

Town of Carbondale 511 Colorado Avenue Carbondale, CO 81623

AGENDA PLANNING & ZONING COMMISSION THURSDAY, March 9, 2023 7:00 P.M. Carbondale Town Hall & Via Zoom

ATTENTION: All regular Carbondale Planning and Zoning Commission Meetings, will be conducted in person and virtually via Zoom. If you wish to attend the meeting virtually, and you have a comment concerning one or more of the Agenda items, please email <u>kmcdonald@carbondaleco.net</u> by 4:00 p.m. on March 9, 2023. If you would like to comment virtually during Persons Present Not on the Agenda please email <u>kmcdonald@carbondaleco.net</u> with your full name and email address by 4:00 p.m. on March 9, 2023

Please click the link below to join the webinar:

https://us06web.zoom.us/j/87373821919?pwd=OGZhM2hYUVR6Ukt0c3pycHQ1U0pkQT09

- 1. CALL TO ORDER
- 2. ROLL CALL
- 4. 7:05 p.m. 7:10 p.m.
 Public Comment for Persons not on the agenda (See instructions above)
- 7:10p.m. 8:10 p.m. Roaring Fork School District, Meadowood Employee Housing Attachment B
- 6. 8:10 p.m. 8:20 p.m. Staff Update
- 7. 8:20 p.m. 8:30 p.m. Commissioner Comments
- 8. 8:30 p.m. ADJOURN

<u>Upcoming P & Z Meetings:</u> 3-23-2023 – TBD 4-13-2023 – TBD **Please note all times are approximate**

MINUTES

CARBONDALE PLANNING AND ZONING COMMISSION Thursday February 23, 2023

Commissioners Present:

Staff Present:

Jared Barnes, Planning Director Kae McDonald, Planning Technician

Nick Miscione Jarrett Mork Kim Magee Kade Gianinetti (1st Alternate) Jess Robison (2nd Alternate)

Commissioners Absent:

Jay Engstrom, Chair Jeff Davlyn Nicholas DiFrank

Due to the absence of the Planning and Zoning Commission Chair and Vice-Chair, the meeting was called to order at 7:01 by Jared Barnes.

<u>Motion</u>

Jarrett nominated Nick to chair the meeting, Kade seconded the motion, and he was nominated unanimously.

January 12, 2023 Minutes:

Motion Passed: Jarrett *moved* to approve the January 12, 2023, meeting minutes. Kade *seconded the motion*, and it was *unanimously approved*.

Yes: Nick, Jarrett, Kim, Kade, Jess No: none

Public Comment – Persons Present Not on the Agenda

There were no persons present to speak on a non-agenda item.

Resolution No. 1, Series of 2023, Approving a Minor Site Plan Review and Conditional Use Permit for 570 Redstone Avenue

Jared reminded the commission members that the public hearing for 570 Redstone Avenue took place on January 12th and the resolution captures the motion including the six conditions of approval, findings for approval for the site plan review, and conditions and findings for the conditional use permit.

Motion Passed: Jarrett *moved* to approve the January 12, 2023, meeting minutes. Kade *seconded the motion*, and it was *unanimously approved*.

Yes: Nick, Jarrett, Kim, Kade, Jess No: none

Comprehensive Plan Implementation Matrix Prioritization

Jared reminded the commission members that at the December 8th Planning and Zoning Commission meeting – which lacked a quorum – those members in attendance had a conversation touching on proposed Unified Development Code updates triggered by the Comprehensive Plan Update approval. He noted that the discussion focused on those topics identified by the Board of Trustees at the November 29, 2022, work session including HCC Zone District amendments, tiny home regulations, and other housing related initiatives. Jared noted that in the associated packet memo, those near-term (0-3 years) actions that may fit within the preferred BOT strategies were highlighted as high priorities. He asked for additional feedback so staff can work internally to prepare the code text amendments and thereby move forward with the process.

Kade commented that issues revolving around Accessory Dwelling Units should be a priority, reminding the commission members that the recent approval of the 570 Redstone Avenue ADU was in a PUD with a defunct HOA, and from a housing perspective it would be a good idea to clean that process up and remove barriers. He emphasized the importance of creating unique housing for live/work situations.

Jarrett agreed that ADUs should be a high priority and by introducing the topic, it would also satisfy the goal of educating homeowners on ADU regulations and providing guidance on permitting and construction conversion. He noted that property owners in Planned Unit Developments such as Colorado Meadows are currently learning by proximity, and it can also provide an avenue for HOA's to update their verbiage.

Jess asked how the Planning and Zoning Commission had any power over "old" HOA's, noting that it is limited to education.

Kim noted that that strategy was listed as a medium-term strategy and asked for confirmation that the commission members wanted to make it a priority.

Kade replied in the affirmative, commenting that it is difficult not to include it in the conversation surrounding affordable housing.

Jarrett agreed, reminding the commission members that based on the number of times homeowners have applied for various permits, ADU's are a common action.

Jared noted Action item 3.4.3 states "Consider amending the UDC to allow detached ADUs," and thought the code related to detached ADUs would allow the opportunity to take a step back and provide additional context. He added that the Town has limited control over PUDs and their restrictions and while there are certain aspects where the Town can encourage people to apply or streamline the application process, the Town can't arbitrarily amend a PUD's covenants.

Jess wondered if bringing attention to PUD requirements would create the desire to make an HOA active again. Kade replied that that is the Town's choice, but it can't be forced.

Jarrett added that it could also aid the HOA's in more clearly defining what is allowed.

Jared pointed out that it could clarify a gray area and allow a neighborhood to identify what they want for their area.

Nick commented that there are two instruments of authority that supersede provisions in covenants: 1) Colorado Common Interest Ownership Act, and 2) Colorado Revised Statues. He wondered if anyone is tracking which covenant provisions might be illegal and where HOAs might be overstepping their authority.

Jess didn't think anyone was -- unless a homeowner brings it up by taking legal action.

Jared agreed and commented that he didn't know if there was a distinction between CCIOA regulating condominium or development versus a subdivision. He wasn't sure restrictive covenants would fall within the purview of CCIOA because there aren't common interest items that an HOA is controlling.

Nick replied that it was important to distinguish between common areas and common interests, arguing that common interests and/or discriminatory practices might be applicable.

Kade suggested that parking requirements for ADUs might also be relaxed if there is adequate street parking, so additional landscaping isn't sacrificed.

Nick noted that the pervious/impervious requirements strike a balance, so the landscaping isn't sacrificed.

Jared reminded the commission members that there is a minimum parking requirement of one space for an ADU, but if it is added onto the requirements for the primary dwelling, there could be as many as four required. He went on to explain that the UDC updates require Code Text Amendments presented during a Public Hearing after which they are presented to the BOT for adoption, and he envisions a few work sessions to prepare beforehand.

Jared pointed out Action Item 3.4.8 "Monitor short-term rentals (STRs) to ensure that local/workforce housing is not converted into STRs. Amend the UDC to prohibit STRs where inappropriate," reminding the commission members that the STR regulations expire in December 2023, and the BOT can either update the regulations or re-adopt them. He thought that process might trickle down to the P & Z for code amendment changes, as well as determining which zone districts might allow an STR license.

Kade agreed that all the highlighted action items were important. He thought a conversation regarding tiny homes would be timely, especially as it relates to why and their effective use but wasn't sure if it was a priority.

Jess commented that she interpreted the action items of detached ADUs and tiny homes as going together – for example, could a tiny home be considered a detached ADU?

Jared thought they could be very similar but thought the idea behind tiny homes was more about regulating Tiny Home Parks -- even though there aren't a lot of available parcels within Carbondale where such a development might make sense.

Kade noted that there were two separate issues: 1) Tiny homes as isolated occurrences – as a detached ADU, for example – that he could support, and 2) Based upon his observation of several tiny home parks being consumed after they have provided seed capital for a larger development venture, he doesn't see the benefit of developing regulations for that.

Nick thought Kade had good points but didn't think a tiny home would qualify as a detached ADU under the Town's current design guidelines.

Jared thought it was still important to define regardless of whether they can be permitted.

Jess pointed out that another issue could be turning a tiny home into a STR.

Jarrett thought all the topics related to the HCC should be prioritized.

Kade thought they were all related and should be considered holistically rather than calling out each one separately.

Kim agreed, emphasizing that these topics are a priority because she doesn't want to see all the development end up along Highway 133.

Kade thought that even though it wasn't highlighted, rezoning Downtown North should also be a consideration.

Jared replied that that wasn't necessarily an actionable item that the Town can controls.

Jess asked if implementing a new Downtown North zone classification could drive what happens there.

Jared acknowledged the point, adding that the challenge would be creating a zone district that achieves those goals given that the property is owned by a single entity.

Kade noted that other items discussed at the December meeting were zoning and setback restrictions along Highway 133, noting that a lot of work has gone into providing accessibility along that corridor.

Jarrett agreed noting that providing safety, infrastructure and form along that corridor is important. He wondered what power the P & Z must prescribe and implement safety features.

Jared replied that specific to Highway 133, encouraging developments to have certain types of safety and/or pedestrian amenities could be in the code. He noted the challenge will be where they might be located because the Colorado Department of Transportation has specific requirements for infrastructure located within their right-of-way. He related that the Town is undertaking a Multi-Modal Mobility and Access Plan – it will be a consultant-driven plan with the Bike, Pedestrian and Trails Commission taking on much of the review – a part of which will likely inform the community's desires regarding Highway 133.

Based on the discussion, Jared listed the four priorities as identified by the commission members:

- 1) Accessory Dwelling Units
- 2) Historic Commercial Core
- 3) Tiny Homes
- 4) Downtown North

Planning & Zoning Work Session with Board of Trustees

Jared noted that historically the Planning & Zoning Commission has met with the Board of Trustees for a work session at least once per year – typically in the first quarter – but since the onset of the Covid Pandemic, it hasn't happened. He reported that this year's check-in has been scheduled for Tuesday, March 21st and based on a review of past work sessions the topics have included accomplishments, approvals, code amendments in progress and goals. He noted that the BOT would like all commission members to attend, if possible.

Nick commented that he has participated in several of these check-ins, and he has found the BOT to be a welcoming group that set a positive tone and, overall, it is an enriching experience.

Jarrett noted that although their accomplishments list is quite short, the Comprehensive Plan Update adoption represents a lot of work.

Kade added that he would also like to review "lessons learned," and identify pitfalls and address how to manage them in a positive way.

Nick pointed out that the public outreach was commendable and he can't recall another effort that gathered that much information and processed it in a meaningful way.

Jared commented that from his perspective – given the time frame and goal of the undertaking – the time would have been better spent as a re-write rather than an update.

Kim agreed, noting that it was difficult to know where to stop and the community had a lot to say.

Staff Update

Jared reported that Kelly Amdur was hired as the new Planner and has started work. He noted that she had had previous travel plans prior to being hired and wasn't able to attend tonight's meeting, but will be at the March 9th meeting. He expressed enthusiasm for her many years of experience as a Planner for the City of San Francisco and was confident that the work backlog will lessen with her onboarding.

Commissioner Comments

Jarrett referred to Marina's recent resignation and inquired as to the turn around time for a new commission member.

Jared replied that it is a top priority and he anticipated advertising the vacancy soon. He noted that this is an opportunity for the alternates to express their desire to move into a regular member position and that they will also check with recent applicants to gauge their interest in reapplying. He conceded that the appointment process still needs to be worked out because the process as currently outlined is very "clunky." He explained that although it is ultimately the BOT's decision, he also understands the value in having the P & Z interviewing candidates and making the recommendation.

Motion to Adjourn

A motion was made by Jarrett to adjourn, Kade seconded the motion, and the meeting was adjourned at 8:27 p.m.



Town OF CARBONDALE 511 COLORADO AVENUE CARBONDALE, CO 81623

Planning & Zoning Commission Memorandum

Meeting Date: 3/9/2023

TITLE: RFSD Meadowood Employee Housing – Major Site Plan Review, Alternative Compliance, Minor Plat Amendment, and Rezoning

Submitting Department:	Planning Department
Property Owner:	Roaring Fork School District
Applicant:	Robert Schultz Consulting LLC
Property Location:	Lots 2A and 2B, Northface Base Camp Subdivision (East of Meadow Wood Dr and High School Access Road Intersection)
Zone District:	Community Arts (CA) – Lot 2A Commercial Business Park (CBP) – Lot 2B
ATTACHMENTS:	Land Use Application 010523 Additional Drawings and Revised Plans 030623 Agency Referral Comments 2023

BACKGROUND

Project Summary

This is a combined application for a Major Site Plan Review, Minor Plat Amendment, Rezoning Application, and Alternative Compliance. The combined application requires a public hearing and recommendation by the Planning and Zoning Commission (P&Z) and a subsequent public hearing and action by the Board of Trustees.

The proposal includes three main components. First, a rezoning application proposes to rezone Lot 2A from Community Arts (CA) to Residential High Density (R/HD). Lot 2B is proposed to remain as Commercial Business Park (CBP). The proposed zone districts will apply to the modified property boundaries for Lots 2A and 2B as outlined in the minor plat amendment. The Roaring Fork School District (RFSD) is the owner of both Lots 2A and 2B and therefore is eligible to apply for a general rezoning.

Second, the minor plat amendment proposes to modify the property boundary between Lot 2A and 2B. The amendment proposed two exchange parcels: the first measures 1.293 acres and is located along Meadow Wood Dr between Lot 2A and the Carbondale Fire Protection District; the second measures 0.560 acres and is the southeastern portion of Lot 2A which is encumbered by the existing practice fields. The initial and proposed lot sizes are as follows:

	Current Size	Proposed Size
Lot 2A	2.705 (117,838 square feet (SF))	3.439 (149,781 SF)
Lot 2B	25.848 (1,122,931 SF)	23.822 (1,037,672 SF)

The Unified Development Code (UDC) §2.6.7.B.2.i, permits the RFSD to apply for a minor plat amendment for Lots 2A and 2B. The RFSD owns both lots, the request does not attempt to remove any recorded covenants or restrictions, and the amendment does not increase the number of lots.

The third component is a major site plan review and accompanying alternative compliance request. This request is to construct a 50-unit development on Lot 2A. Three buildings are proposed with Building A sited along Meadow Wood Dr, Building B facing the High School Access Drive, and Building C internal to the property. Buildings A and B are predominately two-story buildings with a mixture of flat and shed roofs, while Building C is a three-story structure with predominately flat roofs. The proposed unit mix across the project is 8 studio, 10 one-bedroom, 16 two-bedroom, and 16 three-bedroom units. The three buildings are as follows:

Building A	8 units	8,910 SF
Building B	12 units	16,016 SF
Building C	30 units	57,522 SF

The site has access on Meadow Wood Dr and the High School Access Road which connect via an internal parking lot. A larger parking lot is located along the northeastern property line between Building C and the Ella Ditch.

The alternative compliance request is for three project components. First, a request to permit the outdoor private space for eight studio units to be less than the 60 sq. ft. minimum. Second, is to deviate from the Street Landscaping requirements. The UDC prescribes a landscape strip and street trees between the curb and sidewalk, while the proposal continues the existing condition along Meadow Wood Dr and proposed the landscape strip and street trees behind the sidewalk which will be adjacent to the curb. Third, a parking reduction request proposes 90 parking spaces as opposed to the 93 which are required by code.

This application was publicly noticed in the Sopris Sun on February 9, 2023 and the applicant completed a mailed notice and posting of the property on February 13, 2023.

Land Exchange and IGA

The subject property (Lot 2A, The North Face Base Camp Subdivision) was part of a land exchange between the Roaring Fork School District ("RFSD"), Town of Carbondale ("Town") and Carbondale Council on Arts and Humanities ("Carbondale Arts"). In 2006, an Intergovernmental Agreement (IGA) was agreed to between the parties (reception #694548) and Carbondale Arts conveyed Lot 2A to the Town in exchange for 76 S. 4th Street (The Launchpad). The Town subsequently conveyed Lot 2A to RFSD in exchange for the Carbondale Elementary School Parcel, which is now home to the 3rd Street Center. Prior to the land exchange, an IGA (reception #609155) was agreed to between RFSD and Town concerning the development of the school site on Lot 2B. Section 13 of the IGA states that if RFSD becomes the owner of Lot 2A that it will be subject to the IGA. Section 5 of the IGA requires that any use other than school uses and school buildings, including housing, are subject to the Town's codes and regulations including zoning, subdivisions, and building codes. Furthermore, Section 10 of the IGA states that the Town's inclusionary housing ordinance shall not apply to the development of the property.

DISCUSSION

Unless otherwise stated, when reviewing the proposal compliance with zoning and the UDC is based upon the proposed R/HD zoning and the proposed lot sizes as presented in the minor plat amendment.

Comprehensive Plan

The property is designated as Public Facilities on the Future Land Use Map (FLUM). This designation aims to preserve community institutional uses including schools. Although the proposal does not directly preserve a school, the construction of housing for school district employees does improve the viability and resiliency of our local schools. As the applicant states, investing in housing for staff is an important way that RFSD can develop, retain, and attract great teachers, leaders, and staff.

Section 3.3 identifies housing as one of the top goals for Carbondale. A guiding principle is to prioritize housing affordability and housing diversity. The proposed development works to achieve this goal by creating rental housing for school district employees that the RFSD will provide at affordable rents. Furthermore, the construction of multi-family rental housing which includes a mix of studio, one-, two-, and three-bedroom units will increase housing diversity.

One recommendation of Section 5.2, *Housing & Jobs*, is to continue to engage with affordable housing providers and agencies to develop actionable strategies and programs to deliver affordable housing in Carbondale. The RFSD proposal is a way Carbondale is engaging in the delivery of affordable housing.

Section 5.4 outlines goals and strategies related to Climate Action. The applicant represents that the proposed housing's close proximity to town centers and employment centers inherently support sustainability due to decreased travel. The project's proximity to Crystal River Elementary, Carbondale Middle School, and Roaring Fork High School

will further support the sustainability efforts as employees of these schools will have a higher possibility of living within the proposed development and close to employment. The proposal will be developed as an all-electric site and will incorporate EV charging on-site. The development will meet the 2021 International Energy Conservation Code (IECC), which is estimated to be 10% more efficient than the 2015 IECC which the Town has adopted.

The subject property is not currently located within the Residential Focus Area, an area comprised of properties zoned R/HD, but is directly across Meadow Wood Dr from this area. Section 5.9 discusses the threat to existing housing stock and incompatibility with adjacent uses by redeveloping R/HD zoning. The proposed rezoning to R/HD and associated development plan would increase the compatibility of the subject lot with the adjacent R/HD parcel (e.g. Carbondale South and Villas de Santa Lucia). Furthermore, the proposed use, RFSD employee housing rentals, will support the adjacent buildings by ensuring additional year-round residents and increasing the affordable housing stock.

Overall, the proposal achieves the goals, policies and intent of the 2022 Comprehensive Plan.

Rezoning Application

The Property is currently zoned CA (Lot 2A) and CBP (Lot 2B). Lot 2A is proposed to be rezoned to R/HD, while Lot 2B is to remain CBP. The rezoning is proposed on the amended lots as outlined in the Minor Plat Amendment application. Surrounding zone districts are:

North/East/South: CBP – Lot 2B (RFSD / Roaring Fork High School) South: Fire Station PUD (Carbondale & Rural Fire Protection District) West/North: R/HD (Carbondale South & Villas de Santa Lucia)



The following review criteria are required to be met in order to rezone a property. Staff's responses to each review criteria are listed below:

1. The amendment will promote the public health, safety, and general welfare;

The zoning change from CA to R/HD is supported by a few prior actions. First, the land exchange, as discussed above, contemplated RFSD acquiring Lot 2A for the purposes of school uses. Second, the IGA between the Town and RFSD outlined the process if non-school uses were proposed on Lot 2A. Between these two, the prior processes identify school related uses on Lot 2A. The proposed residential use provides a greater compatibility with the surrounding residential uses and ensures that commercial uses are not permitted. The ensured compatibility with the surrounding uses positively impacts the public health, safety, and general welfare of the community.

2. The amendment is consistent with the Comprehensive Plan and the purposes stated in this Unified Development Code;

As stated previously, the residential use is supported by and consistent with the Comprehensive Plan. The UDC Appendix encourages landowners to rezone land from an obsolete zoning district. The existing CA zoning is an obsolete zone district and not included in the current UDC Appendix. When reviewing Chapter 18, the zoning code prior to the adoption of the UDC, the intent of the CA zone district was to provide a broad range of arts and related activities, while residential uses are not permitted. RFSD would have had difficulty developing a compatible project under existing zoning. The proposed rezoning will not negatively impact the purposes of the UDC.

3. The amendment is consistent with the stated purpose of the proposed zoning district(s);

The purpose of the R/HD zone district is to provide high-density neighborhoods which include common open space and schools and other public facilities. The district is intended to be closer to commercial centers and downtown, while serving as a transition to lower-density districts. The proposal is not located close to commercial centers or downtown, but the property is located close to schools, parks, and other R/HD zone districts. Ultimately, the proposed zoning district fits within the character of the neighborhood.

4. The amendment is not likely to result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated;

The proposed zone amendment does change the use to residential uses. The residential use is more intensive than likely would be realized under the CA zoning. With that said the compatibility of residential uses with those across the street will not significantly impact the natural environment.

5. The amendment is not likely to result in material adverse impacts to other property adjacent to or in the vicinity of the subject property; and

The proposed R/HD zoning will not result in material adverse impacts on adjacent properties. The adjacent school use will benefit from the potential of workforce within

close proximity, while the R/HD zoned properties across Meadow Wood Dr, will not be impacted given the compatible use.

6. Facilities and services (including roads and transportation, water, gas, electricity, police and fire protection, and sewage and waste disposal, as applicable) will be available to serve the subject property while maintaining adequate levels of service to existing development.

The application was referred out to a variety of facilities and services, including the fire protection district which provided confirmation of the ability to serve. CDOT reviewed the traffic plan which anticipated an increase of 20 morning peak hour trips and 26 afternoon peak hour trips. The existing roadway network, including Highway 133, is adequate to handle the increased traffic. During the land exchange RFSD provided water rights dedication. The applicant is representing a need for 32.8 EQRs, while a final analysis is underway it is anticipated that sufficient water rights exist or a fee-in-lieu would be an option. The project's engineering report was reviewed by staff and agrees that adequate facilities exist to serve the proposed rezoning.

Minor Plat Amendment

As stated previously, the minor plat amendment proposed to adjust the lot lines between Lots 2A and 2B. The lot line adjustment involves two exchange parcels transferring between Lots 2A and 2B. The practice fields adjacent to the project and High School will be solely on Lot 2B, while the proposed housing and part of the High School Access Road will be on Lot 2A.

The rational for the minor plat amendment is to adjust the lot lines between Lots 2A and 2B to ensure that 2A only contains the improvements associated with the housing, while the uses associated with the High School (e.g. practice fields) remain on Lot 2B. Another reason for the lot line adjustment is to ensure that Lot 2A contains enough lot area to meet all of the dimensional standards as required in the UDC (e.g. common open space, lot coverage, etc.)

The minor plat amendment is a staff decision and will track with the combined application. After reviewing the proposal, Staff has determined that the minor plat amendment meets the review criteria as listed below:

1. The minor plat amendment does not increase the number of lots or parcels or create new lots or parcels;

No new lots are created with the proposed minor plat amendment.

2. The minor plat amendment does not affect a recorded easement without approval of the easement holder;

Existing easements are not affected by the proposed lot line adjustment.

3. Street locations will not be changed;

All street location will remain in the original location and are not changed by the proposal.

4. The minor plat amendment will not create any nonconformities or increase the degree of nonconformity of any existing structure, use, or development standards; and

The minor plat amendment will not create any nonconformities or increase the degree of nonconformity. The proposed lot line adjustment ensures that the new lots meet all standards of the UDC.

5. The minor plat amendment shall comply with all other provisions of this chapter and other applicable provisions of the Unified Development Code.

Outside of the Alternative Compliance request, the proposal meets all provisions of the UDC.

Major Site Plan and Alternative Compliance

Zoning (UDC §3.2.6.B)

The proposed R/HD zoning districts permits multi-family dwellings. The zone district requires a minimum lot size of 3,000 SF with a minimum 50-foot lot depth and 25-foot lot width. The proposed Lot 2A is 3.439 acres in area, has a minimum lot depth of 89.27 feet, and a minimum lot width of 195.87 feet. The proposed 50-unit housing development and proposed Lot 2A meet the standards of the R/HD zoning district.

Setbacks (UDC §3.2.6.B)

	Required	Proposed
Front	5'	20'
Side	5'	5'
	4', street	
Rear	5'	5'

The proposal meets the minimum setback requirements of the R/HD zone district.

Maximum Impervious Surface (UDC §3.7.2)

A maximum of 60% of the site is permitted to be covered with impervious surfaces, while a minimum of 40% of the property is required to be open space.

	Required	Proposed
Maximum Impervious	89,868.6 SF	84,443 SF
Minimum Pervious	59,912.4 SF	65,338 SF

The proposal includes a mix of planted areas, rain gardens, and pervious walkways and paths as pervious areas, while all other portions of the property are calculated as impervious areas. The proposal does not request any exemption for pervious paving or to calculate patios as pervious area. The proposal complies with the maximum impervious and minimum pervious area requirements.

Building Height (UDC §3.2.5.B)

The UDC allows a maximum height of 35 feet in the R/HD zone district. Building height is measured from predevelopment grade to the top of the top of a flat roof or midspan of a pitched roof. Of note, the definition of building height does allow the top of a pitched

roof to extend no more than 5 feet above the maximum building height. The application proposes that all buildings utilize a mix of flat roofs and shed roofs.

	Proposed Flat	Proposed Shed	Proposed Shed
	Roof Height	Roof Mid Span	Roof Top
Building A	20.93'	25.09'	29.09'
Building B	20.93'	27.5'	31.94'
Building C	29.4'	34.45'	37.69'

All of the buildings meet the maximum 35-foot height limit as defined in the UDC. Final compliance with the maximum building height will need to be verified at the time of building permit submission to ensure all elements meet the maximum allowable height.

Use Regulations (UDC §4.2.5)

The proposed multi-family dwelling units are permitted as a use by right in the R/HD zoning district.

Private Common Open Space (UDC §5.3.3)

The proposal includes more than ten residential units and is required to include a minimum of 15% of the site area as private common open space, which equates to 22,467 SF. The applicant is proposing 30,600 SF of private common open space. Most of this requirement is the central open area (19,540.25 SF), while the remaining area is located to the northwest of Building A adjacent to Meadow Wood Dr and to the southwest of Building B along the High School Access Dr.

The UDC does permit the practice fields to be counted as common open space (§5.3.3.D.2), but are not included in the calculation for two reasons. First, the practice fields are proposed to be removed from Lot 2A by the minor plat amendments. Second, the RFSD has heavily programmed and requires the practice fields for school use. The applicant has not included practice fields in their required common open space calculation, but they will appear as common open space when not in use.

The proposal complies with the private common open space requirements.

Landscaping (UDC §5.4)

The Landscape Plan proposes a mixture of trees, shrubs, grasses, and flowers throughout the site. Landscaping has been focused in the central common open space, along the Ella Ditch, and along Meadow Wood Dr and the High School Access Dr. The Town Arborist has reviewed the proposal and recommended species changes to ensure compatibility with town guidelines. Another recommendation was to plant location to ensure long-term planting viability. The applicant is accepting of the Town's recommendations and willing to update their Landscape plan accordingly.

Streetscape Landscaping (UDC §5.4.3.B) and Alternative Compliance (UDC §5.1.3) The UDC requires streetscape landscaping and street trees for the first five feet adjacent to Meadow Wood Dr (UDC §5.4.3.B). The application proposes a 7.5-foot wide sidewalk attached to Meadow Wood Dr's curb and then a 25-foot wide landscape area. The first five feet of this landscaped area will be within the Meadow Wood Dr right-ofway. The applicant proposes to mimic street trees on their property along Meadow Wood Drive by planting a mixture of deciduous canopy and ornamental trees. The applicant is proposing: a 12' wide landscaping strip adjacent to the High School Access Dr; protection of the existing trees along the drive; and, to plant two new deciduous canopy trees along the drive to mimic street tree conditions.

The applicant is requesting alternative compliance for the streetscape landscaping and cites the existing and adjacent condition along the east side of Meadow Wood Dr. Between the High School Access Dr. and North Face Park the landscape strip and street trees are behind the sidewalk which is adjacent to the roadway.



The intent of this requirement is to establish a landscape area between public rights-ofway and any buildings and parking lots. The proposal achieves this intent while being consistent with the existing conditions of adjacent properties. The relocation of the landscaped area will create an increased area with a greater number and variety of planting which will improve the condition along Meadow Wood Dr which would not be achieved through strict adherence to the UDC. Staff has reviewed the requested alternative compliance and determined that continuation of the existing condition along Meadow Wood Dr and the increased landscape area is preferred to realigning the sidewalk and complying with the streetscape landscaping requirements and meets the review criteria.

Parking Lot Landscaping (UDC §5.4.3.C)

The application proposes landscape strips and parking lot islands throughout the site. The parking lot islands meet the minimum size requirement of six-feet wide and 75 SF in area. The landscape islands break up the parking lot to separate row of six spaces or less. The only areas that are not broken up by parking lot landscape islands are the covered parking areas along the northeastern property line and located underneath Building C. The area under Building C includes not more than 3 consecutive parking spaces and is broken up by exterior storage units, stairwells, and building support elements for the upper levels.

The covered parking area along the northeastern property line covers 33 consecutive spaces. So long as the covered parking area is constructed, the spaces would be exempt from the landscape island requirements. If the covered parking is not constructed the area would be required to install parking lot landscape islands and would result in a net loss of 4 parking spaces. The applicant has indicated to staff that the intent is to construct the covered parking as both a code compliance item and resident livability amenity. Given the rising costs of construction the covered parking may be delayed to a second phase of construction. With that said, staff would recommend that a condition of approval require compliance with the parking lot landscaping requirements and relocation of the required parking spaces if the covered parking is not completed within 3 years of the first certificate of occupancy (CO) being issued.

Screening (UDC §5.4.5)

The applicant is proposing an all-electric project and will locate all mechanical equipment on the flat roof portions of each building. The design meets the requirement of mechanical equipment screening and will be verified at the time of building permit.

The application proposes two enclosed trash and recycle areas, one at each entrance to the parking lot. Each area is proposed as a CMU enclosure with a corrugated metal faced gate. The enclosure along Meadow Wood Dr will be 34 feet from the property line and 60 feet from the edge of asphalt, while the enclosure along the Access Dr will be 34 feet from the edge of asphalt. The UDC requires waste collection areas to be fully enclosed by a six-foot fence or masonry wall and the proposal complies.

Fencing (UDC §5.4.6)

No fencing is proposed with this application, therefore a separate fence permit will be required if a future fence installation is desired.

Site Access and Circulation (UDC §5.5)

The site is accessed via a 24-foot wide driveway which connects Meadow Wood Dr to the High School Access Dr. The driveway and internal drive aisle serve all parking spaces as well as the trash and recycling areas. The application proposes a 7.5-foot wide sidewalk along Meadow Wood Dr. and the High School Access Dr. which exceeds the code requirement.

Internal pedestrian sidewalks are required to access each building in a multi-family development. The application proposes a combination of five-foot and 7.5-foot wide sidewalks throughout the property. These sidewalks connect each unit's ground level

entry door and building stairwells to adjacent sidewalks, as well as connect internal parking lots and the central open space to each building. The proposal meets the internal pedestrian circulation requirements.

General Standards for All Residential Development (UDC §5.6.3)

The proposed design includes common open space and a mix of residential unit types as discussed previously. The buildings have been sited and designed to take advantage of solar access, while the buildings are being constructed to meet the 2021 IECC. These elements comply with the general standards for residential development.

Private Outdoor Space (UDC §5.6.5.B) and Alternative Compliance (UDC §5.1.3)

The UDC requires private outdoor space for each unit based on the gross floor area (GFA) of each unit. Ground floor units are required to have 10% of the GFA, but no less than 80 SF, while second and third floor units are required to have 5% of the GFA, but no less than 60 SF. The minimum dimension for a ground floor unit is eight feet, while a second or third floor unit requires six feet. The proposed development includes seven different unit types which provide the following spaces:

	Unit Area	Required	Proposed
	(SF)	(SF)	(SF)
Type One (1 st floor)	847	85	116-176
Type One (2 nd floor)	890	60	103
Type Two (1 st floor)	1,191	119	175
Type Two (2 nd floor)	1,234	62	87-109
Type Three (1 st floor)	1,325	113	178
Type Three (2 nd floor)	1,363	68	74
Type Four (1 st floor)	648	80	138-160
Type Four (2 nd /3 rd floor)	648	60	61
Type Five	1,126	60	82-94
Type Six	885	60	74
Type Seven	413	60	46-47

All the units meet the minimum required dimensions, while the majority of units comply with the minimum required area. Eight studio units (Unit Type 7) within Building C do not meet the minimum 60 square foot size requirement. The applicant cites their smaller size and the design limitations as constraining factors. The applicant also cites the large common gathering area immediately adjacent to Building C as a mitigating factor for the smaller private outdoor spaces. The applicant has prepared a study which demonstrates how compliance would be achieved. Building C would be shifted two feet to the southwest and would get four feet wider. This would result in the common open space area for all units shrinking by 629.75 SF.

Staff believes there is merit to the request and acknowledges that the reduced common open space area is detrimental to the entire project. With that said, the P&Z should consider the Alternative Compliance request and determine if the review criteria listed below are met.

Building Design (UDC §5.6.5)

The UDC asks that character be created by architectural details and that monotonous repetition be avoided. Furthermore, balconies, overhangs, and patios should be used to provide relief and to break up wall surfaces. Lastly, multi-family building designs should have variation in setbacks and building heights.

The proposal utilizes a variety of plane changes, roof forms, fenestration, materiality to create architectural interest and break up the size of each building. The design variation between each unit and building avoids repetition and limits monotony or mundane elevations. The proposed main building materials are stucco, cement fiber shiplap siding, cement fiber board and batten siding, and asphalt shingles on sloped roof forms. The proposed colors are a light tan for the stucco and light-, medium-, and dark grey for the siding.

Buildings A and B utilize numerous entrances to ensure that no more than two units share a common stairwell. Building C has a central hallway on the second and third floors which access each unit, while first floor units have private entrances. The UDC discourages long corridors lined with entrances. Building C's hallway is 135 feet long and serves 12 units per floor with dual stairwells to increase access. Compliance with this standard would be difficult for Building C as designed. Lastly, the covered parking area has not been designed yet but should be compatible with the main buildings by using similar design details and elements.

Overall, the proposed building design, materials, and colors create and attractive set of buildings that meet the town's design standards.

Bulk Storage (UDC §5.6.5.C.4)

The UDC requires one cubic foot of bulk storage for every three gross square feet per dwelling unit. Furthermore, exterior bulk storage areas should be an integral part of the project. All of the proposed bulk storage areas are located on the ground-level and are adjacent to unit entries and stairwells. The bulk storage area are incorporated into the design of the buildings. The proposal meets design aspects of the UDC and is compliant in size as follows:

	Unit Area (SF)	Required (ft ³)	Proposed (ft ³)
Type One (1 st floor)	847	280	450
Type One (2 nd floor)	890	294	450
Type Two (1 st floor)	1,191	393	524
Type Two (2 nd floor)	1,234	407	544-561
Type Three (1 st floor)	1,325	437	524
Type Three (2 nd floor)	1,363	450	561
Type Four	648	214	400-403
Type Five	1,126	372	500-503
Type Six	885	292	450-488
Type Seven	413	136	350

Multi-Building Developments (UDC §5.6.5.C.5)

The proposed development is three buildings and not subject to the multi-building development requirements.

Parking (UDC §5.8) and Alternative Compliance (UDC §5.1.3)

The proposed development is required a total of 93 spaces as follows: 10 for 8 studio units (1.25 spaces/unit); 15 for 10 one-bedroom units (1.5 spaces/unit); 28 for 16 twobedroom units (1.75 spaces/unit over 800 SF); and, 40 for 16 three-bedroom units (2.5 spaces/unit over 900 SF). The application is proposing 90 parking spaces, inclusive of 5 accessible spaces, which is based on a revised parking lot plan. All parking spaces are designed to meet the dimensional requirement of the UDC and will be constructed of asphalt.

The combination of existing and proposed landscaping along the Ella Ditch and Northeastern property line and covered parking meets the intent of the parking lot screening standards outlined in UDC §5.8.6.H, *Screening*.

The applicant requests an alternative compliance for the reduction of three parking spaces. The applicant states that one limiting factor for compliance is the project's desire is to maintain the size and integrity of the central common area for the benefit of the residences. The applicant also highlights the large RFSD parking lot which is close to the site and could be used for overflow parking if the need arises. Lastly, the inclusion of ample on-site bike parking, a future bike share station adjacent to the property, and proximity to adjacent schools support the first/last mile strategies intended to increase non-vehicular travel and reduce vehicular need.

Staff has reviewed the requested alternative compliance and agrees that the design of the primary property benefits from the requested parking reduction. A larger and more functional common space, ample bike parking, proximity to employment, and a large parking lot approximately 500 feet away support the requested alternative compliance. Staff raised concerns about the reduction and worked with the applicant to prepare an alternative design if the P&Z is not supportive of the alternative compliance request. This alternative design would install three spaces on the southside of the High School Access Dr. Staff would like to highlight that if the covered parking isn't built and the applicant has to relocate required parking, this location would be the most logical and the design could be expanded from three to seven parallel spaces.

Bicycle Parking (UDC §5.8.7)

No off-street bicycle parking is required for residential uses, but the application has provided 46 bicycle parking spaces throughout the project.

Exterior Lighting (UDC §5.10)

The applicant has not proposed exterior light fixtures or a lighting plan. A lighting plan and fixture specifications will be required at the time of building permit submission.

Inclusionary Housing (UDC §5.11.4)

As stated previously, the IGA between the Town and RFSD exempts development on this site from meeting the Inclusionary Housing ordinance. With that said, 100% of the development is restricted to RFSD employees and their families. The intent of the Ordinance is to provide affordable housing opportunities to individuals living within the Roaring Fork Valley. Although not deed restricted, the requirement to be employed by the RFSD to live in these units meets the intent of the ordinance.

Solar Access (UDC §5.12)

The subject property is zoned R/HD and is in SA zone II. The UDC requires a solar shading analysis which demonstrates that no portion of the proposed structures would shade higher than a theoretical 25-foot high solar fence on the building envelope of an adjoining property. The applicant has prepared a solar shading analysis which demonstrates compliance with this requirement.

Future Ownership

The application does not propose to subdivide the project into individual units or lots. As stated in the IGA, if the RFSD transfers ownership of Lot 2A to a third party then the IGA would be terminated. If a property transfer occurs or RFSD or future owner desired to subdivide the property into condominium units, numerous other provisions of the UDC would be applicable, such as park land dedication and inclusionary housing. It is Staff's intent to merely document this requirement, but not outline all potential provisions that would be applicable.

Public Improvements

There will be a few public improvements associated with this development including but not limited to underground utilities, connections of water and sewer utilities, installation of a fire hydrant, driveway connections to Meadow Wood Dr, sidewalk replacement, and landscaping in the ROW. An Engineer's Estimate of Cost for public improvements has been provided. If the application is approved by the Board of Trustees, a Development Improvements Agreement will be required, and public improvements will need to be secured by a letter of credit.

REVIEW CRITERIA

General Rezoning criteria (UDC §2.4.2.C.3.b):

Amendments to the zoning map may be approved if the Board of Trustees finds that all of the following approval criteria have been met:

- 1. The amendment will promote the public health, safety, and general welfare;
- 2. The amendment is consistent with the Comprehensive Plan and the purposes stated in this Unified Development Code;
- 3. The amendment is consistent with the stated purpose of the proposed zoning district(s);
- 4. The amendment is not likely to result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated;

- 5. The amendment is not likely to result in material adverse impacts to other property adjacent to or in the vicinity of the subject property; and
- 6. Facilities and services (including roads and transportation, water, gas, electricity, police and fire protection, and sewage and waste disposal, as applicable) will be available to serve the subject property while maintaining adequate levels of service to existing development.

Site Plan criteria (UDC §2.5.3.C):

A site plan may be approved upon a finding that the application meets all of the following criteria:

- 1. The site plan meets the purposes of the zoning district in which it will be located and is consistent with the Comprehensive Plan;
- 2. The site plan is consistent with any previously approved subdivision plat, planned unit development, or any other precedent plan or land use approval as applicable;
- 3. The site plan complies with all applicable development and design standards set forth in this Code; and,
- 4. Traffic generated by the proposed development will be adequately served by existing streets within Carbondale, or the decision-making body finds that such traffic impacts will be sufficiently mitigated.

Alternative Compliance criteria (UDC §5.1.3.E):

Alternative compliance may be approved if the applicant demonstrates that following criteria have been met by the proposed alternative:

- 1. Achieves the intent of the subject standard to a better degree than the subject standard;
- 2. Advances the goals and policies of the Comprehensive Plan and this Code to a better degree than the subject standard;
- 3. Results in benefits to the community that exceed benefits associated with the subject standard; and
- 4. Imposes no greater impacts on adjacent properties than would occur through compliance with the specific requirements of this ordinance.

RECOMMENDATION

Staff recommends that the following motion be approved:

Move to recommend approval of the Rezoning Application, Major Site Plan, and Alternative Compliance request for the construction of 50 multi-family residential units on Lots 2A and 2B, North Face Base Camp Subdivision with the following conditions and findings.

Conditions

- 1. All representations of the Applicant in written submittals to the Town or in public hearings concerning this project shall also be binding as conditions of approval.
- 2. The Applicant shall pay and reimburse the town for all other applicable professional and Staff fees pursuant to the Carbondale Municipal Code.
- 3. Approval of the Major Site Plan Review is contingent upon Town approval of a Development Improvements Agreement which addresses construction of public improvements associated with the development prior to issuance of a building permit.
- 4. Approval of the Major Site Plan Review is contingent upon Town approval of the engineering plans.
- 5. If the covered parking is not completed within 3 years of the first Certificate of Occupancy being issued, then the site plan will be revised to bring the parking along the northeast property line into compliance with the parking lot landscaping and landscape island requirements. Any required parking spaces which are impacted will be relocated to another location on Lot 2A, North Face Base Camp Subdivision.
- 6. The covered parking area has not been designed yet, but should be compatible with the main buildings by using similar design details and elements. A building permit will be required and architectural compatibility will be required.
- 7. A separate fence permit shall be required for all site fencing.
- 8. All lighting shall be in compliance with Section 5.10 of the UDC (Exterior Lighting). The lighting plan shall be subject to review and approval of Town Staff.
- 9. Fees in lieu of water rights may be required and due prior to recordation of a development improvements agreement.
- 10. The applicant shall enter into an agreement with the Carbondale & Rural Fire Protection District that addresses payment of impact fees prior to the issuance of any building permits for this project.

Findings for Approval, General Rezoning

- 1. The rezoning from Community Arts (CA) to Residential High Density (R/HD) is consistent with the prior agreements between RFSD and Town as outlined in the 2006 Land Swap and IGA;
- 2. The rezoning to R/HD will promote the public health, safety, and general welfare;

- 3. The rezoning from CA to R/HD removes a parcel from an obsolete zoning district and utilizes a standard zoning district which is consistent with the Comprehensive Plan and the purposes stated in the UDC;
- The subject property's proximity to other R/HD zoned properties and RFSD school and supports the rezoning and is consistent with the stated purpose of the R/HD zoning district;
- 5. The rezoning to R/HD is not likely to result in significant adverse impacts upon the natural environment, including air, water, noise, stormwater management, wildlife, and vegetation, or such impacts will be substantially mitigated;
- 6. The rezoning to R/HD is not likely to result in material adverse impacts to other property adjacent to or in the vicinity of the subject property; and
- 7. Facilities and services (including roads and transportation, water, gas, electricity, police and fire protection, and sewage and waste disposal, as applicable) will be available and adequate to serve the subject property and proposed development.

Findings for Approval, Site Plan

- 1. The site plan meets the purposes of the Residential High Density (R/HD) zoning district;
- 2. The site plan is consistent with the 2022 Comprehensive Plan;
- The site plan is consistent with the North Face Park Subdivision, the 2002 IGA Concerning Development of School Site between Town of Carbondale and RFSD (Reception #609155), and the 2006 IGA Regarding Land Exchange (Reception #694548);
- 4. The site plan complies with all applicable development and design standards set forth in this Code; and,
- 5. Traffic generated by the proposed development will be adequately served by existing streets within Carbondale.

Findings for Approval, Alternative Compliance - Streetscape Landscaping

- 1. The proposed streetscape landscaping design achieves the intent of the subject standard to a better degree than the subject standard by increasing the amount of landscaped area between the street and the adjacent buildings;
- The proposed streetscape landscaping design advances the goals and policies of the Comprehensive Plan and the UDC to a better degree than the subject standard by providing continuity and consistency along the eastern side of Meadow Wood Dr while improving the overall pedestrian experience;
- The proposed streetscape landscaping design results in benefits to the community that exceed benefits associated with the subject standard by increasing the amount of landscaped area between the roadway and buildings and creating a consistent and continuous pedestrian experience along Meadow Wood Dr; and

4. The proposed streetscape landscaping design imposes no greater impacts on adjacent properties than would occur through compliance with the specific requirements of this ordinance.

Additional Optional Recommended Findings for Approval

If the P&Z is supportive of the applicant's requested Alternative Compliance for either the private outdoor space or parking space reduction, then Staff would recommend including the following findings in the P&Z's recommendation.

Findings for Approval, Alternative Compliance – Private Outdoor Space

- 1. The reduced private outdoor space for the 8 studio units in Building C achieves the intent of the subject standard to a better degree than the subject standard by increasing the common private outdoor space for the entire development;
- 2. The reduced private outdoor space for the 8 studio units in Building C advances the goals and policies of the Comprehensive Plan and the UDC to a better degree than the subject standard by creating a larger and more functional private common open space and reducing the size of Building C;
- 3. The reduced private outdoor space for the 8 studio units in Building C results in benefits to the community that exceed benefits associated with the subject standard by reducing the overall mass of Building C; and
- 4. The reduced private outdoor space for the 8 studio units in Building C imposes no greater impacts on adjacent properties than would occur through compliance with the specific requirements of this ordinance.

Findings for Approval, Alternative Compliance - Parking Reduction

- The reduced parking requirement achieves the intent of the subject standard to a better degree than the subject standard by mitigating the parking need through proximity of RFSD housing to employment areas and providing overflow parking as needed within close proximity;
- The reduced parking requirement advances the goals and policies of the Comprehensive Plan and this Code to a better degree than the subject standard by prioritizing proximity between housing and workplace for RFSD employees, providing alternative transportation opportunities, and providing overflow parking as needed within close proximity;
- The reduced parking requirement results in benefits to the community that exceed benefits associated with the subject standard by locating RFSD housing close to RFSD employment and increasing access to alternative transportation opportunities; and
- 4. The reduced parking requirement imposes no greater impacts on adjacent properties than would occur through compliance with the specific requirements of this ordinance as the RFSD can accommodate overflow parking on the adjacent surface lot.

Prepared By: Jared Barnes, Planning Director

RFSD Employee Meadowood Housing Major Site Review, Minor Plat Amendment, and Zone Change Alternative Compliance- Private Outdoor Space, Off-Street Parking, Street Landscaping



Submitted to: Town of Carbondale 511 Colorado Ave. Carbondale, CO 86123

Prepared for: Roaring Fork School District RE-1 1405 Grand Ave. Glenwood Springs, CO 81601

Prepared by:

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Background

The Roaring Fork School District is continuing to create an environment in which our students and staff can thrive. As highlighted in the District's strategic plan, an important way to achieve this is by investing in talent to develop, retain, and attract great teachers, leaders, and staff in all departments.

As with other employers, the District also faces employment challenges related to a lack of affordable housing in the communities that it serves. In 2015, voters approved \$15M in bonds to build or purchase District employee housing. That resulted in acquisition of 66 units in Glenwood Springs, Basalt, and Carbondale.

The dramatic changes in the housing market since 2015 have led the District to identify the need for additional housing to staff our schools and departments. The existing housing units have been very helpful in supporting staff and ongoing requests for access to rental units and the success of our current housing inventory have led the District to pursue additional rental housing on District-owned property. The District's goal is to have housing ready for employees for the 2024-25 school year.

The District reviewed all the properties in its inventory in search of additional opportunities. Two properties in Carbondale, next to the recently built 3^{ed} St. District housing and a property along Meadowood at the access drive to Roaring Fork High School made the most sense. The Meadowood property was selected as it did not require impacting existing community recreation facilities and had good access to SH 133 at the signalized intersection. The surrounding area is home to multi-family housing, the fire station, schools, and recreation facilities.

The District hired most of the same team that designed the successful 3rd St. housing project: architect JV DeSousa, planner Bob Schultz and landscape architect Norris Design. Sopris Engineering is providing engineering services. The design process began with interviews with existing residents at 3rd St. and expanded to include a survey of staff housing needs that included responses from more than 400 District employees.

The design process began with interviews with existing residents at 3^{-d} St. and expanded to include a survey of staff housing needs that included responses from more than 400 District employees.

The housing would be designed, owned, and operated by the Roaring Fork School District for its employees in accordance with existing rental housing guidelines adopted by the District.

While the State will typically review, approve, and inspect the project, the District and Town signed an Agreement in 2001 that called for Town review and inspection as well.

In order to achieve the goal of housing employees for the 2024-2025 school year, both reviews will happen at the same time, or the Town and State will agree to allow the Town to perform all inspections using the State code. The project needs to break ground in the spring of 2023 to meet the project intention.

Summary of Employee Housing Project

The site is at the corner of Meadowood Dr. and the access drive to the high school. Villas de Santa Lucia and Carbondale South are to the north, a Town recreation gravel parking lot is to the east, Roaring Fork High School is to the south, and the new fire training facility is to the west. The design team met with the fire district, and they do not have any concerns about housing next door. The application includes a boundary line adjustment (Minor Amended Plat) to expand the parcel shown in red to encompass the housing site.



The nearby zoning is Residential High-Density (Villas De Santa Lucia and Carbondale South) and Fire Station PUD. The building site and adjacent park property is a mix of two obsolete zone districts- Business Park and Community Arts, both remnants of the former North Face headquarters plan. The amended development parcel is proposed to be zoned R/HD- Residential High Density.



In siting building locations, the frontages to Meadowood Dr. and the access drive were primary considerations. The District's intention here is to create a strong relationship between buildings and streets, similar to the 3rd St. housing. The "front doors" and outdoor areas by entries at 3rd St have been popular with the residents and it has enlivened that section of 3rd St. This approach is called for in the Town's UDC.

From the start, we envisioned two-story buildings framing Meadowood Dr. and the access road with a strong relationship to that corner. Nearby, Carbondale South is three-stories tall, and the Villas De Santa Lucia are two. Two two-story buildings fronting the streets felt like the right offering to the street in this location. The third building is set back and internal to the site, with three stories of homes and some "tuck under" parking at the ground level.

An active green space fronts Building C, the taller building, to make it feel less dense and to provide direct green space access for residents. The practice fields will be proximate to the housing and during most of the time when the fields are not in use, the green space will seem quite generous.



There are 50 units proposed. The mix of units was made based on information from a District employee needs survey. All together there are 8 studios, 10 one-bedrooms, 16 two-bedroom, and 16 three-bedroom units. 30 of the 50 units are planned in Building C in the drawing above.

	Number
Studio	8
One Bedroom	10
Two Bedroom	16
Three Bedroom	16

The Meadowood site has a signalized intersection at SH 133, access to nearby recreation facilities, good views in all directions, and good bike/pedestrian access to District work sites.

The site is relatively flat with the Ella Ditch running along the eastern boundary of the property. There are some trees along the access road, but the site is mostly covered with ground vegetation. The site includes an asphalt trail that connects to the recreation facilities to the east and the high school to the south. The Town property in the area includes a strip of vegetation, then asphalt trail and then trees. The District proposes a similar streetscape.

To the south and east of the site are two RFSD practice fields, used for football, lacrosse, soccer, ultimate frisbee, etc. Maintaining use of those practice fields is important to high school operations.

A final site planning consideration was setting up the site for potential future phases. Someday the district may need to add to the project site, so a site plan was designed to allow that potential future.

Plan Highlights

When working on a site plan, one comes across the central features that define the project opportunities and constraints.

Location, Location, Location

It would be hard to overstate the value of location in creating affordability. The proximity of this site to work, play, and culture makes it possible for walk, bike, and transit access to most of the amenities in Carbondale and the valley as a whole. The site makes it possible for couples to reduce transportation costs to a single vehicle without limiting the options for either. A wecycle bike sharing station is planned near the site in addition to the proposed on-site bike parking and individual storage for each unit.

The location is convenient to local schools, the library, downtown, multiple recreation facilities, the Rio Grande and Crystal River bike trails, biking on the Crown, and shopping.

Sustainability

Housing near town centers and places of employment are a great start to sustainability efforts. School District buildings are all subject to building inspections by the State of Colorado and these buildings will be subject to the 2021 International Energy Conservation Code, which the Town hopes to adopt in the future.

The 2021 IECC requires more insulation, additional controls to reduce energy consumption, and additional requirements to follow through on energy savings. The federal government estimates that a building will be 10% more efficient if built to this code rather than the 2015 IECC.

In addition, the Design team has worked with its mechanical engineer to explore Beneficial Electrification, employing an all-electric site in anticipation of gains in renewables in the available electric mix. EV charging is also part of the site infrastructure. The roof profiles will employ areas of flat roof to accommodate the equipment needed for an all-electric project.

Infrastructure

Sopris Engineering has met with Town Public Works staff to identify areas of study for proposed planned infrastructure. Domestic water will be provided by the town system with connections to existing lines in the access drive to the high school and from Meadowood.

When the Smith Ranch (prior name of Lots 2A and 2B) was annexed to the Town, the water rights adjudicated to the property were dedicated to the Town. Any remaining credits for this development will be addressed in the Development Improvement Agreement. Ditch water, connected to the existing irrigation system shared by the Town and District, will be used for landscape watering.

There is an existing fire hydrant in the northeast corner of the site and an additional hydrant will be added to the southwest of Building B. The Fire District has reviewed and accepted the proposed access for fire trucks.

Wastewater service will be provided by the Town's system. The site will tie into an existing sewer line near the pickleball courts. Capacity exists for this new use.

Service from normal dry utilities (electric, cable, internet) will be provided except for gas. No gas service is proposed.

Drainage and stormwater will largely be directed to the central green area. That area will include drywells to facilitate infiltration of stormwater. The soils in the area are appropriate for this approach.

Traffic counts were prepared for submission to CDOT for normal review of access control at the intersection of Meadowood and SH 133. CDOT is satisfied that the current access permit will accommodate the expected vehicle trips under the existing improvements at SH 133. For more information on civil engineering, see Exhibit H.

Proposed Land Use Actions

Minor Plat Amendment

Lot 2A of the North Face Base Camp Subdivision is proposed to be amended as a boundary line adjustment per section 2.6.7.B.2.i of the Town's UDC. The School District owns both parcels involved, no change to covenants or restrictions are proposed, and no additional lots are created by the Plat Amendment. An Amended Plat is attached as Exhibit B.

Review of the Minor Plat Amendment is made by the Planning Director. Because the UDC directs that the Plat be recorded within 90 days of approval, the Applicant requests an informal opinion from the Director early in the process and a final written decision upon Trustee action on the Site Review.

The intended use of Lot 2A is staff housing for RFSD employees. 50 housing units are proposed on 3.439 acres. The number of bedrooms and floor plans are displayed in Exhibit E. The intended use of Lot 2B are the existing uses, a public high school, recreation fields, parking, and other non-residential School District uses. No nonconformities or new lots are created by the amendment. Street locations are not changed by the amendment. Recorded easements are honored and not impacted by the amendment.

The amended Lot 2A goes from the existing 2.705 +/- acres to 3.439 +/- acres. The amended Lot 2B goes from 24.555 +/- acres to 23.822 +/- acres.

	Amended Lot 2A
% Open Space/Landscaped Area	44%
% Lot Covered by Buildings and Other	56%
Impervious	
Setbacks	Front- 5', Sides- 5', Rear- 5'

The tabular information requested in the Code is provided below:

	Amended Lot 2B
% Open Space/Landscaped Area	71%
% Lot Covered by Buildings and Other	29%
Impervious	
Setbacks	SH 133- 50', Sides- 7.5', Rear- 20'

Rezone- CA & CBP to R/HD

Amended Lot 2A is currently a mix to two obsolete zone districts- Community Business Park (CBP) and Community Arts (CA) and would be rezoned to Residential High Density (R/HD) per section 2.4.2 of the Town's UDC.

2.4.2.C.1a.i

Exhibit C displays the Site Plan and the zoning conformance information below addresses the standards of the R/HD zone.

2.4.2.C.1a.ii

The existing zoning was based on a former plan for the headquarters of North Face Corporation moving to this location. That plan failed and the Roaring Fork School District ended up purchasing the property for Roaring Fork High School and other uses. The proposed use for Lot 2A is housing for District employees. The other housing along Meadowood Dr. serves as important housing stock for local employees. The Villas de Santa Lucia is income-restricted housing and Carbondale South has long provided an entry point for home ownership in Carbondale. The property is near District employment, recreation facilities, and the downtown area.

2.4.2.C.1a.iii A list of property owners within 300' of the site is Exhibit I.
R/HD Zone Compliance

	Code Requirement	Provided
Min. Lot Area	3,000 sf	3.439 Acres
Т. 3.2-9		
Setbacks	5'	20' front, 5' side, 5' rear
Т. 3.2-9		
Height	35' max.	All buildings < 35'
T. 3.2-9	/	
Impervious/Landscape	40%	< 44%
1.3./-2		De une itte el Lle e
Use	MFH Permitted Use	Permitted Use
I. 4.2-1		Consistent with Term land to
Street planting	5' With trees and	Consistent with Town land to
5.4.3.B		the east instead, see Exhibit D
5.4.3.C	75 ST	boundary designed to allow for carports as budget allows so islands only in locations that will not be covered.
Public Streets 5.5	N/A	No public streets are proposed
Driveways and Access 5.5.2.D	Emergency Access	Adequate access is provided, see Exhibit C
Pedestrian Circ. 5.5.3	5' sidewalks	Yes, use existing trails to east and south. Internal walkways. See Exhibit C
Screening	6' Waste & recycling	Yes, Exhibit C
Private Common Open Space 5.6.3.A and 5.3.3	15%	Yes, See Exhibit C. Areas include passive zone along frontage to Meadowoood, trails on the property and the common open area at the center of the site. The site opens onto additional District to the west and Town land for recreation to the east.
Mix of Types 5.6.3.B	Variety	Yes, mix of Studio, 1, 2, 3 bdrm
Underground Utilities 5.6.3.E	Required	Yes

Energy/Orientation 5.6.3.F	Energy efficient design	Meets 2021 IECC building standard, 360 degree views, all
	Honors views	electric, ev charging infrastructure.
Supplemental Standards	Private outdoor	Yes, Studios Alt Compliance
5.6.5 MFH	spaces	See Exhibit E
	Vary	Yes Exhibit E
	Setbacks/Heights	Yes Exhibit B and E
	Residential	
	Character	Yes Exhibit E
	Varied Roof Form	Yes Exhibit E
	Varied Buildings	Yes Exhibit C and E
	Orientation to views	Yes Exhibit C
	Circulation/Parking	Yes Exhibit E
	Bulk Storage	Yes Exhibit E
Number of Spaces	93	91 Alt. Compliance
Table 5.8-1		See Exhibit B
		22 Bike spaces
Design Off-Street Parking	Dimensional	Yes Exhibit B
5.8.6	Requirements	
	Access to Public	Yes Meadowood
	ROW	

Major Site Plan Review

Amended Lot 2A is consistent with the criteria for approval of a Major Site Review in Section 2.5.3 of the Town's Comprehensive Plan and UDC as displayed below.

The housing plan strengthens community as it and the housing on 3rd St. support the strength of local schools to serve local communities. Including working educators and staff and designing in concert with area surroundings are consistent with community character intentions.

Housing District employees makes the District and community more resilient during a period of rapidly increasing prices and limited housing availability. Other residents benefit from not competing for housing with those housed by the District. The selection of materials, energy efficiency and all-electric mechanical design all contribute to long term resiliency intentions of the Plan.

Affordable housing, regardless of the producer or income level is essential to maintaining the broad spectrum of income, age, and social diversity identified as inclusivity and equity intentions of the Plan.

The recently adopted Comprehensive Plan Update identifies this area on the Future Land Use Map as public facilities. The designation includes schools or in this case school district housing. The plan recognizes the significant need for affordable housing for local employees and the District is proposing to be an important contributor to that effort. It will take efforts from public, non-profit, and private parties to preserve and develop much needed affordable housing.

Energy is another area of interest in the Plan and the housing proposed will meet the 2021 IECC requirements for energy efficiency. In addition, the District is proposing an all-electric development in anticipation of reductions in greenhouse gases from electric generation.

The CO Department of Transportation reviewed the traffic estimate for the project and confirmed that it can be accommodated within the existing Access Control Permit.

	Code Requirement	Provided
Site Plan 2.5.3.F.2.a	Topography Adjoining properties Proposed buildings Existing buildings Parking areas, drives,	Exhibit A provides existing conditions survey. Exhibit C site plan displays building locations, parking and walkways.
	Sidewalks Landscaping, fences Streets, alleys, trails Solid waste Snow storage Utilities & easements	Landscape, see Exhibit D See Exhibit C See Exhibit C See Exhibit D See Exhibit G
Site Plan 2.5.3.F.b	Site Plan	See Exhibit C
Site Plan 2.5.3.F.c	Conceptual building elevations	See Exhibit E
Site Plan 2.5.3.F.d	Sample materials	See Exhibit E
Site Plan 2.5.3.F.e	Dimensioned floor plans	See Exhibit E
Site Plan 2.5.3.F.f	Final grading plan	See Exhibit F
Site Plan 2.5.3.F.g	Irrigation Plan	Irrigation will tie into existing District HS irrigation system See Exhibit D

Alternative Compliance- Outdoor Private Space

There are eight studio units in Building C that are smaller units and a smaller balcony is proposed due to design limitations in those situations. The balconies would meet the requirement of having a 6' minimum dimension, would be greater than 5% of the living area and are an extension of the living area. However, they would be smaller than the 60 square foot minimum prescribed by the code. The balconies would be about 46 square feet in size.

The site will include a central common gathering area attached to this building that will better serve gathering types of uses anticipated for private outdoor space such as a common grill and dining area. The common space will provide an alternative space in addition to the balcony attached to their studio unit with shared amenities. The District believes that its employees living in the eight studios will prefer having access to both spaces. This alternative allows the District to create greater diversity in housing types and offer the lowest rents while meeting overall Town design intentions.



Alternative Compliance- Street Landscaping

The street landscaping is proposed to match the existing streetscape connecting to adjacent properties. The existing condition from the access drive to to the base of White Hill in front of the Town Park (note there is no sidewalk or landscape along the fire district training facility). Beginning at the access drive there is a curb line, then a narrow strip of vegetation, then an asphalt trail and then plantings. The UDC prescribes a curb, then 5' planting strip with street trees and then a sidewalk.

In discussion with the Town Public Works Director, this was seen as a more convenient alignment for park, school, and neighborhood users. The consistency makes a more usable pedestrian and bike environment and plantings between the trail and buildings will provide a pleasant streetscape.

Exhibit D displays the proposed alternative.

Alternative Compliance- Parking

	Number	Per Unit	Code Required
Studio	8	1.25	10
One Bedroom	10	1.5	15
Two Bedroom	16	1.75	28
Three Bedroom	16	2.5	40
Total	50		93

The Applicant believes that the 91 parking spaces provided meets the desire to accommodate parking for vehicles related to the project. The two spaces, that are less than the code formula, are deleted to maintain the integrity of the central green area.

The Carbondale parking formula for multifamily housing is higher than would be required in some other local municipalities and the formula proposed by the Urban Land Institute for multifamily projects. For instance, the Basalt Code would require 91 spaces and the Aspen Code only 50. In addition, the District has a large parking lot near the site that could be utilized if demand for overflow parking ever exceeds the spaces provided.

The direction of the UDC and Comprehensive Plan are to prevent parking from dominating the view from the street and to encourage the use of "tuck under" and carport parking. Both approaches are included in this application. The difference of two spaces in negligible in terms of on-site parking, while the inclusion of spaces in the central green space would have impacts to the enjoyment of that space for residents.

In addition to the bulk storage space and on-site bike parking, a Wecycle bike share station is proposed adjacent to the site. These "last mile" strategies are intended to increase non-vehicle mobility and to allow households to reduce the need for two vehicles.

EXHIBIT LIST

- Exhibit A Existing Conditions ISP
- Exhibit B Amended Plat
- Exhibit C Site Plan
- Exhibit D Landscape, Snow Storage, and Irrigation Plan
- Exhibit E Architectural Concept, Floor Plans & Materials
- Exhibit F Grading & Drainage
- Exhibit G Utilities
- Exhibit H Engineer's Report & Public Improvement Estimate
- Exhibit I 300' Property Owner List
- Exhibit J Adjoining Zoning
- Exhibit K Deeds

Roaring Fork RE-1 School District AUTHORIZATION AND REPRESENTATION

The Roaring Fork School District grants the following individuals the rights of representation for the Roaring Fork School District's employee housing along Meadowood Dr. in Carbondale:

Robert Schultz, Robert Schultz Consulting- Planner JV DeSousa, Reveal Design- Architect Yancy Nichol, Sopris Engineering- Engineer Chad Lee, JVAM Law- Attorney

Please contact me with any questions at jrodriguez@rfschools.com.

Yours truly,

Jes<u>u</u>s Rodriguez Superintendent, Roaring Fork RE-1 School District

intern improvement control Certificate or improvement Survey Part sussing existing and proposed lot configurations, existing structures, exist and not passed uping lines, and dedicated public screets. The plan must acate at these of improvements to the unipart because plane.

b. A written statement of the estanded out and propagatized and of each of the particle in the sublimitien.)

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includes all first to find entropy and the sublicant to the property. In Antony are



Town of Carbondale 511 Colorado Ave Carbondale, CO 81623 (970)963-2733

	Contract of the second second	10000
Pre-Applicatio	n Meeting Date	
ees	Date Pd	

e

Land Use Application

PART 1 - APPLICANT INFORM	MATION	
Applicant Name: Robert S	chultz Consulting LLC	Phone: 970-963-3670
Applicant Address: 354 Fa	wn Dr Carbondale CO 81623	
E-mail:rschultzcon	sulting@gmail.com	Otto States
Owner Name: Roaring Fo	ork School District	Phone: 970-384-6024
Address: 400 Sopris	Ave. Carbondale, CO 81623	
E-mail: jgatlin@rfschoo	ols.com	MARCE STREET
Location of Property: provide stre Lot 2A and 2B North	et address and either 1) subdivision lot ar Face Base Camp Subdivision	nd block; or 2) metes and bounds:
PART 2 - PROJECT DESCRIP	LION	
General project description:		
Lot line adjustment,	zone RHD, and site review for	r staff housing
1 1 1 1 1	1 4	
Size of Parcel: 3.439/23.82	2 # Dwelling Units: 50 Sa	Eta Comm: 0
Type of Application(s): Min	or Plat Amend, Rezone, Majo	r Site Review, Alt. Complian
Existing Zoning: CBP/C	A Proposed Zoning:	BHD/CBP
this application. I declare that the above informati	on is true and correct to the best of my kn	iowledge.
Applicant Signature	Date	and the second second
Signature of all owners of the	roperty must appear before the applie	addam da anna a
Changel	Matter / 1	auon is accepted.
Owner Signature	Date Owner Signature	
STATE OF COLORADO)	Date
COUNTY OF GARFIELD) ss.	
The above and foregoing do	cument was acknowledged before me this	s 4th day of
January 2023, b	Jesús Rodia	day or
Vitness my hand and official	y	<u>.</u>
Ay commission expires:	CRUZ HARO NOTARY PUBLI STATE OF COLOR NOTARY ID 2022400 MY COMMISSION EXPIRES 0	IC ADO 03057 01/21/2026
	Carno Harro	1





SCALE: 1" = 2000'

TITLE PROPERTY DESCRIPTION

Lot 2A The North Face Base Camp Subdivision Exemption Plat according to the Final Plat recorded March 16, 2001, at Reception No. 577652

County of Garfield State of Colorado

SURVEY NOTES

1) Date of Survey: September 14, 2022 and October 3, 2022.

- 2) Date of Preparation: October 05, 2022.
- 3) Basis of Bearing: A bearing of S 00°03'00" W from the steel bar in concretelocated at the intersection of 8th & Main Streets and the steel bar located insidea valve box at the intersection of 8th and Euclid Avenue.
- 4) Basis of Survey: The North Face Base Camp Subdivision Exemption Plat, recorded March 16, 2001 as Reception #577652 of the Garfield County Records and the found survey monuments as shown.
- 5) This survey does not constitute a title search by Sopris Engineering, LLC (SE) to determine ownership or easements of record. For all information regarding easements, rights of way and/or title of record, SE relied upon the above said The North Face Base Camp Subdivision Exemption Plat and the Title Commitment and the Title Commitment prepared by Land Title Guarantee Company, Order No. ABS63019152 with an effective date of September 02, 2022.
- 6) The linear unit used in the preparation of this plat is the U.S. survey foot as defined by the United States Department of Commerce, National Institute of Standards and Technology.
- 7) Basis of Elevation: Project based on Global Position System (GPS) observation from the Continuous Operating Reference Station (CORS) SE01utilizing the Continental United States 2012 Geoid Model (GEOID 12B Conus)and based the 1988 North American Vertical Datum (NAVD88), this established a site benchmark elevation of 6622.50' Northwest corner of Lot 2A, as shown.
- 8) Contour interval: One foot (1.0').
- 9) This lot benefits from Plat note 4 of The North Face Base Camp Subdivision Exemption Plat Reception No. 577652 as follows; Lot 2B shall be subject to a 10 foot utility easement for gas main/service for Lot 2A, the location of which will be determined at the time of Lot 2A site plan approval, subject to the approval of the owner of Lot 2B. The owner of Lot 2B shall have the sole discretion to determine from time to time the location of said easement; provided, that the main/service and related facilities necessary to properly convey said utility in the event that the owner of Lot 2B desires to relocate said gas main/service after its initial installation.

SURVEYOR'S CERTIFICATE

II hereby state that this Improvement Survey Plat was prepared by Sopris Engineering, LLC (SE) for

Roaring Fork School District No. RE-1 and Land Title Guarantee Company

I furthermore state that the improvements on the above described parcel on this date, September 14, 2022, except utility connections are entirely within the boundaries of the parcel except as shown, that there are no encroachments upon the described premises by improvements on any adjoining premises, except as indicated, and that there is no apparent evidence or sign of any easement crossing or burdening any part of said parcel, except as noted. I furthermore state that this property is subject to reservations, restrictions, covenants and easements of record or in place.

Mark S. Beckler L.S. #28643





PROPERTY DESCRIPTION:

LOT 2A, THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED IN THE RECORDS OF THE CLERK AND RECORDER OF GARFIELD COUNTY ON MARCH 16, 2001, AS RECEPTION NO. 577652. COUNTY OF GARFIELD STATE OF COLORADO

AND

LOT 2B, ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636. COUNTY OF GARFIELD STATE OF COLORADO

EXISTING LEGEND



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EXISTING ELECTRIC MANHOLE EXISTING DRAINAGE DRY-WELL EXISTING SEWER MANHOLE EXISTING TELEPHONE MANHOLE EXISTING UTILITY MANHOLE EXISTING GUY WIRE EXISTING POWER POLE EXISTING WATER MANHOLE

EXISTING WATER VALVE EXISTING CURB STOP EXISTING GAS METER EXISTING ELECTRIC TRANSFORMER EXISTING ELECTRIC METER EXISTING TELEPHONE PEDESTAL EXISTING CATV PEDESTAL EXISTING SEWER CLEANOUT EXISTING LIGHT POLE EXISTING SIGN EXISTING STORM INLET

EXISTING DECIDUOUS TREE

EXISTING CONIFER TREE





OTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.

SOPRIS ENGINEERING LLC 502 MAIN STREET • SUITE A3•CARBONDALE CO 81623 (970) 704•0311• soprisengineering.com



VICINITY MAP SCALE: 1" = 2000'

SURVEY NOTES

1) DATE OF FIELD WORK: FEBRUARY & MARCH 1999, JUNE 2000, APRIL & DECEMBER 2004; UPDATED SEPTEMBER AND OCTOBER 2022.

2) DATE OF PREPARATION: DECEMBER 2022.

3) BASIS OF SURVEY: THE LOT LINE ADUSTMENT PLAT OF PARCEL B, SMITH EXEMPTION, RECORDED JANUARY 28, 2000 AS RECEPTION NO. 558687, THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT, RECORDED MARCH 16, 2001 AS RECEPTION NO. 577652, THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT, RECORDED OCTOBER 18, 2005 AS RECEPTION NO. 6846366, VARIOUS DOCUMENTS OF RECORD AND THE FOUND SURVEY MONUMENTS AS SHOWN.

4) BASIS OF BEARING: A BEARING OF N 89°57'00" W BETWEEN THE TOWN OF CARBONDALE STREET MONUMENTS AT THE INTERSECTION OF 4TH AND EUCLID, A FOUND DISK WITH NAIL AND THE INTERSECTION OF 8TH AND EUCLID, A FOUND #6 REBAR. THIS ESTABLISHED A LOCAL PROJECT BEARING BASE OF N.35°58'00"E. ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF MEADOW WOOD DRIVE, AS SHOWN HEREON.

5) THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SOPRIS ENGINEERING, LLC (SE) TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING EASEMENTS, RIGHTS OF WAY AND/OR TITLE OF RECORD, SE RELIED UPON THE TITLE COMMITMENTS PREPARED BY LAND TITLE GUARANTEE COMPANY UNDER ORDER NO. ABS63019152-2, EFFECTIVE DATE SEPTEMBER 2, 2022 AS TO LOT 2A AND UNDER ORDER NO. ABS63019153-2, EFFECTIVE DATE SEPTEMBER 2, 2022 AS TO LOT 2B, ALONG WITH VARIOUS DOCUMENTS AND PLATS OF RECORD AS SHOWN IN NOTE 3 HEREON.

6) FIELD WORK FOR THIS SURVEY WAS PERFORMED LIMITED TO LOT 2A AND A PORTION OF LOT 2B, AS SHOWN HEREON, THE AERIAL BACKGROUND SHOWN IS FROM A 2021 GOOGLE IMAGE, GEOREFERENCED TO THE SUBJECT PROPERTY.

7) THE LINEAR UNIT USED IN THE PREPARATION OF THIS PLAT IS THE U.S. SURVEY FOOT AS DEFINED BY THE UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

IMPROVEMENT LOCATION CERTIFICATE

I HEREBY STATE THAT THIS IMPROVEMENT LOCATION CERTIFICATE WAS PREPARED BY SOPRIS ENGINEERING, LLC (SE) FOR ROARING FORK SCHOOL DISTRICT NO. RE-1. THAT IT IS NOT A LAND SURVEY PLAT, OR AN IMPROVEMENT SURVEY PLAT AND IT IS NOT TO BE RELIED ON FOR THE ESTABLISHMENT OF FENCE, BUILDING, OR OTHER FUTURE IMPROVEMENT LINES.

I FURTHERMORE STATE THAT THE MPROVEMENTS ON THE PORTION OF THE ABOVE DESCRIBED PARCEL, AS SHOWN, ON THIS DATE, NOW MBER 22, 2022, EXCEPT UTILITY CONNECTIONS, ARE ENTIRELY WITHIN THE BOUNDABLES OF THE RA ACEL, EXCEPT AS SHOWN; THAT THERE ARE NO ENCROACHMENTS UPON THE DESCRIBED PREMISE DYCEPT AS INDICATED, AND THAT THERE IS NO APPARENT EVIDENCE OR SIGN OF ANY EASEMENCR DISING OR BURDENING ANY PART OF SAID PARCEL, EXCEPT AS NOTED.

32024.02 CL 12/27/2022 G:\2022\32024 CARBONDALE SCHOOL\SURVEY\SURVEY DWGS\SURVEY PLOTS\32024.02_ILC.DWG

MARK S. BECKLER L.S. #28643

RESULTING PROPERTY DESCRIPTIONS

LOT 2A (AFTER LOT LINE ADJUSTMENT) SEE SHEET 2 FOR RESULTING PARCEL DETAILS

A TRACT OF LAND SITUATED IN LOT 7 AND LOT 9 ALL IN SECTION 3. TOWNSHIP 8 SOUTH. RANGE 88 WEST OF THE SIXTH PRINCIPAL MERIDIAN: SAID TRACT OF LAND BEING A PORTION OF LOT 2A, NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED IN THE RECORDS OF THE CLERK AND RECORDER OF GARFIELD COUNTY ON MARCH 16, 2001, AS RECEPTION NO. 577652 AND A PORTION OF LOT 2B, ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636; SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 2A WHENCE THE SURVEY MONUMENT AT THE INTERSECTION OF THE CENTERLINES OF 4TH STREET AND EUCLID AVENUE, TOWN OF CARBONDALE, COUNTY OF GARFIELD, STATE OF COLORADO, BEARS N 31°44'44" W 3474.22 FEET (WITH ALL BEARINGS CONTAINED HEREIN RELATIVE TO A BEARING OF N 89°57'00" W ALONG THE CENTERLINE OF SAID EUCLID AVENUE BETWEEN SURVEY MONUMENTS ON THE CENTERLINES OF SAID 4TH STREET AND 8TH STREET IN SAID TOWN OF CARBONDALE);

THENCE S.55°04'46"E. ALONG THE EASTERLY BOUNDARY LINE OF SAID LOT 2A A DISTANCE OF 551.20 FEET; THENCE LEAVING SAID EASTERLY BOUNDARY LINE OF SAID LOT 2A S.89°59'34"W. A DISTANCE OF 378.54 FEET; THENCE S.00°00'36"E. A DISTANCE OF 42.40 FEET; THENCE S.35°58'00"W. A DISTANCE OF 204.76 FEET; THENCE N.54°02'00"W. A DISTANCE OF 89.97 FEET TO THE SOUTHEAST CORNER OF THAT PROPERTY DESCRIBED AS PARCEL A SMITH EXEMPTION, ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A. SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636; THENCE CONTINUING N.54°02'00"W. ALONG THE EASTERLY BOUNDARY LINE OF SAID PARCEL A SMITH EXEMPTION A DISTANCE OF 182.28 FEET, MORE OR LESS, TO A POINT ON THE SOUTHERLY RIGHT-OF-WAY OF MEADOW WOOD DRIVE AS DEDICATED ON THE PLAT OF CARBONDALE SOUTH PLANNED UNIT DEVELOPMENT RECORDED AS RECEPTION NO. 306370 OF THE GARFIELD COUNTY RECORDS; THENCE LEAVING SAID EASTERLY BOUNDARY LINE OF SAID PARCEL A SMITH EXEMPTION N.35°58'00"E. ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF SAID MEADOW WOOD DRIVE A DISTANCE OF 10.33 FEET; THENCE CONTINUING ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE S.56°56'24"E. A DISTANCE OF 2.59 FEET; THENCE CONTINUING ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE N.35°58'00"E. A DISTANCE OF 440.91 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SAID TRACT OF LAND CONTAINING 149,782 SQUARE FEET OR 3.439 ACRES, MORE OR LESS.

COUNTY OF GARFIELD STATE OF COLORADO

OF RE-1 SCHOOL

LOT 2B (AFTER LOT LINE ADJUSTMENT) SEE SHEET 2 FOR RESULTING PARCEL DETAILS

A TRACT OF LAND SITUATED IN LOT 7 AND LOT 9 ALL IN SECTION 3, TOWNSHIP 8 SOUTH, RANGE 88 WEST OF THE SIXTH PRINCIPAL MERIDIAN; SAID TRACT OF LAND BEING A PORTION OF LOT 2A, NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED IN THE RECORDS OF THE CLERK AND RECORDER OF GARFIELD COUNTY ON MARCH 16, 2001, AS RECEPTION NO. 577652 AND A PORTION OF LOT 2B. ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A. SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636; SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY RIGHT-OF-WAY OF COLORADO STATE HIGHWAY NO. 133, WHENCE THE SURVEY MONUMENT AT THE INTERSECTION OF THE CENTERLINES OF 4TH STREET AND EUCLID AVENUE, TOWN OF CARBONDALE, COUNTY OF GARFIELD, STATE OF COLORADO, BEARS N 19°23'08" W 4000.84 FEET (WITH ALL BEARINGS CONTAINED HEREIN RELATIVE TO A BEARING OF N 89°57'00" W ALONG THE CENTERLINE OF SAID EUCLID AVENUE BETWEEN SURVEY MONUMENTS ON THE CENTERLINES OF SAID 4TH STREET AND 8TH STREET IN SAID TOWN OF CARBONDALE); SAID POINT ALSO BEING A POINT ON THE SOUTHERLY BOUNDARY LINE OF THAT PROPERTY DESCRIBED AS PARCEL A SMITH EXEMPTION, ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636;

THENCE ALONG THE SOUTHERLY BOUNDARY LINE OF SAID PARCEL A, SMITH **EXEMPTION THE FOLLOWING THREE (3) COURSES:**

1) N.69°30'22"E. A DISTANCE OF 50.00 FEET;

2) S.54°02'00"E. A DISTANCE OF 75.39 FEET 3) N.35°58'00"E. A DISTANCE OF 463.93 FEET TO THE SOUTEAST CORNER OF SAID PARCEL A, SMITH EXEMPTION;

THENCE LEAVING SAID SOUTHERLY BOUNDARY LINE OF SAID PARCEL A, SMITH EXEMPTION S.54°02'00"E. A DISTANCE OF 89.97 FEET; THENCE N.35°58'00"E. A DISTANCE OF 204.76 FEET; THENCE N.00°00'36"W. A DISTANCE OF 42.40 FEET; THENCE N.89°59'34"E. A DISTANCE OF 378.54 FEET MORE OR LESS TO A POINT ON THE EASTERLY BOUNDARY LINE OF SAID LOT 2A, NORTH FACE BASE CAMP; THENCE S.55°04'46"E. ALONG SAID EASTERLY BOUNDARY LINE OF SAID LOT 2A A DISTANCE OF 24.62 FEET TO A POINT ON THE BOUNDARY LINE OF SAID LOT 2B, LOT LINE ADJUSTMENT PLAT; THENCE N.89°46'12"E. A DISTANCE OF 161.67 FEET TO A POINT IN AN EXISTING FENCE; THENCE S 00°13'48" E 1137.88 FEET ALONG SAID FENCE TO THE SOUTHEAST CORNER OF SAID LOT 9, A CEDAR FENCE POST; THENCE S 87°44'00" W 799.51 FEET ALONG THE SOUTHERLY LINE OF SAID LOT 9, ADJACENT AND/OR ADJOINING SAID FENCE TO THE EASTERLY RIGHT-OF-WAY OF SAID STATE HIGHWAY NO. 133; THENCE N 26°34'00" W ALONG SAID EASTERLY RIGHT-OF-WAY 759.02 FEET TO THE POINT OF BEGINNING.

SAID PARCEL OF LAND CONTAINING 1,037,680 SQUARE FEET OR 23.822 ACRES, MORE OR LESS.

 $\langle \rangle$

2 - FROM 2A TO 2B

RESULTING PARCELS

RESULTING LOT 2A

RESULTING LOT 2B

24,373 0.560

149,781 3.439

1,037,672 23.822

1,187,453 27.260

COUNTY OF GARFIELD STATE OF COLORADO

CERTIFICATE OF DEDICATION AND OWNERSHIP

KNOW ALL MEN BY THESE PRESENTS, THAT THE RE-1 SCHOOL DISTRICT BEING THE SOLE OWNER IN FEE SIMPLE OF ALL THE REAL PROPERTY DESCRIBED AS:

LOT 2A, THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED IN THE RECORDS OF THE CLERK AND RECORDER OF GARFIELD COUNTY ON MARCH 16, 2001, AS RECEPTION NO. 577652. COUNTY OF GARFIELD

STATE OF COLORADO AND

LOT 2B, ACCORDING TO THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED OCTOBER 18, 2005 UNDER RECEPTION NO. 684636. COUNTY OF GARFIELD

STATE OF COLORADO COUNTY OF GARFIELD

STATE OF COLORADO

HAS BY THESE PRESENTS LAID OUT AND PLATTED ALL OF THE ABOVE DESCRIBED REAL PROPERTY INTO RESULTING LOT 2A AND RESULTING LOT 2B;

THE PURPOSE OF THIS PLAT IS TO ADJUST THE COMMON BOUNDARY LINE BETWEEN SAID LOT 2A AND SAID LOT 2B, PRESERVING ALL PREVIOUSLY DEDICATED EASEMENTS, AS SHOWN HEREON.

OWNER: RE-1 SCHOOL DISTRICT TITLE:

IN WITNESS WHEREOF SAID OWNER HAS CAUSED HIS NAME TO BE HEREUNTO SUBSCRIBED THIS _____ DAY OF _____ , A.D., 2023.

STATE OF COLORADO))SS.

COUNTY OF GARFIELD)

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS DAY OF , A.D., 2023,

DISTRICT.

MY COMMISSION EXPIRES

WITNESS MY HAND AND SEAL

NOTARY PUBLIC

RESTATED PLAT NOTES:

1) ALL LOTS SHOWN ON THE WITHIN MINOR PLAT AMENDMENT MAY ONLY BE RESUBDIVIDED PURSUANT TO FULL SUBDIVISION REVIEW IN ACCORDANCE WITH PROVISIONS OF THE CARBONDALE MUNICIPAL CODE. THE PROVISIONS OF PARAGRAPH 4 OF ORDINANCE NO. 30, SERIES OF 1998, REGARDING SITE DEVELOPMENT APPROVAL PRIOR TO THE ISSUANCE OF BUILDING PERMIT FOR ANY DEVELOPMENT UPON ANY OF THE LOTS SHOWN ON THE WITHIN EXEMPTION PLAT SHALL REMAIN IN FULL FORCE AND EFFECT UNLESS, IN CONNECTION WITH ANY RESUBDIVISION OF ANY LOT SHOWN ON THE WITHIN EXEMPTION PLAT, THE TOWN ACKNOWLEDGES IN WRITING (I) THAT THE PURPOSES OF SAID PARAGRAPH 4 OF ORDINANCE NO. 30 HAVE BEEN SATISFIED BY THE INFORMATION SUPPLIED AND REVIEWED BY THE TOWN IN CONNECTION WITH SUCH RESUBDIVISION, AND (II) THAT AS TO ANY SPECIFIC LOT(S) CREATED BY SUCH RESUBDIVISION FURTHER COMPLIANCE WITH SAID PARAGRAPH 4 OF ORDINANCE NO. 30 IS UNNECESSARY.

2) THE IRRIGATION EASEMENTS DEPICTED ON LOT 2A AND 2B ARE FOR THE PURPOSE OF THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE ELLA DITCH AND THE CONVEYANCE AND UTILIZATION OF IRRIGATION WATER FROM SAID DITCH. THE EASEMENTS ARE RELOCATABLE IN NATURE, AND ANY RELOCATION SHALL BE APPROVED BY AND DEDICATED TO THE TOWN AS PER PARAGRAPH 6(K) OF THE ANNEXATION AGREEMENT RECORDED AS RECEPTION No. 547057 IN THE RECORDS OF THE GARFIELD COUNTY CLERK AND RECORDER; PROVIDED, THAT THE OWNER OF SAID LOTS SHALL BE FULLY RESPONSIBLE FOR THE COST OF CONSTRUCTION OF ANY AND ALL DITCHES AND RELATED FACILITIES NECESSARY TO PROPERLY CONVEY SAID WATER.

3) THE WESTERLY EDGE OF ANY DRIVE ACCESSING LOT 2A FROM MEADOW WOOD DRIVE WILL BE A MINIMUM OF 100 FEET FROM THE COMMON BOUNDARY OF LOT 2A AND 2B.

4) LOT 2B SHALL BE SUBJECT TO A 10 FOOT UTILITY EASEMENT FOR GAS MAIN/SERVICE FOR LOT 2A, THE LOCATION OF WHICH WILL BE DETERMINED AT THE TIME OF LOT 2A SITE PLAN APPROVAL, SUBJECT TO THE APPROVAL OF THE OWNER OF LOT 2B. THE OWNER OF LOT 2B SHALL HAVE THE SOLE DISCRETION TO DETERMINE FROM TIME TO TIME THE LOCATION OF SAID EASEMENT; PROVIDED, THAT THE OWNER OF SAID LOT 2B SHALL BE FULLY RESPONSIBLE FOR THE COST OF RELOCATING ANY GAS MAIN/SERVICE AND RELATED FACILITIES NECESSARY TO PROPERLY CONVEY SAID UTILITY IN THE EVENT THAT THE OWNER OF LOT 2B DESIRES TO RELOCATE SAID GAS MAIN/SERVICE AFTER ITS INITIAL INSTALLATION.

NOTICE: ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGA ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE PARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF CERTIFICATION SHOWN HEREON.



TOWN PLANNING DIRECTOR

ATTEST:

TOWN CLERK

SOPRIS ENGINEERING LLC 502 MAIN STREET • SUITE A3•CARBONDALE CO 81623 (970) 704•0311• soprisengineering.com



SURVEY NOTES

1) DATE OF FIELD WORK: FEBRUARY & MARCH 1999, JUNE 2000, APRIL & DECEMBER 2004; UPDATED SEPTEMBER AND OCTOBER 2022.

2) DATE OF PREPARATION: DECEMBER 2022.

3) BASIS OF SURVEY: THE LOT LINE ADUSTMENT PLAT OF PARCEL B. SMITH EXEMPTION, RECORDED JANUARY 28, 2000 AS RECEPTION NO. 558687, THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT, RECORDED MARCH 16, 2001 AS RECEPTION NO. 577652, THE LOT LINE ADJUSTMENT PLAT OF PARCEL A, SMITH EXEMPTION PROPERTY AND LOT 2B OF THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT, RECORDED OCTOBER 18, 2005 AS RECEPTION NO. 6846366, VARIOUS DOCUMENTS OF RECORD AND THE FOUND SURVEY MONUMENTS AS SHOWN.

4) BASIS OF BEARING: A BEARING OF N 89°57'00" W BETWEEN THE TOWN OF CARBONDALE STREET MONUMENTS AT THE INTERSECTION OF 4TH AND EUCLID. A FOUND DISK WITH NAIL AND THE INTERSECTION OF 8TH AND EUCLID, A FOUND #6 REBAR. THIS ESTABLISHED A LOCAL PROJECT BEARING BASE OF N.35°58'00"E. ALONG THE SOUTHERLY RIGHT-OF-WAY LINE OF MEADOW WOOD DRIVE, AS SHOWN HEREON.

5) THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SOPRIS ENGINEERING, LLC (SE) TO DETERMINE OWNERSHIP OR EASEMENTS OF RECORD. FOR ALL INFORMATION REGARDING EASEMENTS, RIGHTS OF WAY AND/OR TITLE OF RECORD, SE RELIED UPON THE TITLE COMMITMENTS PREPARED BY LAND TITLE GUARANTEE COMPANY UNDER ORDER NO. ABS63019152-2. EFFECTIVE DATE SEPTEMBER 2. 2022 AS TO LOT 2A AND UNDER ORDER NO. ABS63019153-2, EFFECTIVE DATE SEPTEMBER 2, 2022 AS TO LOT 2B, ALONG WITH VARIOUS DOCUMENTS AND PLATS OF RECORD AS SHOWN IN NOTE 3 HEREON.

6) THE LINEAR UNIT USED IN THE PREPARATION OF THIS PLAT IS THE U.S. SURVEY FOOT AS DEFINED BY THE UNITED STATES DEPARTMENT OF COMMERCE, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.

SURVEYOR'S CERTIFICATE

I, MARK S. BECKLER, DO HEREBY STATE THAT I AM A REGISTERED LAND SURVEYOR LICENSED UNDER THE LAWS OF THE STATE OF COLORADO, THAT THIS LOT LINE ADJUSTMENT PLAT IS A TRUE, CORRECT AND COMPLETE PLAT OF LOT 2A AND LOT 2B NORTH FACE BASE CAMP MINOR PLAT AMENDMENT AS LAID OUT, PLATTED, DEDICATED AND SHOWN HEREON; THAT SUCH PLAT WAS MADE FORM AN ACCURATE SURVEY OF SAID PROPERTY BY ME AND UNDER MY SUPERVISION AND CORRECTLY SHOWS THE LOCATION AND DIMENSIONS OF THE BOUNDARY, LOTS, EASEMENTS AND STREETS OF SAID SUBDIVISION AS THE SAME ARE STAKED UPON THE GROUND IN COMPLIANCE WITH APPLICABLE REGULATIONS GOVERNING THE SUBDIVISION OF LAND.

IN WITNESS WHEREOF THAVE SET Y HAND AND SEAL THIS DAY OF A.D. 2023.

CLERK AND RECORDER'S CERTIFICATE

, RECEPTION NO.

PAGE

THIS PLAT WAS FILED FOR RECORD IN THE OFFICE OF THE CLERK AND RECORDER OF GARFIELD COUNTY AT O'CLOCK .M., ON THE DAY , A.D. 202___, AND IS DULY RECORDED IN BOOK _____,

CLERK AND RECORDER

DEPUTY

, 2023, ACCORDING TO THE

32024.02 CL 12/27/2022 G:\2022\32024 CARBONDALE SCHOOL\SURVEY\SURVEY DWGS\SURVEY PLOTS\32024.02_LLA-SH1.DWG



SOPRIS ENGINEERING LLC 502 MAIN STREET • SUITE A3•CARBONDALE CO 81623 (970) 704•0311• soprisengineering.com

32024.02 CL 12/27/2022 G:\2022\32024 CARBONDALE SCHOOL\SURVEY\SURVEY DWGS\SURVEY PLOTS\32024.02_LLA-SH2.DWG



2024 CARBONDALE SCHOOL\CIVILDWGS\PLOT\32024-3-SITE PLAN.DWG - Dec 30, 2022 - 11:4

LA	ANDSCAPE NOTES	BIORETENT	ION SEED MIX				
1.	REFER TO IRRIGATION PLANS FOR LIMITS AND TYPES OF IRRIGATION DESIGNED FOR THE LANDSCAPE. IN NO CASE SHALL	+++++++++	COMMON NAME	SCIENTIFIC NAME	VARIETY	PLS LBS PER ACRE	OUNCES PER ACRE
		+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$	SAND BLUESTEM	ANDROPOGON HALLII	GARDEN	3.5	
	MINIMUM DISTANCE AWAY FROM ALL RUILDING AND WALL FOUNDATIONS AS STIPLILATED IN THE GEOTECHNICAL REPORT		SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	BUTTE	3	
2	PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION		PRAIRIE SANDREED	CALAMOVILFA LONGIFOLIA	GOSHEN	3	
۷.	$\Delta CTIVITY SHALL BE THOROLIGHLY LOOSENED TO A DEPTH OF 8" - 12" AND AMENDED PER SPECIFICATIONS$		INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES	PALOMA	3	
3	AUL SEED, SOD AND SHRUB BED AREAS ARE TO RECEIVE ORGANIC SOIL PREPARATION IN ACCORDANCE WITH THE SOILS		SWITCHGRASS	PANICUM VIRGATUM	BLACKWELL	4	
0.	REPORT OR AT A MINIMUM OF 3.5 CULYDS /1000 SE EVENLY TILLED INTO SOIL AT A DEPTH OF 6"		WESTERN WHEATGRASS	PASCOPYRUM SMITHII	ARIBA	3	
4	ALL TREES ARE TO BE STAKED AND GUYED PER DETAILS FOR A PERIOD OF 1 YEAR. THE CONTRACTOR SHALL BE		LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	PATURA	3	
т.	RESPONSIBLE FOR REMOVING STAKES AT THE END OF 1 YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION BY THE		ALKALI SACATON	SPOROBOLUS AIROIDES		3	
	OWNER'S REPRESENTATIVE OBTAIN APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO REMOVAL		SAND DROPSEED	SPOROBOLUS CRYPTANDRUS		3	
5	ALL TREES IN SEED OR TURE AREAS SHALL RECEIVE MULCH RINGS, OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE		*PASTURE SAGE	ARTEMISIA FRIGIDA			2
0.	FOR ANY TREES THAT WILL NOT BE MULCHED FOR EXCESSIVE MOISTURE REASONS.		*BLUE ASTER	ASTER LAEVIS			4
6.	SHRUB, GROUNDCOVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY 4" PERFORATED GALVANIZED ROLL TOP EDGING		*BLANKET FLOWER	GAILLARDIA ARISTATA			8
•.	WHERE SHOWN ON PLANS, EDGER IS NOT REQUIRED WHEN ADJACENT TO CURBS, WALLS, CONCRETE WALKS OR SOLID		*PRAIRIE CONEFLOWER				4
	FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS			DALEA (PETALOSTEMUM) PURPUREA			4
	SPECIFIED ON THE PLANS.		TOTAL			27.5	22
7.	ALL SHRUB BEDS ARE TO BE MULCHED WITH MIN. 3" DEPTH, SHREDDED BARK LANDSCAPE MULCH OVER SPECIFIED						
	GEOTEXTILE WEED CONTROL FABRIC UNLESS SHOWN/NOTED AS ROCK MULCH. ROCK MULCH AREAS ARE TO BE MULCHED	LOW GROW	NATIVE SEED MIX				
	WITH MIN. 3" DEPTH 1-1 1/2" LOCALLY SOURCED ROCK. ALL GROUND COVER AND PERENNIAL FLOWER BEDS SHALL BE					PLSIBS	PERCENT
	MULCHED WITH 3" DEPTH SHREDDED BARK LANDSCAPE MULCH. NO WEED CONTROL FABRIC IS REQUIRED IN	· · · ·	COMMON NAME	SCIENTIFIC NAME		PER ACRE	PER ACRE
	GROUNDCOVER OR PERENNIAL AREAS.	* * *	BLUE FESCUE	FESTUCA GLAUCA		4.4	20%
8.	AT SEED AREA BOUNDARIES ADJACENT TO EXISTING NATIVE AREAS, OVERLAP ABUTTING NATIVE AREAS BY THE FULL		BLUE GRAMA	BOUTELOUA GRACILIS		3.3	15%
	WIDTH OF THE SEEDER.		ROCKY MOUNTAIN FESCUE	FESTUCA SAXIMONTANA		3.3	15%
9.	EXISTING TURF AREAS THAT ARE DISTURBED DURING CONSTRUCTION, ESTABLISHMENT AND THE MAINTENANCE PERIOD		CANBY BLUEGRASS	POA SECUNDA 'CANBAR'		3.3	15%
	SHALL BE RESTORED WITH NEW SOD TO MATCH EXISTING TURF SPECIES. DISTURBED NATIVE AREAS WHICH ARE TO		INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES		2.2	10%
	REMAIN SHALL BE OVER SEEDED AND RESTORED WITH SPECIFIED SEED MIX.		SANDBERG BLUE	POA SECUNDA		2.2	10%
10.	ALL SEEDED SLOPES EXCEEDING 25% IN GRADE (4:1) SHALL RECEIVE EROSION CONTROL BLANKETS. PRIOR TO		SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA		2.2	10%
	INSTALLATION, NOTIFY OWNER'S REPRESENTATIVE FOR APPROVAL OF LOCATION AND ANY ADDITIONAL COST IF A CHANGE		ALPINE BLUEGRASS	POA ALPINA		0.45	2.5%
	ORDER IS NECESSARY.		BOTTLEBRUSH SQUIRRELTA	IL ELYMUS ELYMOIDES		0.45	2.5%
11.	WHEN COMPLETE, ALL GRADES SHALL BE WITHIN +/- 1/8' OF FINISHED GRADES AS SHOWN ON THE PLANS.		ΤΟΤΔΙ			21.8	100%
12.	SOFT SURFACE TRAILS NEXT TO MANICURED TURF OR SHRUB BEDS SHALL BE CONTAINED WITH 4" PERFORATED METAL		TOTAL			21.0	10070
	BENDA BOARD EDGER.	TUDE CDAS					
13.	PRIOR TO THE PLACEMENT OF MULCH AND WEED FABRIC, A GRANULAR, PRE-EMERGENT, WEED CONTROL AGENT SHALL BE	TURF GRAS	S BLEND. SOD				
	ADDED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION, EXCEPT AROUND		DEEP ROOTED BI UEGRASS	BLEND, LOCALLY SOURCED			
	ORNAMENTAL GRASSES.						
14.	THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND						

REPLACEMENT OF ALL IMPROVEMENTS SHOWN OR INDICATED ON THE APPROVED LANDSCAPE PLAN ON FILE IN THE PLANNING DEPARTMENT.

PLANT SCHEDULE

<u>DECIDUOUS CANOPY TREES</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>ROOT</u>	<u>SIZE</u>
AC TA	ACER TATARICUM	TATARIAN MAPLE	B & B	2.5" CAL.
GL SH	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` TM	SHADEMASTER LOCUST	B & B	2"CAL
TI GR	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	B & B	2"CAL
EVERGREEN TREES	BOTANICAL NAME	COMMON NAME	ROOT	<u>SIZE</u>
PI ED	PINUS EDULIS	PINON PINE	B & B	6` HEIGHT
ORNAMENTAL TREES	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
AC CO	ACER GINNALA 'COMPACTUM'	COMPACT AMUR MAPLE	CONT.	#20
AM CA	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	B & B	2" CAL.
MA SS	MALUS X `SPRING SNOW`	SPRING SNOW CRAB APPLE	B & B	1.5"CAL
DECIDUOUS SHRUBS BU AL CO AF LI LO RH AR SO ST SY VU	BOTANICAL NAME BUDDLEJA ALTERNIFOLIA 'ARGENTEA' CORNUS SERICEA 'ARCTIC FIRE' LIGUSTRUM VULGARE 'LODENSE' RHUS AROMATICA 'GRO-LOW' SORBARIA SORBIFOLIA STELLIPILA SYRINGA VULGARIS	<u>COMMON NAME</u> SILVER FOUNTAIN BUTTERFLY BUSH ARCTIC FIRE DOGWOOD LODENSE PRIVET GRO-LOW FRAGRANT SUMAC URAL FALSE SPIREA COMMON PURPLE LILAC	ROOT CONT. CONT. CONT. CONT. CONT. CONT.	<u>SIZE</u> #5 #5 #5 #5 #5
<u>EVERGREEN SHRUBS</u>	BOTANICAL NAME	<u>COMMON NAME</u>	<u>ROOT</u>	<u>SIZE</u>
AR CH	ARCTOSTAPHYLOS X COLORADOENSIS `CHIEFTAIN`	CHIEFTAIN MANZANITA	CONT.	#5
PI MO	PINUS MUGO `MOPS`	MUGO PINE	CONT.	#5
ORNAMENTAL GRASSES	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
BO BA	BOUTELOUA GRACILIS `BLONDE AMBITION`	BLOND AMBITION BLUE GRAMA GRASS	CONT.	#1
CA BR	CALAMAGROSTIS BRACHYTRICHA	KOREAN FEATHER REED GRASS	CONT.	#1
MI ML	MISCANTHUS SINENSIS `MORNING LIGHT`	MORNING LIGHT MAIDEN GRASS	CONT.	#1
PA HM	PANICUM VIRGATUM `HEAVY METAL`	BLUE SWITCH GRASS	CONT.	#1
PA SH	PANICUM VIRGATUM `SHENANDOAH`	SWITCH GRASS	CONT.	#1
PERENNIALS AC MO HE HB HE SA HO PA VE SN	BOTANICAL NAME ACHILLEA X `MOONSHINE` HEUCHERA X `HARVEST BURGUNDY` HEUCHERA X `SNOW ANGEL` HOSTA FORTUNEI `PATRIOT` VERONICA SNOWMASS	<u>COMMON NAME</u> MOONSHINE YARROW HARVEST BURGUNDY CORAL BELLS SNOW ANGEL CORAL BELLS PATRIOT HOSTA SNOWMASS BLUE-EYED SPEEDWELL	ROOT CONT. CONT. CONT. CONT. CONT.	<u>SIZE</u> #1 #1 #1 #1

B B M B M CHECKED BY: DRAWN BY:

KEY MAP



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BR BM CHECKED BY: DRAWN BY:

EN	TS	
PE	NUMBER REQUIRED	NUMBER PROVIDED
	12 TREES	12 TREES
	10 TREES	10 TREES
		XX TREES TOTAL

LEGEND

\frown	
•)	DECIDUOUS CANOPY TREES
	DECIDUOUS ORNAMENTAL TF
	EVERGREEN TREES
· (+)	EXISTING TREES TO REMAIN AND BE PROTECTED
	EVERGREEN SHRUBS
$\odot \odot \odot$	DECIDUOUS SHRUBS
*	ORNAMENTAL GRASS
⊖ ⊖⊖@©	PERENNIALS
* * * * * * * * *	LOW GROW NATIVE GRASS S
$\begin{array}{c} + & + & + & + & + & + \\ + & + & + & + &$	BIORETENTION GRASS SEED
	CRUSHER FINES
	CONCRETE
	5-8" RIVER ROCK COBBLE MU
	1 ¹ / ₂ " RIVER ROCK COBBLE MU
	SOD LAWN
	EXISTING MULTIPLE USE FIEI
	WOOD MULCH LANDSCAPE B
	BENDA BOARD EDGER
	LOT LINE

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OVERALL
EXHIBIT C
LP-101

CALCULATIONS	$\begin{array}{c} \bullet \bullet$
KING AREA:	9,006 SQ. FT.
/IDED:	5,879 SQ. FT.

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SHEET TITLE:
SNOW
STORAGE
<u> </u>
EXHIBIT C
LP-201

IRRIGATION NOTES

- 1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL BY THE TIME OF FINAL INSPECTION. THE ENTIRE IRRIGATION SYSTEM SHALL BE INSTALLED BY A QUALIFIED IRRIGATION CONTRACTOR.
- 2. THE IRRIGATION SYSTEM SHALL BE SERVED BY THE EXISTING NON-POTABLE WATER
- IRRIGATION SYSTEM THAT CURRENTLY SERVES ROARING FORK HIGH SCHOOL. 3. IF ANY PART OF THE IRRIGATION SYSTEM WILL OPERATE ON POTABLE WATER, THE SYSTEM
- WILL HAVE APPROPRIATE BACKFLOW PREVENTION DEVICES INSTALLED TO PREVENT CONTAMINATION OF THE POTABLE WATER SOURCE. 4. ALL SHRUB BEDS WILL BE DRIP BUBBLER IRRIGATED. SOD AND SEED AREAS SHALL RECEIVE
- SPRAY IRRIGATION FOR HEAD TO HEAD COVERAGE. 5. ALL PLANTS SHARING SIMILAR HYDROZONE CHARACTERISTICS SHALL BE PLACED ON A
- VALVE DEDICATED TO PROVE THE NECESSARY WATER REQUIREMENTS SPECIFIC TO THAT HYDROZONE.
- 6. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED, TO THE MAXIMUM EXTENT POSSIBLE, TO CONSERVE WATER BY USING THE FOLLOWING DEVICES AND SYSTEMS: MATCHED PRECIPITATION RATE TECHNOLOGY ON ROTOR AND SPRAY HEADS (WHEREVER POSSIBLE), RAIN SENSORS AND SMART MULTI-PROGRAM COMPUTERIZED IRRIGATION CONTROLLERS FEATURING SENSORY INPUT CAPABILITIES.

LEGEND

SPRAY IRRIGATION - SOD: 32,745 SF

DRIP BUBBLER IRRIGATION - BEDS:16,558

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SPRAY IRRIGATION - SEED: 3219

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TREES TO BE PROTECTED AND PRESERVED SHALL BE IDENTIFIED ON THE TRUNK WITH WHITE SURVEY TAPE. GROUPING OF MORE THAN ONE TREE MAY OCCUR

- 2. TO PREVENT ROOT SMOTHERING, SOIL STOCKPILES, SUPPLIES, EQUIPMENT OR ANY OTHER MATERIAL SHALL NOT BE PLACED OR STORED WITHIN THE DRIP LINE OR WITHIN 15 FEET OF A TREE TRUNK, WHICHEVER IS GREATER.
- FENCING MATERIAL SHALL BE SET AT THE DRIP LINE OR 15 FEET FROM TREE TRUNK, WHICHEVER IS GREATER, AND 3. MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, AND A MINIMUM OF FOUR FEET IN HEIGHT. TREE ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE.
- WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. 6 ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. ROOTS SHALL BE CUT NO MORE THAN 1/3 OF THE RADIUS FROM DRIPLINE TO TRUNK. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING. DURING DORMANCY PERIOD. ROOT STIMULATOR SHALL BE APPLIED TO CUT ROOTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST.WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR
- WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. ROOT CUTS SHOULD BE MADE BACK TO A LATERAL ROOT. WHENEVER POSSIBLE, ROOTS SHOULD BE CUT BETWEEN LATE FALL AND BUD OPENING, DURING DORMANCY PERIOD. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST. WATERING OF PROTECTED TREES IN WHICH ROOTS WERE CUT SHALL BE PROVIDED BY THE CONTRACTOR
- 8. ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE SHOULD BE AVOIDED FOR EXISTING TREES TO REMAIN. RETAINING WALLS AND TREE WELLS ARE ACCEPTABLE ONLY WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.

<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><list-item><list-item><list-item><list-item><section-header><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></list-item></section-header></list-item></list-item></list-item></list-item></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>	(1) TREE PROTECTION	
 3 TREETERNTING DETAIL 3 TREETERNTING DETAIL 3 ET SHRUB ROOT-BALL 1" HIGHER THAN FINISH GRADE 4 SET SHRUB ROOT-BALL 1" HIGHER THAN FINISH GRADE 4 SPECIFIED MULCH, REFER TO MATERIAL SCHEDULE, SHEET LXX 5 SHRUB PLANTING 	 PRUNING NOTES: ALL PRUNING SHALL COMPLY WITH ANSI A300 STANDARDS. DO NOT HEAVILY PRUNE THE TREE AT PLANTING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS AND BROKEN BRANCHES. SOME INTERIOR TWIGS AND LATERAL BRANCHES MAY BE PRUNED. HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN. STAKING NOTES: STAKE TREES PER FOLLOWING SCHEDULE, THEN REMOVE AT END OF FIRST GROWING SEASON. 1-1/2" CALIPER SIZE - MIN. 1 STAKE ON SIDE OF PREVAILING WIND (GENERALLY N.W. SIDE). 1-1/2" - 3" CALIPER SIZE - MIN. 2 STAKES - ONE ON N.W. SIDE, ONE ON S.W. SIDE (OR PREVAILING WIND SIDE AND 180° FROM THAT SIDE).	Image: Constrained state Image: Constate Image: Constate
 NOTE: BROKEN OR CRUMBLING ROOT-BALLS WILL BE REJECTED. CARE SHOULD BE TAKEN NOT TO DAMAGE THE SHRUB OR ROOT-BALL WHEN REMOVING IT FROM ITS CONTAINER. ALL JUNIPERS SHOULD BE PLANTED SO THE TOP OF THE ROOT-BALL OCCURS ABOVE THE FINISH GRADE OF THE MULCH LAYER. DIG PLANT PIT TWICE AS WIDE AND AS HIGH AS THE CONTAINER. PRUNE ALL DEAD OR DAMAGED WOOD PRIOR TO PLANTING, DO NOT PRUNE MORE THAN 20% OF LIMBS. SHRUB PLANTING 	3 THEET EANTING DE TALE	 SET SHRUB ROOT-BALL 1" HIGHER THAN FINISH GRADE FINISH GRADE (TOP OF MULCH) SPECIFIED MULCH, REFER TO MATERIAL SCHEDULE, SHEET L-XXX TILL IN SPECIFIED SOIL AMENDMENT TO A DEPTH OF 8" IN BED BACKFILLED AMENDED SOIL UNDISTURBED SOIL
	 NOTE: 1. BROKEN OR CRUMBLING ROOT-BALLS WILL BE REJECTED. 2. CARE SHOULD BE TAKEN NOT TO DAMAGE THE SHRUB OR ROOT-BALL WHEN REMOVING IT FROM ITS CONTAINER. 3. ALL JUNIPERS SHOULD BE PLANTED SO THE TOP OF THE ROOT-BALL OCCURS ABOVE THE FINISH GRADE OF THE MULCH LAYER. 4. DIG PLANT PIT TWICE AS WIDE AND AS HIGH AS THE CONTAINER. 5. PRUNE ALL DEAD OR DAMAGED WOOD PRIOR TO PLANTING, DO NOT PRUNE MORE THAN 20% OF LIMBS. 	SCALE: 1 1/2" = 1'-0"

LP-501

1) BOULDER, NATURALLY SET BOULDER SO THAT A MINIMUM 1/4 OF BOULDER IS BELOW FINISH GRADE, REFER TO MATERIAL SCHEDULE, SHEET LP-100

2 SPECIFIED MULCH, CRUSHER FINES OR COBBLE, REFER TO PLAN

(3) 3" MINIMUM ROAD BASE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY

(4) UNDISTURBED GRADE

409 Main Street Suite 207 P.O. Box 2320 Frisco, CO 80443 P 970.368.7068 www.norris-design.com

1 CONCRETE WALK

SCALE: 3/4" = 1'-0"

- 2) #4 REBAR 24" ON CENTER
- (3) 1" DEEP CONTROL JOINT
- (4) (2) #4 REBAR 24" ON CENTER
- (5) CONCRETE CURB, 2" RADIUS ON ALL EXPOSED EDGES, SLOPE TOP 1/4" PER FOOT TOWARD PLAYGROUND
- (6) ENGINEERED WOOD FIBAR SAFETY SURFACE, REFER TO MATERIAL SCHEDULE, SHEET LP-100
- (7) 3/4" WASHED GRAVEL
- (8) GEOTEXTILE FILTER /
- DRAINAGE MAT 95% STANDARD PROCTOR DENSITY

OWNER: ROARING FORK SD 400 SOPRIS AVE CARBONDALE, CO 81623 970.384.6000

SCALE: 1 1/2" = 1'-0"

1 CONCRETE WALK

- (2) MONOLITHIC CONCRETE CURB REFER TO DETAIL 6, SHEET LP-502
- (3) 2" RADIUS ON ALL EXPOSED EDGES
- (4) (3) #4 REBAR
- 5) #4 REBAR 18" ON CENTER
- 6 PLAY SAFETY SURFACE, REFER TO DETAIL 6, SHEET LP-XXX
- (7) TOOLED SCORE JOINTS, 6" APART
- (8) (2) #4 DOWELS 18" ON CENTER
- (9) SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY

SCALE: 3/4" = 1'-0"

DATE:
12/30/2022 SITE
REVIEW PACKAGE
SHEET TITLE:
LANDSCAPE
DETAILS
LP-502

SITE DATA

SITE AREA		149,781 \$	SF
		2	
		<u>)</u>	10
Studios	8 Units x 1.25 Sp 10 Units x 1.5 Sp	oaces	10 15
Two Bed Units	16 Units x 1.5 Sp 16 Units x 1.75 S	baces	28
Three Bed Units	16 Units x 2.5 S	oaces	40
Total Requir	ed		93
AUTOMOBILE PA	RKING Provided		
Standard			8/ 2
Handicap Van Acc	cessible		2
Total Provid	ed		91
BIKE PARKING Pro	ovided		
Total Provid	ed		44
PRIVATE OUTDO	<u>OR SPACE</u>		
Refer to Building I	loor Plans for Sp	pecific Patio /	Areas
REQUIRED SF BY	UNIT TYPE		
Unit Type One (fir	st floor)	Unit area 8	47 sf
84/ x .1 or 8 Total Provid	J st ad	Required 8	5 st
Unit Type One (se	cond floor)	I Init area 8	90 cf
890 x .05 or	60 sf	Required 6	0 sf
Total Provid	ed	103 sf	0.01
Unit Type Two (fir	st floor)	Unit area 1 [°]	191 sf
1191 x .1 or 8	0 sf	Required 1	19 sf
Total Provid	ed	175 sf	
Unit Type Two (se	econd floor)	Unit area 12	234 sf
1234 x .05 of Total Provid	r 60 st ad	Required 6	2 st
	eu first floor)	07-109 SI	DDE of
1325 x 1 or 8	R0 sf	Required 1	325 SI 33 sf
Total Provid	ed	178 sf	55 51
Unit Type Three (second floor)	Unit area 13	363 sf
1363 x .05 of	r 60 sf	Required 6	8 sf
Total Provid	ed	74 sf	
Unit Type Four (fi	rst floor)	Unit area 6	48 sf
648 x .1 or 8 Total Provid	0 st ed	Required 8	U st
Unit Type Four (a)	eu hove first floor)	Unit area 6	18 cf
648 x .05 or	60 sf	Required 6	
Total Provid	ed	61 sf	
Unit Type Five		Unit area 1 [°]	126 sf
1126 x .05 or	60 sf	Required 6	0 sf
Total Provid	ed	82-94 sf	
Unit Type Six		Unit area 8	85 sf
885 x .05 or Total Provid	60 st ed	Required 6	U st
	eu	I Init area A	12 cf
413 x .05 or	60 sf	Required 6	0 sf
Total Provid	ed	46-47 sf	
Minimum Ground	l Floor Dimentio	n	8' 6'
Minimum Opper			0
BULK STORAGE S	PACE	· · · · ·	
Reter to Building I	-loor Plans for Sp	pecitic Bulk S	torage
Areas by Unit			
REQUIRED SF BY	UNIT TYPE		
Unit Type One (fir	st floor)	Unit area 8	47 sf
041 X .33 Total Provid	ed	κequired 28 450 ft ³	ου π.
	acond floor)	Hnit area 0	90 cf
onic type one (se		Unit alta 0	

Required 294 ft³

Unit area 1191 sf

Required 393 ft³

Required 407 ft³ 544-561 ft³

Unit area 1325 sf

Required 437 ft³

Required 450 ft³

Unit area 648 sf

Required 214 ft³ 400-403 ft³

Unit area 1126 sf

Required 372 ft³ 500-503 ft³

Unit area 885 sf Required 292 ft³

Unit area 413 sf Required 136 ft³

450-488 ft³

350 ft³

450 ft³

524 ft³

524 ft³

561 ft³

890 x .33 Total Provided

1191 x .33

1234 x .33

1325 x .33

1363 x .33

648 x .33

1126 x .33

885 x .33

Unit Type Five

Unit Type Six

Unit Type Seven 413 x .33

Unit Type Two (first floor)

Total Provided

Total Provided Unit Type Three (first floor)

Total Provided

Total Provided

Unit Type Four (first floor)

Total Provided

Total Provided

Total Provided

Total Provided

Unit Type Two (second floor) Unit area 1234 sf

Unit Type Three (second floor) Unit area 1363 sf

21,396 sf 49,915 sf 3,132 sf 54,872 sf 54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	VILLAS DE Owner: Vil Zone: Resi Section: 3 Township: Subdivision Project
49,915 sf 3,132 sf 3,132 sf 34,443 sf 54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	VILLAS DE Owner: Vil Zone: Resi Section: 3 Township: Subdivision Project
3,132 sf 3,132 sf 3,132 sf 3,4,443 sf 3,4,443 sf 2,414 sf 2,414 sf 3,928 sf 35,338 sf	Owner: Vil Zone: Resi Section: 3 Township: Subdivision Project
) sf 34,443 sf 54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	Zone: Resi Section: 3 Township: Subdivision Project
34,443 sf 54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	Section: 3 Township: Subdivision Project
54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	Township: Subdivision Project
54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	Subdivision Project
54,872 sf 5,124 sf 2,414 sf ,928 sf 55,338 sf	Project
5,124 sf 2,414 sf ,928 sf 55,338 sf	Project
2,414 sf ,928 sf 55,338 sf	
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55,338 sf	
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SITE BENCHMARK - REFER TO C	
ELEVATION = 622	2.5'
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	EN PROPE
FPD CAMPUS	EW PROPERTY IS
. <u>FPD CAMPUS</u> nd RFPD	W PROPERTY LINE
FPD CAMPUS nd RFPD	EN PROPERTY LINE
	SITE BENCHMARK - REFER TO C ELEVATION = 622

Township: 8 Range: 88 A TR in Lots 7 and 9

	Site Plan
)	SCALE: 1" - 30'

SCALE: 1" = 30'

	Unit Floor Area	Building A	Quantity	Area	Building B	Quantity	Area	Building C	Quantity	Area	Total Area
Unit Type 1 // Two Bed (First Floor)	847		4	3388		2	1694				5082
Unit Type 1 // Two Bed (Second Floor)	890		3	2670		2	1780				4450
Type A Unit // Two Bed (accessible)	939		1	939			939				1878
Unit Type 2 // Three Bed (First Floor)	1191					3	3573				3573
Unit Type 2 // Three Bed (Second Floor)	1234					3	3702				3702
Unit Type 3 // Three Bed (First Floor)	1325					1	1325				1325
Unit Type 3 // Three Bed (Second Floor)	1363					1	1363				1363
Unit Type 4 // One Bed	648								9	5832	5832
Type A Unit // One Bed (accessible)	748								1	748	748
Unit Type 5 // Three Bed	1126								8	9008	9008
Unit Type 6 // Two Bed	885								4	3540	3540
Unit Type 7 // Studio	413								8	3304	3304
Common Area, Outdoor Patios & Bulk Storage				1014			809			3332	5155
Enclosed Building Total			8	8011		12	15185		30	25764	48960
Building Area Total				8910			16016			32596	57522

TO AMENITY OPEN SPACE

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Staff Housing \sim 81623 ive \Box Ο RFSD Meadowood S Meadowood Carbondale CC $\overline{\mathbf{O}}$

issue date: 12/30/22 Site Review Package

revisions:

project RFSD Meadowood Staff Housing

drawing title Building A Floor Plans

AS NOTED drawing scale drawing number

Building A

Building B

Building C

Site Total

Unit Type (First Flo

Unit Type (Second Type A U (accessit

Unit Type (First Flo Unit Type (Second

Unit Type (First Flo Unit Type (Second

Unit Type Type A U (accessit

Unit Type Unit Type

Unit Type

Common Patios &

Enclosed Building

Building Unit Mix Matrix

Unit and Building Areas

	Unit Floor Area	Building A	Quantity	Area	Building B	Quantity	Area	Building C	Quantity	Area	Total Area
e 1 // Two Bed or)	847		4	3388		2	1694				5082
e 1 // Two Bed Floor)	890		3	2670		2	1780				4450
nit // Two Bed ble)	939		1	939			939				1878
e 2 // Three Bed or)	1191					3	3573				3573
e 2 // Three Bed Floor)	1234					3	3702				3702
e 3 // Three Bed or)	1325					1	1325				1325
e 3 // Three Bed Floor)	1363					1	1363				1363
e 4 // One Bed	648								9	5832	5832
nit // One Bed ble)	748								1	748	748
e 5 // Three Bed	1126								8	9008	9008
e 6 // Two Bed	885								4	3540	3540
e 7 // Studio	413								8	3304	3304
a Area, Outdoor Bulk Storage				1014			809			3332	5155
Building Total			8	8011		12	15185		30	25764	48960
Area Total				8910			16016			32596	57522

jvD LLC 1910 7th Street, Third Floor Boulder, Colorado 80302 720.301.0500 jv@jvdesousa.com

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Staff Housing Drive D 81623 RFSD Meadowood S Meadowood I Carbondale CO Ο

issue date: 12/30/22 Site Review Package

revisions:

project RFSD Meadowood Staff Housing

drawing title Building B Floor Plans

AS NOTED drawing scale drawing number

Building A

Building B

Building C

Site Total

Unit Type (First Flo Unit Type (Second Type A U (accessit

Unit Type (First Flo Unit Type (Second

Unit Type (First Flo Unit Type (Second

 \bigotimes^{\prime}

Unit Type Type A U (accessit

Unit Type Unit Type

Unit Type

Common Patios &

Building

TO ACCESS DRIVE

Building Unit Mix Matrix

Unit and Building Areas

	nit Floor Area	uilding A	uantity	ea	uilding B	uantity	ea	uilding C	uantity	ea	otal Area
Unit Type 1 // Two Red	5	Ê	ā	A	D	ā	A	2	ā	A	Ц
(First Floor)	847		4	3388		2	1694				5082
Unit Type 1 // Two Bed (Second Floor)	890		3	2670		2	1780				4450
Type A Unit // Two Bed (accessible)	939		1	939			939				1878
Unit Type 2 // Three Bed (First Floor)	1191					3	3573				3573
Unit Type 2 // Three Bed (Second Floor)	1234					3	3702				3702
Unit Type 3 // Three Bed (First Floor)	1325					1	1325				1325
Unit Type 3 // Three Bed (Second Floor)	1363					1	1363				1363
Unit Type 4 // One Bed	648								9	5832	5832
Type A Unit // One Bed (accessible)	748								1	748	748
	1100								•	0000	0000
Unit Type 5 // Three Bed	1126								8	9008	9008
Unit Type 6 // Two Red	885								1	3540	3540
onit type o // two bed	000								-	0040	0040
Unit Type 7 // Studio	413								8	3304	3304
Common Area, Outdoor Patios & Bulk Storage				1014			809			3332	5155
Enclosed Building Total			8	8011		12	15185		30	25764	48960
Building Area Total				8910			16016			32596	57522

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Staff Housing Drive D 81623 \bigcirc RFSD Meadowood S Meadowood I Carbondale CO

issue date: 12/30/22 _Site Review Package

revisions:

^{project} RFSD Meadowood Staff Housing

drawing title Building B Roof Plan

drawing scale AS NOTED drawing number

Building Unit Mix Matrix

8

Building A

Building B

Building C

Site Total

Unit and Building Areas

Unit Type (First Floo

Unit Type (Second Type A U (accessit

Unit Type (First Flo Unit Type (Second

Unit Type (First Floo Unit Type (Second

Unit Type Type A U (access

Unit Type Unit Type

Unit Type

Common Patios &

| 10 | 16 | 16 | 50

One Bedroom Two Bedroom Three Bedroom

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Staff Housing 81623 Drive Ο RFSD Meadowood S Meadowood I Carbondale CO

issue date: 12/30/22 Site Review Package

revisions:

project RFSD Meadowood Staff Housing

drawing title Building C First and Second Floor Plans

drawing scale AS NOTED drawing number

	Unit Floor Area	Building A	Quantity	Area	Building B	Quantity	Area	Building C	Quantity	Area	Total Area
a 1 // Two Bed or)	847		4	3388		2	1694				5082
1 // Two Bed Floor)	890		3	2670		2	1780				4450
nit // Two Bed ble)	939		1	939			939				1878
e 2 // Three Bed or)	1191					3	3573				3573
2 // Three Bed Floor)	1234					3	3702				3702
e 3 // Three Bed or)	1325					1	1325				1325
3 // Three Bed Floor)	1363					1	1363				1363
4 // One Bed	648								9	5832	5832
nit // One Bed ble)	748								1	748	748
5 // Three Bed	1126								8	9008	9008
6 // Two Bed	885								4	3540	3540
									•		0010
7 // Studio	413								8	3304	3304
Area, Outdoor Bulk Storage				1014			809			3332	5155
Building Total			8	8011		12	15185		30	25764	48960
Area Total				8910			16016			32596	57522

TO AMENITY OPEN SPACE

TO PARKING AND DRIVE AISLE

 $\bigotimes^{\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!}$

Building B

Building C

Site Total

Unit Type (First Flo Unit Type (Second Type A U (accessit

Unit Type (First Flo Unit Type (Second

Unit Type (First Flo Unit Type (Second

Unit Type Type A U (accessi

Unit Type Unit Type

Unit Type

Common Patios &

Enclosed Building

Building Unit Mix Matrix

10 16 16 50

One Bedroom Two Bedroom Three Bedroom

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RFSD Meadowood Staff Housing Meadowood Drive Carbondale CO 81623

issue date: 12/30/22 Site Review Package

revisions:

project RFSD Meadowood Staff Housing

drawing title Buidling C Third and Roof Plans

drawing scale AS NOTED drawing number

Unit and Building Areas

8

	Unit Floor Area	Building A	Quantity	Area	Building B	Quantity	Area	Building C	Quantity	Area	Total Area
e 1 // Two Bed or)	847		4	3388		2	1694				5082
e 1 // Two Bed Floor)	890		3	2670		2	1780				4450
nit // Two Bed ble)	939		1	939			939				1878
e 2 // Three Bed or)	1191					3	3573				3573
e 2 // Three Bed Floor)	1234					3	3702				3702
e 3 // Three Bed or)	1325					1	1325				1325
e 3 // Three Bed Floor)	1363					1	1363				1363
e 4 // One Bed	648								9	5832	5832
nit // One Bed ble)	748								1	748	748
e 5 // Three Bed	1126								8	9008	9008
e 6 // Two Bed	885								4	3540	3540
e 7 // Studio	413								8	3304	3304
n Area, Outdoor Bulk Storage				1014			809			3332	5155
d Building Total			8	8011		12	15185		30	25764	48960
Area Total				8910			16016			32596	57522

Elevation Keynotes	
1. Roofing	
1.01	TPO Membrane Roofing
1.02	Asphalt Shingle Roofing
1.03	Metal Wall Cap
2. Cladding/Siding	
2.01	Stucco
2.02	James Hardie Aspyre Shipl Primary Color
2.03	James Hardie Aspyre Shipl Secondary Color
2.04	Cement Fiber Board and Batten
2.06	Aspyre Shiplap - Furred - Primary Color
2.07	Cement Fiber Board and Batten - Furred
3. Windows/Doors	
3.01	Anderson 100 Low SHGC
3.02	Anderson 100 low U-Value North and Northwest expo
3.03	Unit Entry Door
3.04	Stair Entry Door
3.05	Anderson 100 Sliding Glas Door
3.06	Glass Unit Entry Door
3.07	Storage Room Door
3.08	Utility Entry Door
4. Other Materials and Systems	
4.01	Private Outdoor Balcony
4.02	Balcony Railing
4.03	Entry Awning

Stucco James Hardie Aspyre Shiplap -Primary Color James Hardie Aspyre Shiplap -Secondary Color Cement Fiber Board and Batten Aspyre Shiplap - Furred -Primary Color Cement Fiber Board and Batten - Furred Anderson 100 Low SHGC -East, South, West Elevations Anderson 100 low U-Value for North and Northwest exposure Unit Entry Door

Stair Entry Door Anderson 100 Sliding Glass Door Glass Unit Entry Door Storage Room Door Utility Entry Door

Private Outdoor Balcony Balcony Railing Entry Awning Steel Column

MATERIALS PALETTE

4.04

CEMENT FIBER SHIPLAP

DIPLA	Ρ		
			_

STUCCO

#DFD3C3

North East Elevation SCALE: 1/8" = 1'-0"

and fabrication shall remain the responsibility of the contractor or fabricator. All ideas, designs, arrangements and plans indicated or presented by these drawings are the property of the Architect, and were created for use in connection with the specified project.

T.O. FIRST FLOOR SHEATHING 100.00

0 4' 8'

Staff Housing \odot Drive 0 81623 RFSD Meadowood S Meadowood I Carbondale CO Ο

issue date: 12/30/22 Site Review Package

revisions:

project RFSD Meadowood Staff Housing

drawing title Building A Elevations

drawing scale AS NOTED drawing number

Elevation Keynotes

4.03

4.04

MATERIALS PALETTE

STUCCO

	,	
1. Roofing		
	1.01	TPO Membrane Roofing
	1.02	Asphalt Shingle Roofing
	1.03	Metal Wall Cap
2. Cladding/	/Siding	
	2.01	Stucco
	2.02	James Hardie Aspyre Shiplap - Primary Color
	2.03	James Hardie Aspyre Shiplap -
	2.04	Cement Fiber Board and
	2.06	Aspyre Shiplap - Furred - Primary Color
	2.07	Cement Fiber Board and Batten - Furred
3. Windows,	/Doors	
	3.01	Anderson 100 Low SHGC - Fast South West Elevations
	3.02	Anderson 100 low U-Value for North and Northwest exposure
	3.03	Unit Entry Door
	3.04	Stair Entry Door
	3.05	Anderson 100 Sliding Glass Door
	3.06	Glass Unit Entry Door
	3.07	Storage Room Door
	3.08	Utility Entry Door
4. Other Ma	terials and Systems	
	4.01	Private Outdoor Balcony
	4.02	Balcony Railing

Entry Awning

Steel Column

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issue date: 12/30/22 Site Review Package

revisions:

Elevation Keynotes

1. Roofing		
	1.01	TPO Membrane Roofing
	1.02	Asphalt Shingle Roofing
	1.03	Metal Wall Cap
2. Cladding	/Siding	
	2.01	Stucco
	2.02	James Hardie Aspyre Shiplap - Primary Color
	2.03	James Hardie Aspyre Shiplap - Secondary Color
	2.04	Cement Fiber Board and Batten
	2.06	Aspyre Shiplap - Furred - Primary Color
	2.07	Cement Fiber Board and Batten - Furred
3. Windows	/Doors	
	3.01	Anderson 100 Low SHGC -
	3.02	Anderson 100 low U-Value for North and Northwest exposure
	3.03	Unit Entry Door
	3.04	Stair Entry Door
	3.05	Anderson 100 Sliding Glass Door
	3.06	Glass Unit Entry Door
	3.07	Storage Room Door
	3.08	Utility Entry Door
4. Other Ma	aterials and Systems	
	4.01	Private Outdoor Balcony
	4.02	Balcony Railing

Railing 4.03 Entry Awning

Steel Column

COLORS

#CDD2D2

#727C7F

#3E4749

#DFD3C3

4.04

MATERIALS PALETTE

CEMENT FIBER BOARD AND BATTEN

CEMENT FIBER

SHIPLAP

STUCCO

1

LONGITUDE :107.2112 W LATITUDE: 39.4022 N ELEVATION: 6222.5'

SUN LOCATION AT 2PM DECEMBER 21 ALTITUDE: 21.87 DEGREES AZIMUTH: 27.82 DEGREES

SHADOW LENGTH CALCULATIONS 2PM

	Roof height above grade in feet	Solar altitude (sun angle at 2 pm)	Shadow length in feet
Building C			
Α	31.9	21.87	79.47
В	31.9	21.87	79.47
С	37.4	21.87	93.18
D	31.5	21.87	78.48
E	35.2	21.87	87.70
F	35.2	21.87	87.70
G	35.2	21.87	87.70
н	35.2	21.87	87.70
I	37.7	21.87	93.92
J	31.2	21.87	77.73
Building A			
Α	22.7	21.87	56.55
В	29.1	21.87	72.50
С	21.3	21.87	53.07
D	21.3	21.87	53.07
E	29.1	21.87	72.50
F	29.1	21.87	72.50
G	21.3	21.87	53.07
Н	21.3	21.87	53.07
1	29.1	21.87	72.50
J	20.9	21.87	52.07
К	20.9	21.87	52.07
L	25.2	21.87	62.78
М	19.6	21.87	48.83
Ν	10.5	21.87	26.16
25' Solar Fence			
	25	21.87	62.28

jvD LLC 1910 7th Street, Third Floor Boulder, Colorado 80302 720.301.0500 jv@jvdesousa.com

All contents of this document expresses design intent only. FInal engineering and fabrication shall remain the responsibility of the contractor or fabricator. All ideas, designs, arrangements and plans indicated or presented by these drawings are the property of the Architect, and were created for use in connection with the specified project.

RFSD Meadowood Staff Housing Meadowood Drive Carbondale CO 81623

revisions:

_{project} RFSD Meadowood Staff Housing

drawing title Solar Study

drawing scale AS NOTED drawing number

LONGITUDE :107.2112 W LATITUDE: 39.4022 N ELEVATION: 6222.5'

SUN LOCATION AT 10AM DECEMBER 21 ALTITUDE: 20.49 DEGREES AZIMUTH: -31.08 DEGREES

SHADOW LENGTH CALCULATIONS 10AM

	roof height above grade in feet	solar altitude (sun angle at 2 pm)	shadow length in feet
Building C			
Α	31.9	20.49	85.37
В	31.9	20.49	85.37
С	37.4	20.49	100.08
D	31.5	20.49	84.30
E	35.2	20.49	94.20
F	35.2	20.49	94.20
G	35.2	20.49	94.20
н	35.2	20.49	94.20
I	37.7	20.49	100.89
J	31.2	20.49	83.49
Building A			
Α	22.7	20.49	60.75
В	29.1	20.49	77.87
С	21.3	20.49	57.00
D	21.3	20.49	57.00
E	29.1	20.49	77.87
F	29.1	20.49	77.87
G	21.3	20.49	57.00
н	21.3	20.49	57.00
I	29.1	20.49	77.87
J	20.9	20.49	55.93
к	20.9	20.49	55.93
L	25.2	20.49	67.44
м	19.6	20.49	52.45
Ν	10.5	20.49	28.10
25' Solar Fence			
	25	20.49	66.90

jvD LLC 1910 7th Street, Third Floor Boulder, Colorado 80302 720.301.0500 jv@jvdesousa.com

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RFSD Meadowood Staff Housing Meadowood Drive Carbondale CO 81623

revisions:

_{project} RFSD Meadowood Staff Housing

drawing title Solar Study

drawing scale AS NOTED drawing number

t CARBONDALE SCHOOL\CIVIL\CIVIL DWGS\PLOT\32024-5-GRADING AND DRAINAGE PLAN.DWG - Jan 03, 2023 - 10:49p

NOFF DRA	AINAGE (CALCULA	TIONS							
, 10-MIN,	EXISTING	PEAK RU	NOFF SUM	MARY	100-Y	R, 10-MIN,	EXISTING	5 PEAK RU	NOFF SUM	MARY
%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
15%	0.18	2.68	0.857	0.41	EX-1	15%	0.50	4.37	0.857	1.87
2%	0.07	2.68	1.151	0.22	EX-2	2%	0.44	4.37	1.151	2.21
2%	0.07	2.68	0.795	0.15	EX-3	2%	0.44	4.37	0.795	1.53
10-MIN, D	EVELOPE	D PEAK R	UNOFF SUN	/IMARY	100-YR,	, 10-MIN, D	DEVELOPI	ED PEAK R	UNOFF SUI	MMARY
51%	0.46	2.68	0.857	1.06	P-1	51%	0.66	4.37	0.857	2.47
75%	0.66	2.68	1.151	2.04	P-2	75%	0.78	4.37	1.151	3.92
62%	0.56	2.68	0.795	1.19	P-3	62%	0.72	4.37	0.795	2.50
OF CONCE	NTRATION	WAS AS	SUMED TO	BE EQUAL	TO 10 MI	NUTES.				
	NOFF DRA , 10-MIN, % IMPERV. 15% 2% 2% 2% 10-MIN, D 51% 75% 62% DF CONCE	NOFF DRAINAGE (, 10-MIN, EXISTING % C ₁₀ IMPERV. 15% 0.18 2% 0.07 2% 0.07 2% 0.07 10-MIN, DEVELOPE 51% 0.46 75% 0.66 62% 0.56 DF CONCENTRATION	NOFF DRAINAGE CALCULA , 10-MIN, EXISTING PEAK RU % C10 I10 IMPERV. (in/hr) 15% 0.18 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 51% 0.46 2.68 75% 0.66 2.68 62% 0.56 2.68 DF CONCENTRATION WAS ASS 0.56 0.56	NOFF DRAINAGE CALCULATIONS 10-MIN, EXISTING PEAK RUNOFF SUM % C10 I10 AREA IMPERV. (in/hr) (acres) 15% 0.18 2.68 0.857 2% 0.07 2.68 1.151 2% 0.07 2.68 0.795 10-MIN, DEVELOPED PEAK RUNOFF SUN S1% 0.46 2.68 0.857 51% 0.46 2.68 0.857 S1% 0.46 2.68 0.857 51% 0.46 2.68 0.857 0.51% 0.46 2.68 0.795 51% 0.46 2.68 0.795 0.66 2.68 0.795 62% 0.56 2.68 0.795 0.795 0.795 0.795	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY % C ₁₀ I ₁₀ AREA Q ₁₀ IMPERV. (in/hr) (acres) (cfs) 15% 0.18 2.68 0.857 0.41 2% 0.07 2.68 1.151 0.22 2% 0.07 2.68 0.795 0.15 IO-MIN, DEVELOPED PEAK RUNOFF SUMMARY 51% 0.46 2.68 0.857 1.06 75% 0.66 2.68 1.151 2.04 62% 0.56 2.68 0.795 1.19 DF CONCENTRATION WAS ASSUMED TO BE EQUAL	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YI % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN IMPERV. (in/hr) (acres) (cfs) I.D. 15% 0.18 2.68 0.857 0.41 EX-1 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.07 2.68 0.795 0.15 EX-3 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 51% 0.46 2.68 0.857 1.06 P-1 75% 0.66 2.68 1.151 2.04 P-2 62% 0.56 2.68 0.795 1.19 P-3	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN % IMPERV. (in/hr) (acres) (cfs) I.D. IMPERV. 15% 0.18 2.68 0.857 0.41 EX-1 15% 2% 0.07 2.68 1.151 0.22 EX-2 2% 2% 0.07 2.68 0.795 0.15 EX-3 2% 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, D 100-YR, 10-MIN, D 100-YR, 10-MIN, D 51% 0.46 2.68 0.857 1.06 P-1 51% 75% 0.66 2.68 1.151 2.04 P-2 75% 62% 0.56 2.68 0.795 1.19 P-3 62%	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN % C ₁₀₀ IMPERV. (in/hr) (acres) (cfs) I.D. IMPERV. 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, DEVELOPED 0.46 2.68 0.857 1.06 P-1 51% 0.66 75% 0.66 2.68 1.151 2.04 P-2 75% 0.78 62% 0.56 2.68 0.795 1.19 P-3 62% 0.72	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING PEAK RUNOFF SUMMARY % C10 I100 AREA Q10 BASIN % C100 I100 MPERV. (in/hr) (acres) (cfs) I.D. IMPERV. (in/hr) 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 4.37 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, DEVELOPED PEAK R 51% 0.46 2.68 0.857 1.06 P-1 51% 0.66 4.37 75%	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING PEAK RUNOFF SUM (in/hr) AREA Q10 BASIN % C100 I100 AREA % C10 I10 AREA Q10 BASIN % C100 I100 AREA MPERV. (in/hr) (acres) (cfs) I.D. IMPERV. (in/hr) (acres) 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 4.37 0.857 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 4.37 1.151 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 0.795 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 0.795 2% 0.07 2.68 0.857 1.06 P-1 51% 0.66 4.37 0.857 51% 0.46

	-/									
1-HR, E>	(IST DETEN	ITION RUN	OFF SUMM	ARY	100-	YR, 1-HR E	XIST DETEN	NTION RUN	IOFF SUMN	1ARY
%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
/IPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
15%	0.18	0.777	0.857	0.120	EX-1	15%	0.50	1.19	0.857	0.510
2%	0.07	0.777	1.151	0.063	EX-2	2%	0.44	1.19	1.151	0.603
2%	0.07	0.777	0.795	0.043	EX-3	2%	0.44	1.19	0.795	0.416
IR DEVE	LOPED DET	FENTION R	UNOFF SUN	/MARY	100-YR,	1-HR DEVE	LOPED DE	TENTION F	UNOFF SU	MMARY
51%	0.46	0.777	0.857	0.306	P-1	51%	0.66	1.19	0.857	0.673
75%	0.66	0.777	1.151	0.590	P-2	75%	0.78	1.19	1.151	1.069
62%	0.56	0.777	0.795	0.346	P-3	62%	0.72	1.19	0.795	0.681
0011051	TRATION					TEC				

		TOTLAR	THOORSI			
	EX Q ₁₀	DE Q ₁₀	+/- Q	DET. REQ.	POST DET	DET.
-	(cfs)	(cfs)	(cfs)	(cf) [1]	Q10 (cfs)	PROV. (cf)
/	0.23	1.24	1.02	3,691	0.00	4,984
	[1] REQUIRED DETEN	TION CALCULA	TED USING THI	RATIONAL METI	HOD DETENTIO	N VOLUME

/	
DRAIN TIME	
(HR)	
14.6	
15 7	
10.7	

	_					
10 YEAR - 1 HOUR STORAGE						
Duration=	60	minutes				
P =	0.777					
RUNOFF VOLUME - Vr=C*(P/12)*A						
BASIN	Vr	Vr				
I.D.	(ac-ft)	(CF)				
EX-1	0.010	435				
EX-2	0.005	227				
EX-3	0.004	157				
P-1	0.026	1,112				
P-2	0.049	2,143				
P-3	0.029	1,256				

10-YR, 1-HR, HISTORIC PEAK RUNOFF SUMMARY			100-YR, 1-HR, HISTORIC PEAK RUNOFF SUMMARY								
BASIN	%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
H-1	8%	0.12	0.777	11.940	1.11	H-1	8%	0.46	1.19	11.940	6.54
10-YR, 1-HR, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 1-HR,						R, 1-HR, DE	DEVELOPED PEAK RUNOFF SUMMARY				
X-1	22%	0.23	0.777	11.940	2.13	X-1	22%	0.53	1.19	11.940	7.53
L] TIME	OF CONCEN	VTRATIO	N WAS AS	SUMED TO	BE EQUAL	TO 10 MI	NUTES.				
21 RATIC	NAL C FAC	TORS ARE	E BASED O	N THE PER	CENT IMPI	ERVIOUS F	ROM TABL	E 6-5 OF (5 OF THE UI	DFCD -

10 YEAR - 1 HOUR STORAGE SUMMARY						
EX Q ₁₀	DE Q ₁₀	+/- Q	DET. REQ.	POST DET	DET.	
(cfs)	(cfs)	(cfs)	(cf) [1]	Q10 (cfs)	PROV. (cf	
1.11	2.13	1.02	3,704	0.00	4,984	
1] REQUIRED DETENT	TION CALCULA	TED USING THE	RATIONAL MET	HOD DETENTIO	N VOLUME	
APPROACH.						

10 YEAR - 1 HOUR STORAGE				
Duration=	60	minutes		
P =	0.777			
RUNOFF VOLUME - Vr=C*(P/12)*A				
BASIN	Vr	Vr		
I.D.	(ac-ft)	(CF)		
H-1	0.093	4,041		
X-1	0.178	7,746		

100 YEAR - 1 HOUR STORAGE SUMMARY							
EX Q ₁₀₀ (cfs)	DE Q ₁₀₀ (cfs)	+/- Q (cfs)	DET. REQ. (cf) [1]	POST DET Q10 (cfs)	DET. PROV. (cf		
6.54	7.53	0.99	3,610	0.00	4,984		
REQUIRED DETENTION CALCULATED USING THE RATIONAL METHOD DETENTION VOLUME							

100 YEAR - 1 HOUR STORAGE						
Duration= 60 minutes						
P = 1.19						
RUNOFF VOLUME - Vr=C*(P/12)*A						
BASIN	Vr	Vr				
I.D.	(ac-ft)	(CF)				
H-1	0.545	23,726				
X-1	0.628	27,336				

:\32024 CARBONDALE SCHOOL\CIVILDWGS\PLOT\32024-4-UTILITY PLAN.DWG - Jan 03, 2023 - 10:45pm

Reilly O'Brien Project Manager Dynamic Project Management (303) 775-5051 Email: <u>reilly.obrien@dynamicpm.com</u>

RE: Roaring Fork School District (RFSD), Meadowood Drive Housing Development Exhibit H – Engineering Report – SE Job #32024.02

Dear Reilly,

Sopris Engineering, LLC (SE) has prepared the following Engineering Report to support a proposed housing development in Carbondale, Colorado. The subject site is located north of the Roaring Fork High School off Meadowood Drive. The property is bound on the north and east by the gravel parking lot and baseball field for the pickle ball courts and field owned by the Town, on the north and west by Meadowood Drive, on the south and west by the Carbondale Fire District training facility, and on the south by the practice fields for the high school. The information presented in this report is for a Major Site Plan Review by the Town. The project team is also proposing a lot line adjustment as further described below.

Background and Project Summary

The subject property is made up of Lot 2A and Lot 2B of the North Face Base Camp Subdivision. The majority of the proposed development will fall within the existing Lot 2A property. However, the development will go outside of the existing Lot 2A boundary so a lot line adjustment is being proposed to expand Lot 2A around the development.

The proposed development generally includes 50 residential units split between three buildings. Building A is a two story building located adjacent to Meadowood Drive and has eight 2-bed units. Building B is a two story building and parallels both Meadowood Drive and the existing asphalt access drive to the high school. Building B has four 2-bed units and eight 3-bed units. Building C is located along the north and east property line and is a 3-story building. It includes eight studio units, ten 1-bed units, four 2-bed units, and eight 3-bed units. Building C includes covered parking on the first level along with units. There are two stories of residential units located above the covered parking and first floor units. The development will include associated parking, landscaping, sidewalks, pathways, and utility improvements. The plat requirements have been included with the Major Site Plan Review Application.

There will be two accesses into the proposed development including one from Meadowood Drive at the north corner of the property and one off the existing asphalt driveway to the high school on the south side of the development. A central green space area will include two retention ponds for storm water collection of the impervious areas such as the parking lot, roads, and roofs of the buildings. Two drywell structures with grated inlet lids are proposed in the bottom of the ponds to promote infiltration into the soils.

Public improvements to serve and support the development generally include modifications to Meadowood Drive and the existing asphalt path for the north site access, sanitary sewer main and manhole installation, and installation of one fire hydrant to be located off the south corner of the property. The public improvements are proposed to be further described and outlined in a Development Improvements Agreement (DIA) as part of the Town process. A draft of the public improvements cost estimate has been attached to this report.

Existing Conditions

The existing site has historically been vacant land. The Roaring Fork High School was constructed on Lot 5B of the Subdivision along with an asphalt drive off Meadowood Drive. Soils generally consist of a small layer of topsoil $(\pm 6'')$ with a larger layer of gravel/sand/cobbles (essentially pitrun type material) beneath. The grade of the site generally sits higher than the road elevations that border the site with shallow grades from south east to north west. There is an existing ditch and drainage easement along the entire north and east property boundary. There is an irrigation, drainage, and utility easement along the north and west property boundary that parallels Meadowood Drive. Irrigation water for the site will be from a shared raw water irrigation system that currently serves the high school practice fields and the Town ball fields surrounding the site.

Proposed Lot Line Adjustment

The existing Lot 2A property is approximately 2.705-acres. The existing Lot 2B property is approximately 24.555acres. Lot 2A is proposed to be expanded to include the new improvements and will be approximately 3.439-acres. Resulting Lot 2B will be approximately 23.822-acres. See drawings and lot line adjustment plat for more details.

Vehicle Access and Traffic Review

Vehicles will access the subject site generally from Highway 133 and Meadowood Drive. Vehicles will be able to use two different accesses into the site including one directly from Meadowood Drive on the north side of the site and another that will utilize the existing asphalt drive off Meadowood Drive and then into the south side of the site. Emergency vehicle access to the site will be from the same routes.

SE has reached out to the fire department about emergency vehicle access to the site. The fire department has agreed that they have adequate access and can back their trucks directly onto Meadowood Drive if necessary. Either of the two accesses may be used for emergency vehicles.

A traffic count analysis was prepared by Kimley-Horn for this project to determine if a new highway access permit at Highway 133 and Meadowood Drive would be needed based on traffic generated from the development. If traffic generated exceeds 20% of the permitted traffic at a highway access, then a new access permit is triggered. Kimley-Horn reviewed the traffic counts at the Highway 133 and Meadowood Drive access and compared those counts to the anticipated traffic generated and offered the following conclusion:

The residential development is anticipated to generate 20 morning peak hour trips and 26 afternoon peak hour trips. Based on existing volumes for the east leg of the intersection being 118 morning vehicles and 112 afternoon vehicles, the afternoon peak hour project traffic contributes more than 20% to the east leg (23%: 26 project/112 existing). However, the existing CDOT Access Permit at the intersection allows up to 252 vehicles and the development is well within that threshold. Therefore, an access permit is not needed.

SE reached out to CDOT and received verification of the same conclusion that an access permit is not required for this development. An email chain between SE and CDOT is attached to this report for reference.



Drainage

The subject site will be increasing impervious area from the existing condition which will require stormwater detention/retention. The development is proposing to collect roof drainage in gutters and roof drains and to pipe that drainage to two separate drywells located at the bottom of two shallow retention ponds onsite. Surface drainage in the parking lots and roads will generally be directed to surface inlets and piped to the drywells. The proposed concrete sidewalk paths and landscape areas on the outside of the buildings that parallel Meadowood Drive and the asphalt access drive will generally direct surface runoff to the Meadowood Drive curb and gutter following existing drainage patterns.

A drywell is a BMP (Best Management Practice) that incorporates manhole structures with perforated barrel sections at the deeper depths. Washed, screened rock is installed around the exterior of the perforated barrel section. When sub-soils are capable of moderate to high infiltration rates (which is expected on this site), drywells are considered to be a viable BMP. They dramatically reduce the increased runoff and volume of stormwater generated from surrounding impervious area and promote infiltration; thereby improving the water quality of the stormwater runoff.

The system will be designed to retain the entire 10-year, 1-hour storm event in the storm infrastructure and retention ponds. Conclusions of the system design are anticipated to suggest that no adverse impacts to the subject property or surrounding properties will result from the proposed development. A separate drainage report with calculations and supporting analysis for the stormwater drainage and detention/retention system has been attached.

Construction Erosion Control

Temporary erosion control will be addressed in the Building Permit submittals. A state stormwater permit for erosion control will be necessary because the total disturbance area is more than 1.0 acre. The disturbance area will include the proposed Lot 2A property. The site will utilize erosion control which includes best management practices such as silt fence, log wattles, and truck tracking control onsite.

Utilities

Domestic Water System

The subject site falls within the Town of Carbondale's water service area. An 8-inch DIP water main exists under the asphalt access drive off Meadowood Drive. A 4-inch DIP water service is proposed off this line to serve Building B. Another 6-inch waterline service is proposed off this line to serve a proposed fire hydrant located at the south corner of the site. An 8-inch DIP water main also exists on the south and east side of Meadowood Drive. This line parallels Meadowood Drive and is within a utility easement that is on the subject property. Two 4-inch DIP water services are proposed off this line to serve Building A and a third 4-inch DIP water service is to come off this water main to serve Building C.

A fire hydrant exists at the north corner of the subject property and as stated previously, a new fire hydrant is proposed at the south corner of the site. SE has reached out to the fire department and received authorization that these two fire hydrants are sufficient to serve development on the subject site. All water improvements will be in compliance with the Town's rules, regulations, and specifications. See utility design drawings for more details.



Sanitary Sewer System

The subject site falls within the Town of Carbondale's sanitary sewer service area. An 8" SDR-35 PVC sewer main and three sewer manholes are proposed through the site with services from the three buildings tying into the main. The sewer main is to gravity feed to an existing manhole located in the existing asphalt path that parallels Meadowood Drive. The existing manhole is approximately 250-ft north of the subject property just west of the existing pickleball courts. All sewer improvements will be in compliance with the Town's rules, regulations, and specifications. See utility design drawings for more details.

SE performed a capacity analysis at the request of the Town to verify that the existing sewer main that the RFSD Housing development's proposed sewer will gravity feed to has sufficient capacity. The existing sewer main currently serves all developments on Roaring Fork Avenue including Villas De Santa Lucia, Carbondale South Condominiums, and the bathroom that serves the Town ballfields, pickleball, and tennis courts. When the RFSD housing development is added, and a hypothetical housing development the same size as the RFSD housing, it is estimated that the existing sewer main at Roaring Fork Avenue will run at approximately 50% capacity. Note that this analysis includes a peaking factor of 4 for the actual sewer flow rate in the pipe.

Electric/Telephone/Cable

Comcast, Lumen (formally CenturyLink), Ting Internet (formally Cedar Networks), and Xcel Energy utility conduits are proposed to be extended to pedestal, vault, and transformer/switch cabinet locations on the subject property. Services for each of these utilities will be extended from the pedestal and transformer locations to the buildings. All installation will be in accordance with utility company standards. All utility companies have been contacted and will serve letters have been requested. SE will confirm that service is available to the subject site and prepare detailed design for the Building Permit phase of the project. See utility drawings for more details.

Natural Gas

Gas service is not proposed and there are not any existing gas lines on the subject site that the team is aware of.

EQR Analysis

The following describes analysis prepared by SE for the number of EQRs generated for the housing development and the resulting water consumption. Note that because the development will be irrigated from a raw water distribution system, EQRs were not included for irrigation from the domestic waterline. The Town code allows a reduction in EQRs for single family development if irrigation is not from the domestic system. This single family reduction was used for the housing development for estimating purposes. SE has assumed 350 gal/day per EQR for water use and 300 gal/day per EQR for sewer use. It should be noted that this analysis should not be considered final and the number of EQRs and water usage will be determined by the Town attorney and Town water rights engineer. This analysis is for estimation and information purposes only.

In this analysis, multifamily units were tabulated with the corresponding EQRs per the Town code Table of EQRs in Section 13-3-20 and Section 13-10-50. The proposed housing development includes:

- (18) x Studio or 1-Bed units with 1 kitchen, up to 1,500 SF
- (16) x 2-Bed units with up to 1 ½ baths, 1 kitchen, up to 1,500 SF
- (16) x 3-Bed units with up to 2 baths, 1 kitchen, up to 2,000 SF
- ±33,900 SF of Irrigated Area



The Town's Table of EQRs shows the following EQR's per development type:

- Studio or 1-Bed units with 1 kitchen, up to 1,500 SF 0.6 EQR/unit
- 2-Bed units with up to 1 ½ baths, 1 kitchen, up to 1,500 SF 0.8 EQR/unit
- 3-Bed units with up to 2 baths, 1 kitchen, up to 2,000 SF 1.0 EQR/unit
- Reduction of 0.02 EQR/100 SF of lawn or landscaping irrigated from a nonmunicipal system

The Housing Development will generate the following EQR's per the Town code:

- Studio or 1-Bed units: 18 units x 0.6 EQR/unit = 10.8 EQRs
- 2-Bed units: 16 units x 0.8 EQR/unit = **12.8 EQRs**
- 3-Bed units: 16 units x 1.0 EQR/unit = 16.0 EQRs
- Irrigation Reduction: 33,900 SF x 0.02 EQR/100 SF = -6.8 EQRs

Total EQRs proposed for the housing development for water equals **32.8 EQRs**. Assuming 350 gal/day per EQR for water, this generates approximately **11,440 gal/day**.

Total EQR's proposed for the housing development for sewer equals **39.6 EQRs**. Note that no reduction is taken on the sewer side. Assuming 300 gal/day per EQR for sewer, this generates approximately **11,880 gal/day**.

Conclusion:

Based on the proposed layout and design, the existing and proposed access, drainage, traffic, utilities, irrigation, and site improvements have been addressed per the Town of Carbondale requirements for review and submittal.

If you have any questions or need any additional information, please call (970) 704-0311.

Sincerely, SOPRIS ENGINEERING, LLC

Kyle Sanderson, PE Project Manager

Attachments:

- DRAFT Public Improvements Cost Estimate
- Email Chain with CDOT
- Drainage Report



DRAFT - RFSD MEADOWOOD DEVELOPMENT ESTIMATED CONSTRUCTION COSTS FOR PUBLIC IMPROVEMENTS SE JOB #32024.02 - JANUARY 4, 2023

	ITEM	QUANTITY	UNIT	UNIT COST	Т	COST
GENE	RAL	•				
G1	MOBILIZATION	1.00	L.S.	\$ 9,000.00) \$	9,000.00
G2	CLEAR AND GRUB	1.00	L.S.	\$ 2,500.00) \$	2,500.00
G3	STRIP & STAGE TOPSOIL, ASSUME 6" THICK (ASSUME 15FT WIDE OVER SEWERLINE ONSITE)	75.00	C.Y.	\$ 15.00) \$	1,125.00
G4	TRAFFIC CONTROL	1.00	L.S.	\$ 5,000.00) \$	5,000.00
G5	SURVEY, CONSTRUCTION ADMIN, TESTING, AS BUILTS	1.00	L.S.	\$ 27,000.00) \$	27,000.00
SUBT	OTAL G1-G5				\$	44,625.00
DEM	DLITION					
D1	REMOVE EX MEADOWOOD DR CURB & GUTTER	75.00	L.F.	\$ 12.00) \$	900.00
D2	SAWCUT EX ASPHALT - CURB & PATH (MEADOWOOD DR) & HYDRANT (HIGH SCHOOL DR)	132.00	L.F.	\$ 7.00) \$	924.00
D3	REMOVE EX ASPHALT IN MEADOWOOD DR & ASPHALT PATH	305.00	S.Y.	\$ 15.00) \$	4,575.00
D4	REMOVE EX ASPHALT (HIGH SCHOOL DR FOR FIRE HYDRANT)	15.00	S.Y.	\$ 15.00) \$	225.00
D5	REMOVE ASPHALT AND CONCRETE FOR SHALLOW UTILTIES (ESTIMATE)	1.00	L.S.	\$ 6,500.00) \$	6,500.00
SUBT	OTAL D1-D5				\$	13,124.00
UTILI	TY, IRRIGATION, & STORM IMPROVEMENTS					
U1	8" SDR 35 SEWER LINE	560.0	L.F.	\$ 100.00) \$	56,000.00
U2	SEWER SERVICE WYES	3.0	EACH	\$ 550.00) \$	1,650.00
U3	4' DIA. MANHOLE	3.0	EACH	\$ 7,000.00) \$	21,000.00
U4	TIE INTO EXIST SEWER MANHOLE	1.0	EACH	\$ 1,000.00) \$	1,000.00
U5	FIRE HYDRANT ASSEMBLY AND VALVE	1.0	EACH	\$ 8,000.00) \$	8,000.00
U6	6" DIP WATERLINE (FIRE HYDRANT LINE)	16.0	L.F.	\$ 65.00) \$	1,040.00
U7	TAP WATER MAIN FOR FIRE HYDRANT LINE	1.0	EACH	\$ 5,000.00) \$	5,000.00
U8	4' UTILITY TRENCH - SHALLOW UTILITIES (ESTIMATED LENGTH)	300.00	L.F.	\$ 25.00) \$	7,500.00
U9	PREPARE BASE FOR XCEL TRANSFORMERS (ASSUME 3)	3.00	EACH	\$ 1,200.00) \$	3,600.00
SUBT	OTAL U1-U9				\$	104,790.00
					خطع	
ROAD	, CURB & GUTTER, VALLEY PAN, ASPHALT PATH, & LANDSCAPING IMPROVEMENTS					
S1	EXCAVATION & GRADING	1.00	L.S.	\$ 7,500.00) \$	7,500.00
S2	CLASS 6 ABC - MEADOWOOD DR & HIGH SCHOOL DR - 9" UNDER ASPHALT, 7" UNDER CONCRETE	25.00	C.Y.	\$ 50.00) \$	1,250.00
S3	CLASS 6 ABC - ASPHALT PATH - 4"	36.00	C.Y.	\$ 50.00) \$	1,800.00
S4	ASPHALT ON MEADOWOOD DR & HIGH SCHOOL DR (4")	32.00	S.Y.	\$ 60.00) \$	1,920.00
S5	ASPHALT ON PATH (3")	250.0	S.Y.	\$ 60.00) \$	15,000.00
S6	CONCRETE VALLEY PAN AND FILLETS ON MEADOWOOD DR	350.00	S.F.	\$ 40.00) \$	14,000.00
S7	CONCRETE CURB AND GUTTER ON MEADOWOOD DR	61.00	L.F.	\$ 50.00) \$	3,050.00
S8	LANDSCAPE BUFFER IN MEADOWOOD DR (NO IRRIGATION, NO TREES IN ROW)	2,465.00	S.F.	\$ 4.00) \$	9,860.00
S9	PLACE TOPSOIL (LANDSCAPE BUFFER IN MEADOWOOD DR)	60.00	C.Y.	\$ 17.00) \$	1,020.00
SUBT	OTAL S1-S9				\$	55,400.00
UTILI	TY COMPANY FEES (NOTE THAT FEES BELOW ARE ESTIMATES AND ARE SUBJECT TO CHANGE)					
F1	XCEL ENERGY FEES	1.00	L.S.	\$ 25,000.00) \$	25,000.00
F2	CENTURYLINK FEES	1.00	L.S.	\$ 5,000.00) \$	5,000.00
SUBT	OTAL F1-F2	•	•		\$	30,000.00
					_	

10% CONTINGENCY \$ 24,794.00

This opinion of probable cost was prepared for budgeting purposes only. Sopris Engineering, LLC cannot be held responsible for variances from this estimate as actual cost may vary due to bid and market fluctuation.

Re: Meadowood Drive/ Highway 133 Access Permit (32024.02)

From : Killian - CDOT, Brian <brian.killian@state.co.us>

Subject : Re: Meadowood Drive/ Highway 133 Access Permit (32024.02)

To: Kyle Sanderson <ksanderson@sopriseng.com>

Cc : Kandis Aggen, CDOT <kandis.aggen@state.co.us>, Yancy Nichol <ynichol@sopriseng.com>

Kyle,

CDOT concurs that no access permit is needed per the information provided.

Thanks,

Brian Killian Region 3 Access Program Manager Traffic & Safety



P 970-683-6284 | C 970-210-1101 | F 970-683-6290 222 S. 6th St, Room 100 Grand Junction, CO 81501 brian.killian@state.co.us | www.codot.gov | www.cotrip.org

On Tue, Dec 20, 2022 at 1:19 AM Kyle Sanderson <<u>ksanderson@sopriseng.com</u>> wrote: Hi Brian and Kandis,

I hope you both are doing well.

We had Kimley-Horn perform some traffic counts for us at the Meadowood Drive and Highway 133 Access for the project referenced in the previous emails on this chain.

The Roaring Fork School District is proposing a 50 unit housing development. We asked Kimley-Horn to give us an analysis of their traffic counts versus generated traffic and they came up with the following conclusion:

 The residential development is anticipated to generate 20 morning peak hour trips and 26 afternoon peak hour trips. Based on existing volumes for the east leg of the intersection being 118 morning vehicles and 112 afternoon vehicles, the afternoon peak hour project traffic contributes more than 20% to the east leg (23%: 26 project/112 existing). However, the existing CDOT Access Permit at the intersection allows up to 252 vehicles and the development is well within that threshold. Therefore, an access permit is not needed.

Are you able to confirm this conclusion for us that we do not need an access permit?

I have attached the existing access permit and a site plan PDF for reference.

Please feel free to reach out if you have any questions and I really appreciate your help.

Thanks,

Kyle Sanderson, PE

Sopris Engineering 502 Main Street, Suite A-3 Carbondale, CO 81623 Email: <u>ksanderson@sopriseng.com</u> Cell: (970) 379-2131 Office: (970) 704-0311 x44

From: "Kyle Sanderson" <<u>ksanderson@sopriseng.com</u>> To: "Brian Killian" <<u>brian.killian@state.co.us</u>> Cc: "Kandis Aggen, CDOT" <<u>kandis.aggen@state.co.us</u>>, "Yancy Nichol" <<u>ynichol@sopriseng.com</u>> Sent: Tuesday, September 27, 2022 2:19:17 PM Subject: Re: Meadowood Drive/ Highway 133 Access Permit (32024.02)

Hi Brian,

I appreciate you sending this over.

The school district is considering some teacher housing that will access off this intersection and down Meadowood.

We will be in touch if we need anything else.

Thanks,

Kyle Sanderson, PE Sopris Engineering

502 Main Street, Suite A-3

Carbondale, CO 81623 Email: <u>ksanderson@sopriseng.com</u> Cell: (970) 379-2131 Office: (970) 704-0311 x44

From: "Brian Killian" <brian.killian@state.co.us>
To: "Kyle Sanderson" <ksanderson@sopriseng.com>
Cc: "Kandis Aggen, CDOT" <kandis.aggen@state.co.us>, "Yancy Nichol"
<ynichol@sopriseng.com>
Sent: Monday, September 26, 2022 8:56:53 AM
Subject: Re: Meadowood Drive/ Highway 133 Access Permit (32024.02)

Kyle,

Please see attached permit. The only other information that we have is the signal was recently upgraded from a span wire signal to a mast arm signal.

Is there a new development going in? What type of development?

Thanks,

Brian Killian Region 3 Access Program Manager Traffic & Safety



COLORADO

Department of Transportation

P 970-683-6284 | C 970-210-1101 | F 970-683-6290 222 S. 6th St, Room 100 Grand Junction, CO 81501 brian.killian@state.co.us | www.codot.gov | www.cotrip.org

On Fri, Sep 23, 2022 at 10:21 AM Kyle Sanderson <<u>ksanderson@sopriseng.com</u>> wrote: Hi Brian and Kandis,

I hope you are both doing well and Happy Friday.

I have a new project in Carbondale and it utilizes the intersection at Meadows Drive and Highway 133 in Carbondale.

Are you able to send me the access permit and any other information you may have for this intersection?



I appreciate your help and please reach out if you have any questions.

Thanks,

Kyle Sanderson, PE

Sopris Engineering 502 Main Street, Suite A-3 Carbondale, CO 81623 Email: <u>ksanderson@sopriseng.com</u> Cell: (970) 379-2131 Office: (970) 704-0311 x44

DRAINAGE REPORT

FOR

RFSD MEADOWOOD HOUSING DEVELOPMENT CARBONDALE, CO

Prepared for: Town of Carbondale: Major Site Plan Review

Prepared by:

Sopris Engineering, LLC 502 Main Street Suite A3 Carbondale, Colorado 81623

On Behalf of:

Roaring Fork School District c/o Reilly O'Brien Dynamic Project Management

SE Project Number: 32024.02

January 4, 2023





Purpose of Drainage Study

- Evaluate the existing & historic drainage conditions and estimate flow rates to compare existing/historic versus post development drainage conditions.
- Estimate 10-year and 100-year post development peak runoff rates in support of sizing of stormwater mitigation infrastructure.
- Ensure the detention and retention systems have adequate capacity such that post development runoff rates do not exceed existing peak runoff rates for the 10-year and 100-year storm events.
- Provide Best Management Practice (BMP) recommendations to minimize sediment transport offsite

General Overview, Site Description, & Existing Conditions

The Roaring Fork School District (RFSD) is proposing a housing development located off Meadowood Drive on the south side of Carbondale. The subject property is made up of Lot 2A and Lot 2B of the North Face Base Camp Subdivision. The proposed development generally includes 50 total residential units split between three buildings. The development will include associated parking, landscaping, sidewalks, pathways, and utility improvements. The majority of the proposed development will fall within the existing Lot 2A property. However, the development will go outside of the existing Lot 2A boundary so a lot line adjustment is being proposed to expand Lot 2A around the development. For this analysis, the proposed Lot 2A adjusted boundary has been treated as the study area.

The existing site has historically been vacant land. The Roaring Fork High School was constructed on Lot 5B of the Subdivision along with an asphalt drive off Meadowood Drive. Soils generally consist of a small layer of topsoil ($\pm 6''$) with a larger layer of gravel/sand/cobbles (essentially pitrun type material) beneath. The grade of the site generally sits higher than the road elevations that border the site with shallow grades from south east to north west.

Development on the site will be increasing impervious area from the existing condition which will require stormwater detention/retention. The development is proposing to collect roof drainage in gutters and roof drains and to pipe that drainage to two drywells located at the bottom of two separate shallow retention ponds onsite. Surface drainage in the parking lot area and roads will generally be directed to surface inlets and piped to the drywells. The proposed concrete paths and landscape areas on the outside of the buildings that parallel Meadowood Drive and the asphalt access drive will generally direct surface runoff to Meadowood Drive and into the curb and gutter following historic drainage patterns. The covered parking on the north boundary of the site will shed water from south to north and into the ditch on the north property line also following existing drainage patterns.

An offsite basin has been included to accurately calculate the existing peak flow rates through the site and to show that the retention ponds being proposed will over retain onsite drainage. The over-retainage is to offset the runoff leaving the site as further described below. Historic drainage that enters the site from the south generally consists of the high school ball fields and areas around the high school.

The onsite soils consist of Type 'B' Hydrologic Soils, according to the soil survey provided by the National Resource Conservation Service (NRCS). Type 'B' soils are conducive to moderate infiltration rates with moderately well drained soils. The subject property also falls within <u>Zone C</u> on FEMA Flood Insurance Rate Map panel number 0802051859B with a revised date of January 3, 1986. FEMA designates Zone C as minimal risk areas outside the 0.2% (500 year storm) annual chance floodplain.



Historic Drainage Basin vs Developed Drainage Basin

The historic drainage conditions were analyzed in order to estimate existing peak stormwater flow rates that are generated on the site as well as the offsite drainage that flows through the site. One historic basin was delineated. This basin was compared to the developed condition to understand the overall peak flows that are developed to safely route drainage through the site. The overall historic and developed basins are described below and illustrated on the Exhibit F – Drainage Plan drawing.

Historic Basin 1 (H-1) includes the existing subject site as well as the offsite areas tributary to the site. The offsite areas generally include the high school practice ball fields and areas around the high school. The historic stormwater runoff from this basin generally flows from south east to northwest with sheet flow drainage leaving the site onto the adjacent streets at Meadowood Drive and the high school drive.

Overall Developed Basin 1 (X-1) includes the proposed developed site as well as the offsite areas tributary to the site. The proposed site generally includes the three buildings, adjacent parking areas, roads, and landscape areas. The offsite area is the same as the historic basin. The overall developed basin was delineated to understand the developed peak flow rates in order to safely route the offsite flows and the developed onsite flows safely through the site as well as understanding the allowable release rates.

The overall historic and developed drainage basins were used to estimate 10-year and 100-year peak runoff rates through the entire site. The hydrologic methods and assumptions are described further below and results are summarized within Table 1 below.

Existing Onsite Drainage Basins

The onsite existing drainage conditions were analyzed in order to estimate existing peak stormwater flow rates in order to compare against the developed conditions for pre-post drainage analysis and understanding of allowable release rates. Three basin delineations that match the proposed onsite basins were analyzed. The basins are described in greater detail below and illustrated on the Exhibit F - Drainage Plan drawing.

Existing Basin 1 (EX-1) is the onsite basin that reflects the areas outside of the proposed buildings that will drain offsite and not be retained internally. The existing basin includes a portion of the high school drive that is tributary to the site as well as a portion of Meadowood Drive where the proposed access will be located. It also includes the area where the proposed covered parking will be located. The basin is generally made up of natural grassland outside of the road surfaces. The existing stormwater runoff from this basin generally flows from southeast to northwest with sheet flow drainage onto the adjacent streets.

Existing Basin 2 (EX-2) is the onsite basin that reflects the proposed basin where Buildings A, B, and the adjacent parking lots are located. The existing surface does not include any impervious area and generally includes natural grassland. The existing stormwater runoff from this basin generally flows from southeast to northwest with sheet flow drainage onto the adjacent streets.

Existing Basin 3 (EX-3) is the onsite basin that reflects the proposed basin where Building C and the adjacent parking lots are located. The existing surface does not include any impervious area and generally includes natural grassland. The existing stormwater runoff from this basin generally flows from southeast to northwest with sheet flow drainage onto the adjacent streets.



The existing drainage basins were used to estimate 10-year and 100-year peak runoff rates for the subject property for pre-post drainage analysis, stormwater mitigation infrastructure sizing, and to determine allowable release rates for the developed site. The hydrologic methods and assumptions are described further below and results are summarized within Table 2 and 3 below.

Developed Onsite Drainage Basins

The development area was broken up into three proposed development basins in order to properly estimate peak runoff and size the proposed stormwater mitigation infrastructure. The proposed basins are described in greater detail below and illustrated on the Exhibit F - Drainage Plan drawing.

Post Development Basin 1 (P-1) generally includes the proposed concrete paths and landscape areas outside of the buildings. There is also an area of the proposed access into the site off Meadowood Drive along with the proposed covered parking off Meadowood Drive in this basin. The entire basin drains off the site and is not retained internally to the site. Flows on the landscape areas will most likely infiltrate into the soils with larger storm events sheet flowing to the curb and gutter along Meadowood Drive following historic drainage patterns. The hardscapes will sheet flow as well to the curb following historic drainage patterns.

Post Development Basin 2 (P-2) generally includes Buildings A and B along with the adjacent parking spaces, drive aisles, and landscape areas. Flows on the landscape areas will most likely infiltrate into the soils with larger storm events sheet flowing to the hard surfaces or to area inlets. The hard surfaces will sheet flow to area inlets and curb inlets on the surface and then into storm pipes. The roofs of the buildings will be collected in roof drains and then piped as well. Runoff in the pipes will be conveyed to Drywell #1 located under Retention Pond #1 that are both within the basin.

Post Development Basin 3 (P-3) generally includes Building C along with the adjacent parking spaces, drive aisles and landscape areas. Flows on the landscape areas will most likely infiltrate into the soils with larger storm events sheet flowing to the hard surfaces. The hard surfaces will sheet flow to area inlets and curb inlets on the surface and then into storm pipes. The roofs of the building will be collected in roof drains and then piped as well. Runoff in the pipes will be conveyed to Drywell #2 located under Retention Pond #2 that are both within the basin.

The design of the onsite stormwater mitigation including the retention ponds and drywells has been oversized to offset the peak flows produced within basin P-1. This approach allows for the flows leaving the site developed in basin P-1 to be less than or equal to the historic flows off the site. The analysis is considered conservative because infiltration through the bottom of ponds and drywells into the soils are not accounted for and the additional volume in the storm pipes are not considered either.

The developed drainage basins were used to estimate 10-year and 100-year peak runoff rates for the subject property for pre-post drainage analysis, stormwater mitigation infrastructure sizing, and to determine allowable release rates for the developed site. The hydrologic methods and assumptions are described further below and results are summarized within Table 2 and 3 below.



Hydrologic Analysis Methods & Assumptions

Onsite and offsite drainage areas were analyzed using the Rational Method (Equation 1) since the cumulative total of tributary area being studied was less than 90 acres.

Equation 1: Q = C* I * A Q = Runoff Flow Rate (cfs); C = Runoff Coefficient I = Rainfall Intensity (in/hr); A= Area of Basin (acres)

The runoff coefficient (C) is a variable representing the ratio of runoff to rainfall volumes during a storm event. The determination of C depends on the soil type, watershed imperviousness, and storm event frequency. Each drainage basin was studied to determine the percent of impervious area within the basin. Landscape areas were assumed to be 2% impervious which correlates to 10-year and 100-year runoff coefficients of 0.07 and 0.44, respectively. Hard surfaces including buildings, roofs, concrete, and asphalt were assumed to be 100% impervious or 0.86 and 0.89 for the 10-year and 100-year runoff coefficients, respectively. Each basin's total or effective percent impervious area was used to establish a weighted runoff coefficient. The Mile High Flood District (MHFD) (formerly UDFCD) out of Denver, CO has developed runoff coefficient tables in Chapter 6 of Volume 1 of their Urban Storm Drainage Criteria Manual. Runoff coefficients are based on the amount of runoff and the storm event. Table 6-5 is attached for reference at the end of this report. This table was used to determine the corresponding 10-year and 100-year weighted average runoff coefficients based on a Type B hydrologic soil classification.

The design rainfall duration used in the Rational Method is referred to as the time of concentration. The time of concentration is the cumulative travel time, including overland flow and channelized flow, for runoff to get from the furthest point upstream of a basin to a designated design point. A minimum time of concentration of 10 minutes was used for all basins given the size of the basin and the relatively short travel distances. Based on the Town of Carbondale's Intensity Duration Frequency (IDF) Curve, the 10-year and 100-year rainfall intensities were selected. The IDF Curve and Tables for Carbondale are attached at the end of this report.

Peak Runoff Through Site – The historic basin including onsite and offsite flows was analyzed for the 10-year and 100-year, 1-hour storm as the peak rainfall runoff to be safely routed through the site. The peak runoff rates through the entire site are summarized in Table 1 below:

10-Y	10-YR, 1-HR, HISTORIC PEAK RUNOFF SUMMARY						100-YR, 1-HR, HISTORIC PEAK RUNOFF SUMMARY					
BASIN	%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q_{100}	
I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	
H-1	8%	0.12	0.777	11.940	1.11	H-1	8%	0.46	1.19	11.940	6.54	
10-YR	, 1-HR, DE	VELOPED	PEAK RU	NOFF SUM	MARY	100-Y	R, 1-HR, DE	VELOPE) PEAK RL	JNOFF SUM	MARY	
X-1	22%	0.23	0.777	11.940	2.13	X-1	22%	0.53	1.19	11.940	7.53	
[1] TIME (OF CONCE	NTRATION	WAS AS	SUMED TO	BE EQUAL	TO 10 MII	NUTES.					
[2] RATIO	NAL C FAC	TORS ARE	BASED O	N THE PERC	CENT IMPE	RVIOUS F	ROM TABL	E 6-5 OF (CHAPTER (6 OF THE UI	OFCD -	
[3] RAINF	ALL INTEN	SITY IS FR	OM THE I	NOAA 14 IDI	F CURVE F	OR CARBC	NDALE, CO)				

Table 1: Existing and Post Development Peak Runoff Summary (1-hr Storm)



Peak Runoff Onsite – The onsite basins were analyzed for the 10-year and 100-year, 10-min storm for sizing of storm pipes and inlet capacities. The 10-min duration storm has higher rainfall intensities than longer duration storms ultimately contributing to a conservative analysis for sizing stormwater infrastructure. The peak runoff rates for the onsite basins are summarized in Table 2 below:

10-YR	, 10-MIN, I	EXISTING	PEAK RU	NOFF SUMI	MARY	100-YF	R, 10-MIN,	EXISTING	6 PEAK RU	JNOFF SUM	MARY
BASIN	%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
EX-1	15%	0.18	2.68	0.857	0.41	EX-1	15%	0.50	4.37	0.857	1.87
EX-2	2%	0.07	2.68	1.151	0.22	EX-2	2%	0.44	4.37	1.151	2.21
EX-3	2%	0.07	2.68	0.795	0.15	EX-3	2%	0.44	4.37	0.795	1.53
10-YR,	10-MIN, D	EVELOPE	D PEAK R	UNOFF SUN	IMARY	100-YR,	10-MIN, D	DEVELOPE	ED PEAK R	UNOFF SUI	MMARY
P-1	51%	0.46	2.68	0.857	1.06	P-1	51%	0.66	4.37	0.857	2.47
P-2	75%	0.66	2.68	1.151	2.04	P-2	75%	0.78	4.37	1.151	3.92
P-3	62%	0.56	2.68	0.795	1.19	P-3	62%	0.72	4.37	0.795	2.50
[1] TIME (OF CONCE	NTRATION	WAS AS	SUMED TO	BE EQUAL	TO 10 MIN	NUTES.				
[2] RATIO	NAL C FAC	TORS ARE	BASED O	N THE PERC	ENT IMPE	RVIOUS FI	ROM TABLI	E 6-5 OF (CHAPTER (5 OF THE UI	DFCD -
URBAN ST	ORM DRA	INAGE CR	ITERIA M	ANUAL. (M	ILE HIGH F	LOOD DIS	TRICT)				
[3] RAINF	ALL INTEN	SITY IS FR	OM THE N	NOAA 14 ID	F CURVE F	OR CARBO	NDALE, CC)			

Table 2: Existing and Post Development Peak Runoff Summary (10-min Storm)

Detention/Retention Mitigation Peak Runoff – For detention and retention mitigation onsite, the modified rational method was used. The site has been analyzed for the 10-year, 1 hour storm event for detention/retention system sizing. See below for more detail on the site detention mitigation methods and assumptions. The detention runoff rates for this project are summarized in Table 3 below.

Table 3: Existing and Post Development Detention Runoff Summary (1-hr storm)

10-YR	, 1-HR, EXI	IST DETER	NTION RU	NOFF SUM	MARY	100-YR, 1-HR EXIST DETENTION RUNOFF SUMMARY						
BASIN	%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀	
I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	
EX-1	15%	0.18	0.777	0.857	0.120	EX-1	15%	0.50	1.19	0.857	0.510	
EX-2	2%	0.07	0.777	1.151	0.063	EX-2	2%	0.44	1.19	1.151	0.603	
EX-3	2%	0.07	0.777	0.795	0.043	EX-3	2%	0.44	1.19	0.795	0.416	
10-YR, 1	-HR DEVEL	OPED DE	TENTION	RUNOFF SU	IMMARY	100-YR, 1	-HR DEVEI	OPED DE	TENTION	RUNOFF S	UMMARY	
P-1	51%	0.46	0.777	0.857	0.306	P-1	51%	0.66	1.19	0.857	0.673	
P-2	75%	0.66	0.777	1.151	0.590	P-2	75%	0.78	1.19	1.151	1.069	
P-3	62%	0.56	0.777	0.795	0.346	P-3	62%	0.72	1.19	0.795	0.681	
[1] TIME (OF CONCEN	NTRATION	WAS AS	SUMED TO	BE EQUAL	TO 10 MI	NUTES.					
[2] RATIO	NAL C FAC	TORS ARE	E BASED O	N THE PERC	CENT IMPE	RVIOUS F	ROM TABL	E 6-5 OF (CHAPTER (5 OF THE UI	OFCD -	
[3] RAINF	ALL INTEN	SITY IS FR		NOAA 14 ID	F CURVE F	OR CARBC	NDALE, CO)				



Hydraulic Analysis Methods & Assumptions

Stormwater runoff is routed on the surface via sheet flow, then to drainage swales or curb and gutter, and then routed in storm sewer pipes which daylight into drywells. The pipes onsite have been sized according to the design flows. The pipes however may be submerged during larger storm events as the flow backs up in the drywells and underground detention system. The detention systems for the basin are interconnected to distribute and maximize the potential for infiltration. Supporting hydraulic data for all of the calculations have been provided at the end of this report. Each of the gravity storm channels were sized using Manning's Equation (Equation 2).

Equation 2: Q = 1.49/n * R^{2/3} * A * S^{0.5} Q = Runoff Flow Rate (cfs); n = Manning's Roughness Coefficient R = Hydraulic Radius (ft); A= Flow Area (sf), S = Channel Slope (ft/ft)

The hydraulic capacity calculations have been separated by standard pipe sizes for site stormwater drainage with a minimum 2% slope. In general the pipes onsite collect stormwater from small subareas within the larger drainage basins. The approximate maximum capacity of each size storm pipe is summarized in Table 4 below.

Pipe Size (IN)	Pipe Material	Manning's n	Slope	Capacity (CFS)
4	Solid PVC	0.011	2.00%	0.33
6	Solid PVC	0.011	2.00%	1.00
8	Solid PVC	0.011	2.00%	2.18
12	ADS N12	0.011	2.00%	6.40

Table 4: Hydraulic Pipe capacity

The terminal storm sewer pipes will utilize 12" smooth wall HDPE pipes. The pipe capacity is greater than the 100year storm runoff rates, but the added size provides access for maintenance and reduces clogging potential.

The final hydraulic capacity calculations will be completed for the building permit submittal. Supporting hydraulic data for all of the calculations has been attached.

Detention Mitigation Analysis & Design

The primary drainage criterion within the Town of Carbondale includes detaining/retaining stormwater runoff onsite such that post development runoff rates exiting the site do not exceed historic levels. Because this site is adjacent and tributary to the Meadowood Drive stormwater system, it was decided to calculate detention volumes for the 10-year, 1-hr storm. Note the shorter duration high intensity storms have higher runoff rates, but the stormwater runoff volume is smaller than the longer duration storms. As the stormwater system retains storm events up to the 1 hour event, the shorter duration events are also retained. Also note that the storage volume calculations do not account for volumes in pipes or any infiltration into the soils, so the design provides a further conservative analysis.



SE looked at the project with the offsite basin included first to review the required detention. Table 5 summarizes the 10 year -1 hour existing and post development peak runoff rates contributing runoff and also summarizes the required and provided storage volumes to size the proposed stormwater detention infrastructure.

10 YEAR - 1 HOUR STORAGE SUMMARY											
EX Q ₁₀ DE Q ₁₀ +/- Q DET. REQ. POST DET DET.											
(cfs)	(cfs)	(cfs)	(cf) [1]	Q10 (cfs)	PROV. (cf)						
1.11 2.13 1.02 3,704 0.00 4,984											

Table 5: Detention Runoff Rates and Storage Volume (Overall):

[1] REQUIRED DETENTION CALCULATED USING THE RATIONAL METHOD DETENTION VOLUME APPROACH.

10 YEAR - 1	L HOUR STO	RAGE						
Duration=	60	minutes						
P = 0.777								
RUNOFF VOLUME - Vr=C*(P/12)*A								
BASIN	Vr	Vr						
I.D.	(ac-ft)	(CF)						
H-1	0.093	4,041						
X-1	0.178	7,746						

The Rational Method Detention Volume approach was used to estimate the required storage volumes. Note that the required storage volume is 3,704-CF and the provided volume is 4,984-CF for a difference of 1,280-CF. This approach shows that the provided retention onsite is larger than required and shows the release rates in basin P-1 are less than or equal to the historic rate. In other words, the release rate of P-1 when converted to volume is 1,112-CF (see next section) which is less than the additional volume required of 1,280-CF.

SE then looked at the project without the offsite basin and compared the two approaches. Table 6 summarizes the 10 year - 1 hour existing and post development peak runoff rates contributing runoff onsite, and also summarizes the required and provided storage volumes to size the proposed stormwater detention infrastructure.

Table 5: Detention Runoff Rates and Storage Volume:

10 YEAR - 1 HOUR STORAGE SUMMARY											
EX Q_{10} DE Q_{10} +/- Q DET. REQ. POST DET DET.											
(cfs) (cfs) (cfs) (cf) [1] Q ₁₀ (cfs) PROV. (cf											
0.23	1.24	1.02	3,691	0.00	4,984						
[1] REQUIRED DETEN APPROACH.	[1] REQUIRED DETENTION CALCULATED USING THE RATIONAL METHOD DETENTION VOLUME APPROACH.										



10 YEAR - 1	L HOUR STO	ORAGE							
Duration=	60	minutes							
P =	0.777								
RUNOFF VOLUME - Vr=C*(P/12)*A									
BASIN	Vr	Vr							
I.D.	(ac-ft)	(CF)							
EX-1	0.010	435							
EX-2	0.005	227							
EX-3	0.004	157							
P-1	0.026	1,112							
P-2	0.049	2,143							
P-3	0.029	1,256							

The Rational Method Detention Volume approach was used to estimate the required storage volumes. Note that the runoff volume for basin P-1 of 1,112-CF is larger than the combined existing storage volume of 819-CF (435 – 227 + 157) for a difference of approximately 293-CF. However, the difference in the total provided storage volume versus the required volume is 1,293-CF (4,984 – 3,691). This approach shows that the provided retention onsite is larger than required. In other words, the retention ponds are capturing more historic flow onsite in the developed condition, allowing for the flow rate being released off basin P-1 to be less than or equal to the historic rate.

The two approaches were within 13-CF of required volume and show that developed release rates are not exceeding historic flow rates.

Retention Pond Design:

Retention Pond #1 located within Basin P-2 has a surface area of approximately 1,400-SF and is approximately 1.5ft deep allowing for $\pm 2,100$ -CF of storage volume. Drywell #1 below the pond has a volume of ± 312 -CF. Retention Pond #2 located within Basin P-3 has a surface area of approximately 2,260-SF and is approximately 1.0-ft deep allowing for $\pm 2,260$ -CF of storage volume. Drywell #2 below the pond has a volume of ± 312 -CF. The toal storage volume in the ponds and drywells is approximately 4,984-CF. Based on the soils data as well as SE's experience working on this parcel, the underlying soils consist of gravel with cobbles which are ideal for infiltrating water.

For estimating the time to drain the ponds, an infiltration rate of 5-inches per hour was assumed for the gravel lens around the drywells in the bottom of the ponds. The drain time for each pond is summarized in Table 6 below.



	POND	NFILTRATIO	ON RATE A	ND DRAIN TIMES	
	DRAIN TIME				
POND ID	(HR)				
#1	346	5	144	2100	14.6
#2	346	5	144	2260	15.7
SURFACE /	AREA OF EACH I	DRYWELL =	3.14 X (21	T/2)^2 = 346 SF	

Table 7: Pond infiltration/drain time:

It is assumed that the ground surface of the retention ponds will be maintained as a grass surface. These infiltration rates should represent a conservative estimate, which will provide for long term function of the retention system. Flows larger than the pond capacity will simply stage up and flow to the north out to the Meadowood Drive storm system. Final detention pond design and details will be provided for the building permit submittal.

Drywell Design:

Drywells are being used for stormwater mitigation infrastructure in the bottom of the ponds. A drywell is a BMP that incorporates manhole structures with perforated barrels at the deeper depths. Washed screened rock is installed around the exterior of the perforated sections. When sub-soils are capable of moderate to high infiltration rates, drywells are considered to be a viable BMP. They dramatically reduce the increased runoff and volume of stormwater generated from surrounding impervious areas and promote infiltration; thereby improving the water quality of stormwater runoff. Based on the NRCS soils data as well as the onsite soils report prepared for this parcel, the underlying soils consist of gravel with cobbles which are ideal for infiltrating water.

The available volume provided by the drywell system includes the area within the structure as well as the available voids within the gravel backfill. The volume of the backfill gravel includes the prism associated with the 1H:1V cut slopes. A 30% void ratio was used for estimating the available volume within voids of the gravel material. The available storage within the connecting storm drains was not included in the storage calculation. In addition, the infiltration capacity of the drywell system was also neglected which was considered to be a conservative approach. Each of the drywells has an approximate storage volume capacity of 312- CF for a total volume provided of 624-CF below the ponds. The design of the drywells is summarized in details attached to the end of this report.

Ella Ditch Drainage

The Ella Ditch runs along the north and east boundary of the project site. If the Ella Ditch were to flood and overtop, the water would enter the site generally by sheet flow through the high school practice fields or through the covered parking spaces across from Building C. SE feels confident that the road infrastructure onsite has the capacity to convey the flows to Meadowood Drive without reaching the finish floor elevations of the proposed buildings. Once in Meadowood Drive, the flows would follow historic drainage patterns.



Sediment & Erosion Control

Current construction standards provide parameters for mitigation of drainage and soil erosion activities relative to site development. Appropriate best management practices (BMP's) shall be applied to this site. These BMP's are primarily grouped for two stages of the development, the construction phase and the post development phase, with the main emphasis on soil erosion and sediment transport controls.

Temporary Erosion Control during the construction phase for the proposed improvements there will be potential for soil erosion and offsite sediment transport triggered by surface runoff during rain events. The contractor must at a minimum install and maintain the following BMPs during the construction phase:

- ✓ An embedded silt fence around the disturbed soils and especially in the low receiving ends of the slopes.
- ✓ Prior to any clearing and grubbing, lot grading, and prior to any construction work, the contractor must construct temporary sediment basins in strategically located areas in order to collect runoff sediment and stop sediment from traveling offsite.
- ✓ The site must be inspected at the end of every 14-day period during construction, and silt deposits from behind the silt fencing and from the sediment pits must be removed regularly to ensure full functioning of this erosion control system. These activities must be logged in a logbook available at the site for inspection at all times.
- ✓ Vehicle tracking pads (mud racks) at the site entrance(s) must be installed to avoid mud tracking into public right of way.
- ✓ Seed & mulch must be placed over disturbed cut and fill slopes, and watered as necessary, to establish temporary vegetative ground cover until paving, gravel surface and/or landscaping is done.

A construction site can be a very dynamic area; because of this the final location and selection of construction BMPs will be left up to the contractor. All appropriate permitting must be acquired prior to commencing construction and the criteria outlined within all appropriate permits must be adhered to until the associated permits have been closed.

Permanent Erosion Control BMPs shall consist of a complete landscaping and ground covering task to permanently re-vegetate and cover bear grounds that will remain open space to avoid long-term soil erosion. This effort will reduce the risk of unnecessary degradation and failure of the drainage system. Temporary erosion control structures installed during construction shall be left in place as necessary and maintained until new vegetation has been reestablished at a 70% level. Upon reaching a satisfactory level of soil stabilization from the new vegetation, all erosion control structures shall be removed; with the exception of the proposed sediment/retention basins. These should remain in place until they become a conflict with future improvements.

Conclusions

The results of this drainage study suggest that no adverse drainage impacts to the subject property or surrounding properties will result from the proposed development. Although onsite peak runoff rates will increase with the added improvements, the site stormwater improvements and retention pond will eliminate any increase in stormwater runoff leaving the site. Best Management Practices (BMPs) have been identified and will be implemented during the construction of the improvements. In addition, permanent vegetated cover should be installed as soon as construction allows.





NOFF DRA	AINAGE (CALCULA	TIONS							
, 10-MIN,	EXISTING	PEAK RU	NOFF SUM	MARY	100-Y	R, 10-MIN,	EXISTING	5 PEAK RU	NOFF SUM	MARY
%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
15%	0.18	2.68	0.857	0.41	EX-1	15%	0.50	4.37	0.857	1.87
2%	0.07	2.68	1.151	0.22	EX-2	2%	0.44	4.37	1.151	2.21
2%	0.07	2.68	0.795	0.15	EX-3	2%	0.44	4.37	0.795	1.53
10-MIN, D	EVELOPE	D PEAK R	UNOFF SUN	/IMARY	100-YR,	, 10-MIN, D	DEVELOPI	ED PEAK R	UNOFF SUI	MMARY
51%	0.46	2.68	0.857	1.06	P-1	51%	0.66	4.37	0.857	2.47
75%	0.66	2.68	1.151	2.04	P-2	75%	0.78	4.37	1.151	3.92
62%	0.56	2.68	0.795	1.19	P-3	62%	0.72	4.37	0.795	2.50
OF CONCE	NTRATION	WAS AS	SUMED TO	BE EQUAL	TO 10 MI	NUTES.				
	NOFF DRA , 10-MIN, % IMPERV. 15% 2% 2% 2% 10-MIN, D 51% 75% 62% DF CONCE	NOFF DRAINAGE (, 10-MIN, EXISTING % C ₁₀ IMPERV. 15% 0.18 2% 0.07 2% 0.07 2% 0.07 10-MIN, DEVELOPE 51% 0.46 75% 0.66 62% 0.56 DF CONCENTRATION	NOFF DRAINAGE CALCULA , 10-MIN, EXISTING PEAK RU % C10 I10 IMPERV. (in/hr) 15% 0.18 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 2% 0.07 2.68 51% 0.46 2.68 75% 0.66 2.68 62% 0.56 2.68 DF CONCENTRATION WAS ASS 0.56 0.56	NOFF DRAINAGE CALCULATIONS 10-MIN, EXISTING PEAK RUNOFF SUM % C10 I10 AREA IMPERV. (in/hr) (acres) 15% 0.18 2.68 0.857 2% 0.07 2.68 1.151 2% 0.07 2.68 0.795 10-MIN, DEVELOPED PEAK RUNOFF SUN S1% 0.46 2.68 0.857 51% 0.46 2.68 0.857 S1% 0.46 2.68 0.857 51% 0.46 2.68 0.857 0.51% 0.46 2.68 0.795 51% 0.46 2.68 0.795 0.66 2.68 0.795 62% 0.56 2.68 0.795 0.795 0.795 0.795	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY % C ₁₀ I ₁₀ AREA Q ₁₀ IMPERV. (in/hr) (acres) (cfs) 15% 0.18 2.68 0.857 0.41 2% 0.07 2.68 1.151 0.22 2% 0.07 2.68 0.795 0.15 IO-MIN, DEVELOPED PEAK RUNOFF SUMMARY 51% 0.46 2.68 0.857 1.06 75% 0.66 2.68 1.151 2.04 62% 0.56 2.68 0.795 1.19 DF CONCENTRATION WAS ASSUMED TO BE EQUAL	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YI % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN IMPERV. (in/hr) (acres) (cfs) I.D. 15% 0.18 2.68 0.857 0.41 EX-1 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.07 2.68 0.795 0.15 EX-3 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 51% 0.46 2.68 0.857 1.06 P-1 75% 0.66 2.68 1.151 2.04 P-2 62% 0.56 2.68 0.795 1.19 P-3	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN % IMPERV. (in/hr) (acres) (cfs) I.D. IMPERV. 15% 0.18 2.68 0.857 0.41 EX-1 15% 2% 0.07 2.68 1.151 0.22 EX-2 2% 2% 0.07 2.68 0.795 0.15 EX-3 2% 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, D 100-YR, 10-MIN, D 100-YR, 10-MIN, D 51% 0.46 2.68 0.857 1.06 P-1 51% 75% 0.66 2.68 1.151 2.04 P-2 75% 62% 0.56 2.68 0.795 1.19 P-3 62%	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING % C ₁₀ I ₁₀ AREA Q ₁₀ BASIN % C ₁₀₀ IMPERV. (in/hr) (acres) (cfs) I.D. IMPERV. 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, DEVELOPED 0.46 2.68 0.857 1.06 P-1 51% 0.66 75% 0.66 2.68 1.151 2.04 P-2 75% 0.78 62% 0.56 2.68 0.795 1.19 P-3 62% 0.72	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING PEAK RUNOFF SUMMARY % C10 I100 AREA Q10 BASIN % C100 I100 MPERV. (in/hr) (acres) (cfs) I.D. IMPERV. (in/hr) 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 4.37 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 10-MIN, DEVELOPED PEAK RUNOFF SUMMARY 100-YR, 10-MIN, DEVELOPED PEAK R 51% 0.46 2.68 0.857 1.06 P-1 51% 0.66 4.37 75%	NOFF DRAINAGE CALCULATIONS , 10-MIN, EXISTING PEAK RUNOFF SUMMARY 100-YR, 10-MIN, EXISTING PEAK RUNOFF SUM (in/hr) AREA Q10 BASIN % C100 I100 AREA % C10 I10 AREA Q10 BASIN % C100 I100 AREA MPERV. (in/hr) (acres) (cfs) I.D. IMPERV. (in/hr) (acres) 15% 0.18 2.68 0.857 0.41 EX-1 15% 0.50 4.37 0.857 2% 0.07 2.68 1.151 0.22 EX-2 2% 0.44 4.37 1.151 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 0.795 2% 0.07 2.68 0.795 0.15 EX-3 2% 0.44 4.37 0.795 2% 0.07 2.68 0.857 1.06 P-1 51% 0.66 4.37 0.857 51% 0.46

	-/									
1-HR, E>	(IST DETEN	ITION RUN	OFF SUMM	ARY	100-	YR, 1-HR E	XIST DETEN	NTION RUN	IOFF SUMN	1ARY
%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
/IPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
15%	0.18	0.777	0.857	0.120	EX-1	15%	0.50	1.19	0.857	0.510
2%	0.07	0.777	1.151	0.063	EX-2	2%	0.44	1.19	1.151	0.603
2%	0.07	0.777	0.795	0.043	EX-3	2%	0.44	1.19	0.795	0.416
IR DEVE	LOPED DET	FENTION R	UNOFF SUN	/MARY	100-YR,	1-HR DEVE	LOPED DE	TENTION F	UNOFF SU	MMARY
51%	0.46	0.777	0.857	0.306	P-1	51%	0.66	1.19	0.857	0.673
75%	0.66	0.777	1.151	0.590	P-2	75%	0.78	1.19	1.151	1.069
62%	0.56	0.777	0.795	0.346	P-3	62%	0.72	1.19	0.795	0.681
0011051	TRATION					TEC				

		TOTLAR	THOORSI			
	EX Q ₁₀	DE Q ₁₀	+/- Q	DET. REQ.	POST DET	DET.
-	(cfs)	(cfs)	(cfs)	(cf) [1]	Q10 (cfs)	PROV. (cf)
/	0.23	1.24	1.02	3,691	0.00	4,984
	[1] REQUIRED DETEN	TION CALCULA	TED USING THI	RATIONAL METI	HOD DETENTIO	N VOLUME

/	
DRAIN TIME	
(HR)	
14.6	
15 7	
10.7	

	_	
10 YEAR -	1 HOUR STO	DRAGE
Duration=	60	minutes
P =	0.777	
RUNOFF VOLUM	E - Vr=C*(P,	/12)*A
BASIN	Vr	Vr
I.D.	(ac-ft)	(CF)
EX-1	0.010	435
EX-2	0.005	227
EX-3	0.004	157
P-1	0.026	1,112
P-2	0.049	2,143
P-3	0.029	1,256



10-Y	<u>'R, 1-HR, H</u>	ISTORIC I	PEAK RUN	OFF SUMN	IARY	100-	<u>YR, 1-HR, F</u>	IISTORIC	PEAK RUI	NOFF SUMN	/ARY
BASIN	%	C ₁₀	I ₁₀	AREA	Q ₁₀	BASIN	%	C ₁₀₀	I ₁₀₀	AREA	Q ₁₀₀
I.D.	IMPERV.		(in/hr)	(acres)	(cfs)	I.D.	IMPERV.		(in/hr)	(acres)	(cfs)
H-1	8%	0.12	0.777	11.940	1.11	H-1	8%	0.46	1.19	11.940	6.54
10-YF	R, 1-HR, DE	VELOPED	PEAK RU	NOFF SUM	MARY	100-Y	R, 1-HR, DE	VELOPE) PEAK RU	JNOFF SUM	MARY
X-1	22%	0.23	0.777	11.940	2.13	X-1	22%	0.53	1.19	11.940	7.53
L] TIME	OF CONCEN	NTRATIO	WAS AS	SUMED TO	BE EQUAL	TO 10 MI	NUTES.				
21 RATIC	NAL C FAC	TORS ARE	E BASED O	N THE PER	CENT IMPI	ERVIOUS F	ROM TABL	E 6-5 OF (CHAPTER (DFCD -

	10 YEAR -	1 HOUR STO	DRAGE SUMN	/IARY	
EX Q ₁₀	DE Q ₁₀	+/- Q	DET. REQ.	POST DET	DET.
(cfs)	(cfs)	(cfs)	(cf) [1]	Q10 (cfs)	PROV. (cf
1.11	2.13	1.02	3,704	0.00	4,984
1] REQUIRED DETENT	TION CALCULA	TED USING THE	RATIONAL MET	HOD DETENTIO	N VOLUME
APPROACH.					

10 YEAR - 1	1 HOUR STO	DRAGE
Duration=	60	minutes
P =	0.777	
RUNOFF VOLUME -	Vr=C*(P/12)	*A
BASIN	Vr	Vr
I.D.	(ac-ft)	(CF)
H-1	0.093	4,041
X-1	0.178	7,746

	100 YEAR	- 1 HOUR ST	ORAGE SUMI	MARY	
EX Q ₁₀₀ (cfs)	DE Q ₁₀₀ (cfs)	+/- Q (cfs)	DET. REQ. (cf) [1]	POST DET Q10 (cfs)	DET. PROV. (cf
6.54	7.53	0.99	3,610	0.00	4,984
REQUIRED DETEN	TION CALCULA	TED USING THE	RATIONAL METH	HOD DETENTIO	N VOLUME

100 YEAR -	1 HOUR ST	ORAGE
Duration=	60	minutes
P =	1.19	
RUNOFF VOLUME -	Vr=C*(P/12)	*A
BASIN	Vr	Vr
I.D.	(ac-ft)	(CF)
H-1	0.545	23,726
X-1	0.628	27,336



USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey

MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:24.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available А misunderstanding of the detail of mapping and accuracy of soil Water Features line placement. The maps do not show the small areas of A/D contrasting soils that could have been shown at a more detailed Streams and Canals В scale. Transportation B/D Rails +++ Please rely on the bar scale on each map sheet for map С measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service US Routes \sim Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available ~ Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the А -Aerial Photography Albers equal-area conic projection, should be used if more A/D accurate calculations of distance or area are required. в This product is generated from the USDA-NRCS certified data as of the version date(s) listed below. B/D Soil Survey Area: Aspen-Gypsum Area, Colorado, Parts of С Eagle, Garfield, and Pitkin Counties C/D Survey Area Data: Version 13, Sep 7, 2022 Soil map units are labeled (as space allows) for map scales D 1:50.000 or larger. Not rated or not available an ai Date(s) aerial images were photographed: Aug 25, 2021—Sep Soil Rating Points 5, 2021 А The orthophoto or other base map on which the soil lines were A/D compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor В shifting of map unit boundaries may be evident. B/D

Hydrologic Soil Group-Aspen-Gypsum Area, Colorado, Parts of Eagle, Garfield, and Pitkin Counties



Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
13	Atencio-Azeltine complex, 3 to 6 percent slopes	В	4.0	100.0%
Totals for Area of Intere	st		4.0	100.0%

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified Tie-break Rule: Higher



1	
NESTERN	
	APPROXIMATE SCALE IN FEET
	NATIONAL FLOOD INSURANCE PROGRAM
	FIRM Flood insurance rate map
	GARFIELD COUNTY, COLORADO (UNINCORPORATED AREAS)
	PANEL 1859 OF 1900 (SEE MAP INDEX FOR PANELS NOT PRINTED)
	UMMUNITY-PANEL NUMBER 080205 1859 B
	MAP REVISED: JANUARY 3, 1986
2	Federal Emergency Management Agency
-	
	This is an official FIDMethy changingtime of the share of the
	This is an official Playmette snowing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Manning Undate Oueview Fort Shart
REFERE	available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

Total or Effective	NRCS Hydrologic Soil Group A								
% Impervious	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year		
2%	0.01	0.01	0.01	0.01	0.04	0.13	0.27		
5%	0.02	0.02	0.02	0.03	0.07	0.15	0.29		
10%	0.04	0.05	0.05	0.07	0.11	0.19	0.32		
15%	0.07	0.08	0.08	0.1	0.15	0.23	0.35		
20%	0.1	0.11	0.12	0.14	0.2	0.27	0.38		
25%	0.14	0.15	0.16	0.19	0.24	0.3	0.42		
30%	0.18	0.19	0.2	0.23	0.28	0.34	0.45		
35%	0.21	0.23	0.24	0.27	0.32	0.38	0.48		
40%	0.25	0.27	0.28	0.32	0.37	0.42	0.51		
45%	0.3	0.31	0.33	0.36	0.41	0.46	0.54		
50%	0.34	0.36	0.37	0.41	0.45	0.5	0.58		
55%	0.39	0.4	0.42	0.45	0.49	0.54	0.61		
60%	0.43	0.45	0.47	0.5	0.54	0.58	0.64		
65%	0.48	0.5	0.51	0.54	0.58	0.62	0.67		
70%	0.53	0.55	0.56	0.59	0.62	0.65	0.71		
75%	0.58	0.6	0.61	0.64	0.66	0.69	0.74		
80%	0.63	0.65	0.66	0.69	0.71	0.73	0.77		
85%	0.68	0.7	0.71	0.74	0.75	0.77	0.8		
90%	0.73	0.75	0.77	0.79	0.79	0.81	0.84		
95%	0.79	0.81	0.82	0.83	0.84	0.85	0.87		
100%	0.84	0.86	0.87	0.88	0.88	0.89	0.9		
			NDCCHLI	1	<u>с</u> р				
Total or Effective			NKCS Hydr	ologic Soil	Group B				
Total or Effective % Impervious	2-Year	5-Year	NRCS Hydr 10-Year	ologic Soil 25-Year	Group B 50-Year	100-Year	500-Year		
Total or Effective % Impervious 2%	2-Year 0.01	5-Year 0.01	NRCS Hydr 10-Year 0.07	010gic Soll 25-Year 0.26	Group B 50-Year 0.34	100-Year 0.44	500-Year 0.54		
Total or Effective % Impervious 2% 5%	2-Year 0.01 0.03	5-Year 0.01 0.03	NRCS Hydr 10-Year 0.07 0.1	010gic Soil 25-Year 0.26 0.28	50-Year 0.34 0.36	100-Year 0.44 0.45	500-Year 0.54 0.55		
Total or Effective % Impervious 2% 5% 10%	2-Year 0.01 0.03 0.06	5-Year 0.01 0.03 0.07	NRCS Hydr 10-Year 0.07 0.1 0.14	010gic Soil 25-Year 0.26 0.28 0.31	Group B 50-Year 0.34 0.36 0.38	100-Year 0.44 0.45 0.47	500-Year 0.54 0.55 0.57		
Total or Effective % Impervious 2% 5% 10% 15%	2-Year 0.01 0.03 0.06 0.09	5-Year 0.01 0.03 0.07 0.11	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18	0.26 0.28 0.31 0.34	Group B 50-Year 0.34 0.36 0.38 0.41	100-Year 0.44 0.45 0.47 0.5	500-Year 0.54 0.55 0.57 0.59		
Total or Effective % Impervious 2% 5% 10% 15% 20%	2-Year 0.01 0.03 0.06 0.09 0.13	5-Year 0.01 0.03 0.07 0.11 0.15	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38	Group B 50-Year 0.34 0.36 0.38 0.41 0.44	100-Year 0.44 0.45 0.47 0.5 0.52	500-Year 0.54 0.55 0.57 0.59 0.61		
Total or Effective % Impervious 2% 5% 10% 15% 20% 25%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17	5-Year 0.01 0.03 0.07 0.11 0.15 0.19	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47	100-Year 0.44 0.45 0.47 0.5 0.52 0.54	500-Year 0.54 0.55 0.57 0.59 0.61 0.63		
Total or Effective % Impervious 2% 5% 10% 15% 20% 25% 30%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65		
Total or Effective % Impervious 2% 5% 10% 15% 20% 25% 30% 35%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66		
Total or Effective % Impervious 2% 5% 10% 15% 20% 25% 30% 35% 40%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68		
Total or Effective % Impervious 2% 5% 10% 25% 30% 35% 40% 45%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7		
Total or Effective % Impervious 2% 5% 10% 15% 20% 30% 35% 40% 45% 50%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72		
Total or Effective % Impervious 2% 5% 10% 15% 20% 30% 35% 40% 45% 50% 55%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5	ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56 0.6	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68	500-Year 0.54 0.55 0.57 0.69 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74		
Total or Effective % Impervious 2% 5% 10% 15% 20% 25% 30% 35% 40% 45% 50% 55%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.34 0.38 0.42 0.46 0.5 0.54	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56 0.6 0.63	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74 0.76		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 40% 45% 50% 60% 65%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49 0.54	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.58	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56 0.6 0.63 0.66	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.52 0.55 0.58 0.61 0.63 0.66 0.69	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.72 0.74 0.76 0.77		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 30% 35% 40% 45% 50% 55% 60% 65% 70%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.54 0.58	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.58 0.62	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56 0.66 0.66 0.69	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75	500-Year 0.54 0.55 0.57 0.69 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.72 0.74 0.76 0.77 0.79		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 30% 35% 40% 45% 50% 60% 65% 70% 75%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55 0.6	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49 0.54 0.58 0.63	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.58 0.62 0.66	ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.47 0.5 0.53 0.56 0.6 0.63 0.66 0.69 0.72	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72 0.75	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75 0.78	500-Year 0.54 0.55 0.57 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.72 0.74 0.76 0.77 0.79 0.81		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 30% 35% 40% 45% 50% 60% 65% 70% 75% 80%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55 0.6 0.64	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49 0.54 0.63 0.67	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.58 0.62 0.66 0.7	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.66 0.63 0.66 0.72 0.75	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72 0.75 0.77	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75 0.78 0.8	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74 0.72 0.74 0.76 0.77 0.79 0.81 0.83		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 40% 45% 50% 60% 65% 70% 75% 80% 85%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55 0.6 0.64 0.69	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49 0.54 0.63 0.67 0.72	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.62 0.66 0.7 0.74	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.66 0.63 0.66 0.72 0.75 0.78	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72 0.75 0.77 0.8	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75 0.78 0.8 0.82	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74 0.74 0.76 0.77 0.79 0.81 0.83 0.85		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 30% 35% 40% 45% 50% 60% 65% 70% 75% 80% 85% 90%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55 0.6 0.64 0.69 0.74	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.54 0.58 0.63 0.67 0.72 0.76	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.58 0.62 0.74 0.78	Ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.66 0.63 0.66 0.72 0.75 0.78 0.81	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72 0.75 0.77 0.8 0.83	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75 0.78 0.8 0.82 0.84	500-Year 0.54 0.55 0.57 0.59 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74 0.74 0.74 0.76 0.77 0.79 0.81 0.83 0.85 0.87		
Total or Effective % Impervious 2% 5% 10% 15% 20% 35% 30% 35% 40% 45% 50% 60% 65% 70% 75% 80% 85% 90% 95%	2-Year 0.01 0.03 0.06 0.09 0.13 0.17 0.2 0.24 0.29 0.33 0.37 0.42 0.46 0.5 0.55 0.6 0.64 0.69 0.74 0.79	5-Year 0.01 0.03 0.07 0.11 0.15 0.19 0.23 0.27 0.32 0.36 0.4 0.45 0.49 0.54 0.58 0.63 0.67 0.72 0.76	NRCS Hydr 10-Year 0.07 0.1 0.14 0.18 0.22 0.26 0.3 0.34 0.38 0.42 0.46 0.5 0.54 0.62 0.66 0.7 0.74 0.78 0.82	ologic Soll 25-Year 0.26 0.28 0.31 0.34 0.38 0.41 0.44 0.47 0.5 0.53 0.56 0.66 0.69 0.72 0.75 0.78 0.81 0.85	Group B 50-Year 0.34 0.36 0.38 0.41 0.44 0.47 0.49 0.52 0.55 0.58 0.61 0.63 0.66 0.69 0.72 0.75 0.77 0.8 0.83 0.86	100-Year 0.44 0.45 0.47 0.5 0.52 0.54 0.57 0.59 0.61 0.64 0.66 0.68 0.71 0.73 0.75 0.78 0.8 0.82 0.84 0.87	500-Year 0.54 0.55 0.57 0.69 0.61 0.63 0.65 0.66 0.68 0.7 0.72 0.74 0.72 0.74 0.76 0.77 0.79 0.81 0.83 0.85 0.87 0.88		

Table 6-5.Runoff coefficients, c

Total or Effective	NRCS Hydrologic Soil Group C						
% Impervious	2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	500-Year
2%	0.01	0.05	0.15	0.33	0.40	0.49	0.59
5%	0.03	0.08	0.17	0.35	0.42	0.5	0.6
10%	0.06	0.12	0.21	0.37	0.44	0.52	0.62
15%	0.1	0.16	0.24	0.4	0.47	0.55	0.64
20%	0.14	0.2	0.28	0.43	0.49	0.57	0.65
25%	0.18	0.24	0.32	0.46	0.52	0.59	0.67
30%	0.22	0.28	0.35	0.49	0.54	0.61	0.68
35%	0.26	0.32	0.39	0.51	0.57	0.63	0.7
40%	0.3	0.36	0.43	0.54	0.59	0.65	0.71
45%	0.34	0.4	0.46	0.57	0.62	0.67	0.73
50%	0.38	0.44	0.5	0.6	0.64	0.69	0.75
55%	0.43	0.48	0.54	0.63	0.66	0.71	0.76
60%	0.47	0.52	0.57	0.65	0.69	0.73	0.78
65%	0.51	0.56	0.61	0.68	0.71	0.75	0.79
70%	0.56	0.61	0.65	0.71	0.74	0.77	0.81
75%	0.6	0.65	0.68	0.74	0.76	0.79	0.82
80%	0.65	0.69	0.72	0.77	0.79	0.81	0.84
85%	0.7	0.73	0.76	0.79	0.81	0.83	0.86
90%	0.74	0.77	0.79	0.82	0.84	0.85	0.87
95%	0.79	0.81	0.83	0.85	0.86	0.87	0.89
100%	0.83	0.85	0.87	0.88	0.89	0.89	0.9

 Table 6-5. Runoff coefficients, c (continued)



Figure 6-1. Runoff coefficient vs. watershed imperviousness NRCS HSG A



NOAA Atlas 14, Volume 8, Version 2 Location name: Carbondale, Colorado, USA* Latitude: 39.4014°, Longitude: -107.2207° Elevation: 6166.51 ft** * source: ESRI Maps ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	tion Average recurrence interval (years)									
Duration	1	2	5	10	25	50	100	200	500	1000
5-min	1.30 (1.03-1.67)	1.92 (1.52-2.48)	2.89 (2.29-3.74)	3.66 (2.87-4.76)	4.63 (3.44-6.18)	5.33 (3.89-7.26)	5.96 (4.20-8.40)	6.58 (4.42-9.56)	7.30 (4.70-11.0)	7.78 (4.92-12.1)
10-min	0.948 (0.750-1.22)	1.40 (1.12-1.81)	2.12 (1.67-2.74)	2.68 (2.10-3.49)	3.39 (2.53-4.53)	3.89 (2.84-5.32)	4.37 (3.07-6.15)	4.81 (3.23-7.00)	5.34 (3.44-8.05)	5.69 (3.61-8.85)
15-min	0.768 (0.612-0.992)	1.14 (0.908-1.48)	1.72 (1.36-2.23)	2.18 (1.71-2.83)	2.76 (2.05-3.68)	3.17 (2.31-4.32)	3.55 (2.50-5.00)	3.91 (2.63-5.70)	4.34 (2.80-6.55)	4.63 (2.93-7.20)
30-min	0.518	0.742	1.09 (0.860-1.41)	1.36 (1.07-1.77)	1.70	1.94 (1 41-2 64)	2.16 (1 52-3 03)	2.36 (1 59-3 43)	2.59 (1.67-3.91)	2.75 (1 74-4 27)
60-min	0.344 (0.273-0.443)	0.459 (0.364-0.593)	0.638 (0.504-0.827)	0.777 (0.610-1.01)	0.953 (0.711-1.27)	1.08 (0.787-1.47)	1.19 (0.840-1.68)	1.30 (0.874-1.89)	1.42 (0.920-2.15)	1.51 (0.954-2.34)
2-hr	0.214 (0.172-0.273)	0.274 (0.219-0.349)	0.366 (0.292-0.468)	0.437 (0.347-0.562)	0.529 (0.399-0.697)	0.594 (0.439-0.799)	0.654 (0.466-0.907)	0.709 (0.483-1.02)	0.776 (0.506-1.15)	0.820 (0.524-1.26)
3-hr	0.167 (0.135-0.212)	0.203 (0.164-0.257)	0.260 (0.209-0.330)	0.305 (0.243-0.388)	0.362 (0.276-0.475)	0.404 (0.302-0.541)	0.444 (0.319-0.613)	0.482 (0.331-0.688)	0.528 (0.347-0.781)	0.560 (0.360-0.851)
6-hr	0.110 (0.090-0.137)	0.125 (0.102-0.157)	0.151 (0.122-0.189)	0.172 (0.139-0.216)	0.201 (0.157-0.263)	0.224 (0.170-0.299)	0.248 (0.181-0.340)	0.272 (0.190-0.386)	0.304 (0.203-0.447)	0.329 (0.213-0.492)
12-hr	0.068 (0.056-0.084)	0.078 (0.064-0.096)	0.093 (0.077-0.115)	0.107 (0.087-0.133)	0.126 (0.100-0.164)	0.142 (0.109-0.187)	0.158 (0.117-0.215)	0.176 (0.124-0.247)	0.199 (0.135-0.289)	0.218 (0.143-0.321)
24-hr	0.041 (0.034-0.050)	0.047 (0.039-0.058)	0.058 (0.048-0.071)	0.067 (0.055-0.082)	0.080 (0.064-0.103)	0.091 (0.071-0.118)	0.102 (0.076-0.137)	0.114 (0.081-0.158)	0.130 (0.089-0.186)	0.143 (0.095-0.208)
2-day	0.024 (0.020-0.029)	0.028 (0.023-0.033)	0.034 (0.029-0.041)	0.040 (0.033-0.048)	0.048 (0.038-0.060)	0.054 (0.042-0.070)	0.061 (0.046-0.081)	0.068 (0.049-0.093)	0.078 (0.054-0.110)	0.086 (0.058-0.123)
3-day	0.018 (0.015-0.021)	0.020 (0.017-0.024)	0.025 (0.021-0.030)	0.029 (0.024-0.035)	0.035 (0.028-0.044)	0.039 (0.031-0.050)	0.044 (0.034-0.058)	0.049 (0.036-0.067)	0.056 (0.039-0.079)	0.062 (0.042-0.088)
4-day	0.014 (0.012-0.017)	0.017 (0.014-0.020)	0.020 (0.017-0.024)	0.023 (0.020-0.028)	0.028 (0.023-0.034)	0.031 (0.025-0.040)	0.035 (0.027-0.046)	0.039 (0.028-0.052)	0.044 (0.031-0.061)	0.048 (0.033-0.068)
7-day	0.010 (0.008-0.011)	0.011 (0.009-0.013)	0.013 (0.011-0.015)	0.015 (0.013-0.018)	0.018 (0.014-0.022)	0.020 (0.016-0.025)	0.022 (0.017-0.028)	0.024 (0.018-0.032)	0.027 (0.019-0.037)	0.030 (0.020-0.041)
10-day	0.008 (0.007-0.009)	0.009 (0.007-0.010)	0.010 (0.009-0.012)	0.012 (0.010-0.014)	0.014 (0.011-0.016)	0.015 (0.012-0.019)	0.017 (0.013-0.021)	0.018 (0.013-0.024)	0.020 (0.014-0.028)	0.022 (0.015-0.031)
20-day	0.005 (0.004-0.006)	0.006 (0.005-0.006)	0.007 (0.006-0.008)	0.007 (0.006-0.009)	0.009 (0.007-0.010)	0.009 (0.008-0.012)	0.010 (0.008-0.013)	0.011 (0.008-0.015)	0.012 (0.009-0.017)	0.013 (0.009-0.018)
30-day	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.007 (0.006-0.009)	0.008 (0.006-0.010)	0.009 (0.006-0.011)	0.010 (0.007-0.013)	0.010 (0.007-0.014)
45-day	0.003 (0.003-0.004)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.006 (0.005-0.008)	0.007 (0.005-0.009)	0.008 (0.005-0.010)	0.008 (0.006-0.011)
60-day	0.003 (0.002-0.003)	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.005)	0.005 (0.004-0.006)	0.006 (0.004-0.007)	0.006 (0.004-0.008)	0.006 (0.005-0.009)	0.007 (0.005-0.009)
1					, , , , , , , , , , , , , , , , , , ,		tion conice (DD		. ,	

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical

10¹ Precipitation intensity (in/hr) 100 10^{-1} 10-2 60-min 24-hr 7-day 10-day 30-day 45-day 60-day 5-min 10-min 15-min 30-min 2-hr 3-hr Duration 2-day 3-day 4-day 20-day 10¹ Precipitation intensity (in/hr) 100 10-1 10-2 1 2 5 10 25 50 100 200 500 1000 Average recurrence interval (years)





NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Mon Oct 31 20:45:12 2022

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Maps & aerials

Small scale terrain





Large scale terrain



Large scale map Fort Collin 40 Bou Grand Junction Colorado

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70 +_ 50 1<u>00</u>km 60mi

Large scale aerial



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US Department of Commerce National Oceanic and Atmospheric Administration National Weather Service National Water Center 1325 East West Highway Silver Spring, MD 20910 Questions?: HDSC.Questions@noaa.gov

Disclaimer

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

6 IN PIPE 2% SLOPE - FLOW

Circular		Highlighted	
Diameter (ft)	= 0.50	Depth (ft)	= 0.45
		Q (cfs)	= 0.999
		Area (sqft)	= 0.19
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 5.37
Slope (%)	= 2.00	Wetted Perim (ft)	= 1.25
N-Value	= 0.011	Crit Depth, Yc (ft)	= 0.48
		Top Width (ft)	= 0.30
Calculations		EGL (ft)	= 0.90
Compute by:	Q vs Depth		
No. Increments	= 10		



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

8 IN PIPE 2% SLOPE - FLOW

Circular		Highlighted	
Diameter (ft)	= 0.67	Depth (ft)	= 0.60
		Q (cfs)	= 2.181
		Area (sqft)	= 0.33
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 6.52
Slope (%)	= 2.00	Wetted Perim (ft)	= 1.68
N-Value	= 0.011	Crit Depth, Yc (ft)	= 0.64
		Top Width (ft)	= 0.40
Calculations		EGL (ft)	= 1.26
Compute by:	Q vs Depth		
No. Increments	= 10		



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc.

12 IN PIPE 2% SLOPE - FLOW

	Highlighted	
= 1.00	Depth (ft)	= 0.90
	Q (cfs)	= 6.346
	Area (sqft) =	= 0.74
= 100.00	Velocity (ft/s) =	= 8.52
= 2.00	Wetted Perim (ft) =	= 2.50
= 0.011	Crit Depth, Yc (ft)	= 0.97
	Top Width (ft) =	= 0.60
	EGL (ft) =	= 2.03
Q vs Depth		
= 10		
	 = 1.00 = 100.00 = 2.00 = 0.011 Q vs Depth = 10 	= 1.00 $= 1.00$ $= 1.00$ $= 100.00$ $= 100.00$ $= 2.00$ $= 0.011$



Reach (ft)



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Reception#. 750105 11/03/2008 04:41:04 PM Jean Alberico 1 of 2 Rec Fee:\$11.00 Doc Fee:0.00 GARFIELD COUNTY CO

Exhibit K

No Da Fee

SPECIAL WARRANTY DEED

THIS DEED, made this <u>364</u> day of October, 2008, between THE TOWN OF CARBONDALE, a Colorado home rule municipal corporation, (Grantor), and the ROARING FORK SCHOOL DISTRICT NO. RE-1, whose legal address is 1405 Grand Avenue, Glenwood Springs, CO 81601, County of Garfield and State of Colorado, (Grantee):

WITNESSETH, that the Grantor, for and in consideration of the sum of Ten Dollars and Other Good and Valuable Consideration, the receipt and sufficiency of which is hereby acknowledged, hereby grant, bargain, sell, convey and confirm, unto the Grantee and the Grantee's successors and assigns, all the real property, together with any improvements thereon, located in the COUNTY OF GARFIELD and STATE OF COLORADO described as follows:

Lot 2A, the North Face Base Camp Subdivision Exemption Plat recorded in the records of the Clerk and Recorder of Garfield County on March 16, 2001, as Reception No. 577652.

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging, or in anywise appertaining, the reversions, remainders, rents, issues and profits thereof, and all the estate, right, title, interest, claim and demand whatsoever of the Grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the Grantee, and the Grantee's successors and assigns forever. The Grantor, for itself, its successors and assigns, does covenant and agree that the Grantor shall and will WARRANT AND FOREVER DEFEND the above-bargained premises, but not any adjoining vacated street or alley, if any, in the quiet and peaceable possession of the Grantee and the successors and assigns of the Grantee, against all and every person or persons claiming the whole or any part thereof, by, through or under the Grantors except and subject to those matters set forth in Exhibit A attached hereto and made a part hereof.

IN WITNESS WHEREOF, the Grantor has executed this deed on the date set forth above.

THE TOWN OF CARBONDALE A Colorado home rule municipal corporation Mayor Deputy A AL STATE OF COLORADO)) ss. COUNTY OF GARFIELD The foregoing instrument was acknowledged before me this $3/5^{57}$ day of October, 2008, by Michau Hassig as Mayor and Lynn S. Young of Carbondale, a Colorado home rule municipal corporation. as Town Clerk of the Town Michau Hassig Souty Witness my hand and official seal. My commission expires: ELLEN M LIPSCOMB NOTARY PUBLIC STATE OF COLORADO After recording please return to: Lawrence R. Green, Esg. Balcomb & Green, P.C. My Commission Expires Sept. 21, 2010 P.O. Drawer 790 Glenwood Springs, CO 81601





WARRANTY DEED

THIS DEED, Made this16th day of August, 2002, between The North Face. Inc. a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, and duly authorized to transact business in Colorado, grantor, and Roaring Fork School District No. RE-1, grantee; whose legal address is

1405 Grand Avenue, Glenwood Springs, CO 81601.

WITNESSETH, That the grantor(s), for and in consideration of the sum of Ten and 00/100 ****** DOLLARS, the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey, and confirm, unto the grantee, its successors and assigns forever, all the real property together with improvements, if any, situate, lying and being in the County of Garfield and, State of Colorado, described as follows:

The real property described on Exhibit "A" attached hereto and made a part hereof by this reference;

Together With, but without warranty of any kind, all of Grantor's right, title and interest in and to the right of entry for condition broken and all other rights reserved and retained by the Grantor in that certain Deed recorded in the Garfield County records on March 16, 2001 as Reception No. 577675 in Book 1238, Page 58.

also known by street and number as: N/A

TOGETHER, with all and singular the hereditaments and appurtenances thereunto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the grantor, either in law or equity, of, in and to the above bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantee, its successors and assigns, that at the time of the ensealing and delivery of these presents, it is well seized of the premises above conveyed, has good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form aforesaid, and that the same are free and clear from former and other grants, bargains, sales, liens, taxes, assessments, encumbrances and restrictions of whatever kind or nature soever, EXCEPT GENERAL TAXES AND ASSESSMENTS FOR THE YEAR 2002 AND SUBSEQUENT YEARS, AND SUBJECT TO EXCEPTIONS ATTACHED HERETO AND INCORPORATED HEREIN.

The grantor shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantee, its successors and assigns, against all and every person or persons lawfully claiming or to claim the whole or any part thereof.

IN WITNESS WHEREOF, The grantor has caused its corporate name to be hereunto subscribed by its Vice fresident the day and year first above written.

THE NORTH FACE, INC.	
By Robert R Shearer 8	lisløa

STATE OF NORTH CAROLINA)

) ss

COUNTY OF GUILFORD

The foregoing instrument was	acknowledged before me this	15th day of august	, 2002,
y Robert R. Shearer	as Vice President	for THE NORTH FACE, INC.	



ETURN TO: PRUDENTIAL TOWN & COUNTRY

CARBONDALE, CO

350 HIGHWAY 133 SUITE #2

81623

Witness my hand and official seal

14 JANUARY 200 My commission expires

lotary Public

UE NODELLEACE INC

q12

LOT 2B, ACCORDING TO THE NORTH FACE BASE CAMP SUBDIVISION EXEMPTION PLAT RECORDED IN THE RECORDS OF THE CLERK AND RECORDER OF GARFIELD COUNTY ON MARCH 16, 2001 AS RECEPTION NO. 577652 OF THE GARFIELD COUNTY RECORDS

LOT 2B METES AND BOUNDS DESCRIPTION:

A TRACT OF LAND SITUATED IN LOT 7 AND LOT 9 ALL IN SECTION 3, TOWNSHIP 8 SOUTH, RANGE 88 WEST OF THE SIXTH PRINCIPAL MERIDIAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE EASTERLY RIGHT-OF-WAY OF COLORADO STATE HIGHWAY NO. 133, WHENCE THE SURVEY MONUMENT AT THE INTERSECTION OF THE CENTERLINES OF 4TH STREET AND EUCLID AVENUE, TOWN OF CARBONDALE, COUNTY OF GARFIELD, STATE OF COLORADO BEARS N 19 DEGREES 25' 49" W 3878.61 FEET (WITH ALL BEARINGS CONTAINED HEREIN RELATIVE TO A BEARING OF N 89 DEGREES 57' 00" W ALONG THE CENTERLINE OF SAID EUCLID AVENUE BETWEEN SURVEY MONUMENTS ON THE CENTERLINES OF SAID 4TH STREET AND 8TH STREET IN SAID TOWN OF CARBONDALE; THENCE N 63 DEGREES 26' 00" E 48.02 FEET TO THE SOUTHWEST CORNER OF THAT PROPERTY DESCRIBED AS RECEPTION NO. 474088 OF THE GARFIELD COUNTY RECORDS; THENCE N 35 DEGREES 58' 00" E ALONG THE SOUTHERLY BOUNDARY OF SAID PROPERTY AND THE SOUTHERLY BOUNDARY OF THE CARBONDALE SOUTH PLANNED UNIT DEVELOPMENT 477.07 FEET, TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING ALONG THE SOUTHERLY BOUNDARY OF THE CARBONDALE SOUTH P.U.D. AND ALONG THE SOUTHERLY BOUNDARY OF THE CARBONDALE HOUSING PROJECT N 35 DEGREES 58' 00" E 120.28 FEET THENCE LEAVING SAID SOUTHERLY BOUNDARY S 55 DEGREES 04' 46" E 386.14 FEET; THENCE S 73 DEGREES 18' 54" W 312.60 FEET; THENCE N 89 DEGREES 46' 12" E 161.67 FEET TO A POINT IN AN EXISTING FENCE; THENCE S 00 DEGREES 13" 48" E 1137.88 FEET ALONG SAID FENCE TO THE SOUTHEAST CORNER OF SAID LOT 9, A CEDAR FENCE POST; THENCE S 87 DEGREES 44' 00" W 799.51 FEET ALONG THE SOUTHERLY LINE OF SAID LOT 9, ADJACENT AND/OR ADJOINING SAID FENCE TO THE EASTERLY RIGHT-OF-WAY OF SAID STATE HIGHWAY NO. 133; THENCE N 26 DEGREES 34' 00" W ALONG SAID EASTERLY RIGHT-OF-WAY 759.02 FEET; THENCE LEAVING SAID EASTERLY RIGHT-OF-WAY N 69 DEGREES 30' 22" E 329.84 FEET ALONG AN EXISTING FENCE AND FENCE EXTENDED; THENCE CONTINUING ALONG SAID FENCE AND FENCE EXTENDED N 03 DEGREES 17' 55" W 409.11 FEET, TO THE TRUE POINT OF BEGINNING.

COUNTY OF GARFIELD STATE OF COLORADO

809156 08/19/2002 04:05P B1378 P873 M ALSDORF 2 of 3 R 15.00 D 400.00 GARFIELD COUNTY CO

OwnerName	Mailing Address	City	State	ZipCode
P & C NIESLANIK LLLP	481 COUNTY ROAD 100	CARBONDALE	CO	81623-9547
ROARING FORK SCHOOL DISTRICT RE-1	PO BOX 820	GLENWOOD SPRINGS	CO	81602-0820
CARBONDALE AND RURAL FIRE PROTECTION DISTRICT	300 MEADOWOOD DRIVE	CARBONDALE	CO	81623
STATE OF COLORADO DEPARTMENT OF HIGHWAYS	4201 E ARKANSAS AVENUE	DENVER	CO	80222-3406
CARBONDALE AND RURAL FIRE PROTECTION DISTRICT	300 MEADOWOOD DRIVE	CARBONDALE	CO	81623
CARBONDALE, TOWN OF	511 COLORADO AVENUE	CARBONDALE	CO	816232067
ROARING FORK SCHOOL DISTRICT, NO RE-1	1405 GRAND AVENUE	GLENWOOD SPRINGS	CO	81601
ROARING FORK SCHOOL DISTRICT RE-1	1405 GRAND AVENUE	GLENWOOD SPRINGS	CO	81601-3807
90 ROARING FORK AVE A#1 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
JURICK, EMILY K & MEHR, WILLIAM L	90 ROARING FORK AVE APT A2	CARBONDALE	CO	81623
ARRINGTON, REBECCA LEE	90 ROARING FORK APT A3	CARBONDALE	CO	81623
GOTTKO, ROBERT M, RICHARD & IRENE H	90 ROARING FORK AVENUE #A4	CARBONDALE	CO	81623
90 ROARING FORK AVE #B-1 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
KELMANSON, BELINDA & RACHEL	90 ROARING FORK AVE B2	CARBONDALE	CO	81623
COLLOTON, CAMERON	601 BRENDEN COURT	ASPEN	CO	81611
90 ROARING FORK AVE #B-4 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
LIEBMANN, BRUCE	68 PRIMROSE LANE	CARBONDALE	CO	81623
MAGILL, FAITH A	420 N IOWA #205N	GUNNISON	CO	81230
MULLALLY, DAWN MARIE	90 ROARING FORK AVENUE, UNIT C3	CARBONDALE	CO	81623
90 ROARING FORK AVE #C-4 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
PENNINGTON, DEBRAA& MCINNIS, PHYLLIS	PO BOX 560	SOMERSET	CO	81434
CARBONDALE SOUTH A2 LLC	501 RIO GRAND PLACE SUITE 107	ASPEN	CO	81611
HENKE, ROSE MARY TRUST	4704 HARLAN STREET, SUITE 250	DENVER	CO	80212
JUNG, DENNIS P	PO BOX 8351	ASPEN	CO	81612
NEVILAS, JOANNE	PO BOX 378	BASALT	CO	81621
CURRY, PATRICK	93 MEADOWWOOD DRIVE 2-B	CARBONDALE	CO	81623
93 MEADOWOOD DR #B-3 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
93 MEADOWOOD DR #B-4 LLC	564 TWINING FLATS ROAD	ASPEN	CO	81611
ANDERSON, JUSTIN K	342 NW 21ST STREET	CORVALLIS	OR	973306072
DICKERSON, PAUL T	PO BOX 1842	CARBONDALE	CO	81623
LIEBMANN, BRUCE	68 PRIMROSE LANE	CARBONDALE	CO	81623
STAHL, JIL J & THERIAULT, LIN J	215 N POWER ROAD, UNIT 296	MESA	AZ	85205
SPRANG, PATRICIA ANGELINE	89 MEADOW WOOD DRIVE, APT A1	CARBONDALE	CO	81623
GENTRY, RYAN	89 MEADOW WOOD DRIVE #A-2	CARBONDALE	CO	81623

CROCKETT, RUFUS	PO BOX 3837	ASPEN	CO	81612
JOHNSON, RORY PAUL & JOHNSON UGARTE, ISABEL MARIA	89 MEADOWOOD DRIVE A-4	CARBONDALE	CO	81623
HUNTER, GREGORY C & PATRICIA L	1426 SOUTH PEARL STREET	DENVER	CO	80210
WHALEN, JEROME & MARY A & WHALEN, MEGAN	228 S 8TH STREET	CARBONDALE	CO	81623-1918
GOMEZ BARRIENTOS, LETICIA & VALBUENA, USIEL DOLORES	PO BOX 1231	CARBONDALE	CO	81623
MAC G LLC	119 MONARCH ROAD	GLENWOOD SPRINGS	CO	81601
BAIRD, BRIDGER	1809 GRAND AVNEUE	GLENWOOD SPRINGS	CO	81601
KHARKHAL, NATALLIA	21050 NE 38TH AVENUE APT 1804	AVENTURA	FL	33180
GERALIS, PANTELIS	123 NICHOLAS LANE	ASPEN	CO	81611
DURHAM, ROBERT E & MELODY L	14628 HIGHWAY 133	REDSTONE	CO	81623
RUSBY, SALLY B	295 RIO GRANDE LANE #22	CARBONDALE	CO	81623
DONATH, KYLE	111H ASPEN AIRPORT BUSINESS CENTER	ASPEN	CO	81611
SANDATE, MATEO J	PO BOX 1751	CARBONDALE	CO	81623
CRULL, JEANNETTE	86 ROARING FORK AVENUE, UNIT A4	CARBONDALE	CO	81623
GEMUS, SAMUEL & BURNETT, JULIA	86 ROARING FORK AVENUE, APR B1	CARBONDALE	CO	81623
ASPEN VALLEY ABODE LLC	200 OAK RUN	CARBONDALE	CO	81623
WIMMER, MARIA BARBARA	121 GARFIELD AVENUE	CARBONDALE	CO	81623
BORCHELT, PHILLIP C	247 RAINBOW DRIVE #14773	LIVINGSTON	ΤX	77399
MULLIGAN, DIANE & MARK DAVID	1114 MILWAUKEE STREET	DENVER	CO	80206
KOPP, MICHAEL & RACHEL	788 CASTLE VALLEY BOULEVARD, UNIT 1	NEW CASTLE	CO	81647
MOUND, HENRY	86 ROARING FORK AVENUE APT C3	CARBONDALE	CO	81623
SUMMERS, COREY MICHAEL	86 ROARING FORK AVENUE UNIT C4	CARBONDALE	CO	81623
TRIPLE CS LLC	281 LARKSPUR DRIVE	CARBONDALE	CO	81623
UPTON HIGHLANDS LLC	107 SHODDY MILL ROAD	ANDOVER	СТ	6232
SUMMERS, MARGARET W	82 ROARING FORK AVENUE #A3	CARBONDALE	CO	81623
TOM, AUDREY JOAN	82 ROARING FORK AVENUE #A4	CARBONDALE	CO	81623
BACA, ZACHARY THOMAS & LAURA RENAE	82 ROARING FORK AVE #B1	CARBONDALE	CO	81623
SYDORYK, KATHLEEN L	0601 KINGS ROW AVENUE	CARBONDALE	CO	81623
FUENTES, FERNANDO A	82 ROARING FORK AVENUE, B3	CARBONDALE	CO	81623
MARSH, BRIAN & AALTO, CHRISTINA	82 ROARING FORK AVENUE B4	CARBONDALE	CO	81623
ARMSTRONG, BERNARD & SALVADORE, TERESA	82 ROARING FORK AVE #C1	CARBONDALE	CO	81623
WATSON, MARY J	781 LATIGO LOOP	CARBONDALE	CO	81623
MYTTY, DUANE & SIRI	82 ROARING FORK AVENUE C3	CARBONDALE	CO	81623
GALLUCCIO, VINCENT	325 OAK LANE	ASPEN	CO	816112186
HOWARD, FRANCIS & MOORE, AMBER	85 MEADOW WOOD DRIVE, APT A1	CARBONDALE	CO	81623

KNUTSON, DAYTON THOMAS & FULTON, MARIEL MARIE	85 MEADOW WOOD DRIVE, APT A2	CARBONDALE	CO	81623
RAMIREZ, HILDA E	472 NORTH 8TH STREET	CARBONDALE	CO	81623
JOYA, LUISA A	85 MEADOWOOD DRIVE A4	CARBONDALE	CO	81623
GEORGE, ROBERT E VI & SAMMIE J TROTTER	950 WASHINGTON AVENUE	ROCKY FORD	CO	81067
HUNTER, GREGORY C & PATRICIA	1426 SOUTH PEARL STREET	DENVER	CO	80210
JSE VENTURES, LLC	48 HOPI	CARBONDALE	CO	81623
FOX, KAREN R LIVING TRUST DATED 7/30/10	PO BOX 652	SILVERTHORNE	CO	80498
SBARRA, WILLIAM JOHN III & WILSON, TRACY MARIE	PO BOX 1718	CARBONDALE	CO	81623-4718
NOTHNAGEL, MIRIAM BERTRAM	98 WEANT BLVD	CARBONDALE	CO	81623
HABERMAN, MOLLY RACHEL	401 E LUPINE DRIVE	ASPEN	CO	81611
LEMOTTE, TANJA E & WATERMAN, COLIN M	85 MEADOWOOD DRIVE APT C4	CARBONDALE	CO	81623
CARBONDALE SOUTH CONDOMINIUMS INC	PO BOX 1298	GLENWOOD SPRINGS	CO	81602-1298
VILLAS DE SANTA LUCIA, INC	4045 PECOS STREET, SUITE A	DENVER	CO	80211

WEBOWOOD BEN. PAVER PATIO, TYP.-BIKE PARKING, TYP.-PRIVACY SCREENING-PAVER PATIO, TYP. — ADA ACCESS PATH-MEROONOOD RIVE BUILDINGB PAVER PATIO, TYP.-**EXISTING TREE TO** REMAIN, TYP. HIGH SCHOOL ACCESS DRIVE

RFSD MEADOWOOD HOUSING | SITE PLAN

03/09/2022



ALL GRAPHICS ARE CONCEPTUAL AND SUBJECT TO CHANGE







IMPERVIOUS SURFACES

Building footprings Parking surfaces Walkways and Paths Other

Total

177

21,396	sf
49,915	sf
13,132 0 sf 84,443	si sf



jvD LLC 1910 7th Street, Third Floor Boulder, Colorado 80302 720.301.0500 jv@jvdesousa.com

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issue date: 12/30/22 Site Review Package

revisions: **3/6/23** Revisions #1

project RFSD Meadowood Staff Housing

drawing title Impervious Surfaces Diagram

drawing scale AS NOTED

drawing number

PERVIOUS SURFACES

Planted Areas Rain Gardens Walkways and Paths Other **Total**

54,872 sf 6,124 sf 2,414 sf 1,928 sf 65,338 sf



















Building Unit Mix Matrix

 $\bigotimes^{\!\!\!\!\!\!\!\!\!\!\!}$











	Unit Floor Area	Building A	Quantity	Area	Building B	Quantity	Area	Building C	Quantity	Area	Total Area
Unit Type 1 // Two Bed (First Floor)	847		4	3388		2	1694				5082
Unit Type 1 // Two Bed (Second Floor)	890		3	2670		2	1780				4450
Type A Unit // Two Bed (accessible)	939		1	939			939				1878
Unit Type 2 // Three Bed (First Floor)	1191					3	3573				3573
Unit Type 2 // Three Bed (Second Floor)	1234					3	3702				3702
Unit Type 3 // Three Bed (First Floor)	1325					1	1325				1325
Unit Type 3 // Three Bed (Second Floor)	1363					1	1363				1363
Unit Type 4 // One Bed	648								9	5832	5832
Type A Unit // One Bed (accessible)	748								1	748	748
Unit Type 5 // Three Bed	1126								8	9008	9008
Unit Type 6 // Two Bed	885								4	3540	3540
Unit Type 7 // Studio	413								8	3304	3304
Common Area, Outdoor Patios & Bulk Storage				1014			809			3332	5155
Enclosed Building Total			8	8011		12	15185		30	25764	48960
Building Area Total				8910			16016			32596	57522



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l Staff Housing d Drive 81623 RFSD Meadowood S Meadowood I Carbondale CO Ο

issue date: 12/30/22 Site Review Package

revisions: **3/6/23** Revisions #1

project RFSD Meadowood Staff Housing

drawing title Buidling C Third and Roof Plans

drawing scale AS NOTED drawing number



Elevation Keynotes

1. Roofing		
	1.01	TPO Membrane Roofing
	1.02	Asphalt Shingle Roofing
	1.03	Metal Wall Cap
2. Cladding/	Siding	
	2.01	Stucco
	2.02	James Hardie Aspyre Shiplap - Primary Color
	2.03	James Hardie Aspyre Shiplap - Secondary Color
	2.04	Cement Fiber Board and Batten
	2.06	Aspyre Shiplap - Furred - Primary Color
	2.07	Cement Fiber Board and Batten - Furred
3. Windows	/Doors	
	3.01	Anderson 100 Low SHGC - Southeast and Southwest Elevations
	3.02	Anderson 100 low U-Value for Northeast and Northwest exposure
	3.03	Unit Entry Door
	3.04	Stair Entry Door
	3.05	Anderson 100 Sliding Glass Door
	3.06	Glass Unit Entry Door
	3.07	Storage Room Door
	3.08	Utility Entry Door
4. Other Ma	terials and Systems	
	4.01	Private Outdoor Balcony

Private Outdoor Balcony Balcony Railing

MATERIALS PALETTE

4.02



CEMENT FIBER SHIPLAP

STUCCO













South West Elevation SCALE: 1/8" = 1'-0"





North West Elevation SCALE: 1/8" = 1'-0"

0 4'





North East Elevation SCALE: 1/8" = 1'-0"





T.O. SECOND FLOOR SHEATHING 110.15' 6,234.65'

• T.O. FIRST FLOOR SHEATHING 100.00' 6,224.50'





• T.O. FIRST FLOOR SHEATHING 100.00' 6,224.50'

0 4' 8'



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Staff Housing 3 Drive) 8162 RFSD Meadowood S Meadowood E Carbondale CO 0 od O O

issue date: 12/30/22 Site Review Package

revisions: **3/6/23** Revisions #1

project RFSD Meadowood Staff Housing

drawing title **Building A Elevations**

drawing scale AS NOTED drawing number



Elevation Keynotes

4.01

4.02

Private Outdoor Balcony

Balcony Railing

1. Roofing		
1.01	TPO Membrane Roofing	
1.02	Asphalt Shingle Roofing	لافه لافه لافه لافه لافه لافه لافه لافه
1.03	Metal Wall Cap	
2. Cladding/Siding		
2.01	Stucco	
2.02	James Hardie Aspyre Shiplap - Primary Color	
2.03	James Hardie Aspyre Shiplap - Secondary Color	
2.04	Cement Fiber Board and Batten	
2.06	Aspyre Shiplap - Furred - Primary Color	
2.07	Cement Fiber Board and Batten - Furred	
3. Windows/Doors		
3.01	Anderson 100 Low SHGC - Southeast and Southwest Elevations	
3.02	Anderson 100 low U-Value for Northeast and Northwest exposure	
3.03	Unit Entry Door	
3.04	Stair Entry Door	
3.05	Anderson 100 Sliding Glass Door	
3.06	Glass Unit Entry Door	
3.07	Storage Room Door	<u>North East Elevation </u>
3.08	Utility Entry Door	SCALE: 1/8" = 1'-0"
4. Other Materials and Systems		



2

North West Elevation SCALE: 1/8" = 1'-0"





T.O. FLAT ROOF SHEATHING 122.08' 6,246.58'

T.O. SECOND FLOOR SHEATHING 111.30' 6,235.80'

0 4'









jvD LLC 1910 7th Street, Third Floor Boulder, Colorado 80302 720.301.0500 jv@jvdesousa.com

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0 4' 8

issue date: 12/30/22 Site Review Package

revisions: **3/6/23** Revisions #1

project RFSD Meadowood Staff Housing

drawing title **Building B Elevations**

drawing scale AS NOTED drawing number



0 4'



Elevation Keynotes

1. Roofing

	1.01	TPO Membrane Roofing
	1.02	Asphalt Shingle Roofing
	1.03	Metal Wall Cap
2. Cladding/	Siding	
	2.01	Stucco
	2.02	James Hardie Aspyre Shiplap - Primary Color
	2.03	James Hardie Aspyre Shiplap - Secondary Color
	2.04	Cement Fiber Board and Batten
	2.06	Aspyre Shiplap - Furred - Primary Color
	2.07	Cement Fiber Board and Batten - Furred
3. Windows	/Doors	
	3.01	Anderson 100 Low SHGC - Southeast and Southwest Elevations
	3.02	Anderson 100 low U-Value for Northeast and Northwest exposure
	3.03	Unit Entry Door
	3.04	Stair Entry Door
	3.05	Anderson 100 Sliding Glass Door
	3.06	Glass Unit Entry Door
	3.07	Storage Room Door
	3.08	Utility Entry Door
4. Other Ma	terials and Systems	
	4.01	Private Outdoor Balcony









4.02

MATERIALS PALETTE

#CDD2D2

COLORS

Balcony Railing

CEMENT FIBER SHIPLAP



STUCCO







#DFD3C3









TOWN OF CARBONDALE

PLANNING DEPARTMENT REVIEWING AGENCY FORM

PLANNING ITEM #: LU23-01, LU23-02, LU23-03

DATE SENT: 1-23-23

COMMENTS DUE: 2-06-23

TO:

To assist the Town in its review of this project, your review and written comments are requested. Please notify the Planning Department if you will not be able to respond by the date listed above. Questions regarding this project should be directed to the Planning Department, 963-2733.

APPLICANT: Robert Schultz Consulting LLC

OWNERS: Roaring Fork School District

LOCATION: Lots 2A and 2B, North Face Base Camp Subdivision, East of the Meadowood Dr and High School Access Drive intersection.

ZONE: Community Arts (CA) and Commercial Business Park (CBP)

PROJECT DESCRIPTION: <u>A combined application, including a Major Site Plan Review,</u> <u>Minor Plat Amendment, Rezoning Application, and Alternative Compliance, for a 50-unit</u> <u>apartment development for school district employee housing.</u>

PLANNING STAFF CONTACT: <u>Jared Barnes</u>

The following are conditions or comments I would offer regarding this item: (Attach separate sheet if necessary)

- 1. The Town of Carbondale's water is system is capable of providing adequate fire flows for the required 1,500 gallon per minute flow.
- 2. There are two existing fire hydrants located along Meadowood Drive adjacent to the site. An additional new hydrant is proposed near the south corner of the site. The number and spacing of the hydrants are adequate for the project.
- 3. The proposed access is adequate for the sprinklered residential buildings.

Bill Gavette, Deputy Chief, Carbondale & Rural FPD Signature

02-09-2023 Date

Please return comments to both:

jbarnes@carbondaleco.net kmcdonald@carbondaleco.net

Planning Department Town of Carbondale 511 Colorado Avenue Carbondale, CO 81623

Jared Barnes

From:	Carl Meinecke
Sent:	Thursday, January 26, 2023 11:38 AM
То:	Jared Barnes
Subject:	RE: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing
Attachments:	Exhibit D- Landscape, Snow, Irrigation copy (1) Arborist Comments.pdf

Hello,

I made comment's electronically on the attached PDF.

Overview of Comments

- I removed some trees that are in a tight area along the interior street, one that would create visual issues close to a corner, and a few others I reduced tree groupings to 2 instead of 3.
- Changed some tree species in Islands and street to species with more upright growth habits.
- Added stipulation to keep vegetation in certain areas no more than 24in tall at mature height for increased visibility.
- Noted that tree staking is not a specific requirement for the town of Carbondale.
- Noted must follow our Planting and Protection guidelines, anything above and beyond is OK.

At some point we will need the Tree Board to Review as well.

Carl Meinecke / Town Arborist Town of Carbondale CSU Colorado Gardener Certificate ISA Certified Arborist®, RM-7721AT 0756 Hwy 133 Carbondale, CO 81623 970-379-9289 cell 970-510-1331 office

From: Jared Barnes <jbarnes@carbondaleco.net>
Sent: Tuesday, January 24, 2023 9:46 AM
To: Carl Meinecke <cmeinecke@carbondaleco.net>
Subject: RE: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing

Yeah I have one in my office. Feel free to swing by.

Jared Barnes, AICP Planning Director Town of Carbondale 511 Colorado Ave From: Carl Meinecke <<u>cmeinecke@carbondaleco.net</u>>
Sent: Tuesday, January 24, 2023 9:39 AM
To: Jared Barnes <<u>jbarnes@carbondaleco.net</u>>
Subject: RE: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing

Hello,

Do you have a big paper copy or can you print me off a big version of EXHIBIT D Landscape, Snow, Irrigation.

Thanks,

Carl Meinecke / Town Arborist Town of Carbondale CSU Colorado Gardener Certificate ISA Certified Arborist®, RM-7721AT 0756 Hwy 133 Carbondale, CO 81623 970-379-9289 cell 970-510-1331 office

From: Jared Barnes <<u>jbarnes@carbondaleco.net</u>>
Sent: Monday, January 23, 2023 6:37 PM
To: Jared Barnes <<u>jbarnes@carbondaleco.net</u>>
Subject: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing

Referral Agency,

Please find attached a referral request for a Major Site Plan review, Minor Plat Amendment, Rezoning, and Alternative Compliance application for a 50-unit residential development. The project is called the Roaring Fork School District's Meadowood Employee Housing application and is located to the east of the intersection of Meadowood Dr and the High School Access Road, just south of North Face Park.

I have attached a Reviewing Agency Form and included a link to the application documents below. If you would prefer a paper copy, please let me know as soon as possible.

https://www.dropbox.com/scl/fo/wwuogh0ujs916msje3ueq/h?dl=0&rlkey=uu6nrcgh5sf0lfq2vgt9ptdkt

Thank you in advance for your time in reviewing the application and any comments you share. You are an important part of the Town of Carbondale's review. If you have any questions or difficulty accessing the plans, please don't hesitate to contact me.

Thanks,

Jared Barnes, AICP Planning Director Town of Carbondale 511 Colorado Ave Carbondale, CO 81623 970-510-1208 jbarnes@carbondaleco.net www.carbondalegov.org

LA	ANDSCAPE NOTES	BIORETENT	ION SEED MIX				
1.	REFER TO IRRIGATION PLANS FOR LIMITS AND TYPES OF IRRIGATION DESIGNED FOR THE LANDSCAPE. IN NO CASE SHALL IRRIGATION BE EMITTED WITHIN THE MINIMUM DISTANCE FROM BUILDING OR WALL FOUNDATIONS AS STIPULATED IN THE	+ + + + + + + + + + + + + + + + + + + +	COMMON NAME	SCIENTIFIC NAME	VARIETY	PLS LBS PER ACRE	OUNCES PER ACRE
	GEOTECHNICAL REPORT. ALL IRRIGATION DISTRIBUTION LINES, HEADS AND EMITTERS SHALL BE KEPT OUTSIDE THE	+ + + + + + + + + + + + + + + + + + + +	SAND BLUESTEM	ANDROPOGON HALLII	GARDEN	3.5	
	MINIMUM DISTANCE AWAY FROM ALL BUILDING AND WALL FOUNDATIONS AS STIPULATED IN THE GEOTECHNICAL REPORT.		SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	BUTTE	3	
2.	PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION		PRAIRIE SANDREED	CALAMOVILFA LONGIFOLIA	GOSHEN	3	
	ACTIVITY SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF 8" - 12" AND AMENDED PER SPECIFICATIONS.		INDIAN RICEGRASS	ORYZOPSIS HYMENOIDES	PALOMA	3	
3.	ALL SEED, SOD AND SHRUB BED AREAS ARE TO RECEIVE ORGANIC SOIL PREPARATION IN ACCORDANCE WITH THE SOILS	Staking not a requirement	SWITCHGRASS		BLACKWELL	4	
	REPORT OR AT A MINIMUM OF 3.5 CU.YDS./1000 SF EVENLY TILLED INTO SOIL AT A DEPTH OF 6"	for the Town of Carbondale				3	
4.	ALL TREES ARE TO BE STAKED AND GUYED PER DETAILS FOR A PERIOD OF 1 YEAR. THE CONTRACTOR SHALL BE				FAIURA	3	
	RESPONSIBLE FOR REMOVING STAKES AT THE END OF 1 YEAR FROM ACCEPTANCE OF LANDSCAPE INSTALLATION BY THE					3	
	OWNER'S REPRESENTATIVE. OBTAIN APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO REMOVAL.	•	*PASTURE SAGE	ARTEMISIA FRIGIDA		0	2
5.	ALL TREES IN SEED OR TURF AREAS SHALL RECEIVE MULCH RINGS. OBTAIN APPROVAL FROM OWNER'S REPRESENTATIVE		*BLUE ASTER	ASTERIAEVIS			4
•	FOR ANY TREES THAT WILL NOT BE MULCHED FOR EXCESSIVE MOISTURE REASONS.		*BLANKET FLOWER	GAILLARDIA ARISTATA			8
6.	SHRUB, GROUNDCOVER AND PERENNIAL BEDS ARE TO BE CONTAINED BY 4" PERFORATED GALVANIZED ROLL TOP EDGING		*PRAIRIE CONEFLOWER	RATIBIDA COLUMNIFERA			4
	WHERE SHOWN ON PLANS. EDGER IS NOT REQUIRED WHEN ADJACENT TO CURBS, WALLS, CONCRETE WALKS OR SOLID		*PURPLE PRAIRIECLOVER	DALEA (PETALOSTEMUM) PURPUREA			4
	FENCES WITHIN 3" OF PRE-MULCHED FINAL GRADE. EDGER SHALL NOT BE REQUIRED TO SEPARATE MULCH TYPES UNLESS					27 5	22
7	SPECIFIED UN THE PLANS.		TOTAL			21.0	
1.	ALL SHRUB BEDS ARE TO BE MULCHED WITH MIN. 3 DEPTH, SHREDDED BARK LANDSCAPE MULCH OVER SPECIFIED						
	MULCHED WITH 3" DEPTH SHREDDED BARK LANDSCAPE MULCH NO WEED CONTROL FARRIC IS REQUIRED IN					PLS LBS	PERCENT
	GROUNDCOVER OR PERENNIAL AREAS	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~				PERACRE	
8	AT SEED AREA BOUNDARIES ADJACENT TO EXISTING NATIVE AREAS, OVERLAP ABUTTING NATIVE AREAS BY THE FULL	¥ ¥ 1	BLUE FESCUE	FESTUCA GLAUCA		4.4	20%
0.	WIDTH OF THE SEEDER		BLUE GRAMA	BOUTELOUA GRACILIS		3.3	15%
9	EXISTING TURE AREAS THAT ARE DISTURBED DURING CONSTRUCTION ESTABLISHMENT AND THE MAINTENANCE PERIOD			FESTUCA SAXIMONTANA		3.3	15%
0.	SHALL BE RESTORED WITH NEW SOD TO MATCH EXISTING TURF SPECIES. DISTURBED NATIVE AREAS WHICH ARE TO					3.3	15%
	REMAIN SHALL BE OVER SEEDED AND RESTORED WITH SPECIFIED SEED MIX.					2.2	10%
10.	ALL SEEDED SLOPES EXCEEDING 25% IN GRADE (4:1) SHALL RECEIVE EROSION CONTROL BLANKETS, PRIOR TO		SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA		2.2	10%
	INSTALLATION, NOTIFY OWNER'S REPRESENTATIVE FOR APPROVAL OF LOCATION AND ANY ADDITIONAL COST IF A CHANGE		ALPINE BLUEGRASS	POA AI PINA		0.45	2.5%
	ORDER IS NECESSARY.		BOTTI FBRUSH SQUIRREI TA			0.45	2.5%
11.	WHEN COMPLETE, ALL GRADES SHALL BE WITHIN +/- 1/8' OF FINISHED GRADES AS SHOWN ON THE PLANS.					01.0	4000/
12.	SOFT SURFACE TRAILS NEXT TO MANICURED TURF OR SHRUB BEDS SHALL BE CONTAINED WITH 4" PERFORATED METAL		TOTAL			21.8	100%
	BENDA BOARD EDGER.						
13.	PRIOR TO THE PLACEMENT OF MULCH AND WEED FABRIC, A GRANULAR, PRE-EMERGENT, WEED CONTROL AGENT SHALL BE	IURF GRAS	S RLEND: SOD				
	ADDED TO ALL PLANTING BEDS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION, EXCEPT AROUND	·····					
	ORNAMENTAL GRASSES.		DELL NOOTED BLOEDKA33	BLEND, LOCALLI SOUNCLD			

14. THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND REPLACEMENT OF ALL IMPROVEMENTS SHOWN OR INDICATED ON THE APPROVED LANDSCAPE PLAN ON FILE IN THE PLANNING DEPARTMENT.

PLANT SCHEDULE

DECIDUOUS CANOPY TREES	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
AC TA	ACER TATARICUM	TATARIAN MAPLE	B & B	2.5" CAL.
GL SH	GLEDITSIA TRIACANTHOS INERMIS `SHADEMASTER` TM	SHADEMASTER LOCUST	B & B	2"CAL
TI GR	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	B & B	2"CAL
EVERGREEN TREES	BOTANICAL NAME	COMMON NAME	ROOT	<u>SIZE</u>
PI ED	PINUS EDULIS	PINON PINE	B & B	6` HEIGHT
ORNAMENTAL TREES	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
AC CO	ACER GINNALA 'COMPACTUM'	COMPACT AMUR MAPLE	CONT.	#20
AM CA	AMELANCHIER CANADENSIS	CANADIAN SERVICEBERRY	B & B	2" CAL.
MA SS	MALUS X `SPRING SNOW`	SPRING SNOW CRAB APPLE	B & B	1.5"CAL
DECIDUOUS SHRUBS BU AL CO AF LI LO RH AR SO ST SY VU	BOTANICAL NAME BUDDLEJA ALTERNIFOLIA `ARGENTEA` CORNUS SERICEA `ARCTIC FIRE` LIGUSTRUM VULGARE `LODENSE` RHUS AROMATICA 'GRO-LOW' SORBARIA SORBIFOLIA STELLIPILA SYRINGA VULGARIS	<u>COMMON NAME</u> SILVER FOUNTAIN BUTTERFLY BUSH ARCTIC FIRE DOGWOOD LODENSE PRIVET GRO-LOW FRAGRANT SUMAC URAL FALSE SPIREA COMMON PURPLE LILAC	ROOT CONT. CONT. CONT. CONT. CONT. CONT.	<u>SIZE</u> #5 #5 #5 #5 #5
<u>EVERGREEN SHRUBS</u>	BOTANICAL NAME	<u>COMMON NAME</u>	<u>ROOT</u>	<u>SIZE</u>
AR CH	ARCTOSTAPHYLOS X COLORADOENSIS `CHIEFTAIN`	CHIEFTAIN MANZANITA	CONT.	#5
PI MO	PINUS MUGO `MOPS`	MUGO PINE	CONT.	#5
ORNAMENTAL GRASSES	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
BO BA	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLOND AMBITION BLUE GRAMA GRASS	CONT.	#1
CA BR	CALAMAGROSTIS BRACHYTRICHA	KOREAN FEATHER REED GRASS	CONT.	#1
MI ML	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT MAIDEN GRASS	CONT.	#1
PA HM	PANICUM VIRGATUM 'HEAVY METAL'	BLUE SWITCH GRASS	CONT.	#1
PA SH	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	CONT.	#1
PERENNIALS	BOTANICAL NAME	<u>COMMON NAME</u>	ROOT	<u>SIZE</u>
AC MO	ACHILLEA X `MOONSHINE`	MOONSHINE YARROW	CONT.	#1
HE HB	HEUCHERA X `HARVEST BURGUNDY`	HARVEST BURGUNDY CORAL BELLS	CONT.	#1
HE SA	HEUCHERA X `SNOW ANGEL`	SNOW ANGEL CORAL BELLS	CONT.	#1
HO PA	HOSTA FORTUNEI `PATRIOT`	PATRIOT HOSTA	CONT.	#1
VE SN	VERONICA SNOWMASS	SNOWMASS BLUE-EYED SPEEDWELL	CONT.	#1

B B M B M CHECKED BY: DRAWN BY:

KEY MAP



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DATE: 12/30/2022 SITE
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REVIEW PACKAGE
SHEET TITLE
LANDSCAPE
NOTES
EXHIBIT C
LP-100



BR MBR CHECKED BY: DRAWN BY:

INTS			
PE	NUMBER REQUIRED	NUMBER PROVIDED	
	12 TREES	12 TREES	
	10 TREES	10 TREES	
		XX TREES TOTAL	

LEGEND

\frown	
	DECIDUOUS CANOPY TREES
	DECIDUOUS ORNAMENTAL TR
	EVERGREEN TREES
· · · · · · · · · · · · · · · · · · ·	EXISTING TREES TO REMAIN AND BE PROTECTED
	EVERGREEN SHRUBS
$\bigcirc \bigcirc $	DECIDUOUS SHRUBS
	ORNAMENTAL GRASS
0 0000 0000	PERENNIALS
* * * * * * * * * *	LOW GROW NATIVE GRASS S
$\begin{array}{c} + & + & + & + & + & + \\ + & + & + & + &$	BIORETENTION GRASS SEED
	CRUSHER FINES
	CONCRETE
	5-8" RIVER ROCK COBBLE MU
	1 ¹ / ₂ " RIVER ROCK COBBLE MU
	SOD LAWN
	EXISTING MULTIPLE USE FIEI
	WOOD MULCH LANDSCAPE E
	BENDA BOARD EDGER
	LIMIT OF WORK
	LOT LINE

DECIDUOUS ORNAMENTAL TREE
EVERGREEN TREES
EXISTING TREES TO REMAIN AND BE PROTECTED
EVERGREEN SHRUBS
DECIDUOUS SHRUBS
ORNAMENTAL GRASS
PERENNIALS
LOW GROW NATIVE GRASS SEE
BIORETENTION GRASS SEED
CRUSHER FINES
CONCRETE
5-8" RIVER ROCK COBBLE MULC
1 ¹ / ₂ " RIVER ROCK COBBLE MULCH
SOD LAWN
EXISTING MULTIPLE USE FIELDS
WOOD MULCH LANDSCAPE BED
BENDA BOARD EDGER SPADE CUT EDGE
LUI LINE

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OVERALL
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LP-101







CALCULATIONS	$\begin{array}{c} \bullet \bullet$
KING AREA:	9,006 SQ. FT.
/IDED:	5,879 SQ. FT.

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SNOW
STORAGE
<u> </u>
EXHIBIT C
LP-201



IRRIGATION NOTES

- 1. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE INSTALLED AND OPERATIONAL BY THE TIME OF FINAL INSPECTION. THE ENTIRE IRRIGATION SYSTEM SHALL BE INSTALLED BY A QUALIFIED IRRIGATION CONTRACTOR.
- 2. THE IRRIGATION SYSTEM SHALL BE SERVED BY THE EXISTING NON-POTABLE WATER
- IRRIGATION SYSTEM THAT CURRENTLY SERVES ROARING FORK HIGH SCHOOL. 3. IF ANY PART OF THE IRRIGATION SYSTEM WILL OPERATE ON POTABLE WATER, THE SYSTEM
- WILL HAVE APPROPRIATE BACKFLOW PREVENTION DEVICES INSTALLED TO PREVENT CONTAMINATION OF THE POTABLE WATER SOURCE. 4. ALL SHRUB BEDS WILL BE DRIP BUBBLER IRRIGATED. SOD AND SEED AREAS SHALL RECEIVE
- SPRAY IRRIGATION FOR HEAD TO HEAD COVERAGE. 5. ALL PLANTS SHARING SIMILAR HYDROZONE CHARACTERISTICS SHALL BE PLACED ON A
- VALVE DEDICATED TO PROVE THE NECESSARY WATER REQUIREMENTS SPECIFIC TO THAT HYDROZONE.
- 6. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED, TO THE MAXIMUM EXTENT POSSIBLE, TO CONSERVE WATER BY USING THE FOLLOWING DEVICES AND SYSTEMS: MATCHED PRECIPITATION RATE TECHNOLOGY ON ROTOR AND SPRAY HEADS (WHEREVER POSSIBLE), RAIN SENSORS AND SMART MULTI-PROGRAM COMPUTERIZED IRRIGATION CONTROLLERS FEATURING SENSORY INPUT CAPABILITIES.

LEGEND

SPRAY IRRIGATION - SOD: 32,745 SF

DRIP BUBBLER IRRIGATION - BEDS:16,558



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SPRAY IRRIGATION - SEED: 3219



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PLAN
EXHIBIT C
I P-401





- PLACED OR STORED WITHIN THE DRIP LINE OR WITHIN 15 FEET OF A TREE TRUNK, WHICHEVER IS GREATER
- MAINTAINED IN AN UPRIGHT POSITION THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITIES.
- FENCING MATERIAL SHALL BE BRIGHT, CONTRASTING COLOR, DURABLE, AND A MINIMUM OF FOUR FEET IN HEIGHT. TREE ROOTS SHALL NOT BE CUT UNLESS CUTTING IS UNAVOIDABLE.

DURING DORMANCY PERIOD. ROOT STIMULATOR SHALL BE APPLIED TO CUT ROOTS. EXPOSED ROOTS SHALL BE COVERED IMMEDIATELY TO PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT

- WHEN ROOT CUTTING IS UNAVOIDABLE, A CLEAN SHARP CUT SHALL BE MADE TO AVOID SHREDDING OR SMASHING. PREVENT DEHYDRATION. ROOTS SHALL BE COVERED WITH SOIL OR BURLAP AND KEPT MOIST. WATERING OF
- ANY GRADE CHANGES (SUCH AS THE REMOVAL OF TOPSOIL OR ADDITION OF FILL MATERIAL) WITHIN THE DRIP LINE WHEN CONSTRUCTED PRIOR TO GRADE CHANGE.



BR BR

LP-501



1) BOULDER, NATURALLY SET BOULDER SO THAT A MINIMUM 1/4 OF BOULDER IS BELOW FINISH GRADE, REFER TO MATERIAL SCHEDULE, SHEET LP-100

2 SPECIFIED MULCH, CRUSHER FINES OR COBBLE, REFER TO PLAN

(3) 3" MINIMUM ROAD BASE COMPACTED TO 95% OF STANDARD PROCTOR DENSITY

(4) UNDISTURBED GRADE



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1 CONCRETE WALK

SCALE: 3/4" = 1'-0"

- 2) #4 REBAR 24" ON CENTER
- (3) 1" DEEP CONTROL JOINT
- (4) (2) #4 REBAR 24" ON CENTER
- (5) CONCRETE CURB, 2" RADIUS ON ALL EXPOSED EDGES, SLOPE TOP 1/4" PER FOOT TOWARD PLAYGROUND
- (6) ENGINEERED WOOD FIBAR SAFETY SURFACE, REFER TO MATERIAL SCHEDULE, SHEET LP-100
- (7) 3/4" WASHED GRAVEL
- (8) GEOTEXTILE FILTER /
- DRAINAGE MAT 95% STANDARD PROCTOR DENSITY



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SCALE: 1 1/2" = 1'-0"

1 CONCRETE WALK

- (2) MONOLITHIC CONCRETE CURB REFER TO DETAIL 6, SHEET LP-502
- (3) 2" RADIUS ON ALL EXPOSED EDGES
- (4) (3) #4 REBAR
- 5) #4 REBAR 18" ON CENTER
- 6 PLAY SAFETY SURFACE, REFER TO DETAIL 6, SHEET LP-XXX
- (7) TOOLED SCORE JOINTS, 6" APART
- (8) (2) #4 DOWELS 18" ON CENTER
- (9) SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY

SCALE: 3/4" = 1'-0"

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LANDSCAPE
DETAILS
LP-502

Sheryl Bower
lared Barnes
RE: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing
Fhursday, February 2, 2023 11:04:54 AM

Hi Jared, In response to your request, we have reviewed the RFSD Meadowood Employee Housing project. We support projects that provide for the Garfield County workforce. As the project is not located on a County road nor is it directly adjacent to unincorporated Garfield County, we have no additional comments. If you have any questions, please feel free to reach out.

Thank you.

Regards,

Sheryl L Bower, AICP Garfield County Community Development Director 108 8th Street , Suite 401 Glenwood Springs, CO 81601 970-945-1377 (1605)

From: Jared Barnes <jbarnes@carbondaleco.net>
Sent: Monday, January 30, 2023 4:32 PM
To: Sheryl Bower <sbower@garfield-county.com>
Subject: FW: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing

Sheryl,

Please find attached a referral request for a Major Site Plan review, Minor Plat Amendment, Rezoning, and Alternative Compliance application for a 50-unit residential development. The project is called the Roaring Fork School District's Meadowood Employee Housing application and is located to the east of the intersection of Meadowood Dr and the High School Access Road, just south of North Face Park.

I have attached a Reviewing Agency Form and included a link to the application documents below. If you would prefer a paper copy, please let me know as soon as possible.

https://www.dropbox.com/scl/fo/wwuogh0ujs916msje3ueq/h? dl=0&rlkey=uu6nrcgh5sf0lfq2vgt9ptdkt

If you need some additional time for GarCo to review and provide comments, please let me know.

Thank you in advance for your time in reviewing the application and any comments you share. You are an important part of the Town of Carbondale's review. If you have any questions or difficulty accessing the plans, please don't hesitate to contact me.

Thanks,

Jared Barnes, AICP Planning Director Town of Carbondale 511 Colorado Ave Carbondale, CO 81623 970-510-1208 jbarnes@carbondaleco.net www.carbondalegov.org Jared:

Similar to the other current and pending development in Carbondale, this continues to increases demands for transportation, including local transit, without a funding source for infrastructure, fleet, and operations.

WE-cycle has a location approved with The Town of Carbondale for an 11 docking point station in the Southwest corner of the North Face Park parking lot. We recommend keeping the approved station location and the applicant purchasing an additional 8 docking points, and associated bikes, to add sufficient operational capacity to account for the additional proposed 50 units. The Town of Carbondale would need to approve the expanded station to accommodate for the total of 19 docking points.

WE-cycle also recommends that there be a direct pedestrian access between the North Face Park parking lot and the housing so as to facilitate access to the bikeshare station without going onto the road.

David Johnson, AICP

Director of Planning Roaring Fork Transportation Authority 1340 Main Street; Carbondale, CO 81623 970.384.4979 (phone), 970.376.4492 (mobile)

From: Jared Barnes <jbarnes@carbondaleco.net>
Sent: Monday, January 23, 2023 6:37 PM
To: Jared Barnes <jbarnes@carbondaleco.net>
Subject: Town of Carbondale Referral Request - RFSD Meadowood Employee Housing

Referral Agency,

Please find attached a referral request for a Major Site Plan review, Minor Plat Amendment, Rezoning, and Alternative Compliance application for a 50-unit residential development. The project is called the Roaring Fork School District's Meadowood Employee Housing application and is located to the east of the intersection of Meadowood Dr and the High School Access Road, just south of North Face Park.

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https://www.dropbox.com/scl/fo/wwuogh0ujs916msje3ueq/h?

dl=0&rlkey=uu6nrcgh5sf0lfq2vgt9ptdkt

Thank you in advance for your time in reviewing the application and any comments you share. You are an important part of the Town of Carbondale's review. If you have any questions or difficulty accessing the plans, please don't hesitate to contact me.

Thanks,

Jared Barnes, AICP Planning Director Town of Carbondale 511 Colorado Ave Carbondale, CO 81623 970-510-1208 jbarnes@carbondaleco.net www.carbondalegov.org

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