PLANNING COMMISSION
STAFF REPORT

January 18, 2024

AGENDA ITEM:	Planning File No. MAJ-23-0008: A final review of a Major Site Plan Application for a residential townhome development located at 400 Granite Street.
LOCATION:	400 Granite Street / Lots 11 and 12, Block 19 Frisco Town Sub
ZONING:	Residential High Density (RH)
APPLICANT:	Abigail Ploen, Ploen Haus
OWNER:	MACATR LLC 8360 W 48th Ave Wheat Ridge, CO 80033-3121
TOWN STAFF:	Sally Ward, Planner I SallyW@TownofFrisco.com (970) 668-9131

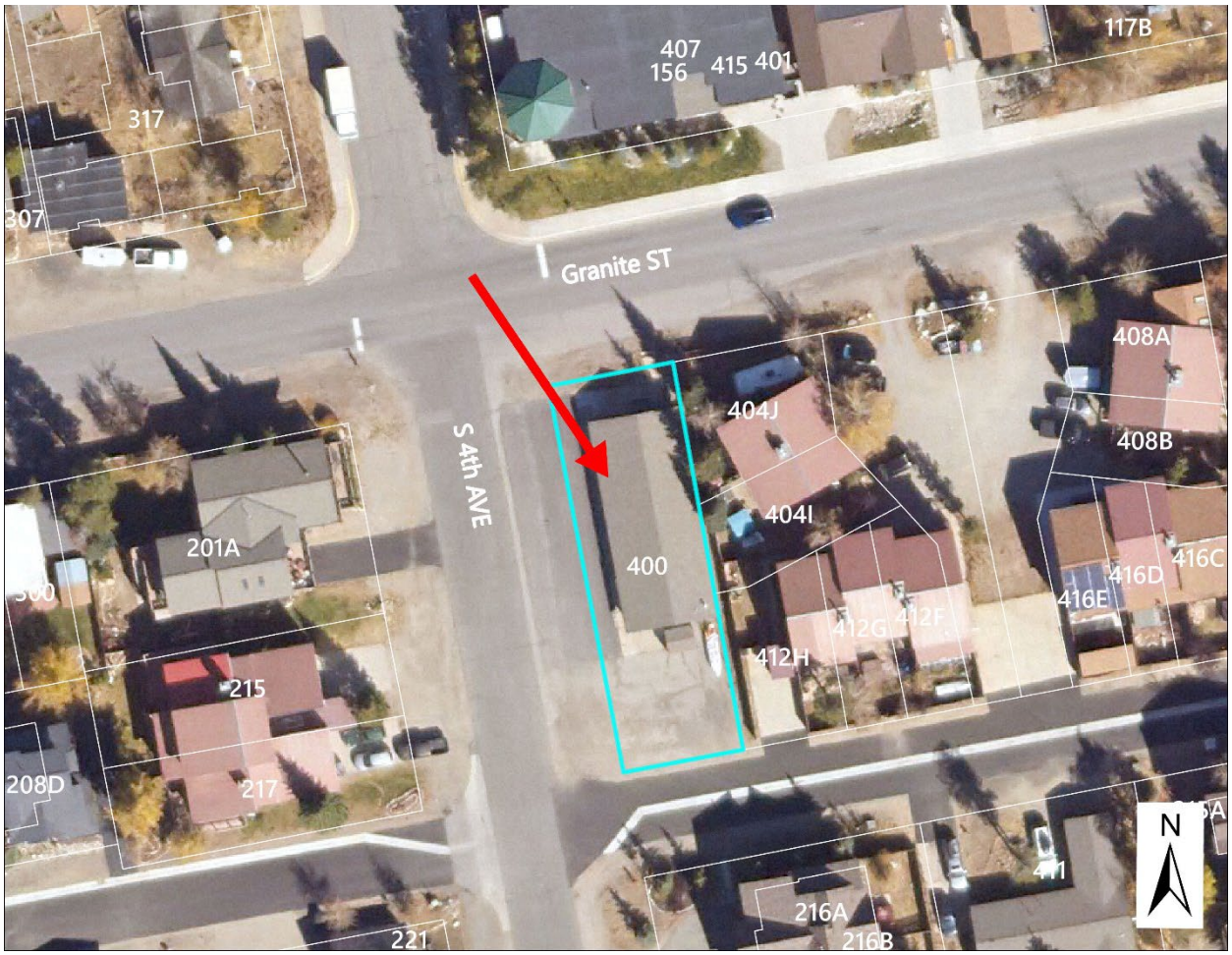
PROJECT DESCRIPTION

The applicant is proposing a new multifamily townhome development located at 400 Granite Street. The proposed development consists of three (3) 3-bedroom units.

BACKGROUND

The subject property is located on the southeast corner of Granite Street and S. 4th Avenue. The site is zoned Residential High (RH) Density with the properties to the east, west, and south also zoned RH and Central Core (CC) properties to the north. A single-family residence and a duplex property are to the west, and the Aspen Square Townhome development is to the east.

Before Frisco zoning districts were established, the building on site was utilized as the Frisco Post Office. In 1993, a variance was granted by the Planning Commission to allow an extension of a non-conforming use and a change in use to become a dance school. The existing site consists of a single-story commercial property, which was formerly the Summit School of Dance. The building is not currently occupied by a commercial tenant.



Vicinity Map

The Planning Commission reviewed the sketch plan of this proposal at the September 7, 2023 meeting. Comments from the Commissioners included the following:

- Commissioners requested further information regarding snow removal, snow storage, and rooftop snow retention.
- Commissioners requested the grout color be added to the material board.
- Commissioners noted the applicant should take the public comment regarding protecting the privacy of neighboring properties into consideration.

View the online Agenda and approval of the September 7, 2023 Planning Commission meeting minutes through the following link:
https://townoffrisco.primegov.com/Portal/Meeting?meetingTemplateId=1310

MAJOR SITE PLAN REVIEW

A Major Site Plan application requires Planning Commission review and discussion. The proposal is reviewed in detail for conformance with the Frisco Community Plan and compliance with the Frisco Unified Development Code (UDC).

ANALYSIS – FRISCO COMMUNITY PLAN

The following elements of the Frisco Community Plan are applicable to the review of the proposed development:

Vision and Guiding Principles (excerpts)
The vision and guiding principles are a statement of community values. Together, they reflect characteristics that residents value about Frisco today, and the kind of community that residents would like to see Frisco become as it continues to grow and evolve over time. The vision and guiding principles serve as an organizing framework for subsequent chapters and policy guidance in the Community Plan, as well as for the Town Council's Strategic Plan.

Guiding Principle 1: Inclusive Community

Frisco cares about our neighbors, visitors, and the whole of our community. We are an inclusive community that welcomes people of all backgrounds and income levels. We support a balance of housing options to create opportunities for a diverse population to reside here. Our history is integral to our identity and it is also a guiding principle for our future. As the Town grows and changes, we need to be rooted in the values of our past. The Ten Mile Range mountain backdrop, historic structures, vibrant neighborhoods, and a lively Main Street characterize Frisco along with the friendly people and welcoming vibe. As Frisco grows, this character and identity should be preserved and enhanced throughout Town.

1.1: Protect the character and livability of Frisco's residential neighborhoods

- ***1.1A Ensure new housing complements adjacent properties and neighborhoods through appropriate mass, scale, and design. See page 68 for Area Specific Policies/Design Principles to help encourage compatible neighborhood development.***
- *1.1B Invest in targeted improvements (e.g., trail connections, bike paths, sidewalks, and drainage improvements) that enhance the safety and quality of life of residents.*
- ***1.1C Strive to create an appropriate balance of full-time residents, second homes, and short-term rentals to maintain a diverse and vibrant community.***

Guiding Principle 2: Thriving Economy

The Frisco economy is built upon a unique balance of tourism and its role as a commercial-service hub for the region. Tourism, driven by recreational opportunities, and the small, mountain town appeal of Main Street, creates jobs and revenue. Locals and visitors utilize the large retailers, grocery stores, and services located along Summit Boulevard, and support the small businesses on Main Street. While the Frisco economy has seen steady growth in the past decade, diversification of the economy is important. More year-round opportunities will provide stability through the seasons and economic downturns. The Town should focus on small, incremental changes that preserve the town character and a healthy small business community that attracts residents and visitors.

2.1: Maintain a diverse and strong economy

- *2.1A Continue to attract and retain businesses that support and enhance Frisco's tourism revenues, while also seeking to build upon entrepreneurship and new or emerging niches.*
- ***2.1B Provide opportunities for a balanced mix of housing and services to support local businesses, employees, residents and visitors.***

- ***2.1C As development and infill occurs, ensure that the Town's overall mix of land uses remains aligned with community goals.***
- *2.1D Participate in regional and state economic development efforts that support a diverse economy.*
- *2.1E Support the creation of home-based businesses and remote workers.*

There is an existing mixture of residential building types, building designs, and dwelling unit densities in this neighborhood. The surrounding properties consists of single and multifamily residential properties.

The proposed development includes a building design that is unique to the project but is also reflective of the architectural elements and styling of other buildings in Frisco. The application facilitates the construction of new residential units that add variety to the sizes and types of homes in this residential neighborhood.

The proposed construction of three (3) residential dwelling units on the subject property is permitted through the allowed density in the RH District. The application appears to be in general conformance with the purpose and recommendations of the Frisco Community Plan.

ANALYSIS – RESIDENTIAL HIGH DENSITY [§180-3.7]

The requirements of the Residential High (RH) Density District are applicable to the review of the proposed multifamily project as follows:

Purpose: The purpose of the RH District is as follows:

> *"To allow for high density residential development that is in close proximity to commercial activity, and to provide for a broad mix in the housing type and cost for all residents."*

Minimum Lot Area: The minimum lot area in the RH District is 10,500 square feet or 0.24 acres. The subject lot is 7,005 square feet and is considered a legal nonconforming lot.

Minimum Lot Frontage: The minimum lot frontage in the RH District is sixty (60) feet. Lot frontage is defined in the UDC as:

> *That portion of a lot fronting upon and providing rights of access to a dedicated street. Lot frontage is measured continuously along only one street.*

The property is approximately 50 feet east to west and 140 feet from north to south. There are no proposed changes to the existing lot frontage.

Setbacks: Pursuant to §180-9, Definitions, Frisco Town Code:

> *"Lot Line, Front – The property line separating a lot from the street except, where a lot is bordered by more than one (1) street, the property owner shall determine which side of the lot having street frontage is to be considered the front for setback purposes. Each lot proposed for development shall have at least one (1) property line designated as the front lot line."*

The designated front lot line is the north lot line that fronts Granite Street. Based upon the submitted plans, there are no proposed building encroachments into the setbacks. An

Improvement Location Certificate (ILC) will be required during construction to ensure the structure, including roof eaves, does not encroach into the setback.

The minimum required setbacks and proposed setbacks for this application are as follows:

	Minimum Setback	Proposed Setback
Front Yard	20 feet	20 feet
Side Yard	10 feet	10 feet
Rear Yard	10 feet	10 feet

Maximum Lot Coverage: Per the Unified Development Code, lot coverage shall not exceed 55% of the total lot area in the RH District. The allowable lot coverage for this site is 3,852.75 square feet based on the size of the lot. The proposed lot coverage is 3,637 square feet including the building footprint, driveways, decks, patios and walkways over 3 feet in width. The lot coverage is 52%, meeting the requirements. Lot coverage will be further verified at the time of building permit submittal.

Maximum Building Height: The maximum building height is 35 feet in this zone district. The applicant is proposing a maximum building height of 34 feet, meeting the requirements. A roof ILC will be required during construction to ensure that the building does not exceed the maximum building height.

Density: The permitted density in the RH District is 16 dwelling units per developable acre. The 7,005 square foot property (0.16 acres) allows three (3) units of density on the property. The application meets this standard.

ANALYSIS – USE STANDARDS [§180-5]

Permitted and Conditional Uses: A variety of residential uses are permitted in the RH District including multi-unit dwellings and townhomes. The application meets this standard.

ANALYSIS - DEVELOPMENT STANDARDS [180-6]

Buildings Occupying More Than One Lot (§180-6.3.2): Lots 11 & 12, Block 19, Frisco Town Subdivision are one development site for the purposes of analyzing development standards. Since there is not an existing townhome plat, a re-plat will be required to formally consolidate Lots 11 & 12 either by vacating the lot lines or through a townhome plat. Staff has added this as a suggested condition of approval.

Grading Plan (§180-6.5): The developer is subject to the standards regulating grading permits. The applicant has submitted a grading plan that was reviewed by the Town Engineer. All outstanding comments by the Town Engineer have been addressed.

Drainage Plan (§180-6.6): Drainage plan submittal requirements, design standards and erosion and sediment control were reviewed by the Town Engineer. All outstanding comments by the Town Engineer have been addressed.

Access (§180-6.11)**:** All vehicle access shall comply with the standards set forth in Chapter 155, Minimum Street Design and Access Criteria. Where development abuts a Town road, the location and design of access points to the road must be approved by the Frisco Public Works Director.

Multifamily projects shall have a minimum driveway width of nine (9) feet and a maximum width of 20 feet. The width is measured within Town ROW from the ROW line to the edge of pavement.

The applicant is proposing three driveways into the site. There are two (2) driveways proposed on the west side of the site onto S. 4th Avenue and one (1) driveway on the south side of the site on to Teller Street Alley. The application did not meet minimum separation requirements from the driveway in Teller Street Alley to the intersection with 4th Avenue. A waiver request for the less-than-required distance was submitted to Public Works and approved by the Public Works Director. All driveways meet the minimum width requirements. All outstanding comments by the Frisco Public Works Director have been addressed.

Non-vehicular Access Requirements (§180-6.11.2):

> *It is the purpose of this section to promote the use of non-vehicular modes of transportation through a Town- wide network of connecting non-vehicular pathways and provide safe access year round. All site plans shall provide for and show non-vehicular access in accordance with the standards set forth in the Frisco Trails Master Plan and Chapter 155, Minimum Street Design and Access Criteria. In addition, all non-vehicular access shall meet the following standards:*
>
> A. *All multi-family, mixed-use, non-residential developments, and residential subdivisions shall provide safe and convenient non-vehicular access to a public street or road year-round. Developments shall install paved, year round access from and through the development to adjacent public sidewalks, bicycle and pedestrian facilities, or right of way both existing and proposed pursuant to the Frisco Trails Master Plan and in accordance with the Standards of Chapter 155, Minimum Street Design and Access Criteria.*
>
> B. *Every principal structure shall provide access to adjacent trail systems or public open space usable for recreation activities.*
>
> C. *Developments shall integrate pedestrian ways, trails, and/or bicycle paths with similar existing and planned facilities on adjacent properties. The Frisco Trails Master Plan should be used as a reference when planning for the integration of these facilities.*

The application materials show driveways connecting to the ROW of 4th Ave and Teller Street Alley. There are no existing or planned public pathways on any of the adjacent streets. The application is meeting these standards.

On-Premise Parking Requirements (§180-6.13.3. D)**:** One (1) parking space is required per bedroom with a maximum of four (4) parking spaces per unit. One (1) visitor parking space is required for five (5) units.

The following is a parking analysis:

Use Type	Parking Standard	# Bedrooms	Required Spaces
Residential	1 per bedroom Maximum of 4 spaces per unit	3, 3-bedroom units	9
Visitor Parking	1 per five units		0
Total Required			**9**

The application meets the quantity of parking requirements.

Tandem Parking (§180-6.13.6)**:** For multifamily residential projects, two (2) stacked (tandem) spaces may be permitted if Planning Commission finds that the layout of the parking is functional and, at a minimum, finds two (2) out of the following four (4) criteria are met:

i. That some of the spaces could be used as potential visitor parking space; and/or,
ii. That, given the layout and design of the building, adequate storage space is provided for the residents so that it is not anticipated the parking space(s) will be needed predominately for storage; and/or,
iii. That the architecture of the building façade which faces or accesses the parking spaces avoids a canyon effect, such that movement is provided in the building design; and/or,
iv. That an adequate turning radius area is provided with the parking layout to allow for turning and backing into or out of the tandem parking spaces.

The proposed tandem parking shows two (2) stacked tandem spaces for each unit. Note 10 of the site plan states that the tandem parking spaces are to comply completely with all criteria laid out in the Town of Frisco's UDC, Tandem Parking Section (18-6.13-4). <u>If the Planning Commission finds that the proposed tandem parking is adequate and functional, and meets two (2) out of the four (4) criteria, then the application meets this standard.</u>

Electric Vehicle Charging Stations: Chapter 65 of the Code of Ordinances of the Town of Frisco concerning Building Construction and Housing Standards, Section C405.10.1 references electric vehicle charging stations for new construction. The property will be required to comply with requirements as outlined in Section C405.10.1 at the time of building permit submittal.

Accessible Parking (§180-6.13.3.H)**:** All facilities, commercial, mixed-use, and multifamily projects with seven (7) attached units or more must provide accessible parking. Accessible parking spaces are not required with this application.

Bicycle Parking (§180-6.13.4)**:** All multifamily residential developments must provide both enclosed, secure bicycle parking, and outdoor bicycle parking facilities. Dwelling units with a private garage are not required to provide enclosed, secure bicycle parking. Each proposed dwelling unit has a garage and so bicycle parking is not required for this application. The application meets this standard.

Snow Storage Areas (§180-6.13.7): The UDC requirements state that "snow storage shall be provided on premises in the amount of twenty-five percent of paved surface area and any unpaved parking and driveway areas, including uncovered decks. The applicant must demonstrate that snow removal operations for upper floor decks will not impact adjacent property."

The site plan shows 1,106 square feet of uncovered paved areas and decks, and 279 square feet of snow storage, meeting the requirements. During sketch plan review, the Planning Commission requested more information on snow storage for uncovered decks and rooftop snow retention. In the application narrative, the applicant stated the following:

> "*Snow storage calculations have been added to the Site Plan & Landscape Plan."*
>
> *"Snow retention has been added to the roof plan in all these areas [areas shedding on to decks and driveways]."*

Outdoor Lighting (§180-6.16): Outdoor lighting installed for new structures shall be full cut-off fixtures and be positioned so that there is no direct light emission onto adjacent properties. The application materials show full cutoff light fixtures for outdoor lighting, meeting the requirements.

Landscaping and Revegetation (§180-6.14)**:** This proposal is subject to the landscaping requirements for a residential development. In residential developments, for every 875 square feet of project lot area or fraction thereof, a minimum of one (1) tree must be planted on the site and one (1) shrub shall be required for every 1,500 square feet of lot area. With a lot size of 7,005 square feet, eight (8) trees are required, and five (5) shrubs are required.

The landscaping plan shows three (3) Aspen, one (1) Bristlecone Pine, two (2) Shubert Chokecherry, and two (2) Englemann Spruce to be planted. Additionally, there are eleven (11) Alpine Currant to be planted, meeting the requirement. The application meets the requirements for plant quantity, size, and species diversity.

Refuse Management (§180-6.17): All commercial, mixed-use and multifamily residential development projects containing five (5) or more units shall utilize a trash enclosure for the collection and storage of refuse and recyclable materials. No trash enclosure is required for this development. The applicant has submitted correspondence from a trash hauler stating that they will be able to haul individual toters with no issues.

Residential Development Standards (§180-6.22)**:** The purpose of the residential development standards is to promote high-quality development while still providing for creative and unique building designs; to establish minimum standards related to scale, mass, architecture, materials, and overall design character of development and provide incentives to help achieve desired attributes; and to preserve established neighborhood scale and character, ensuring that residential areas contribute to the streetscape and are conducive to walking.

The application shall be held to the following residential development standards:

A. Facade Standards

1. *Intent. To ensure that the façade design of development is compatible with Frisco's small mountain town character and provides a human scale to enhance the walking experience in the neighborhood.*

The proposed development includes building designs that are unique to this project and have a similar styling to other buildings in Frisco.

2. *Building Elements. All building elevations shall employ varied articulation of wall surfaces, as shown in Figure 6-UU. Each façade shall be articulated through the use of at least four of the following techniques:*
    a. *Deep eaves or overhangs, at least 24 inches in depth;*
    b. *Balconies, porches, or patios;*
    c. *Building elements that provide shelter from natural elements;*
    d. *Offsets, insets, bays, or other similar architectural features to add a variety of depths to the wall plane;*
    e. *A change in texture or material, provided all exterior wall textures and materials are consistent with the overall architectural style of the building;*
    f. *Variation in roof planes or roof forms, including dormers or gables; or*

g. *Variation in window sizes and shapes.*

A variety of building elements are utilized on all four (4) facades of the building. Varied building articulation is achieved by utilizing all of the techniques listed above.

3. *Duplicate Building Design Prohibited*
   a. *Building designs that duplicate, or are substantially similar in terms of roof pitch, building articulation, materials, colors, and building elements to existing or proposed structures within a 300-foot radius of the property shall not be allowed, with the exception that accessory structures on the same lot or parcel as the primary structure may be similar in design as the primary structure.*

   b. *Where a project contains two or more buildings or units, not identical units, the building design shall provide architectural relief from the duplication of buildings and units by utilizing a variety of windows, decks, balconies, or exterior facade composition.*

The building design does not duplicate other buildings within a 300-foot radius of the property and provides architectural relief from the duplication of buildings and units.

C. Roof Standards

1. *Intent. To ensure that roof elements are compatible with or complementary to existing historic or contributing buildings in the area and to encourage visibly pitched roofs or roof elements and the use of dormers and breaks in ridgelines.*

The application materials show pitched roof elements and breaks in ridgelines.

2. *Roof Pitch*
   a. *Pitched roofs, or flat roofs augmented with pitched roof elements, are required.*
   b. *A minimum roof pitch of 6/12 is encouraged.*
   c. *Mansard roofs are prohibited.*

The proposed building roofs are a combination of roof pitches of 4:12, 6:12, and flat elements, meeting the requirements.

3. *Roof Design. Roof lines shall be designed in a manner where they do not substantially deposit snow onto required parking areas, sidewalks, trash storage areas, stairways, decks, balconies or entryways.*

The proposed roof forms generally deposit snow away from parking areas and walkways, however, some pitches appear to deposit snow onto parking areas and decks. The need for snow guards, snow clips, snow fences, and other similar rooftop snow retention will be evaluated by the Town of Frisco Building Department as part of the building permit application review process.

4. *Roof Materials*
   a. *If metal roofs are used they shall be surfaced with a low gloss finish, matte finish, or other finish proven to fade and not be reflective.*
   b. *Metal roofs, asphalt and fiberglass shingles are permitted provided that they heavy material that provides substantial relief and shadow, and the design and color are compatible with the building.*

c. *Historic buildings, as noted in the Town's Historic Resource Inventory, may use rolled asphalt roofing materials.*
d. *Bright colored roofs that exceed a chroma of four on the Munsell Color chart are prohibited.*

The application materials show brown asphalt shingles and rust-colored corrugated metal panels being used as roof materials. The application meets this standard.

D. Building Material Standards

1. *Intent. To ensure that building materials are compatible and complementary to existing historic and contributing buildings in the area, using a combination of mainly natural materials.*
2. *Primary Materials*
   a. *Building materials shall be predominantly natural, including but not limited to, wood siding, wood shakes, logs, stone, brick, or other similar materials.*
   b. *Other materials that imitate natural materials are also acceptable provided their texture, shape, and size are substantially similar to the natural materials they are imitating, and are not obviously artificial materials.*
   c. *Stucco or steel are acceptable materials when used in combination with other acceptable materials.*

Proposed exterior building materials include matte or low-gloss metal panels, wood beams, trim and siding, chopped stone veneer, and barnwood siding. The application meets this standard.

3. *Specific Material Standards*
   a. *Concrete Block. Concrete block shall not be allowed as the primary or extensive exterior finish. When used as an accent, concrete block shall be a split block, or other similarly shaped, textured, and colored materials that are found to be compatible with the building and the purpose of this section.*
   b. *Metal. Metal shall have a matte finish or a finish proven to fade and not be reflective.*
   c. *Glass. The use of mirrored or reflective glass is prohibited unless required for compliance with the voluntary green building program as administered by the Town's Building Official.*

The application includes all metal flashings, railings, and timber connector plates in a matte finish, meeting the requirement.

4. *Variety of Materials on All Building Elevations*
   a. *There shall be a variety of quality and type of exterior materials, and their application shall be generally in balance and proportional on all elevations of the building.*
   b. *Materials that wrap around the building, such as a durable material at the base of the structure, shall continue around projecting outside exterior corners and end at recessed inside exterior corners.*

The applicant is proposing a variety of exterior materials which appear to wrap the building corners. The application meets this standard.

E. Building Colors

1. *Intent. To promote building colors compatible with the site and surrounding buildings*

The primary building colors and materials consist of wood siding in natural and weathered wood tones, matte black vertical metal siding, and stone in tan-brown tones. The application meets this standard.

Bulk Standards (§180-6.23): Table 6-K of the UDC outlines bulk plane requirements. Building forms may deviate from the bulk plane standards if they do not exceed maximum building height and provide substantial architectural relief, with Planning Commission approval. Staff may approve the deviation if the projection beyond the bulk plane does not exceed 350 cubic feet. The applicant is proposing 350 cubic feet of bulk plane encroachment. As stated in the application's narrative:

We are proposing (6) small 45-degree bulk plane encroachments for Architectural relief for a total of 350 cf of total.

If the Planning Commission finds that the proposed encroachments provide substantial architectural relief, the application meets this standard.

PUBLIC COMMENT

The Community Development Department has not received any formal public comments concerning this project as of January 12, 2024.

STAFF RECOMMENDATIONS

Recommended Findings

The Community Development Department recommends the following findings pertaining to the Major Site Plan application for the proposed new residential townhome development located at 400 Granite Street / Lots 11 and 12, Block 19, Frisco Town Sub.

Based upon the review of the Staff report Dated January 18, 2024, and the evidence and testimony presented, the Planning Commission finds:

1. *The proposed development application is in general conformance with the principles and policies of the Frisco Community Plan. Residential development of this lot is supported by the Frisco Community Plan Guiding Principles of Inclusive Community and Thriving Economy. The proposed development includes a building design that is unique to this project but that is also reflective of the architectural elements and styling of other buildings in Frisco. The location and orientation of this building creates a design that enhances the overall character of the community. This application facilitates the construction of new residential units that add variety to the sizes and types of homes in this residential neighborhood.*

2. *The proposed development application is in general conformance with the Town of Frisco Zoning Regulations, specifically Section 180-3.7, the Residential High District (RH), including: lot area, lot frontage, lot coverage, setbacks, building height and density. All the applicable requirements have been met by the submittal and the recommended conditions of approval.*

3. *The proposed development application is in general conformance with the Town of Frisco Zoning Regulations, specifically Section 180-6, Development Standards since all the applicable requirements have been met by the submittal and the recommended conditions of approval; including: grading plan, drainage plan, snow storage and snow shedding, vehicular access, non-vehicular access, and refuse management. The Planning Commission finds that the layout of the tandem parking is functional given the layout and design of the building, adequate storage space is provided so the tandem parking does not need to be used for storage, the architecture of the building façade which accesses the parking spaces avoids a canyon effect and an adequate turning radius area is provided with the parking layout to allow for turning and backing into or out of the tandem parking spaces.*

4. *The proposed development application is in general conformance with the Town of Frisco Zoning Regulations, specifically Section 180-6.14 Landscaping since all the applicable requirements have been met by the submittal and the recommended conditions of approval; including: required vegetation, water conservation, irrigation system, and landscaping maintenance.*

5. *The proposed development application is in general conformance with the Town of Frisco Zoning Regulations, specifically 180-6.16 Outdoor Lighting since all the applicable requirements have been met by the submittal and the recommended conditions of approval; including: exterior light fixtures, light emissions, design, and energy savings.*

6. *The proposed development application is in general conformance with the Town of Frisco Zoning Regulations, specifically Section 180-6.22, Residential Development Standards, since all of the applicable requirements have been met by the submittal and the recommended conditions of approval; including: that the development is designed in a manner compatible with the neighborhood and the small mountain*

town character of Frisco; the development includes required building elements and the other recommendations and standards of the Residential Design Standards.

7. *The proposed development application is in general conformance with the Bulk Plane Standards, since the proposed bulk plane encroachments provide architectural relief and do not exceed 350 cubic feet.*

Recommended Action

Based upon the findings above, the Community Development Department recommends APPROVAL of the proposed Major Site Plan application for the proposed new residential townhome development located 400 Granite Street / Lots 11 and 12, Block 19, Frisco Town Sub, subject to the following conditions:

Conditions:

1. *Prior to issuance of a Certificate of Occupancy, the Applicant shall execute a final plat to vacate the property lines between Lots 11 and 12, Block 19, Frisco Town Sub in accordance with Section 180-6.3.2 of the Frisco Unified Development Code. This may also be accomplished through a townhome plat.*

2. *Prior to building permit submittal, the applicant shall satisfy the requirements of the Summit County GIS Department.*

3. *Prior to building permit submittal, the applicant shall satisfy the requirements of Xcel Energy.*

Recommended Motion

Should the Planning Commission choose to approve this major site plan application, the Community Development Department recommends the following motion:

With respect to File No. MAJ-23-0008, I move that the recommended findings set forth in the January 18, 2024 staff report be made and that the recommended conditions set forth therein be taken and that the Planning Commission hereby APPROVES the request for the Major Site Plan application for the proposed new residential townhome development located at 400 Granite Street / Lots 11 and 12, Block 19, Frisco Town Sub.

ATTACHMENTS

Attachments:

Attachment A – Referral Comments
Attachment B – Project Narrative
Attachment C – Final Application Materials MAJ-23-0008

cc: Abigail Ploen

RE: 400 Granite St Revisions

Reply | Reply All | Forward

Thu 12/7/2023 11:23 AM

Chandler Morehardt <Chandler.Morehardt@summitcountyco.gov>
To Ward, Sally; Frick, Jessica L; Goble, Jeff; McGinnis, Chris; Matt Smith; Kim McDonald
Cc Amy Lagace; Suzanne Kenney; Sally Bickel; Mattka, Cheryl

You forwarded this message on 12/8/2023 9:49 AM.

Hi all, I'd like to reiterate that the project name for this should be **Tango Townhomes** and **NOT 400 Granite St**. While this is address for the current location of the project, that address will be retired and the addresses for the units of this project will be as follows:

Unit 1 – 405 Teller St ALY
Unit 2 – 208 S 4th AVE
Unit 3 – 204 S 4th AVE

Once this project receives final approval, I will send out an address letter assigning these new addresses.

Thank you,

Chandler Morehardt
Information Systems Dept.
Summit County Government
GIS Technician
chandler.morehardt@summitcountyco.gov
970.668.4219
0037 Peak One Drive
PO Box 5660
Frisco, CO 80443

SUMMIT COUNTY
COLORADO

RE: Planning & Referral Comments MAJ-23-0008 Final Submittal #2

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FJ

Frick, Jessica L <Jessica.L.Frick@xcelenergy.com>
To Abby Ploen; Ward, Sally; Zach Ploen

Tue 12/26/2023 8:01 AM

Follow up. Start by Tuesday, December 26, 2023. Due by Tuesday, December 26, 2023.
You replied to this message on 12/28/2023 3:39 PM.
This message is part of a tracked conversation. Click here to find all related messages or to open the original flagged message.

I'm sorry unless I am missing something, I don't see a section C-C or D-D, I only see the 3 pages of A that are attached.
Generally the rule of thumb is that there needs to be 6' of clearance for the flat portion between the drip and meters to prevent the sliding ice and snow from falling on.

Your meter location will ultimately need to be determined with your actual designer, I just wanted to pass along that feedback so you are aware. Please allow for your assigned designers to make the final determination of meter location.

Jess Frick

Xcel Energy | Responsible By Nature

Planner Thereafter; Mountain Design

Monday- Thursday 7:00a-5:30p MST

Email: jessica.l.frick@xcelenergy.com

Cell: 970-409-7257

Supervisor: Kyle Alsup; Kyle.C.Alsup@xcelenergy.com

WWW.XCELENERGY.COM

BUILDERS CALL LINE: 800-628-2121 or BCLCO@excelenergy.com

CUSTOMER SERVICE: 800-895-4999

Useful Links:

CLICK HERE to Apply Online!

Call 811 Before You Dig!

Xcel Energy Standard for Installation- Click HERE!

TOWN of FRISCO
PUBLIC WORKS DEPARTMENT
P.O. BOX 4100
FRISCO, COLORADO 80443

TO: Ronda Campbell / Macatr, LLC Ron Mattox.

FROM: Jeff Goble, Public Works Director

CC: Katie Kent, Community Development Director
Sally Ward, Planner II, Community Development

DATE: December 19, 2023

SUBJ: Review of waiver request for 400 Granite Street (Tango Townhomes)

The Frisco Public Works Department has reviewed the waiver request regarding section IV.D.3(a) of the Town of Frisco Minimum Street Design and Access Criteria, specifically the distance of a driveway from an intersection as it relates to the Minimum Street Design and Access Criteria, and the Town of Frisco Unified Development Code.

Findings

Upon review of the provided waiver request and supporting documentation, Town staff noted that the applicant has met all three of the conditions required, as stated on the application, to grant a waiver. Therefore, Public Works **APPROVES AND GRANTS** this waiver. The proposed driveway on Teller Alley may be constructed as shown on the submitted plan set.

Jeff Goble 12/19/2023
Jeff Goble, CWP
Public Works Director
Town of Frisco, CO

Ronda Campbell
PO Box 2384
RondaCampbell@comcast.net
970-389-3437

APPROVED

Jeff Goble

12/19/2023

December 18, 2023

To: Mr. Jeff Goble
Public Works Director
Frisco Public Works/Town of Frisco
102 School Road
Frisco, Colorado 80443

Re: **Granite Street Driveway Waiver Justification Narrative**
400 Granite Street
Tango Townhomes

Dear Jeff,

In response to the requested driveway wavier (attached) the following justifications are submitted:

1. The project consists of one lot allowing 3 units. The waiver is requesting one driveway on Teller Street Aly, two driveways on 4th Street, and no driveways on Granite Street.
2. The Town of Frisco's future plan is to put in a 10' bike path on the south side of Granite Street. The Town is requesting limited access from this side of the lot. This is a hardship in our design process to have access to all 3 allowed units per the building code.
3. Granting the waiver will facilitate maintenance by not having to maintain a driveway on a busy street and future bike path.
4. The driveways, as designed, will not be detrimental to the public health, safety and welfare by keeping the access point on the alley side of the lot and not on Granite Street in the way of the bike path.

In summary, we are trying to work with the Town of Frisco to facilitate a much needed bike path by reducing access traffic on Granite Street by providing single user access to all of the units from the much less busy ally.

If you have any questions, please let me know.

Thank you,

Ronda Campbell

Ronda Campbell

APPROVED

Jeff Goble

12/19/2023

TOWN OF FRISCO
COLORADO

Public Works Department

Waiver Request per Minimum Street Design and Access Criteria

APPLICANT INFORMATION

Applicant Ronda Campbell/Macatr, LLC Ron Mattox RondaCampbell11@gmail.com
(Name) (Email Address)

Mailing Address PO Box 2384 Frisco, CO 80443
(Street/P.O. Box) (City/State/Zip Code)

Telephone Number 970-389-3437
(Home) (Work) (Fax)

Note: If applicant is other than the owner(s), a statement by the owner(s) consenting to this application must be submitted with the application.

Name of Engineer/Surveyor/Agent Ronda Campbell/Macatr, LLC Ron Mattox RondaCampbell11@gmail.con
(Name) (Email Address)

Mailing Address PO Box 2384 Frisco, CO 80443
(Street/P.O. Box) (City/State/Zip Code)

PROJECT INFORMATION

Name of Development (if applicable) Tango Townhomes

Property Address 400 Granite Street, Frisco CO 80443

Legal Address of Property: Lot 11,12 Block 19 Subdivision Frisco Town Sub

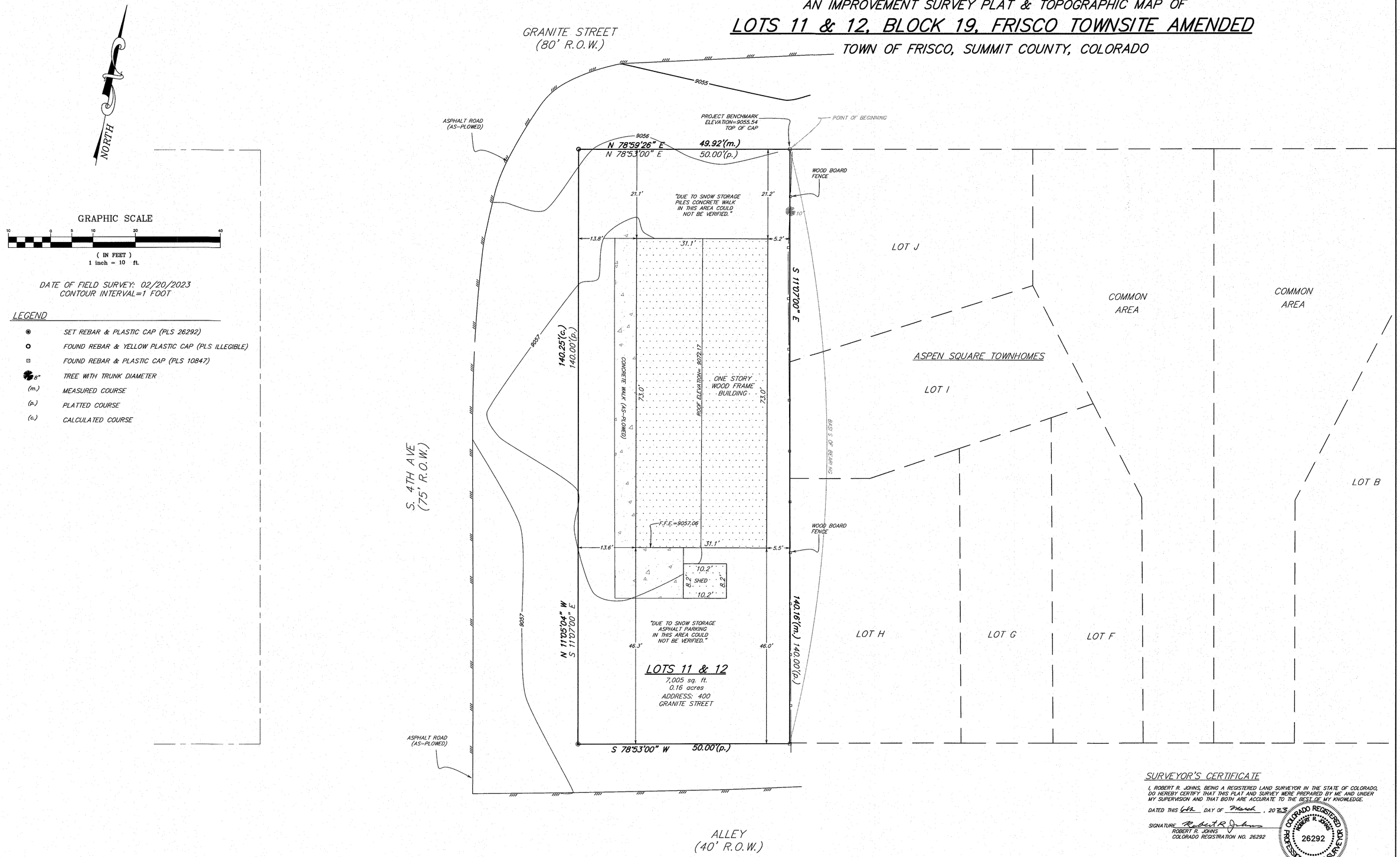
In addition to this request form, the applicant must submit information showing the waiver request items and that ALL of the following conditions exist relative to the waiver request:

1. Failure to grant the waiver would result in practical difficulty for the applicant or would make the project economically unfeasible for the applicant;
2. Granting the waiver would facilitate project maintenance; and
3. Granting the waiver would not be detrimental to the public health, safety and welfare.

The waiver, if granted, shall only be to the extent necessary to afford a reasonable use of the property.

Applicant's Signature Ronda Campbell Date 12 /18 /23

AN IMPROVEMENT SURVEY PLAT & TOPOGRAPHIC MAP OF
LOTS 11 & 12, BLOCK 19, FRISCO TOWNSITE AMENDED
TOWN OF FRISCO, SUMMIT COUNTY, COLORADO



GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

DATE OF FIELD SURVEY: 02/20/2023
CONTOUR INTERVAL=1 FOOT

LEGEND

- SET REBAR & PLASTIC CAP (PLS 26292)
- FOUND REBAR & YELLOW PLASTIC CAP (PLS ILLEGIBLE)
- FOUND REBAR & PLASTIC CAP (PLS 10847)
- 8" TREE WITH TRUNK DIAMETER
- (m.) MEASURED COURSE
- (p.) PLATTED COURSE
- (c.) CALCULATED COURSE

SURVEYOR'S CERTIFICATE

I, ROBERT R. JOHNS, BEING A REGISTERED LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY THAT THIS PLAT AND SURVEY WERE PREPARED BY ME AND UNDER MY SUPERVISION AND THAT BOTH ARE ACCURATE TO THE BEST OF MY KNOWLEDGE.

DATED THIS 6th DAY OF March, 2023

SIGNATURE Robert R Johns
ROBERT R. JOHNS
COLORADO REGISTRATION NO. 26292

COLORADO REGISTERED PROFESSIONAL LAND SURVEYOR ROBERT R. JOHNS 26292

Drawn GAW/ESH	Dwg 22666ISP	Project 22666
Checked RRJ	Date 2/16/2023	Sheet 1 of 1

R-A-N-G-E W-E-S-T INC.
ENGINEERS & SURVEYORS
P.O. Box 589
Silverthorne, CO 80498 970-468-6281

SITE PLAN DATA

TOTAL AREA OF PROPERTY	0.16 ACRES / 7,005 SQ. FT.
MAX BUILDING HEIGHT	35' FLAT & PITCHED
LOT COVERAGE (BUILDING, DRIVEWAYS, DECKS & PATIO/SIDEWALKS OVER 3' WIDE)	MAX: 7,005 SQ. FT. X 55% = 3,853 SQ.FT ACTUAL = 3,637 SQ.FT
LAWN AREA	7,005 SQ. FT. X 10% = 700.5 SQ. FT. MAX ACTUAL: 0 SQ. FT.

BUILDING DATA

JURISDICTION	TOWN OF FRISCO
ZONING	RESIDENTIAL HIGH DENSITY
BUILDING CODE	2018 INTERNATIONAL RESIDENTIAL CODE
ACCESSIBLE UNITS REQ.	NONE

HEIGHT TABLE

POINT	N. GRADE	F. GRADE	LOWEST	RIDGELINE	HEIGHT	W/ RAILING	MAX HEIGHT
A	9057	9057.4	9057	9081	24'	YES	35'
B	9057	9057	9057	9091	34'	N/A	35'
C	9057	9057	9057	9090.5	33.5'	N/A	35'
D	9057	9057	9057	9090.75	33.75'	N/A	35'
E	9057	9057	9057	9090.75	33.75'	N/A	35'
F	9057	9058.4	9057	9081	24'	YES	35'
G	9057	9057	9057	9083.3	26.3'	N/A	35'
H	9057	9057	9057	9090.5	33.5'	YES	35'

OFF-STREET PARKING DATA

OCCUPANCY	GROSS AREA	PARKING STALL RATIO	# OF STALLS REQUIRED	# OF STALLS (ACTUAL)
RESIDENTIAL	(3) 3 BEDROOM UNITS	1 PER BDRM./ 4 MAX	9	9
	ADA VAN		0	0
	VISITOR	1 PER 5 UNITS	0	0
TOTAL			9	9

1. MIN. PARKING DIMENSIONS 9' X 18.5' PER TOWN OF FRISCO

DRIVEWAY DIMENSIONS

LOCATION	TOWN REQUIRED WIDTH	FIRE REQUIRED WIDTH	ACTUAL WIDTH
UNIT 1	20' MAX	-	9'
UNIT 2	20' MAX	-	9'
UNIT 3	20' MAX	-	9'

TRASH ENCLOSURE

SIZE	# OF ENCLOSURES REQUIRED	# OF ENCLOSURES PROVIDED
-	0	0

1. ALL DUMPSTER ENCLOSURES SHALL BE IN ACCORDANCE TO THE TOWN OF FRISCO DEVELOPMENT STANDARDS, SECTIONS 180-6.17 & SECTION 180-5.2.3.

SNOW STORAGE

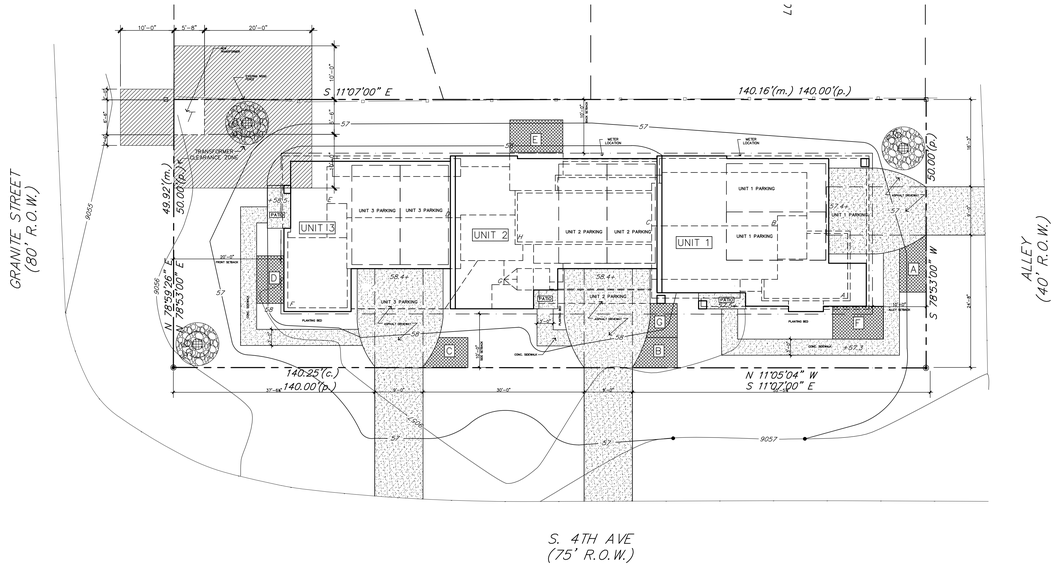
	TOTAL UNCOVERED PAVED AREA	25% OF UNCOVERED PAVED	SOURCE LOCATION
A	145 SF	37 SF	UNIT 1 DRIVEWAY
B	166 SF	42 SF	UNIT 2 DRIVEWAY
C	151 SF	38 SF	UNIT 3 DRIVEWAY
D	164 SF	41 SF	UNIT 3 ROOF DECK
E	228 SF	57 SF	UNIT 2 ROOF DECK
F	154 SF	39 SF	UNIT 1 ROOF DECK
G	98 SF	25 SF	UNIT 2 ROOF DECK
TOTAL	1,106 SF	279 SF	

BULK PLANE ENCROACHMENTS

A	24 CSF
B	21 CSF
C	150 CSF
D	55 CSF
E	84 CSF
F	16 CSF
TOTAL	350 SF

SITE PLAN NOTES

1. EXISTING SITE INFORMATION IS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY RANGE WEST PHONE: 970.468.6281 JOB #22666
2. THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL IMPROVEMENTS SHOWN ON THE SITE PLAN.
3. SEE CIVIL DRAWINGS FOR DETAILS ON GRADING, EROSION CONTROL, AND STORM WATER RUNOFFF.
4. G.C. IS TO NOTIFY UTILITY COMPANIES AND COORDINATE THE INSTALLATION OF ELECTRICAL, GAS, WATER, SEWER, CABLE T.V. AND TELEPHONE SERVICES. G.C. IS TO PAY FOR ANY ADDITIONAL COSTS.
5. REMOVE ALL TOP SOIL OVER THE BUILDING AREA FOR A DISTANCE OF TEN FEET BEYOND THE OUTSIDE WALLS. PLACE SOIL IN A NEAT PILE ON THE LOT WHERE DIRECTED BY OWNER.
6. EXCAVATION AT WALLS IS TO BE MADE 18 INCHES LARGER THAN OUTSIDE FOUNDATION WALL DIMENSIONS IN EVERY DIRECTION TO ALLOW FOR INSPECTION, WATERPROOFING, DRAIN PIPE, ETC.
7. MATERIAL USED FOR FILL SHALL BE FREE OF ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND SHALL NOT CONTAIN ROCKS OR LUMPS HAVING A DIAMETER OF MORE THAN 6 INCHES, OR BRUSH OR SOD.
8. COMPACT EACH FILL MATERIAL LAYER USING SUITABLE EQUIPMENT. MOISTEN OR AERATE LAYERS TO ATTAIN STANDARD PROCTOR DENSITIES AS FOLLOWS:
   1. EXTERIOR SIDE OF FOUNDATION WALLS: 90%
   2. FLOOR AND GARAGE SLAB FILL: 100%
   3. FOOTINGS: 100%
9. G.C. SHALL BRING FINISHED GRADES TO THE ELEVATIONS AND CONTOURS SHOWN ON THE DRAWINGS. SLOPE FINISHED GRADE AWAY FROM BUILDING A MINIMUM OF 1 FOOT IN 10 FEET UNLESS SHOWN OTHERWISE.
10. TANDEM PARKING SPACES TO COMPLY COMPLETELY WITH ALL CRITERIA LAID OUT IN THE TOWN OF FRISCO'S UDC, TANDEM PARKING SECTION (180-6.13.4)
11. BOLLARDS ON THE ALLEY SIDE OF THE TRANSFORMER ARE TO BE INSTALLED FOR PLOWING PURPOSES.
12. HOA WILL BE RESPONSIBLE FOR ANY AND ALL FIXES THAT MAY OCCUR WITH WATER ISSUES BETWEEN UNITS A & B DUE TO TIGHT QUARTERS.
13. BMPS MUST BE DOUBLED UP ALONG MATERIAL STORAGE AREAS AND CONCRETE WASHOUTS.

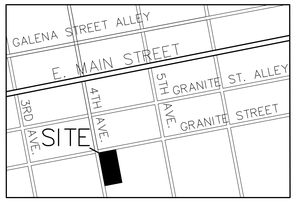


NORTH

SITE PLAN

0 10 20 30

SCALE 1" = 10'



NORTH

VICINITY MAP

NOT TO SCALE

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE
- BUILDING ENVELOPE
- DRIVEWAY
- CONSTRUCTION LIMITS FENCE
- SNOW STORAGE
- DRAINAGE SWALE
- MAIN LEVEL 5810 — BUILDING ELEVATION
- 5808.75 — SPOT ELEVATION
- 1 / A7 — WALL OR DETAIL SECTION MARK
- 1 / A7 — INTERIOR ELEVATION
- A / A6 — CROSS SECTION MARK
- 20 — DOOR NUMBER (RE: DOOR SCHEDULE)
- F.D. — FLOOR DRAIN
- 1 / A7 — ENLARGED DETAIL LOCATOR
- CPT / TILE — FLOOR MATERIAL DELINEATION
- 13 — SHEET NOTE
- PL.4 — MATERIAL TAG

DRAWING INDEX

ARCHITECTURAL

A-1 SITE PLAN
A-2 LOWER LEVEL FLOOR PLAN
A-3 MAIN LEVEL FLOOR PLAN
A-4 UPPER LEVEL FLOOR PLAN
A-5 ROOF PLAN
A-6 EXTERIOR ELEVATIONS
A-7 EXTERIOR ELEVATIONS
A-8 BUILDING SECTIONS & EXTERIOR DETAILS
A-9 BUILDING SECTIONS & EXTERIOR DETAILS
A-10 WALL SECTIONS
A-11 WALL SECTIONS
A-12 SPECIFICATIONS
A-13 DOOR & WINDOW SCHEDULES
A-14 INTERIOR ELEVATIONS

STRUCTURAL

S-1.1 STRUCTURAL NOTES & TYPICAL DETAILS
S-2.1 FOUNDATION PLAN
S-2.2 MAIN LEVEL FLOOR & LOW ROOF FRAMING PLAN
S-2.3 UPPER LEVEL FLOOR & MID ROOF FRAMING PLAN
S-2.4 HIGH ROOF & ROOF DECK FRAMING PLAN
S-3.1 FOUNDATION DETAILS
S-3.2 FRAMING DETAILS

LANDSCAPING

L-1 LANDSCAPE PLAN

PROJECT OWNER
MACATR LLC
8360 W 48TH AVE
WHEAT RIDGE CO 800330000

ARCHITECT
PLOENHAUS, LLC
6590 EAST LAKE PLACE
CENTENNIAL, COLORADO 80111
303.495.8124
ABBY@PLOENHAUS.COM
CONTACT: ABBY PLOEN

BUILDER
CAMPBELL CONSTRUCTION, LLC
110 S. 1ST AVE., UNIT #1
FRISCO, CO 80443
970.389.7246
PETECAMPBELLCONSTRUCTION@COMCAST.NET
CONTACT: PETE CAMPBELL

STRUCTURAL ENGINEER
SUNDQUIST DESIGN GROUP
P.O. BOX 676
CONIFER, CO 80433
303-838-2222
JOE@SUNDQUISTDESIGN.COM
CONTACT: JOE SUNDQUIST

CIVIL ENGINEER
TEN MILE ENGINEERING, INC.
P.O. BOX 1785
FRISCO, CO 80443
303.485.5773
TENMILEENGINEER@AOL.COM
CONTACT: JOE MAGLICIC

ELECTRICAL ENGINEER
KAZIN & ASSOCIATES, INC.
9364 TEDDY LANE, SUITE 101
LONE TREE, CO 80124
720-489-1609
DKAZIN@DMKA.COM
CONTACT: DAVID M. KAZIN, P.E.

PLOENHAUS

/pl'ai'n hous

p: 303.495.8124
e: Abby@PloenHa
6590 East Lake Pla
Centennial, CO 80

TANGO TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

[redacted]

SITE PLAN

NOV. 22, 202

A1

SNOW STORAGE

TOTAL UNCOVERED PAVED AREA		25% OF UNCOVERED PAVED	SOURCE LOCATION
A	145 SF	37 SF	UNIT 1 DRIVEWAY
B	166 SF	42 SF	UNIT 2 DRIVEWAY
C	151 SF	38 SF	UNIT 3 DRIVEWAY
D	164 SF	41 SF	UNIT 3 ROOF DECK
E	228 SF	57 SF	UNIT 2 ROOF DECK
F	154 SF	39 SF	UNIT 1 ROOF DECK
G	98 SF	25 SF	UNIT 2 ROOF DECK
TOTAL	1,106 SF	279 SF	

PLANT SCHEDULE

# TREES REQUIRED	1 TREE PER 875SF= 7,005 SF LOT / 875 = 8 TREES REQUIRED
# SHRUBS REQUIRED	1 SHRUB PER 1,500SF= 7,005 SF LOT / 1500 = 5 SHRUBS REQUIRED
MAXIMUM PERCENTAGE OF ANY ONE SPECIES = 45%	

CODE	QTY.	COMMON NAME/BOTANICAL NAME	CONT.	CAL.	HGT.	SPACING	%
AP	3	ASPEN / POPLULUS TREMULOIDES	-	3"		6'	37%
BC	1	BRISTLECONE PINE / PINUS ARISTATA	-		10'	10'	13%
SC	2	SHUBERT CHOKECHERRY / PRUNUS VIRGINIANA	-	3"		6'	25%
ES	2	ENGELMANN SPRUCE / PICEA ENGELMANNII	-		10'	10'	25%
R	11	ALPINE CURRANT / RIBES ALPINUM	#5	-		5'	-

EXISTING PLANT SCHEDULE

CODE	QTY.	COMMON NAME/BOTANICAL NAME
		PER SURVEY, NO EXISTING PLANTS ON SITE

*ALL PLANTS ARE TO BE DROUGHT TOLERANT
*ONLY NATURAL GRASSES TO BE USED INSTEAD OF SOD

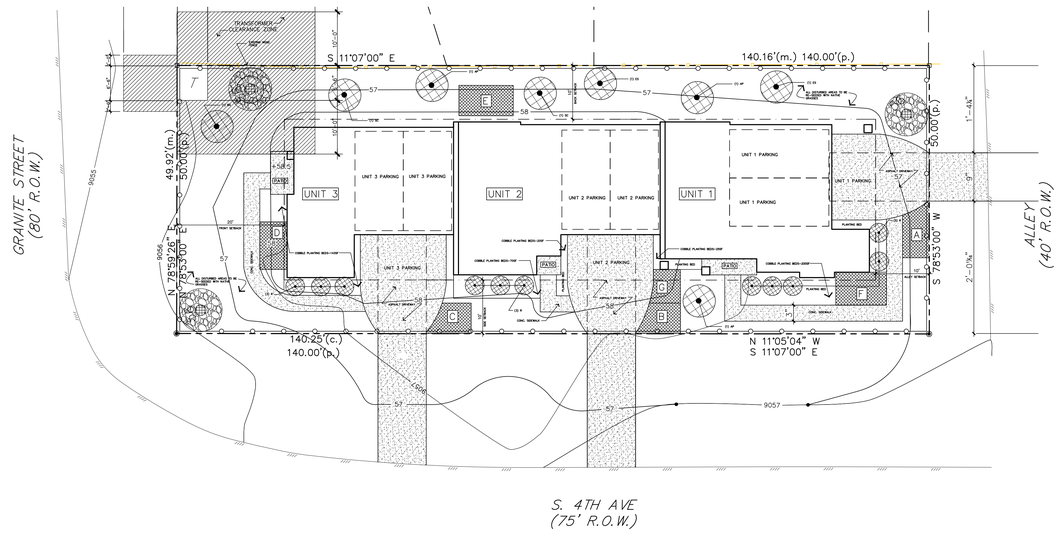
NOTE:

1. A MINIMUM OF TWO INCHES OF TOPSOIL SUFFICIENT FOR GROWTH AND RESEEDING WITH NATIVE SEED MIX AT 2LB./1000 SQUARE FEET FOR ALL DISTURBED AREAS IS REQUIRED

2. ALL NEW TREES AND SHRUBS ARE TO BE WATERED BY A DRIP IRRIGATION SYSTEM UNTIL ESTABLISHED.

3. A 2.5' DEEP AREA OF 4"-6" NATIVE COBBLE WILL BE PLACED AROUND THE HOUSE UNDER ALL DRIP EDGES.

4. FINAL GRASS MIX MUST BE CHOSEN FROM 180-6.14.8 PLANT MATERIALS LIST FOR FRISCO. CONTRACTOR TO USE XX CATEGORY NATURAL GRASS SEED WHICH IS DROUGHT TOLERANT AND LOW GROWING. CONTRACTOR TO SUPPLY ADEQUATE MOISTURE TO GET THE SEED STARTED.



LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE
- BUILDING ENVELOPE
- DRIVEWAY
- DRAINAGE SWALE
- MAIN LEVEL 5810 — BUILDING ELEVATION
- 5808.75 + — SPOT ELEVATION
- 18" — EXISTING PINE TREE TO REMAIN
- 18" — EXISTING PINE TREE TO BE REMOVED
- NEW TREE/SHRUB SEE PLANT SCHEDULE

NOTE:
ALL PINE BEETLE INFESTED TREES TO BE REMOVED

NORTH

LANDSCAPE PLAN

PL·OE·N HAUS
/pl'ai'n house/
p: 303.495.8124
e: Abby@PloenHaus.com
6590 East Lake Place
Centennial, CO 80111

TANGO TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

[redacted]

LANDSCAPE PLAN

NOV. 22, 2023
1" = 10'-0"

L1

PLAN KEY NOTES

1. INSTALL $\frac{5}{8}$" TYPE "X" DRYWALL ON GARAGE CEILINGS
2. FLOOR DRAIN UNDER WASHER/DRYER. SLOPE MIN $\frac{1}{4}$" PER FOOT TO DRAIN.
3. DOOR CONNECTING GARAGE TO RESIDENCE SHALL COMPLY WITH IRC 2012, SECTION R302.5.1. IT SHALL HAVE A 20MIN RATING AND BE EQUIPPED WITH A SELF-CLOSING DEVICE.
4. CABINETS BY KITCHEN CABINET SUPPLIER.
5. OPENINGS WITHIN 3'-5' OF FIREWALL ARE TO BE LESS THAN 25% OF THE TOTAL WALL AREA.
6. MECHANICAL CHASE. VERIFY SIZE AND LOCATION WITH HVAC & PLUMBER.
7. CONTROL JOINTS SHALL BE MADE IN FINISH SLABS BY CUTTING THE CONCRETE WHILE PLASTIC TO A DEPTH OF 1/3 THE THICKNESS OF THE SLAB, THUS REMAINING UNTIL THE CONCRETE HAS REACHED ITS INITIAL SET. THE JOINT SHALL BE TOOLED WITH A SMALL RADIUS GROOVING TOOL. JOINTS SHALL BE AT 5'-0" O.C.
8. NOT USED
9. ALL EXPOSED METAL FLASHING, VENT STACKS, ETC. SHALL BE PAINTED TO MATCH ADJACENT SURFACES.
10. FIRE-RETARDANT PLYWD. DECKING FROM FACE OF STUD TO 4'-0" OUT FROM FIREWALL, TYP.
11. TYP. SLOPED ROOF: ASPHALT SHINGLE ROOF OVER ICE AND WATERSHIELD OVER 30# FELTS OVER $\frac{5}{8}$" APA RATED PLYWOOD SHEATHING OVER ROOF JOISTS (RE: STRUCT. DWGS.) W/ INSUL. & $\frac{5}{8}$" GYP. BOARD ON INTERIOR SIDE (RE: DEEPER GREEN CONSULTANTS FOR R-VALUES)
12. TYP. ROOF DECK FLOOR: COMPOSITE DECKING, OVER 2X PRESSURE TREATED SLEEPERS W/ HOLES FOR DRAINAGE, OVER TPO MEMBRANE OVER MIN. $\frac{1}{2}$" DENSDECK ROOF BOARD OVER, SLOPED CONT. UL CLASSIFIED POLYISOCYANURATE INSULATION, OVER $\frac{5}{8}$" APA RATED PLYWOOD SHEATHING OVER ROOF JOISTS (RE: STRUCT. DWGS.) W/ SPRAY FOAM INSUL. & $\frac{5}{8}$" GYP. BOARD ON INTERIOR SIDE (RE: DEEPER GREEN CONSULTANTS FOR R-VALUES)
   $\frac{1}{4}$" PER FOOT SLOPED INSULATION TO ROOF DRAINS
   -PLUMBING CONTRACTOR TO DESIGN SIZE AND LOCATION OF ROOF AND SECONDARY DRAINS. INSTALL PER MANUFACTURERS REQUIREMENTS, 2018 IRC SECTION 903.4 AND 2018 IRC SECTION R903.4, TYP.
13. TYP. CLASS A FLAT ROOF ASSEMBLY: TPO MEMBRANE OVER MIN. $\frac{1}{2}$" DENSDECK ROOF BOARD OVER, SLOPED CONT. UL CLASSIFIED POLYISOCYANURATE INSULATION, OVER $\frac{5}{8}$" APA RATED PLYWOOD SHEATHING OVER ROOF JOISTS (RE: STRUCT. DWGS.) W/ SPRAY FOAM INSUL. & $\frac{5}{8}$" GYP. BOARD ON INTERIOR SIDE (RE: DEEPER GREEN CONSULTANTS FOR R-VALUES)
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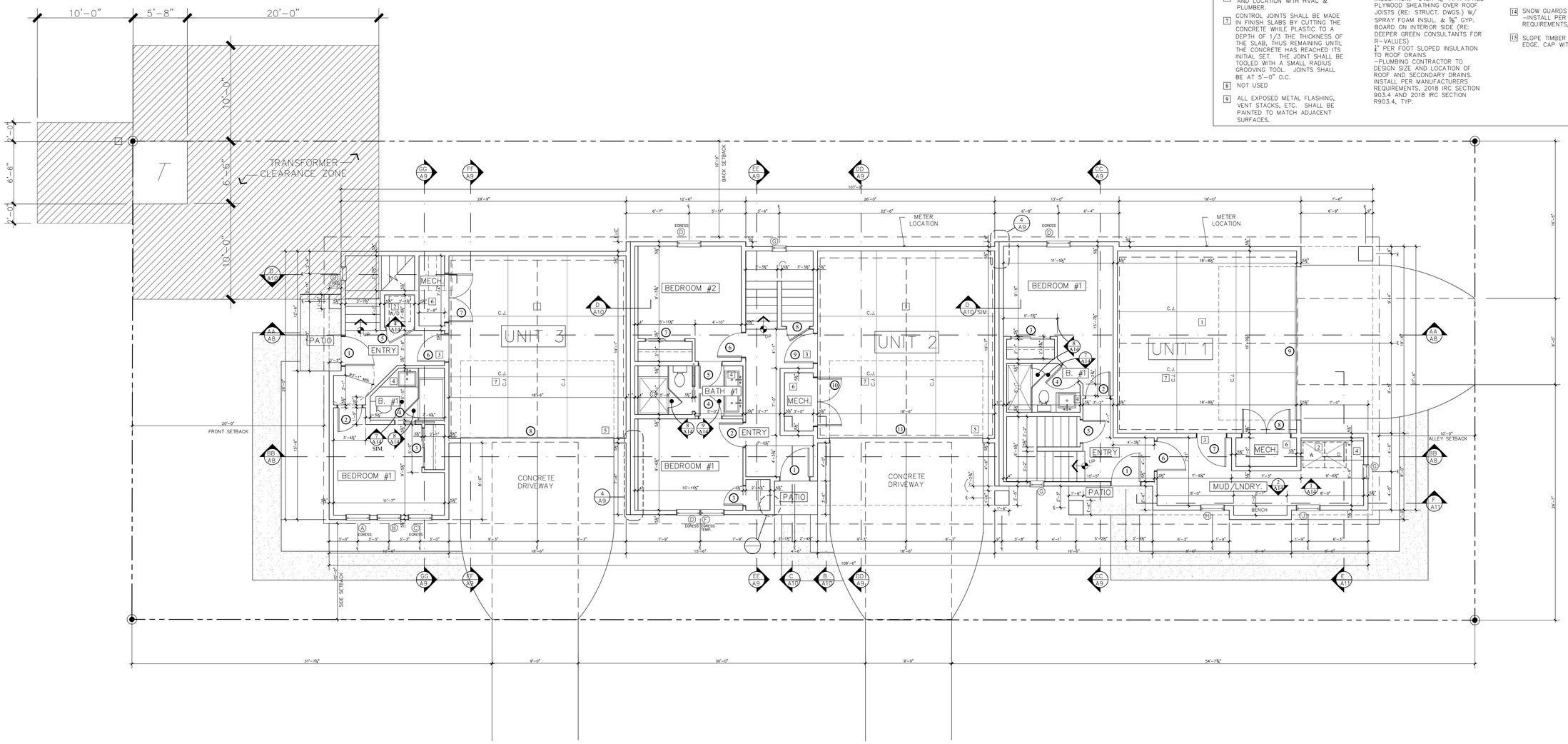
14. SNOW GUARDS
   -INSTALL PER MANUFACTURES REQUIREMENTS, TYP.
15. SLOPE TIMBER $\frac{1}{4}$" PER FOOT TO EDGE. CAP WITH FLASHING



UNIT 1 MARKET UNIT
FIRST LEVEL: 518 SF FINISHED AREA
SECOND LEVEL: 886 SF FINISHED AREA
THIRD LEVEL: 516 SF FINISHED AREA
TOTAL: 1,920 SF FINISHED AREA

UNIT 2 MARKET UNIT
FIRST LEVEL: 537 SF FINISHED AREA
SECOND LEVEL: 888 SF FINISHED AREA
THIRD LEVEL: 532 SF FINISHED AREA
TOTAL: 1,957 SF FINISHED AREA

UNIT 3 MARKET UNIT
FIRST LEVEL: 338 SF FINISHED AREA
SECOND LEVEL: 738 SF FINISHED AREA
THIRD LEVEL: 453 SF FINISHED AREA
TOTAL: 1,529 SF FINISHED AREA

LOWER LEVEL PLAN

NORTH

PL·OE·N HAUS
/pl'ai'n house/
p: 303.495.8124
e: Abby@PloenHaus.com
6590 East Lake Place
Centennial, CO 80111

TANGO TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

PLANS

NOV. 22, 2023
1/4" = 1'-0"

A2

PLAN KEY NOTES

1. INSTALL $\frac{5}{8}$" TYPE "X" DRYWALL ON GARAGE CEILINGS
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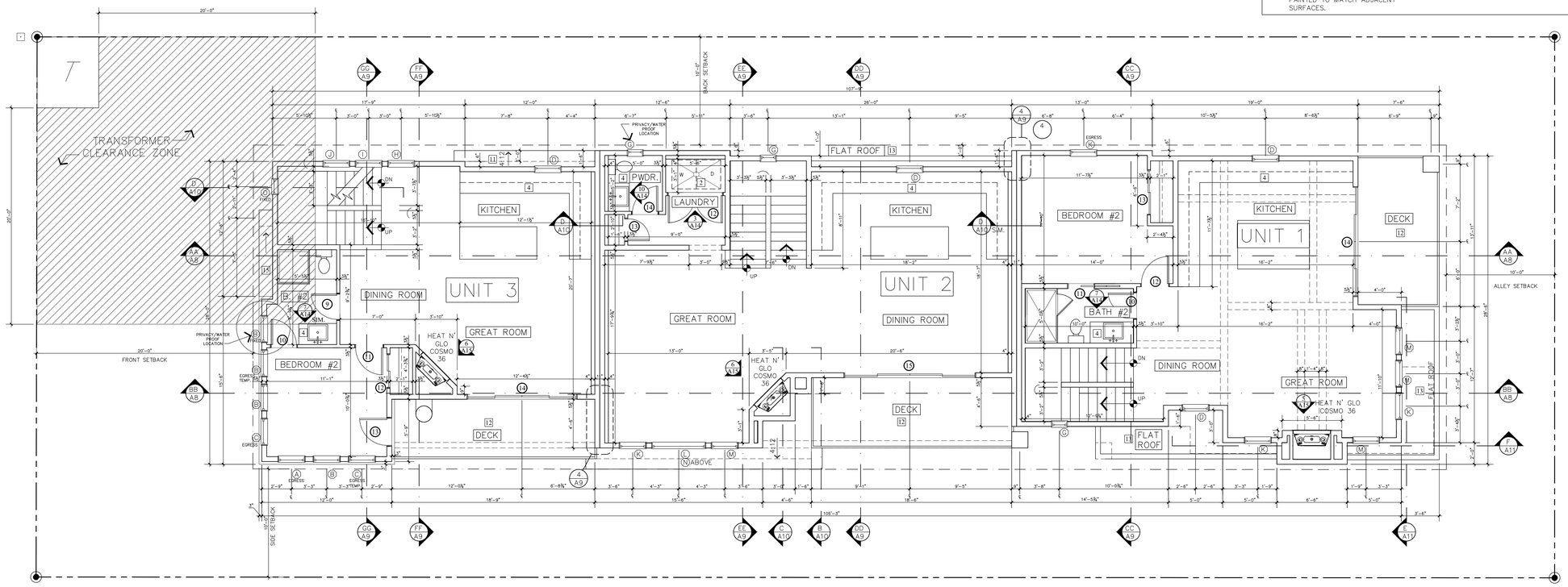

MAIN LEVEL PLAN NORTH

UNIT 1 MARKET UNIT	UNIT 2 MARKET UNIT	UNIT 3 MARKET UNIT
FIRST LEVEL: 518 SF FINISHED AREA	FIRST LEVEL: 537 SF FINISHED AREA	FIRST LEVEL: 338 SF FINISHED AREA
SECOND LEVEL: 886 SF FINISHED AREA	SECOND LEVEL: 888 SF FINISHED AREA	SECOND LEVEL: 738 SF FINISHED AREA
THIRD LEVEL: 516 SF FINISHED AREA	THIRD LEVEL: 532 SF FINISHED AREA	THIRD LEVEL: 453 SF FINISHED AREA
TOTAL: 1,920 SF FINISHED AREA	TOTAL: 1,957 SF FINISHED AREA	TOTAL: 1,529 SF FINISHED AREA

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[redacted]

PLANS

NOV. 22, 2023
1/4" = 1'-0"

A3

PLAN KEY NOTES

1. INSTALL $\frac{5}{8}$" TYPE "X" DRYWALL ON GARAGE CEILINGS
2. FLOOR DRAIN UNDER WASHER/DRYER. SLOPE MIN $\frac{1}{4}$" PER FOOT TO DRAIN.
3. DOOR CONNECTING GARAGE TO RESIDENCE SHALL COMPLY WITH IRC 2012, SECTION R302.5.1. IT SHALL HAVE A 20MIN RATING AND BE EQUIPPED WITH A SELF-CLOSING DEVICE.
4. CABINETS BY KITCHEN CABINET SUPPLIER.
5. OPENINGS WITHIN 3'-5' OF FIREWALL ARE TO BE LESS THAN 25% OF THE TOTAL WALL AREA.
6. MECHANICAL CHASE. VERIFY SIZE AND LOCATION WITH HVAC & PLUMBER.
7. CONTROL JOINTS SHALL BE MADE IN FINISH SLABS BY CUTTING THE CONCRETE WHILE PLASTIC TO A DEPTH OF 1/3 THE THICKNESS OF THE SLAB, THUS REMAINING UNTIL THE CONCRETE HAS REACHED ITS INITIAL SET. THE JOINT SHALL BE TOOLED WITH A SMALL RADIUS GROOVING TOOL. JOINTS SHALL BE AT 5'-0" O.C.
8. NOT USED
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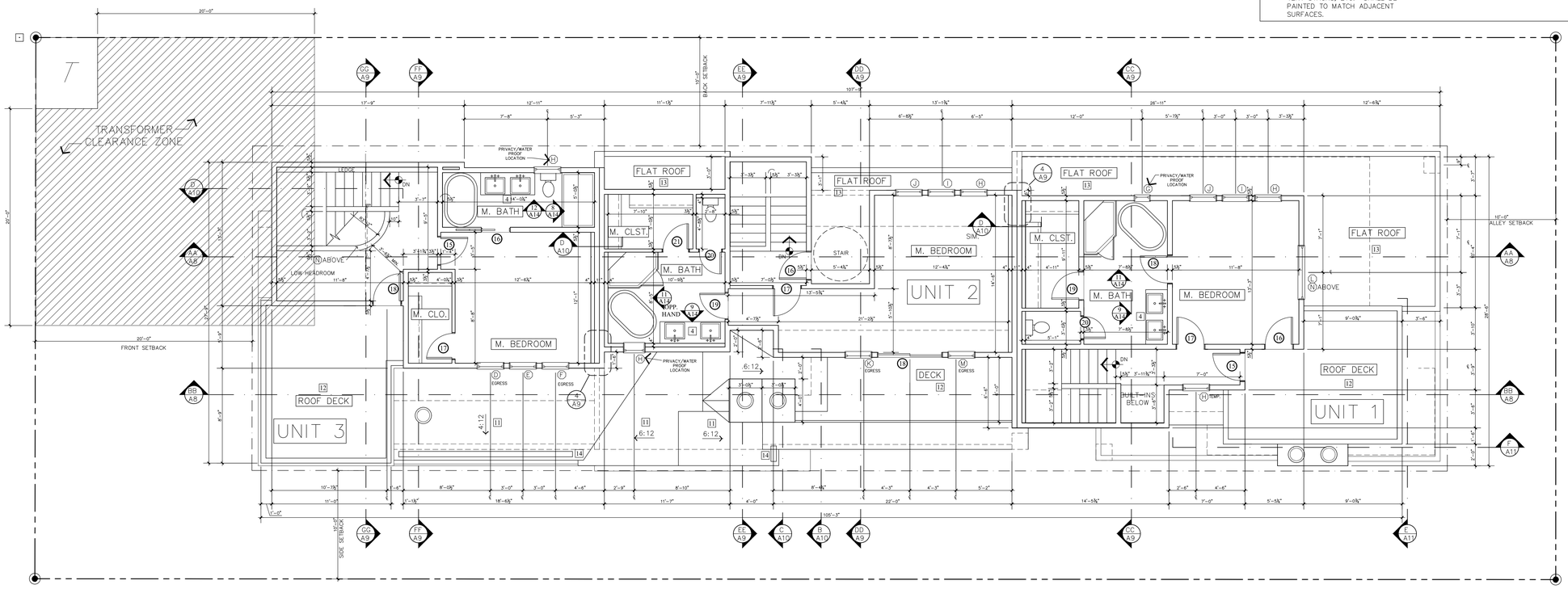

UPPER LEVEL PLAN NORTH

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PLANS

NOV. 22, 2023
1/4" = 1'-0"

A4

HEIGHT TABLE

POINT	N. GRADE	F. GRADE	LOWEST	RIDGELINE	HEIGHT	W/ RAILING	MAX HEIGHT
A	9057	9057.4	9057	9081	24'	YES	35'
B	9057	9057	9057	9091	34'	N/A	35'
C	9057	9057	9057	9090.5	33.5'	N/A	35'
D	9057	9057	9057	9090.75	33.75'	N/A	35'
E	9057	9057	9057	9090.75	33.75'	N/A	35'
F	9057	9058.4	9057	9081	24'	YES	35'
G	9057	9057	9057	9083.3	26.3'	N/A	35'
H	9057	9057	9057	9090.5	33.5'	YES	35'

PLAN KEY NOTES

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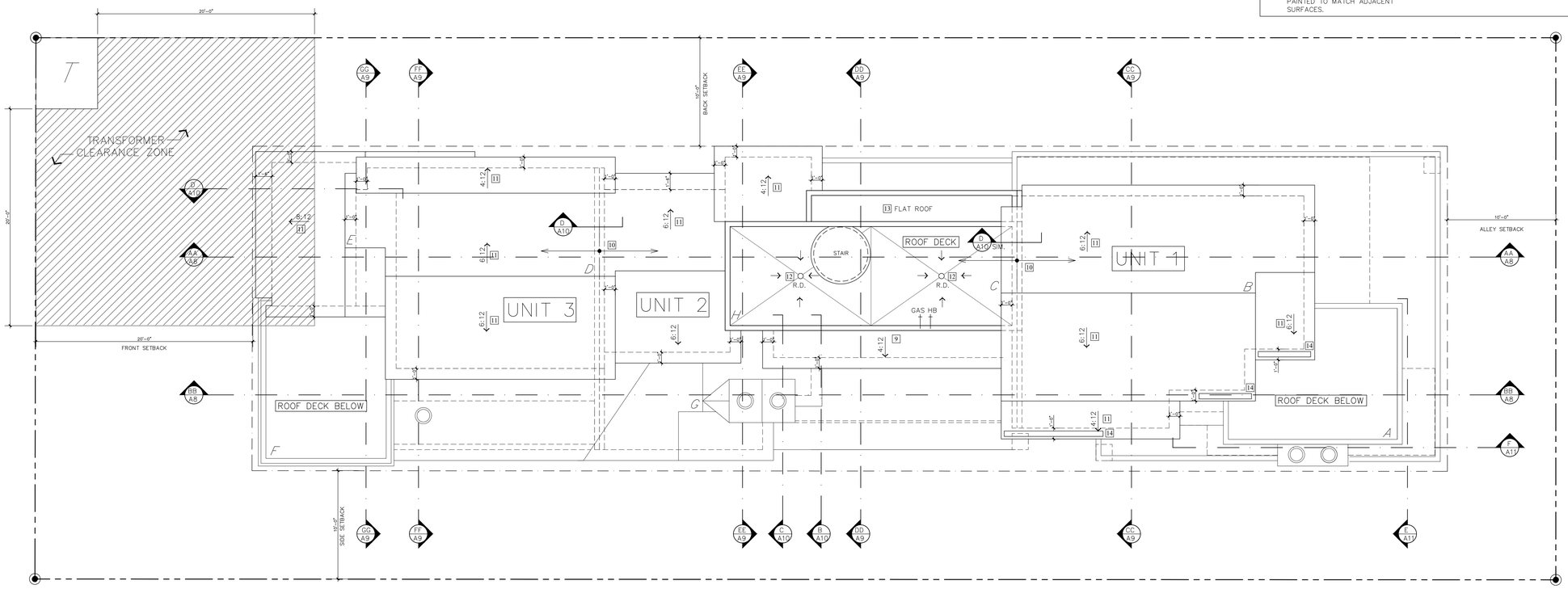

ROOF PLAN NORTH

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PLANS

NOV. 22, 2023
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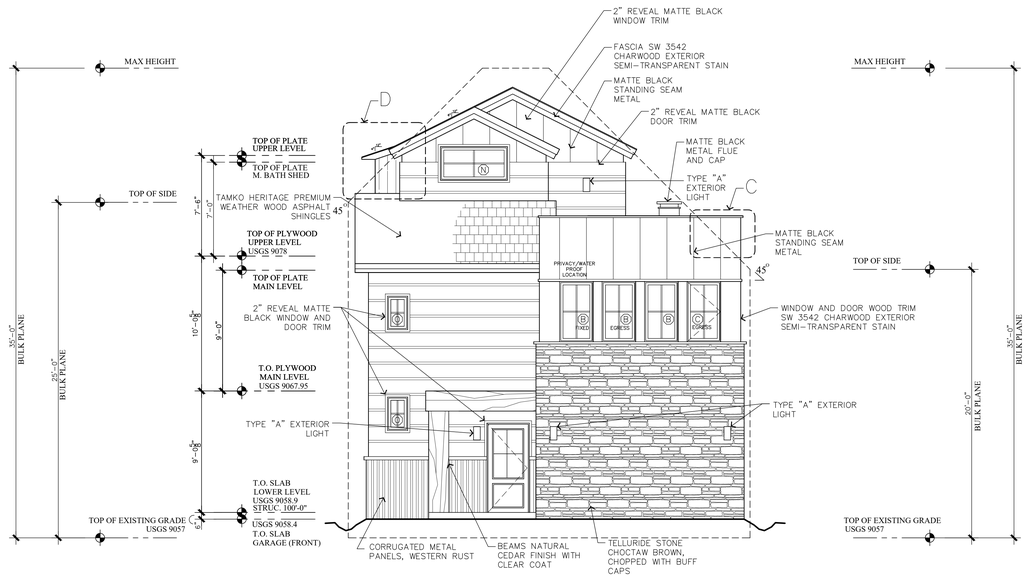
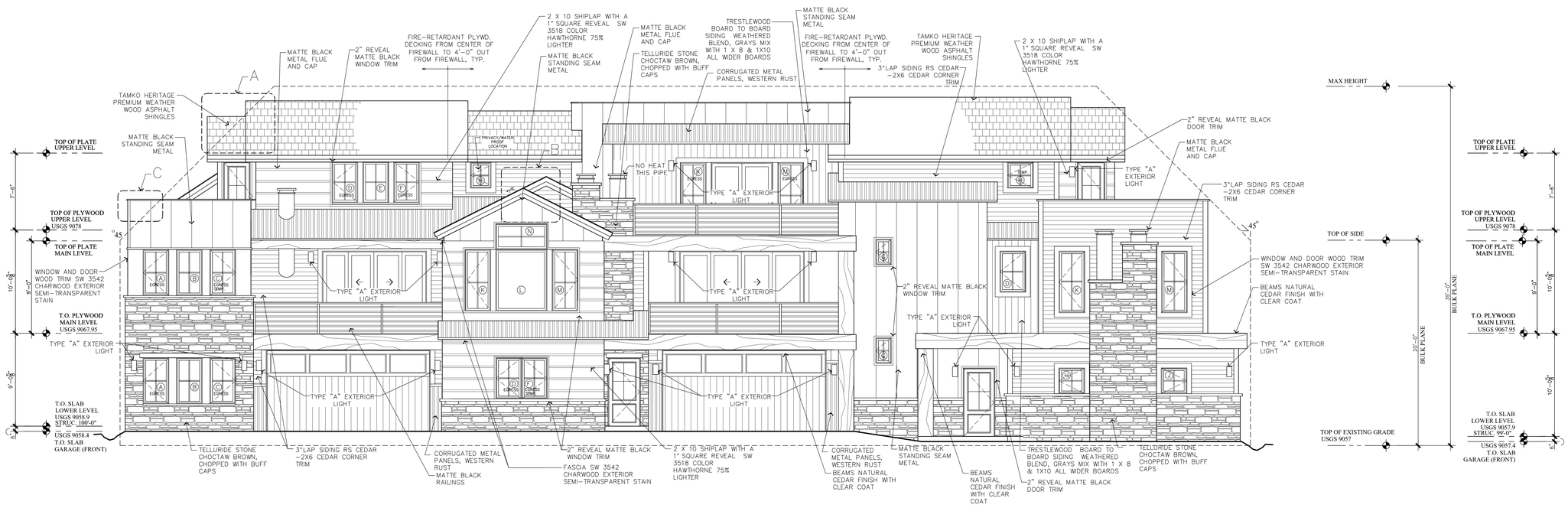
A5



NORTH ELEVATION



WEST ELEVATION

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ELEVATIONS

NOV. 22, 2023

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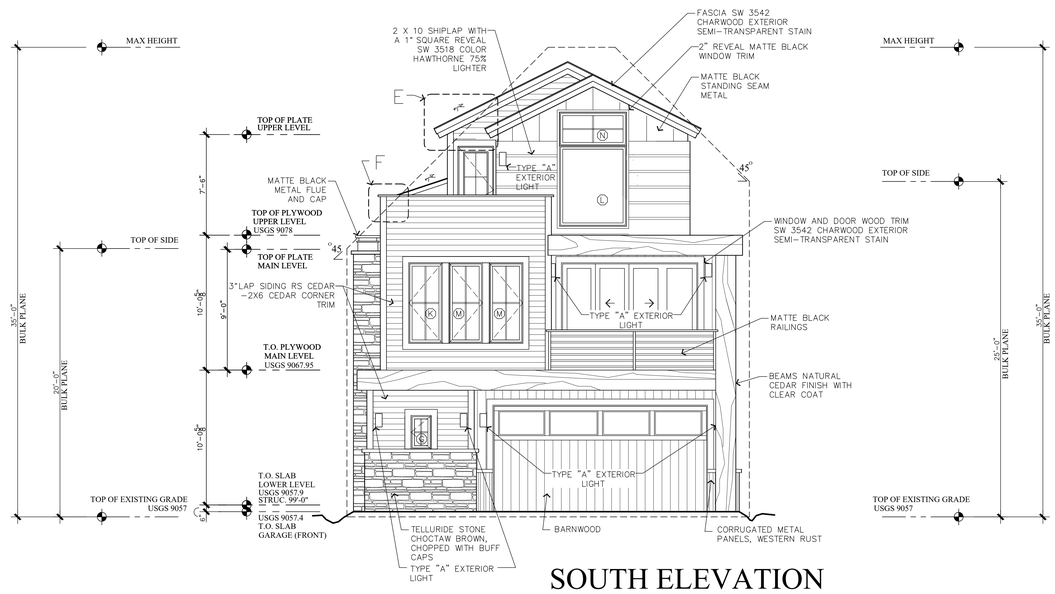
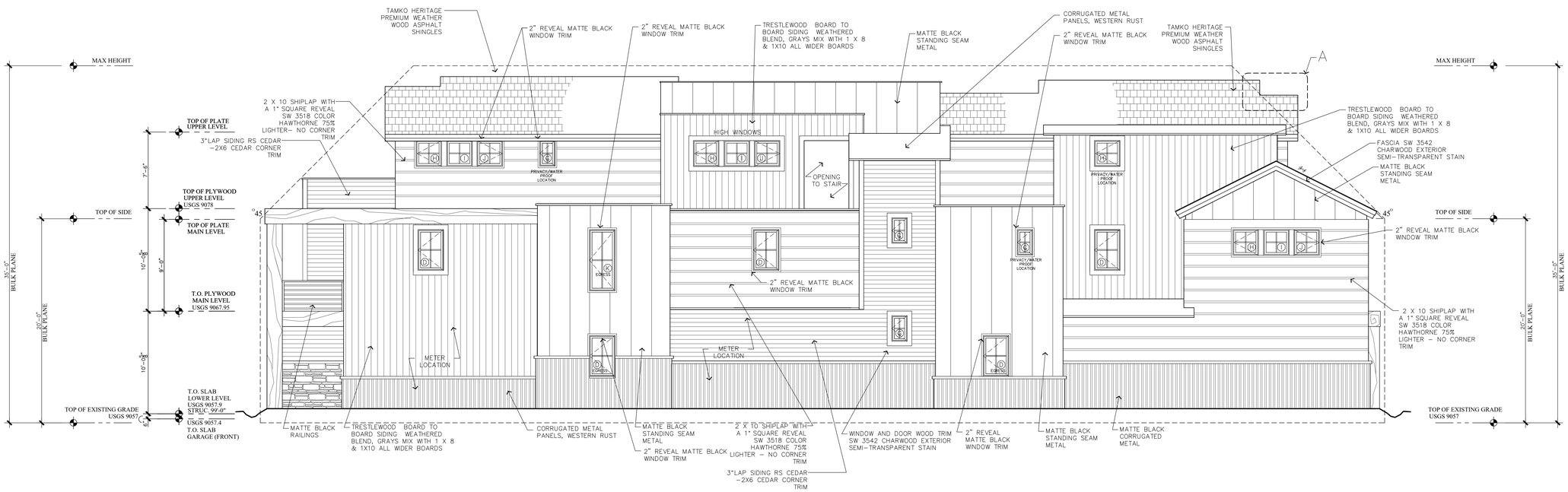
A6



SOUTH ELEVATION



EAST ELEVATION

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NOV. 22, 2023

1/4" =1'-0"

A7

OVERALL GENERAL NOTES:

1. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
2. TRENCHES SHALL BE EXCAVATED AND THE PIPE EXPOSED FOR INSPECTION AT ANY LOCATION ON THE PROJECT IF SO ORDERED.
3. ALL STREET STATIONING IS ALONG THE CENTERLINE OF THE ROADWAY UNLESS OTHERWISE NOTED. FOR SEPARATE WATER & SANITARY SEWER PLANS THE STATIONING IS ALONG THE CENTERLINE OF THE PIPE.
4. THE PROFILE GRADE ON THE PLANS IS ALONG THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL HAVE ON HIS POSSESSION AT THE SITE A COPY OF THE APPROVED CONSTRUCTION PLANS.
6. LIMITS OF WORK: NO AREAS SHALL BE DISTURBED OUTSIDE OF THE TEMPORARY CONSTRUCTION EASEMENTS AND THE ROADWAY DISTURBANCE LIMITS.
7. ALL CONSTRUCTION SHALL CONFORM TO THE TOWN OF FRISCO STANDARDS AND SPECIFICATIONS AS APPLICABLE. ALL WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DEVELOPER, SUMMIT COUNTY, OR THEIR REPRESENTATIVES. ONE OR ALL OF THE PARTIES HAS THE RIGHT TO REJECT MATERIALS AND WORKMANSHIP WHICH DO NOT CONFORM TO SPECIFICATIONS.
8. THE CONTRACTOR SHALL NOTIFY THE TOWN OF FRISCO AND THE PUBLIC UTILITY COMPANIES PRIOR TO PROCEEDING WITH ANY EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING UTILITY (INCLUDING DEPTHS) WHICH MAY CONFLICT WITH THE PROPOSED CONSTRUCTION. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. ALL ITEMS SHOWN ON THE PLANS AS EXISTING ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE ACTUAL LOCATIONS MAY VARY FROM THE PLANS, ESPECIALLY IN THE CASE OF UNDERGROUND UTILITIES. WHENEVER THE CONTRACTOR DISCOVERS A DISCREPANCY IN LOCATIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY. ALL WORK PERFORMED IN THE AREA OF THE PUBLIC UTILITIES SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS OF THESE AGENCIES.
9. CONTRACTOR SHALL GIVE 48 HOURS NOTICE TO TOWN OF FRISCO PERSONNEL TO PERFORM REQUIRED NSPECTIONS AND PRIOR TO ANY CONSTRUCTION ON THIS SITE.
10. ALL EXCAVATION SHALL COMPLY WITH OSHA SAFETY REGULATIONS.
11. CONTRACTOR SHALL OBTAIN APPROVAL FOR ALL TRAFFIC CONTROL AND ROAD/ALLEY REQUIREMENTS NECESSARY FROM THE TOWN OF FRISCO. NO ROAD/ALLEY CLOSURES MAY OCCUR WITHOUT APPROVAL AND NOTIFICATION OF TOWN OF FRISCO AND THE FIRE DEPARTMENT.
12. CONTRACTOR SHALL OBTAIN APPROVAL FOR ALL CONSTRUCTION STAGING REQUIREMENTS OFF THE PROPERTY NECESSARY FROM THE TOWN OF FRISCO.

DISTURBED AREA SEEDING NOTES:

1. All areas to be seeded will be properly prepared to provide a friable soil surface in the upper 6 inches, minimum.
2. Areas to be seeded will be drill seeded with the appropriate mix (Table 2 or 3) at the rates specified. Seed may be broadcast or hydroseeded on steep slopes. The specified seeding rate will be doubled for broadcast seeding or increased by 50 percent for hydroseeding.
3. seeded areas will be mulched at a rate of at least two tons per acre of certified, weed-free straw mulch, or one ton per acre of wood cellulose, if hydromulching is completed. Hydromulching will be completed as a separate step after seeding.
4. Straw mulch will be secured by use of m-binder tackifier at a rate of 3 pounds/1,000 square feet on slopes flatter than 2:1. Mulch will be secured with netting on slopes steeper than 3:1.

SEED MIX TYPE I			
COMMON NAME	SCIENTIFIC NAME	% MIX	POUNDS PLS/ACRE
IDAHO FESCUE	FESTUCA IDAHOENSIS	20	3.9
ALPINE BLUEGRASS	POA ALPINA	20	1.7
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	20	15.8
JUNE GRASS	KOELERIA CRISTATA	15	0.6
ARIZONA FESCUE	FESTUCA ARIZONICA	20	3.2
WHITE YARROW	ACHILLEA MILLEFOLIUM	5	0.2
TOTAL			25.4

1. Mix should be drill seeded, except on steep slopes where broadcast or hydroseeding are acceptable at 200 and 150 percent of rate shown, respectively.
2. The following wildflowers may also be seeded in certain areas.
   - –Blanket Flower 0.8 Pounds PLS/Acre
   - –Lupine 4.4 Pounds PLS/Acre
   - –Firecracker Penstemon 0.2 Pounds PLS/Acre
   - –California Poppy 0.4 Pounds PLS/Acre
3. Divide Pounds PLS/Acre by 43.5 to obtain Pounds PLS/1,000 SQ. Ft.

SEED MIX TYPE II			
COMMON NAME	SCIENTIFIC NAME	% MIX	POUNDS PLS/ACRE
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	20	15.8
REDTOP	AGROSTIS ALBA	15	0.3
TUFTED HAIRGRASS	DESCHAMPSIA CAESPITOSA	15	0.5
IDAHO FESCUE	FESTUCA IDAHOENSIS	30	5.8
ALPINE BLUEGRASS	POA ALPINA	20	1.7
TOTAL			24.1

1. Mix should be drill seeded, except on steep slopes where broadcast or hydroseeding are acceptable at 200 and 150 percent of rate shown, respectively.
2. Divide Pounds PLS/Acre by 43.5 to obtain Pounds PLS/1,000 SQ Ft.

ROADWAY GENERAL NOTES:

1. EARTHWORK OPERATIONS SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT FOR THE PROJECT.
2. PAVING SHALL NOT START UNTIL SUBGRADE COMPACTING TESTS ARE TAKEN AND MEET THE REQUIREMENTS OF THE PLANS AND SPECS AND FINAL PAVEMENT DESIGN BY GEOTECHINCAL ENGINEER AND/OR TOWN OF FRISCO STANDARDS, WHICHEVER ARE MORE STRINGENT. THE PAVEMENT SECTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THS PROJECT. THE MINIMUM DEPTH OF ASPHALT SHALL BE 3 INCHES.
3. THE CONTRACTOR SHALL SAW-CUT ALL EXISTING PAVEMENT WHERE MATCH LINES WITH EXISTING EDGE OF PAVEMENT OCCUR.
4. PORTLAND CEMENT CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS: SECTION TO END SECTION. THEREFORE, DISTANCES SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND COULD VARY. END SECTIONS ARE INCLUDED IN THE PIPE LENGTH SHOWN ON THE
   - A. COMPRESSIVE STRENGTH OF 4000 PSI AFTER 28 DAYS OF CURE TIME;
   - B. AIR CONTENT OF 6.5% ± 1.5%;
   - C. MAXIMUM SLUMP OF 3";
   - D. "FIBER MESH" FIBERS SHALL BE ADDED TO CONCRETE FOR STRENGTH, AT A RATE OF 1.5 POUNDS OF FIBER PER CUBIC YARD OF CONCRETE.
5. ROADWAY RETAINING WALL VERTICAL AND HORIZONTAL INFORMATION HAVE BEEN ESTABLISHED AS PART OF THESE ROADWAY PLANS. STRUCTURAL, GEOTECHNICAL, AND DRAINAGE ENGINEERING FOR THE WALLS IS BY OTHERS (SEE SEPARATE DESIGN DOCUMENTS).
6. COMPACTION TESTING FOR THE BASE COURSE IN THE ROADWAY SHALL MEET 95% OF MODIFIED PROCTOR (ASTM D-1557) THE MATERIAL BEING WITHIN 2.0 PERCENT OF OPTIMUM MOISTURE. EACH LIFT OF ASPHALT SHALL MEET THE MINIMUM DENSITY OF 92-96 PERCENT MAXIMUM THEORETICAL DENSITY AS DETERMINED BY THE RICE DENSITY METHOD (ASTM D-2041). TESTS SHALL BE MADE AT A FREQUENCY OF EVERY 200 LINEAR FEET AND AT EVERY 12" COMPACTED LIFT OF FILL PLACED, AND FOR EVERY LIFT OF ASPHALT PLACED OR ROLLED. ASPHALT DENSITY TESTING SHALL BE PERFORMED ON EACH LIFT AT INTERVALS OF ONE TEST PER EVERY 250 LINEAR FEET PER LANE. TEST LOCATIONS ON EACH LIFT AND EACH LANE SHALL BE STAGGERED.
7. DURING EARTHWORK OPERATION GEOTECHNICAL ENGINEER SHALL ASSESS ACTUAL SUB-SURFACE CONDITIONS AND REQUEST ADDITIONAL REQUIREMENTS IF NECESSARY.

STORM SEWER GENERAL NOTES

1. LOCATION AND ELEVATION OF EXISTING STORM SEWER AND CULVERTS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. ANY DIFFERENCES FROM DESIGN PLAN SHALL BE REPORTED TO DESIGN ENGINEER.
2. STORM SEWER SHALL BE HDPE (HIGH DENSITY POLYETHYLENE).
3. ALL CULVERTS SHALL HAVE END SECTIONS ON BOTH THE UPSTREAM AND DOWNSTREAM ENDS OF THE PIPE UNLESS OTHERWISE NOTED ON THE PLANS AND SHALL EXTEND 1 TO 3 FEET BEYOND EACH EDGE OF SHOULDERED PAVED DRIVE.
4. STORM SEWER BEDDING AND PIPE ZONE BACKFILL SHALL BE 3/4" TO 1" ROAD BASE OR APPROVED ALTERNATE.
5. PIPE LENGTHS FOR STORM SEWER ARE APPROXIMATE HORIZONTAL DISTANCES FROM END PLANS. FINAL LENGTH OF STORM SEWER SHALL BE SUFFICIENT TO PROVIDE THE ROAD SHOULDERS AND SIDE SLOPES TO NOT BE STEEPER THAN SHOWN ON THE TYPICAL ROAD SECTION.

SANITARY SEWER GENERAL NOTES:

1. ALL SANITARY SEWER CONSTRUCTION SHALL CONFORM TO FRISCO SANITATION DISTRICT "DESIGN STANDARDS AND SPECIFICATIONS FOR SEWER CONSTRUCTION".
2. ALL SEWER MAINS AND SERVICES SHALL BE SDR 35 (UNLESS OTHERWISE NOTED).
3. ALL MANHOLE RIMS WITHIN THE 100-YEAR FLOOD PLAIN SHALL BE SET AT THE 100-YEAR FLOOD PLAIN ELEVATION AND SHALL HAVE GASKETTED BOLT DOWN LIDS.
4. MANHOLES SHALL BE WRAPPED WITH BITUTHENE.
5. SANITARY SEWER BEDDING AND PIPE ZONE BACKFILL GRADATION SHALL BE 1/4" TO 3/4" OR APPROVED ALTERNATE.
6. PIPELINE FLUSHING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING A CLEANING COMPANY THAT WILL HIGH-PRESSURE JET CLEAN THE LINES TO INSURE THAT SAND, ROCKS, OR OTHER FOREIGN MATERIAL ARE NOT LEFT IN ANY OF THE PIPELINES. WHEN FLUSHING, CARE SHOULD BE TAKEN TO PREVENT DAMAGE TO PROPERTY OR ROADWAYS OR EROSION OF SURROUNDING SOILS. FLUSHING WATER AND FLUSHED DEBRIS SHALL NOT BE ALLOWED TO ENTER THE EXISTING SEWER SYSTEM.
7. SEWER LINE ALIGNMENT, AND GRADE VERIFICATION. ONCE THE SEWER PIPELINES HAVE BEEN FLUSHED, THE SEWER PIPELINES SHALL BE INSPECTED BY MEANS OF CLOSED CIRCUIT TELEVISION (CCTV). DOCUMENTATION SHALL CONSIST OF A COLOR, VHS-FORMAT VIDEOTAPE, LOG SHEETS, AND A WRITTEN REPORT DETAILING THE CONDITION OF THE PIPELINE AND LATERAL CONNECTIONS/OPENINGS. THE REPORT SHALL NOTE THE TIME AND DATE OF VIDEO INSPECTION, STREET NAME, UPSTREAM AND DOWNSTREAM MANHOLE, DIRECTION OF VIEW, DIRECTION OF FLOW, SURFACE MATERIAL, PIPELINE LENGTH, PIPE SECTION LENGTH, PIPE SIZE, PIPE MATERIAL, LATERAL CONNECTIONS, VIDEO TAPE NUMBER, COUNTER NUMBER, AND A DETAILED LOGGING OF DEFECTS ENCOUNTERED. ANY REJECTED WORK SHALL BE REPAIRED, THEN RE-TELEVISED.
8. LEAKAGE. ALL PIPELINES SHALL BE TESTED FOR LEAKAGE BY MEANS OF AN AIR PRESSURE TEST. THE TEST SHALL BE PERFORMED AS FOLLOWS:

A. PREPARATION FOR TESTS: FLUSH AND CLEAN THE PIPELINE PRIOR TO TESTING IN ORDER TO WET THE PIPE SURFACES AND PRODUCE MORE CONSISTENT RESULTS. PLUG AND BRACE ALL OPENINGS IN THE PIPELINE AND THE UPPER CONNECTIONS. CHECK ALL PIPE PLUGS WITH A SOAP SOLUTION TO DETECT ANY AIR LEAKAGE. IF LEAKS ARE FOUND, RELEASE THE AIR PRESSURE, ELIMINATE THE LEAKS, AND START THE TEST PROCEDURE OVER AGAIN.

B. PROCEDURE OF TEST: ADD AIR UNTIL THE INTERNAL PRESSURE OF THE PIPELINE IS RAISED TO APPROXIMATELY 4.0 PSI, AT WHICH TIME THE FLOW OF AIR SHALL BE REDUCED AND THE PRESSURE MAINTAINED BETWEEN 3.5 AND 4.5 PSI FOR A SUFFICIENT TIME TO ALLOW THE AIR TEMPERATURE TO COME TO EQUILIBRIUM WITH THE TEMPERATURE OF THE PIPE.

C. AFTER THE TEMPERATURE HAS STABILIZED, PERMIT THE PRESSURE TO DROP TO 3.5 PSIG IN EXCESS OF THE GROUND WATER PRESSURE ABOVE THE TOP OF THE SEWER, AT WHICH TIME A STOP WATCH OR SWEEP SECOND HAND WATCH SHALL BE USED TO DETERMINE THE TIME LAPSE REQUIRED FOR THE AIR PRESSURE TO DROP TO 3.0 PSIG.

D. THE TIME ELAPSED SHALL NOT BE LESS THAN THE FOLLOWING:

PIPE SIZE (INCHES)	TIME (MINUTES)
6	5
8	5
10	6.5
12	7.5

E. BRACE ALL PLUGS SUFFICIENTLY TO PREVENT BLOWOUTS AND VENT THE PIPELINE COMPLETELY BEFORE ATTEMPTING TO REMOVE PLUGS.

F. PROVIDE PRESSURIZING EQUIPMENT WITH A RELIEF VALVE SET AT 5 PSI TO AVOID OVER-PRESSURIZING AND DAMAGING AN OTHERWISE ACCEPTABLE LINE.

9. MANHOLE VISUAL EXAMINATION. THE ENGINEER SHALL VISUALLY CHECK EACH MANHOLE, BOTH EXTERIOR AND INTERIOR, FOR FLAWS, CRACKS, HOLES, OR OTHER INADEQUACIES, WHICH MIGHT AFFECT THE OPERATION OR WATERTIGHT INTEGRITY OF THE MANHOLE. SHOULD ANY INADEQUACIES BE FOUND, THE CONTRACTOR, AT ITS OWN EXPENSE, SHALL MAKE ANY REPAIRS DEEMED NECESSARY BY THE ENGINEER. CONTRACTOR TO NOTIFY ENGINEER 48 HOURS PRIOR TO INSTALLATION OF MAN HOLES.

10. MANHOLE LEAKAGE TEST (VACUUM). ALL MANHOLES SHALL BE TESTED FOR LEAKAGE AND ALL TESTS SHALL BE WITNESSED BY THE ENGINEER. THE LEAKAGE TEST SHALL BE CONDUCTED PRIOR TO BACK-FILLING AROUND THE MANHOLE AND SHALL BE CARRIED OUT IN THE FOLLOWING MANNER:

A. MANHOLES SHALL BE VACUUM TESTED AFTER ASSEMBLY AND PRIOR TO BACKFILLING.

B. CARE SHALL BE TAKEN LO EFFECT A SEAL BETWEEN THE VACUUM BASE AND THE MANHOLE RIM. PIPE PLUGS SHALL BE SECURED TO PREVENT MOVEMENT WHILE THE VACUUM IS DRAWN.

C. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN. THE TIME FOR THE VACUUM TO DROP TO 9 INCHES OF MERCURY SHALL BE RECORDED.

D. ACCEPTANCE SHALL BE DEFINED AS WHEN THE TIME TO DROP TO 9 INCHES MEETS OR EXCEEDS THE FOLLOWING:

DIA	TIME TO DROP 1" HG
4 FT.	120 SECONDS
5 FT.	120 SECONDS
6 FT.	120 SECONDS

E. IF THE MANHOLE FAILS THE TEST, MAKE NECESSARY REPAIRS. REPAIRS AND REPAIR PROCEDURES MUST BE ACCEPTABLE TO TOWN.

F. IF PREFORMED PLASTIC GASKETS ARE PULLED OUT DURING THE VACUUM TEST, THE MANHOLE SHALL BE DISASSEMBLED AND THE GASKETS SHALL BE REPLACED.

11. ALL SEWER LINE WORK SHALL BE INSPECTED BY THE DESIGN ENGINEER DURING CONSTRUCTION.
12. AS BUILT DRAWINGS SHALL BE PROVIDED BY A PROFESSIONAL ENGINEER.
13. EXISTING SEWER MAIN ELEVATIONS MUST BE FIELD VERIFIED.

WATER GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE TOWN OF FRISCO WATER DISTRICT CURRENT RULES AND REGULATIONS. WATER SYSTEM SPECIFICATIONS AND TESTING PROCEDURES SHALL BE IN CONFORMANCE WITH TOWN OF FRISCO WATER DISTRICT STANDARDS.
2. ALL WATER MAINS SHALL BE AWWA, CLASS 52, PUSH ON JOINT, DUCTILE IRON PIPE (DIP) WITH RUBBER GASKET..
3. SERVICE LINES SHALL BE 1" K COPPER. ALL SERVICE LINES SHALL HAVE A BACKFLOW PREVENTION DEVICE INSTALLED UPSTREAM OF THE WATER METER CONSISTING OF A DOUBLE CHECK VALVE ASSEMBLY SIMILAR OR EQUAL TO A WATTS REGULATOR NO. 7.
4. MINIMUM COVER WITHIN STREETS IS 9.5 FEET AND 8.5 FEET IN UNPAVED LOCATIONS. INSULATION REQUIRED AT DEPTHS BELOW 8.5'.
5. THE CONTRACTOR IS RESPONSIBLE FOR:
   - A. NOTIFYING ALL CUSTOMERS POSSIBLY AFFECTED BY OUTAGE OF WATER DURING CONSTRUCTION.
   - B. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL APPLICABLE LICENSES, PERMITS, BONDS, ETC. REQUIRED FOR THE MAIN INSTALLATION/SYSTEM MODIFICATION.
   - C. CONTACTING TOWN OF FRISCO WATER DISTRICT FOR PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

   NOTE: BE ADVISED THAT OCCASIONALLY VALVES IN OUR SYSTEM MAY BE INOPERABLE. ON SUCH OCCASIONS IT MAY BECOME NECESSARY TO BACK UP AN ADDITIONAL BLOCK FOR THE SHUT OUT. IT WILL THEN BE NECESSARY TO MAKE THE ADDITIONAL NOTIFICATIONS TO GIVE THE AFFECTED CUSTOMERS THE MANDATORY 24 HOURS ADVANCE NOTICE. ALSO BE ADVISED THAT WHEN VALVE MAINTENANCE IS REQUIRED, A DELAY OF SEVERAL DAYS SHOULD BE EXPECTED.
6. ALL WATER LINE WORK SHALL BE INSPECTED BY THE DESIGN ENGINEER DURING CONSTRUCTION
7. AS BUILT DRAWINGS SHALL BE PREPARED BY A COLORADO PROFESSIONAL ENGINEER PER THE TOWN OF FRISCO WATER DISTRICT REQUIREMENTS.
8. FOR DETAILS OF IRRIGATION REQUIREMENTS AND METER REQUIREMENTS SEE LANDSCAPE PLANS..
9. CONTRACTOR IS RESPONSIBLE FOR VERIFING THE MECHINICAL DESIGN ACCOUNTS FOR FIRE PROTECTION AND CONFIRMING THE 4" WATER SERVICE SPECIFIED IS SIZE APPROPRIATELY.

WATER GENERAL NOTES (CONTINUED):

10. VALVES SHALL BE RESILIENT SEAT NRS GATE VALVES AND SHALL OPEN-LEFT (MUELLER, US, WATEROUS OR CLOW BRAND RESILIENT WEDGE VALVES ONLY). CHECK WITH WATER SUPT. FOR VERIFICATION OF SPECIFIC MODEL NUMBERS.
11. VALVE BOXES SHALL BE OVAL BASE BOTTOM TYPE. CHECK WITH WATER SUPT. FOR VERIFICATION OF SPECIFIC MODEL NUMBERS.
12. ALL FIRE HYDRANTS SHALL BE WATEROUS "PACER" WITH 34-INCH MOUNTAIN STANDARD FLANGE MEETING THE FOLLOWING REQUIREMENTS:

NOZZLE	5-1/4 INCH
INLET	6 INCH FOR MECHANICAL JOINT
DEPTH OF BURY	9'-6" OR 8'-6" (AS REQUIRED TO MEET THE WATERLINE COVER)
OPERATING NUT1	1 INCH PENTAGON
OPEN	LEFT(CCW)
OUTLETS	TWO 2-1/2 INCH, ONE 5-1/4 INCH PUMPER NOZZLE (THREADS TO MATCH EXISTING)
THREADS	NATIONAL STANDARD
CAPS	CAP WITH PENTAGON NUT
COLOR	RED (ALL ABOVE GROUND PARTS)
THRUST RESTRAINT	BOTTOM THRUST BLOCK AND 2-3/4" TIE RODS FROM MAIN TEE TO HYDRANT BOTTOM.
ELEVATION OF NOZZLE	42" ± 3" OPERATING NUT ABOVE FINISHED GROUND SURFACE AT TRAFFIC FLANGE

ALL HYDRANTS TO BE SHOP PRIMED AND PAINTED RED. BOLLARDS AS SPECIFIED BY TOWN.

13. WATER METER KIT WILL BE PROVIDED BY TOWN. THE CHARGE FOR THE WATER METER KIT WILL BE PAID BY THE DEVELOPER AT THE TIME OF THE BUILDING PERMIT ISSUANCE. THE METER KIT WILL HAVE REMOTE READOUT.
14. AIR RELEASE VALVES (ARV'S) SHALL BE APCO MODEL NO. 143 C COMBINATION AIR/VACUUM VALVE OR APPROVED EQUAL.
15. MECHANICAL JOINT RESTRAINT DEVICES SHALL BE:

FOR DUCTILE IRON PIPE:	FOR C900 PVC PIPE:
MEGALUG 1700 SERIES	IBEE IRON INC. SERIES 1500
ROMAL ROM GRIP	
UNI-FLANGE 1400 SERIES	
STAR GRIP 3000 SERIES	
SIGMA-LOCK	

16. PIPE JOINT RESTRAINT DEVICES, TIE RODS AND THRUST BLOCKS SHALL BE INSTALLED PER DETAILS. ALL RESTRAINT RODS AND HARDWARE ARE TO BE STAINLESS STEEL OR CORTEN.
17. CHLORINATION

ALL MAIN EXTENSIONS AND PRIVATE PIPE EXTENSIONS SHALL BE CHLORINATED IN ACCORDANCE WITH AWWA C651. THE CHLORINATING AGENT AND METHOD OF APPLICATION, SHALL BE APPROVED BY THE TOF.

THE CHLORINATION OF THE FINISHED PIPELINE SHALL BE DONE PRIOR TO THE HYDROSTATIC TESTING. BEFORE FILLING THE PIPE WITH WATER, THE PIPE SHALL BE CLEAN AND FREE OF DEBRIS TO THE SATISFACTION OF THE TOWN. TOS WILL NOT PROVIDE LABOR OR MATERIAL FOR DISINFECTION TO APPLICANT'S INSTALLING MAINS UNDER PRIVATE CONTRACT.

CHLORINE TABLETS MAY BE USED FOR DISINFECTION IN 12-INCH AND SMALLER PIPE. SIXTEEN INCH AND LARGER PIPE REQUIRES A CHLORINE SLURRY FED INTO THE WATER USED IN FILLING THE PIPE. CHLORINE TABLETS SHALL BE ATTACHED TO THE INSIDE TOP OF THE PIPE WITH AN APPROVED ADHESIVE CERTIFIED TO NSF STANDARD 61 PRIOR TO THE PIPE INSTALLATION IN THE TRENCH. AN APPROVED ADHESIVE IS DOW CORNING 732 MULTI-PURPOSE SEALANT.

NUMBER OF HYPOCHLORITE TABLETS OF 5 GRAM STRENGTH
REQUIRED FOR A DOSE OF 50 MILLIGRAMS/LITER*

PIPE LENGTH (FEET)	PIPE DIAMETER (INCHES) 6	8	12
13 OR LESS	2	2	5
18	2	3	6
20	2	3	7

*BASED ON 3 3/4" GRAM AVAILABLE CHLORINE PER TABLET

AFTER THE PIPE IS FILLED WITH WATER AND CHLORINE, THE CHLORINATED WATER SHALL BE HELD IN CONTACT WITH THE PIPE FOR 24 HOURS. AT THE END OF THE 24 HOUR PERIOD, THE WATER IN THE PIPELINE SHALL BE TESTED BY THE TOWN OF FRISCO TO INSURE A RESIDUAL CHLORINE CONTENT OF NOT LESS THAN 25 MILLIGRAMS PER LITTER. THE PIPE LINE THEN SHALL BE THOROUGHLY FLUSHED TO REMOVE THE HEAVILY CHLORINATED WATER. THE CONTRACTOR SHALL TAKE CARE IN FLUSHING THE PIPELINE TO PREVENT PROPERTY, ENVIRONMENTAL OR DANGER TO THE PUBLIC.

SAMPLES OF WATER WILL BE COLLECTED FOR BACTERIOLOGICAL EXAMINATION AND RESIDUAL CHLORINE CONTENT TESTING BEFORE THE PIPE IS PUT INTO SERVICE. TESTING OF RESIDUAL CHLORINE AND SAMPLING WILL BE DONE BY THE LOCAL HEALTH AUTHORITY OR THEIR DESIGNATED REPRESENTATIVE.

18. HYDROSTATIC TESTING

NO HYDROSTATIC TESTS SHALL BE MADE ON ANY PORTION OF THE PIPELINE UNTIL FIELD PLACED CONCRETE HAS HAD ADEQUATE CURING TIME, DEFINED AS FOLLOWS:

CONCRETE SHALL BE CURED BY A METHOD RECOMMENDED BY ACI 308. WHEN THE DAILY MEAN AMBIENT TEMPERATURE IS ABOVE 40°F, THE FINISHED CONCRETE SHALL BE CURED CONTINUOUSLY FOR A MINIMUM OF 7 DAYS OR FOR THE TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED COMPRESSIVE STRENGTH, WHICHEVER PERIOD IS LESS. WHEN THE MEAN DAILY AMBIENT TEMPERATURE IS 40°F OR LOWER, THE FINISHED CONCRETE SHALL BE CONTINUALLY CURED AT A MINIMUM TEMPERATURE OF 55° F FOR THE PERIOD RECOMMENDED BY ACI 306 TO PREVENT DAMAGE FROM EARLY-AGE FREEZING AND PROVIDE THE SERVICE CATEGORY STRENGTHS REQUIRED FOR EACH PLACEMENT.

TOF SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF TESTING. ALL TESTING SHALL BE MADE IN THE PRESENCE .OF TOF WATER DEPARTMENT STAFF

ONLY THE FOLLOWING METHODS ARE ACCEPTABLE FOR SUPPLYING POTABLE WATER FOR HYDROSTATIC TESTING:

1. WATER MAY BE TAKEN FROM A NEARBY PRESSURIZED WATER SOURCE WHICH HAS BEEN PREVIOUSLY CHLORINATED, TESTED AND ACCEPTED, SUCH AS A FIRE HYDRANT.
2. WATER MAY BE DELIVERED TO THE SITE IN A CHLORINATED WATER TRUCK HAVING A MINIMUM CAPACITY OF 300 GALLONS. THE WATER TRUCK SHALL BE USED EXCLUSIVELY FOR THE TRANSPORTATION OF POTABLE WATER.
3. ANY PREVIOUSLY TESTED, CHLORINATED AND ACCEPTED WATER MAIN, WHICH IS PRESSURIZED AND IS TO SERVE THE NEW MAIN EXTENSION, MAY BE TAPPED ON THE PRESSURIZED SIDE OF THE CLOSED VALVE.

IN ANY EVENT, THE METHOD OF SUPPLYING WATER AS WELL AS THE SOURCE OF WATER FOR HYDROSTATIC TESTING MUST BE CERTIFIED AND APPROVED BY TOB. USE OF BARRELS, SANITARY OR OTHERWISE, TO SUPPLY WATER FOR HYDROSTATIC TESTING IS STRICTLY PROHIBITED.

TOF WILL FURNISH ONLY THE CALIBRATED METER BUT NOT THE PUMP FOR TESTING. THE PIPELINE SHALL BE PROPERLY BACKFILLED AND SHALL BE IN A STATE OF READINESS FOR TESTING. ALL BULKHEADS, PUMPS, TAPS, AND APPURTENANCES NECESSARY TO FILL THE PIPELINE AND MAINTAIN THE REQUIRED PRESSURE SHALL BE IN PLACE. THE PIPELINE SHALL BE FILLED WITH WATER AND THE TEST PRESSURE OF 150 POUNDS PER SQUARE INCH SHALL BE APPLIED TO THE PIPELINE BY MEANS OF A CONTINUOUSLY OPERATING PUMP, EQUIPPED WITH A BYPASS VALVE FOR REGULATING PRESSURE. WHEN FILLING THE PIPELINE, IT SHALL BE FILLED AT A RATE, WHICH WILL NOT CAUSE ANY SURGES, NOR WILL IT EXCEED THE RATE AT WHICH THE AIR CAN BE RELEASED.

ALL AIR IN THE LINE SHALL BE PROPERLY PURGED. WHERE BLOWOFFS OR HYDRANTS ARE NOT AVAILABLE OR ARE NOT EFFECTIVE IN PURGING AIR FROM THE LINE, TOF SHALL REQUIRE A TAP TO PURGE THE LINE. THE LOCATION AND SIZE OF TAP SHALL BE AT TOF'S DISCRETION.

WHILE THE TEST PRESSURE IS MAINTAINED, AN EXAMINATION SHALL BE MADE OF THE PIPELINE IN GENERAL, AND ANY LEAKS SHALL BE REPAIRED. ANY PIPE OR FITTING FOUND TO BE FAULTY SHALL BE REMOVED AND REPLACED. NO LEAKAGE IS ALLOWED THROUGH THE BONNET OF THE LINE VALVE. ANY VALVE LEAKING THROUGH THE BONNET SHALL BE REPAIRED IN PLACE OR REMOVED AND REPLACED. CUTTING AND REPLACING PAVEMENT, EXCAVATING, AND BACKFILLING MAY ALL BE NECESSARY PARTS OF LOCATING AND REPAIRING LEAKS DISCOVERED BY PRESSURE TESTING OF PIPE.

AFTER ALL VISIBLE LEAKS HAVE BEEN STOPPED, THE FULL TEST-PRESSURE SHALL BE MAINTAINED FOR 2 CONTINUOUS HOURS. ALLOWABLE LEAKAGE FOR EACH SECTION BETWEEN LINE VALVES SHALL NOT EXCEED THE FOLLOWING LEAKAGE RATES FOR 4-INCH THROUGH 20-INCH DISTRIBUTION AND TRANSMISSION MAINS:

PIPE SIZE (INCHES)	ALLOWABLE LEAKAGE PER 1,000 FEET OF PIPE (GALLONS PER HOUR) DIP
6	.55
8	.74
12	1.10

SHOULD TESTING SHOW A LEAKAGE RATE IN EXCESS OF THE RATES SHOWN, THE PIPELINE SHALL NOT BE ACCEPTED. THE PIPELINE SHALL BE REPAIRED, RECHLORINATED AS DESCRIBED IN NOTE 12, AND RETESTED UNTIL IT MEETS THE TEST REQUIREMENTS.

19. THE CONTRACTOR IS RESPONSIBLE FOR:
   - A. NOTIFYING ALL CUSTOMERS POSSIBLY AFFECTED BY OUTAGE OF WATER DURING CONSTRUCTION.
   - B. THE CONTRACTOR SHALL OBTAIN, AT HIS EXPENSE, ALL APPLICABLE LICENSES, PERMITS, BONDS, ETC. REQUIRED FOR THE MAIN INSTALLATION/SYSTEM MODIFICATION.
   - C. CONTACTING TOWN OF FRISCO FOR PRE-CONSTRUCTION MEETING AND INSPECTION, 970-XXX-XXXX, AT LEAST 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
   - D. IN CASE OF AN EMERGENCY AFTER WORKING HOURS, CALL TOWN OF FRISCO AT 970-668-0836 (JEFF GOBLE)

   NOTE: BE ADVISED THAT OCCASIONALLY VALVES IN OUR SYSTEM MAY BE INOPERABLE. ON SUCH OCCASIONS IT MAY BECOME NECESSARY TO BACK UP AN ADDITIONAL BLOCK FOR THE SHUT OUT. IT WILL THEN BE NECESSARY TO MAKE THE ADDITIONAL NOTIFICATIONS TO GIVE THE AFFECTED CUSTOMERS THE MANDATORY 24 HOURS ADVANCE NOTICE. ALSO BE ADVISED THAT WHEN VALVE MAINTENANCE IS REQUIRED, A DELAY OF SEVERAL DAYS SHOULD BE EXPECTED.

WATER GENERAL NOTES (CONTINUED):

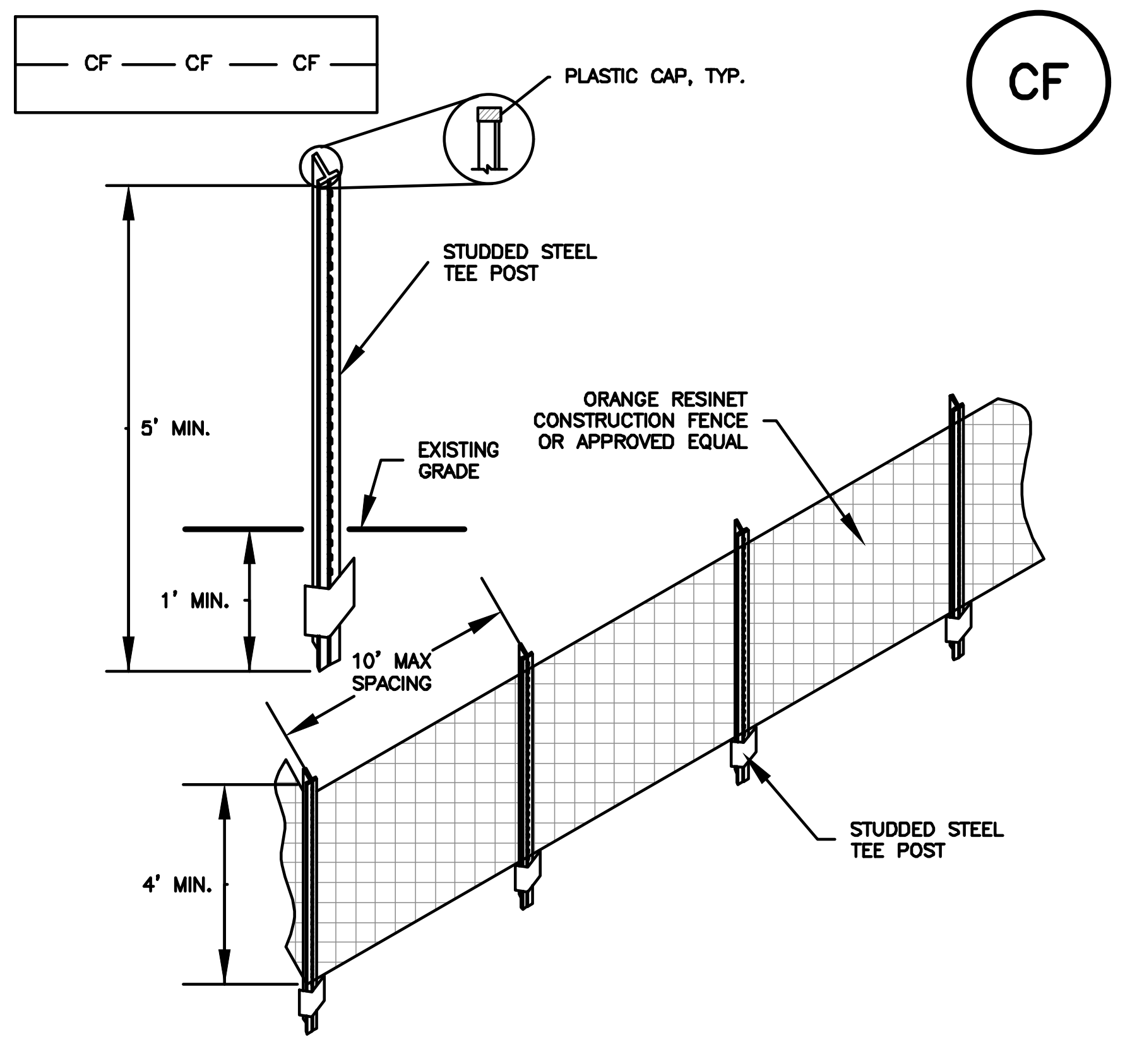
20. WATER TRENCH BEDDING AND PIPE ZONE BACKFILL SHALL BE GRADED AS FOLLOWS:

SIEVE SIZE	TOTAL PASSING BY SIZE (% BY WEIGHT)
⅜" to 1½"	100
NO. 200	0-3

OR TOWN OF FRISCO APPROVED CONTRACTOR ALTERNATE.

21. IRRIGATION VAULT TO BE CONSTRUCTED PER TOWN OF FRISCO DETAILS.
22. CLAY CHECK DAMS MAY BE REQUIRED IF GROUNDWATER IS ENCOUNTERED.

CALL UTILITY NOTIFICATION
CENTER OF COLORADO
811
CALL 2 BUSINESS DAYS IN ADVANCE
BEFORE YOU DIG, GRADE OR EXCAVATE
FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.



CONSTRUCTION FENCE INSTALLATION NOTES

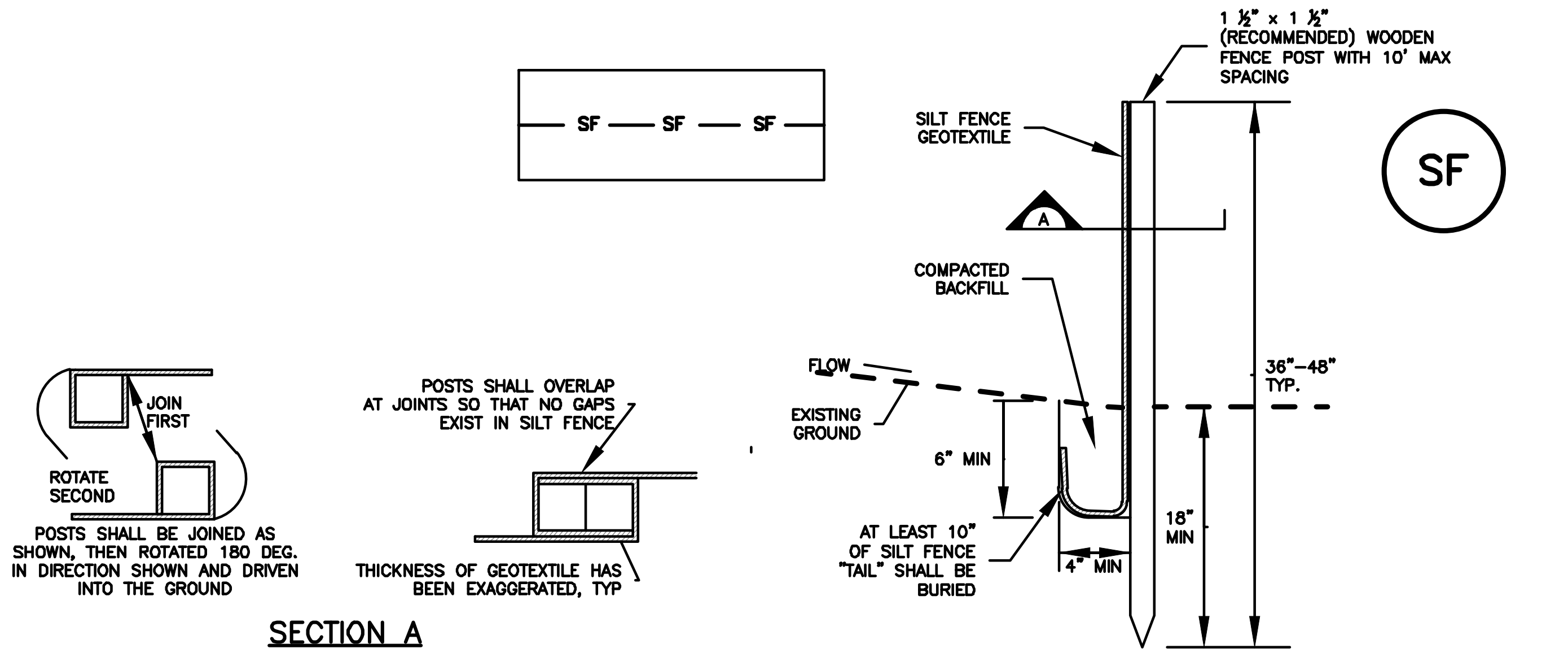
1. SEE PLAN VIEW FOR:
   - -LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

CF PLASTIC MESH CONSTRUCTION FENCE



SECTION A

SILT FENCE

SF SILT FENCE

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCEINSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

33789

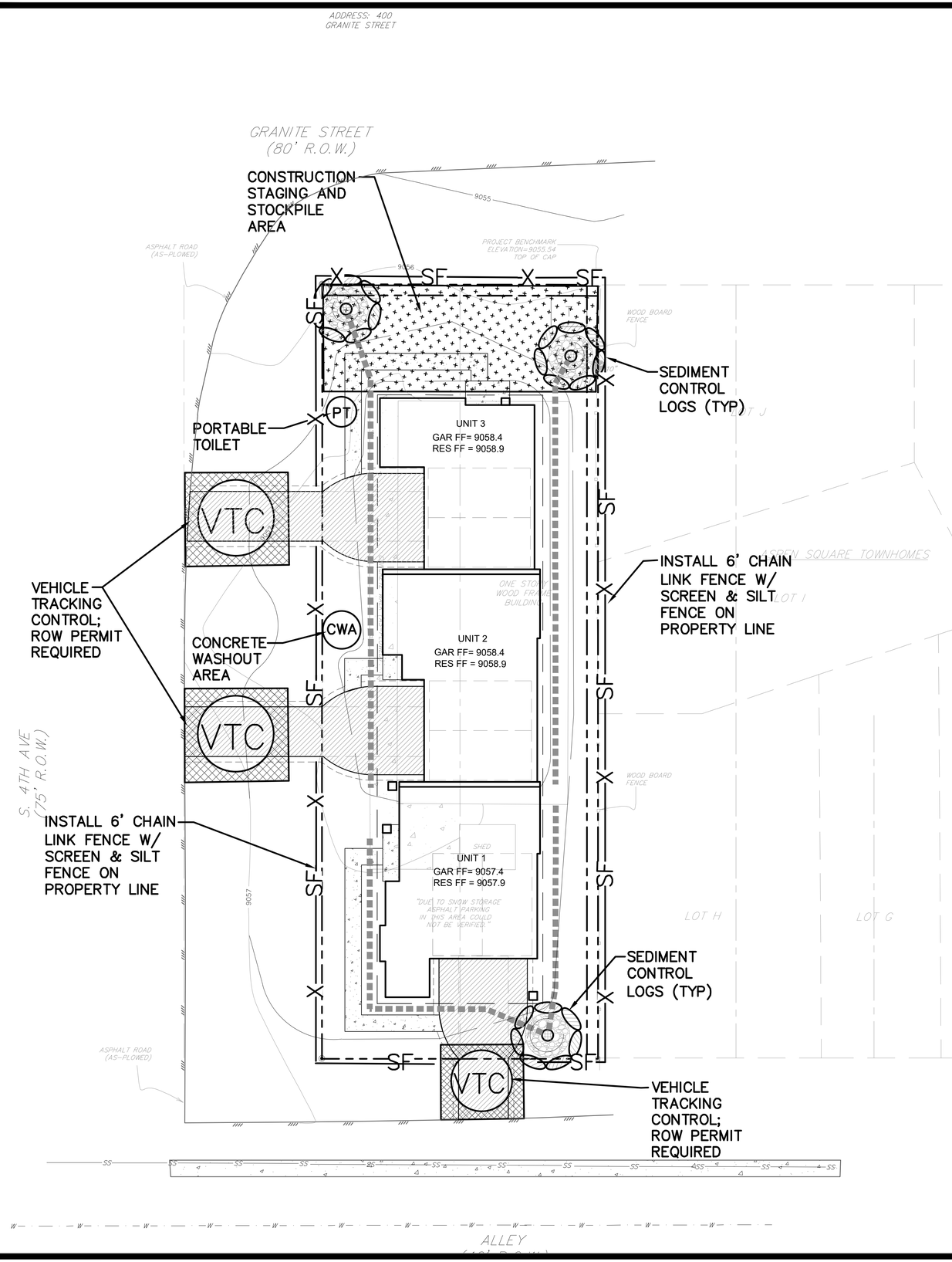
No.	Revision/Issue	Date	Description
3	REVISED	11/8/23	REVISED PER TOF COMMENTS
2	REVISED	8/4/23	ADDED TRANSFORMER
1	SKETCH PLAN SUBMITTAL	7/14/23	TOF SKETCH PLAN SUBMITTAL

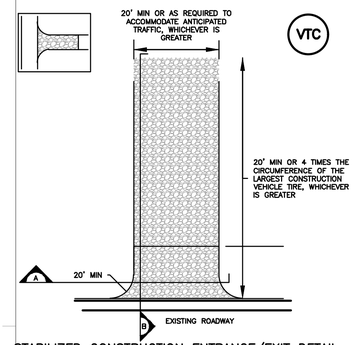
TEN MILE
ENGINEERING, INC.
Professional Civil Engineers
Po Box 1785
Frisco, CO 80443
970.485.5773
Joe@tenmileengineering.com

400 GRANITE STREET
LOTS 11-12, BLOCK 19
FRISCO TOWNSITE AMENDED
TOWN OF FRISCO, SUMMIT COUNTY, COLORADO

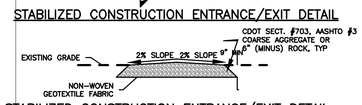
GENERAL NOTES AND DETAILS

Project: 400 GRANITE
Date: 7/14/23
Scale: NTS
Sheet: 1





STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL



STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL – SECTION A

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   –TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVTIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

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

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

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

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

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

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

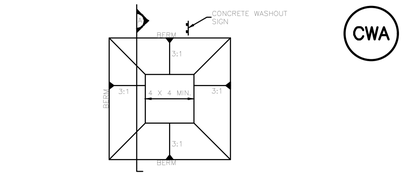
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

VTC AGGREGATE

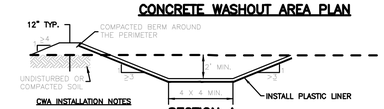
VEHICLE TRACKING CONTROL

STANDARD EROSION & SEDIMENT CONTROL NOTES:

1. The contractor must notify Town of Frisco at least 48 hours prior to starting construction.
2. All grading, erosion, and sediment control must conform with approved plans. Revisions to disturbance areas, slopes, and/or erosion and sediment control measures are not permitted without prior approval from the Town of Frisco.
3. Erosion control measures must be installed prior to grading activities.
4. All temporary and permanent soil erosion and sediment control practices must be maintained and repaired as needed to assure continued performance of their intended function. For example, erosion control blankets, straw bale dikes or silt fences may require periodic replacement. Sediment traps and basins will require periodic sediment removal.
5. All topsoil, where physically practicable, must be salvaged and not topsoil shall be removed from the site except as set forth in the approved plans. Topsoil and overburden must be segregated and stockpiled separately. Topsoil and overburden must be redistributed within the graded area after rough grading to provide a suitable base for areas, which must be seeded and planted. Runoff from the stockpiled area must be controlled to prevent erosion and resultant sedimentation of receiving water.
6. The landowner and/or contractor must immediately take all necessary steps to control increased sediment discharge.
7. The landowner and/or contractor is responsible for clean up and removal of all sediment and debris from all drainage infrastructure and other public facilities.
8. The landowner and/or contractor must take reasonable precautions to ensure that vehicles don not track or spill earth materials on to streets/roads and must immediately remove such material if this occurs.
9. The landowner and/or contractor is responsible for controlling waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste, as applicable. In addition, spill prevention and containment BMP's for construction materials, waste and fuel must be provided, as applicable.
10. If it is necessary to move material in excess of 300 cubic yards and/or 10,000 square feet of land disturbance area to or from another Town of Frisco site, an approved grading and erosion control plan and is necessary for the off-site property. If the material is moved to a property located within another jurisdiction, evidence is required that the local government has approved the grading operation.
11. The storm water volume capacity of detention ponds must be restored and storm sewer lines will be cleaned upon completion of the project.
12. Soil stabilization measures must be applied within 30 days to the disturbed areas that may not be at final grade, but will be left dormant for longer than 60 days.
13. Fugitive dust emissions resulting from grading activities and/or wind shall be controlled using the best available control technology, as defined by the Colorado Department of Public Health and Environment, at the time of grading.
14. The erosion and sediment control plan may be modified by the Town of Frisco, or its authorized representative, as field conditions warrant.



CONCRETE WASHOUT AREA PLAN



SECTION A

CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –CWA INSTALLATION LOCATION.

2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

CWA

CWA MAINTENANCE NOTES

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

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

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

4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.

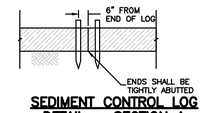
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.

6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.

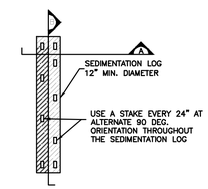
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

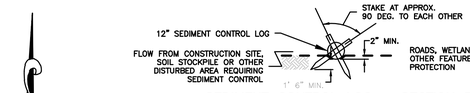
CWA–1. CONCRETE WASHOUT AREA



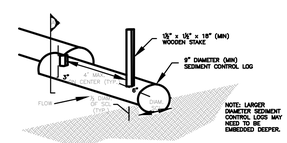
SEDIMENT CONTROL LOG DETAIL – SECTION A



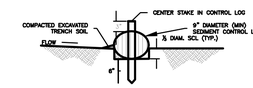
SEDIMENT CONTROL LOG DETAIL



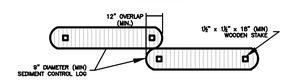
SEDIMENT CONTROL LOG – SECTION B



SEDIMENT CONTROL LOG



SECTION A



SEDIMENT CONTROL LOG JOINTS

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS OR HIGH VELOCITY DRAINAGE WAYS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

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

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

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

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

SCL

SCL–1. SEDIMENT CONTROL LOG

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

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

0 5 10 20

SCALE: 1" = 10'
ORIGINAL GRAPHIC SCALE

COLORADO REGISTERED JOSEPH E. MALOCZI 33789 PROFESSIONAL ENGINEER

No.	Revision/Issue	Date	Description
3	REVISED	11/8/23	REVISED PER TOF COMMENTS
2	REVISED	8/4/23	ADDED TRANSFORMER
1	SKETCH PLAN SUBMITTAL	7/14/23	TOF SKETCH PLAN SUBMITTAL

TEN MILE ENGINEERING, INC.
Professional Civil Engineers
Po Box 1785
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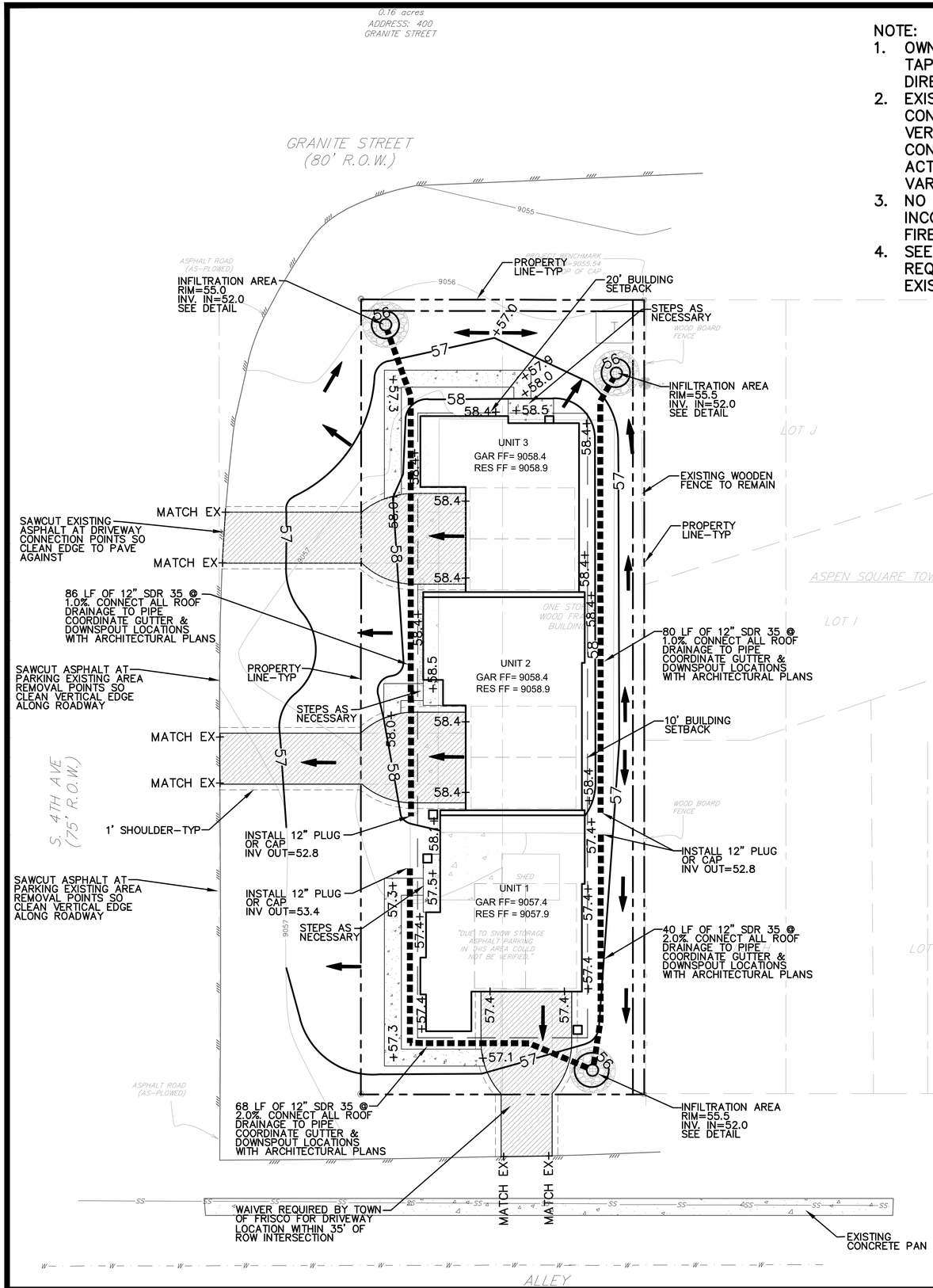
970.485.5773
Joe@tenmileengineering.com

400 GRANITE STREET

LOTS 11–12, BLOCK 19
FRISCO TOWNSITE AMENDED
TOWN OF FRISCO, SUMMIT COUNTY, COLORADO

EROSION CONTROL AND WATER QUALITY PLAN

Project: 400 GRANITE
Date: 7/14/23
Scale: 1"=10'
Sheet: 2

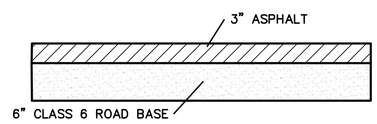


NOTE:

1. OWNER RESPONSIBLE FOR THE INSTALLATION OF HEAT TAPE IN ALL GUTTERS AND DOWNSPOUTS AS NECESSARY. DIRECT DOWNSPOUTS TO INFILTRATION AREA.
2. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR DETERMINING ACTUAL VERTICAL & HORIZONTAL LOCATIONS PRIOR TO START OF CONSTRUCTION. REPORT ALL CONFLICTS TO ENGINEER. ACTUAL LOCATION ON PROPOSED IMPROVEMENTS MAY VARY.
3. NO PARKING – FIRE LANE SIGNS SHALL BE INCORPORATED INTO THE PLANS AS DIRECTED BY THE FIRE DEPARTMENT AND TOWN OF FRISCO.
4. SEE PLANS AND PERMITS BY OTHERS FOR ALL REQUIREMENTS ASSOCIATED WITH THE DEMOLITION OF EXISTING STRUCTURES.

GENERAL AND UTILITY NOTES:

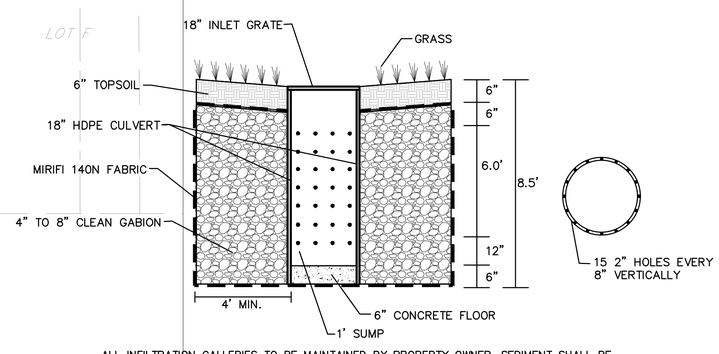
1) ALL COLLECTION SYSTEM WORK SHALL CONFORM TO THE FRISCO SANITATION DISTRICT "DESIGN STANDARDS AND SPECIFICATIONS FOR SEWER CONSTRUCTION".
2) EXISTING SEWER MAIN ELEVATIONS MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION.
3) ALL DOMESTIC WATER SERVICE INSTALLATIONS SHALL CONFORM TO THE TOWN OF FRISCO WATER CONSTRUCTION STANDARDS. CONTACT JEFF GOBLE 970 668 0836 WITH QUESTIONS.
4) SEE LANDSCAPE PLAN FOR INFORMATION ON IRRIGATION SYSTEM DESIGN.
5) SEE MECHINICAL AND FIRE PROTECTION PLANS FOR INFORMATION ON WATER METER, BACKFLOW ASSEMBLY LOCATION AND SIZE REQUIREMENTS.
6) SEE SITE PLAN FOR INFORMATION ON SNOW STORAGE.
7) ALL WATER FROM ROOF DRAINS AND GUTTERS SHALL BE PIPED TO THE INFILTRATION GALLERY. SEE ARCHITECTURAL PLANS FOR DETAILS AND PIPE LOCATIONS.
8) LANDOWNER/CONTRACTOR TO COORDINATE THE RELOCATION OF EXISTING ELECTRIC, GAS, CATV AND PHONE LINES WITH UTILITY COMPANIES.
9) ALL ROAD AND CONCRETE CUTS SHALL BE BROUGHT BACK TO CURRENT TOWN STANDARDS.
10) ALL ROOF DRAINAGE SHALL BE CAPTURED IN ROOF DRAIN AND/OR GUTTERS. NO DIRECT DISCHARGE ALLOWED ON TO TOWN ROW. SEE ARCHITECTURAL PLANS FOR DETAILS
11) ALL WATER INSPECTIONS REQUIRE 24 HOUR NOTICE.
12) CONTACT TOWN OF FRISCO PUBLIC WORKS TO DETERMINE IF ADDITIONAL TAP FEES ARE REQUIRED.
13) ALL WATER LINE INSTALLATION AND CONNECTIONS MUST COMPLY WITH TOWN OF FRISCO CONSTRUCTION STANDARDS IN EFFECT AT TIME OF BUILDING PERMIT ISSUANCE.
14) SEE MECHANICAL PLANS FOR DETAILS OF WATERLINE CONNECTION INTO BUILDING, METER AND BACKFLOW PREVENTION PIPING AND REMOTE METER READOUT LOCATION. REQUIRED BEFORE BUILDING PERMIT IS ISSUED.
15) SEE MECHANICAL PLANS FOR DETAILS OF SUMP PUMP AND ASSOCIATED PIPING. ALL SUMP PUMP CONNECTIONS TO STORM DRAINAGE SYSTEM MUST BE DOWN STREAM OF PERFORATED MANHOLE AND INFILTRATION AREA.
16) ALL CONSTRUCTION STAGING AND MANAGEMENT MUST COMPLY WITH IBC CHAPTER 33 – SAFEGUARDS DURING CONSTRUCTION
17) ALL WATER SERVICE MAINTENANCE AND REPAIR IS THE RESPONSIBILITY OF THE HOA/HOMEOWNERS.



PAVEMENT SECTION SHALL BE
3" ASPHALT ON 6" OF ROAD BASE
SEE GEOTECHNICAL RECOMMENDATIONS
FOR COMPACTION REQUIREMENTS
SECTION TO BE FIELD VERIFIED BY
GEOTECHINICAL ENGINEER

TYPICAL PAVEMENT SECTION

NO SCALE



ALL INFILTRATION GALLERIES TO BE MAINTAINED BY PROPERTY OWNER. SEDIMENT SHALL BE REMOVED FROM SUMP VIA VACUUM TRUCK ONCE SEDIMENT HAS FILLED SUMP 2/3 FULL.

TYPICAL INFILTRATION AREA DETAIL

NTS

CALL UTILITY NOTIFICATION
CENTER OF COLORADO

811

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FOR THE MARKING OF UNDERGROUND
MEMBER UTILITIES.

0 5 10 20
SCALE: 1" = 10'
ORIGINAL GRAPHIC SCALE

COLORADO REGISTERED
JOSEPH E. MAGLICA, JR.
33789
PROFESSIONAL ENGINEER

No.	Revision/Issue	Date	Description
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1	SKETCH PLAN SUBMITTAL	7/14/23	TOF SKETCH PLAN SUBMITTAL

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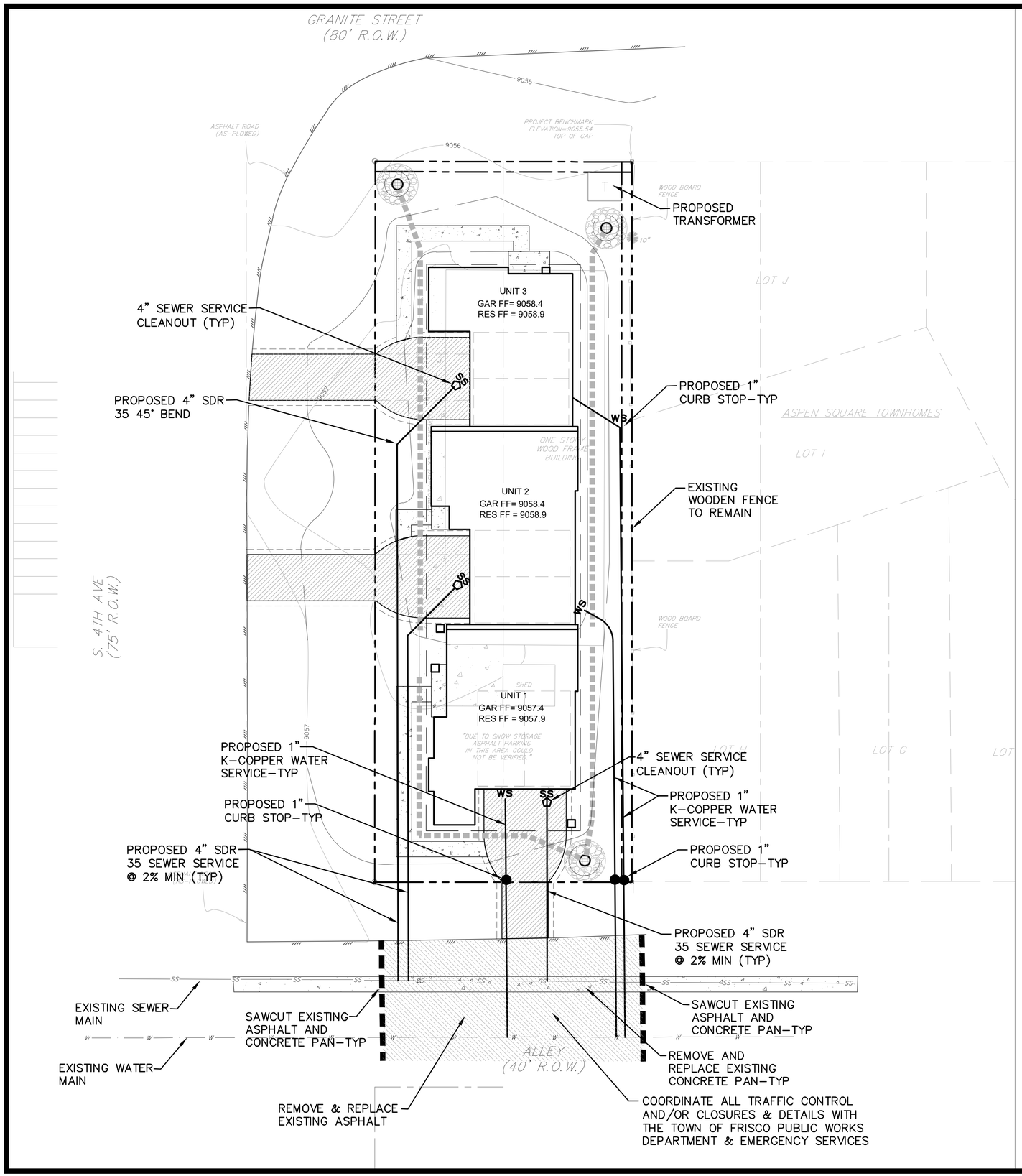
400 GRANITE STREET

LOTS 11-12, BLOCK 19
FRISCO TOWNSITE AMENDED
TOWN OF FRISCO, SUMMIT COUNTY, COLORADO

GRADING AND DRAINAGE PLAN

Project: 400 GRANITE
Date: 7/14/23
Scale: 1"=10'
Sheet: 3



GENERAL AND UTILITY NOTES:

1) ALL COLLECTION SYSTEM WORK SHALL CONFORM TO THE FRISCO SANITATION DISTRICT "DESIGN STANDARDS AND SPECIFICATIONS FOR SEWER CONSTRUCTION".

2) EXISTING SEWER MAIN ELEVATIONS MUST BE FIELD VERIFIED PRIOR TO CONSTRUCTION AND ORDERING MANHOLES..

3) ALL DOMESTIC WATER SERVICE INSTALLATIONS SHALL CONFORM TO THE TOWN OF FRISCO WATER CONSTRUCTION STANDARDS. CONTACT JEFF GOBLE 970 668 0836 WITH QUESTIONS.

4) SEE LANDSCAPE PLAN FOR INFORMATION ON IRRIGATION SYSTEM DESIGN.

5) SEE MECHINICAL AND FIRE PROTECTION PLANS FOR INFORMATION ON WATER METER, BACKFLOW ASSEMBLY LOCATION AND SIZE REQUIREMENTS.

6) SEE SITE PLAN FOR INFORMATION ON SNOW STORAGE.

7) ALL WATER FROM ROOF DRAINS AND GUTTERS SHALL BE PIPED TO THE INFILTRATION GALLERY. SEE ARCHITECTURAL PLANS FOR DETAILS AND PIPE LOCATIONS.

8) LANDOWNER/CONTRACTOR TO COORDINATE THE RELOCATION OF EXISTING ELECTRIC, GAS, CATV AND PHONE LINES WITH UTILITY COMPANIES.

9) ALL ROAD AND CONCRETE CUTS SHALL BE BROUGHT BACK TO CURRENT TOWN STANDARDS.

10) ALL ROOF DRAINAGE SHALL BE CAPTURED IN ROOF DRAIN AND/OR GUTTERS. NO DIRECT DISCHARGE ALLOWED ON TO TOWN ROW. SEE ARCHITECTURAL PLANS FOR DETAILS

11) ALL WATER INSPECTIONS REQUIRE 24 HOUR NOTICE.

12) CONTACT TOWN OF FRISCO PUBLIC WORKS TO DETERMINE IF ADDITIONAL TAP FEES ARE REQUIRED.

13) ALL WATER LINE INSTALLATION AND CONNECTIONS MUST COMPLY WITH TOWN OF FRISCO CONSTRUCTION STANDARDS IN EFFECT AT TIME OF BUILDING PERMIT ISSUANCE.

14) SEE MECHANICAL PLANS FOR DETAILS OF WATERLINE CONNECTION INTO BUILDING, METER AND BACKFLOW PREVENTION PIPING AND REMOTE METER READOUT LOCATION. REQUIRED BEFORE BUILDING PERMIT IS ISSUED.

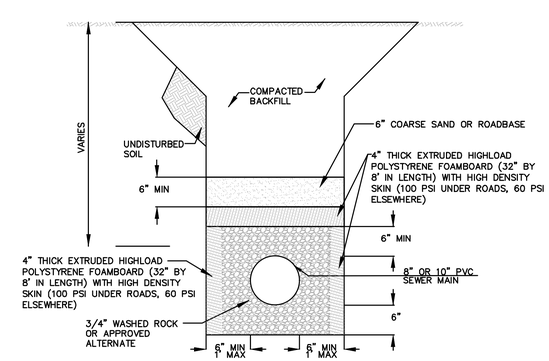
15) SEE MECHANICAL PLANS FOR DETAILS OF SUMP PUMP AND ASSOCIATED PIPING. ALL SUMP PUMP CONNECTIONS TO STORM DRAINAGE SYSTEM MUST BE DOWN STREAM OF PERFORATED MANHOLE AND INFILTRATION AREA.

16) SEE MECHANICAL PLANS FOR DETAILS OF GREASE TRAP AND ASSOCIATED PIPING WITHIN AND OUTSIDE OF BUILDING.

17) ALL CONSTRUCTION STAGING AND MANAGEMENT MUST COMPLY WITH IBC CHAPTER 33 – SAFEGUARDS DURING CONSTRUCTION

NOTE:

1. CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF HEAT TAPE IN ALL NEW 6" AND 12" DRAINAGE CULVERT AND HEAT TAPE STUBS. CONTRACTOR TO INSTALL PULL STRINGS.
2. EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR RESPONSIBLE FOR DETERMINING ACTUAL VERTICAL & HORIZONTAL LOCATIONS PRIOR TO START OF CONSTRUCTION. REPORT ALL CONFLICTS TO ENGINEER. ACTUAL LOCATION OF PROPOSED UTILITIES VERTICALLY MAY VARY.
3. INSTALL INSULATION OVER SEWER AND WATER MAINLINE AND SERVICES WHERE DEPTH IS LESS THAN 8'.
4. CONTRACTOR TO OBTAIN A ROW PERMIT FROM TOWN OF FRISCO PRIOR TO INSTALLATION OF UTILITIES.



TYPICAL INSULATION DETAIL

NO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

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0 5 10 20

SCALE: 1" = 10'
ORIGINAL GRAPHIC SCALE

COLORADO REGISTERED PROFESSIONAL ENGINEER JOSEPH E. MAGLICA 33789

No.	Revision/Issue	Date	Description
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400 GRANITE STREET

LOTS 11-12, BLOCK 19
FRISCO TOWNSITE AMENDED
TOWN OF FRISCO, SUMMIT COUNTY, COLORADO

OVERALL UTILITY PLAN

Project: 400 GRANITE
Date: 7/14/23
Scale: 1"=10'
Sheet: 4

LEGEND

NOTE: ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT

DEVICES

⊖ OR ⊖	SINGLE RECEPTACLE: 125V, 15A/20A AS REQUIRED
⊜ OR ⊜	DUPLEX RECEPTACLE: 125V, 15A/20A AS REQUIRED
⊕ OR ⊕	DOUBLE-DUPLEX RECEPTACLE: 125V, 15A/20A AS REQUIRED
⊜ OR ⊜	HALF-SWITCHED RECEPTACLE: 125V, 15A/20A AS RQ'D
USB⊖ OR USB⊖	SINGLE RECEPTACLE WITH (2) USB PORTS
USB⊜ OR USB⊜	DUPLEX RECEPTACLE WITH (2) USB PORTS
USB⊕ OR USB⊕	DOUBLE-DUPLEX RECEPTACLE WITH (4) USB PORTS
Ⓖ	FACELESS GFCI OUTLET - READILY ACCESSIBLE
⊜ OR ●	SPECIAL PURPOSE RECEPT. - V AND A AS REQUIRED
⌽	FLUSH FLOOR OUTLET (DEVICE AS INDICATED)
⊢◷	CLOCK RECEPTACLE
((⊜	DUPLEX RECEPTACLE - WIRELESS PLUG LOAD CONTROL
— PM12 —	PLUGMOLD - # INDICATES RECEPTACLE SPACING O.C.
— WM —	WIREMOLD - AS SPECIFIED ON PLAN
PP ■	POWER POLE
PP ◧	POWER/DATA POLE (DIVIDED)
Ⓟ	POWER OUTLET FURNITURE WHIP
	BELL, CHIME, OR BUZZER
Ⓗ	HOOD CONNECTION
Ⓣ	THERMOSTAT
Ⓓ	DAMPER MOTOR
IBTD	INTERSYSTEM BONDING TERMINATION DEVICE

SWITCHES/CONTROLS

S	SINGLE POLE SWITCH
S_2	TWO POLE SWITCH
S_3	3-WAY SWITCH
S_4	4-WAY SWITCH
$\overline{SS}$	DUAL-LEVEL SWITCHING (ALTERNATE LAMPS OR FIXTURES)
S_P	SWITCH WITH PILOT LIGHT
S_K	KEY OPERATED SWITCH
D OR S_D	DIMMER SWITCH - WATTAGE AS REQUIRED
S_T	MECHANICAL TIME SWITCH
S_{LV}	LOW VOLTAGE SWITCH
V OR S_V	VARIABLE SPEED MOTOR CONTROL SWITCH
S_{CB}	CIRCUIT-BREAKER SWITCH - 20A1P
OS	OCCUPANCY SENSOR - CEILING MOUNTED
OS	OCCUPANCY SENSOR - WALL MOUNTED
OS2	OCCUPANCY SENSOR - 2-POLE, WALL MOUNTED
OS3	OCCUPANCY SENSOR - 3-WAY, WALL MOUNTED
OSD	OCCUPANCY SENSOR - 0-10V DIMMING, WALL MOUNTED
OS	OCCUPANCY SENSOR - CORNER MOUNTED - WALL OR CEILING
OS	OCCUPANCY SENSOR - LIGHT FIXTURE MOUNTED/INTEGRAL
PS	PHOTOSENSOR - CEILING MOUNTED
PS	PHOTOSENSOR - LIGHT FIXTURE MOUNTED/INTEGRAL
LC1	DIGITAL LOAD CONTROL MODULE WITH 1 RELAY
LC2	DIGITAL LOAD CONTROL MODULE WITH 2 RELAYS
LC3	DIGITAL LOAD CONTROL MODULE WITH 3 RELAYS
LC1D	DIGITAL LOAD CONTROL MODULE WITH 1 RELAY & DIMMING
LC2D	DIGITAL LOAD CONTROL MODULE WITH 2 RELAYS & DIMMING
OLC	OUTDOOR LIGHTING CONTROLLER
S	DIGITAL SWITCH
S #	DIGITAL SWITCH - # = NUMBER OF BUTTONS
↑↓	DIGITAL SWITCH WITH RAISE/LOWER BUTTONS
S TS X"	LCD TOUCHSCREEN - X = SCREEN SIZE
STO OR S_{TO}	THERMAL OVERLOAD SWITCH
⁝ OR : OR •	PUSH BUTTON SWITCH (1, 2, OR 3 BUTTON)
↑	EMERGENCY POWER-OFF SHUNT-TRIP
T S	TIME SWITCH - TORK (DIGITAL)
PC	PHOTOCELL
	WIRELESS COMMUNICATIONS - ADDED TO DEVICE SYMBOL
WAC	WIRELESS AREA CONTROLLER

POWER DISTRIBUTION

	SWITCHBOARD OR EQUIPMENT ENCLOSURE
	ELECTRICAL PANEL
	SWITCH WITH FUSE
	SWITCH
	PULLOUT FUSED DISCONNECT
	CIRCUIT BREAKER
M2	CONTACT - NO - # INDICATES ASSOC. COIL
M2	CONTACT - NC - # INDICATES ASSOC. COIL
M2	COIL - # INDICATES ASSOCIATED CONTACT
	OVERLOAD RELAY
ERMS	ENERGY-REDUCING MAINTENANCE SWITCH
GFPE	GROUND-FAULT PROTECTION OF EQUIPMENT
KKI 2	KIRK KEY INTERLOCK - # INDICATES RELATED KEYS
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
SPD	SURGE PROTECTIVE DEVICE
~	AC POWER SOURCE
	DC POWER SOURCE
NF	NON-FUSED DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH
☒	MAGNETIC STARTER OR CONTACTOR
☒	COMBINATION STARTER
VFD	VFD/DISCONNECT COMBO
M OR M	ELECTRIC METER - UTILITY METER U.O.N.
OR CT	CURRENT TRANSFORMER
	MOTOR
	TRANSFER SWITCH
	GENERATOR
J/B OR Ⓙ	JUNCTION BOX
	CIRCUIT RUN CONCEALED IN WALL OR CEILING
	CIRCUIT RUN IN OR UNDER FLOOR OR IN EARTH
	CIRCUIT RUN SURFACE MOUNTED
	CONDUIT UP, CONDUIT DOWN
	CONDUIT STUB - CAP IF UNDERGROUND
	FLEXIBLE CONNECTION TO EQUIPMENT
→ OR →	HOMERUN - ARROWS INDICATE # OF PHASE COND.
⏚	GROUNDING ELECTRODE
	PAD MOUNTED TRANSFORMER
OR T	TRANSFORMER
	OVERHEAD SERVICE ENTRANCE

PHONE/DATA

△	DATA OUTLET
▲	TELEPHONE OUTLET
▲	COMBINATION TELEPHONE/DATA OUTLET
▲	FLUSH FLOOR OUTLET (DEVICE AS INDICATED)
	WIRELESS ACCESS POINT - CEILING UON
©	COMMUNICATIONS OUTLET FURNITURE WHIP
	TELEPHONE TERMINAL BOARD
	TELEPHONE TERMINAL CABINET

LIGHTING

	RECESSED FLUORESCENT
	SURFACE FLUORESCENT
	FLUORESCENT STRIP LIGHT
	LIGHT - TYPE INDICATED ON SCHEDULE
	LIGHT - TYPE INDICATED ON SCHEDULE
	TRACK LIGHT
○	SURFACE MOUNTED FIXTURE
⊘ OR ⊘	RECESSED FIXTURE
⊘ OR ⊘	RECESSED WALL WASHER
⊙	PENDANT MOUNTED FIXTURE
	WALL MOUNTED FIXTURE
⊗	KEYLESS PORCELAIN LAMP HOLDER - 150W
	BATTERY PACK EMERGENCY LIGHT
	REMOTE EMERGENCY LIGHT
EM/WP	EXTERIOR EMERGENCY EGRESS LIGHT
BATT	BATTERY PACK FOR REMOTE EMERGENCY LIGHT
	BATTERY PACK EXIT LIGHT
	BATTERY PACK EXIT/EM COMBINATION LIGHT
▨ OR NL	INDICATES NON-SWITCHED NIGHT LIGHT
EM	INDICATES INTEGRAL EMERGENCY POWER BATTERY

UPPERCASE LETTER ADJACENT TO FIXT. INDICATES FIXTURE TYPE

LOWERCASE LETTER ADJACENT TO FIXT. INDICATES CONTROL

FIRE ALARM & DETECTION

● OR Ⓢ	SMOKE DETECTOR
T● OR Ⓗ	HEAT DETECTOR (F-FIXED TEMP, R-RATE-OF-RISE)
SS	SINGLE STATION SMOKE DETECTOR WITH SOUNDER
XXXcd SS	SINGLE STATION SMOKE DET. WITH HORN & STROBE
BT	BEAM DETECTOR TRANSMITTER
BR	BEAM DETECTOR RECEIVER
	DUCT DETECTOR
FS	MOTOR OPERATED FIRE/SMOKE DAMPER
FS	FLOW SWITCH
TS	TAMPER SWITCH
PS	PRESSURE SWITCH
RM	RELAY MODULE
MM	MONITOR MODULE
CM	CONTROL MODULE
CR	CONTROL RELAY
CO	CARBON MONOXIDE DETECTOR
MD ■ OR DH	MAGNETIC DOOR HOLDER
◪	MANUAL PULLSTATION
S	SPEAKER AND STROBE
S	SPEAKER
	HORN AND STROBE
	HORN
	STROBE
	MINI-HORN AND STROBE
	MINI-HORN
	REMOTE INDICATING LIGHT
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
ERSP	ELEVATOR RECALL SUPERVISORY PANEL
BPS	BOOSTER POWER SUPPLY
EOL	END-OF-LINE RESISTOR
RTS	REMOTE TEST SWITCH
O/C/A	OPEN/CLOSE/AUTOMATIC SWITCH

ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFI/AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AIC	AMPERE INTERRUPTING CAPACITY (MINIMUM RATING)
ATS	AUTOMATIC TRANSFER SWITCH
CD	CORD DROP
CLG	CEILING MOUNTED
DT	DUST TIGHT
E OR (E)	EXISTING
FLR	FLOOR MOUNTED
G OR GND	GROUND
GFI/GFCI	PERSONNEL GROUND-FAULT PROTECTION (.5ma)
GF/GFPE	EQUIPMENT GROUND-FAULT PROTECTION
IG	ISOLATED GROUND
ISC	AVAILABLE FAULT CURRENT (RMS SYMMETRICAL)
ILT	LET-THROUGH FAULT CURRENT (RMS SYMMETRICAL)
N OR (N)	NEW
NO/NC	NORMALLY OPEN/NORMALLY CLOSED
O.C.	ON CENTER
R OR (R)	RELOCATE
SCCR	SHORT CIRCUIT CURRENT RATING
ST	SHUNT-TRIP
TL	TWIST-LOCK
TR	TAMPER RESISTANT
UC	UNDER COUNTER
UON	UNLESS OTHERWISE NOTED
WP	WEATHER PROOF
XP	EXPLOSION PROOF

AUDIO/VISUAL

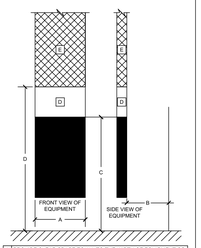
Ⓢ	SPEAKER - CEILING MOUNTED (FLUSH)
⊢Ⓢ	SPEAKER - WALL MOUNTED
	AUDIO/VISUAL EQUIPMENT RACK - FLOOR MOUNTED
■	AUDIO/VISUAL EQUIPMENT RACK - WALL MOUNTED
VC	VOLUME CONTROL
Ⓜ	MICROPHONE OUTLET - FLOOR MOUNTED
⊢Ⓜ	MICROPHONE OUTLET - WALL MOUNTED
	CABLE/TV OUTLET

DESIGNATIONS

X, X X	MECHANICAL/PLUMBING EQUIPMENT TAG
X	REVISION TAG
XX	DETAIL NOTE
X	DETAIL NOTE
XXX	UTILIZATION EQUIPMENT TAG

ADOPTED CODES:
2020 NATIONAL ELECTRICAL CODE

CLEAR SPACE/WORKING SPACE ABOUT ELECTRICAL EQUIPMENT



A	PROVIDE CLEAR SPACE EQUAL TO THE WIDTH OF EQUIPMENT OR 30", WHICHEVER IS GREATER.
B	PROVIDE THE FOLLOWING CLEAR SPACE IN FRONT OF EQUIPMENT: 3' FOR 0-150 L-G VOLTAGE AND 4' FOR 151-600 L-G VOLTAGE.
C	PROVIDE CLEAR SPACE, FOR THE WIDTH OF THE EQUIPMENT, FROM GRADE, FLOOR OR PLATFORM TO A HEIGHT OF 6-1/2' OR THE HEIGHT OF THE EQUIPMENT, WHICHEVER IS GREATER.
D	THE SPACE EQUAL TO THE WIDTH AND DEPTH OF THE EQUIPMENT AND EXTENDING FROM THE FLOOR TO A HEIGHT OF 6' ABOVE THE EQUIPMENT OR TO THE STRUCTURAL CEILING, WHICHEVER IS LOWER, SHALL BE DEDICATED TO THE ELECTRICAL INSTALLATION - NO PIPING, DUCTS, LEAK PROTECTION APPARATUS, OR OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION SHALL BE LOCATED IN THIS ZONE. SUSPENDED CEILINGS WITH REMOVABLE PANELS SHALL BE PERMITTED WITHIN THE 6' ZONE. SPRINKLER PROTECTION SHALL BE PERMITTED FOR THE DEDICATED SPACE WHERE THE PIPING COMPLIES WITH THIS SECTION. A DROPPED, SUSPENDED, OR SIMILAR CEILING THAT DOES NOT ADD STRENGTH TO THE BUILDING STRUCTURE SHALL NOT BE CONSIDERED A STRUCTURAL CEILING.
E	THE AREA ABOVE THE DEDICATED SPACE SHALL BE PERMITTED TO CONTAIN FOREIGN SYSTEMS, PROVIDED PROTECTION IS INSTALLED TO AVOID DAMAGE TO THE ELECTRICAL EQUIPMENT FROM CONDENSATION, LEAKS, OR BREAKS IN SUCH FOREIGN SYSTEMS.

THE FINAL LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD, PRIOR TO ROUGH-IN, TO MEET APPLICABLE LOCATION, HEIGHT AND CLEARANCE REQUIREMENTS.

THE ELECTRICAL CONTRACTOR SHALL STOP WORK IMMEDIATELY, AND ADVISE OTHERS TO STOP WORK IF THERE IS A CONFLICT WITH THE ELECTRICAL CLEARANCE AND WORK SPACE REQUIREMENTS PER THE ABOVE INFORMATION AND THE NEC.

BRANCH-CIRCUIT WIRING SCHEDULE (UNLESS OTHERWISE NOTED)

OVERCURRENT PROTECTION DEVICE RATING/ SETTING	PHASE CONDUCTOR SIZE (CU)	NEUTRAL CONDUCTOR SIZE (CU) (IF REQUIRED)	EQUIPMENT GROUNDING CONDUCTOR SIZE (CU)	CONDUIT SIZE
15 A	#12 AWG	#12 AWG	#12 AWG	1/2"
20 A	#12 AWG	#12 AWG	#12 AWG	1/2"
25 A	#10 AWG	#10 AWG	#10 AWG	1/2"
30 A	#10 AWG	#10 AWG	#10 AWG	1/2"
35 A	#8 AWG	#8 AWG	#10 AWG	3/4"
40 A	#8 AWG	#8 AWG	#10 AWG	3/4"
45 A	#6 AWG	#6 AWG	#10 AWG	1"
50 A	#6 AWG	#6 AWG	#10 AWG	1"
60 A	#4 AWG	#4 AWG	#10 AWG	1 1/4"
70 A	#4 AWG	#4 AWG	#8 AWG	1 1/4"
80 A	#3 AWG	#3 AWG	#8 AWG	1 1/4"
90 A	#2 AWG	#2 AWG	#8 AWG	1 1/2"
100 A	#1 AWG	#1 AWG	#8 AWG	1 1/2"

NOTES:

1.	FOR MOTOR LOADS, USE MCA (MINIMUM CIRCUIT AMPACITY) TO SIZE PHASE AND NEUTRAL CONDUCTORS AND USE MOCP (MAXIMUM OVER-CURRENT PROTECTIVE DEVICE) TO SIZE EQUIPMENT GROUNDING CONDUCTOR.
2.	INCREASE PHASE, NEUTRAL, AND EQUIPMENT GROUNDING CONDUCTOR SIZES BY 1 STANDARD CONDUCTOR SIZE PER EACH 75' OF CONDUCTOR LENGTH. INCREASE CONDUIT SIZE ACCORDINGLY.

ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS

DRAWINGS ARE DIAGRAMMATIC AND DO NOT INDICATE ALL FITTINGS, JUNCTION BOXES, ETC. REQUIRED. PROVIDE ALL REQUIRED EQUIPMENT, CONDUIT, FITTINGS, WIRING, BOXES, ETC. FOR A COMPLETE AND OPERATIONAL INSTALLATION.

WORK AND EQUIPMENT SHALL COMPLY WITH STATE AND LOCALLY ADOPTED CODES AND STANDARDS, INCLUDING THE 2020 NATIONAL ELECTRICAL CODE (NEC), INTERNATIONAL CODES (I-CODES), AND LOCAL AMENDMENTS.

ANYTHING DRAWN OR SPECIFIED SHALL NOT BE CONSTRUED TO CONFLICT WITH STATE AND LOCALLY ADOPTED CODES AND STANDARDS, INCLUDING THE NATIONAL ELECTRICAL CODE, WHICH GOVERNS THE INSTALLATION OF ANY ELECTRICAL WORK. ITEMS SHALL NOT BE INSTALLED IN CONFLICT WITH THE NEC. RESOLVE ANY AND ALL CONFLICTS PRIOR TO INSTALLATION.

BECOME THOROUGHLY ACQUAINTED WITH THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED. EXAMINE ALL SERVICES, EQUIPMENT, AND EXISTING CONDITIONS, WHICH THIS WORK IS IN ANY WAY DEPENDENT UPON, AND BRING ANY DISCREPANCIES OR OMISSIONS FOUND IN THE DRAWINGS TO THE ELECTRICAL ENGINEER'S ATTENTION PRIOR TO SUBMITTING BID.

THE LOCATION OF OUTLETS AND EQUIPMENT SHOWN ON THE DRAWINGS ARE APPROXIMATE. THE ARCHITECT AND ENGINEER SHALL HAVE THE RIGHT TO ADJUST THE LOCATION OF OUTLETS OR FIXTURES, WITHIN 10' OF THE SPECIFIED LOCATION, BEFORE THEY ARE INSTALLED AND WITHOUT ADDITIONAL COST.

PROVIDE DRAWINGS TO LOCAL BUILDING AUTHORITY AND OBTAIN A PERMIT PRIOR TO STARTING ANY WORK.

NOTIFY ELECTRICAL ENGINEER OF ANY CHANGES REQUESTED BY THE LOCAL BUILDING AUTHORITY IMMEDIATELY AND PRIOR TO STARTING WORK.

VERIFY AND COMPLY WITH UTILITY COMPANY REQUIREMENTS. PROVIDE METERING, CONNECTION CABINETS, CT CABINETS, AND TRANSFORMER AND CONNECTION CABINET PADS PER LOCAL UTILITY COMPANY REQUIREMENTS.

PROVIDE A REDLINED AS-BUILT SET OF ELECTRICAL DRAWINGS TO OWNER UPON COMPLETION OF WORK.

ELECTRICAL WORK SHOWN LIGHT OR MARKED "E" IS EXISTING, SHOWN DARK IS NEW, AND SHOWN DASHED IS EXISTING TO BE REMOVED OR RELOCATED UNLESS OTHERWISE INDICATED. DASHING MAY ALSO INDICATE UNDER FLOOR OR UNDER GROUND CONDUIT. IF UNCLEAR, CONTACT ELECTRICAL ENGINEER FOR CLARIFICATION.

EQUIPMENT, WIRING, AND DEVICES SHOWN ARE NEW UNLESS OTHERWISE NOTED.

MAINTAIN CIRCUITING TO EXISTING EQUIPMENT AND DEVICES TO REMAIN.

REFERENCE ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

INSTALL EQUIPMENT AND DEVICES PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. NOTIFY ELECTRICAL ENGINEER, PRIOR TO INSTALLING EQUIPMENT AND DEVICES, IF MANUFACTURER'S INSTALLATION INSTRUCTIONS CONFLICT WITH ELECTRICAL INFORMATION ON THE THESE DRAWINGS.

ELECTRICALLY OPERATED EQUIPMENT SHOWN ON PLANS (ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL, CIVIL, EQUIPMENT SUPPLIER, SHOP DRAWINGS) AND NOT CIRCUITED ON THE ELECTRICAL PLANS, WILL REQUIRE ELECTRICAL SERVICE. CONTACT ELECTRICAL ENGINEER FOR CONNECTION REQUIREMENTS AND CLARIFICATION PRIOR TO BID. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID.

PROVIDE HANGERS AND SUPPORTS TO ADEQUATELY AND SECURELY SUPPORT ELECTRICAL SYSTEM COMPONENTS IN A NEAT AND WORKMANLIKE MANNER.

MAINTAIN THE FIRE RATING OF THE ASSEMBLY (CEILING, WALL, OR FLOOR) IN WHICH EQUIPMENT, WIRING, AND DEVICES ARE TO BE INSTALLED.

EQUIPMENT SHALL BE FULLY RATED FOR THE AMBIENT CONDITIONS (ELEVATION, TEMPERATURE, WIND LOAD, SOIL CONDITIONS, ETC) AT THE PROJECT LOCATION.

KEEP PRODUCTS IN ORIGINAL MANUFACTURER'S PACKAGING AND PROTECT FROM DAMAGE UNTIL READY FOR INSTALLATION.

PROVIDE PRODUCTS LISTED, CLASSIFIED, AND LABELED AS SUITABLE FOR THE PURPOSE INTENDED.

UNLESS SPECIFICALLY INDICATED TO BE EXCLUDED, PROVIDE ALL REQUIRED CONDUIT, BOXES, WIRING, CONNECTORS, HARDWARE, SUPPORTS, TRIMS, ACCESSORIES, ETC. AS NECESSARY FOR COMPLETE AND OPERATIONAL SYSTEMS.

SUBMITTALS AND SUBSTITUTIONS

PROVIDE PRODUCT DATA SHEETS AND SHOP DRAWINGS FOR EQUIPMENT, FIXTURES, AND DEVICES TO ELECTRICAL ENGINEER PRIOR TO PURCHASING. REVIEW, STAMP AND INITIAL ALL ELECTRICAL SUBMITTALS AND SHOP DRAWINGS CERTIFYING THAT THE SUBMITTALS HAVE BEEN REVIEWED PRIOR TO SUBMITTING TO ELECTRICAL ENGINEER FOR REVIEW.

EQUIPMENT AND FIXTURES SPECIFIED REPRESENT REQUIRED QUALITY AND PERFORMANCE.

PROVIDE PRODUCT DATA SHEETS AND SHOP DRAWING OF PROPOSED SUBSTITUTIONS TO SPECIFIED EQUIPMENT TO ELECTRICAL ENGINEER FOR REVIEW. ELECTRICAL ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF SUBSTITUTIONS TO SPECIFIED EQUIPMENT. REVIEW, STAMP AND INITIALED ALL ELECTRICAL SUBMITTALS AND SHOP DRAWINGS CERTIFYING THAT SUBMITTALS HAVE BEEN REVIEWED PRIOR TO SUBMITTING TO ELECTRICAL ENGINEER FOR REVIEW.

SUBMITTALS AND SHOP DRAWINGS ARE TO INCLUDE THE FOLLOWING: KEY TO PLAN DESIGNATIONS, MANUFACTURER, MODEL NUMBER, DATA SHEETS, QUANTITIES, COLORS, LABELS, DIMENSIONS, INSTALLATION INSTRUCTIONS, AND ANY ADDITIONAL INFORMATION REQUIRED TO DETERMINE IF THE PRODUCT MEETS THE DESIGN INTENT.

CONSTRUCTION PHASE REVIEW REQUIREMENTS

INSTALL POWER, LIGHTING, COMMUNICATIONS AND SPECIAL SYSTEM (FIRE ALARM, SECURITY, BUILDING AUTOMATION, ETC) BOXES PRIOR TO RUNNING CABLE OR CONDUIT TO BOXES. ARRANGE FOR OWNER, ARCHITECT, AND ENGINEER TO REVIEW BOX LOCATIONS PRIOR TO RUNNING CABLE OR CONDUIT TO BOXES. ADJUST BOXES AS DIRECTED BY OWNER, ARCHITECT, AND ENGINEER.

THE ELECTRICAL CONTRACTOR SHALL INSTALL RECEPTACLES, WIRING, LIGHTING, SMOKE DETECTORS, ALARM DEVICES, ELECTRICAL CONNECTIONS TO MECHANICAL EQUIPMENT, TV OUTLETS, DATA OUTLETS, AND TELEPHONE OUTLETS FOR THE FIRST OF EACH UNIT TYPE AND PRIOR TO STARTING ANY OTHER UNIT OF A SAME TYPE.

THE MOCKUP UNIT SHALL BE APPROVED IN WRITING BY THE ARCHITECT, ELECTRICAL ENGINEER, BUILDING DEPARTMENT AND OWNER OR OWNER'S REPRESENTATIVE PRIOR TO STARTING ANY ADDITIONAL UNITS OF THE SAME TYPE.

REQUESTS FOR MODIFICATIONS TO THE CONTRACT (CHANGE ORDERS)

REQUESTS BY CONTRACTOR FOR ADDITION OR REDUCTION TO THE CONTRACT AMOUNT SHALL BE ACCOMPANIED BY THE FOLLOWING FOR EVALUATION BY THE OWNER AND ENGINEER:

1. ORIGIN AND DATE OF CLAIM
2. QUANTITIES OF PRODUCTS, LABOR, AND EQUIPMENT
3. DOLLAR AMOUNT OF TAXES, OVERHEAD, AND PROFIT
4. JUSTIFICATION FOR ANY CHANGE IN CONTRACT TIME
5. CREDIT AMOUNT FOR DELETIONS (WITH DOCUMENTATION)
6. DATES AND TIMES OF WORK PERFORMED, AND BY WHOM
7. TIME RECORDS AND WAGE RATES PAID
8. INVOICES AND RECEIPTS FOR PRODUCTS AND EQUIPMENT

SUBMIT ALL DOCUMENTATION TO ENGINEER AND OWNER, AND OBTAIN WRITTEN APPROVAL PRIOR TO STARTING ANY WORK THAT AFFECTS THE CONTRACT AMOUNT OR COMPLETION DATE.

EXISTING CONDITIONS

THESE DRAWINGS CONTAIN INFORMATION REGARDING EXISTING CONDITIONS. THIS INFORMATION WAS COMPILED FROM EXISTING DRAWINGS, CASUAL FIELD OBSERVATIONS OR INFORMATION PROVIDED BY OTHERS. IN SOME CASES, ASSUMPTIONS WERE MADE WHEN FIELD OBSERVATIONS OR EXISTING DRAWINGS DID NOT PROVIDE NECESSARY INFORMATION (I.E. LOCKED DISCONNECTS, NO WIRE SIZE INDICATED, NAMEPLATE DATA MISSING, INACCURATE AS-BUILT DRAWINGS, ETC.).

EXISTING CONDITIONS SHALL BE VERIFIED AND ALLOWED FOR PRIOR TO BID AND CONSTRUCTION. NOTIFY THE ELECTRICAL ENGINEER OF ANY DISCREPANCIES WITH THESE DRAWINGS IMMEDIATELY AND PRIOR TO COMMENCING ANY FURTHER WORK.

COORDINATION

THE ELECTRICAL DRAWINGS ARE ONLY ONE PART OF A COMPLETE SET OF CONSTRUCTION DOCUMENTS. EXAMINE THE ARCHITECTURAL, MECHANICAL, PLUMBING, AND CIVIL DRAWINGS PRIOR TO SUBMITTING BID AND STARTING WORK TO DETERMINE THE FULL EXTENT OF ELECTRICAL WORK REQUIRED.

COORDINATE WORK WITH OTHER TRADES PRIOR TO ROUGH-IN. COORDINATION SHALL INCLUDE REVIEWING THE ARCHITECTURAL, MECHANICAL, PLUMBING, ETC. DRAWINGS AND SHOP DRAWINGS PRIOR TO BID AND CONSTRUCTION.

OBTAIN AND REVIEW SHOP DRAWINGS, PRODUCT DATA, MANUFACTURER'S WIRING DIAGRAMS AND MANUFACTURER'S INSTRUCTIONS FOR EQUIPMENT PROVIDED BY OTHERS.

THE FINAL LOCATION OF EQUIPMENT SHALL BE COORDINATED IN THE FIELD, PRIOR TO ROUGH-IN, TO MEET APPLICABLE LOCATION, HEIGHT AND CLEARANCE REQUIREMENTS.

DEMOLITION

DISCONNECT WIRING TO EQUIPMENT, DEVICES, AND FIXTURES TO BE REMOVED. REMOVE EQUIPMENT, WIRING, DEVICES AND CONDUIT NOT BEING USED. DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS TO BE REMOVED.

FIELD VERIFY EXISTING CONDITIONS TO DETERMINE EXTENT OF DEMOLITION WORK. REFERENCE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. DEMOLITION DRAWINGS ARE BASED ON CASUAL FIELD OBSERVATION AND EXISTING RECORD DOCUMENTS. DEMO PLANS ARE PROVIDED FOR REFERENCE ONLY.

MAINTAIN THE ELECTRICAL SERVICE TO EXISTING EQUIPMENT AND DEVICES TO REMAIN. EXTEND EXISTING INSTALLATIONS USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATIONS.

PROVIDE TEMPORARY WIRING AND CONNECTIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION.

MAINTAINING EXISTING SERVICES

MAINTAIN THE ELECTRICAL SERVICE TO EXISTING TENANTS AND AREAS. ANY SERVICE DISCONTINUITY SHALL BE COORDINATED AND APPROVED BY OWNER AND TENANTS PRIOR TO OUTAGE. IF REQUIRED, PROVIDE TEMPORARY POWER DURING OUTAGE.

WIRING AND CONDUIT

NEW WIRING SHALL BE THHN/THWN-2, 90°C INSULATED COPPER UNLESS OTHERWISE NOTED. ALUMINUM CONDUCTORS SHALL BE XHHW-2, INSULATED COMPACT STRAND.

THE CONDUCTORS FOR 15A AND 20A BRANCH CIRCUITS SHALL BE #12 THHN/THWN-2, 90°C INSULATED COPPER.

15A BRANCH CIRCUITS IN DWELLING UNITS MAY BE #14 THHN/THWN-2, 90°C INSULATED COPPER.

BRANCH-CIRCUIT CONDUCTORS GREATER THAN 20A SHALL BE AS INDICATED ON PLANS OR REQUIRED PER CODE.

INCREASE CONDUCTOR SIZES AS REQUIRED TO LIMIT FEEDER VOLTAGE DROP TO 3%, BRANCH-CIRCUIT VOLTAGE DROP TO 3%, AND TOTAL VOLTAGE DROP (FEEDER + BRANCH-CIRCUIT) TO 5%.

THE MAXIMUM NUMBER OF CONDUCTORS IN A CONDUIT FOR A 3Ø SYSTEM SHALL BE THREE (AØ, BØ, CØ), NOT INCLUDING NEUTRAL AND EQUIPMENT GROUNDING CONDUCTORS, UNLESS OTHERWISE INDICATED. CONDUIT SIZE SHALL BE BASED UPON NEC CHAPTER 9 AND ANNEX C. MORE THAN 3 CURRENT-CARRYING CONDUCTORS MAY BE INSTALLED IN A RACEWAY IF THE APPROPRIATE AMPACITY-DERATING FACTORS ARE APPLIED.

THE MAXIMUM NUMBER OF CONDUCTORS IN A CONDUIT FOR A 1Ø SYSTEM SHALL BE TWO (AØ, BØ), NOT INCLUDING NEUTRAL AND EQUIPMENT GROUNDING CONDUCTORS UNLESS OTHERWISE INDICATED. CONDUIT SIZE SHALL BE BASED UPON NEC CHAPTER 9 AND ANNEX C. MORE THAN 3 CURRENT-CARRYING CONDUCTORS MAY BE INSTALLED IN A RACEWAY IF THE APPROPRIATE AMPACITY-DERATING FACTORS ARE APPLIED.

PROVIDE A DEDICATED NEUTRAL FOR EACH LINE-TO-NEUTRAL CIRCUIT UNLESS A MULTI-POLE BREAKER, WHICH DISCONNECTS ALL PHASE CONDUCTORS THAT SHARE A NEUTRAL, IS PROVIDED (LISTED BREAKER-TIES ARE PERMITTED).

PROVIDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR WITH ALL FEEDERS AND BRANCH-CIRCUIT WIRING.

PROVIDE ALL CONDUIT, FITTINGS, SUPPORTS, AND ACCESSORIES REQUIRED FOR A COMPLETE RACEWAY SYSTEM.

CONDUIT SHALL BE CONCEALED IN WALLS, FLOOR OR CEILING IN FINISHED AREAS UNLESS OTHERWISE INDICATED.

IN FINISHED AREAS, WHERE CONDUIT AND CABLE CAN NOT BE CONCEALED IN WALLS OR CEILINGS (I.E. EXISTING MASONRY CONSTRUCTION), PROVIDE WIREMOLD OR EQUAL SURFACE MOUNTED RACEWAY AS APPROVED BY ARCHITECT OR ENGINEER.

UNLESS OTHERWISE INDICATED AND WHERE NOT OTHERWISE RESTRICTED, USE THE CONDUIT TYPES INDICATED BELOW FOR THE SPECIFIED APPLICATIONS. WHERE MORE THAN ONE LISTED APPLICATION APPLIES, COMPLY WITH THE MOST RESTRICTIVE REQUIREMENTS. WHERE CONDUIT TYPE FOR A PARTICULAR APPLICATION IS NOT SPECIFIED, USE GALVANIZED STEEL RIGID METAL CONDUIT. DO NOT USE CONDUIT AND ASSOCIATED FITTINGS FOR APPLICATIONS OTHER THAN AS PERMITTED BY NFPA 70 AND PRODUCT LISTING. REFERENCE THE NEC FOR ADDITIONAL APPLICATION REQUIREMENTS.

APPLICATION	TYPE OF CONDUIT
IN CONCRETE OR MASONRY	EMT, IMC, GRC, PVC
OUTDOORS (ABOVE GRADE)	EMT, IMC, GRC
BRANCH CIRCUITS (EXPOSED)	EMT, IMC, GRC
INTERIOR BRANCH CIRCUITS (CONCEALED BEHIND DRYWALL)	MC, EMT, IMC
SUPPLY TO DISTRIBUTION PANELS	EMT, IMC, GRC, PVC
UNDERGROUND	PVC, IMC, GRC

SER AND NM CABLE MAY BE USED IN RESIDENTIAL PROJECTS WHERE PERMITTED BY THE NEC.

CONNECTIONS TO LUMINAIRES ABOVE ACCESSIBLE CEILINGS: USE FLEXIBLE METAL CONDUIT. MAXIMUM LENGTH TO BE 6' UNLESS OTHERWISE INDICATED.

FINAL CONNECTIONS TO VIBRATING EQUIPMENT (MOTORS, TRANSFORMERS, ETC) SHALL BE MADE WITH FLEXIBLE METAL CONDUIT IN DRY LOCATIONS AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT IN DAMP, WET, OR CORROSIVE LOCATIONS. MAXIMUM LENGTH TO BE 6' UNLESS OTHERWISE INDICATED.

INSTALL RACEWAYS AND CABLES EXPOSED TO SUNLIGHT ON ROOFTOPS A MINIMUM OF 1" ABOVE ROOF SURFACE.

PROVIDE PVC COATED GRC FOR ELBOWS IN PVC CONDUIT RUNS.

ALL CONDUITS AND CABLES PASSING THROUGH RATED WALLS, FLOORS OR CEILINGS SHALL BE FIRE STOPPED WITH APPROVED FIRE BARRIER CAULK. INSTALL CAULK PER MANUFACTURE'S INSTRUCTIONS AND MAINTAIN THE RATING OF THE WALL, FLOOR, OR CEILING BEING PENETRATED.

SERVICE CONDUCTORS: ROUTE OUTSIDE OF BUILDING OR STRUCTURE OTHER THAN AT THE POINT OF ENTRANCE TO CONNECT TO THE SERVICE DISCONNECTING MEANS.

DEVICES

DEVICE AND FACEPLATE COLOR SHALL BE AS SPECIFIED BY THE ARCHITECT OR TO MATCH EXISTING. COORDINATE FACEPLATE AND DEVICE COLORS WITH ARCHITECT, INTERIOR DESIGNER AND OWNER PRIOR TO PURCHASING AND INSTALLING DEVICES AND FACEPLATES.

PHOTOCELL/PHOTOSENSOR LOCATION ADJUSTMENTS: LOCATIONS INDICATED ARE DIAGRAMMATIC AND ONLY INTENDED TO INDICATE WHICH ROOMS OR AREAS REQUIRE DEVICES. PROVIDE QUANTITY AND LOCATIONS AS REQUIRED FOR PROPER CONTROL OF RESPECTIVE ROOM OR AREA BASED ON MANUFACTURER'S RECOMMENDATIONS FOR INSTALLED DEVICES.

DEMONSTRATE PROPER OPERATION OF LIGHTING CONTROL DEVICES TO OWNER, AND CORRECT DEFICIENCIES OR MAKE ADJUSTMENTS AS DIRECTED.

PROVIDE TAMPER RESISTANT RECEPTACLES FOR 15A AND 20A RECEPTACLES RATED 120V, 208V, AND 240V IN THE FOLLOWING AREAS: DWELLING UNITS; GUEST ROOMS OR GUEST SUITES IN HOTELS AND MOTELS; CHILD CARE FACILITIES; CHILD CARE AREAS; PRESCHOOLS AND ELEMENTARY SCHOOLS; BUSINESS OFFICES, CORRIDORS, AND WAITING ROOMS AND SIMILAR AREAS IN DENTAL AND MEDICAL FACILITIES; AND DORMITORIES.

GFCI PROTECTION FOR PERSONNEL PROTECTION: PROVIDE GFCI RECEPTACLE, FACELESS GFCI DEVICE FEEDING STANDARD RECEPTACLE, OR GFCI CIRCUIT-BREAKER. THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.

DWELLING UNIT RECEPTACLE GFCI PROTECTION: 120V, 208V, AND 240V RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS: BATHROOMS, GARAGES, OUTDOORS, CRAWL SPACES, BASEMENTS, KITCHENS (WHERE RECEPTACLES SERVE COUNTERTOP SURFACES), SINKS (WITHIN 6' OF INSIDE EDGE OF SINK BOWL), BATHTUBS AND SHOWER STALLS (WHERE RECEPTACLE IS WITHIN 6' OF THE BATHTUB OR SHOWER STALL), LAUNDRY AREAS, INDOOR DAMP AND WET LOCATIONS, AND ANY LOCATIONS REQUIRED PER THE NEC.

DWELLING UNIT OUTLET GFCI PROTECTION: OUTDOOR OUTLETS, 120V, 208V, AND 240V BRANCH-CIRCUITS, RATED 50A OR LESS. 120V LIGHTING OUTLETS IN CRAWL SPACES.

GFCI PROTECTION: PROVIDE GFCI PROTECTION FOR 1Ø RECEPTACLES RATED 120V, 208V AND 240V, 50A OR LESS AND 3Ø RECEPTACLES RATED 208V AND 240V, 100A OR LESS FOR THE FOLLOWING: BATHROOMS, KITCHENS, FOOD PREPARATION AREAS WITH A SINK, ROOFTOPS, OUTDOORS, SINKS (WITHIN 6' OF TOP INSIDE EDGE OF SINK BOWL), ELECTRIC WATER COOLERS, INDOOR DAMP OR WET LOCATIONS, LOCKER ROOMS, CRAWL SPACES, UNFINISHED BASEMENTS, LAUNDRY AREAS, BATHTUBS AND SHOWER STALLS (WITHIN 6' OF THE BATHTUB OR SHOWER STALL, GARAGES, SERVICE BAYS, VEHICLE EXHIBITION HALLS AND SHOWROOMS, OUTLETS INDICATED ON POWER PLAN, AND OUTLETS REQUIRED PER THE NEC.

PROVIDE GFCI PROTECTION FOR 120V, 15A OR 20A EQUIPMENT SERVICE RECEPTACLES.

PROVIDE ARC-FAULT PROTECTION FOR 120V, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, AND SIMILAR ROOMS OR AREAS.

PROVIDE ARC-FAULT PROTECTION FOR 120V, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES INSTALLED IN DORMITORY UNIT BEDROOMS, LIVING ROOMS, HALLWAYS, CLOSETS, AND BATHROOMS.

PROVIDE ARC-FAULT PROTECTION FOR 120V, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS AND DEVICES INSTALLED IN GUEST ROOMS AND GUEST SUITES OF HOTELS AND MOTELS AND PATIENT SLEEPING ROOMS IN NURSING HOMES AND LIMITED-CARE FACILITIES.

PROVIDE WEATHER-RESISTANT RECEPTACLES FOR RECEPTACLES INSTALLED IN DAMP OR WET LOCATIONS.

PROVIDE HUBBELL RECEPTACLES WITH THE APPROPRIATE NEMA CONFIGURATION FOR RECEPTACLES SHOWN ON THE ELECTRICAL PLAN.

PROVIDE 6' CORD AND PLUG FOR SPECIAL-PURPOSE RECEPTACLES IF EQUIPMENT TO BE INSTALLED IS NOT SUPPLIED WITH A CORD AND PLUG.

PROVIDE FLOOR-MOUNTED DEVICE COVERS MOUNTED FLUSH WITH THE FINISHED FLOOR SURFACE.

PROVIDE WIRING DEVICES AS MANUFACTURED BY HUBBELL, PASS AND SEYMOUR, LEVITION, WATT-STOPPER, LUTRON OR EQUAL.

COORDINATE MOUNTING HEIGHTS OF SWITCHES, RECEPTACLES, PHONE OUTLETS, DATA OUTLETS, TV OUTLETS, AND LIGHT FIXTURES WITH ARCHITECTURAL DRAWINGS.

THE MOUNTING HEIGHT FOR DEVICES SHALL BE AS INDICATED BELOW, UNLESS OTHERWISE NOTED. MOUNTING HEIGHTS ARE TO CENTER OF DEVICE, UNLESS OTHERWISE NOTED. MATCH MOUNTING HEIGHT OF EXISTING DEVICES IF APPLICABLE.

GENERAL RECEPTACLES (RESIDENTIAL) @12" AFF
ABOVE COUNTER RECEPTACLES AND SWITCHES @ 2" ABOVE
COUNTER OR BACKSPLASH TO BOTTOM OF DEVICE (COORDINATE WITH ARCHITECT)
GARAGE OUTLETS @ 44" AFF
LIGHT SWITCHES @ 44" AFF
LIGHT SWITCHES IN BATHROOMS @ 44" AFF
TELEPHONE OUTLETS @ 18" AFF
TELEPHONE OUTLET (WALL MOUNTED) 44" AFF
CLOCK OUTLETS @ 7'-6" AFF
TV OUTLETS (RESIDENTIAL) @ 12" AFF
DATA/PHONE OUTLETS (RESIDENTIAL) @ 12" AFF

LOCATE WALL SWITCHES ON STRIKE SIDE OF DOOR WITH EDGE OF WALL PLATE 3 INCHES FROM EDGE OF DOOR FRAME. WHERE LOCATIONS ARE INDICATED OTHERWISE, NOTIFY ARCHITECT TO OBTAIN DIRECTION PRIOR TO PROCEEDING WITH WORK.

PROVIDE "IN-USE" WEATHERPROOF COVER FOR EXTERIOR RECEPTACLES.

COMPLY WITH ADA STANDARDS FOR MOUNTING HEIGHTS AND LOCATIONS.

DEVICES IN THE SAME LOCATION AND AT THE SAME MOUNTING HEIGHT SHALL BE MOUNTED UNDER A COMMON WALL PLATE.

DISTRIBUTION EQUIPMENT

PROVIDE DISTRIBUTION PANELS, DISCONNECTS, CONTACTORS, ETC. OF VOLTAGE, AMPERAGE, PHASE, AND SHORT-CIRCUIT RATINGS AS INDICATED ON PLANS.

TERMINATIONS SHALL BE RATED 75°C MINIMUM CU/AL.

CIRCUIT BREAKERS OR FUSES RATED 1200A OR HIGHER: PROVIDE ENERGY-REDUCING MAINTENANCE SWITCH WITH LOCAL STATUS INDICATOR.

EQUIPMENT SHALL BE FULLY-RATED FOR THE AVAILABLE FAULT CURRENT UNLESS A SERIES-RATED COMBINATION IS SPECIFICALLY NOTED ON PLANS.

FUSES SPECIFIED ARE AS MANUFACTURED BY BUSSMANN. THE SAME CLASS OF FUSE AS MANUFACTURED BY LITTELFUSE AND GOULD-SHAWMUT MAY BE SUBSTITUTED.

PROVIDE ENCLOSURES FOR EQUIPMENT AND DEVICES SUITABLE FOR THE INSTALLED LOCATION.

PROVIDE 3 5/8" DEEP LOAD CENTERS FOR PANELS.

PROVIDE PANELS AND SWITCHBOARDS BUSSING AND FINGERS TO ACCOMMODATE BREAKERS OR SWITCHES IN ALL AVAILABLE SPACES.

PROVIDE A LISTED BREAKER-TIE OR MULTI-POLE BREAKER FOR EACH MULTIWIRE (SHARED NEUTRAL) BRANCH CIRCUIT.

PROVIDE DISTRIBUTION EQUIPMENT AS MANUFACTURED BY AMERICAN MIDWEST POWER, SQUARE D, ELECTRO-MECHANICAL INDUSTRIES, CUTLER-HAMMER, SIEMENS, ERICKSON ELECTRIC, GE OR METRON.

THE MOUNTING HEIGHT FOR DISTRIBUTION EQUIPMENT SHALL BE AS INDICATED BELOW, UNLESS OTHERWISE NOTED.

PANELS/LOADCENTERS - 6' AFF MAX TO CENTER OF TOP HANDLE
DISCONNECT SWITCHES - 6'-6" AFF MAX TO CENTER OF HANDLE
SINGLE UTILITY METER - 4' MIN, 6' MAX TO CENTER OF METER
METER CENTER - 3' MIN, 6' MAX TO CENTER OF METERS

CLEAN EXPOSED SURFACES AND CHECK TIGHTNESS OF ELECTRICAL CONNECTIONS FOR EQUIPMENT TO BE REUSED. REPLACE DAMAGED CIRCUIT BREAKERS AND PROVIDE CLOSURE PLATES FOR VACANT POSITIONS IN EXISTING PANELS.

PROVIDE CONCRETE PAD FOR FLOOR AND GROUND MOUNTED ELECTRICAL EQUIPMENT.

SURGE PROTECTIVE DEVICES (SPD)

PROVIDE SPD FOR DWELLING UNIT SERVICES OR EACH NEXT LEVEL DOWNSTREAM DISTRIBUTION EQUIPMENT.

PROVIDE SPD INSTALLED IN DISTRIBUTION EQUIPMENT OR REMOTE SPD ADJACENT TO DISTRIBUTION EQUIPMENT. PROVIDE MEANS TO DISCONNECT SPD FOR BOTH INTEGRAL AND REMOTE SURGE PROTECTIVE DEVICES.

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PROVIDE BRASS TAG (ATTACHED WITH BRASS SCREWS), INDICATING UNIT SERVED ON SERVICE DISCONNECTS, FEEDER DISCONNECTS, AND METERS SERVING MULTI-TENANT FACILITIES.

PROVIDE A PANEL SCHEDULE WITH LOAD DESCRIPTIONS FOR PANELS AFFECTED BY THIS PROJECT.

PROVIDE IDENTIFICATION LABELS OR HANDWRITTEN TEXT USING INDELIBLE MARKER TO IDENTIFY CIRCUITS ENCLOSED IN BOXES.

USE IDENTIFICATION LABEL OR ENGRAVED FACEPLATE TO IDENTIFY BRANCH CIRCUITS FEEDING RECEPTACLES AND SWITCHES. PROVIDE IDENTIFICATION ON INSIDE SURFACE OF FACEPLATE FOR RECEPTACLES AND SWITCHES IN PUBLIC AREAS OR IN AREAS AS DIRECTED BY ARCHITECT OR OWNER.

USE IDENTIFICATION LABEL TO IDENTIFY RECEPTACLES PROTECTED BY UPSTREAM GFI PROTECTION.

LABEL CONDUCTORS AND CABLE WITH POWER SOURCE AND CIRCUIT NUMBER OR OTHER REQUIRED DESIGNATION. USE WRAP-AROUND SELF-ADHESIVE VINYL CLOTH, WRAP-AROUND SELF-ADHESIVE VINYL SELF-LAMINATING, HEAT-SHRINK SLEEVE, PLASTIC SLEEVE, PLASTIC CLIP-ON, OR VINYL SPLIT SLEEVE TYPE MARKERS SUITABLE FOR THE CONDUCTOR OR CABLE TO BE IDENTIFIED. USE FACTORY PRE-PRINTED OR MACHINE-PRINTED TEXT, ALL CAPITALIZED UNLESS OTHERWISE INDICATED.

IDENTIFY EACH PIECE OF ELECTRICAL EQUIPMENT WITH AN IDENTIFICATION NAMEPLATE. PROVIDE THE FOLLOWING INFORMATION ON THE NAMEPLATE:

DISTRIBUTION EQUIPMENT: AMPERE RATING, VOLTAGE, PHASE, POWER SOURCE, AND LOADS BEING SERVED.

ENCLOSED SWITCHES AND CIRCUIT BREAKERS: AMPERE RATING, VOLTAGE AND PHASE, POWER SOURCE, LOAD BEING SERVED.

CONDUCTOR INSULATION SHALL BE COLOR CODED AS FOLLOWS:
240/120V, 1Ø: PHASE A - BLACK; PHASE B - RED

PROVIDE UNDERGROUND WARNING TAPE 12" BELOW GRADE FOR POWER AND COMMUNICATIONS CONDUIT AND CABLE. USE NON-DETECTABLE TYPE POLYETHYLENE TAPE SUITABLE FOR DIRECT BURIAL, 6" WIDE MINIMUM, AND INDICATE THE TYPE OF SERVICE CONTINUOUSLY REPEATED OVER THE FULL LENGTH OF TAPE. TAPE FOR BURIED POWER LINES: BLACK TEXT ON RED BACKGROUND. TAPE FOR BURIED COMMUNICATIONS: BLACK TEXT ON ORANGE BACKGROUND.

PROVIDE CIRCUIT DIRECTORY TO IDENTIFY LOADS SERVED FOR PANELBOARDS AND LOAD CENTERS.

MECHANICAL AND PLUMBING EQUIPMENT

REFERENCE MECHANICAL AND PLUMBING (M/P) PLANS FOR EXACT LOCATION AND REQUIREMENTS OF EQUIPMENT.

ELECTRICALLY OPERATED EQUIPMENT SHOWN ON THE M/P PLANS AND NOT SHOWN ON THE ELECTRICAL PLANS WILL REQUIRE ELECTRICAL SERVICE. CONTACT ELECTRICAL ENGINEER FOR CONNECTION REQUIREMENTS PRIOR TO BID. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE BID.

VERIFY EQUIPMENT NAMEPLATE DATA (VOLTAGE, PHASE, FLA, MCA, MOCP, ETC.) PRIOR TO ROUGH-IN. NOTIFY ELECTRICAL ENGINEER IN WRITING OF ANY DISCREPANCIES WITH THESE DRAWINGS IMMEDIATELY AND PRIOR TO COMMENCING ANY FURTHER WORK.

STARTERS FOR M/P EQUIPMENT SHALL BE PROVIDED WITH THE EQUIPMENT.

REFERENCE M/P PLANS FOR CONTROL REQUIREMENTS FOR ALL M/P EQUIPMENT. PROVIDE CONDUIT, WIRE, AND DEVICES FOR EQUIPMENT CONTROLS. PROVIDE SHOP DRAWING(S) FROM EQUIPMENT SUPPLIER(S) FOR REVIEW PRIOR TO STARTING WORK. ROUTE CIRCUITS THROUGH EQUIPMENT CONTROL PANELS, PROVIDE CONTROL WIRING, AND INTERLOCKS PER THE M/P SPECIFICATIONS AND EQUIPMENT SHOP DRAWINGS.

REFERENCE MECHANICAL DRAWINGS FOR LOCATIONS OF FIRE SMOKE DAMPERS. PROVIDE 120V, 20A CIRCUIT TO FIRE SMOKE DAMPERS, AND PROVIDE EITHER DUCT OR SMOKE DETECTORS AS REQUIRED. CONNECT DETECTORS TO FIRE ALARM SYSTEM IF APPLICABLE.

RETURN AIR SYSTEMS OVER 2000CFM: PROVIDE SMOKE/DUCT DETECTOR IN RETURN AIR SYSTEM TO SHUT DOWN AIR DISTRIBUTION SYSTEM UPON ACTIVATION OF SMOKE/DUCT DETECTOR. CONNECT DETECTORS TO FIRE ALARM SYSTEM IF APPLICABLE.

PROVIDE EW201B FOR MECHANICAL EQUIPMENT CONTROLLED BY A TIME SWITCH. PROVIDE CONTACTORS RATED FOR THE MECHANICAL LOAD BEING CONTROLLED.

MAKE FINAL ELECTRICAL CONNECTIONS TO M/P EQUIPMENT.

UTILIZATION EQUIPMENT

VERIFY EQUIPMENT NAMEPLATE DATA (VOLTAGE, PHASE, FLA, MCA, MOCP, SCCR, ETC.) PRIOR TO ROUGH-IN. NOTIFY ELECTRICAL ENGINEER IN WRITING OF ANY DISCREPANCIES WITH THESE DRAWINGS IMMEDIATELY AND PRIOR TO COMMENCING ANY FURTHER WORK.

MAKE FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT.

TELEPHONE, DATA, AND CABLE OUTLETS

PRE-WIRE UNIT OUTLETS FROM UNIT COMMUNICATION CABINET TO TELEPHONE OUTLETS WITH 4-PAIR CAT 5E CABLE AND 75 OHM COAX CABLE TO CABLE TV OUTLETS.

LIGHTING

PROVIDE LIGHT FIXTURES AS INDICATED ON LIGHTING PLAN OR FIXTURE SCHEDULE.

REFERENCE ARCHITECTURAL DRAWINGS FOR LUMINAIRE SCHEDULE. NOTIFY ELECTRICAL ENGINEER OF ANY DISCREPANCIES WITH THESE DRAWINGS.

THE MOUNTING HEIGHT FOR LIGHT FIXTURES SHALL BE AS INDICATED ON THE FIXTURE SCHEDULE, ARCHITECTURAL ELEVATIONS, OR AS SHOWN BELOW, UNLESS OTHERWISE NOTED. MATCH MOUNTING HEIGHT OF EXISTING LIGHT FIXTURES IF APPLICABLE.

PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH LIGHTING CIRCUIT.

CONNECT EXIT AND EMERGENCY LIGHTING TO NON-SWITCHED LEG OF LOCAL LIGHTING CIRCUIT UNLESS OTHERWISE NOTED.

MAKE CONNECTIONS TO LIGHT FIXTURES USING BUILDING WIRE WITH INSULATION SUITABLE FOR TEMPERATURE CONDITIONS WITHIN THE LUMINAIRE.

MAINTAIN THE FIRE RATING OF THE ASSEMBLY (CEILING OR WALL) IN WHICH LIGHT FIXTURES ARE TO BE INSTALLED. PROVIDE FIRE-RATED FIXTURES OR PROVIDE BOX AROUND FIXTURES AS MANUFACTURED BY TENMAT, EZ BARRIER OR EQUAL.

PROVIDE IC RATED FIXTURE FOR FIXTURES IN CONTACT WITH INSULATION. IF REQUIRED, PROVIDE TENTING AROUND FIXTURES TO MAINTAIN REQUIRED CLEARANCE FROM INSULATION FOR NON-IC RATED FIXTURES.

COORDINATE THE PLACEMENT OF SUPPORTS, ANCHORS, ETC. REQUIRED FOR MOUNTING LIGHT FIXTURES. COORDINATE COMPATIBILITY OF LUMINAIRES AND ASSOCIATED TRIMS WITH MOUNTING SURFACES AT INSTALLED LOCATIONS.

LAMP BURN-IN: OPERATE LAMPS AT FULL OUTPUT FOR MINIMUM OF 100 HOURS OR PRESCRIBED PERIOD PER MANUFACTURER'S RECOMMENDATIONS. REPLACE LAMPS THAT FAIL PREMATURELY DUE TO IMPROPER LAMP BURN-IN.

JUST PRIOR TO SUBSTANTIAL COMPLETION, REPLACE ALL LAMPS THAT HAVE FAILED.

COORDINATE FINAL LIGHT SWITCH LOCATIONS WITH OWNER AND CONFIRM LOCATIONS DURING BOX WALK.

ELECTRIC UTILITY COMPANY

SUBMIT ELECTRICAL DRAWINGS AND SERVICE APPLICATION TO ELECTRIC UTILITY COMPANY PRIOR TO STARTING ANY WORK.

COORDINATE WITH THE ELECTRIC UTILITY COMPANY TO ARRANGE FOR PERMANENT AND TEMPORARY ELECTRICAL SERVICE TO BE PROVIDED TO THE SITE AS REQUIRED.

OBTAIN WRITTEN APPROVAL FROM THE LOCAL ELECTRIC UTILITY COMPANY INDICATING THAT THE SERVICE DESIGN IS ACCEPTABLE. PROVIDE LETTER TO ELECTRICAL ENGINEER PRIOR TO PURCHASING ANY ELECTRICAL SERVICE EQUIPMENT OR STARTING ANY WORK ON THE ELECTRICAL SERVICE. NOTIFY ELECTRICAL ENGINEER IMMEDIATELY OF ANY DESIGN CHANGES REQUESTED BY THE UTILITY COMPANY.

TELEPHONE SERVICE

PROVIDE 1" CONDUIT FROM TELEPHONE PEDESTAL TO TELEPHONE TERMINAL BOX IN DWELLING UNITS. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.

PROVIDE #6 GROUND FROM BUILDING GROUNDING ELECTRODE SYSTEM TO TELEPHONE TERMINAL. PROVIDE GROUND BAR IN TERMINAL CABINET.

CABLE SERVICE

PROVIDE 1" CONDUIT FROM CABLE PEDESTAL TO CABLE TERMINAL BOX IN DWELLING UNITS. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.

FIRE/SPRINKLER ALARM AND DETECTION SYSTEM (IF REQUIRED)

DWELLING UNIT SMOKE DETECTORS: INTERCONNECT SINGLE STATION SMOKE DETECTORS WITHIN INDIVIDUAL DWELLING UNITS.

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KAZIN & ASSOCIATES
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LONE TREE, CO 80124
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PROJECT #: 23133

DAVID M. KAZIN
20747
11-30-23

NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

ELECTRICAL SPECIFICATIONS & LEGEND

NOVEMBER 30, 2023

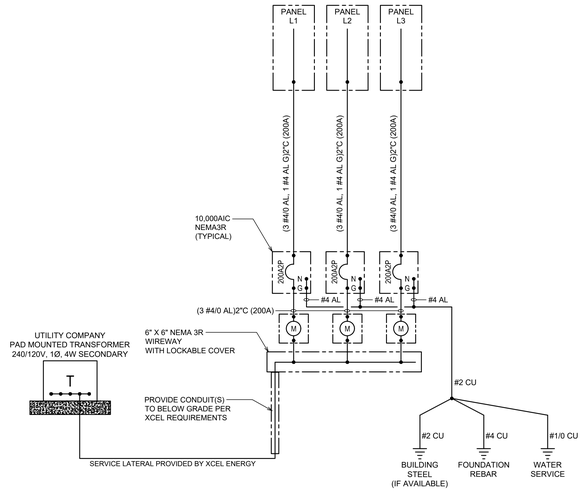
E1

FAULT CURRENT

LOCATION DESCRIPTION (ISC END)	VOLTAGE	PHASE	CIRCUIT PARAMETERS						TRANSFORMER PARAMETERS		ISC START	ISC END
			CONDUCTOR SIZE	CU OR AL	# OF SETS	STEEL/ NONMAG	LENGTH (MIN)	C-VALUE	kVA	%Z (MIN)		
@ METERS & DISCONNECTS	120	1	#2/0	AL	1	NONMAG	50	7301			21,700	6,241
@ METERS & DISCONNECTS	240	1	#2/0	AL	1	NONMAG	50	7301			14,800	8,023

SERVICE LOAD SUMMARY

LOAD DESCRIPTION	LOAD (VA)	QUANTITY	DEMAND FACTOR (%)	TOTAL LOAD (VA)
GENERAL LIGHTING, SMALL APPLIANCE, LAUNDRY				
GENERAL LIGHTING & RECEPTACLES	3VA	5400ft^2	100%	16218VA
SMALL APPLIANCE	1500VA	6	100%	9000VA
LAUNDRY	1500VA	3	100%	4500VA
SUB-TOTAL				29718VA
1ST 3kVA	3000VA	@	100%	3000VA
3-120kVA	26718VA	@	35%	9351VA
>120kVA	0VA	@	25%	0VA
SUB-TOTAL				12351VA
APPLIANCES				
DISHWASHER	1200VA	4	75%	3600VA
DISPOSAL	900VA	4	75%	2700VA
		0	75%	0VA
SUB-TOTAL				6300VA
ELECTRIC CLOTHES DRYERS				
DRYER	5000VA	3	100%	15000VA
SUB-TOTAL (PER NEC 220.54)	15000VA	@	100.0%	15000VA
ELECTRIC COOKING				
OVEN 1	9600VA	1	100%	9600VA
OVEN 2	9600VA	1	100%	9600VA
OVEN 3	9600VA	1	100%	9600VA
		0	100%	0VA
			100%	0VA
SUB-TOTAL (PER NEC 220.55)	28800VA	3	kW PER 220.55	14000VA
HEATING & COOLING				
BOILER	500VA	3	100%	1500VA
HEAT TRACE	3000VA	3	100%	9000VA
	0VA	0	100%	0VA
SUB-TOTAL				10500VA
MISCELLANEOUS LOADS				
EVSE	7600VA	3	125%	28500VA
				0VA
SUB-TOTAL				28500VA
TOTAL LOAD	SERVICE LOAD PER NEC			86651VA
PHASE VOLTAGE (L-L)	208V			
LINE VOLTAGE (L-N)	120V			
PHASE	3Ø			
TOTAL AMPERAGE				241A



1 ONE-LINE DIAGRAM
NOT TO SCALE

LIGHTING FIXTURE SCHEDULE

KAZIN & ASSOCIATES, INC

DESCRIPTION OF LUMINAIRE				BASIS OF DESIGN				
ID	DESCRIPTION	FINISH	MOUNTING INFORMATION	MANUFACTURER	MODEL NUMER OR SERIES	DESIGN LOAD (VA)	LUMENS	VOLTAGE
A	4 FT LED STRIP		GARAGES & LOFTS					120
B	8 INCH SURFACE		BEDROOMS, BATHS, & HALLS					120
C	6 INCH RECESSED DOWNLIGHT		LIVING ROOMS		LT4-06-9FS23-1E-WH-DM	7.5	600	120
C1	4 INCH RECESSED DOWNLIGHT		RECESSED EXTERIOR	HALO				121
D	4FT VANITY		BATHROOMS					120
D1	2 FT VANITY		BATHROOMS					120
F	12 INCH PENDANT		DINING & ISLANDS					120
G	EXTERIOR FULL CUT-OFF LED WALL SCONCE	BLACK	EXTERIOR +7'	PROGRESS	P5674-31	16.9	504	120
G1	INTERIOR LED WALL SCONCE		INTERIO					120
I	WET LOCATION 6 INCH RECESSED DOWNLIGHT		SHOWERS					120
J	2FT LED STRIP		MECHANICAL CLOSETS					120
T8	8FT TRACK		KITCHENS					120
U	WALL SCONCE		STAIRS					120

ALL FIXTURES SHALL BE LED OR PROVIDED WITH LED LAMPS

PANEL: TYPICAL

PANEL TYPE:	LOAD CENTER
PANEL AMPACITY (MINIMUM):	200
MAIN BREAKER/MLO:	MLO
LINE VOLTAGE:	240
PHASE VOLTAGE:	120
PHASE:	3
WIRE:	4
MINIMUM AIC RATING:	10,000

GENERAL PANEL NOTES: A, 9, 2, 3, 5, 6

BRANCH CIRCUIT NOTES: 1, 2, 3, 4, 5, 6, 7

GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFPE	GROUND FAULT PROTECTION EQUIPMENT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
GFAF	ARC FAULT GROUND FAULT COMBO
ST	STANDARD
SCO	BREAKER LOCK
BHPL	BREAKER HANDLE PADLOCK ATTACHMENT

CTS	LOAD DESCRIPTION	GENERAL LIGHTING & RECEPT	SMALL APPLIANCE	APPLIANCE	DRYER	ELECTRIC COOKING	HEATING OR COOLING	OTHER LOAD @ 100%	OTHER LOAD @ 125%	BREAKER #	BREAKER POLES	CONDUCTOR SIZE	BREAKER	CONDUCTOR SIZE	BREAKER POLES	BREAKER #	OTHER LOAD @ 125%	OTHER LOAD @ 100%	HEATING OR COOLING	ELECTRIC COOKING	DRYER	APPLIANCE	SMALL APPLIANCE	GENERAL LIGHTING & RECEPTACLES	LOAD DESCRIPTION	CTS
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	1	A	2	GFAF	1	20						1000	SMALL APPLIANCE	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	3	B	4	GFAF	1	20						1000	SMALL APPLIANCE	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	5	A	6	GFAF	1	20						1000	MICROAVE	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	7	B	8	GFAF	1	15					1200		DISHWASHER	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	9	A	10	GFAF	1	15					900		DISPOSAL	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	11	B	12	GFAF	1	20				1500			WASHER	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	13	A	14	GFCI	2	30			2500				DRYER	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	15	B	16	GFCI	-	30			2500				-	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	17	A	18		1	15		500					BOILER	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	19	B	20	GFCI	2	50			4000				RANGE	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	21	A	22	GFCI	-	50			4000				-	
	GENERAL LIGHTING & RECEPT	1200								20	1	#10	23	B	24	GFPE	2	20		1500					HEAT TRACE	
	BATHROOM RECEPTS	1200								20	1	GFCI	25	A	26	GFPE	-	20		1500					-	
	BATHROOM RECEPTS	1200								20	1	GFCI	27	B	28	GFAF	1	15							SPARE	
	GARAGE RECEPTS	1200								20	1	GFCI	29	A	30	GFAF	1	15							SPARE	
	GARAGE DOOR		900							20	1	#10	31	B	32	GFAF	1	15							SPARE	
	CAR CHARGER (EVSE)							3800		40	2	GFCI	33	A	34										SPACE	
								3800		40		GFCI	35	B	36										SPACE	
	SPACE FOR FUTURE SOLAR												37	A	38		2	SPD							SPD	
													39	B	40			SPD								

	CONNECTED (VA)			NEC FACTOR	DEMAND (VA)		
	A@	B@	TOTAL		A@	B@	TOTAL
GENERAL LIGHTING & RECEPTACLES	9600	8400	18000	3,957 @ 3VA/SQFT	2936	2936	5871
SMALL APPLIANCE	3000	1500	4500	100%	3000	1500	4500
LAUNDRY	0	1500	1500	100%	0	1500	1500
SUB TOTAL	12600	11400	24000	100%	5936	5936	11871
1ST 3KVA	1500	1500	3000	100%	1500	1500	3000
3-120KVA	4436	4436	8871	35%	1552	1552	3105
APPLIANCE	900	2100	3000	75%	675	1575	2250
DRYER	2500	2500	5000	100%	2500	2500	5000
ELECTRIC COOKING	4000	4000	8000	8000 VA PER NEC 220.55	4000	4000	8000
HEATING OR COOLING (LARGER LOAD)	0	0	0	100%	0	0	0
OTHER LOAD @ 100%	300	100	400	100%	300	100	400
OTHER LOAD @ 125%	800	800	1600	125%	1000	1000	2000
EXISTING PEAK DEMAND	0	0	0	125%	0	0	0
ADDITIONAL LOADS	0	0	0	100%	0	0	0
TOTAL VA	19136	19836	38971		18971	17577	36551
MINIMUM REQUIRED VA (HIGHEST @ # 2)							36551
TOTAL AMPS	159	165	162		141	141	

KAZIN & ASSOCIATES, INC

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e: Abby@PloenHaus.com
6590 East Lake Place
Centennial, CO 80111

KAZIN & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
9384 TEDDY LANE, SUITE 101
LONE TREE, CO 80124
(720) 489-1609
PROJECT #: 23133

COLORADO LICENSED
DAVID M. KAZIN
20747
11-30-23
PROFESSIONAL ENGINEER

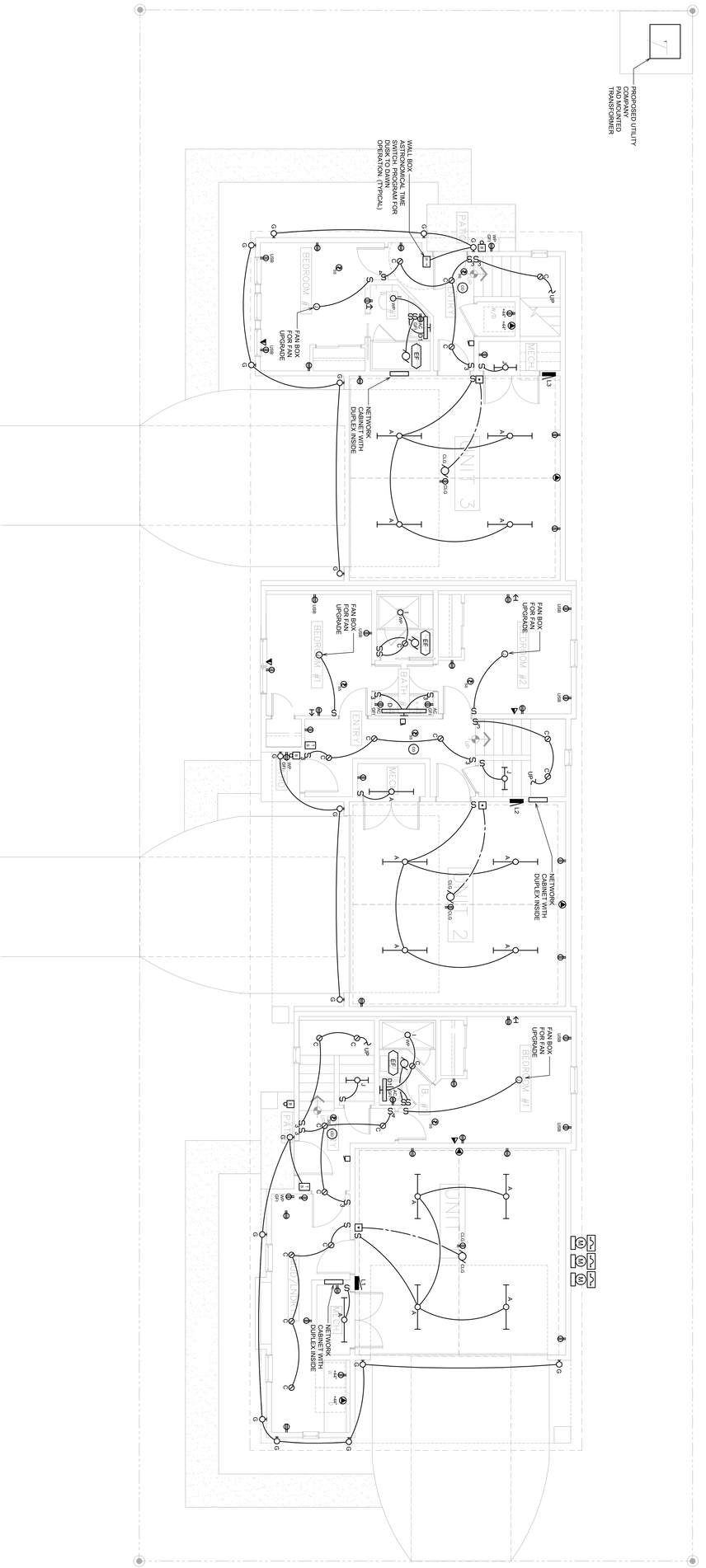
NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

[redacted]

ONE-LINE DIAGRAM & SCHEDULES

NOVEMBER 30, 2023

E2



1 LOWER LEVEL ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

LOWER LEVEL ELECTRICAL PLAN

NOVEMBER 30, 2023

E3

KAZIN & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
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 PROJECT #: 23133

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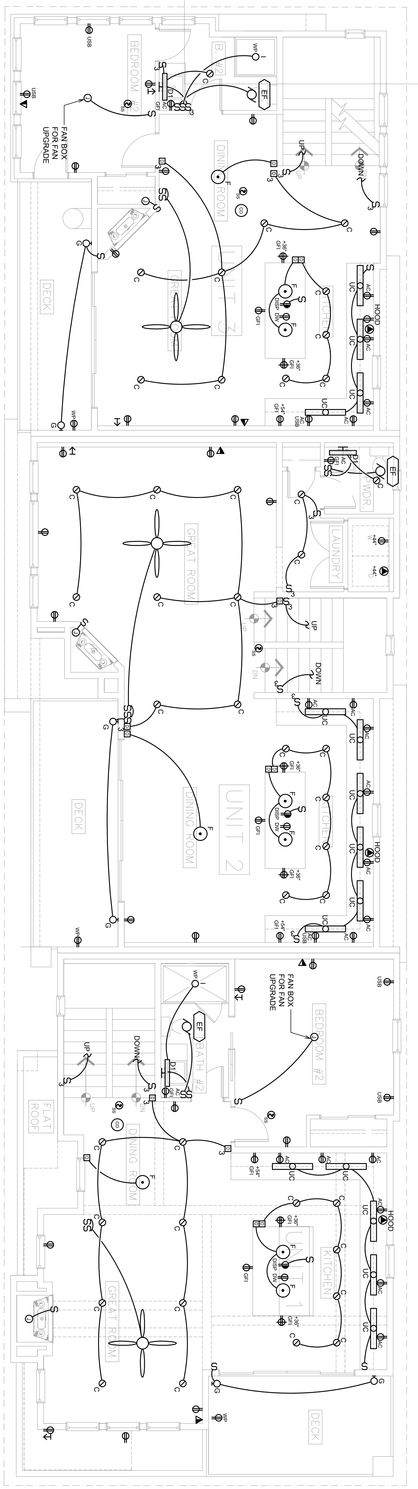
PL·OE·NHAUS



1 MAIN LEVEL ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

MAIN LEVEL ELECTRICAL PLAN

NOVEMBER 30, 2023

E4

COLORADO REGISTERED PROFESSIONAL ENGINEER 20747 11-30-23

KAZIN & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
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 PROJECT #: 23133

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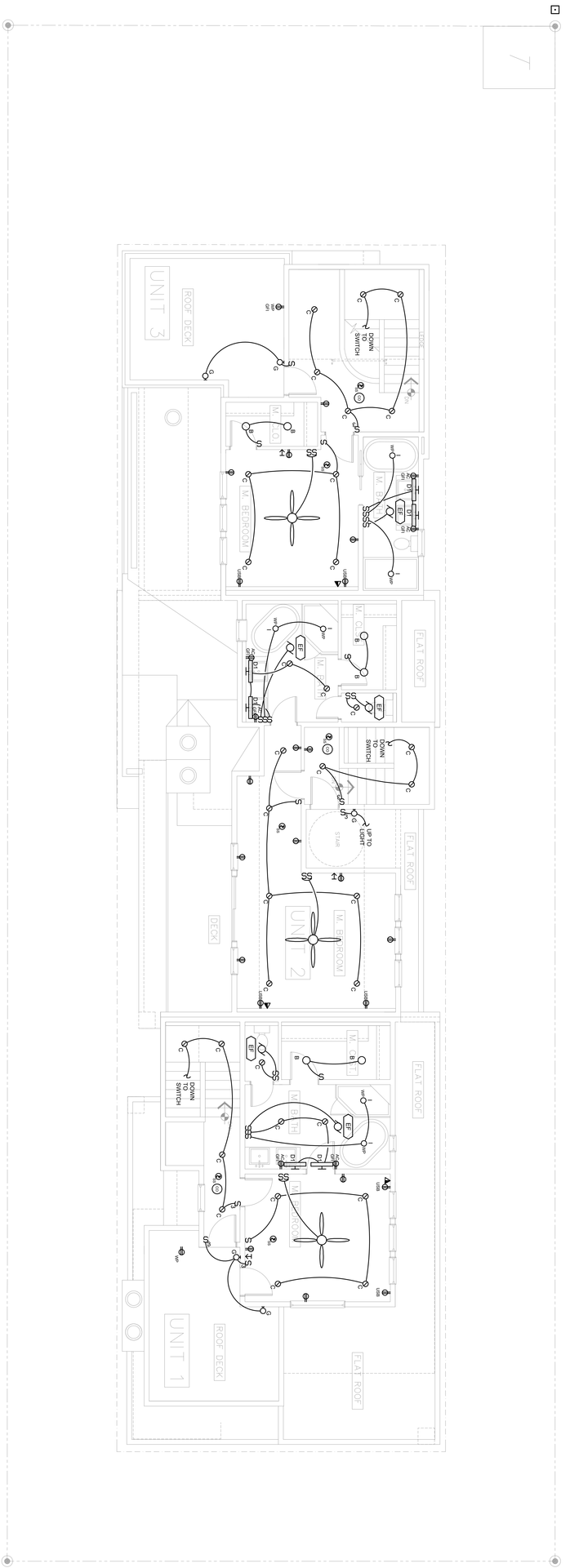
PL·OE·NHAUS



1 UPPER LEVEL ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

UPPER LEVEL ELECTRICAL PLAN

NOVEMBER 30, 2023

E5

COLORADO LICENSED PROFESSIONAL ENGINEER 20747 11-30-23 PROFESSIONAL ENGINEER

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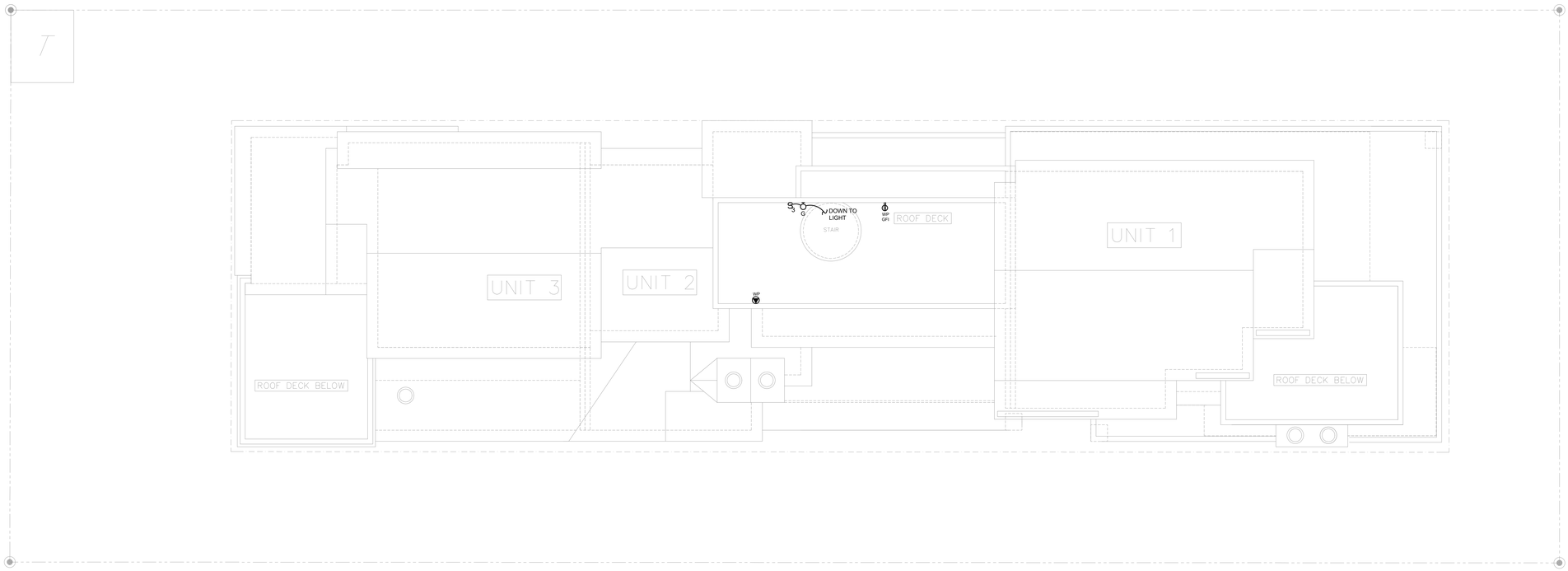
PL·OE·NHAUS



1 ROOF LEVEL ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

PL·OE·HAUS
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COLORADO LICENSED
DAVID M. KAZIN
20747
11-30-23
PROFESSIONAL ENGINEER

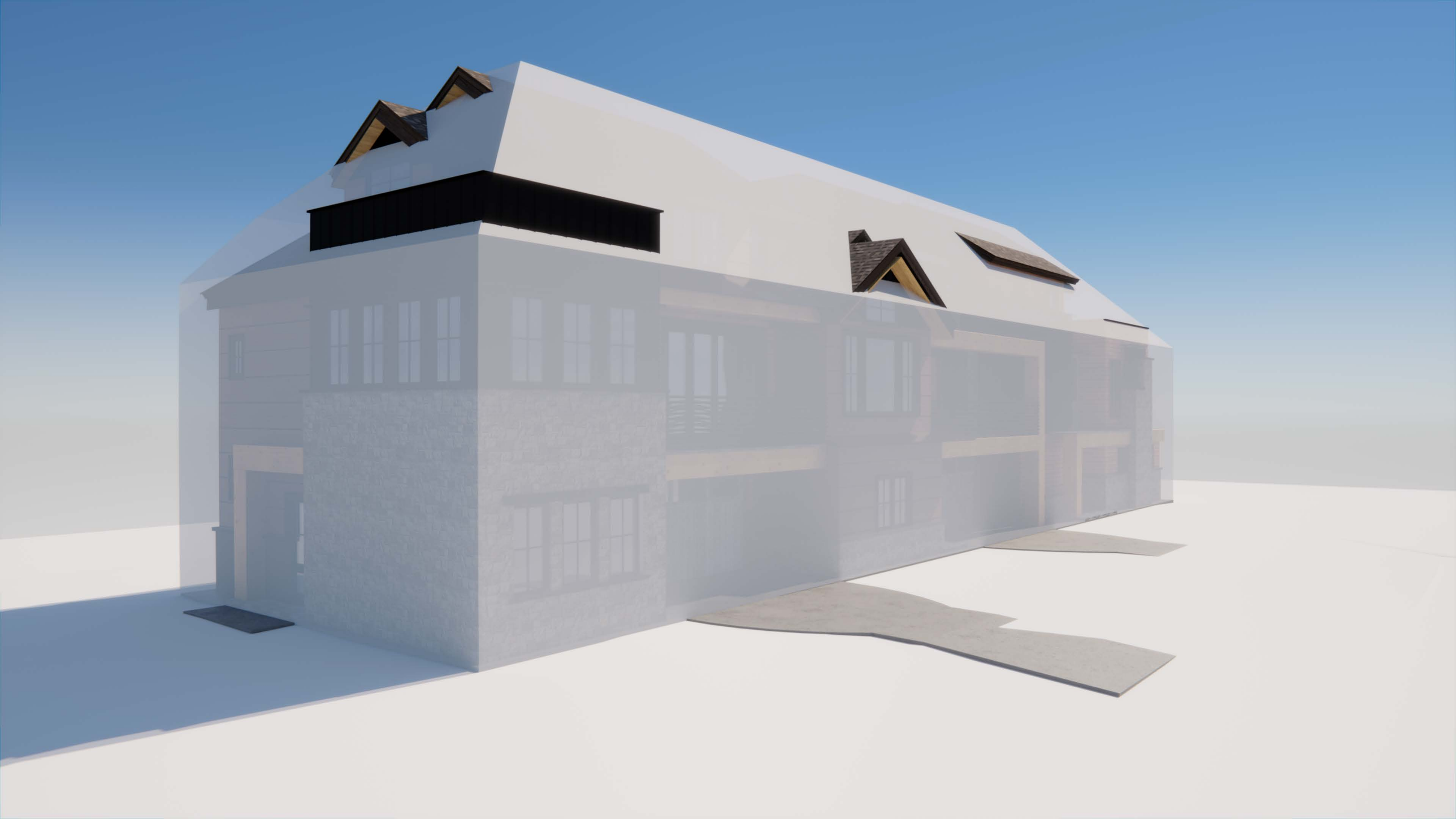
NEW TOWNHOMES
400 GRANITE ST.
FRISCO, COLORADO

[redacted]

ROOF LEVEL ELECTRICAL PLAN

NOVEMBER 30, 2023

E6



TANGO TOWNHOMES

400 Granite St.

Stone:

Telluride Stone, TN Choctaw Full Veneer Chopped, Colorado Buff Sills

Vertical Siding and Garage Doors:

1” x Random 8”-12” x Random 4’ – 14’ NatureAged Barnwood Board-to-Board Siding

Metal Vertical:

Siding: 24G 16" Snap-On Standing Seam Metal Siding Panels; Low-Gloss or Matte Black

Horizontal Siding:

2x12 SPF (Spruce/Pine/Fir) SM 2” Reveal; SW 3518 Hawthorne Semi-Transparent 70% Color Lighter -No corner trim

Horizontal Siding:

3” Lap Siding RS Cedar -2x6 Cedar Corner Trim

Facia, Trims and Belly Bands:
(Outside Corners / Inside Corners (If Needed) / Headers Between 2 Type of Siding / Door Trims)
RS Cedar 2x6 over 2x10; Cabot Cordovan Brown Semi-Solid

Soffits and Beams:

RS Cedar 1x6 T&G V-Groove, Natural cedar finish with clear coat

Exterior Metal Railings & Timber Connector Plates:

Matte Black

Metal Flashings, Caps and Flues:

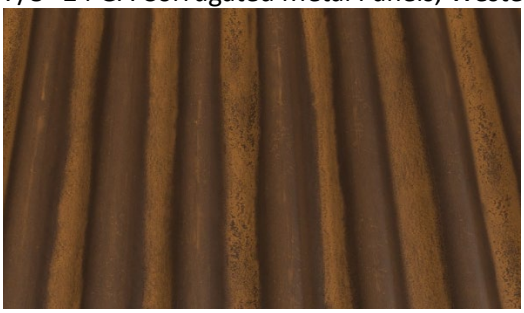
Matte Black

Asphalt Shingle Roofing:

Tamko Heritage Weathered Wood

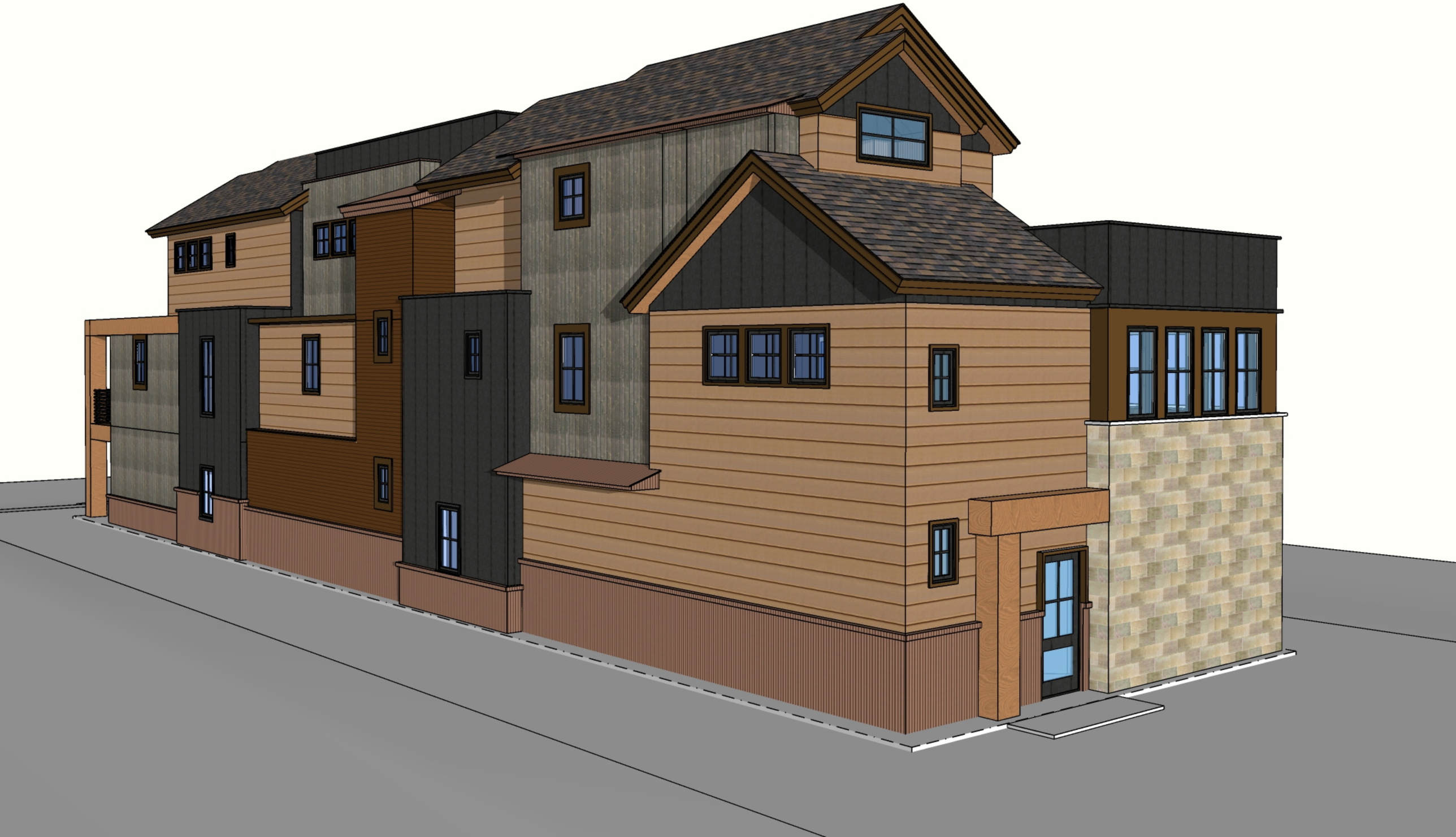
Metal Roofing & Metal Wainscot:

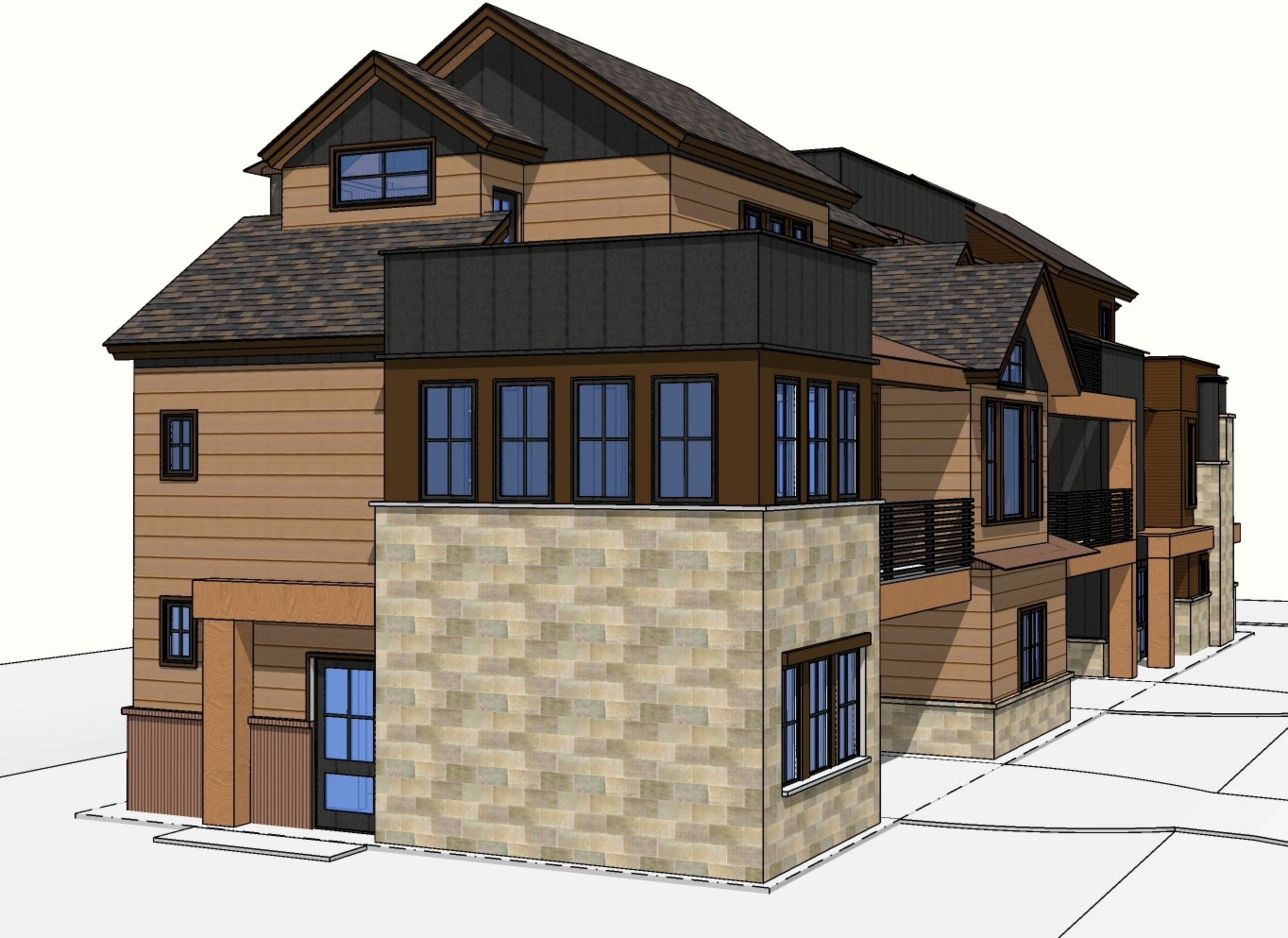
7/8” 24 GA Corrugated Metal Panels, Western Rust



Windows:

Pella Lifestyle Signature Series Matte or Low-Gloss Black





PLOENHAUS
noun | plain·house | \'plānhaús\
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Oct. 10th, 2023

Planning Commission
Town of Frisco
P.O. Box 4100
Frisco, CO 80443

Re: Project Narrative for Tango Townhomes located at:

400 Granite St.
Frisco, CO 80443

Dear Planning Commission,

Thank you for considering our project for Final Plan approval. In our submittal package you will see all required documents that we feel express our intent for this project, as well as our project narrative that is outline below. Thank you very much for your time.

Sincerely,
Abby Ploen
Architect

Tango Townhomes Narrative

The proposed Townhome development, located at 400 Granite St., is shown with (3) total units. The unit breakdown is as follows:

(3) 3 bedroom Units

The project is being developed under the standards of the Town of Frisco's Unified Development Code. Within this code the project is following the below standards:

RESIDENTIAL HIGH DENSITY *(UDC 180-3.7)*

The proposed project will help further develop the commercial district by adding reasonable density and full market units to help drive business. The proposed elevations are well suited to add to the already beautifully designed Town of Frisco by having extensive plane changes in the roofs and walls, a cohesive building look that is not a "duplicate" layout, varied finish materials and a relatively small scale to stay away from the "big box" look. The façade of the proposed development has been broken

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down extensively to reduce the scale and to allow the smaller massing to fit into the existing mountain character of the neighborhood.

We are proposing (6) small 45-degree bulk plane encroachments for Architectural relief for a total of 350 csf of total.

The elevations have employed all of the techniques laid out in the UDC to articulate the different wall surface. The techniques used are, balconies/decks/patios, Building elements that provide shelter from natural elements, offsets/insets/bays, a change in texture or materials that are consistent with the overall architectural style of the building plane, variation in roof planes or roof forms, and variation in window sizes and shapes. Deeper eves are being used where the bulk plane is non-restricting.

Since the project contains two or more units, great care has been taken in the design to provide architectural relief from the duplication of buildings and units by utilizing a variety of windows, decks, balconies, or exterior facade composition, as it states in the code. The buildings are designed to look "whole" and not one unit standing out in repeat. The roof elements have been broken up as to be complementary to the existing architecture of the area. Min. 4:12 pitched roofs, flat roofs and roof decks together allow the overall project to be dynamic, gives more character to the buildings and utilizes the great views. They are also designed to try and minimize snow sheading on living, utilities and circulation areas, when possible. The project color palette is natural light brown tones with natural steel accents and all other materials are of low-gloss finish. The building materials and colors are keeping with the surrounding buildings and are of natural materials, non-shinny finishes and varied extensively at every wall plane deviation. Overall, this project has been designed to conform to all the

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applicable standards of the UDC and contribute to the beautiful Town of Frisco.

Response to comments from the Sketch Plan Meeting:

Comment #1:
"Uncovered Deck snow storage needs to be added."

Ploenhaus Response: Snow storage calculations have been added to the Site plan & Landscape plan

Comment #2:
"Rooftop snow retention needs to be added to areas shedding on decks and driveways."

Ploenhaus: Snow Retention has been added to the roof plan in all these areas.

Comment #3:
"Add grout to the Material board"

Ploenhaus: Grout color has been added to the Material Board.

Comment #4:
"404 Granite owner: Please protect privacy between their unit and unit 2. Particularly master bedroom level."

Ploenhaus: The Master bedroom deck has been moved to the front of Unit 2. We have also replaced the former sliding door with high windows for privacy. All existing trees will remain. Additional trees have been added to the back property line to also help with privacy.