



**Planning & Zoning Commission
Tuesday, July 5, 2022, 6:00 PM
Public Meeting Room / Eagle Town Hall
200 Broadway, Eagle, CO 81631**

This agenda and the meetings can be viewed at www.Townofeagle.org.

PUBLIC WIFI – Eagle Guest

MEETING ACCESS INFORMATION AND PUBLIC PARTICIPATION

1. This will be an in-person meeting with access via Microsoft Teams. First time users of Teams will need to download the app.

Microsoft Teams meeting

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Phone Conference ID: 122 048 615#

Please note: All virtual participants are automatically muted. In order to be called upon and unmuted, you will need to use the "Raise Hand". When it is your turn to speak, the moderator will unmute your line and you will have three (3) minutes for public comment.

PUBLIC COMMENTS: If you are unable to attend, public comments regarding any items on this agenda can be submitted to the Planning Department at Planning@townofeagle.org and will be included as part of the record.

For technical difficulties, please email Nikki.Davis@townofeagle.org and we will do our best to assist you.

6:00 PM - REGULAR MEETING CALLED TO ORDER

APPROVAL OF MINUTES *Approval of minutes from the following meeting(s) of the Planning & Zoning Commission.*

1. Minutes dated June 21, 2022

PUBLIC COMMENT

Citizens are invited to comment on any item not on the agenda subject to a public hearing. Please limit your comments to three (3) minutes per person. Those who are speaking are requested to state their name & address for the record.

PRESENTATIONS

1. CU Outdoor Recreation Economy (ORE) District Strategy Presentation

PUBLIC HEARINGS

1. Reserve at Hockett Gulch Minor Planned Unit Development (PUD) Amendment
 - a. Resolution No. 58, Series 2022, "A Resolution of the Planning and Zoning Commission of the Town of Eagle, Colorado Conditionally Approving the Minor Planned Unit Development Amendment for Certain Property Within the Town of Eagle Known as Reserve at Hockett Gulch"
2. 435 Eby Creek Apartments Major Development Permit
3. Code Amendment to Section 4.12.040. - Lot Line Adjustment

OPEN DISCUSSION

ADJOURN

I hereby certify that the above Notice of Meeting was posted by me in the designated location at least 24 hours prior to said meeting.



Nikki Davis
Administrative Technician II



MEETING MINUTES
Planning & Zoning Commission
Tuesday, June 21, 2022, 6:00 PM
Public Meeting Room / Eagle Town Hall
200 Broadway, Eagle, CO 81631

This agenda and the meetings can be viewed at www.Townofeagle.org.

PUBLIC WIFI – Eagle Guest

MEETING ACCESS INFORMATION AND PUBLIC PARTICIPATION

This was an in-person meeting with option for the public to attend via Teams.

6:00 PM - REGULAR MEETING CALLED TO ORDER

Meeting called to order at 6:00pm.

COMMISSIONERS PRESENT

Matt Hood, Jesse Gregg, Bill Nutkins,
Keith Klesner, Jennifer Filipowski,
Keegan Winkeller

COMMISSIONERS ABSENT

Kyle Hoiland, Charlie Perkins

STAFF

Chad Phillips – Community Development Director
Jessica Lake – Planner I
Tez Hawkins – Senior Planner
Nikki Davis - Administrative Tech II

APPROVAL OF MINUTES

1. Minutes dated June 7, 2022

The minutes were approved without change.

PUBLIC COMMENT

Public comment opened at 6:01pm. There was no public comment.

PUBLIC HEARINGS

1. Project: 435 Eby Creek Apartments Major Development Permit
File #: DR22-03
Applicant: Jeffrey P Manley AIA, Martin Manley Architects
Location: 435 Eby Creek Road
Staff Contact: Peyton Heitzman, Planner II
Request: Seeking approval for a Major Development Permit to construct a 30-dwelling unit apartment building on 2.804 acres.

Planning & Zoning Commission Site Visit

On Tuesday, June 21, 2022, members of the Planning & Zoning Commission (Commission) and staff conducted a site visit at 435 Eby Creek Road. Hood provided a summary of their visit and current condition of the site.

Staff Presentation

Phillips requested to continue the file to the July 5, 2022 Commission meeting.

MOTION: KLESNER MOTIONED TO CONTINUE FILE # DR22-03, THE DEVELOPMENT PERMIT FOR 435 EBY CREEK ROAD, TO THE JULY 5, 2022 PLANNING & ZONING COMMISSION MEETING. MOTION WAS SECONDED BY NUTKINS AND APPROVED UNANIMOUSLY.

Hood closed file # DR22-03.

2. Project: Haymeadow RMF 1 & 2 Lot Line Adjustment
File #: LLA22-02
Applicant: Abrika Properties, LLC
Location: 91 Mt. Hope Circle & 24 Snowy Peak Road (Tracts 38 & 55)
Staff Contact: Jessica Lake, Planner I
Request: A request for a lot line adjustment approval to re-plat the lot between RMF-1 and RMF-2.

Planning & Zoning Commission Site Visit

On Tuesday, June 21, 2022, members of the Commission and staff conducted a site visit at Haymeadow. Hood provided a summary of their visit and current condition of the site.

Staff Presentation

Lake presented both Haymeadow files. First, Lake noted a correction made to both staff reports regarding the size of future lot RMF-1A. She explained how the lot line adjustment would modify the acreage of both tracts RMF-1 and RMF-2 and include the vacation of Tract B. To make this adjustment, the application is required to meet the technical standards of the Town's Municipal Code (Code), the Haymeadow PUD Guide and Zoning Plan, and conform to the Comprehensive Plan (Comp Plan). Staff recommended approval with conditions.

Public Comment

There was no public comment.

Discussion

The Commission expressed unanimous support for approval.

MOTION: NUTKINS MOTIONED TO APPROVE FILE # LLA22-02, THE HAYMEADOW LOT LINE ADJUSTMENT OF RMF-1 AND RMF-2, BASED ON COMPLIANCE WITH SECTION 4.12.040 OF THE MUNICIPAL CODE AND WITH THE FOLLOWING CONDITION:

- 1. WITHIN 30 DAYS OF APPROVAL, THE FINAL PLAT SHALL BE REVISED TO REFLECT ANY ADDITIONAL TECHNICAL COMMENTS FROM THE PUBLIC HEARINGS, TOWN STAFF, OR REFERRAL AGENCIES.**

MOTION WA SECONDED BY GREGG AND APPROVED UNANIMOUSLY.

Hood closed file # LLA22-02.

- | | |
|----------------|--|
| 3. Project: | Haymeadow RMF 1 & 2 Major Development Permit |
| File #: | DR22-01 |
| Applicant: | Abrika Properties, LLC |
| Location: | 91 Mt. Hope Circle & 24 Snowy Peak Circle (Tracts 38 & 55) |
| Staff Contact: | Jessica Lake, Planner I |
| Request: | Seeking approval for a Major Development Permit to construct 76 multi-family dwelling units in 7 buildings on 5.03 acres in RMF-1 and 12 multi-family units in 3 buildings on 1.33 acres in RMF-2. |

Staff Presentation

By obtaining a Major Development Permit, the applicant will begin constructing 88 of the 218 multi-family units in Neighborhood A1. Community amenities such as a dog park, park space, playgrounds, and connectivity to the trail system will be primarily located in RMF-1. Nine units will be designated for the Local Employee Residence Program (LERP) with the possibility for more. Lake reviewed conditions of approval from the 2021 PUD amendment. One condition required designating 30 resident-occupied (RO) units above and beyond the LERP requirements. The other condition outlined the timing of construction of dwelling units after obtaining approval of RMF-1.

The Code provides three standards for a Major Development Permit. First, the application is required to meet either the PUD Guide or the Code Standards' technical, design, environmental, and LERP criteria. Next, the proposed development must comply with the Code's subdivision, improvements, and dedications standards. Lake stated the Development Agreement will address the subdivision requirements and improvement agreement fees. Last, the proposed development must comply the Town's goals and policies. While staff believes the application aligns with the Comp Plan, Lake identified several Comp Plan policies for the Commission to consider. Furthermore, Lake provided additional discussion topics focused on LERP, the Phasing Plan, critiquing the building design, and evaluating if the application aligns with and improves the Town's identity.

Staff recommended approval with 10 conditions to address items such as development permit expiration, LERP compliance, as well as with technical design and landscaping requirements.

Applicant Presentation

Members of the Haymeadow design team Rosa Foth, Michael Hood, Michael Noda, and Alex Fales were present. Noda and Fales attended via Teams.

Michael Hood emphasized the focus of this development plan would be on building design, architecture, and the landscape plan. Noda explained that they designed seven multi-family condominium units and three townhomes with very compact footprints. The buildings' design drew inspiration from homes and barns found around Eagle, tactfully imitating prevailing colors, materials, and form. Noda expanded on other structural details including the roof design and massing. He highlighted additional benefits of the small footprint design including ease of landscape integration, accessibility for parking, and improved walkability throughout the neighborhood. Fales gave an overview of the landscape plan. Within RMF-1, residents will have access to internal neighborhood parks and desirable proximity to the core park. A focus of the plan is to prioritize water resources and increase density of shade trees. The outskirts have denser landscaping around the buildings and integrates with surrounding native grass, a good fire defensible space.

Michael Hood provided a thorough project summary, illustrating the details of topics such as the project's LERP contributions and diversification of Eagle's housing stock; compliance with the phasing and timing requirements; maintaining and improving Eagle's character with a concentration on open and green spaces; and enhancing sense of place throughout Haymeadow. Michael Hood stated the development team agrees with staff's list of conditions, adding clarification that a few of the conditions were included as a response to referral agency comments.

Q & A

Gregg asked about the tandem parking design and its impact on safety and pedestrian visibility. Michael Hood replied that they've created 8 ft. sidewalks with a mountable curb and added lighting on the corners. The parking space behind the garage would be assigned to the owner. This design was a creative approach to meet the parking requirements while reducing impervious surface. Not every unit will have a garage; they are available on a first-come-first-served basis. The sidewalk systems also travel outside the building perimeter providing alternative routes that minimize pedestrian traffic behind the garages. Parking on the sidewalks will be prohibited by the HOA.

Hood asked how the trail connections work. Michael Hood explained there are access points both on the north and south side of the property, both of which go through the Town's public right-of-way (ROW). The north side connection is part of Filing 1.

Hood asked how renting the units would impact LERP. Michael Hood replied the unit would remain deeded as LERP and would be rented to a LERP applicant. Scott Schlosser, Haymeadow's real estate representative, added they are using The Valley Home Store's pricing regulations.

Gregg noted that the landscape plan does not include coniferous trees. Michael Hood confirmed that was intentional since they are a native species. Gregg added the staff report and conditions of approval ask for this.

Klesner asked about electric vehicle (EV) charging stations. Michael Hood stated they have designated six EV spaces; however, EV spaces do not contribute to their parking count. Instead, the garages will be retrofitted with the proper conduit giving property owners the framework to set up this service through Holy Cross Energy. Phillips asked rhetorically, is it a parking spot or a charging station? Hood request that this topic be assessed in the code update.

Nutkins asked if staff reviewed the building design against the Haymeadow design guidelines to which Lake replied, yes.

Gregg asked why the roofs were black. Michael Hood replied that is part of the architectural design.

Public Comment

There was no public comment.

Discussion

The Commission reviewed each of staff's discussion items.

Michael Hood confirmed that the trigger for build out is 12 months from Town Council's approval. Gregg suggested adding a condition requiring nine LERP units in Phase 1 specifically. Lake added that the Town will need to establish a tracking program, similar to The Valley Home Store's system. Winkeller countered, expressing he likes having LERP dispersed through the project as it increases diversity throughout the community.

The Commission agreed that the phasing plan aligns satisfies the timing of construction condition.

Nutkins expressed that while he likes the building design, it seems detached from the design of neighboring homes. Winkeller and Nutkins provided a range of technical critique regarding the roof form and elements. Gregg added that the black roof will stand out and recommended lighter colors to blend with the landscape.

Next, the Commission reviewed staff's recommended conditions of approval.

Nutkins asked if the Commission could add a condition which has staff re-review the design guidelines. Lake responded that the staff could create a condition that reflects the changes the Commission requested and present that to Town Council. The Town Code dictates that a development plan cannot be changed unless it is recommended by the Commission.

Hood questioned if the Commission could dictate whether the architectural design matches Eagle's character. Winkeller noted the Commission is only making a recommendation.

Gregg asked for clarification on landscape buffers on the norther section. Lake replied that the condition is meant to address street buffers throughout the development.

MOTION: FILIPOWSKI MOTIONED TO APPROVE FILE # DR22-01, THE HAYMEADOW MAJOR DEVELOPMENT PERMIT FOR RMF-1 AND RMF-2, BASED ON COMPLIANCE WITH CHAPTERS 4.06, 4.07, 4.12, 4.13 OF THE MUNICIPAL CODE, THE SECOND AMENDED PUD GUIDE FOR THE HAYMEADOW PUD, AND THAT THE APPLICATION IS SUPPORTED BY THE GOALS AND POLICIES OF THE 2021 ELEVATE EAGLE COMPREHENSIVE PLAN. THE FOLLOWING CONDITIONS OF APPROVAL APPLY:

- 1. THE DEVELOPMENT PERMIT SHALL BE INCORPORATED INTO THE BUILDING PERMIT AND ALL CONDITIONS SHALL APPLY TO THE BUILDING PERMIT. IF MORE THAN THREE YEARS ELAPSE (JULY 12, 2025) WITHOUT THE APPLICATION FOR A BUILDING PERMIT, A NEW DEVELOPMENT PERMIT SHALL BE REQUIRED, FOLLOWING THE PROCEDURES SET FORTH IN THIS CHAPTER.**
- 2. FINAL LERP COMPLIANCE, SUCH AS, WHICH UNITS WILL BE DESIGNATED AS LERP, THEIR ADDRESSES, AND THEIR PRICE POINTS MAY BE DEFERRED UNTIL CONDO/TOWNHOME PLAT APPLICATION SUBMITTAL.**
- 3. SECTION 3.A.4.E.3. OF THE PUD GUIDE SHALL BE UPDATED TO INCLUDE THE FOLLOWING LANGUAGE IN THE NEXT PUD GUIDE AMENDMENT: THE 50' SETBACK ALONG SYLVAN LAKE RD SHALL BE MEASURED FROM EITHER THE BACK OF ASPHALT OR EDGE OF CURB, WHICHEVER IS MORE RESTRICTIVE.**
- 4. THE 2ND AND 3RD SENTENCE OF SECTION 2.F. OF THE PUD GUIDE (BUILDING HEIGHT) SHALL BE UPDATED IN THE NEXT PUD GUIDE AMENDMENT TO READ AS FOLLOWS: MEASUREMENT SHALL BE FROM EXISTING OR FINISHED GRADE, WHICHEVER IS MORE RESTRICTIVE. FOR NEW SUBDIVISIONS AND/OR DEVELOPMENT PERMITS, EXISTING GRADE, SHALL BE DETERMINED BY THE APPROVED GRADING PLAN FOR THE SUBDIVISION OR DEVELOPMENT PERMIT.**
- 5. THE NEIGHBORHOOD ENTRANCE SIGN SHALL REQUIRE A SIGN PERMIT AND THE LOCATION OF THE SIGN SHALL NOT BE PLACED IN A CLEAR VISION AREA OR SITE TRIANGLE. ANY FUTURE SIGNS WILL NOT BE**

CONSIDERED A PUD OR DEVELOPMENT PERMIT AMENDMENT AND SHALL COMPLY WITH THE TOWN SIGN CODE.

6. ALL TRASH ENCLOSURES SHALL BE BEAR RESISTANT.

7. ALL PROPOSED ROCK GROUND COVER SHALL BE REPLACED WITH WOOD MULCH AT TIME OF BUILDING PERMIT APPLICATION, HOWEVER, SHOULD THE LAND USE CODE BE UPDATED PRIOR TO INSTALLATION OF GROUND COVER THE APPLICANT MAY SUBMIT A CHANGE REQUEST TO STAFF FOR ADMINISTRATIVE APPROVAL TO SWITCH TO ANOTHER GROUND COVER MATERIAL, IN COMPLIANCE WITH THE DEVELOPMENT CODE AT THE TIME OF SUBMITTAL.

8. ANY SPECIES INCLUDED ON THE LANDSCAPE PLAN THAT ARE NOT LISTED ON EITHER THE TOWN'S LIST OF PREFERRED SPECIES OR ON THE CSU EXTENSION OFFICES LIST OF FIREWISE PLANT MATERIALS WILL NEED TO BE REPLACED WITH SPECIES THAT ARE ON ONE OF THESE LISTS IN THE LANDSCAPE PLAN TO BE SUBMITTED AT TIME OF BUILDING PERMIT APPLICATION.

9. ADDITIONAL DECIDUOUS AND CONIFEROUS TREES SHALL BE ADDED TO BOTH STREET BUFFERS TO MEET THE 30 FOOT AND 20 FOOT ON CENTER MINIMUM SPACING REQUIREMENTS RESPECTIVELY AND ADDITIONAL SHRUBS AND PERENNIALS SHALL BE ADDED TO ACHIEVE MASSING IN THE LANDSCAPE PLAN TO BE SUBMITTED AT TIME OF BUILDING PERMIT APPLICATION.

10. AN UPDATED LIGHTING PLAN SHALL BE SUBMITTED FOR STAFF REVIEW AND APPROVAL PRIOR TO OR AT TIME OF BUILDING PERMIT APPLICATION. ALL FIXTURES INCLUDED IN THE DEVELOPMENT SHOULD BE "IDA DARK SKY COMPLIANT," IF AT ALL POSSIBLE, AND SHALL BE AT A TEMPERATURE OF 3000K OR LESS.

MOTION WAS SECONDED BY KLESNER AND PASSED WITH A VOTE OF 5 IN FAVOR (KLESNER, HOOD, GREGG, WINKELLER, FILIPOWSKI) AND ONE OPPOSED (NUTKINS).

Hood closed file # DR22-01.

4. Project: Stone Concepts Outdoor Storage Special Use Permit
File #: SU22-03
Applicant: Teague Carlson
Location: 1248 Chambers Avenue
Staff Contact: Tez Hawkins, Senior Planner
Request: A request for a Special Use Permit to conduct outdoor storage in the Commercial General (CG) zone district.

Staff Presentation

Hawkins presented this file. The outdoor storage facility was approved in April 2021 with a Temporary Use Permit. The storage facility does not encompass the entire property and is on the rear side of the main building. The Town's Code outlines four standards for granting a Special Use Permit: compliance with the Comp Plan; review of minimum use standards; ensuring the requested use is compatible with existing surrounding uses; and that the proposed special use can accommodate increased traffic, parking, or pedestrian use in addition to ensuring visual screening is maintained by the property owner.

Staff recommended approval with three conditions.

Q & A

Winkeller asked if the property is delinquent since the Temporary Use Permit expired in April 2022. Hawkins replied that the applicant was only required to submit an application ahead of the expiration date.

Hood asked why a Special Use Permit was not issued already. Hawkins explained that the applicant is pursuing a Minor Development Permit to put all their materials inside the building. The applicant added that 1210 Chambers Avenue will become an indoor slab housing facility, they are waiting to secure financing.

Public Comment

There was no public comment.

Discussion

The Commission expressed unanimous support for approval.

MOTION: NUTKINS MOTIONED TO APPROVED SPECIAL USE PERMIT FILE # SU22-03 BASED ON STANDARDS 1-4 OF SECTION 4.05.010 OF THE MUNICIPAL CODE AND WITH THE FOLLOWING CONDITIONS:

1. SCREENING SHALL BE AS SHOWN IN THE APPLICATION AND SHALL BE WEIGHTED SO AS NOT TO BECOME A HAZARD IN ADVERSE WEATHER CONDITIONS. THE APPLICANT SHALL BE RESPONSIBLE FOR SAFELY SECURING THE SCREENING. THE SCREENING SHALL BE AESTHETICALLY MAINTAINED AT THE LEVEL THAT IS SHOWN IN THE APPLICATION.
2. ANY LANDSCAPING OR GROUND COVER DISTURBED AS A RESULT OF THIS PERMIT SHALL BE RESTORED TO ITS PREVIOUS CONDITIONS IF THE OUTDOOR STORAGE FACILITY IS ABANDONED.
3. THE OUTDOOR STORAGE FACILITY'S APPROVAL SHALL NOT BE TRANSFERRED IF THE PROPERTY IS SOLD OR CHANGES USE.

MOTION WAS SECONDED BY GREGG AND APPROVED UNANIMOUSLY.

Hood closed file # SU22-03.

COMMUNITY DEVELOPMENT DEPARTMENT & TOWN COUNCIL UPDATE

Reminder for Commissioners to reapply for their seats.

OPEN DISCUSSION

No other discussion items.

ADJOURN

MOTION: GREGG MOTIONED TO ADJOURN. MOTION WAS SECONDED BY KLESNER AND PASSED UNANIMOUSLY.

MEETING ADJOURNED AT 8:00 PM.



To: Planning & Zoning Commission

From: Nikki Davis, Administrative Tech, Community Development

Date: July 5, 2022

Agenda Item: Outdoor Recreation Economy (ORE) District Research and Strategy Study Report

REQUEST:

Staff requests that the Planning & Zoning Commission review and provide feedback on the strategy report.

INTRODUCTION:

Representatives from the University of Colorado (CU) – Boulder’s Masters of the Outdoor Recreation and Environment (MORE) have prepared a robust economic development study ideating a versatile yet authentic Outdoor Recreation Economy project for the Town of Eagle.

The project was first conceptualized in early 2020 when the Town began working with CU to develop an economic development package. Seeking financial aid, staff pursued grant funding through the Rural Economic Development Initiative (REDI, 2020) and the Energy Impact Assistance Fund (EIAF, 2021); however, were unsuccessful securing these resources. The project gained momentum in the summer of 2021 when staff established funding from the Colorado Office of Economic Development and International Trade (OEDIT) along with Town Council’s approval to reallocate unspent project funds that would help expense the study.

Formally, the Town executed a Professional Services Agreement (PSA) with the consultants on August 24, 2021 ([LINK](#)). The PSA underwent minor amendments on September 28, 2021 ([LINK](#)).

ANALYSIS:

Phase one of the project completes the peer community review, economic sector analysis, and develops strategies for economic incentives for outdoor recreation business to grow, relocate, or start in Eagle. The team’s research methodology was refined into three tasks:

- **Discovery.** Assess Town’s assets, planning policies, key stakeholders, and community vision.
- **Research.** Identify best in class business park/district and land use/community planning models and strategies for resort and mountain towns.
- **Develop.** Produce a market and economic analysis, inclusive of comparable town economics and demographics.

The study expands on and provides a best practice model for these focus areas: River Access, Workforce Development, Major Corridor Access, District/Land Use Planning, and Outdoor Recreation Economy.

Phase two has been distilled to focus on an implementation approach once a site has been identified. Presently, no formal timeline, budget, or scope of work has been established for phase two. The city of Montrose's *Colorado Outdoors* is a model example of outdoor recreation economy at work ([LINK](#)).

Discussion Items:

Discussion questions for the Planning & Zoning Commission to consider while reviewing the report:

- Is an ORE District viable for the Town of Eagle?
- Is there a desire to proceed to Phase Two – implementation approach?
 - Create Town of Eagle branded deliverables.
 - Direct staff to pursue and partner with interested landowners.

COMMUNITY INPUT:

The Economic Vitality Committee was involved in the initial project proposal and continues to advocate for implementation. Staff has not yet presented this report to the greater community.

COMPREHENSIVE PLAN ALIGNMENT:

The strategy report addresses a variety of policies from the 2021 Amended Elevate Eagle Comprehensive Plan. Goal 1-2: Expand and Diversity the Town's Economic Opportunities by creating a strategic plan to develop the technology and outdoor recreation industries in Eagle. The project would meet Goal 2-7.5: Encourage Development of Underutilized Lots on Chambers Avenue through our partnership with interested developers on Chambers to build a facility to house businesses. Finally, Goal 3-1: Promote the Town's Unique Activities is accomplished with Eagle's outdoor recreation and remote work capacity for these new industries.

RECOMMENDED ACTION OR PROPOSED MOTION:

None, staff is looking for direction and feedback that will be incorporated into a strategic economic and business development plan.

ATTACHMENTS:

- ORE District Executive Summary
- ORE District Best In Class Study

Town of Eagle, CO: Best in Class Models and Strategies for Outdoor Recreation, Economy-Based Land Use and Development

Executive Summary

Purpose of Engagement:

To assist the Town of Eagle in researching and planning best in class models and strategies for a new “Outdoor Recreation Economy (ORE) District” (ORE District) to be located on approximately six acres within the Town limits, in support of certain land use and economic and community development goals identified in the Town’s 2019 Comprehensive Plan and Downtown Assessment.

Action Steps & Deliverables:

1. *Discovery:* Review the Town of Eagle’s 2019 Town of Eagle Comprehensive Plan, Downtown Assessment and other seminal planning documents. Meet with key Town administrative and planning staff to understand and assess the vision, plans, regulations (e.g., zoning) and other activities related to both overall community planning goals.
2. *Research:* Research into best in class eco-industrial park and co-located business models across the US, identify and interview key stakeholders that can inform best practices in land use planning and development around outdoor recreation economies.
3. *Market and Economic Analysis:* Assess the Town economy and compare it to peer/competitive economies in Colorado and other states.
4. *Presentation:* Create report and slide deck on research findings and recommendations.

Phase 1: Situation Analysis

Research Methodology:

1. Comparable Town Analysis
2. Stakeholder Interviews
3. Eagle Asset Mapping

Research Focal Areas:

- River Access
- Workforce Development
- Major Corridor Access
- District / Land Use Planning
- Outdoor Recreation Economy

[Comprehensive Presentation of Situation Analysis Results](#) - *click link to view.*

Research Focal Area Best Practices

Stakeholder interview insights and Eagle Asset Mapping insights incorporated into the below.

River Access Best Practices

- Integrate natural recreation opportunities presented by the river with the existing downtown, such as river walks or kayak launch pads.
- Leverage high quality fly fishing waters to attract aligned businesses and tourism opportunities. Prioritize Eagle River as a unique identifier for the Town.
- Utilize Eagle River as a focal point for non-vehicle connectivity, such as walk/bike trails.
- Look to successful examples of riverfront revitalization projects that integrate natural assets with downtown assets.

Workforce Development Best Practices

- Survey and engage local businesses to determine what the business community needs to evolve its workforce. Stakeholder insight indicates that common workforce needs are:
 - Development of affordable and attainable workforce housing.
 - Construction and subsidization of high-quality office and co-working space with high-speed broadband internet.
 - Improvements to community connectivity and access to transit services.

Major Corridor Access Best Practices

- Implement attractive 'gateways' to give visitors a sense of arrival and place when entering the Town from I-70.
- Leverage the access provided by I-70 to make the Town a business destination in the center of CO. Incorporate business attractions like conference space or showrooms.
- Assess how access to I-70 could be utilized as a distribution and supply corridor for emerging and existing outdoor recreation businesses.
- Investigate how transit could be improved to increase access to the Town from nearby communities (e.g., VelociRFTA transit network in the Roaring Fork Valley).

District Planning Best Practices

- Utilize holistic "district planning" to create a sense of place within the Town. Integrate land use planning goals with the identity and culture of the Town.
- Direct residents and businesses to where you'd like them to spend their time with intentional land use and connectivity planning. Connect new district(s) with downtown areas, local businesses, etc.
- Integrate district planning with natural resources. Create recreational opportunities like walking, biking and river access where possible.

ORE Community Best Practices

- Implement policy incentives that create a business-friendly community. These could include real estate subsidies, grants and tax incentives.
- Support real estate development and zoning policies that are relevant to business needs, such as warehousing space, shipping capacity and flexible office space.
- Create business opportunities for networking, investment and talent attraction through Town marketing campaigns, Town-hosted conferences, etc.
- Recruit and/or foster "anchor" businesses that can serve as a proof of concept to other businesses and workforce talent considering setting up shop in Town.

Economic and Market Analysis Methodology and Results

Economic and market research was conducted to describe the Town economy and compare the Town economy to peer/competitive economies in Colorado and in other states. This included absolute and relative growth metrics, location quotients, and measures of economic diversity. Research also included an overview of area housing characteristics (e.g., rental versus owner-occupied, housing stock, etc.) and population characteristics (e.g., population by age, gender, race/ethnicity). This information can inform the feasibility of growing an outdoor industry economy in the Town.

Results can be found in slides 48 - 61 in the core [presentation slide deck](#).

Appendix

Comparable Town Analysis Summary:

With a focus on mountain and resort towns, and specific input from Bill Shrum, the team assessed 22 peer communities across North America. The intent in this analysis was to identify best practices in the concepts of outdoor recreation economy building, district planning, public-private partnership and mixed-use development that could be applied to the Town of Eagle. Population size, infrastructural features, natural features, downtown/district areas, planning and development policies, transit and connectivity options, housing and workforce accommodations and town identity features were all assessed and documented.

Colorado Towns Studied: Avon, Steamboat Springs, Carbondale, Glenwood Springs, Salida, Buena Vista, Frisco, Durango, Montrose, Evergreen, Telluride, Trinidad, Woodland Park.

Non-Colorado Towns Studied: Leavenworth, WA. Las Catalinas, Costa Rica. South Jordan, UT. Burnside Park, Nova Scotia, Canada. Ballard Brewery District, Seattle, WA. Park City, UT. Jackson, WY, Taos, NM.

Results:

- Montrose and Glenwood Springs offer excellent case studies for Eagle to emulate.
 - Montrose's Colorado Outdoors campus facilitates the recruitment of outdoor recreation businesses to Montrose, and provides housing, office space and outdoor recreation opportunities to tenants. Efficient public-private partnership with the City of Montrose led to expedited zoning processes, riverfront easements to the City and a business-friendly atmosphere that is attracting new commerce, employment and housing opportunities.
 - Glenwood Springs offers a history of planning principles that prioritize connectivity within the town. Their Confluence Development Plan demonstrates a way to integrate historically underused properties (industrial space, parking lots, brownfields) to create affordable housing options that are connected through bike/walk trails to the downtown.
- Dedicated cross-functional efforts were undertaken in all towns that built successful outdoor recreation economies. Combined efforts from city planning and zoning, chamber of commerce/economic development, private real estate development, natural resource restoration/conservation and policy incentives all combine to create the workforces, infrastructure and communities necessary to build a successful outdoor recreation economy.

Policy Tools:

Our research indicates that peer economies that have successfully revitalized through outdoor recreation did so by leveraging state and local level policy incentives to pave the way and partially fund their efforts.

Policy Tool	Office/Policy Manager	About
<u>Rural Jumpstart</u>	OEDIT	Program that incentivizes new businesses move to or start in rural, economically distressed areas.

<u>Rural Technical Assistance Program (RTAP)</u>	OEDIT	Provides free technical assistance, consulting and funding to aid communities in developing economic development plans/strategies.
<u>Rural Economic Development Initiative (REDI)</u>	DOLA	Fund available to help rural Colorado communities create diverse economic revitalization strategies.
<u>Main St. Program</u>	DOLA	Community framework for downtown revitalization. Adds notoriety and recognition to a downtown location.

Similarly, peer economies created efficient policy pathways for developers and businesses in town that supported core town planning goals (such as affordable housing, business recruitment, etc.).

Montrose, CO, offers a good case study for the types of policy incentives and public-private partnership tools a town can implement to facilitate reaching their goals:

- Montrose employs as Director of Business Innovation and Tourism (DBIT) as a full time position within city government.
- Department and Revitalization Team (DART) is a stable department in Montrose that specifically fosters business and economic growth, including increasing tiers of accreditation in their Main Street program, business outreach, downtown business recruitment and more.
- Public-private partnership with Colorado Outdoors allowed for expedited permitting and mutual-value add in real estate development (example: river-access easements donated back to City).
- The Montrose Urban Renewal Authority (MURA) was formed to develop the outdoor recreation manufacturing park along the Uncompahgre River.
 - Connect Trail Initiative (via \$2mil grant) connects MURA area with downtown via walk/bike trail.
- Montrose implements additional business Incentives, such as:
 - Revolving Loan Funds
 - In-kind Site Improvements for Curb Appeal
 - Building permit and tap fee abatement
 - Relocation expenses for businesses transitioning to operating in Montrose
 - Office space abatement for businesses relocating to Montrose

Application of Best Practices and Research Focal Areas to Town of Eagle:

Focus Area	Recommendation	Town's Comp Plan
	Identify a project champion and committee of champions within the Town to move this district concept forward.	
District Planning, and ORE Business Community	Utilize land that is zoned for light industrial/commercial for uses that incentivize outdoor recreation businesses, such as warehousing, gear showrooms, manufacturing facilities, co-working space and more.	Goal 1-2: create commercial development that fits the desired character of the Town.

Workforce Development	Create business, real estate and housing incentives that attract the workforce talent that the Town is interested in.	Goal 1-1: create attainable housing for those that live and work within the Town.
District Planning	Promote and increase non-vehicle connectivity in the Town through increased walk/bike trail development.	Goals 2-2, 2-4, 3-1, 3-3, 4-2, 5-3: foster trail systems and improved connectivity within the Town.
River Access	Utilize river access to support activity-specific identifiers in the Town (i.e. - become a fly fishing business hub).	Goal 3-1: promote the Town's unique recreational activities.
Outdoor Recreation Economy	Leverage business/policy incentives at the state and local level to create a business friendly environment.	
District Planning	Leverage district planning to create unique identifiers that foster a sense of place and identity for the Town.	Goal 2-1 and 2-3: support the Town's unique mountain character.

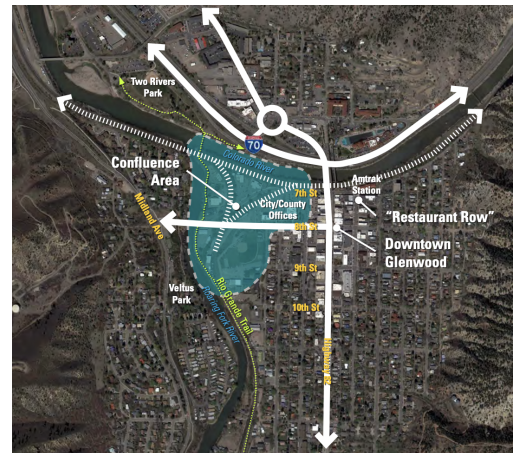
District Planning Example: Colorado Outdoors Campus, Montrose, CO

Colorado Outdoors, part of a public-private partnership in Montrose, includes a multi-purpose campus that is intended to help Montrose meet a number of economic vitality goals, from attainable workforce housing, to commercial space, to river access and trail systems. Colorado Outdoors relied on effective partnership with Montrose and anchor local businesses to get the development project off the ground.



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Glenwood Springs' Confluence Redevelopment Plan successfully allowed the town to convert industrial and under-utilized land parcels to a multifunctional housing and commercial development that prioritized connectivity to the town's downtown area and river resources.



District Planning Example: South Main Neighborhood, Buena Vista, CO

The South Main Neighborhood incorporated New Urbanism planning principles as a means to enhance the Buena Vista community as a whole. Nestled on the Arkansas river, with roughly 40 acres to work with, a new holistically planned community was created. River access, shops, restaurants, housing and other amenities were all constructed with the goal of integrating New Urbanism into a historically rural region.



Next Steps:

- Determine viability for ORE district in the Town.
- Determine several land parcels that could be good fits for this type of development, inclusive of willing and amenable development partners.
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Town of Eagle, CO: Best in Class Models and Strategies for Outdoor Recreation Economy-Based Land Use and Development

Best Practices and Highlights from
Phase 1: Situation Analysis

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Slides 37-39: Alignment to Town of Eagle's Vision and Planning Process

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Slide 44: Next Steps and Guiding Questions

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August 2021 Statement of Work:

“To assist the Town of Eagle in researching and planning best in class models and strategies for a new ‘Outdoor Recreation Economy (ORE) District’ (ORE District) to be located on approximately six acres within the Town limits, in support of certain land use and economic and community development goals identified in the Town’s 2019 Comprehensive Plan and Downtown Assessment.”

Phase 1: Situation Analysis

Discover: The Town’s planning policies, key stakeholders and community vision.

Research: Best in class business park/district and land use/community planning models and strategies for resort and mountain towns.

Develop: Market and economic analysis, inclusive of comparable town economics and demographics.

Present: Findings and recommendations.

PHASE 1 KEY PLANNING RESEARCH FOCUS AREAS

01

RIVER ACCESS

With access to world class fly fishing and recreational waters, the Town can lean into their natural resources to create a unique identity based in outdoor recreation.

02

WORKFORCE DEVELOPMENT

From housing to coworking space, the Town can build the workforce that supports the diverse economy they strive for.

03

MAJOR CORRIDOR ACCESS

Access to major ski resorts, cities, recreation areas and business resources is made possible by I-70

04

DISTRICT/LAND USE PLANNING

Thoughtful land use planning of available land parcels in the Town can support Comp Plan goals for achieving interconnected residential, workforce, business and small town mountain charm goals.

05

OUTDOOR RECREATION ECONOMY

With abundant natural resources and outdoor recreation opportunities, the Town has the opportunity to build a diverse and unique economy centered in outdoor recreation.

PHASE 1 RESEARCH METHODOLOGY



COMPARABLE TOWNS

Our team conducted research analysis on 22 towns that have undergone economic revitalization with an emphasis on outdoor recreation businesses. We culled best practices and highlights from these peer communities.



STAKEHOLDER INTERVIEWS

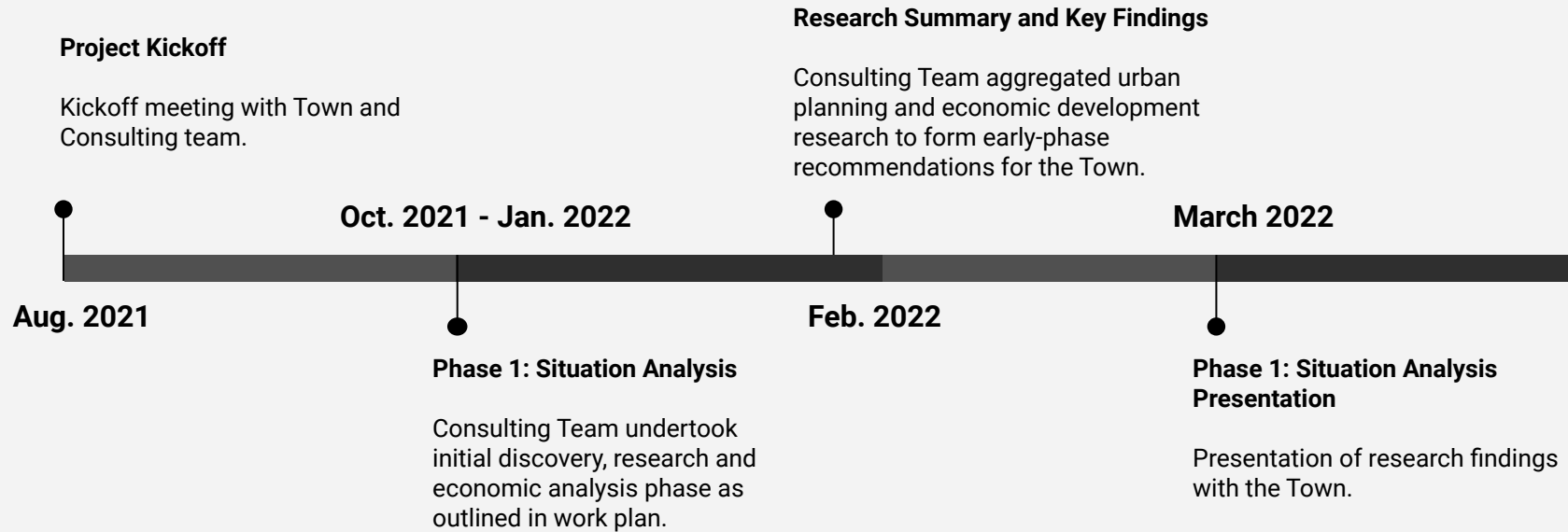
Our team conducted informational interviews with 8 industry experts in the fields of outdoor recreation, economic revitalization, land use planning and more. Their insights are incorporated into our recommended best practices.



TOWN OF EAGLE ASSET MAPPING

Our team assessed the Town's Comprehensive Plan and other planning policies, met with leaders in the Town's business community and government and conducted research to understand the best practices that may be most applicable to the Town.

Project Timeline





01

RIVER ACCESS

River Access Best Practices

Integrate natural recreation opportunities presented by the river with the existing downtown, such as river walks or kayak launch pads.

Leverage high quality fly fishing waters to attract aligned businesses and tourism opportunities. Prioritize Eagle River as a unique identifier for the Town.

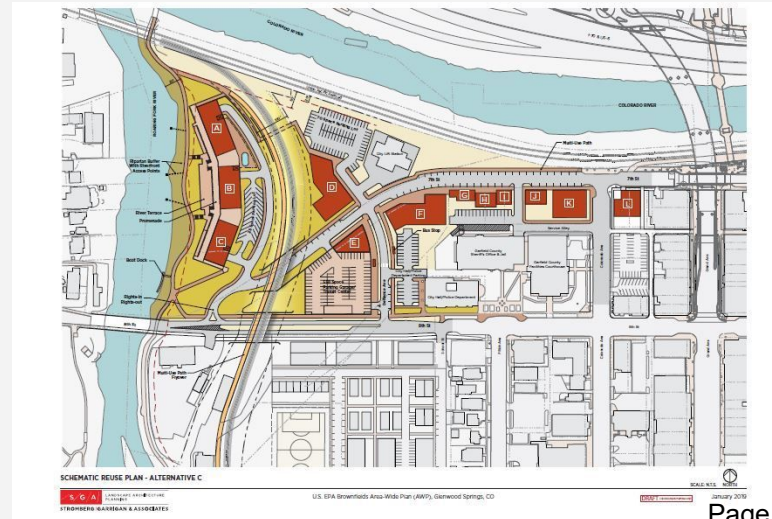
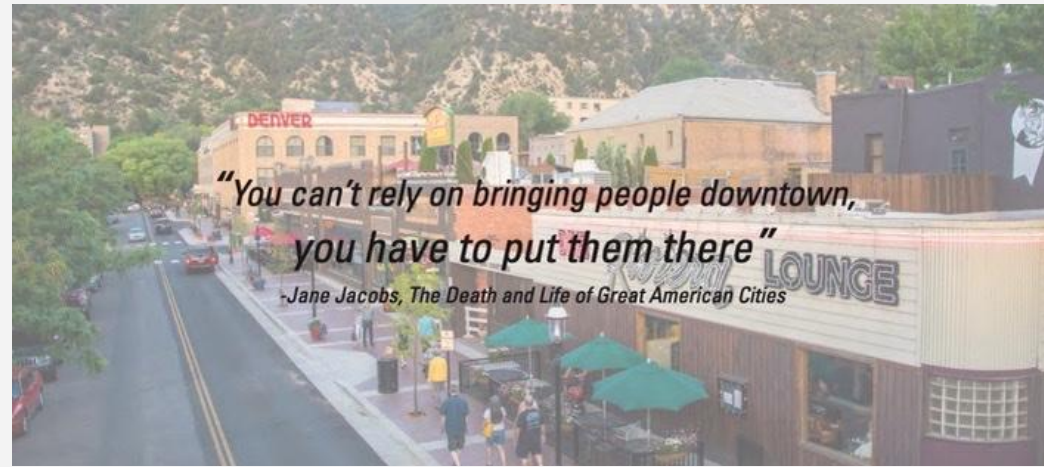
Utilize Eagle River as a focal point for non-vehicle connectivity, such as walk/bike trails.

Look to successful examples of riverfront revitalization projects that integrate natural assets with downtown assets.

River Access Success Story: Glenwood Springs, CO

Glenwood Springs, CO

Glenwood Springs has planned a walkable housing and commercial district to revitalize brownfields and an old water treatment plant. The district is adjacent to the Colorado River and connected through a trail system to their downtown area and parks. Lessons can be taken from their [Confluence Redevelopment Plan](#).



River Access Success Story: Salida, CO

Salida, CO

[Salida's Riverside Park](#) sits on the Arkansas River, just north of Salida's historic downtown area. The space allows for residents and visitors to enjoy the river with access to the town's robust trail network. Amenities such as bathrooms, an amphitheater and bouldering walls have been constructed to attract visitors and locals to the location. A yearly music festival is also held at the riverfront location which brings visitors from around Colorado, boosting the local economy.

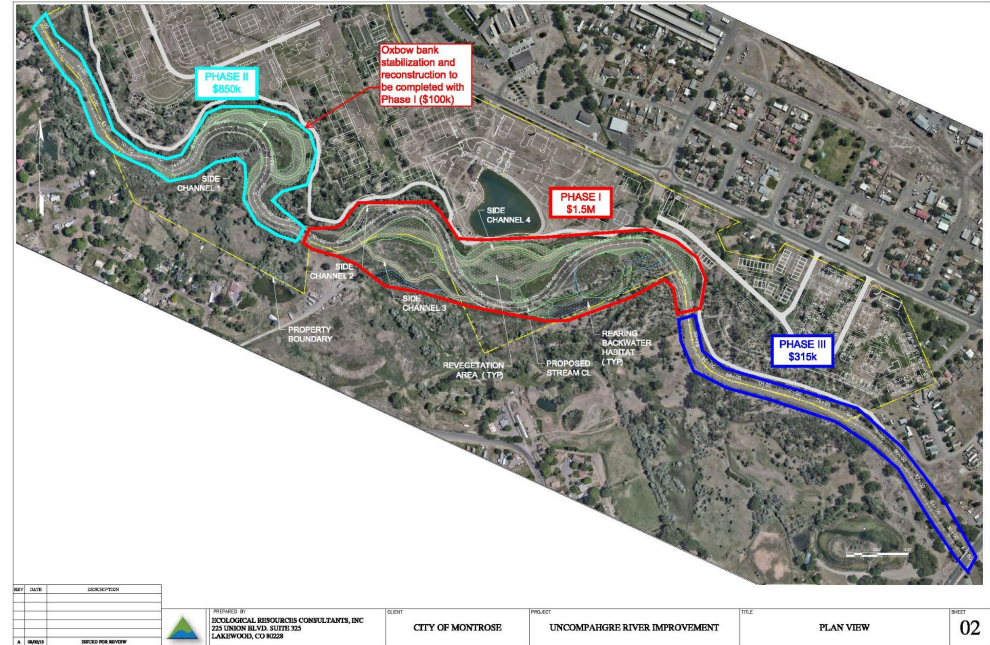


River Access

Success Story: Montrose, CO

Montrose, CO

[Colorado Outdoors](#) is a project dedicated to building a robust outdoor recreation economy in Montrose. Part of the project includes restoring the Uncompahgre River to a Gold Medal rated trout fishing destination. Phase 1 began in 2020 and was [completed in March of 2021](#). This effort was undertaken as a joint effort between private and public sectors. The [Montrose Urban Renewal Authority](#) (MURA) spearheaded the revitalization project.



River Access Guiding Questions

1. Does the Eagle River corridor need revitalization? Is it possible to restore river quality to meet Gold Medal fishery standards?
2. What does the Eagle River mean to Town residents?
3. Can the Eagle River be utilized as a unique identifier for the Town's business, economic and tourism identity?



02

WORKFORCE DEVELOPMENT

Workforce Development Best Practices

Survey and engage local businesses to determine what the business community needs to evolve its workforce. Stakeholder insight indicates that common workforce needs are:

Development of affordable and attainable workforce housing.

Improvements to community connectivity and access to necessary transit services.

Construction and subsidization of high-quality office and co-working space with high-speed broadband internet.

Workforce Development Success Story: Grand Junction, CO

Grand Junction, CO

Through a public-private partnership spearheaded by an outdoor recreation business coalition, Grand Junction redeveloped the Edgewater neighborhood of town into a riverfront, mixed-use office and commercial district. Complete with breweries and coffee shops to attract employees, local businesses can set up offices or co-working spaces in the shared buildings. The entire complex is centered on principles of outdoor recreation combined with quality urban design.



What does top talent need to work in the Town of Eagle?

Stakeholder Interviews with industry experts recommend providing the Town's workforce with the following:

- Advanced, modern working or co-working space; added benefits come from price-controlled or subsidized rent.
- Reliable, fast broadband internet.
- Stable, attainable housing that is suitable to the employee population you want to attract.
- Quality of life bonuses, such as easy access to outdoor recreation opportunities or social connections through breweries and coffee shops.
- Professional networking opportunities, such as conferences or trade shows held within the Town.



Workforce Development Guiding Questions

1. What kind of workforce does the Town want to attract (i.e. seasonal vs. permanent, corporate vs manufacturing, etc.)?
2. What does the existing workforce in the Town look like? What does the available workforce look like? What are the limits or constraints on increasing the workforce?
3. How could the Town recruit the workforce to support and develop the proposed ORE district?

03

MAJOR CORRIDOR ACCESS



Major Corridor Access Best Practices

Implement attractive 'gateways' to give visitors a sense of arrival and place when entering the Town from I-70.

Leverage the access provided by I-70 to make the Town a business destination in the center of Colorado. Incorporate business attractions like conference space, showrooms, etc.

Assess how access to I-70 could be utilized as a distribution and supply corridor for emerging and existing outdoor recreation businesses.

Investigate how transit could be improved to increase access to the Town from nearby communities (e.g., VelociRFTA transit network in the Roaring Fork Valley).

Corridor Access Success Story: Carbondale, CO

Carbondale, CO

In 2012, Carbondale's town council approved of a [revitalization of the existing gateway park](#) located at the junction of routes 82 and 133.

The plans for the 7 acre site call for improvements to the existing boat launch and camping sites, as well as the construction of a new welcome center and outdoor education center. The park marks the main entry into the town and a unique placemaking asset. The plan is slated for completion in 2027.



Major Corridor Access Guiding Questions

1. How is the Town currently utilizing its access to I-70 for business and economic priorities?
2. How will the East Eagle Sub Area Plan affect the Town's sense of place as it relates to its access to I-70?
3. What unique business events or opportunities are created by the Town's central location along I-70 in the middle of the state?



04

DISTRICT PLANNING

District Planning Best Practices

Utilize district planning to create a sense of place within the Town. Integrate land use planning goals with the identity and culture of the Town.

Integrate industrial ecology principles, including how diverse land uses can complement each other.

Direct residents and businesses to where you'd like them to be with intentional land use and connectivity planning. Connect new district(s) with downtown areas, local businesses, etc.

Integrate district planning with natural resources. Create recreational opportunities, like walking, biking and river access where possible.

District Planning/Land Use Success Story: Burnside Park, Nova Scotia

Burnside Park, Nova Scotia

Burnside Park, in Halifax, Nova Scotia, is an eco-industrial park constructed in the 1990s to test industrial ecology principles. It remains a thriving eco-industrial park today, with a range of businesses supporting it.

Burnside Park proved industrial ecology hypotheses that interconnected businesses thrive in proximity to one another, and shared resources benefit the larger whole.



District Planning/Land Use Success Story: Buena Vista, CO

Buena Vista, CO

The [South Main Neighborhood](#) is a district planning example that combines sustainable development practices, outdoor recreation economy, arts and culture. What started as a vacant 41 acre site on the Arkansas River in the 1990s has been developed into a New Urbanist community.

The developers leveraged the natural assets of the surrounding environment and created a walkable, pedestrian friendly community. Within the community are shopping, dining, work and play options for those living within or visiting the community.



District Planning Guiding Questions

1. What land parcels would be well-suited to holistic, New Urbanist development principles?
2. Would local businesses be amenable to the development of a new business district, centered around outdoor recreation?
3. Can this style of holistic land use planning and development help the Town achieve connectivity, attainable housing, workforce development and economic goals?

05

OUTDOOR
RECREATION
ECONOMY (ORE)
BUSINESS
COMMUNITY



ORE Community Best Practices

Implement policy incentives that create a business-friendly community. These could include real estate subsidies, grants and tax incentives.

Support real estate development and zoning policies that are relevant to business needs, such as warehousing space, shipping capacity and flexible office space.

Create business opportunities for networking, investment and talent attraction through Town marketing campaigns, Town-hosted conferences, etc.

Recruit and/or foster “anchor” businesses that can serve as a proof of concept to other businesses and workforce talent considering setting up shop in Town.

ORE Business Community Needs

1

Working Space

Support coworking and/or flexible office space that attracts the type of businesses wanted in that community. Discover if your business community needs labs, offices, design space, gear testing space, etc

2

Workforce Accommodations

Employers need to house talent in appropriate housing that is priced according to pay in the region.

3

Warehousing and Manufacturing Space

Product oriented businesses need warehousing and industrial space for distribution, inventory management, etc. ORE companies may want to develop product onsite, and having access to manufacturing facilities can be a significant draw for businesses.

4

Policy / Municipal Support

Policy incentives can be a gravitational force that attracts businesses to set up shop in your community. Businesses need to feel that the community is authentically pro-business and open to growth.

5

Unique Identifiers for Brand Identity

Businesses want the opportunity to create a brand around their home-base. The Town can offer collaborative showrooms or gear testing labs, and emphasize specific outdoor recreation opportunities (fly-fishing) to foster brand identity.

ORE Business Community Success Story: Steamboat Springs, CO

Steamboat Springs, CO

Steamboat Springs has attracted a number of outdoor recreation businesses, enough to earn the moniker: [“Outdoor Business Town USA”](#). The town has accomplished this through promoting their access to wilderness and necessary business infrastructure and fostering entrepreneurship.

As Colorado OREC Director Nathan Fey states, “Steamboat has most everything they [businesses] need – the supply chain logistics are manageable, the broadband is good, it’s only three hours from Denver and the outdoor recreation is super accessible. It’s kind of a perfect package.”



ORE Business Community Success Story: Steamboat Springs, CO

Steamboat Springs, CO

Further strengthening Steamboat's case as an attractive town for ORE businesses is a dedicated member of the city's [chamber of commerce](#) to economic development. This role serves as a liaison between the community and businesses interested in relocating to the area.

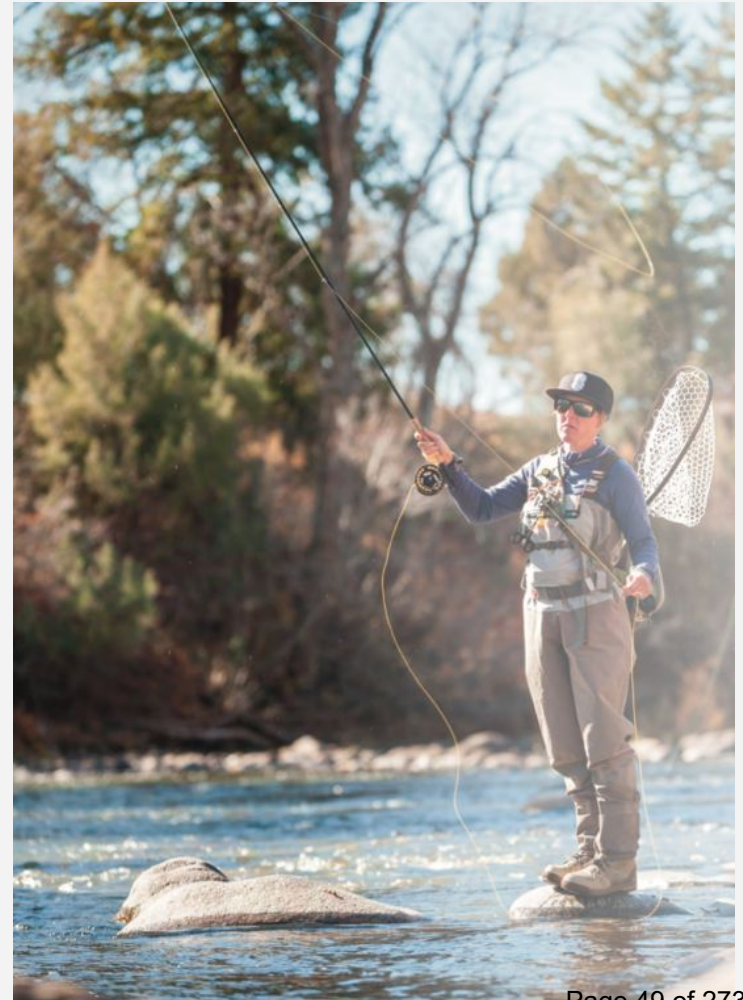
John Bristol, Steamboat's Director of Economic Development, explains that giving businesses places to grow and flourish, establishing affordable workforce housing and coordinating with existing companies helps guide growth.



What do ORE businesses need in Eagle to thrive?

Stakeholder interviews with industry experts highlight the following:

- Establish a dedicated position(s) within town government for economic and business development.
- Collaborate with existing businesses to develop incentives and policy programs that will entice new businesses to relocate.
- Take advantage of federal, state and local funding sources such as REDI and RTAP.
- Provide a platform for businesses to play a vital role in community development; the local government and community culture should be inviting to new businesses.



ORE Business Community Guiding Questions

1. Who are the key outdoor recreation businesses that already exist in the Town?
 - a. Would any existing businesses be good candidates to serve as “anchor tenants” or champions of business development in the Town?
2. Is the culture in the Town amenable to business development and growth?
3. What opportunities and/or challenges could be presented by attracting new businesses?



Policy Incentives

Our research shows that towns that successfully revitalized through outdoor recreation leveraged state and local level policy incentives to pave the way and partially fund their efforts.

Policy Incentives for ORE Development

Policy Tool	Office/Policy Manager	About
Rural Jumpstart	OEDIT	Program that incentivizes new businesses move to or start in rural, economically distressed areas.
Rural Technical Assistance Program (RTAP)	OEDIT	Provides free technical assistance, consulting and funding to aid communities in developing economic development plans/strategies.
Rural Economic Development Initiative (REDI)	DOLA	Fund available to help rural Colorado communities create diverse economic revitalization strategies.
Main St. Program	DOLA	Community framework for downtown revitalization. Adds notoriety and recognition to a downtown location.

Best Policy Practices for the Town:

- The best opportunity for success in receiving this support is if the Town acts as a facilitator between businesses and state government. Colorado is looking for the Town to be invested in the economic growth in their region, so that they aren't supporting businesses in isolation.
- Creating a roadmap towards diverse economic growth with a specific focus (outdoor recreation, etc.) offers the best chance for success in receiving financial support.
- Creative financing outside of these grants should be considered to drive investment in the Town.

Policy Incentives Success Story:

Montrose, CO



- Montrose employs as Director of Business Innovation and Tourism (DBIT) as a full time position within city government.
- [Department and Revitalization Team](#) (DART) is a stable department in Montrose that specifically fosters business and economic growth, including increasing tiers of accreditation in their Main Street program, business outreach, downtown business recruitment and more.
- DART and DBIT leverage Montrose's Opportunity Zone designation to actively attract investment.
- Public-private partnership with Colorado Outdoors allowed for expedited permitting and mutual-value add in real estate development (example: river-access easements donated back to City).
- The Montrose Urban Renewal Authority (MURA) was formed to develop the outdoor recreation manufacturing park along the Uncompahgre River.
 - Connect Trail Initiative (via \$2mil grant) connects MURA area with downtown via walk/bike trail.
- Montrose implements additional [business Incentives](#), such as:
 - Revolving Loan Funds
 - In-kind Site Improvements for Curb Appeal
 - Building permit and tap fee abatement
 - Relocation expenses for businesses relocating to Montrose
 - Office space abatement for businesses relocating to Montrose

Alignment of ORE District Planning with the Town's Vision and Planning Policies



Core Policy and Vision Goals in Eagle's Comprehensive Plan

Visioning section and policy goals clearly indicate desire for attainable and diverse housing development.



The Town is seeking to strengthen its economic vitality through diversity of local businesses.

Despite desire for growth, locals want to keep their mountain charm and historic identity.



Walkable, bikeable, multi-transit neighborhoods and improved connectivity to downtown and outdoor recreation resources get frequent mentions in the Comprehensive Plan.

The Town seeks to preserve and enhance the Broadway district and downtown centers of economic and cultural significance.



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District Planning	Leverage district planning to create unique identifiers that foster a sense of place and identity for the Town.	Goal 2-1 and 2-3: support the Town's unique mountain character.

River Access

Integrate river-based recreation and trail systems into land use planning.

District Planning

Integrate development goals for residential, commercial, light industrial and economic diversity into one multi-functional land parcel(s)..

Workforce Development

Provide incentives and infrastructure to attract the type of workforce that will live, work and play within the Town.



Outdoor Recreation Economy District

Outdoor Recreation Economy Community

Focus real estate development on the businesses, workforce, tourists and residents that support an outdoor recreation economy.

Major Corridor Access

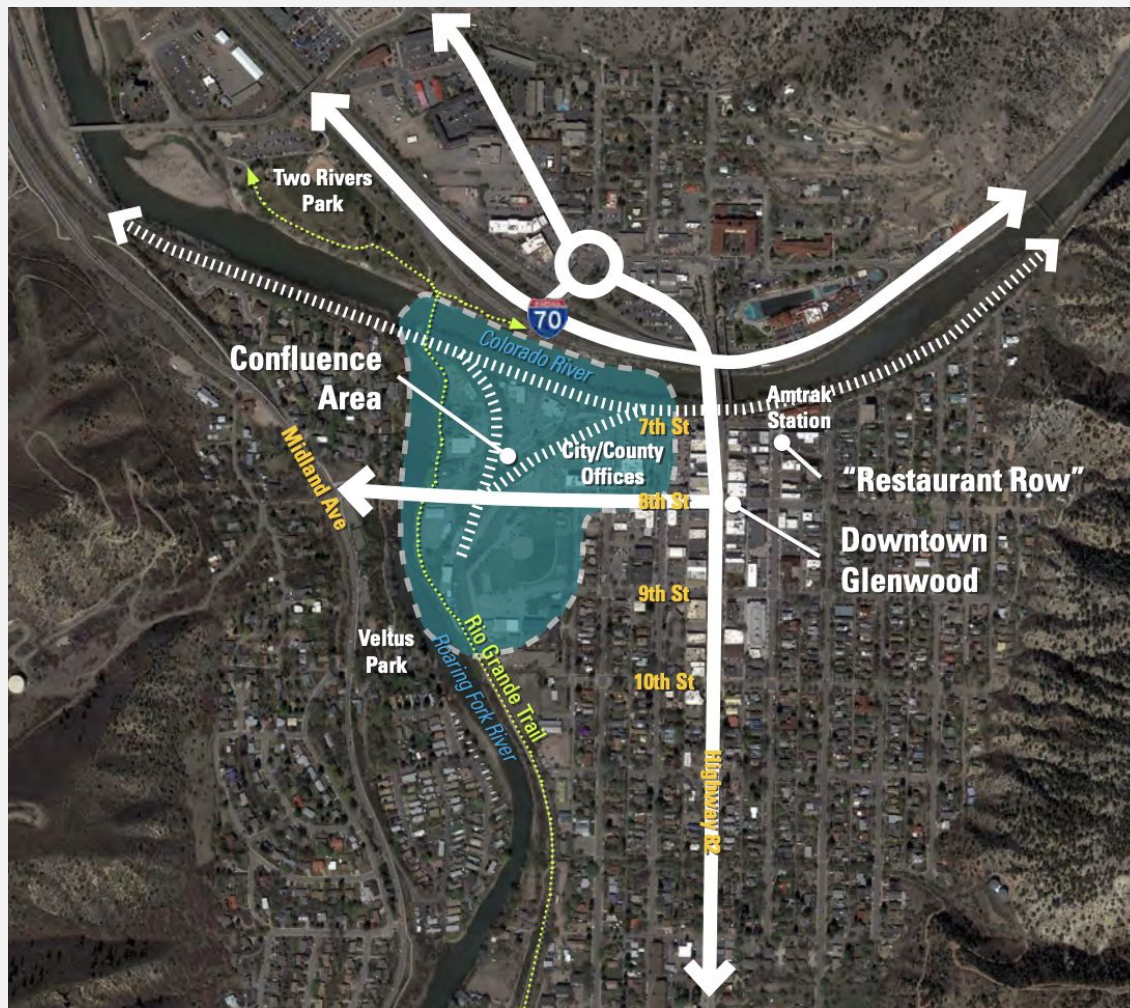
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- Work with Consulting Team to map out design and development of ORE District.



THANK YOU

Questions?

Appendix



Contact list

- John Bristol, Economic Development Director, Town of Steamboat Springs, john@steamboatchamber.com
- David Dragoo, Founder and Executive Chairman of Mayfly Outdoors, david@mayflyoutdoors.com
- Nathan Fey, OEDIT, Director of Outdoor Recreation Industry Office, nathan.fey@state.co.us
 - *Just departed OEDIT, CU Consulting Team can reconnect the Town to Nathan if desired.*
- Natalie Ooi, Teaching Associate Professor, CU MENV (Masters of Outdoor Recreation Economy), natalie.ooi@colorado.edu
- Cliff Harold, Principal Consultant, First Flatiron Consulting, previously Executive Director for Boulder Economic Council, clif.harald@firstflatironconsulting.com
- Sarah Shrader, Owner/Co-founder, Bonsai Designs, Founder of Outdoor Recreation Coalition in Grand Junction, sshrader@coloradomesa.edu



Economic and Market Analysis of Comparable Towns

The following economic data is intended to contextualize our research on comparable peer towns to Eagle.

The Town of Eagle is smaller than some of its peer communities (Glenwood Springs, Steamboat Springs, and Montrose), but larger than others (Salida, Carbondale, and Buena Vista). At the county level, Eagle County is the third largest in terms of population and the largest by employment, and has the highest average annual pay and GDP among the cohort.

Town/City	County	Town/City Population	County Population	County Employment	County Average Annual Pay	County Real GDP	County Nominal GDP
Town of Eagle	Eagle County	7,484	55,624	30,225	54,122	3,446	4,197
Glenwood Springs	Garfield County	10,027	61,723	24,707	53,655	4,219	3,410
Salida	Chaffee County	5,683	19,515	7,812	44,091	736	890
Montrose	Montrose County	20,364	42,810	14,899	44,697	1,467	1,724
Carbondale	Garfield County	6,446	61,723	24,707	53,655	4,219	3,410
Buena Vista	Chaffee County	2,854	19,515	7,812	44,091	736	890
Steamboat Springs	Routt County	13,185	24,840	14,355	51,606	1,728	2,040

The Town of Eagle is growing population at a faster rate than its peer communities. However, Eagle County is growing at a slower rate than both Chaffee County and Garfield County. The pandemic recession caused employment in Eagle and Garfield counties to decline, but despite the pandemic, Eagle County's real GDP increased 0.5% in 2020.

Town/City	County	Town/City Population	County Population	County Employment	County Average Annual Pay	County Real GDP	County Nominal GDP
Town of Eagle	Eagle County	1.8%	1.1%	-0.5%	4.7%	0.5%	2.9%
Glenwood Springs	Garfield County	0.6%	1.4%	-0.7%	2.9%	-1.2%	-0.9%
Salida	Chaffee County	1.4%	1.5%	1.5%	5.3%	3.8%	6.2%
Montrose	Montrose County	0.3%	0.6%	1.2%	3.8%	1.7%	3.7%
Carbondale	Garfield County	0.5%	1.4%	-0.7%	2.9%	-1.2%	-0.9%
Buena Vista	Chaffee County	0.9%	1.5%	1.5%	5.3%	3.8%	6.2%
Steamboat Springs	Routt County	1.1%	0.8%	0.4%	3.6%	0.5%	2.8%

Eagle County's unemployment rate fell to 2.8% in January 2022, indicating a return to a tight labor market and renewed competition for workers. While the number of unemployed individuals is estimated at just 1,138, the available labor supply is even tighter in Chaffee County (314), Routt County (471), and Montrose County (881). These worker constraints may hold back business expansion opportunities.

County	Unemployment Rate	Unemployed
Eagle County	2.8%	1,138
Garfield County	3.4%	1,157
Chaffee County	3.1%	314
Montrose County	3.9%	881
Routt County	2.8%	471

Eagle County recorded more employment than its peer communities in 2020. The economic identity for the peer communities commonly features the tourism sector, but some communities include greater levels of natural resources and manufacturing employment.

Industry	Eagle (Eagle)	Garfield (Glenwood Springs, Carbondale)	Chaffee (Buena Vista, Salida)	Montrose (Montrose)	Routt (Steamboat Springs)
Total Covered	30,225	24,707	7,812	14,899	14,355
Total Private	26,968	19,650	5,690	11,795	11,965
Agriculture, forestry, fishing and hunting	63	183	NA	270	123
Mining, quarrying, and oil and gas extraction	27	798	NA	23	181
Utilities	71	213	55	190	143
Construction	3,270	3,090	684	1,286	1,304
Manufacturing	341	361	187	1,080	153
Wholesale trade	381	576	244	377	340
Retail trade	3,473	3,062	1,195	2,265	1,596
Transportation and warehousing	598	553	69	526	224
Information	200	136	73	127	109
Finance and insurance	478	534	212	295	314
Real estate and rental and leasing	1,525	604	140	352	858
Professional and technical services	1,453	1,237	269	441	593
Management of companies and enterprises	110	151	6	117	63
Administrative and waste services	2,398	1,138	110	472	998
Educational services	256	233	103	22	214
Health care and social assistance	2,652	2,816	422	2,110	1,104
Arts, entertainment, and recreation	2,608	559	361	137	1,237
Accommodation and food services	6,048	2,732	1,309	1,315	1,978
Other services, except public administration	1,017	674	206	389	435
Total Government	3,257	5,057	2,122	3,104	2,390

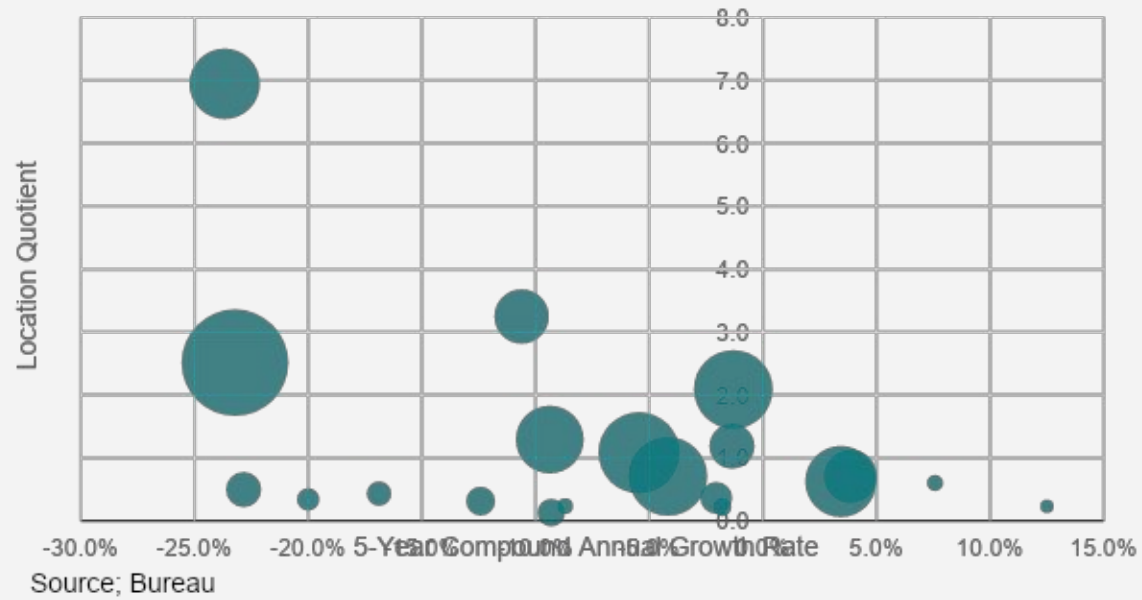
The location quotient (LQ) shows the relative concentration of employment compared to the national average. An LQ greater than 1 indicates a greater level of activity compared to the nation. Eagle County has 6.9 times the activity in Arts, Entertainment, and Recreation; 2.5 times the activity in Accommodation and Food Services; and 3.2 times the activity in Real Estate, Rental and Leasing. This is consistently greater than all but Routt County.

Industry	Eagle (Eagle)	Garfield (Glenwood Springs, Carbondale)	Chaffee (Buena Vista, Salida)	Montrose (Montrose)	Routt (Steamboat Springs)	Colorado
Total Covered	1.0	1.0	1.0	1.0	1.0	1.0
Total Private	1.1	0.9	0.9	0.9	1.0	1.0
Agriculture, forestry, fishing and hunting	0.2	0.8	NA	2.0	NA	0.9
Mining, quarrying, and oil and gas extraction	0.2	8.3	NA	0.4	3.2	2.1
Utilities	0.6	2.2	1.8	3.3	2.5	0.8
Construction	2.1	2.4	1.7	1.7	1.8	1.3
Manufacturing	0.1	0.2	0.3	0.8	0.1	0.6
Wholesale trade	0.3	0.6	NA	0.6	0.6	1.0
Retail trade	1.1	1.2	1.4	1.4	1.0	0.9
Transportation and warehousing	0.5	0.6	0.2	0.9	0.4	0.9
Information	0.3	0.3	0.5	0.4	0.4	1.5
Finance and insurance	0.4	0.5	0.6	0.5	0.5	1.0
Real estate and rental and leasing	3.2	1.6	1.2	1.5	3.8	1.3
Professional and technical services	0.7	0.7	NA	0.4	0.6	1.4
Management of companies and enterprises	0.2	0.4	NA	0.5	0.3	1.0
Administrative and waste services	1.3	0.7	0.2	0.5	1.1	0.9
Educational services	0.4	0.5	0.7	0.1	0.8	0.7
Health care and social assistance	0.6	0.8	0.4	1.0	0.5	0.8
Arts, entertainment, and recreation	6.9	1.8	3.7	0.7	6.9	1.4
Accommodation and food services	2.5	1.4	2.1	1.1	1.7	1.1
Other services, except public administration	1.2	1.0	0.9	NA	1.1	1.0
Total Government	0.7	1.3	1.8	1.4	1.1	

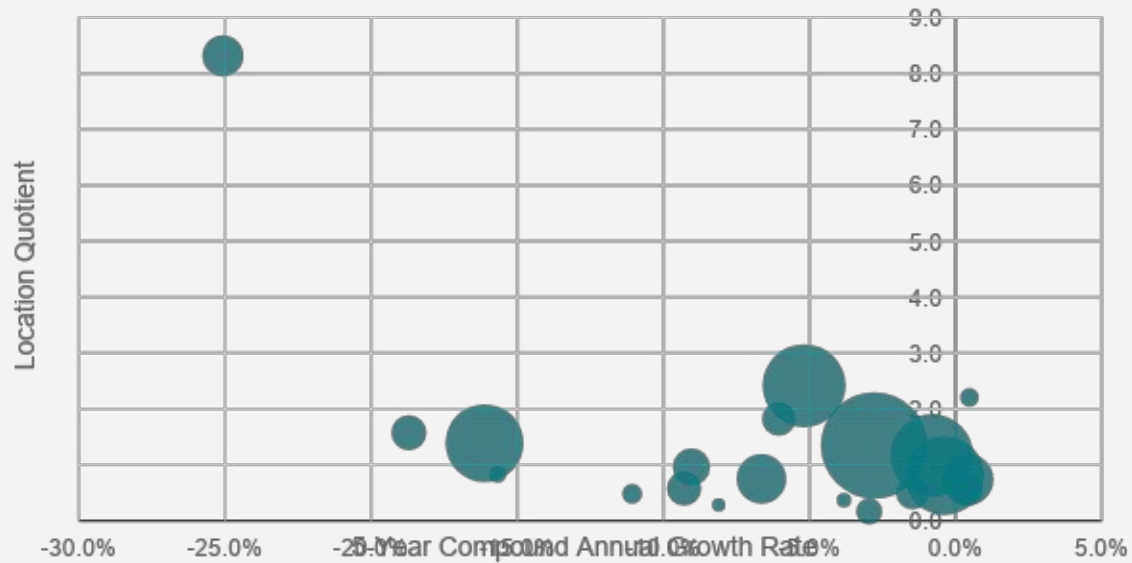
The 2020 5-year compound annual growth rate for employment was adversely impacted by the pandemic recession. The 2021 data will soon be released, showing the rebound across most sectors of the economy. The recession's impact on the tourism industry is notable with negative growth rates in the Arts, Entertainment, and Recreation and the Accommodation and Food Services sectors.

Industry	Eagle (Eagle)	Garfield (Glenwood Springs, Carbondale)	Chaffee (Buena Vista, Salida)	Montrose (Montrose)	Routt (Steamboat Springs)	Colorado
Total Covered	-0.5%	-0.7%	1.5%	1.2%	0.4%	0.9%
Total Private	-0.7%	-1.0%	1.1%	1.4%	-0.6%	0.8%
Agriculture, forestry, fishing and hunting	7.0%	-3.1%	NA	1.6%	6.4%	5.1%
Mining, quarrying, and oil and gas extraction	6.2%	-11.5%	NA	-20.4%	-14.1%	-6.7%
Utilities	-0.3%	-5.8%	1.5%	-2.2%	0.1%	0.2%
Construction	2.1%	0.0%	4.8%	5.8%	5.0%	3.3%
Manufacturing	-1.2%	-1.4%	-1.9%	-3.1%	5.7%	0.8%
Wholesale trade	-6.6%	-4.1%	NA	-2.0%	1.7%	0.8%
Retail trade	0.3%	0.0%	3.1%	1.7%	0.7%	-0.1%
Transportation and warehousing	-0.2%	-5.4%	-2.2%	3.0%	-9.1%	5.6%
Information	-4.6%	-0.9%	-4.1%	-4.9%	-4.5%	1.2%
Finance and insurance	0.5%	0.5%	0.8%	-0.7%	0.8%	1.3%
Real estate and rental and leasing	-1.4%	-2.9%	0.6%	3.8%	6.3%	2.1%
Professional and technical services	5.0%	2.8%	2.8%	0.5%	-4.0%	3.2%
Management of companies and enterprises	5.3%	0.1%	NA	3.0%	2.4%	2.8%
Administrative and waste services	4.9%	-1.1%	NA	2.0%	8.5%	-1.1%
Educational services	5.4%	-1.5%	15.6%	-1.7%	4.7%	0.3%
Health care and social assistance	5.5%	2.0%	-3.1%	2.9%	-3.1%	1.6%
Arts, entertainment, and recreation	-6.6%	6.2%	-6.8%	-2.3%	-2.2%	-2.6%
Accommodation and food services	-4.4%	-1.7%	1.0%	1.8%	-2.7%	-2.8%
Other services, except public administration	1.5%	-1.5%	7.9%	1.8%	-9.4%	0.4%
Total Government	1.1%	0.3%	2.5%	0.4%	6.1%	1.2%

Eagle County

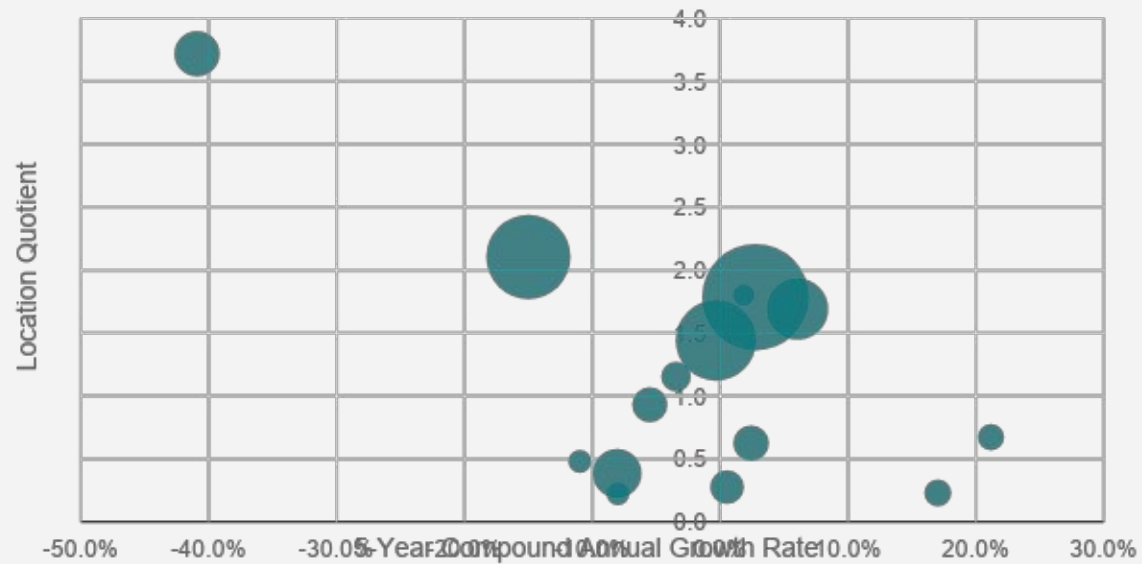


Garfield County



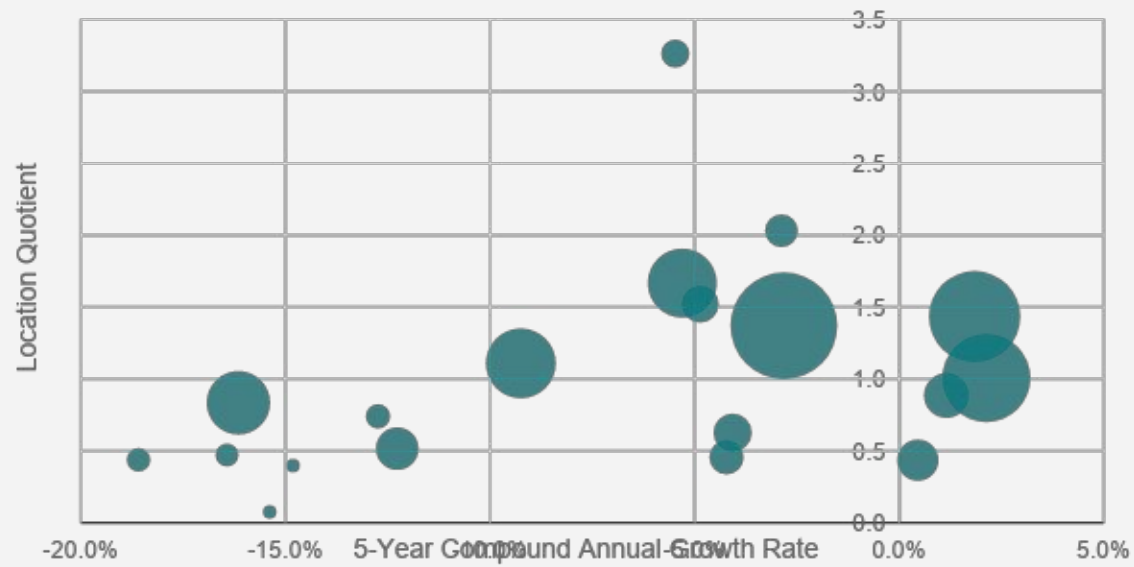
Source: Bureau

Chaffee County



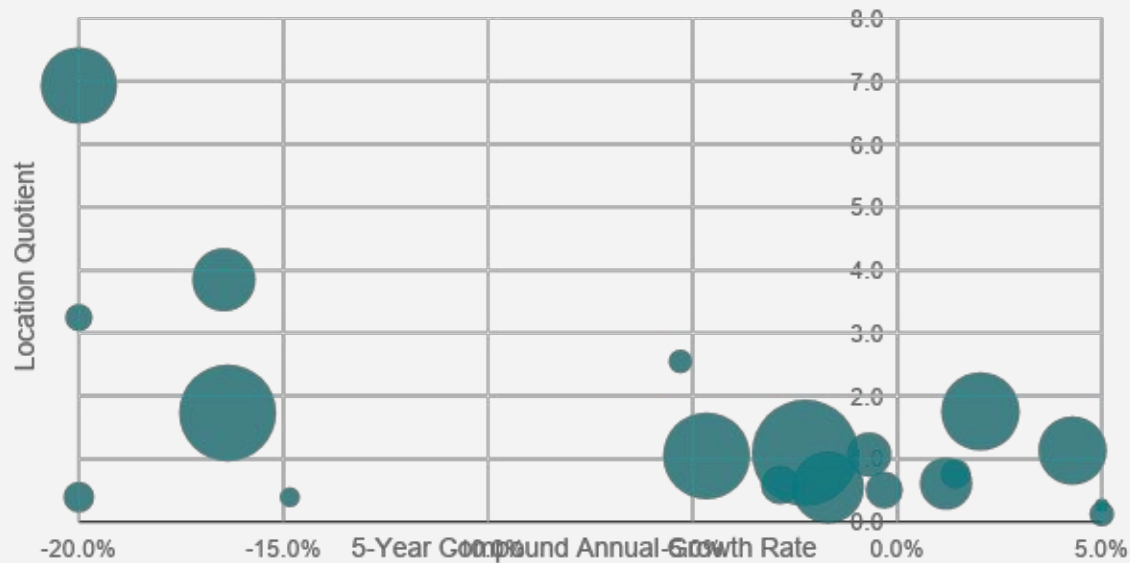
Source: Bureau

Montrose County



Source; Bureau

Routt County



Source: Bureau

Demographics: Race/Ethnicity

	Not of Hispanic Origin	Not of Hispanic Origin	Not of Hispanic Origin	Not of Hispanic Origin	Hispanic Origin	
	Black	White	Asian/Pacific Islander	American Indian	Hispanic	Total
Chaffee County	406	16,757	190	211	1,951	19,515
Eagle County	671	37,551	782	210	16,411	55,624
Garfield County	556	42,145	587	383	18,052	61,723
Routt County	328	22,389	259	83	1,781	24,840
Montrose County	295	32,769	373	373	9,001	42,810

	Not of Hispanic Origin	Not of Hispanic Origin	Not of Hispanic Origin	Not of Hispanic Origin	Hispanic Origin	
	Black	White	Asian/Pacific Islander	American Indian	Hispanic	Total
Chaffee County	2.1%	85.9%	1.0%	1.1%	10.0%	100.0%
Eagle County	1.2%	67.5%	1.4%	0.4%	29.5%	100.0%
Garfield County	0.9%	68.3%	1.0%	0.6%	29.2%	100.0%
Routt County	1.3%	90.1%	1.0%	0.3%	7.2%	100.0%
Montrose County	0.7%	76.5%	0.9%	0.9%	21.0%	100.0%

Demographics: Age

County	0 to 29	30 to 49	50 to 64	65 to 110
Chaffee	5,816	4,598	3,948	5,152
Eagle	20,812	17,183	10,280	7,351
Garfield	23,354	18,164	11,397	8,809
Routt	8,190	7,638	4,676	4,332
Montrose	14,563	9,024	8,531	10,691

County	0 to 29	30 to 49	50 to 64	65 to 110
Chaffee	29.8%	23.6%	20.2%	26.4%
Eagle	37.4%	30.9%	18.5%	13.2%
Garfield	37.8%	29.4%	18.5%	14.3%
Routt	33.0%	30.8%	18.8%	17.4%
Montrose	34.0%	21.1%	19.9%	25.0%



To: Planning & Zoning Commission

From: Carrie McCool, Eagle Contract Planner
Chad Phillips, Director, Community Development

Date: July 5, 2022

Agenda Item: Minor PUD Amendment to change the location of a portion of the 5-foot-wide soft perimeter path File # PUDA22-01
Planning and Zoning Commission Resolution No.58

The property owner, Epoch GCH Hockett Gulch Holdings, LLC submitted an application to amend the Reserve at Hockett Gulch PUD Guide to change the location of a portion of the 5-foot-wide soft perimeter path to the interior of the property along either the east or west side of the Hockett Gulch drainage channel or eliminate the soft path through HD/PUD-3 to accommodate certain comments from Colorado Parks and Wildlife.

On June 7, 2022, the Planning and Zoning Commission **conditionally approved** the Reserve at Hockett Gulch Minor PUD Amendment to eliminate the required 5-foot-wide soft perimeter path through HD/PUD-3 finding that eliminating the perimeter soft path through HD/PUD-3 was in compliance with conditions 1-6 of Section 4.11.050 of the Land Use and Development Code and with the Elevate Eagle Comprehensive Plan.

The attached Resolution represents the Commission's findings and action taken at the said public hearing for the Commission's final approval.

ATTACHMENT:

Planning and Zoning Commission Resolution No. 58

**TOWN OF EAGLE, COLORADO
PLANNING AND ZONING COMMISSION
RESOLUTION NO. 58
(Series of 2022)**

A RESOLUTION APPROVING THE MINOR AMENDMENT TO THE PLANNED UNIT
DEVELOPMENT FOR RESERVE AT HOCKETT GULCH WITH CONDITIONS

WHEREAS, Epoch GCH Hockett Gulch Holding LLC ("Owner") owns the real property described in **Exhibit A**, attached hereto and incorporated herein by this reference (the "Property");

WHEREAS, Owner filed an Application for a Minor Amendment to the Planned Unit Development ("PUD") for Reserve at Hockett Gulch (the "Application");

WHEREAS, on June 7, 2022, the Planning Commission held a properly-noticed public hearing on the Application, at which the Applicant and members of the public were provided an opportunity to comment on the Application.

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING AND ZONING COMMISSION OF EAGLE, COLORADO AS FOLLOWS:

Section 1. Findings. The Planning and Zoning Commission finds as follows:

- a. The Application complies with all applicable provisions of the Eagle Municipal Code, and approval of the Application with the conditions outlined in Section 2 is in the best interest of the public health, safety, and welfare.
- b. Vehicle collisions with wildlife occurring on Grand Avenue pose a significant public safety issue for the Town, area residents, and visitors as well as being detrimental to the wildlife population;
- c. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 is the most consistent with the efficient development and preservation of the entire PUD;
- d. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 would not have an adverse effect on the land surrounding the Property;
- e. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 would not confer a special benefit upon any person;
- f. The elimination of the 5-foot-wide soft path through HD/PUD-3 would not detract from other uses approved in the PUD;

g. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 does not contain an open space plan that differs substantially in quantity or quality from that originally approved;

h. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 does not contain any changes to street and utilities for the remainder of the PUD; and

i. The elimination of the 5-foot-wide soft path trail through HD/PUD-3 is in conformance with Section 4.11 of the Code and with the Elevate Eagle Comprehensive Plan.

Section 2. Approval. Based on the foregoing findings, the Planning and Zoning Commission hereby approves the Application and the Minor Amendment and authorizes issuance of a Development Permit, subject to the following conditions:

a. The Applicant shall make minor technical corrections to the Application documents as directed by Town staff; and

b. The Applicant shall eliminate the 5-foot-wide soft path trail through HD/PUD-3.

INTRODUCED, READ, PASSED AND ADOPTED ON JULY 5, 2022.

TOWN OF EAGLE PLANNING AND ZONING
COMMISSION

Matthew Hood, Chair

ATTEST:

Nikki Davis, Administrative Technician II

EXHIBIT A

Legal Description

HISTORIC LEGAL DESCRIPTION:

A TRACT OF LAND DESIGNATED THE "MONTGOMERY TRACT", LOCATED IN TRACTS 49 AND 50 OF SECTIONS 5 AND 6 RESPECTIVELY IN TOWNSHIP 5 SOUTH, RANGE 84 WEST, 6TH PRINCIPAL MERIDIAN IN THE COUNTY OF EAGLE, STATE OF COLORADO. SAID TRACTS 49 AND 50, DESIGNATED UNDER THE INDEPENDENT RESURVEY OF TOWNSHIP 5 SOUTH, RANGE 84 WEST, 6TH PRINCIPAL MERIDIAN APPROVED BY THE SURVEYOR GENERAL'S OFFICE IN DENVER, COLORADO ON JUNE 20, 1922, WERE ORIGINALLY DESCRIBED AS THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER (NW1/4SW1/4) AND THE SOUTH HALF OF THE SOUTHWEST QUARTER (S1/2SW1/4) OF SECTION 5, AND THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER (NE1/4SE1/4) OF SECTION 6 RESPECTIVELY OF TOWNSHIP 5 SOUTH, RANGE 84 WEST, 6TH PRINCIPAL MERIDIAN, COUNTY OF EAGLE, STATE OF COLORADO, SAID MONTGOMERY TRACT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT CORNER NO. 1, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR A FENCE LINE AND AN IRRIGATION DITCH, CAP IS MARKED "CORNER NO. 1 MONTGOMERY TRACT" FROM WHICH CORNER NO. 1 OF SAID TRACT 49 IN SECTION 5 OF TOWNSHIP 5 SOUTH, RANGE 84 WEST, 6TH PRINCIPAL MERIDIAN BEARS NORTH 47 DEGREES 02 MINUTES 40 SECONDS EAST 586.87 FEET DISTANT; THENCE NORTH 72 DEGREES 59 MINUTES 30 SECONDS WEST 730.29 FEET TO CORNER NO. 2, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR THE SOUTHERLY RIGHT OF WAY FENCE LINE OF U.S. HIGHWAY NO. 6 & 24, AS IT NOW EXISTS, CAP MARKED "CORNER NO. 2 MONTGOMERY TRACT", THENCE SOUTH 84 DEGREES 01 MINUTES 40 SECONDS WEST 937.90 FEET TO CORNER NO. 3, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR A FENCE JUNCTION WITH THE SOUTHERLY RIGHT OF WAY FENCE LINE OF U.S. HIGHWAY NO. 6 & 24, AS IT NOW EXISTS, CAP IS MARKED "CORNER NO. 3 MONTGOMERY TRACT", THENCE SOUTH 40 DEGREES 59 MINUTES 30 SECONDS EAST 807.75 FEET TO CORNER NO. 4, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR A FENCE LINE, CAP IS MARKED "CORNER NO. 4 MONTGOMERY TRACT"; THENCE SOUTH 74 DEGREES 47 MINUTES 20 SECONDS EAST 1527.39 FEET TO CORNER NO. 5, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR THE JUNCTION OF TWO FENCE LINES, CAP IS MARKED "CORNER NO. 5 MONTGOMERY TRACT", THENCE NORTH 02 DEGREES 38 MINUTES 10 SECONDS EAST 597.03 FEET TO CORNER NO. 6, AN IRON PIPE WITH A BRAZED CAP SET IN CONCRETE NEAR A FENCE LINE AND IRRIGATION DITCH, CAP IS MARKED "CORNER NO. 6 MONTGOMERY TRACT"; THENCE NORTH 53 DEGREES 19 MINUTES WEST 498.85 FEET TO CORNER NO. 1, THE PLACE OF BEGINNING, COUNTY OF EAGLE, STATE OF COLORADO.

SURVEYED LEGAL DESCRIPTION:

A TRACT OF LAND DESIGNATED THE MONTGOMERY TRACT LOCATED IN TRACTS 49 AND 50 OF SECTIONS 5 AND 6, TOWNSHIP 5 SOUTH, RANGE 84 WEST OF THE SIXTH PRINCIPAL MERIDIAN IN THE COUNTY OF EAGLE AND STATE OF COLORADO AS DESCRIBED IN THE DEED RECORDED IN BOOK 440 AT PAGE [486](#), ALL BEARINGS SHOWN HEREON BEING BASED ON A BEARING OF N0°33'00"W BETWEEN STREET MONUMENTS FOUND AT 5TH AND BROADWAY AND 2ND AND BROADWAY BOTH BEING 2" BRASS MONUMENTS IN CAST IRON MONUMENT BOXES, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING A CORNER NO. 1 OF THE MONTGOMERY TRACT FROM WHICH A 1-1/2" ALUMINUM CAP WITNESS CORNER, PLS 23089, ON A 5/8" REBAR BEARS N72°59'13"W 60 FEET AND ALSO FROM WHICH CORNER NO. 1 OF TRACT 49, BEING A FOUND 3" ALUMINUM CAP ON ALUMINUM PIPE, PLS NO. 26967 BEARS N47°02'40"E 586.67 FEET; THENCE N72°59'13"W 730.00 FEET TO THE SOUTHERLY RIGHT OF WAY OF U.S. HIGHWAY 6 AND 24, TO A FOUND 2" ALUMINUM CAP ON A NO. 6 REBAR, PLS NO. 23089; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING FOUR COURSES:

1. 356.57 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT WITH A RADIUS OF 1529.01 FEET, A TANGENT OF 179.01 FEET, A DELTA ANGLE OF 13°21'42", AND A CHORD THAT BEARS S74°36'16"W 355.77 FEET;

2. N8°42'53"W 49.89 FEET;

3. 104.29 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT WITH A RADIUS OF 1479.08 FEET, A TANGENT OF 52.17 FEET, A DELTA ANGLE OF 4°02'24" AND A CHORD THAT BEARS S83°18'19"W 14.27 FEET;

4. S85°19'31"W 481.28 FEET;

THENCE DEPARTING THE RIGHT OF WAY OF U.S. HIGHWAY 6 AND 24 S40°59'23"E 1.63 FEET TO A FOUND BRAZED CAP, STAMPED "MONTGOMERY TRACT"; THENCE S40°59'23"E 808.14 FEET TO A FOUND 2" BRAZED CAP, STAMPED "MONTGOMERY TRACT"; THENCE S74°48'55"E 1526.35 FEET TO A POINT ON THE TRACT LINE BETWEEN CORNER NO. 1 AND CORNER NO. 6 OF TRACT 49, FROM WHICH CORNER NO. 6, A 3" ALUMINUM CAP ON AN ALUMINUM PIPE, PLS NO. 23089 BEARS S02°33'18"W 14.67 FEET; THENCE ALONG THE 6-1 LINE OF TRACT 49 N02°33'18"E 597.31 FEET; THENCE DEPARTING SAID TRACT LINE N53°18'48"W 497.53 FEET TO THE POINT OF BEGINNING.

SURVEYED LEGAL DESCRIPTION PREPARED BY:

JAMES S. KUNKEL, PE/PLS #23089
FOR AND ON BEHALF OF INTERMOUNTAIN ENGINEERING.
JOB NO. 150050 DATED AUGUST 6, 2015



**STAFF REPORT AND
CERTIFICATE OF RECOMMENDATION**

TO: Planning & Zoning Commission

FROM: Community Development Department

DATE: July 5, 2022

PROJECT: 435 Eby Creek Apartments

REQUEST: A Major Development Permit to construct a 30-unit apartment building on 2.804 acres. There are six design variances associated with this request.

FILE NUMBER: DR22-03

APPLICANT: Jeffrey P Manley AIA of Martin Manley Architects on behalf of Rick Patriacca

LOCATION: 435 Eby Creek Road

CODE: Chapter 4.04. Zoning
Chapter 4.06: Development Review
Chapter 4.07: Development Standards
Chapter 4.08: Sign Code
Chapter 4.13: Subdivision Design, Improvements and Dedications
Chapter 4.14: Assurance of Adequate Public Facilities

ZONING: Residential Multi-Family (RMF) Zone District

EXHIBITS:

- A: Application and Project Narrative
- B: Aerial Map
- C: Site Photos
- D: 3D Renderings
- E: Architectural Plans
- F: Building Height
- G: Civil Plans
- H: Lighting Plan
- I: Drainage Memo
- J: Soils Study dated June 2007
- K: Traffic Impact Analysis dated April 13, 2022
- L: Staff Determination of Adequacy and Public Facilities Impact Report
- M: Public Comment
- N: Referral Agency Comments and Responses ([LINK](#))
- O: Water Supply and Metering Sheets ([LINK](#))
- P: Ability to Serve Letters from Utility Providers ([LINK](#))

PUBLIC COMMENT:

Staff has received 1 letter of public comment as of July 1, 2022. Letters received after this time will be gathered and entered into the public record at the hearing.

STAFF:

Peyton Heitzman, Planner – peyton.heizman@townofeagle.org

INTRODUCTION

Jeffrey P Manley AIA (Applicant) is requesting a Major Development Permit to construct a 30-unit apartment building at 435 Eby Creek Road (Property). The building is four levels with covered parking on the first level and three levels with residential units. The apartment building will have 6 one-bedroom and 24 two-bedroom units.

There are six design variances included with this request. These variances include:

- 1) A reduction in the front landscape buffer.
- 2) Landscaping in the parking area to constitute less than 10% of the total un-enclosed parking area.
- 3) Parking within the front yard setback.
- 4) Intersection of the access way and public street within 15 feet of the side lot line.
- 5) Reduced planting strip between sidewalk and road curb and gutter.
- 6) Slopes steeper than 2:1.



The 2.8-acre Property is located north of I-70 and west of Eby Creek Road. The Property is within Phase II of the Perry Subdivision which was platted in 1997. Through the platting process, the western portion of the lot was designated as open space. The open space designation can be found on the architectural set of plans. The topography of the Property is a steep hillside on the western end that becomes less steep towards the eastern end of the property where there is relatively flat, buildable land. On January 25, 2022, the Property was rezoned from Commercial General (CG) to Residential Multi-Family (RMF).

To the south of the Property is another residential apartment building. To the west is the Eby Creek Mesa Subdivision in unincorporated Eagle County. Eby Creek Mesa open space is to the north and to the east is Eby Creek Road and various commercial uses along Market Street.

ISSUES FOR DISCUSSION

1. Is the sidewalk connection sufficient to meet an Elevate Eagle policy requiring recreational amenities for residents?
2. Should the proposal be subject to the requirements of the North Interchange Area?
3. What kind of consistency in retaining wall systems in the Planning Commission comfortable with? Should the visible portions of the retaining wall be made of boulders?
4. Should more plant variety be provided for in the landscape plan (conifer and deciduous trees)?
5. Should additional landscaping be added to the rear of the building to better buffer the building from wildlife habitat and movement corridors?
6. What considerations should be given to the three (3) Local Employee Residency Program (LERP) units due to the lack of TOE guidelines for rental units?

STANDARDS FOR DEVELOPMENT PERMIT (Section 4.06.020.)

STANDARD #1: *The proposed development complies with the Town's regulations, goals and policies.*

Town of Eagle Regulations

Staff Comment: Staff reviewed the development application against the relevant Town regulations in Title 4 of the Municipal Code. The standards are listed first, followed by staff's analysis. Applicable chapters from the Municipal Code include:

- 1) Chapter 4.04: Zoning
- 2) Chapter 4.06: Development Review
- 3) Chapter 4.07: Development Standards
- 4) Chapter 4.08: Sign Code
- 5) Chapter 4.13: Subdivision Design, Improvements and Dedications
- 6) Chapter 4.14: Assurance of Adequate Public Facilities

CHAPTER 4.04. – ZONING

Schedule of requirements in residential districts (Section 4.04.080.)

RMF ZONE DISTRICT REQUIREMENTS								
	MLA	MLA/DU	MFY	MSY	MRY	MBH	MLC*	MFA
REQUIRED	6,000 sf	MF 4,000 sf	25'	Greater of 12.5' or ½ bldg height	20'	35'	Building 50%; all other impervious 20%	150%
ACTUAL	122,142 sf	4,071 sf/DU (30 units total)	>25'	>17'6"	>20'	>35	Building 10%; all other 17%	29.5%
KEY:	MLA = Minimum lot area. MLA/DU = Minimum lot area per dwelling unit. MFY = Minimum front yard.			MSY = Minimum side yard. MRY = Minimum rear yard. MBH = Maximum building height. MLC = Maximum lot coverage. MFA = Maximum floor area.				

See Site Plan on Sheet A1.1 of Architectural Plans.

Building height (Section 4.04.090 and Section 4.07.040)

The maximum height allowed is 35 feet to any point on the building. On a gable, hip, or gambrel roof, any selected reference point on the roof surface that sits directly above the interior of the building must be measured from existing grade to the average distance between the eaves and the apex of the roof. If the selected reference point is outside of the building footprint (such as eaves and overhangs), then the height measurement is from the existing or proposed finished grade, whichever is more restrictive.

Staff Comment: Staff and the Applicant have two interpretations as to how the building should be measured. The Code states that the building height is measured from existing grade to the average distance between the eaves and apex of the roof when the selected reference point is a point on the roof surface that sits directly above the interior of the building. Once that midpoint on the roof surface (average distance between eaves and apex) is determined, as shown in attachment F: Building Height, that midpoint acts as a plane from which the 35' is measured down from. This measurement leads the building to be just over 2' too high on the western portion of the building.

The Applicant's interpretation is that the midpoint sets the height restriction and from the midpoint to the eaves, the roof is required to be 35' or less from existing grade. If the Planning Commission agrees with staff's interpretation then the applicant will request a zoning variance in a subsequent application.

Minimum Use Standards (Section 4.04.100.J.4)

No dust, noise, odor, fumes, glare or vibration shall be projected beyond the lot.

Staff Comment: Staff does not anticipate the residential use generating dust, noise, odor, fumes, glare or vibration that will project beyond the lot.

Inclusionary residential requirements for local employee residency (Section 4.04.110.)

Applicability. Local employee residences shall be required as a condition of approval for all residential development including residential annexations, residential planned unit developments (PUDs) (Chapter 4.11), residential

subdivisions (Chapter 4.12), and multifamily residential development permits (Chapter 4.06), as well as special use permits for high density multifamily dwellings in the Residential Multi-Family (RMF) and Central Business District (CBD) Zone Districts (Section 4.05.010).

All residential annexations, new residential subdivisions, new planned unit developments containing residential units, development permits for new multifamily residential developments and special use permits for high density multifamily dwellings, approved after the effective date of the ordinance from which this section is derived, containing ten or more residential units, shall set aside at least ten percent of those units as local employee residences as defined in this section and the Town's local employee residency requirements and guidelines.

Staff Comment: The project is a multifamily residential development with over 10 units, qualifying for the local employee residency program (LERP). Three of the 30 units are subject to the LERP per Section 4.04.110.E.1.

The Applicant is proposing to rent the units in the apartment building. When considering recent for-rent developments (Broadway Station, 700 Chambers Subdivision, The House), the Town has no examples where LERP requirements were applied. While documentation on this decision has been difficult to find, staff believes previous staff chose not to apply LERP requirements to rental units as a result of a Colorado State Court decision in 2000, *Town of Telluride v. Lot Thirty Four Venture (Telluride Case)*. The Court determined that the application of inclusionary housing programs to rental units was a form of rent control. Colorado State Law prohibits local government from imposing rent control policies. In 2021, the state legislature approved HB21-1117 that allows local governments to adopt affordable housing policies that would allow for restricted rents ([LINK](#)). The Municipal Code's LERP requirements do not exempt rental units from the program. The Town Attorney has reviewed the language and agreed that LERP applies to rental projects. The challenge with applying LERP to this project is that the Town is missing guidelines that outline how the program should be administered. Guidelines exist for for-sale units but were never created for rental units. Here, we will include the LERP requirements in the Development Agreement, and for future rental projects, we will develop general LERP guidelines.

Staff recommends that a condition of approval be added, requiring the Applicant provide a LERP Plan as part of the Development Agreement to be approved by the Town Council.

CHAPTER 4.06. - DEVELOPMENT REVIEW

Staff Comment: This project requires the installation of two new fire hydrants. The extension of municipal facilities triggers the need for a Major Development Permit. As a Major Development Permit, this project will go before the Planning Commission for recommendation and the final decision will be made by the Town Council. The Major Development Permit review process requires a site review by the Planning Commission. This site review took place on June 21, 2022. Questions brought up during the site visit included:

- Grading
- Drainage
- A retention wall to the rear of the building
- The lot size
- Access to the lot
- Topography
- Design Variances
- A sidewalk through the Property

Per the Code, the Commissioners who attended the site visit may make written (or verbal) recommendations to the full Planning Commission regarding compliance of the proposal with the Town's regulations, goals, policies and plans. These recommendations will be shared at the July 5, 2022 meeting.

CHAPTER 4.07. - DEVELOPMENT STANDARDS

Lighting Standards (Section 4.07.010.)

Staff Comment: Building and parking area lighting can be found in the lighting plan. The footcandle calculations indicate there will not be light trespass beyond the Property lines. Façade lighting is prohibited in residential multifamily areas according to Section 4.07.010; however, the use of porch lights and egress lighting is encouraged in the lighting standards. The Applicant is proposing nine light fixtures on the building for egress lighting. The

mounting height of these fixtures is 10' and will operate from dusk to 11 pm in conformance with the lighting standards. The parking lot lighting will not exceed the maximum height of 15' and will operate from dusk to dawn.

Landscape Standards - Section 4.07.020.

No more than 80 percent of the area of any development shall be covered with impervious materials; a minimum of 20 percent of each development shall be covered with landscape materials, as provided below.

Landscape materials shall include live plant materials, including grass, ground covers, trees, shrubs, and flower beds. The following landscape materials may cover a maximum of 30 percent of the required landscape area: walks, decks, terraces, water features and decorative rock. No artificial trees, shrubs, turf, or plants may be used as landscape material.

Staff Comment: The landscape plan is available on Sheet A1.2. and shows that 89,096 sf or 73% of lot will be landscaped, exceeding the 20% minimum. The majority of the landscape material is live plant materials with an exception of 1,000 sf that will be mulch for trees and shrubs.

Front Street Buffer - Section 4.07.020.B.3.a.

	<u>REQUIRED</u>	<u>ACTUAL</u>
Materials	Deciduous, conifer, and ornamental trees, shrubs, perennials, bulbs, and seed or sodded lawn.	Ornamental trees, shrubs, perennial ground covers, and natural grass consistent with surrounding landscape. Deciduous and conifer trees not included.
Quantities	Flexible. Combination with differing heights and densities. Shall not compete with and overpower existing streetscape planting in public ROW.	Plan shows differing heights and densities with trees and shrubs. Plan does not appear to overpower the existing streetscape.
Landscape buffer	5% average of two side property lines.	This calculates to 17.17' from property line. Standard is not met.
Irrigation	Irrigated using an underground automatic system	Permanent underground drip irrigation along the front yard.
Deciduous tree spacing and height	Spaced 30' on center. Species appropriate spaces or evenly along roadways. Minimum 6' in height.	None provided in plans.
Ornamental tree spacing and caliper	Spaced 15' on center (except Aspens can be less) Species appropriate spaces or evenly along roadways. 2-inch caliper	The Fruitless Flowering Crabapples are spaced 15' on center. Spaced fairly evenly along roadway Quaking Aspen 2-2.5" caliper Fruitless Flowering Crabapples 2" caliper
Shrubs and perennials	Space to achieve massing at mature size.	Several along front yard which appear to achieve massing.

Staff Comment: Staff believes the application meets all the requirements for the front yard buffer with an exception of the landscape buffer width. This is a requested design variance. Analysis of all design variances is provided later in the staff report.

Ground Coverage

Groundcovers, including sod and seed, shall be planted at a rate to achieve full coverage and mowed to a maximum height of six inches. All plant beds shall be mulched to an appropriate depth to retain moisture and reduce dust. Mulch shall be organic; rock and gravel mulch is not allowed. No more than two driveway cuts per lot, each a

maximum of 35 feet wide, shall be allowed unless specifically approved by the Planning Commission during the development review.

Staff Comment: The landscape plan shows full ground coverage. The proposed mulch is an organic material made of shredded bark. The development proposes one driveway cut that is 21.5' wide and under the 35' maximum.

Boundary buffer.

The boundaries of every development shall be landscaped to adequately buffer potential incompatibility between adjacent land uses. Screening of parking lots from adjacent properties shall be required. Screening must be provided to eliminate headlight glare from lot onto adjacent property and to screen views into parking lots. Planting buffers along the edge(s) of parking lots must be a minimum of five feet wide or a combination of fencing and a two-foot wide buffer may be used.

Staff Comment: There are several large, mature trees that buffer the building from the adjacent property to the south. The landscape plan notes the preservation of these mature trees will be considered if practical. The Applicant is also proposing a variety of shrubs and trees along the southern end of the parking lot as a buffer between the two parking lots. This landscape buffer is greater than the five-foot minimum. Additionally, the project sits on a hill above the adjacent property to the south, further separating the two uses. Staff believes the two properties are sufficiently buffered and no incompatibility is anticipated.

Drainage easements.

All drainage easements shall be seeded or sodded with grass or other ground cover and shall be maintained in a manner that promotes proper drainage in conformance with the drainage plan for the subdivision in which the subject lot lies.

Staff Comment: There is a 15' Drainage and Utility Easement that runs along the north, east and western perimeter of the Property. The drainage easement was created with the Perry Subdivision, Phase II Final Plat and will be maintained through this development permit. The landscape plan shows all possibly disturbed easements will be re-seeded.

Parking area landscaping - Section 4.07.020. and Section 4.07.080.

In parking areas with ten or more parking spaces, landscaped islands or peninsulas shall be used to reduce the visual impact and assist in defining on-site traffic movement. Such landscaped areas shall be curbed to prevent vehicles from intruding on them. They shall be included in the total landscape requirements of this section and shall constitute at least ten percent of the total un-enclosed parking area, in conformance with Section 4.07.140.

For parking lots with ten or more parking spaces, one deciduous shade tree shall be required to be planted in the interior of the lot for every ten parking stalls. All required shade trees shall be located within curbed, planted medians and/or islands to provide spatial definition and shade within paved areas. All parking lots adjacent to primary and secondary streets shall be screened using plant material and/or fencing.

Staff Comment: The parking area includes landscaped islands (or peninsulas) and proposes no more than 10 contiguous parking stalls at a time. The parking lot is designed with curb and gutter (see Sheet No. C3). Less than ten percent of the total unenclosed parking area is landscape. This is a design variance request.

The landscape plan shows deciduous shade trees within all parking lot islands and peninsulas. The landscape plan shows plantings along the east end of the parking lot, buffering Eby Creek Road.

Recommended Plant List

Staff Comment: Section 4.07.020.D. of the Municipal Code provides a recommended plant list. The Landscape Plan proposes the use of Fruitless Flowering Crabapple and Quaking Aspen trees, both included on this list. The shrubs proposed on the landscape plan include Spirea, Dwarf Lilac, Cotoneaster, and Serviceberries. The Applicant has shared that these shrubs, while not on the Town's list, range from low water use to low-medium water use.

General Architectural Standards - Section 4.07.040.

Building mass, form, length, and height shall be designed to provide variety and visual interest, maintaining a scale appropriate to surroundings.

Staff Comment: The Code does not define or provide an objective measurement of visual interest. The building appears to provide a variety of mass, form, length, and height that is in scale with the surrounding area. To the south is 85 Pond Road that provides a large apartment complex of comparable scale.

Building styles that are traditionally used within the Town and in rural settings (such as two-story, false fronts and ranch buildings) shall be used as examples for new construction and renovations. Appropriate styles and form vary within the Town; refer to specific area design standards for appropriate building types. Buildings that are evocative of other regions, such as adobe buildings, are inappropriate.

Staff Comment: See staff review of North Interchange Area below.

The front facade of buildings shall orient towards the street; the front building facade containing the primary entry way shall parallel the street.

Staff Comment: The front façade orients towards Eby Creek Road. The primary entry ways (there are two) are generally parallel to the street.

Architectural detail.

Building entrances shall be visible and accessible from the pedestrian right-of-way along the building's primary street.

Staff Comment: Building entrances will be visible from Eby Creek Road.

Building materials should be sympathetic and harmonious with the natural setting of Eagle. Traditional materials used in construction of buildings in rural mountain communities are wood, stone, stucco, and brick masonry. A variety of materials should be employed within the building facade. Stone or masonry delineating the building foundation is encouraged. Screw down metal roofs are permitted.

Staff Comment: The Applicant is proposing a variety of materials for the building façade including stucco, a composite wood siding, and metal. Asphalt shingles are proposed for the roof.

Facade and roof colors shall have subtle, neutral, or earth tone colors. Muted colors are encouraged. The use of high intensity colors, metallic colors, black, or fluorescent colors is prohibited.

Staff Comment: The colors for each individual material can be found on Sheets A.0 and A3.1. Staff believes the proposed colors are subtle and earth toned.

Building trim and accent areas may feature brighter, complementing colors, including primary colors, but plastic materials and neon tubing is unacceptable for building trim or accent areas. Plastic light raceways are prohibited.

Staff Comment: The Applicant is proposing dark bronze window trim and graphite timbers, trim and fascia (Sheets A.0 and A3.1). Staff believes the proposed trim and accent areas are complementary colors and comply with this standard.

Plastics. Major components, including roofs, walls, fascia and exterior trim of a principal structure shall not be of plastic. Plastic may be allowed for smaller components such as skylights, outdoor seating and similar items. The use of plastics shall be discouraged unless it is demonstrated that the proposed material is the best alternative for the particular component.

Staff Comment: Plastic is not a proposed material for the structure.

Underground utility connection is encouraged. Where the connection meets the building, risers, utility meters, panel boxes, etc., are encouraged to be covered with the same or compatible material as the siding material unless expressly prohibited by utility company regulations.

Staff Comment: The Applicant has noted that utility panels & meters will be located within the covered parking area with limited visibility from outside the structure.

Areas for trash receptacles shall be designed so that the receptacle, as much as possible, cannot be viewed from the street or yard. Access to the receptacles must be provided to allow easy ingress and egress by trash hauling vehicles. Dumpsters must be placed on concrete pads.

All mechanical equipment (either on roofs or at ground level), service areas, storage areas, loading docks, and trash receptacles shall be screened from public view.

Staff Comment: The trash receptacles will be enclosed and screened from public view. The plans show easy ingress and egress for trash hauling vehicles. Sheet A1.1 shows that the dumpster will be placed on concrete pads.

Sheet A3.2 shows that mechanical/condensing units are located to the rear of the building and shielded from public view.

North Interchange Area - Section 4.07.080.

Staff Comment: Under general provisions of the North Interchange Area the Code states that commercially zoned land is applicable to the standards within. The existing language in the Code does not account for residential rezoning. There were no residentially zoned lots north of I-70 until 2018. While the applicability of these standards is not entirely clear, staff has reviewed the application against the standards in this subarea for conformance with the general character of the North Interchange Area. The proposal is generally in conformance with standards in the North Interchange Area with the exception of Section 4.07.080.G.1 requiring a 5' planting strip between the sidewalk and curb/gutter and Section 4.07.080.D.2. that requires slopes be no steeper than 2:1. The Applicant is requesting a design variance for these standards.



Building mass/form/orientation.

Buildings shall be similar in size to those found in a rural mountain community. Traditionally, the largest buildings in the vicinity are those found in ranch complexes. The central form of the buildings is usually simple and rectangular, having secondary gable and shed roofed wings. Porches shall project from the central form and be covered by a separate roof. Roofs that are similar to those of traditional ranch buildings, such as simple gable and shed forms, are appropriate. This incremental add-on approach creates visual interest and scale. Roof pitches, trim, and entrance locations also help to inform and influence the overall aesthetic of a building.

Staff Comment: The building form is rectangular with a gable roof. There are secondary shed roofed wings. The projecting porches are covered by the gable and shed roofed wings serving the entire building. There is simple trim at the windows and the entrance locations that blend in with the overall building design. The roof pitches, building form, material all add to the overall aesthetic of the building.

Provide variation in roof lines and forms. For buildings with a floorplate of from 5,000 square feet to 10,000 square feet, a multiple roof treatment is encouraged; flat roofs are not permitted. Minimum roof pitch to be 5:12 for all buildings less than 10,000 square feet.

Staff Comment: Variation of roof lines and forms are provided. Building footprint is 11,798 square feet. The 5:12 pitch requirement is not applicable.

The siting of any new building should respond to existing site features. Removal of existing native plant material should be limited to areas essential for site development. Excessive excavation of hillsides should not be permitted.

All cut and fill slopes should be stabilized, contoured to blend with existing, undisturbed terrain, and revegetated using plant material similar to that found on undisturbed land in the immediate vicinity. Slopes greater than 2:1 are not permitted.

Staff Comment: The Applicant has proposed a limit of disturbance on the site to limit excavation behind the building. Where excavation is required for construction, the project proposes revegetation with a mix of grasses and fescue seed. As previously noted, the Applicant is requesting a design variance from the 2:1 slope.

Architectural details.

Facades that face public rights-of-way, including the I-70 corridor, shall include variation in the wall plane. Facades that are greater than 100 feet in length shall include spatial definition in the form of wall projections and/or recesses which must have a depth of at least three percent of the length of the facade. Projections and/or recesses must occupy at least 20 percent of the length of the facade. Group items such as windows to create an interesting composition; these type of features provide visual interest to the pedestrian, reduce monolithic appearance, and add local character to development. Facade projections, recesses, windows, and entrances should be integral parts of the building and must not be superficially applied trim, graphics, or paint.

Staff Comment: The building offers variation in the wall plane that exceeds 20%.

Building materials shall be used for all major surfaces that are similar to those employed historically. Segmented, horizontal siding as traditionally seen on wood and wood-clad ranch buildings is appropriate; maximum overlap dimension shall be eight inches. Stone masonry is appropriate when used as a foundation material; however, stone cladding over large portions of a surface is not a documented historical use and is inappropriate. Concrete block must be split-faced and all windows and entrances on such buildings must have added trim. Modular panel materials are not allowed. All facade materials shall have low reflectivity. Pitched roof material shall be wood or asphalt shingles or standing rib seam sheet metal-matte finish.

Staff Comment: The design includes composite wood horizontal siding. Stone cladding and concrete block are not proposed for the building facade. There is trim for all windows and entrances. Sample materials and colors are available on the cover sheet of the architectural set of plans. The project proposes asphalt shingles for the roof.

Landscape/sidewalks/furnishings/screening.

Formal, irrigated landscape treatment shall not abut native, undisturbed ground without edge treatment. Edge transition shall be in the form of a defined grade break, drainage swale, building wall, mulched and planted bed, or pavement.

Staff Comment: The native, undisturbed ground is primarily to the rear of the Property, separated by the retaining wall that wraps behind the building. Per the landscape plan, the ground cover to the front of the building is a blend of native grasses. The trees and shrubs will be mulched.

Retaining walls may be necessary in grade changes and should be concrete with a sandblast finish or keyed brick. Where grade and space allow, boulders may be used. The design and layout of the boulder wall should be such that the base course of the boulders are partly submerged into finish grade. Where appropriate, pockets in-between boulders should be planted to achieve a natural appearance. Retaining wall systems should be consistent from parcel to parcel.

Staff Comment: The retaining wall proposes the use of Redi Rock as a keyed brick system. The nearby parcels use varying retaining wall systems, making consistency from parcel to parcel impossible. The Eagle River Lodge uses boulders and The House uses some boulders for retaining to the front of the property and a shotcrete wall to the rear of the building. The proposed Redi Rock retaining wall has minimal visibility with the exception of an area at the entrance, which will be partially covered by a monument sign. Due to challenges with grading and to minimize disturbance of the land above the grading, the Applicant is proposing the same Redi Rock design throughout the development. The Applicant has shared that the use of boulders north of the building would be more visually intrusive and result in grading challenges and difficulties to properly surface drain water coming down the slope. The proposal sits well above the adjacent property, limiting the ability for visual consistency in retaining walls.

The House



Eagle River Lodge



Parking Standards - Section 4.07.140.

Number of Parking Spaces Required, Size, Materials

Room Type	Spaces Required	# Rooms Planned	Total
1-Bedroom	1.5	6	9
2-Bedroom	2	24	48
1 additional space per 6 du ($30 \div 6 = 5$, rounded up)			5
Total Required:			62
Total Provided (See Sheet A1.1):			62

Staff Comment: The development design meets the minimum parking space requirement. Of the parking provided, 17 spaces are located under the structure and 45 spaces are located in the unenclosed parking lot. The size of the parking stalls throughout the development are 9' X 19' (Sheet C3) and comply with size requirements in Section 4.07.140.D. Asphalt is proposed for the parking surface area, a permitted material under Section 4.07.140.K.a.b.

Location of parking spaces - Section 4.07.140.F.

Off-street parking may be located on any part of the lot occupied by the dwellings or uses for which such parking space is required except that no parking space shall be established in a required front yard setback on any lot containing three or more dwellings. Enclosed underground parking spaces may be located anywhere on the lot.

Staff Comment: Twenty of the non-enclosed parking spaces are within the front yard setback, requiring a design variance.

No parking space shall be located closer than five feet from a window or door of a habitable structure.

Staff Comment: All doors and windows to the dwelling units are located on the second floor and are more than 5 feet from any proposed parking space.

Design of Parking Areas and Access - Section 4.07.140.L.A.

Except single- and two-family dwellings, each access way between a public street and the parking area shall be not less than 15 feet nor more than 35 feet wide at the intersection of the access way with the public street, and a divider stop at least six feet long shall be installed if the access way exceeds 25 feet in width. Each access way shall be clearly and permanently marked and defined through the use of landscaping, rails, fences, walls or other barriers or markers. Said marking and defining may be augmented by painting or striping.

Staff Comment: The width of the access way is 21.5', within the 15 to 35 feet permitted by the Code. The access way will be clearly identified by the end of the sidewalk and a grouping of plants in the landscape plan.

Except single- and two-family dwellings, access from any parking area onto a collector or arterial street and from any parking area with four or more parking spaces onto a local street shall be designed to permit user vehicles to enter and exit unrestricted in forward drive. Access ways shall be designed so as to reduce the number and proximity of access points along public streets. Access ways on the same lot frontage shall be separated by a minimum curb length of 30 feet.

Staff Comment: Only one access point is provided for the development that allows vehicles to enter and exit unrestricted in forward drive.

The intersection of an access way with a public street shall be located not closer than 15 feet to a side lot line, except that a common access way to two adjacent properties with combined width not exceeding 35 feet may be provided at the common lot line.

Staff Comment: The access way is less than 10' from the side lot line to the north. The Applicant is requesting a design variance from this requirement.

A minimum of one parking space for the disabled shall be provided for each nonresidential use which requires a minimum of 15 parking spaces. Such spaces shall be located as close as possible to a major entrance of a building or use. Such spaces shall be a minimum of 12 feet in width, unless located parallel to a sidewalk, in which case they shall be a minimum of nine feet in width. Parallel spaces shall be a minimum of 24 feet in length. All parking spaces for the disabled shall be designated by means of a permanent identification sign.

Staff Comment: The Municipal Code only provides a parking requirement for nonresidential uses. However, the plan provides two handicapped parking spaces, exceeding the requirements in Title 4.

Parking area layout.

MINIMUM PARKING SPACE AND DRIVEWAY REQUIREMENT

Parking Angle	Stall Width	Length of Stall to Curb	Aisle Width	Curb Length per Stall	Width of Double Row with Aisle
90	9'0"	19.0	24.0	9.0	62.0

Staff Comment: All of the proposed parking stalls are designed to a 90-degree angle and subject to the layout requirements in the table above. The site plan on Sheet A1.1 provides the minimum stall width and length. The aisle width is 24' through the majority of the drive. In front of the building the aisle will be increased to 26' to accommodate a fire truck. There is a 62' aisle with for the parking area with a double row.

Development Impact Report - Section 4.07.100.

Staff Comment: The Applicant has completed the Development Impact Checklist as required by the Code. Staff agrees with the Applicant's analysis.

Impact Fees – Sections 4.07.120., 4.07.130., and 4.07.170.

Staff Comment: The proposal is required to provide a Street Improvement Fee, Fire Protection Fee and Public Safety Impact Fees totaling \$95,626.80. This requirement will be a provision of the Development Agreement that will be reviewed and approved by Town Council.

CHAPTER 4.08. – SIGN CODE

Staff Comment: Sheet A1.1 provides a location for a monument sign on the northeast end of the building. Since the details of the sign are limited, staff has included a condition of approval requiring the monument sign be approved through the Town sign permit process, subject to the standards in Chapter 4.08.

CHAPTER 4.13. - SUBDIVISION DESIGN, IMPROVEMENTS AND DEDICATIONS

Drainage - Section 4.13.050.

Staff Comment: The application is missing information on the drainage plan required under Section 4.13.050.A. The Applicant has requested that the items be provided at time of building permit. Staff has added a condition of approval that the complete drainage plan be provided at time of building permit and that Town Engineer approval be required prior to issuance of building permit. This section of the Code requires that *where the proposed development results in the need for off-site drainage improvements, such improvements shall be the responsibility of the applicant.* There are sufficient details on the drainage plain (Sheet D1 and D2 of Civil Plans) regarding drainage improvement which will be included in the Development Agreement.

Erosion and sediment control, stabilization, and revegetation - Section 4.13.060.

Staff Comment: The application includes an erosion control plan that can be found on Sheet No. C4. Section 4.13.060 provides a list of required elements for the erosion and control plan. Erosion control and site protection notes are also available on the landscape plan on Sheet A1.2.

<u>Requirement</u>	<u>Staff Comment</u>
<i>Keep cut and fill operations to a minimum so as to create the least erosion potential;</i>	Addressed with limits of disturbance.
<i>Retain and protect natural vegetation whenever feasible;</i>	Addressed in note #2 of Sheet C4.1.
<i>Minimize the exposed ground area and the duration of exposure;</i>	Applicant is proposing erosion control blankets on Sheet C4.0 to minimize exposure.
<i>Protect exposed critical areas with temporary vegetation and/or mulching during development;</i>	Addressed in note #5 of Sheet C4.1.
<i>Trap sediment in runoff water by use of debris basins, sediment basins, erosion control fencing, silt traps or similar measures until the disturbed area is stabilized;</i>	Addressed in note #12 of Sheet C4.1.
<i>Prevent surface water from damaging cut and fill slopes;</i>	Addressed in note #12 and #26 of Sheet C4.1.
<i>Locate cuts and fills so as not to endanger adjoining property; keep cuts less than 2:1 unless a subdivision variance or development permit variance is granted;</i>	Located in Sheet C4.0. Applicant is requesting design variance for cut steeper than 2:1.
<i>Avoid fills on natural watercourses or constructed channels;</i>	Addressed in note #12 of Sheet C4.1.
<i>Develop the grading plan so that water is not diverted onto the property of another landowner unless a written easement agreement allowing such drainage is received from the other landowner and duly recorded; and</i>	Grading Plan provided for on Sheets C5 through C5.3. Note #6 of Sheet C4.1. provides temporary fencing along boundaries to grading outside Property.
<i>Exercise proper measures for dust control during earthwork operations, including watering of disturbed areas;</i>	Note #28 of Sheet C4.1., however, the proper measures are not specifically identified in plan.

<i>Provide gravel at entrances to the public right-of-way to prevent tracking mud. Minimize the number of entrances from the right-of-way;</i>	Not provided in plan. Included as a condition of approval.
<i>That adequate provision is made for revegetation and soil stabilization during and after development of the site; and</i>	Note 29 on Sheet C4.1.
<i>Stabilize disturbed soils as quickly as practicable;</i>	Note #5 of Sheet C4.1 which requires stabilization measures within 30 days of final grade reached on site.
<i>Establish and install permanent vegetation and structural erosion control measures as soon as practicable;</i>	Note #29 and Note #5 address temporary and permanent erosion control and vegetation measures.
<i>Stockpile topsoil and reuse it after final site grading on slopes and other critical areas to be stabilized with vegetation; and</i>	Addressed in note #3 of Sheet C4.1.

That all cuts and fills are adequately designed, engineered and vegetated to control erosion as well as stability of the entire mass; keep cuts less than 2:1 unless otherwise expressly approved by the Town.

Staff Comment: The Applicant is requesting cuts steeper than 2:1 through a design variance. The Applicant has shared that the location and position of the building on the north side of the allow is intended to create room for grading and draining on the south side of the lot. The existing grades of the site that are steeper than 2:1 are a result of the neighboring properties construction that extended onto the Property. The grades of this project are being tied into these existing slopes. The Applicant has coordinated with Public Works to minimize the amount of steep slope required to tie into the existing topography. The application also achieves surface drainage that is fully contained on site.

Staff referred the application to the Colorado Geological Survey (CGS). CGS provided recommendations that have been incorporated as conditions of approval for the application. These conditions require the Applicant to have a geotechnical engineer validate the 2007 Soils Study that was included with the application package and that the geologic and geotechnical study be expanded to discuss all of the mapped geologic hazards potentially impacting the site as identified in the online Geological Hazard Maps. Additionally, the Applicant will be required to provide engineering estimates on sediment load for site drainage that will be required prior to issuance of building permit. Recommendations from the additional information will need to be incorporated into the project plans.

The use of retaining walls or structures to stabilize cut or its fill slopes will not be permitted without the written approval of the Town Engineer and the Planning Commission.

Staff Comment: A condition of approval has been added that final Town Engineer approval be required for any retaining walls. This approval will be in writing. Approval of this application will be accepted as Planning Commission approval of the retaining walls.

Lot and block design - Section 4.13.070.

Each lot in a development shall be designed to provide an adequate, readily accessible building site for a structure devoted to the intended use of the land. Lots and blocks shall be designed to afford the maximum solar access to each building site.

Staff Comment: Due to the topography of the lot, there are limitations on building orientation to increase solar exposure.

School land dedication - Section 4.13.080.

Staff Comment: The school land dedication is required for all major development permits. The dedication of land is not practical in this situation and the Applicant has agreed to pay a fee-in-lieu of dedication. This fee will be included in the Development Agreement.

Easements - Section 4.13.100.

Unless otherwise determined by the Town, all easements necessary to provide service to a subdivision or other development shall be dedicated to the Town, free and clear of all liens and encumbrances, including, but not limited to, water easements, wastewater easements, electric easements, natural gas easements, telephone service easements, telecommunications service easements, cable television service easements, general utility easements, access easements, and bicycle and pedestrian pathway easements. The dimensions of such easements shall be subject to approval by the Town Engineer.

Staff Comment: Sheet C3 provides a new easement through the Property. A provision of the Development Agreement, which will require Town Council approval, will require the easement be dedicated to the Town in compliance with Section 4.13.100.

Sidewalks and bikeways - Section 4.13.110.

Sidewalks and bikeways shall be provided by the developer to allow convenient pedestrian access through or across the development and joining with pedestrian ways and bikeways of adjacent properties.

Staff Comment: Currently, there are no joining pedestrian ways or bikeways from adjacent properties. The Applicant is proposing a sidewalk through the development and along Eby Creek Road for future connectivity to the adjacent property and the Eby Creek Roundabout.

Access Section - 4.13.120.

No more than one access point from an arterial or collector street shall be provided to any development unless the applicant documents that additional access points would be significantly beneficial to the safety and operation of the street or that provision of only one access point would be detrimental to public safety. Such documentation shall be subject to approval by the Town's Traffic Engineer.

Staff Comment: Only one access point is proposed.

Underground Utilities - Section 4.13.160.

Except in the Industrial Zone District, all wires, cables or other equipment for the distribution of electric energy, and telecommunication signals, with the exception of transformers, meters, junction boxes and like equipment, shall be placed underground. Where subdivisions or developments are approved along or with crossing existing overhead power and communications facilities, energy and telecommunications may be obtained from these existing facilities. The service connections to these facilities shall be placed underground unless otherwise approved by the Town Council due to economic, engineering or aesthetic reasons. Utility easements and rights-of-way shall be provided in the subdivision or development.

Staff Comment: The Utility Plan can be found on Sheet C6.0. Notes on Sheet C6.4 mention the installation of conduit for utilities. It appears that all service connection to the building will be underground; however, staff has included a condition of approval requiring that this standard be upheld.

CHAPTER 4.14. – ASSURANCE OF ADEQUATE PUBLIC FACILITIES (PFIR)

Staff Comment: Staff's determination of adequacy can be found as an attachment in the packet. In summary, staff find that there will be adequate public facilities available to the project and that the Town's level of service will not be negatively impacted by the new development.

STANDARDS FOR A DESIGN VARIANCE (Section 4.07.160.)

The Applicant is requesting six design variances from the following standards:

Variance #1

Section 4.07.020.B.3.a. The width of the landscaped buffer shall be five percent of the average of the two side property lines, but not less than 15 feet.

Staff Comment: The width of the front landscape buffer from the edge of the parking lot to the property line varies from 7' 3" to 13' 3". Based on the length of the two side property lines, the project is required to provide a front landscape buffer of 17' 17".

Variance #2

Section 4.07.140.L.6.a. Except in the CBD zone district, at least ten percent of the total unenclosed parking area, including access ways, shall be devoted exclusively to landscaping of trees, shrubs, and ground cover which reduce the visual impact and assist in defining on-site traffic movement when the number of parking spaces required is ten or more.

Staff Comment: The Code requires that 10% of the parking area be landscaped and the project is proposing to have 6.3% of the parking area landscaped.

Variance #3

Section 4.07.020.B Off-street parking may be located on any part of the lot occupied by the dwellings or uses for which such parking space is required except that no parking space shall be established in a required front yard setback on any lot containing three or more dwellings.

Staff Comment: Twenty parking spaces on the eastern end of the property encroach into the 25' setback.

Variance #4

Section 4.07.140.L.1.d The intersection on an access way with a public street shall be located not closer than 15 feet to a side lot line, except that a common access way to two adjacent properties with combined width not exceeding 35 feet may be provided at the common lot line.

Staff Comment: Intersection of the access way and public street is less than 10 feet from the side lot line.

Variance #5

Section 4.07.080.G.1. Sidewalks shall be detached from curb and gutter a minimum distance of five feet to accommodate a planting strip between the curb and sidewalk.

Staff Comment: The Applicant is requesting that no planting strip be provided.

Variance #6

Section 4.13.060.C.1.b. That all cuts and fills are adequately designed, engineered and vegetated to control erosion as well as stability of the entire mass; keep cuts less than 2:1 unless otherwise expressly approved by the Town.
Section 4.07.080.D.2 Slopes greater than 2:1 are not permitted.

Staff Comment: The Erosion Control Plan on Sheet C4.0 indicates where slopes cuts are greater than 2:1.

The design variances are subject to the following standards.

STANDARD #1: *A design variance may be granted if there exists on the property in question exceptional topographical, soil, or other subsurface condition, or other extraordinary conditions peculiar to the site, existing buildings, or lot configuration, such that strict application of the regulation from which the variance is requested would result in peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the applicant; Or*

STANDARD #2: *that the public good would be better served by granted the variance.*

Staff Comment: Staff believes each of the design variances above qualify for Criteria #1. Approximately half of the lot has a slope greater than 30%. Conformance with these standards is difficult due to limited buildable area on the site because of the steep hillside to the western end of the Property, the drainage to the east, and grading challenges to the north and south. Staff believes there is exceptional topographic conditions peculiar to the site that create exceptional practical difficulties on the Applicant.

Town of Eagle Goals and Policies

Staff Comment: Staff has provided an analysis of the project against relevant policies from the 2021 Amended Elevate Eagle Comprehensive Plan below.

Policy 1-1.1 Ensure a healthy mix of housing types and densities (e.g. Single-family, duplex, multifamily, mixed use, and accessory dwelling units) to allow for greater diversity.

Policy 1-1.3. Stimulate the creation of workforce housing through town policies, incentives, and regulatory procedures. Collaborate with community partners and private sector to expand the reach of Eagle's workforce housing efforts.

Staff comment: This new multi-family development will create a healthy mix of housing types and densities. Roughly 80% of Town of Eagle's housing stock is single-family homes. This project will provide the community with another multi-family housing option. The LERP units established through this development will increase the inventory of workforce housing.

Policy 2-3.3 Ensure new development builds upon and adds value to Eagle's unique community character through adherence to high quality standards of design and constructions. Ensure residential infill and redevelopment blend appropriately with the character and scale of surrounding neighborhoods. Utilize infill and conservation-oriented development to accommodate growth while retaining open lands and protecting environmentally sensitive areas.

Staff Comment: The proposal appears to blend with the scale of adjacent properties. The layout, scale and design conform to the North Interchange Area standards. The environmentally sensitive areas on the Property received protections during subdivision through the creation of an undevelopable zone.

Policy 2-5.4. Preserve viewsheds and view corridors in key areas throughout Town. Work to preserve high quality agricultural lands, rural lands as appropriate, public lands, wildlife resources, water resources and forest resources when evaluating new development and/or annexations.

Policy 4-1.2. Protect and preserve wildlife habitat, movement corridors, and other sensitive lands.

Policy 4-1.7. Utilize the most current analysis tools and mapping to identify critical wildlife habitats and movement corridors.

Staff Comment: The location of the Property does not impact any viewsheds or view corridors. The Property does not impact agricultural lands, rural lands, public lands, water resources and forest resources.

Colorado Parks and Wildlife (CPW) provided review comments for this project and shared that the lot falls within CPW mapped wildlife habitat. Suggestions from CPW include: a landscape buffer to the rear of the building to preserve the Mule Deer movement corridor, a 250-foot wildlife corridor, CPW approved bear-resistant dumpster containers, education to new residents, a dog enclosure if dogs are permitted, and prohibiting domestic cats to be allowed outdoors. Other recommendations include seasonal closure of public lands, requiring dogs on leashes, discouraging fruit producing landscaping, fences that adhere to CPW's Fencing with Wildlife in Mind document, and plans that meet the Town's lighting requirements.

The Applicant has agreed to use bear-proof trash dumpsters, to educate tenants, and due to the height of the retaining wall, they believe residents will be discouraged from walking to the rear of the building. No fencing is proposed, and all landscaping is fruitless.

Staff believes the Applicant has made a good effort to address CPW concerns, however, there are a few conditions of approval that may help to preserve the wildlife habitat and movement corridors on the lot. These conditions include CPW's final approval of the dumpster enclosure, additional coniferous trees with full foliage be added to the south of the dumpster enclosure to further discourage residents from walking behind the building and that education materials be prepared and shown to staff prior to issuance of Temporary Certificate of Occupancy (TCO). Staff will only verify that the items in CPW's referral letter be addressed. Finally, staff recommends a condition that the Applicant provide a dog enclosure if there is a suitable location on site.

Policy 2-4.1. Enhance pedestrian access and amenities, and public gathering area to promote social interactions. New development should provide amenities such as sidewalks, parks, open space, systems, and bicycles paths.

Policy 3-3.1. Ensure residents have access to recreation amenities. Require new development to provide adequate parks, trails, other recreational facilities, and connections to pedestrian/bicycle-oriented amenities.

Policy 3-5.4. Require new development to provide trail (hiking, biking, motorized) connections to local and regional destinations or existing trail systems.

Staff Comment: Due to the steep hillside on most of the Property, there is little opportunity for recreational facilities on site. The new sidewalk provides connectivity to pedestrian/bicycle-oriented amenities south of I-70. The Town Welcome Center and the River Park is within a mile walk from the new development. While there are no known trail

systems north of I-70 that this development can connect to, the Property can connect to the existing sidewalk systems including the ECO Trail south of I-70.

Policy 4-2.1. Preserve and protect the quality of and integrity of wetlands, rivers, streams, and riparian areas.

Staff comment: Drainage from the Property run south to the Eagle River. According to the drainage memo, a water quality unit will be installed in a manhole located at the southeast end of the Property to ensure quality runoff that preserves and protects the nearby river.

Policy 4-3.2. Promote energy efficient designs and building codes that encourage energy conscious lifestyles and reduce overall energy consumption. Encourage all construction efforts to utilize green building practices.

Staff comment: The application narrative addresses green practices that will be utilized for this building, including recycling services, durable building materials, roof mounted solar (156 mega watt hour system), and an asphalt shingle roofing product made with recycled material.

Policy 4-4.1. Development should avoid natural hazards and impacts on environmentally sensitive and hazard-prone areas. Discourage buildings or land disturbances on steep slopes, ridgelines and other hazard areas.

Staff Comment: The image to the right, taken from Eagle County GIS, indicates slopes greater than or equal to 30% in red. The building is located on the eastern end of the Property to avoid the slope as much as possible.



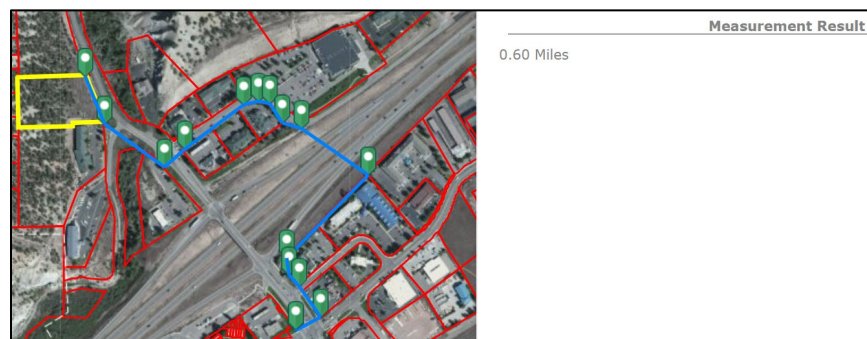
Policy 5-1.2. Enhance ease of active modes of transportation.

Policy 5-3.2. Ensure efficient multimodal connectivity between all residential areas and public destinations.

Staff comment: The addition of the sidewalk along Eby Creek Road will allow easier access and more efficient connectivity to multi-modal transportation from the Property to the existing sidewalk system.

Policy 5-1.4. Promote the development of compact neighborhoods in close proximity to public transit options, and allowing increased residential, retail, and mixed-use densities in areas close to transit stops.

Staff Comment: The proposal is less than a mile from the Chambers Park n Ride transit stop (see image below).



Policy 5-4.1. Maintain public services and infrastructure per community expectations and Town standards.

Staff comment: The project includes the installation of two new fire hydrant to meet Town standards. The PFIR addresses the developments impact on other public services.

STAFF RECOMMENDATION

Staff recommends Approval with Conditions of the 435 Eby Creek Apartments Major Development Permit with design variances, File #DR22-03, based on compliance with Chapters 4.04, 4.06, 4.07, 4.12, and 4.14 of the Municipal Code and that the application is supported by the goals and policies in the 2021 Amended Elevate Eagle Comprehensive Plan.

PLANNING AND ZONING COMMISSION POTENTIAL MOTIONS

Below are the Planning and Zoning Commission options related to File #DR22-03:

1. Approve the application with no conditions.
 2. Approve the application with conditions.
 3. Continue (table) the application. (Provide staff and the application detail regarding information needed for a decision).
 4. Deny the application. (Cite all Code sections and/or Plan policies that resulted in motion for denial)
-

FINDINGS OF FACT

The application for File #DR22-03 meets the requirements for Title 4 of the Municipal Code and substantially supports the 2021 Amended Elevate Eagle Comprehensive Plan.

IF APPROVED, THE P&Z AND COUNCIL MAY CONSIDER THE FOLLOWING SUGGESTED CONDITIONS OF APPROVAL:

1. A LERP Plan shall be provided with the Development Agreement to be approved by Town Council. No TCO will be provided until the LERP units have been established.
2. The monument sign be approved through the Town sign permit process, subject to the standards in Chapter 4.08.
3. A drainage plan including all the required information from Section 4.13.050 shall be provided and approved by the Town Engineer prior to issuance of building permit.
4. All new utility service connections to the building shall be placed underground in compliance with Section 4.13.160.
5. Gravel shall be installed at the entrances to the public right-of-way to prevent tracking mud during construction or until asphalt has been installed.
6. A geotechnical engineer shall validate the 2007 Soils Study prior to the application of a building permit.
7. Prior to issuance of building permit, the geologic and geotechnical study shall be expanded to discuss all of the mapped geologic hazards potentially impacting the site as identified in the online Geological Hazard Maps. Recommendations shall be incorporated into the project plans.
8. The Applicant shall provide engineering estimates on sediment load for site drainage prior to issuance of building permit. Recommendations shall be incorporated into the project plans.
9. CPW shall provide final approval of the dumpster enclosure.
10. Additional trees with full foliage shall be added south of the dumpster enclosure to further discourage residents from walking behind the building.
11. Education materials shall be prepared and shown to staff prior to issuance of TCO. Staff will only verify that the items in CPW's referral letter have been addressed.
12. Prior to issuance of TCO, the Applicant shall provide a dog enclosure if there is a suitable location on site.
13. If the Building Code or other applicable criteria requires more ADA accessible parking than Title 4, the greater number of spaces shall apply.
14. The Applicant shall be responsible for the crosswalk, flashing crossing signage, and any other safety signage, to the sidewalk east of Eby Creek Road identified in the plans. Timing and manner of completion shall be addressed in the Development Agreement.
15. On-site stormwater treatment to replace the required on-site detention will be supplied and approved by the Town Engineer prior to issuance of building permit.
16. The Stormwater Management Plan Narrative shall be required with the building permit application.
17. Final utility details shall be approved by the Town Engineer prior to issuance of building permit.
18. It shall be the responsibility of the Applicant to provide a set of consistent plans with the Municipal codes and Town of Eagle specifications at time of building permit application.
19. Final retaining walls needed to achieve 2:1 or flatter slopes shall be approved by the Town Engineer prior to issuance of building permit.



TOWN OF EAGLE
COMMUNITY DEVELOPMENT
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www.townofeagle.org

LAND USE & DEVELOPMENT APPLICATION

Pursuant to the Land Use & Development Code, Title 4

ZONING REVIEW	DEVELOPMENT REVIEW	SUBDIVISION REVIEW
☐ Special Use Permit	Minor Development Permit	☐ Concept Plan
☐ Zoning Variance	☒ Major Development Permit	☐ Preliminary Plan
☐ Rezoning	PLANNED UNIT DEVELOPMENT (PUD) REVIEW	☐ Final Plat
☐ Temporary Use Permit	☐ PUD Zoning Plan	☐ Lot Line Adjustment
☐ Amendment to Zone District Regulations	☐ PUD Development Plan	☐ Condominium / Townhouse
☐ Encroachment Permit		☐ Minor Subdivision

PROJECT NAME 435 EBY CREEK APARTMENTS

PRESENT ZONE DISTRICT RES. MULTI FAMILY (RMF) **PROPOSED ZONE DISTRICT** RES. MULTI FAMILY (RMF)
(if applicable)

LOCATION

STREET ADDRESS 435 EBY CREEK ROAD, EAGLE COLORADO 81631

PROPERTY DESCRIPTION

SUBDIVISION PERRY SUBDIVISION **LOT(S)** 3, PHASE II Parcel #1939-321-10-004 **BLOCK** _____
(attach legal description if not part of a subdivision)

DESCRIPTION OF APPLICATION/PURPOSE 30-UNIT APARTMENT BUILDING

APPLICANT NAME MARTIN MANLEY ARCHITECTS,
JEFFREY P MANLEY AIA **PHONE** 970-688-0326
ADDRESS PO BOX 1587, EAGLE CO 81631 **EMAIL** jeff@martinmanleyarchitects.com
OWNER OF RECORD Son Ray LLC **PHONE** 970-328-7751
ADDRESS PO Box 4556, Eagle, CO 81631 **EMAIL** rick@pcivail.com
REPRESENTATIVE* Rick Patriacca **PHONE** 970-328-7751
ADDRESS PO Box 4556, Eagle, CO 81631 **EMAIL** rick@pcivail.com

*A representative must submit an affidavit or power of attorney signed by the property owner of record authorizing the representation.

APPLICATION SUBMITTAL ITEMS:

The following submittal materials must be submitted in full before the application will be deemed complete (please check all items that are being submitted):

- ☒ Applicable fees and deposits.
- ☒ Project Narrative, describing the project, its compliance with any applicable review criteria, any impacts to the surrounding area, and any other relevant information.
- ☒ Surrounding and interested Property Ownership Report (see project specific checklist for more information).
- ☒ Proof of Ownership (ownership & encumbrance report) for subject property.
- ☒ Site Plan, drawn to scale and depicting the locations and boundaries of existing and proposed lots and structures.
- ☒ Project specific checklist.

FEES AND DEPOSITS:

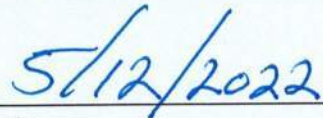
See Eagle Municipal Code Section 4.03.080

1. Application fees shall be paid in full at the time of the filing of the application and unless paid, the application shall not be deemed complete. All fees are nonrefundable.
2. As described in Eagle Municipal Code § 4.03.080, third-party consultants may be necessary for the review and processing of applications. These costs ("pass-through costs") must be paid by the applicant. If pass-through costs are expected, the applicant must pay a deposit at the time the application is filed. If at any time the deposit does not fully cover the pass-through costs, the applicant must pay another subsequent deposit before the Town will continue processing the application.
3. The Town may withhold the recording of any Subdivision Final Plat or Development Plan or the signing of any Resolution or Ordinance until all pass-through fees are paid in full.
4. Within 30 days of approval or denial of an application, any remaining deposit shall be returned to the applicant. If an application is withdrawn, any remaining deposit shall be returned to the applicant within 60 days.

I have read the application form and certify that the information contained herein is correct and accurate to the best of my knowledge. I understand that it is my responsibility to provide the Town with accurate information related to this application. I UNDERSTAND THAT FILING AN APPLICATION IS NOT A GUARANTEE THAT THE APPLICATION WILL BE APPROVED.



Signature



Date

FOR OFFICE USE ONLY

DATE RECEIVED _____	BY _____	FILE NUMBER _____
REVIEW FEE _____	DATE PAID _____	RECEIVED BY _____
DATE CERTIFIED COMPLETE _____	BY _____	
P&Z HEARING DATE _____	DECISION _____	
BOT HEARING DATE _____	DECISION _____	



Town of Eagle
Community Dev. Dept
Eagle Co 81631

Date: 5-13-22, updated 6-22-22

Community Development Department,

The Development team, represented by Jeffrey Manley AIA of Martin Manley Architects, are requesting the review for Development Permit. The apartments located at the property at 435 Eby Creek Road, part of Perry Subdivision, Lot 3 Phase II, Parcel Number 1939-321-10-004, is proposed to be developed to include a 30-unit apartment building. The project is a use by right and is allowed 30 units with a Multi-Family Dwelling building within the Residential Multi-Family (RMF) zoning.

Lot size: 2.804 acres (43,560 sf.) = 122,142.24 s.f.

Allowable use allows for a rate of 4000 s.f. per dwelling unit or 30.53 units allowed by right.

Building can be 50% of lot area (61,071.12 s.f.), all other impervious 20% (24,428.45 s.f.)

The Goal of the Development is to bring much needed housing to the Town of Eagle. The property is located on Eby Creek Road and is near to the City Market, restaurants and public path system, public transportation and less than 1,500 feet from the I-70 off ramp. This location for the residents will add minimal impacts to the Town of Eagle's traffic issues since amenities are so close. The project is compatible with the Town's goals and policies as laid out in Elevate Eagle Comprehensive plan. *The vision provided in the plan states: "Eagle will continue to be a high quality livable community through the implementation of strategies that will enhance the Town's unique identity, its economic vitality, its sense of community and the quality and character of the surrounding rural lands."* Elevate Eagle's Goal 1-1 *"Promote a wide range of attainable housing opportunities for young adults, families, aging residents, workforce and others."* This project is a development that will add to the efforts that the Town of Eagle has embraced with the goal of adding more attainable housing to the town. Also, providing a stepping stone for establishing a first place of residence. The apartment will have a 'healthy mix' of 1, and 2 bedroom units that will address different affordability levels for its inhabitants. The building type will allow the workforce to find attainable residency in the Town of Eagle.

The project is in alignment with the Eagle's goals to provide more workforce housing. This mix of units will provide for a total of 55 bedrooms. So many of the area's workers are needing to find other arrangements for living or are needing to leave the valley due to the fact that they cannot find housing. This development will create local inventory of housing so that the employers can better retain their employees;... Fulfilling part of the town's Housing Goal #1. The apartments will give the ability for the residents to invest in this community by providing an overall quality living arrangement and quality of life. This objective works when the employees have a suitable place to live, work and shop locally.

The location of this new development is close to City Market, restaurants, and stores. These residences will enhance the vibrancy and viability of this portion of the town with only a short distance to travel/walk/ride to access all Eagle has to offer. From the drive, there is easy access to Eby Creek Road. The flatter terrain on the east side of the road is where we can see the Town and Eagle County possibly creating a bike path on the east side of the Eby Creek Road and continuing up to Eby Creek subdivision.

From the property the tenants have a short and direct path, south, toward the roundabout and to the amenities of Eagle. This addresses Goal 2-4 of the Elevate Eagle Comp Plan.

The Goal 2-5: *Maintain and improve the appearance of Eagle by establishing and reinforcing the town's identity and sense of place.* The building is positioned on the lower slopes of the hillside. The upper portion of the site will remain 'natural' and maintain the existing character of the area of junipers, pinon and sage. We will propose to add trees and landscape to screen the parking and tie the project into the site. The high views of Eby Creek subdivision above will not be affected by the development due to the amount of elevation change.

To promote and demonstrate our efforts to the community, we feel in alignment with the Town's Goal 4-3 to Support and Demonstrate sustainability. The developer is going to install some Electric Vehicle recharging stations for the tenants to use. The trash enclosure will be sized to be able to house receptacles for recyclables. The building itself will use materials and methods to support 'green building practices.' The building siding will be a durable material of LP Smart Siding or stucco with a high level of recycled content. The asphalt shingle roofing is a product with recycled content. Siding and roofing material meets or exceeds National Green Building Standards, as well as may other programs that help solidify these as green products. The position of the building is set to passively use the sun to heat the building and to provide natural melting of the parking lot's surface. One of the major sustainability criteria is the location of the site and type of building. The collective living of an apartment building that is close to public transportation, close to major traffic arteries (like I-70) and local amenities is one of the key factors in creating sustainable living environments.

This request is supported by the following Elevate Eagle Comprehensive Plan policies and goals:

GOAL 1-1. PROMOTE A WIDE RANGE OF ATTAINABLE HOUSING OPPORTUNITIES FOR YOUNG ADULTS, FAMILIES, AGING RESIDENTS, WORKFORCE, AND OTHERS

- 1-1.1 supports residential on this parcel, aspiring to " ...ensure a healthy mix of housing types and densities (e.g. single-family, duplex, multi-family, mixed use and accessory dwelling units) to allow for greater diversity.
- 1-1.3. Stimulate the creation of workforce housing through town policies, incentives, and regulatory procedures. Collaborate with community partners and the private sector to expand the reach of Eagle's workforce housing efforts. (serving the need of adding more workforce housing)

GOAL 1-2. EXPAND AND DIVERSIFY THE TOWN'S ECONOMIC OPPORTUNITIES.

- 1-2.1. Provide opportunities that increase the likelihood of the Town's citizens to work within Eagle.

GOAL 2-4. CONNECT EAGLE'S UNIQUE NEIGHBORHOODS PHYSICALLY AND VISUALLY THROUGH A WALKABLE AND TRAIL-ORIENTED ENVIRONMENT WITH HIGH-QUALITY WAYFINDING.

2-4.1. Enhance pedestrian access and amenities, and public gathering areas to promote social interaction. a. New development should provide amenities such as sidewalks, parks, open space systems, and bicycle paths. We are proposing a sidewalk on the West side of Eby Creek Road that runs the length of the property that could tie into Town of Eagle's future sidewalk to connect to the Market Street round-a-bout sidewalk. We have been in conversations with Public works and the proposed sidewalk fits with the Town's goals.

GOAL 2-5. MAINTAIN AND IMPROVE THE APPEARANCE OF EAGLE BY ESTABLISHING AND REINFORCING THE TOWN'S IDENTITY AND SENSE OF PLACE.

- 2-5.1. Maintain and enhance the sense of community in Eagle.
- 2-5.4. Preserve view sheds and view corridors in key areas throughout Town. Work to preserve high quality agricultural lands, rural lands as appropriate, public lands, wildlife resources, water resources and forest resources when evaluating new development and/or annexations. The upper portion of the site will not be effected by the construction and will provide the back drop that exists today.

GOAL 4-3. SUPPORT AND DEMONSTRATE SUSTAINABILITY.

4-3.2. Promote energy efficient designs and building codes that encourage energy conscious lifestyles and reduce overall energy consumption.

a. Encourage all construction efforts to utilize green building practices.

(Use of green materials and building practices, EV charging stations, and recycle program are being implemented)

VARIANCES RESPONSE: The following variances all fall under the same or very similar criteria for acceptance

Design Code Variance: Section 4.07.020.B.3.a Front landscape buffer “The width of the landscaped buffer shall be five percent of the average of the two side property lines, but not less than 15 feet.” The drawing has shown numerous trees and shrubs in this street buffer that meet the landscape spacing requirements, but due to slope constraints of the property and required parking for the building, the width is not possible. The required width as per the formula is (side property line north 358.88 feet + (side property line south 30.04 feet 298.02) / 2 for average = 343.47 average X .5% = 17.17 feet.

The site steepness and grading at the parking area to provide a viable parking area prohibit the code compliant depth of street landscape frontage. The distance from the street edge to the parking edge is between 38’-8” and 46’-10” due to the large right-of-way width. Current distances from parking to property line is 13’-3” and 7’-3”. We feel that the existing large right-of-way width give the buffer the code intended. Limit area is due to the steepness of the back portion of the lot.

Design Code Variance: Section 4.07.020.B.7. landscaping in parking area constitutes 10% of total un-enclosed parking area. We have revised the plan to incorporate an access sidewalk that will meet accessible standards to connect the parking lot to the street. For access to this occur we will need to have a smaller east landscape peninsula that could get the design closer to meet code minimum. This origin spot for the sidewalk is the best place to meet and follow existing grade contours to the right of way and to the street/drive intersection. The parking area of non covered parking total 21,574 s.f. 10% of the area = 2,157 s.f. The Parking area island and peninsulas total 1,368 s.f. (6.3%) This is 789 s.f. short of the required 10% when counting only islands and peninsulas. We feel that the existing large right-of-way width give the buffer, the parking being high on the hill, and break-up of the parking into smaller areas will achieve the code intent. Limit area is due to the steepness of the back portion of the lot.

Design Code Variance: Parking Section 4.07.140.F.2 – Parking spaces are not permitted within the front yard setback on any lot containing three or more dwellings. RESPONSE: Due to the steepness of the lot and the required parking/circulation there is not enough room for the parking without being in the front setback. We feel that the existing large right-of-way width give the buffer the code intended. Limit area is due to the steepness of the back portion of the lot.

Design Code Variance: Parking Section 4.07.140.L.1.d. The intersection of an access way with a public street needs to be a least 15’ from the side lot line. RESPONSE: Site plan and civil drawings are updated to reflect a bit larger offset from the side yard setback, but not the full 15’. The position of the access way is located to create the optimal angle off of Eby Creek road and start at a high enough grade that the drive does not need to be overly steep to reach the parking lot and the drive’s position allows for optimal angle at the intersection of the road and drive. The property to the north is not a buildable lot and we feel that the intent of the code is to not have drives too close to neighboring property’s drives. We feel the intent of the code is achieved.

Design Code Variance: Parking Section 4.07.080.G.1 Sidewalk with 5’ planting strip between sidewalk and road curb and gutter. RESPONSE: We would request that a variance be granted to delete the five feet planting strip and to be adjacent to the curb and gutter. The sidewalks that we are proposing will match sidewalk in the area do not have this planting strips. And the site grading will not allow for a planting strip to be easily accomplished. We will be constructing to the town standard of 6’-0” wide sidewalk when attaching to the road edge.

Design Code Variances: Erosion control Section 4.13.060. Slopes are steeper than 2:1

RESPONSE: There will need to be some grades that exceed the 2:1 to tie into the existing grades of the neighboring property. The drawings have been revised to minimize any steeper than code compliant as practical/possible. We have discussed this with public works and the civil engineer, and the Town are working together to minimize effected regrading at steeper than 2:1. Note: The drainage from the site is being collected so that surface drainage does not affect neighboring property.

The Criteria for review: The Planning Commission may grant a variance provided it finds both Subsections (A)(1)(a) and (b) of this section and either Subsection (A)(1)(c) or (d) of this section are applicable.

a. That the variance granted is without substantial detriment to the public good and does not impair the intent and purposes of the Town's regulations, goals, policies and plan, including the specific regulation in question; and

RESPONSE: There is NO effect in public good or impairment to the town's regs, goals or policies. The building is pushed uphill as much a practical and the amount of required parking fills the remaining available site. The site steepness, grading, and the parking area needed to provide a viable parking prohibit the code compliant depth of street landscape frontage and push parking to be within the front setback. The limited area for parking constrain the amount of landscape islands that is possible.

b. That the variance granted is the minimum necessary to alleviate the hardship; and

RESPONSE: This is the minimum necessary to alleviate

c. That there exists on the property in question exceptional topography, shape, size or other extraordinary and exceptional situation or condition peculiar to the site, existing buildings, or lot configuration such that strict application of the zone district requirements from which the variance is requested would result in peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the owner of the property in question; or

RESPONSE: There is exceptional topography that effects the site. The third level of this building I still 30" under the proposed grade on the west side. The building is pushed uphill as much a practical and the amount of required parking fills the remaining available site. The site steepness and grading at the parking area to provide a viable parking lot prohibit the design code compliant of the above listed variance request items.

d. That such exceptional situation or condition was not induced by any action of the applicant and is not a general condition throughout the zone district. **RESPONSE:** It is not induced by applicant and not general in the zone

The apartments will add the ability for the local businesses to attract and retain employees within a great place to live in Eagle. We look forward to your review. The goal is to start construction in the Fall 2022.

Jeffrey P Manley AIA, [Martin Manley Architects](http://martinmanleyarchitects.com)

PO Box 5668

Eagle Colorado 81631

970-688-0326

Attachments:

Parking matrix: and Zoning/Code analysis:

Building footprint allowable= 50% of lot area (61,071.12 s.f.), all other impervious 20% (24,428.45 s.f.)

Building footprint area Proposed: 11,798.5 s.f. (10% lot area) < 61,071.12 s.f.

Site/other impervious Proposed: 21,574 s.f. (17.7% lot area) < 24,428.45 s.f. (area not covered by footprint)

Max floor area allowed = 150 % of lot area (183,213.36 s.f.)

Building floor area Proposed: 35,794.2 s.f. (29.3 % lot area) includes area of covered garages

(for break out of area per building see sheet A0.2)

Landscaping Area Minimum: 40,306.94 s.f. (30% lot area)

Landscaping Area Proposed: 89,096.74 s.f. (73 % lot area) (lot size -footprint+impervious)=landscape)

Height Maximum: 35'-0"

Height Proposed: 34'-5 1/2"

Parking Matrix:

Section 4.07.140. - Parking standards.

Multiple-family dwelling: 1½ per dwelling unit for units with one bedroom, two per dwelling unit for units with two bedrooms, 2½ per dwelling unit for units with three or more bedrooms, plus one additional space per six dwelling units.

Parking Required: 1½ per dwelling unit for units with one bedroom (1.5X6 = 9 stalls)
2 per dwelling unit for units with two bedrooms, (2X24 = 48 stalls)
2½ per dwelling unit for units with three or more bedroom (2.5X0 = 0 stalls)
plus one additional space per six dwelling units (1/6 X 30 units = 5 stalls)
62 required parking stalls

Parking Proposed: 62 Parking Stalls (Conforming)

Snow Storage (20% of non covered parking =.20X20,852 s.f) 4,170.4 s.f. of snow storage

Break down of unit types

<u>LEVEL</u>	<u>1 BEDROOM</u>	<u>2 BEDROOM</u>	<u>3 BEDROOM</u>
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BRDM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	<u>(2) ONE BDRM</u>	<u>(10) TWO BDRM</u>	<u>(0) THREE BDRM</u>
	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM
TOTAL #=30 UNITS			

IBC 2015 code

IFC 2021 code

IBC Section 1106, table 1106.1- total accessible spaces to be provided= 2 required, Section 1106.2 where parking is provided under the building. Parking shall be provided under the building .

IBC Section 1107.6.1.1.accessible units,

(1 type 'B' and 1 type 'A') for buildings with 26-50 units, =2 (without roll in showers) all dwellings units are to be a minimum of Type 'B'

Building Occupancy: Mixed use

Class: R2 Apartment houses, and Class=S2 Parking Garage

Construction Type= V-B

Unprotected wood frame

Construction Type V-B has a limit of 3 stories. Proposed building is 3 stories above grade + basement

Sprinkler system, S13 in accordance with Section 903.3.1.1,

Aerial Photo



Site Photos



















PROJECT DESCRIPTION

A 30 unit apartment building with some covered parking proposed....
*A mix of one bedroom and two bedroom apartments.

FIRE DEPT. SUMMARY

Fire Dept. Notes:

Smoke Detectors and Carbon Monoxide alarms must be installed IN ALL DWELLING UNITS, and be installed per 2021 IFC and fire alarm installation standards.

AN AUTOMATIC 513 FIRE-SPRINKLER SYSTEM AND MONITORED FIRE ALARM MUST BE INSTALLED PER NFPA REQUIREMENTS.

Note: building is < 200 feet long.

Wildfire Urban Interface Notes:

- The perimeter of the building will have 3/4" gravel landscape bed at perimeter of the building 10'-0" wid (min) or be pavement. See landscape plan.
- All evergreen trees with 30' plus of the structure will be removed to create a Defensible Zone around the Structure. All ladder fuels in the landscape to remain will be removed for a distance of 100' of the structure on the property to the west. The south of the building is an existing development with limited trees, and the east is a parging area.
- Roofing material will be a minimum Class 'B' material. Roof venting in soffits will occur in the outer 1/3 of the overhang, with non combustibile vent covers and metal screening with opening < 1/4".
- Decking will meet Class 'B' or better (ASTM-84 flame spread ratio)

CODE SUMMARY

This project falls under the jurisdiction of:

The Town of Eagle and Town of Building Department

The 2015 International Residential Code (IBC 2015)

The 2015 National Electrical Code

The 2021 International Fire Code

The Town of Eagle Development Code

Class of Work: New Construction

Type of Occupancy: Mixed use =R-2 (apartment), S2 (Parking Garage)

Type of Construction: Type V-B (Sprinklered)

Levels: 3-story over Basement (lower covered parking)

ZONING SUMMARY

Current Zoning: Residential Multi-Family (RMF) zoning.

Current Land Use: Vacant

Proposed Land Use: Residential Multi-Family (RMF) zoning.

Lot Area: 2,804 acres x 43,560 s.f. = 122,142.24 s.f.

Buildable Area: 83,605.69 (area not in open space zone)

Density: 30 dwelling unit permitted.

Maxium Lot Coverage:

Building footprint can be 50% of lot area (61,071.12 s.f.), all other impervious 20% (24,428.45 s.f.)

Building footprint area Proposed: 11,821.4 s.f. (19.7% lot area) < 61,071.12 s.f.

Site/other impervious Proposed: 21,573 s.f. (17.2% lot area) < 24,428.45 s.f. (area not covered by footprint)

Max floor area allowed = 150 % of lot area (183,213.36 s.f.)

Building floor area Proposed: 35,794.2 s.f. (29.3 % lot area) includes area of covered garages

(for break out of area per building see sheet A0.2)

Landscape Area Minimum: 40,386.94 s.f. (30% lot area)

Landscape Area Proposed: 89,096.74 s.f. (73 % lot area) (lot size -footprint+impervious)-landscape)

Height Maximum: 35'-0"

Height Proposed: 34'-5 1/2"

Parking Required: 1 1/2 per dwelling unit for units with one bedroom (1.5X6 = 9 stalls)
2 per dwelling unit for units with two bedrooms, (2X24 = 48 stalls)
2 1/2 per dwelling unit for units with three or more bedroom (2.5X30 = 0 stalls)
plus one additional space per six dwelling units (1/6 X 30 units = 5 stalls)
62 required parking stalls

Parking Proposed: 62 Parking Stalls (Conforming)

Snow Storage (20% of non covered parking = 20 X 21,574 s.f.) 4,315 s.f. of snow storage

Break down of unit types

LEVEL	1 BEDROOM	2 BEDROOM	3 BEDROOM
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BDRM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	(2) ONE BDRM	(8) TWO BDRM	(0) THREE BDRM
	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM

TOTAL =30 UNITS

Setbacks: Front Setback 25' for Local and collector streets

Side yard setback is 12.5' or 1/4 the height (max set back would be 17.5')

Rear setback 20'

MATERIALS & COLORS



Roofing:
50-Year Asphalt shingle
Elk-Gaf, High Def, Weathered Wood

Flashing and Gutters:
Paint lock aluminum
Color: black

Decks: Synthetic Brazilian Walnut

Drive/Parking Lot: Asphalt drive

Windows: Fiberglass windows and doors
Color: Dark Bronze
Stair Tower Metal Siding:
Corrugated metal,
vertical, charcoal gray

Siding, 8" LP siding or Diamond kote
Color: SEAL

Timbers, trim, and fascia,
2x6 and 2x10 Fascia Trim
8x8 knee braces
Color: Graphite

Cement Stucco
Very Light Hand Trowel-freeform
square corners
Sto- Indiana Limestone LRV 60

Railing Pickets and rails
Black: 42" tall

Redi Rock retain wall system



435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

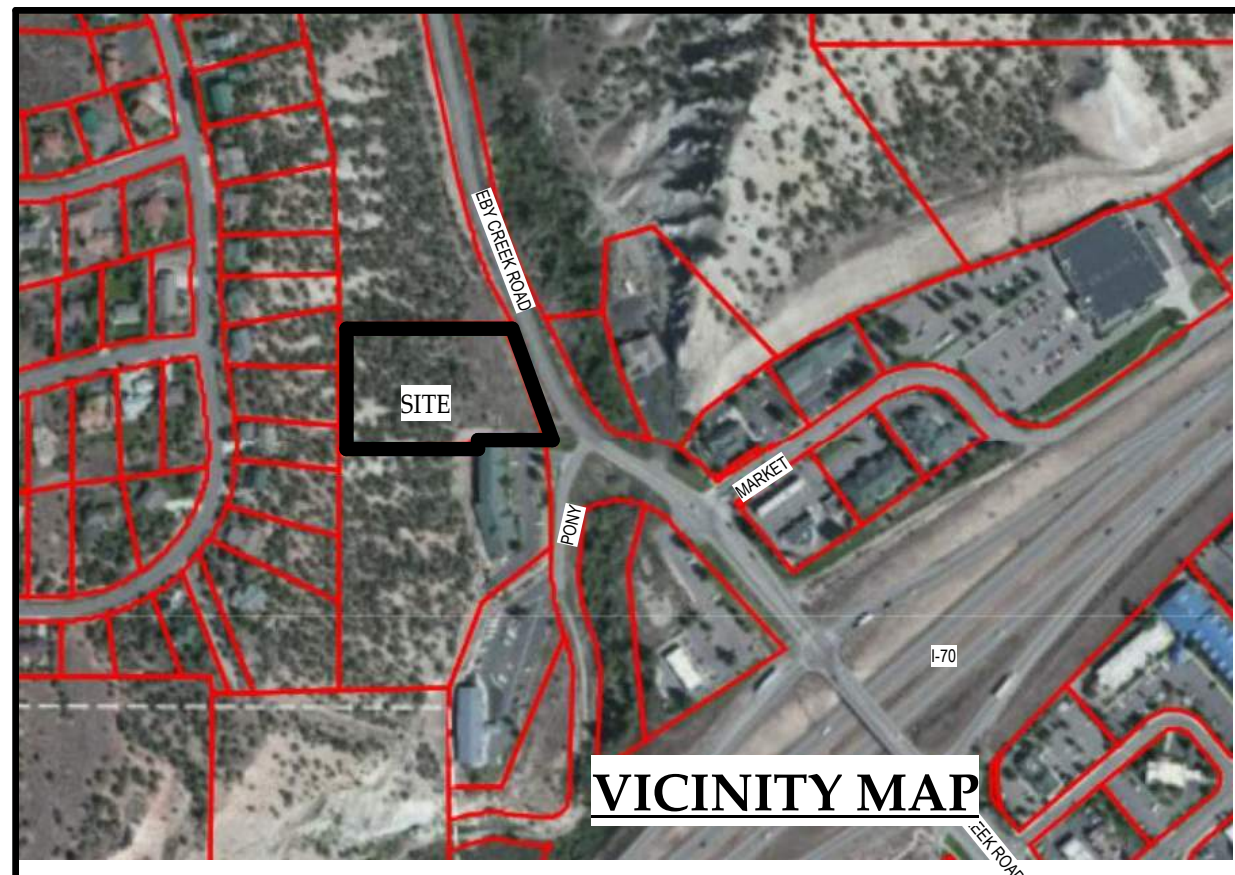
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

6-22-22

UPDATED DEVELOPMENT PERMIT SET



NOTE: RENDERINGS ARE ARTISTIC REPRESENTATIONS OF THE HOUSE DESIGN
AND ARE NOT MEANT TO ACCURATELY DEPICT LANDSCAPING.



CODE REVIEW

Construction Type V-B has a limit of 3 stories. Proposed building is 3 stories above grade + basement

Sprinkler system, 513 in accordance with Section 903.3.1.1

Section 504.3 Allowable building height = 60 feet. Building by height limit by Dev. Code = 35'-0" (conforming)

Section 504.4 Maximum number of stories above grade plane for Occ. R2 =3 stories in V-B

Building proposed to be split to a 2 story + basement

Building is 3 stories + basement. The lowest level is a basement level since second level is <12'-0" above the finished ground level. Second level meets the definition for Story above grade plane.

Story above grade plane: Any story having its finished floor surface ENTIRELY above grade plane, or in which the finished surface of the floor next is: 1) more than 6' above grade plane or 2) more than 12' above the finished ground level at any point

Section 506 Building area

Table 506.2

Type V-B, SM sprinkler system limits area to 21,000 s.f.

506.3 Frontage increase... based upon w= 30 feet. calculation

W=(L1Xw1+L2Xw2+L3Xw3+L4Xw4) / F

W= (63.125X30 + 196.75X30+ 63.125X30 + 196.75X30) / 519.75 feet perim.

W= (1893.75 + 5902.5 +1893.75 + 5902.5) / 519.75 feet perim.

W=(15,592.5) / 519.75 feet perim.

W= 30

506.3.3 Amount of increase

I= F/P-25/W/30

I=(519.75/519.75-25)/30/30

I= .751

I= .751 Frontage increase = 0.75 X7000 s.f. (allowable area in NS)= 5250 s.f.

Total area allowed for V-B, R2 building is 21,000 s.f.+ 5250 s.f. = 26,250 s.f.

Proposed fire areas per IBC 2015 = < 26,250 s.f.

Fire separation walls, fire barriers are added to divide the building into 3 separate buildings, 2 separately structured 1 hour walls, for a fire rating of 2 hours total between buildings and 2 hour enclosures at stairs towers and stair elevator tower. 2 hour rating on elevator shaft.

Table 508.4 Separation of occupancies, R2 residential, and S2 garage area

In a sprinklered building the separation of 1 hour is required

704.10 Exterior structural members, fire resistive rating per Table 601= 0 hour fire rating

Section 709 smoke barriers 710 smoke partitions

Dividing in horizontally into 2 or 3 building using 2 hour fire wall and 1.75 hour doors on hold opens

Area split on center line 'F' or 'F' and 'D'

Between centerline 'E' and 'T' bldg 'A' Between centerline 'A' and 'E' bldg 'B'

First floor= 2,296.4 s.f. First floor= 4,519.9 s.f.

Second floor= 2,136.6 s.f.

Second floor= 4,304.4 s.f.

Third floor= 3,963.3 s.f.

Third floor= 7,858.1 s.f.

Fourth floor= 3,449.8 s.f.

Fourth floor= 7,265.7 s.f.

Totals= 11,846.1 s.f. < 26,250 s.f. Total= 23,948.2 s.f. < 26,250 s.f. allowable area

Section 711.2.4.3 Dwelling units and sleeping units 1 hour fire resistance rated construction (exception for VB to 1/2 hour with sprinkler)

Fire sprinkler

[F]903.2.10 Group S-2 enclosed parking garages.

An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.6 where either of the following conditions exists:

1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m2).

2. Where the enclosed parking garage is located beneath other groups.

[F]903.3.1.1 NFPA 13 sprinkler systems.

Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Sections 903.3.1.1.1 and 903.3.1.1.2.

[F]903.3.1.1.2 Bathrooms.

In Group R occupancies, other than Group R-4 occupancies, sprinklers shall not be required in bathrooms that do not exceed 55 square feet (5 m2) in area and are located within individual dwelling units or sleeping units, provided that walls and ceilings, including the walls and ceilings behind a shower enclosure or tub, are of noncombustible or limited-combustible materials with a 15-minute thermal barrier rating.

[F]903.3.2 Quick-response and residential sprinklers.

Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in all of the following areas in accordance with Section 903.3.1 and their listings:

3. Dwelling units and sleeping units in Group I-1 and R occupancies.

OCCUPANT LOAD

1004.5 Max floor area allowance for Residential = 200 gross, parking garages= 200 gross

Bldg 'A' Area for residential, garage, corridors and stair wells =11,773.4 s.f. / 200 per occupant =58.87 persons

Bldg 'B' Area for residential, garage, and corridors =11,806.3 s.f. / 200 per occupant = 59.03 persons

Bldg 'C' Area for residential, garage, corridors and stair wells =12,037.6 s.f. / 200 per occupant = 60.19 persons

Total Building occupant load of 178.09 persons

Note: First level storage, elevator and stair wells are counted in total above.

If this area is deducted then the total occupant load is reduced by (4176.8 s.f./200= 20.88 persons)

1006 number of exits. Table 1006.2.1 (occupant load > 20 persons will require 2 exits) Max. common path of egress = Travel distance of 125 feet, Table 1006.3.2 min number of exits = 2 exits from each story

1007.1.1 TWO Exits shall be placed not less than 1/2 of the length of the maximum overall diagonal dimension of the building area. EXCEPTION::: WHERE THERE IS AUTO SPRINKLER SYSTEM THE DISTANCE SHALL NOT BE <1/3 OF THE LENGTH OF THE OVERALL DIAGONAL DIMENSION

Bldg 'A' Diagonal = 89.0 X .33 = 29.4 feet

Bldg 'B' Diagonal = 88.7 X .33 = 29.3 feet

Bldg 'C' Diagonal = 89.75 X .33 = 29.6 feet

Total Building Diagonal = 206.7 X .33= 68.2 feet

Distance between existing enclosures = 69.75 feet

SECTION 1009.7.4 48" clear width min between handrails PER, There is an exception that width can be reduced in bldgs. with sprinkler systems, Stairs are proposed at 48"

Section 1009.3.3 Area of refuge is not required with auto sprinkler system or at stairways in R-2 occupancies

Section 1009.4.2 Area of refuge at elevators is not required with auto sprinkler system

Section 1009.8 two way communication is required at elevator

ARCHITECTURAL SHEET LIST

Sheet #	Sheet Name
A0.0	COVER SHEET
A0.2	AREA PLANS AND CODE SHEET
A1.1	SITE PLAN
A1.2	LANDSCAPE PLAN
A2.0.1	UNIT PLANS
A2.1	FIRST LEVEL PLAN
A2.1.1	1ST LEVEL PLAN AREA 1
A2.1.2	1ST LEVEL PLAN AREA 2
A2.2	SECOND LEVEL PLAN
A2.2.1	2ND LEVEL AREA 1
A2.2.2	2ND LEVEL AREA 2
A2.3	THIRD LEVEL PLAN
A2.3.1	3RD LEVEL PLAN AREA 1
A2.3.2	3RD LEVEL PLAN AREA 2
A2.4	FOURTH LEVEL PLAN
A2.4.1	4TH LEVEL PLAN AREA 1
A2.4.2	4TH LEVEL PLAN AREA 2
A2.5	ROOF PLAN
A3.0	EXTERIOR ELEVATIONS
A3.1	EXTERIOR ELEVATIONS
A3.2	EXTERIOR ELEVATIONS
A4.0	BUILDING SECTIONS
A4.1	BUILDING SECTIONS

PROJECT INFORMATION

Owner: Son-Ray LLC
PO Box 4556
Eagle, CO 81631
Email: Rick@PCIVail.com
Office: 970-328-7751

Location: 000435 EBY CREEK RD,
Subdivision: PERRY SUBDIVISION
Lot: 3 PHASE II

Parcel # 1939-321-10-004

Architect: JEFFREY P MANLEY, AIA
Martin Manley Architects
PO Box 1587
Eagle Colorado 81631
jeff@martinmanleyarchitects.com
970-688-0326

Structural Engineer: Anderson Structural Engineering

General Contractor: Patriacca Constiction Inc
PO Box 4556
Eagle, CO 81631
Email: Rick@PCIVail.com
Office: 970-328-7751

Civil Engineer: Yarnell Consulting & Civil Design, LLC
P.O. Box 3901
Eagle, Colorado 81631-3901
Justin Yarnell
(970) 323-7008
justin@theyarnells.com

Geotechnical: HP Kumar and Associates

Fire Protection Consultant: VERITAS Fire Engineering, Inc.
12364 W. Alameda Pkwy, Suite 135
Lakewood, CO 80228
Ken Sutton, PE Sr. Fire Protection Engineer
303-985-3300 ext 211
303-985-5594 fax
ken@veritasfire.com

Surveyor: Meridian Land Surveying, LLC
Eron Watts, PL5
970-524-0963
PO Box 2225
Gypsum, CO 81637
ewatts.mls@gmail.com

Traffic Consultant:

MEP Engineer: Boulder engineering
Michael Vair, PE
Office: 303-444-6038 x103
michael@boulderengineering.com

MARTIN MANLEY ARCHITECTS

REVISIONS	Description	Date
No.		

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date :	6-22-22
Project Number:	2175
	COVER SHEET
	A0.0

BLDG A -AREA SCHEDULE (NO GARAGE)		
Name	Area	
BLDG A- FIRST LEVEL ENTRY VESITBULE/ STAIR	310.6 SF	
BLDG A- FIRST LEVEL STORAGE AREA	721.8 SF	
BLDG A- FOURTH LEVEL AREA	3449.8 SF	
BLDG A- SECOND LEVEL AREA	2136.6 SF	
BLDG A- THIRD LEVEL AREA	3963.3 SF	
Grand total: 5	10582.1 SF	

BLDG A -AREA SCHEDULE (WITH GARAGE)		
Name	Area	
BLDG A- .OPEN GARAGE AREA	1264 SF	
BLDG A- FIRST LEVEL ENTRY VESITBULE/ STAIR	310.6 SF	
BLDG A- FIRST LEVEL STORAGE AREA	721.8 SF	
BLDG A- FOURTH LEVEL AREA	3449.8 SF	
BLDG A- SECOND LEVEL AREA	2136.6 SF	
BLDG A- THIRD LEVEL AREA	3963.3 SF	
Grand total: 6	11846.1 SF	

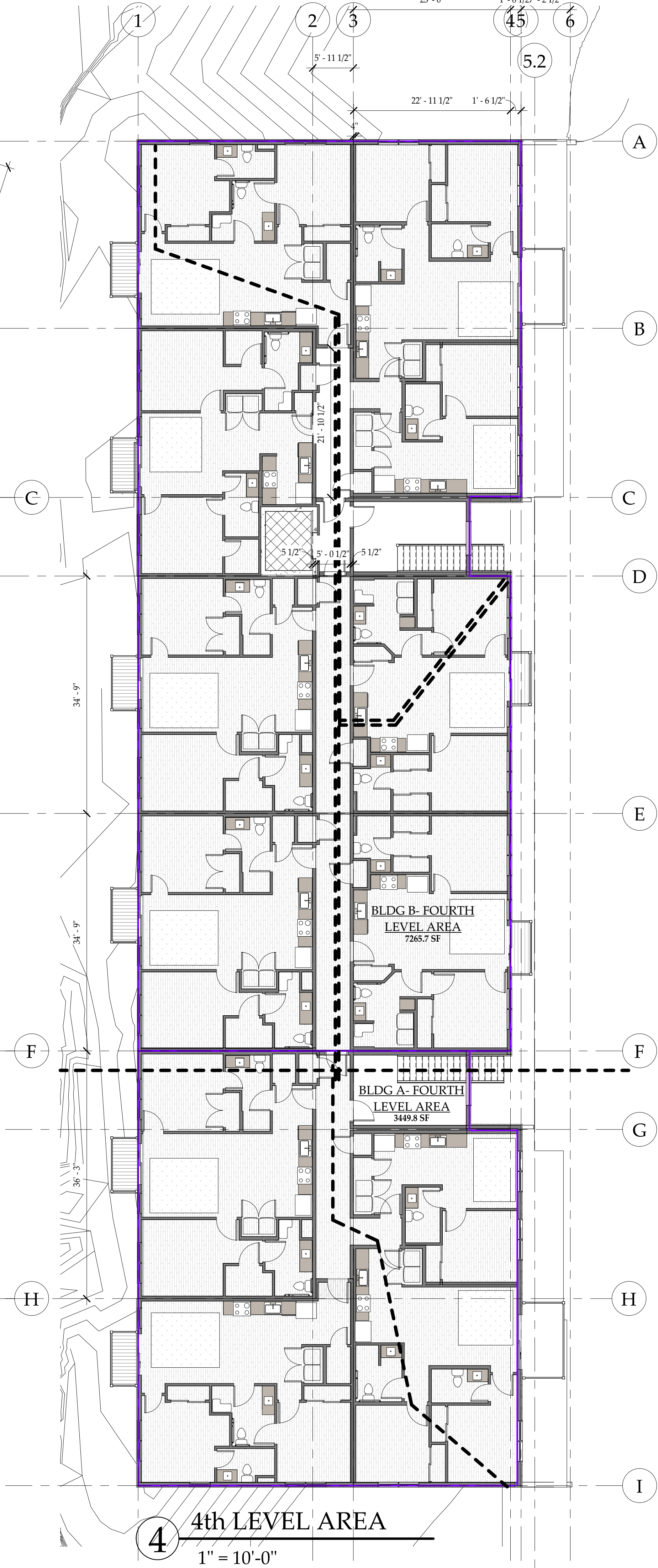
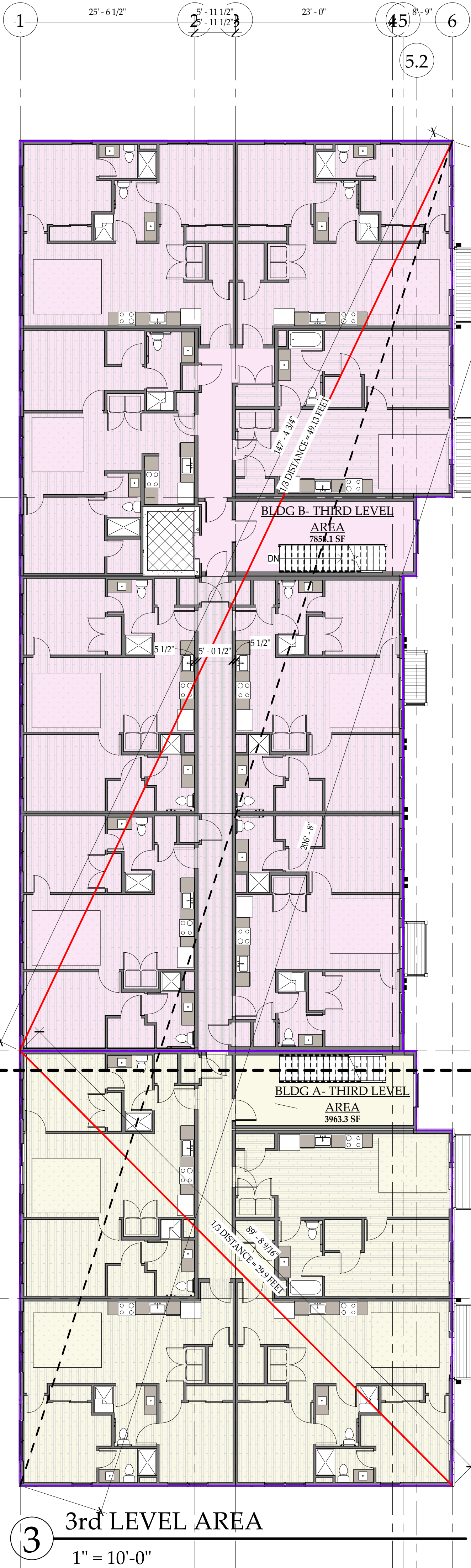
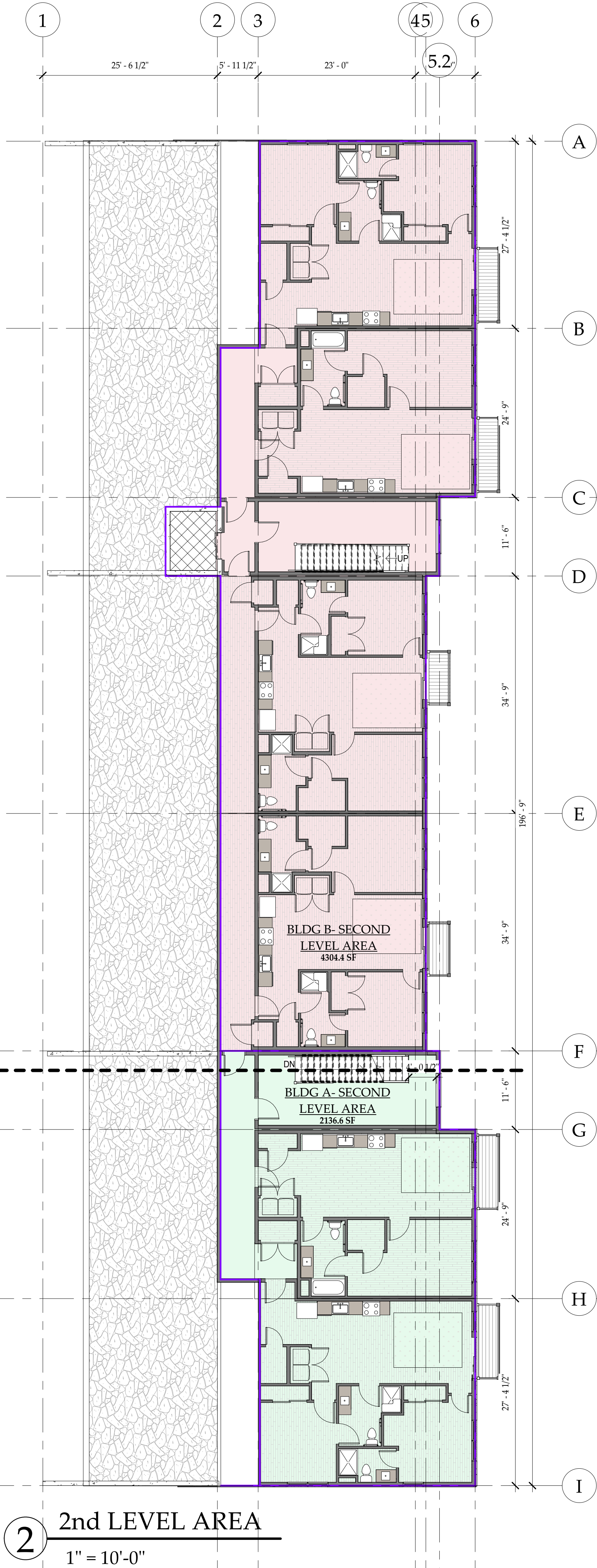
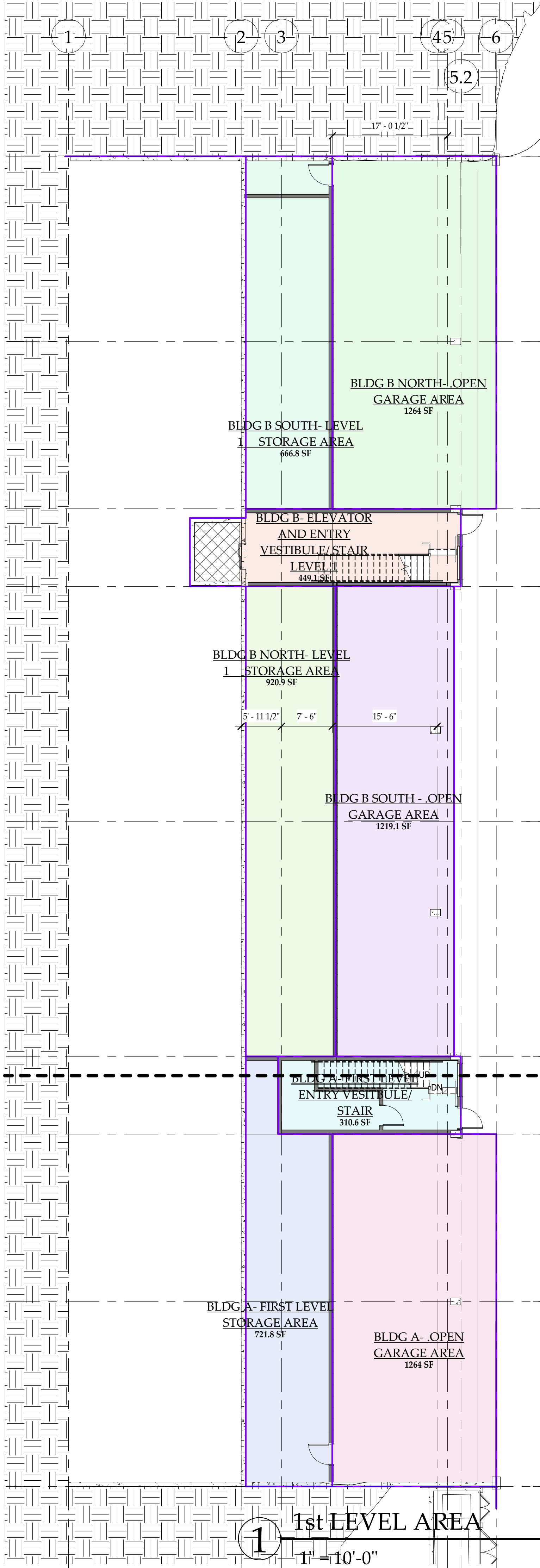
BLDG B -AREA SCHEDULE (NO GARAGE)		
Name	Area	
BLDG B NORTH- LEVEL 1 STORAGE AREA	920.9 SF	
BLDG B SOUTH- LEVEL 1 STORAGE AREA	666.8 SF	
BLDG B- ELEVATOR AND ENTRY VESTIBULE/ STAIR LEVEL 1	449.1 SF	
BLDG B- FOURTH LEVEL AREA	7265.7 SF	
BLDG B- SECOND LEVEL AREA	4304.4 SF	
BLDG B- THIRD LEVEL AREA	7858.1 SF	
Grand total: 6	21465 SF	

BLDG B -AREA SCHEDULE (WITH GARAGE)		
Name	Area	
BLDG B NORTH- .OPEN GARAGE AREA	1264 SF	
BLDG B NORTH- LEVEL 1 STORAGE AREA	920.9 SF	
BLDG B SOUTH - .OPEN GARAGE AREA	1219.1 SF	
BLDG B SOUTH- LEVEL 1 STORAGE AREA	666.8 SF	
BLDG B- ELEVATOR AND ENTRY VESTIBULE/ STAIR LEVEL 1	449.1 SF	
BLDG B- FOURTH LEVEL AREA	7265.7 SF	
BLDG B- SECOND LEVEL AREA	4304.4 SF	
BLDG B- THIRD LEVEL AREA	7858.1 SF	
Grand total: 8	23948.2 SF	

AREA SCHEDULE (NO GARAGE OR STORAGE)		
Name	Area	
BLDG A- FIRST LEVEL ENTRY VESITBULE/ STAIR	310.6 SF	
BLDG A- FIRST LEVEL STORAGE AREA	721.8 SF	
BLDG A- FOURTH LEVEL AREA	3449.8 SF	
BLDG A- SECOND LEVEL AREA	2136.6 SF	
BLDG A- THIRD LEVEL AREA	3963.3 SF	
BLDG B NORTH- LEVEL 1 STORAGE AREA	920.9 SF	
BLDG B SOUTH- LEVEL 1 STORAGE AREA	666.8 SF	
BLDG B- ELEVATOR AND ENTRY VESTIBULE/ STAIR LEVEL 1	449.1 SF	
BLDG B- FOURTH LEVEL AREA	7265.7 SF	
BLDG B- SECOND LEVEL AREA	4304.4 SF	
BLDG B- THIRD LEVEL AREA	7858.1 SF	
Grand total: 11	32047.1 SF	

AREA SCHEDULE (GARAGE)		
Name	Area	
BLDG A- .OPEN GARAGE AREA	1264 SF	
BLDG B NORTH- .OPEN GARAGE AREA	1264 SF	
BLDG B SOUTH - .OPEN GARAGE AREA	1219.1 SF	
Grand total: 3	3747.2 SF	

AREA SCHEDULE (total area)		
Name	Area	
BLDG A- .OPEN GARAGE AREA	1264 SF	
BLDG A- FIRST LEVEL ENTRY VESITBULE/ STAIR	310.6 SF	
BLDG A- FIRST LEVEL STORAGE AREA	721.8 SF	
BLDG A- FOURTH LEVEL AREA	3449.8 SF	
BLDG A- SECOND LEVEL AREA	2136.6 SF	
BLDG A- THIRD LEVEL AREA	3963.3 SF	
BLDG B NORTH- .OPEN GARAGE AREA	1264 SF	
BLDG B NORTH- LEVEL 1 STORAGE AREA	920.9 SF	
BLDG B SOUTH - .OPEN GARAGE AREA	1219.1 SF	
BLDG B SOUTH- LEVEL 1 STORAGE AREA	666.8 SF	
BLDG B- ELEVATOR AND ENTRY VESTIBULE/ STAIR LEVEL 1	449.1 SF	
BLDG B- FOURTH LEVEL AREA	7265.7 SF	
BLDG B- SECOND LEVEL AREA	4304.4 SF	
BLDG B- THIRD LEVEL AREA	7858.1 SF	
Grand total: 14	35794.3 SF	



435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date: 6-22-22	2175
Project number:	AREA PLANS AND CODE SHEET
A0.2	

REV/SIONS	Description	Date
No.		

Consultant	
Address	
Phone	
E-mail	

MARTIN MANLEY ARCHITECTS

970.328.5151 OFFICE
PO Box 1587, Eagle, CO 81631
www.martinmanleyarchitects.com

4335 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

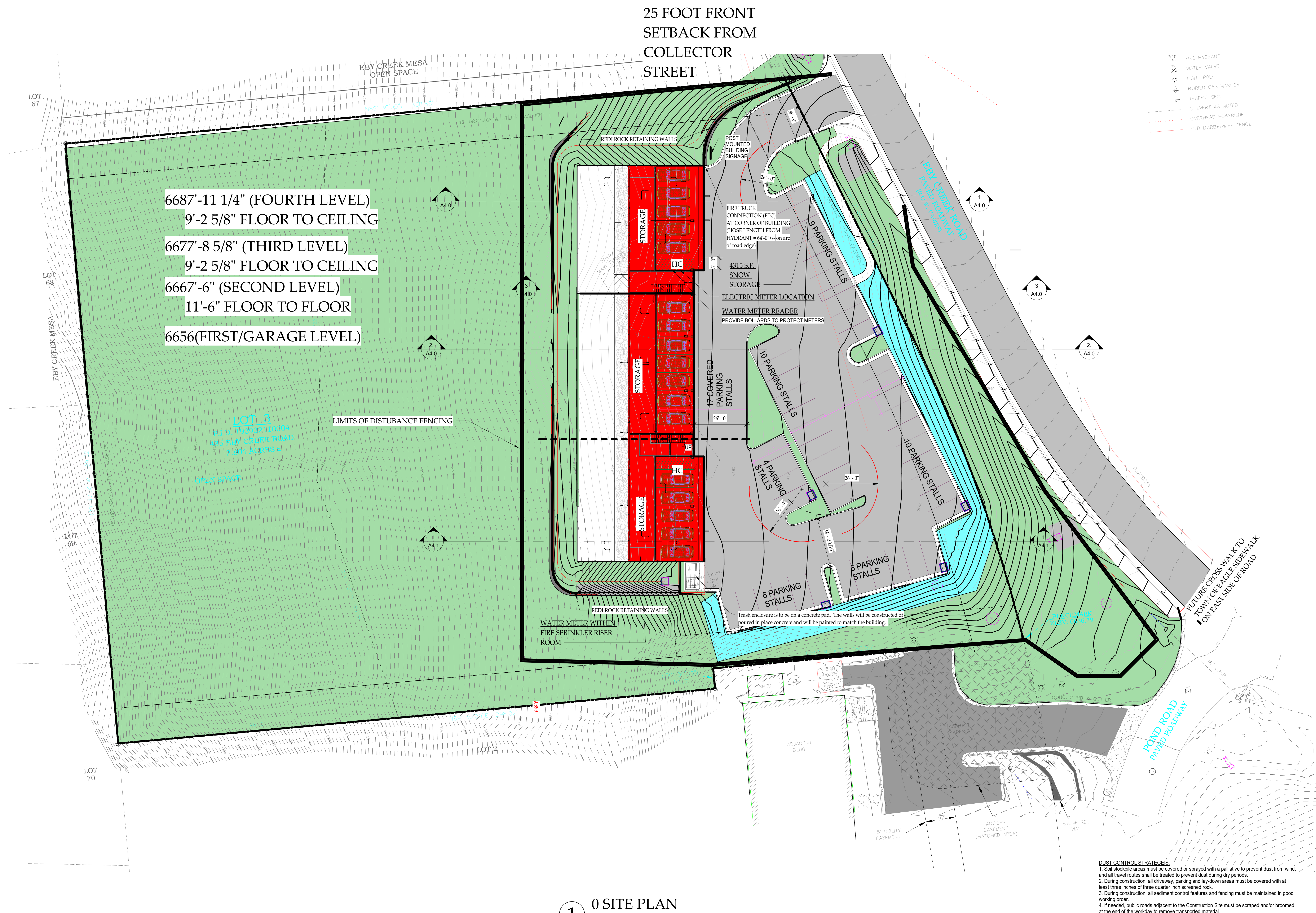
NOT FOR CONSTRUCTION

Date:	6-22-22
Project number:	2175
SITE PLAN	
A1.1	

Parking Matrix: **Section 4.07.140. - Parking standards.**
Multiple-family dwelling: 1½ per dwelling unit for units with one bedroom, two per dwelling unit for units with two bedrooms, 2½ per dwelling unit for units with three or more bedrooms, plus one additional space per six dwelling units.

(7) 1 bedroom X 1 ½ per dwelling unit = 10.5 Parking stalls
 (2) 2 bedroom X 2 per dwelling unit = 42 Parking stalls
 (2) 3 bedroom X 2 ½ per dwelling unit = 5 Parking stalls
 1 stall per 5 units (30 units/6) = 5 Parking stalls
Total Parking Required **62.5 Parking stalls or 63 Parking stalls**

63 parking stalls shown,



DUST CONTROL STRATEGIES:

1. Soil stockpile areas must be covered or sprayed with a palliative to prevent dust from wind and all travel routes shall be treated to prevent dust during dry periods.
2. During construction, all driveway, parking and lay-down areas must be covered with at least three inches of three quarter inch screened rock.
3. During construction, all sediment control features and fencing must be maintained in good working order.
4. If needed, public roads adjacent to the Construction Site must be scraped and/or broomed at the end of the workday to remove transported material.



Symbol	Name	Size	Count
Conifer Trees			0
Deciduous Trees			36
QA	QUAKING ASPEN (POPULUS TREMULOIDES)	2" to 2.5" CAL.	29
FC	FRUITLESS FLOWERING CRABAPPLE (Malus 'Spring Snow') (15' TALL MATURE HT)	2" CAL.	7
Deciduous Shrubs			76
SP	SPIREA, ANTHONY WATERER (Spirea japonica 'Anthony Waterer')	#5	18
LL	DWARF KOREAN LILAC (SYRINGA MEYERI 'PALABIN') OR Fendler ceanothus, mountain-lilac	#5.	23
CE	COTONEASTER DAMMERI CORAL BEAUTY (COTONEASTER DAMMERI)	#5	15
SB	SHADBLow SERVICEBERRY (Amelanchier canadensis)	#5	20
Perennial Ground covers			
GC	SNOW IN SUMMER, STONECROP, CREEPING PHLOX, NATIVE LOW-GROW GRASSES, ROCKY MTN. FESCUE	2900 square feet of cover. Provide drip irrigation	
Mulched Areas			
MULCH	SHREDDED BARK MULCHED AREA - AROUND TREES AND SHRUBS NOT COVERED BY GROUND COVER	1000 square feet of cover.	
Natural Grass Areas (reveg)			28,000 square feet of cover.
NG	MIX OF GRASSES AND FESCUE SEED, ARKANSAS VALLEY SEED COMPANY, NATIVE LOW GROW MOUNTAIN MIX. AREAS ARE TO SPRAYED WITH A FERTILIZER AND SEED MIX. EFFORT TO BE MADE TO KEEP ALL FERTILIZER OUT WATER SHED	Spray seed mix. in revegetated areas to return to a more native look. Use temp drip irrigation in areas to 3 growing seasons and remove once reestablished	

IRRIGATION NOTE:
1. ALL RESEEDED AREAS AND AROUND TREES ARE TO RECIEVE TEMPORARY DRIP IRRIGATION TI REMAIN IN PLACE FOR 3 GROWING SEASONS OR UNTIL ESTABLISHED
2. THE GROUND COVER AND PLANTING BEDS ARE TO RECIEVE PERMANENT DRIP IRRIGATION 2900 S.F. (THIS AREA IS IN THE FRONT STREET BUFFER AND SOUTH SIDE PARKING LOT BUFFER AREAS) THIS IS PERMANENT IRRIGATION
3. All irrigation piping in the TOE Right Of Way or Easements must be locatable, meet all COB11 requirements and be registered in the Colorado 811 System. Only temp irrigation is planned at this time in these areas.

TOTAL OF PERMANENT DRIP IRRIGATION AREA OF 2900 S.F.

EROSION CONTROL & SITE PROTECTION NOTES & SPECIFICATIONS:

1. SILT FENCING IS TO BE PLACED AT THE LIMIT OF DISTURBANCE AS NEEDED TO PREVENT EROSION AND SEDIMENTATION. A CONSTRUCTION FENCE WILL BE PLACED AT THE LIMIT OF DISTURBANCE WHERE THE SILT FENCE IS NOT USED.
2. SILT FENCING IS TO BE PLACED AT BASES OF FILL AND SOIL STOCKPILES TO PREVENT EROSION AND SEDIMENTATION.
3. STRAW HATTLES SHALL BE PLACED AT ALL EXISTING AND PROPOSED DRAINAGE SHALES.
4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
5. ALL DISTURBED AREAS NOT DESIGNATED AS SHRUB BEDS OR PERENNIAL BEDS SHALL BE REVEGETATED WITH THE SPECIFIED SEED MIXTURE. SEE PLANTING NOTES & PLANTING PLAN FOR MORE INFORMATION.
6. PROVIDE SILT FENCE AROUND ALL REVEGETATED AREAS FOR A MINIMUM OF ONE YEAR PERIOD OF ESTABLISHMENT.

LANDSCAPE LEGEND

1/8" = 1'-0"

1 0 LANDSCAPE PLAN

1" = 20'-0"

DUST CONTROL STRATEGIES:

1. Soil stockpile areas must be covered or sprayed with a palliative to prevent dust from wind, and all travel routes shall be treated to prevent dust during dry periods.
2. During construction, all driveway, parking and lay-down areas must be covered with at least three inches of three quarter inch screened rock.
3. During construction, all sediment control features and fencing must be maintained in good working order.
4. If needed, public roads adjacent to the Construction Site must be scraped and/or broomed at the end of the workday to remove transported material.

Lot size: 2.804 acres (43,560 sf.) = 122,142.24 s.f.

Lot Area: 2.804 acres x 43,560 s.f. = **122,142.24 s.f.**
Buildable Area : **85,605.69** (area not in open space zone)

Allowable use allows for a rate of 4000 s.f. per dwelling unit or 30.53 units allowed by right.
Density: 30 dwelling unit permitted.

Maxium Lot Coverage:
Building footprint can be 50% of lot area (61,071.12 s.f.), all other impervious 20% (24,428.45 s.f.)
Building footprint area Proposed: 11,798.5 s.f. (10% lot area) < 61,071.12 s.f.
Site/other impervious Proposed: 21,247 s.f. (17% lot area) < 24,428.45 s.f. (area not covered by footprint)

Max floor area allowed = 150 % of lot area (183,213.36 s.f.)
Building floor area Proposed: 36,087.8 s.f. (29.5 % lot area) includes area of covered garages (for break out of area per building see below code analysis and on sheet A0.2)

Landscaping Area Minimum: 40,306.94 s.f. (30% lot area)
Landscaping Area Proposed: 89,096.74 s.f. (73 % lot area) (lot size -footprint+impervious)=landscape

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

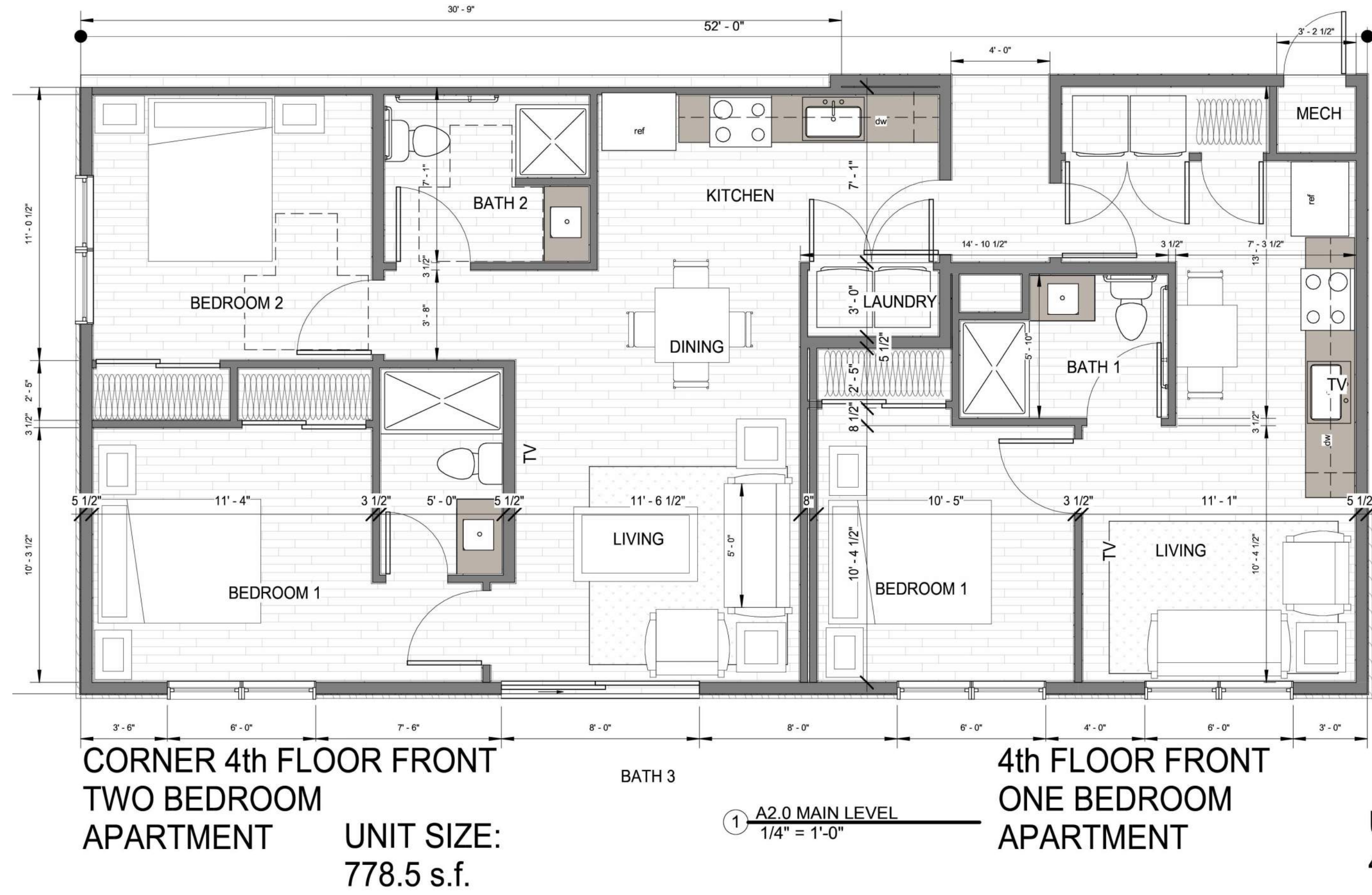
Date: 6-22-22
Project number: 2175
LANDSCAPE PLAN

A1.2

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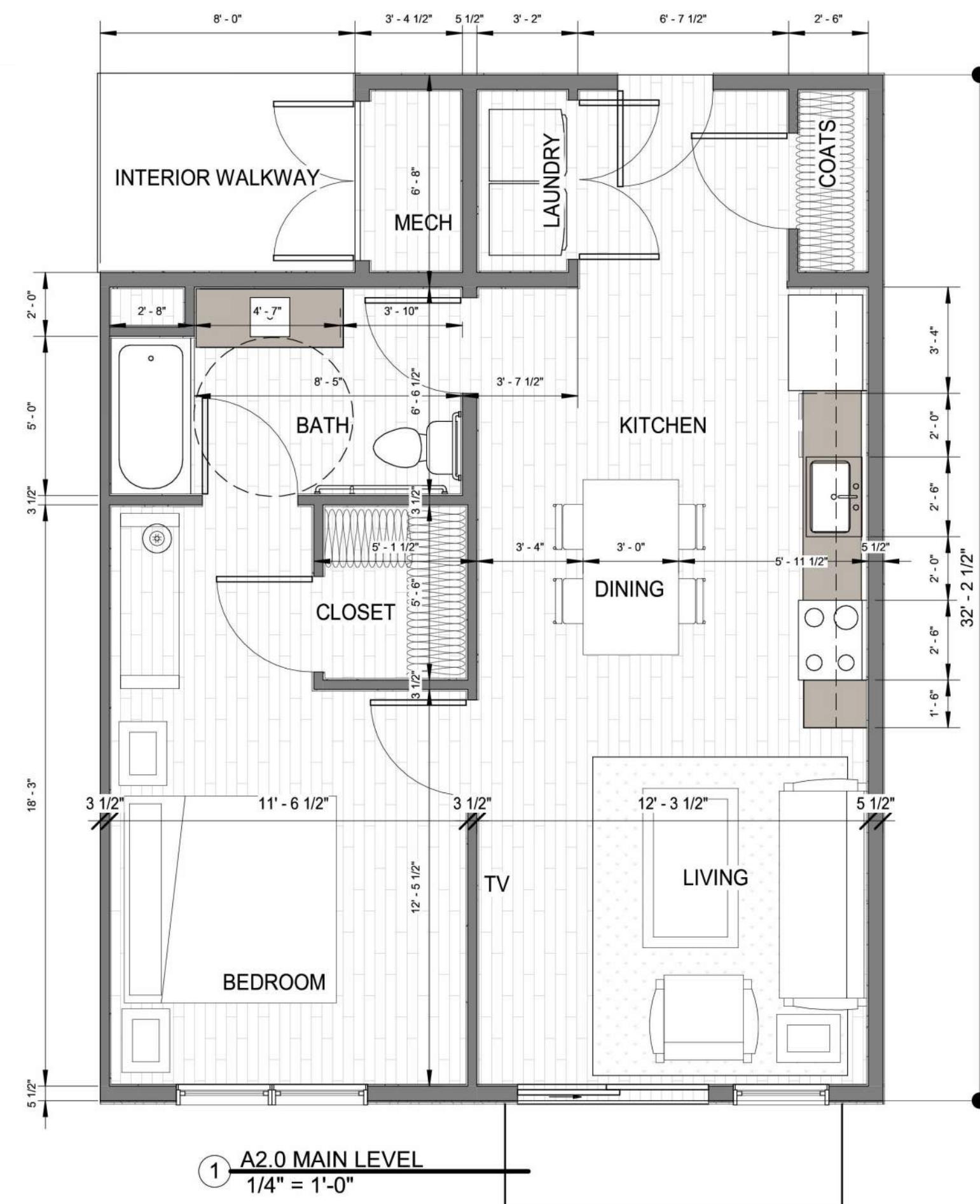
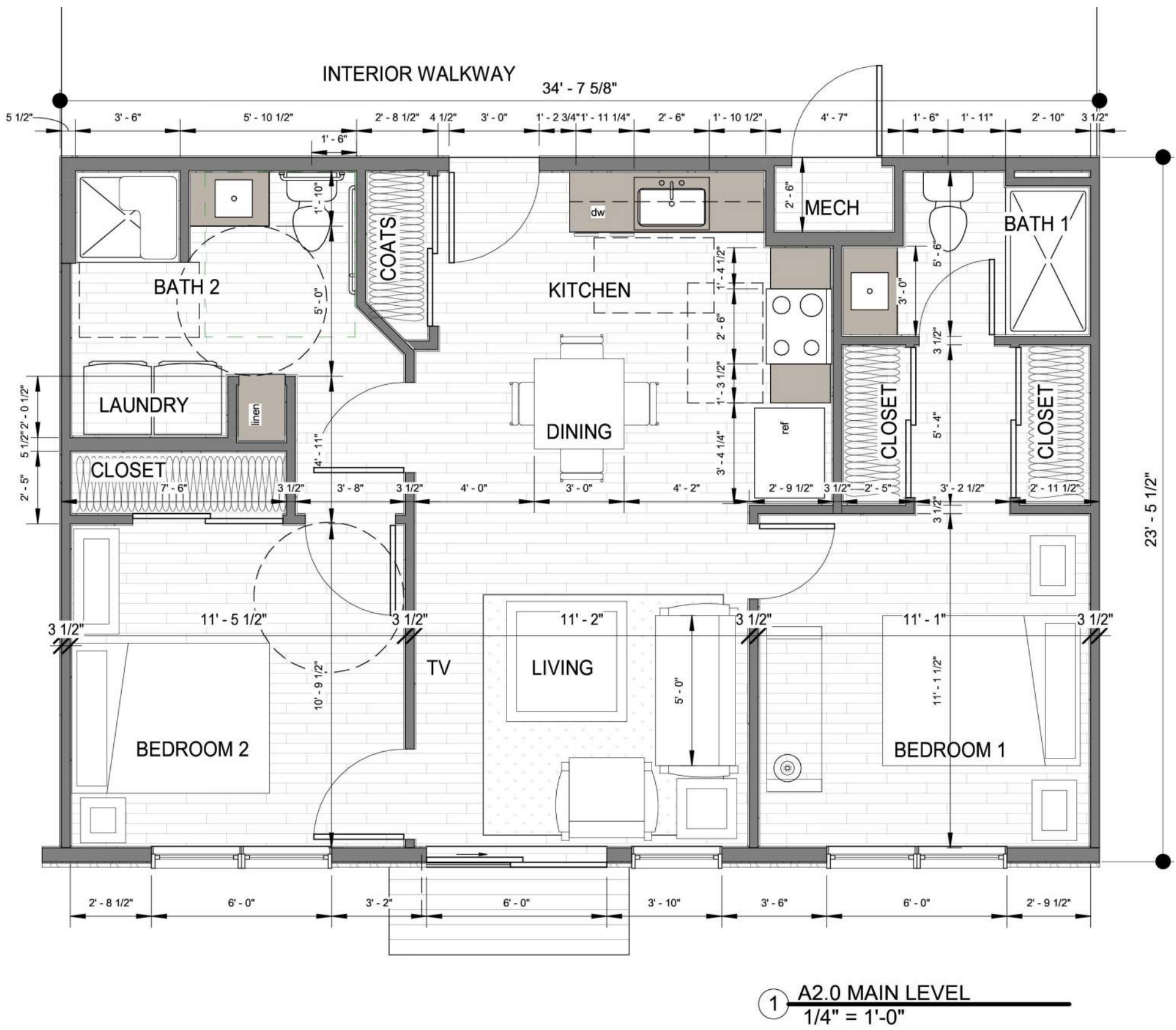
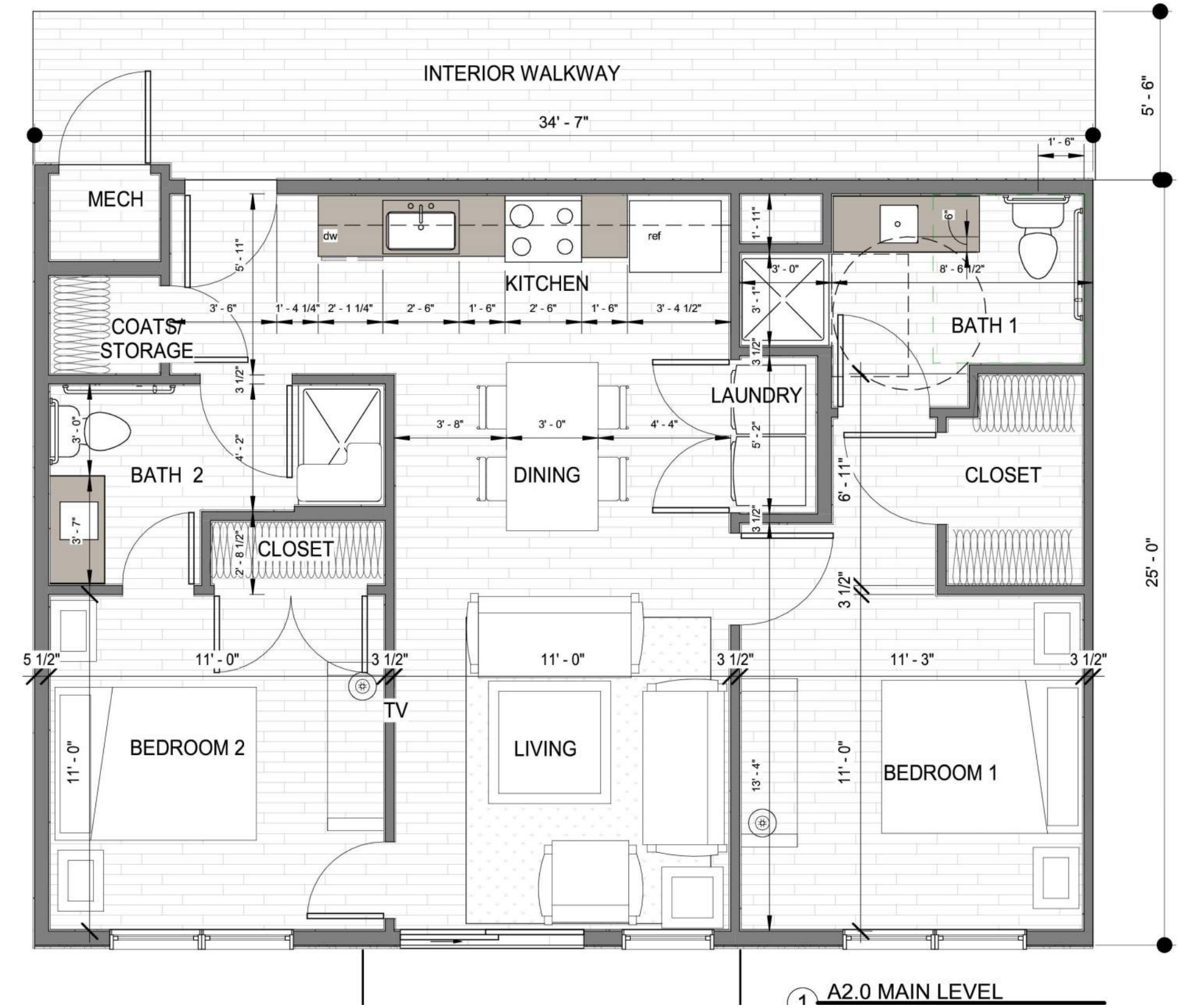
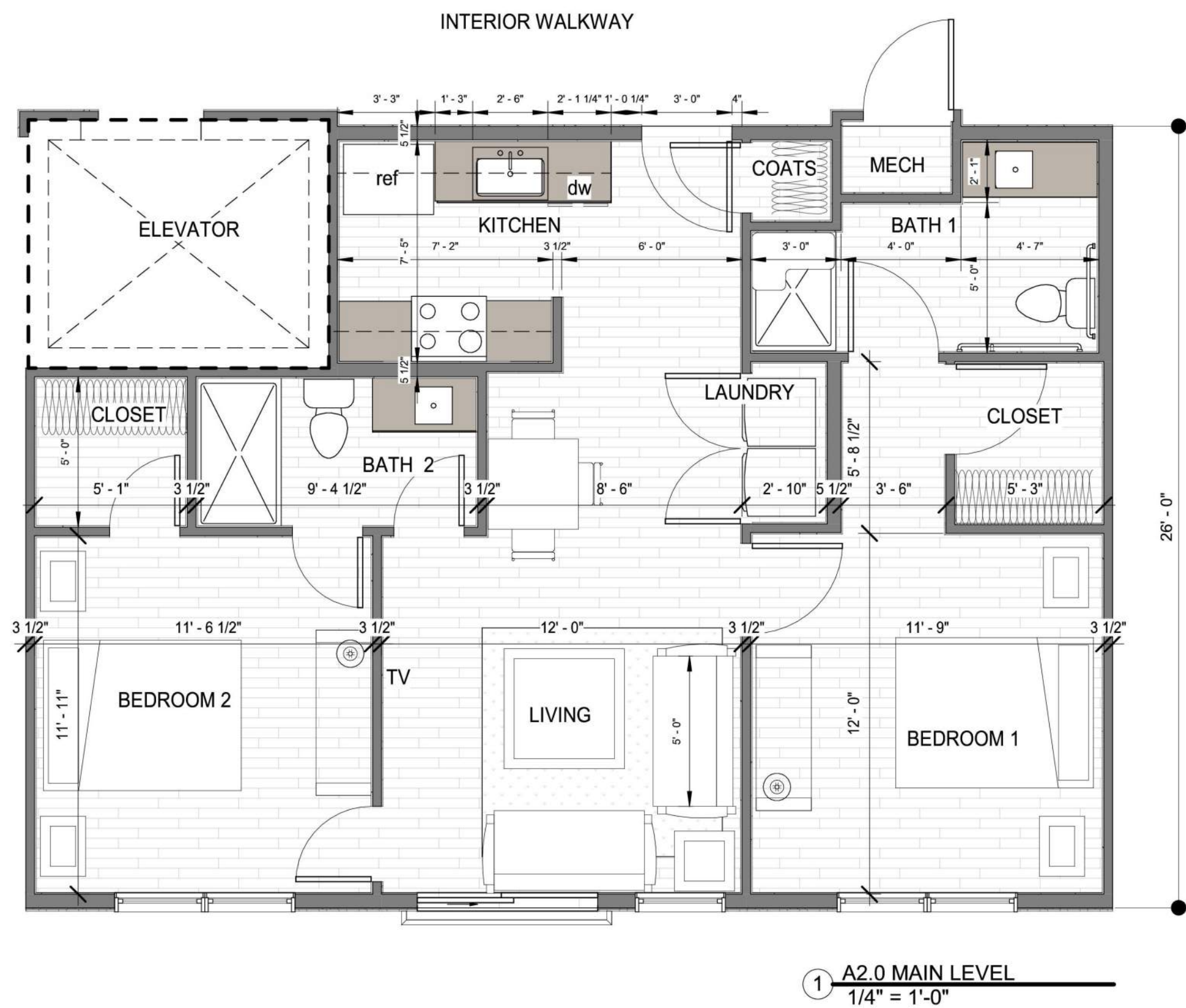
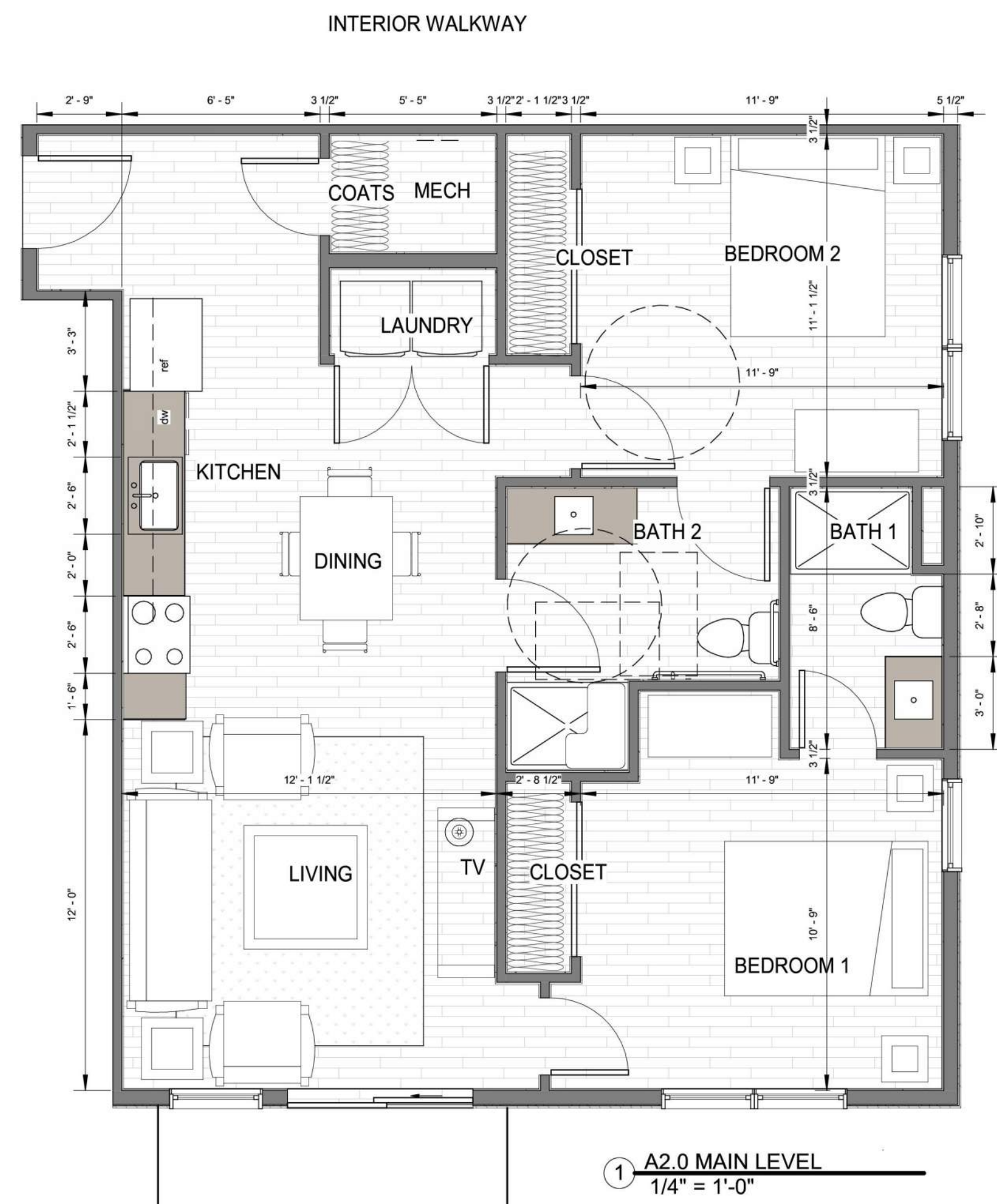
REV/SIONS	No.	Description	Date

Consultant
Address
Phone
E-mail



4th FLOOR FRONT
ONE BEDROOM
APARTMENT

UNIT SIZE
465.8 s.f.



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No.	Revisions Description	Date

Consultant
Address
Phone
E-mail

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date: 6-22-22
Project number: 2175
UNIT PLANS

A2.0.1

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

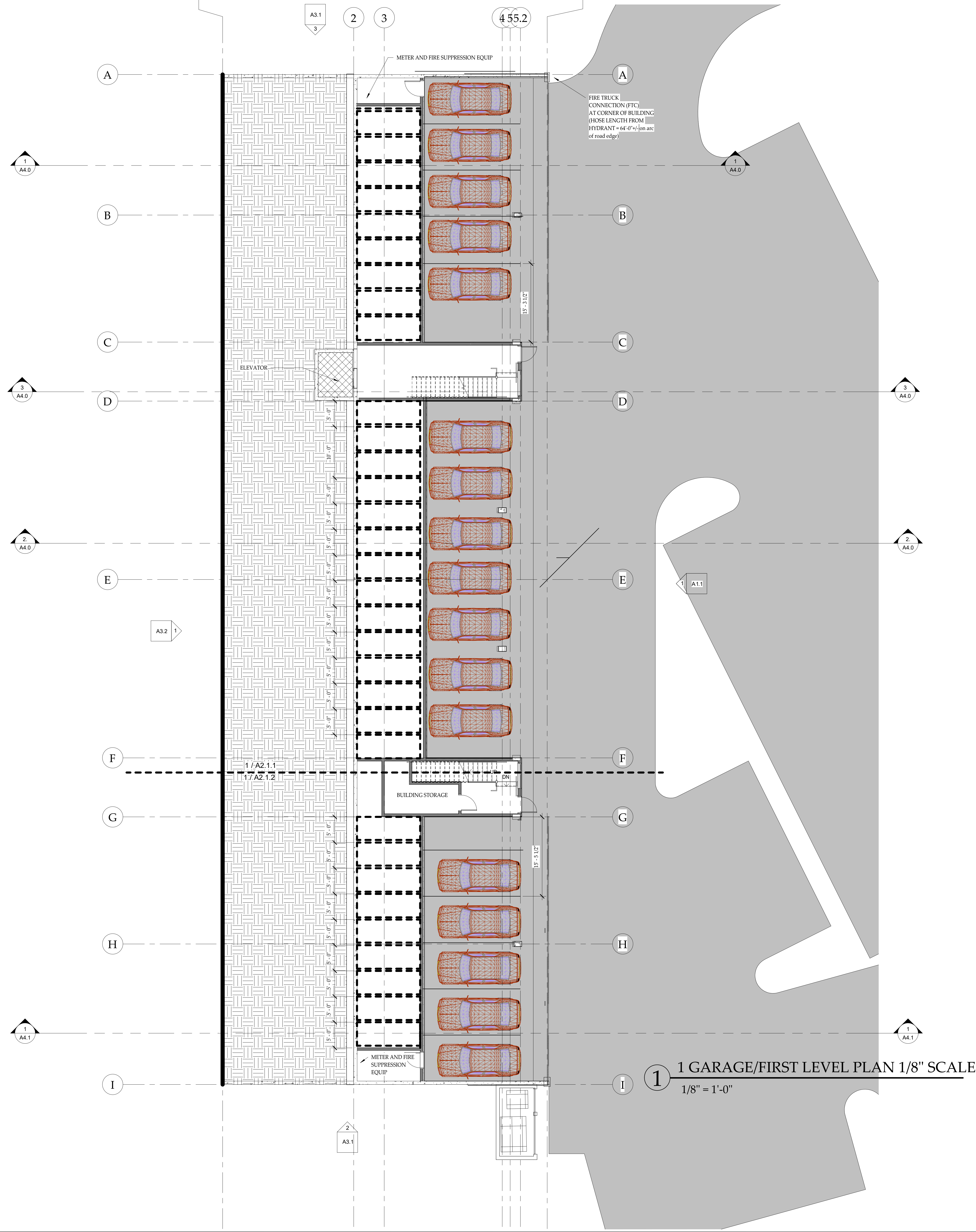
NOT FOR CONSTRUCTION

Date: 6-22-22

Project number: 2175

FIRST LEVEL PLAN

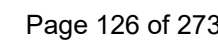
A2.1

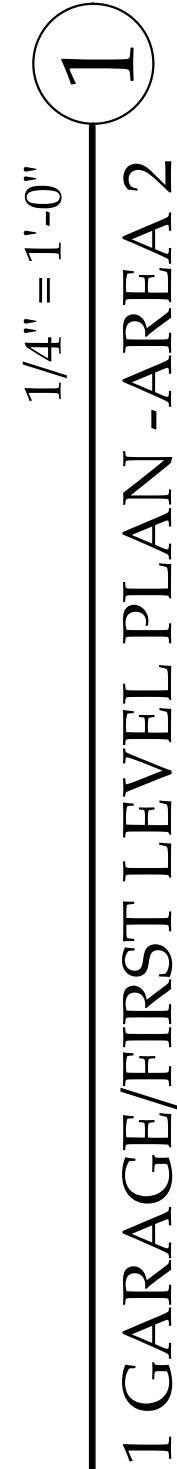


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435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

Date: 6-22-22
 Project number: 2175
 1ST LEVEL PLAN AREA 1
A2.1.1





Date: 6-22-21
 Project number: 211
 1ST LEVEL PLAN AREA 2

435 EBV CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

[illegible]

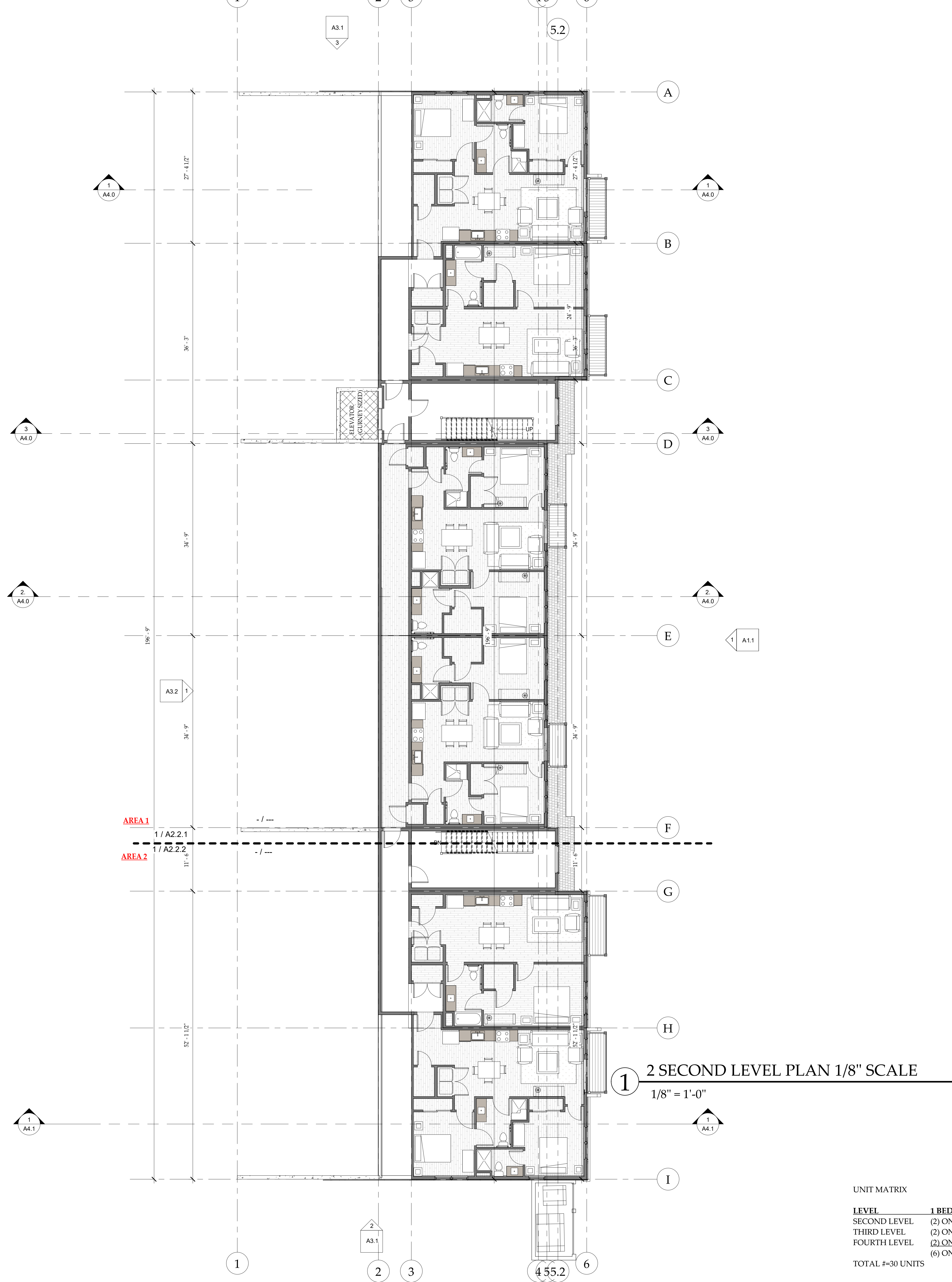
Consultant	Address	Address	Phone	Fax	e-mail
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435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date:	6-22-22
Project number:	2175
SECOND LEVEL PLAN	
A2.2	



UNIT MATRIX			
LEVEL	1 BEDROOM	2 BEDROOM	3 BEDROOM
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BDRM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM
TOTAL #=30 UNITS			



6-22-22

2175

2ND LEVEL AREA 1

Date:

Project number:

A2.2.1

NOT FOR CONSTRUCTION

3

4

5

5.2

6

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

UPDATED DEVELOPMENT PERMIT SET

2

Consultant
Address
Phone
E-mail

REV/SIONS

No.	Description	Date

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Page 129 of 273



1
2 SECOND LEVEL PLAN - AREA 2
1/4" = 1'-0"

Date:	6-22-22
Project number:	2175
2ND LEVEL AREA 2	
A2.2.2	

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

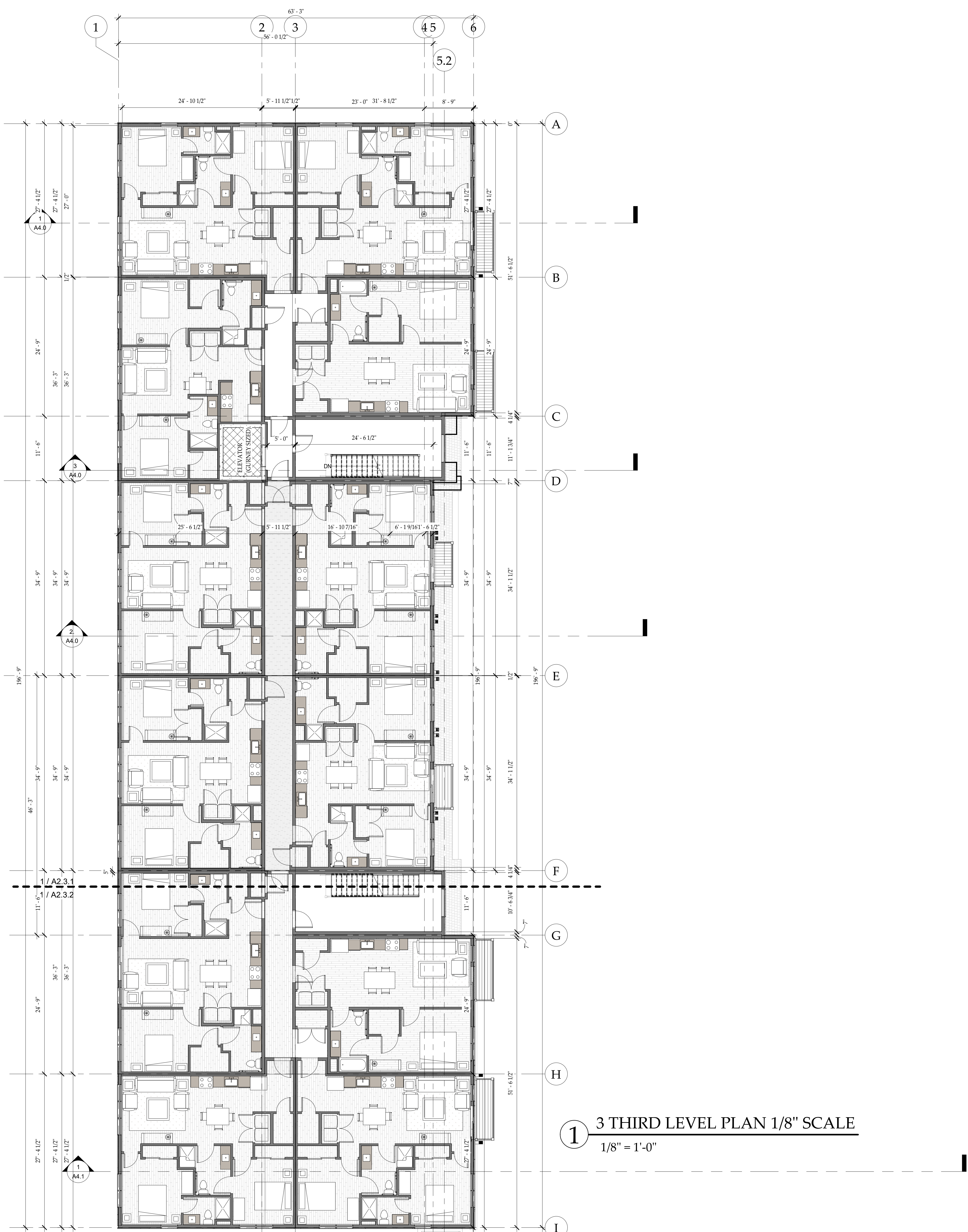
435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

Consultant
Address
Phone
Fax
e-mail

REVISIONS	
No.	Description

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UNIT MATRIX

LEVEL	1 BEDROOM	2 BEDROOM	3 BEDROOM
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BRDM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
TOTAL #=30 UNITS	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM

6-22-22

Project number:

2175

THIRD LEVEL PLAN

A2.3

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

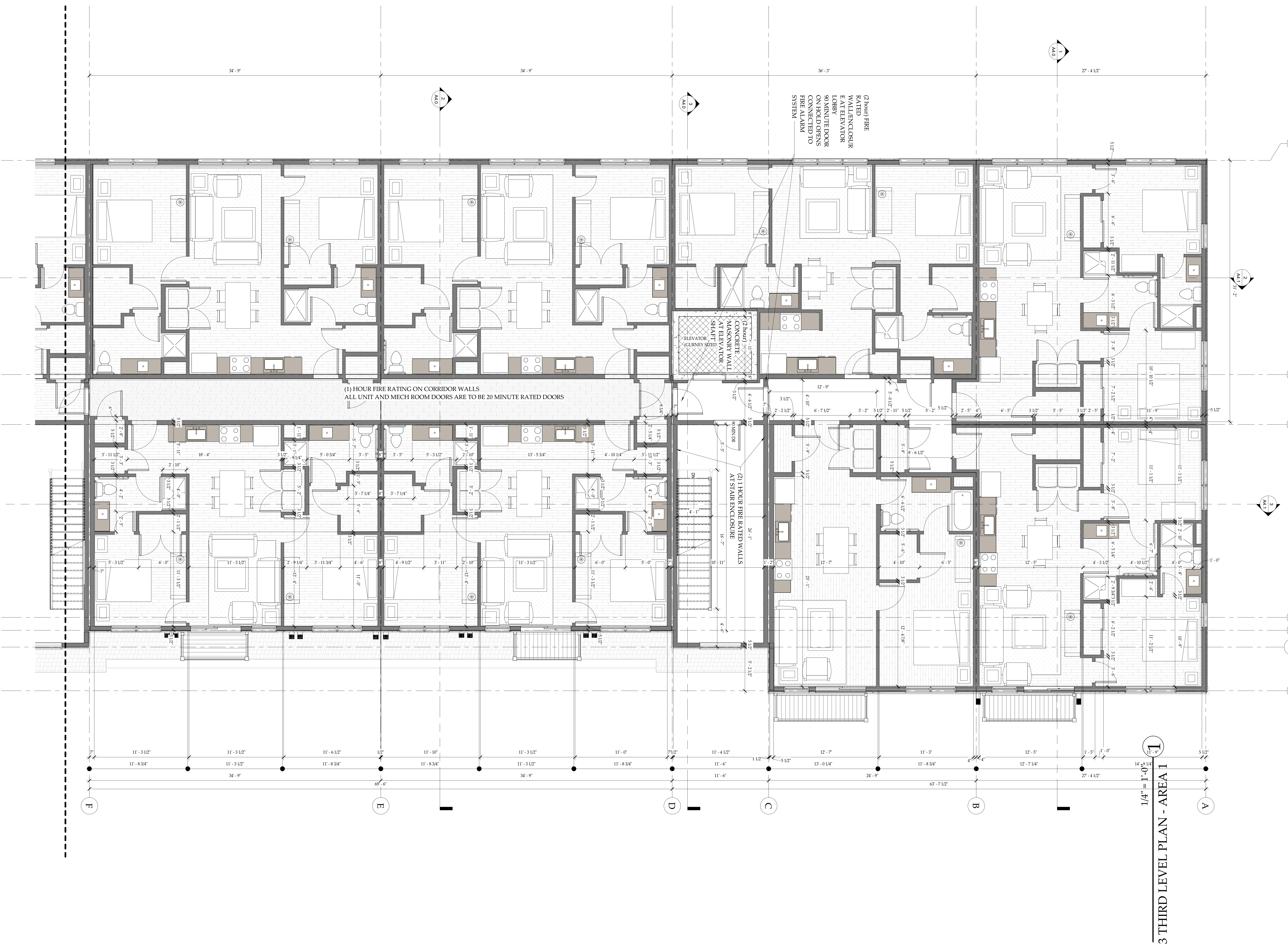
UPDATED DEVELOPMENT PERMIT SET

Consultant
Address
Phone
e-mail

REV/SIONS
Description
No.
Date

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6-22-22

Date:

2175

Project number:

3RD LEVEL PLAN AREA 1

3RD LEVEL PLAN AREA 1

A2.3.1

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

UPDATED DEVELOPMENT PERMIT SET

1

2

3

4

5

5.2

6

REVISIONS

No.	Description	Date

Consultant

Address

Phone

E-mail

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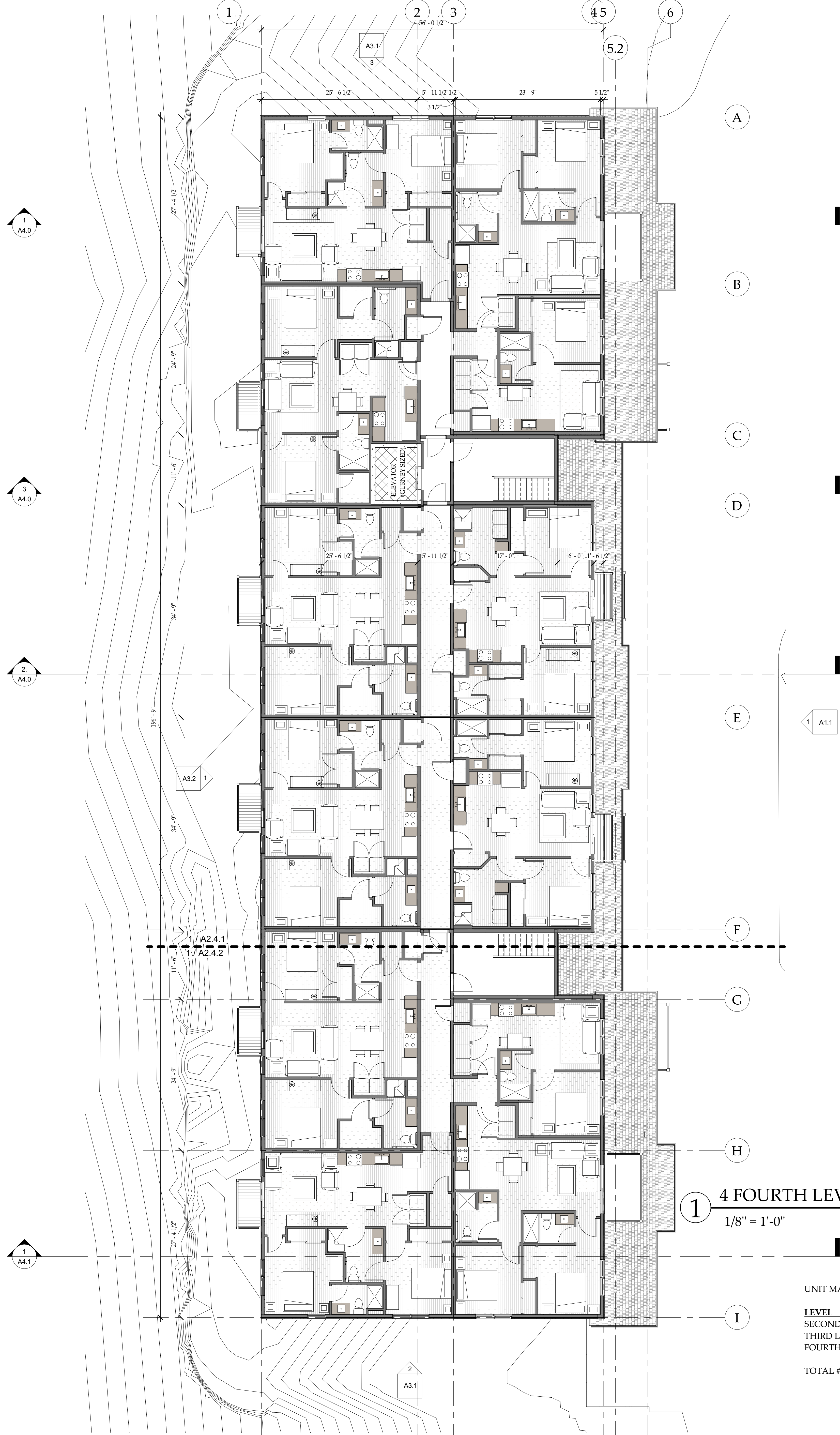
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Page 132 of 273



UNIT MATRIX			
LEVEL	1 BEDROOM	2 BEDROOM	3 BEDROOM
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BRDM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
TOTAL #=30 UNITS	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM

6-22-22

2175

FOURTH LEVEL PLAN

Date:

Project number:

6-22-22

2175

FOURTH LEVEL PLAN

Date:

Project number:

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

UPDATED DEVELOPMENT PERMIT SET

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Consultant

Address

Phone

E-mail

Page 134 of 273



UNIT MATRIX

LEVEL	1 BEDROOM	2 BEDROOM	3 BEDROOM
SECOND LEVEL	(2) ONE BDRM	(4) TWO BDRM	(0) THREE BRDM
THIRD LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
FOURTH LEVEL	(2) ONE BDRM	(10) TWO BDRM	(0) THREE BDRM
TOTAL #=30 UNITS	(6) ONE BDRM	(24) TWO BDRM	(0) THREE BDRM

1/4" = 1'-0"
4 FOURTH LEVEL PLAN - AREA 1

6-22-22

2175

4TH LEVEL PLAN AREA 1

Date:

Project number:

A2.4.1

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II

UPDATED DEVELOPMENT PERMIT SET

2

3

1

2

3

REV/SIONS

No.

Description

Date

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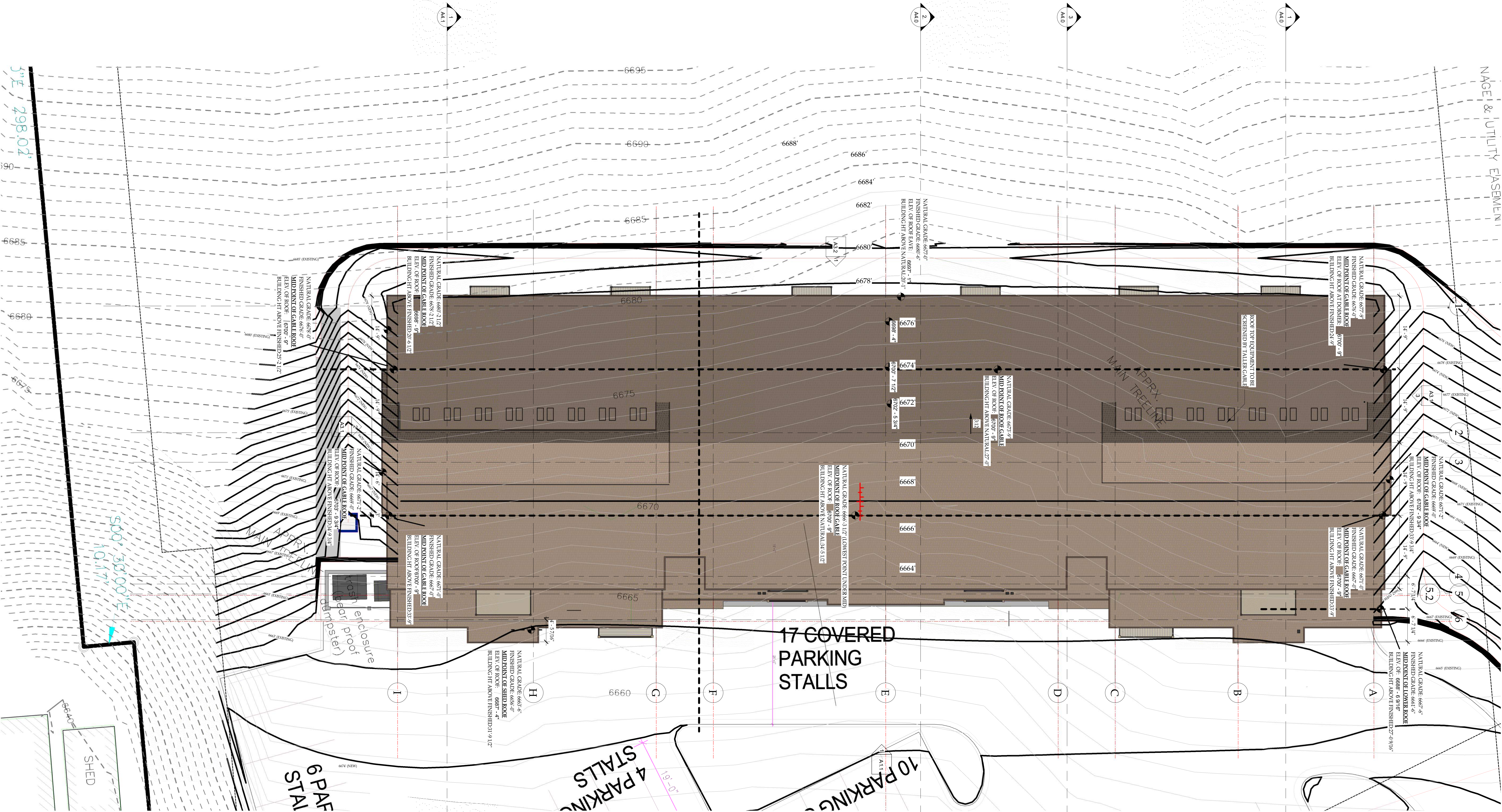
435 EBV CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date: 6-22-22
 Project number: 2175
 4TH LEVEL PLAN AREA 2
A2.4.2





1
1/8" = 1'-0"
ROOF PLAN color

No.	Description	Date

Consultant Name Address Phone e-mail

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date: 6-22-22	2175
Project number:	
ROOF PLAN	
A2.5	



1 3D View 1

Date:	6-22-22
Project number:	2175
EXTERIOR ELEVATIONS	

A3.0

NOT FOR CONSTRUCTION

435 EBY CREEK APARTMENTS

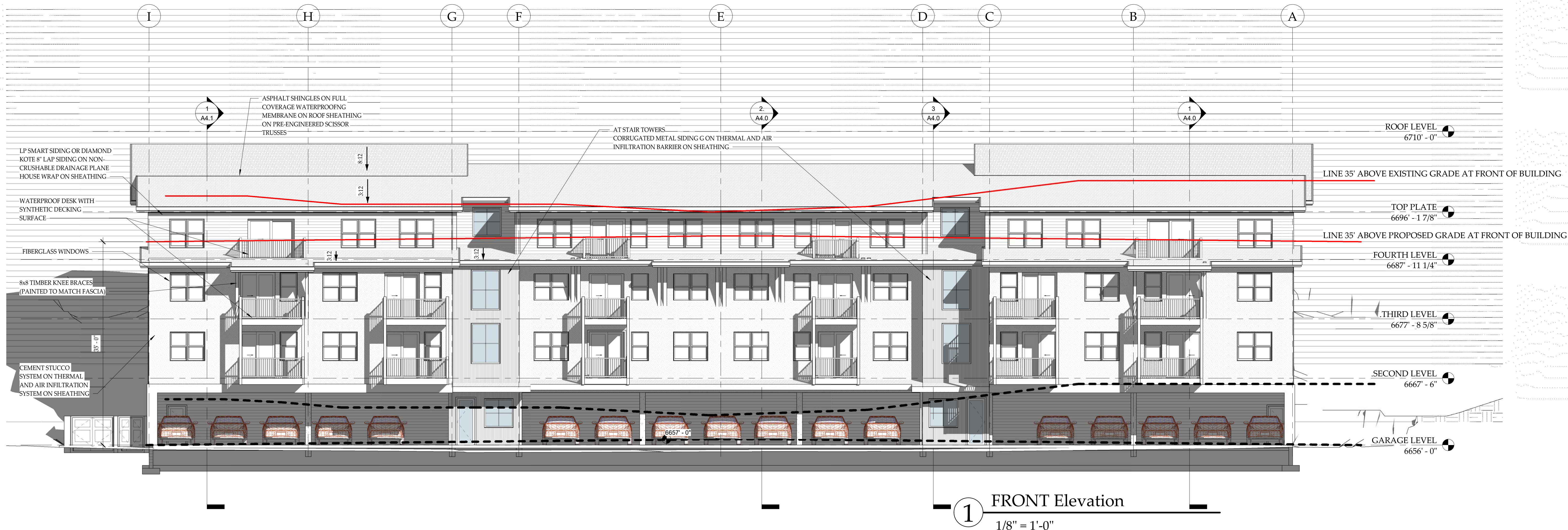
435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

Consultant	
Address	
Address	
Phone	
Fax	
e-mail	

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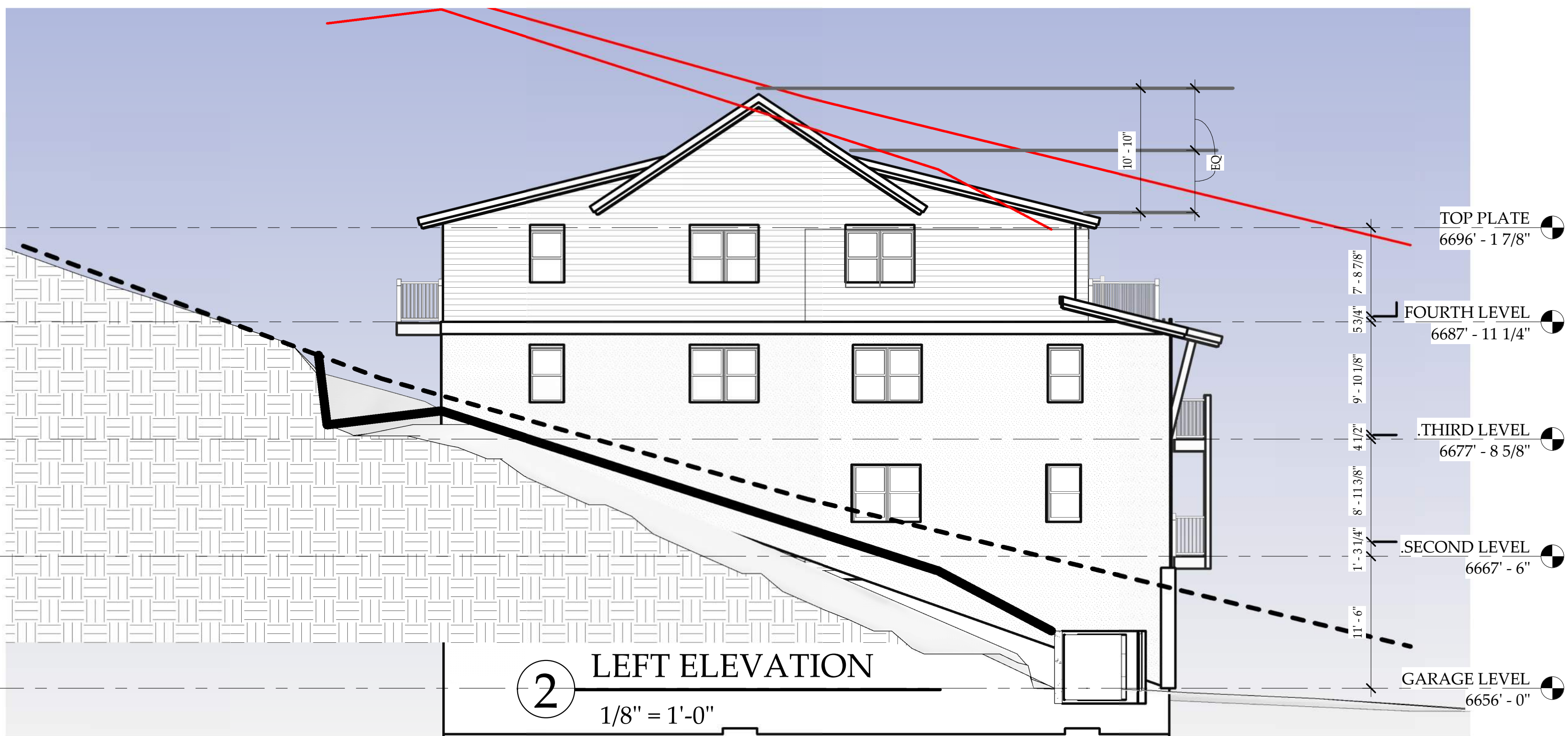
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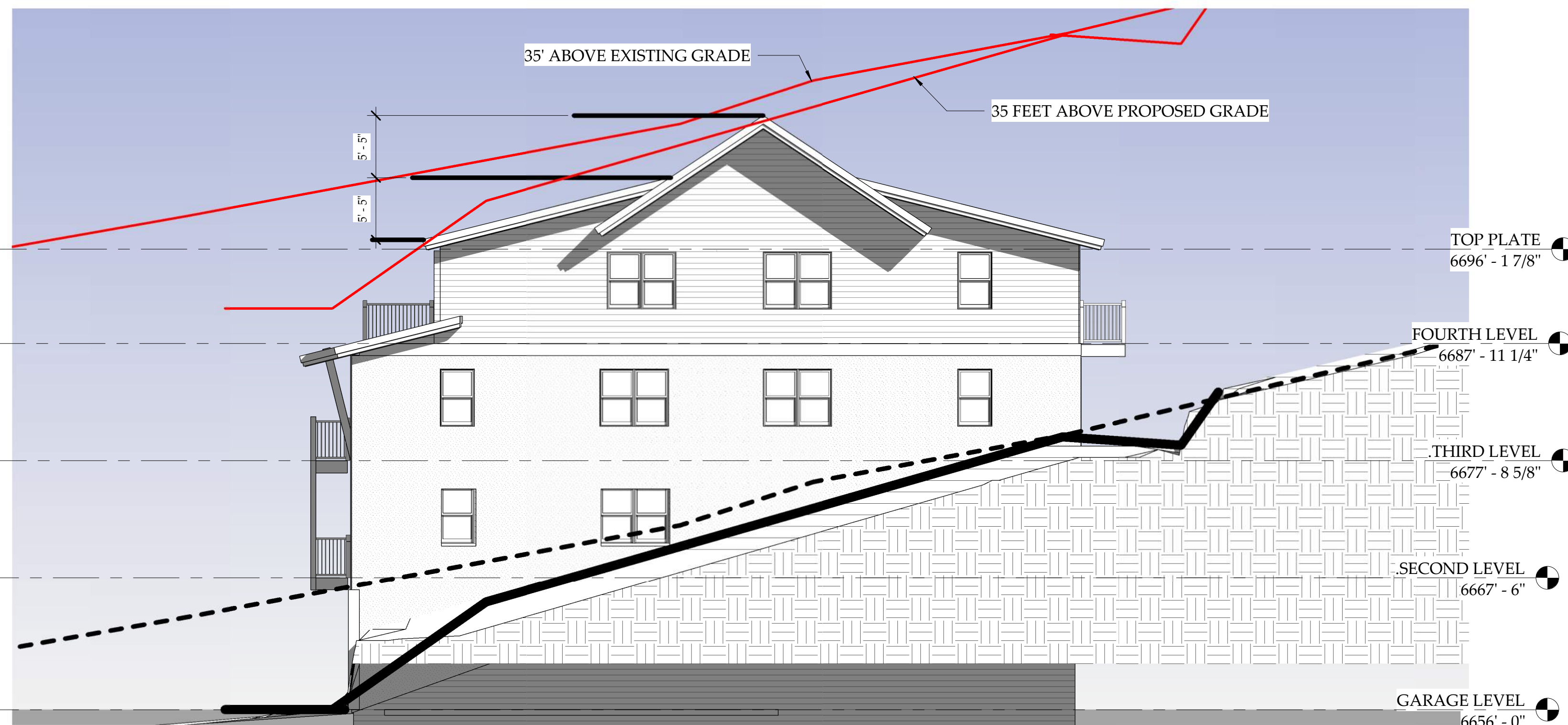
1 FRONT Elevation

1/8" = 1'-0"



2 LEFT ELEVATION

1/8" = 1'-0"



3 RIGHT Elevation

1/8" = 1'-0"



MATERIAL DESCRIPTIONS

12" = 1'-0"

No.	Revisions	Description	Date

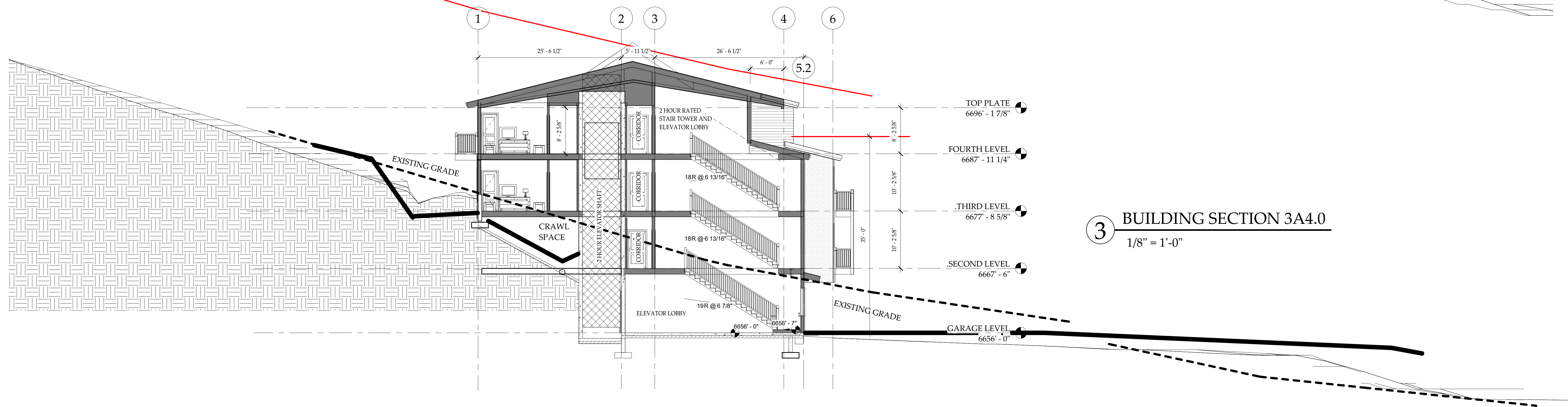
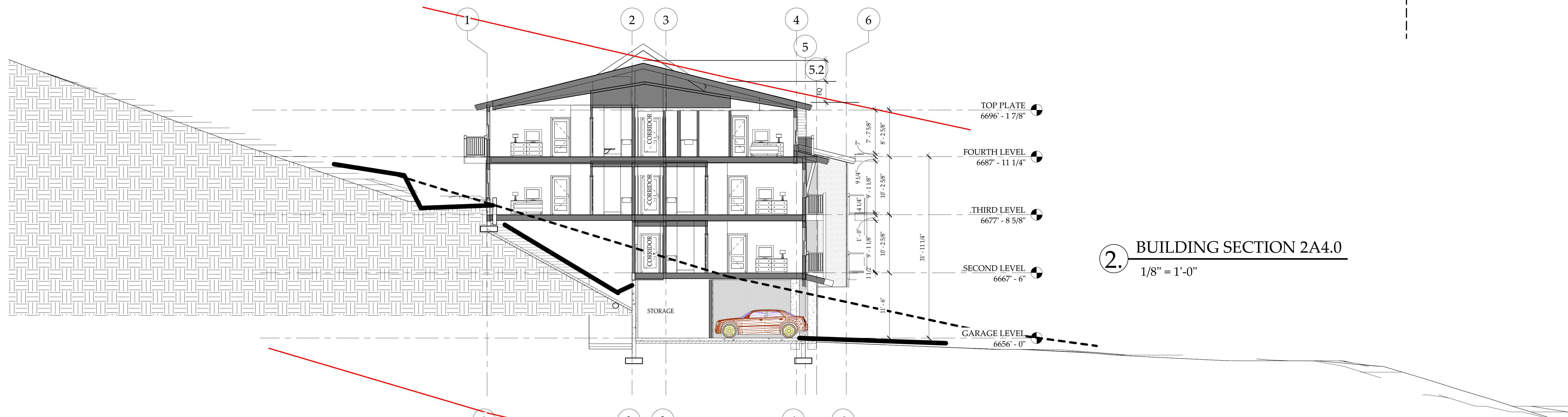
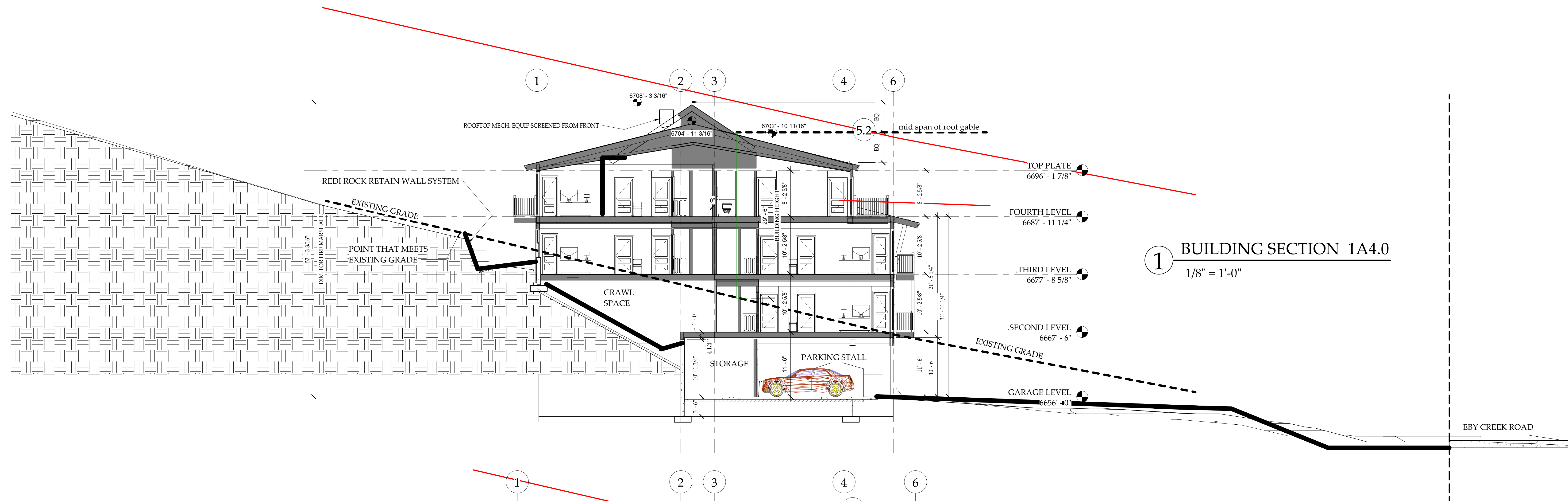
Consultant
Address
Phone
E-mail

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

NOT FOR CONSTRUCTION

Date:	6-22-22
Project number:	2175
EXTERIOR ELEVATIONS	
A3.1	

[illegible]

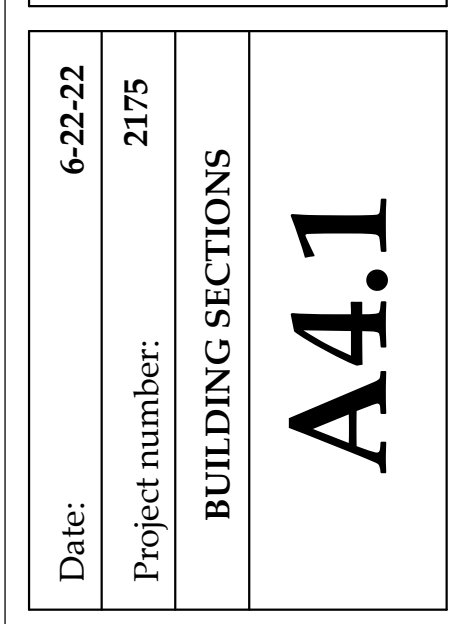
Consultant	
Address	
Address	
Phone	
Fax	
e-mail	

435 EBV CREEK APARTMENTS

435 EBY CREEK ROAD
Subdivision: PERRY SUBDIVISION Lot: 3, PHASE II
UPDATED DEVELOPMENT PERMIT SET

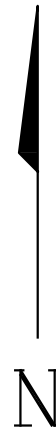
NOT FOR CONSTRUCTION

Date:	6-22-22
Project number:	2175
BUILDING SECTIONS	
A4.0	

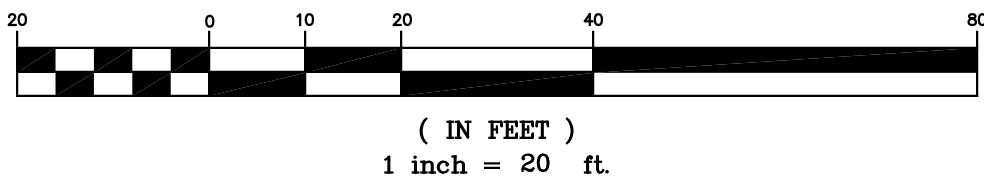


TOPOGRAPHIC SURVEY

LOT 3, PERRY SUBDIVISION, PHASE II
Located in Section 32, Township 4 South,
Range 84 West of the 6th P.M.
Town of Eagle, Eagle County, Colorado

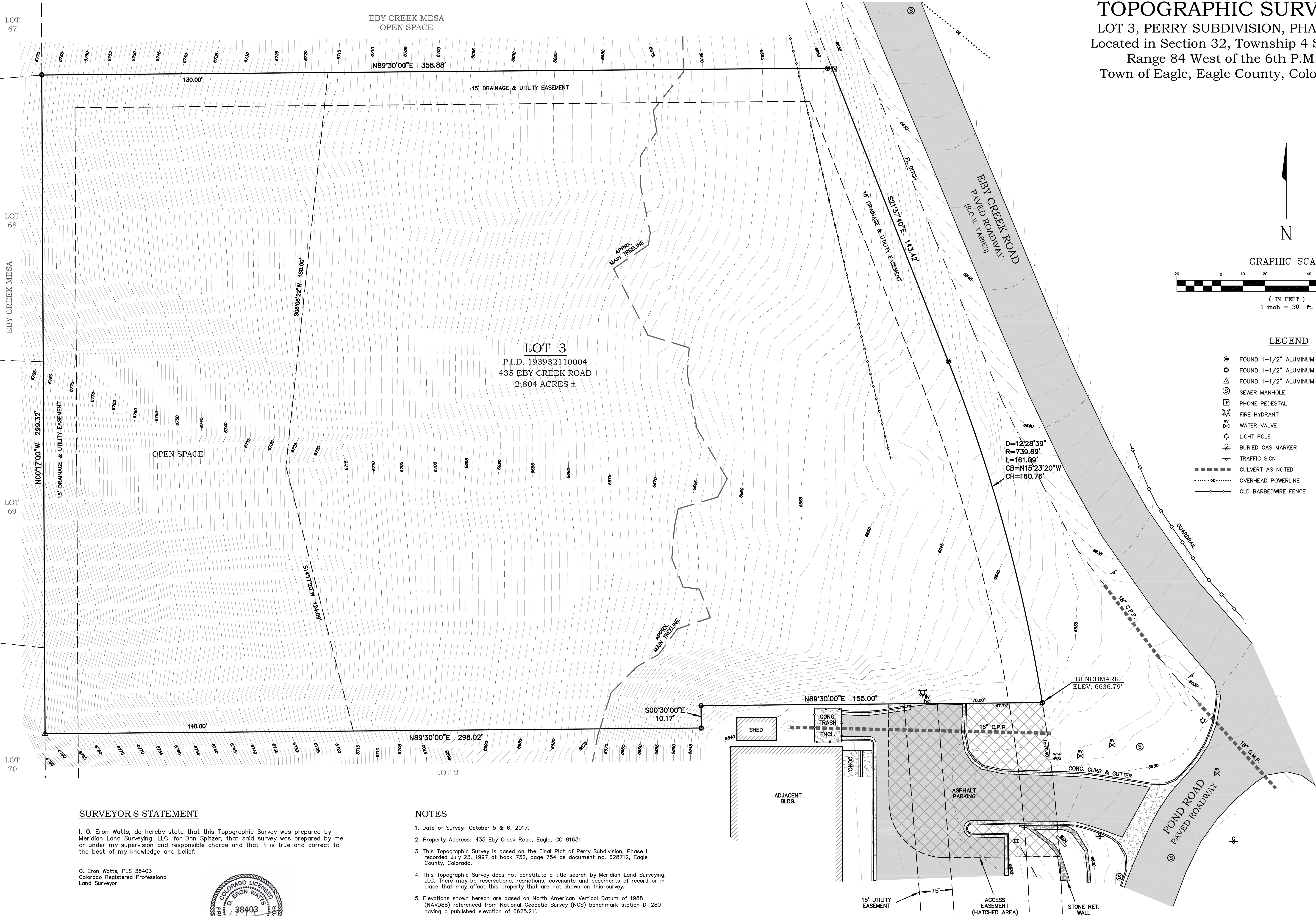


GRAPHIC SCALE



LEGEND

- FOUND 1-1/2" ALUMINUM CAP LS25630
- FOUND 1-1/2" ALUMINUM CAP LS30093
- △ FOUND 1-1/2" ALUMINUM CAP LS26967
- ⊙ SEWER MANHOLE
- ☐ PHONE PEDESTAL
- ⛑ FIRE HYDRANT
- ⛑ WATER VALVE
- ☆ LIGHT POLE
- ⊙ BURIED GAS MARKER
- ⊙ TRAFFIC SIGN
- ▬ CULVERT AS NOTED
- ⋯ OVERHEAD POWERLINE
- OLD BARBEDWIRE FENCE



SURVEYOR'S STATEMENT

I, O. Eron Watts, do hereby state that this Topographic Survey was prepared by Meridian Land Surveying, LLC, for Dan Spitzer, that said survey was prepared by me or under my supervision and responsible charge and that it is true and correct to the best of my knowledge and belief.

O. Eron Watts, PLS 38403
Colorado Registered Professional
Land Surveyor



NOTES

- Date of Survey: October 5 & 6, 2017.
- Property Address: 435 Eby Creek Road, Eagle, CO 81631.
- This Topographic Survey is based on the Final Plat of Perry Subdivision, Phase II recorded July 23, 1997 at book 732, page 754 as document no. 628712, Eagle County, Colorado.
- This Topographic Survey does not constitute a title search by Meridian Land Surveying, LLC. There may be reservations, restrictions, covenants and easements of record or in place that may affect this property that are not shown on this survey.
- Elevations shown herein are based on North American Vertical Datum of 1988 (NAVD88) referenced from National Geodetic Survey (NGS) benchmark station D-280 having a published elevation of 6625.21'.
- Contour interval equals 1 foot.

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown herein.

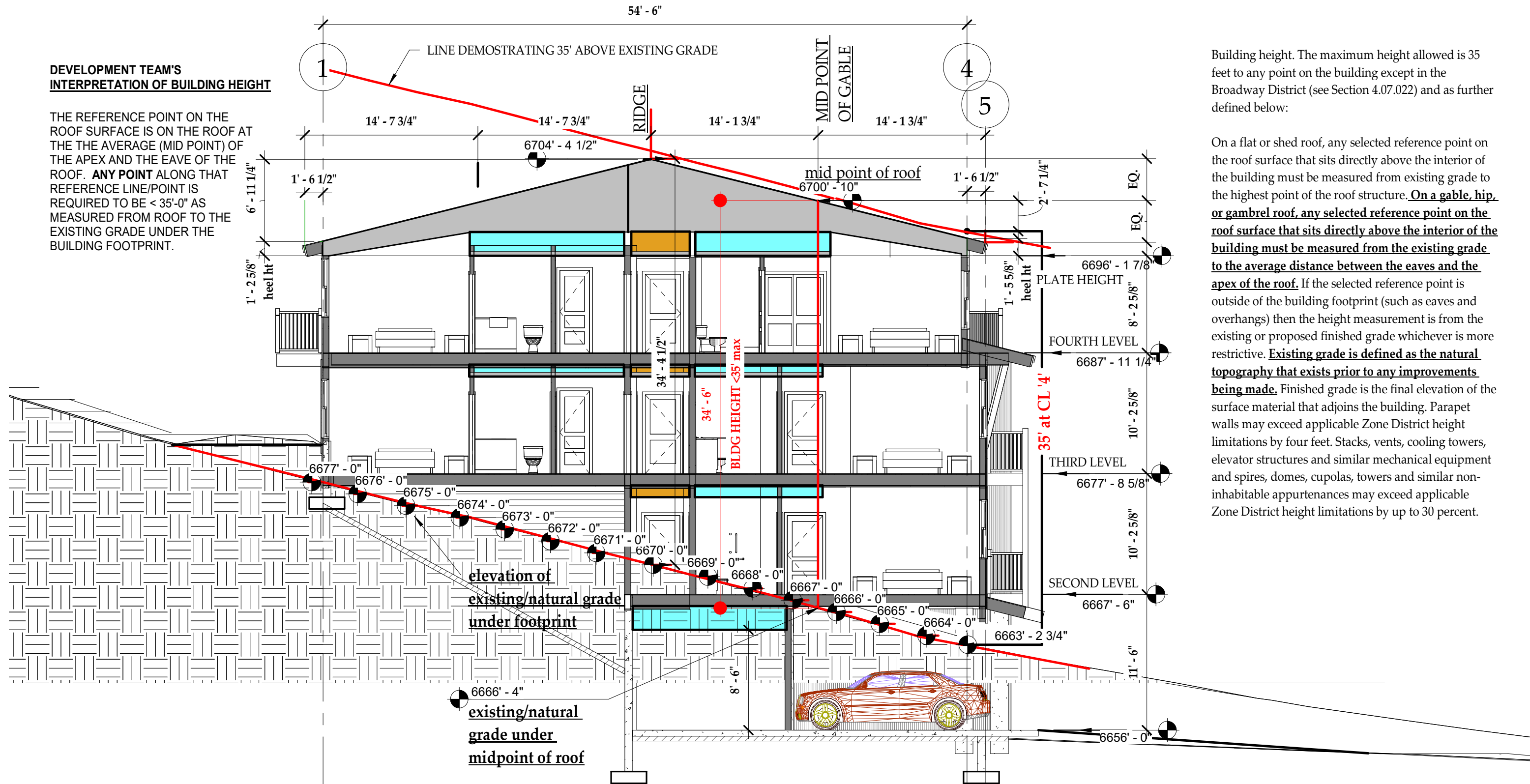
TOPOGRAPHIC SURVEY
LOT 3, PERRY SUBDIVISION, PHASE II
ACCORDING TO THE FINAL PLAT RECORDED JULY 23, 1997
AT BOOK 732, PAGE 754 AS DOCUMENT NO. 628712
LOCATED IN SEC. 32, T4S, R84W, 6TH P.M.
TOWN OF EAGLE, EAGLE COUNTY, COLORADO
435 EBY CREEK ROAD ROAD

SHEET:
1 OF 1
DATE:
10/11/2017
FLS/PTS:
EW/EW
DWG NO:
17007-R1
REVISION:
TYPD 10/16/17

MERIDIAN
LAND SURVEYING, L.L.C.
P.O. Box 2225 Gypsum, CO 81637
(970) 524-0963

DEVELOPMENT TEAM'S INTERPRETATION OF BUILDING HEIGHT

THE REFERENCE POINT ON THE ROOF SURFACE IS ON THE ROOF AT THE THE AVERAGE (MID POINT) OF THE APEX AND THE EAVE OF THE ROOF. **ANY POINT ALONG THAT REFERENCE LINE/POINT IS REQUIRED TO BE < 35'-0" AS MEASURED FROM ROOF TO THE EXISTING GRADE UNDER THE BUILDING FOOTPRINT.**



Building height. The maximum height allowed is 35 feet to any point on the building except in the Broadway District (see Section 4.07.022) and as further defined below:

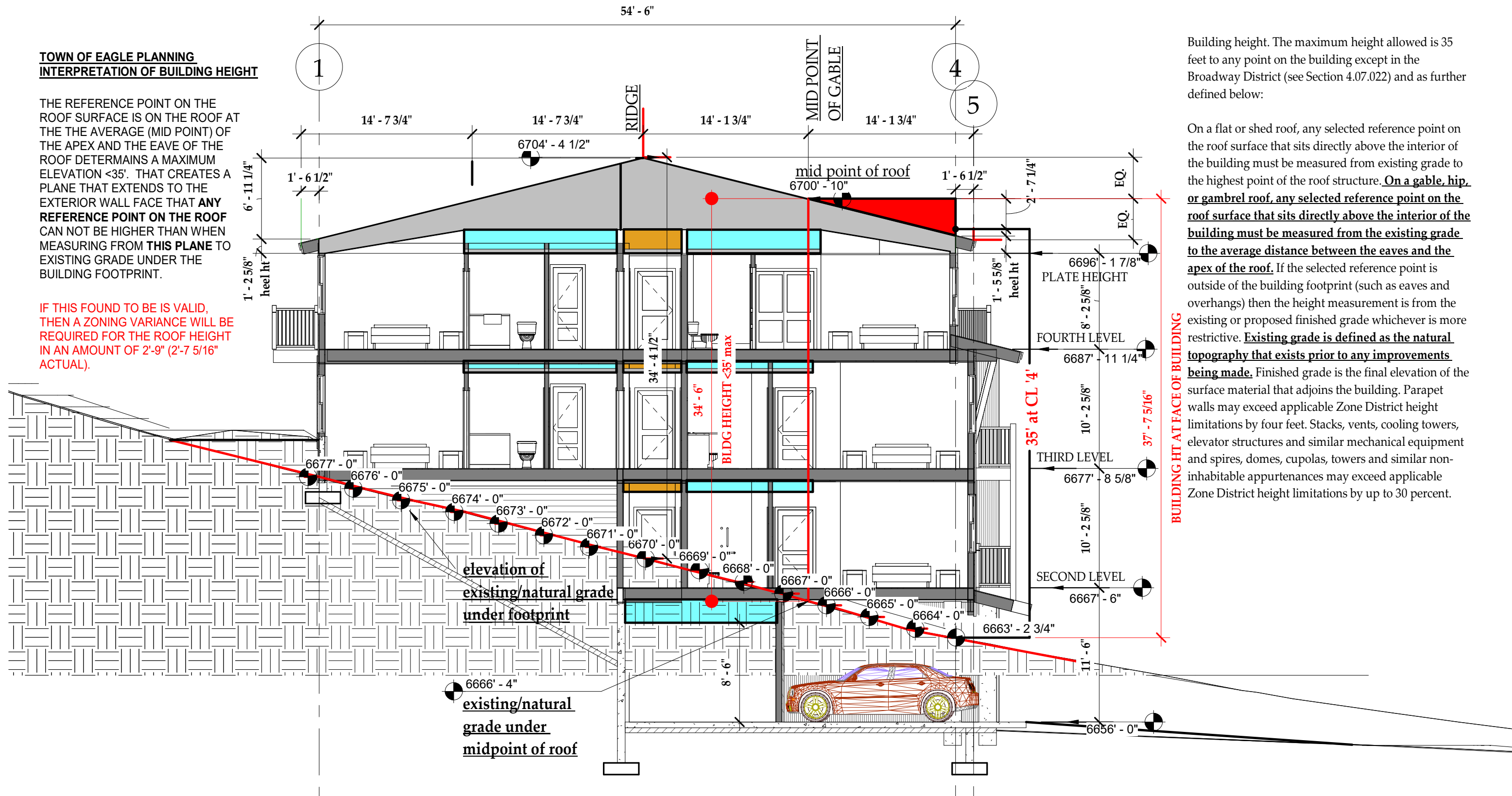
On a flat or shed roof, any selected reference point on the roof surface that sits directly above the interior of the building must be measured from existing grade to the highest point of the roof structure. **On a gable, hip, or gambrel roof, any selected reference point on the roof surface that sits directly above the interior of the building must be measured from the existing grade to the average distance between the eaves and the apex of the roof.** If the selected reference point is outside of the building footprint (such as eaves and overhangs) then the height measurement is from the existing or proposed finished grade whichever is more restrictive. **Existing grade is defined as the natural topography that exists prior to any improvements being made.** Finished grade is the final elevation of the surface material that adjoins the building. Parapet walls may exceed applicable Zone District height limitations by four feet. Stacks, vents, cooling towers, elevator structures and similar mechanical equipment and spires, domes, cupolas, towers and similar non-inhabitable appurtenances may exceed applicable Zone District height limitations by up to 30 percent.

1 BUILDING SECTION AT BLDG HEIGHT
1/8" = 1'-0"

**TOWN OF EAGLE PLANNING
INTERPRETATION OF BUILDING HEIGHT**

THE REFERENCE POINT ON THE ROOF SURFACE IS ON THE ROOF AT THE THE AVERAGE (MID POINT) OF THE APEX AND THE EAVE OF THE ROOF DETERMAINS A MAXIMUM ELEVATION <35'. THAT CREATES A PLANE THAT EXTENDS TO THE EXTERIOR WALL FACE THAT **ANY REFERENCE POINT ON THE ROOF** CAN NOT BE HIGHER THAN WHEN MEASURING FROM **THIS PLANE** TO EXISTING GRADE UNDER THE BUILDING FOOTPRINT.

IF THIS FOUND TO BE IS VALID, THEN A ZONING VARIANCE WILL BE REQUIRED FOR THE ROOF HEIGHT IN AN AMOUNT OF 2'-9" (2'-7 5/16" ACTUAL).



Building height. The maximum height allowed is 35 feet to any point on the building except in the Broadway District (see Section 4.07.022) and as further defined below:

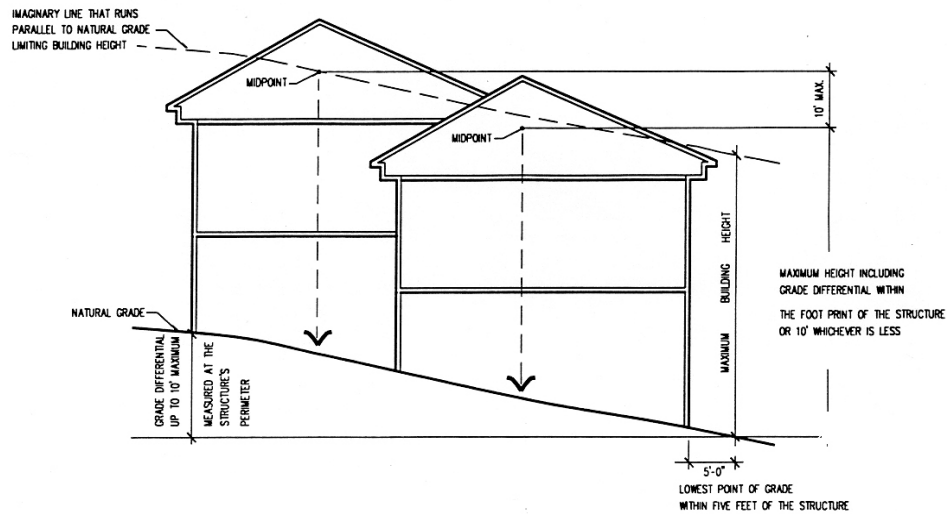
On a flat or shed roof, any selected reference point on the roof surface that sits directly above the interior of the building must be measured from existing grade to the highest point of the roof structure. On a gable, hip, or gambrel roof, any selected reference point on the roof surface that sits directly above the interior of the building must be measured from the existing grade to the average distance between the eaves and the apex of the roof. If the selected reference point is outside of the building footprint (such as eaves and overhangs) then the height measurement is from the existing or proposed finished grade whichever is more restrictive. Existing grade is defined as the natural topography that exists prior to any improvements being made. Finished grade is the final elevation of the surface material that adjoins the building. Parapet walls may exceed applicable Zone District height limitations by four feet. Stacks, vents, cooling towers, elevator structures and similar mechanical equipment and spires, domes, cupolas, towers and similar non-inhabitable appurtenances may exceed applicable Zone District height limitations by up to 30 percent.

1 BUILDING SECTION AT BLDG HEIGHT PER TOE PLANNING
1/8" = 1'-0"

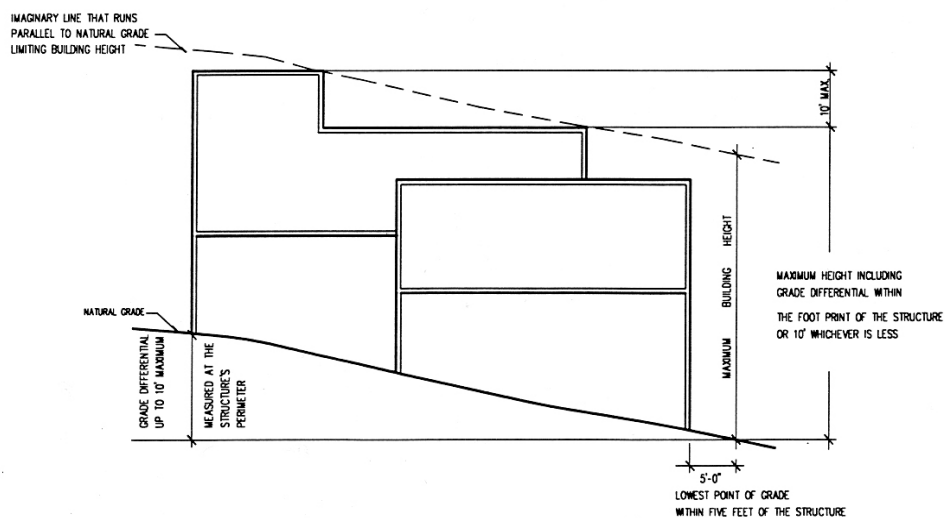
BUILDING HEIGHT is defined on the following illustrations:

STEPPED OR TERRACED BUILDINGS

The building height of a stepped or terraced building on a lot with an average slope in excess of fifteen (15) percent shall be measured as the maximum height of any building segment from natural or finished grade (whichever is more restrictive) at any point directly above that grade location. A building segment is a portion of the building that contains one-third of that building elevation being measured. A stepped or terraced structure shall not exceed the maximum height of the underlying zone district, plus, either (a) the maximum grade differential to the lowest point of grade within five (5) feet of the structure or (b) ten (10) feet, whichever is less

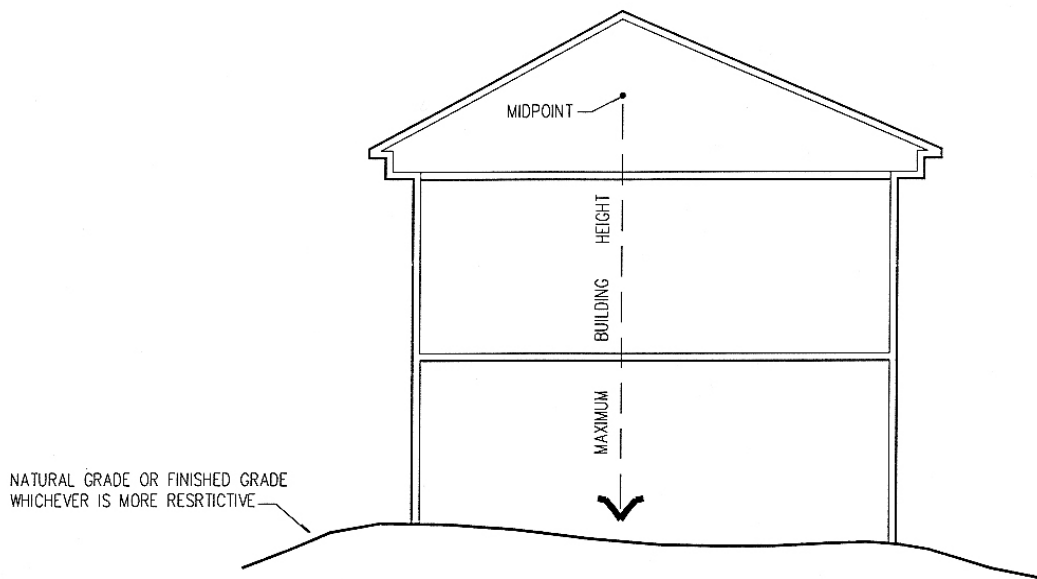


FLAT ROOF STRUCTURES

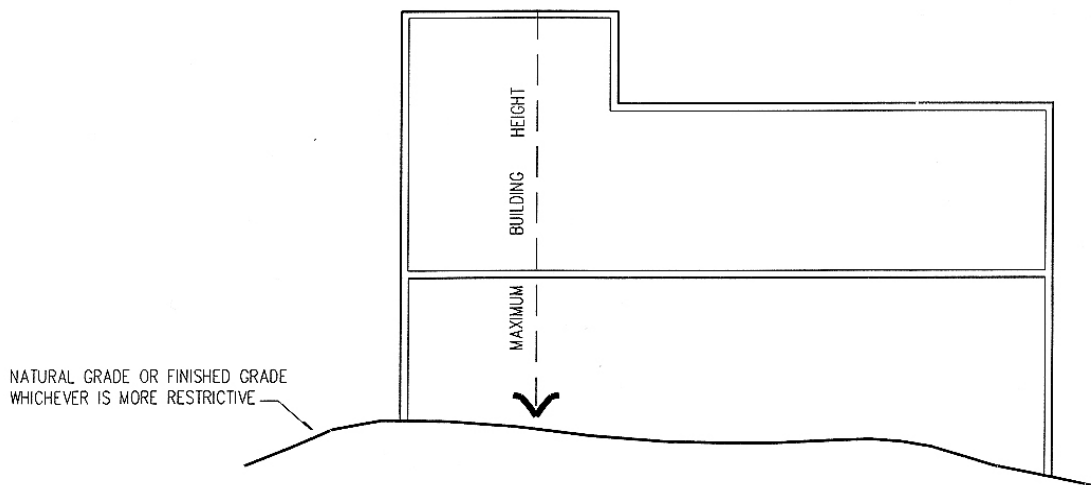


BUILDING HEIGHT CALCULATIONS FOR LOTS HAVING AN AVERAGE SLOPE OF LESS THAN THIRTY (30) PERCENT.

Building height means the distance measured vertically on all sides of a structure, from the natural or finished grade (whichever is more restrictive) of any given point to a point directly above that location that is: (a) the top of a flat roof, or mansard roof; or (b) the midpoint between the eave line and the peak of a gable, gambrel, hip or shed or similar pitched roof; or (c) the peak of any roof that exceeds a slope of a twelve to twelve (12:12).

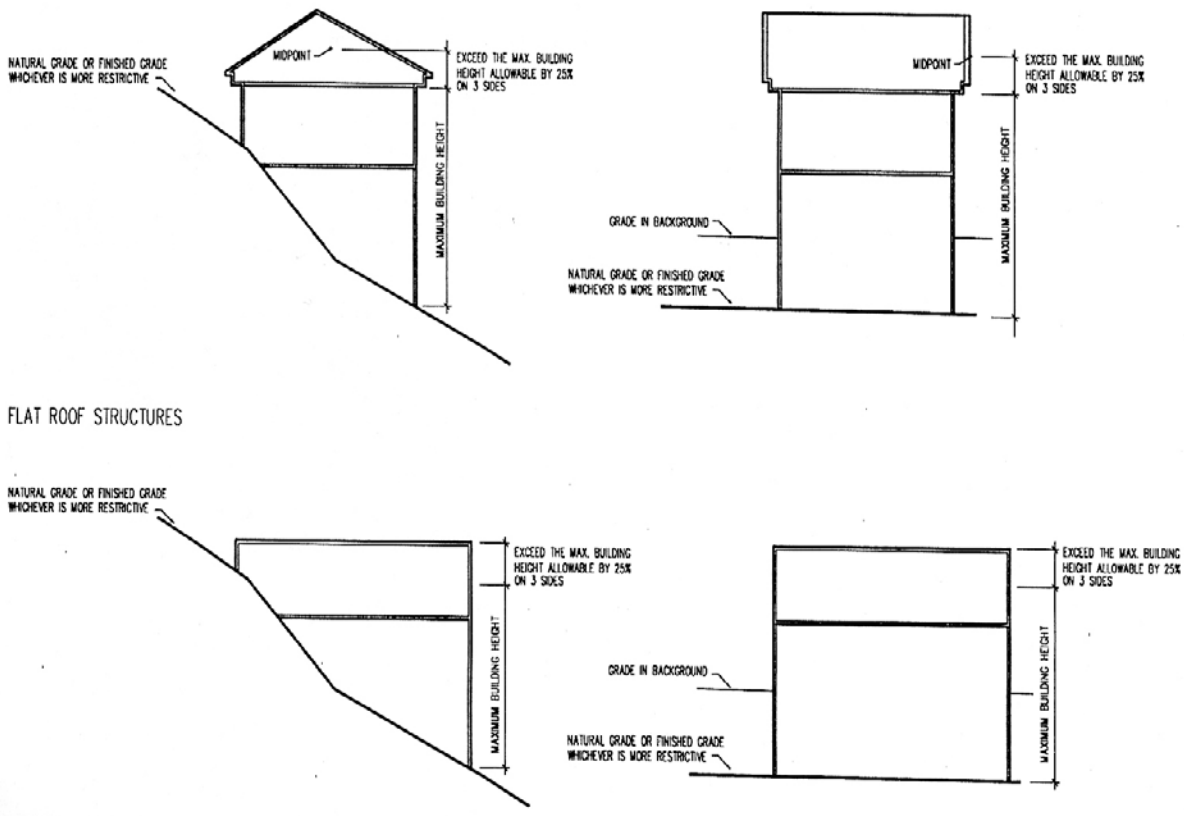


FLAT ROOF STRUCTURES



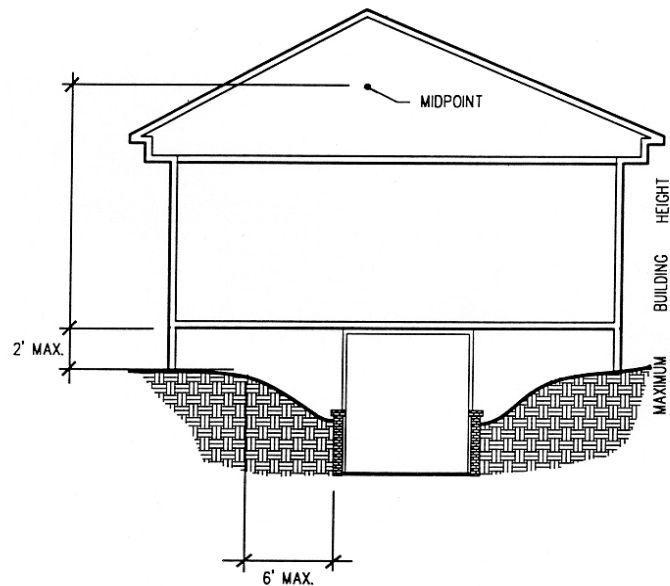
BUILDING HEIGHT CALCULATIONS FOR LOTS HAVING AN AVERAGE SLOPE OF THIRTY (30) PERCENT OR GREATER.

Building height means the distance measured vertically on all sides of a structure, from the natural or finished grade (whichever is more restrictive) at any give point to a point directly above that location that is: (a) the top of a flat roof, or mansard roof; or (b) the midpoint between the eave line and the peak of a gable, gambrel, hip, shed or similar pitched roof; or (c) the peak of any roof that exceeds a slope of a twelve to twelve (12:12). The measurement of three (3) sides may exceed the maximum building height allowable for the zone district in which the building is located by a maximum of twenty-five (25) percent.

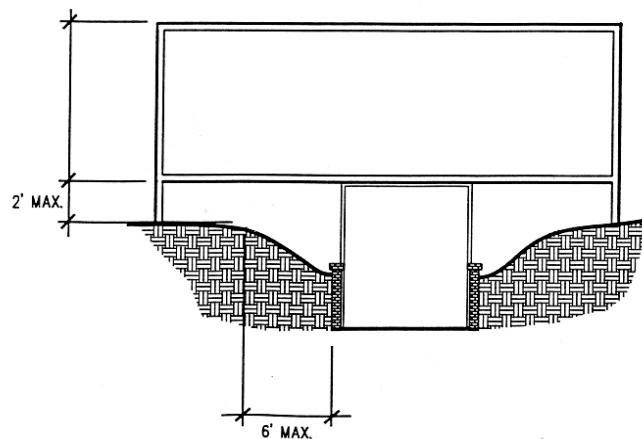


BUILDING HEIGHT CALCULATIONS FOR BUILDINGS INCORPORATING UNDERGROUND PARKING

For buildings incorporating underground parking, height shall be measured using the applicable definition above, provided, that for portions of the structure where the vertical distance between the top of the foundation wall and grade is more than twenty-four (24) inches and this portion of the structure has an opening exclusively for vehicle access, the grade within six (6) feet of that opening shall be used to determine building height. The opening for vehicular access shall not exceed a maximum width of sixteen (16) feet for multi-family residential uses, twenty (20) feet for commercial uses and twenty five feet for industrial uses. There shall be a maximum of two (2) such openings per building.



FLAT ROOF STRUCTURES



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EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2, SECTION 32, TOWNSHIP 4 SOUTH, RANGE 84 WEST OF
THE 6TH PRINCIPAL MERIDIAN, TOWN OF EAGLE, COUNTY OF EAGLE, STATE OF COLORADO

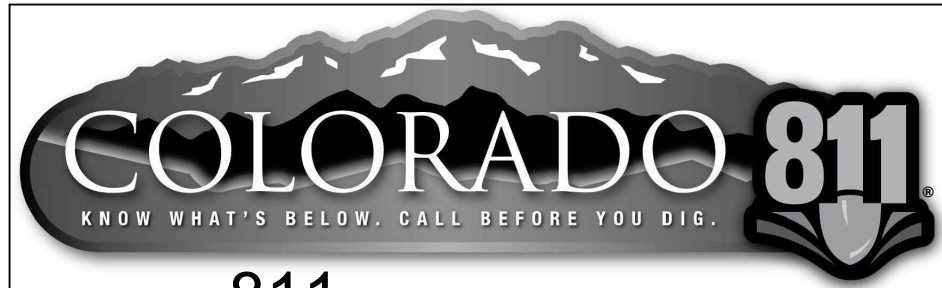
LEGEND

EXISTING		PROPOSED
	PROPERTY LINE	
	RIGHT-OF-WAY LINE	
	SECTION LINE	
	EASEMENT	
	RETAINING WALL	
	CURB & GUTTER	
	ASPHALT	
	CONCRETE/ SIDEWALK	
	HANDICAP RAMPS	
	CONTOURS	
	UTILITY CROSSING	
	STORM SEWER	
	STORM MANHOLE	
	ROOF DRAIN	
	STORM INLET	
	FLARED END SECTION	
	SANITARY SEWER	
	SANITARY MANHOLE	
	CLEAN OUT	
	WATER LINE	
	WATER VALVE	
	FIRE HYDRANT	
	WATER METER	
	IRRIGATION LINE	
	IRRIGATION CONTROL	
	OVERHEAD ELECTRIC	
	ELECTRIC LINE	
	LIGHT POLE	
	POWER POLE	
	ELECTRIC METER	
	TELEPHONE LINE	
	TELEPHONE PEDESTAL	
	CABLE TV	
	SIGN	
	DIRECTION OF FLOW	
	GRADING ARROW	
	GAS LINE	
	DESCRIPTIONS	
	SPOT ELEVATIONS	



VICINITY MAP

SCALE: 1"=100'



CALL **811** 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE FOR
MARKING OF UNDERGROUND MEMBER UTILITIES

ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS.
THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM
THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE
CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE SIZE,
MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES
PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BASIS OF BEARING AND BENCHMARK:

BASIS OF BEARING: BEARINGS ARE BASED UPON AN ASSUMED BEARING OF N89°30'00"E
FOR THE NORTHERLY LIMITS OF THE SUBJECT PROPERTY.

BENCHMARK: ELEVATIONS ARE BASED UPON THE NATIONAL GEODETIC SURVEY (N.G.S.)
BENCHMARK STATION D-280.
ELEVATION = 6625.21 FEET (N.A.V.D. 88)

EXISTING TOPOGRAPHY SHOWN WAS TAKEN FROM THE DESIGN SURVEY COMPLETED BY
MERIDIAN SURVEYING AND DATED 11 OCTOBER 2017.

SUBMITTALS / REVISIONS

1	SCHEMATIC DESIGN (NOT FOR CONSTRUCTION)	4/25/2022
2	DESIGN DEVELOPMENT (NOT FOR CONSTRUCTION)	5/19/2022
3	DEVELOPMENT PERMIT RESUBMITTAL (NO CONST.)	6/24/2022

Sheet List Table

Sheet Number	Sheet Title
C1	Cover Sheet
C1.1	General Notes & Abbreviations
C2	Existing Conditions & Demo Plan
C3	Site Plan
C4.0	Erosion Control Plan
C4.1	Erosion Control Notes
C5.0	Overall Grading Plan
C5.1	Detailed Grading Plan
C5.2	Detailed Grading Plan
C5.3	Grading Notes
C6.0	Overall Utility Plan
C6.1	Detailed Utility Plan
C6.2	Detailed Utility Plan
C6.3	Detailed Utility Plan
C6.4	Utility Notes
C9.1	Details
C10.1	Typical Sewer Details
C10.2	Typical Sewer Details
C11.1	Typical Water Details
C11.2	Typical Water Details
C11.3	Typical Water Details
C11.4	Typical Water Details
C12.1	Typical Road Details
C12.2	Typical Road Details
C12.3	Typical Road Details
C13.1	Typical Storm Sewer Details
C13.2	Typical Storm Sewer Details
C14.1	Typical Building Details
C14.2	Typical Building Details
D1	Drainage Plan (Proposed)
D2	Drainage Plan (Off-Site)

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
CIVIL DESIGN, LLC

P.O. BOX 3901, EAGLE, COLORADO 81631
(970) 323-7008

THE DESIGNS SHOWN HEREIN INCLUDING
ALL TECHNICAL DRAWINGS, GRAPHIC
REPRESENTATION & MODELS THEREOF, ARE
PROPRIETARY & CAN NOT BE COPIED,
DUPLICATED, OR COMMERCIALY EXPLOITED
IN WHOLE OR IN PART WITHOUT THE SOLE
AND EXPRESS WRITTEN PERMISSION FROM
YARNELL CONSULTING & CIVIL DESIGN, LLC.

NO.	ISSUE / REVISION	NAME	DATE
1.	SCHEMATIC DESIGN (NO CONST.)	J. YARNELL	4/15/22
2.	DESIGN DEVELOPMENT (NO CONST.)	J. YARNELL	5/19/22
3.	DEVELOPMENT PERMIT RESUBMISSION	J. YARNELL	6/24/22
4.			
5.			

DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO.: 22.011	

SHEET TITLE
COVER SHEET

SHEET NO.
C1

PROJECT CONTACTS

OWNER	JURISDICTION	ARCHITECT	CIVIL ENGINEER	LAND SURVEYOR
SON RAY, LLC P.O. BOX 4556 EAGLE, COLORADO 81631 970-328-7751	TOWN OF EAGLE 200 BROADWAY EAGLE, COLORADO 81631 970-445-0847	MARTIN MANLEY ARCHITECTS P.O. BOX 1587 EAGLE, COLORADO 81631 970-328-1299	YARNELL CONSULTING & CIVIL DESIGN P.O. BOX 3901 EAGLE, COLORADO 81631-3901 970-323-7008	MERIDIAN SURVEYING P.O. BOX 2225 GYPSUM, COLORADO 81637 970-524-0963
RYAN SMITH	DENNIS WIKE	JEFF MANLEY	JUSTIN YARNELL	ERON WATTS

UTILITY CONTACTS

NATURAL GAS	ELECTRIC	FIBER OPTIC	WATER & SANITATION
BLACK HILLS ENERGY 96 COUNTY ROAD 160, GLENWOOD SPRINGS, CO 81601 970-928-0407	HOLY CROSS ENERGY P.O. BOX 2150 GLENWOOD SPRINGS, CO 81602 970-947-5439	CENTURY LINK P.O. BOX 0570 EAGLE, COLORADO 81631 970-328-8290	TOWN OF EAGLE 200 BROADWAY EAGLE, COLORADO 81631 970-445-0847
JASON COX	KEITH HERNANDEZ	JASON SHARPE	DENNIS WIKE

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GENERAL NOTES:

1.

ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF EAGLE "PUBLIC WORKS MANUAL." ITEMS NOT COVERED WITHIN SAID MANUAL SHALL BE IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND M-STANDARDS.
2.

ALL STREETS, WATER UTILITY, STORM SEWER, AND SANITARY SEWER UTILITY CONSTRUCTION SHALL BE SUBJECT TO TOWN OF EAGLE INSPECTION.
3.

THE CONTRACTOR SHALL HAVE ONE [1] SIGNED COPY OF PLANS APPROVED BY THE TOWN OF EAGLE AND ONE [1] COPY OF THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS ON THE JOB SITE AT ALL TIMES.
4.

PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CIVIL ENGINEER--OF-RECORD TEST REPORTS, SHOP DRAWINGS, CUT SHEETS, AND ANY OTHER DOCUMENTATION NECESSARY TO CLEARLY INDICATE THE MATERIALS AND COMPONENTS SLATED FOR USE ON THE PROJECT.
5.

CONTRACTOR SHALL NOTIFY THE ENGINEER, OWNER, AND THE TOWN OF EAGLE INSPECTOR 48 HOURS PRIOR TO THE START OF CONSTRUCTION. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED WITH THE TOWN OF EAGLE INSPECTOR 24 HOURS PRIOR TO START OF WORK.
6.

ALL RANGE POINTS, TIES, BENCHMARKS, OR OTHER SURVEY CONTROL POINTS, WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION, MUST BE PRESERVED. ANYTHING DAMAGED OR DESTROYED MUST BE RESTORED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, AT NO COST TO THE OWNER.
7.

ALL ELEVATIONS ARE ON UNITED STATES GEOLOGICAL SURVEY (USGS) VERTICAL DATUM -- NOT ARCHITECTURAL SPOT ELEVATIONS ARE AROUND ELEVATION 6700. THEREFORE, SPOT ELEVATION 95.26 CORRESPONDS TO USGS ELEVATION 6695.26 WHILE SPOT ELEVATION 05.35 CORRESPONDS TO USGS ELEVATION 6705.35.
8.

THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING, BUT NOT LIMITED TO, SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, TRENCH EXCAVATION AND SHORING, TRAFFIC CONTROL, AND SECURITY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
9.

THE TOWN/OWNER/ENGINEER CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
10.

ALL TRENCHES SHALL BE ADEQUATELY SUPPORTED AND THE SAFETY OF WORKERS PROVIDED FOR AS REQUIRED BY THE MOST RECENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION [OSHA] "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION." THESE REGULATIONS ARE DESCRIBED IN SUBPART P, PART 1926 OF THE CODE OF FEDERAL REGULATIONS. SHEETING AND SHORING SHALL BE UTILIZED WHERE NECESSARY TO PREVENT ANY EXCESSIVE WIDENING OR SLOUGHING OF THE TRENCH WHICH MAY BE DETRIMENTAL TO HUMAN SAFETY, TO THE PIPE BEING PLACED, OR TO ANY EXISTING SITE IMPROVEMENTS OR STRUCTURES. THE CONTRACTOR MAY BE REQUIRED TO USE AN APPROVED PILING INSTEAD OF SHEETING AND SHORING.
11.

CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FOR THE SCOPE OF WORK.
12.

AT LEAST FIVE [5] WORKING DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO THE TOWN OF EAGLE INSPECTOR. THE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A CERTIFIED TRAFFIC CONTROL SUPERVISOR AND SHALL BE IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). NO WORK SHALL BEGIN UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN PLACED IN ACCORDANCE WITH THE PLAN. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN THE TRAFFIC CONTROL DEVICES FOR THE ENTIRE DURATION OF THE PROJECT OR UNTIL THE ROADWAY HAS BEEN OPENED AND THE PERMANENT TRAFFIC CONTROL DEVICES HAVE BEEN INSTALLED.
13.

ALL TRENCH BACKFILL AND SUBGRADE PREPARATION SHALL BE TESTED TO ENSURE COMPLIANCE WITH TOWN OF EAGLE STANDARDS AND SHALL BE TESTED AT TOWN OF EAGLE--REQUIRED FREQUENCIES BY A TOWN OF EAGLE--APPROVED PRIVATE SOILS TESTING FIRM. TEST RESULTS SHALL BE SUBMITTED TO, REVIEWED, AND APPROVED BY, THE TOWN OF EAGLE ENGINEERING DEPARTMENT PRIOR TO INSTALLING BASE COURSE, ASPHALT OR CONCRETE ON PREPARED SUBGRADE. ALL BASE COURSE DENSITY SHALL ALSO BE TESTED BY THE PRIVATE SOILS FIRM AT TOWN OF EAGLE--REQUIRED FREQUENCIES TO ENSURE COMPLIANCE WITH TOWN OF EAGLE REQUIREMENTS. BASE COURSE TEST RESULTS SHALL ALSO BE APPROVED BY THE TOWN OF EAGLE ENGINEERING DEPARTMENT PRIOR TO INSTALLING PAVEMENT. ALL CONCRETE AND ASPHALT PLACED SHALL BE TESTED IN ACCORDANCE WITH TOWN OF EAGLE MINIMUM MATERIALS TESTING STANDARDS. TEST RESULTS SHALL BE REVIEWED AND APPROVED BY THE TOWN OF EAGLE ENGINEERING DEPARTMENT PRIOR TO INITIATION OF THE REQUIRED TWO--YEAR WARRANTY PERIOD.
14.

CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL HEALTH AND SAFETY RULES AND REGULATIONS.
15.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING CONSTRUCTION AND FOR COORDINATING WITH THE APPROPRIATE UTILITY COMPANY FOR ANY UTILITY CROSSINGS REQUIRED. REPAIR OF DAMAGED UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE, INCLUDING BUT NOT LIMITED TO UNKNOWN UNDERGROUND UTILITIES.
16.

EXISTING FENCES, TREES, SIDEWALKS, CURB/GUTTER, LANDSCAPING, STRUCTURES, AND IMPROVEMENTS DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR RESTORED IN LIKE KIND AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE INDICATED ON THESE PLANS.
17.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MAINTAINING REASONABLE ACCESS TO AND FROM ALL OF THE ADJACENT PROPERTIES THROUGHOUT THE COURSE OF THE WORK. THE CONTRACTOR SHALL BE REQUIRED TO MEET (INDIVIDUALLY OR COLLECTIVELY) WITH ALL ADJACENT PROPERTY OWNERS WHOSE DRIVEWAY ACCESS WILL BE AFFECTED BY THE WORK. AS CONSTRUCTION CONDITIONS CHANGE AND THE WORK PROGRESSES, THE CONTRACTOR SHALL BE REQUIRED TO PERIODICALLY UPDATE THOSE PROPERTY OWNERS SO THAT THEY ARE KEPT INFORMED ABOUT THEIR ACCESS.
18.

CONTRACTOR SHALL OBTAIN A STORMWATER CONSTRUCTION PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY CONTROL DIVISION, PRIOR TO CLEARING, GRADING, OR EXCAVATING A SITE OF ONE [1] ACRE OR MORE. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE TOWN OF EAGLE ENGINEERING DEPARTMENT PRIOR TO THE START OF CLEARING, GRADING, OR EXCAVATING OF THE SITE. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
19.

CONTRACTOR SHALL OBTAIN A COLORADO STATE CONSTRUCTION DEWATERING DISCHARGE PERMIT FROM THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT (CDPHE) FOR ALL AREAS WHERE DEWATERING IS REQUIRED AND WATER IS DISCHARGED INTO A STORM SEWER, CHANNEL, IRRIGATION DITCH, OR ANY WATERS OF THE UNITED STATES. A COPY OF THE APPROVED PERMIT MUST BE SUBMITTED TO THE TOWN OF EAGLE ENGINEERING DEPARTMENT PRIOR TO THE START OF ANY DEWATERING. A COPY OF THE APPROVED PERMIT MUST ALSO BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION.
20.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING STORM RUNOFF AND ANY GROUNDWATER ENCOUNTERED DURING THE CONSTRUCTION OF ANY PORTION OF THIS PROJECT. GROUNDWATER SHALL BE PUMPED, PIPED, REMOVED, AND DISPOSED OF IN A MANNER WHICH DOES NOT CAUSE FLOODING OF EXISTING STREETS NOR EROSION ON ABUTTING PROPERTIES IN ORDER TO CONSTRUCT THE IMPROVEMENTS SHOWN ON THESE PLANS. NO CONCRETE SHALL BE PLACED WHERE GROUNDWATER IS VISIBLE OR UNTIL THE GROUNDWATER TABLE HAS BEEN LOWERED BELOW THE PROPOSED IMPROVEMENTS. ANY UNSTABLE AREAS, AS A RESULT OF GROUNDWATER, ENCOUNTERED DURING THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE STABILIZED AS AGREED UPON BY THE CONTRACTOR, THE TOWN OF EAGLE INSPECTOR, AND THE GEOTECHNICAL ENGINEER AT THE TIME OF OCCURRENCE.
21.

THE CONTRACTOR IS RESPONSIBLE FOR FIELD LOCATING AND VERIFYING ELEVATIONS OF ALL EXISTING UTILITIES (STORM SEWER, SANITARY, WATER, NATURAL GAS, ELECTRIC, TELEPHONE, FIBER OPTICS, CABLE TELEVISION, ETC.) AND FINISHED GRADES AT THE POINTS OF CONNECTION SHOWN ON THE PLANS, AND AT ANY UTILITY CROSSINGS. IF A CONFLICT EXISTS AND/OR A DESIGN MODIFICATION IS REQUIRED, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO MODIFY THE DESIGN PRIOR TO INSTALLING ANY OF THE NEW IMPROVEMENTS.

22.

PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULES.
23.

CONTRACTOR SHALL NOTIFY ALL BUSINESSES/RESIDENTS IN WRITING 48 HOURS PRIOR TO ANY SHUT--OFF IN SERVICE. THE NOTICES MUST HAVE CONTRACTOR'S PHONE NUMBER AND NAME OF CONTACT PERSON, AND EMERGENCY PHONE NUMBER FOR AFTER--HOURS CALLS. ALL SHUT--OFFS MUST BE APPROVED BY THE TOWN OF EAGLE WATER DEPARTMENT, AND TOWN OF EAGLE VALVES AND APPURTENANCES SHALL BE OPERATED BY TOWN OF EAGLE PERSONNEL, UNLESS WRITTEN PERMISSION IS GIVEN OTHERWISE.
24.

ALL PUBLIC IMPROVEMENT WORK, INCLUDING CORRECTION WORK, SHALL BE INSPECTED BY A TOWN OF EAGLE REPRESENTATIVE WHO SHALL HAVE THE AUTHORITY TO HALT CONSTRUCTION WHEN STANDARD CONSTRUCTION PRACTICES ARE NOT BEING ADHERED TO. THE TOWN OF EAGLE RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR BEING AWARE OF, NOTIFYING, COORDINATING, AND SCHEDULING ALL INSPECTIONS REQUIRED FOR FINAL APPROVALS AND PROJECT ACCEPTANCE.
25.

REFER TO LANDSCAPE PLANS PREPARED BY MARTIN MANLEY ARCHITECTS FOR FINAL LANDSCAPE AND SPECIALTY LANDSCAPE FEATURES.
26.

COMPACTION OF ALL TRENCHES MUST BE ATTAINED, AND COMPACTION TEST RESULTS SUBMITTED TO THE ENGINEER AND THE TOWN OF EAGLE PRIOR TO FINAL ACCEPTANCE.
27.

RECORD DRAWINGS SHOWING ALL CHANGES FROM THE APPROVED CONSTRUCTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND OWNER PRIOR TO INITIATION OF THE REQUIRED TWO--YEAR WARRANTY PERIOD. THE RECORD DRAWINGS WILL CONSIST OF A MARKED--UP SET OF "ISSUED FOR CONSTRUCTION" DRAWINGS VERIFYING THE FOLLOWING:
 - ALL LENGTHS, SIZES, AND MATERIALS OF INSTALLED PIPE, UTILITY STRUCTURES, AND ANY OTHER IMPROVEMENT.
 - HORIZONTAL LOCATIONS BY NORTHING AND EASTING COORDINATES OF ALL UTILITY STRUCTURES, BENDS, CLEANOUTS, VALVES, TAPS, WYES, STUBS, PLUGS, TEES, ETC.
 - INVERT ELEVATIONS OF STORM SEWER AND SANITARY SEWER STRUCTURES, INLETS, OUTLETS, CLEAN--OUTS, STUB ENDS, TOP OF PIPE ELEVATIONS OF EACH UTILITY CROSSING, ETC.
 - CONSTRUCTED SLOPE OF STORM AND SANITARY PIPES BETWEEN STRUCTURES.
 - TOP OF PIPE ELEVATION AT REGULAR INTERVALS AND/OR FITTINGS FOR WATER LINES.
 - ELEVATIONS AT FLOWLINE OF CURB/GUTTER AT DESIGN LOCATIONS AND GRADE BREAKS. ELEVATION OF INLET AND TRENCH DRAIN GRATES. TOP OF CURB AT CURB INLETS.
 - ANY OTHER VARIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE CLEARLY NOTED AND DETAILED ON THE PLANS.
 - AS--BUILT FIELD NOTES, FROM WHICH THE AS--BUILT DRAWINGS ARE PREPARED, ARE TO BE PROVIDED AND STAMPED/SIGNED AND DATED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO.
25.

THE CONTRACTOR SHALL WARRANT ALL WORK TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF TWO [2] YEARS FROM THE DATE OF ACCEPTANCE.
26.

DURING CONSTRUCTION AND UPON COMPLETION OF CONSTRUCTION, THE SITE SHALL BE CLEANED AND RESTORED TO A CONDITION EQUAL TO, OR BETTER THAN, THAT WHICH EXISTED BEFORE CONSTRUCTION, AS DETERMINED BY THE OWNER, HIS/HER REPRESENTATIVE, OR THE TOWN OF EAGLE INSPECTOR.
27.

CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT TITLED [-----], DATED [-----], AND PREPARED BY [-----] FOR PAVEMENT DESIGN AND RECOMMENDATIONS REGARDING EXCAVATION, COMPACTION, MATERIALS, EMBANKMENT, PAVEMENT SUBEXCAVATION, MOISTURE CONTROL, AND TOPSOIL REMOVAL AND REPLACEMENT. FINAL PAVEMENT DESIGN TO BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER SUBGRADE IS COMPLETE. CONTRACTOR TO COORDINATE THIS WORK. THE CONSTRUCTION METHODS FOR EXCAVATION/EMBANKMENTS, COMPACTION, AND SUBGRADE PREPARATION SHALL BE IN STRICT CONFORMANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF DISCREPANCIES BETWEEN THE GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS OF THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
28.

THE OWNER/DEVELOPER AND/OR THEIR ASSIGNS IS HEREBY NOTIFIED THAT IT IS TYPICAL AND LIKELY THAT SOME MOVEMENT OF THE SURFACE GRADES WILL OCCUR OVER TIME DUE TO VARIOUS FACTORS THAT ARE NOT IN CONTROL OF THE DESIGNERS. THUS, A ROUTINE AND DILIGENT MAINTENANCE PROGRAM IS REQUIRED TO MAINTAIN THE PROPER GRADING AND DRAINAGE THROUGHOUT THE PROJECT.
29.

THE PLANS HAVE BEEN PREPARED BY YARNELL CONSULTING & CIVIL DESIGN, LLC IN ACCORDANCE WITH AND IN RELIANCE UPON THE GEOTECHNICAL REPORT TITLED [-----], DATED [-----], AND PREPARED BY [-----]. YARNELL CONSULTING & CIVIL DESIGN, LLC HAS NO RESPONSIBILITY FOR THE FOUNDATION SYSTEMS USED WITHIN THIS DEVELOPMENT. YARNELL CONSULTING & CIVIL DESIGN, LLC SUGGESTS THAT ALL OWNERS, PRESENT AND FUTURE, BECOME AWARE OF THE RISK ASSOCIATED WITH IMPROPER MAINTENANCE OF SLOPES AND DRAINAGE AWAY FROM THE STRUCTURES.
30.

THE DESIGN PLANS SHOWN HEREON WERE DEVELOPED BASED UPON THE GEOTECHNICAL INVESTIGATIONS/ANALYSIS/ENGINEERING CRITERIA WITHIN THE GEOTECHNICAL REPORT TITLED [-----], DATED [-----], PREPARED BY [-----], SIGNED AND SEALED BY [-----] P.E. YARNELL CONSULTING & CIVIL DESIGN, LLC RELIED UPON THE ENGINEERING ANALYSIS AND CONCLUSIONS OF THIS REPORT IN THE PREPARATION OF THESE CIVIL ENGINEERING PLANS AND DOCUMENTS. NO INDEPENDENT INVESTIGATIONS AND/OR ANALYSIS WAS CONDUCTED BY YARNELL CONSULTING & CIVIL DESIGN, LLC. THESE PLANS WERE PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW AND VERIFICATION THAT THESE PLANS DEVELOPED BY YARNELL CONSULTING & CIVIL DESIGN, LLC PROPERLY INTERPRETED AND APPLIED THE CRITERIA AND RECOMMENDATIONS ESTABLISHED BY THEIR GEOTECHNICAL REPORT FOR THIS PROJECT.

ABBREVIATIONS:

APPROX	APPROXIMATE
ARCH	ARCHITECT
ASSM	ASSEMBLY
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
BOW	BACK OF WALK
CIP	CAST IRON PIPE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTOUR
COR	CORNER
DEMO	DEMOLITION
DIA OR Ø	DIAMETER
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
E	ELECTRICAL LINE
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
ESMT	EASEMENT
EXIST	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FGW	FINISHED GRADE AT WALL
FHY	FIRE HYDRANT
FL	FLOW LINE
FT	FOOT
GB	GRADE BREAK
GR	GRATE (AREA OR VALLEY INLETS)
GV	GATE VALVE
HERCP	HORIZONTAL ELLIPTICAL REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HORZ	HORIZONTAL
HP	HIGH POINT
INV.	INVERT
LF	LINEAL FEET
LP	LOW POINT
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
N.I.C.	NOT IN CONTRACT
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRICAL
PC	POINT OF HORIZONTAL TANGENCY
PCC	POINT OF COMPOUND CURVE
PERF	PERFORATED
PERIM	PERIMETER
PERP	PERPENDICULAR
PI	POINT OF HORIZONTAL INTERSECTION
PIV	PRESSURE INDICATOR VALVE
PL	PROPERTY LINE
PLBG	PLUMBING
POC	POINT ON CURVE
POT	POINT OF TANGENT
PRC	POINT OF REVERSE CURVE
PRKG	PARKING
PROP	PROPOSED
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE PIPE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
ROW	RIGHT OF WAY
SSWR	SANITARY SEWER
SEC	SECTION
SF	SQUARE FOOT
STA	STATION
STRM	STORM SEWER
STRUC	STRUCTURAL
SW	SIDEWALK
SY	SQUARE YARD
TELE	TELEPHONE
TB	THRUST BLOCK
TEMP	TEMPORARY
TOC	TOP OF CURB
TOW	TOP OF WALL
UD	UNDER DRAIN
UG	UNDERGROUND
VERT	VERTICAL
VC	VERTICAL CURVE
W	WATER LINE

NOTE: TOW, SHALL BE TOP OF WATER ON UTILITY SHEETS ONLY AND TOP OF WALL ON ALL OTHER SHEETS.

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

YARNELL CONSULTING & CIVIL DESIGN, LLC

P.O. BOX 3901, EAGLE, COLORADO 81631

(970) 323-7008

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1.	SCHEMATIC DESIGN (NO CONST.)	J. YARNELL	4/15/22
2.	DESIGN DEVELOPMENT (NO CONST.)	J. YARNELL	5/19/22
3.	DEVELOPMENT PERMIT RESUBMISSION	J. YARNELL	6/24/22
4.			
5.			

DESIGN BY: J. YARNELL

DRAWN BY: J. YARNELL

REVIEWED BY: J. YARNELL

PROJECT NO.: 22.011

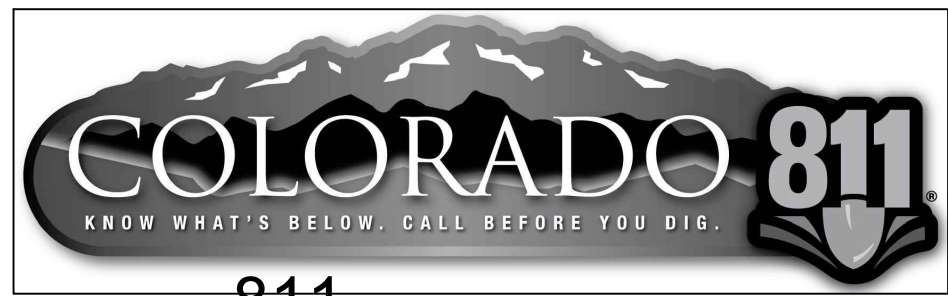
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SHEET TITLE

GENERAL NOTES & ABBREVIATIONS

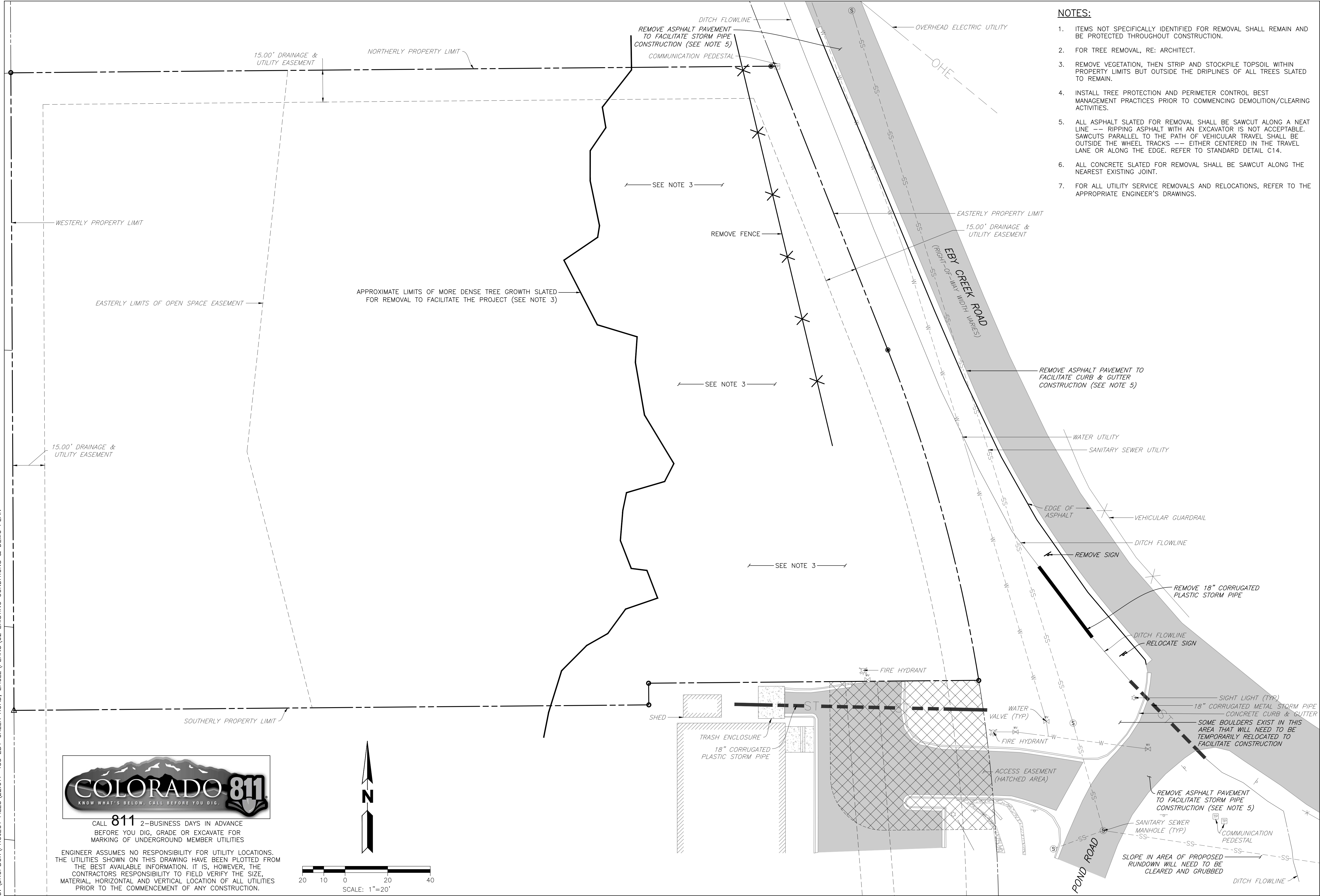
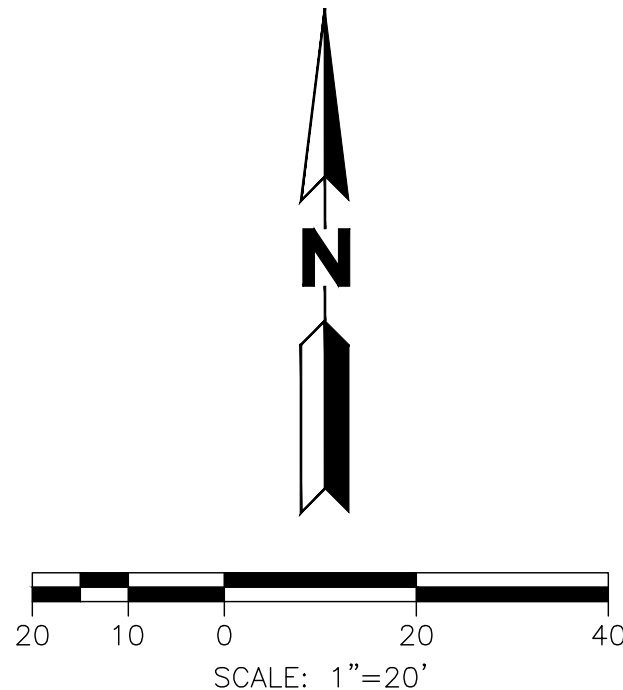
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D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C2 EXISTING CONDITIONS & DEMO PLAN



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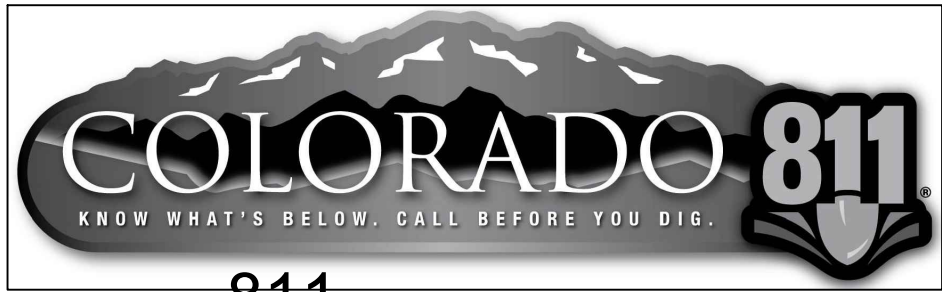
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PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



- NOTES:**
- ITEMS NOT SPECIFICALLY IDENTIFIED FOR REMOVAL SHALL REMAIN AND BE PROTECTED THROUGHOUT CONSTRUCTION.
 - FOR TREE REMOVAL, RE: ARCHITECT.
 - REMOVE VEGETATION, THEN STRIP AND STOCKPILE TOPSOIL WITHIN PROPERTY LIMITS BUT OUTSIDE THE DRIPLINES OF ALL TREES SLATED TO REMAIN.
 - INSTALL TREE PROTECTION AND PERIMETER CONTROL BEST MANAGEMENT PRACTICES PRIOR TO COMMENCING DEMOLITION/CLEARING ACTIVITIES.
 - ALL ASPHALT SLATED FOR REMOVAL SHALL BE SAWCUT ALONG A NEAT LINE --- RIPPING ASPHALT WITH AN EXCAVATOR IS NOT ACCEPTABLE. SAWCUTS PARALLEL TO THE PATH OF VEHICULAR TRAVEL SHALL BE OUTSIDE THE WHEEL TRACKS --- EITHER CENTERED IN THE TRAVEL LANE OR ALONG THE EDGE. REFER TO STANDARD DETAIL C14.
 - ALL CONCRETE SLATED FOR REMOVAL SHALL BE SAWCUT ALONG THE NEAREST EXISTING JOINT.
 - FOR ALL UTILITY SERVICE REMOVALS AND RELOCATIONS, REFER TO THE APPROPRIATE ENGINEER'S DRAWINGS.

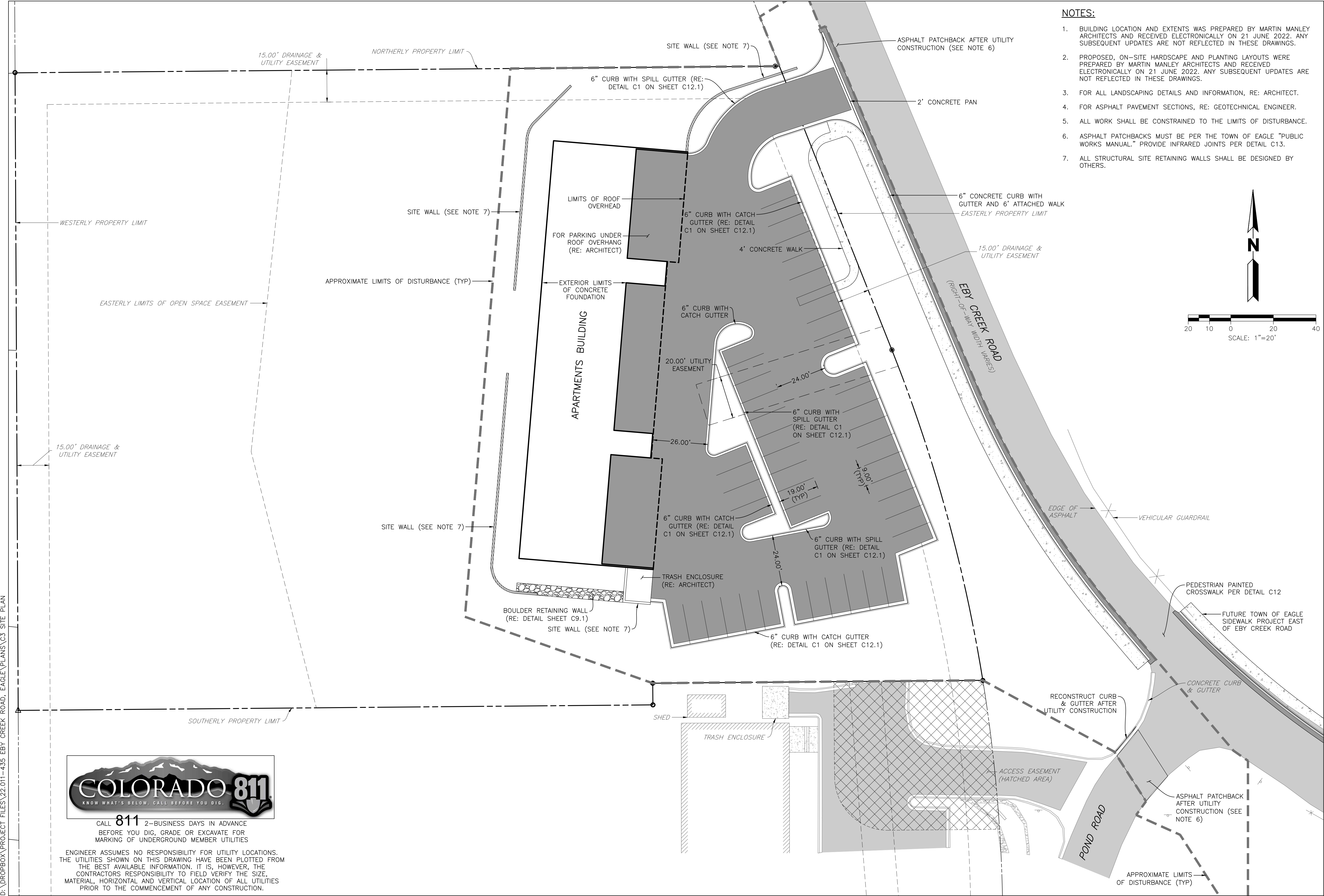
YARNELL CONSULTING & CIVIL DESIGN, LLC P.O. BOX 3901, EAGLE, COLORADO 81631 (970) 323-7008		435 EBY CREEK APARTMENTS 435 EBY CREEK ROAD LOT 3, PERRY SUBDIVISION PHASE 2 EAGLE, COLORADO	
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REVIEWED BY: J. YARNELL	2.	DESIGN DEVELOPMENT (NO CONST.)	4/15/22
PROJECT NO. 22.011	3.	DEVELOPMENT PERMIT RESUBMISSION	5/19/22
DATE: 6/24/2022	4.		6/24/22
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SHEET TITLE		EXISTING CONDITIONS & DEMO PLAN	
SHEET NO.		C2	

D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C3 SITE PLAN

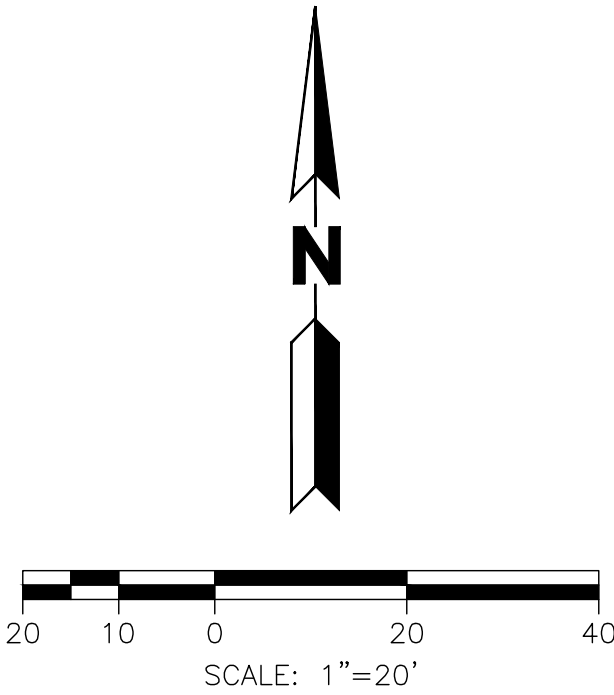


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MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES
PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.



- NOTES:**
- BUILDING LOCATION AND EXTENTS WAS PREPARED BY MARTIN MANLEY ARCHITECTS AND RECEIVED ELECTRONICALLY ON 21 JUNE 2022. ANY SUBSEQUENT UPDATES ARE NOT REFLECTED IN THESE DRAWINGS.
 - PROPOSED, ON-SITE HARDSCAPE AND PLANTING LAYOUTS WERE PREPARED BY MARTIN MANLEY ARCHITECTS AND RECEIVED ELECTRONICALLY ON 21 JUNE 2022. ANY SUBSEQUENT UPDATES ARE NOT REFLECTED IN THESE DRAWINGS.
 - FOR ALL LANDSCAPING DETAILS AND INFORMATION, RE: ARCHITECT.
 - FOR ASPHALT PAVEMENT SECTIONS, RE: GEOTECHNICAL ENGINEER.
 - ALL WORK SHALL BE CONSTRAINED TO THE LIMITS OF DISTURBANCE.
 - ASPHALT PATCHBACKS MUST BE PER THE TOWN OF EAGLE "PUBLIC WORKS MANUAL." PROVIDE INFRARED JOINTS PER DETAIL C13.
 - ALL STRUCTURAL SITE RETAINING WALLS SHALL BE DESIGNED BY OTHERS.



435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

YARNELL CONSULTING & CIVIL DESIGN, LLC

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DESIGN BY: J. YARNELL

DRAWN BY: J. YARNELL

REVIEWED BY: J. YARNELL

PROJECT NO.: 22.011

DATE: 6/24/2022

SHEET TITLE

SITE PLAN

SHEET NO.

C3

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D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C4 EROSION CONTROL PLAN



FOR EROSION CONTROL NOTES, RE: SHEET C4.1

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

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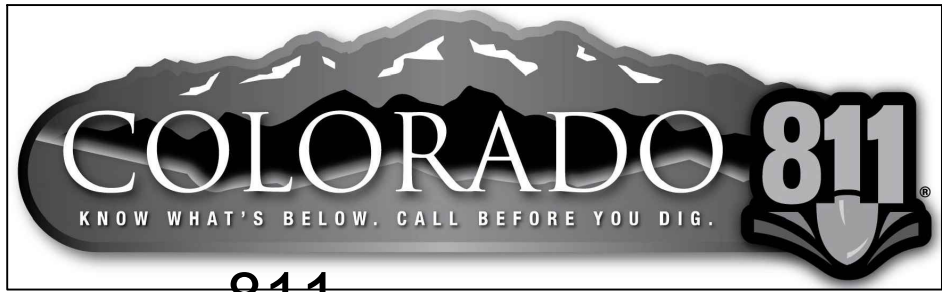
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DRAWN BY: J. YARNELL
REVIEWED BY: J. YARNELL
PROJECT NO.: 22.011
DATE: 6/24/2022

SHEET TITLE
EROSION CONTROL PLAN

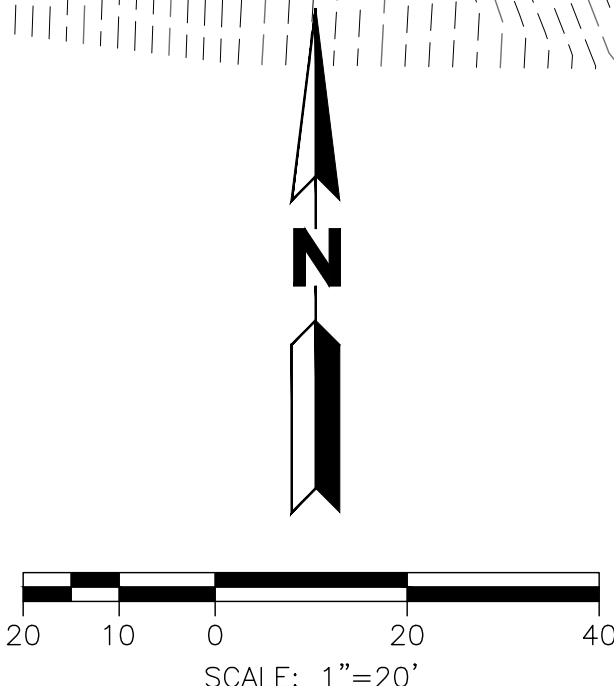
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D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C4 EROSION CONTROL PLAN

EROSION CONTROL NOTES:

1.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, AND IMPLEMENTING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AT ALL TIMES DURING CONSTRUCTION TO PREVENT DAMAGING FLOWS ON THE SITE AND IN THE WATERSHED BELOW THE SITE. CONTROL SYSTEMS SHALL BE INSTALLED PRIOR TO STRIPPING OF NATIVE VEGETATIVE COVER AND AS GRADING PROGRESSES. CONDITIONS IN THE FIELD MAY WARRANT EROSION CONTROL MEASURES IN ADDITION TO WHAT IS SHOWN ON THESE PLANS AND WITHIN THE NARRATIVE (IF APPLICABLE). THE APPROACH MAY BE MODIFIED WITH APPROPRIATE APPROVALS AS FIELD CONDITIONS WARRANT.
2.

NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATION AND FOR THE SHORTEST PRACTICAL PERIOD OF TIME.
3.

TOPSOIL SHALL BE STOCKPILED TO THE EXTENT PRACTICAL ON THE SITE FOR USE ON AREAS TO BE REVEGETATED. ANY AND ALL STOCKPILES SHALL BE LOCATED AND PROTECTED FROM EROSIVE ELEMENTS.
4.

AT ALL TIMES, THE PROPERTY SHALL BE MAINTAINED AND/OR WATERED TO PREVENT WIND--CAUSED EROSION. EARTHWORK OPERATIONS SHALL BE DISCONTINUED WHEN FUGITIVE DUST SIGNIFICANTLY IMPACTS ADJACENT PROPERTY. IF EARTHWORK IS COMPLETE OR DISCONTINUED AND DUST FROM THE SITE CONTINUES TO CREATE PROBLEMS, THE CONTRACTOR SHALL IMMEDIATELY INSTITUTE MITIGATIVE MEASURES AND SHALL CORRECT DAMAGE TO ADJACENT PROPERTY.
5.

PERMANENT OR TEMPORARY SOIL--STABILIZATION MEASURES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 30 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. UNLESS SPECIFIED OTHERWISE, TEMPORARY VEGETATION SHALL BE INSTALLED ON ALL DISTURBED AREAS WHERE PERMANENT SURFACE IMPROVEMENTS ARE NOT SCHEDULED FOR INSTALLATION WITHIN THREE MONTHS. TEMPORARY VEGETATION SHALL BE A VIGOROUS, DROUGHT--TOLERANT, NATIVE SPECIES MIX. PROJECT SCHEDULING SHOULD TAKE ADVANTAGE OF SPRING OR FALL PLANTING SEASONS FOR NATURAL GERMINATION, BUT SEEDED AREAS SHALL BE IRRIGATED, IF CONDITIONS MERIT. REFER TO THE LANDSCAPE PLAN FOR FINAL LANDSCAPING.
6.

TEMPORARY FENCES SHALL BE INSTALLED ALONG ALL BOUNDARIES OF THE CONSTRUCTION LIMITS OR PROPERTY LINES TO PREVENT GRADING ON PROPERTY NOT OWNED BY THE OWNER/DEVELOPER. IN ADDITION, THE TOWN OF EAGLE INSPECTOR MAY REQUIRE ADDITIONAL TEMPORARY FENCES IF FIELD CONDITIONS WARRANT.
7.

THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM LEAVING THE SITE DURING ALL DEMOLITION, EXCAVATION, TRENCHING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, ROADWAYS, WETLANDS, ETC., RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
8.

THE CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN INADVERTENTLY DISCHARGED TO, OR ACCUMULATED IN, THE FLOWLINES AND PUBLIC RIGHT--OF--WAY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT.
9.

THE GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL INSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC ROADWAYS.
10.

APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL CONTROL MEASURES WEEKLY AND AFTER PRECIPITATION EVENTS WHICH GENERATE RUNOFF. ALL NECESSARY MAINTENANCE AND REPAIR SHALL BE COMPLETED IN A TIMELY MANNER. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A CONTROL MEASURE BEFORE THE SEDIMENT LEVEL REACHES ONE--HALF THE HEIGHT OF THE CONTROL MEASURE OR, AT ANY TIME THAT SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE CONTROL MEASURE.
11.

WATER USED IN THE CLEANING OF CONCRETE TRUCK DELIVERY CHUTES SHALL BE DISCHARGED INTO A PREDEFINED, BERMED CONTAINMENT AREA ON THE JOB SITE. THE REQUIRED CONTAINMENT AREA IS TO BE BERMED SO THAT WASH WATER IS TOTALLY CONTAINED. WASH WATER DISCHARGED INTO THE CONTAINMENT AREA SHALL NOT BE ALLOWED TO INFILTRATE BUT MAY EVAPORATE. DRIED CEMENT WASTE SHALL BE REMOVED FROM THE CONTAINMENT AREA AND PROPERLY DISPOSED OF. SHOULD A PREDEFINED, BERMED CONTAINMENT AREA NOT BE AVAILABLE DUE TO THE PROJECT SIZE, OR LACK OF AN AREA WITH A SUITABLE GROUND SURFACE FOR ESTABLISHING A CONTAINMENT AREA, PROPER DISPOSAL OF READY--MIX WASH--OUT AND RINSE--OFF WATER AT THE JOB SITE SHALL CONFORM TO THE APPROVED TECHNIQUES AND PRACTICES IDENTIFIED IN THE COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT'S TRAINING VIDEO ENTITLED "BUILDING FOR A CLEANER ENVIRONMENT, READY MIX WASHOUT TRAINING", AND ITS ACCOMPANYING MANUAL ENTITLED, "READY MIX WASHOUT GUIDEBOOK, VEHICLE AND EQUIPMENT WASHOUT AT CONSTRUCTION SITES." THE DIRECT OR INDIRECT DISCHARGE OF WATER CONTAINING WASTE (CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED. INFORMATION ABOUT, OR COPIES OF THE VIDEO AND TRAINING MANUAL ARE AVAILABLE FROM THE WATER QUALITY CONTROL DIVISION, COLORADO DEPARTMENT OF PUBLIC HEALTH & ENVIRONMENT, 4300 CHERRY CREEK DRIVE SOUTH, DENVER, COLORADO 80222--1530, 303--692--3555.
12.

THE CONTRACTOR SHALL PROTECT THE WATERSHED AND/OR ALL STORM SEWER FACILITIES ADJACENT TO ANY LOCATION WHERE PAVEMENT CUTTING OPERATIONS INVOLVING WHEEL CUTTING, SAW CUTTING, OR ABRASIVE WATER JET CUTTING ARE TO TAKE PLACE. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL WASTE PRODUCTS GENERATED BY SAID CUTTING OPERATIONS ON A DAILY BASIS. THE DISCHARGE OF ANY WATER CONTAMINATED BY WASTE PRODUCTS FROM CUTTING OPERATIONS TO THE WATERSHED AND/OR STORM SEWER SYSTEM IS PROHIBITED.
13.

PAVED SURFACES WHICH ARE ADJACENT TO CONSTRUCTION SITES SHALL BE SWEEPED IN A TIMELY MANNER WHEN SEDIMENT AND OTHER MATERIALS ARE TRACKED OR DISCHARGED ON TO THEM. EITHER SWEEPING BY HAND OR USE OF STREET SWEEPERS IS ACCEPTABLE. STREET SWEEPERS USING WATER WHILE SWEEPING IS PREFERRED IN ORDER TO MINIMIZE DUST. FLUSHING OFF PAVED SURFACES WITH WATER IS PROHIBITED.
14.

SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON--SITE USING STRUCTURAL CONTROLS TO THE MAXIMUM EXTENT PRACTICAL.
15.

STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TACKING, OR WIND.
16.

RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITES UNLESS TREATED TO REDUCE OR REMOVE SEDIMENT AND OTHER POLLUTANTS.
17.

ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED CONTROL AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
18.

AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
19.

CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIAL OTHER THAN STORMWATER ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT: CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.
20.

POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, GLUES, LIMES, PESTICIDES, HERBICIDES, WOOD PRESERVATIVES AND SOLVENTS; ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; FERTILIZERS, VEHICLE/EQUIPMENT WASH WATER AND CONCRETE WASH WATER; CONCRETE, DETERGENT OR FLOATABLE WASTES; WASTES FROM ANY ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING AND SUPERCHLORINATED POTABLE WATER LINE FLUSHING. DURING CONSTRUCTION, PERMITTEE SHALL DISPOSE OF SUCH MATERIALS IN A SPECIFIED AND CONTROLLED TEMPORARY AREA ON--SITE, PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
21.

GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE IS TO BE DIRECTED TOWARD DESILTING FACILITIES.
22.

THE PERMITTEE AND CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATER CREATES A HAZARDOUS CONDITION.
23.

THE PERMITTEE AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND INSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.
24.

THE PERMITTEE SHALL NOTIFY ALL GENERAL CONTRACTORS, SUBCONTRACTORS, MATERIAL SUPPLIERS, LESSEES, AND PROPERTY OWNERS THAT DUMPING OF CHEMICALS INTO THE STORM DRAIN SYSTEM OR THE WATERSHED IS PROHIBITED.
25.

EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
26.

ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN THE 5--DAY RAIN PROBABILITY FORECAST EXCEEDS 40%.
27.

SEDIMENTS FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON--SITE USING AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROLS TO THE MAXIMUM EXTENT PRACTICAL, AND STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
28.

APPROPRIATE CONTROL MEASURES FOR CONSTRUCTION--RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED AND RETAINED ON--SITE TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTY BY WIND OR RUNOFF.
29.

ALL PROPOSED EROSION CONTROL BLANKETS SHALL HAVE A MINIMUM LIFESPAN OF 36 MONTHS AND BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED DOCUMENTATION.

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DRAWN BY:	J. YARNELL	1.	SCHEMATIC DESIGN (NO CONST.)	4/15/22	JUY
REVIEWED BY:	J. YARNELL	2.	DESIGN DEVELOPMENT (NO CONST.)	5/19/22	JUY
PROJECT NO.:	22.011	3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JUY
DATE:	6/24/2022	4.			JUY
		5.			JUY

SHEET TITLE
EROSION CONTROL NOTES

SHEET NO.
C4.1

YARNELL CONSULTING & CIVIL DESIGN, LLC
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(970) 323-7008

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C5.0 OVERALL GRADING PLAN

FOR GRADING NOTES, RE: SHEET C5.3

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

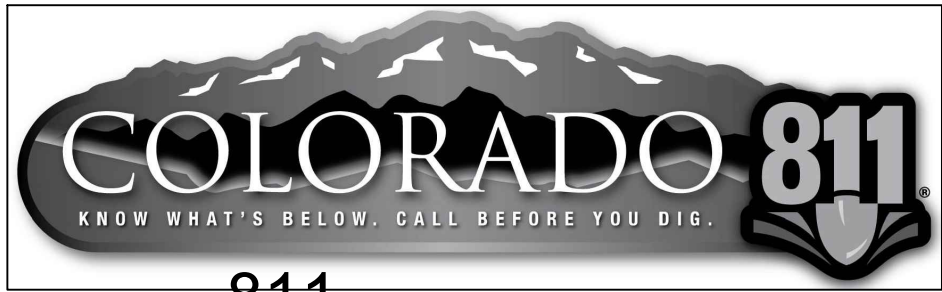
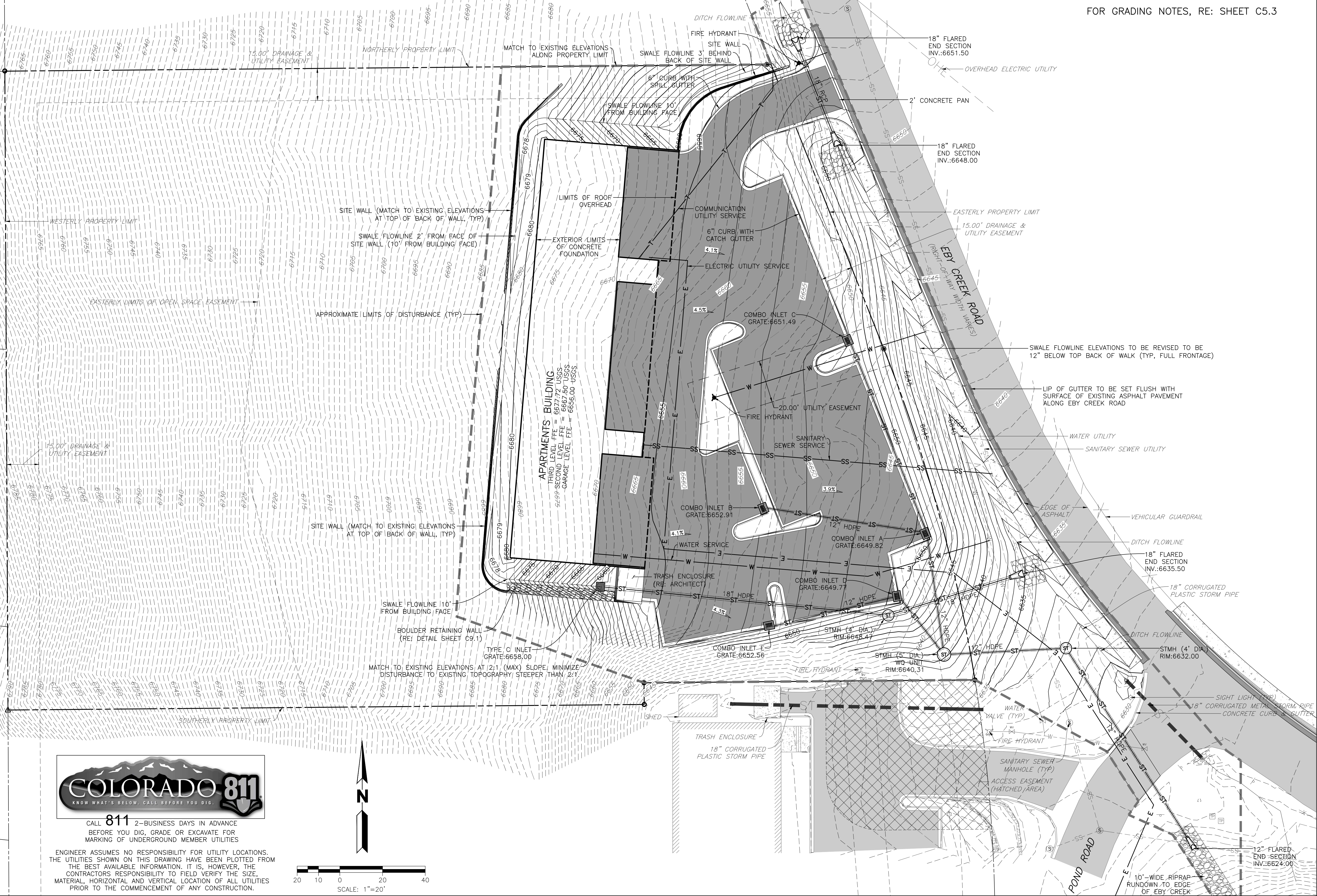
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REVIEWED BY: J. YARNELL
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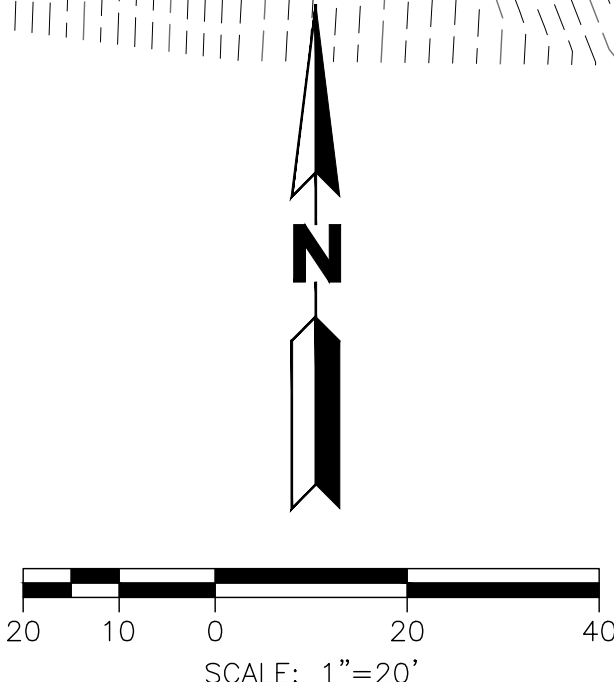
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OVERALL GRADING PLAN

SHEET NO.
C5.0

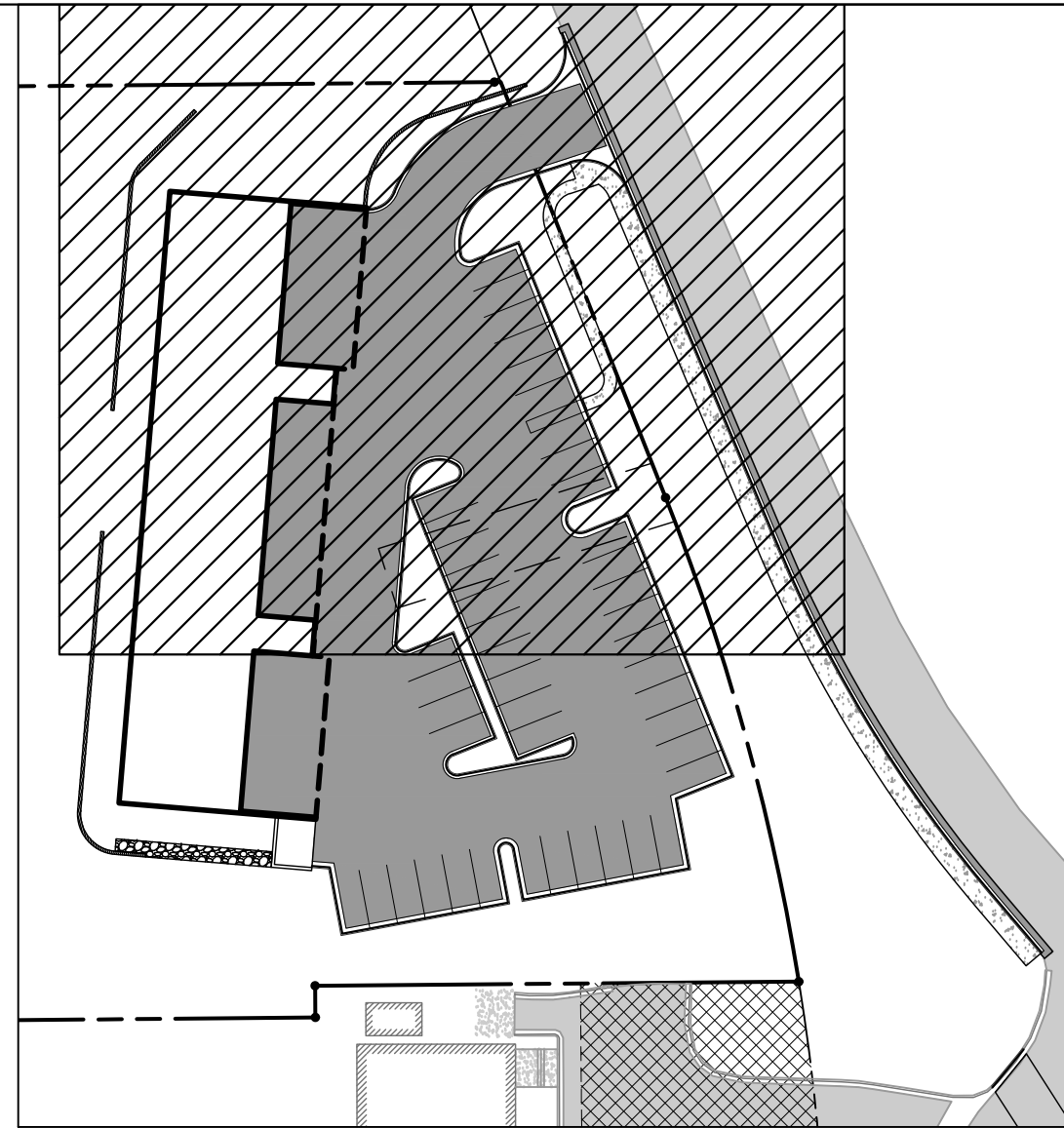


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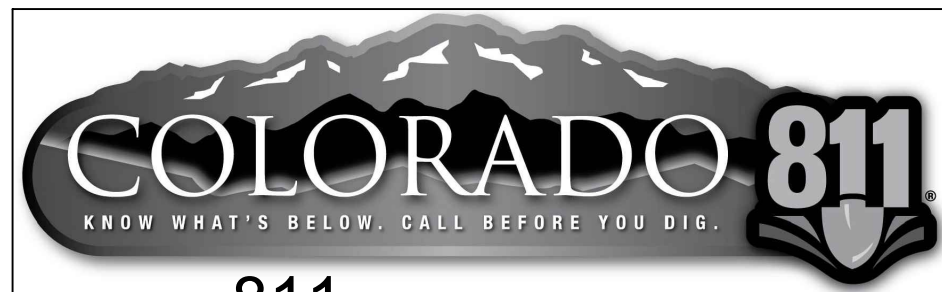
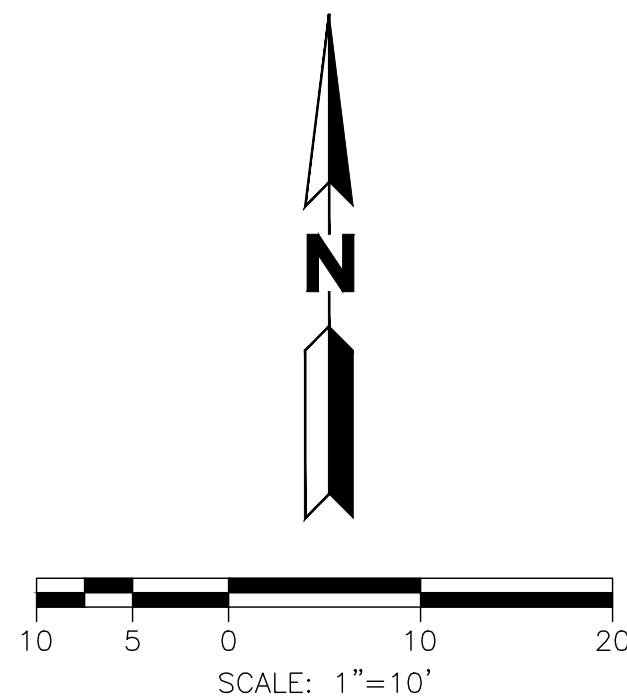
D:\DROPOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C5.1 DETAILED GRADING PLAN



KEYMAP

SCALE: 1"=60'

FOR GRADING NOTES, RE: SHEET C5.3



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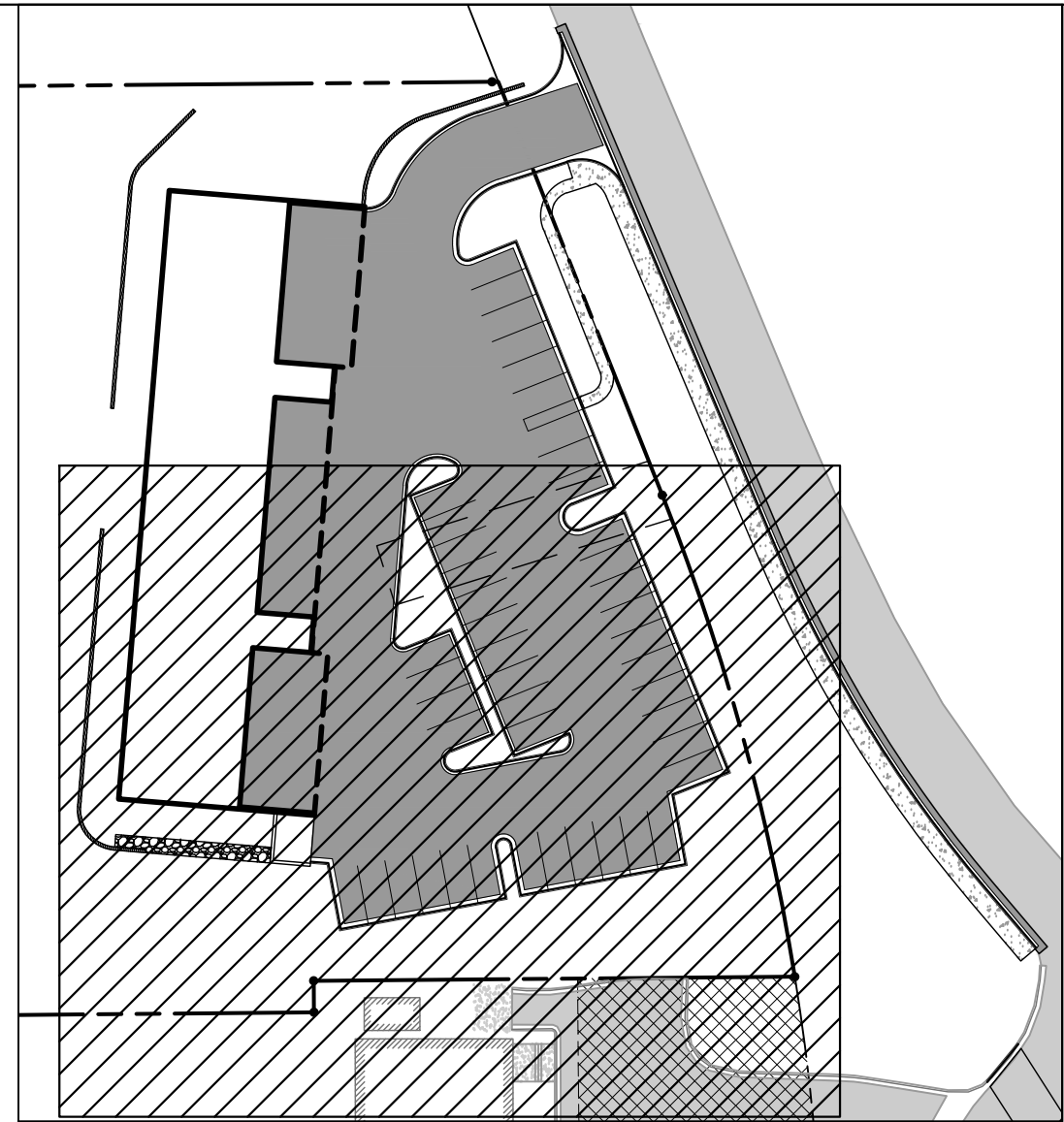
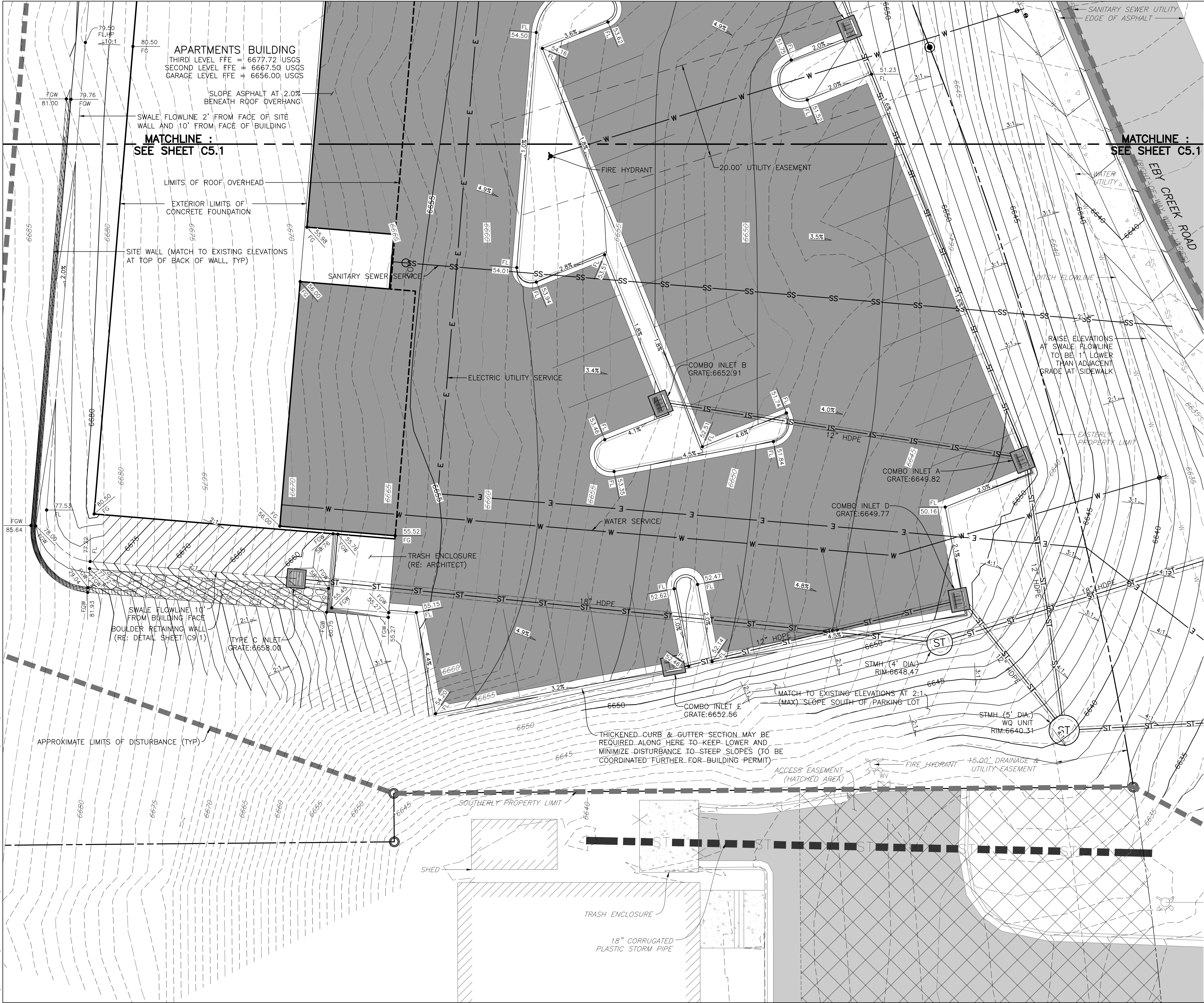
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REVIEWED BY: J. YARNELL		2.		DESIGN DEVELOPMENT (NO CONST.)		JULY		5/19/22					
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435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

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KEYMAP

SCALE: 1"=60'

FOR GRADING NOTES, RE: SHEET C5.3

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

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4.			
5.			

DESIGN BY: J. YARNELL

DRAWN BY: J. YARNELL

REVIEWED BY: J. YARNELL

PROJECT NO.: 22.011

DATE: 6/24/2022

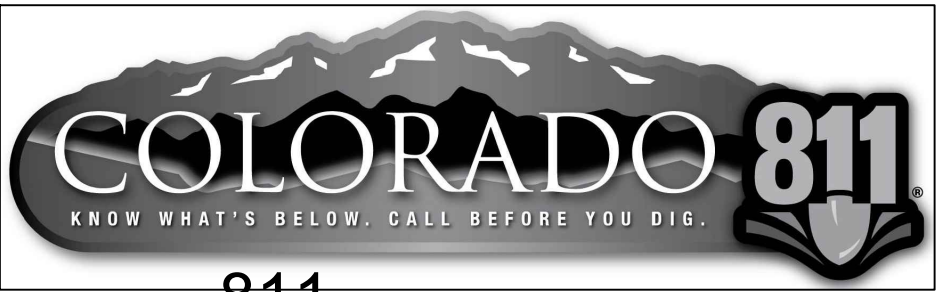
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DETAILED GRADING PLAN

SHEET NO.

C5.2

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GRADING NOTES:

1.

ALL SITE GRADING, EXCAVATION, EMBANKMENT, AND COMPACTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE LATEST GEOTECHNICAL INVESTIGATION FOR THIS PROPERTY AND SHALL FURTHER BE IN CONFORMANCE WITH THE TOWN OF EAGLE "PUBLIC WORKS MANUAL."
2.

THE GRADING DESIGN SHOWN HEREON HAS BEEN PREPARED IN CONFORMANCE WITH THE REQUIREMENTS OF FHA AND HUD CRITERIA AND TO THE GREATEST EXTENT POSSIBLE, IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS FOR THIS PROJECT. VARIOUS CONFLICTING DESIGN CRITERIA MAKE TOTAL COMPLIANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS DIFFICULT [ADA, SITE PLAN LAYOUT, ETC.]. THUS, THESE PLANS HAVE BEEN PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW AND COMMENT RELATIVE TO COMPLIANCE WITH THEIR RECOMMENDATIONS. IF THE GEOTECHNICAL ENGINEER DETERMINES THE DESIGN MAY COMPROMISE THE ACCEPTABLE PERFORMANCE OF THE STRUCTURES AND/OR PAVEMENTS, UPON RECEIPT OF THE WRITTEN COMMENTS FROM THE GEOTECHNICAL ENGINEER, COMMENTS WILL BE DISCUSSED AND RESOLVED WITH THE OWNER AND THE GEOTECHNICAL ENGINEER, AND WILL BE ADDRESSED IN A MANNER AS DIRECTED BY THE OWNER.
3.

IF THE OWNER ELECTS TO UTILIZE FOUNDATION SYSTEMS AND/OR PAVEMENT DESIGNS THAT REQUIRE SPECIAL CONSIDERATION FOR CONTROL OF SUBGRADE MOISTURE, SPECIAL PRECAUTIONS AND EXTRAORDINARY DESIGN PARAMETERS SHALL BE THE RESPONSIBILITY OF THE GEOTECHNICAL ENGINEER IN CONCERT WITH THE FOUNDATION/PAVEMENT DESIGN. IT IS ACKNOWLEDGED THAT VARIOUS FOUNDATION SYSTEMS REQUIRE DIFFERENT LEVELS OF SUBGRADE PREPARATION, DRAINAGE DESIGNS, AND/OR SUBSURFACE DRAINAGE CRITERIA THAT ARE BEYOND THE PURVIEW AND RESPONSIBILITY OF YARNELL CONSULTING & CIVIL DESIGN, LLC, AND THE GRADING PLANS SHOWN HEREON. THE INCORPORATION AND EXECUTION OF THESE SPECIAL PRECAUTIONS SHALL OCCUR IN CLOSE COORDINATION WITH THE GEOTECHNICAL ENGINEER'S DESIGN AND CONSTRUCTION OBSERVATIONS.
4.

GRADING SHOWN HEREON IS DESIGNED TO ADDRESS PROPER DRAINAGE CONSIDERATIONS FOR THE PROTECTION OF THE STRUCTURES AND IMPROVEMENTS WITHIN THE PROJECT. THE COORDINATION OF THIS DESIGN AND COMPLIANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATION WITH THE LANDSCAPE ARCHITECT'S DESIGN, IS THE RESPONSIBILITY OF THE OWNER AND/OR DEVELOPER. YARNELL CONSULTING & CIVIL DESIGN, LLC HIGHLY RECOMMENDS THAT THE LANDSCAPE IMPROVEMENTS BE REVIEWED AND APPROVED FOR COMPLIANCE WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
5.

EXISTING ELEVATIONS SHOWN ON THIS DRAWING HAVE BEEN DEPICTED FROM BEST AVAILABLE INFORMATION AND ARE SHOWN TO THE EXTENT KNOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY EXISTING GRADE CONDITIONS AT THE LIMITS OF CONSTRUCTION AND AT LOCATIONS THAT INTERFACE WITH EXISTING OR PROPOSED BUILDINGS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES THAT CONTRADICT THE ENGINEER'S INTENT FOR DRAINAGE PATTERNS, MAXIMUM AND MINIMUM SLOPES, AND PROPOSED ELEVATIONS AS SHOWN ON THE PLAN. THE ENGINEER WILL NOT BE LIABLE FOR ANY COSTS ASSOCIATED WITH CHANGES TO THE DESIGN WITHOUT PROPER NOTIFICATION.
6.

PROPOSED CONTOURS AND SPOT ELEVATIONS AS SHOWN HEREIN ARE DEFINED AS FINISHED ELEVATION AFTER PAVING, LANDSCAPING, ETC. CONTRACTOR SHALL COORDINATE WITH GEOTECH FOR PAVEMENT THICKNESS AND LANDSCAPE FOR THICKNESS OF TOPSOIL, SOD AND LANDSCAPE MATERIALS.

ALL SPOTS ARE TO FLOWLINE UNLESS OTHERWISE NOTED. FG = FINISHED GRADE, FF = FINISH FLOOR, TOF = TOP OF FOUNDATION, HP = HIGH POINT, LP = LOW POINT, TOW = TOP OF WALL [FINISHED GRADE AT BACK OF WALL], BOW = BOTTOM OF WALL [FINISHED GRADE AT FACE OF WALL], GB = GRADE BREAK, FL = FLOWLINE, TOC = TOP OF CURB.
7.

UNLESS SPECIFICALLY NOTED OTHERWISE, ALL WALKWAYS SHALL BE CONSTRUCTED WITH AN ABSOLUTE MAXIMUM CROSS SLOPE OF 1.8% AND RUNNING SLOPE OF 4.9%.
8.

POSITIVE DRAINAGE MUST BE PROVIDED FROM ALL STRUCTURES. UNLESS SPECIFICALLY NOTED OTHERWISE, ENSURE 2.0% ON HARDSCAPE AND 10:1 [H:V] FOR 10 FEET ON SOFTSCAPE.
9.

ALL ISLANDS ARE TO BE GRADED SUCH THAT THERE IS A POSITIVE DRAINAGE TO ADJACENT CURB AND GUTTER.
10.

TEMPORARY CUT/FILL SLOPES SHALL NOT EXCEED A STEEPNESS OF 1:1 (H:V). PERMANENT SLOPES SHALL NOT EXCEED 3:1 (H:V) [UNLESS NOTED OTHERWISE] IN AREAS TO BE SEEDED OR SODDED.
11.

CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED MANHOLE RIMS, VALVE BOXES, ETC. TO MATCH FINAL GRADE.
12.

YARNELL CONSULTING & CIVIL DESIGN, LLC IS PROVIDING LINE AND GRADE FOR THE RETAINING WALLS SHOWN HEREON. THE WALL LAYOUT/GRADING SHOWN IS PROVIDED TO THE WALL DESIGNER/CONTRACTOR AS A COURTESY. THE WALL DESIGNER SHALL TAKE INTO CONSIDERATION ALL JURISDICTIONAL REQUIREMENTS, GEOTECHNICAL INFORMATION AND REQUIREMENTS, AND GRADING/DRAINAGE PATTERNS IN THE DESIGN OF THE WALLS. THE RETAINING WALL DESIGN NEEDS TO ACCOMMODATE THE EFFECTS OF UNCONTROLLED RUNOFF FROM UP-GRAIDENT OF THE WALLS, INCLUDING HYDROSTATIC PRESSURE AND EROSION.

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

YARNELL CONSULTING & CIVIL DESIGN, LLC

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2.	DESIGN DEVELOPMENT (NO CONST.)	5/19/22	JYJ
3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JYJ
4.			JYJ
5.			JYJ

DESIGN BY: J. YARNELL

DRAWN BY: J. YARNELL

REVIEWED BY: J. YARNELL

PROJECT NO.: 22.011

DATE: 6/24/2022

SHEET TITLE

GRADING NOTES

SHEET NO.

C5.3

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FOR UTILITY NOTES, RE: SHEET C6.4

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
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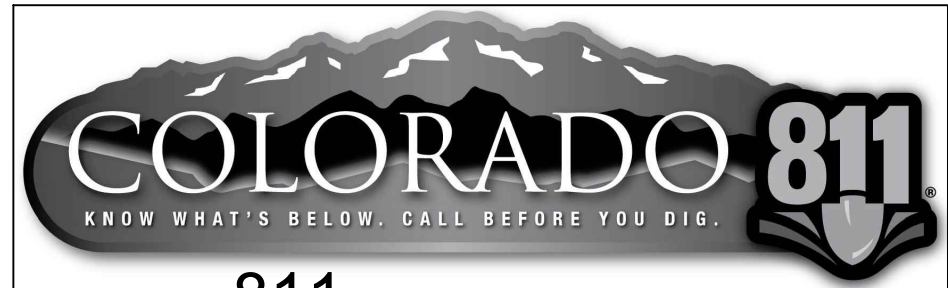
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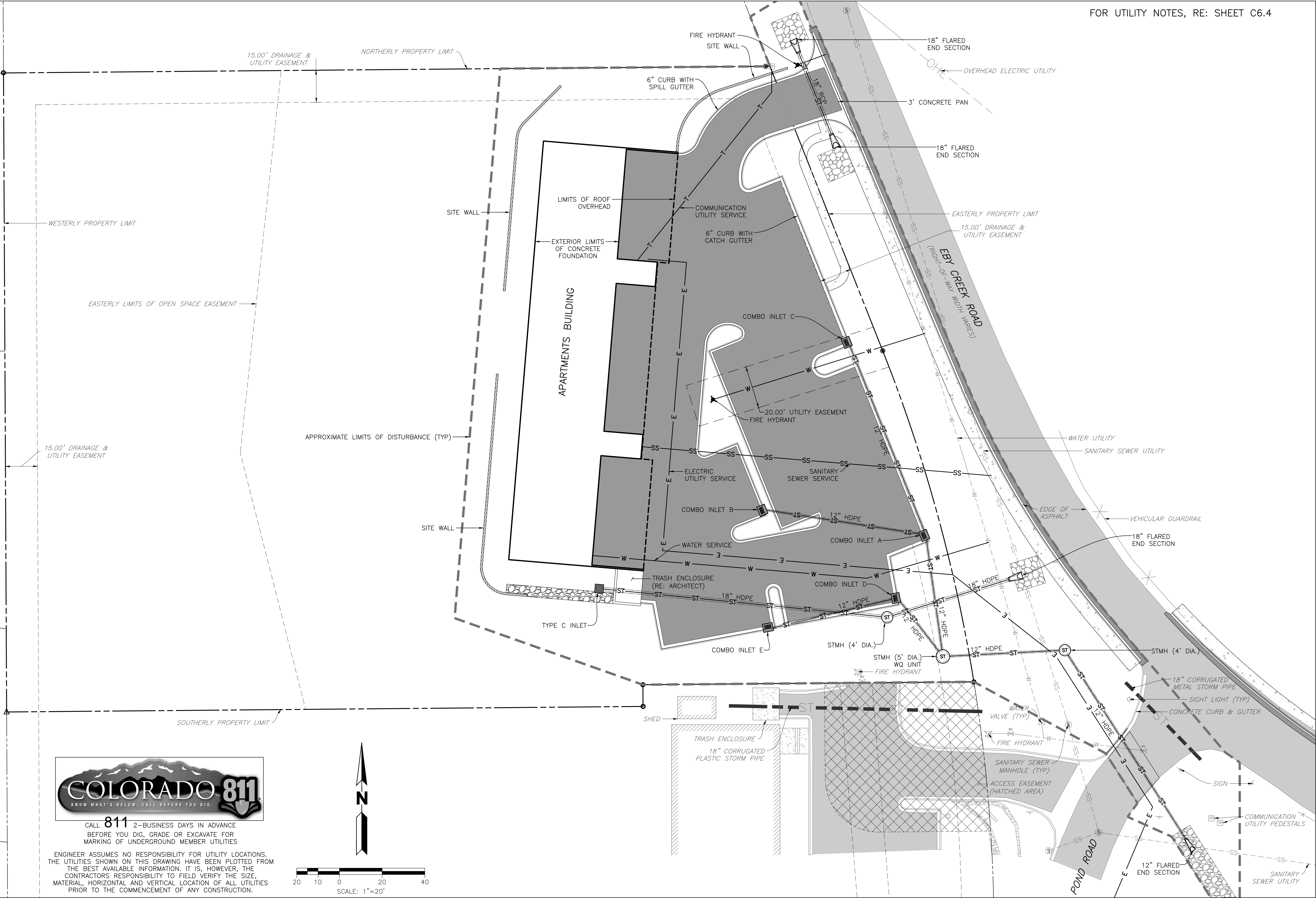
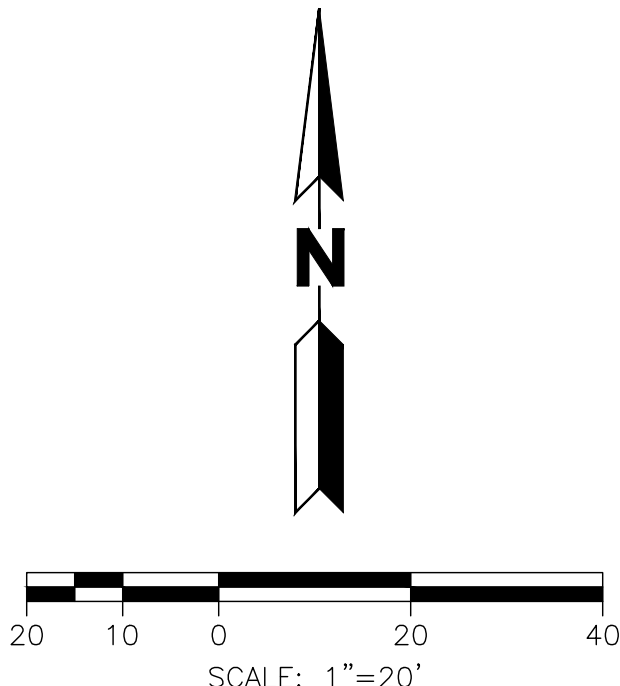
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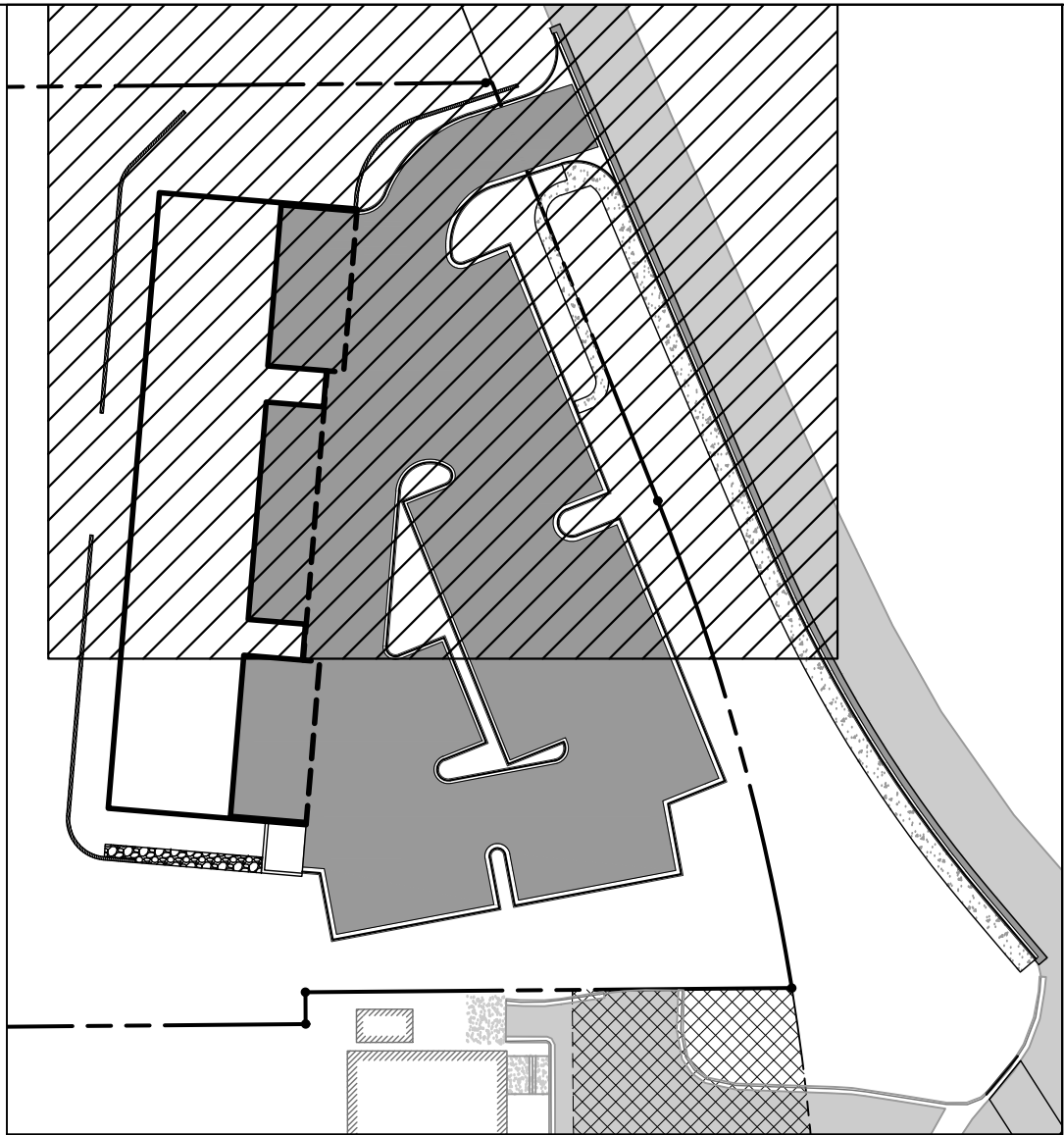


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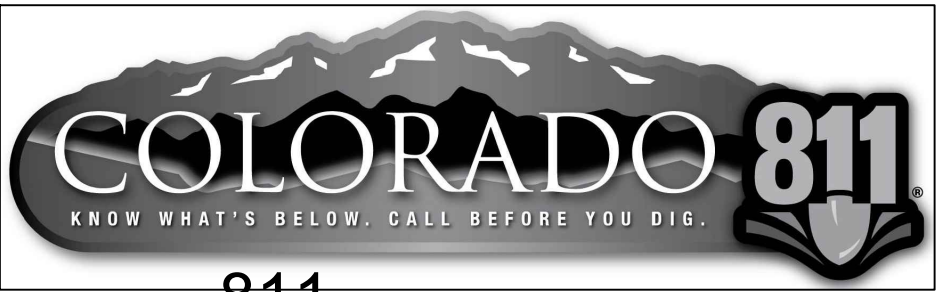
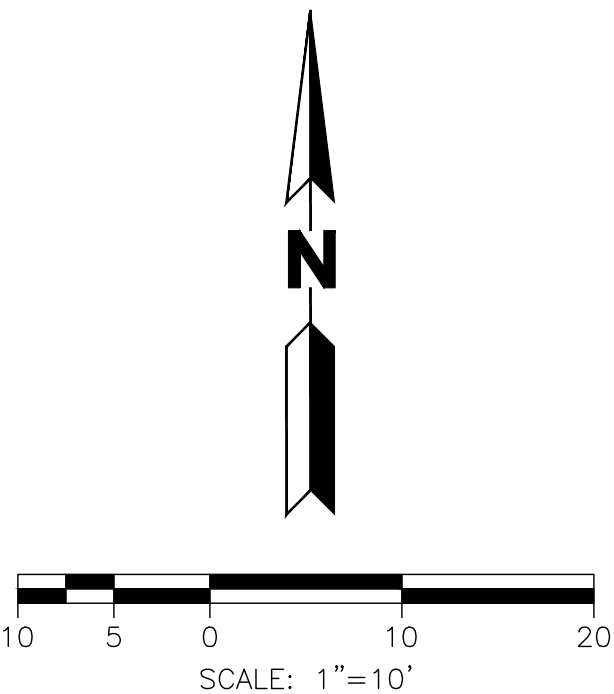
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KEYMAP

SCALE: 1"=60'

FOR UTILITY NOTES & CROSSINGS,
RE: SHEET C6.4



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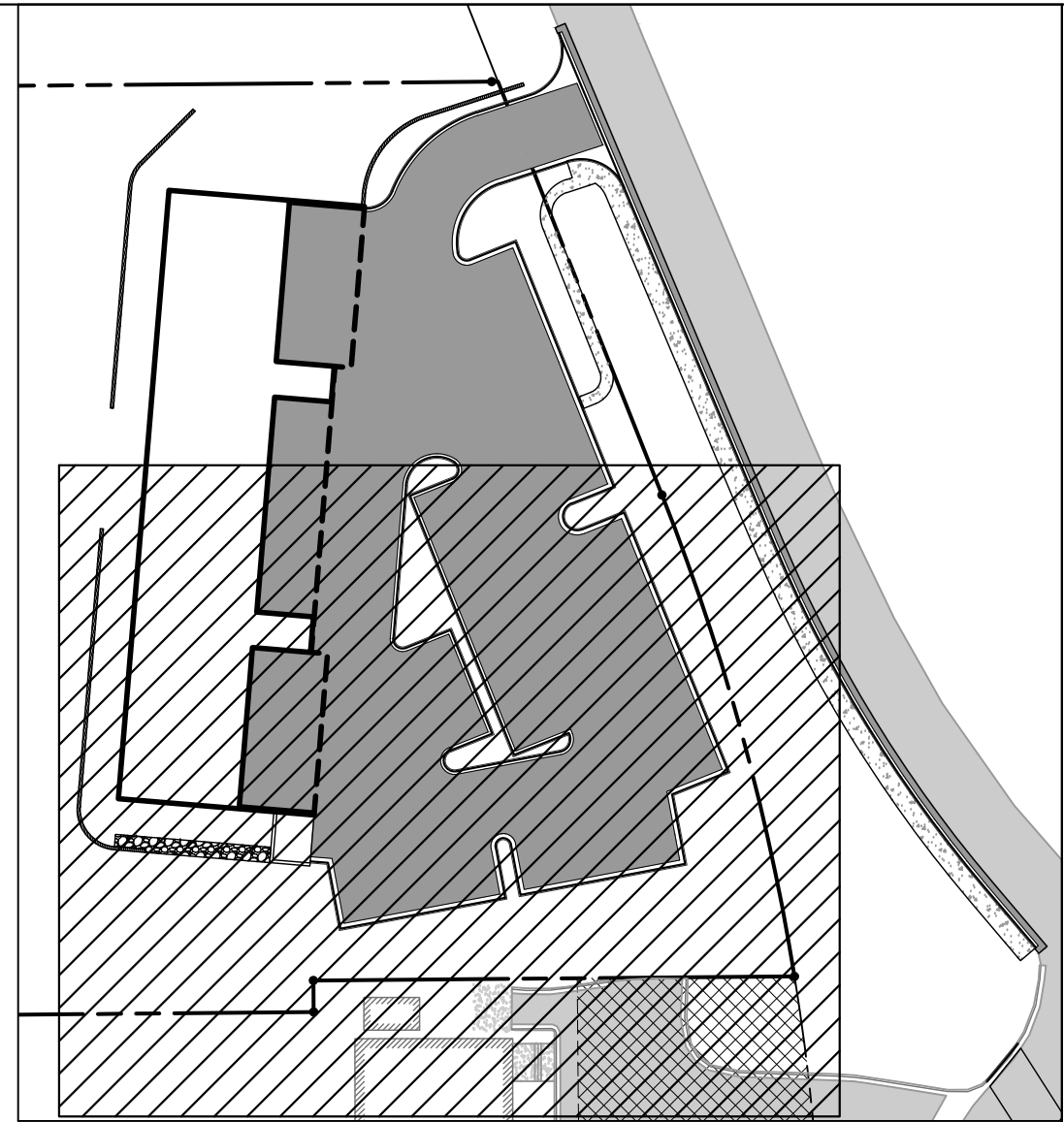
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DETAILED
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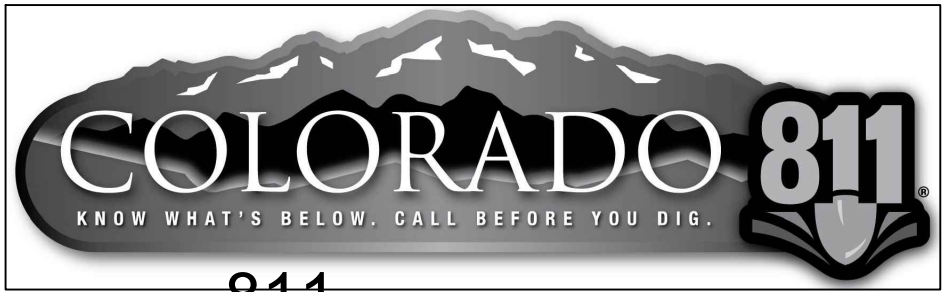
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PROJECT NO.: 22.011

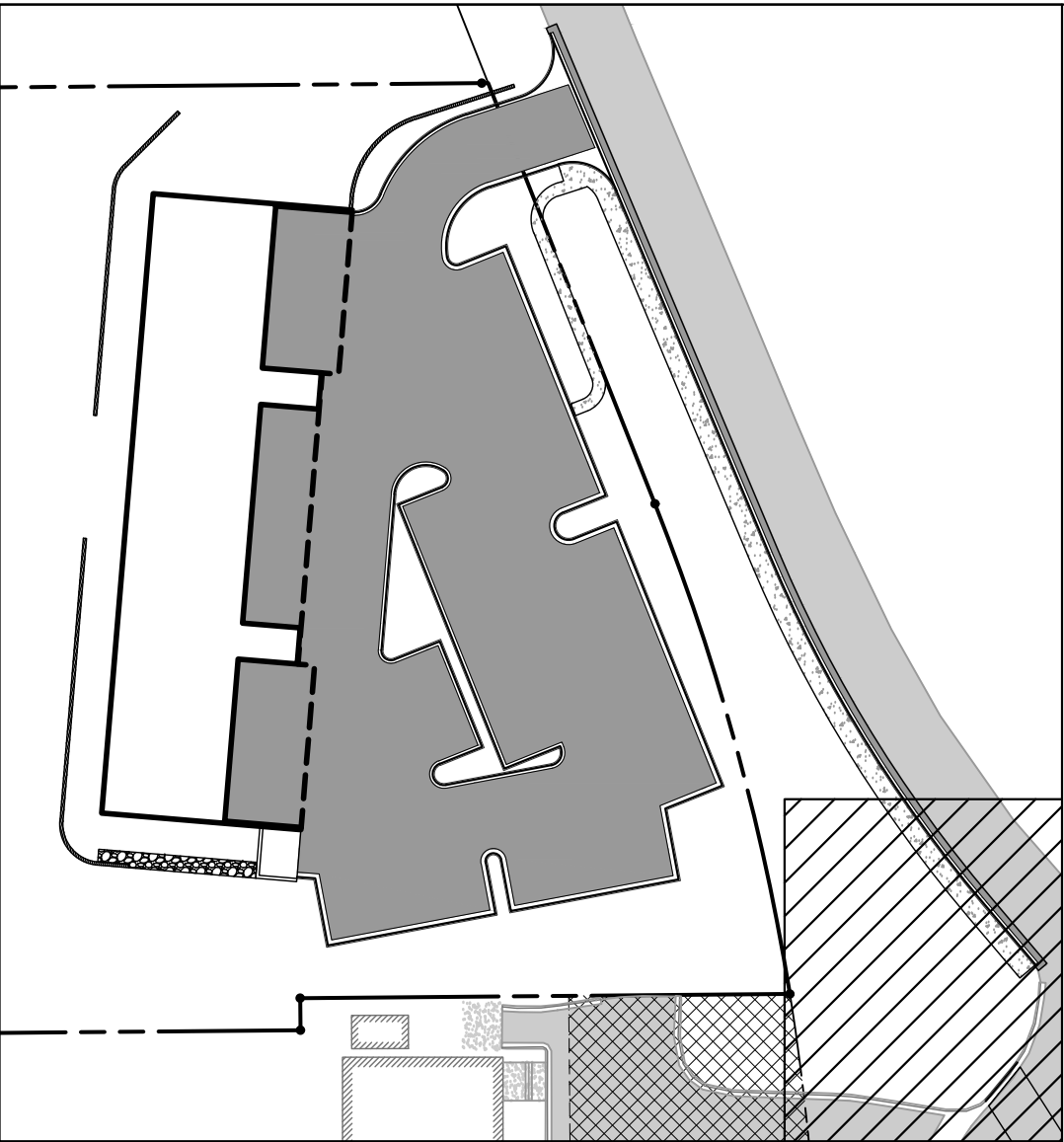
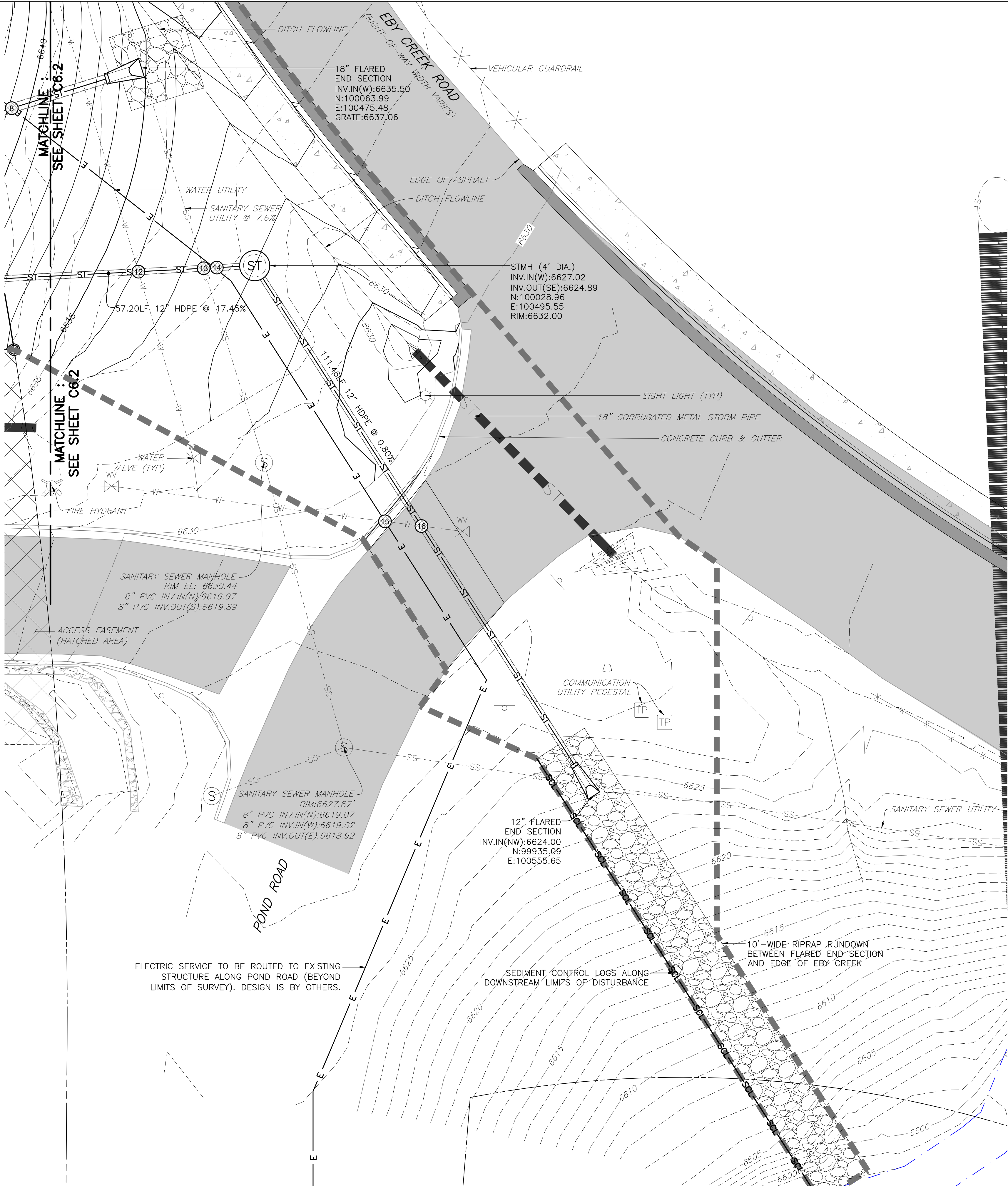
DATE: 6/24/2022

SHEET TITLE

DETAILED
UTILITY PLAN

SHEET NO.

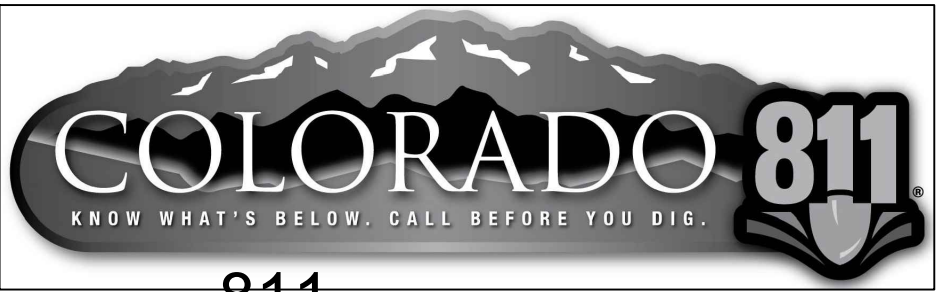
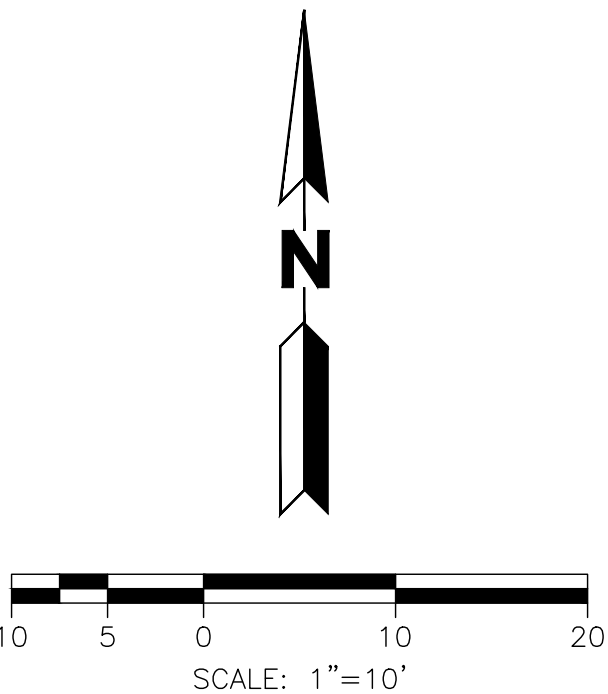
C6.2



KEYMAP

SCALE: 1"=60'

FOR UTILITY NOTES & CROSSINGS,
RE: SHEET C6.4:



CALL 811 2-BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE FOR
MARKING OF UNDERGROUND MEMBER UTILITIES

ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS.
THE UTILITIES SHOWN ON THIS DRAWING HAVE BEEN PLOTTED FROM
THE BEST AVAILABLE INFORMATION. IT IS, HOWEVER, THE
CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE SIZE,
MATERIAL, HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES
PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

SHEET NO.		C6.3	
SHEET TITLE		DETAILED UTILITY PLAN	
DESIGN BY: J. YARNELL	NO.	ISSUE / REVISION	DATE
DRAWN BY: J. YARNELL	1.	SCHEMATIC DESIGN (NO CONST.)	4/15/22
REVIEWED BY: J. YARNELL	2.	DESIGN DEVELOPMENT (NO CONST.)	5/19/22
PROJECT NO.: 22.011	3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22
DATE: 6/24/2022	4.		JY
	5.		JY
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YARNELL CONSULTING & CIVIL DESIGN, LLC			
P.O. BOX 3901, EAGLE, COLORADO 81631			
(970) 323-7008			
435 EBY CREEK ROAD			
LOT 3, PERRY SUBDIVISION PHASE 2			
EAGLE, COLORADO			
435 EBY CREEK APARTMENTS			

D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C6.1 DETAILED UTILITY PLAN

UTILITY LOCATION NOTES:

- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO [UNCC] AT 1-800-922-1087, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO HAVE ALL REGISTERED UTILITY LOCATIONS MARKED. OTHER UNREGISTERED UTILITY ENTITIES ARE TO BE LOCATED BY CONTACTING THE RESPECTIVE REPRESENTATIVE. UTILITY SERVICE LATERALS ARE ALSO TO BE LOCATED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY SIZE, AND HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING FACILITIES PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER, UTILITY PROVIDER(S), AND TOWN OF EAGLE INSPECTOR OF ANY DISCREPANCIES.
- YARNELL CONSULTING & CIVIL DESIGN, LLC (YCCD) ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. THE UTILITIES SHOWN ON THESE PLANS HAVE BEEN PLOTTED FROM THE BEST AVAILABLE INFORMATION. IT IS HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION, [HORIZONTAL AND VERTICAL] OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND NOTIFY THE ENGINEER, UTILITY PROVIDER(S), AND TOWN OF EAGLE INSPECTOR OF ANY DISCREPANCIES.
- IN ACCORDANCE WITH NEW REGULATIONS, ALL UTILITIES CONSTRUCTED AFTER JANUARY 01, 2019 SHALL BE EQUIPPED WITH 10-GAUGE (MINIMUM) TRACER WIRE TAPED TO THE TOP OF THE PIPE.

DRY UTILITY GENERAL NOTES:

- ALL BENDS SHALL BE SWEEPING.
- FOR FINISHED GRADE AT PAD/PEDESTAL LOCATIONS, RE: DETAILED GRADING PLANS. RAISE PAD ELEVATION TO MEET JURISDICTIONAL STANDARD.

ELECTRIC NOTES:

- ELECTRIC DESIGN IS BY OTHERS. INTENT OF UTILITY PLAN(S) IS TO SHOW CONDUIT ROUTING AND EQUIPMENT PLACEMENT ON THE SITE FOR COORDINATION PURPOSES.
- ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH HOLY CROSS ENERGY CONSTRUCTION STANDARDS (LATEST EDITION).
- ALL ELECTRIC CONDUITS SHALL BE 4" PVC.
- MAINTAIN REQUIRED SEPARATION BETWEEN JUNCTION BOXES, TRANSFORMERS, AND FIBER OPTIC PEDESTALS.

FIBER OPTIC (F.O.) / TELEPHONE NOTES:

- FIBER OPTIC DESIGN IS BY OTHERS. INTENT OF UTILITY PLANS IS TO SHOW CONDUIT ROUTING AND EQUIPMENT PLACEMENT ON THE SITE FOR COORDINATION PURPOSES.
- ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH CENTURYLINK CONSTRUCTION STANDARDS (LATEST EDITION).

CABLE TELEVISION NOTES:

- CABLE TELEVISION DESIGN IS BY OTHERS. INTENT OF UTILITY PLANS IS TO SHOW CONDUIT ROUTING AND EQUIPMENT PLACEMENT ON THE SITE FOR COORDINATION PURPOSES.
- ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH COMCAST CONSTRUCTION STANDARDS (LATEST EDITION).

NATURAL GAS NOTES:

- NATURAL GAS DESIGN IS BY OTHERS. INTENT OF UTILITY PLANS IS TO SHOW PIPE ROUTING ON THE SITE FOR COORDINATION PURPOSES.
- ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH BLACK HILLS ENERGY CONSTRUCTION STANDARDS (LATEST EDITION).

SANITARY SEWER NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF EAGLE "PUBLIC WORKS MANUAL." ALL SANITARY SEWER CONSTRUCTION SHALL BE INSPECTED BY A TOWN OF EAGLE INSPECTOR.
- ALL SANITARY SEWER LINES SHALL BE SDR 35 POLYVINYL CHLORIDE [PVC] PIPE IN ACCORDANCE WITH ASTM D-3034.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING SEWER POINTS OF CONNECTION PRIOR TO CONSTRUCTION OF ANY PROPOSED SEWER.
- FOR ALL PIPE INSTALLATIONS, THE DEPTH OF COVER OVER THE PIPE MEASURED FROM OFFICIAL FINISHED/FINAL GRADE TO THE TOP OF THE PIPE SHALL BE A MINIMUM OF 4.5 FEET AND SHALL BE KNOWN AS THE COVER OVER THE PIPE.
- MAINTAIN A MINIMUM OF TEN [10] FEET HORIZONTAL SEPARATION BETWEEN THE OUTSIDE OF ALL SANITARY SEWER AND WATER MAINS AND SERVICES. REFER TO DETAIL B1.
- DISTANCES FOR SANITARY SEWER ARE THE HORIZONTAL DISTANCES BETWEEN THE CENTER OF STRUCTURES. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND STRUCTURE WIDTHS.
- RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. PIPELINE CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE, SUCH THAT THERE IS NO MORE THAN 18 INCHES FROM FINISHED GRADE TO THE TOP OF THE CONE SECTION. THE RIM SHALL BE LEFT 1/8-INCH TO 1/4-INCH BELOW FINISHED ASPHALT.
- CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITY SERVICE CONNECTIONS TO BUILDING WITH MECHANICAL/PLUMBING PLANS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- ALL SANITARY SEWERS SHALL BE BED PER THE TOWN OF EAGLE'S STANDARD TRENCHING AND BACKFILL DETAIL.
- BACKFILL IN PUBLIC RIGHT-OF-WAY MUST MEET THE REQUIREMENTS OF THE TOWN OF EAGLE. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT AND NOTIFY THE TOWN OF EAGLE INSPECTOR 48-HOURS PRIOR TO START OF JOB.
- NO BACKFILL MATERIAL SHALL BE PLACED ABOVE THE SPRINGLINE OF THE PIPE UNTIL A TOWN OF EAGLE REPRESENTATIVE HAS AUTHORIZED BACKFILLING. IT SHALL BE THE DUTY OF THE CONTRACTOR TO NOTIFY THE TOWN OF EAGLE REPRESENTATIVE 48 HOURS IN ADVANCE OF PROPOSED BACKFILL OPERATIONS SO A TOWN OF EAGLE REPRESENTATIVE MAY INSPECT THE PIPE AND THE BEDDING PRIOR TO BACKFILLING.
- ALL SANITARY SEWER PIPES SHALL BE INSTALLED WITH INSULATED NO. 12 TYPE UF TAPED ON TOP OF PIPE AS A TRACER WIRE. TRACER WIRE IS TO BE LOOPED UP TO EACH STRUCTURE (MANHOLES AND/OR CLEANOUTS, AS APPLICABLE). A CATHODIC PROTECTION BOX IS TO BE SET ON THE RIGHT HAND SIDE OF EACH STRUCTURE. THE BOX SHALL HAVE A CAST IRON LOCKING LID WITH A THREE AND ONE-HALF INCH [3-1/2" DIAMETER, EIGHTEEN INCH [18"] LONG PVC BODY. THE CAP WILL NEED A TWO-WIRE CONNECTION POST AS A MINIMUM.
- CONTRACTOR SHALL IMMEDIATELY REMOVE DEBRIS DEPOSITED INTO PUBLIC MANHOLES AND OTHER PUBLIC STRUCTURES TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS CAUSING BACKUP INTO PRIVATE PROPERTIES. IF IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.
- NO TREES SHALL BE PLANTED WITHIN ANY SEWER EASEMENT OR WITHIN TEN [10] FEET OF ANY PUBLIC MANHOLES, OR PIPES.
- UNLESS NOTED OTHERWISE ON PLANS, INSTALL SIX INCH (6") SERVICE LINES AT 0.0104 FT/FT MINIMUM, 0.0600 FT/FT MAXIMUM SLOPE.

STORM SEWER NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF EAGLE "PUBLIC WORKS MANUAL." ALL STORM SEWER CONSTRUCTION SHALL BE INSPECTED BY A TOWN OF EAGLE INSPECTOR.
- CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING STORM SEWER POINTS OF CONNECTION PRIOR TO CONSTRUCTION OF ANY PROPOSED STORM SEWER.
- ALL STORM SEWER LINES 12 INCHES IN SIZE AND GREATER SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE) IN ACCORDANCE WITH ASTM F-405, EXCEPT FOR THE DRIVEWAY CULVERT WHICH MUST BE TYPE V REINFORCED CONCRETE PIPE.
- ALL STORM SEWER LINES LESS THAN 12 INCHES IN SIZE SHALL BE SDR-35 POLYVINYL CHLORIDE [PVC] PIPE IN ACCORDANCE WITH ASTM D-3034.
- ALL STORM SEWER PIPE JOINTS SHALL BE BELL AND SPIGOT TYPE, INSTALLED WITH AN APPROVED RUBBER GASKET O-RING OR PROFILE TYPE GASKET SO AS TO BE WATER-TIGHT.
- DISTANCES FOR STORM SEWER PIPE ARE THE HORIZONTAL DISTANCES BETWEEN CENTER OF STRUCTURES. THEREFORE, DISTANCES SHOWN ON PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND STRUCTURE WIDTHS.
- WHERE APPLICABLE, DISTANCES FOR STORM SEWER PIPE INCLUDE THE LENGTH OF THE FLARED END SECTION.
- ALL STORM SEWER PIPES SHALL BE INSTALLED WITH INSULATED NO. 12 TYPE UF TAPED ON TOP OF PIPE AS A TRACER WIRE. TRACER WIRE IS TO BE LOOPED UP TO EACH STRUCTURE (INLETS, OUTLETS, MANHOLES AND/OR CLEANOUTS, AS APPLICABLE). A CATHODIC PROTECTION BOX IS TO BE SET ON THE RIGHT HAND SIDE OF EACH STRUCTURE. THE BOX SHALL HAVE A CAST IRON LOCKING LID WITH A THREE AND ONE-HALF INCH [3-1/2" DIAMETER, EIGHTEEN INCH [18"] LONG PVC BODY. THE CAP WILL NEED A TWO-WIRE CONNECTION POST AS A MINIMUM.
- MANHOLES, BARRELS, CONES, AND COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) INLETS SHALL BE CONSTRUCTED OF PRECAST CONCRETE. CAST-IN-PLACE STRUCTURES SHALL NOT BE ALLOWED.
- PRECAST MANHOLES AND RISERS SHALL BE MANUFACTURED IN CONFORMITY WITH ASTM DESIGNATION C-478. REFER TO DETAIL A5. ALL CONES SHALL BE ECCENTRIC, EXCEPT FOR MANHOLE DEPTHS SIX [6] FEET OR LESS WHEN A FLAT TOP SECTION SHALL BE USED.
- ALL STORM SEWERS SHALL BE BED PER THE TOWN OF EAGLE'S STANDARD TRENCHING AND BACKFILL DETAILS A1 AND A2.
- THE FLEXIBLE PLASTIC JOINT SEALING COMPOUND WITHIN PRECAST STRUCTURES SHALL BE "RAMNEK" RUBBERNECK OR APPROVED EQUAL.
- CONTRACTOR SHALL IMMEDIATELY REMOVE DEBRIS DEPOSITED INTO PUBLIC MANHOLES AND OTHER PUBLIC STRUCTURES TO ELIMINATE THE POSSIBILITY OF PROPERTY DAMAGE DUE TO THE DEBRIS CAUSING BACKUP INTO PRIVATE PROPERTIES. IF IT IS DETERMINED THAT DEBRIS CAUSED A BACKUP, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGES.
- BACKFILL IN PUBLIC RIGHT-OF-WAY MUST MEET THE REQUIREMENTS OF THE TOWN OF EAGLE. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT AND NOTIFY THE TOWN OF EAGLE INSPECTOR 48-HOURS PRIOR TO START OF JOB.
- NO TREES SHALL BE PLANTED WITHIN ANY UTILITY EASEMENT OR WITHIN TEN [10] FEET OF ANY PUBLIC MANHOLES, PIPES OR INLETS.
- RIM ELEVATIONS SHOWN ARE APPROXIMATE ONLY AND ARE NOT TO BE TAKEN AS FINAL ELEVATIONS. CONTRACTOR SHALL USE PRECAST CONCRETE ADJUSTMENT RINGS TO ADJUST THE MANHOLE FRAME TO THE REQUIRED FINAL GRADE, SUCH THAT THERE IS NO MORE THAN EIGHTEEN [18] INCHES FROM FINISHED GRADE TO THE TOP OF THE CONE SECTION. THE RIM SHALL BE LEFT 1/8-INCH TO 1/4-INCH BELOW FINISHED ASPHALT.
- MANHOLE COVERS SHALL BE ALIGNED TO PROVIDE A MINIMUM OF THREE [3] FEET CLEARANCE BETWEEN THE MANHOLE RING AND THE LIP OF GUTTER.
- COORDINATES FOR AREA INLETS ARE AT CENTER OF INLET. COORDINATES FOR FLARED END SECTIONS ARE AT CENTER OF FLARED END.
- SLOPE OF INLET FLOW LINE OR GRATE TO MATCH STREET GRADE UNLESS INLET IS AT A SUMP LOCATION.
- CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF ROOF DRAIN SERVICES AND DOWNSPOUTS WITH PLUMBING AND ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

WATER NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF EAGLE "PUBLIC WORKS MANUAL." ALL WATER UTILITY CONSTRUCTION SHALL BE INSPECTED BY A TOWN OF EAGLE INSPECTOR.
- ALL FIRE HYDRANT LATERALS AND WATER SERVICES FOUR [4] INCHES IN SIZE AND GREATER SHALL BE DUCTILE IRON, MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C151, CLASS 52, WITH BITUMINOUS OUTSIDE COATING (ONE MIL THICK) AND CEMENT MORTAR LINING PER AWWA C104. PIPE JOINTS SHALL BE PUSH-ON TYPE UTILIZING RUBBER RING GASKET IN ACCORDANCE WITH AWWA C111. PIPE SHALL BE SUPPLIED WITH COPPER BONDING STRAPS AND MECHANICAL ATTACHMENT. A #4 CONDUCTOR AND CADWELDS (CHARGE SIZE CA 45) OR THE MANUFACTURERS' SUPPLIED STRAP SHALL BE USED TO BOND EACH JOINT AND FITTING.
- ALL WATER PIPE JOINT FITTINGS SHALL BE MADE FROM ASTM A536, 65-45-12 DUCTILE IRON AND FURNISHED WITH MECHANICAL JOINT ENDS. ALL FITTINGS SHALL BE AT A PRESSURE RATING OF 350 PSI AND SHALL BE WRAPPED WITH EIGHT MILLIMETER MINIMUM THICKNESS POLYETHYLENE MATERIAL IN ACCORDANCE WITH AWWA STANDARD C105. TWIST-OFF NUTS, SIZED THE SAME AS THE TEE-HEAD BOLTS, SHALL BE USED TO ENSURE PROPER ACTUATING OF RESTRAINING DEVICES. REFER TO DETAIL B11.
- ALL WATER PIPES SHALL BE INSTALLED WITH INSULATED NO. 12 TYPE UF TAPED ON TOP OF PIPE AS A TRACER WIRE. TRACER WIRE IS TO BE LOOPED UP TO EACH HYDRANT. A CATHODIC PROTECTION BOX IS TO BE SET ON THE RIGHT HAND SIDE OF EACH HYDRANT. THE BOX SHALL HAVE A CAST IRON LOCKING LID WITH A THREE AND ONE-HALF INCH [3-1/2" DIAMETER, EIGHTEEN INCH [18"] LONG PVC BODY. THE CAP WILL NEED A TWO-WIRE CONNECTION POST AS A MINIMUM.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST ALL WATER VALVE BOXES TO THE REQUIRED FINAL GRADE. IN ADDITION, VALVE EXTENSIONS SHALL BE INSTALLED SUCH THAT A VALVE KEY SIX [6] FEET IN LENGTH CAN OPERATE THE VALVE.
- NO PIPE SHALL BE BACKFILLED UNTIL IT HAS BEEN INSPECTED BY A TOWN OF EAGLE INSPECTOR.
- THE MANUFACTURER SHALL FURNISH A CERTIFIED STATEMENT THAT ALL OF THE SPECIFIED TESTS AND INSPECTIONS HAVE BEEN MADE AND THE RESULTS THEREOF COMPLY WITH THE REQUIREMENT OF THE APPLICABLE STANDARDS HEREIN SPECIFIED. A COPY OF THE CERTIFICATION WILL BE SENT TO THE TOWN OF EAGLE INSPECTOR UPON REQUEST.
- DISTANCES FOR WATER ARE THE HORIZONTAL DISTANCE BETWEEN CENTER OF FITTING TO CENTER OF VALVE, METER, ETC. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE AND COULD VARY DUE TO VERTICAL ALIGNMENT AND FITTING DIMENSIONS.
- MAINTAIN A MINIMUM OF TEN [10] FEET HORIZONTAL SEPARATION BETWEEN THE OUTSIDE OF ALL SANITARY SEWER AND WATER MAINS AND SERVICES. REFER TO DETAIL B1.
- FOR ALL PIPE INSTALLATIONS, THE DEPTH OF COVER OVER THE PIPE MEASURED FROM OFFICIAL FINISHED/FINAL GRADE TO THE TOP OF THE PIPE SHALL BE A MINIMUM OF 6.0 AND MAXIMUM OF 9.0 FEET AND SHALL BE KNOWN AS THE COVER OVER THE PIPE.
- FIRE HYDRANTS SHALL CONFORM TO THE TOWN OF EAGLE MATERIALS AND SPECIFICATIONS. FIRE HYDRANT ASSEMBLIES SHALL INCLUDE ALL PIPE, FITTINGS, VALVES, THRUST BLOCKS, RESTRAINTS, AND MATERIALS NECESSARY TO INSTALL THE HYDRANT. REFER TO DETAIL B2.
- INSTALL THRUST BLOCKS AT ALL BENDS, STUBS AND TEES IN WATER LINES. ALL BLOW-OFFS, VALVES AND BENDS SHALL BE RODDED OR MECHANICALLY-RESTRAINED PER TOWN OF EAGLE DETAILS AS NOTED OR IF SOIL CONDITIONS ARE UNSTABLE OR AS DIRECTED BY THE TOWN OF EAGLE INSPECTOR.
- WHEN IT IS NECESSARY TO LOWER OR RAISE WATER LINES AT STORM DRAINS AND OTHER UTILITY CROSSINGS, A MINIMUM CLEARANCE OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF PIPES. REFER TO DETAIL B1.
- PRIOR TO INSTALLATION OF WATER MAINS, ROAD CONSTRUCTION MUST HAVE PROGRESSED TO AT LEAST THE "SUB-GRADE" STATE.
- BEFORE ANY TAPS ARE MADE FROM MAINS, APPLICATION[S] FOR THE TAPS MUST BE RECEIVED AND APPROVED BY THE TOWN OF EAGLE WATER DEPARTMENT.
- INDIVIDUAL SERVICE LINE PRESSURE REGULATING VALVES ARE REQUIRED.
- THE WATER QUALITY CONTROL DIVISION OF THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT [CDPHE] REQUIRES ALL WATER LINE CONTRACTORS TO POSSESS A CURRENT DISCHARGE PERMIT FOR DISCHARGES OF CHLORINATED AND PROCESS WATERS ASSOCIATED WITH THE INSTALLATION OF NEW MAINS OR CONDUITS. CONTACT CDPHE WATER QUALITY CONTROL DIVISION AT 303-692-3539 FOR INFORMATION ON OBTAINING THE REQUIRED PERMIT.
- CONTRACTOR TO COORDINATE HORIZONTAL AND VERTICAL LOCATIONS OF UTILITY SERVICE CONNECTIONS TO BUILDING WITH MECHANICAL/PLUMBING PLANS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- THE WATER SERVICE SIZE HAS BEEN PROVIDED BY THE PROJECT'S LIFE SAFETY ENGINEER BASED UPON THE DEMANDS OF THE FIRE SUPPRESSION SYSTEM IN CONJUNCTION WITH THE AVAILABLE PRESSURE AND VOLUME FROM THE PUBLIC SYSTEM AT THE CONNECTION POINT.

UTILITY CROSSINGS (RE: SHEETS C6.1 – C6.3)				
NUMBER	BOTTOM OF UPPER UTILITY	TOP OF LOWER UTILITY	INSULATION?	ENCASEMENT?
1	STORM : 6647.4	WATER : 6645.5	YES	YES
2	ELECTRIC : 6650.7	SANITARY SEWER : 6649.2	NO	NO
3	STORM : 6644.7	SANITARY SEWER : 6635.8	NO	NO
4	SANITARY SEWER : 6631.4	WATER : 6630.5±	YES	YES
5	ELECTRIC : 6645.2	WATER : 6644.0	NO	NO
6	WATER : 6642.5	STORM : 6641.3	YES	YES
7	ELECTRIC : 6643.5	STORM : 6640.0	NO	NO
8	ELECTRIC : 6636.8	STORM : 6633.2	NO	NO
9	18" STORM : 6645.3	12" STORM : 6645.0	NO	NO
10	18" STORM : 6642.8	12" STORM : 6641.8	NO	NO
11	18" STORM : 6640.9	12" STORM : 6640.0	NO	NO
12	STORM : 6630.5	WATER : 6628.0±	YES	YES
13	STORM : 6628.4	SANITARY : 6623.5±	NO	NO
14	STORM : 6628.3	ELECTRIC : 6628.0	NO	NO
15	ELECTRIC : 6624.2	WATER : 6622.5	NO	NO
16	STORM : 6624.2	WATER : 6622.5	YES	YES

435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

YARNELL CONSULTING & CIVIL DESIGN, LLC

P.O. BOX 3901, EAGLE, COLORADO 81631

(970) 323-7008

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NO.	ISSUE / REVISION	DATE	NAME
1.	SCHEMATIC DESIGN (NO CONST.)	4/15/22	JULY
2.	DESIGN DEVELOPMENT (NO CONST.)	5/19/22	JULY
3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JULY
4.			JULY
5.			JULY

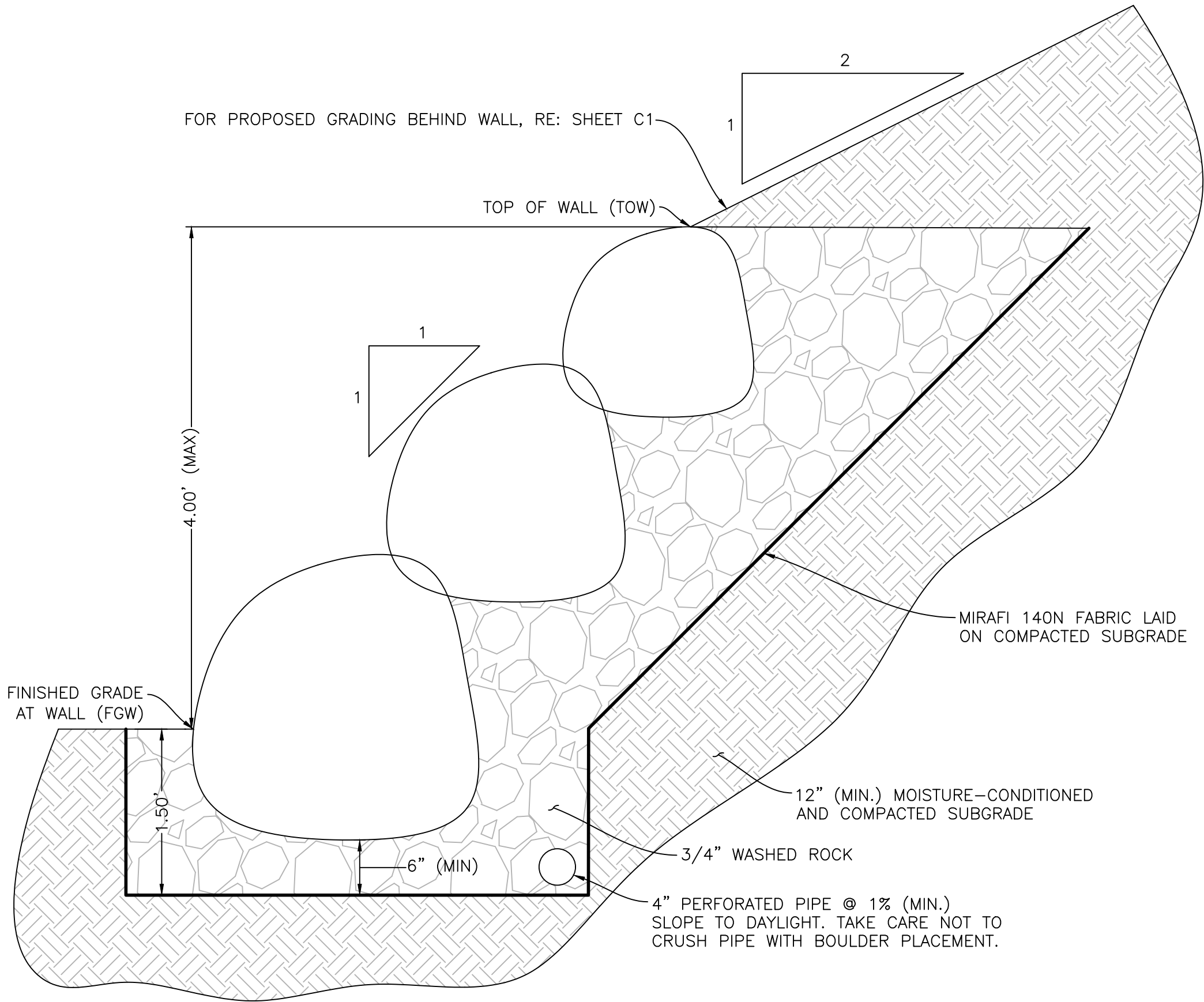
DESIGN BY: J. YARNELL
DRAWN BY: J. YARNELL
REVIEWED BY: J. YARNELL
PROJECT NO.: 22.011
DATE: 6/24/2022

SHEET TITLE

UTILITY NOTES

SHEET NO.

C6.4



NOTES:

1. PLACE LARGER BOULDERS AT BOTTOM OF WALL AND TRANSITION TO SMALLEST BOULDERS AT TOP OF WALL. IN NO CASE SHALL A LARGER BOULDER BE PLACED ATOP A SMALLER ONE.
2. NO BOULDERS USED IN THE CONSTRUCTION OF A WALL SHALL BE SMALLER THAN 12 INCHES IN DIAMETER.
3. A 1:1 SLOPE IS THE STEEPEST THAT A WALL MAY BE CONSTRUCTED USING ROUND BOULDERS.

BOULDER RETAINING WALL DETAIL

N.T.S.

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DESIGN BY:	J. YARNELL	NO.	ISSUE / REVISION	DATE	NAME
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DATE:	6/24/2022	4.			JY
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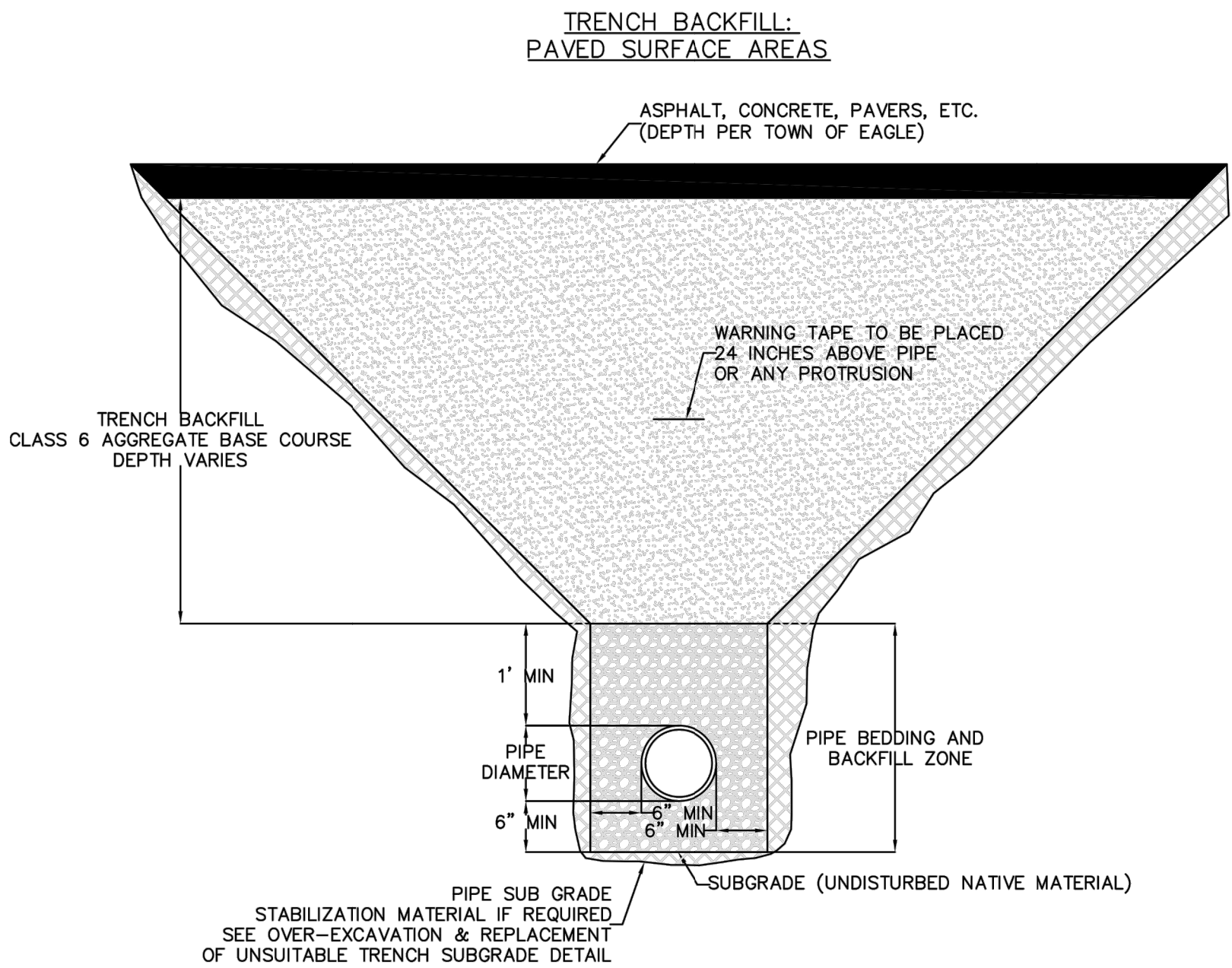
SHEET TITLE
DETAILS

SHEET NO.
C9.1

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

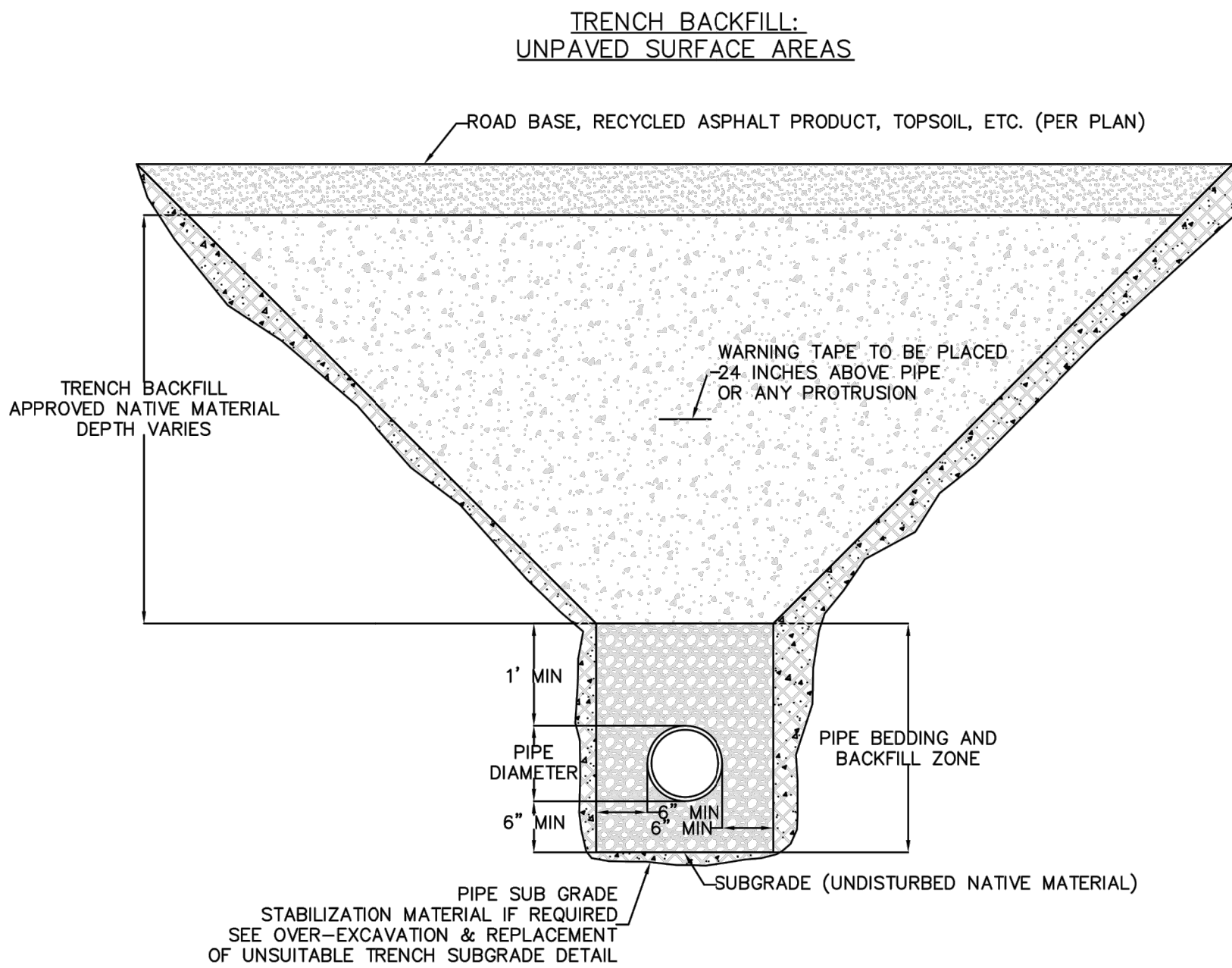
YARNELL CONSULTING &
CIVIL DESIGN, LLC
P.O. BOX 3901, EAGLE, COLORADO 81631
(970) 323-7008

D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C10 TYPICAL SEWER DETAILS



Title: DETAIL -- PAVED SURFACE TRENCH BACKFILL
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/8/2018
Sheet: DETAIL-BACKFILL.DWG

A1

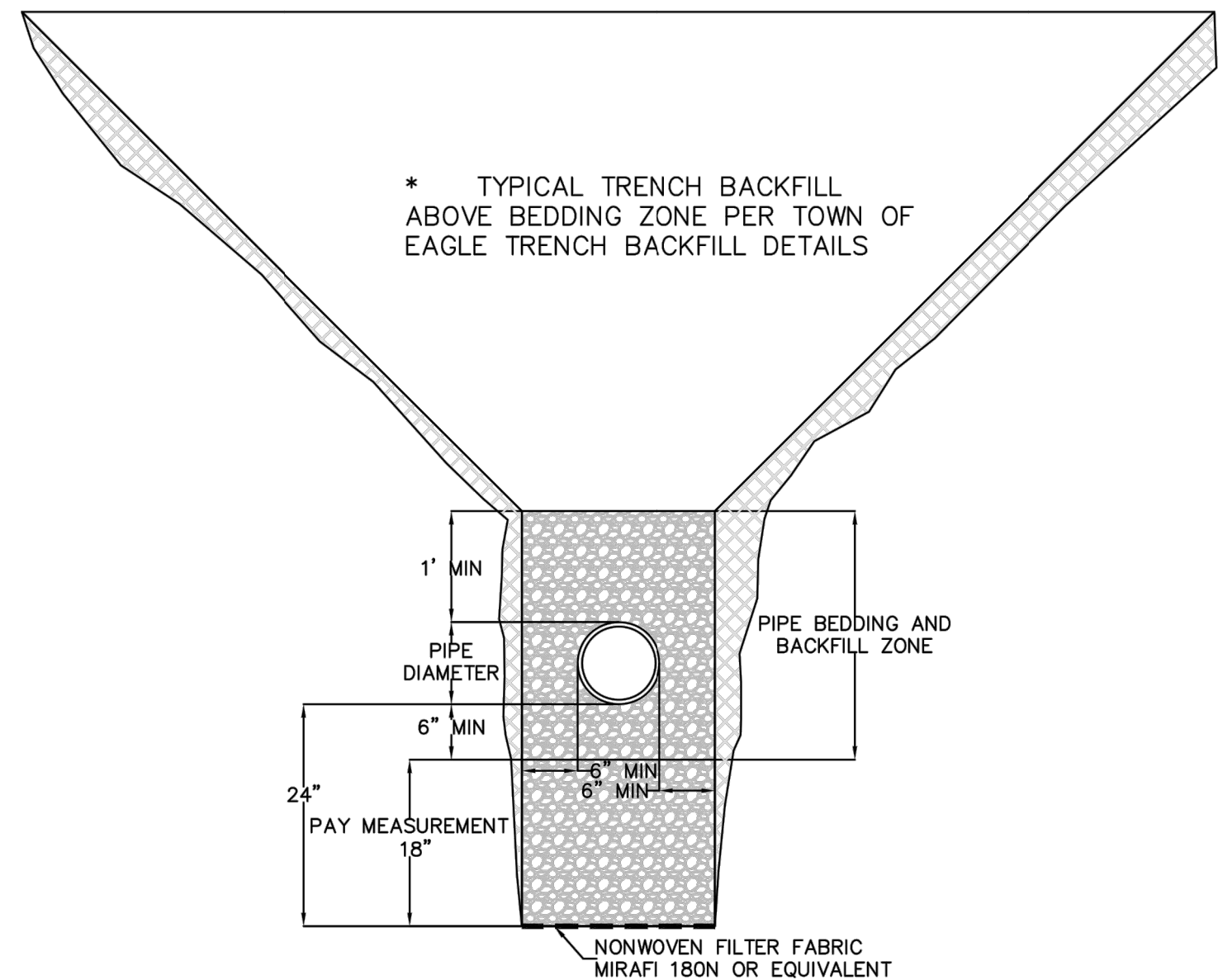


Title: DETAIL -- TRENCH BACKFILL
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/8/2018
Sheet: DETAIL-BACKFILL.DWG

A2



OVER-EXCAVATION & REPLACEMENT OF UNSUITABLE TRENCH SUBGRADE



* NOTE: MAXIMUM PAY WIDTH SHALL BE 4- FEET. MAXIMUM PAY DEPTH WILL BE 1.5- FEET.

Title: DETAIL -- TRENCH BACKFILL
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/8/2018
Sheet: DETAIL-BACKFILL.DWG

A3



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2.	DESIGN DEVELOPMENT (NO CONST.)	J. YARNELL	5/19/22
3.	DEVELOPMENT PERMIT RESUBMISSION	J. YARNELL	6/24/22
4.			
5.			

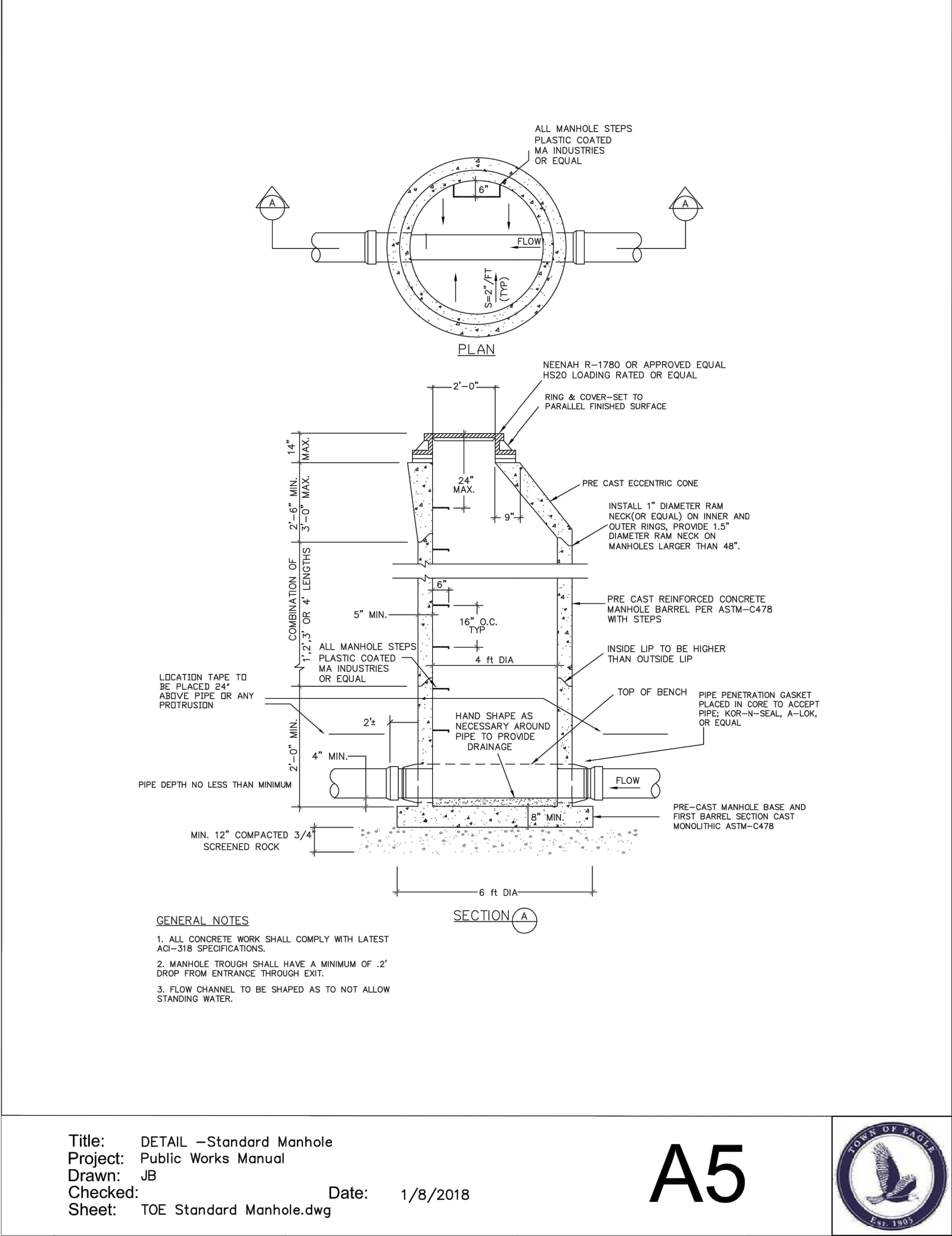
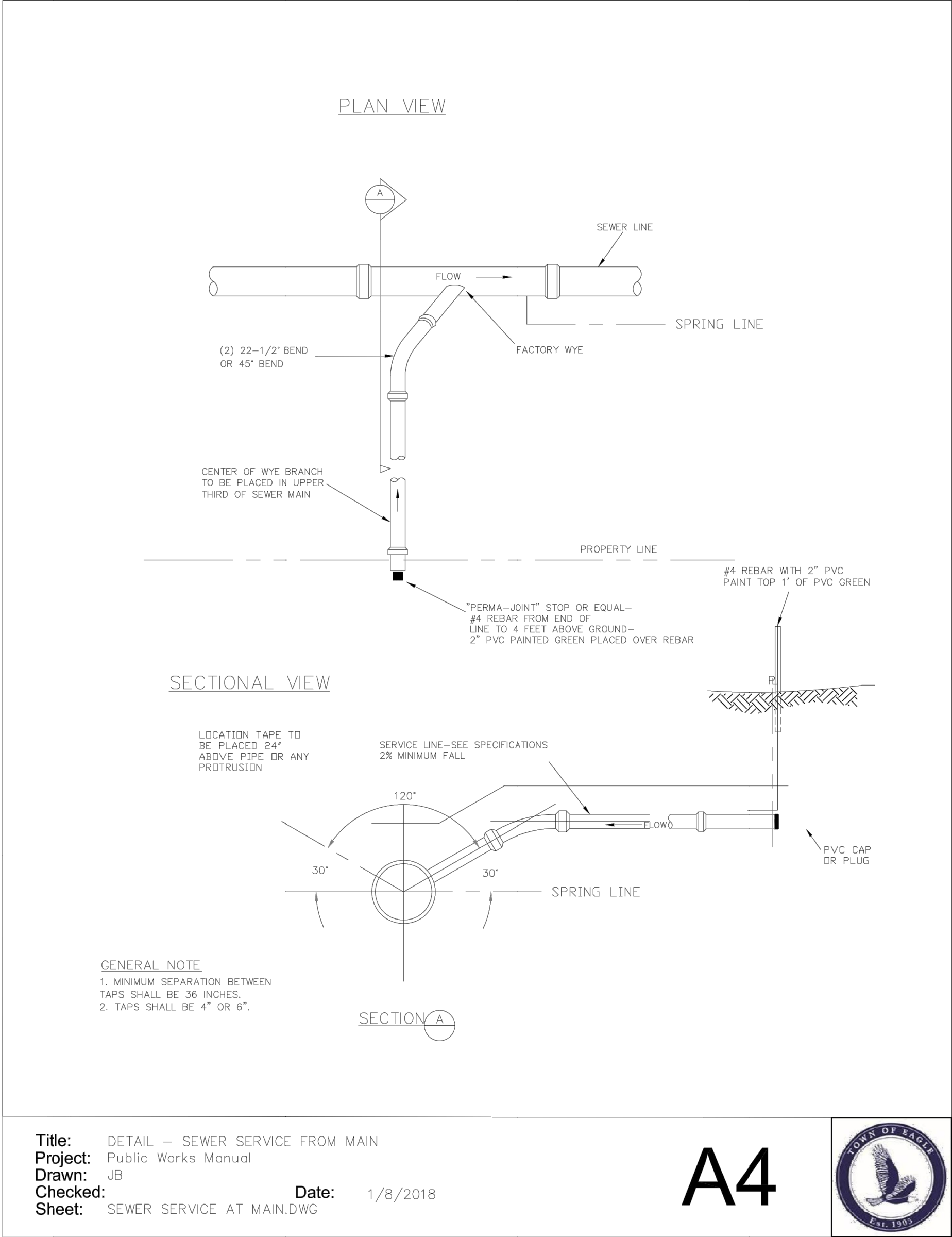
DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO: 22.011	

SHEET TITLE
TYPICAL SEWER
DETAILS

SHEET NO.
C10.1

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
CIVIL DESIGN, LLC
P.O. BOX 3901, EAGLE, COLORADO 81631
(970) 323-7008



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4.		JY	
5.		JY	

DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO: 22.011	

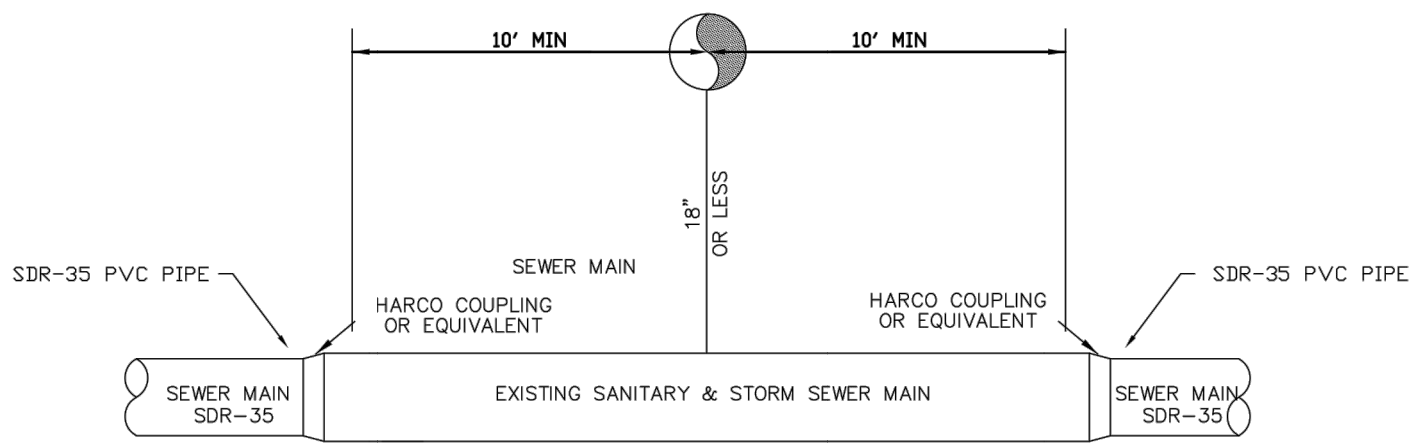
SHEET TITLE
TYPICAL SEWER
DETAILS

SHEET NO.
C10.2

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

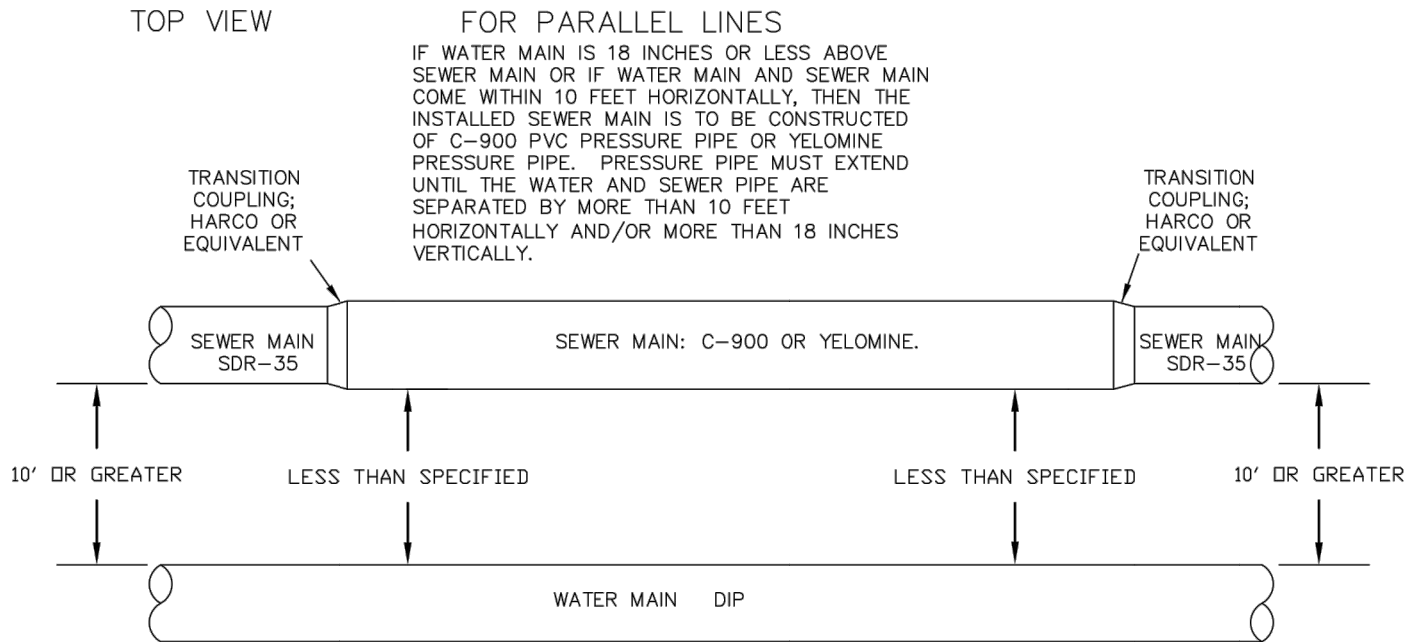
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(970) 323-7008

D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C11 TYPICAL WATER DETAILS



FOR CROSSING MAINS IN 10' BUFFER

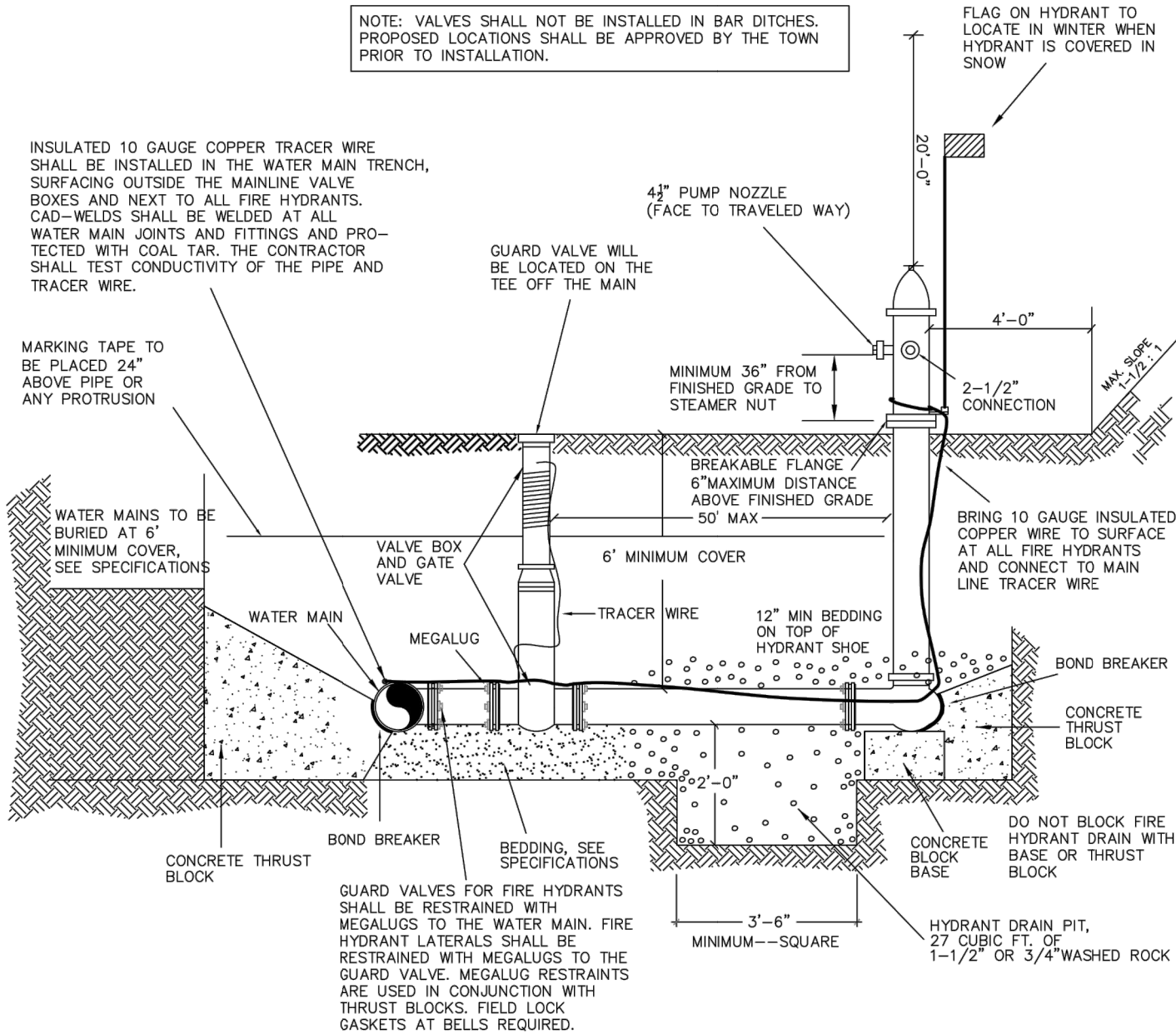
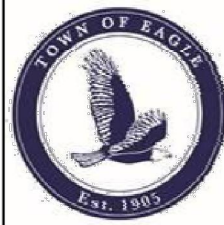
IF WATER MAIN OR SERVICE IS 18 INCHES OR LESS ABOVE SEWER OR IF WATER MAIN OR SERVICE IS ANY DISTANCE BELOW THE SEWER MAIN OR SERVICE, INSTALL C-900 PVC PRESSURE PIPE OR YELOMINE PIPE. PRESSURE PIPE MUST EXTEND UNTIL THE LINES ACHIEVE THE REQUIRED SEPARATION AS MEASURED FROM EXTERIOR WALL TO EXTERIOR WALL, OR THE JOINTS OF THE SEWER MAIN OR SERVICE ARE OFFSET BY 10' HORIZONTALLY FROM THE CENTER OF THE WATER MAIN OR SERVICE.



FOR PARALLEL LINES
IF WATER MAIN IS 18 INCHES OR LESS ABOVE SEWER MAIN OR IF WATER MAIN AND SEWER MAIN COME WITHIN 10 FEET HORIZONTALLY, THEN THE INSTALLED SEWER MAIN IS TO BE CONSTRUCTED OF C-900 PVC PRESSURE PIPE OR YELOMINE PRESSURE PIPE. PRESSURE PIPE MUST EXTEND UNTIL THE WATER AND SEWER PIPE ARE SEPARATED BY MORE THAN 10 FEET HORIZONTALLY AND/OR MORE THAN 18 INCHES VERTICALLY.

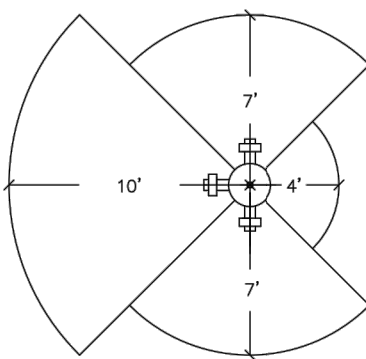
Title: DETAIL -- Water Main Sewer Crossing/ Parrallel
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/8/2018
Sheet: TOE Water Crossing Detail

B1



HYDRANT CLEARANCE DIAGRAM

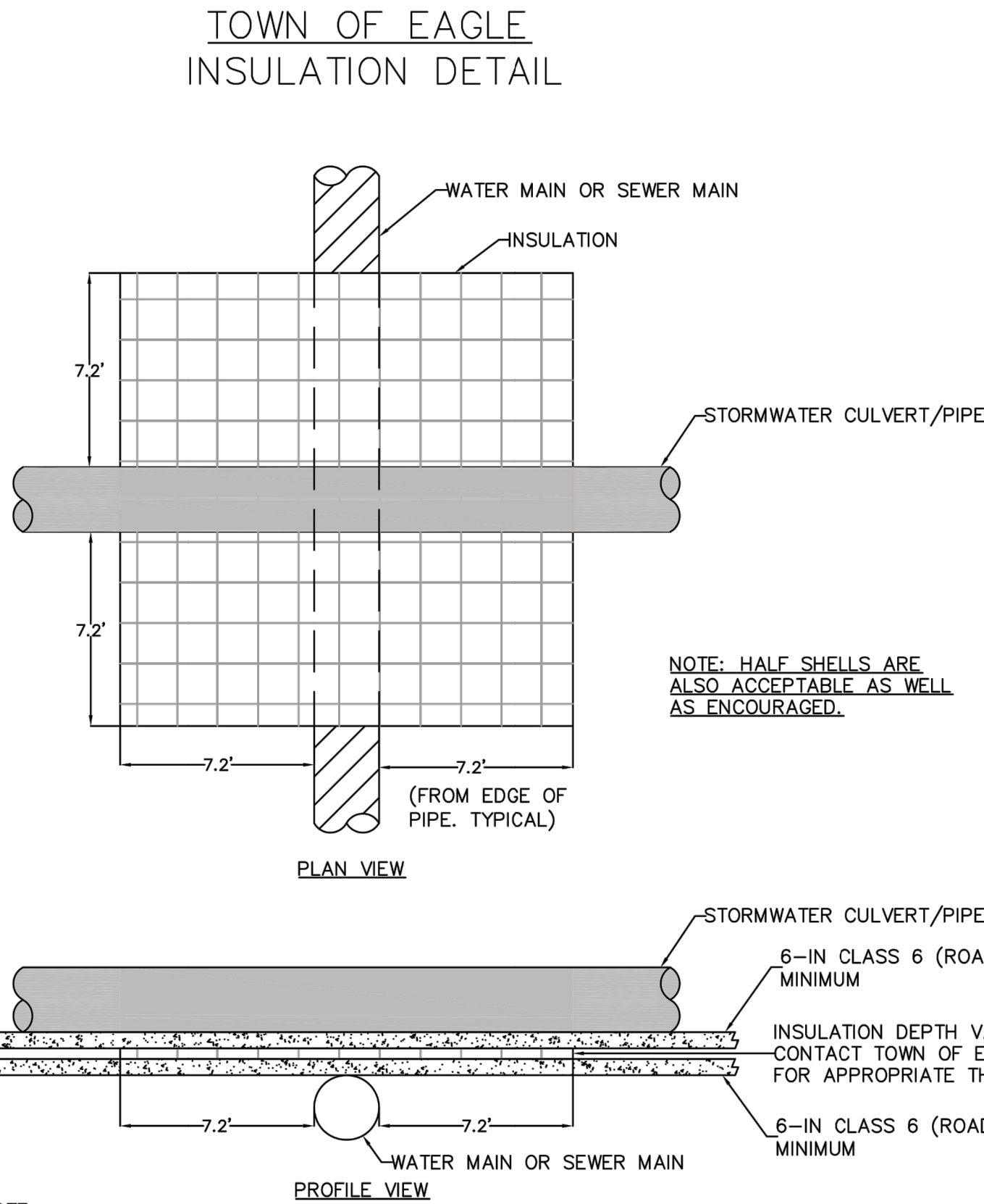
THERE ARE NO ABOVE GROUND OBSTRUCTIONS ALLOWED IN THESE AREAS



FRONT---10 FEET OF CLEARANCE
SIDES---7 FEET OF CLEARANCE
REAR---4 FEET OF CLEARANCE
ABOVE---20 FEET OF CLEARANCE

Title: DETAIL -- Fire Hydrant Detail
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/11/2018
Sheet: TOE Fire Hydrant.dwg

B2



TOWN OF EAGLE
INSULATION DETAIL

NOTE:
1. INSULATION CAN NOT BE BROKEN. NEEDS PROTECTED TOP AND BOTTOM. NO GAPS. FITTED TOGETHER AND DUCT TAPE.
2. INSULATION NEEDS TO BE 6-FT MINIMUM FROM EDGE OF PIPE

Title: DETAIL -- Water Line Insulation
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/4/18
Sheet: TOE Water Line Insulation.dwg

B4



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SHEET TITLE
TYPICAL WATER
DETAILS

SHEET NO.
C11.1

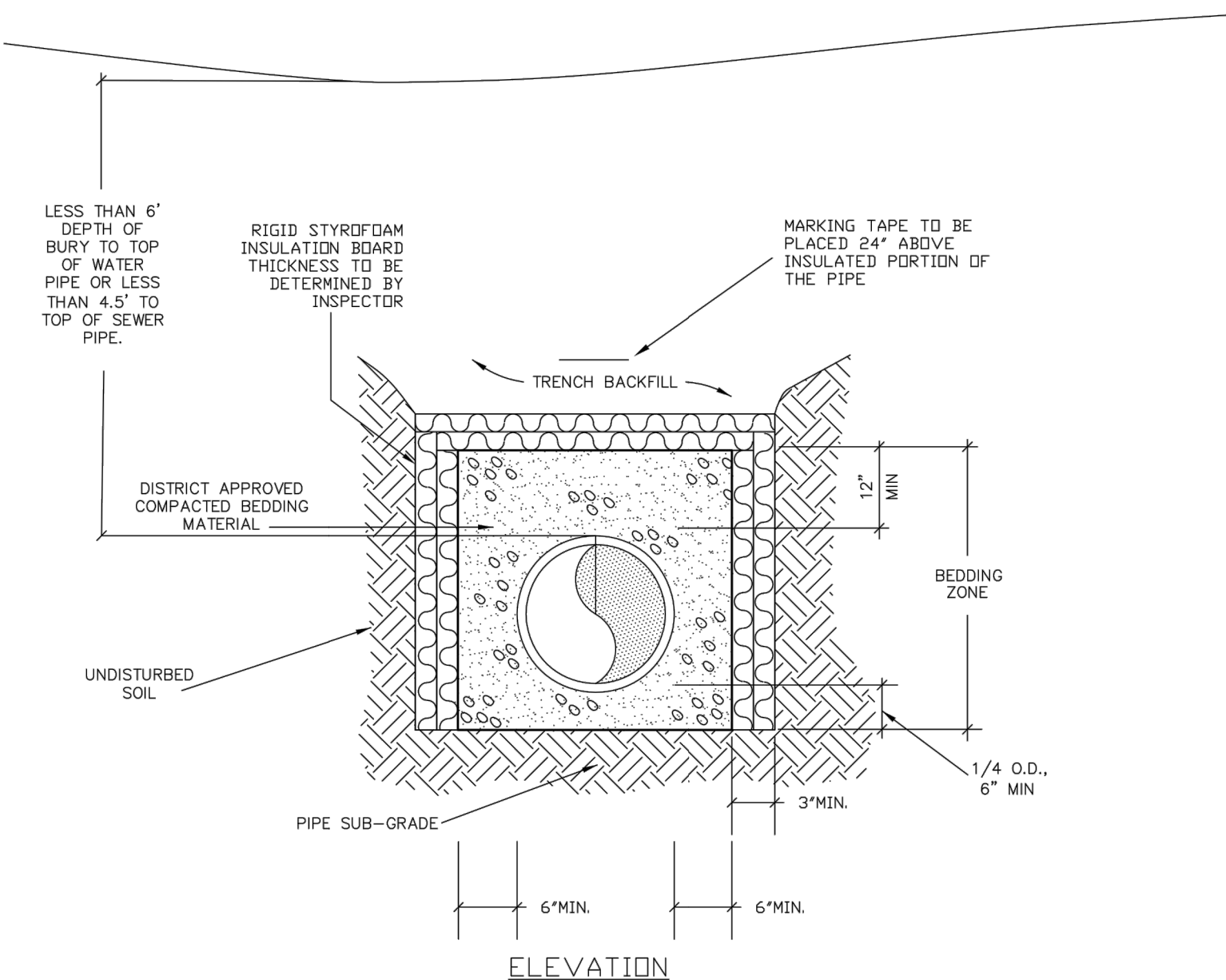
435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
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(970) 323-7008

D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C11 TYPICAL WATER DETAILS



LESS THAN 6' DEPTH OF BURY TO TOP OF WATER PIPE OR LESS THAN 4.5' TO TOP OF SEWER PIPE.

RIGID STYROFOAM INSULATION BOARD THICKNESS TO BE DETERMINED BY INSPECTOR

MARKING TAPE TO BE PLACED 24" ABOVE INSULATED PORTION OF THE PIPE

TRENCH BACKFILL

DISTRICT APPROVED COMPACTED BEDDING MATERIAL

UNDISTURBED SOIL

12" MIN

BEDDING ZONE

1/4 O.D., 6" MIN

3" MIN

6" MIN

6" MIN

ELEVATION

GENERAL NOTES

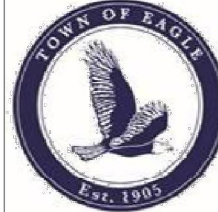
1. CONDITION OF LESS THAN MINIMUM BURY DEPTH ALLOWED ONLY WITH WRITTEN APPROVAL FROM THE TOWN PRIOR TO CONSTRUCTION. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT DOES NOT MEET MINIMUM BURY REQUIREMENTS.

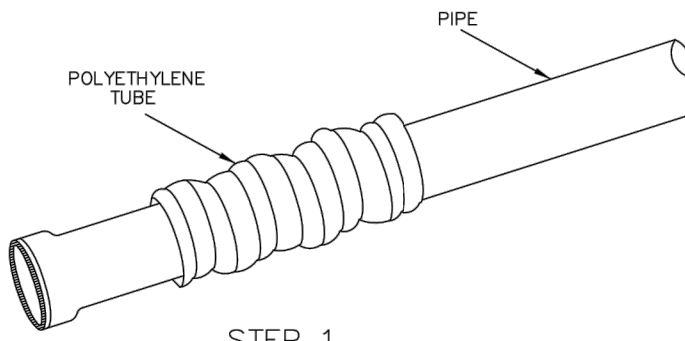
2. SEE SEWER AND WATER PIPE BEDDING DETAIL FOR BACKFILL MATERIAL AND COMPACTION SPECS.

3. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT IS WITHIN THE MINIMUM BURY OF ANY DRAINAGE CULVERT. THIS APPLIES TO THE BOTTOM OF THE PIPE IF IT CROSSES OVER TOP OF THE CULVERT.

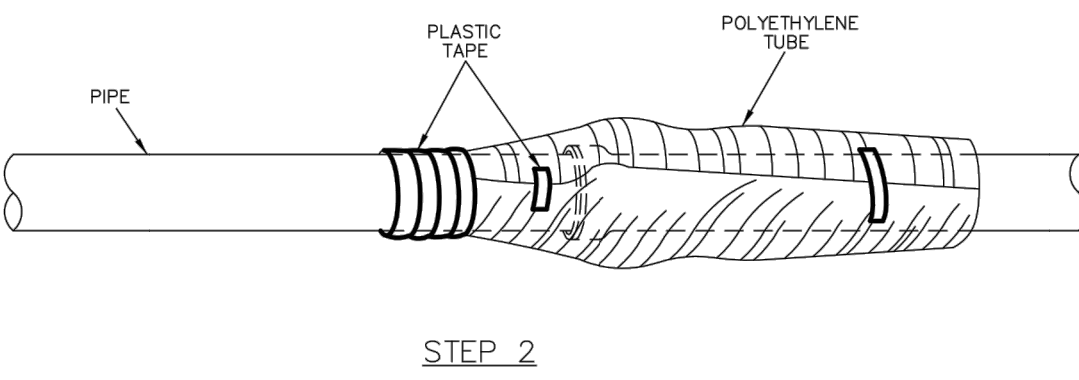
Title: DETAIL – Water Line Insulation Alternate
Project: Public Works Manual
Drawn: JB
Checked: TOE Water Line Insulation Alternate.dwg
Date: 1/11/18

B5

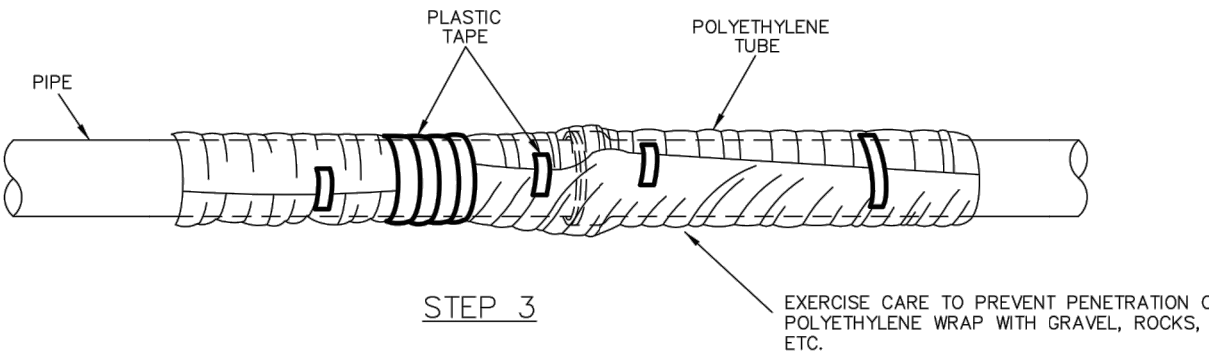




STEP 1



STEP 2



STEP 3

EXERCISE CARE TO PREVENT PENETRATION OF POLYETHYLENE WRAP WITH GRAVEL, ROCKS, ETC.

FIELD INSTALLATION – POLYETHYLENE WRAP

WHERE SPECIFICALLY REQUIRED FOR SOIL APPLICATIONS

STEP 1 – PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE.

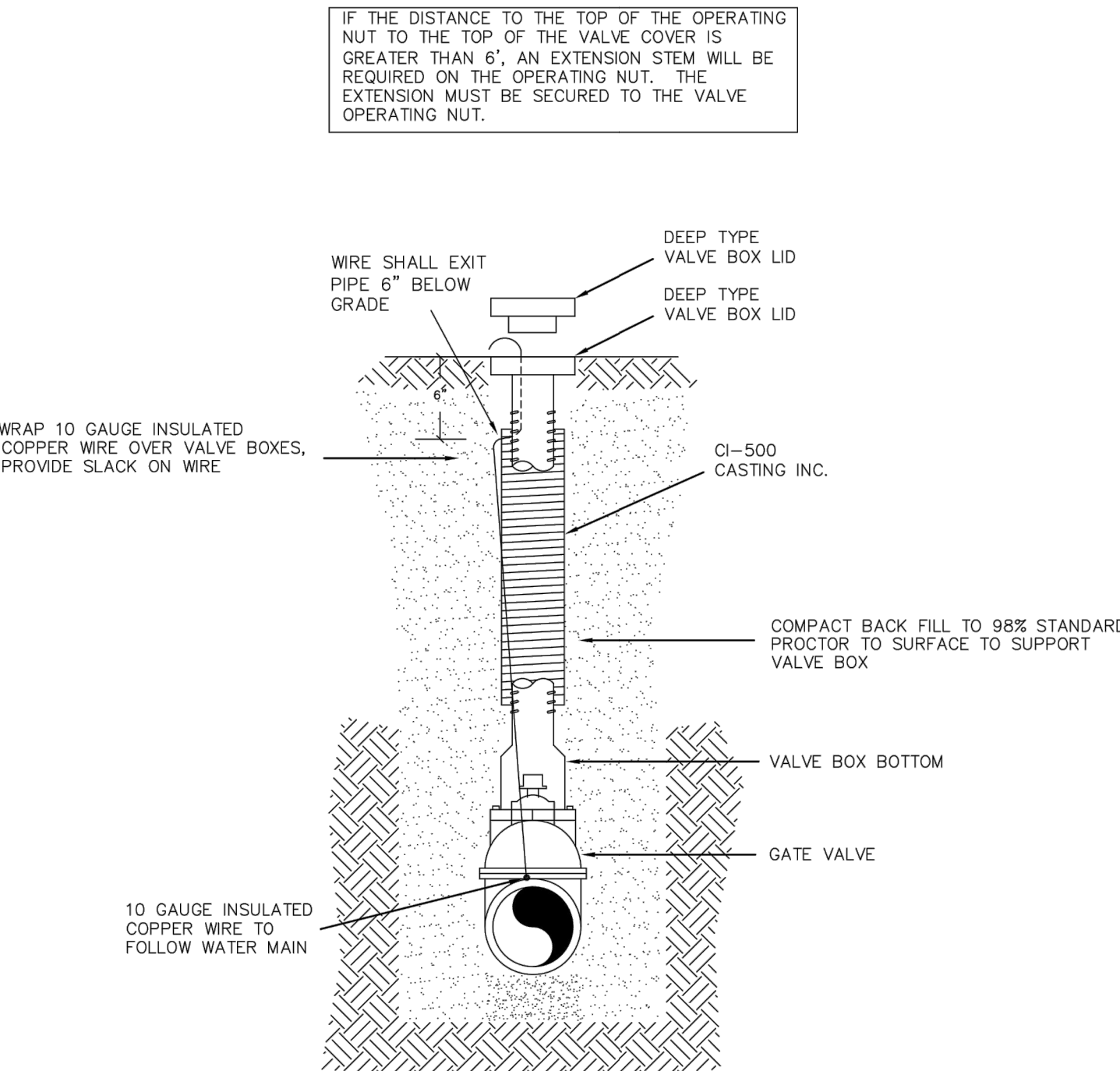
STEP 2 – PULL THE TUBE OVER THE LENGTH OF THE PIPE, TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

STEP 3 – OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

Title: DETAIL – Poly Wrap
Project: Public Works Manual
Drawn: JB
Checked: TOE Standards Drawing
Date: 1/8/2018

B11





IF THE DISTANCE TO THE TOP OF THE OPERATING NUT TO THE TOP OF THE VALVE COVER IS GREATER THAN 6", AN EXTENSION STEM WILL BE REQUIRED ON THE OPERATING NUT. THE EXTENSION MUST BE SECURED TO THE VALVE OPERATING NUT.

WIRE SHALL EXIT PIPE 6" BELOW GRADE

DEEP TYPE VALVE BOX LID

DEEP TYPE VALVE BOX LID

CI-500 CASTING INC.

COMPACT BACK FILL TO 98% STANDARD PROCTOR TO SURFACE TO SUPPORT VALVE BOX

VALVE BOX BOTTOM

GATE VALVE

10 GAUGE INSULATED COPPER WIRE TO FOLLOW WATER MAIN

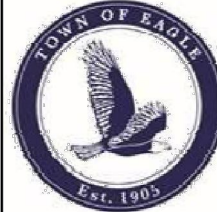
WRAP 10 GAUGE INSULATED COPPER WIRE OVER VALVE BOXES, PROVIDE SLACK ON WIRE

GENERAL NOTE

1. VALVE BOX IS TO BE INSTALLED PLUMB, LEVEL, AND CENTERED ON 2" NUT

Title: DETAIL – Valve Box
Project: Public Works Manual
Drawn: JB
Checked: TOE Valve Box.dwg
Date: 1/11/2018

B14



DESIGN BY: J. YARNELL
DRAWN BY: J. YARNELL
REVIEWED BY: J. YARNELL
PROJECT NO: 22.011
DATE: 6/24/2022

SHEET TITLE
TYPICAL WATER DETAILS

SHEET NO.
C11.2

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4.		JY	
5.		JY	

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P.O. BOX 3901, EAGLE, COLORADO 81631
(970) 323-7008

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C11 TYPICAL WATER DETAILS

USE BOND BREAKER 4 MIL POLYETHYLENE PLASTIC EVERYWHERE CONCRETE CONTACTS PIPES, FITTINGS, BOLTS, & NUTS. ALL NUTS SHALL BE ON THE SIDE OPPOSITE THE THRUST BLOCK SO AS TO BE ACCESSIBLE FROM THE TAPPED SIDE OF THE MAIN.

MJ FOSTER ADAPTOR IS PREFERABLE OR ALLOW ENOUGH DISTANCE TO WORK ON MEGALUGS

CONCRETE THRUST BLOCK

UNDISTURBED EARTH

WATER TEE

8-INCH DIP WATER MAIN WITH POLYWRAP

CADWELD FROM EXISTING PIPE SHOULD TRACER NOT BE PRESENT

MUELLER A-2360 OR US PIPE METRO SEAL 250 RS GATE VALVE UP TO AND INCLUDING 12"

SOLID SLEEVE WITH WEDDING BAND AS NECESSARY

10 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED WITH ALL PIPES

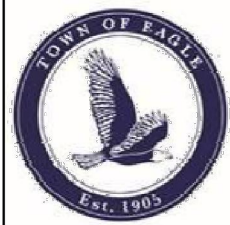
Title:DETAIL – Cut in Tee

Project:Public Works Manual

Drawn:JB

Checked:TOE Cut In Tee.dwg

Date:1/8/2018



B17

USE BOND BREAKER 4 MIL POLYETHYLENE PLASTIC EVERYWHERE CONCRETE CONTACTS PIPES, FITTINGS, BOLTS, & NUTS. ALL NUTS SHALL BE ON THE SIDE OPPOSITE THE THRUST BLOCK SO AS TO BE ACCESSIBLE FROM THE TAPPED SIDE OF THE MAIN.

CONCRETE THRUST BLOCK

UNDISTURBED EARTH

EDGE OF TRENCH

MEGALUG

TAPPING SLEEVE

TAPPING GATE VALVE

10 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED WITH ALL PIPES

PLAN

CONCRETE THRUST BLOCK

GRADE

VALVE BOX AND GATE VALVE

10 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED WITH ALL PIPE

MUELLER A-2361-16 TAPPING VALVE

TAPPING SLEEVE

MEGALUG

UNIFORM CONCRETE BLOCKS (NO WOOD BLOCKING SHALL BE USED)

IN WET AND/OR UNSTABLE GROUND, THE TRENCH BOTTOM WILL BE BROUGHT TO GRADE WITH TOWN APPROVED BEDDING TO SUPPORT THRUST BLOCK.

BOND BREAKER 4 MIL POLYETHYLENE PLASTIC EVERYWHERE CONCRETE CONTACTS PIPES, FITTINGS, BOLTS, & NUTS. ALL NUTS SHALL BE ON THE SIDE OPPOSITE THE THRUST BLOCK SO AS TO BE ACCESSIBLE FROM THE TAPPED SIDE OF THE MAIN.

ELEVATION

GENERAL NOTE

1. NO TAPPING SLEEVES WILL BE ALLOWED WHERE PRESSURES MAY EXCEED 150psi WORKING PRESSURE UNLESS WRITTEN PERMISSION IS GIVEN BY THE TOWN.

2. ROMAC SST II STAINLESS STEEL TAPPING SLEEVE OR APPROVED EQUAL.

Title:DETAIL – Tapping Sleeve

Project:Public Works Manual

Drawn:JB

Checked:TOE Tapping Sleeve.dwg

Date:1/12/2018



B18

USE BOND BREAKER 4 MIL POLYETHYLENE PLASTIC EVERYWHERE CONCRETE CONTACTS PIPES, FITTINGS, BOLTS, & NUTS. ALL NUTS SHALL BE ON THE SIDE OPPOSITE THE THRUST BLOCK SO AS TO BE ACCESSIBLE FROM THE TAPPED SIDE OF THE MAIN.

CONCRETE THRUST BLOCK

DIP WATER MAIN

WATER TEE

4 OR 6-INCH DIP WATER SERVICE WITH POLYWRAP

10 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED WITH ALL PIPES

GATE VALVE WITH VALVE BOX AND LID LABELED "WATER"

SEE TEMPORARY BLOW OFF DETAIL

PLAN

CONCRETE THRUST BLOCK

GRADE

VALVE BOX AND GATE VALVE ASSEMBLY PER DETAIL

10 GAUGE INSULATED COPPER WIRE SHALL BE INSTALLED WITH ALL PIPE

DIP WATER MAIN

GATE VALVE

4 OR 6-INCH DIP WATER SERVICE WITH POLYWRAP

MEGALUG

UNIFORM CONCRETE BLOCKS (NO WOOD BLOCKING SHALL BE USED)

IN WET AND/OR UNSTABLE GROUND, THE TRENCH BOTTOM WILL BE BROUGHT TO GRADE WITH TOWN APPROVED BEDDING TO SUPPORT THRUST BLOCK.

BOND BREAKER 4 MIL POLYETHYLENE PLASTIC EVERYWHERE CONCRETE CONTACTS PIPES, FITTINGS, BOLTS, & NUTS. ALL NUTS SHALL BE ON THE SIDE OPPOSITE THE THRUST BLOCK SO AS TO BE ACCESSIBLE FROM THE TAPPED SIDE OF THE MAIN.

ELEVATION

MJ FOSTER ADAPTOR IS PREFERABLE OR ALLOW ENOUGH DISTANCE TO WORK ON MEGALUGS

SEE TEMPORARY BLOW OFF DETAIL

Title:DETAIL – Tee Detail 4" or 6" Service

Project:Public Works Manual

Drawn:JB

Checked:TOE 4" 6" Tee Detail.dwg

Date:1/12/2018



B19

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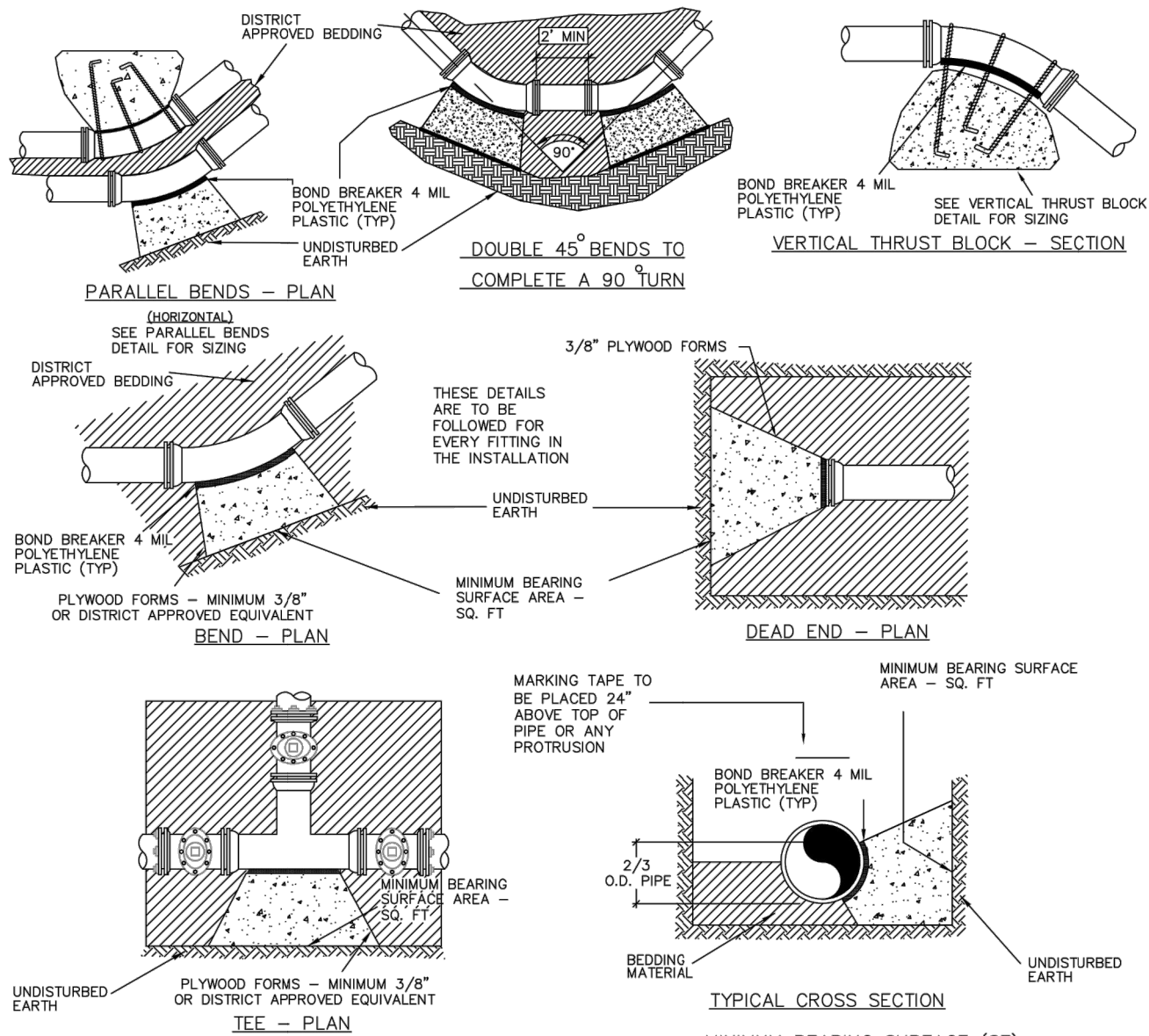
DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO.: 22.011	

SHEET TITLE
TYPICAL WATER
DETAILS

SHEET NO.
C11.3

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
CIVIL DESIGN, LLC
P.O. BOX 3901 EAGLE, COLORADO 81631
(970) 323-7008



MINIMUM BEARING SURFACE (SF)
FOR 200 PSI AND LESS

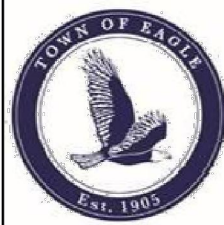
SIZE OF PIPE	11-1/4°	22-1/2°	45°	90°	TEE OR DEAD END
4"	1.3	2.5	2.5	4	6.4
6"	1.3	2.5	5.0	9.0	6.4
8"	1.3	2.5	5.0	9.0	6.4
10"	1.9	3.8	7.4	13.7	9.7
12"	2.7	5.4	10.5	19.3	13.7
16"	4.7	9.3	19.1	33.8	23.8
20"	7.2	14.3	28.0	51.8	36.6

GENERAL NOTES

- MEGALUG RESTRAINTS SHALL BE USED IN CONJUNCTION WITH THRUSTBLOCKS.
- MINIMUM AREA REQUIRED WILL BE THAT OF AN 8 INCH MAIN
- ALL THRUST BLOCKS SHALL BE FORMED. THE MINIMUM THICKNESS FORM MATERIAL SHALL BE 3/8" PLYWOOD OR DISTRICT APPROVED EQUIVALENT.
- BEARING AREA BASED ON SOIL BEARING PRESSURE OF 2000 LB/SF.

Title: DETAIL - General Thrust Blocks
Project: Public Works Manual
Drawn: JB
Checked: TOE General Thrust Blocks.dwg
Date: 1/12/2018

B21

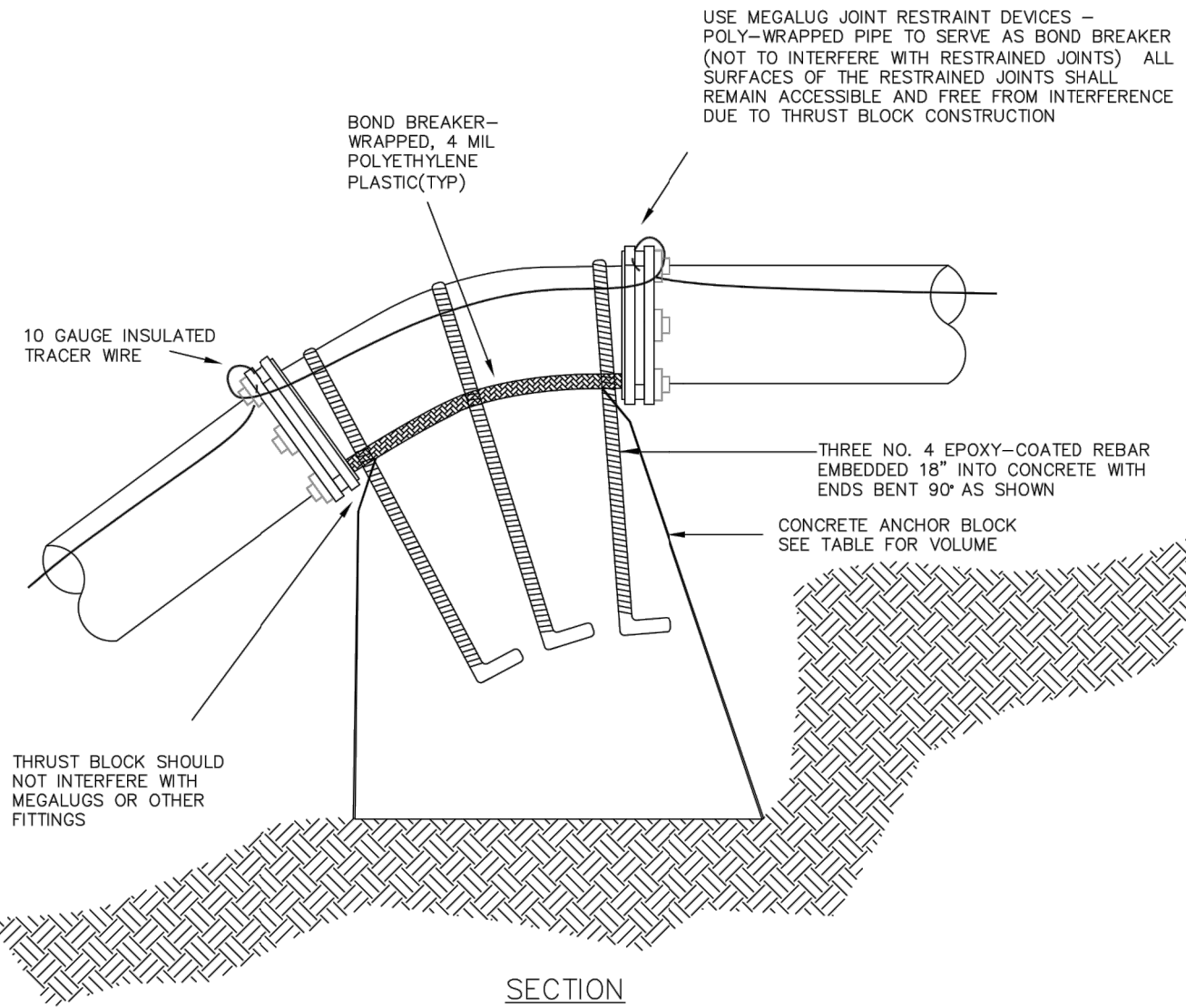


MINIMUM CUBIC YARDS OF CONCRETE

SIZE OF PIPE	11-1/4°	22-1/2°	45°	90°
4"	0.2	0.4	1.3	N/A
6"	0.2	0.5	1.8	N/A
8"	0.2	0.5	1.8	N/A
10"	0.2	0.8	2.7	N/A
12"	0.3	1.0	3.8	N/A

NA = NOT ALLOWED

NOTE: PIPE LARGER THAN 12" TO BE SPECIFICALLY DESIGNED BY ENGINEER. FORMS SHALL BE 3/8" PLYWOOD



Title: DETAIL - Vertical Thrust Block
Project: Public Works Manual
Drawn: JB
Checked: TOE Vertical Thrust Block.dwg
Date: 1/12/2018

B22



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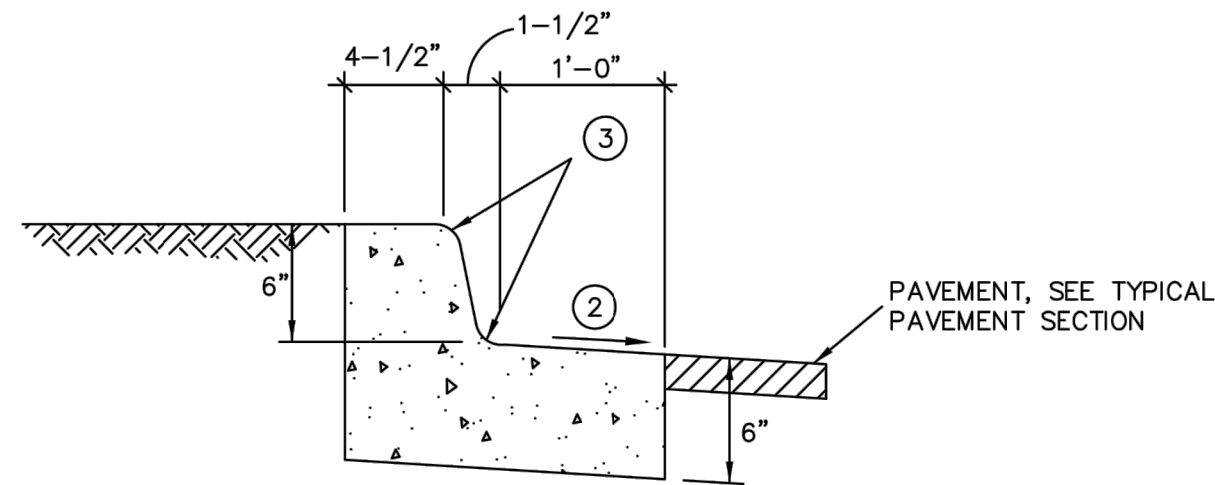
SHEET TITLE
TYPICAL WATER DETAILS

SHEET NO.
C11.4

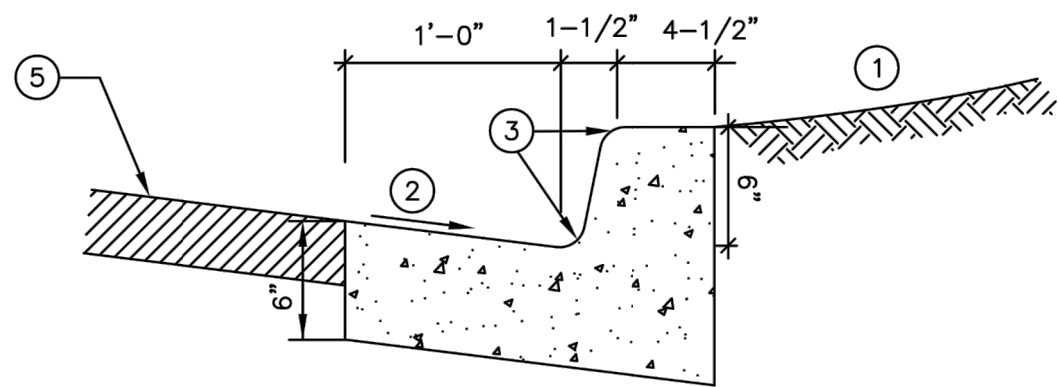
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D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\C12 TYPICAL ROAD DETAILS



SPILL CURB



CATCH CURB

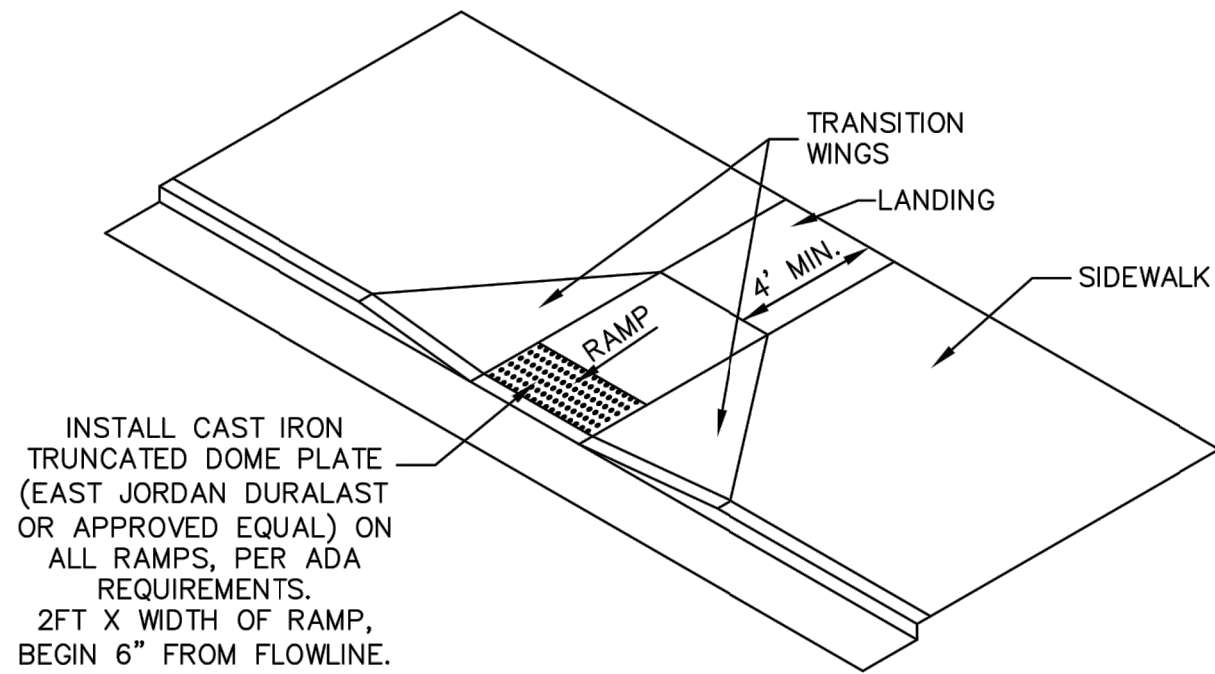
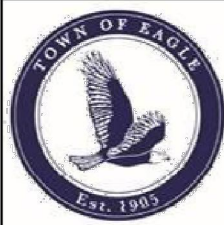
NOTES:

1. BACKFILL, SEE DETAIL OF CUT/FILL SLOPE
2. SLOPE AT 1" PER FOOT
3. 1-1/2" RADIUS TYPICAL
4. SLOPE TO MATCH ADJACENT PAVEMENT
5. PAVEMENT, SEE TYPICAL PAVEMENT SECTION
6. PROVIDE CONTRACTION JOINTS 12' O.C. MAXIMUM
7. PROVIDE EXPANSION JOINTS 100' O.C. MAXIMUM

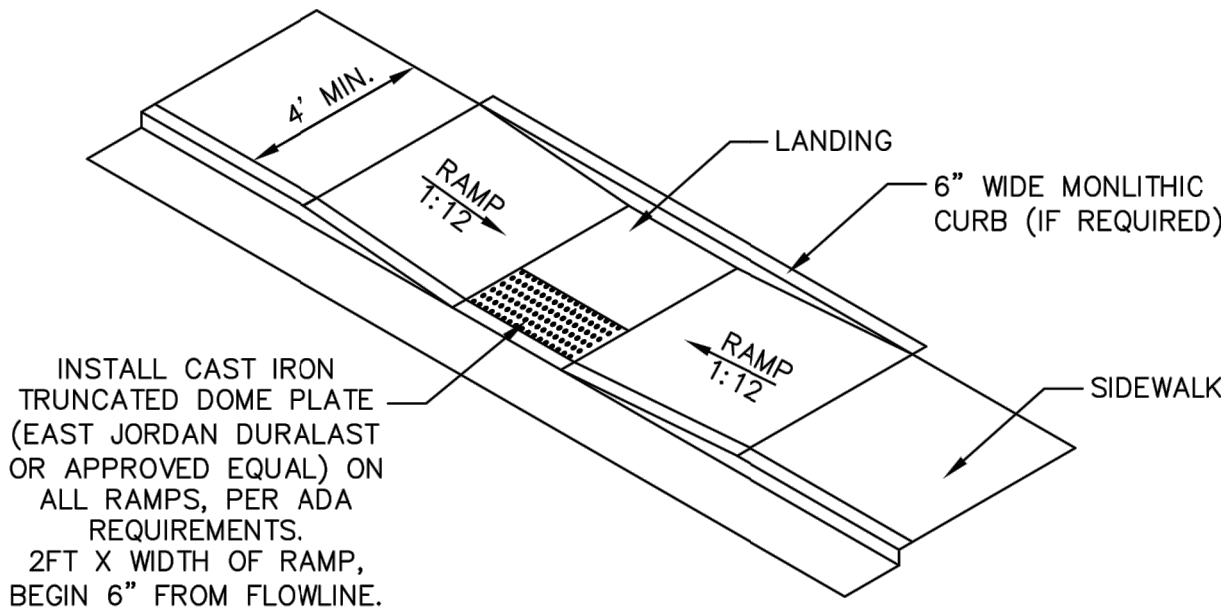
6" VERTICAL CURB AND GUTTER

Title: DETAIL - Vertical Curb Cut
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/16/2018
Sheet: Vertical Curb Cut.dwg

C1



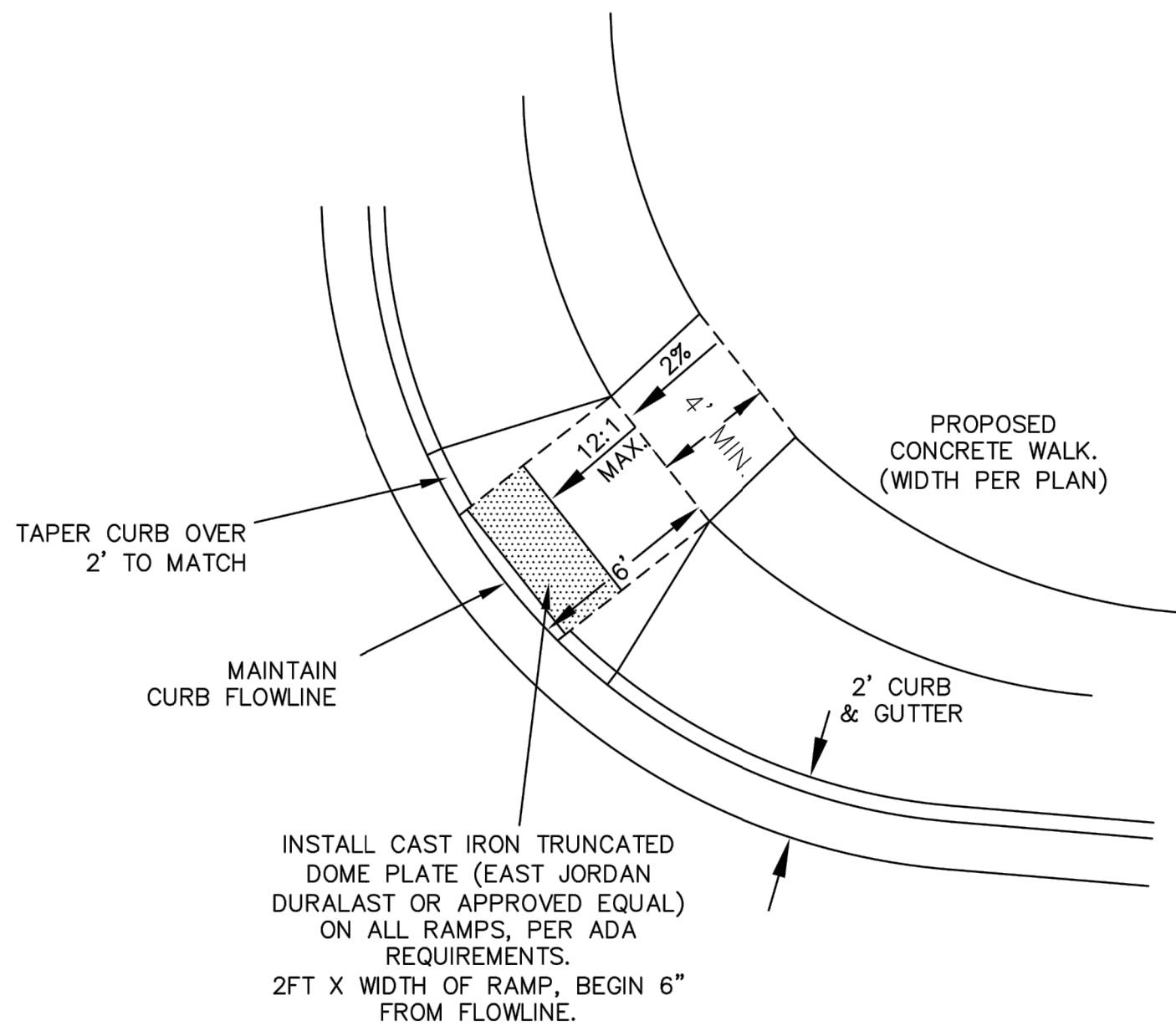
PERPENDICULAR PEDESTRIAN RAMP
WITHIN SIDEWALK



PARALLEL SIDEWALK RAMP

Title: DETAIL - ADA Ramps
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/16/2018
Sheet: ADA Ramps.dwg

C4



Title: DETAIL - ADA Corner Ramp
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/16/2018
Sheet: C4 ADA Corner Ramp.dwg

C5



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3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JY
4.			JY
5.			JY

DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO: 22.011	

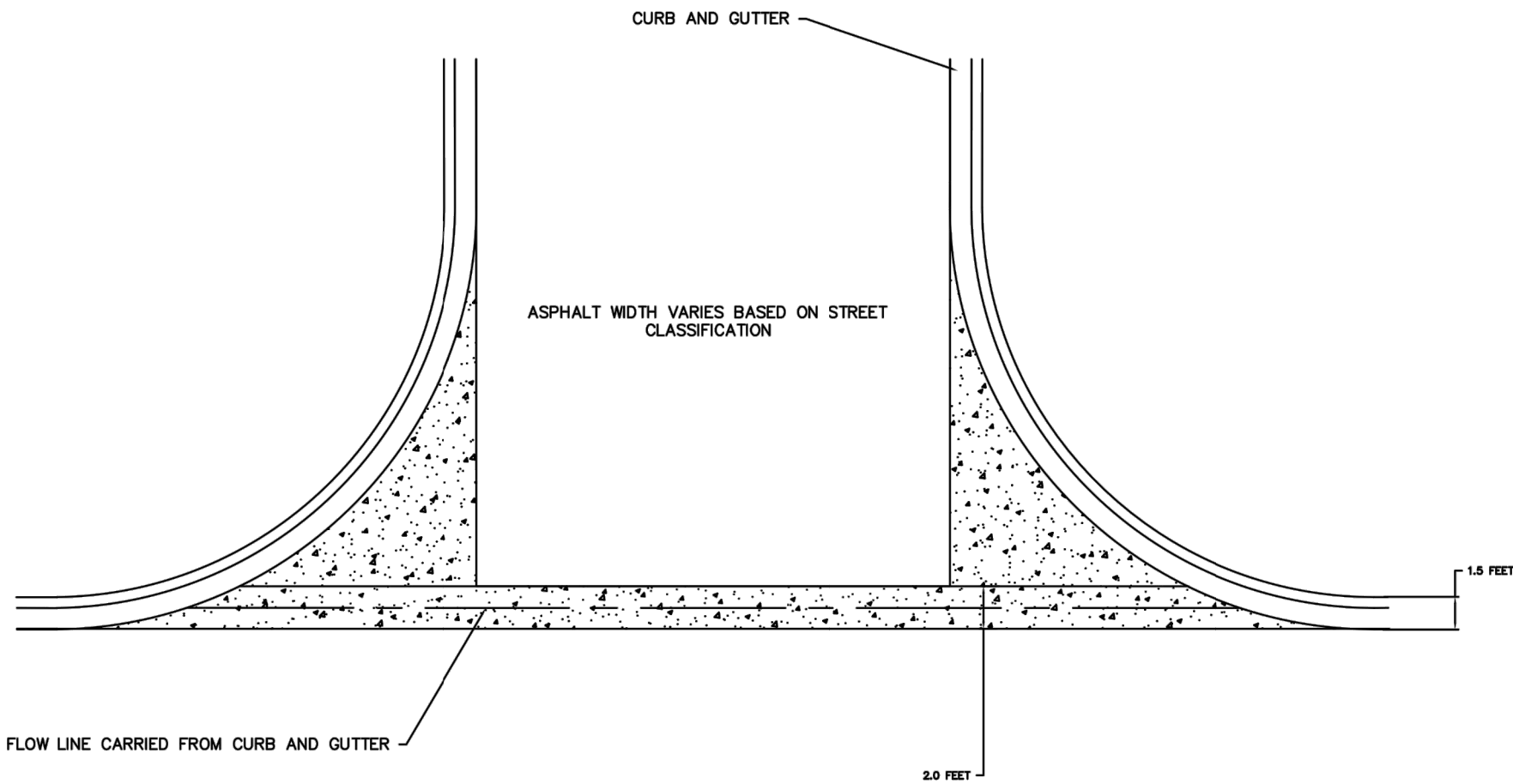
SHEET TITLE
TYPICAL ROAD
DETAILS

SHEET NO.
C12.1

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
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(970) 323-7008

D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C12 TYPICAL ROAD DETAILS



Title: DETAIL -- Street Intersection Curb Fillets
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/16/2018
Sheet: C7 Street Intersection Curb Fillets.dwg

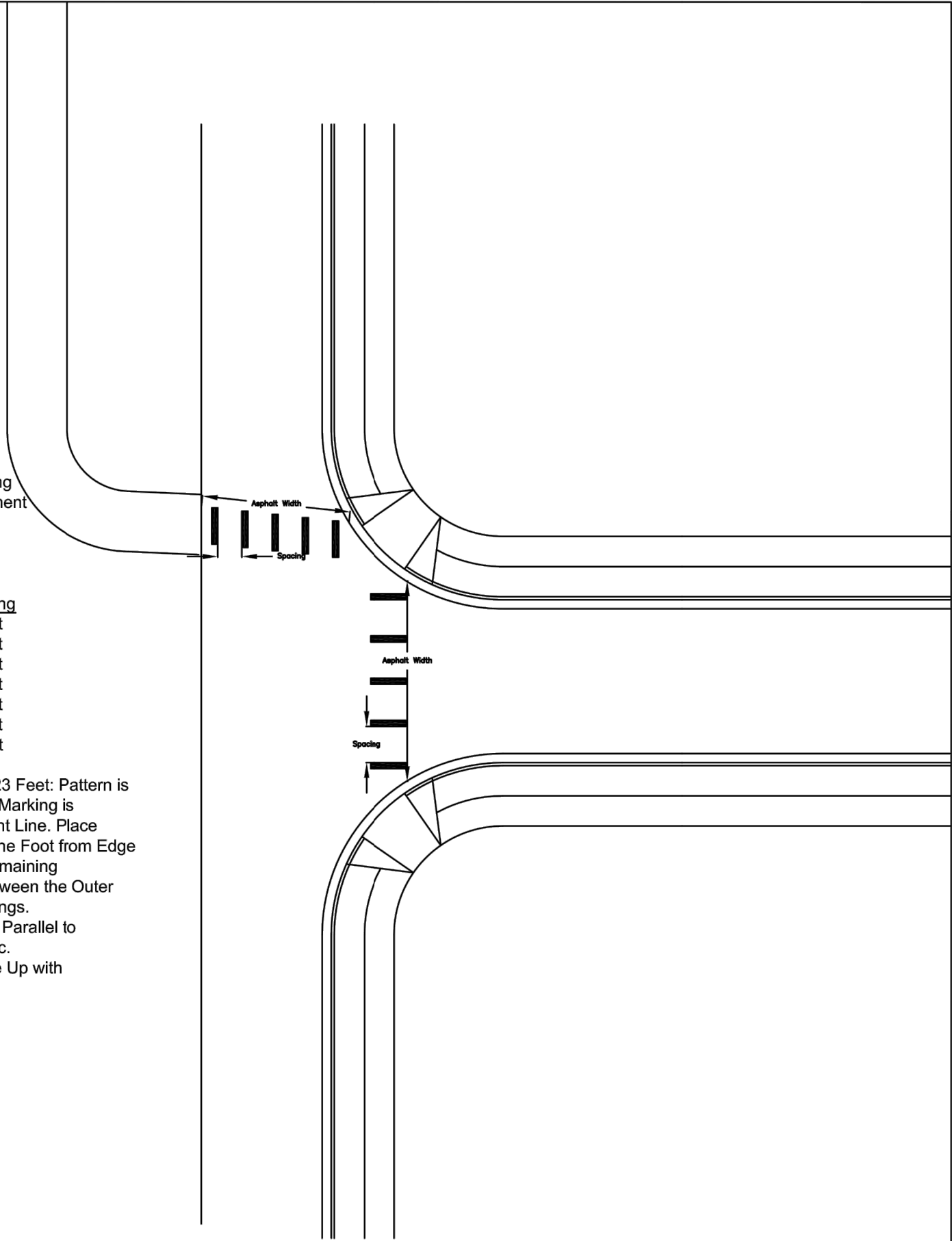
C7



Notes:

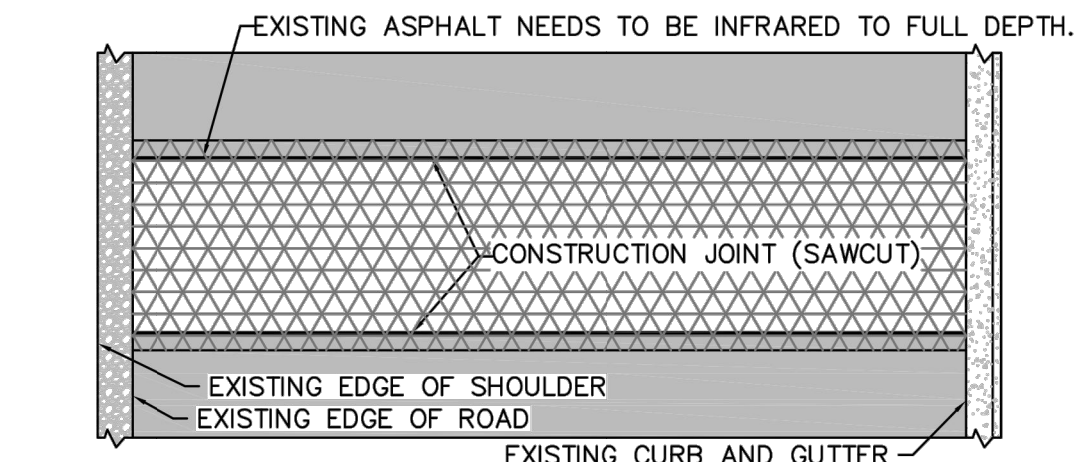
1. Measure Asphalt Width
2. The Center Crosswalk Marking is Centered on the Measurement Line - not the Center Line of Road.
3. Spacing is as follows:

Asphalt Width	Spacing
59 to 67 Feet	6 Feet
53 to 59 Feet	5 Feet
45 to 53 Feet	6 Feet
39 to 45 Feet	5 Feet
31 to 39 Feet	6 Feet
27 to 31 Feet	5 Feet
23 to 27 Feet	4 Feet
4. For Asphalt Width less than 23 Feet: Pattern is the same. Center Crosswalk Marking is Centered on the Measurement Line. Place Outer Crosswalk Markings One Foot from Edge of Asphalt and Center the Remaining Two Crosswalk Markings Between the Outer and Center Crosswalk Markings.
5. Crosswalk Markings Shall be Parallel to the Direction of Vehicle Traffic.
6. Crosswalk Marking Shall Line Up with the Sidewalk Ramps.

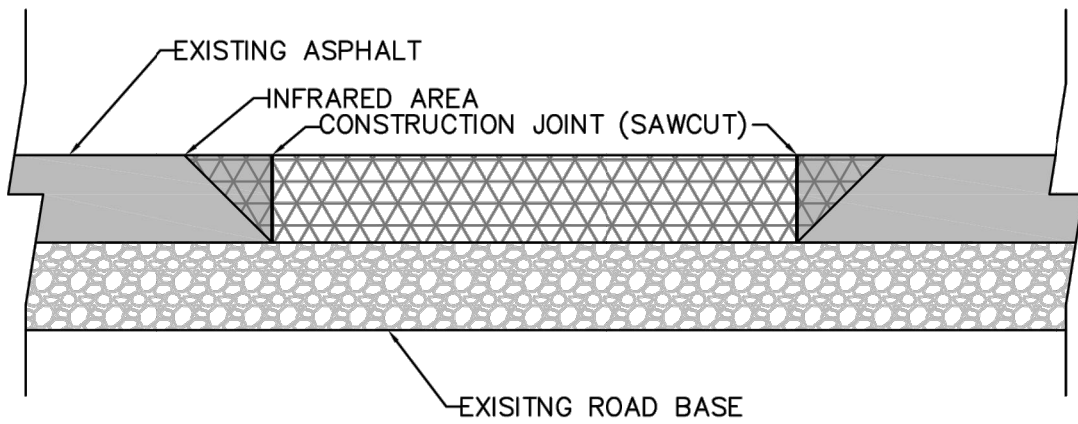


Title: DETAIL -- Crosswalk Detail
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/4/18
Sheet: TOE Crosswalk Detail.dwg

C12



PLAN
NTS



PROFILE
NTS

- NOTES:
1. CONSTRUCTION JOINTS MUST BE FULL DEPTH INFRARED.
 2. CONSTRUCTION JOINTS MUST BE MALLEABLE PRIOR TO BEING RAKED.
 3. EXISTING ASPHALT AT CONSTRUCTION JOINTS MUST BE RAKED FOR PROPER BLENDING OF NEW ASPHALT.
 4. ASPHALT EMULSION MUST BE USED.
 5. SHALLOW UTILITY ROAD CUTS SHOULD TRY TO BE 4--FT MAXIMUM FOR EASIER INFRARED.
 6. TEMPORARY PATCHES MUST BE REMOVED PRIOR TO BEING INFRARED.
 7. TEMPERATURE OF INFRARED SHALL BE 300--DEGREES +/- 25 DEGREES.
 8. REJUVENATOR MUST BE ADDED TO EXISTING ASPHALT.

Title: DETAIL -- Infrared Detail
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/4/18
Sheet: TOE Infrared Detail.dwg

C13



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3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JY
4.			JY
5.			JY

DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO: 22.011	

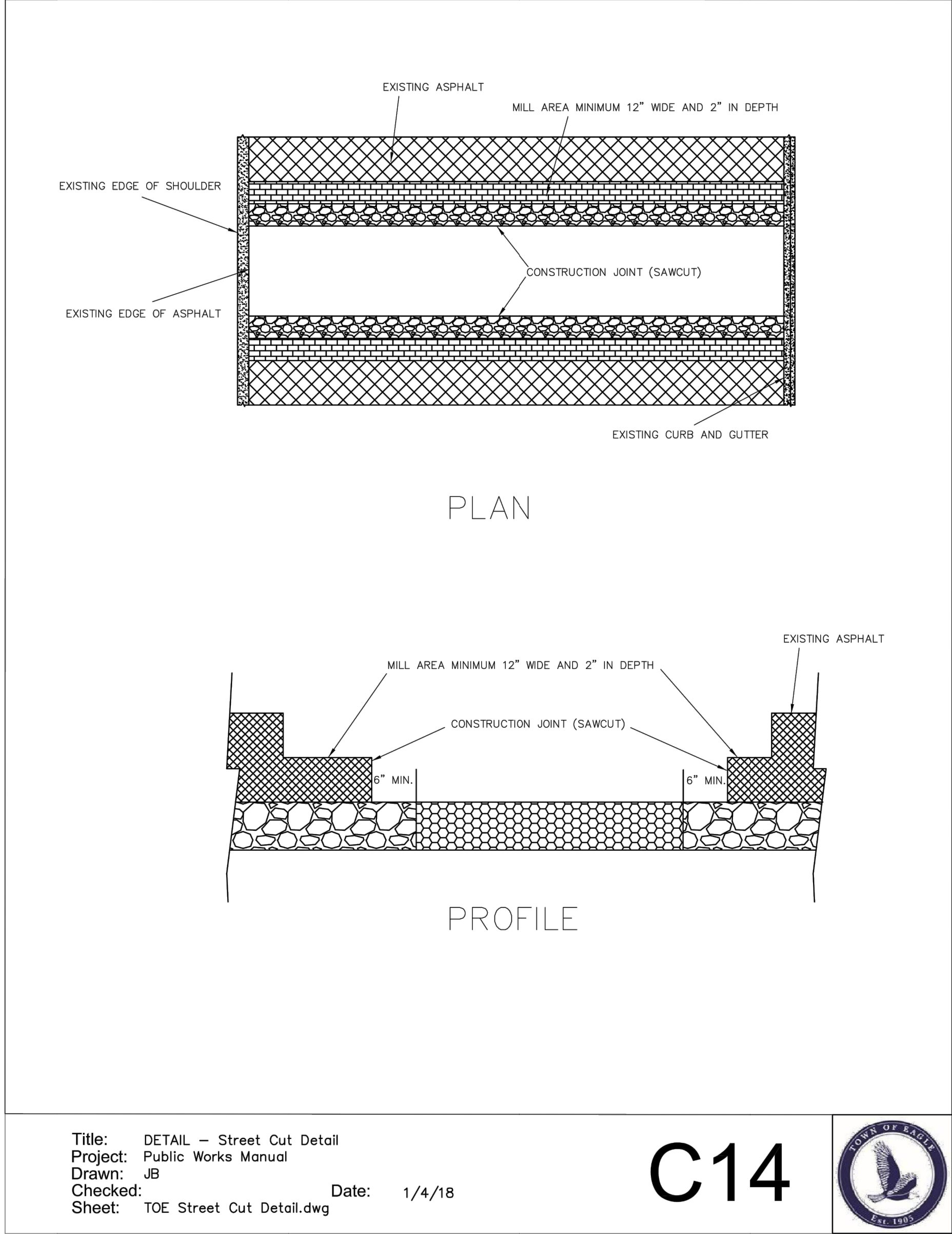
SHEET TITLE
TYPICAL ROAD
DETAILS

SHEET NO.
C12.2

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

YARNELL CONSULTING &
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(970) 323-7008

D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C12 TYPICAL ROAD DETAILS



D:\DROPBOX\PROJECT FILES\22.011--435 EBY CREEK ROAD, EAGLE\PLANS\C13 TYPICAL STORM SEWER DETAILS

OPTIONAL GRATES
TYPE L, V, DL OR
DR (TYPE L
GRATE SHOWN)

CAST IRON FRAME,
GRATE, AND HOOD
APPROX. WEIGHT:
510 LBS.

12"

30" 45"

12"

5'-0"

3'-9"

18"x31" THIN WALL KNOCKOUTS.
SLEDGE OUT AS REQUIRED.
BOTH END WALLS.

31" ROUND THIN
WALL KNOCKOUTS.
SLEDGE OUT AS
REQUIRED.
BOTH SIDE WALLS

OPTIONAL
EXTENSION
HEIGHT

C

D1

Title: Detail Curb Inlet
Project: Public Works Manual
Drawn: JB
Checked: JB
Sheet: Drainage.dwg

Date: 1/18/2018

STORM PIPE BEDDING

TRENCH WIDTH AS SPECIFIED

LOWER LIMIT OF
TRENCH WALL
SLOPE

COMPACTED
CLASS 6
ROAD BASE

12 IN. MIN.

PIPE O.D.

6 IN. MIN.

D3

Title: Detail Bedding
Project: Public Works Manual
Drawn: JB
Checked: JB
Sheet: Drainage.dwg

Date: 1/18/2018

STEEL OR WOOD POST

FILTER FABRIC

BACK FILLED TRENCH

STEEL OR
WOOD POST

FILTER FABRIC
ATTACH SECURELY TO
POST

COMPACTED BACK FILL

RUNOFF

APPROXIMATELY
4 IN. X 4 IN. TRENCH

10 IN.
MIN.

SECTION VIEW

D4

Title: Detail Silt Fence
Project: Public Works Manual
Drawn: JB
Checked: JB
Sheet: Drainage.dwg

Date: 1/18/208

GENERAL NOTES:

1. THE MAXIMUM TRIBUTARY AREA IS LIMITED TO 0.25 ACRES PER 100 FEET OF FENCE.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT. REMOVE SEDIMENT WHEN ONE HALF THE HEIGHT OF THE FENCE HAS BEEN FILLED. REMOVED SEDIMENT SHALL BE DEPOSITED IN AN AREA TRIBUTARY TO A SEDIMENT BASIN OR OTHER FILTERING MEASURE.

435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
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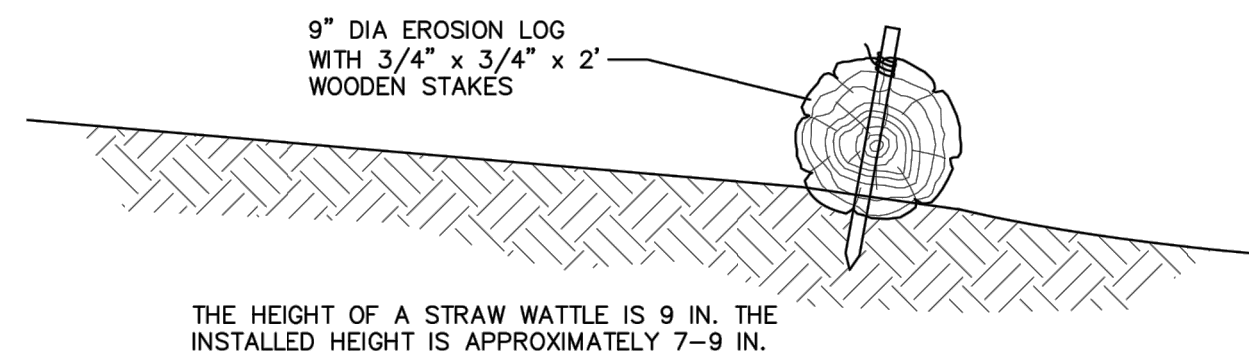
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4.			JUY
5.			JUY

DESIGN BY: J. YARNELL	DATE: 6/24/2022
DRAWN BY: J. YARNELL	
REVIEWED BY: J. YARNELL	
PROJECT NO: 22.011	

SHEET TITLE
TYPICAL STORM
SEWER DETAILS

SHEET NO.
C13.1



EROSION LOG WATTLE DETAIL

N.T.S.

This sediment barrier is designed for low surface flows not to exceed 1 cfs for small areas, slope flatter than 3:1 or short slopes, and where silt fences are not practicable. Straw Wattles can also be installed on contour on steeper slopes to reduce surface, spread water flow and capture sediment. The following is a brief description of the Straw Wattles, their uses and installation.

1. The height of a Straw Wattle is 9 in. The installed height is approximately 5 - 7 in. The standard length of Straw Wattles is 25 ft., however other lengths will be made upon request.
2. Straw Wattles can be installed on contour of slope, with a slight downslope angle at the end of each row to allow for surface drainage during heavy precipitation. They can also be used at the top of slopes to prevent sheeting over the edge, and they can be used at the toe of slopes. Straw Wattles can also be used along sidewalks and curbs and around storm drains and inlets to prevent sediment pollution.
3. Straw Wattles can be used to replace silt fences, straw bale dikes and sand bag barriers. They can also be placed in drainage swales to slow flows and capture sediment; they can be used as level spreaders to prevent concentrated flow, and in place of earthen berms or dikes.
4. Straw Wattles should be installed on surface.
5. Lay the Wattle in the trench and stake with 3/4" X 3/4" X 18" or 24" wood stakes at each end and 15-foot on center. When installing running lengths, straw Wattle ends should be butt jointed together to prevent leakage, and securely staked together but overlapping is acceptable.
6. When used on slopes, Straw Wattles do not require removal and can be abandoned in place. However, when used for temporary purposes such as along sidewalks, curbs, or around storm drains, they can be removed and reused.
7. Wattles installed on slopes that are steeper than 2:1 should be spaced at 10' intervals rather than 20' intervals.

Title: Erosion Log
Project: Public Works Manual
Drawn: JB
Checked:
Sheet: Erosion Log.dwg

Date: 1/18/2018

D5



435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

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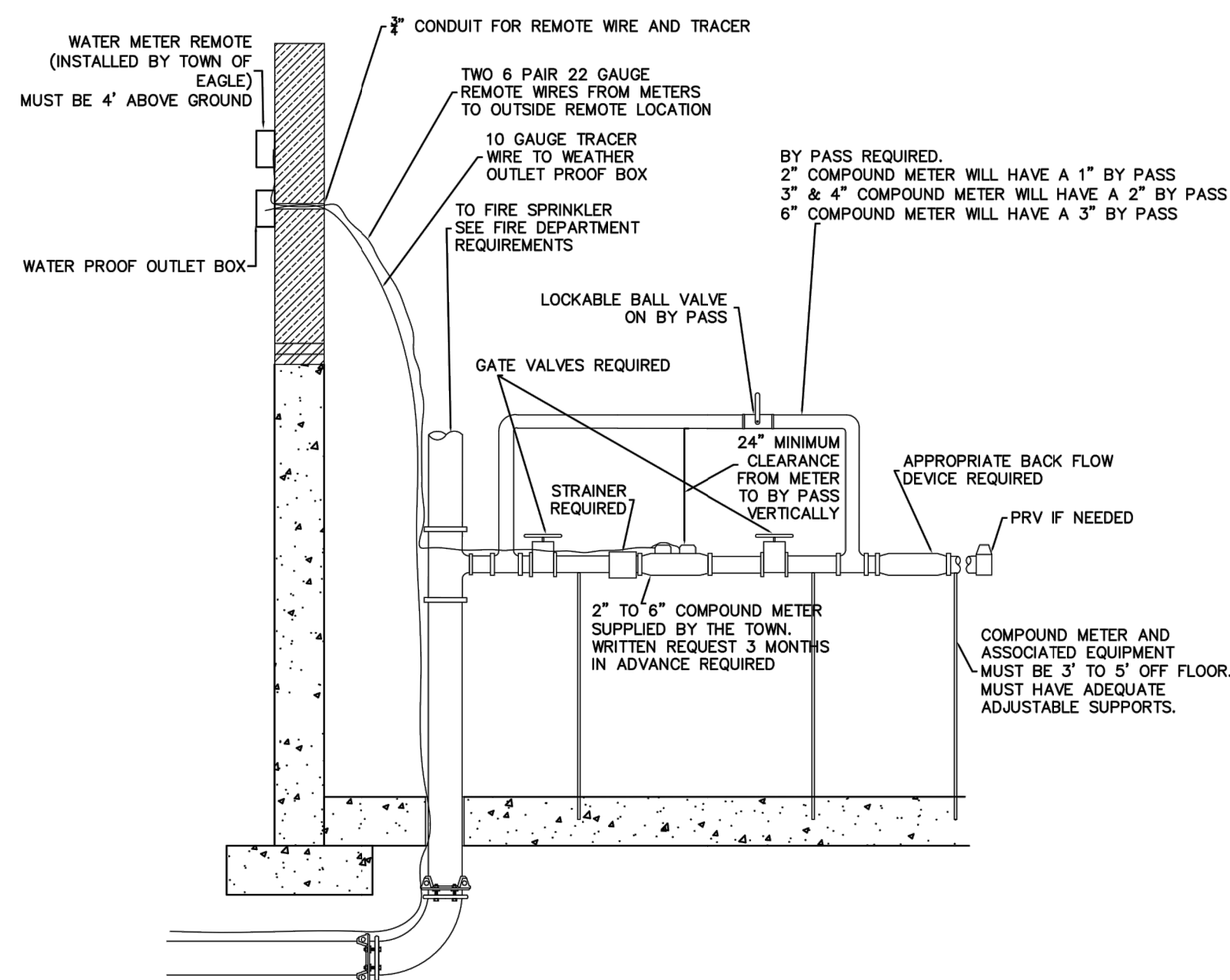
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DRAWN BY:	J. YARNELL	1.	SCHEMATIC DESIGN (NO CONST.)	4/15/22	JUY
REVIEWED BY:	J. YARNELL	2.	DESIGN DEVELOPMENT (NO CONST.)	5/19/22	JUY
PROJECT NO.:	22.011	3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JUY
DATE:	6/24/2022	4.			JUY
		5.			JUY

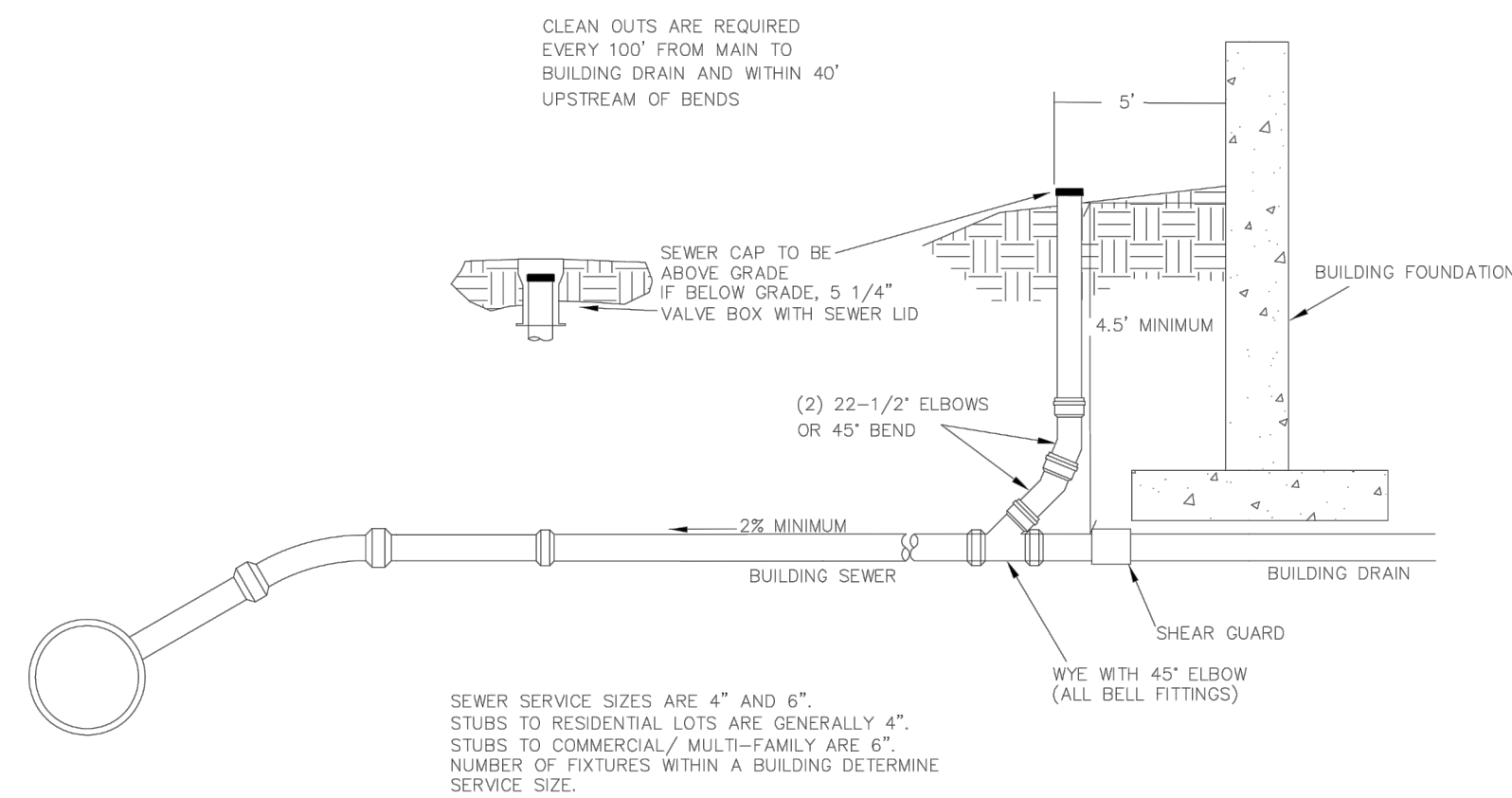
SHEET TITLE
TYPICAL STORM
SEWER DETAILS

SHEET NO.
C13.2



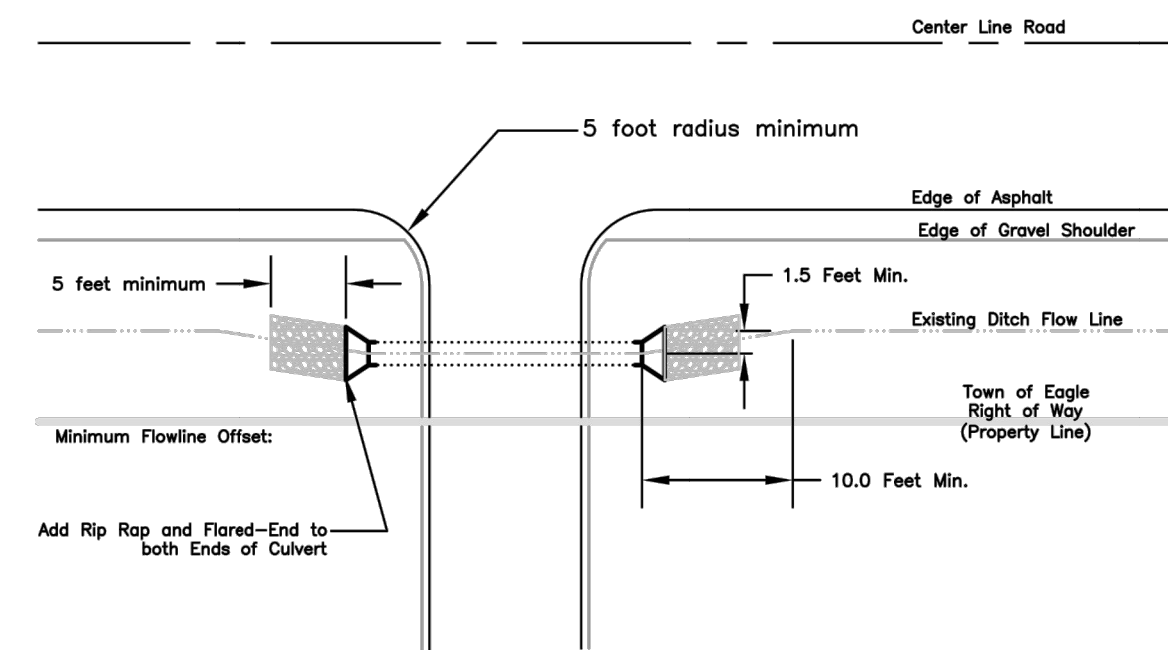
Title: DETAIL — Compound Meter Installation
Project: Public Works Manual
Drawn: JB
Checked: _____ Date: 1/4/18
Sheet: TOE Compound Meter Building.dwg

E2

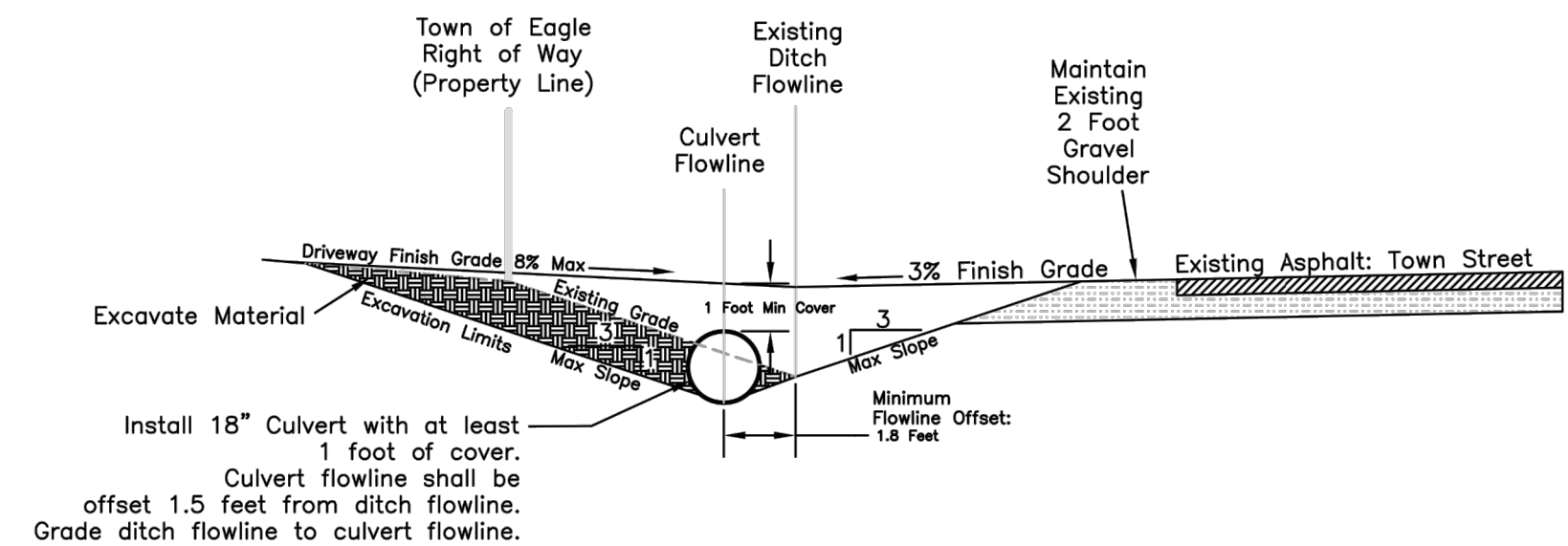
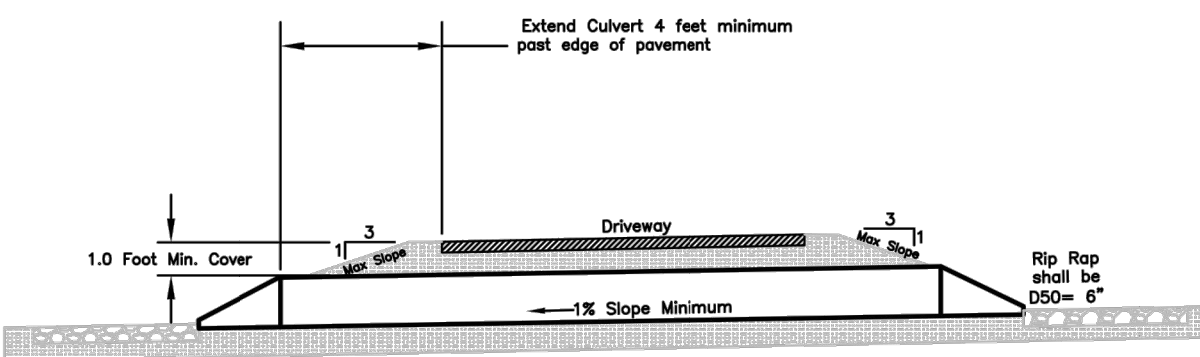


Title: DETAIL - Building Sewer Service
Project: Public Works Manual
Drawn: JB
Checked: _____ Date: 1/4/18
Sheet: TOE Building Sewer Service.dwg

E7



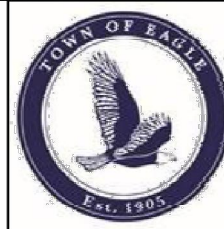
Culvert shall be 18" diameter minimum.
RCP or HDPE with smooth surface inside.
CMP shall not be used.



1. Not to Scale
2. Culvert may be Reinforced Concrete Pipe (RCP), High Density Plastic Pipe (HDPE) or Approved Equivalent.
3. Culvert must have flared end section and rip rap at culvert outlet and inlet.
4. Improve ditch as necessary to make sure positive drainage exists.
5. Maintain 3:1 side slopes max along ditch through property and right of way.

Title: DETAIL — Driveway Culvert
Project: Public Works Manual
Drawn: JB
Checked: Date: 1/19/2018
Sheet: TOE Driveway Culvert.dwg

E10



435 EBY CREEK APARTMENTS
435 EBY CREEK ROAD
LOT 3, PERRY SUBDIVISION PHASE 2
EAGLE, COLORADO

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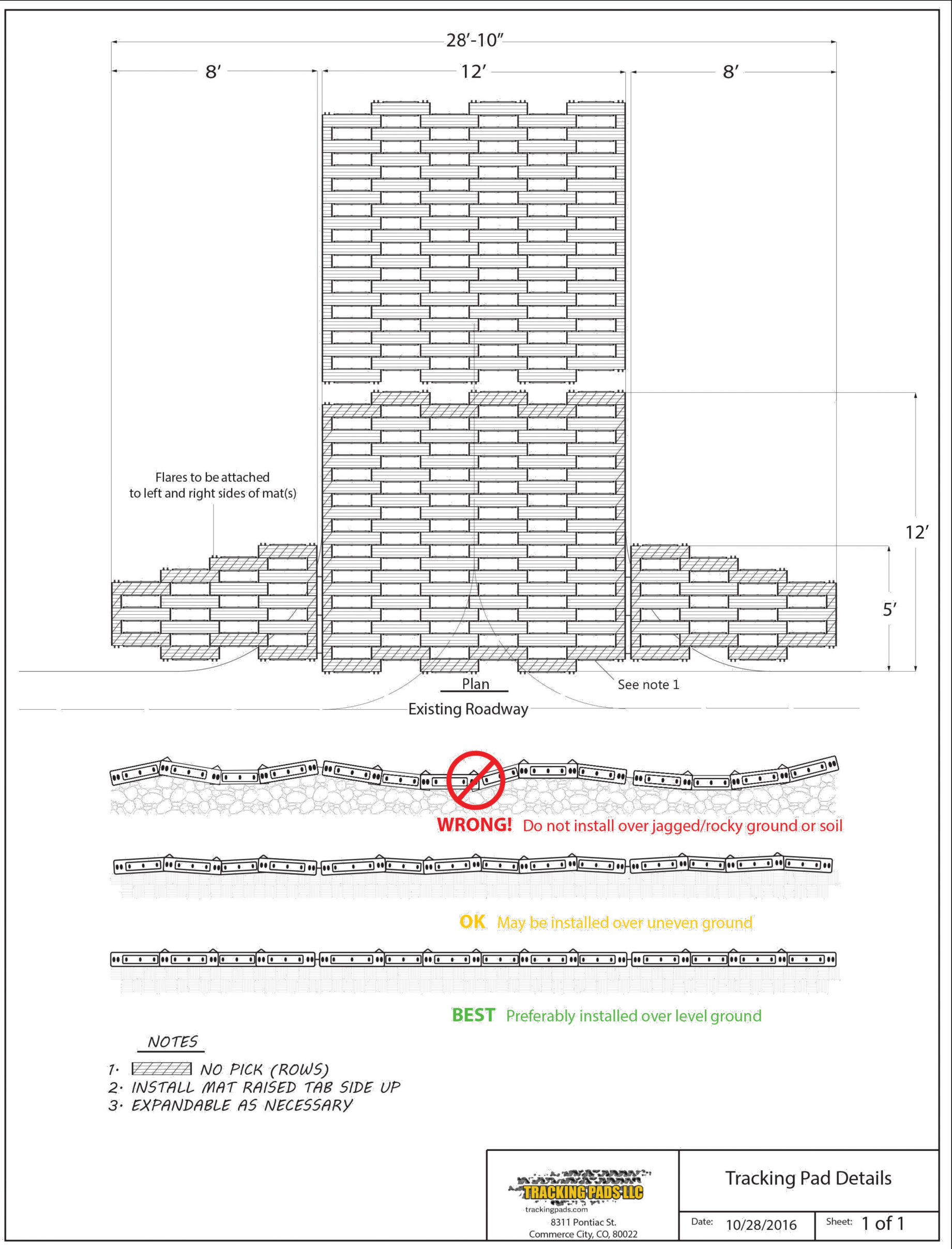
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		3.	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JUY
PROJECT NO.:	22.011	4.			JUY
DATE:	6/24/2022	5.			JUY

SHEET TITLE

TYPICAL
BUILDING
DETAILS

SHEET NO.
C14.1



435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

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4.			JY
5.			JY

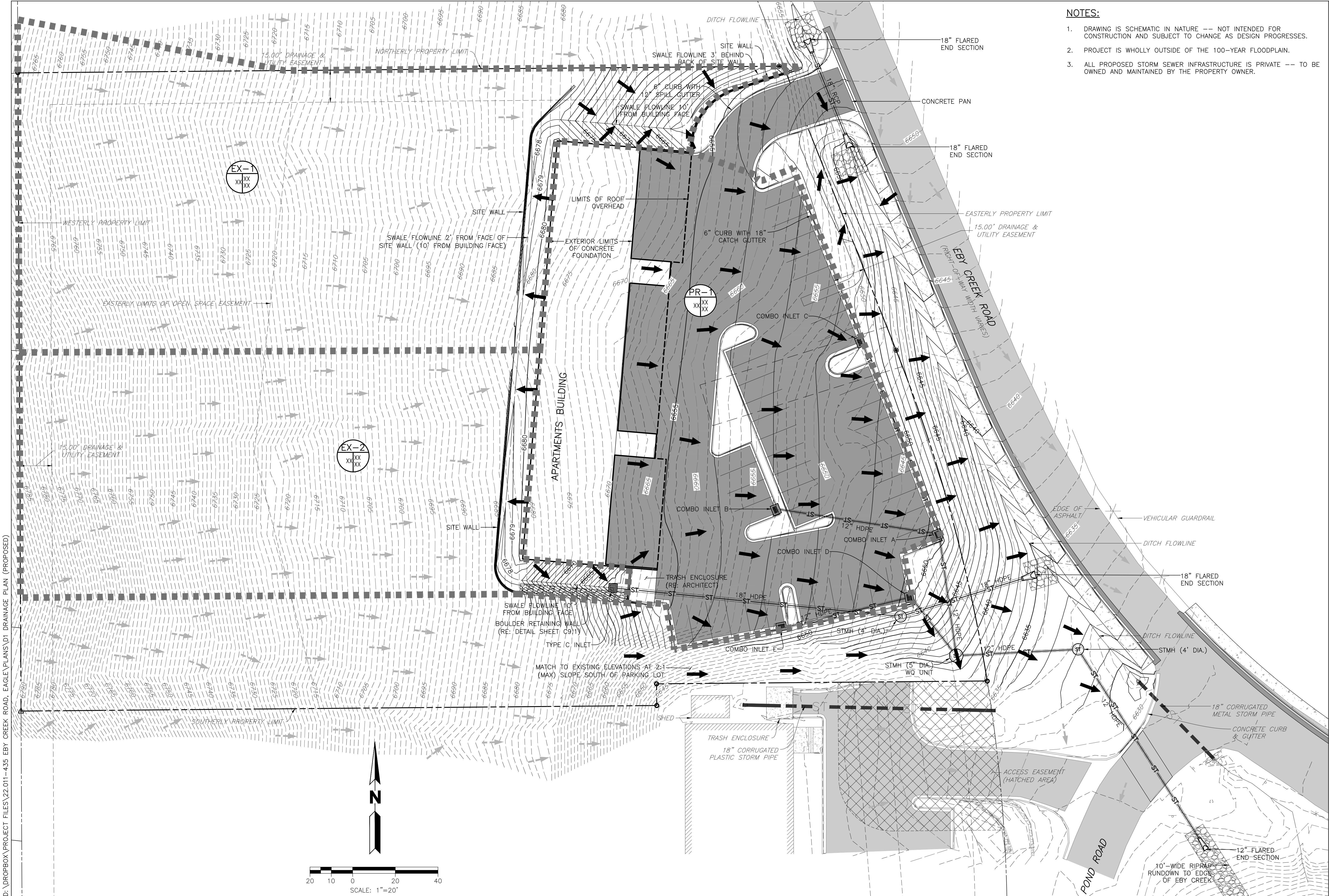
SHEET TITLE

TYPICAL BUILDING DETAILS

SHEET NO.

C14.2

D:\DROPOBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\D1 DRAINAGE PLAN (PROPOSED)



- NOTES:
- DRAWING IS SCHEMATIC IN NATURE --- NOT INTENDED FOR CONSTRUCTION AND SUBJECT TO CHANGE AS DESIGN PROGRESSES.
 - PROJECT IS WHOLLY OUTSIDE OF THE 100-YEAR FLOODPLAIN.
 - ALL PROPOSED STORM SEWER INFRASTRUCTURE IS PRIVATE --- TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.

DESIGN BY: J. YARNELL		NO. 1		NAME		435 EBY CREEK APARTMENTS	
DRAWN BY: J. YARNELL		2		DATE		435 EBY CREEK ROAD	
REVIEWED BY: J. YARNELL		3		NO. 2		LOT 3, PERRY SUBDIVISION PHASE 2	
PROJECT NO. 22.011		4		NO. 3		EAGLE, COLORADO	
DATE: 6/24/2022		5		NO. 4		YARNELL CONSULTING & CIVIL DESIGN, LLC	
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DRAINAGE PLAN (PROPOSED)		D1				P.O. BOX 3901, EAGLE, COLORADO 81631	
						(970) 323-7008	

D:\DROPBOX\PROJECT FILES\22.011-435 EBY CREEK ROAD, EAGLE\PLANS\02 DRAINAGE PLAN (OFF-SITE)



NOTES:
1. THE EXISTING TOPOGRAPHY SHOWN ON THIS DRAWING IS BASED UPON GEOGRAPHIC INFORMATION SYSTEMS LIDAR DATA FROM EAGLE COUNTY. THE DATA WAS OBTAINED IN 2008.

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435 EBY CREEK APARTMENTS

435 EBY CREEK ROAD

LOT 3, PERRY SUBDIVISION PHASE 2

EAGLE, COLORADO

DESIGN BY:	J. YARNELL	NO.	1.	ISSUE / REVISION	SCHEMATIC DESIGN (NO. CONST.)	DATE	4/15/22	NAME	JULY
DRAWN BY: <td>J. YARNELL</td> <td>2.</td> <td>2.</td> <td>DESIGN DEVELOPMENT (NO. CONST.)</td> <td>DESIGN DEVELOPMENT (NO. CONST.)</td> <td>5/19/22</td> <td>JULY</td> <td></td> <td></td>	J. YARNELL	2.	2.	DESIGN DEVELOPMENT (NO. CONST.)	DESIGN DEVELOPMENT (NO. CONST.)	5/19/22	JULY		
REVIEWED BY: <td>J. YARNELL</td> <td>3.</td> <td>3.</td> <td>DEVELOPMENT PERMIT RESUBMISSION</td> <td>DEVELOPMENT PERMIT RESUBMISSION</td> <td>6/24/22</td> <td>JULY</td> <td></td> <td></td>	J. YARNELL	3.	3.	DEVELOPMENT PERMIT RESUBMISSION	DEVELOPMENT PERMIT RESUBMISSION	6/24/22	JULY		
PROJECT NO.: <td>22.011</td> <td>4.</td> <td>4.</td> <td></td> <td></td> <td></td> <td>JULY</td> <td></td> <td></td>	22.011	4.	4.				JULY		
DATE: <td>6/24/2022</td> <td>5.</td> <td>5.</td> <td></td> <td></td> <td></td> <td>JULY</td> <td></td> <td></td>	6/24/2022	5.	5.				JULY		

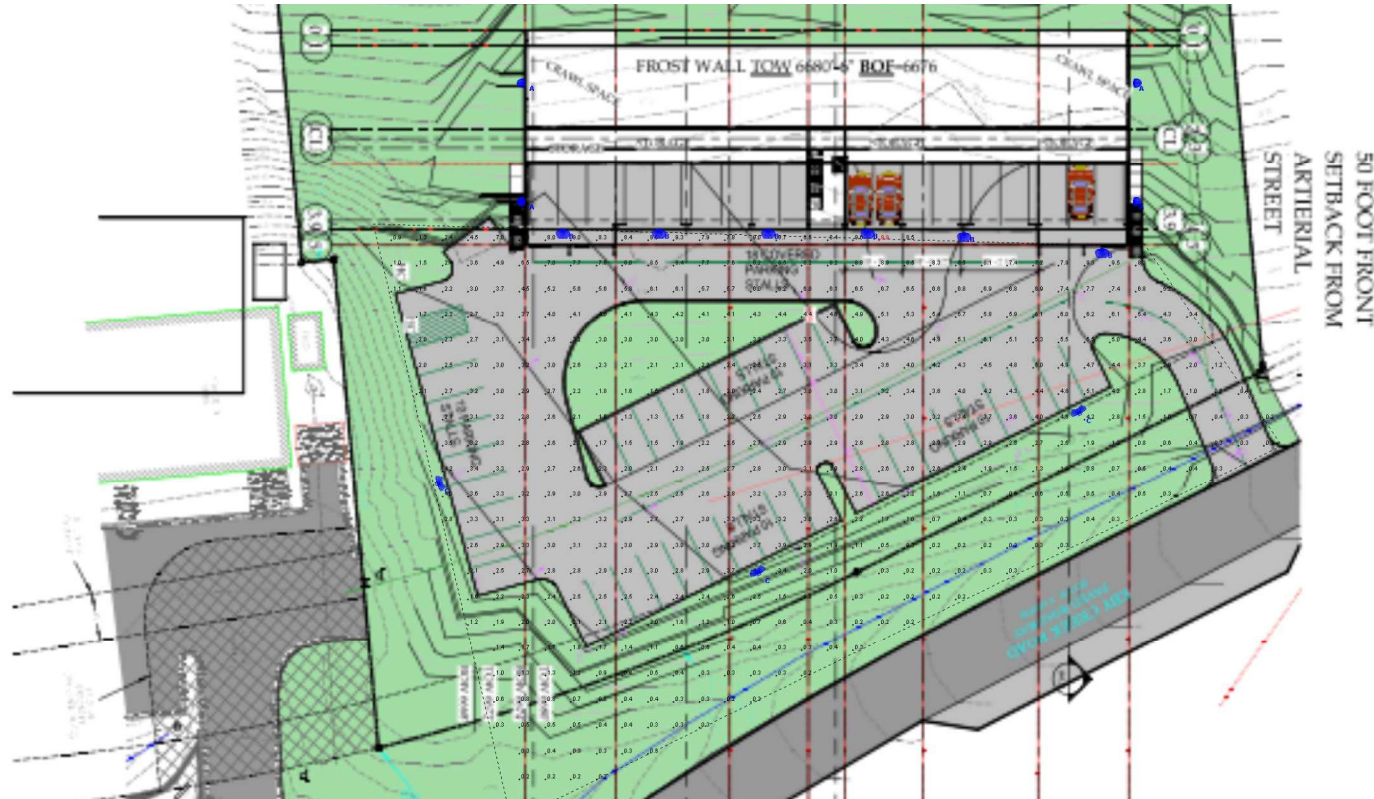
SHEET TITLE

DRAINAGE PLAN (OFF-SITE)

SHEET NO.

D2

1 SITE PLAN
1" = 20'-0"



Current View

Statistics

Description	Symbol	Avg	Min	Max	Max/Min	Avg/Min
Parking	+	3.0 fc	0.1 fc	9.9 fc	99.0:1	30.0:1

Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	Plot
□	A		4	Lithonia Lighting	W065 LED P8 30K BICO VP	W065 LED WITH P8 - PERFORMANCE PACKAGE, 300K, BICO, VISUAL, COMFORT FORWARD OPTIC	1	5771	1	48.44	
□	B		6	Lithonia Lighting	W065 LED P4 700K 30K	W065 LED WITH P4 - PERFORMANCE PACKAGE, 300K, 700K, FORWARD THROW OPTIC	1	11314	1	87.8914	
□	C		3	Lithonia Lighting	DSK1 LED P8 30K T3K MUGLT HS	DSK1 LED P8 30K T3K MUGLT with housewide shield	1	27321	1	107	



20 Sunset Dr
Suite 9
Basalt, CO 81621
suzanne@apollo.lighting

Designer

Date

03/21/2022

Scale

Not to Scale

Drawing No.

Summary

1 of 1



435 Eby Creek Site Lighting

Specification By

Apollo Lighting
20 Sunset Dr Suite 9
Basalt, CO 81621
(970)984-8859
suzanne@apollo.lighting



Submittal Spec Sheet

Dynamically Generated

Series: WDGE2

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: A

Qty: 4

WDGE2 LED Wall Mount

Architectural Wall Luminaire Size 2 – up to 6,000 lumens



Product Submittal Description:

Wall pack, LED, Package 5, 3000K, 80CRI, Visual forward throw, 120-277V, Surface mount, Dark bronze finish, super durable



The product images shown are for illustration purposes only and may not be an exact representation of the product.

[IES Files](#)

[BIM Models](#)

[Full Spec Sheet](#)

Product Webpage: www.acuitybrands.com/products/detail/1008038

Warranty: www.acuitybrands.com/support/warranty/terms-and-conditions

Model #: WDGE2 LED P5 30K 80CRI VF MVOLT SRM DDBXD ✓

Series*		Lamp Type*		LED Configuration*		Correlated Color Temperature*	
WDGE2	Wall pack	LED	LED	P0	Package 0	27K	2700K
				P1	Package 1	30K	3000K
				P1SW	WDGE2 P1 package Small Window	35K	3500K
				P2	Package 2	40K	4000K
				P2SW	WDGE2 P2 package Small Window	50K	5000K
				P3	Package 3	AMB	Amber
				P3SW	WDGE2 P3 package Small Window		
				P4	Package 4		
				P5	Package 5		
Color Rendering Index*		Distribution*		Voltage*		Mounting*	
70CRI	70CRI	T1S	Type I Short	347	347V	ICW	Indirect Canopy/Ceiling Washer
80CRI	80CRI	T2M	Type II Medium	480	480V	PBBW	Premium Backbox for WST LED 2016 design
90CRI	90CRI	T3M	Type III Medium	MVOLT	120-277V	SRM	Surface mount
LW	Limited Wavelength (for AMBLW option)	T4M	Type IV Medium				
		TFTM	Forward throw medium				
		VF	Visual forward throw				
		VW	Visual wide				
Mounting 2		Driver Configuration		Dimming Wires		Dimmable/Controllable	
AWS	Architectural Wall Spacer	DS	Dual switching; Provides 50/50 luminaire operation via two independent drivers on two separate circuits	DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)	NLTAIR2	Night air gen 2 controller



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Submittal Spec Sheet

Dynamically Generated

Series: WDGE2

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: A

Qty: 4

Photocell		Internal Control		Emergency Battery Pack		Conduit Entry	
PE	Photocell, buttontype	PIR	Motion/ambient sensor <15FT; dims to 3V	E10WH	Emergency battery backup, 10W, Hot	BCE	Bottom Conduit Entry
		PIR1FC3V	Motion/ambient sensor <15FT; photocontrol set at 1 FC; dims to 3V	E20WC	Emergency battery backup, 18W, Cold		
		PIRH	Motion/ambient sensor 15-30FT; dims to 3V	E4WH	Emergency battery backup, 4W, Hot		
		PIRH1FC3V	Motion/ambient sensor 15-30FT; photocontrol set at 1 FC; dims to 3V				
Finish*						Assembled in America	
DBLBXD	Textured black, super durable	DMBXD	Medium bronze, super durable	DWHGXD	Textured white, super durable	BAA	Buy American Act
DBLXD	Black finish, super durable	DNATXD	Textured natural aluminum, super durable	DWHXD	White, super durable		
DDBTXD	Textured dark bronze, super durable	DNAXD	Natural aluminum finish, super durable	DWJPD	White aluminium, RAL9006, super durable		
DDBXD	Dark bronze finish, super durable	DSPDXD	Textured dark grey, super durable				
DGCXD	Charcoal grey, super durable	DSPJXD	Light grey, super durable				
DGRHDX	Dark green, RAL6012, super durable	DSSTXD	Textured sandstone, super durable				
DGYGXD	Grey, RAL7040, super durable	DSSXD	Sandstone, super durable				
DGYRXD	DGYRXD	DTGXD	Tennis green, super durable				
DGYWDX	Dark grey, RAL7012, super durable	DWHDXD	White, RAL9002, super durable				

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Not all versions of the product are available with all options.

Specifications subject to change without notice.

Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

See the full specification sheet at the product page link above for full product information and detailed ordering information.

Certain airborne contaminants can diminish the integrity of acrylic and/or polycarbonate.

Visit: <http://www.acuitybrandslighting.com/library/ll/documents/specsheets/acrylic-polycarbonate-compatibility.pdf> for Acrylic-Polycarbonate Compatibility table for suitable uses.

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Submittal Spec Sheet

Dynamically Generated

Series: WDGE3

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: B

Qty: 6

WDGE3 LED Wall Mount

Architectural Wall Luminaire Size 3 – up to 12,000 lumens



Product Submittal Description:

Wall Pack, LED, Package 4, 3000K, 80CRI, Forward Throw distribution, 120-277V, Surface mount, Dark bronze finish, super durable



The product images shown are for illustration purposes only and may not be an exact representation of the product.

[IES Files](#)

[BIM Models](#)

[Full Spec Sheet](#)

Product Webpage: www.acuitybrands.com/products/detail/1008040

Warranty: www.acuitybrands.com/support/warranty/terms-and-conditions

Model #: WDGE3 LED P4 30K 80CRI RFT MVOLT SRM DDBXD ✓

Series*		Lamp Type*		LED Configuration*		Correlated Color Temperature*	
WDGE3	Wall Pack	LED	LED	P1	Package 1	30K	3000K
				P2	Package 2	40K	4000K
				P3	Package 3	50K	5000K
				P4	Package 4		



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Submittal Spec Sheet

Dynamically Generated
Series: WDGE3

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: B

Qty: 6

Internal Control		Surge Protection		Emergency Battery Pack		Conduit Entry	
PIR	Motion/ambient sensor <15FT; dims to 3V	SPD10KV	Additional surge protection 10KV	E15WH	Emergency battery backup, 15W, Hot	BCE	Bottom Conduit Entry
PIR1FC3V	Motion/ambient sensor <15FT; photocontrol set at 1 FC; dims to 3V			E20WC	Emergency battery backup, 18W, Cold		
PIRH	Motion/ambient sensor 15-30FT; dims to 3V						
PIRH1FC3V	Motion/ambient sensor 15-30FT; photocontrol set at 1 FC; dims to 3V						
Finish*						Assembled in America	
DBLBXD	Textured black, super durable	DMBXD	Medium bronze, super durable	DWHGXD	Textured white, super durable	BAA	Buy American Act
DBLXD	Black finish, super durable	DNATXD	Textured natural aluminum, super durable	DWHXD	White, super durable		
DDBTXD	Textured dark bronze, super durable	DNAXD	Natural aluminum finish, super durable	DWJPD	White aluminium, RAL9006, super durable		
DDBXD	Dark bronze finish, super durable	DSPDXD	Textured dark grey, super durable				
DGCXD	Charcoal grey, super durable	DSPJXD	Light grey, super durable				
DGRHXD	Dark green, RAL6012, super durable	DSSTXD	Textured sandstone, super durable				
DGYGXD	Grey, RAL7040, super durable	DSSXD	Sandstone, super durable				
DGYRXD	DGYRXD	DTGXD	Tennis green, super durable				
DGYWXD	Dark grey, RAL7012, super durable	DWHDXD	White, RAL9002, super durable				

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Visit: <http://www.acuitybrandslighting.com/library/ll/documents/specsheets/acrylic-polycarbonate-compatibility.pdf> for Acrylic-Polycarbonate Compatibility table for suitable uses.

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Submittal Spec Sheet

Dynamically Generated

Series: DSX1

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: C

Qty: 3

D-Series Area Size 1

DSX1 LED Area Luminaire

Product Submittal Description:

D-Series Size 1 LED Area Luminaire, LED, Package 8, 3000K, Type III Medium, 120-277V, House-side shield, Square pole mounting, Dark bronze finish, super durable



The product images shown are for illustration purposes only and may not be an exact representation of the product.

[IES Files](#)

[BIM Models](#)

[Full Spec Sheet](#)

Product Webpage: www.acuitybrands.com/products/detail/209326

Warranty: www.acuitybrands.com/support/warranty/terms-and-conditions

Model #: DSX1 LED P8 30K T3M MVOLT HS SPA DDBXD ✓

Series*		Lamp Type*		LED Configuration*			
DSX1	D-Series Size 1 LED Area Luminaire	LED	LED	P1	Package 1	P6	Package 6
				P10	Package 10	P7	Package 7
				P11	Package 11	P8	Package 8
				P12	Package 12	P9	Package 9
				P13	Package 13		
				P2	Package 2		
				P3	Package 3		
				P4	Package 4		
				P5	Package 5		
Correlated Color Temperature*		Distribution*				Voltage*	
30K	3000K	BLC	Backlight control	T5M	Type V Medium	120	120V
40K	4000K	LCCO	Left Corner Cutoff Optic	T5S	Type V Short	208	208V
50K	5000K	RCCO	Right Corner Cutoff Optic	T5VS	Type V Very short	240	240V
AMBPC	Amber, Phosphor Converted	T1S	Type I Short	T5W	Type V Wide	24VDC	24V DC
		T2M	Type II Medium	TFTM	Forward throw medium	277	277V
		T2S	Type II Short	VLS	Visual comfort symmetric	347	347V
		T3M	Type III Medium			480	480V
		T3S	Type III Short			MVOLT	120-277V
		T4M	Type IV Medium			SOLAR	SOLAR
Voltage* (Cont...)		Ambient Starting Temp		Bird Deterrent		Shielding	
XVOLT	XVOLT	HA	High Ambient	BS	Bird spikes	EGS	External Glare Shield
						HS	House-side shield



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Submittal Spec Sheet

Dynamically Generated

Series: DSX1

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: C

Qty: 3

Wiring Device		Mounting*		Driver Configuration		Dimming Wires	
WTB	Utility Terminal Block	MA	Mast arm adaptor, integral	DS	Dual switching; Provides 50/50 luminaire operation via two independent drivers on two separate circuits	DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)
		RPA	Round pole mounting				
		RPUMBA	Round pole universal mounting bracket adaptor				
		SPA	Square pole mounting				
		SPUMBA	Square pole universal mounting bracket adaptor				
		WBA	Wall mount bracket				
Dimmable/Controllable		Receptacle Type		Internal Control			
NLTAIR2	Nlight air gen 2 controller	PER	NEMA twist-lock receptacle only	PIR	Motion/ambient sensor <15FT; dims to 3V	PIRH4V	Motion/ambient sensor 15-30FT; dims to 4V
		PER5	Five-wire receptacle only (no controls)	PIR1FC3V	Motion/ambient sensor <15FT; photocontrol set at 1 FC; dims to 3V	PIRHN	Motion/ambient sensor 15-30FT- Networked
		PER7	Seven-wire receptacle only (no controls)	PIR4V	Motion/ambient sensor <15FT; dims to 4V		
				PIRH	Motion/ambient sensor 15-30FT; dims to 3V		
				PIRH1FC3V	Motion/ambient sensor 15-30FT; photocontrol set at 1 FC; dims to 3V		
Part-Night Dimming		Bi-Level Dimming		Field Adjustable		Fusing	
PNMT5D3	Midpoint, 5 hours past mid-point, 3V	BL30	Bi-level dimming, 30%	FAO	Field adjustable output	DF	Double Fuse
PNMT6D3	Midpoint, 6 hours past mid-point, 3V	BL50	Bi-level dimming, 50%			SF	Single Fuse
PNMT7D3	Midpoint, 7 hours past mid-point, 3V						
PNMTDD3	Midpoint, until dawn, 3V						
Aiming		Finish*					
L90	Left rotated optics	DBLBXD	Textured black, super durable	DMBXD	Medium bronze, super durable	DWHXD	White, super durable
R90	Right rotated optics	DBLXD	Black finish, super durable	DNATXD	Textured natural aluminum, super durable	DWJPD	White aluminium, RAL9006, super durable
		DDBTXD	Textured dark bronze, super durable	DNAXD	Natural aluminum finish, super durable		
		DDBXD	Dark bronze finish, super durable	DSPDXD	Textured dark grey, super durable		
		DGCXD	Charcoal grey, super durable	DSPJXD	Light grey, super durable		
		DGRHXD	Dark green, RAL6012, super durable	DSSTXD	Textured sandstone, super durable		
		DGYGXD	Grey, RAL7040, super durable	DSSXD	Sandstone, super durable		
		DGYWXD	Dark grey, RAL7012, super durable	DTGXD	Tennis green, super durable		
		DHBUXD	Custom Color Holophane Munsell Gray	DWHGXD	Textured white, super durable		
Assembled in America							
BAA	Buy American Act						



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Submittal Spec Sheet

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Series: DSX1

Date: 3/23/2022

Project: 435 EBY CREEK

Group/Type: C

Qty: 3

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See the full specification sheet at the product page link above for full product information and detailed ordering information.

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Visit: <http://www.acuitybrandslighting.com/library/ll/documents/specsheets/acrylic-polycarbonate-compatibility.pdf> for Acrylic-Polycarbonate Compatibility table for suitable uses.

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Catalog Number	SSS 25 5C DM19AS DDBXD
Notes	
Type	C

FEATURES & SPECIFICATIONS

INTENDED USE — These specifications are for USA standards only. Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION

Pole Shaft: The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, .1196"), or 50 KSI (7-gauge, .1793"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

Pole Top: Options include tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable top cap.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

Anchor Base/Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets 5A and 5B classifications of ASTM D3359. Powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

BUY AMERICAN — Product with the BAA option is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT. Please refer to www.acuitybrands.com/buy-american for additional information.

INSTALLATION — Do not erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

WARRANTY — 1-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application. Specifications subject to change without notice.



Anchor Base Poles

SSS

SQUARE STRAIGHT STEEL



SSS Square Straight Steel Poles

ORDERING INFORMATION		Lead times will vary depending on options selected. Consult with your sales representative.			Example: SSS 20 5C DM19 DDBXD	
SSS						
Series	Nominal fixture mounting height	Nominal shaft base size/wall thickness ²	Mounting ³		Options	Finish ¹³
SSS ¹	10'-39' (for 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.) See technical information table for complete ordering information.)	4C 4" 11g (.1196") 4G 4" 7g (.1793") 5C 5" 11g (.1196") 5G 5" 7g (.1793") 6G 6" 7g (.1793") See technical information table for complete ordering information.)	Tenon mounting PT Open top (includes top cap) T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS) KAC/KAD/KSE/KSF/KVR/KVF Drill mounting ⁴ DM19 1 at 90° DM28 2 at 180° DM28 PL 2 at 180° with one side plugged DM29 2 at 90° DM39 3 at 90° DM49 4 at 90° CSX/DSX/RSX/AERIS™/OMERO™/HLA/KAX Drill mounting ⁴ DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90° RAD drill mounting ⁴ DM19RAD 1 at 90° DM28RAD 2 at 180° DM29RAD 2 at 90° DM39RAD 3 at 90° DM49RAD 4 at 90° ESX Drill mounting ⁴ DM19ESX 1 at 90° DM28ESX 2 at 180° DM29ESX 2 at 90° DM39ESX 3 at 90° DM49ESX 4 at 90°	AERIS™ Suspend drill mounting ^{4,5} DM19AST_ 1 at 90° DM28AST_ 2 at 180° DM29AST_ 2 at 90° DM39AST_ 3 at 90° DM49AST_ 4 at 90° OMERO™ Suspend drill mounting ^{4,5} DM19MRT_ 1 at 90° DM28MRT_ 2 at 180° DM29MRT_ 2 at 90° DM39MRT_ 3 at 90° DM49MRT_ 4 at 90°	Shipped installed VD Vibration damper ⁶ HAxy Horizontal arm bracket (1 fixture) ^{7,8} FDLxy Festoon outlet less electrical ^{7,9} CPL12/xy 1/2" coupling ⁷ CPL34/xy 3/4" coupling ⁷ CPL1/xy 1" coupling ⁷ NPL12/xy 1/2" threaded nipple ⁷ NPL34/xy 3/4" threaded nipple ⁷ NPL1/xy 1" threaded nipple ⁷ EHHxy Extra handhole ^{7,10} NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled) IC Interior coating ¹¹ L/AB Less anchor bolts (Include when anchor bolts are not needed) TP Tamper resistant handhole cover fasteners UL UL listed with label (Includes NEC compliant cover) BAA Buy America(n) Act Compliant ¹²	Super durable paint colors DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white Other finishes GALV Galvanized finish Architectural colors and special finishes Paint over Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes available.

- NOTES:
1. Handhole covers (HHC), full base covers (FBC) and top caps (TC) shipped separately. No need to call out in nomenclature. For additional parts please order as replacements.
2. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-Gauge) in nomenclature. "C" - 0.1196" | "G" - 0.1793".
3. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, follow this example: DM28/T20. The combination includes a required extra handhole.
4. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
5. Insert "1" or "2" to designate fixture size; e.g. DM19AST2.
6. On 4" and 5" poles, VD cannot be installed if provisions (EHH, FDL, NPL, CPL) are located higher than 2/3 of the pole's total height.
Example: Pole height is 25ft, A provision cannot be placed above 16ft.
7. Specify location and orientation when ordering option.
For "x": Specify the height above the base of pole in feet or inches; separate feet and inches with a "-".
Example: 5ft = 5 and 20ft 3in = 20-3
For "y": Specify orientation from handhole (A,B,C,D) Refer to the Handhole Orientation diagram below.
Example: 1/2" coupling at 5' 8", orientation C = CPL12/5-8C
8. Horizontal arm is 18" x 2-3/8" O.D. tenon standard, with radius curve providing 12" rise and 2-3/8" O.D. If ordering two horizontal arm at the same height, specify with HAxyy. Example: HA20BD.
9. FDL does not come with GFCI outlet or handhole cover. These must be supplied by contractor or electrician.
10. Combination of tenon-top and drill mount includes extra handhole. EHH includes cover.
11. Provides enhanced corrosion resistance.
12. Use when mill certifications are required.
13. Finish must be specified. Additional colors available; see Architectural Colors brochure linked [here](#) (Form No. 794.3).

Accessories: Order as separate catalog number.	
PL DT20	Plugs for ESX drillings
PL DT8	Plugs for DMxxAS drillings

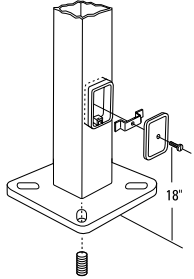
SSS Square Straight Steel Poles

TECHNICAL INFORMATION — EPA (ft²) with 1.3 gust

Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in)	Gauge	EPA (ft ²) with 1.3 gust						Bolt circle (in)	Bolt size (in. x in. x in.)	Approximate ship weight (lbs.)
					80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight			
SSS 10 4C	10	4.0 x 10.0	0.1196	11	30.6	765	23.8	595	18.9	473	8--9	3/4 x 18 x 3	75
SSS 12 4C	12	4.0 x 12.0	0.1196	11	24.4	610	18.8	470	14.8	370	8--9	3/4 x 18 x 3	90
SSS 14 4C	14	4.0 x 14.0	0.1196	11	19.9	498	15.1	378	11.7	293	8--9	3/4 x 18 x 3	100
SSS 16 4C	16	4.0 x 16.0	0.1196	11	15.9	398	11.8	295	8.9	223	8--9	3/4 x 18 x 3	115
SSS 18 4C	18	4.0 x 18.0	0.1196	11	12.6	315	9.2	230	6.7	168	8--9	3/4 x 18 x 3	125
SSS 20 4C	20	4.0 x 20.0	0.1196	11	9.6	240	6.7	167	4.5	150	8--9	3/4 x 18 x 3	140
SSS 20 4G	20	4.0 x 20.0	0.1793	7	14	350	11	275	8	200	8--9	3/4 x 30 x 3	198
SSS 20 5C	20	5.0 x 20.0	0.1196	11	17.7	443	12.7	343	9.4	235	10--12	1 x 36 x 4	185
SSS 20 5G	20	5.0 x 20.0	0.1793	7	28.1	703	21.4	535	16.2	405	10--12	1 x 36 x 4	265
SSS 25 4C	25	4.0 x 25.0	0.1196	11	4.8	150	2.6	100	1	50	8--9	3/4 x 18 x 3	170
SSS 25 4G	25	4.0 x 25.0	0.1793	7	10.8	270	7.7	188	5.4	135	8--9	3/4 x 30 x 3	245
SSS 25 5C	25	5.0 x 25.0	0.1196	11	9.8	245	6.3	157	3.7	150	10--12	1 x 36 x 4	225
SSS 25 5G	25	5.0 x 25.0	0.1793	7	18.5	463	13.3	333	9.5	238	10--12	1 x 36 x 4	360
SSS 30 4G	30	4.0 x 30.0	0.1793	7	6.7	168	4.4	110	2.6	65	8--9	3/4 x 30 x 3	295
SSS 30 5C	30	5.0 x 30.0	0.1196	11	4.7	150	2	50	--	--	10--12	1 x 36 x 4	265
SSS 30 5G	30	5.0 x 30.0	0.1793	7	10.7	267	6.7	167	3.9	100	10--12	1 x 36 x 4	380
SSS 30 6G	30	6.0 x 30.0	0.1793	7	19	475	13.2	330	9	225	11--13	1 x 36 x 4	520
SSS 35 5G	35	5.0 x 35.0	0.1793	7	5.9	150	2.5	100	--	--	10--12	1 x 36 x 4	440
SSS 35 6G	35	6.0 x 35.0	0.1793	7	12.4	310	7.6	190	4.2	105	11--13	1 x 36 x 4	540
SSS 39 6G	39	6.0 x 39.0	0.1793	7	7.2	180	3	75	--	--	11--13	1 x 36 x 4	605

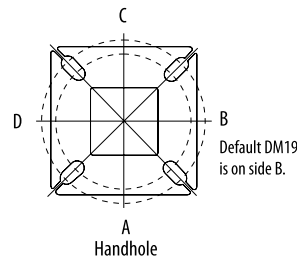
NOTE: * EPA values are based ASCE 7-93 wind map. For 1/2 ft increments, add .6 to the pole height. Ex: 20-6 equals 20ft 6in.

BASE DETAIL



POLE DATA								
Shaft base size	Bolt circle A	Bolt projection B	Base diameter C	Base plate thickness	Template description	Anchor bolt description	Anchor bolt and template number	Anchor bolt description
4"C	8" - 9"	3.25" - 3.75"	8" - 8.25"	0.75"	ABTEMPLATE PJ50004	AB18-0	ABSSS-4C	3/4"x18"x3"
4"G	8" - 9"	3.38" - 3.75"	8" - 8.25"	0.875"	ABTEMPLATE PJ50004	AB30-0	ABSSS-4G	3/4"x30"x3"
5"	10" - 12"	3.5" - 4"	11"	1"	ABTEMPLATE PJ50010	AB36-0	ABSSS-5	1"x36"x4"
6"	11" - 13"	4" - 4.50"	12.5"	1"	ABTEMPLATE PJ50011	AB36-0	N/A	1"x36"x4"

HANDHOLE ORIENTATION



IMPORTANT INSTALLATION NOTES:

- Do not erect poles without having fixtures installed.
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.
- Bolt circles have +/- 1/2" tolerance.

CAUTION: These specifications are intended for general purposes only. Lithonia Lighting reserves the right to change material or design, without prior notice, in a continuing effort to upgrade its products.

Chad Phillips, Town Planner
Town of Eagle
P.O. Box 609
Eagle, Colorado 81631

Subject: 435 Eby Creek Road (Lot 3, Perry Subdivision Phase 2)
Drainage Memo (Rev. 1)

Chad:

Son Ray LLC has contracted Yarnell Consulting & Civil Design, LLC (YCCD) to design the grading, drainage, and utility elements of the proposed 30-unit apartment building on Lot 3 with associated landscaping, parking, and utilities. Per the town of Eagle *Public Works Manual*, new development is to "restrict site drainage to a rate no greater than the historical rate, before development, for the 25-year storm, or shall include development of a storm drainage system to convey runoff water to a site approved by the town." Per correspondence with the town engineer, we propose the following:

1. Provide a private hydrodynamic separator-type water quality unit (Dual-Vortex Separator as manufactured by Oldcastle Infrastructure, or similar) in the proposed storm sewer manhole structure nearest the southeasterly property corner. Product data is appended to this memorandum. The unit will be sized to treat the 2-year (minor) storm event with an internal bypass for the estimated 100-year storm event. Preliminary calculations estimate the 2-year flow rate to be less than 1.0 cubic feet per second (CFS) with the 100-year event being no more than 3.0 CFS.
2. Downstream of the water quality unit, we propose a private storm sewer system across Pond Road with a riprap rundown to Eby Creek. Therefore, no on-site stormwater detention is proposed. Along major waterways, standard drainage practice is not to detain but to "beat the peak" and get the water out before the flow rate in the waterway peaks. Detaining can worsen the drainage condition of a waterway by adding more flow to an already peaked scenario. We believe this approach will optimize conditions within Eby Creek.

To be clear, all proposed storm sewer infrastructure will be privately owned and maintained. We look forward to further discussion regarding this matter over the course of the development permit review. As part of a future building permit submission, we will provide a drainage report with substantially more information included. If necessary, pipe sizes will be adjusted after completion of a more detailed drainage analysis for the building permit.

Sincerely,



Justin J. Yarnell, PE
Colorado PE Number 47241



DUAL-VORTEX SEPARATOR

Submittal Package

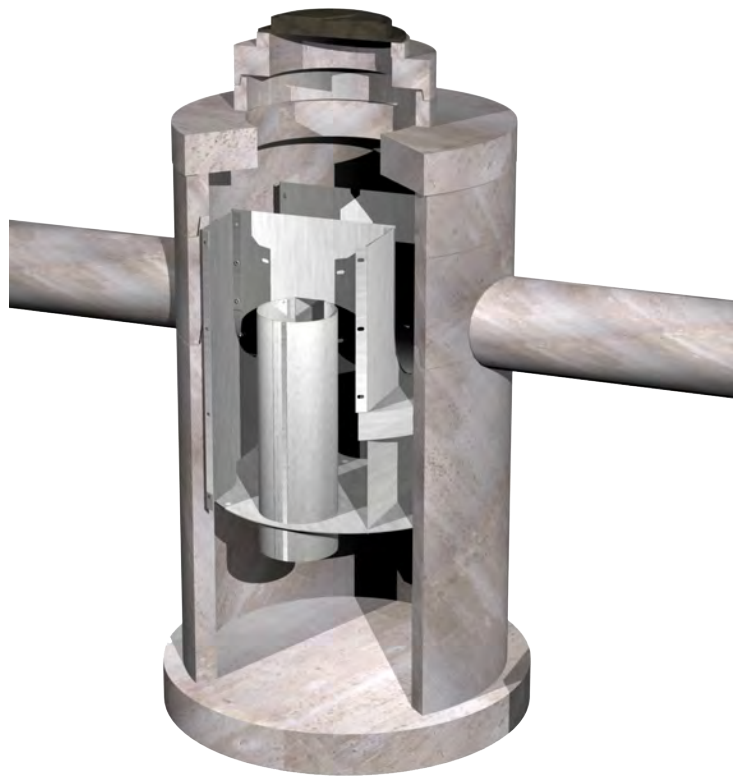


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1 - Submittal Drawing

2 - Features & Benefits

3 - Product Specifications

4 - Inspection & Maintenance

SECTION 1

Submittal Drawing

SECTION 2

Features & Benefits



STORM CYCLONIC WATER Separation

Enhanced Gravity Separation of Stormwater Pollutants in a Compact Configuration

Dual-Vortex Efficiency

Particle settling is enhanced by circular flow patterns and a highly circuitous flow path created by two independent vortex cylinders.

Settled particles are collected in the isolated bottom storage area, while floating trash, debris and petroleum hydrocarbons are retained in the cylinders and upper storage areas.

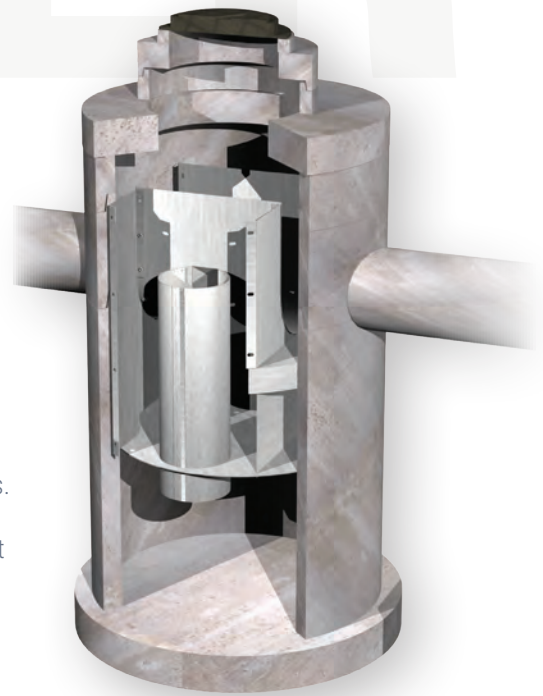
During peak events, flows in excess of design treatment overtop the bypass weir and exit the system without entering the cylinders and lower storage area, thereby eliminating re-entrainment issues.

FEATURES:

- Maintenance Accessible Design
- Economical Installation
- Access Options
- Online System Capability
- Durable Construction
- Proven Performance
- Treatment Train

BENEFITS:

- Open access to accumulated floatables and sediment storage area
- Prepackaged and provided as compact round or square manholes
- Multiple access options (manhole cover or optional hinged lid)
- Internal high-flow bypass weir system provides for online or offline configurations
- Stainless-steel components installed in a reinforced concrete structure
- Third party tested and certified
- Can be installed upstream of infiltration, detention and retention systems or other treatment BMP's



Dual-Vortex Separator Offers an Innovative, Economical Alternative for Removal of Suspended Pollutants from Stormwater Runoff

How it Works

STEP 1

Independent Vortex Cylinders & Control Weir - Flows are directed to the two independent vortex cylinders where particle settling is enhanced by circular flow patterns.

STEP 2

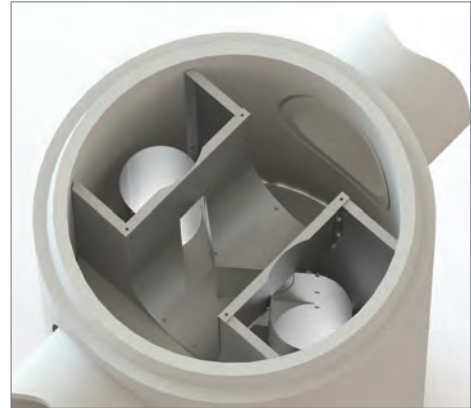
Captured Floatables - Floating trash, debris and petroleum hydrocarbons accumulate at the top of the two cylinders where they are held until transfer into the upper storage area by peak storm events.

STEP 3

Removal of Total Suspended Solids (TSS) - Particle settling is enhanced by the circular flow patterns and a highly circuitous flow path created by two independent vortex cylinders. Sediments are collected and retained in the isolated bottom storage area.

STEP 4

High-Flow Bypass - Flows in excess of the design treatment overtop the bypass weir and exit the system without entering the cylinders and re-entraining captured pollutants.



MODELS AND NOMINAL DIMENSIONS							
Model No.	Structure Diameter (ft.)	Standard Sump Depth* (ft.)	Minimum Rim to Invert Depth (ft.)	Sediment Storage* (cubic feet)	Oil and Floatable Storage (cubic feet)	NJCAT Treatment Flow Rate (cfs)	Maximum Treatment Flow Rate (cfs)
DVS-36	3	4.5	2.5	11	6	0.56	0.56
DVS-48	4	5.0	3.0	19	15	1.00	1.25
DVS-60	5	5.5	3.5	29	29	1.56	2.50
DVS-72	6	6.5	4.5	42	49	2.25	4.25
DVS-84	7	7.0	5.0	58	79	3.06	6.50
DVS-96	8	8.0	5.5	75	116	4.00	9.50
DVS-120	10	10.0	7.0	118	226	6.25	16.80
DVS-144	12	11.5	8.0	170	388	9.00	26.40

*Depth of unit can be increased to add storage capacity.

Available Options

Square configurations accept multiple inlet pipes or meet other special site conditions.
Flume inlet control for grated inlet applications.



SECTION 3

Product Specifications

PART 1 — GENERAL

1.1 Section Includes

- A. Dual Vortex Separator (DVS) – vortex hydrodynamic separator for stormwater treatment.

1.2 Related Sections

- A. Section 01 33 00 – Submittals: Shop Drawings, Product Data, and Samples
- B. Section 02 30 00 – Earthwork: Excavation, Trenching, Backfill, and Compaction.
- C. Section 31 25 00 – Erosion and Sedimentation Controls

1.3 References

- A. American Association of State Highway and Transportation Officials (AASHTO)
 - 1. AASHTO M105 – Standard Specification for Gray Iron Castings
- B. American Society for Testing and Materials (ASTM)
 - 1. ASTM A48, CL.30B – Standard Specification for Gray Iron Castings
 - 2. ASTM A82 – Standard Specification for Steel Wire, Plain, for Concrete Reinforcement
 - 3. ASTM A185 – Standard Specification for Welded Steel Wire Fabric for Concrete Reinforcement
 - 4. ASTM A240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
 - 5. ASTM A496 – Standard Specification for Deformed Steel Wire for Concrete Reinforcement
 - 6. ASTM A497 – Standard Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete
 - 7. ASTM A615 – Standard Specification for Deformed and Plain, Carbon-Steel Bars for Concrete Reinforcement
 - 8. ASTM B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
 - 9. ASTM C32 – Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
 - 10. ASTM C33 – Standard Specification for Concrete Aggregates
 - 11. ASTM C139 – Standard Specification for Concrete Masonry Units for Construction of Catch Basins and Manholes

12. ASTM C150 – Standard Specification for Portland Cement
13. ASTM C478 – Standard Specification for Circular Precast Reinforced Concrete Manhole Sections
14. ASTM C595 – Standard Specification for Blended Hydraulic Cements
15. ASTM C890 – Standard Practice for Minimum Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures
16. ASTM C891 – Standard Practice for Installation of Underground Precast Concrete Utility Structures
17. ASTM C913 – Standard Specification for Precast Concrete Water and Wastewater Structures
18. ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
19. ASTM C1107 – Standard Specification for Packaged Dry, Hydraulic Cement Grout (Non-Shrink)
20. ASTM C1227 – Standard Specification for Precast Concrete Septic Tanks
21. ASTM C1244 – Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill
22. ASTM D698 – Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort

C. Definitions:

1. BMP: Best Management Practices
2. TSS: Total Suspended Solids

1.4 Submittals

The following shall be submitted by contractor in accordance with Section 01 33 00 Submittal Procedures:

A. Product Data for the Hydrodynamic Separator:

1. Product specifications to include but not limited to specification sheets, brochures, and performance claims.
2. Inspection and maintenance guidelines.
3. Submittal drawings shall be provided and annotated to indicate all materials to be used and applicable material standards, required tests of materials, and all design assumptions for structural analysis. Details of steel reinforcing size and placement shall be submitted if professional

engineering stamp and calculations are required by the customer. It is the responsibility of the project's engineer-of-record to verify that the design assumptions are suitable for the proposed application.

- B. Independent third-party certification or test report demonstrating conformance to applicable local or regional BMP standards before the treatment system is installed for the following, upon request:
 - 1. Removal Efficiency
 - 2. Targeted Pollutants of Concern
 - 3. Hydraulic Capacity
 - 4. Certification of adherence to applicable standard
- C. Products submitted as approved equal must be submitted at least 2 weeks prior to project bid opening and must be approved by project engineer. Submittal for approved equal product must contain a signed letter from an executive officer of the manufacturer stating product is equivalent to all applicable requirements of this specification.

1.5 Quality Assurance

The precast concrete producer shall demonstrate adherence to the standards set forth in the plant Quality Control Manual.

- A. Qualifications, Quality Control and Inspection
 - 1. The precast producer shall maintain a permanent quality control department.
 - 2. The precast concrete producer shall have a quality control program which is audited for compliance annually by persons outside that plant's employee structure.
 - 3. Upon request, the precast concrete producer shall supply a copy of their quality control manual.
- B. Quality Control
 - 1. The precast concrete producer shall perform standard concrete testing and inspection.
 - i. Preplacement Check
 - 1. All non machine-cast products shall be inspected for accuracy prior to placing concrete. Checks shall include, but not be limited to, form condition and cleanliness, form dimensions, joints, release agent, blockouts, inserts and locations, lifting devices, reinforcing steel size, spacing, clearances and proper placement. Machine cast products shall have a minimum 5% of the production checked at random.
 - 2. Preplacement checks shall be documented and initialed by the inspector. A drawing with verifications of the above

criteria can be used as documentation.

ii. Postplacement Check

1. All non machine-cast products shall be inspected for accuracy after the concrete forms have been removed. Checks shall include, but not be limited to, dimensional checks, finishing, insert locations, squareness, honeycombing, cracking, marking, coatings, racking, hole size and location. Postplacement checks may require a corrective action report. Machine cast products shall have a minimum of 5% of production checked at random.
 2. Postplacement checks shall be documented and initialed by the inspector. A drawing with verifications of the above criteria can be used as documentation.
2. Copies of the test results and Inspections above shall be available upon request.

1.6 Delivery, Storage, and Handling

- A. All treatment system components shall be delivered to the site and unloaded with handling that conforms to the manufacturer's instructions for reasonable care. Concrete and internal components shall not be rolled or dragged over gravel or rock during handling. The contractor shall take necessary precautions to ensure the method used in lifting or placing the treatment system does not induce stress fatigue in the concrete.

PART 2 — PRODUCTS

2.1 Description

The contractor, and/or a manufacturer selected by the contractor and approved by the Engineer, shall furnish all labor, materials, equipment and incidentals required and install all precast concrete stormwater treatment systems and appurtenances in accordance with the drawings and these specifications. The treatment system is housed in a precast concrete manhole or vault structure. The treatment system shall provide flow partitioned hydrodynamic treatment that removes sediment, free-floating pollutants, and oil particles. The treatment system must include the capability to partition flows, causing treatment flows to be diverted into the treatment chamber. Flows exceeding the treatment capacity of the unit shall divert the bypass flows around the treatment chamber to prevent resuspension and washout of previously trapped pollutants.

2.2 Materials and Design

- A. Concrete for precast stormwater treatment systems shall conform to ASTM A478 or ASTM C890 and C913 and meet the following additional requirements:
1. In all cases the wall thickness shall be no less than the minimum thickness necessary to sustain HS20-44 (MS18) loading requirements as determined by a Licensed Professional Engineer.
 2. Sections shall have tongue and groove or ship-lap joints with a butyl

mastic sealant conforming to ASTM C990.

3. Cement shall be Type I, II, or III Portland cement conforming to ASTM C150.
4. All sections shall be cured by an approved method. Sections shall not be shipped until the concrete has attained a compressive strength of 4,000 psi (28 MPa) or other designate suitable handling strength.
5. Pipe openings shall be sized to accept pipes of the specified size(s) and material(s), and shall be sealed by the contractor with hydraulic cement conforming to ASTM C595M or ASTM C1107.
6. Aggregates shall conform to ASTM C33, except that the requirement for gradation shall not apply.
7. Reinforcement shall consist of wire conforming to ASTM A82 or A496, of wire mesh conforming to ASTM A185 or A497, or Grade 40 steel bars conforming to ASTM A615.
8. Castings for manhole frames and covers shall be in accordance with ASTM A48, CL.30B and AASHTO M105. The access cover/s shall be designed for HS20-44 traffic loading and shall provide a minimum of 30-inch clear opening.
9. Brick or masonry used to build the manhole frame to grade shall conform to ASTM C32 or ASTM C139 and shall be installed in conformance with all local requirements.
10. Diversion weirs, separation chamber, and oil baffle shall be made from aluminum and/or stainless steel and shall conform to ASTM B209 or ASTM A240
11. All mounting hardware for internal components shall be made of 304SS and shall conform to ASTM A240

2.3 Performance

Each specified stormwater flow based treatment device shall conform to the specifications listed in Table 2.1

Table 2.1 DVS Models, Flow Rates and Capacities.

DVS Model	Diameter or Length/Width (ft)	NJCAT Verified Flow Rate (cfs)	Minimum Sediment Storage Capacity (cu-ft)	Minimum Oil Storage Capacity (cu-ft)
DVS-36	3	0.56	11	5
DVS-48	4	1.00	19	12
DVS-60	5	1.56	29	23
DVS-72	6	2.25	42	37
DVS-84	7	3.06	58	60
DVS-96	8	4.00	75	88
DVS-120	10	6.25	118	184
DVS-144	12	9.00	170	312

Each specified flow-based stormwater treatment system shall be verified by New Jersey Corporation for Advanced Technology (NJCAT) and certified by New Jersey Department of Environmental Protection (NJDEP) according to the 2013 Hydrodynamic Separator Testing Protocol. Each specified flow-based stormwater treatment system shall be capable of removing 50% of the weighted Total Suspended Solids (TSS) load based on a d50 particle size of 47 microns. Annual TSS removal efficiency models shall be based on laboratory performance data, site-specific hydraulics and hydrology, and local rainfall intensity distributions. The stormwater treatment system shall be completely housed within one structure.

2.4 Manufacturer

Each stormwater treatment system shall be a Dual Vortex Separator (DVS) as manufactured by Oldcastle Infrastructure, Inc., 7100 Longe St, Stockton, California 95206. Phone: (800) 579-8819.

PART 3 — EXECUTION

3.1 Survey

- A. The installation area shall be surveyed using the work print and a checklist to identify the work to be done and to determine that the plans are correct.
- B. All underground facilities and structures such as gas, water, sewer, power, telephone cable, and so forth shall be located and identified. Location markings shall be placed by the affected utilities before construction.
- C. The survey shall identify and obstacles such as overhead wires, building structures that will interfere with crane operations, work progress, or create a safety hazard.
- D. The survey shall give consideration to the soil structure so that proper shoring, sloping, or both may be planned in advance of the excavation work.

3.2 Planning

- A. Permits required to do work in accordance with the detail plans shall be secured before starting the job. All permits or a record of the permits shall be retained on the

job for immediate reference.

- B. All utilities and owners of surface and subsurface facilities and structures in the area shall be given advance notification of proposed excavation. Every effort shall be made to avoid damage to the facilities of others. If any damage occurs, the owner of the damaged facility shall be notified immediately.
- C. Planning shall include the coordination of all responsible parties to ensure that arrangements for removal of excess and damaged material have been made.
- D. Should it appear that a structure location will interfere with traffic, review the situation with the engineer and notify appropriate authorities.
- E. Provide for access to call boxes, fire hydrants, etc.

3.3 Safety Requirements

- A. Safety requirements for construction shall be in accordance with all federal, state, and local regulations.

3.4 Excavating

- A. If unforeseen facilities or obstructions are encountered, stop excavation operations immediately. Expose the obstruction with wood handled digging tools and investigate them with caution. If there is any doubt as to the type of obstruction exposed, request positive identification from those suspected of owning the facility and then proceed as circumstances dictate.
- B. Inspect excavations after every rainstorm or other hazard-increasing occurrence, and increase the protection against slides and cave-ins, if necessary.
- C. In dewatering excavations, make certain that the discharge is carried to a suitable runoff point.
- D. Excavation size shall be large enough to allow access around the structure after it is installed.

3.5 Shoring

- A. Shoring for construction shall be in accordance with all federal, state, and local regulations

3.6 Installation

- A. Site Access – The general contractor shall be responsible for providing adequate access to the site to facilitate hauling, storage, and proper handling of the precast concrete units.
- B. Installation – Precast concrete units shall be installed: to the lines and grades shown on the contract documents or otherwise specified; be lifted by suitable lifting devices at points provided by the precast concrete producer; in accordance with applicable industry standards. Upon request, the precast concrete producer shall provide installation instructions. Field modifications to the product shall relieve the precast

producer of liability and warranty regardless if such modifications result in the failure of the precast concrete unit.

- C. Leak Resistance – Where leak resistance is a necessary performance characteristic of the precast concrete unit's end use, joint sealant, pipe-entry connectors and other penetrations shall be sealed according to manufacturer's requirements to ensure the integrity of the system.

3.7 Backfilling and Restoration

- A. Do the backfilling as soon as possible after the structure has been placed.
- B. Backfill material shall be granular and free from large stones, rocks, and pavement. Expansive soil material shall not be used as backfill around the structure.
- C. Backfilling shall be achieved by lifts (layers) to the required compaction.
- D. Follow up inspections for settlements are required. Should settlement occur, the contractor shall be responsible for all necessary repairs.

3.8 Field Quality Control

- A. Job Site Tests – When leak resistance testing is required for a precast concrete structure, one of the following methods may be followed:
 - 1. Vacuum Testing
 - i. Prior to backfill, vacuum test system according to ASTM C1244 for manholes and ASTM C1227 for septic tanks.
 - 2. Hydrostatic Testing
 - i. First Backfill the structure, then fill to the normal water level, let stand for 24 hours. Refill to the original water line and measure the water level change over a 24-hour period. Leak shall not exceed 5% of volume.
- B. Inspection
 - 1. Final field elevations and compaction properties shall be verified and documented.

END OF SECTION

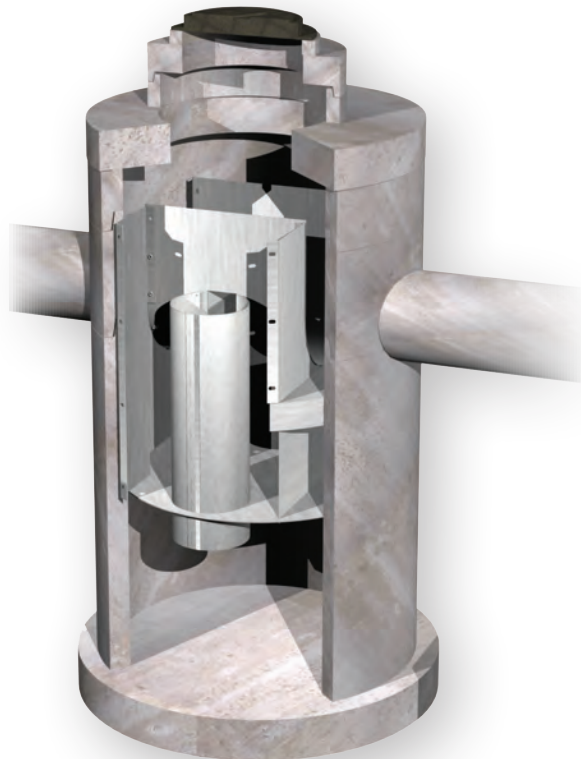
SECTION 4

Inspection & Maintenance



DUAL-VORTEX SEPARATOR

Inspection and Maintenance Guide



Description

The Dual-Vortex Separator (DVS) is a hydrodynamic stormwater treatment device used to remove pollutants from urban runoff. Impervious surfaces and other urban and suburban landscapes generate a variety of contaminants that can enter stormwater and pollute downstream receiving waters. The DVS is designed to capture and retain sediment as well as floating trash, debris and oils. The concentration of metals and other constituents associated with sediment or floating pollutants may also be reduced.

Function

Stormwater runoff enters the DVS unit through an inlet pipe. Influent flow is split evenly between two vortex tubes by a V-shaped weir. The shape and diameter of the vortex tubes promotes circular motion of the incoming stormwater at increased velocities to enhance particle settling through centrifugal force. The system is also designed with an extended flow path to maximize hydraulic residence time which allows increased time to settle out solids. Settled pollutants are collected in an isolated storage area at the bottom of the structure, while floating trash, debris and petroleum hydrocarbons are retained behind baffles that contain the vortex chambers. During peak runoff events, flow in excess of design treatment flow overtops the bypass weir and exits the system without entering the treatment chambers to interrupt the treatment process or re-entrain captured pollutants. Treatment and bypass flows exit the system through an outlet pipe that is plumbed at the same elevation as the inlet pipe.

Configuration

The internal components of the DVS system are fabricated from stainless steel and mounted in a manhole or vault structure. The system is typically delivered as a complete unit for installation by the contractor. Installation includes excavation, preparation of the base rock, setting the unit, plumbing the inlet and outlet piping, backfill and placement of the finished surface at grade. Access to the installed system is allowed through ductile iron casting or hatch covers. The number of access points provided is dependent on the size and configuration of the system.

Maintenance Overview

State and local regulations require all stormwater management systems to be inspected on a regular basis and maintained as necessary to ensure performance and protect downstream receiving waters. Without maintenance, excessive pollutant buildup can limit system performance by reducing the operating capacity and increase the potential for scouring of pollutants during periods of high flow.

Inspection Equipment

The following equipment is helpful when conducting DVS inspections:

- Recording device (pen and paper form, voice recorder, iPad, etc.)
- Suitable clothing (appropriate footwear, gloves, hardhat, safety glasses, etc.)
- Traffic control equipment (cones, barricades, signage, flagging, etc.)
- Manhole hook or pry bar
- Flashlight
- Tape measure
- Measuring stick or sludge sampler
- Long-handled net (optional)
- Replacement sorbent pads

Inspection Procedures

Inspection is essential to consistent system performance and is easily completed. Inspection is typically conducted a minimum of twice per year but since pollutant transport and deposition varies from site to site, a site-specific maintenance frequency should be established during the first two or three years of operation.

DVS inspections are visual and are conducted without entering the unit. To complete an inspection, safety measures including traffic control should be deployed before the access covers are removed. Once the covers have been removed, the following items should be checked and recorded (see form provided on page 5) to determine whether maintenance is required:

- Inspect the internal components and note whether there are any broken or missing parts. In the unlikely event that internal parts are broken or missing, contact Oldcastle Infrastructure at (800) 579-8819 to determine appropriate corrective action.
- Note whether the inlet or outlet pipe is blocked or obstructed.
- Observe, quantify and record the accumulation of floating trash and debris in the baffled chambers around the vortex tubes. The significance of accumulated floating trash and debris is a matter of judgement. A long-handled net may be used to retrieve the bulk of trash and debris at the time of inspection if full maintenance due to accumulation of oils or sediment is not yet warranted.
- Observe, quantify and record the accumulation of oils in the baffled chambers around the vortex tubes. If sorbent pads have been used to absorb free oil and grease, observe and record their condition. Unless the sorbent pads are tethered to the internal baffles, spent pads may be netted and replaced at the time of inspection. The significance of accumulated floating oils is a matter of judgement. However, if there is evidence of an oil or fuel spill, immediate maintenance is warranted.
- Finally, observe, quantify and record the accumulation of sediment in the sediment storage sump. A calibrated dipstick, tape measure or sludge sampler may be used to determine the amount of accumulated sediment. The depth of sediment may be determined by calculating the difference between the measurement from the rim of the DVS to the top of the accumulated sediment and the measurement from the rim of the DVS to the bottom of the DVS structure. Finding the top of the accumulated sediment takes some practice and a light touch, but increasing resistance as the measuring device is lowered toward the bottom of the unit indicates the top of the accumulated sediment.

Maintenance

Maintenance should be scheduled if any of the following conditions are identified during inspection:

- Internal components are broken or missing.
- Inlet or outlet piping is obstructed.
- The accumulation of floating trash and debris that cannot be retrieved with a net and/or oil in the baffled chambers around the vortex tubes is significant.
- Tethered sorbent pads, if used, are dirty or saturated.
- The sediment level in the sediment storage sump is greater than 12 inches. The capacity of the sediment sump is 18 inches of sediment depth for all DVS models. Sediment depths greater than 18 inches will begin to affect the performance of the system.

Maintenance Equipment

The following equipment is helpful when conducting DVS maintenance:

- Suitable clothing (appropriate footwear, gloves, hardhat, safety glasses, etc.)
- Traffic control equipment (cones, barricades, signage, flagging, etc.)
- Manhole hook or pry bar
- Confined space entry equipment, if needed
- Flashlight
- Tape measure
- Sorbent pads
- Vacuum truck

Maintenance Procedures

Maintenance should be conducted during dry weather when no flow is entering the system. All maintenance, except possibly the attachment of sorbent pads (if required), may be conducted without entering the DVS structure. Once safety measures such as traffic control are deployed, the access covers may be removed and the following activities may be conducted to complete maintenance:

- Remove floating trash, debris and oils from the water surface using an extension on the end of the boom hose of the vacuum truck. Continue using the vacuum truck to completely dewater the structure through the vortex tubes and evacuate all accumulated sediment from the sediment sump. Some jetting may be required to fully evacuate sediment from the sump. This is easily achieved by inserting a jet hose through the vortex tube opposite the tube used for vacuum hose access.
- If sorbent pads are required and are tethered to the structure, only personnel that are OSHA Confined Space Entry trained and certified may enter the structure to remove and replace the spent pads.
- The structure does not need to be refilled with water after maintenance is complete. The system will fill with water when the next storm event occurs.
- All material removed from the DVS during maintenance must be disposed of in accordance with local regulations. In most cases, the material may be handled in the same manner as disposal of material removed from sumped catch basins or manholes.

Dual-Vortex Separator Inspection and Maintenance Log

DVS Model _____

Inspection Date _____

Location _____

Condition of Internal Components

Notes:

☐ Good

☐ Damaged

☐ Missing

Inlet or Outlet Blockage or Obstruction

Notes:

☐ Yes

☐ No

Floating Trash and Debris

Notes:

☐ Significant

☐ Not Significant

Floating Oils

Notes:

☐ Significant

☐ Not Significant

☐ Spill

Sediment Depth

Notes:

☐ Inches of Sediment: _____

Maintenance Requirements

☐ Yes - Schedule Maintenance

☐ No - Schedule Re-Inspection

DUAL-VORTEX SEPARATOR

OUR MARKETS



**BUILDING
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**SUBSOIL STUDY
FOR FOUNDATION DESIGN
PROPOSED COMMERCIAL BUILDING
LOT 3, PERRY SUBDIVISION
435 EBY CREEK ROAD
EAGLE, COLORADO**

JOB NO. 107 0341

JUNE 19, 2007

PREPARED FOR:

**DAVID NUDELL
c/o PRUDENTIAL COLORADO PROPERTIES
27 MAIN STREET, SUITE 105
EDWARDS, COLORADO 81632**

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PURPOSE AND SCOPE OF STUDY

This report presents the results of a subsoil study for a proposed commercial building to be located on Lot 3, Perry Subdivision, 435 Eby Creek Road, Eagle, Colorado. The project site is shown on Figure 1. The purpose of the study was to develop recommendations for the foundation design. The study was conducted in accordance with our agreement for geotechnical engineering services to David Nudell dated May 7, 2007.

A field exploration program consisting of exploratory borings was conducted to obtain information on the subsurface conditions. Samples of the subsoils and bedrock obtained during the field exploration were tested in the laboratory to determine their classification, compressibility or swell and other engineering characteristics. The results of the field exploration and laboratory testing were analyzed to develop recommendations for foundation types, depths and allowable pressures for the proposed building foundation. This report summarizes the data obtained during this study and presents our conclusions, design recommendations and other geotechnical engineering considerations based on the proposed construction and the subsurface conditions encountered.

PROPOSED CONSTRUCTION

The building will be a single story structure over a walkout basement level located on the lot as shown on Figure 1. The lower level will be parking and have a slab-on-grade floor. We assume floor elevations of about 1,055 feet for the lower level and about 1,070 feet for the main level. Grading for the structure is expected to require cut depths between about 4 to 20 feet. We assume moderate foundation loadings, typical of the proposed type of construction. The development will include asphalt paved access drive and parking areas.

If building loadings, location or grading plans change significantly from those described above, we should be notified to re-evaluate the recommendations contained in this report.

SITE CONDITIONS

The site is vacant and the ground surface appears mostly natural. The terrain is an easterly sloping hillside with moderately steep grades. Slopes range from about 15 to 25% in the lower part of the lot increasing to about 30 to 40% above the proposed building site. Elevation difference across the building site is about 20 feet. Vegetation consists of grass and weeds with moderately thick sage bush transitioning to relatively thick pinon and juniper trees on the steeper portion of the hillside.

SUBSIDENCE POTENTIAL

Bedrock of the Pennsylvanian age Eagle Valley Evaporite underlies the site and nearby areas. These rocks are a sequence of gypsiferous shale, fine-grained sandstone and siltstone with some massive beds of gypsum and limestone. There is a possibility that massive gypsum deposits associated with the Eagle Valley Evaporite underlie portions of the lot. Dissolution of the gypsum under certain conditions can cause sinkholes to develop and can produce areas of localized subsidence. During previous work in the area, several sinkholes were observed scattered throughout the Eagle area. These sinkholes appear similar to others associated with the Eagle Valley Evaporite in other areas of the Eagle River valley.

Sinkholes were not observed in the immediate area of the subject lot. No evidence of cavities was encountered in the subsurface materials; however, the exploratory borings were relatively shallow, for foundation design only. Based on our present knowledge of the subsurface conditions at the site, it cannot be said for certain that sinkholes will not develop. The risk of future ground subsidence on Lot 3 throughout the service life of the proposed commercial building, in our opinion, is low; however, the owner should be made aware of the potential for sinkhole development. If further investigation of possible cavities in the bedrock below the site is desired, we should be contacted.

FIELD EXPLORATION

The field exploration for the project was conducted on May 24 and 25, 2007. Seven exploratory borings were drilled at the locations shown on Figure 1 to evaluate the subsurface conditions. Borings 1 through 3 were drilled in the access drive/parking areas and Borings 4 through 7 were drilled in the proposed building area. The borings were advanced with 4 inch diameter continuous flight augers powered by a track-mounted CME 45 drill rig. The track rig was needed due to the moderately steep hillside and the thick trees. The borings were logged by a representative of Hepworth-Pawlak Geotechnical, Inc.

Samples of the subsoils and bedrock were taken with 1½ inch and 2 inch I.D. spoon samplers. The samplers were driven into the subsoils and bedrock at various depths with blows from a 140 pound hammer falling 30 inches. This test is similar to the standard penetration test described by ASTM Method D-1586. The penetration resistance values are an indication of the relative density or consistency of the subsoils and hardness of the bedrock. Depths at which the samples were taken and the penetration resistance values are shown on the Logs of Exploratory Borings, Figure 2. The samples were returned to our laboratory for review by the project engineer and testing.

SUBSURFACE CONDITIONS

Graphic logs of the subsurface conditions encountered at the site are shown on Figure 2. The subsoils encountered in the access drive/parking area borings (Borings 1 through 3), below about ½ foot of topsoil, consisted of stiff, very sandy silty clay and medium dense, very clayey silty sand that extended to the depths drilled of 10 feet. The subsoils encountered in the building area borings (Borings 4 through 7), below about ½ foot of topsoil, consisted of medium dense, silty clayey sandy gravel and cobbles with scattered small boulders underlain at depths from about 11½ to 20 feet by very stiff, sandy silty clay with scattered shale fragments. Below depths from about 11½ to 20 feet in Borings 4 through 6, hard claystone/siltstone of the Eagle Valley Evaporite was encountered.

Drilling in the coarse granular soils with auger equipment was occasionally difficult due to the cobbles and boulders and drilling refusal was encountered at relatively shallow depths in Boring 7 in the deposit.

Laboratory testing performed on samples obtained from the borings included natural moisture content and density, gradation analyses, Atterberg limits, and unconfined compressive strength. Results of swell-consolidation testing performed on relatively undisturbed drive samples, presented on Figures 4 and 5, indicate generally low to moderate compressibility under conditions of loading and wetting. A sample of the silty clayey sand matrix soils (Boring 5 at 9 feet) showed a low hydro-compression potential and high compressibility when load after wetting and was probably partly disturbed. Results of gradation analyses performed on small diameter drive samples (minus 1½ inch fraction) of the coarse granular subsoils are shown on Figure 6. The laboratory testing is summarized in Table 1.

No free water was encountered in the borings at the time of drilling. The subsoils were slightly moist to moist to occasionally very moist with depth, and the bedrock was slightly moist to moist.

FOUNDATION BEARING CONDITIONS

The coarse granular soils possess moderate bearing capacity and generally low settlement potential. The building excavation could transition the granular soils and clay soils in deep cut areas. Lightly loaded spread footings bearing on the natural soils should be feasible for foundation support of the building. There could be some potential for differential settlement due to the assumed variable bearing conditions and if the bearing soils become wetted precautions should be taken to prevent wetting of the bearing soils.

An alternate foundation system to reduce the settlement potential would be to extend the bearing level down into the underlying claystone/siltstone, such as with screw piles or drilled piers. Provided below are recommendations for spread footings. If recommendations for screw piles or drilled piers are desired, we should be contacted.

DESIGN RECOMMENDATIONS

FOUNDATIONS

Considering the subsurface conditions encountered in the exploratory borings and the nature of the proposed construction, we recommend the building be founded with spread footings bearing on the natural soils with some risk of movement.

The design and construction criteria presented below should be observed for a spread footing foundation system.

- 1) Footings placed on the undisturbed natural soils should be designed for an allowable bearing pressure of 2,000 psf. Based on experience, we expect settlement of footings designed and constructed as discussed in this section will be about 1 inch. There could be some additional settlement if the bearing soils become wetted. The magnitude of the additional settlement would depend on the depth and extent of the wetting but may be on the order of ½ inch.
- 2) The footings should have a minimum width of 18 inches for continuous walls and 2 feet for isolated pads.
- 3) Exterior footings and footings beneath unheated areas should be provided with adequate soil cover above their bearing elevation for frost protection. Placement of foundations at least 42 inches should be adequate for this area.
- 4) Continuous foundation walls should be well reinforced top and bottom to span local anomalies and better withstand the effects of some differential movement such as by assuming an unsupported length of at least 12 feet. Foundation walls acting as retaining structures should also be designed to resist lateral earth pressures as discussed in the "Foundation and Retaining Walls" section of this report.

- 5) All existing fill, topsoil and any loose or disturbed soils should be removed and the footing bearing level extended down to the relatively dense natural granular or stiff clay soils. The exposed soils in footing area should then be moistened and compacted. The clay soils should be further evaluated for settlement/heave potential at the time of construction.
 - 6) A representative of the geotechnical engineer should observe all footing excavations prior to concrete placement to evaluate bearing conditions.
-

FOUNDATION AND RETAINING WALLS

Foundation walls and retaining structures which are laterally supported and can be expected to undergo only a slight amount of deflection should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 50 pcf for backfill consisting of the on-site granular soils. Cantilevered retaining structures which are separate from the building and can be expected to deflect sufficiently to mobilize the full active earth pressure condition should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 40 pcf for backfill consisting of the on-site granular soils. The wall backfill should not contain topsoil or oversized rocks.

All foundation and retaining structures should be designed for appropriate hydrostatic and surcharge pressures such as adjacent footings, traffic, construction materials and equipment. The pressures recommended above assume drained conditions behind the walls and a horizontal backfill surface. The buildup of water behind a wall or an upward sloping backfill surface will increase the lateral pressure imposed on a foundation wall or retaining structure. An underdrain should be provided to prevent hydrostatic pressure buildup behind walls.

Backfill should be placed in uniform lifts and compacted to at least 90% of the maximum standard Proctor density at a moisture content near optimum. Backfill in pavement and walkway areas should be compacted to at least 95% of the maximum standard Proctor

density. Care should be taken not to overcompact the backfill or use large equipment near the wall, since this could cause excessive lateral pressure on the wall. Some settlement of deep foundation wall backfill should be expected, even if the material is placed correctly, and could result in distress to facilities constructed on the backfill. Use of a select granular material and increasing compaction to 100% standard Proctor density should help mitigate the settlement potential.

The lateral resistance of foundation or retaining wall footings will be a combination of the sliding resistance of the footing on the foundation materials and passive earth pressure against the side of the footing. Resistance to sliding at the bottoms of the footings can be calculated based on a coefficient of friction of 0.40. Passive pressure of compacted backfill against the sides of the footings can be calculated using an equivalent fluid unit weight of 350 pcf. The coefficient of friction and passive pressure values recommended above assume ultimate soil strength. Suitable factors of safety should be included in the design to limit the strain which will occur at the ultimate strength, particularly in the case of passive resistance. Fill placed against the sides of the footings to resist lateral loads should be granular material compacted to at least 95% of the maximum standard Proctor density at a moisture content near optimum.

FLOOR SLABS

The natural on-site soils, exclusive of topsoil, are suitable to support lightly loaded slab-on-grade construction. There could be some slab settlement if the compressible soils below the slab become wetted as previously discussed. To reduce the effects of some differential movement, floor slabs should be separated from all bearing walls and columns with expansion joints which allow unrestrained vertical movement. Floor slab control joints should be used to reduce damage due to shrinkage cracking. The requirements for joint spacing and slab reinforcement should be established by the designer based on experience and the intended slab use. A minimum 4 inch layer of free-draining gravel should be placed beneath basement level slabs to facilitate drainage. This

material should consist of minus 2 inch aggregate with at least 50% retained on the No. 4 sieve and less than 2% passing the No. 200 sieve.

All fill materials for support of floor slabs should be compacted to at least 95% of maximum standard Proctor density at a moisture content near optimum. Required fill can consist of the on-site granular soils devoid of vegetation, topsoil and oversized rocks.

UNDERDRAIN SYSTEM

Although free water was not encountered during our exploration, it has been our experience in the area and where clay soils are present that local perched groundwater can develop during times of heavy precipitation or seasonal runoff. Frozen ground during spring runoff can also create a perched condition. We recommend below-grade construction, such as retaining walls, crawlspace and basement areas, be protected from wetting and hydrostatic pressure buildup by an underdrain system.

The drains should consist of drainpipe placed in the bottom of the wall backfill surrounded above the invert level with free-draining granular material. The drain should be placed at each level of excavation and at least 1 foot below lowest adjacent finish grade and sloped at a minimum 1% to a suitable gravity outlet. Free-draining granular material used in the underdrain system should contain less than 2% passing the No. 200 sieve, less than 50% passing the No. 4 sieve and have a maximum size of 2 inches. The drain gravel backfill should be at least 1 ½ feet deep. An impervious membrane such as 20 or 30 mil PVC should be placed beneath the drain gravel in a trough shape and attached to the foundation wall with mastic to prevent wetting of the bearing soils.

SITE GRADING

The risk of construction-induced slope instability at the site appears low provided the building is located in the less steep part of the lot as planned and cut and fills depths are limited. We assume the cuts for the basement level will not exceed about 20 feet in depth

and be laid back to a stable grade or shored. Fills should be limited to about 8 to 10 feet deep and be compacted to at least 95% of the maximum standard Proctor density near optimum moisture content. Prior to fill placement, the subgrade should be carefully prepared by removing all vegetation and topsoil and compacting to at least 95% of the maximum standard Proctor density. The fill should be benched into the portions of the hillside exceeding 20% grade.

Permanent unretained cut and fill slopes should be graded at 2 horizontal to 1 vertical or flatter and protected against erosion by revegetation or other means. The risk of slope instability will be increased if seepage is encountered in cuts and flatter slopes may be necessary. If seepage is encountered in permanent cuts, an investigation should be conducted to determine if the seepage will adversely affect the cut stability.

SURFACE DRAINAGE

Positive surface drainage is an important aspect of the project to prevent wetting of the bearing soils. The following drainage precautions should be observed during construction and maintained at all times after the building has been completed:

- 1) Inundation of the foundation excavations and underslab areas should be avoided during construction.
- 2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement and slab areas and to at least 90% of the maximum standard Proctor density in landscape areas.
- 3) The ground surface surrounding the exterior of the building should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 12 inches in the first 10 feet in unpaved areas and a minimum slope of 2½ inches in the first 10 feet in paved areas. Free-draining wall backfill should be capped with about 2 feet of the on-site finer graded soils to reduce surface water infiltration.

- 4) Roof downspouts and drains should discharge well beyond the limits of all backfill.
- 5) Landscaping which requires regular heavy irrigation, such as sod, and sprinkler heads should be located at least 10 feet from foundation walls. Consideration should be given to use of xeriscape to reduce the potential for wetting of soils below the building caused by irrigation.

PAVEMENT SECTION

We understand that asphalt pavement is proposed for the access drive and parking areas. Traffic loadings have not been provided but are assumed to be typical of the proposed commercial type building development. We estimate an 18 kip equivalent daily load application (EDLA) of about 15 for the access drives and 5 for the parking lot areas. The subgrade soils encountered at the site are generally low plasticity silty clay and clayey silty sands with AASHTO classifications of A-4 and Group Indices of 0 and 2 on the samples tested. These soils are considered a relatively poor support for pavement sections and moderately to highly susceptible to frost heave. We estimate a Hveem stabilometer "R" value of about 8 for these soils.

Using CDOT design procedures, the above assumed 18kip EDLA's, a Hveem "R" value of 8, a Regional Factor of 2.25 and a serviceability index of 2.0, we recommend the minimum pavement section thickness consist of 4 inches of asphalt on 9 inches of base course for the access drives and 3 inches of asphalt on 9 inches of base course for the automobile only parking areas. For tight turning areas and areas subjected to regular truck traffic, such as delivery and trash pick-up, we suggest the use of at least 6 inches of portland cement concrete on 4 inches of base course.

The asphalt should be a batched hot mix, approved by the engineer and placed and compacted to the project specifications. The base course should meet CDOT Class 6 specifications. All base course and required subgrade fill should be compacted to at least 95% of the maximum standard Proctor density at a moisture content within 2% of

optimum. Concrete should have a minimum 28 day compressive strength of 4,000 psi and be air entrained.

Required fill used to establish design subgrade level can consist of the on-site soils or suitable imported granular soils approved by the geotechnical engineer. Prior to fill placement the subgrade should be scarified to a depth of 8 inches, adjusted to near optimum moisture and compacted to at least 95% of standard Proctor density. In soft or wet areas, the subgrade may require drying or stabilization prior to fill placement. A geogrid and/or subexcavation and replacement with aggregate base soils may be needed for the stabilization. The subgrade should be proofrolled. Areas that deflect excessively should be corrected before placing pavement materials. The subgrade improvements and placement and compaction of base and asphalt materials should be monitored on a regular basis by a representative of the geotechnical engineer. Once traffic loadings are better known, we should review our pavement section recommendations.

LIMITATIONS

This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on Figure 1, the proposed type of construction and our experience in the area. Our services do not include determining the presence, prevention or possibility of mold or other biological contaminants (MOBC) developing in the future. If the client is concerned about MOBC, then a professional in this special field of practice should be consulted. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory borings and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified so that re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata and testing of structural fill by a representative of the geotechnical engineer.

Respectfully Submitted,

HEPWORTH - PAWLAK GEOTECHNICAL, INC.

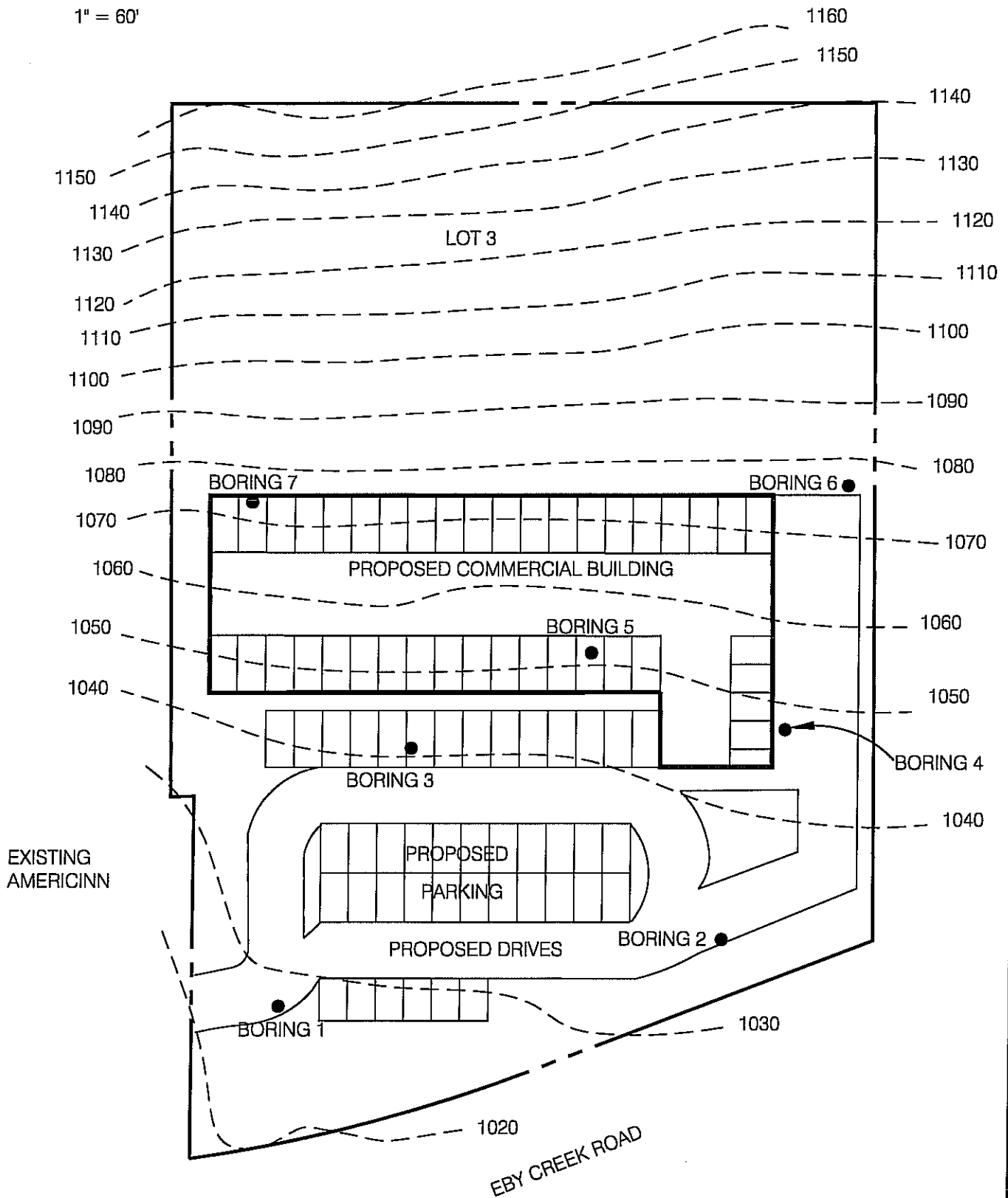
David A. Young, P.E.

Reviewed by:

Steven L. Pawlak, P.E.

DAY/vad

APPROXIMATE SCALE
1" = 60'

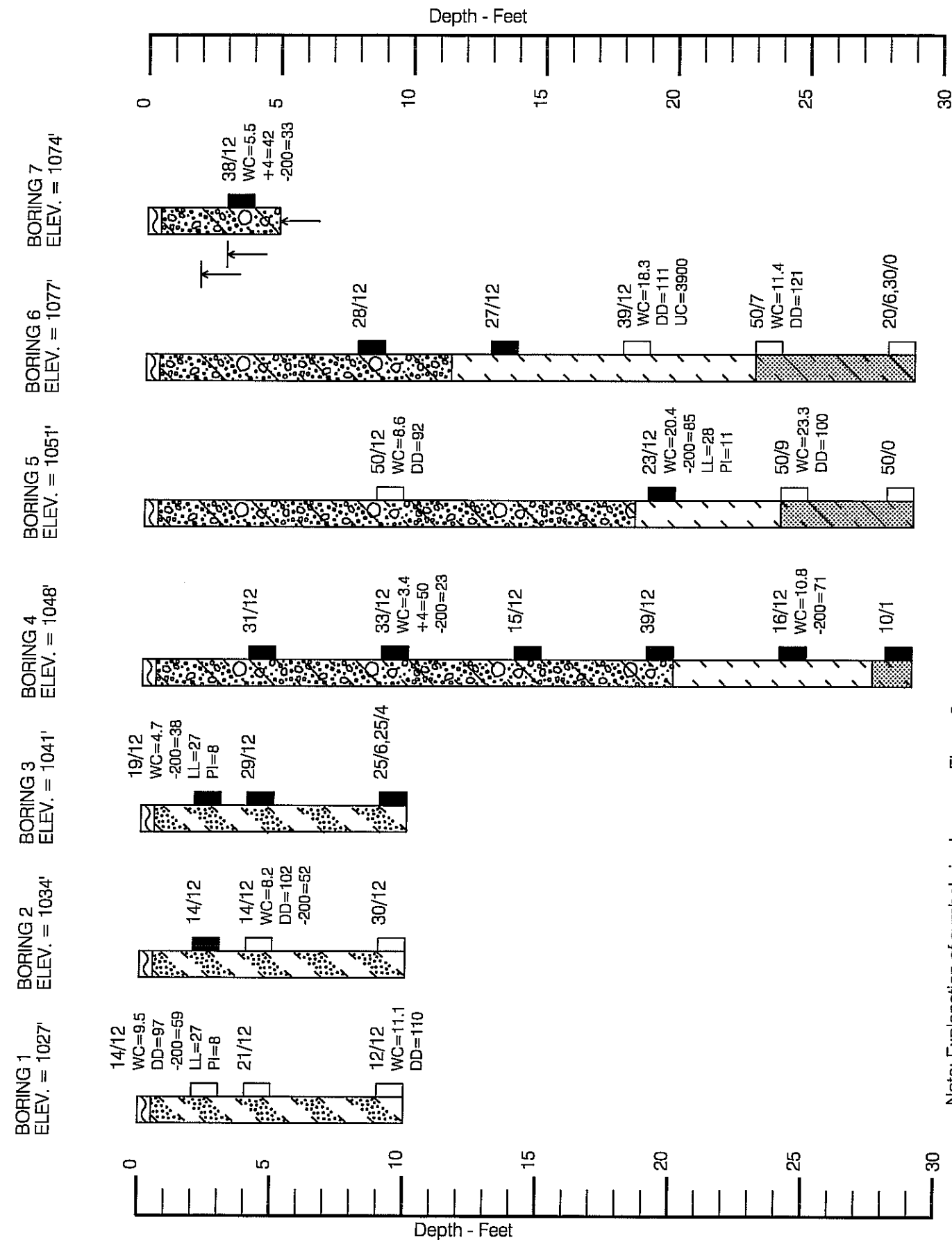


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LOCATION OF EXPLORATORY BORINGS

Figure 1



Note: Explanation of symbols is shown on Figure 3.

LEGEND:



TOPSOIL; organic silty clay to silty clayey sand with scattered gravel and cobbles, slightly moist, dark brown.



CLAY (CL-SC); very sandy to very clayey sand, silty, stiff/medium dense, brown, low to medium plasticity.



GRAVEL AND COBBLES (GM-GC); with small boulders, sandy to very sandy, silty, clayey, medium dense, slightly moist, brown, subrounded to subangular rocks.



CLAY (CL); silty, sandy, scattered shale fragments, stiff to very stiff, slightly moist to very moist, lot to medium plasticity..



CLAYSTONE/SILTSTONE; medium hard to hard, slightly moist to moist, grey-brown. Eagle Valley Evaporite.



Relatively undisturbed drive sample; 2-inch I.D. California liner sample.



Drive sample; standard penetration test (SPT), 1 3/8 inch I.D. split spoon sample, ASTM D-1586.

14/12

Drive sample blow count; indicates that 14 blows of a 140 pound hammer falling 30 inches were required to drive the California or SPT sampler 12 inches.



Practical drilling refusal. Where shown above bottom of log, indicates that multiple attempts were made to advance the boring.

NOTES:

1. Exploratory borings were drilled on May 24 and 25, 2007 with 4-inch diameter continuous flight power auger.
2. Locations of exploratory borings were measured approximately by pacing from features shown on the site plan provided.
3. Elevations of exploratory borings were obtained by interpolation between contours shown on the site plan provided and checked by instrument level. Boring logs are drawn to depth.
4. The exploratory boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the exploratory boring logs represent the approximate boundaries between material types and transitions may be gradual.
6. No free water was encountered in the borings at the time of drilling. Fluctuation in water level may occur with time.

7. Laboratory Testing Results:

WC = Water Content (%)

DD = Dry Density (pcf)

+4 = Percent retained on the No. 4 sieve

-200 = Percent passing No. 200 sieve

LL = Liquid Limit (%)

PI = Plasticity Index (%)

UC = Unconfined Compressive Strength (psf)

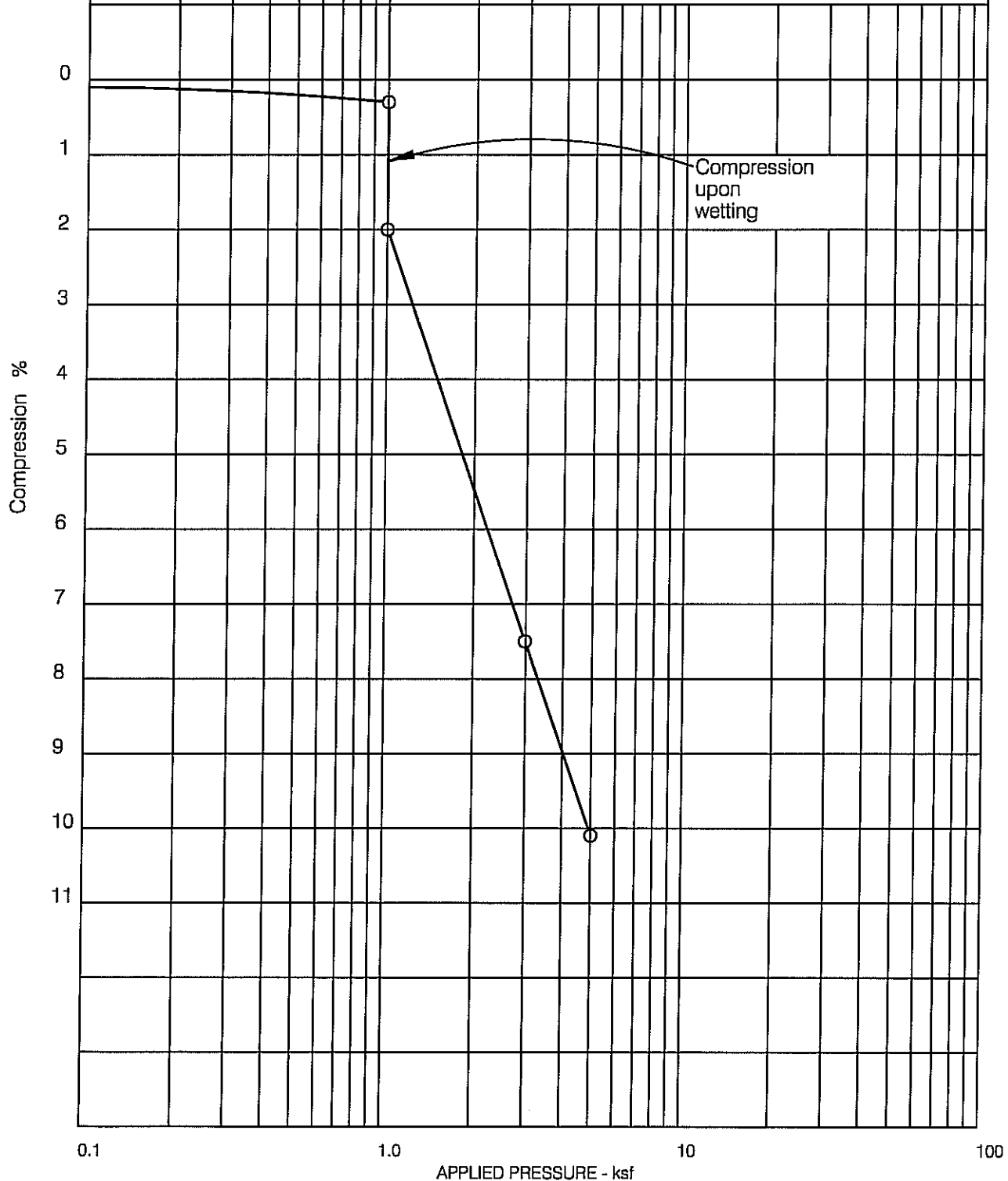
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LEGEND AND NOTES

Figure 3

Moisture Content = 8.6 percent
Dry Density = 92 pcf
Sample of: Silty Clayey Sand Matrix
From: Boring 5 at 9 Feet

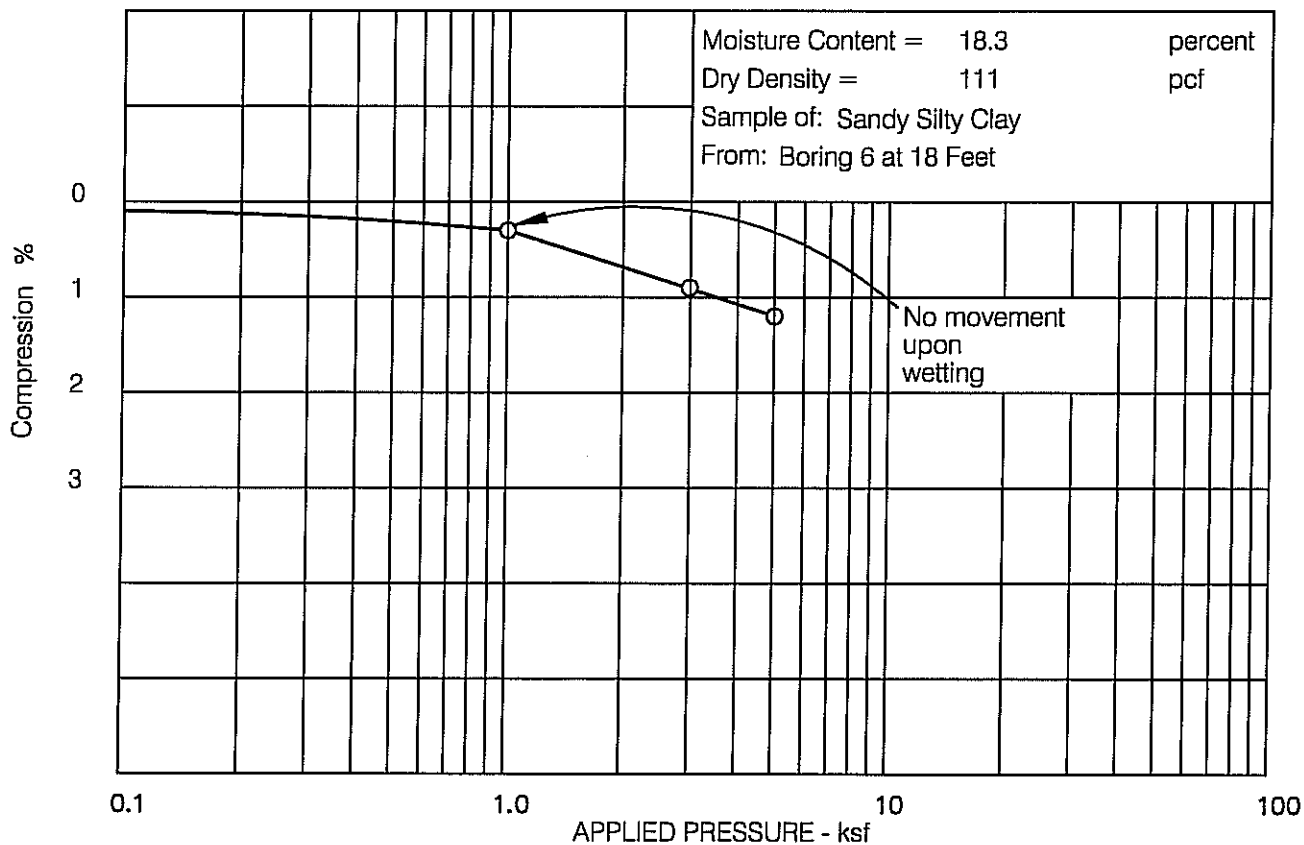
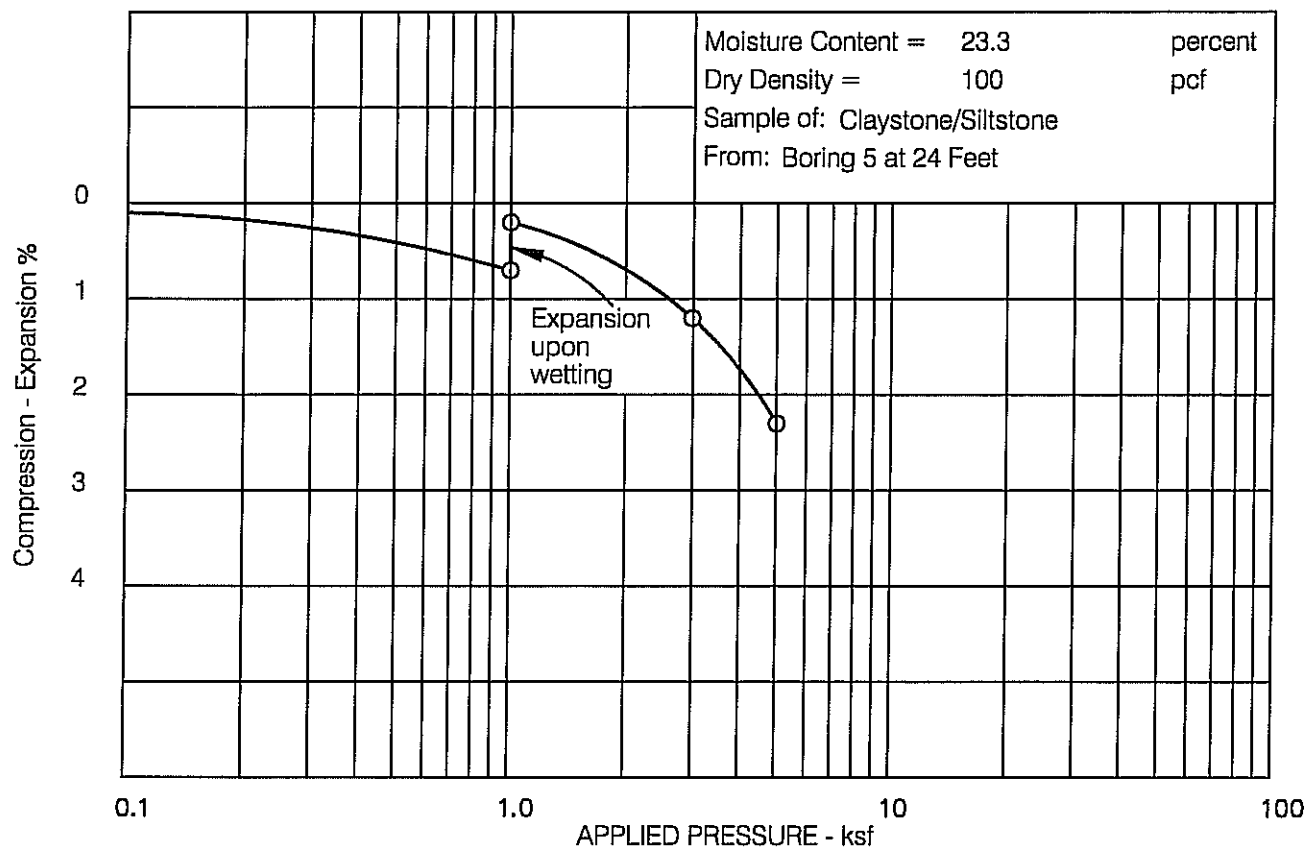


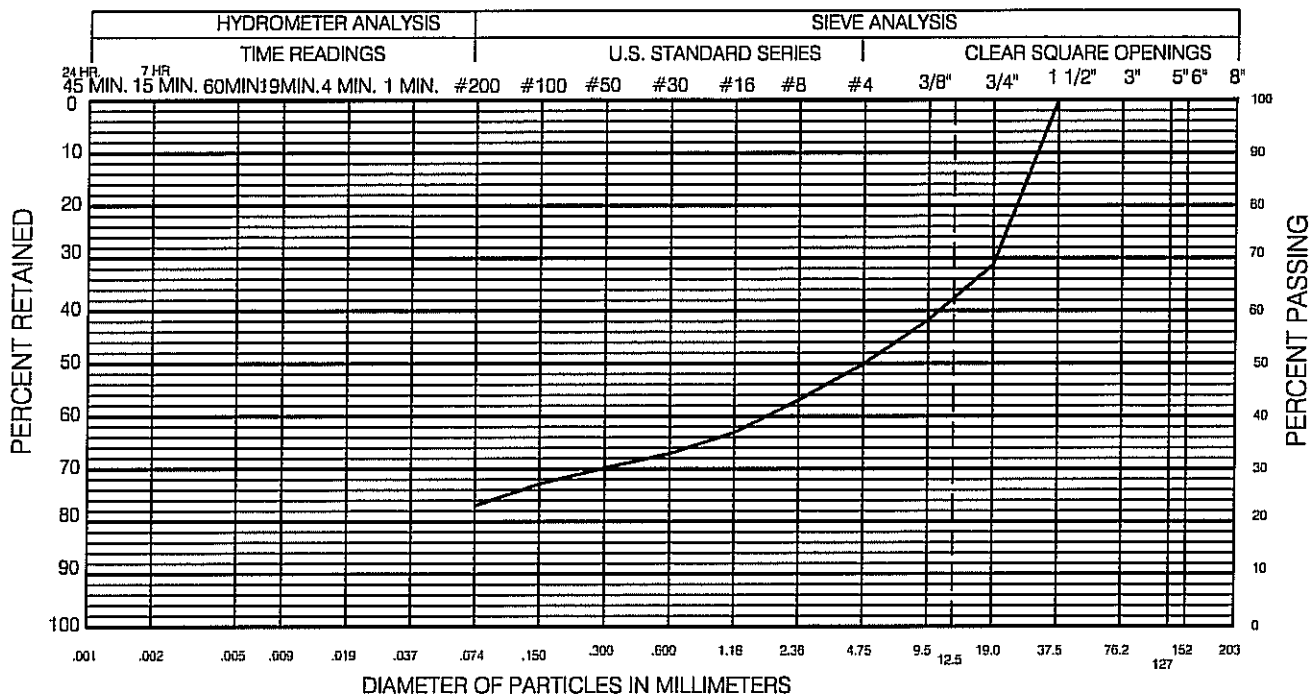
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SWELL-CONSOLIDATION TEST RESULTS

Figure 4



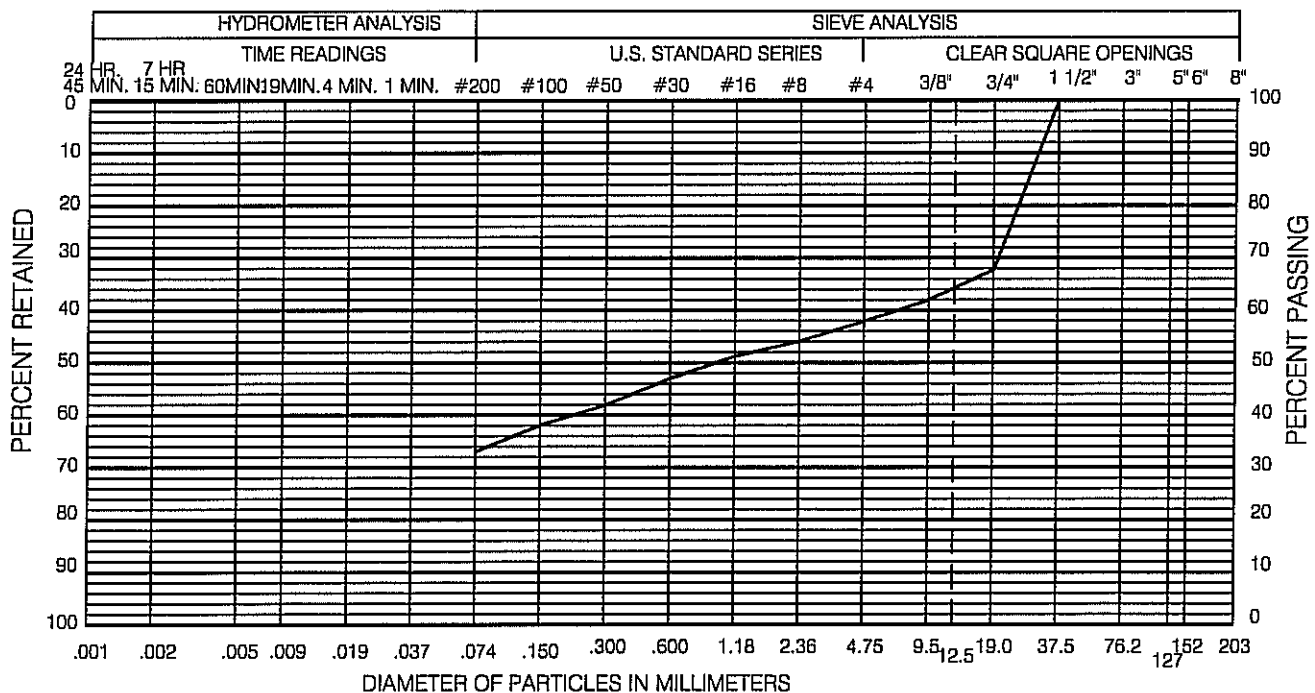


GRAVEL 50 % SAND 27 % SILT AND CLAY 23 %

LIQUID LIMIT % PLASTICITY INDEX %

SAMPLE OF: Silty Clayey Sandy Gravel

FROM: Boring 4 at 9 Feet



GRAVEL 42 % SAND 25 % SILT AND CLAY 33 %

LIQUID LIMIT % PLASTICITY INDEX %

SAMPLE OF: Silty Clayey Sandy Gravel

FROM: Boring 7 at 3 Feet

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GRADATION TEST RESULTS

Figure 6

TABLE 1
SUMMARY OF LABORATORY TEST RESULTS

SAMPLE LOCATION BORING	DEPTH (ft)	NATURAL MOISTURE CONTENT (%)	NATURAL DRY DENSITY (pcf)	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (PSF)	AASHTO CLASSIFICATION	SOIL OR BEDROCK TYPE
				GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTIC INDEX (%)			
1	2	9.5	97			59	27	8		A-4(2)	Very sandy silty clay
	9	11.1	110								Very sandy silty clay
2	4	8.2	102			52					Very sandy silty clay
3	2	4.7				38	27	8		A-4(0)	Very clayey silty sand
4	9	3.4		50	27	23					Silty clayey sandy gravel
	24	10.8				71					Sandy silty clay with shale fragments
5	9	8.6	92								Silty clayey sand matrix
	19	20.4				85	28	11			Sandy silty clay
	24	23.3	100								Claystone/siltstone
6	18	18.3	111						3900		Sandy silty clay
	23	11.4	121								Claystone/siltstone
7	3	5.5		42	25	33					Silty clayey sandy gravel

**Transportation Impact Analysis
for
435 Eby Creek Road
Eagle, Colorado**



April 13, 2022

PREPARED FOR:
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Project Number: M1561

Statement of Engineering Qualifications

Kari J. McDowell Schroeder, PE, PTOE is a Transportation and Traffic Engineer for McDowell Engineering, LLC. Ms. McDowell Schroeder has over twenty-five years of extensive traffic and transportation engineering experience. She has completed numerous transportation studies and roadway design projects throughout the State of Colorado. Ms. McDowell Schroeder is a licensed Professional Engineer in the State of Colorado and has her certification as a Professional Traffic Operations Engineer from the Institute of Transportation Engineers.

Transportation Impact Analysis

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1.0 Project Description

McDowell Engineering has prepared this Level Two Auxiliary Traffic Impact Study for the proposed residential development at 435 Eby Creek Road in Eagle, Colorado. The purpose of this transportation impact analysis is to forecast and analyze the impacts of the additional traffic volumes associated with the addition of the mixed-use development on the surrounding roadway network.

The development is located approximately 500 ft northwest of the Eby Creek Road / Market Street roundabout in Eagle, CO. The proposed development will be constructed on a single lot comprised of 2.8 acres. The lot is currently undeveloped. The project is proposing a total of 30 residential units consisting of (18) two-bedroom units, (12) one-bedroom units with 60 parking spots. The property is accessed directly by Eby Creek Road east of the project site. Recommendations to mitigate any traffic impacts are also included. The analysis complies with Town of Eagle standards.

The location of the proposed development is shown in the vicinity map in **Figure 1**.

Figure 1: Vicinity Map



The project is proposing one access located on the northeast corner of the parcel. The access will have direct connectivity to Eby Creek Road. The internal traffic is two-way. The proposed site plan is shown in **Figure 2**.

Figure 2: Site Plan



2.0 Existing Conditions

2.1 Road Network

Eby Creek Road is a two-lane, north-south, paved road through northern Eagle. Eby Creek Road contains five roundabouts. The analysis will defer to the *State Highway Access Code*¹ (*Access Code*) for turn lane criteria such as turn lane lengths, storage requirements, et cetera.

Eby Creek Road is owned by the Town of Eagle within the vicinity of the site and has an equivalent classification as a NR-B, Non-Rural Arterial. The posted speed limit is 35mph within the vicinity of the site.

2.2 Site Access Description

The intersection of Eby Creek Road and the proposed site access is located approximately 300 ft north of the Eby Creek Road & Pond Road intersection. The site access is proposed as two-way, paved, and stop controlled in the eastbound direction.

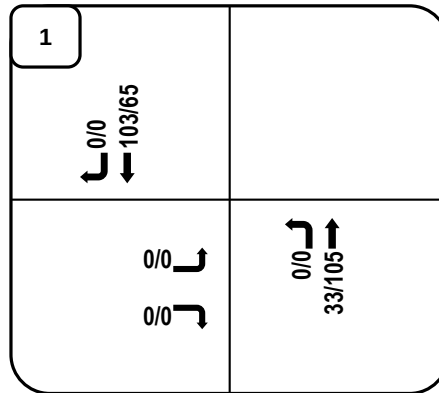
2.3 Existing Traffic Data

Eagle County² provides 24-hr data counts at various locations spread throughout Eagle County. There is a traffic count site just south of the project access containing 24-hr traffic count volumes from 2021. These 24-hr traffic counts can be found in **Figure 3**.

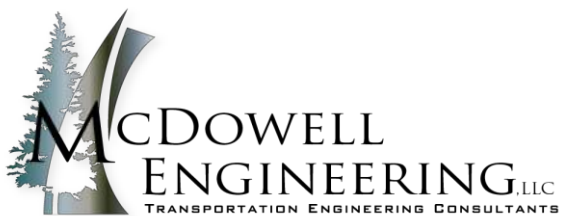
¹ *State Highway Access Code*. State of Colorado, 2002.

² <https://eaglecounty.maps.arcgis.com/apps/Solutions/s2.html?appid=ad3f9618355e47a6a0e0eabe5b73749e>; Eagle County, 2022.

Figure 3: Year 2021 Existing Traffic



*Eby Creek Road volumes were approximated from Eagle County's 2021 AADT data.



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:

Directional Distribution = Inbound% (Outbound %)

AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)

Turning Movements 

Project Number

M1561

Prepared By

EP

4/13/2022

3.0 Infrastructure Assumptions

3.1 Existing & Committed Capital Improvement Projects

The Town of Eagle is currently not planning for any capital improvement projects near the project vicinity.

3.2 Planned or Existing Land Development Projects

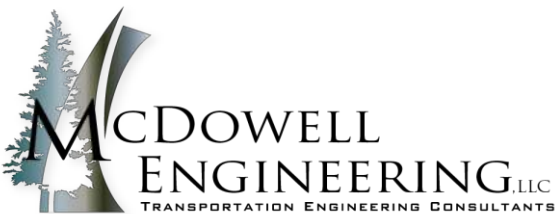
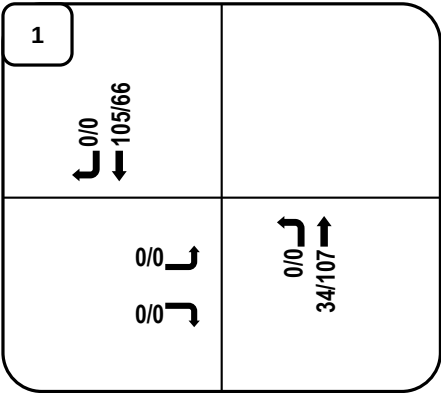
There is a 2.02-acre lot located approximately 800' south of the proposed development. This lot was previously a Burger King fast food restaurant. However, the lot was purchased in 2018 by North Eagle Investments LLC. At the time of this study, there has not been an approved new development at this lot. Therefore, the Town of Eagle does not have any adjacent land development projects underway that are anticipated to impact this analysis.

3.3 Background Traffic Growth

A traffic growth rate of 1% was used for the expected growth on Eby Creek Road. This growth rate was used due to Eby Creek Mesa being close to full buildout. A majority of the lots along Eby Creek Road north of the project site have already been developed. Therefore, there is very little expected growth on Eby Creek Road near the project vicinity.

Projected Year 2023 and 2045 background traffic can be seen in **Figure 4 and 5**.

Figure 4: Year 2023 Background Traffic

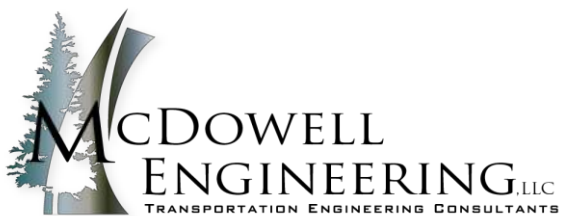
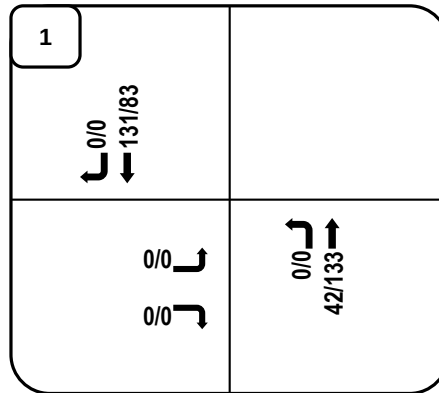


Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)
 Turning Movements

Project Number	M1561
Prepared By	EP
	4/13/2022

Figure 5: Year 2045 Background Traffic



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:

Directional Distribution = Inbound% (Outbound %)

AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)

Turning Movements 

Project Number

M1561

Prepared By

EP

4/13/2022

4.0 Project Traffic

4.1 Trip Generation

Existing: The existing lot currently vacant.

Proposed Residential Development: The Eby Creek development is proposed to be a residential development, with 30 multi-family dwelling units. This falls under one land use code per the Institute of Transportation Engineers' 11th *Edition of the Trip Generation Manual*³ (*Trip Generation Manual*), #220 Multifamily Housing (Low-Rise).

ITE's Trip Generation Manual Handbook calls for the fitted curve equations to be used for average weekday, morning peak hour, and afternoon peak hour traffic volumes. However, all the data points around the 30 dwelling unit point are very close to the average rate line. Therefore, the average rates for average weekday, morning peak hour, and afternoon peak hour were used instead of the fitted curve equations.

A 5% multimodal trip reduction was used when calculating the total number of vehicular trips. This reduction was used to accommodate the projected multimodal trips to the nearby schools and businesses.

A seasonal adjustment factor was not applied due to Eby Creek being a local commuter road within the vicinity of the project and not being affected by seasonal traffic growth.

Proposed New Trips: The project will generate an anticipated 192 additional trips on the average weekday from the existing land use. This includes 4 inbound and 10 outbound trips during the morning peak hour. The evening peak hour is expected to generate 10 inbound and 7 outbound trips

Refer to **Table 1** for trip generation calculations and further breakdown of these trips.

Table 1: Trip Generation Table

ITE Trip Generation Equation ³						Average Weekday	Morning Peak Hour Inbound		Morning Peak Hour Outbound		Evening Peak Hour Inbound		Evening Peak Hour Outbound	
ITE Code	Units ²		Eq. Coef	Avg. Weekday	AM Peak Hour	PM Peak Hour	Trips (VPD)	% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips
Proposed Land Use														
Eby Creek Residential														
#220 - Multifamily Housing (Low-Rise)	30	DU	Type a= b=	Rate 6.74	Rate 0.47	Rate 0.57	202	24%	4	76%	11	62%	11	38% 7
Multi-Modal Reduction	-5%						-10	0	-1	-1		-1		0
Proposed New Trips							192	4	10	10		10		7

Notes:

¹ Values obtained from *Trip Generation, 11th Edition*, Institute of Transportation Engineers, 2021.

² DU = Dwelling Units, kSF = 1,000 Square Feet

³ Fitted curve equations from ITE Land Uses - Equation Type A is $T = a * X + b$, Equation Type B is $\ln(T) = a * \ln(X) + b$, Rate is $T = a * X$

4.2 Trip Distribution

The anticipated arrival and departure routes of project-generated traffic is influenced by several factors including the following:

- The location of the site relative to other facilities and the roadway network
- The configuration of the existing and proposed adjacent roadway network
- Relative location of neighboring population centers

Directional Distribution: Based upon the proposed land use and the location of the project in relation to nearby population centers, one hundred percent (100%) of the site-generated traffic is anticipated to enter/exit the site from/to the south towards Eagle and zero percent (0%) is anticipated to enter/exit the site from/to the north towards Eby Creek Mesa.

Refer to **Figure 6** for directional distribution breakdowns.

4.3 Trip Assignment

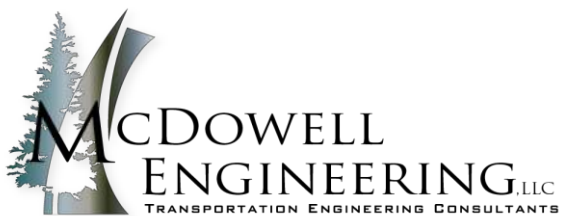
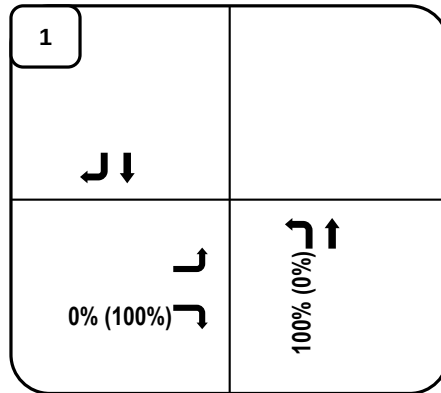
When the trip generation expected for this site is applied to the estimated trip distribution, the result is the anticipated assignment of trips on the roadway system. **Figure 7** depicts the new vehicle trips that are anticipated from the Eby Creek Residential project.

4.4 Total Traffic

The total traffic anticipated at each intersection is the sum of background traffic with the site-generated traffic.

For Year 2023, the background traffic (**Figure 4**) added to the site-generated traffic (**Figure 7**) yields the total Year 2023 traffic in **Figure 8**. For Year 2045, the background traffic (**Figure 5**) added to the site-generated traffic (**Figure 8**) yields the total Year 2045 traffic in **Figure 9**.

Figure 6: Year Project Generated Traffic Distribution Traffic



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:

Directional Distribution = Inbound% (Outbound %)

AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)

Turning Movements

Project Number

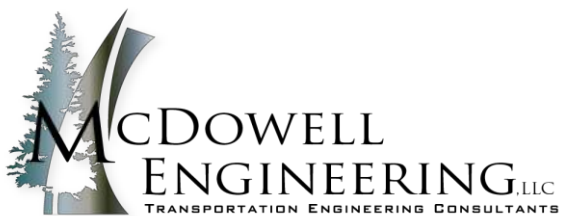
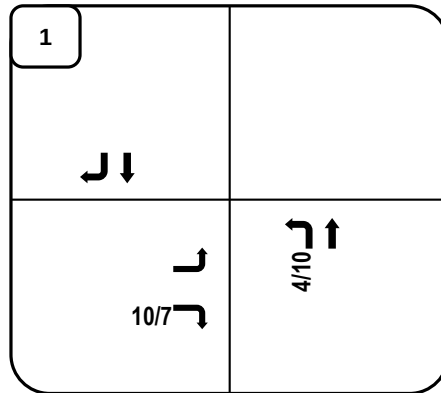
M1561

Prepared By

EP

4/13/2022

Figure 7: Year Project Generated Traffic Assignment Traffic



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:

Directional Distribution = Inbound% (Outbound %)

AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)

Turning Movements

Project Number

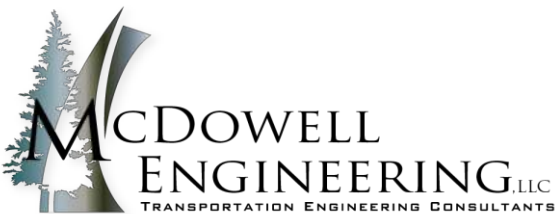
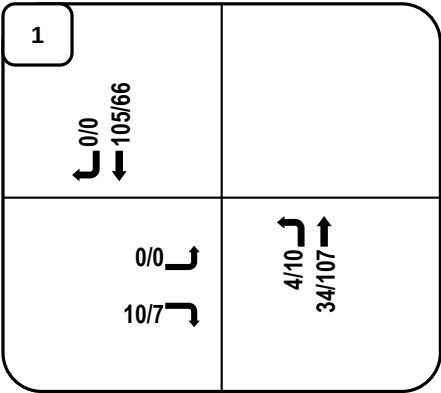
M1561

Prepared By

EP

4/13/2022

Figure 8: Year 2023 Total Traffic



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

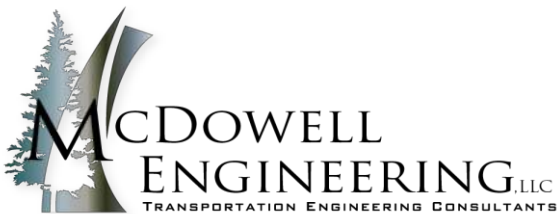
LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)
 Turning Movements


 Project Number M1561
 Prepared By EP
 4/13/2022

Figure 9: Year 2045 Total Traffic



1 0/0 131/83	
0/0 10/7	4/10 42/133



Eagle Eby Creek Multifamily Patriacca
Eagle, CO

LEGEND:
 Directional Distribution = Inbound% (Outbound %)
 AM/PM/SAT Volumes = XX/XX/XX VPH (in PCEs)
 Turning Movements

Project Number	M1561
Prepared By	EP
	4/13/2022

5.0 Traffic Analysis

5.1 Site Access and Circulation Evaluation

As seen in **Figure 2**, the conceptual site plan, the proposed project will have one access with direct connectivity to Eby Creek Road. The site access is located on the northeast corner of the lot. The site access is proposed as two-way, paved, and stop controlled in the eastbound direction.

Access spacing is determined by **Section 4.4** of the *Access Code*. The posted speed limit at the site access is 35 mph, with minimum access spacing of 250'. The properties located to the north and south of the project both have accesses at distances greater than 250'.

5.2 Site Accesses Sight Distance

Sight distance is determined by **Section 4.3** of the *Access Code*.

For a two-lane roadway with a speed limit of 35mph, the minimum sight distance along the highway is 250'. The site access has over 250' of sight distance in either direction; therefore, the site access exceeds the 250' minimum sight distance.

For a two-lane roadway with a speed limit of 35mph, the minimum entering sight distance is the 350'. The site access has over 350' in either direction, therefore, the site access exceeds the 350' minimum sight distance.

The minimum sight distance along the highway and minimum entering sight distance are met for the proposed project access.

5.3 Auxiliary Turn Lane Analysis

The *Access Code* establishes the need for auxiliary turn lanes on Colorado's highway network. Several criteria apply when determining the traffic volume thresholds such as highway classification, posted speed limit, turning traffic volumes, and safety/operations. Eby Creek Road is a local roadway. The analysis defers to the *Access Code* for turn lane criteria such as turn lane lengths, storage requirements, et cetera. Eby Creek Road has an equivalent classification as an NR-B, Non-Rural Arterial.

Based upon the categorization of Eby Creek Road as an NR-A, non-rural arterial and posted speed limit of 35mph, Section 3.11(4) of the *Access Code* requires auxiliary turn lanes for certain turning movement volumes. Auxiliary turn lanes are required on Eby Creek Road for more than 50vph making a right turn movement and 25vph making a left turn movement. Acceleration lanes are only required for specifically identified and documented safety and operations reasons.

Table 2 summarizes the Auxiliary Turn Lane Requirements for the site access according to the *Access Code*.

Table 2: Auxiliary Turn Lane Requirements

#	Int.	Movement	Accel or Decel	Posted Speed Limit (MPH)	Road Classification	SHAC Trigger Volume (VPH)	Year 2021 Existing		Year 2023 BG		Year 2045 BG		Year 2023 Total		Year 2045 Total		Existing Turn Lane	Access Code Required Turn Lane	Trigger Year & Condition
							A	PM	A	PM	A	PM	A	PM	A	PM			
1	Eby Creek Road & Site Access	EBL	Dec	20	NR-B	> 25	0	0	0	0	0	0	0	0	0	0	None	N/A	Does Not Trigger
		EBR	Dec	20	NR-B	> 50	0	0	0	0	0	0	10	7	10	7	None	N/A	Does Not Trigger
		NBL	Dec	35	NR-B	> 25	0	0	0	0	0	0	4	10	4	10	None	N/A	Does Not Trigger
		SBR	Dec	35	NR-B	> 50	0	0	0	0	0	0	0	0	0	0	None	N/A	Does Not Trigger

¹Based upon *State Highway Access Code* requirements for an NR-B roadway with posted speed of 20 or 35 mph.

 Triggered by State Highway Access Code Volumes

 Triggered by State Highway Access Code Safety and Operations

As seen from **Table 2**, the Eby Creek Residential development does not trigger any acceleration or deceleration lanes with current and future forecasted traffic volumes.

5.4 Multimodal Access

An onsite visit was performed. Several bicyclists were observed riding along Eby Creek Road. Several pedestrians were also observed going out for a walk along Eby Creek Road. It is recommended that the Eby Creek Residential development build a sidewalk along the frontage of the property since the development is near several local businesses, restaurants, and grocery stores. This would allow the residents a safe route along Eby Creek Road.

6.0 Summary and Recommendations

The proposed Eby Creek Residential development will be constructed on 1 lot comprised of 2.8 acres total. The lot is currently vacant. The project is proposing a total of 30 residential units consisting of (18) two-bedroom units, (12) one-bedroom units with 60 parking spots. The property is accessed directly by Eby Creek Road east of the project site.

Trip Generation: The multifamily residential project is anticipated to generate 192 vehicle trips per day (vpd) on the average weekday. Peak hour traffic on a weekday at project buildout is anticipated to be 14 vehicles per hour (vph) during the morning peak hour (4 inbound + 10 outbound) and 17 vph during the evening peak hour (10 inbound + 7 outbound).

Turn Lane Analysis: The traffic volumes generated by the site do not trigger any deceleration or acceleration turn lanes.

Based upon the analysis presented in this report, the proposed Eby Creek Residential project is anticipated to be successfully incorporated into the existing roadway network.

7.0 Appendix

7.1 Reference Documents

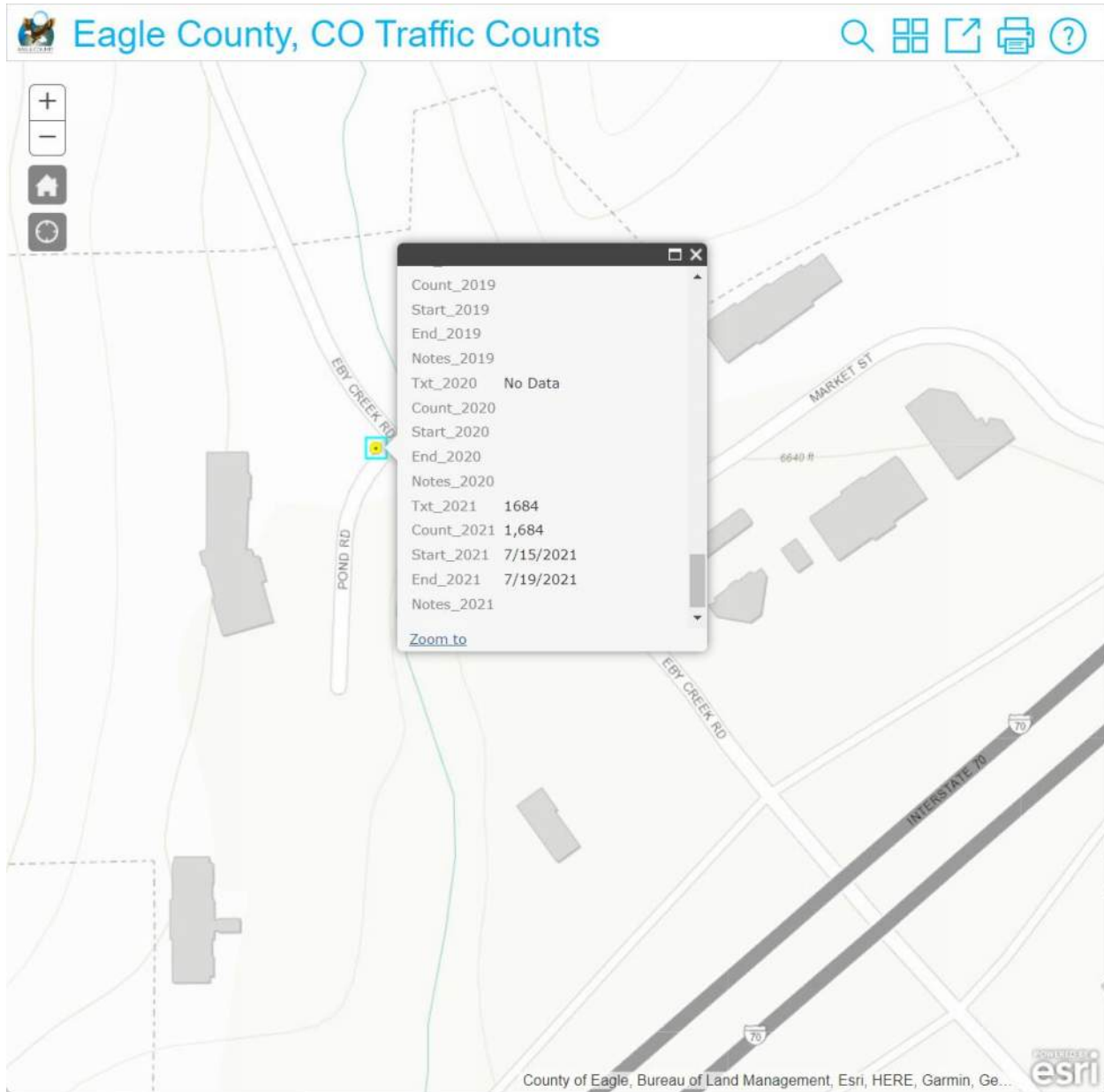
1. *State Highway Access Code*. State of Colorado, 2002.
2. <https://eaglecounty.maps.arcgis.com/apps/Solutions/s2.html?appid=ad3f9618355e47a6a0e0eabe5b73749e>; Eagle County, 2022.
3. *Trip Generation Manual, 11th Edition*. Institute of Transportation Engineers, 2021.

7.2 Included Documents

1. Traffic counts from:
<https://eaglecounty.maps.arcgis.com/apps/Solutions/s2.html?appid=ad3f9618355e47a6a0e0eabe5b73749e>

Traffic Counts

From: <https://eaglecounty.maps.arcgis.com/apps/Solutions/s2.html?appid=ad3f9618355e47a6a0e0eabe5b73749e>





To: Planning Commission

From: Peyton Heitzman, Planner, Community Development

Date: July 5, 2022

Re: Determination of Adequacy

The request is for a development permit a 30-unit apartment building to be completed in one phase. Public facilities impacted include fire protection services, emergency medical services, public schools, and street facilities. The Applicant has provided a Public Facilities Impact Report (PFIR) with their application, which is attached to this memo. The purpose of the PFIR is to ensure that there are adequate public facilities to serve the development and that the Town's level of service standards be maintained at the level adopted by the Town.

Per Section 4.14.050, staff must evaluate the proposed development and provide a recommendation as to whether existing (or proposed) public facilities will meet the needs of the community and future residents of the new development. An analysis of each public facility, followed by staff's determination of adequacy, can be found below.

Public Schools - Section 4.14.110

Existing school facilities are intended to serve the residents in the development and that no additional school facilities will be required for the number of students that will be served by the building. Level of service is defined as a set of guidelines in the Code and is measured by the number of students per classroom per grade level. The guidelines are established by the county school district when economically feasible. Maximum and average classroom sizes are dependent upon a number of factors and are subject to change over time. Eagle County School District (ECSD) was a referral agency to this application and did not share concerns that this development would significantly impact the level of service in local classrooms.

The development is subject to the School Land Dedication. The Applicant has opted to pay the fee in lieu of land dedication totaling \$22,875.70. The purpose of the dedication requirement is to offset the school needs generated by the proposed residential uses.

Based on the information provided by the ECSD and the Applicant, staff believes the capacity of existing public-school facilities will be able to accommodate the proposed development.

Fire Protection Services – Section 4.14.120

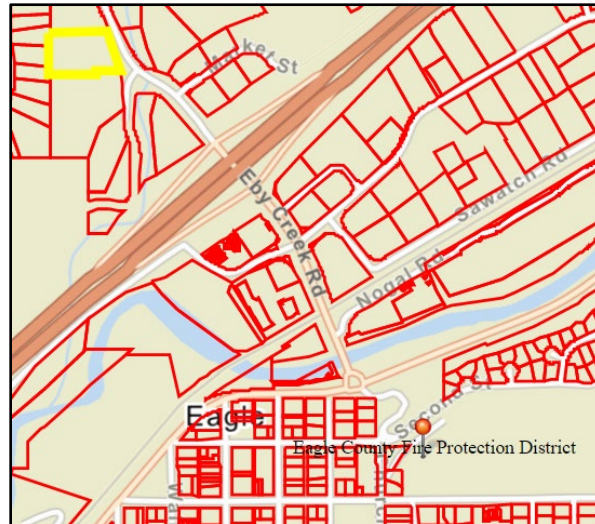
The new development will be serviced by the existing Greater Eagle Fire Protection District Fire Station located at 425 E Third Street. The Municipal Code defines level of service for fire protection services. The standard and the Applicant's response are provided below. The analysis was developed in coordination with the Fire District. Based on the responses provided, staff believes existing public facilities and new public improvements (fire hydrants) have the capacity to serve the new development and meet the Town's level of service standards.

Provide first response basic life support (BLS) and automatic external defibrillation (AED) in under six minutes for 90 percent of all calls requiring emergency medical assistance within the Town.

Applicant Response: Ambulance District is located across the street from the project site. This response time will be met.

Provide rescue services within eight minutes for 90 percent calls within the Town.

Applicant Response: The 3rd Street Fire Station is located 0.8 miles from the property. The anticipated response time is less than 8 minutes.



Capability of providing adequate fire flows. These flows represent performance standards for the Greater Eagle Fire Protection District using only its firefighting apparatus and equipment. They do not replace the flow requirements set forth in the fire code, as adopted by the Greater Eagle Fire Protection District. The fire flow requirements set forth in such fire code anticipate the need for additional resources (mutual aid) and are based upon fire loading for particular occupancies.

- a. 250 GPM initial attack flow within two minutes of arrival for 90 percent of all fires.*
- b. 250 GPM sustained flow within five minutes of arrival for 90 percent of all fires.*
- c. 500 GPM sustained flow within eight minutes of arrival for 80 percent of all structure fires.*
- d. 1,000 GPM sustained flow within five minutes of arrival for all areas within 1,000 feet of a fire hydrant.*
- e. 3,500 GPM sustained flow within 15 minutes of arrival for hydranted areas.*

Applicant Response: Developer and Architect have met with GEFPD Fire Marshall (Randy Cohen) to evaluate the site design, building design, and site fire hydrant layouts. The Civil Plan sheet C5.0 illustrates the addition of (2) fire hydrants to the property. These were added and located at the direction of Mr. Cohen.

Flow rates were obtained from the Town of Eagle Public Works for a nearby property, which showed a flow rate of 1060 GPM from the single hydrant. While it is the expectation from all of the involved parties that the above Fire Flow Rates will be met without any issue, the exact flow rates for the newly added fire hydrants will not be available until after the hydrants have been installed and tested. If there is not adequate flow at these hydrants, then additional apparatus will need to be considered (i.e. fire pumps, storage tank, etc.).

Consistent and adequate emergency dispatching services is maintained.

Applicant Response: No reason to believe this project would impact emergency dispatching services.

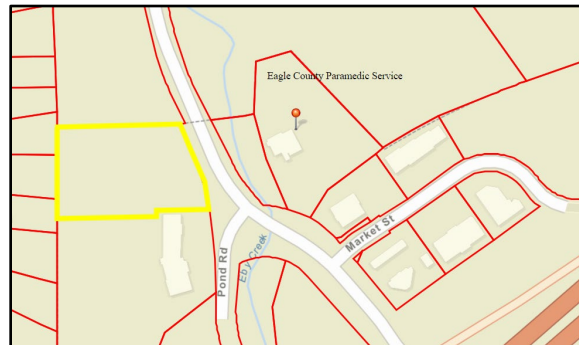
Approval of the proposed subdivision, development or special use will not increase (worsen) the Greater Eagle Fire Protection District's insurance services organization (I.S.O.) fire protection class rating.

Applicant Response: No reason to believe this property could increase GEFPD's ISO class rating.



Emergency Medical Services - Section 4.14.130

Existing emergency medical services are anticipated to serve this development. Level of service is defined by response time of the Eagle County Paramedic Services. Eagle County Paramedic Services has a facility across the street from the proposed development. Due to the proximity, staff believes level of service standards will be achieved through existing facilities. The application was shared with Eagle County Paramedic Services for review. No concerns were shared with Town staff.



Street Facilities – Section 4.14.140

The development will be accessed from Eby Creek Road. The Applicant has provided a traffic impact study (TIS) that evaluates the development's impact on existing street facilities. On page 7 of the TIS provides existing traffic along Eby Creek Road which, at peak times, is just over 100 vehicles per hour (vph). The anticipated increased trip generation (page 19) anticipates 192 vehicle trips per day or 14 vph in the morning and 17 vph in the evening. Recommendations from the TIS include a sidewalk for multi-modal transportation, which has been included in the proposal. The TIS does not recommend other improvements to Eby Creek Road such as deceleration or acceleration turn lanes.

Staff believes existing street facilities, with the new sidewalk, will meet the community's level of service standards.

Staff Recommendation - Summary of Impact/Capacity of Public Facility

Based on the information provided by the Applicant, staff does not anticipate negative impacts and/or a decreased level of service based on the proposal. Existing public facilities should have the capacity to service the proposed development.

Chad Phillips, Town Planner
Town of Eagle
P.O. Box 609
Eagle, Colorado 81631

Subject: 435 Eby Creek Road (Perry Subdivision Lot 3)
Public Facilities Impact Report and Water Demand Analysis

Chad:

Son Ray LLC has contracted Yarnell Consulting & Civil Design, LLC (YCCD) to design the grading, drainage, and utility elements of the proposed 30-unit apartment building on Lot 3 with associated landscaping, parking, and utilities. This letter is intended to address the requirement of a "Public Facilities Impact Report" and "Water Demand Report" for the proposed Development Permit.

Sanitary Sewer

The proposed project will receive sanitary sewer service from an existing, public sanitary sewer system adjacent to the site. The apartment building will be served by new private 6" sewer service line tying into the existing 8" sewer service main within the Eby Creek Road right-of-way.

Downstream system limitations have not been disclosed to Son Ray LLC; therefore, it is assumed that this building will not adversely impact the existing system beyond its designed capacity.

Potable Water System

The proposed project will receive potable water service from an existing, public water main located in the Eby Creek Road right of way – east of the proposed building. Available pressures and volumes within the system are unknown but assumed to be adequate for providing domestic and fire suppression water service to the proposed building.

The private water service line is anticipated to be a 6" DIP running from the existing main line all the way into the building.

The fixture unit count for this project has been tabulated by SRD Plumbing. The calculations are attached to this letter.

Streets

The proposed development does not include any new street facilities, but will utilize the existing Eby Creek Road. The development will connect to this road with a private driveway that connects to a parking lot for the residential units. A Traffic Study performed by McDowell Engineering is attached to this application. Per this report, the development is anticipated to be successfully incorporated into the existing roadway network.

Schools

According to Son Ray LLC, this project is anticipated to have minimal impact on the school system. This development does contain residential units. The number of units, unit types, and unit sizes can be found on sheet A2.2. This information can be used by the school district to estimate the number of school-aged children that are expected to be generated by the development.

Emergency Service

According to Son Ray LLC, the Ambulance facility is less than ½ mile away.

Fire

According to Son Ray LLC, the fire department is less than 1 mile away.

Summary

In summary, the proposed development of Lot 3 will have minimal impact on the existing, public infrastructure and schools, while adequate emergency and fire service appears to be available to serve the project.

Please let know if you have any further questions regarding this letter.

Sincerely,

Justin J. Yarnell, PE
Colorado PE Number 47241

Attachment(s):

1. Plumbing fixture counts

C.

Except as otherwise provided in this section, the following level of service (LOS) standards shall apply:

1. The provisions of the current fire code, building code and any other duly adopted code, statute, ordinance, or standard related to fire protection are being met; or approved, enforceable, equivalent protection or mitigation efforts are undertaken.
2. Adequate response times will be maintained if the new development is approved. Response times will adhere to the following except as indicated below:

- a. Provide first response basic life support (BLS) and automatic external defibrillation (AED) in under six minutes for 90 percent of all calls requiring emergency medical assistance within the Town. Ambulance District is located across the street from the project site. This response time will be met.

- b. Provide rescue services within eight minutes for 90 percent calls within the Town. The 3rd Street Fire Station is located 0.8 miles from the property. The anticipated response time is less than 8 minutes.

- c. The response time requirement for fire response only may be waived at the option of the Town Council in consultation with the Greater Eagle Fire Protection District if approved, built-in, automatic fire protection systems are installed and maintained in all improvements (occupancies). N/A

3. Capability of providing adequate fire flows. These flows represent performance standards for the Greater Eagle Fire Protection District using only its firefighting apparatus and equipment. They do not replace the flow requirements set forth in the fire code, as adopted by the Greater Eagle Fire Protection District. The fire flow requirements set forth in such fire code anticipate the need for additional resources (mutual aid) and are based upon fire loading for particular occupancies.

- a. 250 GPM initial attack flow within two minutes of arrival for 90 percent of all fires.
 - b. 250 GPM sustained flow within five minutes of arrival for 90 percent of all fires.
 - c. 500 GPM sustained flow within eight minutes of arrival for 80 percent of all structure fires.
 - d. 1,000 GPM sustained flow within five minutes of arrival for all areas within 1,000 feet of a fire hydrant.
 - e. 3,500 GPM sustained flow within 15 minutes of arrival for hydranted areas.

Developer and Architect have met with GEFPD Fire Marshall (Randy Cohen) to evaluate the site design, building design, and site fire hydrant layouts. The Civil Plan sheet C5.0 illustrates the addition of (2) fire hydrants to the property. These were added and located at the direction of Mr. Cohen.

Flow rates were obtained from the Town of Eagle Public Works for a nearby property, which showed a flow rate of 1060 GPM from the single hydrant. While it is the expectation from all of the involved parties that the above Fire Flow Rates will be met without any issue, the exact flow rates for the newly added fire hydrants will not be available until after the hydrants have been installed and tested. If there is not adequate flow at these hydrants, then additional apparatus will need to be considered (i.e. fire pumps, storage tank, etc.).

4. Consistent and adequate emergency dispatching services is maintained. **No reason to believe this project would impact emergency dispatching services.**

5. Approval of the proposed subdivision, development or special use will not increase (worsen) the Greater Eagle Fire Protection District's insurance services organization (I.S.O.) fire protection class rating. **No reason to believe this property could increase GEFPD's ISO class rating.**



TOWN OF EAGLE

Hydrant Flow Test Report

Location: 103 Market Date: 3.16.2022

Test Made By: Dan McFadden Time: 1430

Representative of: Town of Eagle

Witness: Konur Berge

Purpose of Test: Development Design

Consumption rate during test: _____

If pumps affect test, indicate pumps operating: _____

Flow Hydrants: 138

Nozzle Size: 2.5" Pollard Swivel Piezo Diffuser

Pitot Reading: 1060 GPM

Dischare Coefficient: 1060 total GPM

GPM: 1060

Static B: 68 psi Residual B: 25 psi

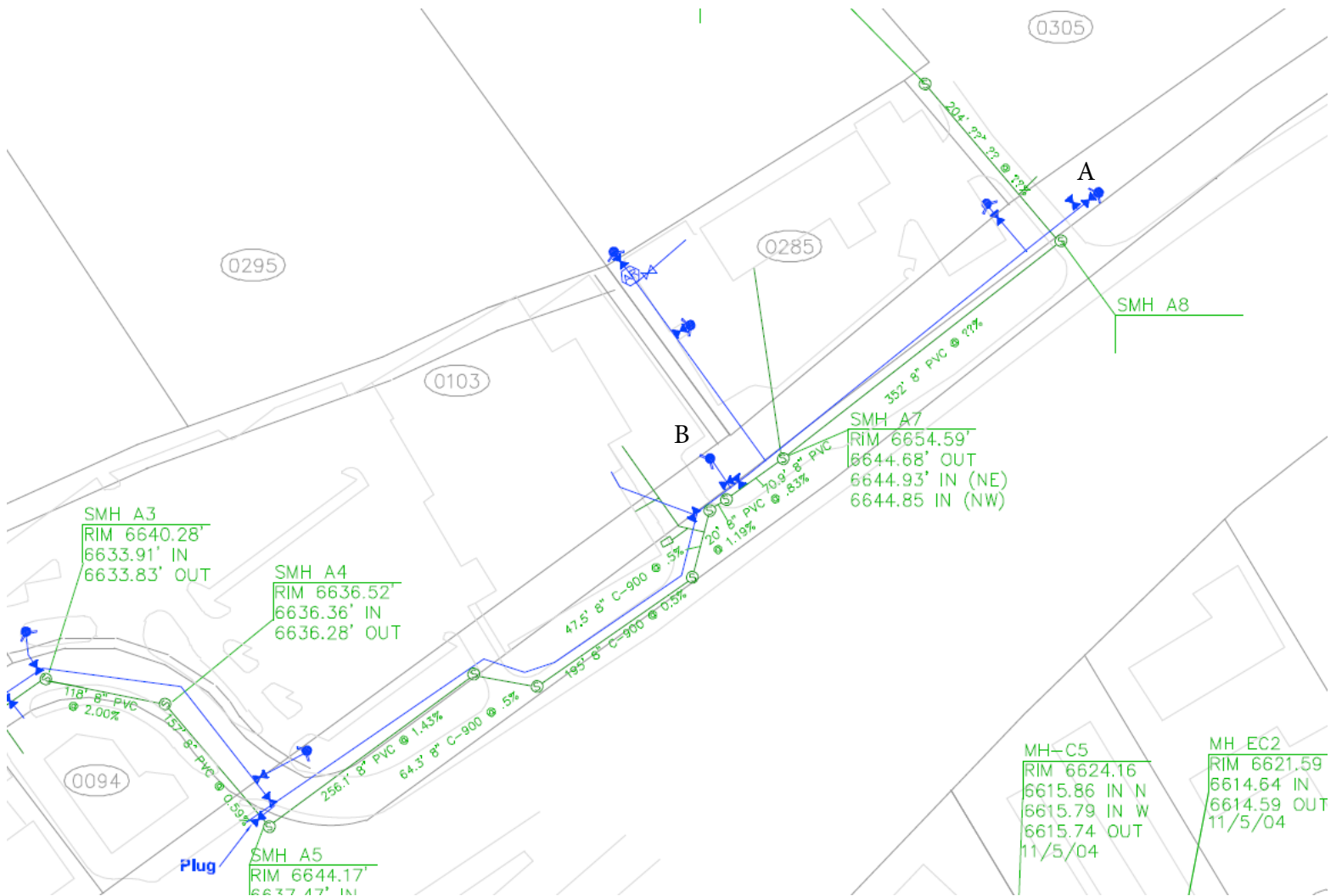
Projected results @ 20psi residual: _____ gpm;

or @ _____ psi residual _____ gpm

Remarks:

Location Map: Show lines sizes and distances to next cross connected line. Show values and hydrant branch size. Indicate North. Show flowing hydrants - Label A1, A2, A3, A4. Show location of static & residual - Label B

Indicate B Hydrant: # 141 Sprinkler _____ Other _____



Peyton Heitzman

From: Jeri Powles <powles1974@gmail.com>
Sent: Thursday, June 30, 2022 1:33 PM
To: Peyton Heitzman
Subject: Public hearing July 5 2022

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Peyton

--I am having trouble with your web page link to join the meeting on July 5.

I do have some concerns as I would like to see this housing be exclusively for teachers, hospital workers, municipal workers and long term employees

Sincerely

* *

Jeri Powles

C-970-445-7242

*O/H 970-328-9398** *

This transmission is intended only for the person(s) named above. The information contained in this transmission may contain privileged and confidential information.

It is intended only for review and/or use by the person(s) named above. If you are not the intended recipient, you are hereby notified that any review, dissemination, distribution or duplication of this communication is strictly prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.



To: Planning & Zoning Commission

From: Peyton Heitzman, Planner, Community Development Department,
peyton.heizman@townofeagle.org

Date: July 5, 2022

Agenda Item: Code Amendment to Section 4.12.040. – Lot line adjustments.

REQUEST:

Update to Section 4.12.040. amending the review and approval process for lot line adjustments (LLA), including the vacation of interior lot lines (lot consolidation).

INTRODUCTION:

When a property owner wants to adjust or vacate a lot line and the resulting parcel remains substantially unchanged, a lot line adjustment is required. The existing review and approval process for lot line adjustments can be found in [Section 4.12.040](#). The existing process includes a pre-application meeting, Planning Commission and Town Council public hearings, and the recording of the final subdivision plat that complies with the requirements in [Section 4.12.020.C](#) of the Municipal Code (Code).

Staff has received feedback from various members of the community, suggesting that the lot line adjustment process is too time intensive and burdensome. With this feedback in mind, staff is presenting an amendment that will make lot line adjustments administrative.

The amendment allows staff to approve lot line adjustments without the public hearing process. A final plat will still be required for recording. The amendment provides one exemption to the final plat requirement. If the lot line adjustment is within the original Town plat with the historic 25' X 50' lots, no platting will be required.

This amendment is being presented ahead of the land use code update due to an uptick in redevelopment in old town Eagle, a change in policy at the state level that has resulted in an increased number of LLA applications, and feedback from the community that an amended review process is a pressing need.

ANALYSIS:

While the amendment allows for approval at the staff level, there are several conditions that must be met prior to staff signing off on any lot line adjustment application. These conditions include:

1. All required public improvements have been installed and approved.
2. All parcels created meet the minimum standards required by this Code and other applicable regulations.
3. The lot line adjustment does not adversely affect the character of the neighborhood or create other adverse impacts.
4. The lot line adjustment does not result in density that exceeds the allowed density of the original subdivision.

5. A final plat is prepared for filing showing all changes. Following approval, the final plat is recorded with Eagle County.
6. In the case of a lot line vacation, the applicant owns both parcels.

In the case of lots within the original Town plat, there are other conditions that must be met for the platting exemption to apply. These conditions include:

1. The applicant owns three (3) adjacent lots that could not be built on individually in compliance with this Code.
2. All lots were platted in 1905 as part of the original plat of the Town.
3. The lots are zoned residential and the proposed improvements will comply with all applicable requirements of this Code if the three (3) lots are treated as one (1) lot.
4. The applicant executes an agreement, in a form approved by the Town and to be recorded against both lots, waiving any rights to sell either of the lots separately.

The Town has processed several lot consolidation applications in the past few months. These applications have included conditions of approval including the removal of secondary taps for water and wastewater as well as the verification of existing utilities when easements are abandoned. While not specifically listed as conditions in the amendment, staff will continue to uphold to the same standards applied to previous approvals that have gone through the public hearing process.

Elevate Eagle Comprehensive Plan (2021 Amendment)

Staff reviewed the code amendment against the 2021 Amended Elevate Eagle Comprehensive Plan (Comprehensive Plan). Relevant policies from the Comprehensive Plan include:

- *Policy 2-1.10. Encourage, where appropriate, increased density near the Downtown core.*

Staff Comment: This amendment will create a more efficient process for development in old town Eagle.

COMMUNITY INPUT:

None.

RECOMMENDED ACTION OR PROPOSED MOTION:

Staff recommends the Planning & Zoning Commission **APPROVE** the recommendation to amend the review and approval process for Section 4.12.040. Lot line Adjustments.

ATTACHMENTS:

- Ordinance No. 13, Series 2022

TOWN OF EAGLE, COLORADO
ORDINANCE NO. 13
(Series of 2022)

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF EAGLE, COLORADO
REPEALING AND REENACTING SECTION 4.12.040 OF THE EAGLE MUNICIPAL CODE,
REGARDING LOT LINE ADJUSTMENTS

NOW BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF EAGLE, COLORADO AS
FOLLOWS:

Section 1. Section 4.12.040 of the Eagle Municipal Code is hereby repealed in its
entirety and reenacted as follows:

Section 4.12.040 – Lot line adjustments.

A. *Purpose.* This purpose of this Section is to allow for the administrative
approval of lot line adjustments, including vacation of interior lot lines.

B. *Submittal requirements.* The applicant shall submit an application
complying with the final subdivision plat requirements of Section 4.12.020(C), and
a final plat showing all proposed adjustments to the lot lines.

C. *Staff review and decision.* The Town Planner shall administratively
approve a lot line adjustment when all of the following conditions are met:

1. All of the required public improvements have been installed and
approved;
2. All parcels created meet the minimum standards required by the
this Code and other applicable regulations;
3. The lot line adjustment does not adversely affect the character of
the neighborhood or create other adverse impacts;
4. The lot line adjustment does not result in density that exceeds the
allowed density of the original subdivision;
5. A final plat is prepared for filing showing all changes; and
6. In the case of a lot line vacation, the applicant owns both parcels.

D. *Recording required.* Following administrative approval, the applicant shall
record the approved plat with Eagle County at the applicant's expense.

E. *Lots within the original Town plat.* A lot line adjustment shall not be required if all of the following conditions exist:

1. The applicant owns three (3) adjacent lots that could not be built on individually in compliance with this Title
2. All lots were platted in 1905 as part of the original plat of the Town;
3. The lots are zoned residential and the proposed improvements will comply with all applicable requirements of this Title if the three (3) lots are treated as one (1) lot; and
4. The applicant executes an agreement, in a form approved by the Town and to be recorded against both lots, waiving any rights to sell any of the lots separately.

Section 2. Severability. If any article, section, paragraph, sentence, clause, or phrase of this Ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this Ordinance. The Town Council hereby declares that it would have passed this Ordinance and each part or parts hereof irrespective of the fact that any one, or part, or parts be declared unconstitutional or invalid.

Section 3. Safety. This Ordinance is deemed necessary for the protection of the public health, safety and welfare.

INTRODUCED, READ, PASSED, ADOPTED AND ORDERED PUBLISHED ON JULY 12, 2022.

TOWN OF EAGLE, COLORADO

Scott Turnipseed, Mayor

ATTEST:

Jenny Rakow, Town Clerk