Town of New Castle
450 W. Main Street
PO Box 90
New Castle, CO 81647

Administration Department
Phone: (970) 984-2311
Fax: (970) 984-2716
www.newcastlecolorado.org

Agenda

New Castle Town Council Regular Meeting

Tuesday, February 18, 2025, 7:00 PM

Virtual Meetings are subject to internet and technical capabilities.
To join by computer, smart phone or tablet:
https://us02web.zoom.us/j/7096588400
If you prefer to telephone in:
Please call: 1-346-248-7799
Meeting ID: 709 658 8400
Follow the prompts as directed. Be sure to set your phone to mute until called on

Call to Order

Pledge of Allegiance

Roll Call

Meeting Notice

Conflicts of Interest

Agenda Changes

Citizen Comments on Items not on the Agenda
-Comments are limited to three minutes-

Consultant Reports
Consultant Attorney
Consultant Engineer

Items for Consideration

A. Introduction: New Castle Trails

B. Consider Ordinance TC 2025-1, A Ordinance of the New Castle Town Council Recommending Conditional Approval of a Final PUD Development Plan and a Final Subdivision Plat for Castle Valley Ranch PUD Filing 13 (9 N Wild Horse Dr)(R2)

C. Consider Resolution TC 2025-5 - A Resolution of the New Castle Town Council Supporting the Application for a Mini Grant from the Garfield County Federal Mineral Lease District For Replacement of Town Hall's Rooftop HVAC System

D. Consider Resolution TC 2025-6 - A Resolution of the New Castle Town Council Supporting the Application for a Traditional Grant from the Garfield County Federal Mineral Lease District For Capital Street Maintenance

E. Consider approval of CDOT Easement Agreement

F. Consider Councilor Appointment for Parks, Open Space, Trails and Recreation Committee (POSTR)

Consent Agenda
Items on the consent agenda are routine and non-controversial and will be approved by one motion. There will be no separate discussion of these items unless a council member or citizen requests it, in which case the item will be removed from the consent agenda.

January 21, 2025 minutes
February 4, 2025 minutes
Liquor License Renewal Hogback Pizza

Staff Reports
Town Administrator
Town Clerk
Town Treasurer
Town Planner
Public Works Director

Commission Reports
Planning & Zoning Commission
Historic Preservation Commission
Climate and Environment Commission
Senior Program
RFTA
AGNC
GCE
EAB
Detox

Council Comments
Items for Future Council Agenda
Adjourn

Town of New Castle
450 W. Main Street
PO Box 90
New Castle, CO 81647

Administration Department
Phone: (970) 984-2311
Fax: (970) 984-2716
www.newcastlecolorado.org

Memorandum

To: Mayor & Council

From: David Reynolds

Re: Agenda Item – Introduction to New Castle Trails Group Members

Date: 02/18/2025

The purpose of this agenda item is to introduce new committee members from the New Castle Trails Group. New Castle Trails Committee Chairperson Trent and Committee Secretary Tyler have met with town staff to discuss their interest in continuing the work of New Castle Trails, they have also presented their thoughts during a Parks Open Space and Trails meeting. During this agenda item, Trent and Tyler will introduce themselves, give a brief background and history of their interest in New Castle Trails, and present their thoughts concerning a 2025 Rides and Reggae Event. While the group will not be seeking direct financial support for the event in 2025, the group would like to share their thoughts and seek Council approval to continue the event this summer.

If time allows the group would also like to touch on thoughts that they have concerning trail maintenance and trail construction moving forward.

Town of New Castle
450 W. Main Street
PO Box 90
New Castle, CO 81647

Planning & Code Administration Department
Phone: (970) 984-2311
Fax: (970) 984-2716

Staff Report

9 North Wild Horse
Castle Valley Ranch PA8 & PA9 Final Plan, Filing 13
Ordinance TC #2025-1
Town Council (TC) – February 18th, 2025

Report Compiled: 2/14/2025

Project Information

Name of Applicant:	R2 Partners
Applicant's Mailing Address:	1009 Delta Avenue Cincinnati, OH 45208
Phone/Email:	614-266-7629/b.rosenberg@r2partners
Property Owner:	CTS Investments, LLC
Owner Mailing Address	343 Dakota Blvd. Boulder, CO 90304
Proposed Use:	130 rental townhomes/apartments in 16 buildings
Approximate Residents:	~ 310-340
Bulk Density:	2.73 units/acre
Open Space:	34 acres passive open space; 9.6 acres developed open space;
Proposed Zoning:	MF-2 per the Castle Valley Ranch PUD
Surrounding Zoning:	Single family residential homes (N Wild Horse Dr.) Open Space (VIX Park, LCR Golf Course) Mixed Use/Commercial zoning (TC Midwest, LLC) Residential zoning (CVRI & LCR)

I Introductory Summary

R2 Partners has been both a developer and owner of multifamily rental projects for over the past 60 years. Based in Cincinnati and serving various areas in Colorado, R2 is rethinking multifamily residential living. Their current application in Castle Valley Ranch (CVR), Planning Areas 8 & 9, embraces the quality of life prized by all New Castle residents. The proposal contemplates 130 multi-family rental units with three distinct floorplans:

- Model 1: "*Empty-nester*" targets retirees valuing convenience and practicality (~770-1,470sf);
- Model 2: "*Live/Work*" focuses on professionals looking for adaptive designs and multi-functional space focused on a work-from-home end user (~680-960sf);
- Model 3: "*Townhomes*" are conventional urban/suburban concepts available for starters or those looking to downsize (~1,420sf);

Dispersed over approximately 47.6 total acres, the proposal contemplates 43.6 acres of passive & active open space (91.6% of total acreage) and includes a connection of N Wild Horse Dr. east of VIX Park. The Applicant will dedicate two single track trails that extend from VIX park to the BLM. Prior to the current preliminary hearing, the Applicant convened for public meetings/hearings on the following dates:

- October 25th, 2023 – P&Z Sketch Plan
- November 7th, 2023 – Council Sketch Plan
- December 7th, 2023 – Community Open House Meeting
- January 24th, 2024 – P&Z Sketch Plan Revised Site Plan
- June 26th, 2024 – P&Z Preliminary Plan
- November 13th – P&Z Final Plan

The final application was reviewed by P&Z and recommended for conditional approval on November 13th, 2024. On January 7th, 2025 the Applicant and the Town agreed to a 60-day extension for final decision on the application pursuant to section 17.100.060 (F). The current deadline for final decision is March 6th, 2025. Town Council's decision will be made by ordinance which shall be introduced twice at a Town Council meeting and, if approved, shall take effect 14 days after final publication pursuant to Article IV of the New Castle municipal code.

As the final of three application steps for new planned unit developments ("PUD") & subdivisions, final PUD reviews assess zoning conformance, compliance with Public Works requirements, the suitability of utilities and infrastructure, compatibility with the comprehensive plan, and address any adverse impacts to the town. By final approval, all civil drawings should approximate construction level readiness.

Council shall decide on (1) of three (3) outcomes to the application: 1) approve the application unconditionally; 2) approve the application with conditions; 3) deny the application. The Council's decision will be made by written ordinance.

.

II Changes from June, 2024 Preliminary Plan

At the November 13th ~~th~~ hearing, the commissioners approved the application with the conditions listed in Resolution PZ #2024-05. The general site plan has remained consistent throughout the preliminary & final application steps. Below are several key components to the proposal with some general comments from the commissioners:

Final Plan	P&Z Comments/Questions
• 130 residential rental units: 26twnh, 80 apartments, 24 empty nesters, 16 buildings	• No comment
• 2.73 units/acre	• No comment
• 91.6% gross area open space (i.e. active + passive open space)	• No comment
• 229 off-street residential parking spaces	• Parking management strategy should be implemented as problems arise.
• All electric units, 5-15% reduction in energy use;	• No comment
• Passive open space with courtyards	• Priority of protecting native vegetation as much as possible
• MF-2 zoning: 40ft building height limit. 6 buildings exceed limit.	• Content with height if structure heights remain at or below 40ft
• Snow Storage: 18.7% of road area	• No comment
• Live/Work units balconies removed	• No comment
• Open space: Applicant owned	• No comment
• Pull-in parking included on west side of N Wild Horse for VIX Park users	• No comment; Staff condition for cost-share discussed below.
• Townhomes: two-story duplexes and tri-plexes	• No comment
• Townhomes with single-car garages will have driveways sized to two-car.	• P&Z appreciative of proactive solution to likely parking issue.
• Workforce housing: See Staff recommendations below.	• 5 units seems limited; Make available to more than Town staff No change
• Vista Loop: Dedicated to Town • Chapman & Medaris Loops: Owner maintained	• No comment
• Two spaces of EV charging capacity added to VIX parking area	• No comment
• Temporary construction easement to bypass N Wild Horse	• Priority of protecting pedestrian areas near CVB and Dog Park;
• Consider cost-share with VIX Park parking	• No comment
• Facilitate cost-share between TC Midwest & R2 Partners for a portion of NWH improvements.	• No comment

II Staff Review:

Throughout the application process, application documents will be reviewed pursuant to the criteria outlined in the Municipal Code (*MC*) for planned unit developments (PUDs) and subdivisions. At the final plan stage, an application shall show conformity to the following

criteria (*MC* 17.100.050(H)):

1. Consistency with the comprehensive plan;
2. Compliance with zoning and density requirements;
3. Compatibility to neighboring land uses;
4. Availability of town services from public works (including water and sewer services), fire, and police;
5. Adequacy of off-street parking and vehicle, bicycle, and pedestrian circulation;
6. The extent to which any required open space or parks are designed for active or passive use by residents of the subdivision or the public; and
7. Development is consistent with the natural character, contours, and viewsheds of the land.

1) Is the proposal consistent with the comprehensive plan?

Applicants are expected to demonstrate substantial conformity with the CP in all applications (**Policy CG-1B**). The checklist below, though not exhaustive, provides a tool for reviewers to assess conformance with the CP:

- Foster distinctive, attractive communities with a strong sense of place and quality of life.
- Demonstrate that individual project fits into a fully-balanced community land use structure.
- Ensure a mix of uses that complement the existing New Castle land-use patterns.
- Create walkable communities with non-vehicular interconnection between use areas.
- Guarantee a balance of housing types that support a range of affordability.
- Preserve open space, farmland, natural beauty, critical environmental areas, and wildlife habitat.
- Encourage economic development and supporting hard & soft infrastructure.
- Concentrate development in ways which provide efficient and cost-effective services.

Quality of Life: According to the application packet (**Exhibit A-Application, page 3**), the proposal aligns with numerous New Castle goals and values favorable for Smart Growth and a high standard of living (**Goal CG-5**). The proposal focuses on conservation of the natural environment (**Goals EN-1 thru EN-8**), sensitivity to architectural aesthetics, and an active lifestyle (**Goal RT-1**) that together support community and sustainability.

As part of a Smart Growth strategy, policy **Goal CG-4A** expects large residential development (greater than 50 units) to integrate commercial services and conveniences. Though not included with this application, commercial development is anticipated elsewhere in Castle Valley Ranch. To meet Smart Growth objectives, Council could, in its evaluation, consider commercial prospects elsewhere in CVR as satisfactorily meeting this requirement. Though independently owned, the two developments may mutually complement each other and resonate with the CVR Master Plan.

Trails/Open Space/Recreation: The trails shown on **Exhibit A, page 7,** align with currently existing use-trails and trail agreements. Two trails will originate from VIX Park and lead east towards the locally dubbed “Sunset Trail” that terminates with public lands to the north. The goal is for a seamless trail experience connecting routes already prized by residents (**Goal POST-3**). Preservation of these trail corridors should also be supportive of existing wildlife habitat (**Goal POST-4**). Other walking trails are dispersed internal to the development. Altogether the trail network will be conducive to recreational opportunities and non-vehicular access to adjoining developments.

Environmental Impact: New Castle is committed to stewardship of the natural environment and therefore is careful to consider potential negative impacts of new development. The Town partners with Colorado Parks and Wildlife (CPW) to identify and protect critical environmental resources (**Goal EN-1**). CPW has provided referral comment and Jake Stanton, the District Wildlife Manger, recommends the following best management practices:

1. Bear-resistant trash containers with regular trash disposal during construction;
2. Bear-resistant dumpsters and/or trash bins for all resident refuse;
3. Wildlife friendly fencing per CPW specifications;
4. Use of non-fruiting trees, shrubs, and flowers for landscaping;
5. Prohibition of at-large and outdoor feeding of pets;
6. Prohibition of feeding wildlife;

For its part, the Town regulates off-leash dogs, encourages dark-sky compliance, preservation of native vegetation, and/or limiting fences in certain areas. In some development applications, the Town has encouraged additional landscape buffers to neutralize the effects of urban impacts on habitat.

New Castle has also made progress in terms of energy conservation. The current building codes require sustainable building practices, that reduce fuel consumption and promote use of renewable energy (**Goal EN-7**). All buildings will comply with the state of Colorado's solar and electrical readiness provisions. Moreover, the Applicant is committed in the direction of Netzero construction. A Netzero building is one that is optimally efficient and generates energy onsite using clean renewable resources in a quantity equal to or greater than the total amount of energy consumed. Net-zero/all-electric appliances pared with solar PV or ground source heating are feasible methods to exploit especially considering local, state, and federal incentives currently available. At this time, fully functioning solar array is not being considered at initial build, but the Applicant maintains that the efficiency steps already being proposed (**Exhibit A-Appendix, page 195**) will reduce consumption by 5-15%.

The Applicant has also proposed raw water as the means to irrigate landscaping. Raw water is non-potable water which bypasses the town's treatment facility thereby eliminating the processing step. The Applicant also receives a reduction in water right dedication requirements as a result of implementation. Opting for raw water is ultimately an economic and sustainability win for all.

Affordability: The rental aspect of the proposal is unique. Rental communities provide a fully managed property for tenants who do not have the time nor inclination to fuss with general repairs and upkeep. Rental communities also provide a way for retirees to downsize in communities dominated by larger single-family homes and a way for younger families to participate in communities in which they may otherwise be priced-out. The proposal also offers units for professionals seeking adaptable spaces serving dual purposed living area plus functional office space. In sum, the diversity of housing modalities works to stratify rent prices making housing attainable to varying income levels.

9 North Wild Horse offers a community promoting quality of life. Quality of life is potentially disadvantaged when a disproportionate share of household income is dedicated to housing costs. The Applicant has been committed to rent rates that are sensible for New Castle. Prices will vary with unit type and should track with those in New Castle and

Glenwood Springs. Of the 130 total units (**Exhibit A-Application, page 14**), the types include 80 *Live/Work* units; 24 *Empty-nester* units, and 26 conventional *Townhome* units. *Live/Work* & *Empty-nester* units will consist of 1-2 bedroom units with the *Townhomes* all at 3-bedroom. For context, Garfield County "Fair Market Rent" for 2023 is $1,357 for 1-bedroom, $1,861 for 2-bedroom, and $2,275 for 3-bedroom. Locally, a Staff search has found asking prices ranging from $1,650 (850sf) to $4,000 (2,000sf) with an average two-bedroom going for $2,600 (Note: not update since 2024).

Discussions about affordable housing in New Castle are bracketed by several features: 1) Per vested rights, there are currently no price caps on rent (or sales) prices; 2) the CP indicates that the town will create and preserve affordable housing merely as an *element* of all new development (**Goal HO-2**); 3) the CP does not define "affordability" though the US Department of Housing and Urban Development (HUD) maintains that monthly housing expenses should not exceed 30% of household income. This discussion aside, the Applicant has been working with P&Z and Staff to implement an affordable housing plan. Initially, three 1-bedroom units were offered to the Town at a 25% rent reduction on a rolling availability (**Exhibit A-Appendix, page 184**). P&Z asked the Applicant to find a way to increase this to at least five total including two, two-bedroom units. To offset costs for this request, the Applicant eliminated one building and increased the height of two Live/Work buildings from two to three levels. At the P&Z final hearing, a 20-year sunset clause was also added for consideration. Ultimately, resolution PZ 2024-6 deferred the final conditions of the affordable housing plan for the Council deliberation. At present, the Applicant and Staff have submitted two alternatives outlined in the conditions below.

Fiscal Impact: A fiscal impact study was performed (Triple Point Strategic Consulting) comparing estimated revenues with costs associated with the new development. The study helps determine whether the Town can meet the new demand on services (**Policy CG-7B, CP pg. 54**). The analysis projects a population increase of 2,004 for the entire town of New Castle with approximately 313 associated specifically with the new development. The analysis then projects revenues and costs based on the Town's budget averaged between the tax years of 2021 and 2024. The results show a yearly net benefit to the town of $190,177. The cumulative net benefit by 2045 is estimated to be $7 million with $3.2 million coming in the initial two years of construction. The Town's finance department has reviewed the assumptions and projected outcomes separately with comparable results.

2) ***Does the proposal demonstrate compliance with zoning and density requirements?***

Zoning: The Applicant has elected Castle Valley Ranch *MF-2* zoning criteria. According to *MC* 17.104.080 MF-2 is a "multifamily district allowing higher density including apartments." The following land uses are those permitted by right:

- Attached dwelling units in structures containing more than two units;
- Public parks, playgrounds and related accessory structures 5,000 sq. ft. or less;
- Parking facilities;
- Recreation facilities including, but not limited to health facilities, hobby rooms, activity rooms, meeting rooms, pools, gymnasiums, ball fields, tennis or basketball courts, volleyball courts, and any building of fields or play surfaces;
- Pedestrian and bicycle trails;
- Open space and parks

The main differences between MF-1 and MF-2 zoning are that the former allows detached dwelling units, slightly lower density, and lower maximum building height (35'). All proposed uses are permitted by right.

The Master PUD allows for the following density standards:

- Minimum lot area of 2,200sf;
- Minimum lot area per dwelling unit of 1,600sf or 27.2 units per acre;
- Maximum building height of 40';
- Minimum front yard setback 18';
- Minimum side yard setback of 0';
- Minimum rear yard setback of 10';
- Minimum distance between buildings of 10';

Density: As shown in the submittal packet (**Exhibit A-Application, page 8**) overall bulk density reaches 2.73 units per acre which is far below the 27.2 units per acre allowed. The *Live/Work* units have the highest localized density within the overall 46.7 acres. However, the *Live/Work* density is no more than 12.3 units/acre which is one unit/acre less than Eagle's Ridge Ranch and five units/acre less than the new senior housing development. Setbacks for each building lot will be finalized at permitting.

Building Height: As architectural designs became refined, the maximum building height for the three story *Live/Work* buildings (Buildings B3 & B4 **Exhibit A-Application, page 18**) was reexamined in relation to the building height definition in Section 17.04.050. At the preliminary hearing the building height was shown as 38.8' measured from the bottom slab to the top ridge as shown below:

:

Preliminary Plan

The current final plan variation (**Exhibit A-Application, page 18**) shows a slightly increased height from slab of 39.9' (though not the uppermost part of the roof):

Final Plan

However, per the code, the initial point of reference for height measurements is not the bottom floor slab. Rather, the building height is defined as follows:

> *"Building height" means the vertical distance measured from the lowest point of the natural grade on the lot within twenty-five (25) feet of the tallest side of the building to the uppermost point of the roof of the building; provided, however, that if the lot upon which a building is to be built has a slope greater than fifteen (15) percent, building height shall be defined as the vertical distance measured from the average existing grade within the building setback envelope to the uppermost point of the roof of the building.*

Taking into account the code's definition renders the building height at approximately 46' or 6' above the 40' zoning maximum (See also 41.5' for B;1 43.8' for B2, Exhibit A-Application, page 19):

Final Plan per Section 17.04.050

The Town has allowed deviations to height limits in the past. Most recently the Town granted a 9' exception for a single building in the Lakota Canyon Ranch Longview application. In that instance, certain factors informed P&Z's decision. For one, the

Longview building was closely situated to other buildings that also exceeded their respective height maximums (i.e. Shibui, CRFR Firehouse, and the Senior Housing). At that time, P&Z was also generally persuaded by the fact that the building's excess height would be obscured by two-story structures immediately adjacent. Story ballons were erected on site to demonstrate this perspective.

At the June preliminary hearing, P&Z expressed concern with the visual impacts of adding a third level to Buildings B3 & B4. At least two methods to mitigate were explored: 1) obscure east elevations using the 2-story Buildings B-1 & B-2. In this way building mass will step gradually with the grade from N Wild Horse to the east; 2) Blunting of roof pitches (compare *Live/Work* gables with sketch plan exhibits). With massing alternatives, structure orientation, and roof articulation, the Applicant felt the concerns with increased building height on the surrounding views would be relieved. Staff has suggested returning to stepped structures as illustrated in the original sketch plan (see above) to better approximate the appearance of surrounding single family and multi-family homes. Alternatively, the structures could be modestly sunken into the topography, effectively lowering the building height. This precedent was also set during the Longview application.

Sketch Plan *Live/Work* Massing

For the Applicant to move forward with these alternatives, Council would have to be convinced that Buildings B1-B4 fit the surrounding residential neighborhood currently comprised of single-family (SF) homes and triplexes. Council would also need to be mindful that the precedent set with this height exception may prompt other future developers in the area to do the same. Overall, Council should come away from the decision with the confidence that consistency with the surroundings is preserved no matter what building height is decided.

3) Does the proposal demonstrate compatibility to neighboring land uses?

The parcel lies in the vicinity of various land uses within CVR: larger SF homes on N Wild Horse Dr., Buckskin Cir. & TBD Filing 12 to the south, VIX Park to the west, a commercial parcel (TC Midwest, LLC) to the southwest and two Garfield RE-2 schools within walking distance. BLM land and the Lakota Links Golf Course lie directly north of the parcel.

P&Z and Council have generally understood compatibility in terms of style and function. A use is considered more or less compatible in *style* to the degree it is similar in architecture, landscaping, and site planning (e.g. roads, trails, open space). A use is considered compatible in *function* to the degree its purpose serves the community similarly to surrounding uses. At times when compatibility is questionable, P&Z and Council have been hospitable to adding transitional features between developments to mute perceived incongruities in style or function. In such cases "buffering", for example landscape screening and open space, can soften the juxtaposition between two architecturally dissimilar developments. Likewise, small scale retail, professional service uses, and open space can function to temper alleged incompatibility between a SF development and, say, an industrial zone.

9 North Wild Horse is a multi-family rental property located within a rural residential setting. As a higher density product, building structures will naturally have more mass and height than those surrounding it. In anticipation of this, the Applicant includes open space buffering (~150' separation) adjacent to homes along Buckskin Dr. Greater distancing is expected to the east and south, near future Silverado Dr. and N Wild Horse homes. Architectural features derive articulation and texturing from neighboring residential designs. *Townhome* units will have horizontal and vertical displacement ("stepping") to better resemble the SF home context. As noted elsewhere, *Live/Work* and *Empty-nester* buildings (**Exhibit A-Application, pages 18-26**) exhibit less vertical displacement than surrounding structures and adjoining topography. This style might be deemed less compatible than what was viewed originally at sketch plan. Feedback from P&Z, Council, and the community has been mixed with respect to the more urban, block style multifamily buildings characteristic of developments in Denver, Vail Valley, and the Roaring Fork mid-valley. Therefore, Council will need to consider whether the current architectural signatures (i.e. roof pitches, elimination of balconies, taller windows) are an adequate tradeoff.

On the other hand, with a more conventionally urban approach the Applicant successfully minimizes sprawl which is supportive of the idyllic areas of CVR. Parking for the *Live/Work* units is nested within the interior of the building site plan while *Empty-nester* units obscure vehicle volume with covered parking spaces (**Exhibit A-Application, page 23**). Parking is also restricted to one side of the street on Vista Loop to reduce on-street congestion. Landscaping will be used sparsely to minimize disruption to otherwise unspoiled terrain. All things considered, the Applicant has made efforts to preserve the overarching style and function of CVR along N Wild Horse Dr. and includes transition features to address instances where compatibility may be questionable.

4) Is there availability of town services from public works (including water and sewer services), fire, and police?

Police:

At Sketch Plan, the Applicant anticipated an increase of approximately 338 new residences at build-out. The Police Department currently consists of twelve FTOs which is ideal for a town the size of New Castle. Generally, additional FTEs are considered for every increase of 500 residents. Therefore, the Police Chief concludes that there would be no compromise with police service as a result of the expected population increase.

Fire: In light of the current multi-year drought and the ongoing expansion of the wildland-urban interface, Colorado River Fire Rescue now stresses improving the resiliency of structures and expanding the surrounding defensible space (**Goal EN-8**). Replacing conventional materials with those of more effective ignition resistance, particularly in buildings along the perimeter of the development, buys time for firefighters during a wildland fire incident and inhibits fires from spreading from the source. In 2024, the Town adopted standards for the requirement of ignition resistant materials and improved defendable space requirements for new structures. To extend their firefighting potential, CRFR requests modest clearing and grading for fire apparatus access near the periphery of the development **Exhibit C**. The Applicant has updated the site plan to address this concern (**Exhibit A-Application, page 7**). It is important that these routes be improved sufficiently enough to carrier the weight of the necessary fire apparatus.

Public Works: The CVR PUD is approved for 1,400 residential units and 100,000sf of

commercial space. These totals were primarily the result of calculations performed on the basis of water dedicated from Elk Creek. At present the PUD has approximately 890 units and no commercial development. With 130 proposed units in this Application, the PUD remains well short of the 1,400 total rooftops allocated for CVR. The current sewer treatment plant is also sufficiently sized to process the full build-out of both CVR and Lakota.

Streets: The Town contemplates ownership and maintenance of Vista Loop and the N. Wild Horse connector, once all public improvements are accepted. Remaining streets will be private. Public Works agrees that speed, safety, and costs are priorities in road design. On-street parking serves to accommodate overflow vehicle parking for guests, deliveries, trash collection, extra resident vehicles, and emergency vehicles. Staff and the Applicant have worked closely to provide street designs that satisfy all these concerns. **Exhibit A-Application, page 46** shows the agreed upon designs.

Snow Storage: Snow removal is located on the site plan (**Exhibit A-Application, page 12**). 17.8% of total roadway area has been designated for snow storage which is 2.8% more than required. Ample snow storage is demonstrated on all separated sidewalks – Staff's preferred storage location.

Raw Water: Raw water is available at the north end of VIX Park and is expected to irrigate all common landscaping areas within the new PUD. The raw water infrastructure will be extended and looped with the installation of the N Wild Horse road connection.

5) Is there adequate off-street parking and vehicle, bicycle, and pedestrian circulation?

Parking: The purpose of off-street parking in the PUD "is to ensure that safe and convenient off-street parking is provided to serve the requirements of all land uses in the Castle Valley Ranch PUD and to avoid congestion in the streets" (MC 17.104.100). As shown on **Exhibit A-Application, page 9**, the following Town standards apply:

- Duplex, tri-plex or four-plex – Two spaces per dwelling unit;
- Five or more dwelling units in one structure – One and one-half spaces per dwelling unit + 1 recreational vehicle parking space for every 5 units in a 5-plex or greater;

Off-Street Parking: Per the standards, required off-street parking totals 229 spaces. The distribution is as follows: The *Townhome* models provide for a mix of one and two car garages. Regardless of garage size, all units will include two-car driveways (**Exhibit A-Application, page 10**), or 3-4 off-street parking spaces where only two are required. This provision solves for issues related to garages used as miscellaneous storage rather than vehicle storage. The Code reduces parking to 1.5 spaces per unit for *Empty-nester* and *Live/Work* models. The Applicant, familiar with the complications of high-density residential parking, has offered at least two spaces per unit for the *Empty-nester* models and has exceeded the parking for the *Live/Work* units. Based on P&Z input, no differentiation will be made between seasonal/RV parking and other parking, but seasonal spaces will be included in the over parking count.

With the improved parking at VIX, the Applicant has also planned to install two fully equipped level 2 EV parking spaces at VIX park. These spaces will be a community-wide

amenity. Staff also recommend a parking management plan be added to the covenants prior to final approval with provisions for reserved parking in shared lots and prohibitions on overnight parking along N Wild Horse Dr. adjacent to VIX park.

Vehicular Circulation: Road, sidewalk, and trail design is a critical component to any new development in New Castle. To optimize circulation, the Applicant is committed to connecting N Wild Horse Dr. to complete the underdeveloped section between Alder Ave. and Castle Valley Blvd. Of note, nearly 1/5th of this new road section is outside the Applicant's property boundary. However, because of the importance of circulation and public safety, the Applicant has agreed to work with the neighboring property owners, particularly TC Midwest, to complete this link. Staff anticipates that the connector will match the Town standard ROW, including detached sidewalks with landscaping.

Nonvehicular Circulation: The Applicant has made a point not to disrupt the general trail alignment between VIX Park and the BLM land. Also, separated sidewalks allow easy circulation to all inhabited portions of the property with additional soft trails extending to the periphery for easier interface with surrounding neighborhoods (**Exhibit A-Application, page 7**). To meet pedestrian safety concerns, high visibility crosswalks with bump outs were added per P&Z request.

6) Are the required open space or parks designed for active or passive use by residents of the subdivision or the public?

As previously discussed, 91.6% of the property will remain as passive/active open space. Within that area, the Applicant has preserved existing public use trails with various connecting trails added (**Exhibit A-Application, page 7**). To reduce the overall development footprint, small, active parks have been replaced with passive open space and two small sitting areas (**Exhibit A-Application, pages 84**). Since the open space requirements for CVR have already been met, no open space will be dedicated to the Town. However, the Applicant contemplates ongoing public access to all residents with an easement agreement.

7) Is the development consistent with the natural character, contours, and viewsheds of the land?

The site plan (**Exhibit A-Application, page 35**) follows the sloping topography downhill from northeast to southwest. Each building generally terraces with the existing slope (**Exhibit A-Application, pages 26,36-37**). Terracing of structures limits cut-and-fill and reduces the need for unsightly landscape retention. The approach also softens the blunt, "blocky" appearance, that may otherwise disrupt the undulating, natural landscape. The *Live/Work* units and the *Empty-nesters* are formidable in size, stretching approximately 150'. As the architecture is being finalized Staff recommends revisiting the massing particularly of the *Live/Work* units. Since roof step-downs at the stair corridors were eliminated, there is concern that an uninterrupted roof ridge for the entire length of the building conflicts with the contours of surrounding topography. And, per **Policy EN-6B** of the CP, visual access to the ridgeline is expected. The Applicant, in **Exhibit A-Application, page 37**, has contemplated modestly sized berms and drought resistant trees or shrubs partly as a screening strategy to mitigate building mass. Ultimately, Council should consider whether these structures, coupled with screening, is enough to maintain consistency with the natural character of the

land.

To conserve water and limit landscape maintenance such as mowing, Staff requests the Applicant consider drought resistant vegetation and seeding with native grasses to restore disturbed areas to their original state. Sod and landscape irrigation, likewise, should be used sparingly to minimize the need for landscape maintenance. Modestly mowed buffers and borders can provide a satisfying manicured look needing little maintenance.

V Staff Recommendations

Staff offer the following recommendations to the final PUD application:

A. The maximum building height of Buildings B1, B2, B3, B4, B15, & B16 shall not exceed the building elevations presented in **Exhibit A-Application, pages 18-19, & 27-28**. *Alternatively*, the Applicant shall consider height reductions, additional screening, architectural modifications, or any combination of these to these structures to optimize consistency with the natural character of the land. All other structures shall comply with the building height requirements specified in Section 17.04.050.

B. All site specific development applications subject to the provisions of the International Fire Code or matters requiring fire alarms and/or fire suppression shall be submitted to the Fire Marshal for review and comment.

C. The applicant shall comply with all recommendations of the Town Engineer, Town Public Works Director, and Town Attorney provided in response to review of the Application.

D. All exterior lighting to be dark-sky compliant per the comprehensive plan. Parking lot lighting should be on timers to reduce the light duration at night while maintaining security lighting as needed.

E. The location and manufacturer of any electric vehicle supply equipment install within the public right of way shall be at the discretion of Public Works.

F. A temporary construction easement, generally conforming to that depicted in the Application, is constructed to accommodate construction vehicle circulation for the buildout of PA 8 & 9 (R2 Partners LLC) and PA 12 (TC Midwest LLC) until the completion of either PA 12 or PAs 8 & 9, whichever is first. The easement shall consist of a semi-impervious surface, a track pad at the intersection with Castle Valley Blvd. and include safety fencing along the length of the easement to prevent unauthorized entry into the easement area. Any damage to public infrastructure, including but not limited to, asphalt bike paths, landscape irrigation, underground utilities, and landscaping shall be the responsibility of the Applicant. The design of the easement shall be approved by the Public Works Department and Town Engineer prior to permitting. Landscaping and grade of PA 12 shall be restored to its initial state once construction operations are completed. The Town Council shall approve the temporary construction easement with

the Final Plat.

G. All trash dumpsters shall be located within an approved trash enclosure that extends six feet high and includes a bear resistant latching mechanism. Trash receptacles for townhomes shall be of a bear resistant type and stored inside.

H. A declaration of covenants for the common interest community that are to the satisfaction of the Town Attorney. The form of the declaration of covenants shall be finalized before consideration of the Final Plat by the town council. Recordation of the declaration of covenants shall be accomplished at or before recording of the Final Plat.

I. A subdivision improvements agreement ("SIA") containing an engineer's stamped cost estimate of public improvements, to the satisfaction of the Town Attorney. The form of the SIA shall be finalized before consideration of the Final Plat by the Town Council. Recordation of the SIA shall be accomplished at or before recording of the Final Plat.

J. Provide a construction phasing plan for inclusion in a subdivision improvements agreement. Identify, at minimum, each of the following components:

- Buildout phases if necessary;
- Schedule that identifies the sequencing of construction, sequencing of occupancy, traffic flow, and traffic control plans during construction;
- Storage and staging areas for construction equipment and materials;
- Illustrate drainage and erosion control best management practices (BMP's);
- Conformance to all requirements and specifications approved by the fire marshal concerning temporary access to the project;
- Provisions for the protection and preservation of all existing vegetation, including trees, shrubs, and native grasses that do not interfere with the construction of buildings, roads, or utility infrastructure.

K. Landscaping shall incorporate native grasses and plants that minimize maintenance, mowing, and irrigating. The PUD landscaping plan shall be approved by Public Works. Plans submitted for building permit for any building shall demonstrate no more than 2,500 square feet of sod per dwelling unit as specified in 13.20.060 of the Municipal Code.

L. All disturbed areas in the project shall be revegetated and maintained in a predominantly weed free condition.

M. All representations of the Applicant made verbally or in written submittals presented to the Town in conjunction with the Application before the Commission or Town Council shall be considered part of the Application and binding on the Applicant.

N. The Applicant shall reimburse the Town for any and all expenses incurred by the Town regarding this approval, including, without limitation, all costs incurred by the Town's outside consultants such as legal and engineering costs.

O. The sale of individual lots, parcels or units may not occur until a plat creating the lot, parcel or unit is recorded with Garfield County and security for the public improvements has been received by the Town.

P. The Applicant and Town Council shall reach agreement on an affordable housing covenant that includes one of two options:

1) 3-one bedroom units offered at 75% of the current market rate in perpetuity;

Or,

2) 3-one bedroom units & 2-two bedroom units offered with the following pricing arrangement:

- Years 0-20 after certificate of occupancy ("CO") – all rent reduced units shall be offered at 75% of current market rate;
- Greater than 20 years up to 23 years after CO – all rent reduced units shall be offered at 80% of current market rate;
- Greater than 23 years and up to 26 years after CO – all rent reduced units shall be offered at 85% of current market rate;
- Greater than 26 years and up to 30 years after CO – all rent reduced units shall be offered at 90% of current market rate;
- Greater than 30 years – the affordable housing covenant shall expire;

The affordable housing covenant shall designate the general housing type for each unit as necessary, without specifying the exact location of each affordable housing unit. The affordable housing covenant shall designate authority to the Town to choose qualified renters that have passed background checks to live in the affordable housing units, with priority first given to town staff and then to members of the workforce of New Castle. If the property or any affordable housing unit were ever to be part of a further subdivision or if Lots 1, 2, and 3, as depicted on the Final Plat, are ever sold into separate ownership, the Town will apply its then-current affordable housing regulations and modify the affordable housing covenant accordingly. The affordable housing covenant shall be finalized before consideration of the Final Plat by Town Council. Recordation of the affordable housing covenant shall be accomplished at or before recording of the Final Plat.

Q. Finalization of water rights dedication requirements for the project. Calculation of irrigated areas and finalization of EQR dedication requirements. A warranty deed conveying the required water rights in the Coryell Ditch shall be executed and recorded together with the Final Plat.

R. Should issues arise about property management or community security, which are not cured after Town notice, the matter can come back for Planning & Zoning and Council review and the potential imposition of additional responsive conditions.

S. **[Place holder for the cost share agreements**]

VI Final Plan Exhibits:

A. Applicant Final Plan Application & Appendix – February 18, 2025
B. CRFR Fire Marshal Referral, Orrin Moon – October 18, 2024
C. Town Engineer Comments, Jefferey Simonson – January 29, 2025
D. Town Public Works Director Comments, John Wenzel – October 21, 2024
E. Temporary Easement Access Referral, TC Midwest, LLC – October 28, 2024
F. Public Hearing Notice, with Legal Description for Final Plan P&Z – November 13, 2024
G. Notarized Affidavit of Public Hearing Notice – November 5, 2024
H. List of Adjacent Property Owners within 250 Feet

Karp Neu Hanlon PC
ATTORNEYS AT LAW

Michael J. Sawyer, Esq.
Partner

Email: mjs@mountainlawfirm.com
Direct: 970.928.2118
Office: 970.945.2261 x 117

DATE: February 13, 2025

TO: New Castle Town Council

FROM: Karp Neu Hanlon, P.C.

RE: Requests for Cost Sharing

Town Council is presented with first reading of an ordinance to approve a final plat for the 9 North Wild Horse development. At the time of second reading of the ordinance, Town Council will also consider a resolution approving a subdivision improvements agreement ("SIA") for this property. As part of the subdivision improvements agreement, there may be provisions and associated agreements related to cost sharing for two infrastructure items. The first infrastructure item is the completion of North Wild Horse Road. The second infrastructure item is the construction of parking along North Wild Horse Road for the benefit of VIX park. A depiction of the areas where North Wild Horse is currently not constructed is depicted below.

The request for cost recovery for the construction of the remaining segment of North Wild Horse would not require contribution by the Town. Instead, the contribution would come from the two landowners fronting the currently uncompleted segment of the road – TC Midwest LLC and CVR Investors, Inc. The argument is that if either of these parcels had developed before the R2 property, the owner would have been required to complete the North Wild Horse Road improvements. The requested cost recovery would provide that the Town use best efforts to collect a defined portion of the construction costs for North Wild Horse Road and make reimburse to R2 (with a duration cap of 10-15 years). The Town would have no liability for lack of cost recovery to R2. The details of how to allocate construction costs are being finalized.

The second request for cost recovery relates to construction of parking on the west side of North Wildhorse Road for the benefit of VIX Park. A depiction of the proposed parking is shown below.

R2 asked for a reduction in the amount of the Recreational Facilities Development Fee ("RFDF") paid to the Town in exchange for constructing the parking. Currently this fee is $3000 per unit. For the propose 130 units this would be $390,000. After reviewing the code section about the RFDF, staff does not belief the fee can simply be waived or reduced. However, Council could approve a SIA that agreed to rebate a defined amount received from collection of the RFDF back to R2.

Staff initially indicated a willingness to support some level of cost recovery for building the parking places for the benefit of VIX Park. Staff asked R2 to isolate the incremental cost of constructing the parking (e.g. the additional fill, asphalt and curb beyond what would be required

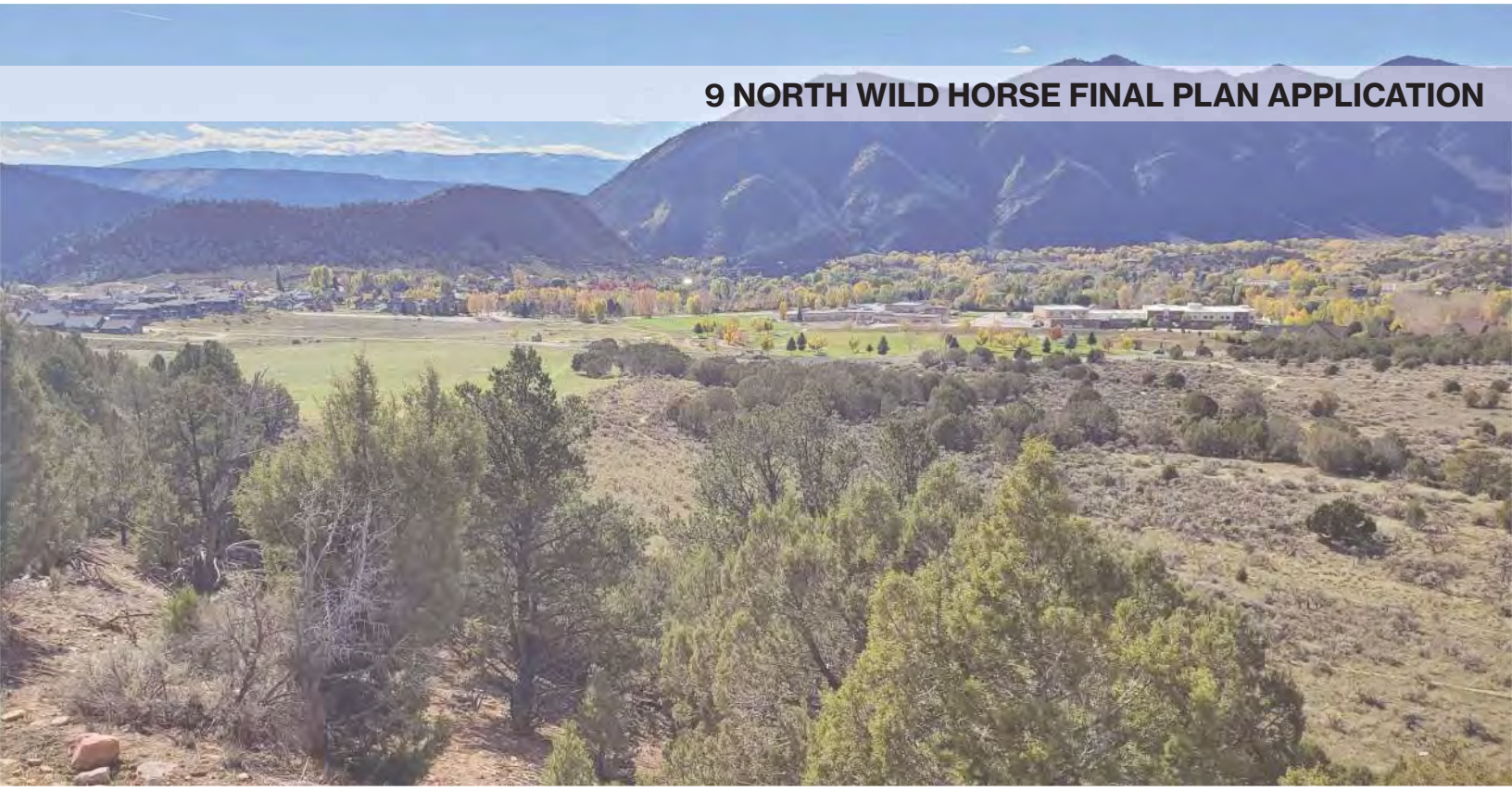
without the parking). Staff anticipated this would be tens of thousands of dollars. R2's recent submittal on cost recovery for the parking was surprisingly high (see below).

ITEM	NATURE OF WORK	QUANTITY	UNIT	UNIT COST	COST
VIX PARK: PERPENDICULAR PARKING, CURB, SIDEWALK ON PARK FRONTAGE					
G1	MOBILIZATION	JOB	L.S.	5,000.00	$ 5,000.00
G2	LAYOUT, OBSERVATION, TESTING & AS-BUILTS	JOB	L.S.	25,000.00	$ 25,000.00
G3	TRAFFIC CONTROL	JOB	L.S.	2,500.00	$ 2,500.00
G4	EROSION CONTROL	JOB	L.S.	1,500.00	$ 1,500.00
VP1	4" DEPTH ASPHALTIC PAVEMENT	1,466	S.Y.	45.00	$ 65,970.00
VP2	18" SUBGRADE OVER EXCAV, PREP, COMPACTION, FINE GRADING	2,129	C.Y.	12.00	$ 25,545.33
VP3	CLASS 6 AGGREGATE	959	C.Y.	70.00	$ 67,130.00
VP4	MOUNTABLE CURB AND GUTTER	620	L.F.	42.00	$ 26,040.00
VP5	18" RIBBON CURB	810	L.F.	28.00	$ 22,680.00
VP6	CONCRETE SIDEWALK	6,907	S.F.	10.00	$ 69,070.00
VP7	NEW HANDICAP RAMPS (2)	120	S.F.	12.00	$ 1,440.00
VP8	SIGNAGE & STRIPING	JOB	L.S.	2,500.00	$ 2,500.00
VP9	TOPSOIL PLACEMENT	73	C.Y.	100.00	$ 7,300.00
VP10	INSTALL TREES	13	E.A.	750.00	$ 9,750.00
VP11	GRASS PREP AND SEEDING	3,915	S.F.	0.90	$ 3,523.50
VP12	STREET LIGHTS - POLES W/ CONCRETE BASE	9	E.A.	6,000.00	$ 54,000.00
				SUBTOTAL VIX PARK =	**$ 388,948.83**
				10% CONTINGENCY =	38,894.88
				TOTAL VIX PARK =	**$ 427,843.72**

Staff believes that the R2 estimate includes significant features that are otherwise required to be built as part of North Wild Horse Road to meet Town standards as opposed to being the incremental costs exclusive to the parking. Staff is seeking direction from Council on how to proceed. It appears the two options are: (a) negotiate a reasonable amount to have the VIX Park parking constructed and agree to reimburse R2 for that amount from the RFRD collected or (b) collect the RFRD and have the Town undertake to build additional parking for VIX park on its own.

We look forward to discussing cost recovery with you at Council meeting.

APPENDIX



9 NORTH WILD HORSE FINAL PLAN APPLICATION

FEBRUARY 18, 2025

This page is intentionally left blank

APPENDIX CONTENTS

DOCUMENTS BY PAGE NUMBER:

4 - 8 APPLICANT RESPONSES TO PRELIMINARY PLAN CONDITIONS OF APPROVAL

9 - 154 ENGINEERING REPORT

155 - 160 ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

161 - 163 GARFIELD COUNTY APPROVAL OF STREET NAMES

164 - 229 AREAS OF KNOWN HAZARDS

167 - 169 EQR AND RAW WATER TABLE

170 - 183 DECLARATION OF COVENANTS

184 - 191 AFFORDABLE HOUSING PLAN

192 - 194 FEE OFFSET AND COST RECOVERY REQUESTS

195 - 197 STATEMENT REGARDING NETZERO BUILDING

198 - 204 TEMPORARY CONSTRUCTION EASEMENT

205 - 226 LAND TITLE COMMITMENT

227 - 229 LIST OF PROPERTY OWNERS WITHIN 250 FEET

APPLICANT RESPONSES TO PRELIMINARY PLAN CONDITIONS OF APPROVAL

This page is intentionally left blank

9 North Wild Horse - Applicant Responses to Preliminary Plan Conditions of Approval

Condition	Condition Text	Applicant Response
a.	Where feasible, Applicant shall add additional parking spaces to the inner radius of Vista Loop across from in the vicinity of townhome units.	On-street parking has been added where feasible on Vista Loop, see Parking Summary for parking count.
b.(1)	The Applicant shall comply with all currently adopted building code and municipal code requirements, including all sign code regulations in effect at the time of building permit application.	Acknowledged. Monument signage is not included as part of the Final Plan but will be submitted separately with a sign permit application per Code 17.18
b.(2)	All site specific development applications subject to the provisions of the International Fire Code or matters requiring fire alarms and/or fire suppression shall be submitted to the Fire Marshal for review and comment.	Acknowledged.
c.	The applicant shall comply with all recommendations of the Town Engineer, Town Public Works Director, and Town Attorney provided in response to review of the Application.	The Applicant's civil engineer has been in communication and coordination with the Town Engineer throughout the design of Final Plan. Please note that North Wild Horse Drive is proposed to not have curb and gutter to avoid point discharge of drainage at VIX Park, which is a change from the design presented at Preliminary Plan.
d.	All exterior lighting to be dark-sky compliant per the comprehensive plan. Demonstrate that all exterior lighting will limit trespass. Parking lot lighting should be on timers to reduce the light duration at night while maintaining security lighting as needed.	A Site Lighting Plan is included in the Application design documents, see table of contents for location. The lighting plan demonstrates compliance with the dark-sky requirements.
e.	All outside parking areas facing residential-only use shall incorporate landscape buffers to obscure vehicles from view per Code Section 17.104.100. In event the aforementioned code section conflicts with the building code, the building code shall control.	Please see the landscape plan enlargements showing the required landscape buffer at parking areas. Shrubs shown within 10' of buildings are listed on the Firewise Plant List.
f.	Pursuant to House Bill HB22-1362, specifically Section CV502.1 of the Colorado Model Electric Ready and Solar Ready Code, the Applicant shall collaborate with Public Works to site the required Electric Vehicle Supply Equipment (EVSE) within the N Wild Horse Dr. right of way adjacent to VIX Park. Public Works shall have the ultimate discretion of the EVSE supplier.	The number of EV spaces and EV ready spaces required by HB22-1362 are shown on the parking diagram in the Application. The Applicant has coordinated with the Town regarding the EV charging stations to be located within the public right-of-way.
g.	Fire access routes should be semi-impervious (compacted road base), two-track roads permanently signed “Emergency Access Only”. Extend an additional access road from Loop Rd. to Lakota Links property boundary to the north. Locations of fire access routes should be approved by the Fire Marshal.	Please see the Civil and Landscape plans showing the location of the described fire access route which utilizes the existing two-track road. Per direct communication from the Town, the fire access does not need to be improved with road base.
h.	Extend raw water infrastructure from existing stub-outs into the new development with an extension along N Wildhorse Dr. Design plans to be approved by the Town Engineer.	Please see the Civil plans for the raw water infrastructure, which has been designed in coordination with the Town Engineer.
i.	Minimize construction traffic along N Wild Horse Dr. with provisions for a temporary construction easement that includes an impervious road surface that accommodates construction vehicle circulation for the buildout of PA 8 & 9 (R2 Partners LLC) and PA 12 (TC Fuels Midwest LLC) until the completion of either PA 12 or PAs 8 & 9, whichever is first.	R2 Partners is in communication with the owners of PA 12 regarding the construction easement. The parties are in general agreement that a temporary construction easement is acceptable, however no agreement has been signed. The email communication between the parties and the draft alignment of a 30' wide temporary easement is included in the Appendix.
j.	All trash dumpsters shall be located within an approved trash enclosure that extends six feet high and includes a bear resistant latching mechanism.	The landscape plans include a detail for a trash enclosure.

9 North Wild Horse - Applicant Responses to Preliminary Plan Conditions of Approval

Condition	Condition Text	Applicant Response
k.	A declaration of covenants for the common interest community that are to the satisfaction of the Town Attorney.	A declaration of covenants is included in the Appendix.
l.	A parking plan shall be added to the covenants prior to final application with provisions for reserved parking in shared lots as necessary. Signage on both sides of N Wild Horse Dr adjacent to VIX park shall read “No Overnight Parking at Any time”.	The covenants contain language pertaining to parking management.
m.	The Applicant shall submit a memorandum proposing Netzero building strategies to be included with the development.	Please see the memorandum included in the Appendix.
n.	A subdivision improvements agreement (SIA) containing an engineer’s stamped cost estimate of public improvements, to the satisfaction of the Town Attorney.	A draft SIA will be provided to the Applicant by the Town; at the time of submittal, the draft SIA was not yet provided to the Applicant. The Engineering Report includes an opinion of costs for the public improvements, see Appendix.
o.	Provide a construction phasing plan for inclusion in a subdivision improvements agreement. Identify, at minimum, each of the following components:	A Construction Phasing Plan (CPP) is included in the Application, see table of contents for location.
	• Buildout phases if necessary;	Construction is anticipated to occur sequentially in a continuous phase.
	• Schedule that identifies the sequencing of construction, sequencing of occupancy, traffic flow, and traffic control plans during construction;	Buildout sequencing is noted on the CPP.
	• Storage and staging areas for construction equipment and materials;	Storage, staging, and parking are noted on the CPP.
	• Illustrate drainage and erosion control best management practices (BMP's);	The Civil plans include temporary drainage and erosion control measures, see Sheet C-1.3.
	• Conformance to all requirements and specifications approved by the fire marshal concerning temporary access to the project;	The CPP includes a note regarding maintaining temporary emergency access per the fire marshal.
p.	Landscaping shall incorporate native grasses and plants that minimize maintenance, mowing [sic], and irrigating. The landscaping plan shall be approved by the Parks Department. Plans submitted to obtain a building permit for any building shall demonstrate no more than 2,500 square feet of sod per dwelling unit as specified in 13.20.060 of the Municipal Code.	The planting plan includes native and drought tolerant species in general, but also specifically in the revegetation seed mixes which consist of native species appropriate for the site eco-type. The total area of manicured landscape is approximately 800 SF/unit. This area will not all be sod, so the total sod area will be well below the 2,500 SF limit. The sod area/unit will be quantified on the landscape plans for each building, which will be submitted with the building permits.
q.	All disturbed areas in the project shall be revegetated and maintained in a predominantly weed free condition.	The landscape plans shows revegetation of all site disturbance. Weed management notes are also included on the landscape plans.
r.	Reach agreement with the Town about ownership and maintenance of roadways, trails, and sidewalks.	Applicant has been in communication with the Town regarding this; see Plat for proposed lot and right-of-way boundaries and trail easements
s.	All representations of the Applicant made verbally or in written submittals presented to the Town in conjunction with the Application before the Commission or Town Council shall be considered part of the Application and binding on the Applicant.	Applicant acknowledges this condition.
t.	The Applicant shall reimburse the Town for any and all expenses incurred by the Town regarding this approval, including, without limitation, all costs incurred by the Town's outside consultants such as legal and engineering costs.	Applicant acknowledges this condition.

9 North Wild Horse - Applicant Responses to Preliminary Plan Conditions of Approval

Condition	Condition Text	Applicant Response
u.	Request approval of street names through Garfield County Communications to avoid any duplication of names in the county dispatch area.	The street names have been approved by Garfield County Communications; an email approval is included in the Appendices.
v.	The sale of individual lots, parcels or units may not occur until a plat creating the lot, parcel or unit is recorded with Garfield County and security for public improvements has been received by the Town.	Applicant acknowledges this Condition.
w.	As part of its Final Application, Applicant shall include provisions for Applicant's plan for providing affordable or community housing units, together with covenants to be recorded in the public record. Community housing shall be made available to Town employees and other employers' employees designated by the Town and include at least 1 two bedroom unit. Affordability shall be a minimum of a 25% reduction from market rates charged by Applicant.	The Applicant's plan for providing affordable housing is included in the appendix.

ENGINEERING REPORT

This page is intentionally left blank

Chad J Lee.
JVAM
chad@jvamlaw.com

RE: 9 North Wild Horse Subdivision, Castle Valley Ranch, New Castle, CO – Final Plan Submission
SE Job # 33011

Chad,

Sopris Engineering, LLC (SE) has prepared the following Engineering Letter for the Final Plan Submission for the proposed 9 North Wild Horse Subdivision (9NWH) in Castle Valley Ranch (CVR) in New Castle, CO. The overall site is a 59 acre parcel east of Vix Park. The proposed development is 46.5 acres+/- that will be developed with 130 residential units. The proposed development has been divided into 3 development lots plus 2 open space parcels. The remaining 12.5 acre 'Lot 4' will be retained by the current landowner. The site will be developed in compliance with the Castle Valley Ranch PUD agreements and the Town of New Castle code requirements.

The subject property is Garfield County parcel #212329300194. The site is located east of Vix Park on the east side of N. Wild Horse Drive. The residential site will be developed with townhomes, live/work, and empty nester units. Refer to the Civil site plan, along with the Landscape Architect's and the Architect's plans for additional site and building details.

The final site, utility, grading, & drainage improvements are shown on the Civil Plans.

1. Existing Conditions

The existing conditions are shown on the existing conditions survey prepared by SE. The SE survey supplements the ALTA survey prepared by SGM. Utility locates were completed and field surveyed on; N. Wild Horse Drive, onsite, and for the existing water main connection on the Lakota Canyon Ranch locations east of the site. Additional utility maps were used to draft in the approximate location of other improvements.

The existing conditions map includes a detailed topographical survey of N. Wild Horse and the adjacent site improvements. The most current Lidar aerial topography was used for the undeveloped site.

2. Access:

The N. Wild Horse road section will be improved from where the pavement ends on the south and west sides. The road sections were reviewed during the Final Plan approval process and are included on the civil plans. The portion of road south of the development will be paved with two 11' travel lanes plus 2' paved shoulders. Perpendicular parking is proposed on the west side of the road adjacent to Vix Park. Parallel parking is proposed adjacent to the 9NWH site.

The site has good access on Vista Loop with two connections to N. Wild Horse Drive. The empty nester residential will be accessed from Medaris Loop which will connect to Vista Loop at two locations. The Live / Work residential will have be accessed from Chapman Loop with one access on the north side to Vista Loop. The townhomes will all have direct access to Vista Loop. Mountable curb is proposed for the street section in front of the proposed townhomes.

Emergency access will be provided throughout the site on the proposed roads and parking access roads.

Parallel parking is proposed on one side of Vista Loop as shown on the Site Plan and road sections. Refer to C1.0 Site plan and Sheet C1.1 for the proposed road sections.

Drainage:

The New Castle public work manual states; "*The rate of runoff from any developed area shall not exceed the historic rate of runoff based on a twenty-five (25) year rainfall event*"

The site grading and drainage has been developed to provide positive drainage away from all structures in coordination with the area storm drainage pattern. The site has local detention basins to ensure the Town's pre-post drainage requirements are met. Two 48" culverts with flared end sections will be installed at the proposed Vista Loop road crossing at the primary drainage channel onsite. The runoff from this primary offsite drainage basin will be safely routed through the site following the existing drainage path. The undeveloped portions of the drainage basins above the site development will be safely routed around the site improvements.

The offsite and existing conditions are described below followed by the proposed drainage improvements. The Hydrologic and Hydraulic drainage modeling was completed in Autodesk's Storm & Sanitary Analyis (Stormnet) program. The drainage model calculations are summarized on civil sheets C6.0 - C6.2 and are included in Appendix A. The general drainage analysis and improvements described and shown on the final plan application are designed in detail for this final plan application.

2.1. Offsite & Existing:

OS-01: The large offsite drainage basin above the site is approximately 2.97 square miles (1,900 acres) in size. This basin flows through the center of this site. SE used the USGS streamstats online program to analyze this drainage basin. The 100 year Q is approximately = 130 cfs.

The site will protect the existing drainage to the extent possible. The site has water and sewer utility crossings which will not change the existing grade at all. Vista Loop has one road crossing which will fill over the existing drainage channel.

For the road crossing, the existing flowline grade will be maintained which provides the best hydraulic situation for a culvert installation. SE utilized the Culvert Nomograph calculator which is a part of the Hydraflow Express Extension for Autodesk to calculate the culvert capacity. Two 48" ADS N-12 culverts will be installed following the existing grade with flared end sections and riprap installed on both sides. The culvert nomograph indicates the 48" culverts have well over 200 CFS capacity which provides a good factor of safety. The culvert nomograph calculations are included in Appendix A.

The existing drainage basins were adjusted slightly after studying the drainage patterns in Vix Park, and to align better with the high point in N. Wild Horse Drive. Existing basin 02 was also divided into two basins as described below.

EX-01: Existing basin 01 is the primary drainage channel through the center of the site. As described above, only one grade change with culverts will impact the drainage channel. EX-01 flows down to the west through the center of the site. Storm water runoff leaves the site and flows through two large diameter corrugated metal culverts under N. Wild Horse. We have designated this location as Design Point 1 (DP-1).

EX-02A: Existing basin 02A is the northwestern portion of the site. The drainage basin extends up the steep hillside on the north side of the site. The drainage paths on the upper portions of the site are numerous. Storm water runoff from this basin flows to a storm sewer culvert on the northside of N. Wild Horse which is identified as Design Point 2A (DP-2A).

The existing storm sewer invert in is clear and the pipe appears to flow down under the road to the southwest. We were not able to locate the invert out of the storm sewer pipe in Vix Park. It appears the daylight invert out is covered by a boulder head wall in the drainage channel south of the existing parking area. Because the swale on

the southwest side of the existing parking area drains down towards a small swale directly adjacent to a residential lot, we have proposed a new culvert to daylight the storm water runoff more directly south to Vix park. This proposed storm sewer is discussed further in the Section 2.2 below.

EX-02B: Existing basin 02B is the northern portion of the site. This drainage basin also extends up the steep hillside on the north side of the site. The drainage paths on the upper portions of the site are numerous. Storm water runoff from this basin appears to sheet flow across N. Wild Horse Drive. We have identified this sheet flow as Design Point 2 (DP-2B).

EX-03: Existing basin 03 is the southern portion of the site. The drainage basin extends up the hillside west of the site to the ridge line that generally defines the eastern limit of Castle Valley Ranch. The drainage paths are numerous but generally appear to sheet flow or flow in small swales to the lower portions of the site. Storm water runoff combines into one primary drainage channel for this basin which is designated as Design Point 3 (DP-3).

2.2. Proposed:

The overall proposed site drainage paths will generally maintain the existing flow paths. The proposed site basins generally match the existing onsite basins. With proposed grading and storm sewer routing, a portion of runoff from basin 02 will be now directed to basin 01. This will minimize the storm water runoff that currently sheet flows across N. Wild Horse. The proposed basins are described in greater detail below and are illustrated on C6.1 and C6.2.

The storm water runoff has been subdivided into smaller sub-basins in order to size the storm water runoff infrastructure through the site. The drainage sub-basins are shown on C6.2 and are detailed and depicted in the Stormnet output graphics and reports.

DE-01: Developed basin 01 is the primary drainage channel through the center of the site. The south end of Vista Loop, approximately 2/3 of the Live / Work development, and the upper northeastern townhome buildings are within this basin. Storm water runoff starts on the existing hillside above development. Drainage swales will direct this runoff to storm inlets. Storm water runoff from the developed site will sheet flow from the landscape and hardscape and be routed in surface swales to storm inlets. Storm sewer pipes daylight to swales and micro detention basins where possible. The upper live work parking lot will have curb openings which allow storm water runoff to daylight into the large landscape area below. Storm water runoff will be attenuated in the site drainage swales. Storm water runoff then flows to two detention basins, one on either side of the primary drainage channel. The storm water runoff will be detained to the historic rate by smaller outflow pipes. When the detention basins are filled to capacity during storm events larger than the 25 year event, the storm water runoff will overtop and sheet flow to the existing drainage path. Storm water runoff leaves the site at DP-1.

DE-02A: Developed basin 02A is the northwestern portion of the site. The proposed basin generally matches the existing basin. Subbasin DE-02A-EX2 is routed to the adjacent drainage swale to the west above the site. A small portion of the backside of the townhomes also will drain to the existing drainage channel. The steep hillside above development will remain undisturbed. The storm water runoff from this basin flows directly to the culvert outlet at DP-2A.

As noted in section EX-02A above, the existing storm sewer pipe appears to direct storm water runoff to the SW. The existing offsite drainage swale near the northwest corner of Vix Park is small, not well defined and is directly adjacent to a residential lot. Because of this, we have proposed the storm sewer pipe be re-routed more southerly, to the south side of the existing berm. The storm water runoff from this new daylight location combines with the current existing flow path in the NW corner of Vix Park, so the existing drainage pattern will be maintained.

DE-02B: Developed basin 02B is the northern portion of the site. Most of the proposed townhomes and the northern portions of the Live / Work are included in this basin. The steep hillside above development will remain undisturbed. Drainage swales will direct the existing runoff to storm inlets. Storm water runoff from the developed

site will sheet flow from the landscape and hardscape and be routed in surface swales to storm inlets. Storm sewer pipes daylight to swales and micro detention basins where possible. Storm water runoff then flows to the detention basin just east of DP-02A. With the development onsite, the sheet flow to the N. Wild Horse street section will be re-routed to the new 18" storm sewer pipe that flows under the improved road and daylights on the north end of Vix Park.

The storm water runoff from the combined DE-02 basin will be detained to the historic rate by a smaller outflow pipe from the detention basin. When the detention basins are filled to capacity during storm events larger than the 25 year event, the storm water runoff will overtop and sheet flow to the existing drainage path. Storm water runoff leaves the site at DP-2.

DE-03: Developed basin 03 is the southern portion of the site. The hillside west of the development will remain undisturbed. The empty nester portion of the site development is within this basin. Storm water runoff from the developed site will sheet flow on the landscape and hardscape areas and be routed in surface swales to storm inlets. Storm water runoff then flows to the site detention basin. The storm water runoff will be detained to the historic rate by a smaller outflow pipe. When the detention basins are filled to capacity during storm events larger than the 25 year event, the storm water runoff will overtop and sheet flow to the existing drainage path. Storm water runoff leaves the site at DP-3.

2.3. Hydrologic Analysis Methods & Assumptions

The smaller onsite and offsite drainage basins were analyzed using the Rational Method (Equation 1) since the basin areas are 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 that represents the ratio of runoff to rainfall volumes during a storm event. The determination of C mainly depends on the soil type, watershed impervious and storm event frequency. Each drainage basin was studied to determine the percent of impervious area.

Each basin's total or effective percent impervious area was used to establish a weighted runoff coefficient. The Mile High Flood District (MHFD), [formerly the Urban Drainage Flood Control District (UDFCD)] out of Denver, CO has developed runoff coefficient tables, which are based on the soil type, percent impervious, and the storm event. The C factor tables are included for reference in Appendix A of this report. This table was used to determine the corresponding 25-year weighted average runoff coefficients based on a Type C 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. The time of concentration for the existing drainage basins was calculated using the TR-55 method and varies from approximately 17-30 minutes. The majority of the proposed sub-basins Tc was assumed to be equal to 10 minutes. This is appropriate for basins that are not 100% impervious and have landscape areas and drainage swales. The Tc was assumed equal to 5 minutes for the proposed sub-basins that are close to 100% impervious without landscape swales.

2.4. Hydraulic Analysis Methods & Assumptions

Storm water runoff is routed on the surface via sheet flow and in drainage swales, and is then routed in storm sewer pipes which daylight to the surface. The stormnet model includes the storm sewer pipes and drainage swales which are hydrodynamically modeled through the site.

The table below is included for general pipe sizing onsite. The gravity storm pipes were sized using Manning's Equation (Equation 2).

Equation 2: $Q = 1.49/n * R2/3 * A * S0.5$

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 storm water drainage with a minimum 2% slope. The pipes onsite collect storm water from small subareas within the larger drainage basins. The approximate maximum capacity of each size storm pipe is summarized in Table 1 below.

Table 1: Hydraulic Pipe capacity

Pipe Size (IN)	Pipe Material	Manning's n	Slope	Capacity (CFS)
6	Solid PVC	0.012	2.00%	1.00
8	Solid PVC	0.012	2.00%	2.18
12	ADS N12	0.012	2.00%	6.35
18	ADS N12	0.012	2.00%	17.15

2.5. Existing Drainage Channel 100 yer Q.

SE prepared a simple HEC-RAS model to analyze the 100 year flow depth in the primary drainage channel onsite. We imported the existing aerial topography terrain data, created a flowline, bank, and defined cross sections for the length of the channel across the site. We then performed a steady flow analysis at the estimated 100 year Q of 130 cfs.

The results show that the existing cross section will safely convey the 130 CFS flow within the existing drainage channel. On the upper end of the channel, above the site development, the drainage channel is deep and well defined. South of the Live / Work, the channel is not as deep and has adjoining grade north of the north bank that is closer to the flow line elevation. The cross sections 348, 261, & 167 show the 130 CFS water surface elevation is higher than the grade on the right overbank. Because the channel does not overtop this area should not actually have storm runoff from the large offsite basin.

The proposed grading will fill in these adjoining low areas and increase the bank height to further define the primary drainage channel. This will ensure that the 100 year flow is contained in the existing channel. The building finish floor elevations and finish grade are also set higher than the adjacent top of bank elevation. The HEC-RAS output results are included in Appendix A.

3. Utilities:

The existing site utilities are shown on the existing condition base map. Will serve letters have been requested from all the utility providers. Electric, gas, and telephone utilities provided will serve letters and have capacity to serve this site. The Town provides potable water, sanitary sewer and irrigation water which have the capacity to serve this site. Proposed utility improvements are discussed here and are shown on the Civil utility sheets. Will serve letters received were provided for the Final Plan review and are included again in Appendix B.

3.1. Potable Water:

The Town of New Castle water system serves CVR. An existing 10" main is under N. Wild Horse Drive. Existing water main lines are stubbed at two locations along the eastern boundary of CVR from the adjacent Lakota subdivision.

Following Final Plan approval during final plan design, the applicant has coordinated the water main connection with Town Staff. Recorded utility easement documents for water main extension on the offsite adjoining properties have not been found. The applicant coordinated with the adjacent property owners requesting a utility easement. At this point the applicant has not been able to obtain the necessary easements. The town will need to assist in obtaining the necessary easements from the adjoining property owner(s).

Connection to the water main lines east of this site are required as we understand this site will be served in the Town's upper pressure zone. When easements have been obtained the applicant will extend a 10" water main from Lakota and routed through the development to N. Wild Horse. The applicant will install pressure reducing valves at the connection to the existing water main in N. Wild Horse Drive. The water main line will have good pressures as the site is on the low elevation of the upper pressure zone. The site will have good flow from a 10" main line along with a second parallel 8" main line. Further design and modeling will be coordinated with the Town Engineer as necessary during the final plan approval process.

The water main line alignment, water valves, fire hydrants, and water service locations are shown on the Civil Utility Plans.

3.2. Sanitary Sewer:

The Town of New Castle sanitary sewer system serves CVR. The existing sanitary sewer main line ends where the N. Wild Horse Drive paved road improvements end on the west end of this site.

The sanitary sewer main will be extended from the west end under N. Wild Horse Drive. Sewer Main 'A' will extend from the existing main line under N. Wild Horse and then will extend up through live / work Lot 2 up to the Empty Nester Lot 3. Sewer Main 'B' will extend up the north side of Vista Loop to serve the Townhomes and the north west live work building. The sanitary sewer main line alignment and service locations are shown on the final civil plans.

The developed site is within the Castle Valley Ranch master planned development. We understand per utility mapping that the existing sewer mains have capacity to serve this development. The 8" sanitary sewer main line slopes are 1% minimum and 10% maximum. These slopes are within the standard range for sewer main lines.

Sewer Main 'A' onsite will serve 104 residential units. Sewer Main 'B' onsite will serve 26 residential units.

3.3. Water and Sewer Tap fees:

The table of equivalent units (EQRs) for water and sewer tap fees are outlined in code section 13.20.060. Our estimate of the proposed site's EQRs is summarized in Table 1 below.

TABLE 1 - WATER & SEWER TAP FEES			
Unit Type	# Units	EQR/Unit*	# EQRs
Townhome - 3BR	26	1.000	26.000
Empty Nester - 1&2BR	24	0.800	19.200
Live/Work - 1&2BR	80	0.800	64.000
Subtotal =	130		109.2
25% Raw Water Irrigation Reduction =			**81.9**

Per code section 13.38.030(D) the EQRs can be reduced by 25% if we use raw water irrigation for the site landscaping.

3.4. Raw Water Irrigation:

The Town of New Castle raw water irrigation system serves portions of CVR. SE received the 03/28/2023 Irrigation Improvement plans prepared by SGM Inc, which will extend a new 8" irrigation main line on the west side of N. Wild

Horse. We understand that this main line extension is scheduled for construction in September of 2024. SE has coordinated with Town staff during Final Plan Design. We understand that two 4" irrigation service main lines will be stubbed for extension onsite. A 4" C900 DR-14 site irrigation main line with 18-24" depth of bury will extend in the Vista Loop ROW to serve this site.

We understand from the Town Engineer that the irrigation main line under North Wild Horse will be able to provide 450 gpm at 60 psi static. This equals approximately 43 psi at the high end of the 9NWH site. The site landscape design will target a maximum flow rate of around 30 gpm per zone. Booster pumps for site irrigation should not be necessary.

The project is proposing drip, xeriscape, and native landscape areas except in several active use areas as shown on the Landscape site plan. Each parcel will have irrigation services from the site 4" main line. The raw water usage calculations are included in the Landscape Architect calculations in the submittal documents.

3.5. Electric:

New Castle has electric and natural gas service from Xcel Energy. This development is designed to be 100% electric, so natural gas service will not be needed or extended to this site.

SE has requested and received a will serve letter and information from Xcel Energy on the existing electric and gas infrastructure in this area. Only electric main lines will be extended from both directions in N. Wild Horse Drive from the end of the existing CVR development.

The site will have electric main lines extending from the new main line in N. Wild Horse Drive. Electric main line will follow Vista Loop to serv the Empty Nester buildings and the townhomes. An additional main line will extend in between the Live / Work buildings to serve Buildings 1 - 4. The proposed transformer and meter locations are shown on the Utility Plan.

The applicant has reached out to Xcel Energy to receive a final plan review letter. We have not received a response yet. SE will continue to coordinate the Electric design with Xcel Energy. Additional details will be provided when received from Xcel Energy.

3.6. Telephone

SE has requested and has received a will serve letter from Lumen (formally CenturyLink). The existing telephone is at the end of the current development south and west of this site. The proposed telephone main lines will extend from the existing infrastructure and will follow the proposed electric alignment to serve each building. The applicant will continue to coordinate the Telephone main lines with Lumen. Additional details will be provided for the final plan submittal.

3.7. Cable:

SE has requested a will serve letter and information on the existing cable infrastructure from Comcast. We have not received communication back from Comcast. At this point we assume the cable lines will be extended in N. Wild Horse Drive from the end of the site development. The proposed cable lines will extend from the existing infrastructure and will follow the proposed electric alignment to serve each building. The applicant will continue to coordinate the cable service with Comcast. Additional details will be provided as necessary when received.

4. Conclusion

The proposed site has good access to N. Wild Horse Drive which connects to Castle Valley Boulevard and then to the larger road network. The existing utilities are adjacent to the site or can be extended from offsite. The primary offsite drainage basin will be routed through the site following the existing drainage path. Storm water runoff will be routed around and through the site to local detention basins.

If you have any questions or need any additional information, please call.

Sincerely,
SOPRIS ENGINEERING, LLC

John Petaisto, PE
Project Engineer

Yancy Nichol, PE
Principal

APPENDIX-A

Drainage Data & Calculations

CVR-R2 Multi Family
Offsite Drainage Basin
Legend
8500' ELEV.+/-
OS-01:
AREA= 2.97 sq. mi
1,900 AC.+-
5880' ELEV.+/-
CVR-R2 MF SITE +-
241
245
241
240
240
Buford Rd
Alder Ave
Castle Valley Blvd
Castle Valley Blvd
New Castle
Google Earth
2 mi
N

USGS
science for a changing world

Study Area Storm Event Runoff Summary for 24 Hour 100 Year Precipitation (TR55)

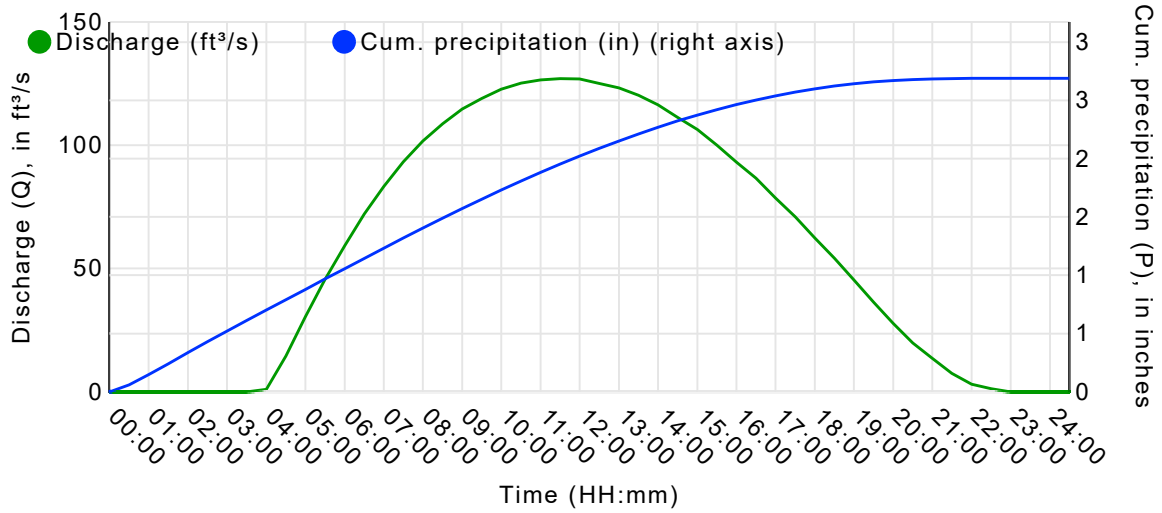
Parameters

Precipitation (inches):	**2.69**
Drainage Area (square miles):	**2.93**
Runoff-Curve Number (dimensionless):	**74.91**

Summary

Peak runoff (cubic feet per second):	**127**
Total infiltration (inches):	**1.93**
Total excess precip (inches):	**0.76**

Runoff hydrograph from 24 Hour 100 Year Precipitation



Tabular Hydrograph

Time	DRNAREA	P	RCN	Duration	Ia	S	dP	P-Ia	Pl	Pe	dPe	Q
00:00	2.93	0.00	74.91	24	0.67	3.35	0	-0.67	0	0	0	0
00:30	2.93	0.06	74.91	24	0.67	3.35	0.0611	-0.609	0.0611	0	0	0
01:00	2.93	0.15	74.91	24	0.67	3.35	0.0855	-0.523	0.0855	0	0	0
01:30	2.93	0.24	74.91	24	0.67	3.35	0.0942	-0.429	0.0942	0	0	0
02:00	2.93	0.34	74.91	24	0.67	3.35	0.0955	-0.334	0.0955	0	0	0
02:30	2.93	0.43	74.91	24	0.67	3.35	0.0939	-0.24	0.0939	0	0	0
03:00	2.93	0.52	74.91	24	0.67	3.35	0.0917	-0.148	0.0917	0	0	0
03:30	2.93	0.61	74.91	24	0.67	3.35	0.0898	-0.0582	0.0898	0	0	0
04:00	2.93	0.70	74.91	24	0.67	3.35	0.089	0.0309	0.0888	0.000282	0.000282	1.07
04:30	2.93	0.79	74.91	24	0.67	3.35	0.0885	0.119	0.0847	0.00411	0.00383	14.5
05:00	2.93	0.88	74.91	24	0.67	3.35	0.0888	0.208	0.0807	0.0122	0.00807	30.5
05:30	2.93	0.97	74.91	24	0.67	3.35	0.089	0.297	0.077	0.0242	0.012	45.5
06:00	2.93	1.06	74.91	24	0.67	3.35	0.0888	0.386	0.0731	0.0399	0.0157	59.2
06:30	2.93	1.14	74.91	24	0.67	3.35	0.0888	0.475	0.0697	0.0589	0.0191	72.1
07:00	2.93	1.23	74.91	24	0.67	3.35	0.088	0.563	0.066	0.0809	0.022	83.2
07:30	2.93	1.32	74.91	24	0.67	3.35	0.0872	0.65	0.0625	0.106	0.0247	93.3
08:00	2.93	1.41	74.91	24	0.67	3.35	0.0858	0.736	0.0589	0.132	0.0269	102
08:30	2.93	1.49	74.91	24	0.67	3.35	0.0842	0.82	0.0555	0.161	0.0287	109
09:00	2.93	1.57	74.91	24	0.67	3.35	0.0826	0.902	0.0523	0.192	0.0303	115
09:30	2.93	1.65	74.91	24	0.67	3.35	0.0804	0.983	0.049	0.223	0.0314	119
10:00	2.93	1.73	74.91	24	0.67	3.35	0.0785	1.06	0.0461	0.255	0.0324	123
10:30	2.93	1.81	74.91	24	0.67	3.35	0.0764	1.14	0.0433	0.289	0.0331	125
11:00	2.93	1.88	74.91	24	0.67	3.35	0.074	1.21	0.0405	0.322	0.0334	126
11:30	2.93	1.95	74.91	24	0.67	3.35	0.0716	1.28	0.038	0.356	0.0336	127
12:00	2.93	2.02	74.91	24	0.67	3.35	0.0691	1.35	0.0356	0.389	0.0335	127
12:30	2.93	2.09	74.91	24	0.67	3.35	0.0662	1.42	0.0331	0.422	0.0331	125
13:00	2.93	2.15	74.91	24	0.67	3.35	0.0635	1.48	0.0309	0.455	0.0326	123
13:30	2.93	2.21	74.91	24	0.67	3.35	0.0605	1.54	0.0287	0.486	0.0318	120
14:00	2.93	2.27	74.91	24	0.67	3.35	0.0573	1.6	0.0265	0.517	0.0307	116
14:30	2.93	2.32	74.91	24	0.67	3.35	0.0538	1.65	0.0244	0.547	0.0294	111
15:00	2.93	2.37	74.91	24	0.67	3.35	0.0506	1.7	0.0224	0.575	0.0281	106
15:30	2.93	2.42	74.91	24	0.67	3.35	0.0468	1.75	0.0204	0.601	0.0264	100
16:00	2.93	2.46	74.91	24	0.67	3.35	0.043	1.79	0.0184	0.626	0.0246	93.2
16:30	2.93	2.50	74.91	24	0.67	3.35	0.0395	1.83	0.0166	0.649	0.0229	86.6
17:00	2.93	2.54	74.91	24	0.67	3.35	0.0355	1.87	0.0147	0.67	0.0208	78.6

Time	DRNAREA	P	RCN	Duration	Ia	S	dP	P-Ia	Pl	Pe	dPe	Q
17:30	2.93	2.57	74.91	24	0.67	3.35	0.0317	1.9	0.013	0.688	0.0187	70.9
18:00	2.93	2.60	74.91	24	0.67	3.35	0.0277	1.93	0.0112	0.705	0.0165	62.4
18:30	2.93	2.62	74.91	24	0.67	3.35	0.0239	1.95	0.0096	0.719	0.0143	54.2
19:00	2.93	2.64	74.91	24	0.67	3.35	0.0199	1.97	0.00791	0.731	0.012	45.3
19:30	2.93	2.66	74.91	24	0.67	3.35	0.0159	1.99	0.00627	0.741	0.0096	36.3
20:00	2.93	2.67	74.91	24	0.67	3.35	0.0121	2	0.00476	0.748	0.00735	27.8
20:30	2.93	2.68	74.91	24	0.67	3.35	0.00861	2.01	0.00337	0.753	0.00524	19.8
21:00	2.93	2.68	74.91	24	0.67	3.35	0.00592	2.02	0.00231	0.757	0.00361	13.6
21:30	2.93	2.69	74.91	24	0.67	3.35	0.00323	2.02	0.00126	0.759	0.00197	7.45
22:00	2.93	2.69	74.91	24	0.67	3.35	0.00134	2.02	0.000524	0.76	0.000821	3.11
22:30	2.93	2.69	74.91	24	0.67	3.35	0.000538	2.02	0.000209	0.76	0.000329	1.24
23:00	2.93	2.69	74.91	24	0.67	3.35	0	2.02	0	0.76	0	0
23:30	2.93	2.69	74.91	24	0.67	3.35	0	2.02	0	0.76	0	0
24:00	2.93	2.69	74.91	24	0.67	3.35	0	2.02	0	0.76	0	0
24:30	2.93	2.69	74.91	24	0.67	3.35	0	2.02	0	0.76	0	0

Citations

Asante, K.O., Artan, G.A., Pervez, S., Bandaragoda, C., and Verdin, J.P., 2008, Technical Manual for the Geospatial Stream Flow Model (GeoSFM): U.S. Geological Survey Open-File Report 2007–1441, 65 p., accessed June 2016 (https://pubs.usgs.gov/of/2007/1441/)

Colorado Department of Natural Resources, 2006, Colorado Floodplain and Stormwater Criteria Manual, Volume 2, 468 p., accessed June 15, 2016 (http://www2.cde.state.co.us/artemis/nrmonos/nr38c862006internet/)

Soil Conservation Service, United States Department of Agriculture, 1986, Urban Hydrology for Small Watersheds, Tech. Release 55, 164 p., accessed October 2017 (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044171.pdf)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as

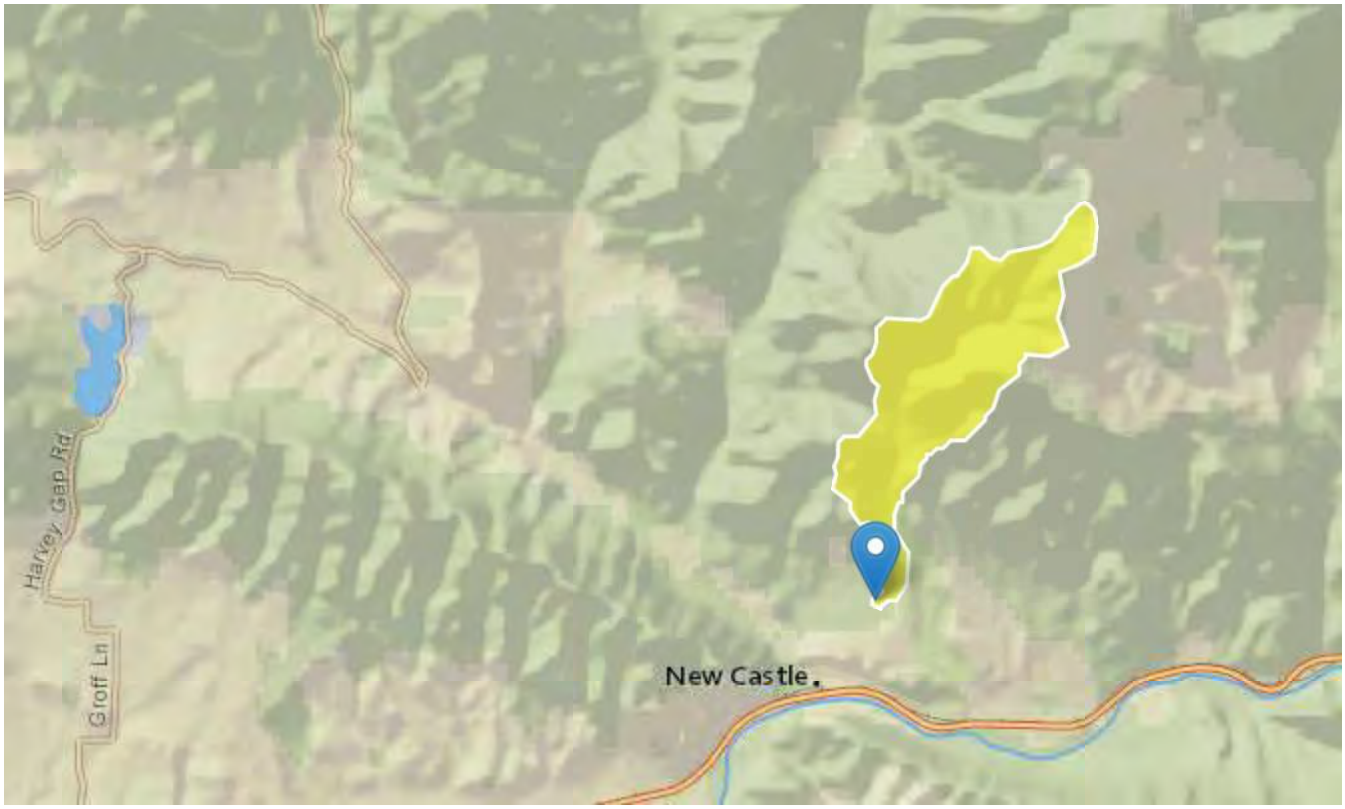
needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.16.1

33011-USGS Streamstats Drainage report

Region ID: CO
Workspace ID: CO20230804145829508000
Clicked Point (Latitude, Longitude): 39.58211, -107.52641
Time: 2023-08-04 08:58:50 -0600



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
BSLDEM10M	Mean basin slope computed from 10 m DEM	39	percent
CSL1085LFP	Change in elevation divided by length between points 10 and 85 percent of distance along the longest flow path to the basin divide, LFP from 2D grid	525.2	feet per mi
DRNAREA	Area that drains to a point on a stream	2.93	square mile
EL7500	Percent of area above 7500 ft	52	percent

Parameter Code	Parameter Description	Value	Unit
ELEV	Mean Basin Elevation	7380	feet
ELEVMAX	Maximum basin elevation	8560	feet
I24H100Y	Maximum 24-hour precipitation that occurs on average once in 100 years	2.69	inches
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	1.26	inches
I6H100Y	6-hour precipitation that is expected to occur on average once in 100 years	1.72	inches
I6H2Y	Maximum 6-hour precipitation that occurs on average once in 2 years	0.83	inches
LAT_OUT	Latitude of Basin Outlet	39.582008	degrees
LC11BARE	Percentage of barren from NLCD 2011 class 31	0	percent
LC11CRPHAY	Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2011	0.2	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	1.8	percent
LC11FOREST	Percentage of forest from NLCD 2011 classes 41-43	84.5	percent
LC11GRASS	Percent of area covered by grassland/herbaceous using 2011 NLCD	0.4	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	2	percent
LC11SHRUB	Percent of area covered by shrubland using 2011 NLCD	12.7	percent
LC11SNOIC	Percent snow and ice from NLCD 2011 class 12	0	percent
LC11WATER	Percent of open water, class 11, from NLCD 2011	0	percent
LC11WETLND	Percentage of wetlands, classes 90 and 95, from NLCD 2011	0	percent
LFPLENGTH	Length of longest flow path	5.21	miles
LONG_OUT	Longitude of Basin Outlet	-107.526397	degrees
MINBELEV	Minimum basin elevation	5830	feet
OUTLETELEV	Elevation of the stream outlet in feet above NAVD88	5835	feet

Parameter Code	Parameter Description	Value	Unit
PRECIP	Mean Annual Precipitation	19.46	inches
RCN	Runoff-curve number as defined by NRCS (http://policy.nrcs.usda.gov /OpenNonWebContent.aspx?content=17758.wba)	74.91	dimensionle
RUNCO_CO	Soil runoff coefficient as defined by Verdin and Gross (2017)	0.47	dimensionle
SSURGOA	Percentage of area of Hydrologic Soil Type A from SSURGO	2.35	percent
SSURGOB	Percentage of area of Hydrologic Soil Type B from SSURGO	13.6	percent
SSURGOC	Percentage of area of Hydrologic Soil Type C from SSURGO	25.6	percent
SSURGOD	Percentage of area of Hydrologic Soil Type D from SSURGO	58.4	percent
STATSCLAY	Percentage of clay soils from STATSGO	25.06	percent
STORNHD	Percent storage (wetlands and waterbodies) determined from 1:24K NHD	0	percent
TOC	Time of concentration in hours	1.4	hours

Peak-Flow Statistics

Peak-Flow Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Peak Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
BSLDEM10M	Mean Basin Slope from 10m DEM	39	percent	7.6	60.2
PRECIP	Mean Annual Precipitation	19.46	inches	18	47

Peak-Flow Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Peak Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	5250
EL7500	Percent above 7500 ft	52	percent	0	99
PRECIP	Mean Annual Precipitation	19.46	inches	8	49

Peak-Flow Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Peak Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
50-percent AEP flood	19.6	ft^3/s	49
20-percent AEP flood	30.8	ft^3/s	44
10-percent AEP flood	38.6	ft^3/s	41
4-percent AEP flood	50.5	ft^3/s	40
2-percent AEP flood	62.2	ft^3/s	39
1-percent AEP flood	71.3	ft^3/s	36
0.5-percent AEP flood	79.7	ft^3/s	36
0.2-percent AEP flood	98.6	ft^3/s	33

Peak-Flow Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Peak Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
50-percent AEP flood	18.4	ft^3/s	113
20-percent AEP flood	32.5	ft^3/s	88
10-percent AEP flood	44.9	ft^3/s	79
4-percent AEP flood	63.8	ft^3/s	74
2-percent AEP flood	81.5	ft^3/s	74
1-percent AEP flood	101	ft^3/s	75
0.5-percent AEP flood	122	ft^3/s	76
0.2-percent AEP flood	160	ft^3/s	79

Peak-Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
50-percent AEP flood	19	ft^3/s
20-percent AEP flood	31.6	ft^3/s
10-percent AEP flood	41.6	ft^3/s
4-percent AEP flood	56.8	ft^3/s
2-percent AEP flood	71.3	ft^3/s
1-percent AEP flood	85.4	ft^3/s
0.5-percent AEP flood	99.7	ft^3/s
0.2-percent AEP flood	128	ft^3/s

Peak-Flow Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Flood-Volume Statistics

Flood-Volume Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Max Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
PRECIP	Mean Annual Precipitation	19.46	inches	18	47

Flood-Volume Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Max Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	5	5250
PRECIP	Mean Annual Precipitation	19.46	inches	8	49
EL7500	Percent above 7500 ft	52	percent	0	99

Flood-Volume Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Max Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
7 Day 2 Year Maximum	11.9	ft^3/s	46
7 Day 10 Year Maximum	20.5	ft^3/s	35
7 Day 50 Year Maximum	30.3	ft^3/s	31

Flood-Volume Statistics Disclaimers [47.3 Percent (1.39 square miles) Northwest Region Max Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Flood-Volume Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Max Flow]

Statistic	Value	Unit
7 Day 2 Year Maximum	1.22	ft^3/s
7 Day 10 Year Maximum	3.74	ft^3/s
7 Day 50 Year Maximum	9.55	ft^3/s

Flood-Volume Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
7 Day 2 Year Maximum	6.85	ft^3/s
7 Day 10 Year Maximum	12.6	ft^3/s
7 Day 50 Year Maximum	20.5	ft^3/s

Flood-Volume Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Low-Flow Statistics

Low-Flow Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Min Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
PRECIP	Mean Annual Precipitation	19.46	inches	18	47
ELEV	Mean Basin Elevation	7380	feet	8600	12000

Low-Flow Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Min Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	5	5250
ELEV	Mean Basin Elevation	7380	feet	6880	10480

Low-Flow Statistics Disclaimers [52.7 Percent (1.54 square miles) Mountain Region Min Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Min Flow]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0166	ft^3/s
7 Day 10 Year Low Flow	0.00355	ft^3/s
7 Day 50 Year Low Flow	0.0143	ft^3/s

Low-Flow Statistics Disclaimers [47.3 Percent (1.39 square miles) Northwest Region Min Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Min Flow]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0586	ft^3/s
7 Day 10 Year Low Flow	0.0217	ft^3/s
7 Day 50 Year Low Flow	0.0156	ft^3/s

Low-Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0365	ft^3/s
7 Day 10 Year Low Flow	0.0121	ft^3/s
7 Day 50 Year Low Flow	0.0149	ft^3/s

Low-Flow Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Flow-Duration Statistics

Flow-Duration Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Flow Duration]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
PRECIP	Mean Annual Precipitation	19.46	inches	18	47

Flow-Duration Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Flow Duration]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	5250
PRECIP	Mean Annual Precipitation	19.46	inches	8	49

Flow-Duration Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Flow Duration]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
10 Percent Duration	4.34	ft^3/s	45
25 Percent Duration	1.16	ft^3/s	55
50 Percent Duration	0.488	ft^3/s	55
75 Percent Duration	0.267	ft^3/s	64
90 Percent Duration	0.127	ft^3/s	85

Flow-Duration Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Flow Duration]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
10 Percent Duration	0.802	ft^3/s	73
25 Percent Duration	0.267	ft^3/s	77
50 Percent Duration	0.119	ft^3/s	83
75 Percent Duration	0.0525	ft^3/s	100
90 Percent Duration	0.0231	ft^3/s	154

Flow-Duration Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
10 Percent Duration	2.67	ft^3/s
25 Percent Duration	0.737	ft^3/s
50 Percent Duration	0.313	ft^3/s
75 Percent Duration	0.165	ft^3/s
90 Percent Duration	0.0778	ft^3/s

Flow-Duration Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation

of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Annual Flow Statistics

Annual Flow Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Mean Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
PRECIP	Mean Annual Precipitation	19.46	inches	18	47

Annual Flow Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Mean Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	5250
PRECIP	Mean Annual Precipitation	19.46	inches	8	49

Annual Flow Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Mean Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
Mean Annual Flow	2.02	ft^3/s	33

Annual Flow Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Mean Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
Mean Annual Flow	0.554	ft^3/s	55

Annual Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit

Statistic	Value	Unit
Mean Annual Flow	1.33	ft^3/s

Annual Flow Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Monthly Flow Statistics

Monthly Flow Statistics Parameters [52.7 Percent (1.54 square miles) Mountain Region Mean Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	1060
PRECIP	Mean Annual Precipitation	19.46	inches	18	47

Monthly Flow Statistics Parameters [47.3 Percent (1.39 square miles) Northwest Region Mean Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1	5250
PRECIP	Mean Annual Precipitation	19.46	inches	8	49

Monthly Flow Statistics Flow Report [52.7 Percent (1.54 square miles) Mountain Region Mean Flow]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
January Mean Flow	0.287	ft^3/s	50
February Mean Flow	0.274	ft^3/s	51
March Mean Flow	0.285	ft^3/s	49
April Mean Flow	0.497	ft^3/s	44
May Mean Flow	4.96	ft^3/s	46

Statistic	Value	Unit	ASEp
June Mean Flow	11.3	ft^3/s	46
July Mean Flow	2.93	ft^3/s	76
August Mean Flow	1.35	ft^3/s	80
September Mean Flow	0.744	ft^3/s	59
October Mean Flow	0.519	ft^3/s	45
November Mean Flow	0.409	ft^3/s	46
December Mean Flow	0.336	ft^3/s	47

Monthly Flow Statistics Flow Report [47.3 Percent (1.39 square miles) Northwest Region Mean Flow]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	ASEp
January Mean Flow	0.137	ft^3/s	85
February Mean Flow	0.118	ft^3/s	77
March Mean Flow	0.153	ft^3/s	68
April Mean Flow	0.415	ft^3/s	84
May Mean Flow	1.96	ft^3/s	71
June Mean Flow	0.7	ft^3/s	80
July Mean Flow	1	ft^3/s	75
August Mean Flow	0.822	ft^3/s	90
September Mean Flow	0.642	ft^3/s	104
October Mean Flow	0.267	ft^3/s	94
November Mean Flow	0.159	ft^3/s	83
December Mean Flow	0.138	ft^3/s	79

Monthly Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
January Mean Flow	0.216	ft^3/s
February Mean Flow	0.2	ft^3/s
March Mean Flow	0.223	ft^3/s

Statistic	Value	Unit
April Mean Flow	0.458	ft^3/s
May Mean Flow	3.54	ft^3/s
June Mean Flow	6.28	ft^3/s
July Mean Flow	2.02	ft^3/s
August Mean Flow	1.1	ft^3/s
September Mean Flow	0.696	ft^3/s
October Mean Flow	0.4	ft^3/s
November Mean Flow	0.291	ft^3/s
December Mean Flow	0.242	ft^3/s

Monthly Flow Statistics Citations

Capesius, J.P., and Stephens, V. C.,2009, Regional Regression Equations for Estimation of Natural Streamflow Statistics in Colorado: U. S. Geological Survey Scientific Investigations Report 2009-5136, 32 p. (http://pubs.usgs.gov/sir/2009/5136/)

Bankfull Statistics

Bankfull Statistics Parameters [81.3 Percent (2.38 square miles) Rocky Mountain System D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	0.15444	9730.1061

Bankfull Statistics Parameters [81.3 Percent (2.38 square miles) Southern Rocky Mountains P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	1.540539	9729.943938

Bankfull Statistics Parameters [18.7 Percent (0.548 square miles) Intermontane Plateau D Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	3.62934	7579.9152

Bankfull Statistics Parameters [18.7 Percent (0.548 square miles) Colorado Plateau P Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	3.621618	3649.980906

Bankfull Statistics Parameters [USA Bieger 2015]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	0.07722	59927.7393

Bankfull Statistics Flow Report [81.3 Percent (2.38 square miles) Rocky Mountain System D Bieger 2015]

Statistic	Value	Unit
Bieger_D_channel_width	9.82	ft
Bieger_D_channel_depth	1.19	ft
Bieger_D_channel_cross_sectional_area	8.68	ft^2

Bankfull Statistics Flow Report [81.3 Percent (2.38 square miles) Southern Rocky Mountains P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	12.1	ft
Bieger_P_channel_depth	0.935	ft
Bieger_P_channel_cross_sectional_area	10.1	ft^2

Bankfull Statistics Disclaimers [18.7 Percent (0.548 square miles) Intermontane Plateau D Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [18.7 Percent (0.548 square miles) Intermontane Plateau D Bieger 2015]

Statistic	Value	Unit

Statistic	Value	Unit
Bieger_D_channel_width	8.44	ft
Bieger_D_channel_depth	0.447	ft
Bieger_D_channel_cross_sectional_area	3.45	ft^2

Bankfull Statistics Disclaimers [18.7 Percent (0.548 square miles) Colorado Plateau P Bieger 2015]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Bankfull Statistics Flow Report [18.7 Percent (0.548 square miles) Colorado Plateau P Bieger 2015]

Statistic	Value	Unit
Bieger_P_channel_width	6.28	ft
Bieger_P_channel_depth	0.217	ft
Bieger_P_channel_cross_sectional_area	1.39	ft^2

Bankfull Statistics Flow Report [USA Bieger 2015]

Statistic	Value	Unit
Bieger_USA_channel_width	18.1	ft
Bieger_USA_channel_depth	1.52	ft
Bieger_USA_channel_cross_sectional_area	30.5	ft^2

Bankfull Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
Bieger_D_channel_width	9.56	ft
Bieger_D_channel_depth	1.05	ft
Bieger_D_channel_cross_sectional_area	7.7	ft^2
Bieger_P_channel_width	11	ft
Bieger_P_channel_depth	0.801	ft
Bieger_P_channel_cross_sectional_area	8.47	ft^2

Statistic	Value	Unit
Bieger_USA_channel_width	18.1	ft
Bieger_USA_channel_depth	1.52	ft
Bieger_USA_channel_cross_sectional_area	30.5	ft^2

Bankfull Statistics Citations

Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub /1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515& utm_medium=PDF&utm_campaign=PDFCoverPages)

Maximum Probable Flood Statistics

Maximum Probable Flood Statistics Parameters [Crippen Bue Region 13]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.93	square miles	0.1	10000

Maximum Probable Flood Statistics Flow Report [Crippen Bue Region 13]

Statistic	Value	Unit
Maximum Flood Crippen Bue Regional	12900	ft^3/s

Maximum Probable Flood Statistics Citations

Crippen, J.R. and Bue, Conrad D.1977, Maximum Floodflows in the Conterminous United States, Geological Survey Water-Supply Paper 1887, 52p. (https://pubs.usgs.gov /wsp/1887/report.pdf)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS).

Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

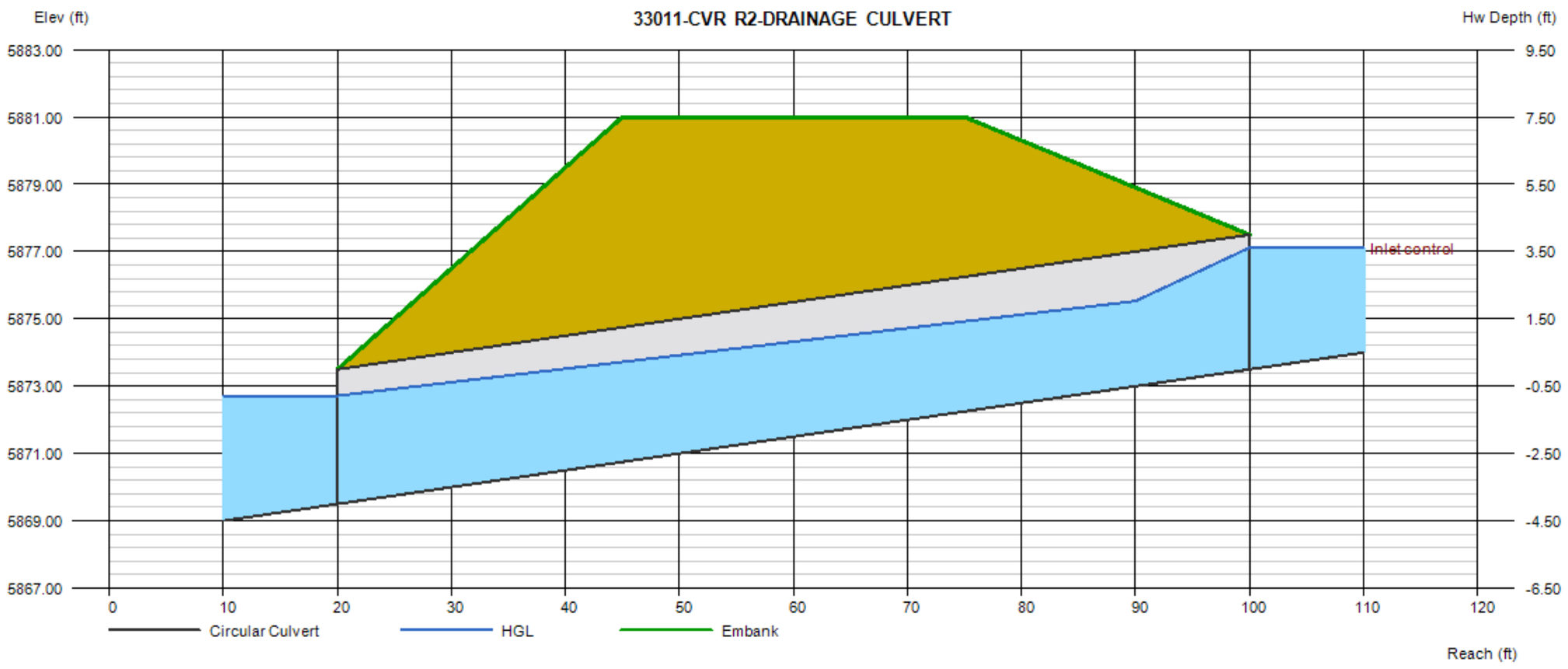
Application Version: 4.16.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 15 2024

33011-CVR R2-DRAINAGE CULVERT

Invert Elev Dn (ft)	= 5869.50	**Calculations**	
Pipe Length (ft)	= 80.00	Qmin (cfs)	= 0.00
Slope (%)	= 5.00	Qmax (cfs)	= 200.00
Invert Elev Up (ft)	= 5873.50	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 48.0		
Shape	= Circular	**Highlighted**	
Span (in)	= 48.0	Qtotal (cfs)	= 130.00
No. Barrels	= 2	Qpipe (cfs)	= 130.00
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Culvert	Veloc Dn (ft/s)	= 6.00
Culvert Entrance	= Smooth tapered inlet throat	Veloc Up (ft/s)	= 8.13
Coeff. K,M,c,Y,k	= 0.534, 0.555, 0.0196, 0.9, 0.2	HGL Dn (ft)	= 5872.72
		HGL Up (ft)	= 5875.93
Embankment		Hw Elev (ft)	= 5877.12
Top Elevation (ft)	= 5881.00	Hw/D (ft)	= 0.90
Top Width (ft)	= 30.00	Flow Regime	= Inlet Control
Crest Width (ft)	= 30.00		

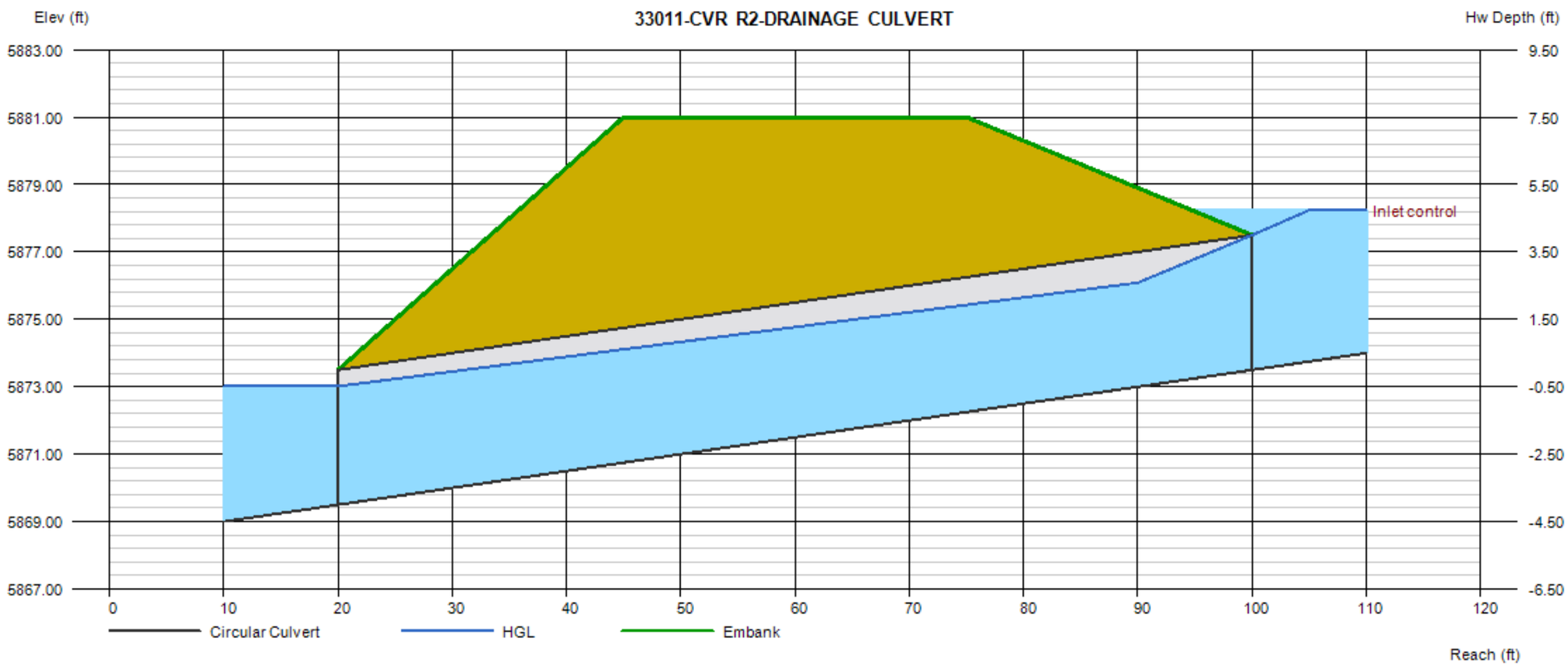


Culvert Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 15 2024

33011-CVR R2-DRAINAGE CULVERT

Invert Elev Dn (ft)	= 5869.50	**Calculations**	
Pipe Length (ft)	= 80.00	Qmin (cfs)	= 0.00
Slope (%)	= 5.00	Qmax (cfs)	= 200.00
Invert Elev Up (ft)	= 5873.50	Tailwater Elev (ft)	= (dc+D)/2
Rise (in)	= 48.0		
Shape	= Circular	**Highlighted**	
Span (in)	= 48.0	Qtotal (cfs)	= 200.00
No. Barrels	= 2	Qpipe (cfs)	= 200.00
n-Value	= 0.012	Qovertop (cfs)	= 0.00
Culvert Type	= Circular Culvert	Veloc Dn (ft/s)	= 8.55
Culvert Entrance	= Smooth tapered inlet throat	Veloc Up (ft/s)	= 9.80
Coeff. K,M,c,Y,k	= 0.534, 0.555, 0.0196, 0.9, 0.2	HGL Dn (ft)	= 5873.01
		HGL Up (ft)	= 5876.53
Embankment		Hw Elev (ft)	= 5878.24
Top Elevation (ft)	= 5881.00	Hw/D (ft)	= 1.19
Top Width (ft)	= 30.00	Flow Regime	= Inlet Control
Crest Width (ft)	= 30.00		



Hydrologic Soil Group—Rifle Area, Colorado, Parts of Garfield and Mesa Counties
(33011-CVR R2-NRCS SOILS)

Map Scale: 1:4,750 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

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

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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

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

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

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

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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

Soil Survey Area: Rifle Area, Colorado, Parts of Garfield and Mesa Counties
Survey Area Data: Version 15, Sep 6, 2022

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

Date(s) aerial images were photographed: Aug 25, 2021—Sep 5, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5	Ascalon fine sandy loam, 1 to 6 percent slopes	B	0.4	0.4%
6	Ascalon fine sandy loam, 6 to 12 percent slopes	B	20.0	17.1%
31	Heldt clay loam, 12 to 25 percent slopes	C	11.6	9.9%
35	Ildefonso-Lazear complex, 6 to 65 percent slopes	A	14.2	12.1%
58	Potts-Ildefonso complex, 12 to 25 percent slopes	C	0.3	0.2%
66	Torriorthents-Camborthids-Rock outcrop complex, steep	D	6.2	5.4%
67	Torriorthents-Rock outcrop complex, steep	D	13.2	11.3%
68	Vale silt loam, 3 to 6 percent slopes	C	2.1	1.8%
69	Vale silt loam, 6 to 12 percent slopes	C	48.7	41.7%
Totals for Area of Interest			**116.7**	**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

NOAA Atlas 14, Volume 8, Version 2
Location name: New Castle, Colorado, USA*
Latitude: 39.5817°, Longitude: -107.5268°
Elevation: 5830 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	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**1.51** (1.18-1.93)	**1.98** (1.55-2.54)	**2.78** (2.16-3.59)	**3.47** (2.68-4.49)	**4.44** (3.32-6.02)	**5.22** (3.80-7.19)	**6.01** (4.25-8.53)	**6.85** (4.63-10.0)	**7.99** (5.20-12.1)	**8.88** (5.62-13.6)
10-min	**1.10** (0.864-1.42)	**1.45** (1.13-1.86)	**2.03** (1.58-2.62)	**2.54** (1.96-3.29)	**3.25** (2.44-4.41)	**3.82** (2.79-5.26)	**4.40** (3.11-6.25)	**5.02** (3.39-7.34)	**5.85** (3.80-8.84)	**6.50** (4.12-9.98)
15-min	**0.896** (0.700-1.15)	**1.18** (0.920-1.52)	**1.66** (1.29-2.13)	**2.06** (1.60-2.67)	**2.64** (1.98-3.59)	**3.10** (2.27-4.28)	**3.58** (2.53-5.08)	**4.08** (2.76-5.97)	**4.76** (3.09-7.19)	**5.28** (3.34-8.12)
30-min	**0.576** (0.450-0.738)	**0.768** (0.598-0.986)	**1.08** (0.842-1.39)	**1.35** (1.04-1.74)	**1.71** (1.28-2.31)	**2.00** (1.45-2.74)	**2.28** (1.61-3.23)	**2.58** (1.74-3.76)	**2.97** (1.93-4.48)	**3.27** (2.07-5.02)
60-min	**0.374** (0.292-0.480)	**0.476** (0.371-0.611)	**0.643** (0.500-0.829)	**0.784** (0.606-1.02)	**0.980** (0.731-1.32)	**1.13** (0.826-1.55)	**1.29** (0.907-1.82)	**1.45** (0.976-2.11)	**1.66** (1.08-2.50)	**1.82** (1.15-2.80)
2-hr	**0.230** (0.182-0.292)	**0.284** (0.223-0.361)	**0.372** (0.292-0.475)	**0.447** (0.349-0.573)	**0.551** (0.416-0.735)	**0.633** (0.466-0.858)	**0.716** (0.509-0.999)	**0.801** (0.547-1.15)	**0.916** (0.601-1.36)	**1.00** (0.642-1.52)
3-hr	**0.178** (0.141-0.225)	**0.211** (0.167-0.266)	**0.265** (0.209-0.336)	**0.312** (0.245-0.397)	**0.378** (0.288-0.503)	**0.431** (0.320-0.582)	**0.486** (0.348-0.675)	**0.543** (0.373-0.778)	**0.621** (0.410-0.918)	**0.682** (0.438-1.02)
6-hr	**0.113** (0.091-0.141)	**0.130** (0.104-0.162)	**0.157** (0.125-0.197)	**0.181** (0.144-0.229)	**0.216** (0.166-0.283)	**0.244** (0.183-0.325)	**0.272** (0.197-0.373)	**0.302** (0.210-0.427)	**0.343** (0.229-0.501)	**0.376** (0.244-0.556)
12-hr	**0.069** (0.056-0.086)	**0.080** (0.064-0.099)	**0.097** (0.078-0.121)	**0.112** (0.090-0.140)	**0.134** (0.104-0.173)	**0.151** (0.114-0.199)	**0.169** (0.123-0.228)	**0.187** (0.131-0.261)	**0.212** (0.143-0.305)	**0.232** (0.152-0.339)
24-hr	**0.042** (0.034-0.052)	**0.049** (0.040-0.060)	**0.059** (0.048-0.073)	**0.069** (0.056-0.085)	**0.082** (0.064-0.106)	**0.093** (0.071-0.121)	**0.104** (0.077-0.139)	**0.116** (0.082-0.160)	**0.132** (0.090-0.188)	**0.145** (0.096-0.209)
2-day	**0.025** (0.021-0.030)	**0.029** (0.024-0.035)	**0.035** (0.029-0.042)	**0.040** (0.033-0.049)	**0.048** (0.038-0.061)	**0.054** (0.042-0.070)	**0.061** (0.046-0.081)	**0.068** (0.049-0.093)	**0.078** (0.054-0.109)	**0.086** (0.057-0.122)
3-day	**0.018** (0.015-0.022)	**0.021** (0.017-0.026)	**0.026** (0.021-0.031)	**0.030** (0.025-0.036)	**0.036** (0.029-0.045)	**0.041** (0.031-0.052)	**0.045** (0.034-0.060)	**0.051** (0.036-0.068)	**0.058** (0.040-0.080)	**0.063** (0.042-0.089)
4-day	**0.015** (0.012-0.018)	**0.017** (0.014-0.021)	**0.021** (0.017-0.025)	**0.024** (0.020-0.029)	**0.029** (0.023-0.036)	**0.033** (0.025-0.042)	**0.037** (0.027-0.048)	**0.040** (0.029-0.054)	**0.046** (0.032-0.063)	**0.050** (0.034-0.070)
7-day	**0.010** (0.008-0.012)	**0.011** (0.009-0.014)	**0.014** (0.011-0.016)	**0.016** (0.013-0.019)	**0.019** (0.015-0.023)	**0.021** (0.016-0.026)	**0.023** (0.017-0.030)	**0.025** (0.018-0.034)	**0.029** (0.020-0.039)	**0.031** (0.021-0.043)
10-day	**0.008** (0.007-0.009)	**0.009** (0.007-0.011)	**0.011** (0.009-0.013)	**0.012** (0.010-0.014)	**0.014** (0.011-0.017)	**0.016** (0.012-0.020)	**0.017** (0.013-0.022)	**0.019** (0.014-0.025)	**0.021** (0.015-0.029)	**0.023** (0.016-0.032)
20-day	**0.005** (0.004-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.006-0.009)	**0.009** (0.007-0.011)	**0.010** (0.008-0.012)	**0.011** (0.008-0.013)	**0.012** (0.008-0.015)	**0.013** (0.009-0.017)	**0.014** (0.009-0.019)
30-day	**0.004** (0.003-0.005)	**0.005** (0.004-0.005)	**0.005** (0.005-0.006)	**0.006** (0.005-0.007)	**0.007** (0.006-0.008)	**0.008** (0.006-0.009)	**0.008** (0.006-0.011)	**0.009** (0.007-0.012)	**0.010** (0.007-0.013)	**0.011** (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** (0.004-0.006)	**0.006** (0.005-0.007)	**0.006** (0.005-0.008)	**0.007** (0.005-0.008)	**0.007** (0.005-0.009)	**0.008** (0.006-0.010)	**0.008** (0.006-0.011)
60-day	**0.003** (0.002-0.003)	**0.003** (0.003-0.004)	**0.004** (0.003-0.004)	**0.004** (0.004-0.005)	**0.005** (0.004-0.006)	**0.005** (0.004-0.006)	**0.006** (0.004-0.007)	**0.006** (0.005-0.008)	**0.007** (0.005-0.009)	**0.007** (0.005-0.010)

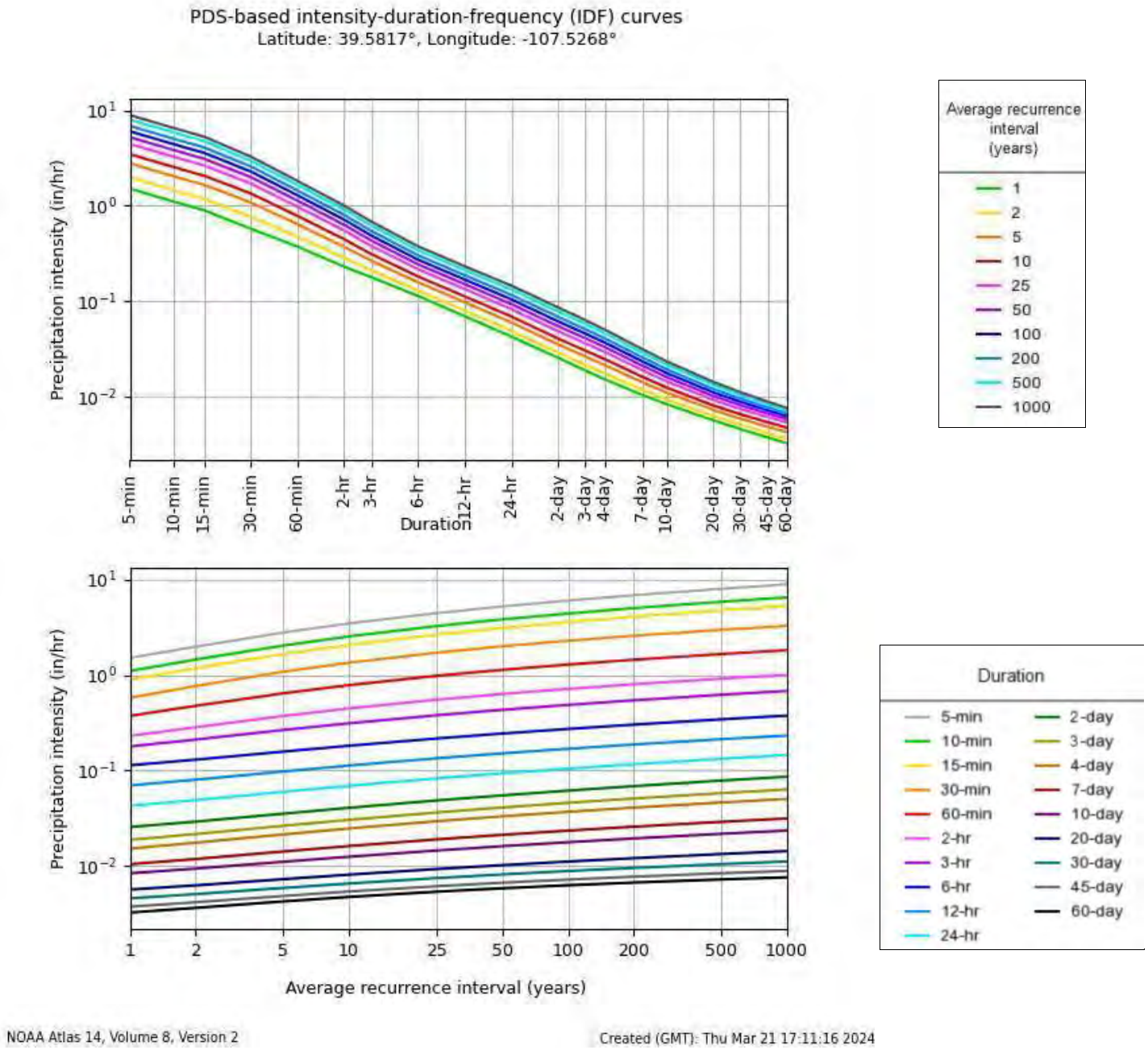
[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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.

Back to Top

PF graphical



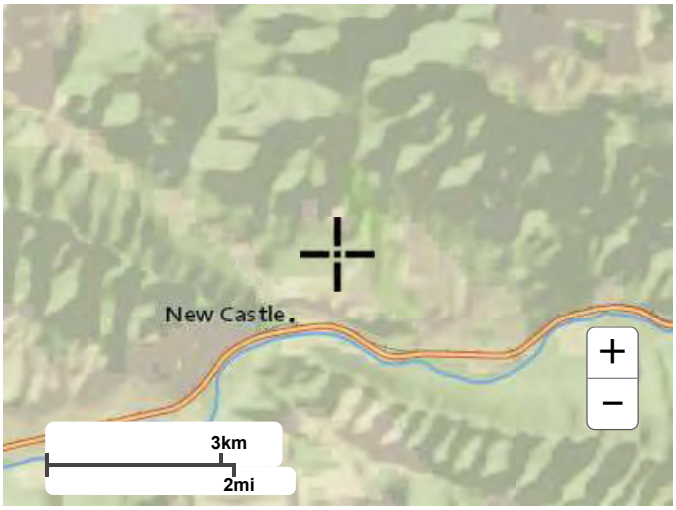
NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Thu Mar 21 17:11:16 2024

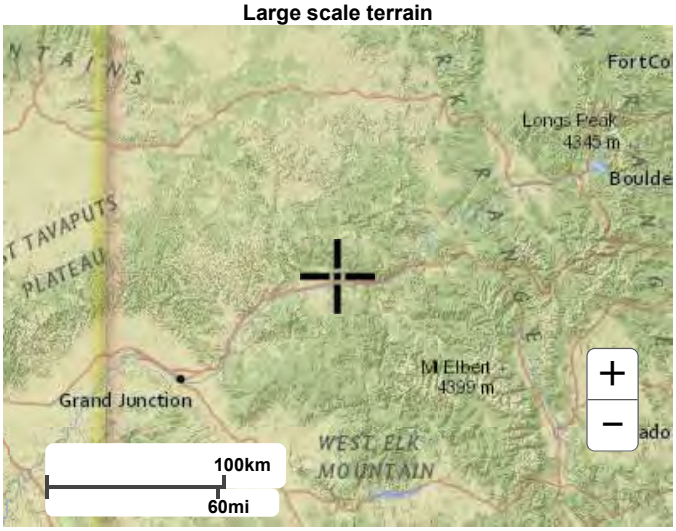
Back to Top

Maps & aerials

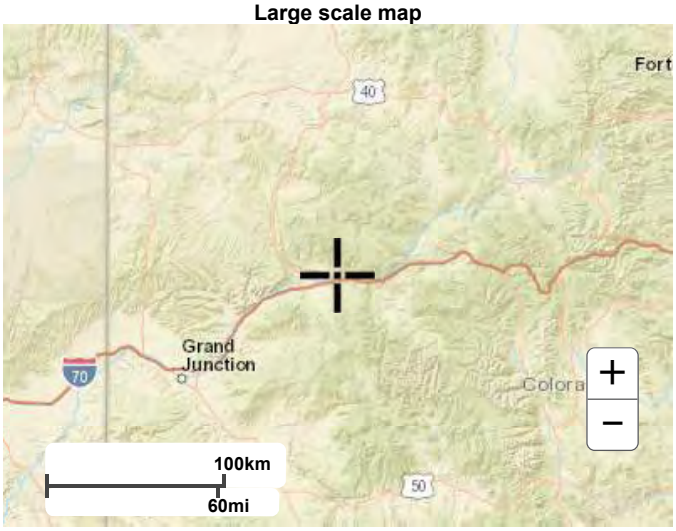
Small scale terrain



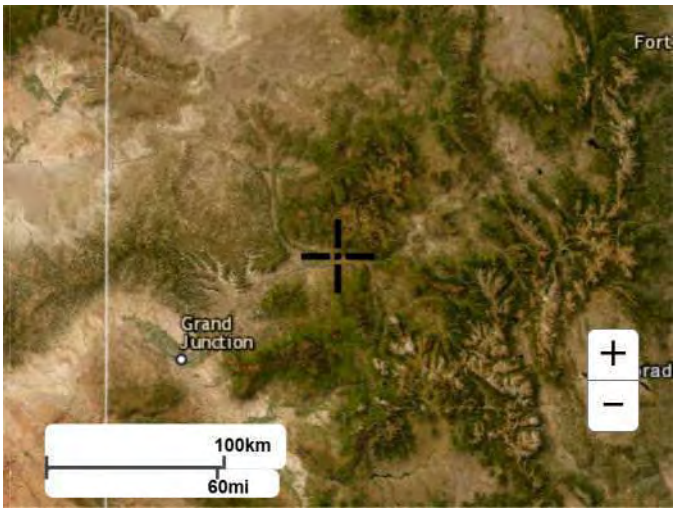
Large scale terrain



Large scale map



Large scale aerial



Back to Top

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

Table 6-5. Runoff coefficients, *c*

Total or Effective % Impervious	NRCS Hydrologic Soil Group A						
	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
Total or Effective % Impervious	**NRCS Hydrologic Soil Group B**						
	2-Year	**5-Year**	**10-Year**	**25-Year**	**50-Year**	**100-Year**	**500-Year**
2%	0.01	0.01	0.07	0.26	0.34	0.44	0.54
5%	0.03	0.03	0.1	0.28	0.36	0.45	0.55
10%	0.06	0.07	0.14	0.31	0.38	0.47	0.57
15%	0.09	0.11	0.18	0.34	0.41	0.5	0.59
20%	0.13	0.15	0.22	0.38	0.44	0.52	0.61
25%	0.17	0.19	0.26	0.41	0.47	0.54	0.63
30%	0.2	0.23	0.3	0.44	0.49	0.57	0.65
35%	0.24	0.27	0.34	0.47	0.52	0.59	0.66
40%	0.29	0.32	0.38	0.5	0.55	0.61	0.68
45%	0.33	0.36	0.42	0.53	0.58	0.64	0.7
50%	0.37	0.4	0.46	0.56	0.61	0.66	0.72
55%	0.42	0.45	0.5	0.6	0.63	0.68	0.74
60%	0.46	0.49	0.54	0.63	0.66	0.71	0.76
65%	0.5	0.54	0.58	0.66	0.69	0.73	0.77
70%	0.55	0.58	0.62	0.69	0.72	0.75	0.79
75%	0.6	0.63	0.66	0.72	0.75	0.78	0.81
80%	0.64	0.67	0.7	0.75	0.77	0.8	0.83
85%	0.69	0.72	0.74	0.78	0.8	0.82	0.85
90%	0.74	0.76	0.78	0.81	0.83	0.84	0.87
95%	0.79	0.81	0.82	0.85	0.86	0.87	0.88
100%	0.84	0.86	0.86	0.88	0.89	0.89	0.9

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

Total or Effective % Impervious	NRCS Hydrologic Soil Group C						
	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

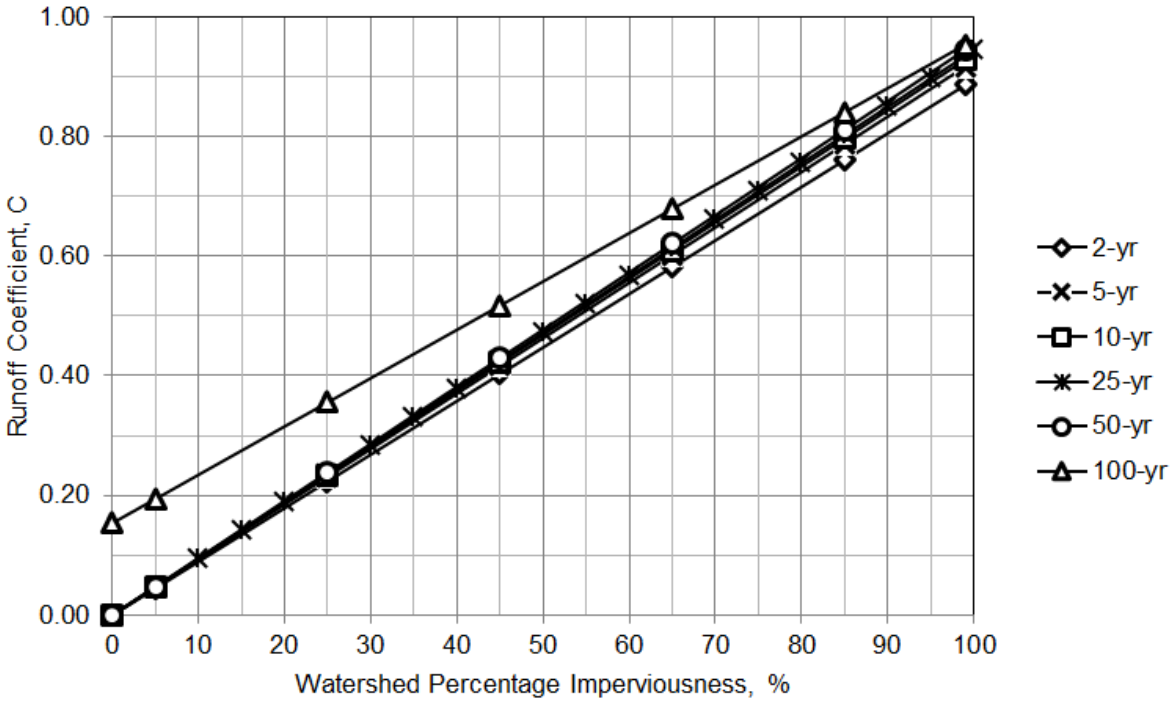
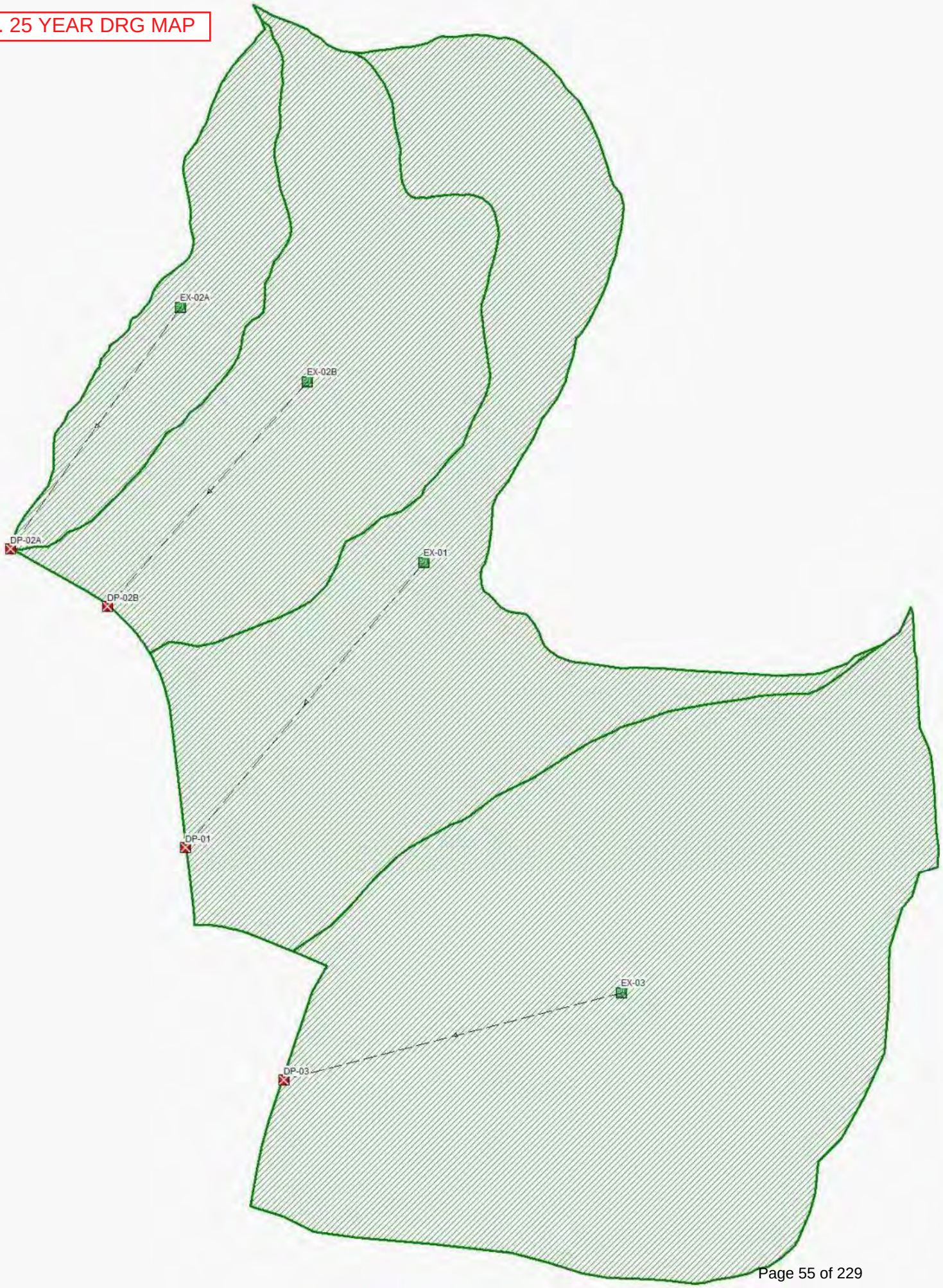


Figure 6-1. Runoff coefficient vs. watershed imperviousness NRCS HSG A

EX. 25 YEAR DRG MAP



Autodesk® Storm and Sanitary Analysis 2024 - Version 13.6.268 (Build 0)

****
Project Description
****
File Name 33011-EX DRG-RATIONAL-25YR.SPF
Description ..... 33011-EX DRG-25 YEAR

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Rational
Time of Concentration..... SCS TR-55
Return Period..... 25 years
Storage Node Exfiltration.. None
Starting Date MAR-21-2024 00:00:00
Ending Date MAR-21-2024 02:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 4
Number of nodes 4
Number of links 0

****
Subbasin Summary
****

Subbasin ID	Total Area acres

EX-01	11.94
EX-02A	3.07
EX-02B	8.42
EX-03	19.17

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
DP-01	OUTFALL	5838.00	5838.00	0.00	
DP-02A	OUTFALL	0.00	0.00	0.00	
DP-02B	OUTFALL	5840.00	5840.00	0.00	
DP-03	OUTFALL	5829.00	5829.00	0.00	

Runoff Quantity Continuity	Volume acre-ft	Depth inches
Total Precipitation	2.922	0.823
Continuity Error (%)	0.673	

Flow Routing Continuity	Volume acre-ft	Volume Mgallons
External Inflow	0.000	0.000
External Outflow	1.241	0.404
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

****
Runoff Coefficient Computations Report
****

Subbasin EX-01

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	11.94	C	0.33
Composite Area & Weighted Runoff Coeff.	11.94		0.33

Subbasin EX-02A

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	3.07	C	0.33
Composite Area & Weighted Runoff Coeff.	3.07		0.33

Subbasin EX-02B

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	8.42	C	0.33
Composite Area & Weighted Runoff Coeff.	8.42		0.33

Subbasin EX-03

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	19.17	C	0.33
Composite Area & Weighted Runoff Coeff.	19.17		0.33

****

SCS TR-55 Time of Concentration Computations Report
****

Sheet Flow Equation

Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

Where:

Tc = Time of Concentration (hrs)
n = Manning's Roughness
Lf = Flow Length (ft)
P = 2 yr, 24 hr Rainfall (inches)
Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation

V = 16.1345 * (Sf^0.5) (unpaved surface)
V = 20.3282 * (Sf^0.5) (paved surface)
V = 15.0 * (Sf^0.5) (grassed waterway surface)
V = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
V = 9.0 * (Sf^0.5) (cultivated straight rows surface)
V = 7.0 * (Sf^0.5) (short grass pasture surface)
V = 5.0 * (Sf^0.5) (woodland surface)
V = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)

Channel Flow Equation

V = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
R = Aq / Wp
Tc = (Lf / V) / (3600 sec/hr)

Where:

Tc = Time of Concentration (hrs)
Lf = Flow Length (ft)
R = Hydraulic Radius (ft)
Aq = Flow Area (ft²)
Wp = Wetted Perimeter (ft)
V = Velocity (ft/sec)
Sf = Slope (ft/ft)
n = Manning's Roughness

Subbasin EX-01

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	213.00	0.00	0.00
Slope (%):	57.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.27	0.00	0.00
Computed Flow Time (minutes):	13.36	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	432.00	1120.00	0.00
Channel Slope (%):	15.00	5.70	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	3.31	2.04	0.00
Computed Flow Time (minutes):	2.17	9.15	0.00

Total TOC (minutes):	24.68

Subbasin EX-02A

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.30	0.00
Flow Length (ft):	27.00	130.00	0.00
Slope (%):	14.00	68.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	1.20	0.00
Velocity (ft/sec):	0.10	0.26	0.00
Computed Flow Time (minutes):	4.49	8.39	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	90.00	0.00	0.00
Slope (%):	64.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	4.00	0.00	0.00
Computed Flow Time (minutes):	0.38	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	207.00	680.00	0.00
Channel Slope (%):	44.00	11.00	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	5.67	2.84	0.00
Computed Flow Time (minutes):	0.61	4.00	0.00

Total TOC (minutes):	17.85

Subbasin EX-02B

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.30	0.00
Flow Length (ft):	100.00	70.00	0.00
Slope (%):	18.00	61.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	1.20	0.00
Velocity (ft/sec):	0.14	0.22	0.00
Computed Flow Time (minutes):	11.57	5.34	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	135.00	0.00	0.00
Slope (%):	64.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	4.00	0.00	0.00
Computed Flow Time (minutes):	0.56	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.04	0.04	0.00
Flow Length (ft):	260.00	805.00	0.00
Channel Slope (%):	36.00	8.50	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	3.85	1.87	0.00
Computed Flow Time (minutes):	1.13	7.18	0.00

Total TOC (minutes):	25.77

==========

Subbasin EX-03

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	160.00	0.00	0.00
Slope (%):	8.70	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.12	0.00	0.00
Computed Flow Time (minutes):	22.53	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	270.00	0.00	0.00
Slope (%):	8.70	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	2.06	0.00	0.00
Computed Flow Time (minutes):	2.18	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	103.00	1050.00	0.00
Channel Slope (%):	32.00	8.70	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	4.84	2.52	0.00
Computed Flow Time (minutes):	0.35	6.94	0.00

==========

Total TOC (minutes):	32.01

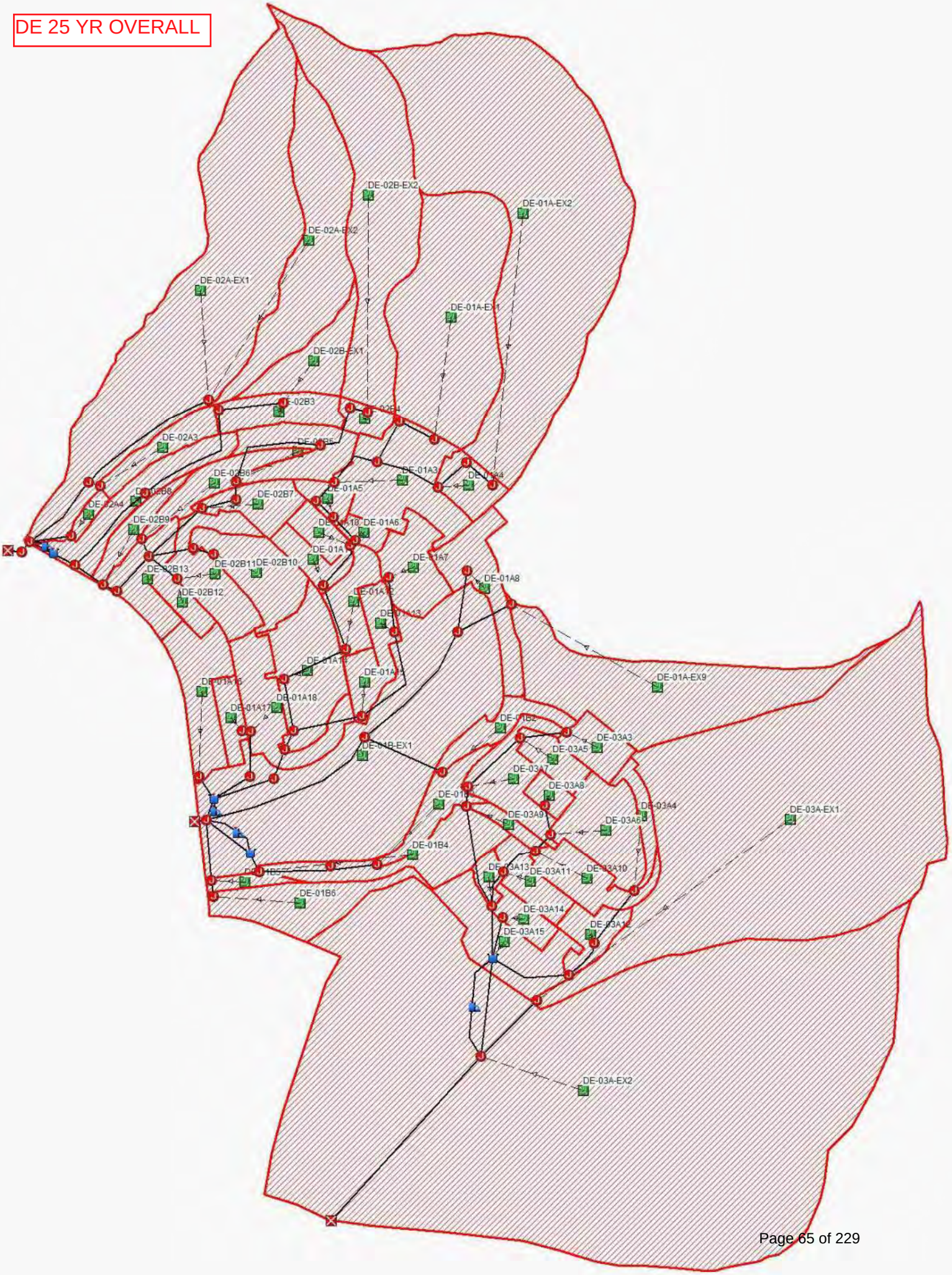
==========

****
Subbasin Runoff Summary
****

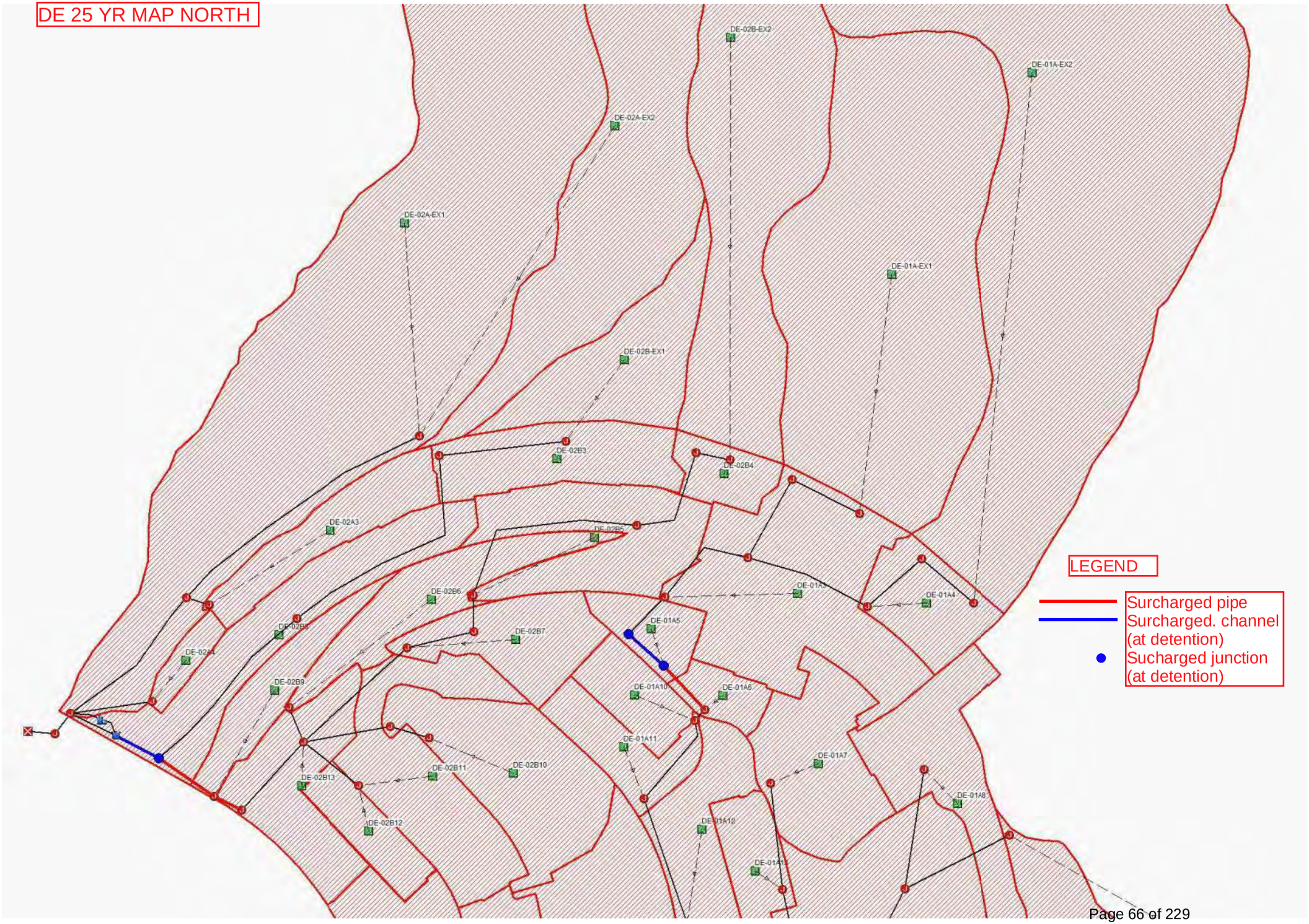
Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
EX-01	0.79	1.93	0.26	7.61	0.330	0	00:24:40
EX-02A	0.70	2.37	0.23	2.40	0.330	0	00:17:51
EX-02B	0.81	1.88	0.27	5.23	0.330	0	00:25:46
EX-03	0.87	1.62	0.29	10.27	0.330	0	00:32:00

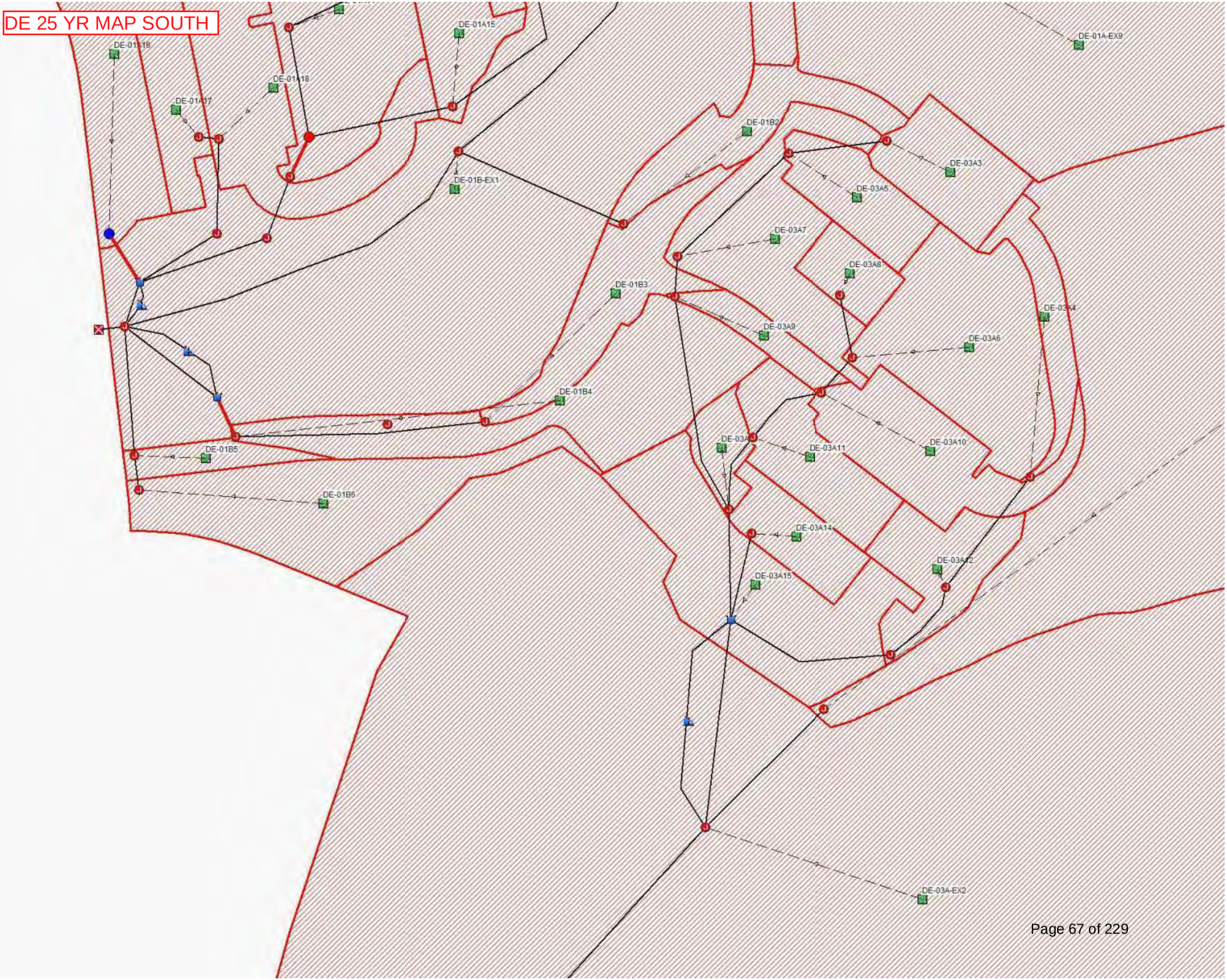
Analysis began on: Sat Sep 14 11:44:41 2024
Analysis ended on: Sat Sep 14 11:44:41 2024
Total elapsed time: < 1 sec

DE 25 YR OVERALL

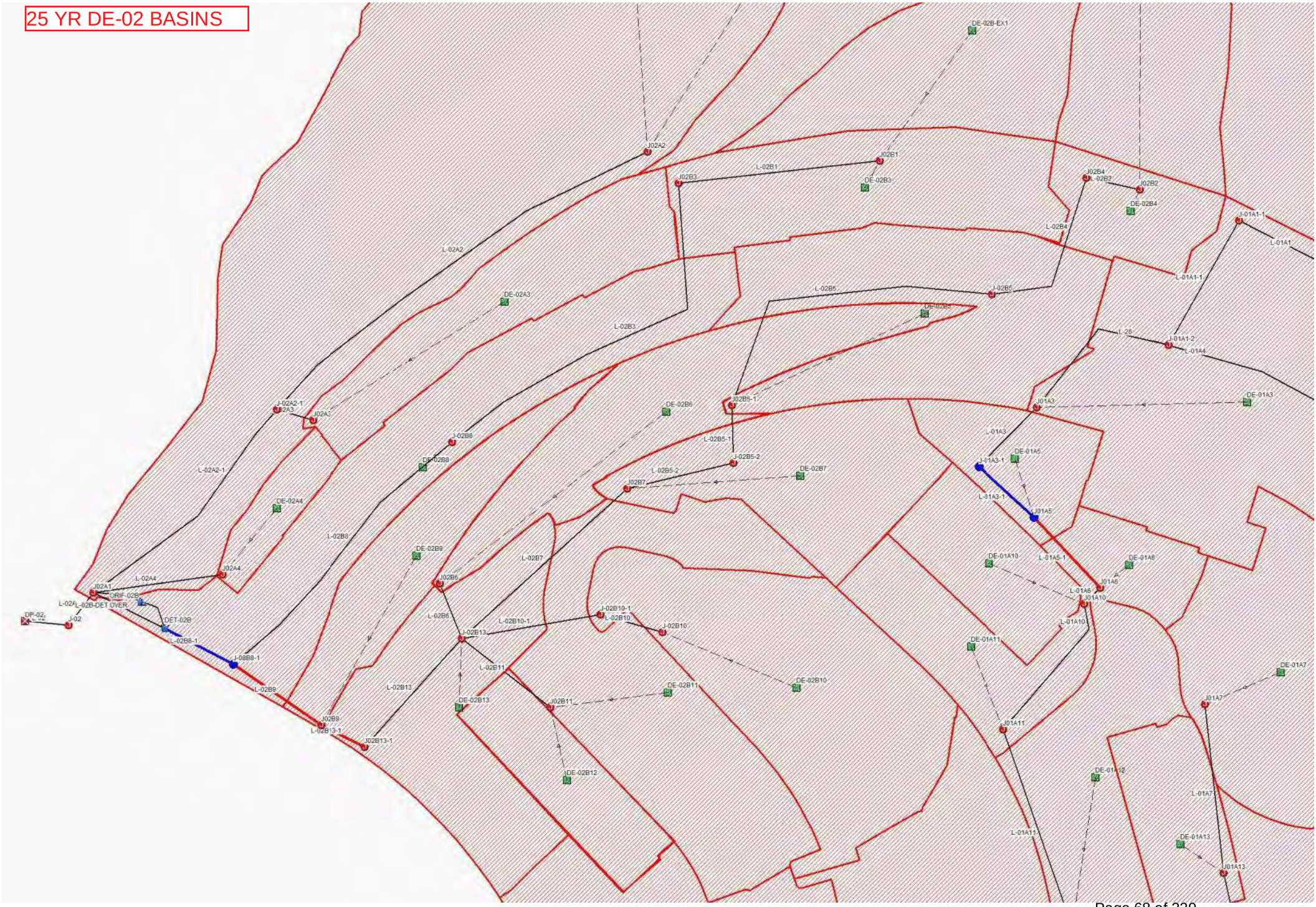


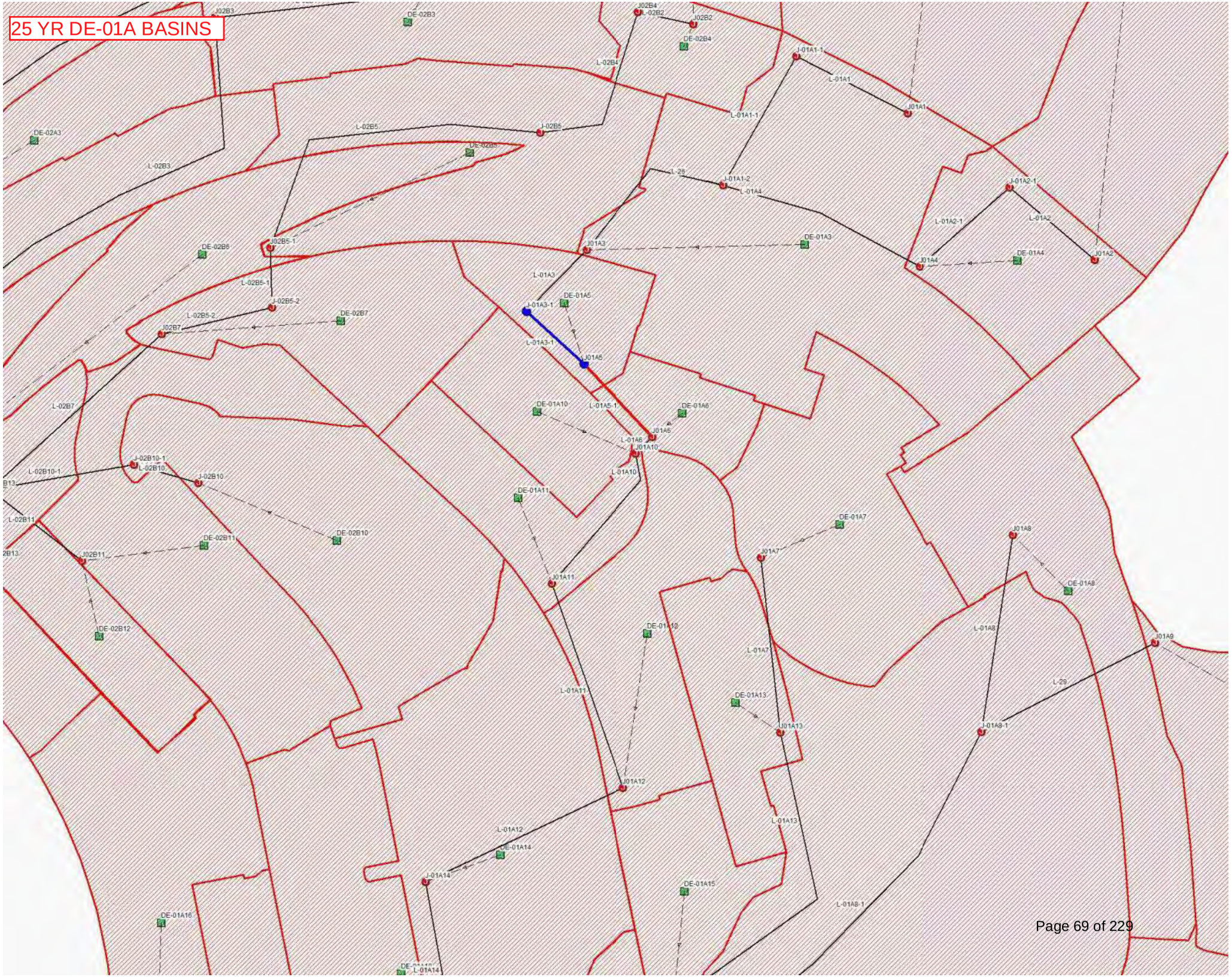
DE 25 YR MAP NORTH

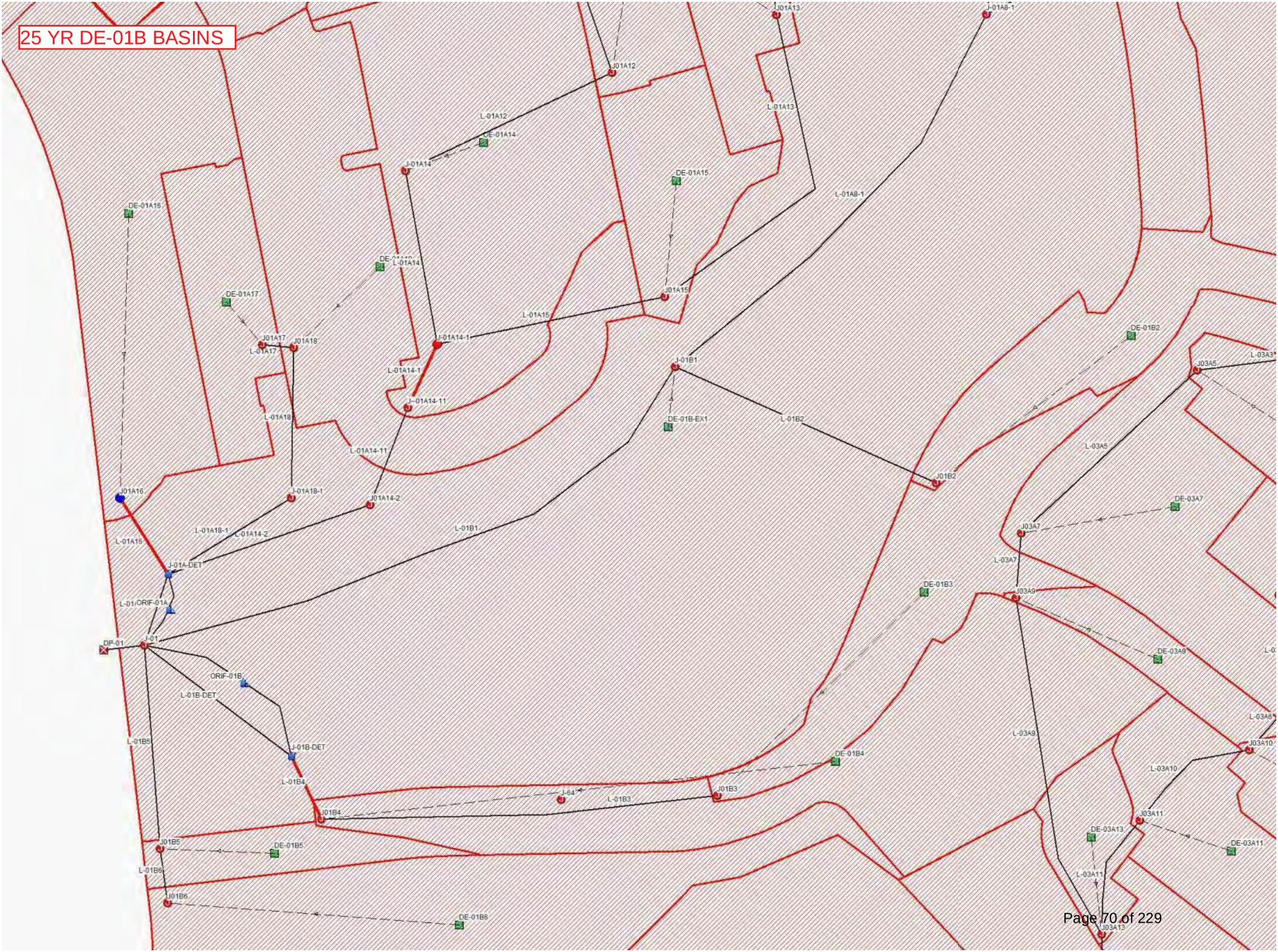


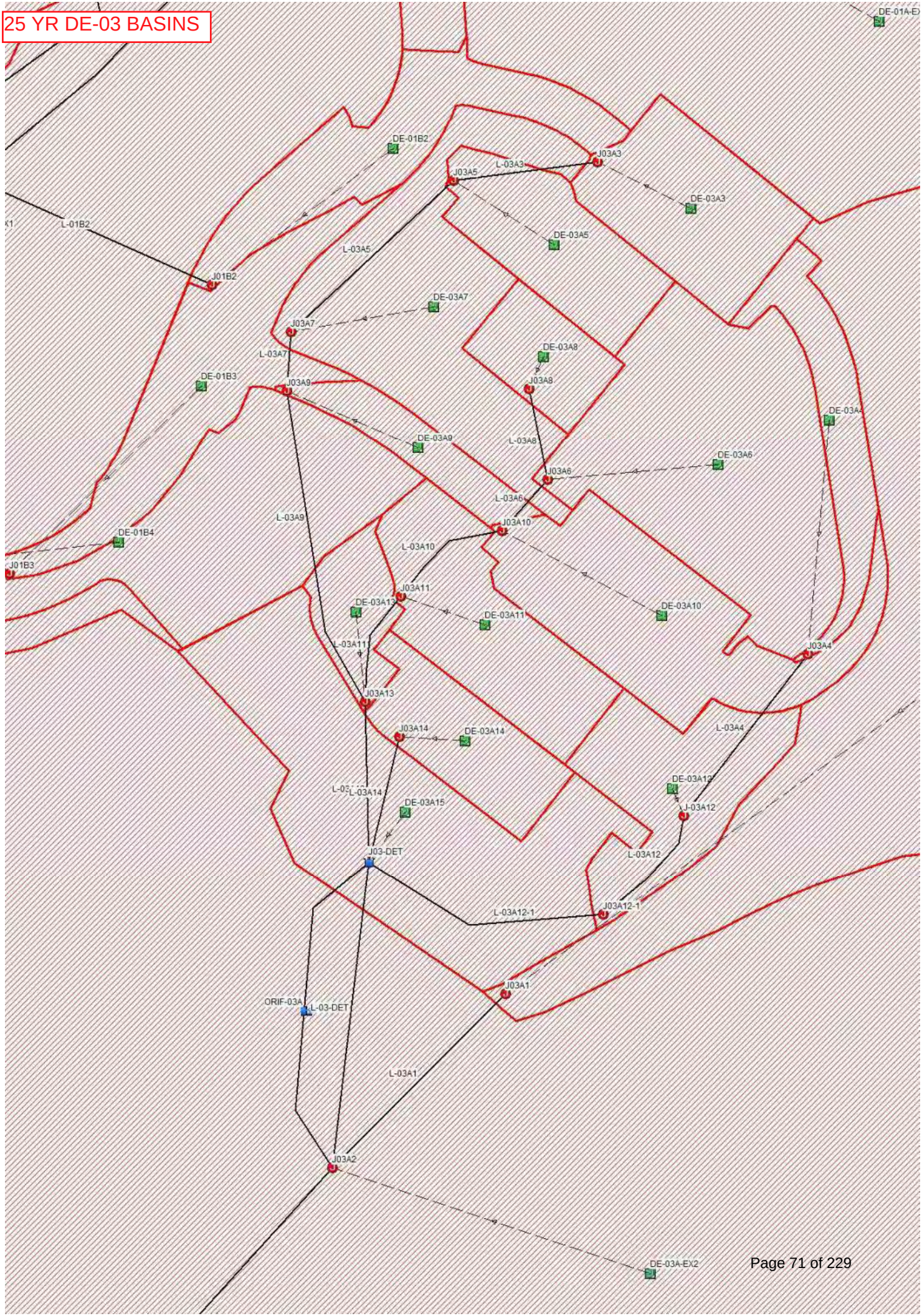

DE 25 YR MAP SOUTH
DE-01A15
DE-01A16
DE-01A18
DE-01A17
DE-01A-EX9
DE-01B2
DE-03A3
DE-03A5
DE-01B-EX1
DE-03A7
DE-03A8
DE-01B3
DE-03A4
DE-03A9
DE-03A6
DE-01B4
DE-03A
DE-03A11
DE-03A10
DE-01B5
DE-01B6
DE-03A14
DE-03A12
DE-03A15
DE-03A-EX2

25 YR DE-02 BASINS

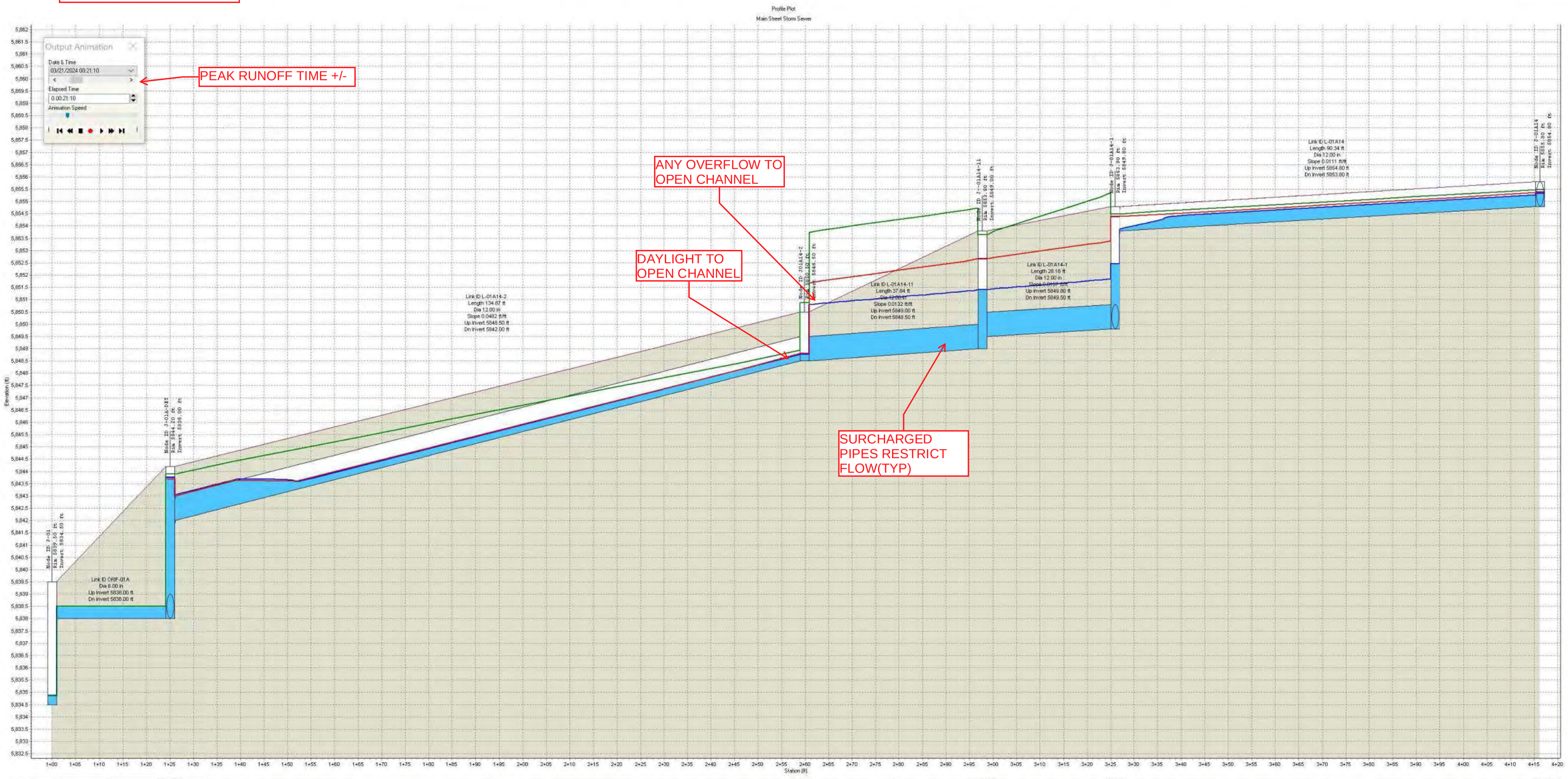



25 YR DE-01A BASINS
J02B3
DE-02B3
J02B4
L-02B4
J02B2
DE-02B4
J-01A1-1
L-01A1
J01A1
L-01A1-1
DE-02A3
L-02B5
J-02B5
DE-02B5
L-02B3
L-25
J-01A1-2
L-01A4
J-01A2-1
L-01A2-1
L-01A2
DE-02B6
J02B5-1
J01A3
DE-01A3
J01A4
DE-01A4
J01A2
L-01A3
L-02B5-1
DE-01A5
J-02B5-2
J-01A3-1
L-02B5-2
DE-02B7
J02B7
L-01A3-1
J01A5
L-02B7
DE-01A10
L-01A5-1
DE-01A6
J01A6
L-01A6
J01A10
J-02B10-1
L-02B10-1
L-02B10
J-02B10
L-01A10
DE-01A11
DE-01A7
J01A8
J01A7
DE-02B10
L-02B11
DE-02B11
J02B11
DE-01A8
J01A11
DE-02B12
DE-01A12
L-01A8
J01A9
L-01A7
L-01A11
L-29
DE-01A13
J-01A8-1
J01A13
J01A12
L-01A13
L-01A12
DE-01A14
J-01A14
DE-01A15
L-01A8-1
DE-01A16


25 YR DE-01B BASINS
J01A13
J01A8-1
J01A12
L-01A12
DE-01A14
L-01A13
J-01A14
DE-01A15
L-01A8-1
DE-01A16
L-01A14
DE-01A17
J01A15
L-01A15
J01A17
J01A18
L-01A17
J-01A14-1
DE-01B2
J-01B1
L-01A14-1
J03A5
J-01A14-11
L-01A18
DE-01B-EX1
L-01B2
L-01A14-11
L-03A5
J01B2
J01A16
L-01A18-1
J01A14-2
DE-03A7
J03A7
L-01A18-1
L-01A14-2
L-01B1
L-01A16
L-03A7
J-01A-DET
DE-01B3
J03A9
L-01/ORIF-01A
DF-01
J-01
DE-03A9
ORIF-01B
L-01B-DET
L-03A6
L-01B5
J-01B-DET
L-03A9
J03A10
DE-01B4
L-03A10
L-01B4
J-64
J01B3
L-01B3
J03A11
J01B4
DE-03A13
J01B5
DE-01B5
DE-03A11
L-01B6
L-03A11
J01B6
DE-01B6
J03A13


25 YR DE-03 BASINS
DE-01A-EX
DE-01B2
J03A3
L-03A3
J03A5
DE-03A3
DE-03A5
L-01B2
L-03A5
J01B2
DE-03A7
J03A7
L-03A7
DE-03A8
DE-01B3
J03A9
J03A8
DE-03A4
DE-03A9
L-03A8
DE-03A6
J03A6
L-03A6
L-03A9
J03A10
DE-01B4
L-03A10
J01B3
J03A11
DE-03A13
DE-03A10
DE-03A11
L-03A11
J03A4
J03A13
J03A14
DE-03A14
L-03A4
L-03A14
DE-03A12
DE-03A15
J-03A12
J03-DET
L-03A12
L-03A12-1
J03A12-1
J03A1
ORIF-03A
L-03-DET
L-03A1
J03A2
DE-03A-EX2

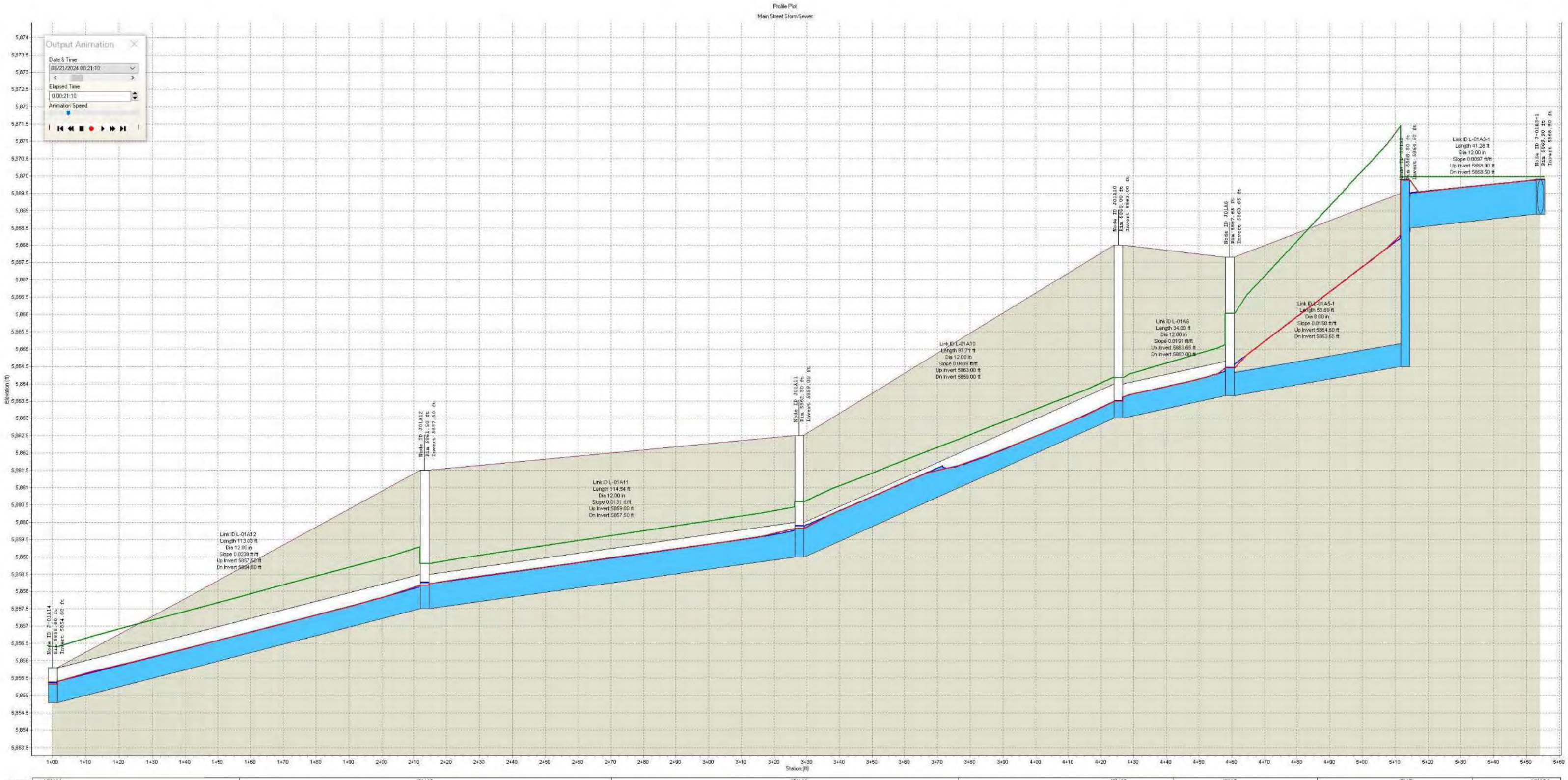
DE-01A MAIN CHANNEL-1



Node ID:	J-01	J-01A-DET	J01A14-2	J-01A14-11	J-01A14-1	J-01A14
Rim (ft):	5839.50	5844.20	5850.50	5853.80	5853.90	5855.80
Invert (ft):	5834.50	5838.00	5848.50	5849.00	5849.80	5854.80
Min Pipe Cover (ft):	0.00		1.00	3.30	0.00	0.00
Max HGL (ft):	5834.86	5843.76	5848.80	5852.66	5854.39	5855.38

Link ID:	ORIF-01A	L-01A14-2	L-01A14-11	L-01A14-1	L-01A14
Length (ft):		134.87	37.84	28.16	90.34
Dia (in):	6.00	12.00	12.00	12.00	12.00
Slope (ft/ft):		0.0482	0.0132	0.0107	0.0111
Up Invert (ft):	5838.00	5848.50	5849.00	5849.80	5854.80
Dn Invert (ft):	5838.00	5842.00	5848.50	5849.50	5853.80
Max Q (cfs):	2.27	6.25	6.25	6.25	5.72
Max Vel (ft/s):	0.00	3.00	11.55	7.96	2.58
Max Depth (ft):	0.00	0.65	0.65	1.00	0.56

DE-01A MAIN CHANNEL-2



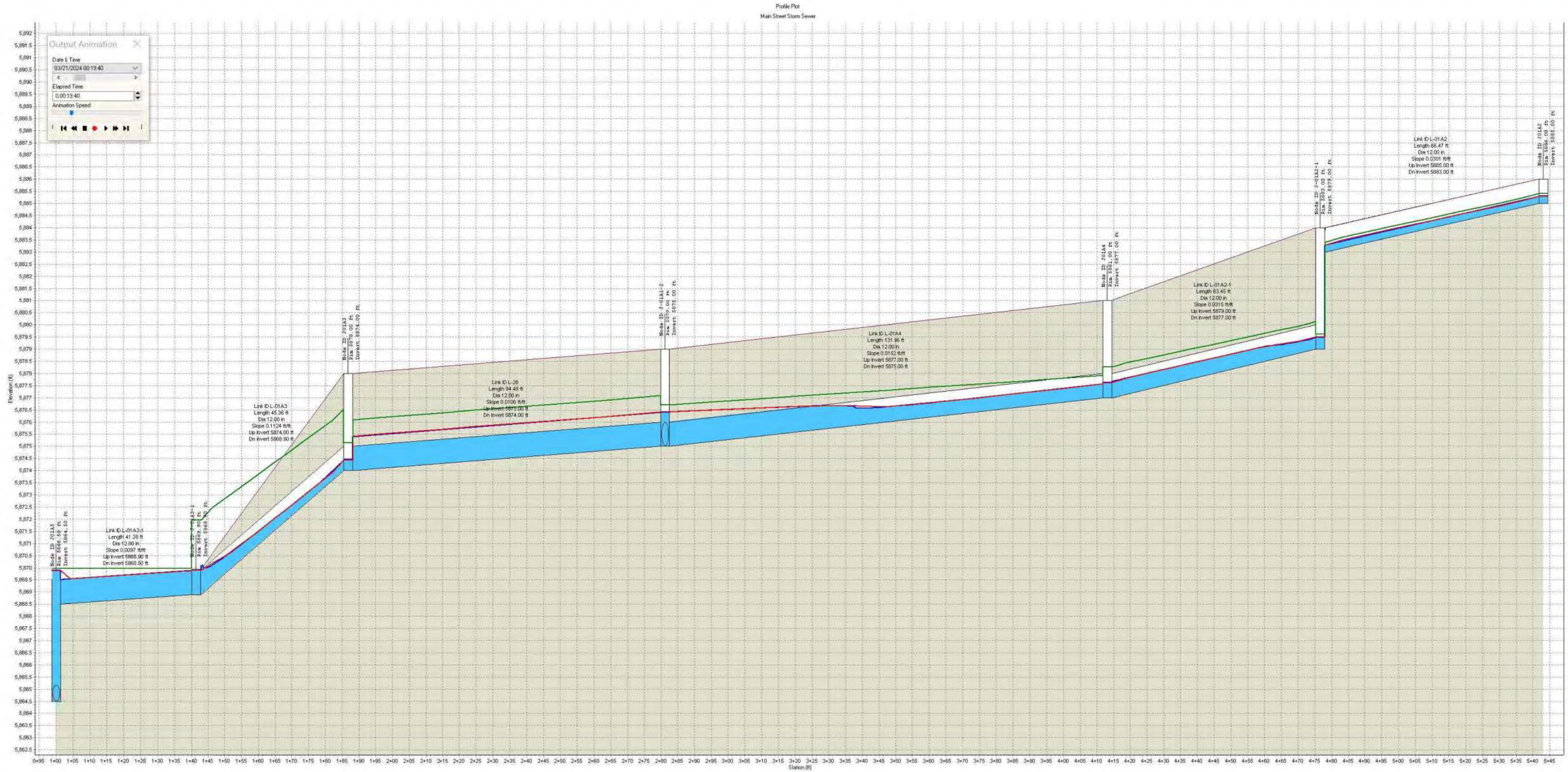
Node ID:	J-01A14	J01A12	J01A11	J01A10	J01A6	J01A5	J-01A3-1
Rim (ft):	5855.80	5861.50	5862.50	5868.00	5867.65	5868.50	5869.90
Invert (ft):	5854.80	5857.50	5859.00	5863.00	5863.65	5864.50	5868.90
Min Pipe Cover (ft):	0.00	3.00	2.50	4.00	3.00	0.00	0.00
Max HGL (ft):	5855.38	5858.26	5859.90	5863.50	5864.46	5869.89	5869.90

Link ID:	L-01A12	L-01A11	L-01A10	L-01A6	L-01A5-1	L-01A3-1
Length (ft):	113.03	114.54	97.71	34.00	53.69	41.28
Dia (in):	12.00	12.00	12.00	12.00	8.00	12.00
Slope (ft/ft):	0.0239	0.0131	0.0409	0.0191	0.0158	0.0097
Up Invert (ft):	5857.50	5859.00	5863.00	5863.65	5864.50	5868.90
Dn Invert (ft):	5854.80	5857.50	5859.00	5863.00	5863.65	5868.50
Max Q (cfs):	4.43	3.99	3.75	3.58	3.51	4.62
Max Vel (ft/s):	8.14	5.89	6.71	6.61	10.06	2.23
Max Depth (ft):	0.67	0.83	0.70	0.65	0.67	1.00

DE-01A MAIN CHANNEL-3

03/21/2024 00:19:40

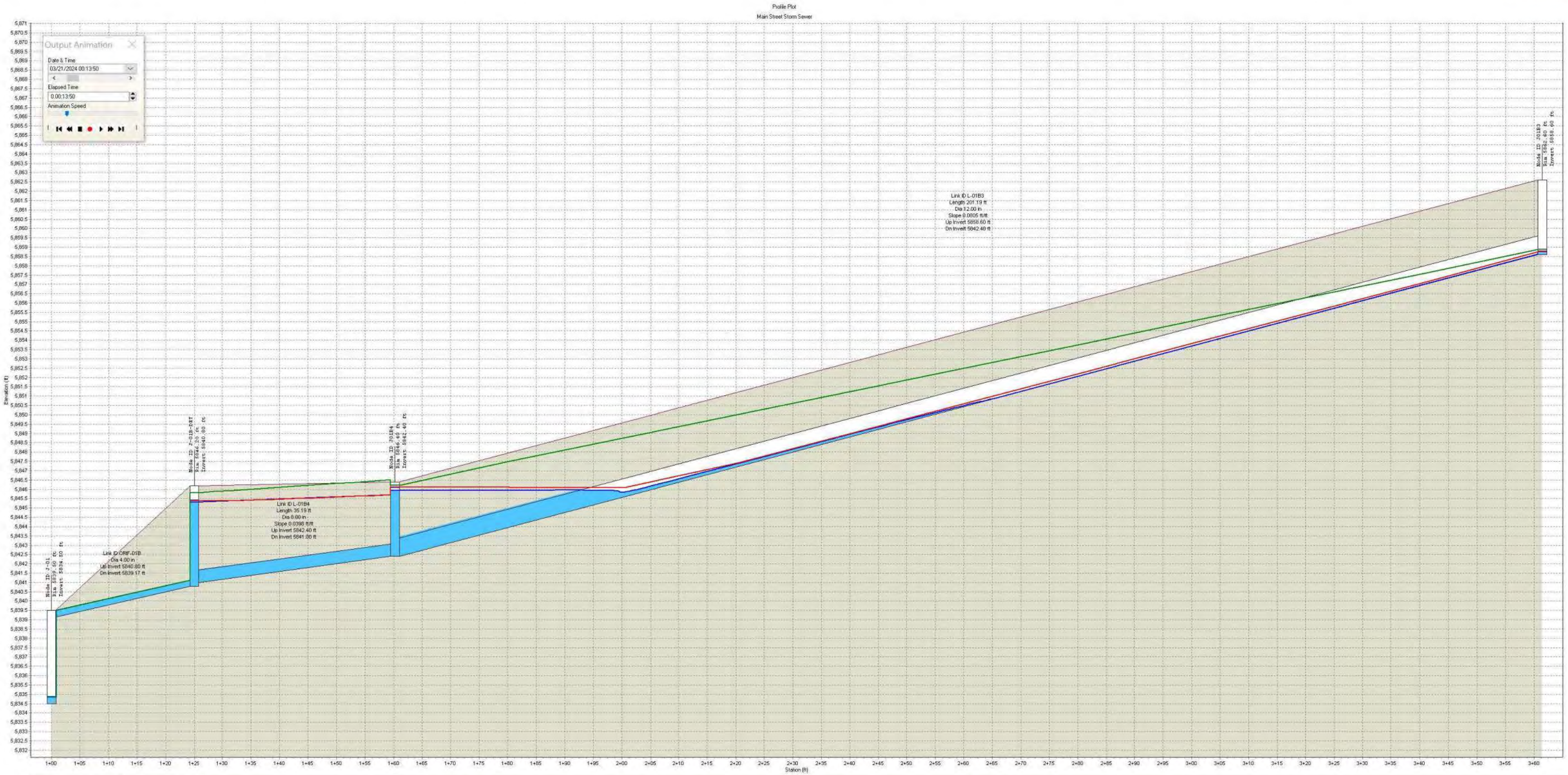
Profile Plot
Main Street Storm Sewer



Node ID:	J01A5	J-01A3-1	J01A3	J-01A1-2	J01A4	J-01A2-1	J01A2	
Rim (ft):	5868.50	5869.90	5878.00	5879.00	5881.00	5883.00	5886.00	
Invert (ft):	5864.50	5868.90	5874.00	5875.00	5877.00	5879.00	5885.00	
Min Pipe Cover (ft):	0.00	0.00	3.00	3.00	3.00	0.00	0.00	
Max HGL (ft):	5869.89	5869.90	5874.46	5876.69	5877.63	5879.50	5885.30	
Link ID:		L-01A3-1	L-01A3	L-26	L-01A4	L-01A2-1	L-01A2	
Length (ft):		41.28	45.36	94.49	131.96	63.45	66.47	
Dia (in):		12.00	12.00	12.00	12.00	12.00	12.00	
Slope (ft/ft):		0.0097	0.1124	0.0106	0.0152	0.0315	0.0301	
Up Invert (ft):		5868.90	5874.00	5875.00	5877.00	5879.00	5885.00	
Dn Invert (ft):		5868.50	5868.90	5874.00	5875.00	5877.00	5883.00	
Max Q (cfs):		4.62	4.86	3.97	2.95	2.80	2.79	
Max Vel (ft/s):		2.23	11.54	6.59	4.31	8.41	2.74	
Max Depth (ft):		1.00	0.72	0.73	0.82	0.56	0.29	

DE-01B MAIN CHANNEL-1

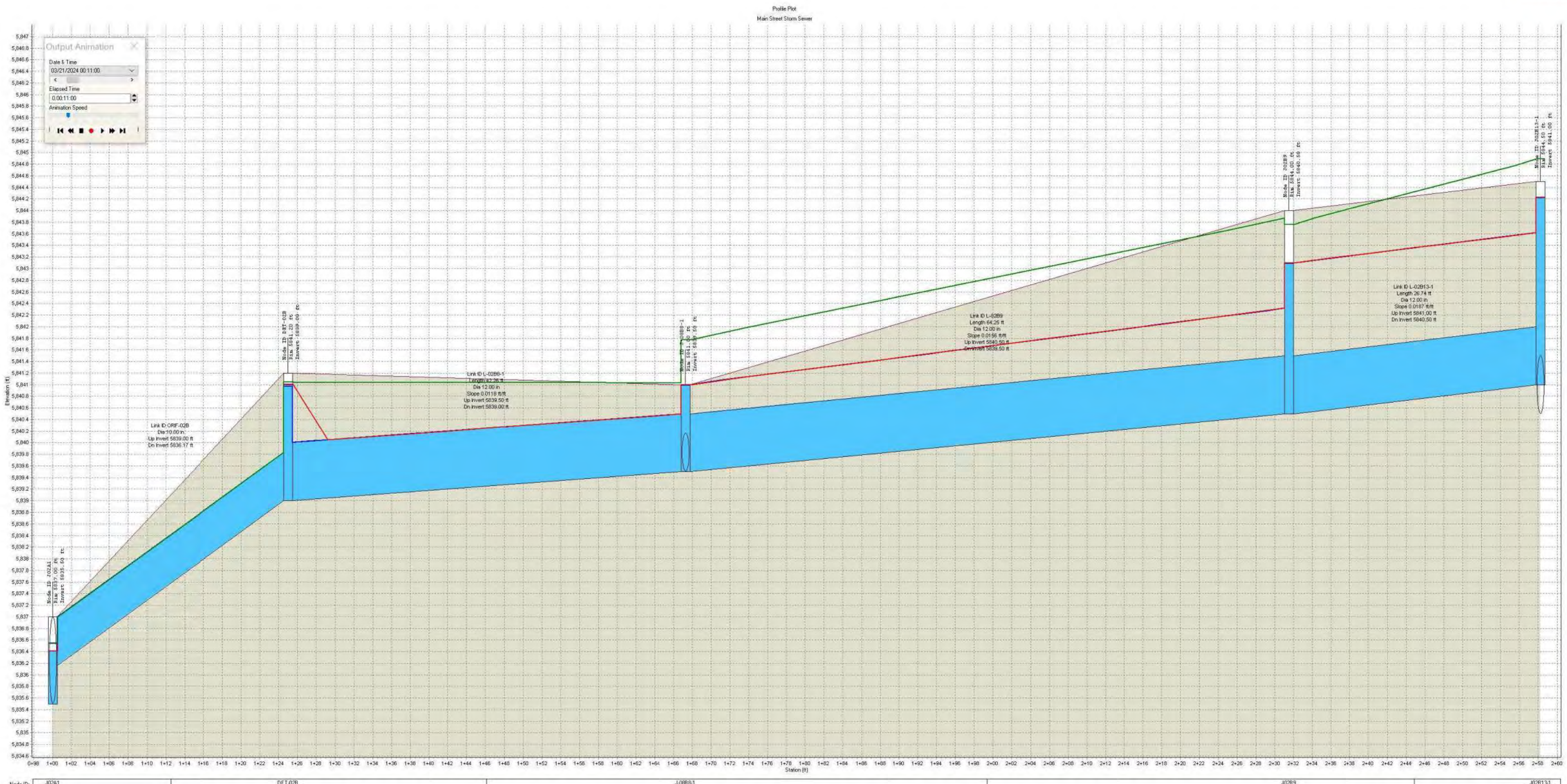
03/21/2024 00:13:50



Node ID:	J-01	J-01B-DET	J01B4	J0183
Rim (ft):	5839.50	5846.20	5846.40	5862.60
Invert (ft):	5834.50	5840.80	5842.40	5858.60
Min Pipe Cover (ft):	0.00		3.00	3.00
Max HGL (ft):	5834.86	5845.40	5846.26	5858.76

Link ID:	ORIF-01B	L-01B4	L-0183
Length (ft):		35.19	201.19
Dia (in):	4.00	8.00	12.00
Slope (ft/ft):		0.0398	0.0805
Up Invert (ft):	5840.80	5842.40	5858.60
Dn Invert (ft):	5839.17	5841.00	5842.40
Max Q (cfs):	0.91	1.79	0.59
Max Vel (ft/s):	0.00	5.12	2.75
Max Depth (ft):	0.00	0.67	0.58

DE-02B MAIN CHANNEL-1

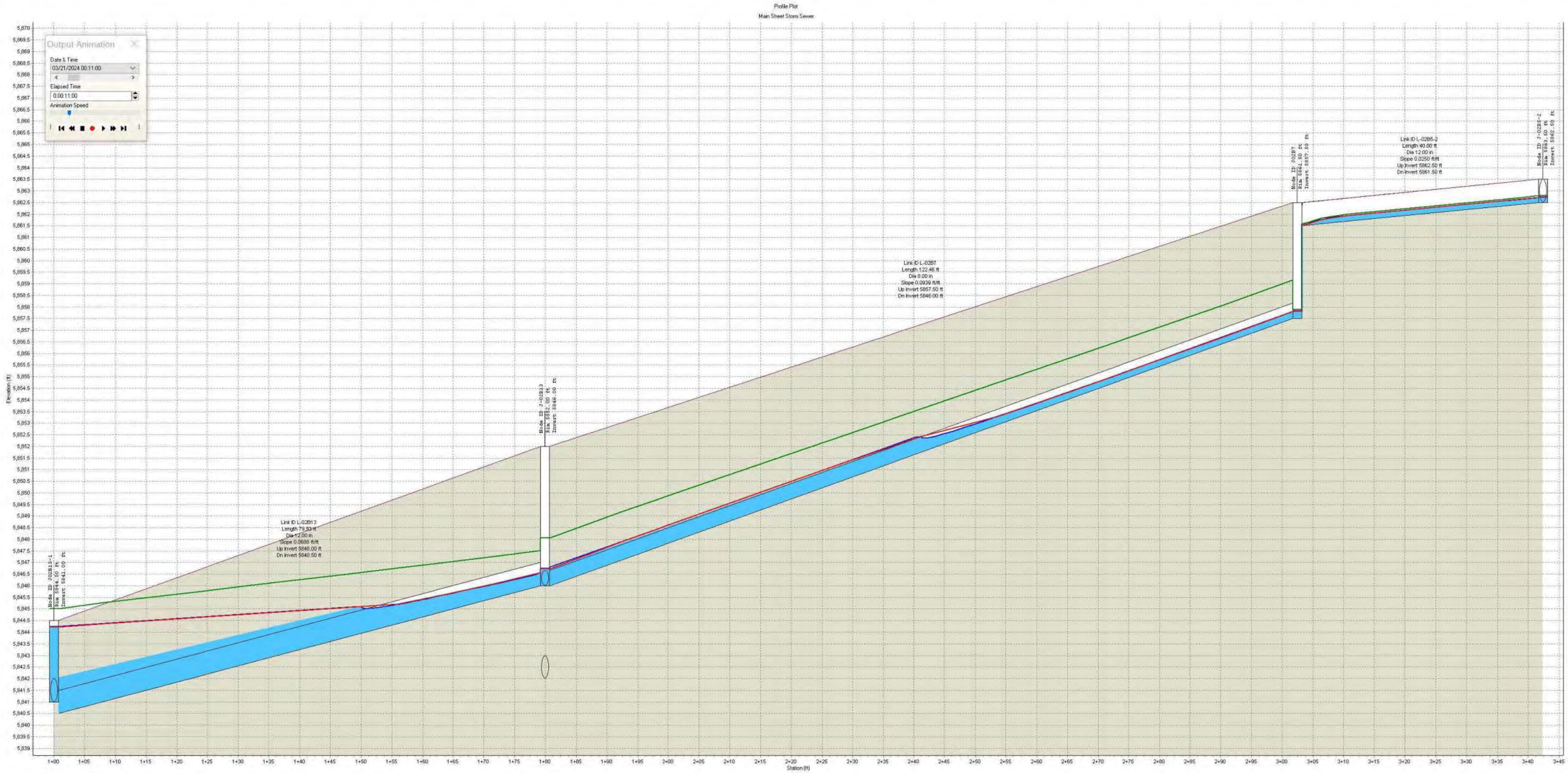


Node ID:	J02A1	DET-02B	J-08B8-1	J02B9	J02B13-1
Rim (ft):	5837.00	5841.20	5841.00	5844.00	5844.50
Invert (ft):	5835.50	5839.00	5839.50	5840.50	5841.00
Min Pipe Cover (ft):	0.00		0.50	2.50	2.50
Max HGL (ft):	5836.55	5841.01	5841.00	5843.10	5844.23

Link ID:	ORIF-02B	L-02B8-1	L-02B9	L-02B13-1
Length (ft):		42.26	64.25	26.74
Dia (in):	10.00	12.00	12.00	12.00
Slope (ft/ft):		0.0118	0.0156	0.0187
Up Invert (ft):	5839.00	5839.50	5840.50	5841.00
Dn Invert (ft):	5836.17	5839.00	5839.50	5840.50
Max Q (cfs):	3.39	5.31	5.54	5.13
Max Vel (ft/s):	0.00	1.44	7.05	6.53
Max Depth (ft):	0.00	1.00	1.00	1.00

DE-02B MAIN CHANNEL-2

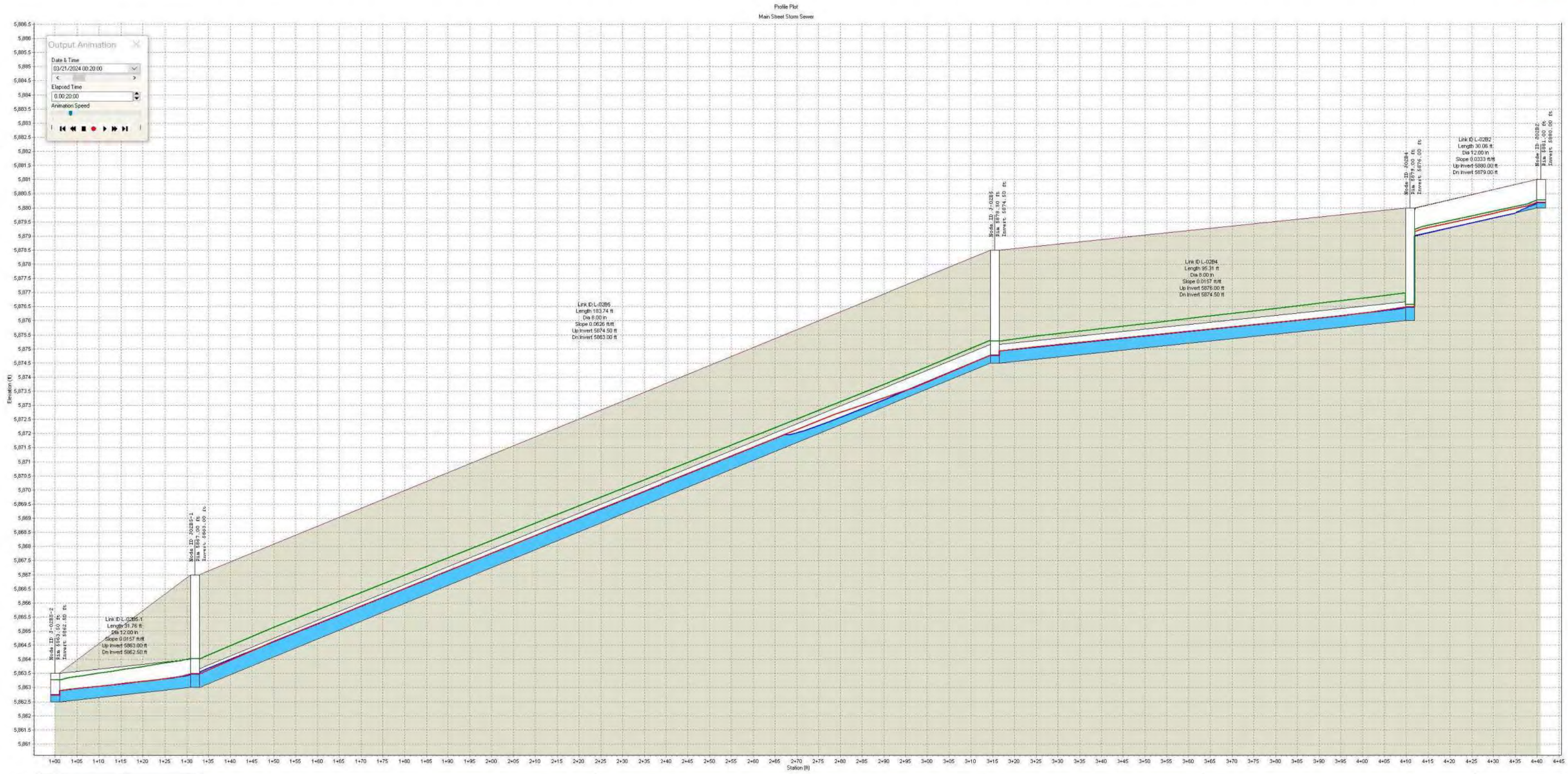
03/21/2024 00:11:00



Node ID:	J02B13-1	J-02B13	J02B7	J-02B5-2
Rim (ft):	5844.50	5852.00	5861.50	5863.50
Invert (ft):	5841.00	5846.00	5857.50	5862.50
Min Pipe Cover (ft):	2.50	5.00	0.00	0.00
Max HGL (ft):	5844.23	5846.73	5857.82	5862.73

Link ID:	L-02B13	L-02B7	L-02B5-2
Length (ft)	79.93	122.46	40.00
Dia (in)	12.00	8.00	12.00
Slope (ft/ft):	0.0688	0.0939	0.0250
Up Invert (ft):	5846.00	5857.50	5862.50
Dn Invert (ft):	5840.50	5846.00	5861.50
Max Q (cfs):	5.13	1.84	1.51
Max Vel (ft/s):	7.10	9.27	2.18
Max Depth (ft):	0.97	0.49	0.22

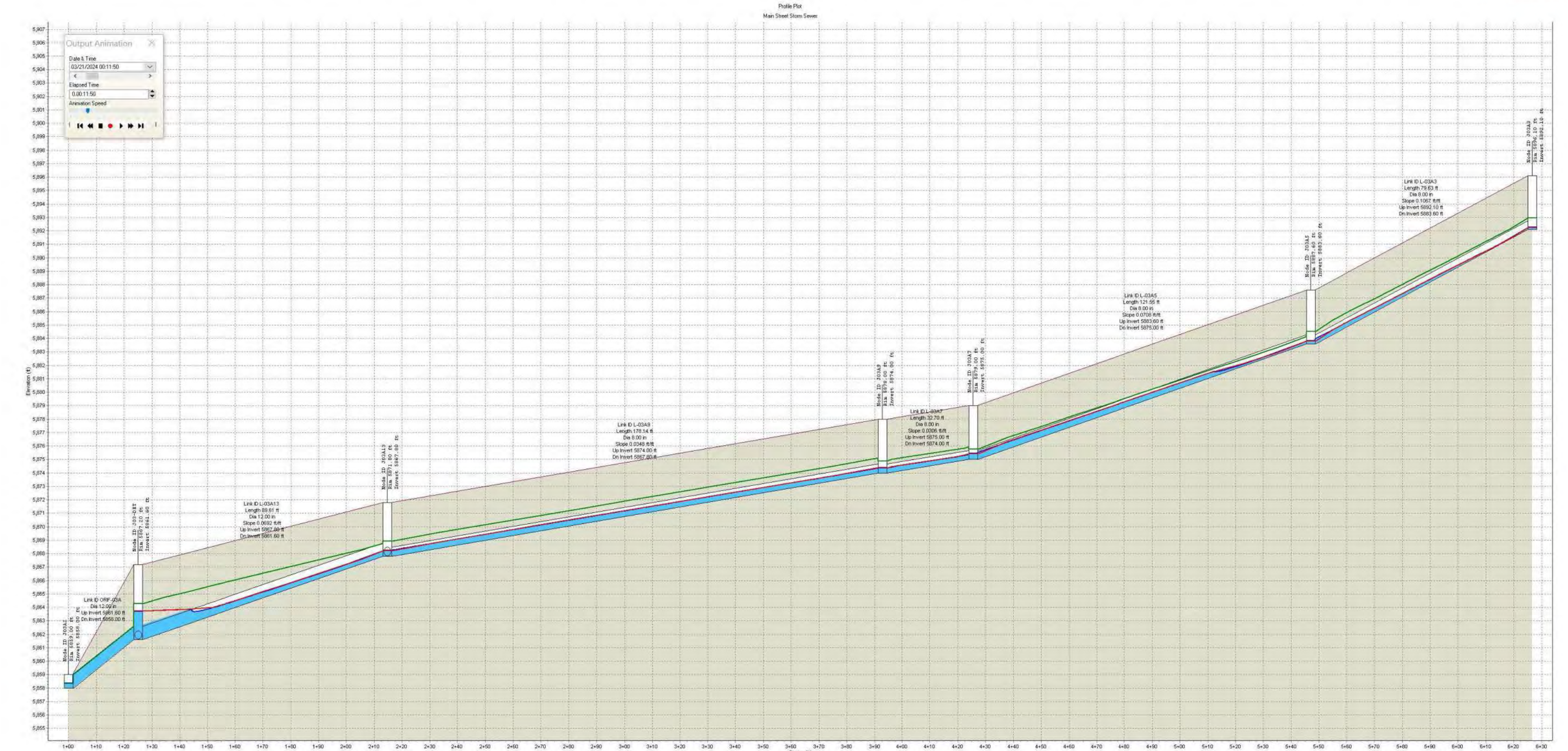
DE-02B MAIN CHANNEL-3



Node ID:	J-02B5-2	J02B5-1	J-02B5	J02B4	J02B2	
Rim (ft):	5863.50	5867.00	5878.50	5879.00	5881.00	
Invert (ft):	5862.50	5863.00	5874.50	5876.00	5880.00	
Min Pipe Cover (ft):	0.00	3.00	3.33	0.00	0.00	
Max HGL (ft):	5862.73	5863.49	5874.78	5876.49	5880.19	
Link ID:	L-02B5-1	L-02B5	L-02B4	L-02B2		
Length (ft):	31.76	183.74	95.31	30.06		
Dia (in):	12.00	8.00	8.00	12.00		
Slope (ft/ft):	0.0157	0.0626	0.0157	0.0333		
Up Invert (ft):	5863.00	5874.50	5876.00	5880.00		
Dn Invert (ft):	5862.50	5863.00	5874.50	5879.00		
Max Q (cfs):	1.53	1.19	1.19	1.19		
Max Vel (ft/s):	5.91	5.88	5.68	2.29		
Max Depth (ft):	0.36	0.38	0.39	0.19		

DE-03 MAIN CHANNEL-1

03/21/2024 00:11:50



Node ID:	J03A2	J03-DET	J03A13	J03A9	J03A7	J03A5	J03A3
Rim (ft):	5859.00	5867.20	5871.80	5878.00	5879.00	5887.60	5896.10
Invert (ft):	5858.00	5861.60	5867.80	5874.00	5875.00	5883.60	5892.10
Min Pipe Cover (ft):	0.00	3.00	3.33	3.33	3.33	3.33	3.33
Max HGL (ft):	5858.34	5863.72	5868.21	5874.39	5875.44	5883.82	5892.26

Link ID:	ORIF-03A	L-03A13	L-03A9	L-03A7	L-03A5	L-03A3
Length (ft):		89.61	178.14	32.70	121.55	79.63
Dia (in):	12.00	12.00	8.00	8.00	8.00	8.00
Slope (ft/ft):		0.0692	0.0348	0.0306	0.0708	0.1067
Up Invert (ft):	5861.60	5867.80	5874.00	5875.00	5883.60	5892.10
Dn Invert (ft):	5858.00	5861.60	5867.80	5874.00	5875.00	5883.60
Max Q (cfs):	4.93	3.57	1.50	1.29	0.79	0.55
Max Vel (ft/s):	0.00	6.02	6.82	5.69	4.65	6.77
Max Depth (ft):	0.00	0.71	0.40	0.41	0.33	0.19

Autodesk® Storm and Sanitary Analysis 2024 - Version 13.6.268 (Build 0)

****
Project Description
****
File Name 33011-DE DRG-RATIONAL-25YR-DET.SPF
Description ..... 33011-DE DRG-25 YEAR

****
Analysis Options
****
Flow Units ..... cfs
Subbasin Hydrograph Method. Rational
Time of Concentration..... SCS TR-55
Return Period..... 25 years
Link Routing Method ..... Hydrodynamic
Storage Node Exfiltration.. None
Starting Date MAR-21-2024 00:00:00
Ending Date MAR-21-2024 02:00:00
Report Time Step 00:00:10

****
Element Count
****
Number of subbasins 56
Number of nodes 80
Number of links 80

****
Subbasin Summary
****

Subbasin ID	Total Area acres
DE-01A10	0.13
DE-01A11	0.15
DE-01A12	0.23
DE-01A13	0.15
DE-01A14	0.56
DE-01A15	0.14
DE-01A16	0.41
DE-01A17	0.13
DE-01A18	0.43
DE-01A3	0.64
DE-01A4	0.19
DE-01A5	0.11
DE-01A6	0.08
DE-01A7	0.32
DE-01A8	0.38
DE-01A-EX1	1.55
DE-01A-EX2	3.71
DE-01A-EX9	1.36
DE-01B2	0.20
DE-01B3	0.23
DE-01B4	0.46
DE-01B5	0.07
DE-01B6	0.45
DE-01B-EX1	2.66
DE-02A3	0.21
DE-02A4	0.05
DE-02A-EX1	2.85
DE-02A-EX2	1.06
DE-02B10	0.40
DE-02B11	0.39
DE-02B12	0.12
DE-02B13	0.28

DE-02B3	0.26
DE-02B4	0.10
DE-02B5	0.35
DE-02B6	0.24
DE-02B7	0.23
DE-02B8	0.40
DE-02B9	0.16
DE-02B-EX1	0.33
DE-02B-EX2	1.54
DE-03A10	0.29
DE-03A11	0.21
DE-03A12	0.19
DE-03A13	0.07
DE-03A14	0.13
DE-03A15	0.48
DE-03A3	0.19
DE-03A4	0.12
DE-03A5	0.16
DE-03A6	0.45
DE-03A7	0.35
DE-03A8	0.08
DE-03A9	0.07
DE-03A-EX1	4.78
DE-03A-EX2	11.31

****
Node Summary
****

Node ID	Element Type	Invert Elevation ft	Maximum Elev. ft	Ponded Area ft²	External Inflow
J-01	JUNCTION	5834.50	5839.50	0.00	
J01A1	JUNCTION	5881.00	5882.00	0.00	
J01A10	JUNCTION	5863.00	5868.00	0.00	

J01A11	JUNCTION	5859.00	5862.50	0.00
J-01A1-1	JUNCTION	5876.50	5880.50	0.00
J01A12	JUNCTION	5857.50	5861.50	0.00
J-01A1-2	JUNCTION	5875.00	5879.00	0.00
J01A13	JUNCTION	5863.20	5867.50	0.00
J-01A14	JUNCTION	5854.80	5855.80	0.00
J-01A14-1	JUNCTION	5849.80	5854.80	300.00
J--01A14-11	JUNCTION	5849.00	5853.80	100.00
J01A14-2	JUNCTION	5848.50	5850.50	0.00
J01A15	JUNCTION	5856.20	5860.20	0.00
J01A16	JUNCTION	5838.50	5842.50	0.00
J01A17	JUNCTION	5848.80	5852.30	0.00
J01A18	JUNCTION	5848.30	5852.30	0.00
J-01A18-1	JUNCTION	5847.00	5849.00	0.00
J01A2	JUNCTION	5885.00	5886.00	0.00
J-01A2-1	JUNCTION	5879.00	5884.00	0.00
J01A3	JUNCTION	5874.00	5878.00	0.00
J-01A3-1	JUNCTION	5868.90	5869.90	0.00
J01A4	JUNCTION	5877.00	5881.00	0.00
J01A5	JUNCTION	5864.50	5869.50	625.00
J01A6	JUNCTION	5863.65	5867.65	200.00
J01A7	JUNCTION	5863.60	5867.10	560.00
J01A8	JUNCTION	5875.00	5879.00	0.00
J-01A8-1	JUNCTION	5870.00	5872.00	0.00
J01A9	JUNCTION	5876.00	5877.00	0.00
J-01B1	JUNCTION	5860.00	5862.00	0.00
J01B2	JUNCTION	5873.30	5877.30	0.00
J01B3	JUNCTION	5858.60	5862.60	0.00
J01B4	JUNCTION	5842.40	5846.40	0.00
J01B5	JUNCTION	5838.70	5839.70	0.00
J01B6	JUNCTION	5839.70	5840.70	0.00
J-02	JUNCTION	5835.00	5838.00	0.00
J02A1	JUNCTION	5835.50	5837.00	0.00
J02A2	JUNCTION	5878.00	5879.00	0.00
J-02A2-1	JUNCTION	5851.00	5857.00	0.00
J02A3	JUNCTION	5854.00	5855.00	0.00

J02A4	JUNCTION	5847.00	5848.00	0.00
J02B1	JUNCTION	5875.00	5876.00	0.00
J-02B10	JUNCTION	5851.50	5855.50	200.00
J-02B10-1	JUNCTION	5851.00	5856.00	100.00
J02B11	JUNCTION	5850.20	5854.20	0.00
J-02B13	JUNCTION	5846.00	5852.00	0.00
J02B13-1	JUNCTION	5841.00	5844.50	0.00
J02B2	JUNCTION	5880.00	5881.00	0.00
J02B3	JUNCTION	5865.00	5870.00	0.00
J02B4	JUNCTION	5876.00	5880.00	0.00
J-02B5	JUNCTION	5874.50	5878.50	0.00
J02B5-1	JUNCTION	5863.00	5867.00	0.00
J-02B5-2	JUNCTION	5862.50	5863.50	0.00
J02B6	JUNCTION	5847.00	5851.00	0.00
J02B7	JUNCTION	5857.50	5862.50	400.00
J-02B8	JUNCTION	5853.50	5857.50	0.00
J02B9	JUNCTION	5840.50	5844.00	0.00
J03A1	JUNCTION	5864.00	5865.00	0.00
J03A10	JUNCTION	5877.50	5881.50	0.00
J03A11	JUNCTION	5868.60	5872.60	0.00
J-03A12	JUNCTION	5872.60	5873.60	0.00
J03A12-1	JUNCTION	5870.00	5871.00	0.00
J03A13	JUNCTION	5867.80	5871.80	0.00
J03A14	JUNCTION	5868.30	5872.30	0.00
J03A2	JUNCTION	5858.00	5859.00	0.00
J03A3	JUNCTION	5892.10	5896.10	0.00
J03A4	JUNCTION	5881.50	5885.50	0.00
J03A5	JUNCTION	5883.60	5887.60	0.00
J03A6	JUNCTION	5878.50	5882.50	0.00
J03A7	JUNCTION	5875.00	5879.00	0.00
J03A8	JUNCTION	5882.70	5886.70	0.00
J03A9	JUNCTION	5874.00	5878.00	0.00
J-08B8-1	JUNCTION	5839.50	5841.00	0.00
J-64	JUNCTION	0.00	6.00	0.00
DP-01	OUTFALL	5834.00	5835.00	0.00
DP-02	OUTFALL	5834.00	5835.00	0.00

DP-03	OUTFALL	5829.00	5830.00	0.00
DET-02B	STORAGE	5839.00	5841.20	0.00
J-01A-DET	STORAGE	5838.00	5844.20	0.00
J-01B-DET	STORAGE	5840.80	5846.20	0.00
J03-DET	STORAGE	5861.60	5867.20	0.00

****
Link Summary
****

Link ID	From Node	To Node	Element Type	Length ft	Slope %	Manning's Roughness
L-01	J-01	DP-01	CHANNEL	20.9	2.3969	0.0320
L-01A1	J01A1	J-01A1-1	CHANNEL	63.3	2.3693	0.0320
L-01A10	J01A10	J01A11	CONDUIT	97.7	4.0937	0.0120
L-01A11	J01A11	J01A12	CONDUIT	114.5	1.3096	0.0120
L-01A1-1	J-01A1-1	J-01A1-2	CONDUIT	78.4	1.9125	0.0120
L-01A12	J01A12	J-01A14	CONDUIT	113.0	2.3887	0.0120
L-01A13	J01A13	J01A15	CONDUIT	183.8	3.8075	0.0120
L-01A14	J-01A14	J-01A14-1	CHANNEL	90.3	1.1069	0.0320
L-01A14-1	J-01A14-1	J--01A14-11	CONDUIT	28.2	1.0653	0.0120
L-01A14-11	J--01A14-11	J01A14-2	CONDUIT	37.8	1.3214	0.0120
L-01A14-2	J01A14-2	J-01A-DET	CHANNEL	134.9	4.8195	0.0320
L-01A15	J01A15	J-01A14-1	CONDUIT	72.8	8.7973	0.0120
L-01A16	J01A16	J-01A-DET	CONDUIT	49.6	1.0089	0.0150
L-01A17	J01A17	J01A18	CONDUIT	16.0	3.1328	0.0120
L-01A18	J01A18	J-01A18-1	CONDUIT	76.1	1.7078	0.0120
L-01A18-1	J-01A18-1	J-01A-DET	CHANNEL	71.2	7.0205	0.0320
L-01A2	J01A2	J-01A2-1	CHANNEL	66.5	3.0089	0.0320
L-01A2-1	J-01A2-1	J01A4	CONDUIT	63.5	3.1521	0.0120
L-01A3	J01A3	J-01A3-1	CONDUIT	45.4	11.2434	0.0120
L-01A3-1	J-01A3-1	J01A5	CHANNEL	41.3	0.9690	0.0320
L-01A4	J01A4	J-01A1-2	CONDUIT	132.0	1.5156	0.0120
L-01A5-1	J01A5	J01A6	CONDUIT	53.7	1.5832	0.0120
L-01A6	J01A6	J01A10	CONDUIT	34.0	1.9118	0.0120

L-01A7	J01A7	J01A13	CONDUIT	93.4	0.4284	0.0120
L-01A8	J01A8	J-01A8-1	CONDUIT	75.0	6.6667	0.0120
L-01A8-1	J-01A8-1	J-01B1	CHANNEL	242.3	4.1276	0.0320
L-01A-DET	J-01A-DET	J-01	CHANNEL	37.4	25.4351	0.0320
L-01B1	J-01B1	J-01	CHANNEL	313.2	8.1420	0.0320
L-01B2	J01B2	J-01B1	CHANNEL	144.7	9.1889	0.0320
L-01B3	J01B3	J01B4	CONDUIT	201.2	8.0521	0.0120
L-01B4	J01B4	J-01B-DET	CONDUIT	35.2	3.9784	0.0120
L-01B5	J01B5	J-01	CHANNEL	103.6	4.0556	0.0320
L-01B6	J01B6	J01B5	CHANNEL	27.9	3.5894	0.0320
L-01B-DET	J-01B-DET	J-01	CHANNEL	93.2	12.3444	0.0320
L-02	J-02	DP-02	CHANNEL	22.0	4.5434	0.0320
L-02A1	J02A1	J-02	CONDUIT	55.0	0.9098	0.0120
L-02A2	J02A2	J-02A2-1	CHANNEL	249.7	10.8112	0.0320
L-02A2-1	J-02A2-1	J02A1	CHANNEL	143.8	10.7759	0.0320
L-02A3	J02A3	J-02A2-1	CHANNEL	20.8	14.3954	0.0320
L-02A4	J02A4	J02A1	CHANNEL	71.6	16.0704	0.0320
L-02B1	J02B1	J02B3	CHANNEL	111.2	5.3962	0.0320
L-02B10	J-02B10	J-02B10-1	CONDUIT	35.2	1.4192	0.0120
L-02B10-1	J-02B10-1	J-02B13	CONDUIT	77.4	6.4608	0.0120
L-02B11	J02B11	J-02B13	CONDUIT	61.6	6.8204	0.0120
L-02B13	J-02B13	J02B13-1	CONDUIT	79.9	6.2555	0.0120
L-02B13-1	J02B13-1	J02B9	CONDUIT	26.7	1.8699	0.0120
L-02B2	J02B2	J02B4	CHANNEL	30.1	3.3267	0.0320
L-02B3	J02B3	J-02B8	CONDUIT	218.5	5.2627	0.0120
L-02B4	J02B4	J-02B5	CONDUIT	95.3	1.5738	0.0120
L-02B5	J-02B5	J02B5-1	CONDUIT	183.7	6.2588	0.0120
L-02B5-1	J02B5-1	J-02B5-2	CONDUIT	31.8	1.5743	0.0120
L-02B5-2	J-02B5-2	J02B7	CHANNEL	40.0	2.5000	0.0320
L-02B6	J02B6	J-02B13	CONDUIT	32.7	3.0618	0.0120
L-02B7	J02B7	J-02B13	CONDUIT	122.5	9.3908	0.0120
L-02B8	J-02B8	J-08B8-1	CONDUIT	175.5	7.9777	0.0120
L-02B8-1	J-08B8-1	DET-02B	CHANNEL	42.3	1.1832	0.0320
L-02B9	J02B9	J-08B8-1	CONDUIT	64.3	1.5564	0.0120
L-02B-DET OVER	DET-02B	J02A1	CHANNEL	33.9	16.2338	0.0320
L-03A1	J03A1	J03A2	CHANNEL	134.4	4.4643	0.0320

L-03A10	J03A10	J03A11	CONDUIT	69.7	12.7763	0.0120
L-03A11	J03A11	J03A13	CONDUIT	63.6	1.2577	0.0120
L-03A12	J-03A12	J03A12-1	CHANNEL	72.8	3.5719	0.0320
L-03A12-1	J03A12-1	J03-DET	CHANNEL	166.2	2.6479	0.0320
L-03A13	J03A13	J03-DET	CONDUIT	89.6	6.9189	0.0120
L-03A14	J03A14	J03-DET	CONDUIT	80.5	8.3261	0.0120
L-03A2	J03A2	DP-03	CHANNEL	378.4	7.6641	0.0320
L-03A3	J03A3	J03A5	CONDUIT	79.6	10.6744	0.0120
L-03A4	J03A4	J-03A12	CONDUIT	111.4	7.9892	0.0120
L-03A5	J03A5	J03A7	CONDUIT	121.5	7.0753	0.0120
L-03A6	J03A6	J03A10	CONDUIT	37.8	2.6490	0.0120
L-03A7	J03A7	J03A9	CONDUIT	32.7	3.0581	0.0120
L-03A8	J03A8	J03A6	CONDUIT	51.1	8.2111	0.0120
L-03A9	J03A9	J03A13	CONDUIT	178.1	3.4804	0.0120
L-03-DET	J03-DET	J03A2	CHANNEL	170.3	5.2832	0.0320
L-26	J-01A1-2	J01A3	CONDUIT	94.5	1.0583	0.0120
L-29	J01A9	J-01A8-1	CHANNEL	103.4	5.8038	0.0320
ORIF-01A	J-01A-DET	J-01	ORIFICE			
ORIF-01B	J-01B-DET	J-01	ORIFICE			
ORIF-02B	DET-02B	J02A1	ORIFICE			
ORIF-03A	J03-DET	J03A2	ORIFICE			

****
Cross Section Summary
****

Link ID	Shape	Depth/ Diameter ft	Width ft	No. of Barrels	Cross Sectional Area ft²	Full Flow Hydraulic Radius ft	Design Flow Capacity cfs
L-01	TRAPEZOIDAL	1.00	14.00	1	10.00	0.70	56.78
L-01A1	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	34.55
L-01A10	CIRCULAR	1.00	1.00	1	0.79	0.25	7.81
L-01A11	CIRCULAR	1.00	1.00	1	0.79	0.25	4.42
L-01A1-1	CIRCULAR	1.00	1.00	1	0.79	0.25	5.34

L-01A12	CIRCULAR	1.00	1.00	1	0.79	0.25	5.97
L-01A13	CIRCULAR	0.67	0.67	1	0.35	0.17	2.55
L-01A14	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	20.52
L-01A14-1	CIRCULAR	1.00	1.00	1	0.79	0.25	3.98
L-01A14-11	CIRCULAR	1.00	1.00	1	0.79	0.25	4.44
L-01A14-2	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	61.40
L-01A15	CIRCULAR	1.00	1.00	1	0.79	0.25	11.45
L-01A16	CIRCULAR	1.00	1.00	1	0.79	0.25	3.10
L-01A17	CIRCULAR	0.67	0.67	1	0.35	0.17	2.32
L-01A18	CIRCULAR	1.00	1.00	1	0.79	0.25	5.04
L-01A18-1	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	74.11
L-01A2	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	38.94
L-01A2-1	CIRCULAR	1.00	1.00	1	0.79	0.25	6.85
L-01A3	CIRCULAR	1.00	1.00	1	0.79	0.25	12.94
L-01A3-1	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	19.20
L-01A4	CIRCULAR	1.00	1.00	1	0.79	0.25	4.75
L-01A5-1	CIRCULAR	0.67	0.67	1	0.35	0.17	1.65
L-01A6	CIRCULAR	1.00	1.00	1	0.79	0.25	5.34
L-01A7	CIRCULAR	0.67	0.67	1	0.35	0.17	0.86
L-01A8	CIRCULAR	0.67	0.67	1	0.35	0.17	3.38
L-01A8-1	TRAPEZOIDAL	1.00	14.00	1	10.00	0.70	74.52
L-01A-DET	TRAPEZOIDAL	0.20	11.60	1	2.16	0.19	16.45
L-01B1	TRAPEZOIDAL	1.00	14.00	1	10.00	0.70	104.66
L-01B2	TRAPEZOIDAL	1.00	14.00	1	10.00	0.70	111.18
L-01B3	CIRCULAR	1.00	1.00	1	0.79	0.25	10.95
L-01B4	CIRCULAR	0.67	0.67	1	0.35	0.17	2.61
L-01B5	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	56.33
L-01B6	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	52.99
L-01B-DET	TRAPEZOIDAL	0.20	11.60	1	2.16	0.19	11.46
L-02	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	41.57
L-02A1	CIRCULAR	1.50	1.50	1	1.77	0.38	10.85
L-02A2	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	64.12
L-02A2-1	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	64.02
L-02A3	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	85.17
L-02A4	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	78.18
L-02B1	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	45.30

L-02B10	CIRCULAR	0.67	0.67	1	0.35	0.17	1.56
L-02B10-1	CIRCULAR	0.67	0.67	1	0.35	0.17	3.33
L-02B11	CIRCULAR	0.67	0.67	1	0.35	0.17	3.42
L-02B13	CIRCULAR	1.00	1.00	1	0.79	0.25	9.65
L-02B13-1	CIRCULAR	1.00	1.00	1	0.79	0.25	5.28
L-02B2	TRAPEZOIDAL	1.00	10.00	1	6.00	0.59	35.57
L-02B3	CIRCULAR	0.67	0.67	1	0.35	0.17	3.00
L-02B4	CIRCULAR	0.67	0.67	1	0.35	0.17	1.64
L-02B5	CIRCULAR	0.67	0.67	1	0.35	0.17	3.28
L-02B5-1	CIRCULAR	1.00	1.00	1	0.79	0.25	4.84
L-02B5-2	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	35.49
L-02B6	CIRCULAR	1.00	1.00	1	0.79	0.25	6.75
L-02B7	CIRCULAR	0.67	0.67	1	0.35	0.17	4.01
L-02B8	CIRCULAR	0.67	0.67	1	0.35	0.17	3.70
L-02B8-1	TRAPEZOIDAL	1.00	8.00	1	5.00	0.60	17.98
L-02B9	CIRCULAR	1.00	1.00	1	0.79	0.25	4.82
L-02B-DET OVER	TRAPEZOIDAL	0.20	12.00	1	2.20	0.18	13.25
L-03A1	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	59.10
L-03A10	CIRCULAR	0.67	0.67	1	0.35	0.17	4.68
L-03A11	CIRCULAR	0.67	0.67	1	0.35	0.17	1.47
L-03A12	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	42.43
L-03A12-1	TRAPEZOIDAL	1.00	12.00	1	7.00	0.57	36.53
L-03A13	CIRCULAR	1.00	1.00	1	0.79	0.25	10.15
L-03A14	CIRCULAR	0.67	0.67	1	0.35	0.17	3.78
L-03A2	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	77.43
L-03A3	CIRCULAR	0.67	0.67	1	0.35	0.17	4.28
L-03A4	CIRCULAR	0.67	0.67	1	0.35	0.17	3.70
L-03A5	CIRCULAR	0.67	0.67	1	0.35	0.17	3.48
L-03A6	CIRCULAR	0.67	0.67	1	0.35	0.17	2.13
L-03A7	CIRCULAR	0.67	0.67	1	0.35	0.17	2.29
L-03A8	CIRCULAR	0.67	0.67	1	0.35	0.17	3.75
L-03A9	CIRCULAR	0.67	0.67	1	0.35	0.17	2.44
L-03-DET	TRAPEZOIDAL	1.00	18.00	1	14.00	0.77	125.24
L-26	CIRCULAR	1.00	1.00	1	0.79	0.25	3.97
L-29	TRAPEZOIDAL	1.00	12.00	1	8.00	0.65	67.38

*************************	Volume	Depth
Runoff Quantity Continuity	acre-ft	inches
*************************	---------	-------
Total Precipitation	2.481	0.699
Continuity Error (%)	0.609	

*************************	Volume	Volume
Flow Routing Continuity	acre-ft	Mgallons
*************************	---------	---------
External Inflow	0.000	0.000
External Outflow	1.161	0.378
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.001	0.000
Continuity Error (%)	0.000	

****
Runoff Coefficient Computations Report
****

Subbasin DE-01A10

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_60%IMPERV	0.13	C	0.66
Composite Area & Weighted Runoff Coeff.	0.13		0.66

Subbasin DE-01A11

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_40%IMPERV	0.15	C	0.54
Composite Area & Weighted Runoff Coeff.	0.15		0.54

Subbasin DE-01A12

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_60%IMPERV	0.23	C	0.66
Composite Area & Weighted Runoff Coeff.	0.23		0.66

Subbasin DE-01A13

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_70%IMPERV	0.15	C	0.71
Composite Area & Weighted Runoff Coeff.	0.15		0.71

Subbasin DE-01A14

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_55%IMPERV	0.56	C	0.63
Composite Area & Weighted Runoff Coeff.	0.56		0.63

Subbasin DE-01A15

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_30%IMPERV	0.14	C	0.49
Composite Area & Weighted Runoff Coeff.	0.14		0.49

Subbasin DE-01A16

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_40%IMPERV	0.41	C	0.54
Composite Area & Weighted Runoff Coeff.	0.41		0.54

Subbasin DE-01A17

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_80%IMPERV	0.13	C	0.77
Composite Area & Weighted Runoff Coeff.	0.13		0.77

Subbasin DE-01A18

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_95%IMPERV	0.43	C	0.85
Composite Area & Weighted Runoff Coeff.	0.43		0.85

Subbasin DE-01A3

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_75%IMPERV	0.64	C	0.74
Composite Area & Weighted Runoff Coeff.	0.64		0.74

Subbasin DE-01A4

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_60%IMPERV	0.19	C	0.66
Composite Area & Weighted Runoff Coeff.	0.19		0.66

Subbasin DE-01A5

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_02%IMPERV	0.11	C	0.33
Composite Area & Weighted Runoff Coeff.	0.11		0.33

Subbasin DE-01A6

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_20%IMPERV	0.08	C	0.43
Composite Area & Weighted Runoff Coeff.	0.08		0.43

Subbasin DE-01A7

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_20%IMPERV	0.32	C	0.43
Composite Area & Weighted Runoff Coeff.	0.32		0.43

Subbasin DE-01A8

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_90%IMPERV	0.38	C	0.82
Composite Area & Weighted Runoff Coeff.	0.38		0.82

Subbasin DE-01A-EX1

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	1.55	C	0.33
Composite Area & Weighted Runoff Coeff.	1.55		0.33

Subbasin DE-01A-EX2

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	3.71	C	0.33
Composite Area & Weighted Runoff Coeff.	3.71		0.33

Subbasin DE-01A-EX9

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_2%_IMPERV	1.36	C	0.33
Composite Area & Weighted Runoff Coeff.	1.36		0.33

Subbasin DE-01B2

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_90%IMPERV	0.20	C	0.82
Composite Area & Weighted Runoff Coeff.	0.20		0.82

Subbasin DE-01B3

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_85%IMPERV	0.23	C	0.80
Composite Area & Weighted Runoff Coeff.	0.23		0.80

Subbasin DE-01B4

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_60%IMPERV	0.46	C	0.80
Composite Area & Weighted Runoff Coeff.	0.46		0.80

Subbasin DE-01B5

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_100%IMPERV	0.07	C	0.89
Composite Area & Weighted Runoff Coeff.	0.07		0.89

Subbasin DE-01B6

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_02%IMPERV	0.45	C	0.33
Composite Area & Weighted Runoff Coeff.	0.45		0.33

Subbasin DE-01B-EX1

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	2.66	C	0.33
Composite Area & Weighted Runoff Coeff.	2.66		0.33

Subbasin DE-02A3

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_40%IMPERV	0.21	C	0.54
Composite Area & Weighted Runoff Coeff.	0.21		0.54

Subbasin DE-02A4

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_50%IMPERV	0.05	C	0.60
Composite Area & Weighted Runoff Coeff.	0.05		0.60

Subbasin DE-02A-EX1

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	2.85	C	0.33
Composite Area & Weighted Runoff Coeff.	2.85		0.33

Subbasin DE-02A-EX2

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_2%_IMPERV	1.06	C	0.33
Composite Area & Weighted Runoff Coeff.	1.06		0.33

Subbasin DE-02B10

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_65%IMPERV	0.40	C	0.68
Composite Area & Weighted Runoff Coeff.	0.40		0.68

Subbasin DE-02B11

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_100%IMPERV	0.39	C	0.89
Composite Area & Weighted Runoff Coeff.	0.39		0.89

Subbasin DE-02B12

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_80%IMPERV	0.12	C	0.77
Composite Area & Weighted Runoff Coeff.	0.12		0.77

Subbasin DE-02B13

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_45%IMPERV	0.28	C	0.57
Composite Area & Weighted Runoff Coeff.	0.28		0.57

Subbasin DE-02B3

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_30%IMPERV	0.26	C	0.49
Composite Area & Weighted Runoff Coeff.	0.26		0.49

Subbasin DE-02B4

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_40%IMPERV	0.10	C	0.54
Composite Area & Weighted Runoff Coeff.	0.10		0.54

Subbasin DE-02B5

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_70%IMPERV	0.35	C	0.71
Composite Area & Weighted Runoff Coeff.	0.35		0.71

Subbasin DE-02B6

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_85%IMPERV	0.24	C	0.80
Composite Area & Weighted Runoff Coeff.	0.24		0.80

Subbasin DE-02B7

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_30%IMPERV	0.23	C	0.49
Composite Area & Weighted Runoff Coeff.	0.23		0.49

Subbasin DE-02B8

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_45%IMPERV	0.40	C	0.57
Composite Area & Weighted Runoff Coeff.	0.40		0.57

Subbasin DE-02B9

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_95%IMPERV	0.16	C	0.85
Composite Area & Weighted Runoff Coeff.	0.16		0.85

Subbasin DE-02B-EX1

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_02%IMPERV	0.33	C	0.33
Composite Area & Weighted Runoff Coeff.	0.33		0.33

Subbasin DE-02B-EX2

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_02%_IMPERV	1.54	C	0.33
Composite Area & Weighted Runoff Coeff.	1.54		0.33

Subbasin DE-03A10

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_100%IMPERV	0.29	C	0.89
Composite Area & Weighted Runoff Coeff.	0.29		0.89

Subbasin DE-03A11

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_25%IMPERV	0.21	C	0.46
Composite Area & Weighted Runoff Coeff.	0.21		0.46

Subbasin DE-03A12

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_15%IMPERV	0.19	C	0.42
Composite Area & Weighted Runoff Coeff.	0.19		0.42

Subbasin DE-03A13

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_10%IMPERV	0.07	C	0.38
Composite Area & Weighted Runoff Coeff.	0.07		0.38

Subbasin DE-03A14

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_90%IMPERV	0.13	C	0.82
Composite Area & Weighted Runoff Coeff.	0.13		0.82

Subbasin DE-03A15

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_15%IMPERV	0.48	C	0.40
Composite Area & Weighted Runoff Coeff.	0.48		0.40

Subbasin DE-03A3

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_100%IMPERV	0.19	C	0.89
Composite Area & Weighted Runoff Coeff.	0.19		0.89

Subbasin DE-03A4

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_100%IMPERV	0.12	C	0.89
Composite Area & Weighted Runoff Coeff.	0.12		0.89

Subbasin DE-03A5

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

MHFD_C_30%IMPERV	0.16	MHFD_C_20%IMPERV	0.49
Composite Area & Weighted Runoff Coeff.	0.16		0.49

Subbasin DE-03A6

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_25%IMPERV	0.45	C	0.46
Composite Area & Weighted Runoff Coeff.	0.45		0.46

Subbasin DE-03A7

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_25%IMPERV	0.35	C	0.46
Composite Area & Weighted Runoff Coeff.	0.35		0.46

Subbasin DE-03A8

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.
MHFD_C_95%IMPERV	0.08	C	0.85
Composite Area & Weighted Runoff Coeff.	0.08		0.85

Subbasin DE-03A9

Soil/Surface Description	Area (acres)	Soil Group	Runoff Coeff.

```
-------------------------------------------------------------------------------------
MHFD_C_100%IMPERV                                    0.07           C         0.89
Composite Area & Weighted Runoff Coeff.              0.07                     0.89

----------------------
Subbasin DE-03A-EX1
----------------------
                                                      Area          Soil       Runoff
Soil/Surface Description                             (acres)        Group      Coeff.
-------------------------------------------------------------------------------------
MHFD_C_2%_IMPERV                                     4.78           C         0.33
Composite Area & Weighted Runoff Coeff.              4.78                     0.33

----------------------
Subbasin DE-03A-EX2
----------------------
                                                      Area          Soil       Runoff
Soil/Surface Description                             (acres)        Group      Coeff.
-------------------------------------------------------------------------------------
MHFD_C_2%_IMPERV                                    11.31           C         0.33
Composite Area & Weighted Runoff Coeff.             11.31                     0.33


**************************************************
SCS TR-55 Time of Concentration Computations Report
**************************************************

Sheet Flow Equation
-------------------

        Tc = (0.007 * ((n * Lf)^0.8)) / ((P^0.5) * (Sf^0.4))

        Where:

        Tc = Time of Concentration (hrs)
        n  = Manning's Roughness
```

```
        Lf = Flow Length (ft)
        P  = 2 yr, 24 hr Rainfall (inches)
        Sf = Slope (ft/ft)

Shallow Concentrated Flow Equation
----------------------------------

        V  = 16.1345 * (Sf^0.5) (unpaved surface)
        V  = 20.3282 * (Sf^0.5) (paved surface)
        V  = 15.0 * (Sf^0.5) (grassed waterway surface)
        V  = 10.0 * (Sf^0.5) (nearly bare & untilled surface)
        V  = 9.0 * (Sf^0.5) (cultivated straight rows surface)
        V  = 7.0 * (Sf^0.5) (short grass pasture surface)
        V  = 5.0 * (Sf^0.5) (woodland surface)
        V  = 2.5 * (Sf^0.5) (forest w/heavy litter surface)
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)

Channel Flow Equation
---------------------

        V  = (1.49 * (R^(2/3)) * (Sf^0.5)) / n
        R  = Aq / Wp
        Tc = (Lf / V) / (3600 sec/hr)

        Where:

        Tc = Time of Concentration (hrs)
        Lf = Flow Length (ft)
        R  = Hydraulic Radius (ft)
```

```
        Aq = Flow Area (ft²)
        Wp = Wetted Perimeter (ft)
        V  = Velocity (ft/sec)
        Sf = Slope (ft/ft)
        n  = Manning's Roughness

--------------------
Subbasin DE-01A10
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A11
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A12
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A13
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A14
--------------------

        User-Defined TOC override (minutes):     10.00
```

```
--------------------
Subbasin DE-01A15
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A16
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A17
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A18
--------------------

        User-Defined TOC override (minutes):      5.00

--------------------
Subbasin DE-01A3
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-01A4
--------------------

        User-Defined TOC override (minutes):     10.00
```

Subbasin DE-01A5

User-Defined TOC override (minutes): 10.00

Subbasin DE-01A6

User-Defined TOC override (minutes): 10.00

Subbasin DE-01A7

User-Defined TOC override (minutes): 10.00

Subbasin DE-01A8

User-Defined TOC override (minutes): 10.00

Subbasin DE-01A-EX1

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	150.00	0.00	0.00
Slope (%):	50.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.24	0.00	0.00

Computed Flow Time (minutes):	10.63	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.00	0.00
Flow Length (ft):	300.00	0.00	0.00
Channel Slope (%):	8.50	0.00	0.00
Cross Section Area (ft²):	0.50	0.00	0.00
Wetted Perimeter (ft):	7.00	0.00	0.00
Velocity (ft/sec):	2.49	0.00	0.00
Computed Flow Time (minutes):	2.01	0.00	0.00
Total TOC (minutes):	12.64		

Subbasin DE-01A-EX2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	213.00	0.00	0.00
Slope (%):	57.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.27	0.00	0.00
Computed Flow Time (minutes):	13.36	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	432.00	370.00	0.00

Channel Slope (%):	15.00	5.50	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	3.31	2.01	0.00
Computed Flow Time (minutes):	2.17	3.08	0.00
Total TOC (minutes):	18.61		

Subbasin DE-01A-EX9

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	120.00	0.00	0.00
Slope (%):	20.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.16	0.00	0.00
Computed Flow Time (minutes):	12.83	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	150.00	0.00	0.00
Slope (%):	30.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	2.74	0.00	0.00
Computed Flow Time (minutes):	0.91	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C

Manning's Roughness:	0.03	0.00	0.00
Flow Length (ft):	300.00	0.00	0.00
Channel Slope (%):	10.00	0.00	0.00
Cross Section Area (ft²):	0.50	0.00	0.00
Wetted Perimeter (ft):	7.00	0.00	0.00
Velocity (ft/sec):	2.70	0.00	0.00
Computed Flow Time (minutes):	1.85	0.00	0.00
Total TOC (minutes):	15.59		

Subbasin DE-01B2

User-Defined TOC override (minutes): 10.00

Subbasin DE-01B3

User-Defined TOC override (minutes): 10.00

Subbasin DE-01B4

User-Defined TOC override (minutes): 10.00

Subbasin DE-01B5

User-Defined TOC override (minutes): 5.00

Subbasin DE-01B6

User-Defined TOC override (minutes): 10.00

Subbasin DE-01B-EX1

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	15.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.13	0.00	0.00
Computed Flow Time (minutes):	12.44	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	10.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	1.58	0.00	0.00
Computed Flow Time (minutes):	1.05	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.00	0.00
Flow Length (ft):	500.00	0.00	0.00
Channel Slope (%):	5.00	0.00	0.00
Cross Section Area (ft²):	0.50	0.00	0.00

Wetted Perimeter (ft):	7.00	0.00	0.00
Velocity (ft/sec):	1.91	0.00	0.00
Computed Flow Time (minutes):	4.36	0.00	0.00
Total TOC (minutes):	17.86		

Subbasin DE-02A3

User-Defined TOC override (minutes): 10.00

Subbasin DE-02A4

User-Defined TOC override (minutes): 10.00

Subbasin DE-02A-EX1

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.30	0.00
Flow Length (ft):	27.00	130.00	0.00
Slope (%):	14.00	68.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	1.20	0.00
Velocity (ft/sec):	0.10	0.26	0.00
Computed Flow Time (minutes):	4.49	8.39	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	90.00	0.00	0.00
Slope (%):	64.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	4.00	0.00	0.00
Computed Flow Time (minutes):	0.38	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	207.00	680.00	0.00
Channel Slope (%):	44.00	11.00	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	5.67	2.84	0.00
Computed Flow Time (minutes):	0.61	4.00	0.00
Total TOC (minutes):	17.85		

Subbasin DE-02A-EX2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	150.00	0.00	0.00
Slope (%):	66.00	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.26	0.00	0.00
Computed Flow Time (minutes):	9.52	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	90.00	0.00	0.00
Slope (%):	64.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	4.00	0.00	0.00
Computed Flow Time (minutes):	0.38	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	100.00	300.00	0.00
Channel Slope (%):	40.00	10.00	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	5.41	2.70	0.00
Computed Flow Time (minutes):	0.31	1.85	0.00
Total TOC (minutes):	12.05		

Subbasin DE-02B10

User-Defined TOC override (minutes): 10.00

Subbasin DE-02B11

User-Defined TOC override (minutes): 5.00

```
--------------------
Subbasin DE-02B12
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-02B13
--------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-02B3
-------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-02B4
-------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-02B5
-------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-02B6
-------------------

        User-Defined TOC override (minutes):     10.00
```

Subbasin DE-02B7

User-Defined TOC override (minutes): 10.00

Subbasin DE-02B8

User-Defined TOC override (minutes): 10.00

Subbasin DE-02B9

User-Defined TOC override (minutes): 10.00

Subbasin DE-02B-EX1

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	100.00	0.00	0.00
Slope (%):	8.50	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.11	0.00	0.00
Computed Flow Time (minutes):	15.62	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	180.00	0.00	0.00

Slope (%):	8.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	1.41	0.00	0.00
Computed Flow Time (minutes):	2.13	0.00	0.00
Total TOC (minutes):	17.74		

Subbasin DE-02B-EX2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.30	0.00
Flow Length (ft):	100.00	70.00	0.00
Slope (%):	18.00	61.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	1.20	0.00
Velocity (ft/sec):	0.14	0.22	0.00
Computed Flow Time (minutes):	11.57	5.34	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	135.00	0.00	0.00
Slope (%):	64.00	0.00	0.00
Surface Type:	Woodland	Unpaved	Unpaved
Velocity (ft/sec):	4.00	0.00	0.00
Computed Flow Time (minutes):	0.56	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00

Flow Length (ft):	260.00	230.00	0.00
Channel Slope (%):	36.00	8.50	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	5.13	2.49	0.00
Computed Flow Time (minutes):	0.84	1.54	0.00
Total TOC (minutes):	19.85		

Subbasin DE-03A10

User-Defined TOC override (minutes): 10.00

Subbasin DE-03A11

User-Defined TOC override (minutes): 10.00

Subbasin DE-03A12

User-Defined TOC override (minutes): 10.00

Subbasin DE-03A13

User-Defined TOC override (minutes): 10.00

```
Subbasin DE-03A14
--------------------

        User-Defined TOC override (minutes):     10.00

--------------------
Subbasin DE-03A15
--------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-03A3
-------------------

        User-Defined TOC override (minutes):      5.00

-------------------
Subbasin DE-03A4
-------------------

        User-Defined TOC override (minutes):      5.00

-------------------
Subbasin DE-03A5
-------------------

        User-Defined TOC override (minutes):     10.00

-------------------
Subbasin DE-03A6
-------------------

        User-Defined TOC override (minutes):     10.00

-------------------
```

Subbasin DE-03A7

User-Defined TOC override (minutes): 10.00

Subbasin DE-03A8

User-Defined TOC override (minutes): 5.00

Subbasin DE-03A9

User-Defined TOC override (minutes): 5.00

Subbasin DE-03A-EX1

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	160.00	0.00	0.00
Slope (%):	8.70	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.12	0.00	0.00
Computed Flow Time (minutes):	22.53	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C
Flow Length (ft):	270.00	0.00	0.00
Slope (%):	8.70	0.00	0.00

Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	2.06	0.00	0.00
Computed Flow Time (minutes):	2.18	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.03	0.00
Flow Length (ft):	103.00	525.00	0.00
Channel Slope (%):	32.00	8.70	0.00
Cross Section Area (ft²):	0.50	0.50	0.00
Wetted Perimeter (ft):	7.00	7.00	0.00
Velocity (ft/sec):	4.84	2.52	0.00
Computed Flow Time (minutes):	0.35	3.47	0.00
Total TOC (minutes):	28.54		

Subbasin DE-03A-EX2

Sheet Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.30	0.00	0.00
Flow Length (ft):	140.00	0.00	0.00
Slope (%):	8.70	0.00	0.00
2 yr, 24 hr Rainfall (in):	1.20	0.00	0.00
Velocity (ft/sec):	0.12	0.00	0.00
Computed Flow Time (minutes):	20.25	0.00	0.00

Shallow Concentrated Flow Computations

	Subarea A	Subarea B	Subarea C

Flow Length (ft):	150.00	0.00	0.00
Slope (%):	32.00	0.00	0.00
Surface Type:	Grass pasture	Unpaved	Unpaved
Velocity (ft/sec):	3.96	0.00	0.00
Computed Flow Time (minutes):	0.63	0.00	0.00

Channel Flow Computations

	Subarea A	Subarea B	Subarea C
Manning's Roughness:	0.03	0.00	0.00
Flow Length (ft):	850.00	0.00	0.00
Channel Slope (%):	9.00	0.00	0.00
Cross Section Area (ft²):	0.50	0.00	0.00
Wetted Perimeter (ft):	7.00	0.00	0.00
Velocity (ft/sec):	2.56	0.00	0.00
Computed Flow Time (minutes):	5.52	0.00	0.00

Total TOC (minutes):	26.41

****
Subbasin Runoff Summary
****

Subbasin ID	Accumulated Precip in	Rainfall Intensity in/hr	Total Runoff in	Peak Runoff cfs	Weighted Runoff Coeff	Time of Concentration days	Time of Concentration hh:mm:ss
DE-01A10	0.54	3.25	0.36	0.27	0.660	0	00:10:00
DE-01A11	0.54	3.25	0.29	0.27	0.540	0	00:10:00
DE-01A12	0.54	3.25	0.36	0.49	0.660	0	00:10:00
DE-01A13	0.54	3.25	0.38	0.35	0.710	0	00:10:00
DE-01A14	0.54	3.25	0.34	1.15	0.630	0	00:10:00
DE-01A15	0.54	3.25	0.27	0.23	0.490	0	00:10:00

DE-01A16	0.54	3.25	0.29	0.72	0.540	0	00:10:00
DE-01A17	0.54	3.25	0.42	0.33	0.770	0	00:10:00
DE-01A18	0.54	3.25	0.46	1.20	0.850	0	00:10:00
DE-01A3	0.54	3.25	0.40	1.54	0.740	0	00:10:00
DE-01A4	0.54	3.25	0.36	0.41	0.660	0	00:10:00
DE-01A5	0.54	3.25	0.18	0.12	0.330	0	00:10:00
DE-01A6	0.54	3.25	0.23	0.11	0.430	0	00:10:00
DE-01A7	0.54	3.25	0.23	0.45	0.430	0	00:10:00
DE-01A8	0.54	3.25	0.44	1.01	0.820	0	00:10:00
DE-01A-EX1	0.61	2.88	0.20	1.47	0.330	0	00:12:38
DE-01A-EX2	0.72	2.31	0.24	2.82	0.330	0	00:18:36
DE-01A-EX9	0.67	2.58	0.22	1.16	0.330	0	00:15:35
DE-01B2	0.54	3.25	0.44	0.53	0.820	0	00:10:00
DE-01B3	0.54	3.25	0.43	0.60	0.800	0	00:10:00
DE-01B4	0.54	3.25	0.43	1.20	0.800	0	00:10:00
DE-01B5	0.54	3.25	0.48	0.20	0.890	0	00:10:00
DE-01B6	0.54	3.25	0.18	0.48	0.330	0	00:10:00
DE-01B-EX1	0.70	2.37	0.23	2.08	0.330	0	00:17:51
DE-02A3	0.54	3.25	0.29	0.37	0.540	0	00:10:00
DE-02A4	0.54	3.25	0.32	0.10	0.600	0	00:10:00
DE-02A-EX1	0.70	2.37	0.23	2.22	0.330	0	00:17:51
DE-02A-EX2	0.59	2.95	0.19	1.03	0.330	0	00:12:03
DE-02B10	0.54	3.25	0.37	0.88	0.680	0	00:10:00
DE-02B11	0.54	3.25	0.48	1.11	0.890	0	00:10:00
DE-02B12	0.54	3.25	0.42	0.30	0.770	0	00:10:00
DE-02B13	0.54	3.25	0.31	0.51	0.570	0	00:10:00
DE-02B3	0.54	3.25	0.27	0.42	0.490	0	00:10:00
DE-02B4	0.54	3.25	0.29	0.18	0.540	0	00:10:00
DE-02B5	0.54	3.25	0.38	0.80	0.710	0	00:10:00
DE-02B6	0.54	3.25	0.43	0.64	0.800	0	00:10:00
DE-02B7	0.54	3.25	0.27	0.37	0.490	0	00:10:00
DE-02B8	0.54	3.25	0.31	0.74	0.570	0	00:10:00
DE-02B9	0.54	3.25	0.46	0.44	0.850	0	00:10:00
DE-02B-EX1	0.70	2.38	0.23	0.26	0.330	0	00:17:44
DE-02B-EX2	0.73	2.21	0.24	1.13	0.330	0	00:19:51
DE-03A10	0.54	3.25	0.48	0.84	0.890	0	00:10:00

DE-03A11	0.54	3.25	0.25	0.31	0.460	0	00:10:00
DE-03A12	0.54	3.25	0.23	0.26	0.420	0	00:10:00
DE-03A13	0.54	3.25	0.21	0.09	0.380	0	00:10:00
DE-03A14	0.54	3.25	0.44	0.34	0.820	0	00:10:00
DE-03A15	0.54	3.25	0.22	0.62	0.400	0	00:10:00
DE-03A3	0.54	3.25	0.48	0.55	0.890	0	00:10:00
DE-03A4	0.54	3.25	0.48	0.34	0.890	0	00:10:00
DE-03A5	0.54	3.25	0.27	0.25	0.490	0	00:10:00
DE-03A6	0.54	3.25	0.25	0.67	0.460	0	00:10:00
DE-03A7	0.54	3.25	0.25	0.52	0.460	0	00:10:00
DE-03A8	0.54	3.25	0.46	0.23	0.850	0	00:10:00
DE-03A9	0.54	3.25	0.48	0.21	0.890	0	00:10:00
DE-03A-EX1	0.84	1.76	0.28	2.78	0.330	0	00:28:32
DE-03A-EX2	0.81	1.85	0.27	6.91	0.330	0	00:26:24

****
Node Depth Summary
****

Node ID	Average Depth Attained ft	Maximum Depth Attained ft	Maximum HGL Attained ft	Time of Max Occurrence days	Time of Max Occurrence hh:mm	Total Flooded Volume acre-in	Total Flooded Time minutes	Retention Time hh:mm:ss
J-01	0.14	0.36	5834.86	0	00:18	0	0	0:00:00
J01A1	0.04	0.23	5881.23	0	00:13	0	0	0:00:00
J01A10	0.16	0.50	5863.50	0	00:16	0	0	0:00:00
J01A11	0.26	0.90	5859.90	0	00:11	0	0	0:00:00
J-01A1-1	0.07	0.36	5876.86	0	00:13	0	0	0:00:00
J01A12	0.22	0.76	5858.26	0	00:11	0	0	0:00:00
J-01A1-2	0.27	1.69	5876.69	0	00:14	0	0	0:00:00
J01A13	0.04	0.27	5863.47	0	00:10	0	0	0:00:00
J-01A14	0.18	0.58	5855.38	0	00:11	0	0	0:00:00

J-01A14-1	0.68	4.59	5854.39	0	00:13	0	0	0:00:00
J--01A14-11	0.64	3.66	5852.66	0	00:13	0	0	0:00:00
J01A14-2	0.08	0.30	5848.80	0	00:13	0	0	0:00:00
J01A15	0.03	0.20	5856.40	0	00:10	0	0	0:00:00
J01A16	2.60	5.00	5843.50	0	00:17	0.60	24	0:00:00
J01A17	0.03	0.17	5848.97	0	00:10	0	0	0:00:00
J01A18	0.07	0.52	5848.82	0	00:10	0	0	0:00:00
J-01A18-1	0.02	0.12	5847.12	0	00:10	0	0	0:00:00
J01A2	0.08	0.30	5885.30	0	00:19	0	0	0:00:00
J-01A2-1	0.13	0.50	5879.50	0	00:19	0	0	0:00:00
J01A3	0.12	0.46	5874.46	0	00:10	0	0	0:00:00
J-01A3-1	0.23	1.00	5869.90	0	00:15	0.12	8	0:00:00
J01A4	0.16	0.63	5877.63	0	00:19	0	0	0:00:00
J01A5	1.24	5.39	5869.89	0	00:16	0.09	21	0:00:00
J01A6	0.25	0.81	5864.46	0	00:16	0	0	0:00:00
J01A7	0.05	0.37	5863.97	0	00:10	0	0	0:00:00
J01A8	0.04	0.31	5875.31	0	00:10	0	0	0:00:00
J-01A8-1	0.03	0.12	5870.12	0	00:16	0	0	0:00:00
J01A9	0.02	0.11	5876.11	0	00:16	0	0	0:00:00
J-01B1	0.04	0.16	5860.16	0	00:18	0	0	0:00:00
J01B2	0.01	0.05	5873.35	0	00:10	0	0	0:00:00
J01B3	0.02	0.16	5858.76	0	00:10	0	0	0:00:00
J01B4	0.58	3.86	5846.26	0	00:07	0	0	0:00:00
J01B5	0.01	0.09	5838.79	0	00:10	0	0	0:00:00
J01B6	0.01	0.07	5839.77	0	00:10	0	0	0:00:00
J-02	0.13	0.44	5835.44	0	00:19	0	0	0:00:00
J02A1	0.30	1.05	5836.55	0	00:19	0	0	0:00:00
J02A2	0.06	0.22	5878.22	0	00:18	0	0	0:00:00
J-02A2-1	0.06	0.23	5851.23	0	00:18	0	0	0:00:00
J02A3	0.01	0.06	5854.06	0	00:10	0	0	0:00:00
J02A4	0.00	0.03	5847.03	0	00:10	0	0	0:00:00
J02B1	0.02	0.11	5875.11	0	00:11	0	0	0:00:00
J-02B10	0.06	0.44	5851.94	0	00:10	0	0	0:00:00
J-02B10-1	0.03	0.23	5851.23	0	00:10	0	0	0:00:00
J02B11	0.04	0.30	5850.50	0	00:10	0	0	0:00:00
J-02B13	0.13	0.73	5846.73	0	00:11	0	0	0:00:00

J02B13-1	0.35	3.23	5844.23	0	00:10	0	0	0:00:00
J02B2	0.05	0.19	5880.19	0	00:20	0	0	0:00:00
J02B3	0.05	0.19	5865.19	0	00:11	0	0	0:00:00
J02B4	0.13	0.49	5876.49	0	00:20	0	0	0:00:00
J-02B5	0.08	0.28	5874.78	0	00:20	0	0	0:00:00
J02B5-1	0.15	0.49	5863.49	0	00:11	0	0	0:00:00
J-02B5-2	0.07	0.23	5862.73	0	00:11	0	0	0:00:00
J02B6	0.03	0.21	5847.21	0	00:10	0	0	0:00:00
J02B7	0.09	0.32	5857.82	0	00:11	0	0	0:00:00
J-02B8	0.06	0.27	5853.77	0	00:10	0	0	0:00:00
J02B9	0.33	2.60	5843.10	0	00:10	0	0	0:00:00
J03A1	0.08	0.20	5864.20	0	00:28	0	0	0:00:00
J03A10	0.04	0.28	5877.78	0	00:10	0	0	0:00:00
J03A11	0.16	2.06	5870.66	0	00:10	0	0	0:00:00
J-03A12	0.02	0.12	5872.72	0	00:10	0	0	0:00:00
J03A12-1	0.02	0.13	5870.13	0	00:12	0	0	0:00:00
J03A13	0.06	0.41	5868.21	0	00:10	0	0	0:00:00
J03A14	0.02	0.13	5868.43	0	00:10	0	0	0:00:00
J03A2	0.15	0.34	5858.34	0	00:26	0	0	0:00:00
J03A3	0.02	0.16	5892.26	0	00:10	0	0	0:00:00
J03A4	0.02	0.14	5881.64	0	00:10	0	0	0:00:00
J03A5	0.03	0.22	5883.82	0	00:10	0	0	0:00:00
J03A6	0.05	0.35	5878.85	0	00:10	0	0	0:00:00
J03A7	0.06	0.44	5875.44	0	00:10	0	0	0:00:00
J03A8	0.02	0.11	5882.81	0	00:10	0	0	0:00:00
J03A9	0.06	0.39	5874.39	0	00:10	0	0	0:00:00
J-08B8-1	0.30	1.50	5841.00	0	00:08	0.44	14	0:00:00
J-64	0.00	0.00	0.00	0	00:00	0	0	0:00:00
DP-01	0.13	0.33	5834.33	0	00:18	0	0	0:00:00
DP-02	0.12	0.41	5834.41	0	00:19	0	0	0:00:00
DP-03	0.14	0.34	5829.34	0	00:26	0	0	0:00:00
DET-02B	0.45	2.01	5841.01	0	00:08	0	0	0:00:00
J-01A-DET	2.93	5.76	5843.76	0	00:25	0	0	0:00:00
J-01B-DET	0.89	4.60	5845.40	0	00:18	0	0	0:00:00
J03-DET	0.24	2.12	5863.72	0	00:11	0	0	0:00:00

****
Node Flow Summary
****

Node ID	Element Type	Maximum Lateral Inflow cfs	Peak Inflow cfs	Time of Peak Inflow Occurrence days	Time of Peak Inflow Occurrence hh:mm	Maximum Flooding Overflow cfs	Time of Peak Flooding Occurrence days	Time of Peak Flooding Occurrence hh:mm
J-01	JUNCTION	0.00	7.52	0	00:17	0.00		
J01A1	JUNCTION	1.47	1.47	0	00:12	0.00		
J01A10	JUNCTION	0.27	3.75	0	00:15	0.00		
J01A11	JUNCTION	0.27	3.99	0	00:11	0.00		
J-01A1-1	JUNCTION	0.00	1.44	0	00:13	0.00		
J01A12	JUNCTION	0.49	4.43	0	00:11	0.00		
J-01A1-2	JUNCTION	0.00	3.97	0	00:19	0.00		
J01A13	JUNCTION	0.35	0.79	0	00:10	0.00		
J-01A14	JUNCTION	1.15	5.51	0	00:10	0.00		
J-01A14-1	JUNCTION	0.00	6.64	0	00:12	0.00		
J--01A14-11	JUNCTION	0.00	6.25	0	00:13	0.00		
J01A14-2	JUNCTION	0.00	6.25	0	00:13	0.00		
J01A15	JUNCTION	0.23	1.00	0	00:10	0.00		
J01A16	JUNCTION	0.72	1.90	0	00:23	1.90	0	00:23
J01A17	JUNCTION	0.33	0.33	0	00:10	0.00		
J01A18	JUNCTION	1.20	1.52	0	00:10	0.00		
J-01A18-1	JUNCTION	0.00	1.51	0	00:10	0.00		
J01A2	JUNCTION	2.82	2.82	0	00:18	0.00		
J-01A2-1	JUNCTION	0.00	2.79	0	00:19	0.00		
J01A3	JUNCTION	1.54	4.86	0	00:15	0.00		
J-01A3-1	JUNCTION	0.00	4.86	0	00:15	1.67	0	00:16
J01A4	JUNCTION	0.41	2.98	0	00:19	0.00		
J01A5	JUNCTION	0.12	4.70	0	00:15	1.21	0	00:15
J01A6	JUNCTION	0.11	3.58	0	00:16	0.00		
J01A7	JUNCTION	0.45	0.45	0	00:10	0.00		

J01A8	JUNCTION	1.01	1.01	0	00:10	0.00
J-01A8-1	JUNCTION	0.00	1.80	0	00:15	0.00
J01A9	JUNCTION	1.16	1.16	0	00:15	0.00
J-01B1	JUNCTION	2.08	4.04	0	00:17	0.00
J01B2	JUNCTION	0.53	0.53	0	00:10	0.00
J01B3	JUNCTION	0.60	0.60	0	00:10	0.00
J01B4	JUNCTION	1.20	1.79	0	00:10	0.00
J01B5	JUNCTION	0.20	0.68	0	00:10	0.00
J01B6	JUNCTION	0.48	0.48	0	00:10	0.00
J-02	JUNCTION	0.00	6.42	0	00:19	0.00
J02A1	JUNCTION	0.00	6.50	0	00:18	0.00
J02A2	JUNCTION	2.94	2.94	0	00:18	0.00
J-02A2-1	JUNCTION	0.00	3.11	0	00:18	0.00
J02A3	JUNCTION	0.37	0.37	0	00:10	0.00
J02A4	JUNCTION	0.10	0.10	0	00:10	0.00
J02B1	JUNCTION	0.56	0.56	0	00:10	0.00
J-02B10	JUNCTION	0.88	0.88	0	00:10	0.00
J-02B10-1	JUNCTION	0.00	0.88	0	00:10	0.00
J02B11	JUNCTION	1.41	1.41	0	00:10	0.00
J-02B13	JUNCTION	0.51	5.20	0	00:10	0.00
J02B13-1	JUNCTION	0.00	5.13	0	00:11	0.00
J02B2	JUNCTION	1.20	1.20	0	00:20	0.00
J02B3	JUNCTION	0.00	0.55	0	00:11	0.00
J02B4	JUNCTION	0.00	1.19	0	00:20	0.00
J-02B5	JUNCTION	0.00	1.19	0	00:20	0.00
J02B5-1	JUNCTION	0.80	1.51	0	00:11	0.00
J-02B5-2	JUNCTION	0.00	1.51	0	00:11	0.00
J02B6	JUNCTION	0.64	0.64	0	00:10	0.00
J02B7	JUNCTION	0.37	1.84	0	00:11	0.00
J-02B8	JUNCTION	0.74	1.25	0	00:10	0.00
J02B9	JUNCTION	0.44	5.54	0	00:11	0.00
J03A1	JUNCTION	2.78	2.78	0	00:28	0.00
J03A10	JUNCTION	0.84	1.73	0	00:10	0.00
J03A11	JUNCTION	0.31	2.03	0	00:10	0.00
J-03A12	JUNCTION	0.26	0.59	0	00:10	0.00
J03A12-1	JUNCTION	0.00	0.59	0	00:10	0.00

J03A13	JUNCTION	0.09	3.60	0	00:10	0.00			
J03A14	JUNCTION	0.34	0.34	0	00:10	0.00			
J03A2	JUNCTION	6.91	9.90	0	00:26	0.00			
J03A3	JUNCTION	0.55	0.55	0	00:10	0.00			
J03A4	JUNCTION	0.34	0.34	0	00:10	0.00			
J03A5	JUNCTION	0.25	0.80	0	00:10	0.00			
J03A6	JUNCTION	0.67	0.90	0	00:10	0.00			
J03A7	JUNCTION	0.52	1.30	0	00:10	0.00			
J03A8	JUNCTION	0.23	0.23	0	00:10	0.00			
J03A9	JUNCTION	0.21	1.50	0	00:10	0.00			
J-08B8-1	JUNCTION	0.00	6.79	0	00:11	3.44	0	00:11	
J-64	JUNCTION	0.00	0.00	0	00:00	0.00			
DP-01	OUTFALL	0.00	7.48	0	00:18	0.00			
DP-02	OUTFALL	0.00	6.42	0	00:19	0.00			
DP-03	OUTFALL	0.00	9.83	0	00:26	0.00			
DET-02B	STORAGE	0.00	5.31	0	00:08	0.00			
J-01A-DET	STORAGE	0.00	8.19	0	00:11	0.00			
J-01B-DET	STORAGE	0.00	1.79	0	00:10	0.00			
J03-DET	STORAGE	0.62	5.01	0	00:10	0.00			

****
Storage Node Summary
****

Storage Node ID	Maximum Ponded Volume 1000 ft³	Maximum Ponded Volume (%)	Time of Max Ponded Volume days hh:mm	Average Ponded Volume 1000 ft³	Average Ponded Volume (%)	Maximum Storage Node Outflow cfs	Maximum Exfiltration Rate cfm	Time of Max. hh:mm:ss	Total Exfiltrated Volume 1000 ft³

DET-02B	0.004	91	0	00:08	0.001	21	3.48	0.00	0:00:00	0.000
J-01A-DET	2.680	74	0	00:25	0.887	24	4.11	0.00	0:00:00	0.000
J-01B-DET	0.302	33	0	00:18	0.033	4	0.91	0.00	0:00:00	0.000
J03-DET	0.004	0	0	00:11	0.000	0	4.93	0.00	0:00:00	0.000

****
Outfall Loading Summary
****

Outfall Node ID	Flow Frequency (%)	Average Flow cfs	Peak Inflow cfs
DP-01	98.34	2.31	7.48
DP-02	97.34	1.42	6.42
DP-03	99.40	3.42	9.83
System	98.36	7.14	23.34

****
Link Flow Summary
****

Link ID	Element Type	Time of Peak Flow Occurrence days	hh:mm	Maximum Velocity Attained ft/sec	Length Factor	Peak Flow during Analysis cfs	Design Flow Capacity cfs	Ratio of Maximum /Design Flow	Ratio of Maximum Flow Depth	Total Time	Reported Condition	Surcharged minutes
L-01	CHANNEL	0	00:18	2.92	1.00	7.48	56.78	0.13	0.35	0	Calculated	
L-01A1	CHANNEL	0	00:13	2.14	1.00	1.44	34.55	0.04	0.22	0	Calculated	
L-01A10	CONDUIT	0	00:16	6.71	1.00	3.75	7.81	0.48	0.70	0	Calculated	
L-01A11	CONDUIT	0	00:11	5.89	1.00	3.99	4.42	0.90	0.83	0	Calculated	
L-01A1-1	CONDUIT	0	00:13	3.01	1.00	1.44	5.34	0.27	0.67	0	Calculated	
L-01A12	CONDUIT	0	00:11	8.14	1.00	4.43	5.97	0.74	0.67	0	Calculated	
L-01A13	CONDUIT	0	00:10	7.04	1.00	0.78	2.55	0.31	0.35	0	Calculated	
L-01A14	CHANNEL	0	00:12	2.58	1.00	5.72	20.52	0.28	0.56	0	Calculated	
L-01A14-1	CONDUIT	0	00:13	7.96	1.00	6.25	3.98	1.57	1.00	19	SURCHARGED	
L-01A14-11	CONDUIT	0	00:13	11.55	1.00	6.25	4.44	1.41	0.65	0	> CAPACITY	
L-01A14-2	CHANNEL	0	00:13	3.00	1.00	6.25	61.40	0.10	0.65	0	Calculated	
L-01A15	CONDUIT	0	00:10	3.16	1.00	1.00	11.45	0.09	0.60	0	Calculated	
L-01A16	CONDUIT	0	00:25	2.34	1.00	1.84	3.10	0.59	1.00			

68 SURCHARGED									
L-01A17	CONDUIT	0	00:10	1.80	1.00	0.33	2.32	0.14	0.52
0 Calculated									
L-01A18	CONDUIT	0	00:10	7.01	1.00	1.51	5.04	0.30	0.32
0 Calculated									
L-01A18-1	CHANNEL	0	00:10	2.27	1.00	1.50	74.11	0.02	0.55
0 Calculated									
L-01A2	CHANNEL	0	00:19	2.74	1.00	2.79	38.94	0.07	0.29
0 Calculated									
L-01A2-1	CONDUIT	0	00:19	6.41	1.00	2.80	6.85	0.41	0.56
0 Calculated									
L-01A3	CONDUIT	0	00:15	11.54	1.00	4.86	12.94	0.38	0.72
0 Calculated									
L-01A3-1	CHANNEL	0	00:15	2.23	1.00	4.62	19.20	0.24	1.00
8 FLOODED									
L-01A4	CONDUIT	0	00:19	4.31	1.00	2.95	4.75	0.62	0.82
0 Calculated									
L-01A5-1	CONDUIT	0	00:24	10.06	1.00	3.51	1.65	2.13	1.00
26 SURCHARGED									
L-01A6	CONDUIT	0	00:16	6.61	1.00	3.58	5.34	0.67	0.65
0 Calculated									
L-01A7	CONDUIT	0	00:10	2.70	1.00	0.45	0.86	0.52	0.48
0 Calculated									
L-01A8	CONDUIT	0	00:10	10.41	1.00	1.01	3.38	0.30	0.32
0 Calculated									
L-01A8-1	CHANNEL	0	00:16	1.99	1.00	1.80	74.52	0.02	0.14
0 Calculated									
L-01A-DET	CHANNEL	0	00:00	0.00	1.00	0.00	16.45	0.00	0.50
0 Calculated									
L-01B1	CHANNEL	0	00:18	2.18	1.00	4.02	104.66	0.04	0.26
0 Calculated									
L-01B2	CHANNEL	0	00:10	0.99	1.00	0.51	111.18	0.00	0.10
0 Calculated									
L-01B3	CONDUIT	0	00:10	2.75	1.00	0.59	10.95	0.05	0.58
0 Calculated									
L-01B4	CONDUIT	0	00:10	5.12	1.00	1.79	2.61	0.68	1.00

23	SURCHARGED								
L-01B5		CHANNEL	0	00:10	1.11	1.00	0.66	56.33	0.01	0.21
0	Calculated									
L-01B6		CHANNEL	0	00:10	1.37	1.00	0.48	52.99	0.01	0.08
0	Calculated									
L-01B-DET		CHANNEL	0	00:00	0.00	1.00	0.00	11.46	0.00	0.50
0	Calculated									
L-02		CHANNEL	0	00:19	4.02	1.00	6.42	41.57	0.15	0.43
0	Calculated									
L-02A1		CONDUIT	0	00:19	7.29	1.00	6.42	10.85	0.59	0.50
0	Calculated									
L-02A2		CHANNEL	0	00:18	4.52	1.00	2.92	64.12	0.05	0.22
0	Calculated									
L-02A2-1		CHANNEL	0	00:18	2.43	1.00	3.09	64.02	0.05	0.61
0	Calculated									
L-02A3		CHANNEL	0	00:10	1.56	1.00	0.37	85.17	0.00	0.14
0	Calculated									
L-02A4		CHANNEL	0	00:10	0.94	1.00	0.10	78.18	0.00	0.51
0	Calculated									
L-02B1		CHANNEL	0	00:11	2.15	1.00	0.55	45.30	0.01	0.11
0	Calculated									
L-02B10		CONDUIT	0	00:10	5.00	1.00	0.88	1.56	0.56	0.50
0	Calculated									
L-02B10-1		CONDUIT	0	00:10	3.98	1.00	0.87	3.33	0.26	0.67
0	Calculated									
L-02B11		CONDUIT	0	00:10	5.88	1.00	1.41	3.42	0.41	0.72
0	Calculated									
L-02B13		CONDUIT	0	00:11	7.10	1.00	5.13	9.65	0.53	0.87
0	Calculated									
L-02B13-1		CONDUIT	0	00:11	6.53	1.00	5.13	5.28	0.97	1.00
13	SURCHARGED									
L-02B2		CHANNEL	0	00:20	2.29	1.00	1.19	35.57	0.03	0.19
0	Calculated									
L-02B3		CONDUIT	0	00:11	5.46	1.00	0.55	3.00	0.18	0.34
0	Calculated									
L-02B4		CONDUIT	0	00:20	5.68	1.00	1.19	1.64	0.72	0.58

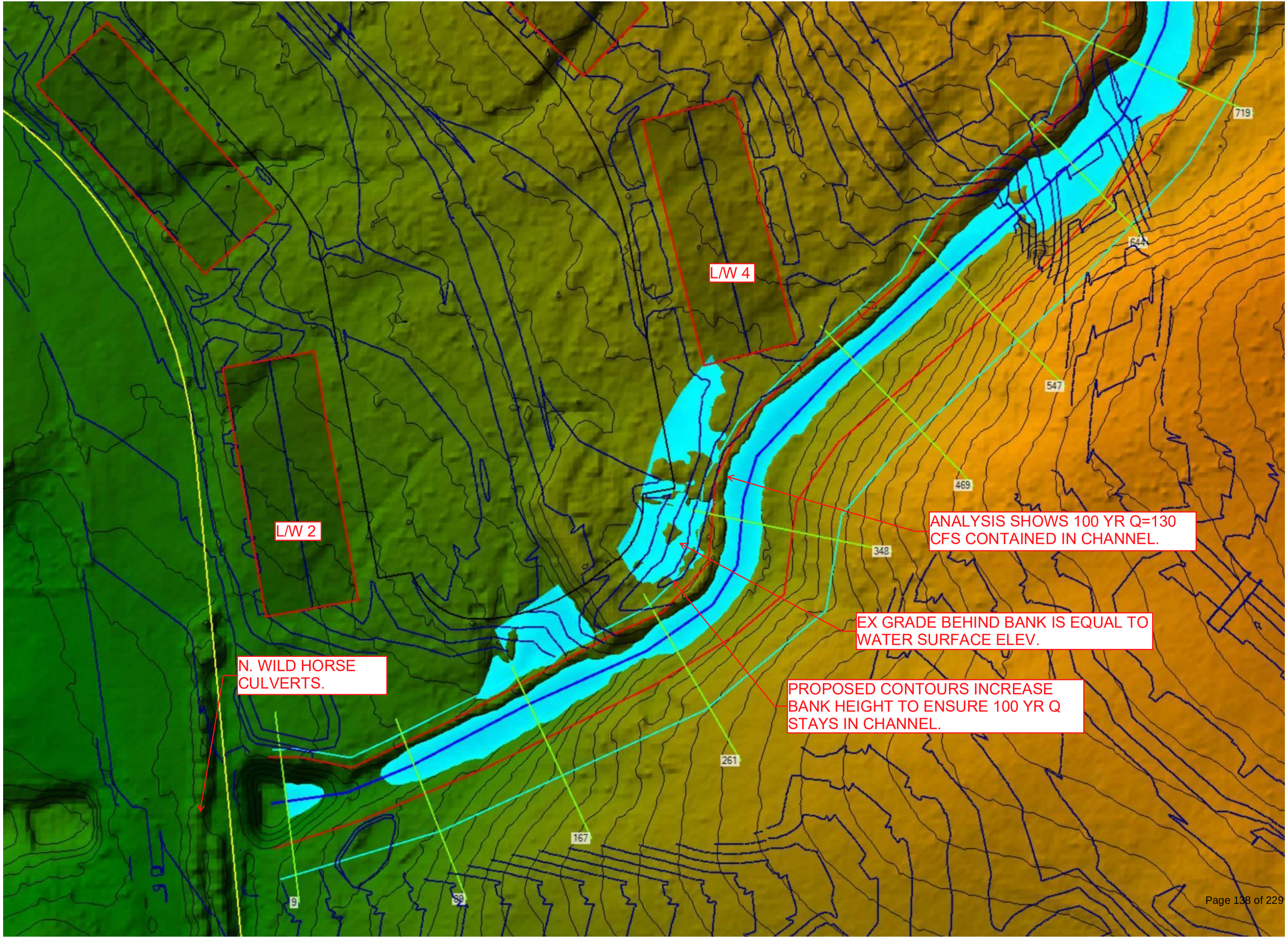
0	Calculated								
L-02B5	CONDUIT	0	00:20	5.88	1.00	1.19	3.28	0.36	0.57
0	Calculated								
L-02B5-1	CONDUIT	0	00:11	5.91	1.00	1.51	4.84	0.31	0.36
0	Calculated								
L-02B5-2	CHANNEL	0	00:11	2.18	1.00	1.51	35.49	0.04	0.22
0	Calculated								
L-02B6	CONDUIT	0	00:10	2.35	1.00	0.63	6.75	0.09	0.47
0	Calculated								
L-02B7	CONDUIT	0	00:11	9.27	1.00	1.84	4.01	0.46	0.74
0	Calculated								
L-02B8	CONDUIT	0	00:10	5.13	1.00	1.25	3.70	0.34	0.70
0	Calculated								
L-02B8-1	CHANNEL	0	00:08	1.44	1.00	5.31	17.98	0.30	1.00
18	FLOODED								
L-02B9	CONDUIT	0	00:11	7.05	1.00	5.54	4.82	1.15	1.00
14	SURCHARGED								
L-02B-DET OVER	CHANNEL	0	00:08	0.08	1.00	0.09	13.25	0.01	0.53
0	Calculated								
L-03A1	CHANNEL	0	00:28	2.05	1.00	2.77	59.10	0.05	0.27
0	Calculated								
L-03A10	CONDUIT	0	00:10	6.50	1.00	1.72	4.68	0.37	0.71
0	Calculated								
L-03A11	CONDUIT	0	00:10	6.73	1.00	2.03	1.47	1.38	0.81
0	> CAPACITY								
L-03A12	CHANNEL	0	00:10	1.84	1.00	0.59	42.43	0.01	0.12
0	Calculated								
L-03A12-1	CHANNEL	0	00:12	1.68	1.00	0.54	36.53	0.01	0.12
0	Calculated								
L-03A13	CONDUIT	0	00:10	6.02	1.00	3.57	10.15	0.35	0.71
0	Calculated								
L-03A14	CONDUIT	0	00:10	2.11	1.00	0.34	3.78	0.09	0.60
0	Calculated								
L-03A2	CHANNEL	0	00:26	5.34	1.00	9.83	77.43	0.13	0.34
0	Calculated								
L-03A3	CONDUIT	0	00:10	6.77	1.00	0.55	4.28	0.13	0.28

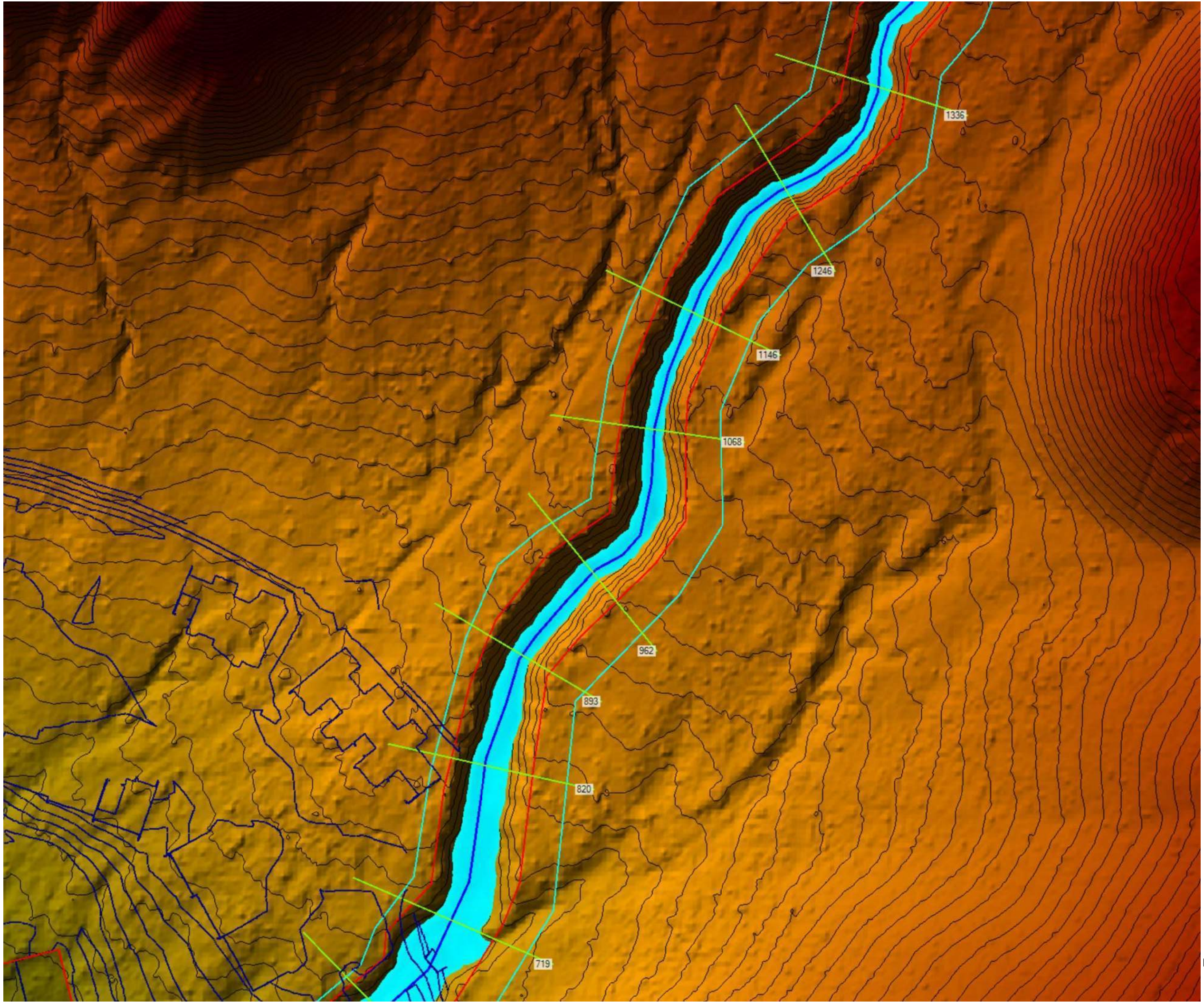
0 Calculated									
L-03A4	CONDUIT	0	00:10	6.86	1.00	0.33	3.70	0.09	0.20
0 Calculated									
L-03A5	CONDUIT	0	00:10	4.65	1.00	0.79	3.48	0.23	0.49
0 Calculated									
L-03A6	CONDUIT	0	00:10	5.46	1.00	0.89	2.13	0.42	0.48
0 Calculated									
L-03A7	CONDUIT	0	00:10	5.69	1.00	1.29	2.29	0.57	0.62
0 Calculated									
L-03A8	CONDUIT	0	00:10	2.13	1.00	0.23	3.75	0.06	0.35
0 Calculated									
L-03A9	CONDUIT	0	00:10	6.82	1.00	1.50	2.44	0.61	0.60
0 Calculated									
L-03-DET	CHANNEL	0	00:00	0.00	1.00	0.00	125.24	0.00	0.17
0 Calculated									
L-26	CONDUIT	0	00:19	6.59	1.00	3.97	3.97	1.00	0.73
0 Calculated									
L-29	CHANNEL	0	00:16	2.21	1.00	1.15	67.38	0.02	0.12
0 Calculated									
ORIF-01A	ORIFICE	0	00:25			2.27			1.00
ORIF-01B	ORIFICE	0	00:18			0.91			1.00
ORIF-02B	ORIFICE	0	00:08			3.39			1.00
ORIF-03A	ORIFICE	0	00:11			4.93			1.00

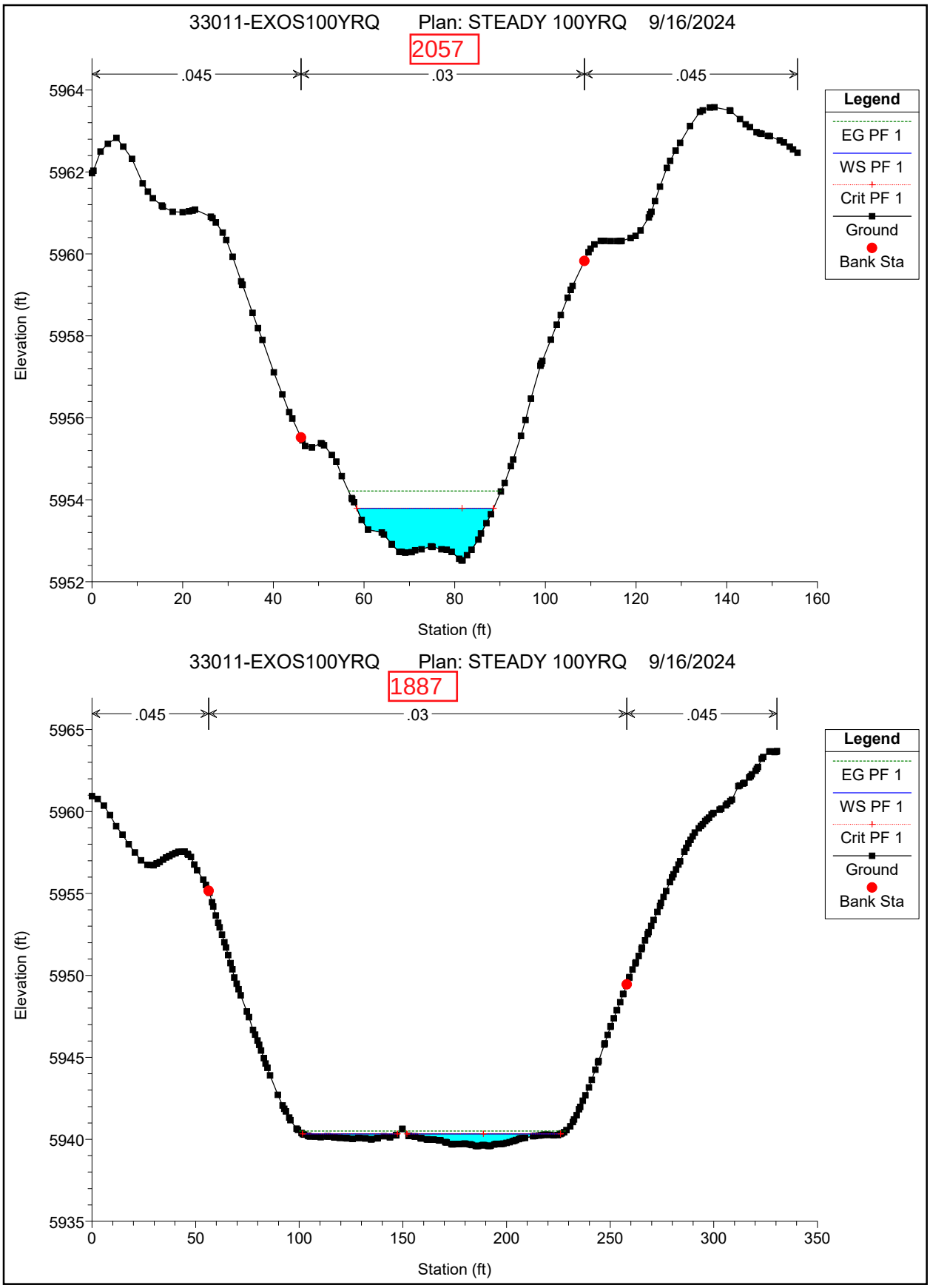
****
Highest Flow Instability Indexes
****
Link L-01A16 (2)

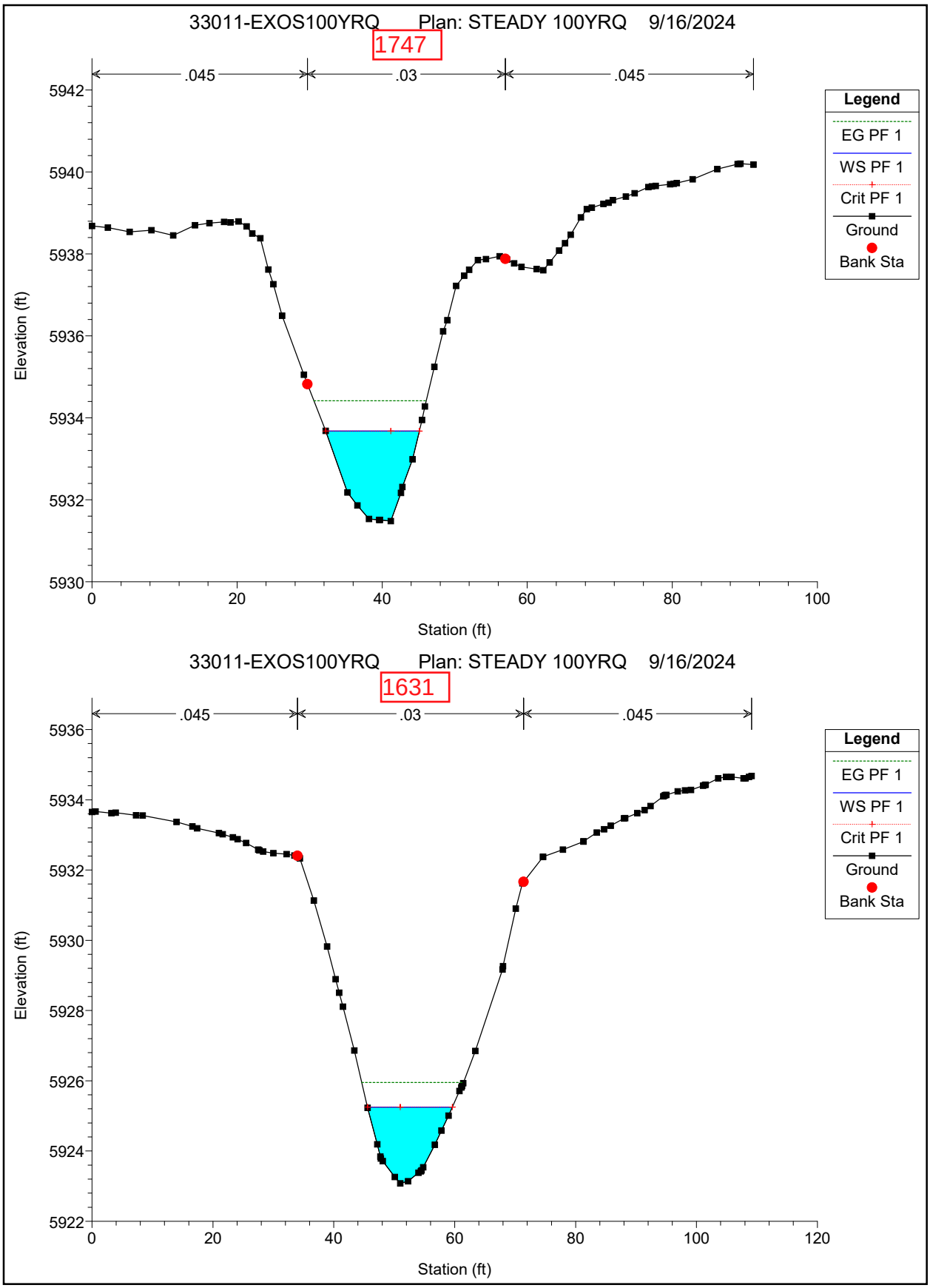
WARNING 108 : Surcharge elevation defined for Junction J01A8 is below junction maximum elevation. Assumed surcharge elevation equal to maximum elevation.

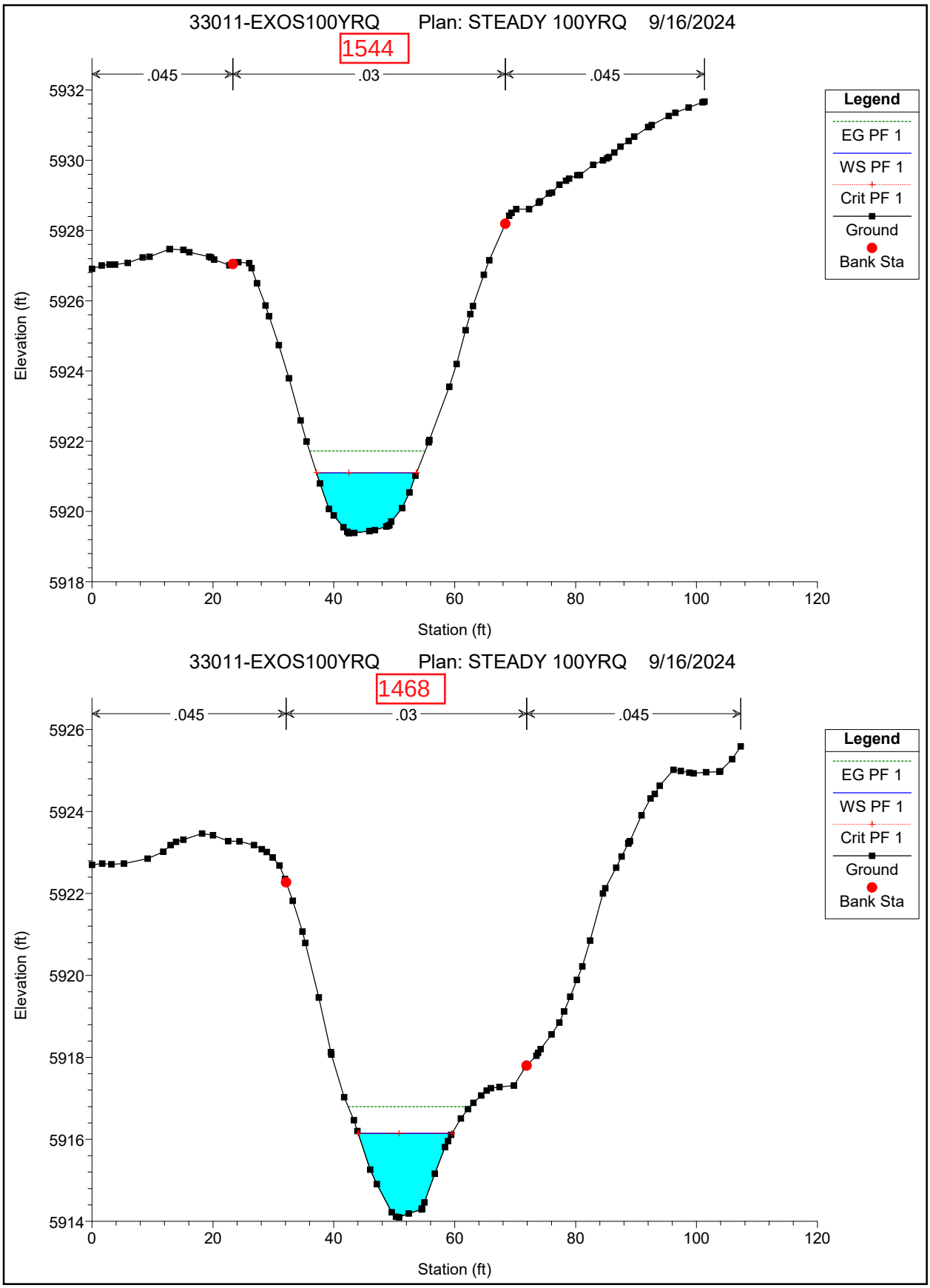
```
  WARNING 117 : Conduit outlet invert elevation defined for Conduit L-02B13 is below downstream node invert
elevation.
                Assumed conduit outlet invert elevation equal to downstream node invert elevation.
  WARNING 117 : Conduit outlet invert elevation defined for Conduit L-02B6 is below downstream node invert
elevation.
                Assumed conduit outlet invert elevation equal to downstream node invert elevation.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J-01A1-1.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J-01A14-1.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J-01A2-1.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J01A5.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J02B3.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J02B4.
  WARNING 002 : Max/rim elevation (depth) increased to account for connecting conduit height dimensions for Node
J02B7.

  Analysis began on:  Sat Sep 14 11:53:24 2024
  Analysis ended on:  Sat Sep 14 11:53:24 2024
  Total elapsed time: < 1 sec
```

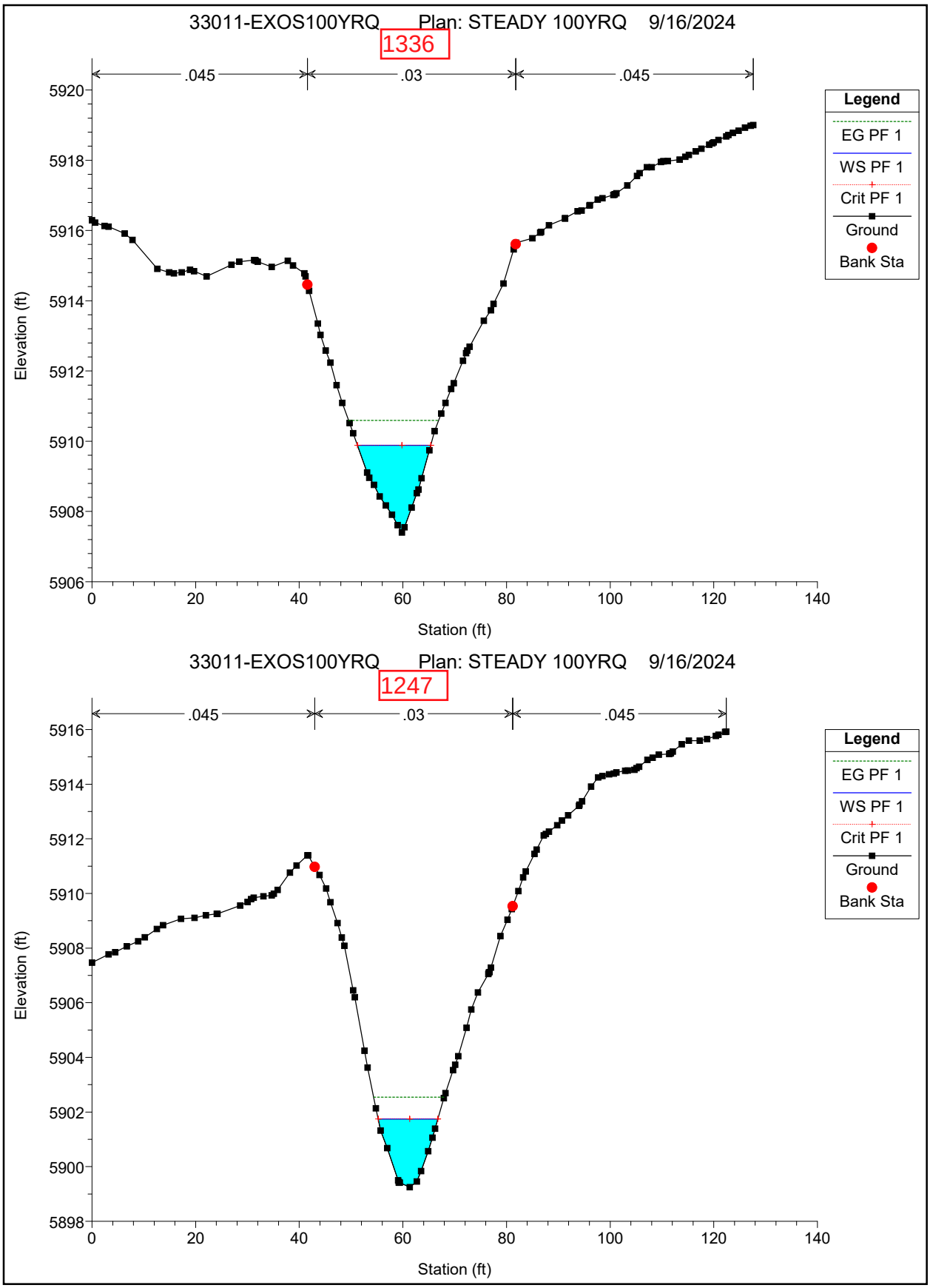

L/W 4
L/W 2
719
644
547
469
348
261
167
99
9
ANALYSIS SHOWS 100 YR Q=130 CFS CONTAINED IN CHANNEL.
EX GRADE BEHIND BANK IS EQUAL TO WATER SURFACE ELEV.
PROPOSED CONTOURS INCREASE BANK HEIGHT TO ENSURE 100 YR Q STAYS IN CHANNEL.
N. WILD HORSE CULVERTS.

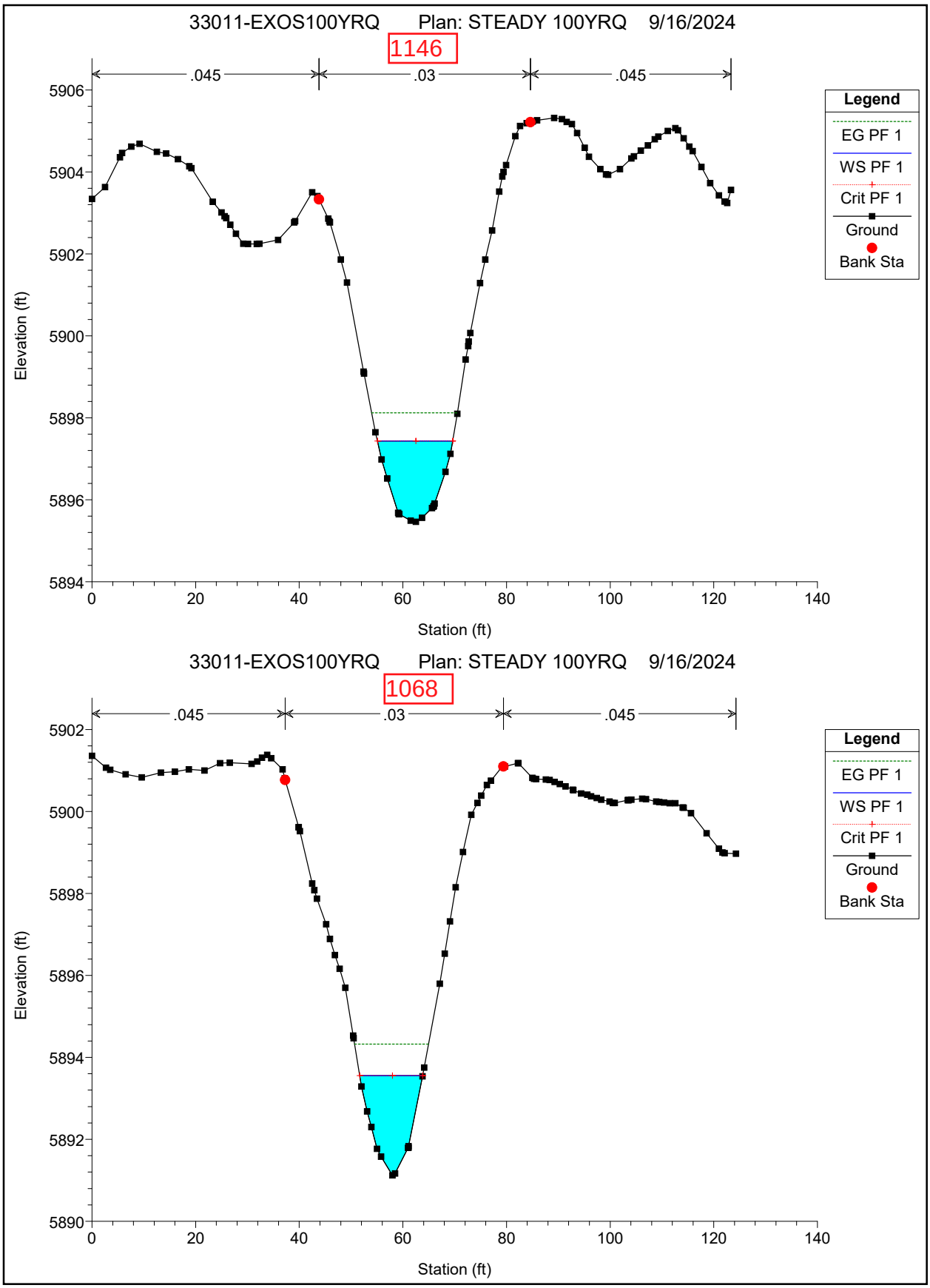

1336
1246
1146
1068
962
893
820
719

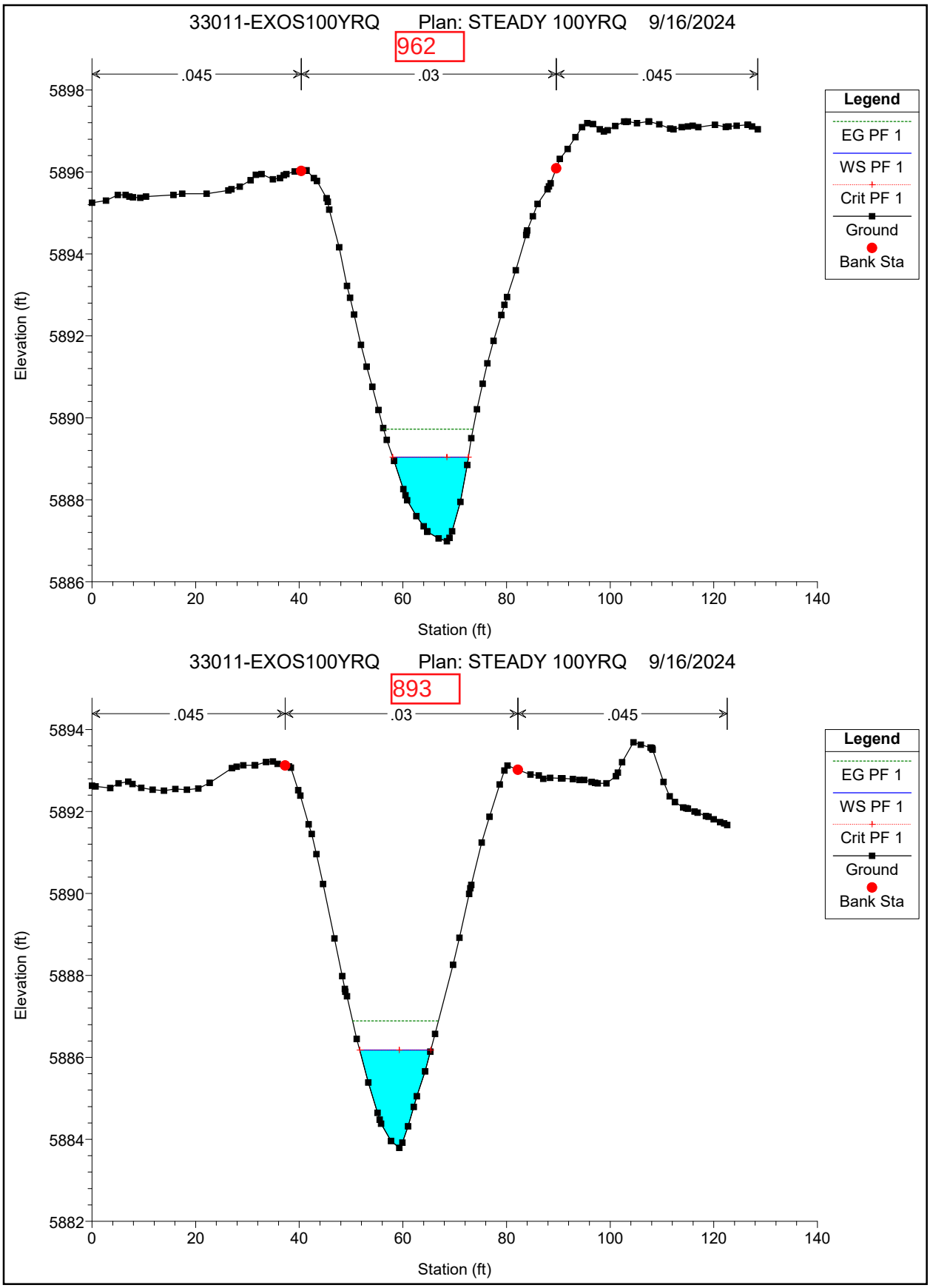

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
2057
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1887
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

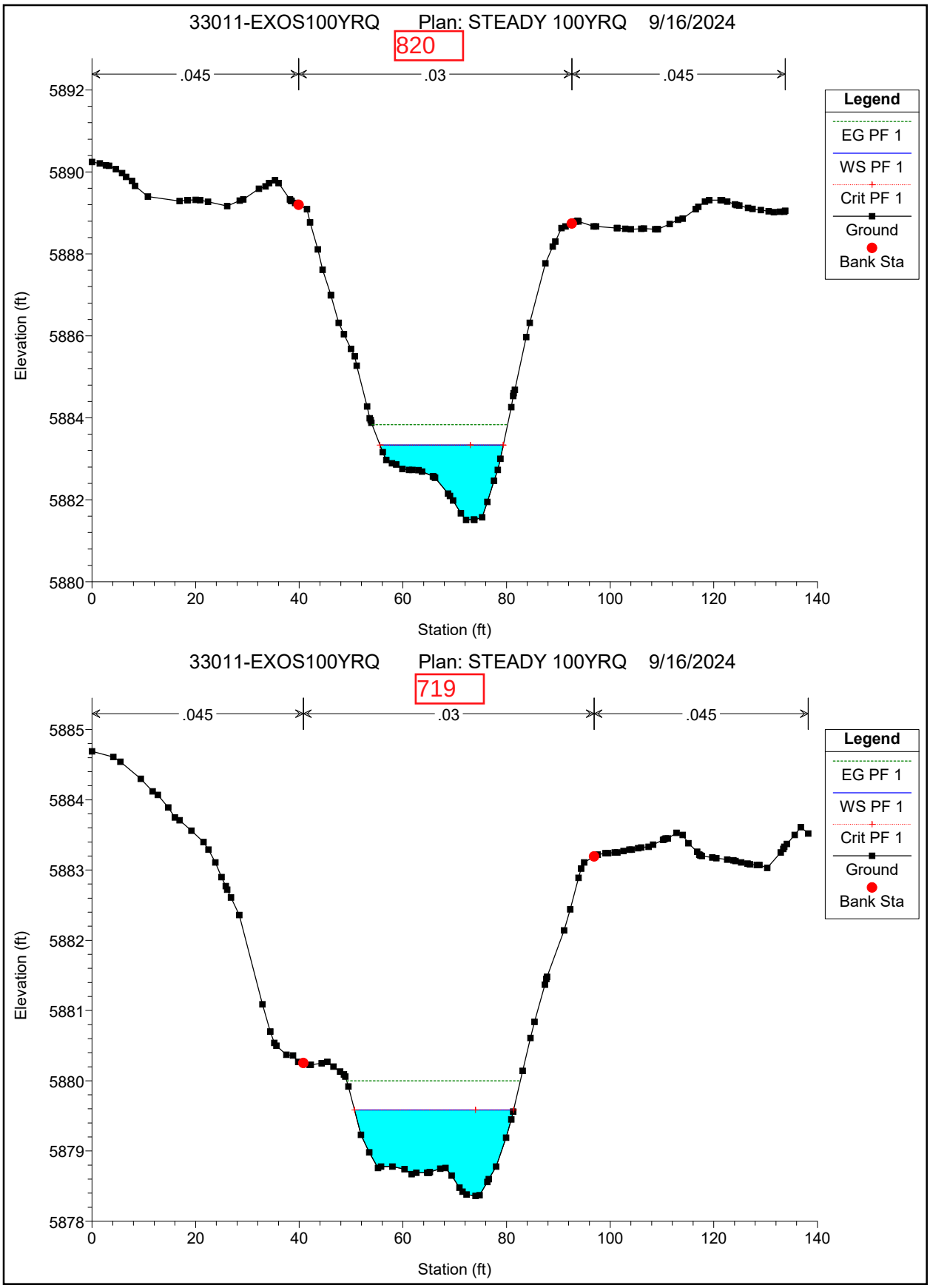

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1747
.045
.03
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1631
.045
.03
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

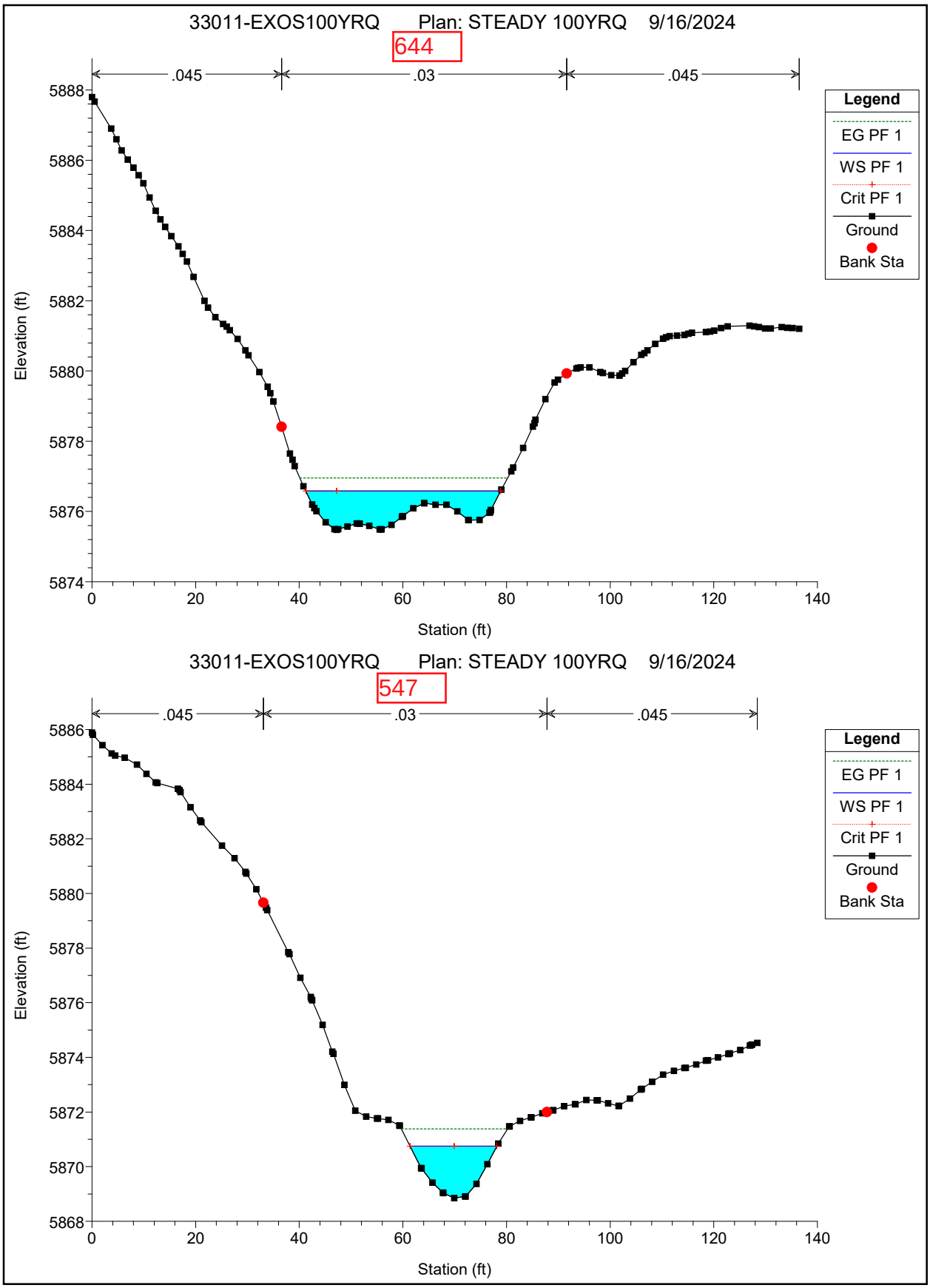

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1544
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1468
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

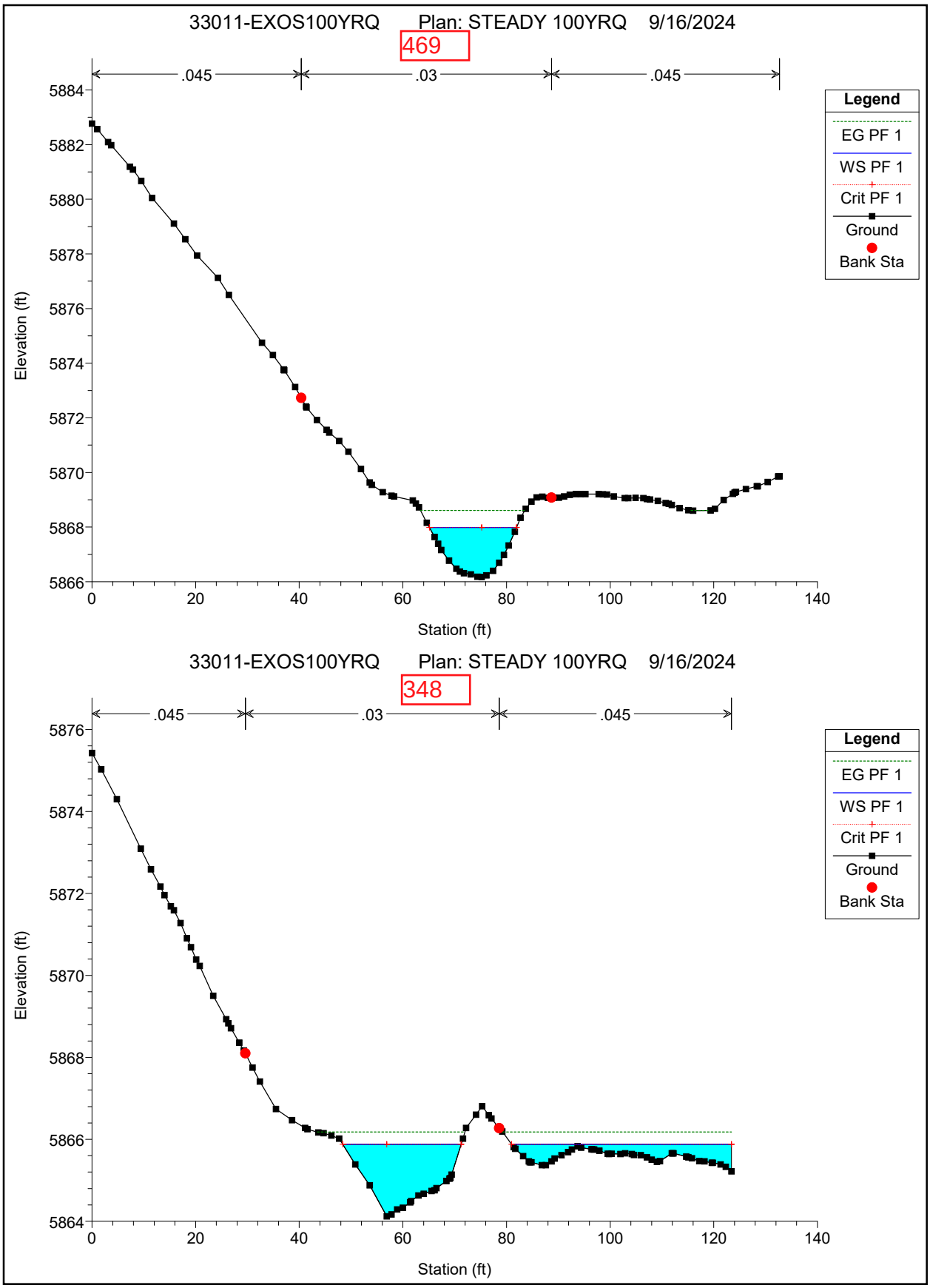

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1336
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1247
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

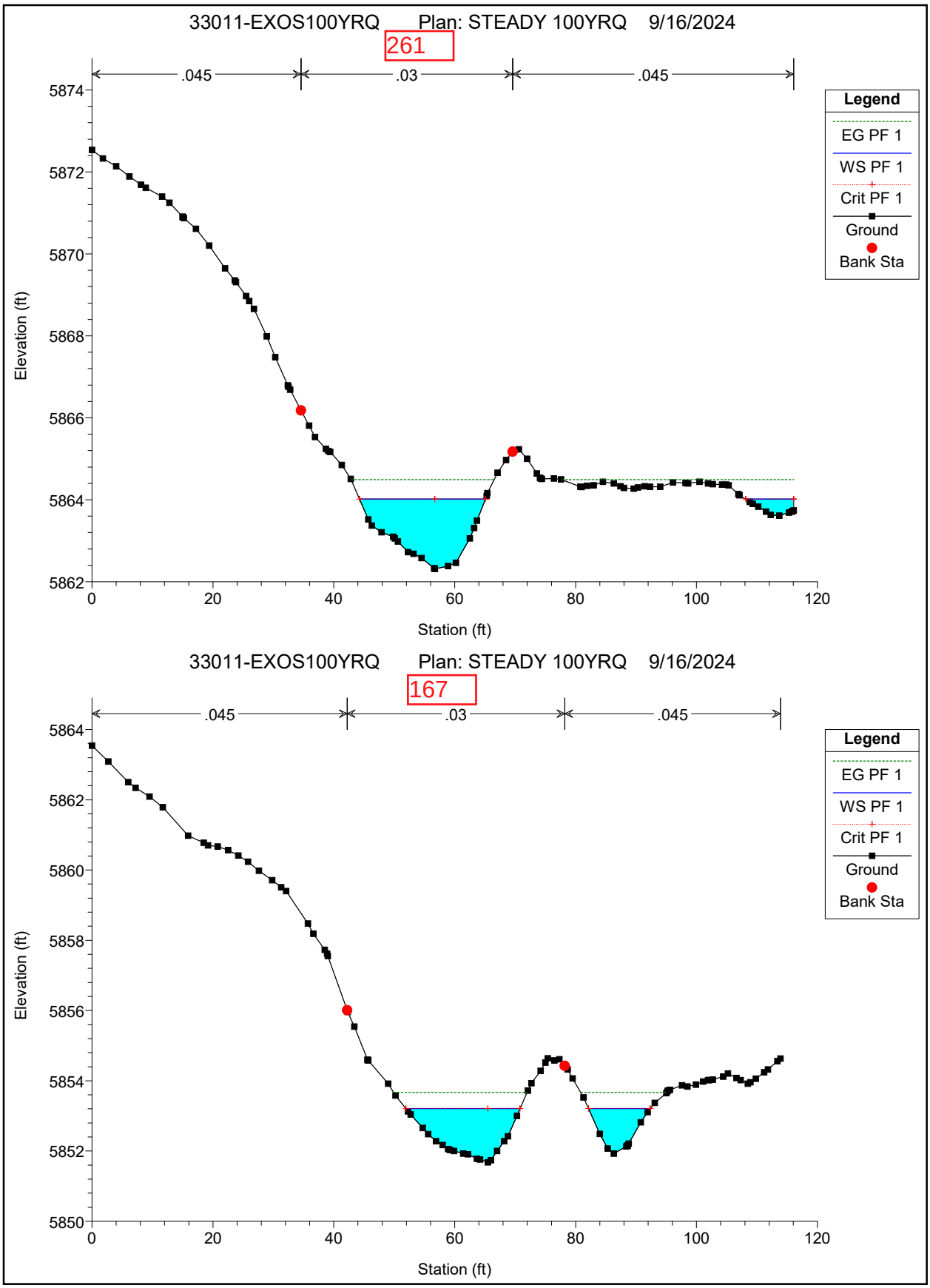

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1146
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
1068
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

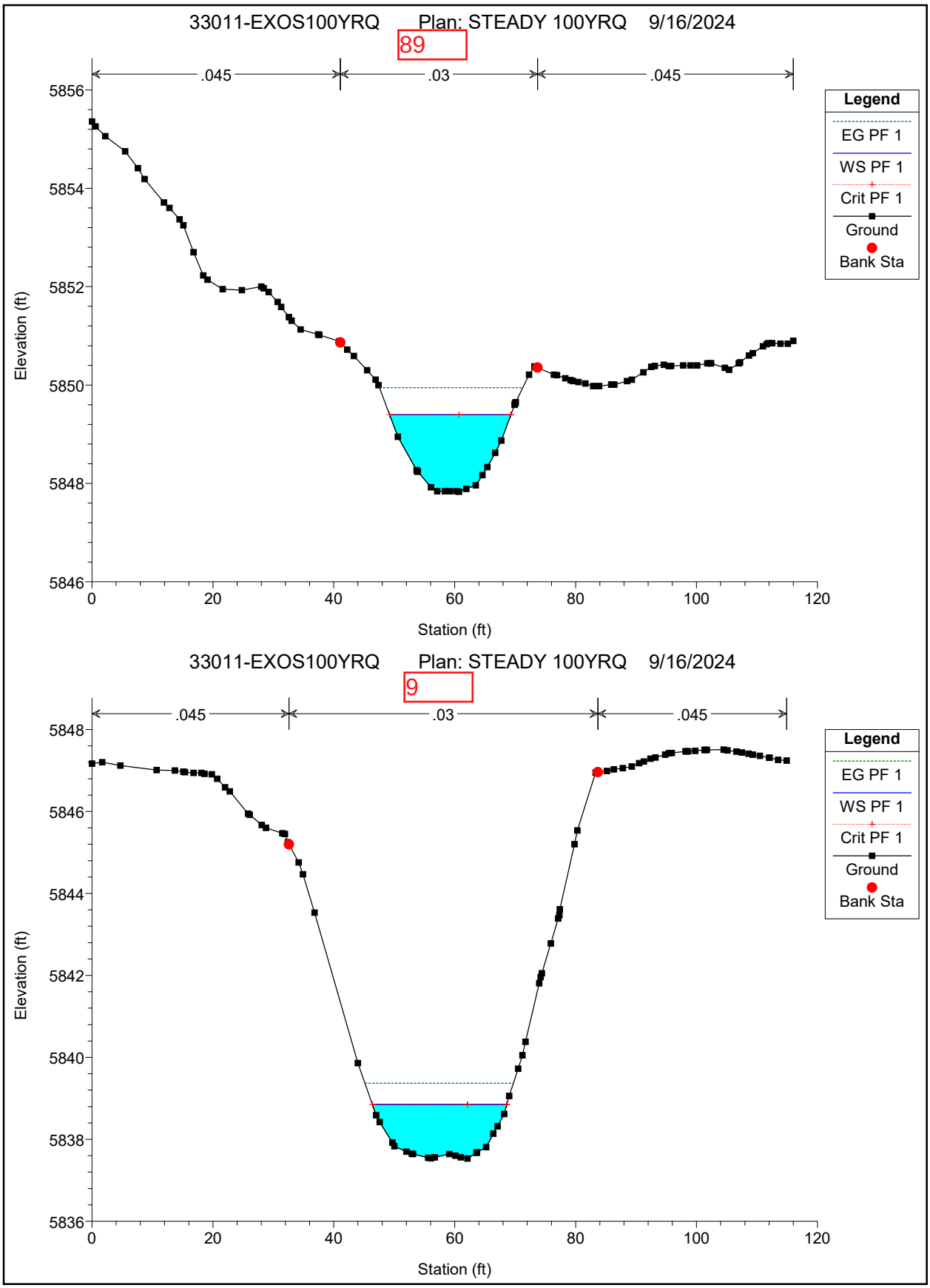

33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
962
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
893
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
820
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
719
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
644
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
547
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
469
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
348
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
261
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
167
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)


33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
89
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)
33011-EXOS100YRQ Plan: STEADY 100YRQ 9/16/2024
9
.045
.03
.045
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
Elevation (ft)
Station (ft)

APPENDIX-B

Will Serve Letters

WILL SERVE LETTER

July 13, 2023

Sopris Engineering
502 Main St Ste A3
Carbondale Co 81623

Re: CVR-R2-MULTIFAMILY

Dear John,

This letter is to confirm that Xcel Energy is your utility provider for natural gas and electric service. In accordance with our tariffs, on file with and approved by the Colorado Public Utilities Commission, gas and electric facilities can be made available to serve the project at CVR-R2-MULTIFAMILY. The cost, and whether any reinforcements or extensions are required, for the Company to provide those facilities will be determined by your designer upon receipt of application and project plans.

Your utility service(s) will be provided after the following steps are completed:

- ***Application submitted to Xcel Energy's "Builders Call Line (BCL)"*** – once your application is accepted you will be assigned a design department representative who will be your primary point of contact
- ***Utility design is completed*** – you must provide your design representative with the site plan, the one - line diagrams, and panel schedules for electric and gas loads if applicable
- ***All documents provided by design representative are signed and returned***
- ***Payment is received*** (Residential Service Laterals if applicable)
- ***Required easements are granted*** - you must sign and return applicable easement documents to your Right-of-Way agent
- ***Site is ready for utility construction*** - the site ready information can be found on our website at may be viewed at Construction and Inspection | Xcel Energy.

An estimated scheduled in-service date will be provided once these requirements have been met. It is important to keep in mind that the terms and conditions of utility service, per our tariffs, require that you provide adequate space and an easement on your property for all gas and electric facilities required to serve your project, including but not limited to gas and electrical lines and meters, transformers, and pedestals. General guidelines for requirements can be found on our website at xcelenergy.com/InstallAndConnect.

Xcel Energy looks forward to working with you on your project and if I can be of further assistance, please contact me at the phone number or email listed below.

Sincerely,

Samantha Wakefield
Xcel Energy Planner
970-201-4860 - samantha.l.wakefield@xcelenergy.com

Mailing address: Xcel Energy
1995 Howard Ave
Rifle, CO 81650

7/11/2023

ATTN: John Petaisto, PE
Sopris Engineering
502 Main Street, Suite A-3
Carbondale, CO 81623
970-704-0311

RE: Castle Valley Ranch (130 units)

To whom it may concern:

Your request for facilities to Castle Valley Ranch (130 units) is within CenturyLink/Lumen's serving area and will be provided in accordance with all the rates and tariffs set forth by the Colorado Public Utilities Commission.

Connections to CenturyLink/Lumen facilities are contingent upon the customer meeting all the requirements of the Utilities tariffs that are in effect for each requested utility service at the time the application for service is made by the customer and formally accepted by CenturyLink/Lumen. Connection requirements may include provisions for necessary line extensions and/or other system improvements, and payment of all applicable system development charges, recovery agreement charges and other fees or charges applicable to the requested service.

Although CenturyLink/Lumen diligently seeks to expand its facilities as necessary to meet anticipated growth, CenturyLink/Lumen services are provided to eligible customers at the time of connection to the facilities on a "first come, first served" basis after acceptance of the customer's application as described above. In certain instances, our facilities and capacities may be limited. Accordingly, no specific allocations or amounts of CenturyLink/Lumen facilities or supplies are reserved for service to the subject property, and no commitments are made as to the availability of CenturyLink/Lumen service at future times.

Sincerely,

Jason Sharpe

Senior Field Engineer
970-328-8290

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COSTS

This page is intentionally left blank

ITEM	NATURE OF WORK	QUANTITY	UNIT	UNIT COST	COST
GENERAL					
G1	MOBILIZATION	JOB	L.S.	40,000.00	$ 40,000.00
G2	LAYOUT, OBSERVATION, TESTING & AS-BUILTS	JOB	L.S.	185,000.00	$ 185,000.00
G3	TRAFFIC CONTROL	JOB	L.S.	5,000.00	$ 5,000.00
G4	EROSION CONTROL	JOB	L.S.	16,000.00	$ 16,000.00
				SUBTOTAL SITE =	**$ 246,000.00**
VISTA LOOP ROW					
VL1	4" DEPTH ASPHALTIC PAVEMENT	4,689	S.Y.	45.00	$ 211,005.00
VL2	18" SUBGRADE OVER EXCAV, PREP, COMPACTION, FINE GRADING	4,993	C.Y.	12.00	$ 59,910.00
VL3	STRUCTURAL FILL MATERIAL (SUITABLE SITE)	833	C.Y.	20.00	$ 16,660.00
VL4	CLASS 6 AGGREGATE	1,433	C.Y.	70.00	$ 100,310.00
VL5	CURB AND GUTTER	3,782	L.F.	42.00	$ 158,844.00
VL6	CONCRETE SIDEWALK	17,861	S.F.	10.00	$ 178,610.00
VL7	NEW HANDICAP RAMPS (10)	600	S.F.	12.00	$ 7,200.00
VL8	SIGNAGE & STRIPING	JOB	L.S.	4,000.00	$ 4,000.00
VL9	TOPSOIL PLACEMENT	500	C.Y.	100.00	$ 50,000.00
VL10	INSTALL TREES	70	E.A.	750.00	$ 52,500.00
VL11	GRASS PREP AND SEEDING	11,000	S.F.	0.90	$ 9,900.00
VL12	STREET LIGHTS - POLES W/ CONCRETE BASE	5	E.A.	6,000.00	$ 30,000.00
VL13	STREET LIGHTS - BOLLARDS ALONG SIDEWALK	26	E.A.	2,500.00	$ 65,000.00
				SUBTOTAL VISTA LOOP =	**$ 943,939.00**
N. WILD HORSE STORM					
STW1	CURB INLET	1	E.A.	4,000.00	$ 4,000.00
STW2	18" STORM INLETS	1	E.A.	4,000.00	$ 4,000.00
STW3	24" STORM INLETS	1	E.A.	4,500.00	$ 4,500.00
STW4	18" STORM PIPE	167	L.F.	85.00	$ 14,195.00
STW5	12" STORM PIPE	115	L.F.	70.00	$ 8,050.00
				SUBTOTAL N. WILD HORSE STORM =	**$ 34,745.00**
VISTA LOOP STORM					
STV1	CURB INLET	8	E.A.	4,000.00	$ 32,000.00
STV2	12" INLETS	2	E.A.	3,500.00	$ 7,000.00
STV3	8" STORM PIPE	70	L.F.	60.00	$ 4,200.00
STV4	12" STORM PIPE	512	L.F.	70.00	$ 35,840.00
STV5	48" CULVERT PIPE	176	L.F.	200.00	$ 35,200.00
STV6	48" FLARED END SECTION	4	E.A.	2,500.00	$ 10,000.00
STV7	RIPRAP	JOB	L.S.	2,000.00	$ 2,000.00
				SUBTOTAL VISTA LOOP STORM =	**$ 126,240.00**
DETENTION & SITE DRAINAGE					
D1	DETENTION BASIN, GRADING, SHAPING, COMPACTION	8,746	S.F.	5.00	$ 43,730.00
D2	18" INLETS	4	E.A.	4,000.00	$ 16,000.00
D3	STORM PIPE (OUTLETS)	150	L.F.	70.00	$ 10,500.00
D4	GRASS PREP AND SEEDING	8,746	S.F.	0.90	$ 7,871.40
				SUBTOTAL DETENTION =	**$ 78,101.40**

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

ITEM	NATURE OF WORK	QUANTITY	UNIT	UNIT COST	COST
SANITARY SEWER					
SS1	8" SDR 35 SEWER LINE	2,404	L.F.	110.00	$ 264,440.00
SS2	4' DIA. PRECAST SEWER MANHOLE	16	E.A.	8,500.00	$ 136,000.00
SS3	6" SDR 35 SEWER SERVICE	250	L.F.	80.00	$ 20,000.00
SS4	4" SDR 35 SEWER SERVICE	650	L.F.	60.00	$ 39,000.00
				SUBTOTAL SEWER =	**$ 459,440.00**
WATER MAIN & HYDRANTS					
W1	CUT & INSTALL TEE AND VALVES AT EX. 10" MAIN	1	L.S.	6,500.00	$ 6,500.00
W2	10" C900 PVC WATER MAIN	2,190	L.F.	110.00	$ 240,900.00
W3	10" WATER VALVES	11	E.A.	4,500.00	$ 49,500.00
W4	8" C900 PVC WATER MAIN	1,211	L.F.	100.00	$ 121,100.00
W5	8" WATER VALVES	7	E.A.	4,000.00	$ 28,000.00
W6	6" C900 PVC WATER SERVICE	892	L.F.	80.00	$ 71,360.00
W7	6" WATER VALVES	15	E.A.	3,500.00	$ 52,500.00
W8	1" WATER SERVICE	27	E.A.	2,500.00	$ 67,500.00
W9	10" PRESSURE REDUCING VALVE (PRV)	1	E.A.	5,000.00	$ 5,000.00
W10	60" MANHOLE FOR PRV	1	E.A.	8,000.00	$ 8,000.00
W11	FIRE HYDRANT ASSEMBLY	10	E.A.	8,000.00	$ 80,000.00
				SUBTOTAL WATER =	**$ 730,360.00**
N. WILD HORSE IRRIGATION SERVICE					
IW1	IRRIGATION SERVICE TO LANDSCAPE AREAS	11,000	S.F.	1.50	$ 16,500.00
				SUBTOTAL N. WH IRRIGATION =	**$ 16,500.00**
VISTA LOOP IRRIGATION MAIN					
IV1	4" PVC C900 DR 18 IRRIGATION MAIN	1,875	L.F.	50.00	$ 93,750.00
IV2	4" WATER VALVES	3	E.A.	2,500.00	$ 7,500.00
IV3	IRRIGATION SERVICE TO LANDSCAPE AREAS	11,000	S.F.	1.50	$ 16,500.00
				SUBTOTAL VISTA LOOP IRR. =	**$ 117,750.00**
ELECTRIC & SHALLOW UTILITIES					
E1	ELECTRIC TRENCHING, BEDDING, BACKFILL, CONDUIT	4,086	L.F.	50.00	$ 204,300.00
E2	ELECTRIC VAULT	8	E.A.	3,000.00	$ 24,000.00
E3	ELECTRIC TRANSFORMER	9	E.A.	6,000.00	$ 54,000.00
				SUBTOTAL ELECTRIC =	**$ 282,300.00**
				TOTAL OF ITEMS ABOVE =	**$ 3,035,375.40**
				10% CONTINGENCY =	303,537.54
				TOTAL ALL ITEMS ABOVE =	**$ 3,338,912.94**

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

ITEM	NATURE OF WORK	QUANTITY	UNIT	UNIT COST	COST
N. WILD HORSE: STREET - THROUGH LANES, PARALLEL PARKING, CURB, SIDEWALK ON SITE FRONTAGE					
G1	MOBILIZATION	JOB	L.S.	5,000.00	$ 5,000.00
G2	LAYOUT, OBSERVATION, TESTING & AS-BUILTS	JOB	L.S.	40,000.00	$ 40,000.00
G3	TRAFFIC CONTROL	JOB	L.S.	7,500.00	$ 7,500.00
G4	EROSION CONTROL	JOB	L.S.	2,500.00	$ 2,500.00
WH1	4" DEPTH ASPHALTIC PAVEMENT	5,210	S.Y.	45.00	$ 234,450.00
WH2	18" SUBGRADE OVER EXCAV, PREP, COMPACTION, FINE GRADING	3,685	C.Y.	12.00	$ 44,214.67
WH3	CLASS 6 AGGREGATE	1,534	C.Y.	70.00	$ 107,380.00
WH4	MOUNTABLE CURB AND GUTTER	974	L.F.	42.00	$ 40,908.00
WH5	CONCRETE SIDEWALK	5,384	S.F.	10.00	$ 53,840.00
WH6	NEW HANDICAP RAMPS (6)	360	S.F.	12.00	$ 4,320.00
WH7	SIGNAGE & STRIPING	JOB	L.S.	7,500.00	$ 7,500.00
WH8	TOPSOIL PLACEMENT	95	C.Y.	100.00	$ 9,500.00
WH9	INSTALL TREES	16	E.A.	750.00	$ 12,000.00
WH10	GRASS PREP AND SEEDING	5,104	S.F.	0.90	$ 4,593.60
WH11	STREET LIGHTS - POLES W/ CONCRETE BASE	3	E.A.	6,000.00	$ 18,000.00
WH12	STREET LIGHTS - BOLLARDS ALONG SIDEWALK	9	E.A.	2,500.00	$ 22,500.00
				SUBTOTAL N. WILD HORSE =	**$ 614,206.27**
				10% CONTINGENCY =	61,420.63
				TOTAL N. WILD HORSE =	**$ 675,626.89**

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

ITEM	NATURE OF WORK	QUANTITY	UNIT	UNIT COST	COST
VIX PARK: PERPENDICULAR PARKING, CURB, SIDEWALK ON PARK FRONTAGE					
G1	MOBILIZATION	JOB	L.S.	5,000.00	$ 5,000.00
G2	LAYOUT, OBSERVATION, TESTING & AS-BUILTS	JOB	L.S.	25,000.00	$ 25,000.00
G3	TRAFFIC CONTROL	JOB	L.S.	2,500.00	$ 2,500.00
G4	EROSION CONTROL	JOB	L.S.	1,500.00	$ 1,500.00
VP1	4" DEPTH ASPHALTIC PAVEMENT	1,466	S.Y.	45.00	$ 65,970.00
VP2	18" SUBGRADE OVER EXCAV, PREP, COMPACTION, FINE GRADING	2,129	C.Y.	12.00	$ 25,545.33
VP3	CLASS 6 AGGREGATE	959	C.Y.	70.00	$ 67,130.00
VP4	MOUNTABLE CURB AND GUTTER	620	L.F.	42.00	$ 26,040.00
VP5	18" RIBBON CURB	810	L.F.	28.00	$ 22,680.00
VP6	CONCRETE SIDEWALK	6,907	S.F.	10.00	$ 69,070.00
VP7	NEW HANDICAP RAMPS (2)	120	S.F.	12.00	$ 1,440.00
VP8	SIGNAGE & STRIPING	JOB	L.S.	2,500.00	$ 2,500.00
VP9	TOPSOIL PLACEMENT	73	C.Y.	100.00	$ 7,300.00
VP10	INSTALL TREES	13	E.A.	750.00	$ 9,750.00
VP11	GRASS PREP AND SEEDING	3,915	S.F.	0.90	$ 3,523.50
VP12	STREET LIGHTS - POLES W/ CONCRETE BASE	9	E.A.	6,000.00	$ 54,000.00
				SUBTOTAL VIX PARK =	**$ 388,948.83**
				10% CONTINGENCY =	38,894.88
				TOTAL VIX PARK =	**$ 427,843.72**

TOTAL ALL ITEMS =	**$ 4,442,383.55**

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

GARFIELD COUNTY APPROVAL OF STREET NAMES

RE: 9NWH Street Names

Cody Smith <smithc@garco911.com>

Tue 7/30/2024 3:28 PM

To:John Petaisto <jpetaisto@sopriseng.com>;Orrin.Moon@Crfr.us <Orrin.Moon@Crfr.us>;Paul Smith <psmith@newcastlecolorado.org>
Cc:Louis Wilsher <LWilsher@dhmdesign.com>;Barry Rosenberg <b.rosenberg@r2partners.co>;Paul Schirmer <paul.schirmer@cdsg-us.com>

Hey John,

Those look okay to me!

Thanks!

Cody Smith – IT Administrator
smithc@garco911.com – 970-625-8281
Garfield County Emergency Communications Authority

From: John Petaisto <jpetaisto@sopriseng.com>
Sent: Tuesday, July 30, 2024 12:47 PM
To: smithc@garco911.com; Orrin.Moon@Crfr.us; Paul Smith <psmith@newcastlecolorado.org>
Cc: Louis Wilsher <LWilsher@dhmdesign.com>; Barry Rosenberg <b.rosenberg@r2partners.co>; Paul Schirmer <paul.schirmer@cdsg-us.com>
Subject: 9NWH Street Names

Hi Cody,

We are working on the proposed 9 North Wild Horse Subdivision in Castle Valley Ranch New Castle. Orrin Moon previously emailed with proposed street names. See attached site plan and proposed street names below.

We understand that '**Vista Loop**' is acceptable which will be the primary street loop through the subdivision.

We are proposing '**Medaris Loop**' for the road on the east end.

We are proposing '**Chapman Loop**' for the road in the for the four center Multi Family buildings.

Can you please review and confirm these names are acceptable?
Thank you,
John Petaisto, PE
C: 970-316-5212
www.soprisengineering.com

SOPRIS ENGINEERING LLC
CIVIL AND SURVEY CONSULTANTS

AREAS OF KNOWN HAZARDS

This page is intentionally left blank

AREAS OF KNOWN HAZARDS ON THE SUBJECT PROPERTY

The Geotechnical Study submitted with Preliminary Plan lists expansive clays and claystone bedrock as being present on or near the site. According to the Study, the claystone exhibited zero to very high swell when tested. This potential expansive soil hazard can be mitigated by ensuring proper fill placement, drainage design, and control of irrigation water, as noted by geotechnical engineer. A geotechnical engineer shall perform localized soil boring and testing where foundations are proposed, and make specific mitigation recommendations for the design of structural foundations for building permit.

As noted in the Engineer's Report, there are no known mapped 100 year floodplains, rockfall or slide hazards on the Property. There are no known economically valuable mineral deposits.

EQR AND RAW WATER TABLE

This page is intentionally left blank

9NWH PUD ACCOUNTING FORM
WATER RIGHT DEDICATION DRY UP

DEVELOPMENT

	(1)	Number of EQRs Developed		EQR's
	(2)	Number of EQRs Proposed in Filing	32.50	EQR's
*	(3)	Number of EQRs for Raw Water Irrigation Developed	12.13	EQR's
	(4)	Number of EQRs Proposed for Raw Water Irrigation in Filing		EQR's
	(5)	Total No. of EQRs	44.63	EQR's

AMOUNT OF DRY UP

A CORYELL DITCH (UP TO 140 ACRES)

			EQRs	Acres/EQR		
(6)	EQR's X 0.10 Acres/EQR		44.63	0.1	4.463	Acres
(7)	Total Dedicated Acres Coryell Ditch to date				4.463	

B RED ROCK DITCH (UP TO 193 ACRES)

			EQRs	Acres/EQR		
(8)	EQR's X 0.10 Acres/EQR			0.1	0	Acres
(9)	Total Dedicated Acres Coryell Ditch to date					

WATER RIGHT DEDICATION

C CORYELL DITCH (UP TO 140 ACRES)

			Acres	cfs/Acres		
(10)	Acres X 0.020 cfs/acre	(Priority #11)	4.463	0.02	0.0893	cfs
(11)	Acres X 0.035 cfs/acre	(Priority #220-S)	4.463	0.035	0.1562	cfs

D RED ROCK DITCH (UP TO 193 ACRES)

(12)	Acres X 0.019 cfs/acre	(First Priority)		cfs
(13)	Acres X 0.0016 cfs/acre	(Second Priority)		cfs
(14)	Acres X 0.032 cfs/acre	(Third Priority)		cfs

* Dedication of .4 EQR/6000 sq ft for 182,000 SqFt of Open Space

DECLARATION OF COVENANTS

This page is intentionally left blank

COVENANTS, CONDITIONS, AND RESTRICTIONS OF 9 NORTH WILDHORSE PUD SUBDIVISION

The undersigned owner ("Declarant") being all the owner of Lots 1, 2, and 4, as well as Parcels 1 and 2 of as depicted on the Final Plat of 9 North Wildhorse PUD Subdivision recorded in the records of Garfield County, Colorado on _____ as Reception No. _____ ("Property") hereby declares, establishes, makes, and grants the following covenants, conditions, restrictions, reservations, agreements as set forth herein (the "Covenants").

NOW, THEREFORE, Declarant hereby adopts and imposes the following Covenants on the Property:

ARTICLE 1.
GENERAL PURPOSE AND SCOPE

1.1 **Imposition of Servitudes**. Declarant hereby makes, declares and establishes the covenants, conditions, restrictions, reservations and easements contained in this Declaration for the benefit of the Property, including all improvements, amenities and facilities appurtenant to or located within the boundaries of the Property now and constructed or installed in the future. From this day forward, the real property and improvements that comprise the Property, or any portion thereof, shall be held, sold, conveyed, encumbered, leased, rented, occupied, improved, and dealt with in any manner whatsoever subject to this Declaration. All covenants, conditions, restrictions, reservations, agreements, easements and other terms and provisions whatsoever established under this Declaration shall: (i) run with the Property or as equitable servitudes as the case may be, and (ii) shall inure to the benefit of and bind all persons or entities having any right, title or interest in all or any part of the Property, including the Declarant, all owners of Lots or Parcels within the Property and their respective heirs, executors, administrators, personal representatives, successors, assigns, grantees, tenants, guests, employees, families, contractors, agents, licensees and invitees; and (iii) create specific rights and privileges which may be shared and enjoyed by all owners and lawful occupants of any part of the Property.

1.2 **Declarant's Intent**. Declarant intends to preserve and protect the attractiveness of the Property, to restrain and minimize future impairment or deterioration of the Property, and to preserve, protect and enhance the value and desirability of the Property and to promote and safeguard the health, comfort, safety, convenience and welfare of the owners and lawful occupants of the Property. Declarant intends to encourage the construction and maintenance of attractive permanent improvements, appropriately located to preserve the harmonious development of the Property and to promote and safeguard the health, comfort, safety, convenience and welfare of all occupants of the Property.

ARTICLE 2.
DEFINITIONS

2.1 **Articles.** The articles of incorporation for the Association may or may not be filed with the Colorado Secretary of State, and any amendments that may be made to those Articles from time to time.

2.2 **Association.** The 9 North Wildhorse Property Owner's Association, which shall be either a registered Colorado nonprofit corporation, or an unincorporated association at Owner's option.

2.3 **Board.** Board of Directors of the Association.

2.4 **Bylaws.** The bylaws of the Association.

2.5 **Common Area.** Parcels 1 and 2 as depicted on the Final Plat.

2.6 **Common Expenses.** As used in this Declaration, this term includes all charges levied by and for the benefit of the Association, pursuant to the Governing Documents, including but not limited to annual costs and expenses of the Association resulting from maintenance of the Property.

2.7 **Common Expense Assessment(s); Assessment(s).** These terms shall include but not be limited to the following items levied against a particular Owner: (i) the Owner's allocated interest in the Common Expenses; (ii) late charges, attorneys' fees, fines and interest charged by the Association at the rate as determined by the Bylaws and rules and regulations enacted by the Association, (iii) charges against a particular Owner and the Lot for the purpose of reimbursing the Association for expenditures and other costs of the Association in curing any violation of the Governing Documents by the Owner or related users; (iv) charges levied against an Owner pursuant to Section 4.5, below, due to the Owner's negligence or misconduct ("Default Assessment") and (iv) any sums permitted by the Governing Documents to be assessed against a particular Owner or Lot.

2.8 **Covenants.** Collective term for all promises, restrictions, reservations, conditions, terms, easements, and rights-of-way specifically set forth or referenced in this Declaration and set forth in the Governing Documents, as the same may be adopted and amended from time to time. Each and every Covenant shall be given the same force and effect at law or equity without regard to in which Governing Document it is set forth.

2.9 **Governing Documents.** Collective references to those documents which govern the operation of the Association, including: (a) Articles; (b) Bylaws; (c) its rules and regulations; and (d) this Declaration, as one or more of the same may be amended from time to time. Each and every provision of the Governing Documents shall be given the force and effect as if set forth in this Declaration.

2.10 **Lot.** One individual Lot or Parcel as set forth on the Final Plat.

2.11 **Owner.** The owner of record, whether one or more persons or entities, of fee simple title to any Lot.

2.12 **Open Space.** The Common Area.

2.13 **Special Assessments.** The Association may at any time, from time to time, determine, levy and assess a Special Assessment applicable to that particular assessment year for the purpose of defraying, in whole or in part, payments for any operating deficit and/or unbudgeted costs, fees and expenses of any construction, reconstruction, repair, demolition, replacement or maintenance of a capital improvement on the Property. Any such Special Assessment shall be due and payable as determined by the Board. Notice in writing setting forth the amount of such Special Assessment per Lot and the due date for payment thereof shall be given to the Owners not less than thirty (30) days prior to such due date.

ARTICLE 3.
THE 9 NORTH WILDHORSE PROPERTY OWNER ASSOCIATION

3.1 **Organization.** The Association may be formed with as an unincorporated association or a registered Colorado nonprofit corporation charged with the duties and invested with the powers prescribed by law and set forth in the Articles, the Bylaws, and this Declaration.

3.2 **Membership on Board.** Each Owner of a Lot shall be entitled either to serve as a voting member of the Board or appoint a voting member to the Board. Provided, however, that in the event any Lot is owned by two (2) or more Owners, whether by joint tenancy, tenancy in common, or otherwise, there shall be only one (1) director per Lot, and the several Owners of any one (1) Lot shall designate to the Corporation which one of the co-Owners shall be a director. In the event a corporation or other association is the Owner of a Lot, the corporation or association shall designate which one of its representatives shall be a director. The membership on the Board shall be appurtenant to each Lot, and shall not be transferred, pledged, or alienated, in any way, except upon the transfer of title to each Lot or a portion thereof, and then only to the transferee of title to a Lot or portion thereof. Any attempt to make a prohibited transfer shall be void. Any transfer of title to a Lot shall operate automatically to transfer membership to the new owner thereof.

3.3 In the event an Owner of a Lot declines to participate on or appoint a director to the Board, the Board shall appoint a director (who shall not be deemed to be the representative or agent of the Owner of the Lot who declined to participate). In the event an Owner desires to participate on the Board who previously had declined to participate or had appointed a representative, such Owner shall become a director immediately upon giving written notice to the Board. In that event, the term of any director appointed in

the Owner's absence (whether appointed by the Owner or the Board) shall terminate immediately upon the Owner giving written notice to the Board.

3.4 Each director shall have one vote. In the event Owners of more than one Lot appoint the same director, such director shall have one vote for each Lot for which the director was appointed.

3.5 The right to vote may not be severed or separated from the ownership of the parcel of property conferring the right to vote.

3.6 Assignment of the right to vote to designee, lessee, or beneficiary, as provided herein is permitted.

3.7 If at any meeting where proper notice of the meeting was given, a director casts a vote representing a certain Lot, it will be conclusively presumed for all purposes that the director casting the vote was acting with the authority and consent of all Owners of the Lot.

3.8 The Association shall have the obligation, subject to and in accordance with the Covenants, to perform each of the following duties for the benefit of the Owners of each Lot within the Property.

3.8.1 To accept and exercise jurisdiction over the Property.

3.8.2 To adopt and amend bylaws and rules and regulations.

3.8.3 To adopt and amend budgets for revenues, expenditures and reserves and collect Assessments.

3.8.4 To hire and terminate management agents and other employees, agents and independent contractors.

3.8.5 To institute, defend or intervene in litigation or administrative proceedings in its own name on behalf of itself or two or more Owners on matters affecting the Property.

3.8.6 To make contracts and incur liabilities.

3.8.7 To regulate the use, maintenance, repair, replacement and modification of the Property.

3.8.8 To cause additional improvements to be made to the Property.

3.8.9 To impose charges for late payment of Assessments, recover reasonable attorney fees and other legal costs for collection of Assessments and other actions to enforce the power of the Association, regardless of whether or not suit was initiated, and after notice and opportunity to be heard, levy reasonable fines for violations of the Governing Documents.

3.8.10 To impose reasonable charges for the preparation and recordation of amendments to the Declaration or statements of unpaid Assessments.

3.8.11 To provide for indemnification of its officers and Board and maintain directors' and officers' liability insurance.

3.8.12 To assign its right to future income, including the right to receive Assessments.

3.8.13 To exercise any other powers conferred by the Declaration or the Bylaws.

3.8.14 To obtain and maintain in force policies of insurance covering the liability of the Association for all activities of the Association and its directors and officers, and such other insurance as it deems advisable.

3.8.15 To exercise all other powers that may be exercised in this state by legal entities of the same type as the Association.

3.8.16 Such other powers as are consistent with the powers herein outlined and those powers adopted by the Association not in conflict herewith.

3.9 **Rights of Action.** The Association on behalf of itself and any aggrieved Owner shall be granted a right of action against any and all Owners for failure to comply with the provisions of the Governing Documents, or with decisions of the Board made pursuant to authority granted to the Association in the Governing Documents. The Owners shall have a right of action against the Association for failure to comply with the provisions of the Governing Documents, or with decisions of the Board made pursuant to authority granted to the Association in the Governing Documents. In any action covered by this section, the Association or any Owner shall have the right but not the obligation to enforce the Governing Documents by any proceeding at law or in equity, or as set forth in the Governing Documents, or by mediation or binding arbitration if the parties so agree. Failure by the Association or by any Owner to enforce compliance with any provision of the Governing Documents shall not be deemed a waiver of the right to enforce any provision thereafter.

3.10 **Implied Rights and Obligations.** The Association may exercise any right or privilege expressly granted to the Association in the Governing Documents or by the Colorado Nonprofit Corporation Act.

3.11 **Notice.** Any notice to an Owner of matters affecting the Property by the Association or by another Owner shall be sufficiently given if in writing and delivered personally, by courier or private service delivery, or the third business day after deposit in the mails for registered or certified mail, return receipt requested, at the address of record for real property tax assessment notices with respect to that Owner's Lot.

ARTICLE 4.
ASSESSMENTS

4.1 **Purpose of Assessments.** Assessments shall be used for the purposes of promoting the health, safety, and welfare of Owners and related users, and in particular:

4.1.1 To provide for a Common Expense Assessment made on an annual basis against all Lots based upon the Association's advance budget of the cash requirements needed by it to provide for the administration and performance of its duties during such Assessment year,

4.1.2 To enforce all provisions of the Governing Documents;

4.1.3 To exercise all rights and powers and to discharge all duties and obligations pursuant to the Governing Documents;

4.1.4 To discharge all expenses incurred by the Association in the alteration, improvement, construction, reconstruction, repair, maintenance or replacement of the Property;

4.1.5 To fund any operating deficit or reserves the Association deems necessary to meet its financial obligations.

4.2 **Budget.** The Board shall adopt an annual budget and distribute the same to the Lot Owners.

4.3 **Annual Assessments.** Annual Assessments made for Common Expenses shall be based upon the estimated cash requirements as the Board shall from time to time determine to be paid by all of the Owners, subject to Section 4.1 above. Estimated Common Expenses shall include, but shall not be limited to, the cost of routine maintenance and snow removal on the Property, expenses of management and insurance premiums for insurance coverage as deemed desirable or necessary by the Association, wages, legal and accounting fees, management fees, expenses and liabilities incurred by the Association under or by reason of this Declaration, payment of any default remaining from a previous assessment period, and the creation of a reasonable and adequate contingency or other reserve or surplus fund for insurance deductibles and general, routine maintenance of the Property on a periodic basis, as needed.

4.4 **Apportionment of Common Expenses.** Except as provided below and elsewhere in this Declaration, all Common Expense Assessments shall be assessed pro rata against each Lot (1/3 to each Lot).

4.4.1 Any Common Expense for insurance may be assessed in proportion to risk.

4.4.2 If a Common Expense is caused by the misconduct of an Owner, the Association may

assess that expense exclusively against that Owner and that Lot, in addition to sums charged to the Owner pursuant to paragraph 4.5 below.

4.4.3 Fees, charges, taxes, impositions, late charges, fines, collection costs and interest charged against an Owner are enforceable as Common Expense Assessments.

4.5 **Owner's Negligence or Misconduct.** In the event that the need for maintenance or repair of the Property or any portion thereof, is caused by or in any way results from the negligent or willful act or failure to act, or the misconduct of an Owner or an Owner's related user, then the expenses, costs, and fees incurred by the Association for such maintenance or repair shall be a personal obligation of such Owner, and such obligation shall be considered a Default Assessment, collectible as a Common Expense Assessment.

4.6 **Special Assessments.** The Association may at any time, from time to time, determine, levy and assess a Special Assessment applicable to that particular assessment year for the purpose of defraying, in whole or in part, payments for any operating deficit and/or unbudgeted costs, fees and expenses of any construction, reconstruction, repair, demolition, replacement or maintenance of the Property or any portion thereof. Any such Special Assessment shall be due and payable as determined by the Board. Notice in writing setting forth the amount of such Special Assessment per Lot and the due date for payment thereof shall be given to the Owners not less than thirty (30) days prior to such due date.

4.7 **Effect of Nonpayment; Assessment Lien.** Any Assessment installment whether pertaining to any Annual, Special or Default Assessment, which is not paid on or before five (5) days after its due date shall be delinquent. If an Assessment installment becomes delinquent, the Association, in its sole discretion, may take any or all of the following actions:

4.7.1 Assess a late charge for each delinquency in such amount the Association deems appropriate.

4.7.2 Assess an interest charge from the due date at the yearly rate of six (6) points above the prime rate charged by the Association's bank, or such other lawful rate as the Board may establish, not exceeding twenty-one percent (21%) per year.

4.7.3 Suspend the voting rights of the Owner during any period of delinquency.

4.7.4 Bring an action against any Owner personally obligated to pay the delinquent Assessments.

4.7.5 Proceed with foreclosure as set forth in more detail below.

4.8 **Lien Rights.** Assessments chargeable to any Lot shall constitute a lien on such Lot. the Association may institute foreclosure proceedings against the defaulting Owner's Lot in the manner for foreclosing a

mortgage on real property under the laws of the State of Colorado. In the event of foreclosure, the Owner shall be liable for the amount of unpaid assessments, any penalties and interest thereon, the cost and expenses of such proceedings, the cost and expenses for filing the notice of the claim and lien, and all reasonable attorneys' fees incurred in connection with the enforcement of the lien. the Association shall have the power to bid on a Lot at foreclosure sale and to acquire and hold, lease, mortgage, and convey the same.

ARTICLE 5.
MAINTENANCE

5.1 **Association's Maintenance Responsibility**. The Association shall maintain and keep the Property in good, clean, attractive and sanitary condition and repair, the costs and expenses of which shall be Common Expenses. Without limiting the foregoing, the Association shall be responsible for maintaining and operating the following in good condition consistent with an upscale residential development:

a. All internal roads, trails, sidewalks, and walkways within the Property, including the roadway surface, shoulder, footpaths and their asphalt, concrete or gravel driving surface or walking surface.

b. Landscaping, vegetation or grass within the Open Space Parcels, and within any other Common Element, including control of noxious weeds.

c. The raw water irrigation system serving the Community, including the irrigation lines and associated trenches; irrigation pump(s), its pedestal, housing, vault, ditch turnout, controllers, control wiring, other associated electronics, and power supply; and all other irrigation features / items equipment used to irrigate the Community.

d. All stormwater and drainage infrastructure located on the Property;

e. All landscaping upon the Property;

f. Common utilities installations including associated trenches and pedestals, but not feeder lines that serve individual Lots, which are the individual Lot Owner's responsibility;

g. Fire hydrants;

h. Fencing;

i. Signs.

The Association will also be responsible for keeping all roads, parking areas, sidewalks and access ways reasonably free of snow, ice, debris and other obstructions, maintaining clear access on the access

drive for emergency vehicles and clear access to the fire hydrants, and maintaining the landscaping within the Common Areas.

5.2 **Lot Owner's Maintenance Responsibility.** Except as provided otherwise in this Declaration or by written agreement with the Association, all maintenance of individual Lots including, without limitation, all exterior and interior surfaces, structural and nonstructural members, utility systems, utility lines from the point of departure from a shared usage, glazing, doors, patios, decks, balconies and other fixtures designed to serve a single Lot, shall be the sole responsibility of the respective Lot Owners. Each Lot shall be maintained in a good, clean, attractive and sanitary condition and repair. Additionally, a Lot Owner shall be fully responsible for all damage and the cost of repair and restoration of service for utility lines or connections outside the boundaries of such Owner's Lot if the Owner or his family members, tenants, guests, invitees, licensees or agents caused such damage or the necessity of repair.

ARTICLE 6.
GENERAL RESTRICTIONS APPLICABLE TO THE PROPERTY

6.1 **Use and Occupancy of Lots.** All Lots shall be used in accordance with the Development Agreement, Project Documents, PUD Guide, and any other applicable laws. Each Owner shall be entitled to the exclusive ownership and possession of his or her Lot, subject to the rights of the Declarant and the Association provided in this Declaration. Occupancy of the improvements on each Lot shall comply with any applicable health or safety code adopted by the Town or County in which the Project is located at the time this Declaration is recorded.

6.2 **Compliance with Laws, Ordinances, Development Agreement and Association Documents**. No Lot shall be used for any purpose not permitted by the PUD Guide for the Project, the Development Agreement, or this Declaration.

6.3 **Use of Common Elements**. Parcels 1 and 2 shall be owned by the Association and shall be utilized for passive open space purposes only, including for casual use by the residents of the Property.

6.4 **Prohibition of Increases in Insurable Risks and Certain Activities**. Nothing shall be done or kept in any Lot or in or on the Common Elements, or any part thereof, which would result in the cancellation of the insurance on all or any part of the Project or in an increase in the rate of the insurance on all or any part of the Project over what the Association, but for such activity, would pay, without the prior written approval of the Board of Directors. Nothing shall be done or kept in any Lot or in or on the Common Elements which would be in violation of any Applicable Law. No damage to or waste of the Common Elements shall be committed by any Owner or Occupant, and each Owner shall indemnify and hold the

Association and the other Owners harmless against all loss resulting from any such damage or waste caused by such Owner or an Occupant of such Owner's Lot (including all Costs of Enforcement incurred in the defense of claims arising by reason of this Section or incurred in establishing the right to indemnification). Failure to so indemnify shall be a default by such Owner under this Section and shall give rise to a Default Assessment against such Owner's Lot. At its own initiative or upon the written request of any Owner, if the Association determines that further action by the Association is proper, the Association shall enforce the foregoing indemnity as a Default Assessment levied against such Lot.

6.5 **Lighting**. No lights shall be emitted which are unreasonably bright or cause unreasonable glare; no sound shall be emitted which is unreasonably loud or annoying; and no odor shall be emitted which is nauseous or unreasonably offensive to others. The Association may adopt additional restrictions regarding these matters in the Rules and Regulations or in a separate policy.

6.6 **Subdivision of Lots**. No Lot or Parcel shall be further subdivided without the express consent of the Association and the Town of New Castle. In the event of further subdivision the Town may require these Covenants to be amended to comply with the Colorado Common Interest Ownership Act, or other law as applicable at the time of said subdivision. This provision shall not be amended without the express consent of the Town of Newcastle.

6.7 **Parking**. The Association shall manage parking on the Property in a reasonable manner, and may enact further rules and policies with regard to parking. If the HOA fails to adopting parking rules or policies for the Property, the Town may require the HOA to adopt and enforce a parking management plan deemed appropriate in the Town's reasonable discretion.

6.8 **Pets**. The Association shall manage pets on the Property in a reasonable manner, and may enact further rules and policies regarding the same.

6.9 **Outdoor Irrigation**. Landscaping on the Property, including on a Lot or Common Area, shall be irrigated only with raw ditch water through the Association managed raw water system, except that if the raw water irrigation system is malfunctioning, newly planted landscaping or newly planted vegetation required for soil stabilization may be watered by other water sources, including potable, and such irrigation system shall be repair expeditiously. All irrigation systems within the Property should be maintained and in good repair.

6.10 **Use of Open Space**. All Lot owners, their tenants and permittees are granted easement for use of the Open Space for recreational uses and no other uses. All use is at the sole risk and responsibility of

such user. Each Lot Owner utilizing, or authorizing or allowing the use of the Open Space by a guest, permittee or invitee of such Lot Owner shall indemnify, defend and hold harmless the Association and the owner of Lot 1 for any and all claims, liabilities, losses, damages, fees, costs, or expenses of any kind, including without limitation attorneys' fees and disbursements, arising out of or related to such Lot Owner or such Lot Owner's guest, permittee or invitee's use of the Open Space. No use of the Recreational Common Area shall be allowed other than by Lot Owners, their guests, permittees and invitees as set forth herein. Any other use of the Recreational Common Area by any other person shall constitute unlawful trespass. The Association shall maintain appropriate insurance covering the authorized use of the Open Space described in this section, with limits of not less than $1M per occurrence of coverage or such higher amount as may be determined by the Executive Board. Uses shall be suspended for residents who demonstrate unruly, careless, reckless, unsafe or injurious behavior in this area. Uses that endanger any user of this Recreational Common Area are not allowed. All residents and guests using the Open Space must clean up after themselves and their pets. Any failure to leave the area in a clean and orderly fashion will result in suspension of use rights for such resident and/or guest. Recreation activities are not allowed in the common areas that lie outside of the Open Space.

6.11 **Severability.** Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions which shall remain in full force and effect.

6.12 **Conflicts Between Documents.** In case of conflict between this Declaration and the Articles and the Bylaws, this Declaration shall control. In case of conflict between the Articles and the Bylaws, the Articles shall control.

[SIGNATURES OF ALL OWNERS]

By: _____ By: _____

STATE OF COLORADO)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 20_____, by _____ as Owner of the Property, and as Declarant.

WITNESS my hand and official seal.

My commission expires: _____

_____

Notary Public

AFFORDABLE HOUSING PLAN AND AGREEMENT

This page is intentionally left blank

AFFORDABLE HOUSING PLAN AND AGREEMENT
R2 PARTNERSHIP, LLC
9 NORTH WILDHORSE PROJECT
NEW CASTLE, COLORADO

THIS Affordable Housing Plan (this "Plan") is made and executed this __ day of _____, 2024 (the "Effective Date"), by and between _____, LLC, a Colorado limited liability company and/or its assigns (the "Owner"), for the benefit of and enforceable by the Board of Trustees of the Town of New Castle, Colorado (the "Town").

WHEREAS, on _____ the Town, by Resolution No._____ approved a the Final Plat for the 9 North Wildhorse PUD Subdivision, recorded on _____ as Reception No. _____ (the "Final Plat"); and

WHEREAS, Owner is the owner of Lots 1, 2, and 4, as well as Parcels 1 and 2 depicted on the Final Plat ("Property"), which is being developed by R2 Partnership, LLC ("Developer"); and

WHEREAS, on _____ the Town, by Resolution No. _____ approved the site plan and construction of 130 townhome units and apartments on the Property (the "Project"); and

WHEREAS, despite that there is no current obligation in the Town of Newcastle Code to provide affordable or deed restricted units, Developer voluntarily agreed to provide 5 such units to the Town and its designees for a rate of not more than 75% of the then-current free market rent for a period of not more than 20 years from the issuance of a certificate of occupancy; and

WHEREAS, as a condition of approval of the Final Plat submitted by Developer to the BOCC for approval as required by the laws of the State of Colorado, Owner, as Developer's predecessor in interest to the Property agrees to enter into this Plan with the Town, setting forth certain restrictions and conditions regarding the providing of affordable housing on the Property, all as more fully set forth below.

NOW THEREFORE, in consideration of the mutual covenants and promises contained herein, the parties agree as follows:

DRAFT

I. Affordable Housing Plan

1. Project. The project consists of 130 townhouse- and apartment-style rental units ("Project"). Of those 130 units, 26 are townhomes in duplex and triplex configurations, and 104 are apartments. Of those 104 apartments, 80 are live/work residences in two and three-story buildings, and the remaining 24 apartment residences are "empty nester" units in two-story buildings.

2. Restricted Units. Owner agrees to restrict 5 units as an "affordable" rental units according to this Plan (together the "Restricted Units" and each a "Restricted Unit"). The Restricted Units shall consist of three 1-bedroom and two 2-bedroom units within the project, and are initially those units set forth on **Exhibit A**. The Restricted Units shall be occupied in accordance with this plan.

3. Timing. Owner shall offer the Restricted Units to the Town upon Certificate of Occupancy.

4. Maximum Rent. The net rental price for the units shall not, at the time of leasing, exceed 75% of the then-current market rental rate for other units in the project. To the extent rental rates rise, Owner may provide 60 days' notice of such increase in the rental rate to the tenant, then thereafter increase rent.

5. Allocation; Notice of Vacancy. The Units will be offered first to the Town of New Castle for its employees. The Town has the authority to designate the occupants of the Restricted Units upon notice to the Owner. Owner shall provide 30 days' notice to the Town prior to the expiration of any lease for a Restricted Unit if the lease will not be renewed. Within 14 days from receiving the vacancy notice from Owner, the Town shall provide Owner with the employee to whom the Town wants to provide the to-be vacant Restricted Unit. Owner has the right to conduct a reasonable investigation of any proposed tenant, and may accept or reject the proposed tenant in the same manner as free market tenants. If the proposed tenant is rejected, the Town shall have an additional 14-day time period to find a second proposed tenant. If the Town does not designate a proposed tenant with the above-described time periods, or Owner reasonably rejects the second proposed tenant, Owner may rent that Restricted Unit for a period of 12 months at a free market rental rate. At the expiration of the 12-month free-market term, Owner shall reoffer the Restricted Unit to the Town pursuant to the procedure described above.

6. Management. Tenants, whether renting under restricted or free-market rent, shall sign the same lease as all other free market tenants, and shall be subject to the same rules and restrictions as other occupants of the Project. Owner reserves the right to terminate any tenant's lease for cause, including unreasonable interference with other tenants' quiet enjoyment, Substantial Violations as described by the lease or applicable law, or nonpayment of rent. In the event a tenant is removed or evicted, Owner shall provide notice to Town, which will have a 30-day period to provide Owner with a proposed tenant to assume the lease. Owner

has the right to conduct a reasonable investigation of any proposed tenant, and may accept or reject the proposed tenant in the same manner as free market tenants. If the proposed tenant is rejected, the Town shall have an additional 14-day time period to find a second proposed tenant. If the Town does not designate a proposed tenant with the above-described time periods, or Owner reasonably rejects the second proposed tenant, Owner may rent that Restricted Unit for a period of 12 months at a free market rental rate. At the expiration of the 12-month free-market term, Owner shall offer the Restricted Unit to the Town pursuant to the procedure described in Paragraph 5.

7. Recording; Expiration; Renegotiation. This Agreement may be recorded against the Property. Notwithstanding any recordation, this Agreement, including Owner's obligation to provide any type of rent restricted units, shall automatically expire twenty (20) years after the issuance of a certificate of occupancy for the first Restricted Unit (the "Expiration Date"). If the Town wishes to continue this Plan after the Expiration Date, the Town shall approach Owner (or its successors or assigns) prior to the Expiration Date, and the Town and Owner shall re-negotiate in good faith the terms of a renewed Affordable Housing Plan for the Project.

II. GENERAL PROVISIONS

1. Compliance with Land Use Regulations. The Developer and its successor or assigns shall be required to obtain all necessary permits and comply with the provisions of the Town's Municipal Code as the same are in effect at the time of commencement of the Plan referred to herein.

2. Severability. Whenever possible, each provision of this Plan and any other related documents shall be interpreted in such a manner as to be valid under applicable law; but if any provision of any of the foregoing shall be invalid or prohibited under said applicable law, such provision shall be ineffective to the extent of such invalidity or prohibition without invalidating the remaining provisions of such subsection or document.

3. Amendment and Modification. The parties hereto mutually agree that this Plan may be amended or modified from time to time, provided that such amendment or modification is in writing and signed by the Developer or the Developer's successor(s) affected by any such amendment.

4. Assignability. This Plan shall be enforceable against the Developer, provided, however, that in the event the Developer sells, transfers or assigns all or part of the Property, the obligations of the Developer under this Plan as to that portion of the Property shall be deemed be assumed by the purchaser of the parcel, and the Developer shall have no further obligations hereunder.

5. Binding upon Successors. This Plan shall inure to the benefit of and be binding upon the parties hereto, their respective successors, and assigns.

6. No Rights to Third Parties. This Plan does not and shall not be deemed

to confer upon or grant to any third party any right to claim damages or to bring any lawsuit, action or other proceedings against either the Town or its officers, employees or agents because of any breach hereof or because of any terms, covenants, agreements or conditions contained herein.

7. Enforcement. At its sole option, the Town may enforce the provisions of this Plan in the same manner and with the same remedies applicable to the enforcement of land use regulations pursuant to the Town's Municipal Code, as they may be amended from time to time, or as otherwise provided by law.

8. Notices. All notices or deliveries required under this Agreement shall be in writing and delivered to the other Party personally, via email to the email address shown below, or via courier or other delivery method that provides proof of delivery (e.g., FedEx, UPS, USPS registered with return receipt, etc.) at the physical address shown below, and shall be effective on the date of delivery or if sent via email the earlier of the date receipt is acknowledged via reply email or one business day after the email is sent. The Parties' initial notice addresses are:

a. Town of New Castle:
[Physical Address]
[Physical Address]
[Physical Address]
[email address]

b. *With copies to:*
David McConaughty, Esq.
910 Grand Avenue, Suite 201
Glenwood Springs,
Colorado 81601
dmcconaughy@garfieldhecht.com

c. Owner c/o Developer:
c/o Barry Rosenberg
R2 Partnership, LLC
PO Box 9833
Cincinnati, OH 45209
b.rosenberg@r2partners.com

d. *With copies to:*
Chad J. Lee, Esq.
901 Grand Ave., Suite 201
Glenwood Springs, CO 81602
chad@jvamlaw.com

DRAFT

IN WITNESS WHEREOF, Owner, Developer, and the Town have executed this Affordable Housing Plan and Agreement dated to be effective as of _____, 2024.

Town of Newcastle, Colorado

ATTEST:

By._____ _____
_____, Mayor Clerk of the Board

_____
Date

[Owner Entity],
a Colorado Limited Liability Company

By: _____
_____, Managing Member

R2 Partnership, LLC
a Colorado Limited Liability Company

By: _____
Barry Rosenberg, Managing Member

DRAFT

(placeholder for Exhibit A)
Initial Restricted Unit Depiction

DRAFT

FEE OFFSET AND COST RECOVERY REQUESTS

Request for Offset of Park Impact Fees.

The Town Code requires that Developers either dedicate parkland and/or pay a fee-in-lieu. The Code also allows a Developer to obtain credit towards the dedication requirement by constructing recreational facilities, so long as the construction of those facilities is secured in the Subdivision Improvement Agreement. For this project, initial feedback from Town Staff was that the project may eliminate several parking spaces at VIX park, even though those parking spaces were located completely or partially on private property. To alleviate this concern, this developer agreed to construct additional parking along North Wild Horse Drive within the Town's right of way. This parking isn't associated with the Developer's project and doesn't count towards its parking requirements. Rather, it will primarily be an amenity serving the public, and VIX park specifically. The Applicant is requesting that all improvements above and beyond what would have been required to construct the road (without the parking) be credited towards otherwise applicable parkland dedication or fee-in-lieu requirements.

Additionally, the Applicant hopes the Town will consider the recreational value of the trail access this project is preserving in their discussion of the park impact fee.

Request for Cost Recovery for Construction of North Wildhorse Road.

The North Wild Horse Drive connection needs to be constructed to serve this Development, even though it will also serve at least 2 other potential developments. Because this property is the first of the various parcels to develop, this Developer is being required to front the entire cost of the road construction, even though this street will serve adjacent properties when those properties eventually develop. As such, the Applicant is requesting that the Town require those future developers to reimburse the Applicant's actual costs to construct the road on a proportionate basis based on objective traffic generation counts.

STATEMENT REGARDING NETZERO BUILDING

This page is intentionally left blank

Net Zero Design - Program at Castle Valley Ranch Multifamily – 9 North Wildhorse

Philosophically, the first moves in net zero design are to limit the amount of energy consumption required by making smart orientation and envelope choices, and then choosing efficient equipment and utilizing electric utilities for power, with the goal of 100% source power by renewable resources.. In the case of 9 North Wild Horse, we are addressing the goal of Net Zero design through exactly this method. Site design is efficient, buildings are built right and envelopes are excellent. This is a sound start to meeting New Castle's goals for a net zero future. In detail:

1. We are orienting the buildings for passive solar access to sun to the south, and that reduces energy loads but also orientates roofs for southern exposure. The essential site layout is best practices for reducing energy consumption and conducive to net zero design.
2. The building's energy usage is planned to be 5% better than baseline energy usage at a minimum, with 15% being the goal. Efficient water heaters, mechanical systems, low flow fixtures, energy star appliances and building thermal envelope upgrades via insulation and windows/doors are all being considered and will be studied further as the technical drawings for the project are advanced in coordination with Xcel Energy's Energy Design Assistance program. New Castle is already on the most current, most efficient energy code, so this is really at the bleeding edge of what is possible for envelope technology today.
3. The project is all electric including energy efficient LED lighting. This is an enormous commitment and impactful in terms of net zero goals. No gas service is anticipated to the buildings. This goes well beyond the base code minimum, which currently allows for gas based fuel appliances, which are less costly upfront and less costly to operate. The "all electric from day one" approach guarantees that we will be aligning with the power grid utilizing cleaner and cleaner renewable energy sources. For example, sustainability consultants have identified 2026 as the year that Colorado's electric grid becomes cleaner utilizing renewable sources over carbon based energy sources and this only improves over time. At some point in the future, as the grid relies more and more upon renewable sources of power, this project will achieve net zero by virtue of this initial all-electric commitment as the electrical infrastructure is already fully ready to support the needs of the project.
4. EV parking space capabilities are being provided per the Colorado Solar Ready code, affecting 60% of the required site parking spaces.

TEMPORARY
CONSTRUCTION EASEMENT

This page is intentionally left blank

Outlook

FW: easement access

From Paul Schirmer <paul.schirmer@CDSG-US.COM>
Date Wed 10/30/2024 12:09 PM
To Louis Wilsher <LWilsher@dhmdesign.com>; Chad Lee (chad@jvamlaw.com) <chad@jvamlaw.com>

From: Paul Smith <psmith@newcastlecolorado.org>
Sent: Monday, October 28, 2024 3:33 PM
To: Maarjan Pasha <maarjan@tcfuels.com>
Cc: Paul Schirmer <paul.schirmer@CDSG-US.COM>; Barry Rosenberg <b.rosenberg@r2partners.co>; John Wenzel <jwenzel@newcastlecolorado.org>
Subject: RE: easement access

Thanks, Maarjan, on behalf of the surrounding community! We'll include this with the Applicant's packet.

Thank you,
Paul Smith
Town Planner/Inspector
psmith@newcastlecolorado.org
(970) 984-2311 #108

From: Maarjan Pasha <maarjan@tcfuels.com>
Sent: Monday, October 28, 2024 12:38 PM
To: Paul Smith <psmith@newcastlecolorado.org>
Cc: Paul Schirmer <paul.schirmer@cdsg-us.com>; Barry Rosenberg <b.rosenberg@r2partners.co>; John Wenzel <jwenzel@newcastlecolorado.org>
Subject: Re: easement access

CAUTION: This email originated from outside of the organiza on. Do not click links or open a achments unless you recognize the sender and know the content is safe.

Please share this with the town, and review.
I am ok with giving the access.

Thanks
Maarjan

On Wed, Oct 23, 2024 at 10:05 AM Paul Smith <psmith@newcastlecolorado.org> wrote:

That's the location the Town would prefer. I know we would also want a robust track pad added at the roundabout and construction safety fencing in the relevant public locations. The asphalt bike path could be ramped/repaired afterwards or both. John with public works would need to review.

Thank you,

Paul Smith
Town Planner/Inspector
psmith@newcastlecolorado.org
(970) 984-2311 #108

From: Paul Schirmer <paul.schirmer@CDSG-US.COM>
Sent: Wednesday, October 23, 2024 8:53 AM
To: Maarjan Pasha <maarjan@tcfuels.com>
Cc: Paul Smith <psmith@newcastlecolorado.org>; Barry Rosenberg <b.rosenberg@r2partners.co>
Subject: RE: easement access

CAUTION: This email originated from outside of the organiza on. Do not click links or open a achments unless you recognize the sender and know the content is safe.

Maarjan:

See attached; please let me know if this location works.

Thanks,

Paul

From: Maarjan Pasha <maarjan@tcfuels.com>
Sent: Tuesday, October 22, 2024 2:53 PM
To: Paul Schirmer <paul.schirmer@CDSG-US.COM>
Cc: Paul Smith <psmith@newcastlecolorado.org>
Subject: Re: easement access

ok, thanks.

-Maarjan

On Tue, Oct 22, 2024 at 1:47 PM Paul Schirmer <paul.schirmer@cdsg-us.com> wrote:

> I asked our engineer to outline the area & will follow up once I receive.
>
> Thanks,

Paul

From: Maarjan Pasha <maarjan@tcfuels.com>
Sent: Tuesday, October 22, 2024 2:09 PM
To: Paul Smith <psmith@newcastlecolorado.org>
Cc: Paul Schirmer <paul.schirmer@CDSG-US.COM>
Subject: Re: easement access

Great, thanks for your reply.
Ill wait to hear from them.
Take care
Maarjan

On Tue, Oct 22, 2024 at 10:45 AM Paul Smith <psmith@newcastlecolorado.org> wrote:

> Hi Maarjan,
>
> Thanks for following up on this. Yes, the location along the school property line would suit. I copied Paul Shirmer with the R2 team. If they are still willing to move forward with this, he can direct his team to create a temporary easement agreement with the terms for you to and the Town to review. We would like to get this completed before the application gets final approval. However, we still have time to finalize prior to permitting if necessary.
>
> Thank you,
> ***Paul Smith***
> *Town Planner/Inspector*
> psmith@newcastlecolorado.org
> (970) 984-2311 #108
>
> NEW CASTLE
> AUTHENTICALLY COLORADO
>
> ---
>
> **From:** Maarjan Pasha <maarjan@tcfuels.com>
> **Sent:** Tuesday, October 22, 2024 9:30 AM
> **To:** Paul Smith <psmith@newcastlecolorado.org>
> **Subject:** easement access
>
> CAUTION: This email originated from outside of the organiza on. Do not click links or open a achments unless you recognize the sender and know the content is safe.
>
> Hi Paul,
> I've been meaning to call you regarding the easement.
> I got a chance to discuss it with the guys and they'd like to see where it will be placed(preferably alongside the school and not through the middle of the property).
> If it helps the town, we would like to help facilitate this.
> If they could provide us a plan of where it will be placed and a contract, we can review and help progress the process.

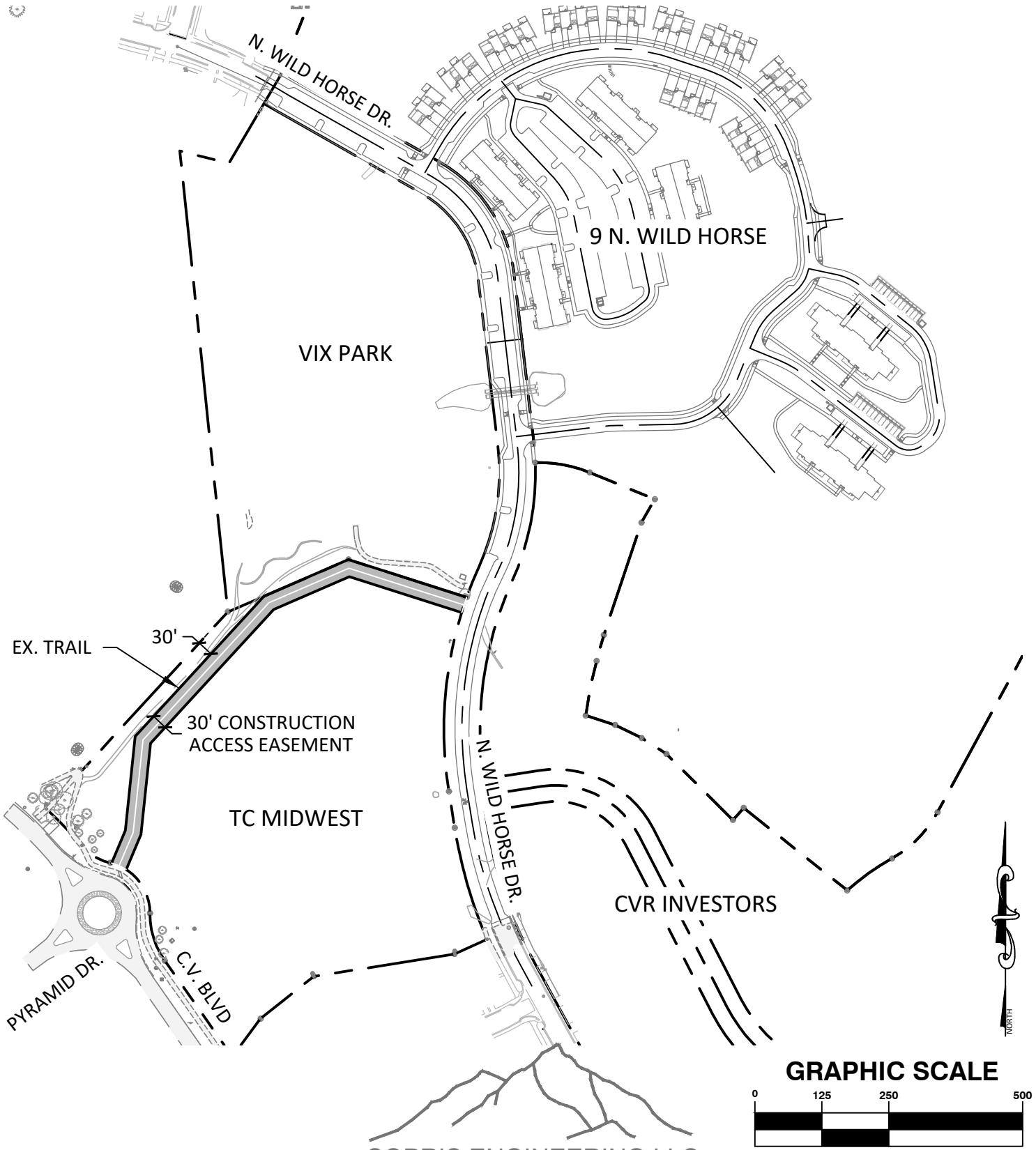
Thanks
Maarjan

TC MIDWEST: CONSTRUCTION EASEMENT EXHIBIT

9 NORTH WILD HORSE

NEW CASTLE, COLORADO.

SHEET 1 OF 1



GRAPHIC SCALE

0 125 250 500

(IN FEET)

1 inch = 250 ft.

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

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\DE\33011-SITE.DWG - Oct 23, 2024 - 8:39am

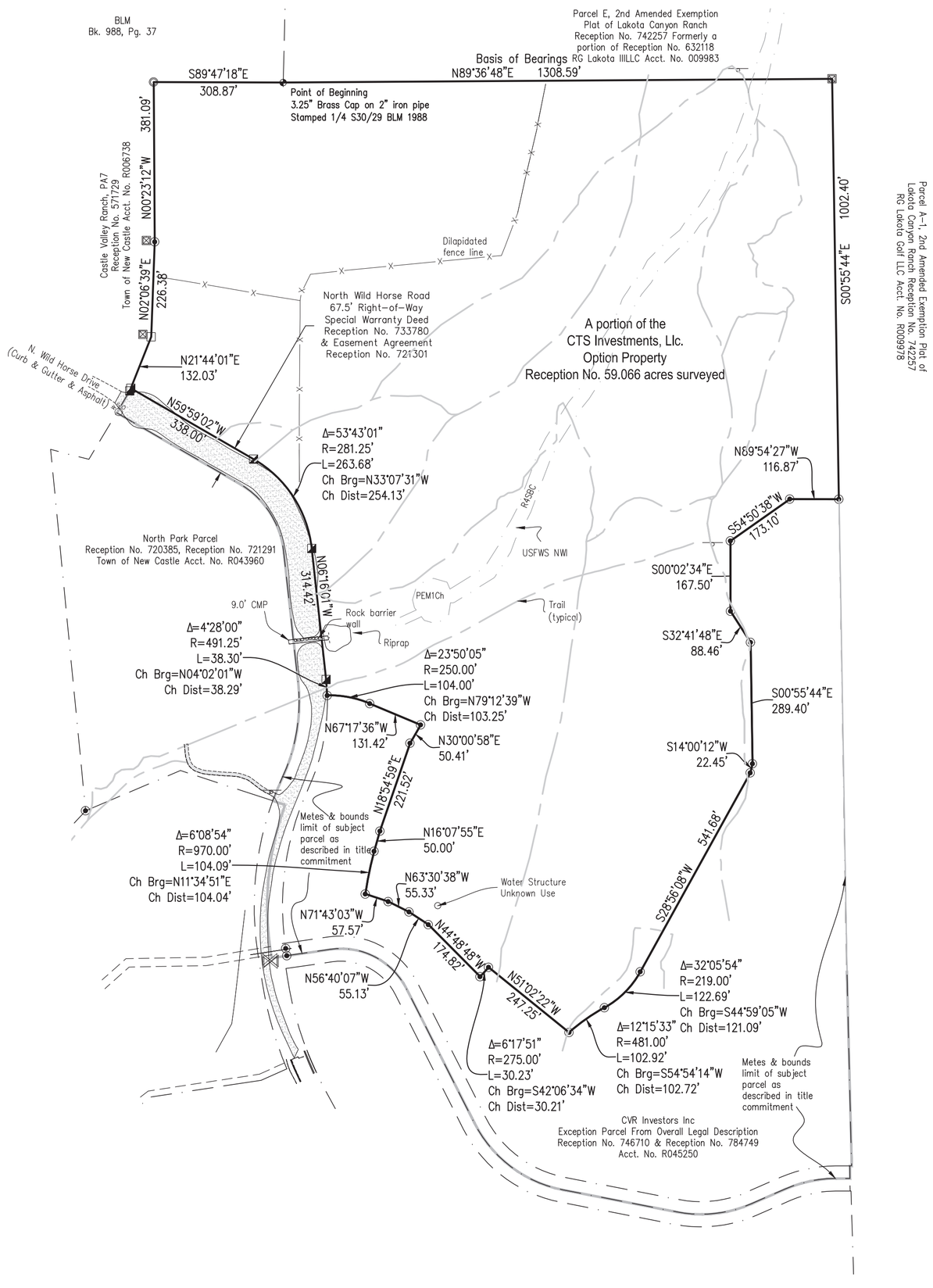
LAND TITLE COMMITMENT

This page is intentionally left blank

ALTA/NSPS Land Title Survey

A portion of the 'Option Parcel' a metes and bounds parcel situated in SW1/4 SECTION 29, SE1/4 SECTION 30, THE NE1/4 SECTION 31 AND THE NW1/4 SECTION 32 Township 5 South, Range 90 West of the 6th P.M.

Town of New Castle, Colorado



For Review
11/17/2021 12:27:02 PM

— LEGEND —

- ⊕ – Found Monument as Described
- ⊠ – Found 1/2" rebar
- □ – Found 5/8" rebar
- ◢ – Set 18" Long 5/8" Rebar & 1.25" Orange Plastic Cap, LS # 38182
- ○ – Found 5/8" Rebar & 1.25" Orange Plastic Cap, LS # 36572
- ◉ – Found 5/8" Rebar & 1.25" Plastic Cap, LS 20133
- ⊠ – Found 5/8" Rebar & 1.25" Yellow Plastic Cap, LS 13501
- ⋈ – Water valve
- ⋔ – Water Shut-off
- –o– – Sign – Single Pole
- —x—x—x—x— Fenceline
- – Asphalt paving
- – Gravel

Graphic Scale
0 100 200 400
In U.S. Feet : 1" = 200'

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

A Portion of the Option Parcel

No.	Revision	Date	By:
1			
2			
3			
4			
5			
6			
7			
8			
9			

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

Job No.	2000-109.033
Drawn by:	SAH & ao
Date:	Nov. 5, 2021
QA/QC: reb	PLS: sah
File:	Option Parcel ALTA

Title:
ALTA/NSPS Land Title Survey

Sheet No.
2
Of: 2

I:\2000\2000-109\033-2021\OptionParcelALTA\Vr-Dwgs\Survey\Dwgs\BaseMaps\Option Parcel ALTA.dwg Plotted: 11/17/2021 9:52 AM By: Scott Hemman

ALTA/NSPS Land Title Survey

A portion of the 'Option Parcel' a metes and bounds parcel situated in SW1/4 SECTION 29, SE1/4 SECTION 30, THE NE1/4 SECTION 31 AND THE NW1/4 SECTION 32 Township 5 South, Range 90 West of the 6th P.M.

Town of New Castle, Colorado

Property Description:

A parcel of land being a portion of the 'Option Property' as described in that Quit Claim Deed recorded at Reception No. 775392 and being situated in the SW1/4 Section 29, SE1/4 Section 30, the NE1/4 Section 31 and the NW1/4 section 32, Township 5 South, Range 90 West of the 6th P.M.., County of Garfield, State of Colorado, said parcel of land being more particularly described as follows:

Beginning at the 1/4 corner between said Sections 29 and 30, a 3.25" Brass Cap on 2" iron pipe Stamped 1/4 S30/29 BLM 1988 thence N 89° 36' 48" E, the assumed basis of bearings along the southerly line of the 2nd Amended Exemption Plat of Lakota Canyon Ranch recorded as Reception No. 742257 a distance of 1308.59 feet to the Northeast Corner of said 'Option Property', being a 1.25" yellow plastic cap with illegible stamping on a 5/8" rebar said corner being coincidental with westerly and southerly lines of said Reception No. 742257.

Thence S 00°55'44" E along easterly line of said Option Property and the said coincidental westerly line of Reception No. 742257 a distance of 1002.40 feet to a point on the northerly line of that parcel of land described in the Special warranty Deed recorded at Reception No. 784749;
Thence the following twenty (20) course along; northerly, westerly, easterly and then northerly lines of said Reception No. 784749:

1. N 89°54'27" W a distance of 116.87 feet;
2. S 54°50'38" W a distance of 173.10 feet;
3. S 00°02'34" E a distance of 167.50 feet;
4. S 32°41'48" E a distance of 88.46 feet;
5. S 00°55'44" E a distance of 289.40 feet;
6. S 14°00'12" W a distance of 22.45 feet;
7. S 28°56'08" W a distance of 541.68 feet;
8. 122.69 feet along a curve to the right, having a radius of 219.00 feet, a central angle of 32°05'54", the chord of which bears S 44°59'05" W, a distance of 121.09 feet;
9. 102.92 feet along a non-tangent curve to the left, having a radius of 481.00 feet, a central angle of 12°15'33", the chord of which bears S 54°54'14" W a distance of 102.72 feet;
10. N 51°02'22" W a distance of 247.25 feet;
11. 30.23 feet along a non-tangent curve to the right, having a radius of 275.00 feet, a central angle of 6°17'51", the chord of which bears S 42°06'34" W a distance of 30.21 feet;
12. N 44°48'48" W a distance of 174.82 feet;
13. N 56°40'07" W a distance of 55.13 feet;
14. N 63°30'38" W a distance of 55.33 feet;
14. N 71°43'03" W a distance of 57.57 feet;
15. 104.09 feet along a non-tangent curve to the right, having a radius of 970.00 feet, a central angle of 6°08'54", the chord of which bears N 11°34'51" E a distance of 104.04 feet;
16. N 16°07'55" E a distance of 50.00 feet;
17. N 18°54'59" E a distance of 221.52 feet;
18. N 30°00'58" E a distance of 50.41 feet;
19. N 67°17'36" W a distance of 131.42 feet;
20. 104.00 feet along a curve to the left, having a radius of 250.00 feet, a central angle of 23°50'05", the chord of which bears N 79°12'39" W, a distance of 103.25 feet to a point on the northeasterly line of North Wild Horse Road as described in that Special Warranty Deed recorded at Reception No. 733780;

Thence the following four (4) courses along said northeasterly line of North Wild Horse Road, being situated parallel to and 67.50 feet northeasterly of the westerly line of said Option Property also a coincidental line with the North Park Parcel as recorded at Reception No. 721291:

1. 38.30 feet along a non-tangent curve to the left, having a radius of 491.25 feet, a central angle of 4°28'00", the chord of which bears N 04°02'01" W a distance of 38.29 feet;
2. N 06°16'01" W a distance of 314.42 feet;
3. 263.68 feet along a curve to the left, having a radius of 281.25 feet, a central angle of 53°43'01", the chord of which bears N 33°07'31" W, a distance of 254.13 feet;
4. N 59°59'02" W a distance of 338.00 feet to a point on the westerly line of said Option Property;

thence the following three (3) courses along westerly lines of said Option Property:

1. N 21°44'01" E a distance of 132.03 feet;
2. N 02°06'39" E a distance of 226.38 feet;
3. N 00°23'12" W a distance of 381.09 feet to a point on the north line of the SW1/4 Section 30;

Thence S 89°47'18" E along said North line SW1/4 Section 30 a distance of 308.87 feet
to the point of beginning, said parcel containing 59.066 acres more or less.

NOTES:

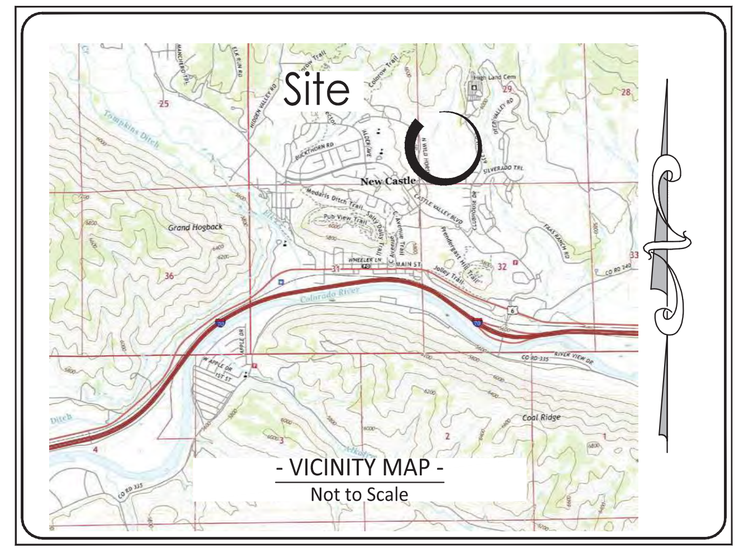
1. Basis of Bearings: Bearings shown hereon are based on an assumed bearing of N89°36'48"E, between found monuments for the 1/4 Corner common to said Section 30 and Section 29 being a 3.25" Brass Cap on 2" iron pipe Stamped 1/4 S30/29 BLM 1988 and the Northeast Corner of the Option Parcel being a 1.25" yellow plastic cap with illegible stamping on a 5/8" rebar.
2. This map has been prepared pursuant to client request for an ALTA/ASGM Land Title Survey
3. Date of field survey : October ___, 2021
4. Units of linear measurements are displayed in US Survey Feet.
5. SGM is not responsible for any changes made to this document after it leaves our possession. Any copy, facsimile, etc., of this document must be compared to the original signed, sealed and dated document to insure the accuracy of the information shown on any such copy, and to insure that no such changes have been made.
6. Subsurface utilities are not within the scope of this survey. Client/contractor must contact specific utility companies to verify both the location and depth of respective utilities. Additional surveying work may be required to show any such subsurface utility locations on this drawing. SGM will not be responsible for protection of subsurface utilities.
7. Property descriptions shown hereon are based on the title commitment referenced below.
8. Fences shown hereon have been shown for general reference and do not necessarily depict limits of ownership.
9. Abbreviations: American Land title Association / National Society of Professional Surveyors=ALTA/NSPS
   Diameter = dia. Reception Number = Rec., Rec.No., feet=' or ft.; inches=" or in.; National Wetland Inventory = NWI; Riverine-Intermittent-Streambed-Seasonally Flooded = R4SBC;
   The little pond area is Palustrine-Emergent-Persistent-Seasonally Flooded-Dike/Impounded = PEMICh.
10. The property shown hereon is subject to all easements, rights-of-way, building setbacks or other restrictions of record, as such items may affect this property. This survey does not represent a title search by this surveyor to determine ownership or to discover easements or other encumbrances of record. All information pertaining to ownership, easement and other encumbrances of record has been taken from the title insurance commitment issued by Land title Guarantee Company, Order No. ABS63017893-2 having an effective date of 11/08/2021.

Every attempt has been made to show all easements, rights-of-way, etc. referred to in the Schedule B2 Exceptions recited in said title insurance policy. Some such items may not be addressed (i.e. Items 1-8) if they are standard title commitment exceptions.

Pertaining to other schedule B2 matters:

Item 9: Right of proprietor of a vein or lode to extract and remove his ore therefrom should the same be found to penetrate or intersect the premises as reserved in United States Patent recorded February 17, 1896 in Book 12 at Page 407 and November 28, 1941 in Book 73 at Page 213. These patents affect the subject parcel in a general sense that cannot be graphically depicted.
Item 10: Right of Way for ditches or canals constructed by the authority of the United States as reserved in United States Patent recorded November 28, 1941, in Book 73 at Page 213. This patent affects the subject parcel in a general sense that cannot be graphically depicted.
Item 11: An undivided one-half interest in all oil, gas and other minerals as described in instrument recorded March 25, 1980 in Book 545 at Page 681 any and all assignments thereof or interests therein. The affects if any on the subject parcel cannot be graphically depicted.
Item 12: An undivided one-half interest of all oil, gas and other minerals as reserved in instrument recorded July 14, 1964 as Rec. No. 226276 in Book 359 at Page 328 any and all assignments thereof or interests therein. The affects if any on the subject parcel cannot be graphically depicted.
Item 13: An undivided one-half interest in all oil, gas and other minerals as reserved in instrument recorded March 13, 1964 as Rec. No. 224674 in book 356 at page 319 any and all assignments thereof or interests therein. The affects if any on the subject parcel cannot be graphically depicted.
Item 14: The terms, conditions and provisions of Ordinance #99-8 recorded June 08, 1999 as Rec. No.546810 in Book 1133 at Page 632. This ordinance affects the subject parcel in a general sense that cannot be graphically depicted.
Item 15: Restrictive covenants, which do not contain a forfeiture or reverter clause, but omitting any covenant or restriction based on race, color, religion, sex, handicap, familial status or national origin unless and only to the extent that said covenant (A) is exempt under Chapter 42, Section 3607 of the United States Code or (B) relates to handicap but does not discriminate against handicapped persons, as contained in instrument recorded August 15, 1983 as Rec. No. 344748 in Book 632 at Page 961 and as amended in instrument recorded February 08, 1996 as Rec. No. 488796 in Book 966 at Page 679 and as amended in instrument recorded November 06, 2000 as Rec. No. 571847 in Book 1216 at Page 205, and supplement recorded November 29, 2000 as Rec. No. 572848 in Book 1219 at Page 627 and Fourth Supplement recorded November 29, 2000 as Rec. No. 572849 in Book 1219 at Page 640 and Fifth Supplement recorded April 26, 2002 as Rec. No. 602252 in Book 1350 at Page 64, Sixth Supplement recorded June 24, 2003 as Rec. No. 630148 in Book 1484 at Page 138, Seventh Supplement recorded October 22, 2004 at Rec. No. 662166 in Book 1633 at Page 210, Eighth Supplement recorded June 13, 2005 as Rec. No. 676110 in Book 1696 at Page 460, Ninth Supplement recorded November 25, 2005 as Rec. No. 687292 in Book 1750 at Page 282 assignment of declarants rights recorded March 9, 2006 as Rec. No. 693692 in Book 1778 at Page 709. These covenants, amendments and supplements affect the subject parcel in a general sense that cannot be graphically depicted.
Item 16: The terms, conditions and provisions of Ordinance #2002-2 recorded April 26, 2002 as Rec. No 602245 in Book 1349 at Page 946. This ordinance affects the subject parcel in a general sense that cannot be graphically depicted.
Item 17: The terms, conditions and provisions of agreement recorded March 16, 2006 as Rec. No. 694099 in Book 1780 at page 501. This agreement affects the subject parcel in a general sense that cannot be graphically depicted.
Item 18: The restrictive covenants, which do not contain a forfeiture or reverter clause, but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as contained in instrument recorded March 09, 2006 as Rec. No. 693698 in Book 1778 at Page 731. This covenant affects the subject parcel in a general sense that cannot be graphically depicted.
Item 19: The terms, conditions and provisions of agreement recorded March 09, 2006 as Rec. No. 693690 in Book 1778 at Page 689. This agreement affects the subject parcel in a general sense that cannot be graphically depicted.
Item 20: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 21: The terms, conditions and provisions of water rights agreement recorded April 17, 2007 as Rec. No. 721292 in Book 1915 at Page 902. This agreement affects the subject parcel in a general sense that cannot be graphically depicted.
Item 22: The terms, conditions and provisions of assignment regarding development agreement recorded April 17, 2007 as Rec. No. 721295 in Book 1915 at Page 939. This assignment agreement affects the subject parcel in a general sense that cannot be graphically depicted.
Item 23: The Terms, conditions and provisions of agreement regarding town agreements recorded April 17, 2007 as Rec. No. 721296 in Book 1915 at Page 949. This agreement affects the subject parcel in a general sense that cannot be graphically depicted.
Item 24: The restrictive covenants, which do not contain a forfeiture or reverter clause, but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as contained in instrument recorded April 17, 2007 as Rec. No. 721297 in Book 1915 at Page 960. This covenant affects the subject parcel in a general sense that cannot be graphically depicted.
Item 25: The terms, conditions and provisions of assignment of declarant rights recorded April 17, 2007 as Rec No. 721298 in Book 1915 at Page 969 affect the subject parcel in a general sense that cannot be graphically depicted.
Item 26: The terms, conditions and provisions of agreement regarding grant of easement recorded April 17, 2007 as Rec. No. in Book 1915 at Page 975 affects the subject parcel in a general sense that cannot be graphically depicted.
Item 27: The terms, conditions and provisions of agreement regarding Silverado Trail recorded April 17, 2007 as Rec. No. 721300 in Book 1915 at Page 987 affects the subject parcel in a general sense that cannot be graphically depicted.
Item 28: The terms, conditions and provisions of easement agreement recorded April 17, 2007 as Rec. No. 721301 in Book 1915 at Page 997 affects the subject parcel in a general sense that cannot be graphically depicted.
Item 29: The terms, conditions and provisions of grading agreement recorded April 17, 2007 as Rec. No. 721302 in Book 1916 at Page 1 affects the subject parcel in a general sense that cannot be graphically depicted.
Item 30: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 31: The terms, conditions, provisions, burdens, obligations and easements as set forth and granted in deed of easement recorded March 15, 2007 under Reception No. 719068 affects the subject parcel in a general sense that cannot be graphically depicted.
Item 32: The easements, conditions, covenants, restrictions, reservations and notes on the plat of Castle Valley Ranch Subdivision Exemption Map and ALTA/ACSM Land Survey Plat recorded April 17, 2007 under Reception No. 721291. The subject parcel is a portion of the Option Parcel as depicted on said survey.
Item 33: (THIS ITEM WAS INTENTIONALLY DELETED).
Item 34: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 35: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 36: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 37: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 38: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 39: (THIS ITEM WAS INTENTIONALLY DELETED)
Item 40: The terms, conditions, provisions, burdens and obligations as set forth in Resolution No. BOE-09-041 recorded august 05, 2009 under Reception No. 772899. Affects the subject parcel in a general sense that cannot be graphically depicted.
Item 41: The terms, conditions, provisions, burdens and obligations as set forth in Resolution No. BOE-11-034 recorded July 28, 2011 under Reception No. 805833. Affects the subject parcel in a general sense that cannot be graphically depicted.

11. Other documents used in the preparation of this map include: Deeds of the North Park Reception No. 720385 and Reception No. 721291; Special Warranty Deed Reception No. 784749; North Wild Horse Road a 67.5' Right-of-Way Reception No. 733780 and the Easement Agreement Reception No. 721301
12. The subject parcel contains numerous trails some with signs and names. There is significant evidence of pedestrian use.



ALTA Notes:

Table A Optional Responsibilities and Specifications

1. Table A Item 1 Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the surveyed property, unless already marked or referenced by existing monuments or witnesses in close proximity to the corner.
2. Table A Item 2 Address(es) of the surveyed property if disclosed in documents provided to or obtained by the surveyor, or observed while conducting the fieldwork. TBD North Wildhorse Drive, New Castle, CO 81647
3. Table A Item 3 Flood zone classification is Zone C according to FIRM Panel 1015 of 1900, Map Number 08020S1015B with an Revision date of January 3, 1986
4. Table A Item 4 Gross Land Area : 59.066 acres more or less
5. Table A Item 6(a) On the date of this survey according to Town of New Castle Zoning Map the subject parcel is zoned: P/S Public open space or park and R Residential.
6. Table A Item 7(a, b, c) there are no buildings on the subject parcel.
7. Table A Item 8 Substantial features observed in the process of conducting the fieldwork (in addition to the improvements and features required pursuant to Section 5 above) (e.g., parking lots, billboards, signs, swimming pools, landscaped areas, substantial areas of refuse) are shown hereon.
13. Table A Item 13 Names of adjoining owners according to current tax records. If more than one owner, identify the first owner's name listed in the tax records followed by 'et al.' are shown hereon.
16 Table A Item 16 Evidence of recent earth moving work, building construction, or building additions observed in the process of conducting the fieldwork.
20. (a) show wetlands pursuant to current U.S.Fish and Wildlife Service (USFWS) shown here on by shape file from USFWS NWI Mapping a 20.73 acre Riverine habitat classified R4SBC. Wetlands and deepwater habitats in this area were photo interpreted by others using 1:58,000 scale, color infrared imagery from 1982.

SURVEYOR'S CERTIFICATE:

To: BLD GROUP, LLC; CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY; Squire Patton Boggs (US) LLP; and Land Title Guaranty Company,

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes: Items 1, 2, 3, 4, 6(a), 7(a), 7(b), 7(c), 8, 13, 14, 16, 19 of Table A thereof together with specially negotiated item.20(a) show wetlands pursuant to current U.S.Fish and Wildlife Maps and/or local municipality maps as shown here on.

The field work was completed on October 26, 2021.

Date of Plat or Map: October 27, 2021.

Scott Hemmen
Colorado PLS # 38182
For, and on behalf of SGM
Scotth@sgm-inc.com

For Review
11/17/2021 12:26:45 PM

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

A Portion of the Option Parcel

#	Revision	Date	By
1	Attorney comments and TC update added	1-17-2022	zah
2			
3			
4			
5			
6			
7			
8			
9			

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

Job No.	2000-109.033
Drawn by:	SAH & ao
Date:	Nov 5, 2021
QA/QC: reb	P.L.S.: sah
File:	Option Parcel ALTA

Title: ALTA/NSPS Land Title Survey

Sheet No. 1

Of: 2

C:\2000\2000-109\033-2021\Option Parcel\ALTA\V-Dwgs\Surv\Dwgs\Base\Maps\Option Parcel ALTA.dwg Plotted: 11/17/2021 8:52 AM By: Scott Hemmen

GARFIELD COUNTY TREASURER

Certificate of Taxes Due

Account Number R043961
Parcel 212329300194

Assessed To
CTS INVESTMENTS, LLC
343 DAKOTA BLVD
BOULDER, CO 80304

Certificate Number 2023-00571
Acres 61.216
Order Number
Vendor ID 4

Land Title
1317 Grand Ave
#200
Glenwood Springs, CO 81601

Legal Description

EXCEPT A TR OF LAND CONT 21.53 AC +/- AS DESC IN PLAT #746709 & SWD REC #746710 Section: 30 Township: 5 Range: 90
PARCEL KNOWN AS OPTION PROPERTY AS PER CVR SUB-DIV EXEMPTION AND ALTA/ACSM LAND SURVEY PLAT

Situs Address

Year	Tax	Interest	Fees	Payments	Balance
Tax Charge					
2022	$6,350.84	$0.00	$0.00	($6,350.84)	$0.00
Total Tax Charge					$0.00
Grand Total Due as of 03/27/2023					**$0.00**

Tax Billed at 2022 Rates for Tax Area 038 - 2-3SF - 038

Authority	Mill Levy	Amount
GARFIELD COUNTY	13.1180000	$1,255.39
GARFIELD COUNTY - R & B	0.0940000	$9.00
GARFIELD COUNTY - SOCIAL SE	0.4430000	$42.40
TOWN OF NEW CASTLE	8.5510000	$818.33
COLORADO RIVER FIRE PROTECT	9.1020000	$871.06
COLO RIVER WATER CONS	0.5010000	$47.95
SCHOOL DISTRICT RE-2	25.3160000	$2,422.74
COLORADO MTN COLLEGE	4.0850000	$390.93
GARFIELD COUNTY PUBLIC LIBR	2.5020000	$239.44
RFTA	2.6500000	$253.60
Taxes Billed 2022	66.3620000	$6,350.84

Values	Actual	Assessed
VACANT PUD LOTS	$330,000	$95,700
Total	$330,000	$95,700

Balances due for Tax Sale Liens are subject to change due to endorsement of current taxes by the lienholder or to advertising and distraint warrant fees that may be added after Sepember 1, 2023, making it advisable to contact the Treasurer's Office prior to remittance.

TO AVOID DELAYS IN THE ISSUANCE OF CERTIFICATES OF REDEMPTION, IT IS RECOMMENDED THAT PAYMENTS TO REDEEM TAX LIENS BE MADE WITH CERTIFIED FUNDS, DEFINED AS CASH, CASHIER'S CHECK, MONEY ORDER OR WIRE TRANSFER.

Special taxing districts and the boundaries of such districts may be on file with the Board of County Commissioners, the County Clerk, or the County Assessor.

This certificate does not include land or improvements assessed under a separate account number, personal property taxes, transfer tax or misc. tax collected on behalf of other entities, special or local improvement district assessments or mobile homes, unless specifically mentioned.

I, the undersigned, do hereby certify that the entire amount of taxes due upon the above described parcels of real property and all outstanding sales for unpaid taxes as shown by the records in my office from which the same may still be redeemed with the amount required for redemption are as noted herein. In witness whereof. I have hereunto set my hand and seal.

Garfield County Treasurer
109 8th Street
Suite 204
Glenwood Springs CO 81601
PH: (970) 945-6382

Receipt2023-03-27-AM-1802

Product	Name	Extended
2	Certificate of Taxes Due R043961	$10.00
		Account #: R043961
		Effective Date: 3/27/23
		Certificate Number: 2023-00571
		Item ID: R043961/
Certificate of Taxes Due		($10.00)
CERT REVENUE		$10.00
WORKING FUND DUE TO FUNDS		$10.00
Total		$10.00
Tender (House Account)		$10.00

Account #	4
Account Name	Land Title
Customer Name	LAND TITLE GUARANTEE COMPANY, MARISA BARTNIK
Balance	($600.00)

Thank You

Mon Mar 27 14:53:12 MDT 2023 amiddleton

Customer Distribution

Prevent fraud - Please call a member of our closing team for wire transfer instructions or to initiate a wire transfer. Note that our wiring instructions will never change.

Order Number: **ABS63019485** Date: **11/30/2023**

Property Address: **NEW CASTLE (VACANT LAND), NEW CASTLE, CO 81647**

For Closing Assistance
Jessica Reed
901 GRAND AVENUE #202
GLENWOOD SPRINGS, CO 81601
(970) 930-9815 (Work)
(800) 318-8206 (Work Fax)
jreed@ltgc.com
Contact License: CO299243
Company License: CO44565

Closers Assistant
Jordan Crisler
901 GRAND AVENUE #202
GLENWOOD SPRINGS, CO 81601
(970) 945-2610 (Work)
(800) 318-8206 (Work Fax)
jcrisler@ltgc.com
Contact License: CO732837
Company License: CO44565

Closing Processor
Raven Peterson
901 GRAND AVENUE #202
GLENWOOD SPRINGS, CO 81601
(970) 945-2610 (Work)
(800) 318-8206 (Work Fax)
ravpeterson@ltgc.com
Company License: CO44565

For Title Assistance
George Rietsch
5975 GREENWOOD PLAZA BLVD
GREENWOOD VILLAGE, CO 80111
(303) 850-4151 (Work)
grietsch@ltgc.com

Buyer/Borrower
R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY
7140 WILDBRIAR DRIVE
DALLAS, TX 75214
b.rosenberg@r2partners.co
d.rosenberg@r2partners.co
Delivered via: Electronic Mail

Attorney for Buyer
GARFIELD & HECHT
Attention: HALEY M CARMER
910 GRAND AVE., SUITE 201
GLENWOOD SPRINGS, CO 81601
(970) 920-5807 (Work)
(970) 917-1937 (Work Fax)
hcarmer@garfieldhecht.com
Delivered via: Electronic Mail

Seller/Owner
CTS INVESTMENTS LLC, A COLORADO LIMITED LIABILITY COMPANY
343 DAKOTA BLVD.
BOULDER, CO 80304
(720) 626-2410 (Cell)
nowintomesee@me.com
Delivered via: Electronic Mail

Buyers Closing Coordinator
DONNA LUNIK
donna.lunik@cdsg-us.com
Delivered via: Electronic Mail

Estimate of Title Fees

Order Number: ABS63019485 **Date:** 11/30/2023

Property Address: NEW CASTLE (VACANT LAND), NEW CASTLE, CO 81647

Seller(s): CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY

Buyer(s): R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY

Thank you for putting your trust in Land Title. Below is the estimate of title fees for the transaction. The final fees will be collected at closing. Visit **ltgc.com** to learn more about Land Title.

Estimate of Title Insurance Fees	
"ALTA" Owner's Policy 06-17-06	$7,467.00
Deletion of Standard Exception(s)	$100.00
Tax Certificate	$27.00
TOTAL	**$7,594.00**

Note: The documents linked in this commitment should be reviewed carefully. These documents, such as covenants conditions and restrictions, may affect the title, ownership and use of the property. You may wish to engage legal assistance in order to fully understand and be aware of the implications of the documents on your property.

Chain of Title Documents:

Garfield county recorded 03/09/2006 under reception no. 693683

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule A

Order Number: ABS63019485

Property Address:

NEW CASTLE (VACANT LAND), NEW CASTLE, CO 81647

1. **Effective Date:**

   03/31/2023 at 5:00 P.M.

2. **Policy to be Issued and Proposed Insured:**

   "ALTA" Owner's Policy 06-17-06 $4,014,706.00
   Proposed Insured:
   R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY

3. **The estate or interest in the land described or referred to in this Commitment and covered herein is:**

   A FEE SIMPLE

4. **Title to the estate or interest covered herein is at the effective date hereof vested in:**

   CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY

5. **The Land referred to in this Commitment is described as follows:**

A PARCEL OF LAND BEING A PORTION OF THE 'OPTION PROPERTY', AS DESCRIBED IN THAT QUIT CLAIM DEED, RECORDED SEPTEMBER 21, 2009 AT RECEPTION NO. **775392**, AND BEING SITUATED IN THE SW1/4, SECTION 29, SE1/4, SECTION 30, THE NE1/4, SECTION 31, AND THE NW1/4, SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M., COUNTY OF GARFIELD, STATE OF COLORADO, SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE 1/4 CORNER BETWEEN SAID SECTIONS 29 AND 30, A 3.25" BRASS CAP ON 2" IRON PIPE STAMPED 1/4 S30/29 BLM 1988, THENCE N 89° 36' 48" E, THE ASSUMED BASIS OF BEARINGS ALONG THE SOUTHERLY LINE, OF THE 2ND AMENDED EXEMPTION PLAT OF LAKOTA CANYON RANCH, RECORDED FEBRUARY 4, 2008 AS RECEPTION NO. **742257**, A DISTANCE OF 1308.59 FEET, TO THE NORTHEAST CORNER OF SAID 'OPTION PROPERTY', BEING A 1.25" YELLOW PLASTIC CAP WITH ILLEGIBLE STAMPING ON A 5/8" REBAR, SAID CORNER BEING COINCIDENTAL WITH WESTERLY AND SOUTHERLY LINES OF SAID RECEPTION NO. **742257**,

THENCE S 00°55'44" E, ALONG EASTERLY LINE OF SAID OPTION PROPERTY, AND THE SAID COINCIDENTAL WESTERLY LINE OF RECEPTION NO. 742257, A DISTANCE OF 1002.40 FEET, TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED, RECORDED APRIL 15, 2010 AT RECEPTION NO. **784749**;
THENCE THE FOLLOWING TWENTY (21) COURSES ALONG THE NORTHERLY, WESTERLY, EASTERLY AND THEN NORTHERLY LINES OF SAID RECEPTION NO. **784749**;
1. N 89°54'27" W A DISTANCE OF 116.87 FEET;
2. S 54°50'38" W A DISTANCE OF 173.10 FEET;
3. S 00°02'34" E A DISTANCE OF 167.50 FEET;
4. S 32°41'48" E A DISTANCE OF 88.46 FEET;
5. S 00°55'44" E A DISTANCE OF 289.40 FEET;
6. S 14°00'12" W A DISTANCE OF 22.45 FEET;
7. S 28°56'08" W A DISTANCE OF 541.68 FEET;
8. 122.69 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 219.00 FEET, A CENTRAL ANGLE OF 32°05'54", THE CHORD OF WHICH BEARS S 44°59'05" W, A DISTANCE OF 121.09 FEET;
9. 102.92 FEET ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 481.00 FEET, A CENTRAL ANGLE OF 12°15'33", THE CHORD OF WHICH BEARS S 54°54'14" W A DISTANCE OF 102.72 FEET;
10. N 51°02'22" W A DISTANCE OF 247.25 FEET;
11. 30.23 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 6°17'51", THE CHORD OF WHICH BEARS S 42°06'34" W A DISTANCE OF 30.21 FEET;

12. N 44°48'48" W A DISTANCE OF 174.82 FEET;
13. N 56°40'07" W A DISTANCE OF 55.13 FEET;
14. N 63°30'38" W A DISTANCE OF 55.33 FEET;
15. N 71°43'03" W A DISTANCE OF 57.57 FEET;
16. 104.09 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 970.00 FEET, A CENTRAL ANGLE OF 6°08'54", THE CHORD OF WHICH BEARS N 11°34'51" E A DISTANCE OF 104.04 FEET;
17. N 16°07'55" E A DISTANCE OF 50.00 FEET;
18. N 18°54'59" E A DISTANCE OF 221.52 FEET;
19. N 30°00'58" E A DISTANCE OF 50.41 FEET;
20. N 67°17'36" W A DISTANCE OF 131.42 FEET;
21. 104.00 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 250.00 FEET, A CENTRAL ANGLE OF 23°50'05", THE CHORD OF WHICH BEARS N 79°12'39" W, A DISTANCE OF 103.25 FEET, TO A POINT ON THE NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, AS DESCRIBED IN THAT SPECIAL WARRANTY DEED RECORDED SEPTEMBER 25, 2007 AT RECEPTION NO. **733780**;
THENCE THE FOLLOWING FOUR (4) COURSES ALONG SAID NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, BEING SITUATED PARALLEL TO AND 67.50 FEET NORTHEASTERLY OF THE WESTERLY LINE OF SAID OPTION PROPERTY, ALSO A COINCIDENTAL LINE WITH THE NORTH PARK PARCEL, RECORDED APRIL 17, 2007 AT RECEPTION NO. **721291**;
1. 38.30 FEET ALONG A NON - TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 491.25 FEET, A CENTRAL ANGLE OF 4°28'00", THE CHORD OF WHICH BEARS N 04°02'01" W A DISTANCE OF 38.29 FEET;
2. N 06°16'01" W A DISTANCE OF 314.42 FEET;
3. 263.68 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 281.25 FEET, A CENTRAL ANGLE OF 53°43'01", THE CHORD OF WHICH BEARS N 33°07'31" W, A DISTANCE OF 254.13 FEET;
4. N 59°59'02" W A DISTANCE OF 338.00 FEET, TO A POINT ON THE WESTERLY LINE OF SAID OPTION PROPERTY, THENCE THE FOLLOWING THREE (3) COURSES ALONG WESTERLY LINES OF SAID OPTION PROPERTY;
1. N 21°44'01" E A DISTANCE OF 132.03 FEET;
2. N 02°06'39" E A DISTANCE OF 226.38 FEET;
3. N 00°23'12" W A DISTANCE OF 381.09 FEET, TO A POINT ON THE NORTH LINE OF THE SW1/4, SECTION 30,
THENCE S 89°47'18" E ALONG SAID NORTH LINE, SW1/4, SECTION 30, A DISTANCE OF 308.87 FEET, TO THE POINT OF BEGINNING,
COUNTY OF GARFIELD, STATE OF COLORADO.

THE ABOVE LEGAL DESCRIPTION WAS CREATED BY SCOTT A. HEMMEN
FOR AND BEHALF OF SGM
118 WEST SIXTH STREET, SUITE 200, GLENWOOD SPRINGS, CO 81601
970-945-1004

Copyright 2006-2023 American Land Title Association. All rights reserved.

The use of this Form is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule B, Part I

(Requirements)

Order Number: ABS63019485

All of the following Requirements must be met:

This proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

Pay the agreed amount for the estate or interest to be insured.

Pay the premiums, fees, and charges for the Policy to the Company.

Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered, and recorded in the Public Records.

1. A FULL COPY OF THE FULLY EXECUTED OPERATING AGREEMENT AND ANY AND ALL AMENDMENTS THERETO FOR R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY MUST BE FURNISHED TO LAND TITLE GUARANTEE COMPANY. SAID AGREEMENT MUST DISCLOSE WHO MAY CONVEY, ACQUIRE, ENCUMBER, LEASE OR OTHERWISE DEAL WITH INTERESTS IN REAL PROPERTY FOR SAID ENTITY.

   NOTE: ADDITIONAL REQUIREMENTS MAY BE NECESSARY UPON REVIEW OF THIS DOCUMENTATION.

2. DULY EXECUTED AND ACKNOWLEDGED STATEMENT OF AUTHORITY SETTING FORTH THE NAME OF R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY AS A LIMITED LIABILITY COMPANY. THE STATEMENT OF AUTHORITY MUST STATE UNDER WHICH LAWS THE ENTITY WAS CREATED, THE MAILING ADDRESS OF THE ENTITY, AND THE NAME AND POSITION OF THE PERSON(S) AUTHORIZED TO EXECUTE INSTRUMENTS CONVEYING, ENCUMBERING, OR OTHERWISE AFFECTING TITLE TO REAL PROPERTY ON BEHALF OF THE ENTITY AND OTHERWISE COMPLYING WITH THE PROVISIONS OF SECTION 38-30-172, CRS.

   NOTE: THE STATEMENT OF AUTHORITY MUST BE RECORDED WITH THE CLERK AND RECORDER.

3. WARRANTY DEED FROM CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY TO R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY CONVEYING SUBJECT PROPERTY.

   NOTE: THE OPERATING AGREEMENT AND STATEMENT OF AUTHORITY RECORDED SEPTEMBER 22, 2021 UNDER RECEPTION NO. **963574** FOR CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY DISCLOSES CTS SERVICES, LLC AS THE MANAGER AUTHORIZED TO EXECUTE LEGAL INSTRUMENTS ON BEHALF OF SAID ENTITY.

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule B, Part I

(Requirements)

Order Number: ABS63019485

All of the following Requirements must be met:

REQUIREMENTS TO DELETE THE PRE-PRINTED EXCEPTIONS IN THE OWNER'S POLICY TO BE ISSUED

A. ITEMS 1-3 OF THE PRE-PRINTED EXCEPTIONS ARE HEREBY DELETED.

B. UPON THE APPROVAL OF THE COMPANY AND THE RECEIPT OF A NOTARIZED FINAL LIEN AFFIDAVIT, ITEM 4 OF THE PRE-PRINTED EXCEPTIONS, WILL BE AMENDED TO READ:

ITEM 4 OF THE PRE-PRINTED EXCEPTIONS IS DELETED AS TO ANY LIENS OR FUTURE LIENS RESULTING FROM WORK OR MATERIAL FURNISHED AT THE SPECIFIC, DIRECT REQUEST, AND WITH THE ACTUAL KNOWLEDGE OF CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY.

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY SHALL HAVE NO LIABILITY FOR ANY LIENS ARISING FROM WORK OR MATERIAL FURNISHED AT THE SPECIFIC, DIRECT REQUEST, AND WITH THE ACTUAL KNOWLEDGE OF R2 PARTNERS, LLC, AN OHIO LIMITED LIABILITY COMPANY.

C. ITEM 5 OF THE PRE-PRINTED EXCEPTIONS WILL BE DELETED IF LAND TITLE GUARANTEE COMPANY CONDUCTS THE CLOSING OF THE CONTEMPLATED TRANSACTION(S) AND RECORDS THE DOCUMENTS IN CONNECTION THEREWITH.

D. UPON PROOF OF PAYMENT OF 2022 TAXES AND ASSESSMENTS, ITEM 6 OF THE PRE-PRINTED EXCEPTIONS WILL BE AMENDED TO READ:

TAXES AND ASSESSMENTS FOR THE YEAR 2023 AND SUBSEQUENT YEARS.

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule B, Part II

(Exceptions)

Order Number: ABS63019485

This commitment does not republish any covenants, condition, restriction, or limitation contained in any document referred to in this commitment to the extent that the specific covenant, conditions, restriction, or limitation violates state or federal law based on race, color, religion, sex, sexual orientation, gender identity, handicap, familial status, or national origin.

1. **Any facts, rights, interests, or claims thereof, not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.**
2. **Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.**
3. **Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.**
4. **Any lien, or right to a lien, for services, labor or material heretofore or hereafter furnished, imposed by law and not shown by the Public Records.**
5. **Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date of the proposed insured acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.**
6. **(a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.**
7. **(a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water.**
8. EXISTING LEASES AND TENANCIES, IF ANY.
9. RIGHT OF PROPRIETOR OF A VEIN OR LODE TO EXTRACT AND REMOVE HIS ORE THEREFROM SHOULD THE SAME BE FOUND TO PENETRATE OR INTERSECT THE PREMISES AS RESERVED IN UNITED STATES PATENT RECORDED FEBRUARY 17, 1896 IN BOOK 12 AT PAGE **407** AND NOVEMBER 28, 1941 IN BOOK 73 AT PAGE **213**
10. RIGHT OF WAY FOR DITCHES OR CANALS CONSTRUCTED BY THE AUTHORITY OF THE UNITED STATES AS RESERVED IN UNITED STATES PATENT RECORDED NOVEMBER 28, 1941, IN BOOK 73 AT PAGE **213**.
11. AN UNDIVIDED ONE-HALF INTEREST IN ALL OIL, GAS AND OTHER MINERALS AS DESCRIBED IN INSTRUMENT RECORDED MARCH 25, 1980 IN BOOK 545 AT PAGE **681** ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN

    (NOTE AFFECTS PARCEL III OF SAID DOCUMENT AND IS NOT PLOTTABLE)
12. AN UNDIVIDED ONE-HALF INTEREST OF ALL OIL, GAS AND OTHER MINERALS AS RESERVED IN INSTRUMENT RECORDED JULY 14, 1964 IN BOOK 359 AT PAGE **328** ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN
13. AN UNDIVIDED ONE-HALF INTEREST IN ALL OIL, GAS AND OTHER MINERALS AS RESERVED IN INSTRUMENT RECORDED MARCH 13, 1964 IN BOOK 356 AT PAGE **319** ANY AND ALL ASSIGNMENTS THEREOF OR INTERESTS THEREIN

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule B, Part II

(Exceptions)

Order Number: ABS63019485

14. TERMS, CONDITIONS AND PROVISIONS OF ORDINANCE #99-8 RECORDED JUNE 08, 1999 IN BOOK 1133 AT PAGE 632.

15. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANT OR RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN UNLESS AND ONLY TO THE EXTENT THAT SAID COVENANT (A) IS EXEMPT UNDER CHAPTER 42, SECTION 3607 OF THE UNITED STATES CODE OR (B) RELATES TO HANDICAP BUT DOES NOT DISCRIMINATE AGAINST HANDICAPPED PERSONS, AS CONTAINED IN INSTRUMENT RECORDED AUGUST 15, 1983, IN BOOK 632 AT PAGE 961 AND AS AMENDED IN INSTRUMENT RECORDED FEBRUARY 08, 1996, IN BOOK 966 AT PAGE 679 AND AS AMENDED IN INSTRUMENT RECORDED NOVEMBER 06, 2000, IN BOOK 1216 AT PAGE 205, AND SUPPLEMENT RECORDED NOVEMBER 29, 2000 IN BOOK 1219 AT PAGE 627 AND FOURTH SUPPLEMENT RECORDED NOVEMBER 29, 2000 IN BOOK 1219 AT PAGE 640 AND FIFTH SUPPLEMENT RECORDED APRIL 26, 2002, IN BOOK 1350 AT PAGE 64, SIXTH SUPPLEMENT RECORDED JUNE 24, 2003 IN BOOK 1484 AT PAGE 138, SEVENTH SUPPLEMENT RECORDED OCTOBER 22, 2004 IN BOOK 1633 AT PAGE 210, EIGHTH SUPPLEMENT RECORDED JUNE 13, 2005 IN BOOK 1696 AT PAGE 460, NINTH SUPPLEMENT RECORDED NOVEMBER 25, 2005 IN BOOK 1750 AT PAGE 282 ASSIGNMENT OF DECLARANTS RIGHTS RECORDED MARCH 9, 2006 IN BOOK 1778 AT PAGE 709

16. TERMS, CONDITIONS AND PROVISIONS OF ORDINANCE #2002-2 RECORDED APRIL 26, 2002 IN BOOK 1349 AT PAGE 946.

17. TERMS, CONDITIONS AND PROVISIONS OF AGREEMENT RECORDED MARCH 16, 2006 IN BOOK 1780 AT PAGE 501.

18. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS CONTAINED IN INSTRUMENT RECORDED MARCH 09, 2006, IN BOOK 1778 AT PAGE 731.

19. TERMS, CONDITIONS AND PROVISIONS OF AGREEMENT RECORDED MARCH 09, 2006 IN BOOK 1778 AT PAGE 689.

20. TERMS, CONDITIONS AND PROVISIONS OF WATER RIGHTS AGREEMENT RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE 902.

21. TERMS, CONDITIONS AND PROVISIONS OF ASSIGNMENT REGARDING DEVELOPMENT AGREEMENT RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE 939.

22. TERMS, CONDITIONS AND PROVISIONS OF AGREEMENT REGARDING TOWN AGREEMENTS RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE 949.

23. RESTRICTIVE COVENANTS, WHICH DO NOT CONTAIN A FORFEITURE OR REVERTER CLAUSE, BUT OMITTING ANY COVENANTS OR RESTRICTIONS, IF ANY, BASED UPON RACE, COLOR, RELIGION, SEX, SEXUAL ORIENTATION, FAMILIAL STATUS, MARITAL STATUS, DISABILITY, HANDICAP, NATIONAL ORIGIN, ANCESTRY, OR SOURCE OF INCOME, AS SET FORTH IN APPLICABLE STATE OR FEDERAL LAWS, EXCEPT TO THE EXTENT THAT SAID COVENANT OR RESTRICTION IS PERMITTED BY APPLICABLE LAW, AS CONTAINED IN INSTRUMENT RECORDED APRIL 17, 2007, IN BOOK 1915 AT PAGE 960.

24. TERMS, CONDITIONS AND PROVISIONS OF ASSIGNMENT OF DECLARANT RIGHTS RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE 969.

ALTA COMMITMENT

Old Republic National Title Insurance Company

Schedule B, Part II

(Exceptions)

Order Number: ABS63019485

25. TERMS, CONDITIONS AND PROVISIONS OF AGREEMENT REGARDING GRANT OF EASEMENT RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE **975**.
26. TERMS, CONDITIONS AND PROVISIONS OF AGREEMENT REGARDING SILVERADO TRAIL RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE **987**.
27. TERMS, CONDITIONS AND PROVISIONS OF EASEMENT AGREEMENT RECORDED APRIL 17, 2007 IN BOOK 1915 AT PAGE **997**.
28. TERMS, CONDITIONS AND PROVISIONS OF GRADING AGREEMENT RECORDED APRIL 17, 2007 IN BOOK 1916 AT PAGE **1**.
29. TERMS, CONDITIONS, PROVISIONS, BURDENS, OBLIGATIONS AND EASEMENTS AS SET FORTH AND GRANTED IN DEED OF EASEMENT RECORDED MARCH 15, 2007 UNDER RECEPTION NO. **719068**.
30. EASEMENTS, CONDITIONS, COVENANTS, RESTRICTIONS, RESERVATIONS AND NOTES ON THE PLAT OF CASTLE VALLEY RANCH SUBDIVISION EXEMPTION MAP AND ALTA/ACSM LAND SURVEY PLAT RECORDED APRIL 17, 2007 UNDER RECEPTION NO. **721291**.
31. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN RESOLUTION NO. BOE-09-041 RECORDED AUGUST 05, 2009 UNDER RECEPTION NO. **772899**.
32. TERMS, CONDITIONS, PROVISIONS, BURDENS AND OBLIGATIONS AS SET FORTH IN RESOLUTION NO. BOE-11-034 RECORDED JULY 28, 2011 UNDER RECEPTION NO. **805833**.
33. MATTERS DISCLOSED ON ALTA / NSPS LAND TITLE SURVEY PREPARED BY SCOTT A. HEMMEN FOR AND BEHALF OF SGM, CERTIFIED NOVEMBER 05, 2021, JOB NO. 2000-109.033

    SAID DOCUMENT STORED AS OUR IMAGE **42244344**

    A: FENCES ARE NOT COINCIDENT WITH THE PROPERTY LINES.
    B: EXCEPTION TO RIGHTS OF OTHERS FOR TRAILS THAT TRANSVERS THROUGHOUT WITHOUT THE BENEFIT OF A RECORDED EASEMENT OR AGREEMENT.

Land Title Guarantee Company
Disclosure Statements

Note: Pursuant to CRS 10-11-122, notice is hereby given that:

(A) The Subject real property may be located in a special taxing district.

(B) A certificate of taxes due listing each taxing jurisdiction will be obtained from the county treasurer of the county in which the real property is located or that county treasurer's authorized agent unless the proposed insured provides written instructions to the contrary. (for an Owner's Policy of Title Insurance pertaining to a sale of residential real property).

(C) The information regarding special districts and the boundaries of such districts may be obtained from the Board of County Commissioners, the County Clerk and Recorder, or the County Assessor.

Note: Effective September 1, 1997, CRS 30-10-406 requires that all documents received for recording or filing in the clerk and recorder's office shall contain a top margin of at least one inch and a left, right and bottom margin of at least one half of an inch. The clerk and recorder may refuse to record or file any document that does not conform, except that, the requirement for the top margin shall not apply to documents using forms on which space is provided for recording or filing information at the top margin of the document.

Note: Colorado Division of Insurance Regulations 8-1-2 requires that "Every title entity shall be responsible for all matters which appear of record prior to the time of recording whenever the title entity conducts the closing and is responsible for recording or filing of legal documents resulting from the transaction which was closed". Provided that Land Title Guarantee Company conducts the closing of the insured transaction and is responsible for recording the legal documents from the transaction, exception number 5 will not appear on the Owner's Title Policy and the Lenders Policy when issued.

Note: Affirmative mechanic's lien protection for the Owner may be available (typically by deletion of Exception no. 4 of Schedule B, Section 2 of the Commitment from the Owner's Policy to be issued) upon compliance with the following conditions:

(A) The land described in Schedule A of this commitment must be a single family residence which includes a condominium or townhouse unit.

(B) No labor or materials have been furnished by mechanics or material-men for purposes of construction on the land described in Schedule A of this Commitment within the past 6 months.

(C) The Company must receive an appropriate affidavit indemnifying the Company against un-filed mechanic's and material-men's liens.

(D) The Company must receive payment of the appropriate premium.

(E) If there has been construction, improvements or major repairs undertaken on the property to be purchased within six months prior to the Date of Commitment, the requirements to obtain coverage for unrecorded liens will include: disclosure of certain construction information; financial information as to the seller, the builder and or the contractor; payment of the appropriate premium fully executed Indemnity Agreements satisfactory to the company, and, any additional requirements as may be necessary after an examination of the aforesaid information by the Company.

No coverage will be given under any circumstances for labor or material for which the insured has contracted for or agreed to pay.

Note: Pursuant to CRS 10-11-123, notice is hereby given:

This notice applies to owner's policy commitments disclosing that a mineral estate has been severed from the surface estate, in Schedule B-2.

(A) That there is recorded evidence that a mineral estate has been severed, leased, or otherwise conveyed from the surface estate and that there is substantial likelihood that a third party holds some or all interest in oil, gas, other minerals, or geothermal energy in the property; and

(B) That such mineral estate may include the right to enter and use the property without the surface owner's permission.

Note: Pursuant to CRS 10-1-128(6)(a), It is unlawful to knowingly provide false, incomplete, or misleading facts or information to an insurance company for the purpose of defrauding or attempting to defraud the company. Penalties may include imprisonment, fines, denial of insurance, and civil damages. Any insurance company or agent of an insurance company who knowingly provides false, incomplete, or misleading facts or information to a policyholder or claimant for the purpose of defrauding or attempting to defraud the policyholder or claimant with regard to a settlement or award payable from insurance proceeds shall be reported to the Colorado Division of Insurance within the Department of Regulatory Agencies.

Note: Pursuant to Colorado Division of Insurance Regulations 8-1-3, notice is hereby given of the availability of a closing protection letter for the lender, purchaser, lessee or seller in connection with this transaction.

Note: Pursuant to CRS 24-21-514.5, Colorado notaries may remotely notarize real estate deeds and other documents using real-time audio-video communication technology. You may choose not to use remote notarization for any document.

Joint Notice of Privacy Policy of
Land Title Guarantee Company
Land Title Guarantee Company of Summit County
Land Title Insurance Corporation and
Old Republic National Title Insurancy Company

This Statement is provided to you as a customer of Land Title Guarantee Company as agent for Land Title Insurance Corporation and Old Republic National Title Insurance Company.

We want you to know that we recognize and respect your privacy expectations and the requirements of federal and state privacy laws. Information security is one of our highest priorities. We recognize that maintaining your trust and confidence is the bedrock of our business. We maintain and regularly review internal and external safeguards against unauthorized access to your non-public personal information ("Personal Information").

In the course of our business, we may collect Personal Information about you from:

- applications or other forms we receive from you, including communications sent through TMX, our web-based transaction management system;
- your transactions with, or from the services being performed by us, our affiliates, or others;
- a consumer reporting agency, if such information is provided to us in connection with your transaction;

  and
- The public records maintained by governmental entities that we obtain either directly from those entities, or from our affiliates and non-affiliates.

Our policies regarding the protection of the confidentiality and security of your Personal Information are as follows:

- We restrict access to all Personal Information about you to those employees who need to know that information in order to provide products and services to you.
- We may share your Personal Information with affiliated contractors or service providers who provide services in the course of our business, but only to the extent necessary for these providers to perform their services and to provide these services to you as may be required by your transaction.
- We maintain physical, electronic and procedural safeguards that comply with federal standards to protect your Personal Information from unauthorized access or intrusion.
- Employees who violate our strict policies and procedures regarding privacy are subject to disciplinary action.
- We regularly assess security standards and procedures to protect against unauthorized access to Personal Information.

WE DO NOT DISCLOSE ANY PERSONAL INFORMATION ABOUT YOU WITH ANYONE FOR ANY PURPOSE THAT IS NOT STATED ABOVE OR PERMITTED BY LAW.

Consistent with applicable privacy laws, there are some situations in which Personal Information may be disclosed. We may disclose your Personal Information when you direct or give us permission; when we are required by law to do so, for example, if we are served a subpoena; or when we suspect fraudulent or criminal activities. We also may disclose your Personal Information when otherwise permitted by applicable privacy laws such as, for example, when disclosure is needed to enforce our rights arising out of any agreement, transaction or relationship with you.

Our policy regarding dispute resolution is as follows: Any controversy or claim arising out of or relating to our privacy policy, or the breach thereof, shall be settled by arbitration in accordance with the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

Commitment For Title Insurance
Issued by Old Republic National Title Insurance Company

NOTICE

IMPORTANT—READ CAREFULLY: THIS COMMITMENT IS AN OFFER TO ISSUE ONE OR MORE TITLE INSURANCE POLICIES. ALL CLAIMS OR REMEDIES SOUGHT AGAINST THE COMPANY INVOLVING THE CONTENT OF THIS COMMITMENT OR THE POLICY MUST BE BASED SOLELY IN CONTRACT.

THIS COMMITMENT IS NOT AN ABSTRACT OF TITLE, REPORT OF THE CONDITION OF TITLE, LEGAL OPINION, OPINION OF TITLE, OR OTHER REPRESENTATION OF THE STATUS OF TITLE. THE PROCEDURES USED BY THE COMPANY TO DETERMINE INSURABILITY OF THE TITLE, INCLUDING ANY SEARCH AND EXAMINATION, ARE PROPRIETARY TO THE COMPANY, WERE PERFORMED SOLELY FOR THE BENEFIT OF THE COMPANY, AND CREATE NO EXTRACONTRACTUAL LIABILITY TO ANY PERSON, INCLUDING A PROPOSED INSURED.

THE COMPANY'S OBLIGATION UNDER THIS COMMITMENT IS TO ISSUE A POLICY TO A PROPOSED INSURED IDENTIFIED IN SCHEDULE A IN ACCORDANCE WITH THE TERMS AND PROVISIONS OF THIS COMMITMENT. THE COMPANY HAS NO LIABILITY OR OBLIGATION INVOLVING THE CONTENT OF THIS COMMITMENT TO ANY OTHER PERSON. .

COMMITMENT TO ISSUE POLICY

Subject to the Notice; Schedule B, Part I—Requirements; Schedule B, Part II—Exceptions; and the Commitment Conditions, Old Republic National Title Insurance Company, a Minnesota corporation (the "Company"), commits to issue the Policy according to the terms and provisions of this Commitment. This Commitment is effective as of the Commitment Date shown in Schedule A for each Policy described in Schedule A, only when the Company has entered in Schedule A both the specified dollar amount as the Proposed Policy Amount and the name of the Proposed Insured. If all of the Schedule B, Part I—Requirements have not been met within 6 months after the Commitment Date, this Commitment terminates and the Company's liability and obligation end.

COMMITMENT CONDITIONS

1. DEFINITIONS
   (a) "Knowledge" or "Known": Actual or imputed knowledge, but not constructive notice imparted by the Public Records.
   (b) "Land": The land described in Schedule A and affixed improvements that by law constitute real property. The term "Land" does not include any property beyond the lines of the area described in Schedule A, nor any right, title, interest, estate, or easement in abutting streets, roads, avenues, alleys, lanes, ways, or waterways, but this does not modify or limit the extent that a right of access to and from the Land is to be insured by the Policy.
   (c) "Mortgage": A mortgage, deed of trust, or other security instrument, including one evidenced by electronic means authorized by law.
   (d) "Policy": Each contract of title insurance, in a form adopted by the American Land Title Association, issued or to be issued by the Company pursuant to this Commitment.
   (e) "Proposed Insured": Each person identified in Schedule A as the Proposed Insured of each Policy to be issued pursuant to this Commitment.
   (f) "Proposed Policy Amount": Each dollar amount specified in Schedule A as the Proposed Policy Amount of each Policy to be issued pursuant to this Commitment.
   (g) "Public Records": Records established under state statutes at the Commitment Date for the purpose of imparting constructive notice of matters relating to real property to purchasers for value and without Knowledge.
   (h) "Title": The estate or interest described in Schedule A.

2. If all of the Schedule B, Part I—Requirements have not been met within the time period specified in the Commitment to Issue Policy, Commitment terminates and the Company's liability and obligation end.

3. The Company's liability and obligation is limited by and this Commitment is not valid without:
   (a) the Notice;
   (b) the Commitment to Issue Policy;
   (c) the Commitment Conditions;
   (d) Schedule A;
   (e) Schedule B, Part I—Requirements; and
   (f) Schedule B, Part II—Exceptions; and
   (g) a counter-signature by the Company or its issuing agent that may be in electronic form.

4. **COMPANY'S RIGHT TO AMEND**

   The Company may amend this Commitment at any time. If the Company amends this Commitment to add a defect, lien, encumbrance, adverse claim, or other matter recorded in the Public Records prior to the Commitment Date, any liability of the Company is limited by Commitment Condition 5. The Company shall not be liable for any other amendment to this Commitment.

5. **LIMITATIONS OF LIABILITY**
   (a) The Company's liability under Commitment Condition 4 is limited to the Proposed Insured's actual expense incurred in the interval between the Company's delivery to the Proposed Insured of the Commitment and the delivery of the amended Commitment, resulting from the Proposed Insured's good faith reliance to:
      i. comply with the Schedule B, Part I—Requirements;
      ii. eliminate, with the Company's written consent, any Schedule B, Part II—Exceptions; or
      iii. acquire the Title or create the Mortgage covered by this Commitment.
   (b) The Company shall not be liable under Commitment Condition 5(a) if the Proposed Insured requested the amendment or had Knowledge of the matter and did not notify the Company about it in writing.
   (c) The Company will only have liability under Commitment Condition 4 if the Proposed Insured would not have incurred the expense had the Commitment included the added matter when the Commitment was first delivered to the Proposed Insured.
   (d) The Company's liability shall not exceed the lesser of the Proposed Insured's actual expense incurred in good faith and described in Commitment Conditions 5(a)(i) through 5(a)(iii) or the Proposed Policy Amount.
   (e) The Company shall not be liable for the content of the Transaction Identification Data, if any.
   (f) In no event shall the Company be obligated to issue the Policy referred to in this Commitment unless all of the Schedule B, Part I—Requirements have been met to the satisfaction of the Company.
   (g) In any event, the Company's liability is limited by the terms and provisions of the Policy.

6. **LIABILITY OF THE COMPANY MUST BE BASED ON THIS COMMITMENT**
   (a) Only a Proposed Insured identified in Schedule A, and no other person, may make a claim under this Commitment.
   (b) Any claim must be based in contract and must be restricted solely to the terms and provisions of this Commitment.
   (c) Until the Policy is issued, this Commitment, as last revised, is the exclusive and entire agreement between the parties with respect to the subject matter of this Commitment and supersedes all prior commitment negotiations, representations, and proposals of any kind, whether written or oral, express or implied, relating to the subject matter of this Commitment.

(d) The deletion or modification of any Schedule B, Part II—Exception does not constitute an agreement or obligation to provide coverage beyond the terms and provisions of this Commitment or the Policy.
(e) Any amendment or endorsement to this Commitment must be in writing and authenticated by a person authorized by the Company.
(f) When the Policy is issued, all liability and obligation under this Commitment will end and the Company's only liability will be under the Policy.

7. **IF THIS COMMITMENT HAS BEEN ISSUED BY AN ISSUING AGENT**

The issuing agent is the Company's agent only for the limited purpose of issuing title insurance commitments and policies. The issuing agent is not the Company's agent for the purpose of providing closing or settlement services.

8. **PRO-FORMA POLICY**

The Company may provide, at the request of a Proposed Insured, a pro-forma policy illustrating the coverage that the Company may provide. A pro-forma policy neither reflects the status of Title at the time that the pro-forma policy is delivered to a Proposed Insured, nor is it a commitment to insure.

9. **ARBITRATION**

The Policy contains an arbitration clause. All arbitrable matters when the Proposed Policy Amount is $2,000,000 or less shall be arbitrated at the option of either the Company or the Proposed Insured as the exclusive remedy of the parties. A Proposed Insured may review a copy of the arbitration rules at http://www.alta.org/arbitration.

IN WITNESS WHEREOF, Land Title Insurance Corporation has caused its corporate name and seal to be affixed by its duly authorized officers on the date shown in Schedule A to be valid when countersigned by a validating officer or other authorized signatory.

Issued by:
Land Title Guarantee Company
3033 East First Avenue Suite 600
Denver, Colorado 80206
303-321-1880

CB Rants

Craig B. Rants, Senior Vice President

OLD REPUBLIC NATIONAL TITLE INSURANCE COMPANY
A Stock Company
400 Second Avenue South, Minneapolis, Minnesota 55401
(612) 371-1111

By C Monroe President

Attest David Wold Secretary

This page is only a part of a 2016 ALTA® Commitment for Title Insurance issued by Old Republic National Title Insurance Company. This Commitment is not valid without the Notice; the Commitment to Issue Policy; the Commitment Conditions; Schedule A; Schedule B, Part I—Requirements; and Schedule B, Part II—Exceptions; and a counter-signature by the Company or its issuing agent that may be in electronic form.

Copyright 2006-2016 American Land Title Association. All rights reserved.

The use of this Form (or any derivative thereof) is restricted to ALTA licensees and ALTA members in good standing as of the date of use. All other uses are prohibited. Reprinted under license from the American Land Title Association.

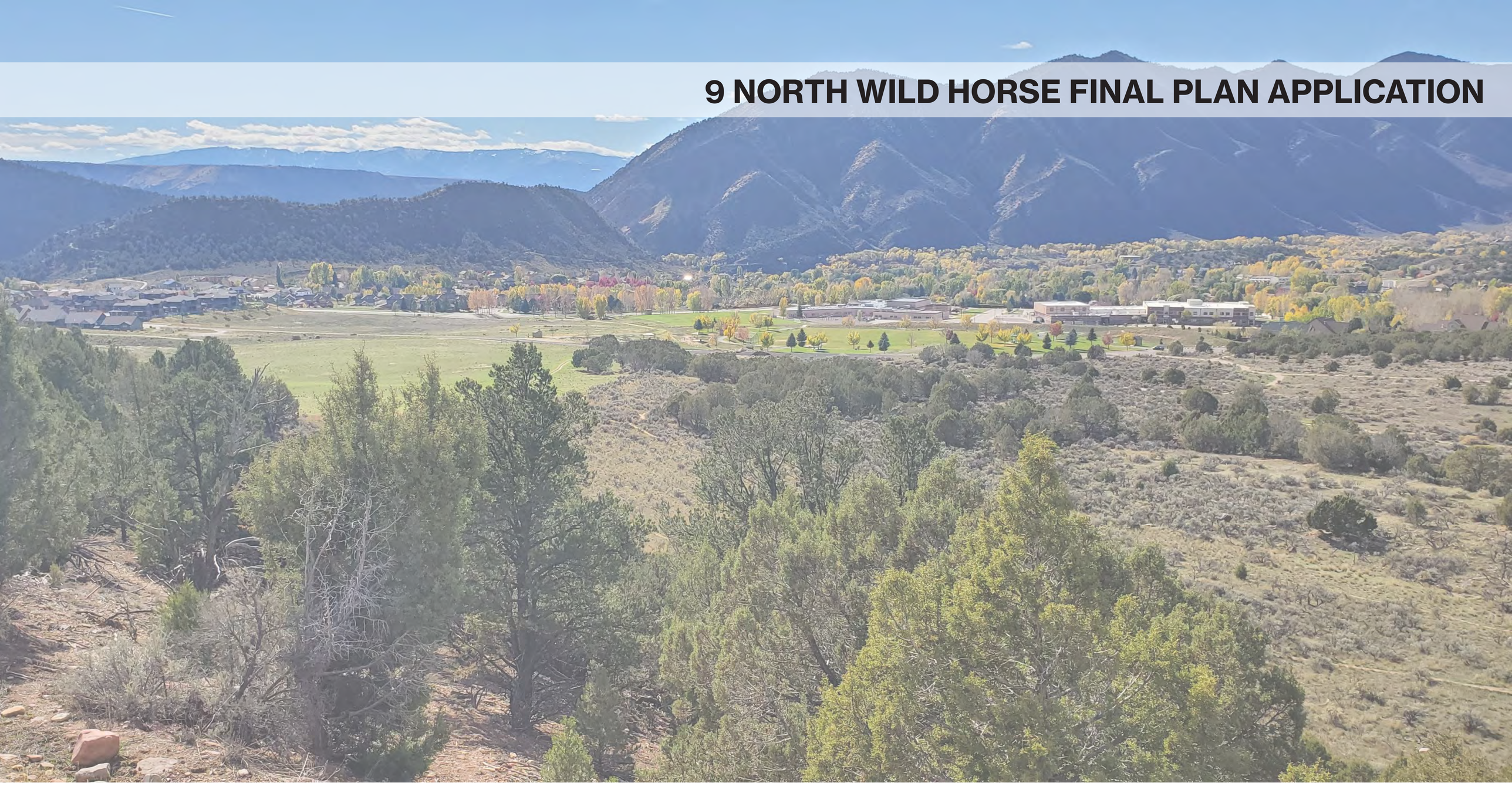
LIST OF PROPERTY OWNERS
WITHIN 250 FEET

This page is intentionally left blank

Garfield County Land Explorer

Parcel	Physical Address	Owner	Account Num	Mailing Address
212303400954	Not available NEW CASTLE	BUREAU OF LAND MANAGEMENT	R030107	2300 RIVER FRONTAGE ROAD SILT, CO 81652
212329200190	Not available NEW CASTLE	RG LAKOTA III LLC	R009983	350 MARKET STREET STE 304 BASALT, CO 81621
212329300185	1000 CLUBHOUSE DR NEW CASTLE	RG LAKOTA GOLF LLC	R009978	350 MARKET STREET STE 304 BASALT, CO 81621
212329300194	Not available NEW CASTLE	CTS INVESTMENTS, LLC	R043961	343 DAKOTA BLVD BOULDER, CO 80304
212329300197	Not available NEW CASTLE	CVR INVESTORS INC	R045250	PO BOX 1380 CAREFREE, AZ 85377
212330400001	Not available NEW CASTLE	GARFIELD SCHOOL DISTRICT RE-2	R380824	839 WHITERIVER AVENUE RIFLE, CO 81650-3515
212330400003	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R043960	PO BOX 90 NEW CASTLE, CO 81647
212330423007	631 N WILD HORSE DR NEW CASTLE	LORD, JAMES T & KELLY M	R006709	631 N WILD HORSE DRIVE NEW CASTLE, CO 81647
212330423008	627 N WILD HORSE DR NEW CASTLE	RATAJCZAK, ZDZISLAW & HALINA	R006710	627 NORTH WILDHORSE DRIVE NEW CASTLE, CO 81647
212330423009	6 BUCKSKIN CIR NEW CASTLE	YOUNG, DAVID A & FRAMBACH, JANE	R006711	6 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423010	10 BUCKSKIN CIR NEW CASTLE	CLASSEN, ROBERT SETH & GONZALEZ CLASSEN, GLORIA ELIZABETH	R006712	10 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423011	14 BUCKSKIN CIR NEW CASTLE	BADOLATO, AARON & ANNE	R006713	14 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423012	18 BUCKSKIN CIR NEW CASTLE	WHITCOMB, RANDALL K LIVING TRUST	R006714	1302 MAUS WICHITA, KS 67212
212330423036	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R006738	PO BOX 90 NEW CASTLE, CO 81647-0166
212330423037	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R006739	PO BOX 90 NEW CASTLE, CO 81647-0166
212332200195	Not available NEW CASTLE	CVR INVESTORS INC	R043962	PO BOX 1380 CAREFREE, AZ 85377
ROW	Not available null			

9 NORTH WILD HORSE FINAL PLAN APPLICATION



DHM DESIGN LANDSCAPE ARCHITECTURE URBAN DESIGN + LAND PLANNING ECOLOGICAL PLANNING

SOPRIS ENGINEERING LLC

Land+Shelter ARCHITECTURE AND PLANNING

ma design

JVAM

FEBRUARY 18, 2025

TABLE OF CONTENTS

APPLICATION DOCUMENTS BY PAGE NUMBER

3	Project Narrative and Conformity with the Comprehensive Plan; Vicinity Map
4-6	Existing Conditions Survey
7	Illustrative Site Plan
8	Development Summary and Zoning
9	Parking Summary
10	EV Parking Diagram
11	Open Space Plan
12	Snow Storage Plan
13	Construction Phasing Diagram
14	Unit Mix Summary
15-21	Live/Work Architectural Floor Plans, Elevations, Materials, and 3D
22-26	Empty Nester Architectural Floor Plans, Elevations, Materials, and 3D
27-28	Townhomes Architectural Floor Plans, Elevations, Materials, and 3D
29-35	Architectural Preliminary Plan to Final Plan Change Comparisons
36-37	Viewshed Renderings
38-42	Final Plat
43-44	Civil Cover Sheet & Notes
45	Civil Site Plan
46	Site Plan Sections
47	Signage & Striping Plan
48	Erosion Control Plan
49	Overall Grading Plan
50- 54	Road Plan/Profiles
55-59	Grading Enlargements
60	Site Utility Plan
61-62	Sewer Main
63-66	Water Main
67- 74	Storm Water Plans/Profiles
75-80	Civil Details
81-83	Drainage Exhibits
84-90	Landscape Plans
91-94	Site Lighting Plans

PROJECT NARRATIVE

The following documents constitute the Final Plan Application for Castle Valley Ranch Multi-Family Housing. The Applicant has selected “9 North Wild Horse” as the name of the proposed neighborhood within the Castle Valley Ranch PUD.
The subject Parcel is located in the northeast corner of the Castle Valley Ranch (CVR) PUD subdivision. The property adjoins the Lakota Links golf course (holes 8 and 9, and the maintenance facility) to the east, vacant land to the north (zoned R/L), single family residential and VIX Park to the west, and vacant land to the south (zoned R and M/U1). Access will be via the planned extension of North Wild Horse Drive; utility services will also be via connection to/extension of existing services in North Wild Horse Drive and connection to Tank 3 water storage operating a looped system per existing agreements.

The existing Parcel is approximately 59.1 acres in total. The seller will retain approximately 12.26 acres, making the project development site 47.6 acres, more or less. See the Acreage and Subdivision Schedule for how the Parcel is proposed to be divided.

Existing Conditions
The site generally consists of gently sloping sage, pinon/juniper, and open meadow/pasture. At the northwest corner of the property there is a steep hillside and a natural drainage channel bisects the property from the northeast to the southwest. This drainage is connected to the larger Castle Valley Ranch drainage system, connecting at the north to a detention structure on Lakota subdivision property, and continuing southwest off of the subject property through culverts and open channels to existing conveyances at Castle Valley Boulevard.

A number of natural-surface recreational trails crisscross the site, connecting to trails north, east, and south of the property. Several of these trails are mapped and connected to a trailhead on the property near VIX Park. The property is otherwise undeveloped.

The property is currently designated as “R” (Residential) overlay within the CVR PUD. The approved CVR zone district MF-2 is applied to this project. The Applicant is pursuing MF-2 zoning in order to consolidate the development area, set aside a significant portion of open space, and also reduce the length of public roadway to be maintained by the Town.

The proposed project conforms with the underlying zoning codes, the approved PUD, and the comprehensive plan.

Proposed Development
The proposed residential development includes a mix of 130 townhouse-style and apartment homes clustered within the center/west portion of the property. Of the 130 proposed units, 26 are townhomes in duplex and triplex configurations, and 104 are apartments. For the apartments, 80 are “live/work” residences in (2) two-story and (2) three-story buildings and the remaining 24 apartment residences are “empty nester” units in (2) two-story buildings. The land to the north and south of the development area is designated as developer-retained open space with limited public access. The seller retained portion is located on the east side of the Parcel. Specific priorities/highlights of the development include:
- Increase the range of housing within CVR by providing a variety of rental units, including townhomes and two distinct apartment types
- Cluster development to preserve areas of contiguous open space and provide separation from neighboring properties
- Ensure the site design and road layout are responsive to existing topography, minimizing disturbance to the existing landscape
- Provide public connections to the existing trail network to the north and east of the property
- Provide private walking trails and passive open space for residents

The Plat Map illustrates how the Parcel is to be divided. There are four distinct boundary types proposed:
- Lots 1-3, which encompass residential building lots and private roads and parking
- Parcels 1 & 2 which encompass the private and public access open space
- Street Rights-of-Way to be dedicated to the public
- Lot 4, which is the seller retained land

The proposed public right-of-way and the development area combined account for 15.68 +/-acres, or 33 % of the proposed development site, leaving 31.92 +/- acres, or 67 % of the site as dedicated open space. The 12.26 acre seller retained land is excluded from all development calculations.

Conformity with Castle Valley Ranch PUD
The proposed project conforms with the underlying zoning codes as well as the Castle Valley Ranch PUD.

According to Town Code Section 17.16.30, the “R” zone districts “...are established to accommodate a variety of residential neighborhoods ranging from a low density single-family to a high density multifamily.”

The MF-2 zone district established by the updated master plan for the CVR PUD permits the following land uses*:
- Attached dwelling units with rear yards
- Attached dwelling units in structures containing more than two units
- Parking facilities
- Pedestrian and bicycle trails
- Open space and parks

The development plan includes residential townhome and apartment units, private parking areas, open space, and trails, all conforming uses in the MF-2 district.

**See the Schedule of Permitted Land Uses for Castle Valley Ranch (Town Code Section 17.104.080) for a complete list of allowable uses.*

Consistency with the Comprehensive Plan
The Comprehensive Plan contains guidance for development; the following represent extracted highlights from the Comp Plan, with Applicant responses in italics, below.

Foster distinctive, attractive communities with a strong sense of place and quality of life
The site location provides many opportunities for outdoor recreation, with connections to trail networks, public parks, and open space. Internal to the project, a series of interconnected open space areas encourage community gathering and physical activity. The project is designed to respond to existing site conditions, preserving existing pinon-juniper hillsides, the route of existing drainage channel, and adjacent vegetation as features of the project. The architecture is envisioned as contemporary expressions of the regional verncaular, with outdoor spaces (patios and balconies) connected to common open areas and generous views.

Demonstrate that individual project fits into a fully-balanced community land use structure
The proposed development is consistent with the intent and approvals of the CVR PUD.

Ensure a mix of uses that complement the existing New Castle land-use patterns
As a part of a master-planned development, the proposed development supports the intended land use types and patterns as identified in the Future Land Use Map and approved CVR PUD.

Create walkable communities with non-vehicular interconnection between use areas
The proposed plan integrates with the existing CVR street and sidewalk system, with easy access to the multi-use trail system at VIX Park. Recreational trail connectivity is provided within the project and to existing natural-surface trails to the north, east, and south of the subject property.

Guarantee a balance of housing types that support a range of affordability
The mix of unit type allows for a variety of lifestyle and income demographics.

Preserve open space, farmland, natural beauty, critical environmental areas, and wildlife habitat
The development plan preserves approximately 67% of the site area as open space and largely undisturbed (except for natural-surface, recreational trails); the development is clustered at the lower-elevation portion of the site, limiting impact to off-site views and preserving visual connectivity to public lands to the north.

Encourage economic development and supporting hard and soft infrastructure
The proposed development completes the planned connection of North Wild Horse Drive and advances the comprehensively-planned CVR neighborhood.

Concentrate development in ways which provide efficient and cost-effective services
The clustered plan is sited to connect efficiently to existing infrastructure within the CVR subdivision; the connection to - and completion of - North Wild Horse Drive provides access to the development and increases connectivity within the surrounding neighborhood without adding unnecessarily complex or extensive infrastructure to the existing systems.

The attached technical plans and reports constitute the bulk of the Final Plan application.

PARTIAL EXISTING CONDITIONS AND TOPOGRAPHICAL MAP OF:

A PORTION OF THE 'OPTION PROPERTY', AND BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M. TOWN OF NEW CASTLE, COLORADO

PROPERTY DESCRIPTION

A parcel of land being a portion of the 'Option Property', as described in that Quit Claim Deed, recorded September 21, 2009 as Reception No. 775392, and being situated in the SW1/4 of Section 29, SE1/4 of Section 30, the NE1/4 of Section 31, and the NW1/4 of SECTION 32, Township 5 South, Range 90 West of the 6TH P.M., County of Garfield, State of Colorado, said parcel of land being more particularly described as follows:

Beginning at the 1/4 corner, between said sections 29 and 30, a 3.25" brass cap on 2" iron pipe stamped "1/4 S30/29 BLM 1988", thence N 89° 36' 48" E the assumed Basis of Bearings along the southerly line of the 2nd Amended Exemption Plat of Lakota Canyon Ranch, recorded February 4, 2008 as Reception No. 742257, a distance of 1308.59 feet to the Northeast corner of said 'Option Property', being a #5 rebar & 1.25" yellow plastic cap stamped "CLAYCOMB ENG L.S. 3174", said corner being coincidental with Westerly and Southerly lines of Reception No. 742257;

Thence S 00°55'44" E, along Easterly line of said 'Option Property', and the said coincidental Westerly line of Reception No. 742257, a distance of 1002.40 feet, to a point on the Northerly line of that parcel of land described in the Special Warranty Deed, recorded April 15, 2010 as Reception No. 784749;

Thence the following twenty-one (21) courses along the Northerly, Westerly, Easterly and Northerly lines of said Reception No. 784749;

1. N 89°54'27" W a distance of 116.87 feet;
2. S 54°50'38" W a distance of 173.10 feet;
3. S 00°02'34" E a distance of 167.50 feet;
4. S 32°41'48" E a distance of 88.46 feet;
5. S 00°55'44" E a distance of 289.40 feet;
6. S 14°00'12" W a distance of 22.45 feet;
7. S 28°56'08" W a distance of 541.68 feet;
8. 122.69 feet along a curve to the right, having a radius of 219.00 feet, a central angle of 32°05'54", the chord of which bears S 44°59'05" W, a distance of 121.09 feet;
9. 102.92 feet along a non-tangent curve to the left, having a radius of 481.00 feet, a central angle of 12°15'33", the chord of which bears S 54°54'14" W a distance of 102.72 feet;
10. N 51°02'22" W a distance of 247.25 feet;
11. 30.23 feet along a non-tangent curve to the right, having a radius of 275.00 feet, a central angle of 6°17'51", the chord of which bears S 42°06'34" W a distance of 30.21 feet;
12. N 44°48'48" W a distance of 174.82 feet;
13. N 56°40'07" W a distance of 55.13 feet;
14. N 63°30'38" W a distance of 55.33 feet;
15. N 71°43'03" W a distance of 57.57 feet;
16. 104.09 feet along a non-tangent curve to the right, having a radius of 970.00 feet, a central angle of 6°08'54", the chord of which bears N 11°34'51" E a distance of 104.04 feet;
17. N 16°07'55" E a distance of 50.00 feet;
18. N 18°54'59" E a distance of 221.52 feet;
19. N 30°00'58" E a distance of 50.41 feet;
20. N 67°17'36" W a distance of 131.42 feet;
21. 104.00 feet along a curve to the left, having a radius of 250.00 feet, a central angle of 23°50'05", the chord of which bears N 79°12'39" W, a distance of 103.25 feet, to a point on the Northeasterly line of North Wild Horse Road, as described in that Special Warranty Deed recorded September 25, 2007 at Reception No. 733780;

Thence the following four (4) courses along said Northeasterly line of North Wild Horse Road, being situated parallel to and 67.50 feet Northeasterly of the westerly line of said 'Option Property', also a coincidental line with the North Park Parcel recorded April 17, 2007 at Reception No. 721291;

1. 38.30 feet along a non-tangent curve to the left, having a radius of 491.25 feet, a central angle of 4°28'00", the chord of which bears N 04°02'01" W a distance of 38.29 feet;
2. N 06°16'01" W a distance of 314.42 feet;
3. 263.68 feet along a curve to the left, having a radius of 281.25 feet, a central angle of 53°43'01", the chord of which bears N 33°07'31" W, a distance of 254.13 feet;
4. N 59°59'02" W a distance of 338.00 feet, to a point on the westerly line of said 'Option Property';

Thence the following three (3) courses along the westerly lines of said 'Option Property';
1. N 21°44'01" E a distance of 132.03 feet;
2. N 02°06'39" E a distance of 226.38 feet;
3. N 00°23'12" W a distance of 381.09 feet, to a point on the North line of the TO A SW1/4 of Section 30,

Thence S 89°47'18" E along said North line SW1/4 of Section 30, a distance of 308.87 feet,
To the Point of Beginning,
County of Garfield, State of Colorado.

Address:
New Castle Vacant Land, New Castle, Colorado, 81647

GRAPHIC SCALE

150 0 75 150 300 600

(IN U.S. SURVEY FEET)
1 inch = 150 ft.

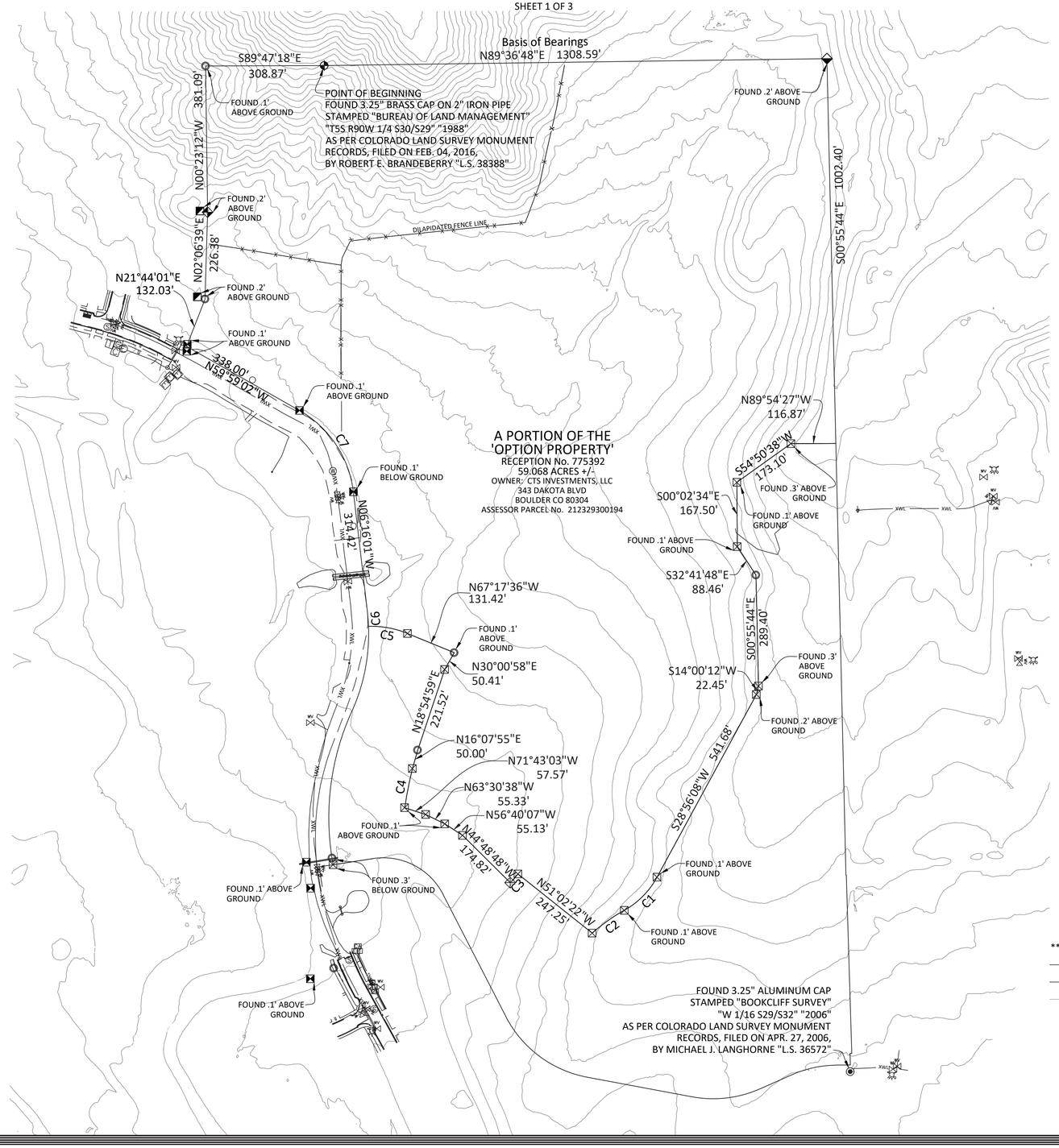
SURVEYOR'S STATEMENT

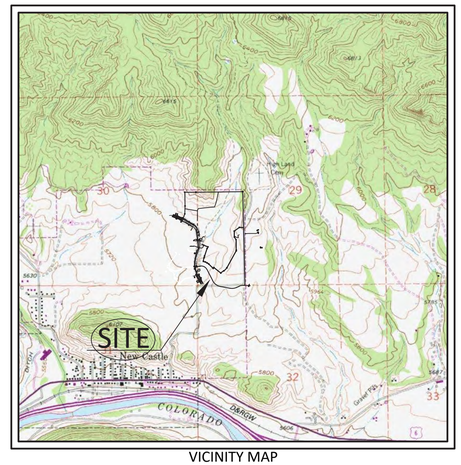
I, Mark S. Beckler, do hereby state that this survey was prepared by Sopris Engineering, LLC for CTS Investments, LLC, A Colorado Limited Liability Company and that it is true and correct to the best of my knowledge and belief.

Mark S. Beckler, L.S. No. 28643

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

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





VICINITY MAP
SCALE: 1" = 2000'

SURVEY NOTES

1) Date of Survey: December 5-6 & 18-21, 2023.

2) Date of Preparation: March 6-11, 2024.

3) Linear Units: 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.

4) Basis of Bearing: Bearings shown hereon are based on an assumed bearing of N89°36'48"E, between found monuments for the 1/4 corner common to said Section 30 and Section 29 being a 3.25" brass cap on 2" iron pipe, stamped "1/4 S30/29 BLM 1988" and the Northeast corner of the option parcel being a #5 rebar & 1.25" yellow plastic cap, stamped "CLAYCOMB ENG L.S. 3174".

5) This survey does not constitute a title search by Sopris Engineering, LLC (SE) to determine ownership or easements of record. No title commitment was used in the preparation of this survey.

6) Basis of elevation: Basis of Elevation: Project based on Global Position System (GPS) observations from the Continuous Operating Reference Station (CORS) GSC1 utilizing the Continental United States 2012 Geoid Model (GEOID 18) CONUS and based the 1988 North American Vertical Datum (NAVD88) and a vertical shift of -4.01 feet as calculated by the North American Vertical Datum Conversion (VERTCON) an online service provided by a subsidy of the National Oceanic Atmospheric Administration (NOAA). This established a site benchmark elevation of 5851.39'. See sheets 2 & 3.

7) Contours shown hereon generated from classified 2016 LiDAR Data aquired through the Colorado Governor's Office of Information Technology, topography based on The North American Vertical Datum of 1988 (NAVD 88); contour interval ten (10') feet.

EXISTING CONDITIONS LEGEND

- CABLE LINE LOCATION
- COMCAST PEDESTAL
- TELEPHONE PEDESTAL
- SEWER MANHOLE
- STORM MANHOLE
- STORM INLET
- ELECTRIC TRANSFORMER
- ELECTRIC RISER
- LIGHT POLE
- EXISTING FIRE HYDRANT
- WATER VALVE
- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND #5 REBAR
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 13501"
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 3174"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 36572"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 38182"
- FOUND #5 REBAR & RED PLASTIC CAP STAMPED "L.S. 20133"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 28643"

MONUMENTS WERE FOUND FLUSH WITH THE GROUND UNLESS OTHERWISE STATED

- XEL — XEL — UNDERGROUND ELECTRIC
- XWL — XWL — WATER LINE
- X — X — WIRE FENCE

Property Boundary Curve Table

Curve #	Length	Radius	Tangent	Delta	Chord Direction	Chord
C1	122.69'	219.00'	63.00'	32°05'54"	S44° 59' 05"W	121.09'
C2	102.92'	481.00'	51.66'	12°15'33"	S54° 54' 14"W	102.72'
C3	30.23'	275.00'	15.13'	6°17'51"	S42° 06' 34"W	30.21'
C4	104.09'	970.00'	52.09'	6°08'54"	N11° 34' 51"E	104.04'
C5	104.00'	250.00'	52.76'	23°50'05"	N79° 12' 39"W	103.25'
C6	38.30'	491.25'	19.16'	4°28'00"	N04° 02' 01"W	38.29'
C7	263.68'	281.25'	142.43'	53°43'01"	N33° 07' 31"W	254.13'

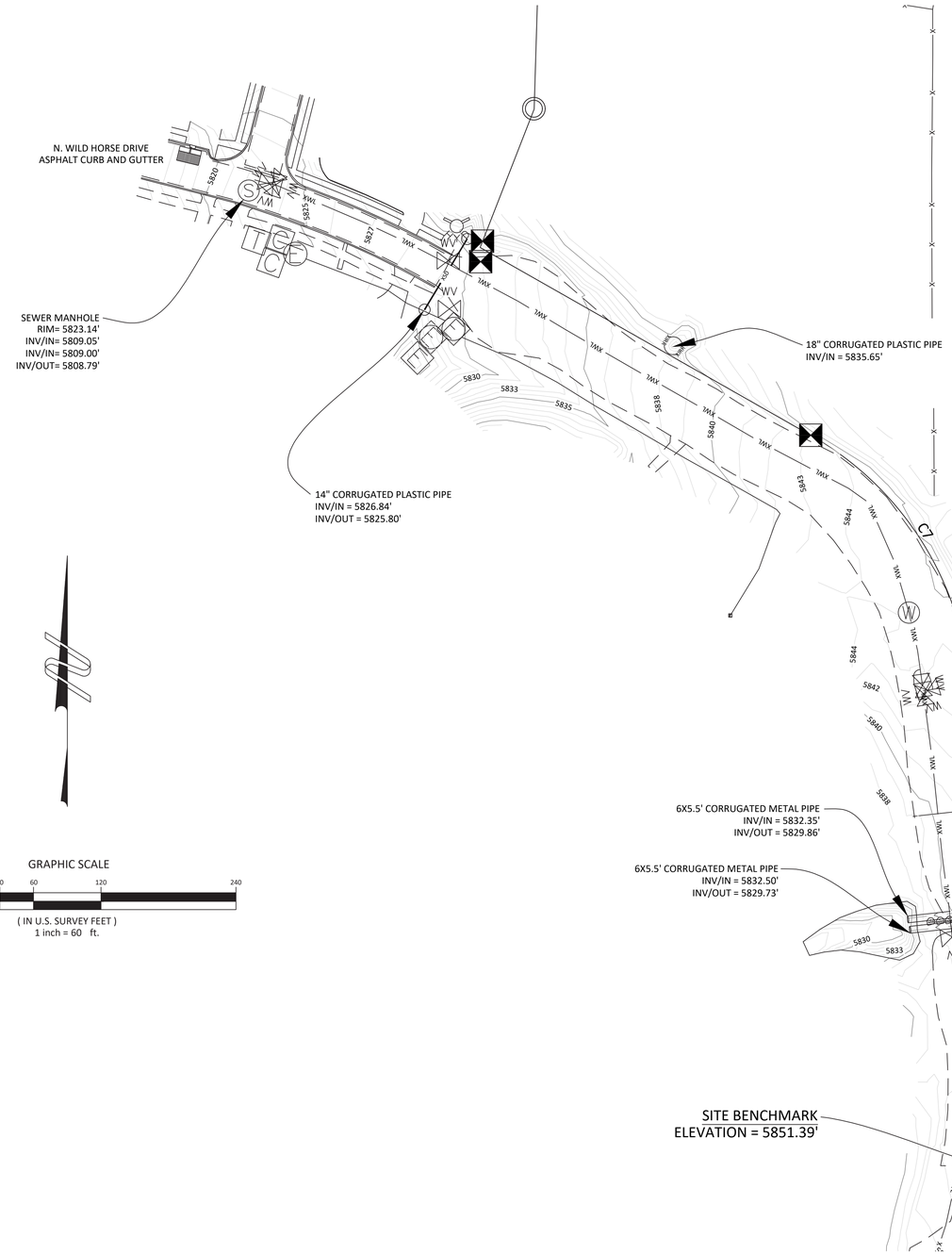
GENERAL UTILITY NOTES:

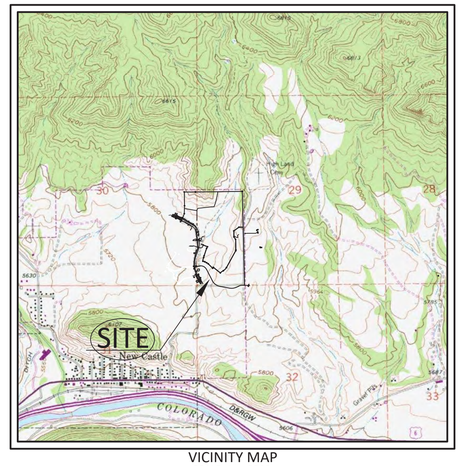
The locations of underground utilities have been plotted based on utility maps, construction/design plans, other information provided by utility companies and actual field locations in some instances. These utilities, as shown, may not represent actual field conditions. It is the responsibility of the contractor to contact all utility companies for field location of utilities prior to construction.

PARTIAL EXISTING CONDITIONS AND TOPOGRAPHICAL MAP OF:

A PORTION OF THE 'OPTION PROPERTY', AND BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M. TOWN OF NEW CASTLE, COLORADO

SHEET 2 OF 3





VICINITY MAP
SCALE: 1" = 2000'

SURVEY NOTES

1)Date of Survey: December 5-6 & 18-21, 2023.

2)Date of Preparation: March 6-11, 2024.

3)Linear Units: 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.

4)Basis of Bearing: Bearings shown hereon are based on an assumed bearing of N89°36'48"E, between found monuments for the 1/4 corner common to said Section 30 and Section 29 being a 3.25" brass cap on 2" iron pipe, stamped "1/4 S30/29 BLM 1988" and the Northeast corner of the option parcel being a #5 rebar & 1.25" yellow plastic cap, stamped "CLAYCOMB ENG L.S. 3174".

5)This survey does not constitute a title search by Sopris Engineering, LLC (SE) to determine ownership or easements of record. No title commitment was used in the preparation of this survey.

6)Basis of elevation: Basis of Elevation: Project based on Global Position System (GPS) observations from the Continuous Operating Reference Station (CORS) GSC1 utilizing the Continental United States 2012 Geoid Model (GEOID 18) CONUS and based the 1988 North American Vertical Datum (NAVD88) and a vertical shift of -4.01 feet as calculated by the North American Vertical Datum Conversion (VERTCON) an online service provided by a subsidy of the National Oceanic Atmospheric Administration (NOAA). This established a site benchmark elevation of 5851.39'. See sheets 2 & 3.

7)Contour interval one (1') foot.

EXISTING CONDITIONS LEGEND

- CABLE LINE LOCATION
- COMCAST PEDESTAL
- TELEPHONE PEDESTAL
- SEWER MANHOLE
- STORM MANHOLE
- STORM INLET
- ELECTRIC TRANSFORMER
- ELECTRIC RISER
- LIGHT POLE
- EXISTING FIRE HYDRANT
- WATER VALVE
- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND #5 REBAR
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 13501"
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 3174"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 36572"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 38182"
- FOUND #5 REBAR & RED PLASTIC CAP STAMPED "L.S. 20133"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 28643"

MONUMENTS WERE FOUND FLUSH WITH THE GROUND UNLESS OTHERWISE STATED

- UNDERGROUND ELECTRIC
- WATER LINE
- WIRE FENCE

GENERAL UTILITY NOTES:

The locations of underground utilities have been plotted based on utility maps, construction/design plans, other information provided by utility companies and actual field locations in some instances. These utilities, as shown, may not represent actual field conditions. It is the responsibility of the contractor to contact all utility companies for field location of utilities prior to construction.

GRAPHIC SCALE

60 0 30 60 120 240

(IN U.S. SURVEY FEET)
1 inch = 60 ft.

SURVEYOR'S STATEMENT

I, Mark S. Beckler, do hereby state that this survey was prepared by Sopris Engineering, LLC for CTS Investments, LLC, A Colorado Limited Liability Company, and that it is true and correct to the best of my knowledge and belief.

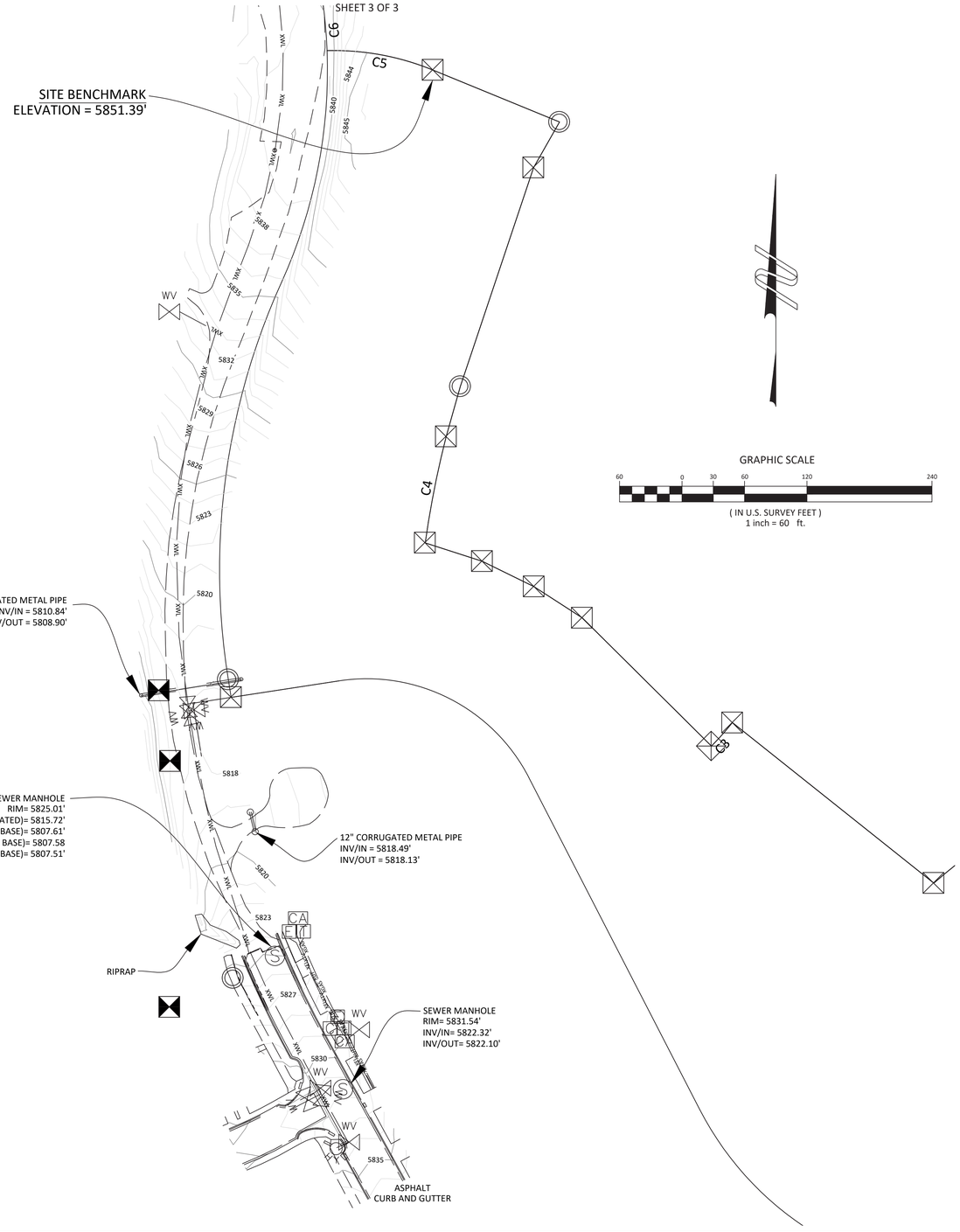
Mark S. Beckler L.S. No. 28643

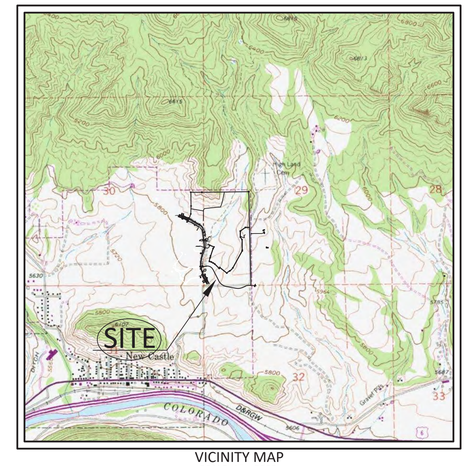
SOPRIS ENGINEERING LLC
502 MAIN STREET • SUITE A3 • CARBONDALE CO 81623
(970) 704 0311 • soprisengineering.com

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

PARTIAL EXISTING CONDITIONS AND TOPOGRAPHICAL MAP OF:

A PORTION OF THE 'OPTION PROPERTY', AND BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M. TOWN OF NEW CASTLE, COLORADO





VICINITY MAP
SCALE: 1" = 2000'

GRAPHIC SCALE

60 0 30 60 120 240

(IN U.S. SURVEY FEET)
1 inch = 60 ft.

SURVEY NOTES

1)Date of Survey: December 5-6 & 18-21, 2023.

2)Date of Preparation: March 6-11, 2024.

3)Linear Units: 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.

4)Basis of Bearing: Bearings shown hereon are based on an assumed bearing of N89°36'48"E, between found monuments for the 1/4 corner common to said Section 30 and Section 29 being a 3.25" brass cap on 2" iron pipe, stamped "1/4 S30/29 BLM 1988" and the Northeast corner of the option parcel being a #5 rebar & 1.25" yellow plastic cap, stamped "CLAYCOMB ENG L.S. 3174".

5)This survey does not constitute a title search by Sopris Engineering, LLC (SE) to determine ownership or easements of record. No title commitment was used in the preparation of this survey.

6)Basis of elevation: Basis of Elevation: Project based on Global Position System (GPS) observations from the Continuous Operating Reference Station (CORS) GSC1 utilizing the Continental United States 2012 Geoid Model (GEOID 18) CONUS and based the 1988 North American Vertical Datum (NAVD88) and a vertical shift of -4.01 feet as calculated by the North American Vertical Datum Conversion (VERTCON) an online service provided by a subsidy of the National Oceanic Atmospheric Administration (NOAA). This established a site benchmark elevation of 5851.39'. See sheets 2 & 3.

7)Contour interval one (1') foot.

EXISTING CONDITIONS LEGEND

- CA — CABLE LINE LOCATION
- C — COMCAST PEDESTAL
- T — TELEPHONE PEDESTAL
- S — SEWER MANHOLE
- W — STORM MANHOLE
- STORM INLET
- E — ELECTRIC TRANSFORMER
- E — ELECTRIC RISER
- LIGHT POLE
- EXISTING FIRE HYDRANT
- WV — WATER VALVE
- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND #5 REBAR
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 13501"
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 3174"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 36572"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 38182"
- FOUND #5 REBAR & RED PLASTIC CAP STAMPED "L.S. 20133"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 28643"

MONUMENTS WERE FOUND FLUSH WITH THE GROUND UNLESS OTHERWISE STATED

- XEL — UNDERGROUND ELECTRIC
- XWL — WATER LINE
- X — WIRE FENCE

GENERAL UTILITY NOTES:

The locations of underground utilities have been plotted based on utility maps, construction/design plans, other information provided by utility companies and actual field locations in some instances. These utilities, as shown, may not represent actual field conditions. It is the responsibility of the contractor to contact all utility companies for field location of utilities prior to construction.

SURVEYOR'S STATEMENT

I, Mark S. Beckler, do hereby state that this survey was prepared by Sopris Engineering, LLC for CTS Investments, LLC, A Colorado Limited Liability Company and that it is true and correct to the best of my knowledge and belief.

28643

Mark S. Beckler L.S. No. 28643

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

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

ILLUSTRATIVE SITE PLAN

LEGEND

1. TOWNHOMES
   10 BUILDINGS - 26 UNITS
2. LIVE/WORK APARTMENTS
   4 BUILDINGS - 80 UNITS
3. EMPTY-NESTERS APARTMENTS
   2 BUILDINGS - 24 UNITS
4. PAVED PATHS & SIDEWALKS
5. GATHERING AND BBQ AREA
6. SOFT SURFACE TRAILS
7. EXISTING TRAILS
8. FIRE ACCESS
9. NORTH WILD HORSE DRIVE EXTENSION
10. VIX PARK
11. LAKOTA PUD
12. FUTURE DEVELOPMENT
13. SELLER RETAINED LAND (WITH NEW LOT LINE: 12.3 ACRES)
14. EXISTING RESIDENTIAL DEVELOPMENT

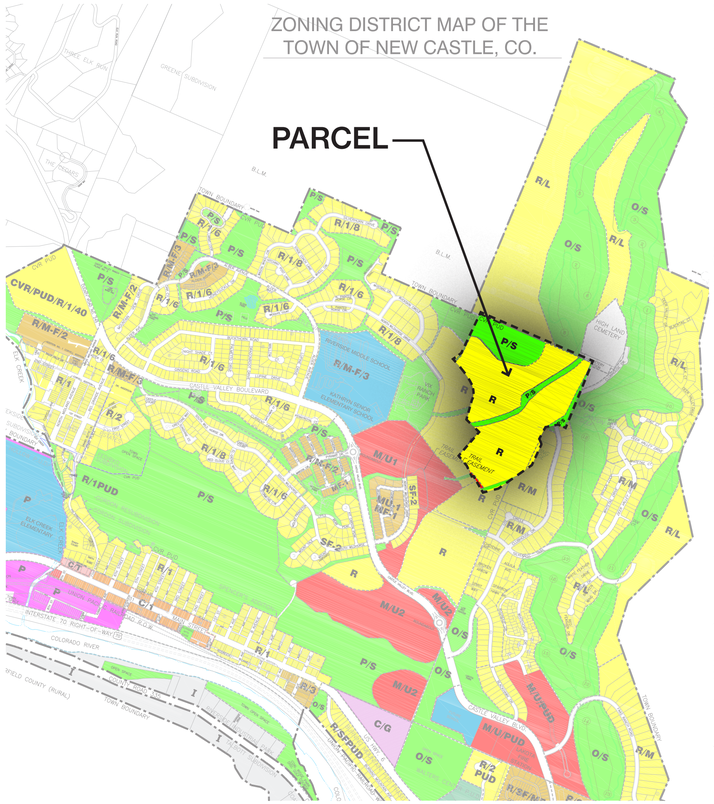
TH-B10
TH-B11
TH-B12
TH-B13
TH-B14
TH-B15
TH-B16
TH-B9
TH-B8
TH-B7
B-1
B-2
B-3
B-4
B-5
B-6
VISTA LOOP
CHAPMAN LOOP
NORTH WILD HORSE DRIVE
VISTA LOOP
MEDARIS LOOP

50' 100' 200'

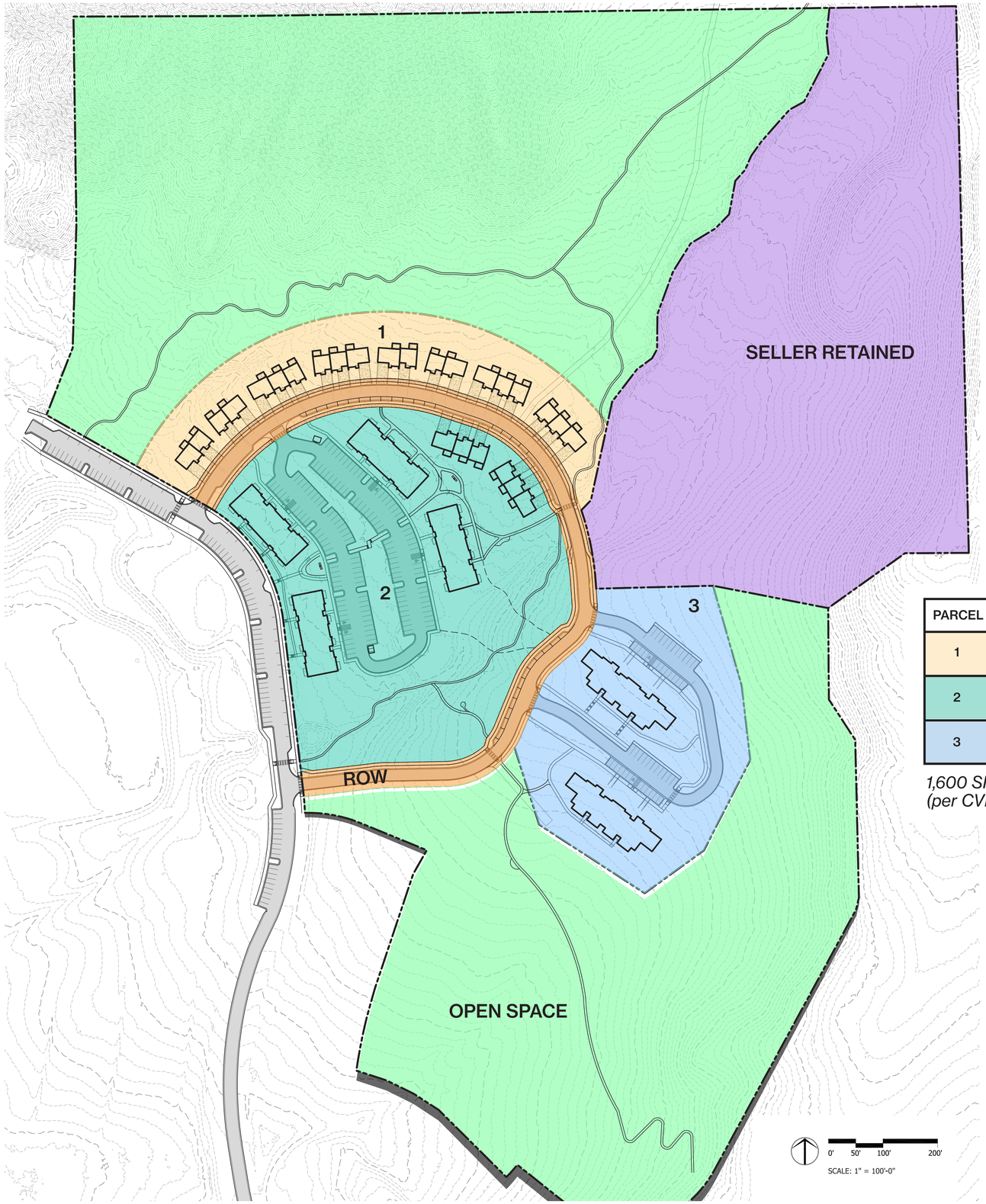
N

DHM DESIGN
LANDSCAPE ARCHITECTURE
ECOLOGICAL PLANNING
LAND PLANNING + URBAN DESIGN

PARCEL ZONING: CVR PUD MF-2



DEVELOPMENT SUMMARY:



LEGEND

- PARCEL 1 - 20 UNITS
  114,768 sq ft TOTAL (2.63 ac)
  5,738 sq ft PER UNIT (0.13 ac)
- PARCEL 2 - 86 UNITS
  304,463 sq ft TOTAL (6.99 ac)
  3,540 sq ft PER UNIT (0.08 ac)
- PARCEL 3 - 24 UNITS
  170,239 sq ft TOTAL (3.9 ac)
  7,093 sq ft PER UNIT (0.16 ac)
- ROW PARCEL
  85,607 sq ft TOTAL (1.96 ac)
- PASSIVE OPEN SPACE
  1,365,480 sq ft TOTAL (31.35 ac)

= 46.8 TOTAL DEVELOPMENT ACREAGE

- SELLER RETAINED PARCEL
  534,275 sq ft TOTAL (12.27 ac)

= 59.1 TOTAL PARCEL ACREAGE

**SELLER RETAINED LOT LINE TO BE ADJUSTED AT FINAL PLAN SUBMITTAL. UPDATED LOT LINE TO INCLUDE MAIN DRAINAGE. RESULTING ACREAGE OF SELLER RETAINED LOT TO BE 12.3 ACRES.

PARCEL	AREA (in s.f.)	# OF UNITS	DENSITY (dwelling unit per acre)
1	114,768 SF	20	+/- 7.6
2	305,681 SF	86	+/- 12.3
3	170,239 SF	24	+/- 6.2

1,600 SF lot area per unit (27.2 du/ac) max density (per CVR MF-2 Zone District)

PARKING SUMMARY:

Parking:

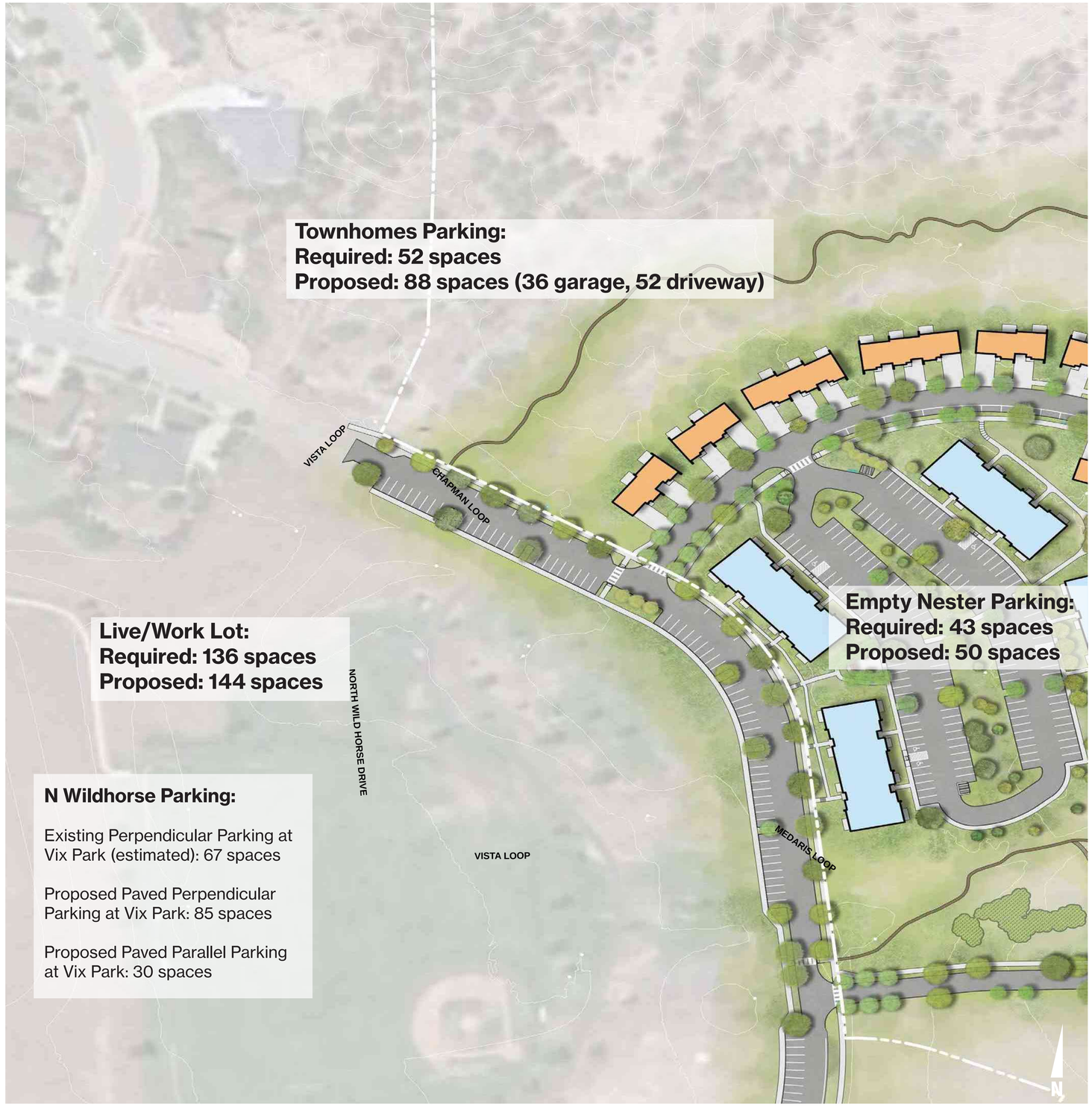
required	proposed
'general parking' buildings 1-4 units = 2 spaces/du buildings 5+ units = 1.5 spaces/du required total: 208 spaces *per code 17.104.100*	
'seasonal + recreational vehicle parking' (1) space for every 5 units of 5-plex or greater required: 21 *per code 17.104.100*	TOTAL PROPOSED SPACES: 282 (including garage, off-street, driveway)
TOTAL REQUIRED SPACES: 229	

TOTAL PARALLEL PARKING PROPOSED WITHIN VISTA LOOP ROAD ROW = 31 SPACES

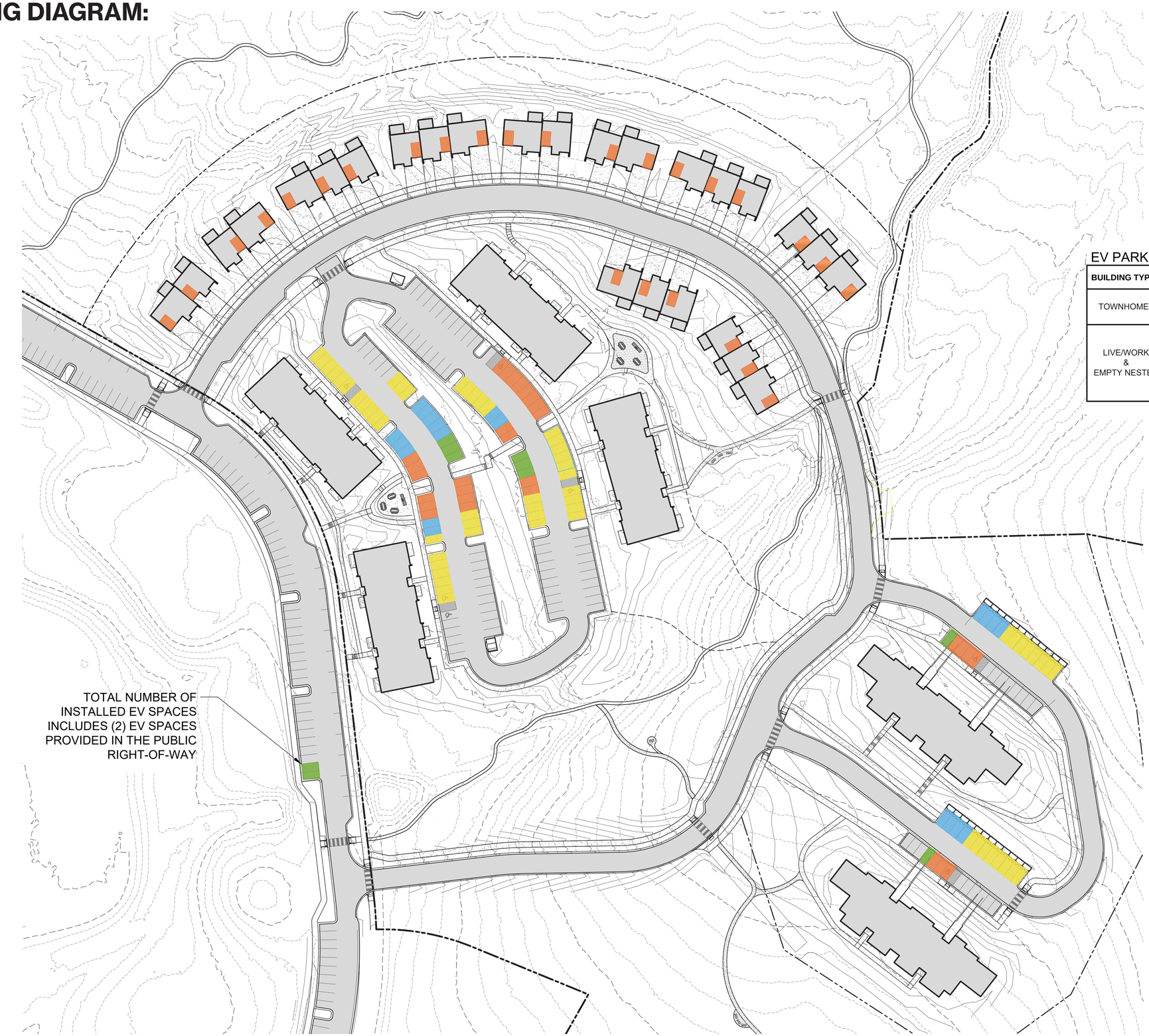
TOTAL PARKING PROPOSED WITHIN NORTH WILD HORSE ROW = 115 SPACES

TOTAL ADDED PARKING (development off-street + development on-street + N Wild Horse on-street - existing N Wild Horse on-street) = **361 NET SPACES**

PARKING BY BUILDING TYPE:



EV PARKING DIAGRAM:



LEGEND

- EV INSTALLED SPACES
  5% of parking spaces (10 TOTAL)
- EV READY SPACES
  15% of parking spaces (30 TOTAL)
- EV CAPABLE SPACES
  10% of parking spaces (26 TOTAL)
- EV CAPABLE LIGHT SPACES
  30% of parking spaces (59 TOTAL)

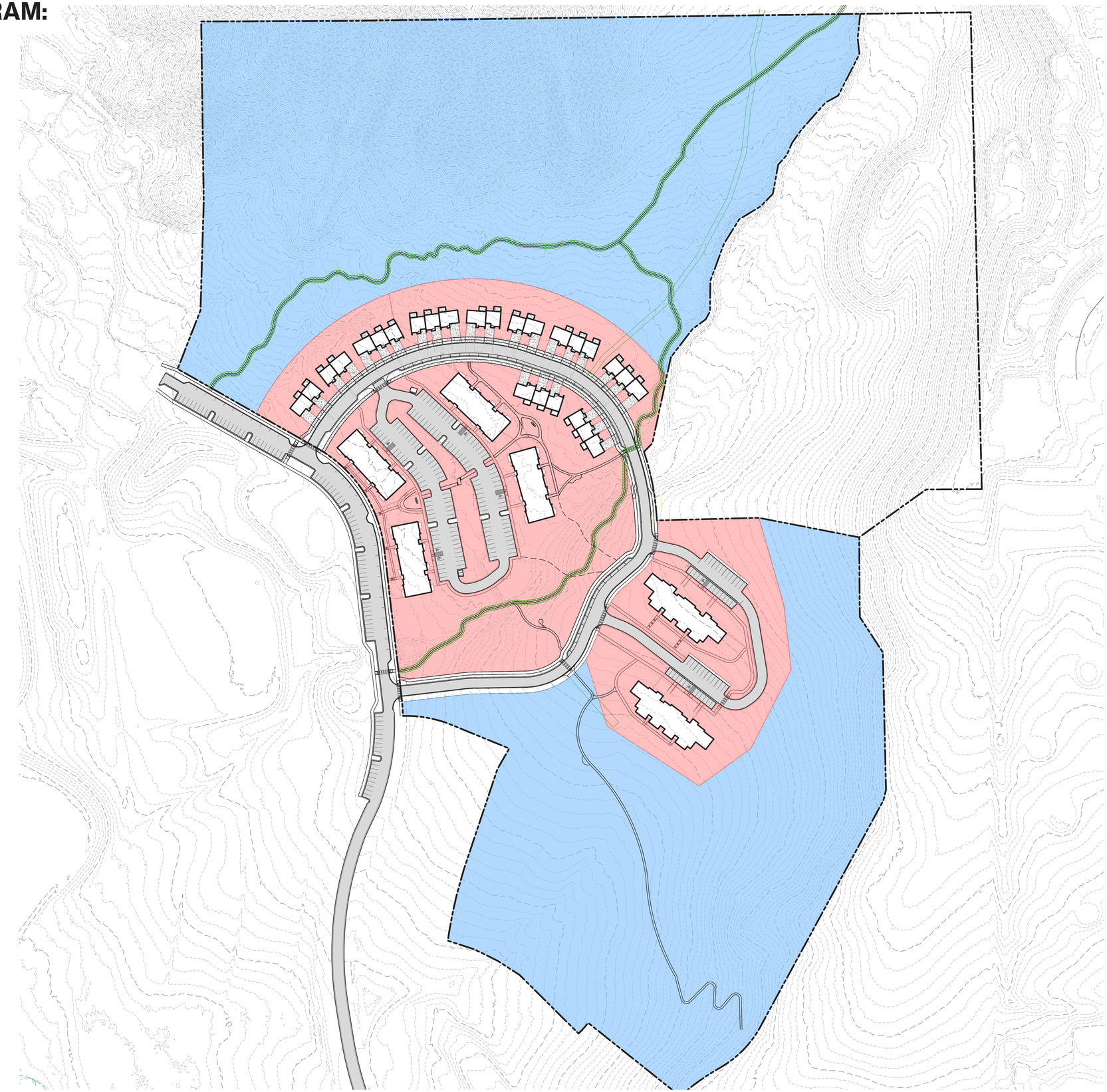
EV PARKING SPACE TABLE

BUILDING TYPE	PARKING SPACES PROVIDED	STATE EV CODE REQUIREMENT	EV SPACES REQUIRED	EV SPACES PROVIDED
TOWNHOMES	N/A (26 UNITS)	1 EV READY SPACE PER UNIT	26 (ALL EV READY)	26 (ALL EV READY)
LIVE/WORK & EMPTY NESTER	194	R-2 OCCUPANCIES WITH >10 PARKING SPACES: EV INSTALLED = 5% EV READY = 15% EV CAPABLE = 10% EV CAPABLE LIGHT = 30%	10 INSTALLED 29 READY 20 CAPABLE 59 LIGHT	10 INSTALLED 29 READY 20 CAPABLE 59 LIGHT

0' 25' 50' 100'

SCALE: 1" = 50'-0"

OPEN SPACE DIAGRAM:



LEGEND

PASSIVE OPEN SPACE
OWNED BY HOA / CIC
1,365,480 sq ft (31.3 acres) TOTAL

DEVELOPMENT OPEN SPACE
OWNED BY HOA / CIC
405,761 sq ft (9.3 acres) TOTAL

PUBLIC ACCESS TRAIL EASEMENT

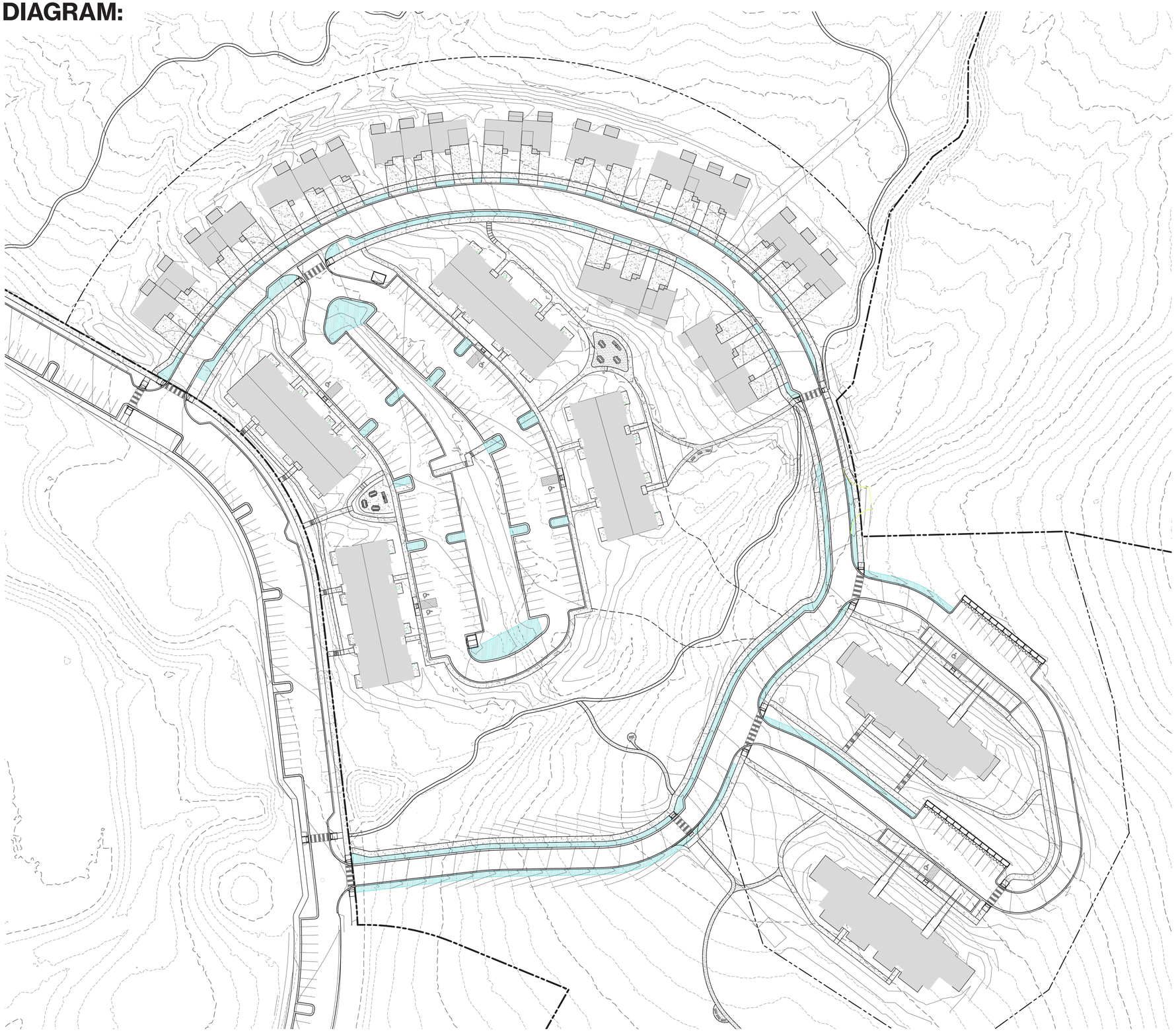
NOTES

1. PASSIVE OPEN SPACE TO INCLUDE UNDISTURBED ACREAGE AND TRAILS OUTSIDE OF THE AREA OF DEVELOPMENT. PUBLIC ACCESS EASEMENTS TO BE DEFINED FOR TRAIL USAGE.
2. DEVELOPMENT OPEN SPACE TO INCLUDE OPEN SPACE SUCH AS LAWNS, LANDSCAPED AREAS, NATURAL AREAS, RECREATION AREAS AND TRAILS WITHIN THE AREA OF DEVELOPMENT. DEVELOPMENT OPEN SPACE MAY INCLUDE TRAIL EASEMENTS FOR PUBLIC USE.

0' 50' 100' 200'

SCALE: 1" = 100'-0"

SNOW STORAGE DIAGRAM:



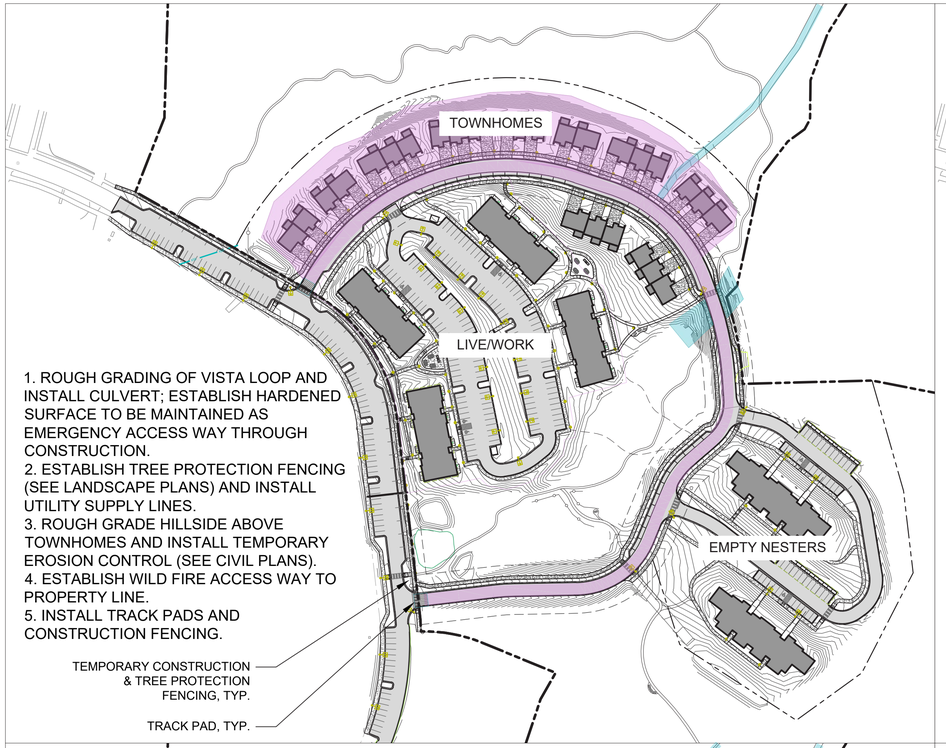
LEGEND

SNOW STORAGE AREAS
TOTAL SNOW STORAGE = 19,693 SQ FT
17.8% OF TOTAL ROADWAY AREA

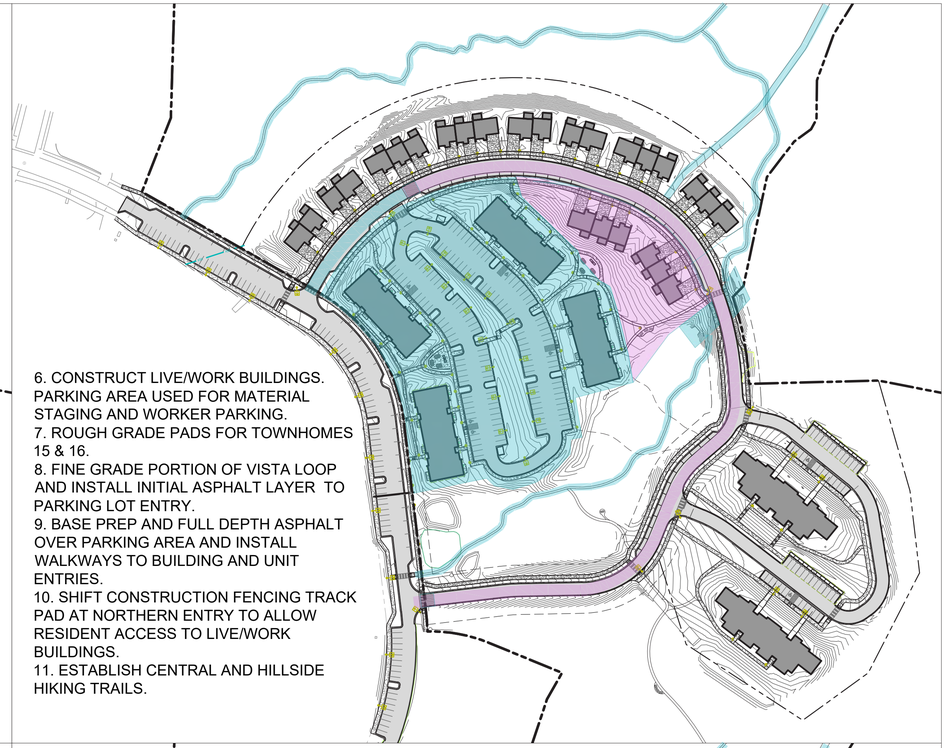
0' 25' 50' 100'

SCALE: 1" = 50'-0"

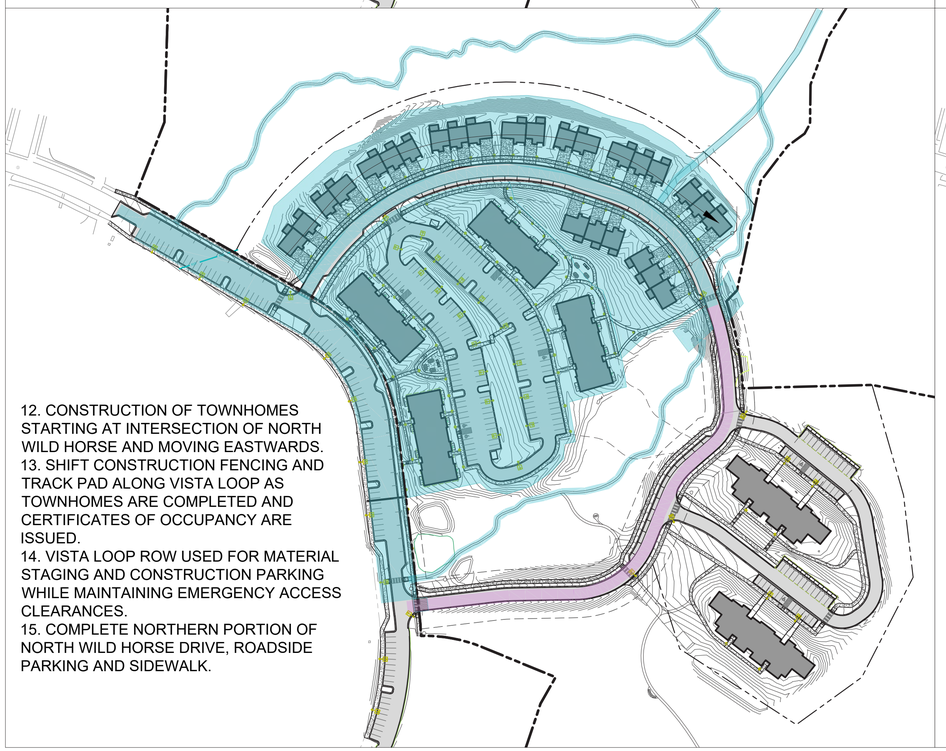
CONSTRUCTION PHASING DIAGRAM:



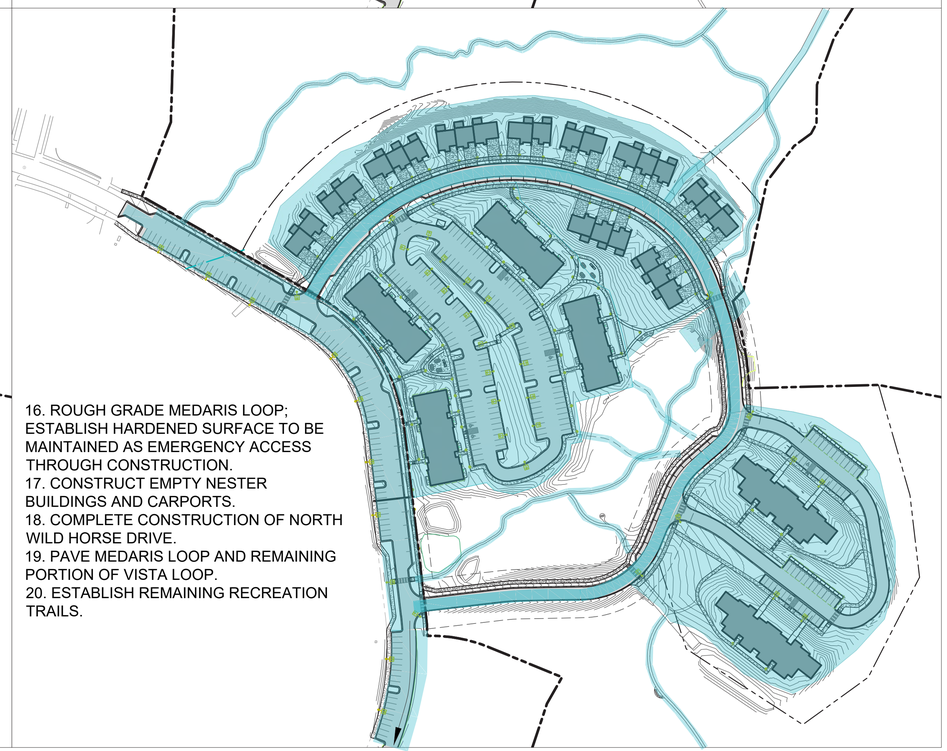
1. ROUGH GRADING OF VISTA LOOP AND INSTALL CULVERT; ESTABLISH HARDENED SURFACE TO BE MAINTAINED AS EMERGENCY ACCESS WAY THROUGH CONSTRUCTION.
2. ESTABLISH TREE PROTECTION FENCING (SEE LANDSCAPE PLANS) AND INSTALL UTILITY SUPPLY LINES.
3. ROUGH GRADE HILLSIDE ABOVE TOWNHOMES AND INSTALL TEMPORARY EROSION CONTROL (SEE CIVIL PLANS).
4. ESTABLISH WILD FIRE ACCESS WAY TO PROPERTY LINE.
5. INSTALL TRACK PADS AND CONSTRUCTION FENCING.



6. CONSTRUCT LIVE/WORK BUILDINGS. PARKING AREA USED FOR MATERIAL STAGING AND WORKER PARKING.
7. ROUGH GRADE PADS FOR TOWNHOMES 15 & 16.
8. FINE GRADE PORTION OF VISTA LOOP AND INSTALL INITIAL ASPHALT LAYER TO PARKING LOT ENTRY.
9. BASE PREP AND FULL DEPTH ASPHALT OVER PARKING AREA AND INSTALL WALKWAYS TO BUILDING AND UNIT ENTRIES.
10. SHIFT CONSTRUCTION FENCING TRACK PAD AT NORTHERN ENTRY TO ALLOW RESIDENT ACCESS TO LIVE/WORK BUILDINGS.
11. ESTABLISH CENTRAL AND HILLSIDE HIKING TRAILS.



12. CONSTRUCTION OF TOWNHOMES STARTING AT INTERSECTION OF NORTH WILD HORSE AND MOVING EASTWARDS.
13. SHIFT CONSTRUCTION FENCING AND TRACK PAD ALONG VISTA LOOP AS TOWNHOMES ARE COMPLETED AND CERTIFICATES OF OCCUPANCY ARE ISSUED.
14. VISTA LOOP ROW USED FOR MATERIAL STAGING AND CONSTRUCTION PARKING WHILE MAINTAINING EMERGENCY ACCESS CLEARANCES.
15. COMPLETE NORTHERN PORTION OF NORTH WILD HORSE DRIVE, ROADSIDE PARKING AND SIDEWALK.



16. ROUGH GRADE MEDARIS LOOP; ESTABLISH HARDENED SURFACE TO BE MAINTAINED AS EMERGENCY ACCESS THROUGH CONSTRUCTION.
17. CONSTRUCT EMPTY NESTER BUILDINGS AND CARPORTS.
18. COMPLETE CONSTRUCTION OF NORTH WILD HORSE DRIVE.
19. PAVE MEDARIS LOOP AND REMAINING PORTION OF VISTA LOOP.
20. ESTABLISH REMAINING RECREATION TRAILS.

WORK IN PROGRESS

WORK COMPLETED

GENERAL NOTES

1. Contractor shall perform dust control measures throughout construction. These measures shall comply with the dust suppression specifications in the Town of New Castle Public Works Manual, Section 2150.

2. Contractor shall maintain temporary erosion controls throughout construction, see Civil plans.

3. Contractor shall suppress weed growth throughout construction.

4. Areas to be seeded temporarily for erosion control or dust suppression during construction shall utilize the "Transitional" or "Native" seed mixes shown on the Landscape Plans. Contractor shall not use any other seed mixes without approval from project Landscape Architect.

5. Seeded areas shall be irrigated. Temporary (i.e. above ground) irrigation may be acceptable until the permanent irrigation system can be installed.

6. Temporary emergency access routes shall be maintained as required by the Fire Department throughout construction.

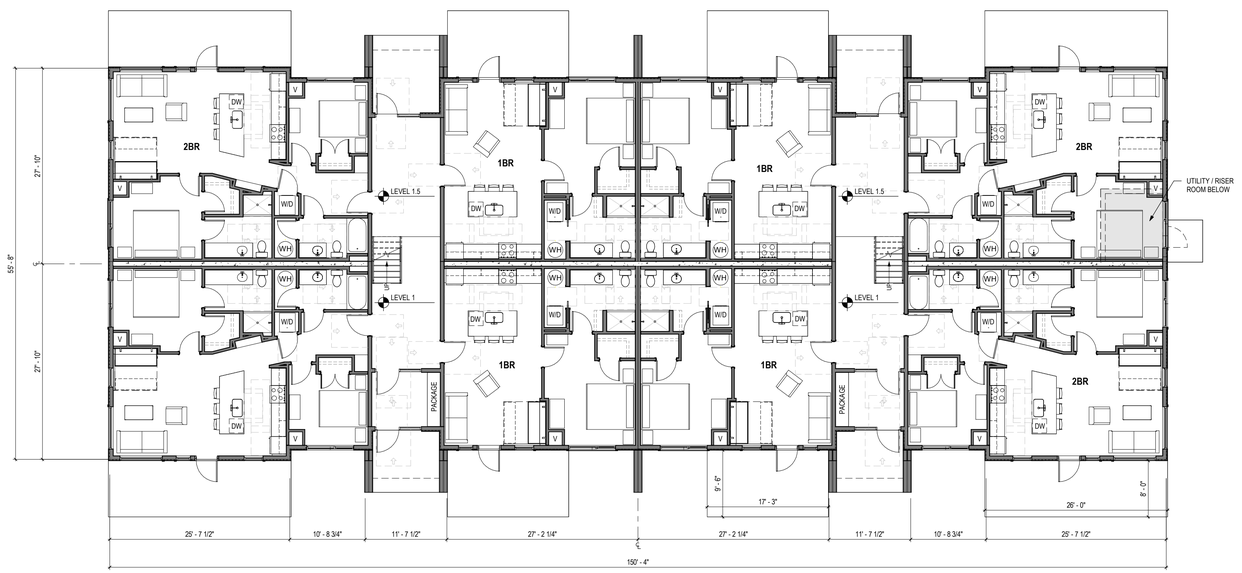
0' 60' 120' 240'

SCALE: 1" = 120'-0"

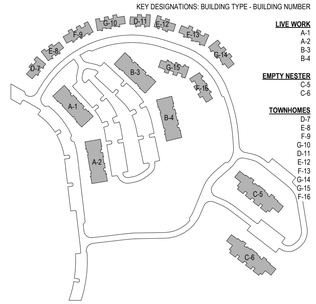
UNIT MIX SUMMARY

Building Type:	Number of Buildings:	Total Units:	Units/building:	Bedrooms/unit:
Live/Work	4	80	16 or 24	1-2
Empty Nester	2	24	12	1-2
Townhouse	10	26	2-3	3
Totals:	15	130		238

live work - 2 & 2.5 floor plan
NOT TO SCALE



live work - 1 & 1.5 floor plan
NOT TO SCALE



ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

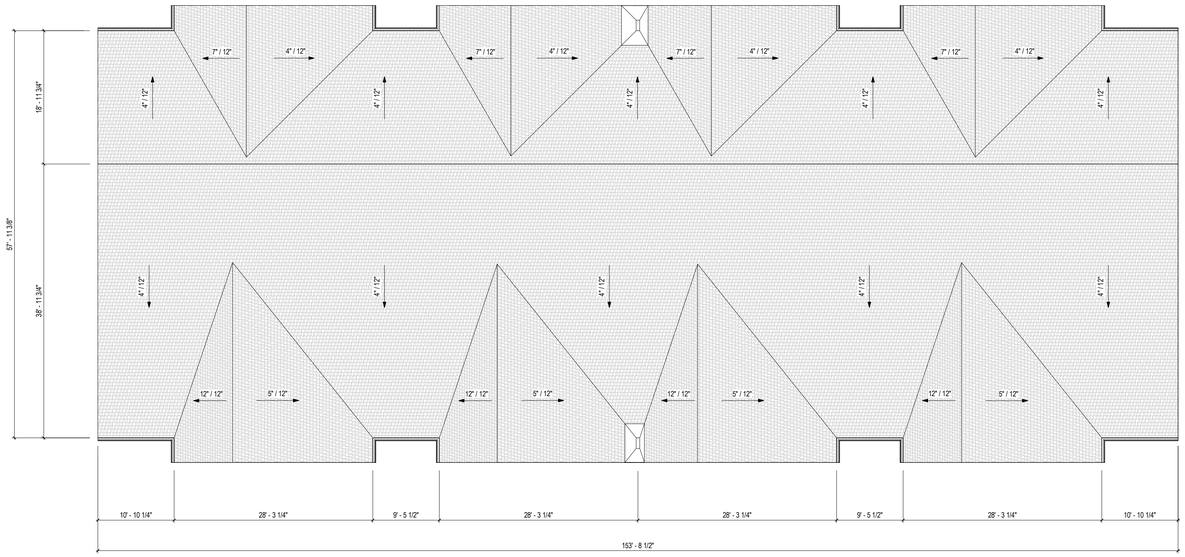
REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
LIVE/WORK BLDG 4 - FLOOR PLANS

SHEET NUMBER:
A2.0



live/work 4 - Roof Plan

NOT TO SCALE

live work - 3 & 3.5 floor plan

NOT TO SCALE

ma design

1410 Race Street
Cincinnati, OH 45202
p 513 407 8260

www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

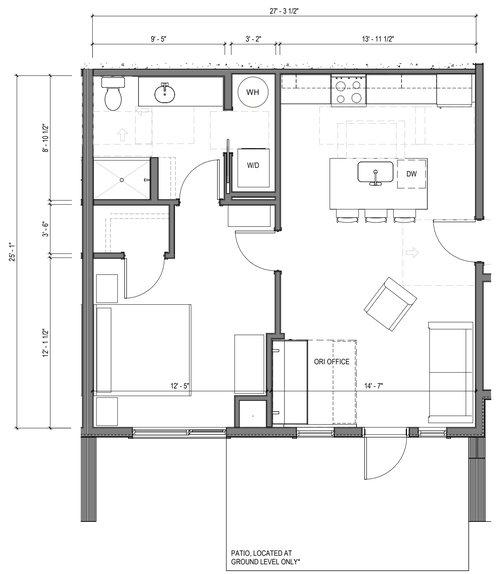
REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

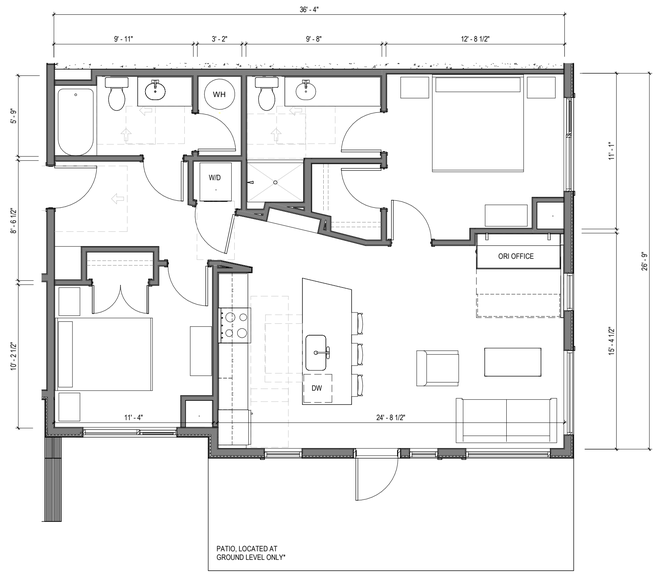
SHEET NAME:
LIVE/WORK BLDG 4 - FLOOR PLANS

SHEET NUMBER:
A2.1



live / work 1 bed unit - 680 SF

NOT TO SCALE



live / work 2 bed unit - 960 SF

NOT TO SCALE

ma design

1410 Race Street
Cincinnati, OH 45202
p 513 407 8260

www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

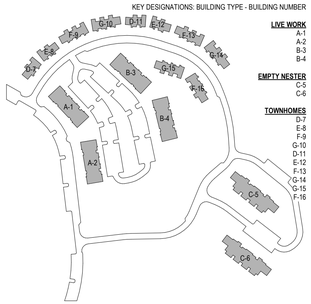
REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
LIVE/WORK - UNIT PLANS

SHEET NUMBER:
A2.2



COLOR LEGEND

- Natural Linen
- Secret Garden
- Woven Wicker
- Tricorn Black (Accents)
- Clary Sage
- Truepenny / Trinket (Accents)

*Or Equivalent Tone

MATERIAL LEGEND

ELEVATION

NATURAL FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIBER CEMENT SHIPLAP SOFFIT

TO BE MINIMUM 1 HR RATED

ASPHALT SHINGLE ROOFING

TO BE MINIMUM CLASS A RATED

NATURAL FIBER CEMENT BOARD SIDING (UNPAINTED)

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIRE TREATED WOOD ACCENTS

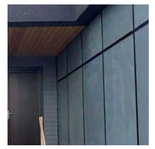
TO BE MINIMUM 1 HR RATED TO MEET THE REQ. OF SECTION 2303.2 OF IBC

FIBER CEMENT SOFFIT

TO BE MINIMUM 1 HR RATED

PAINTED FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL



METAL ROOFING

TO BE MINIMUM CLASS A RATED

WINDOWS

TO BE TEMPERED

live work 3-story - left elevation

NOT TO SCALE

live work 3-story - rear elevation

NOT TO SCALE

live work 3-story - right elevation

NOT TO SCALE

live work 3-story - front elevation

NOT TO SCALE

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

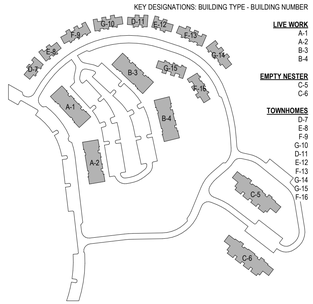
REVISION:

PROJECT NUMBER:
23192

DATE:
31 OCTOBER 2024

SHEET NAME:
LIVE WORK 3-STORY - BUILDING ELEVATIONS

SHEET NUMBER:
A2.3



COLOR LEGEND

- Natural Linen
- Secret Garden
- Woven Wicker
- Tricorn Black (Accents)
- Clary Sage
- Truepenny / Trinket (Accents)

*Or Equivalent Tone

MATERIAL LEGEND

ELEVATION

NATURAL FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIBER CEMENT SHIPLAP SOFFIT

TO BE MINIMUM 1 HR RATED

ASPHALT SHINGLE ROOFING

TO BE MINIMUM CLASS A RATED

NATURAL FIBER CEMENT BOARD SIDING (UNPAINTED)

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIRE TREATED WOOD ACCENTS

TO BE MINIMUM 1 HR RATED TO MEET THE REQ. OF SECTION 2303.2 OF IBC

FIBER CEMENT SOFFIT

TO BE MINIMUM 1 HR RATED

PAINTED FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

METAL ROOFING

TO BE MINIMUM CLASS A RATED

WINDOWS

TO BE TEMPERED

live work 2-story - left elevation

NOT TO SCALE

live work 2-story - rear elevation

NOT TO SCALE

live work 2-story - right elevation

NOT TO SCALE

live work 2-story - front elevation

NOT TO SCALE

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER:
23192

DATE:
31 OCTOBER 2024

SHEET NAME:
LIVE WORK 2 -STORY - BUILDING ELEVATIONS

SHEET NUMBER:
A2.4

lw4 - 3d view looking se

lw4 - 3d view looking ne

lw4 - 3d view looking nw

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
LIVE/WORK BLDG 4 - 3D VIEWS

SHEET NUMBER:
A2.5

lw1 - 3d view looking se

lw1 - 3d view looking nw

lw1 -3d view looking ne

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
LIVE/WORK BLDG 1 - 3D VIEWS

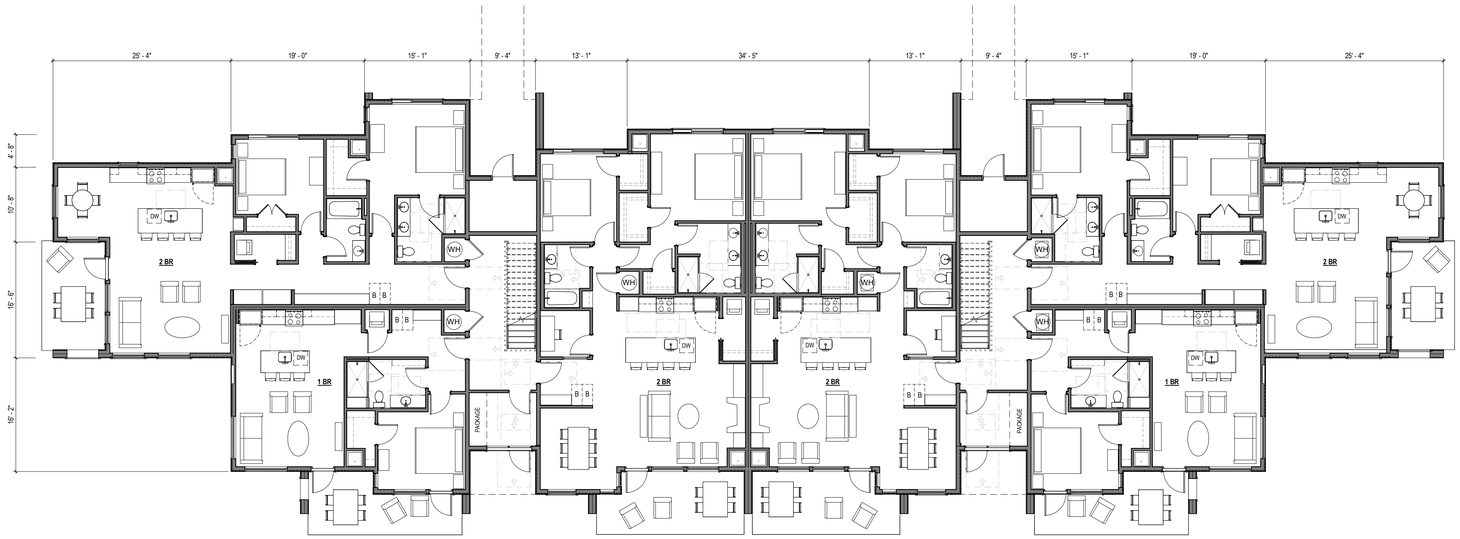
SHEET NUMBER:
A2.6

KEY DESIGNATIONS: BUILDING TYPE - BUILDING NUMBER

LIVE WORK
A-1
A-2
B-3
B-4

EMPTY NESTER
C-5
C-6

TOWNHOMES
D-7
E-8
F-9
G-10
D-11
E-12
F-13
G-14
G-15
F-16



empty nester - floor 1
NOT TO SCALE

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - EMPTY NESTER

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

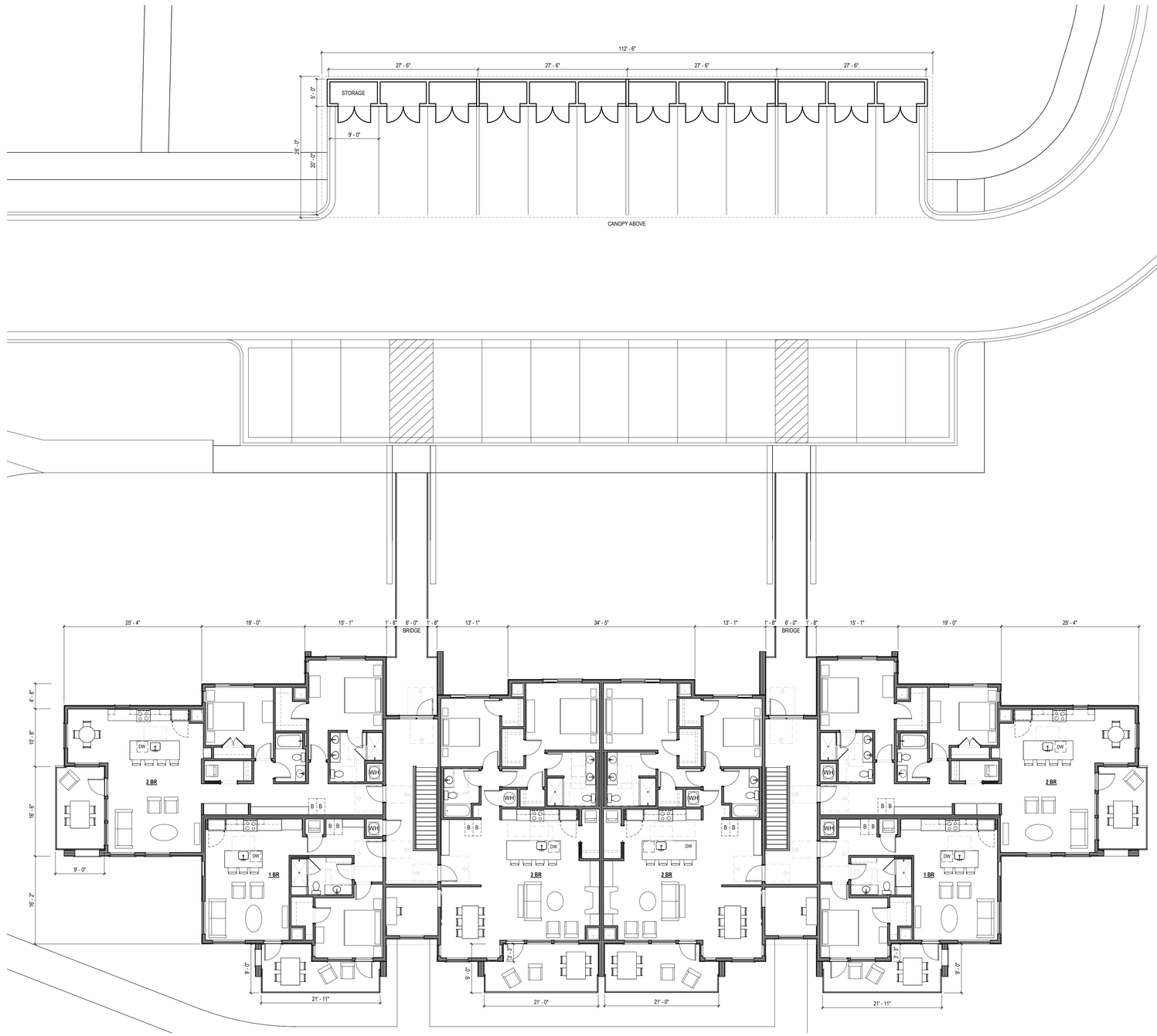
PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
EMPTY NESTER BLDG 2 - FLOOR PLANS

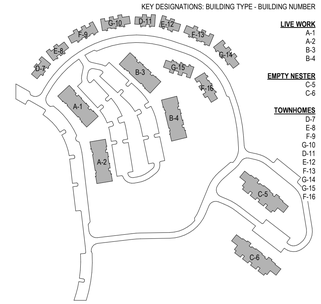
SHEET NUMBER:
A3.0

© 2024 MA Design



empty nester - floor 2

NOT TO SCALE



ma design

1410 Race Street
Cincinnati, OH 45202
p 513 407 8260

www.designwithma.com

NEW CASTLE RESIDENTIAL - EMPTY NESTER

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

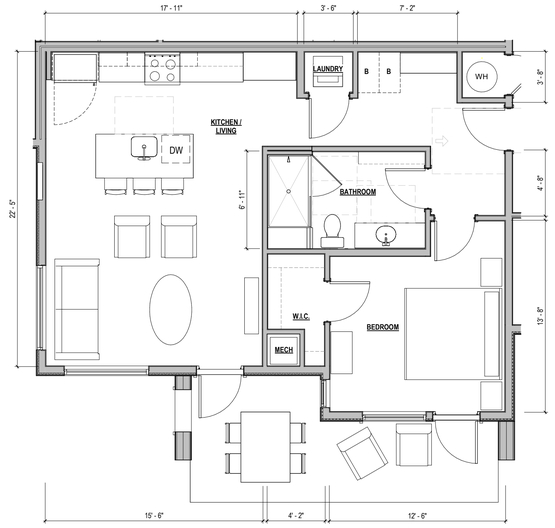
PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
EMPTY NESTER BLDG 2 - FLOOR PLANS

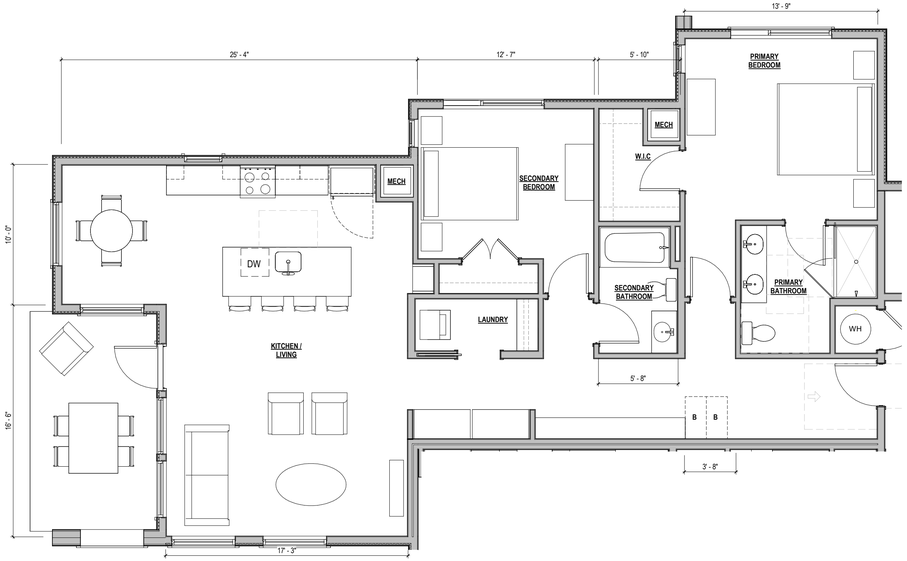
SHEET NUMBER:
A3.1

© 2024 MA Design



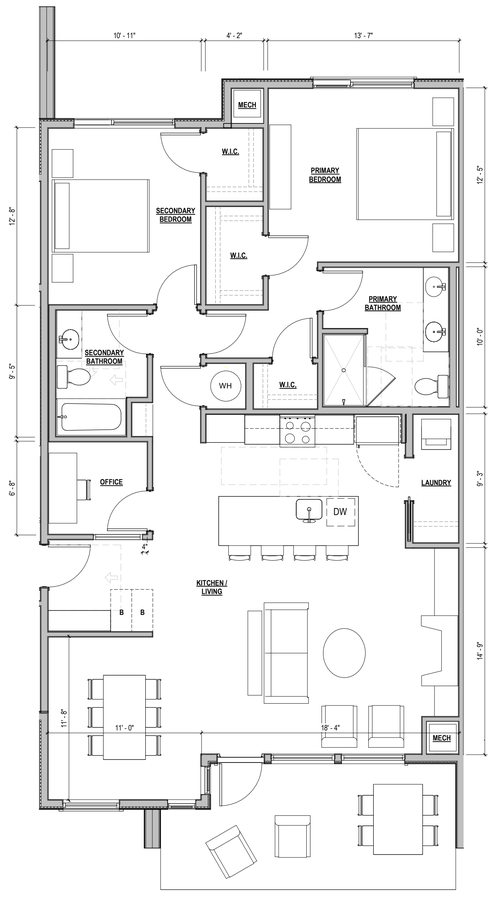
EN - 1 Bed Unit - 770 SF

NOT TO SCALE



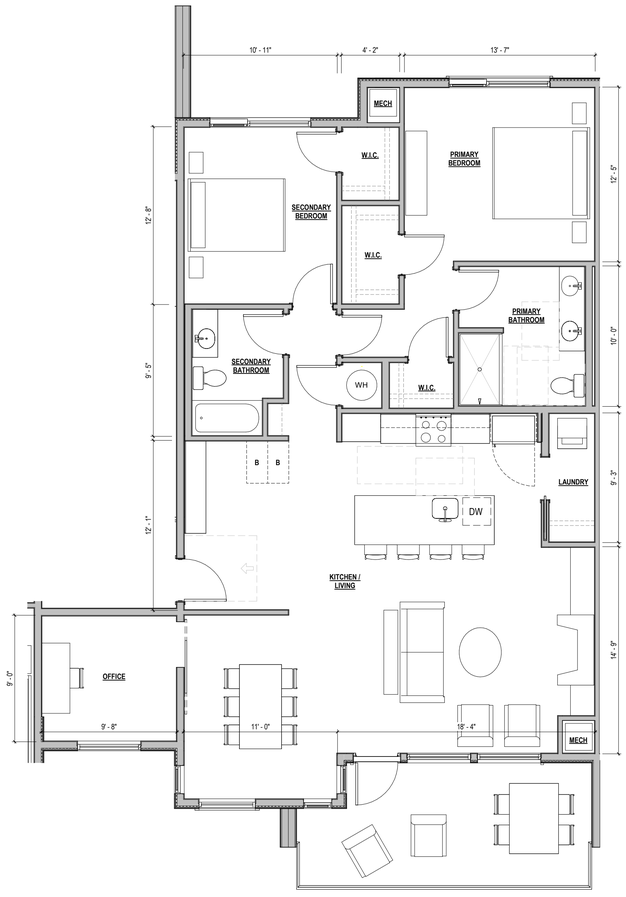
EN - 2 Bed Corner Unit - 1375 SF

NOT TO SCALE



EN - 2 Bed Unit - 1380 SF

NOT TO SCALE



EN - 2 Bed Unit 2nd Floor - 1470 SF

NOT TO SCALE

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - EMPTY NESTER

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
EMPTY NESTER - UNIT PLANS

SHEET NUMBER:
A3.2

EN2 - LEFT ELEVATION

NOT TO SCALE

EN2 - RIGHT ELEVATION

NOT TO SCALE

MATERIAL LEGEND

ELEVATION

NATURAL FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIBER CEMENT SHIPLAP SOFFIT

TO BE MINIMUM 1 HR RATED

ASPHALT SHINGLE ROOFING

TO BE MINIMUM CLASS A RATED

NATURAL FIBER CEMENT BOARD SIDING (UNPAINTED)

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIRE TREATED WOOD ACCENTS

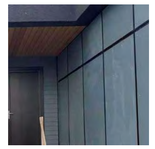
TO BE MINIMUM 1 HR RATED TO MEET THE REQ. OF SECTION 2303.2 OF IBC

FIBER CEMENT SOFFIT

TO BE MINIMUM 1 HR RATED

PAINTED FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL



METAL ROOFING

TO BE MINIMUM CLASS A RATED

WINDOWS

TO BE TEMPERED

EN2 - FRONT ELEVATION

NOT TO SCALE

EN2 - REAR ELEVATION **NOT TO SCALE**

COLOR LEGEND

- Natural Linen
- Woven Wicker
- Clary Sage
- Secret Garden
- Tricorn Black (Accents)
- Truepenny / Trinket (Accents)

*Or Equivalent Tone

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - EMPTY NESTER

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER: 23192

DATE: 31 OCTOBER 2024

SHEET NAME: EMPTY NESTER BLDG 2 - BUILDING ELEVATIONS

SHEET NUMBER: A3.3

EN2 - 3d view looking se

EN2 - 3d view looking ne

EN2 - 3d view looking nw

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - EMPTY NESTER

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

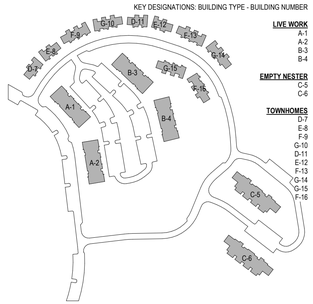
REVISION:

PROJECT NUMBER:
23192

DATE:
13 SEPTEMBER 2024

SHEET NAME:
EMPTY NESTER BLDG 2 - 3D VIEWS

SHEET NUMBER:
A3.4



COLOR LEGEND

- Natural Linen
- Woven Wicker
- Clary Sage
- Secret Garden
- Tricorn Black (Accents)
- Truepenny / Trinket (Accents)

*Or Equivalent Tone

* COLORS SHOWN ON ELEVATION BELOW ARE EXAMPLES OF POSSIBLE CONFIGURATIONS. FACADE COLORS TO ALTERNATE BETWEEN SHADES OF BROWN AND GREEN BETWEEN TRIPLEX AND DUPLEX GROUPINGS

MATERIAL LEGEND

ELEVATION

NATURAL FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIBER CEMENT SHIPLAP SOFFIT

TO BE MINIMUM 1 HR RATED

ASPHALT SHINGLE ROOFING

TO BE MINIMUM CLASS A RATED

NATURAL FIBER CEMENT BOARD SIDING (UNPAINTED)

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

FIRE TREATED WOOD ACCENTS

TO BE MINIMUM 1 HR RATED TO MEET THE REQ. OF SECTION 2303.2 OF IBC

FIBER CEMENT SOFFIT

TO BE MINIMUM 1 HR RATED

PAINTED FIBER CEMENT BOARD SIDING

TO BE MINIMUM 1 HR RATED OR AS APPROVED AS NON COMBUSTIBLE MATERIAL

METAL ROOFING

TO BE MINIMUM CLASS A RATED

WINDOWS

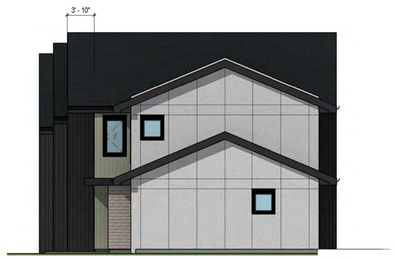
TO BE TEMPERED

townhome triplex back elevation
NOT TO SCALE

townhome duplex side elevation
NOT TO SCALE

townhome duplex back elevation
NOT TO SCALE

townhome triplex front elevation
NOT TO SCALE



townhome triplex side elevation
NOT TO SCALE

townhome duplex front elevation
NOT TO SCALE

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - TOWNHOMES

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

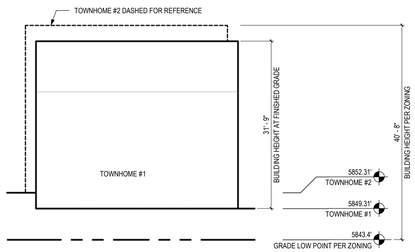
PROJECT NUMBER:
23192

DATE:
31 OCTOBER 2024

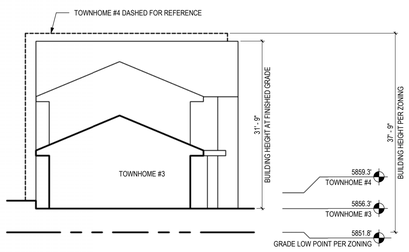
SHEET NAME:
TOWNHOME ELEVATIONS

SHEET NUMBER:
A4.0

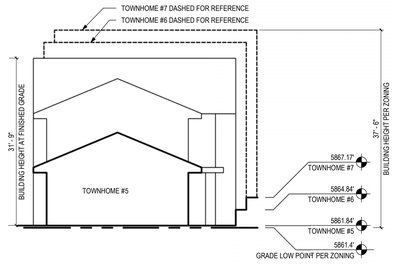
TOWNHOME CLUSTER (D-7) - DUPLEX



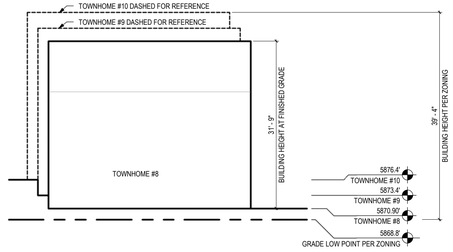
TOWNHOME CLUSTER (E-8) - DUPLEX



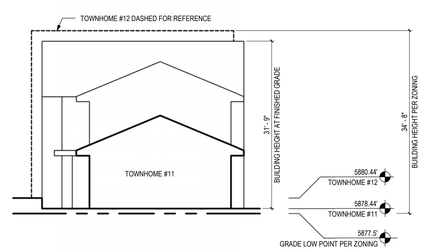
TOWNHOME CLUSTER (F-9) - TRIPLEX



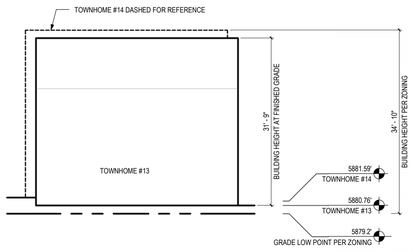
TOWNHOME CLUSTER (G-10) - TRIPLEX



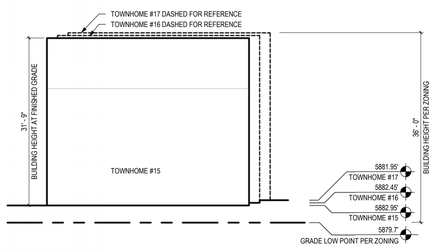
TOWNHOME CLUSTER (D-11) - DUPLEX



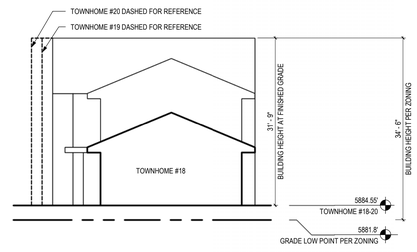
TOWNHOME CLUSTER (E-12) - DUPLEX



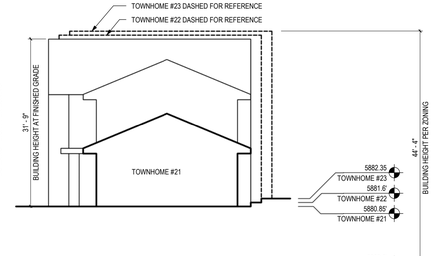
TOWNHOME CLUSTER (F-13) - TRIPLEX



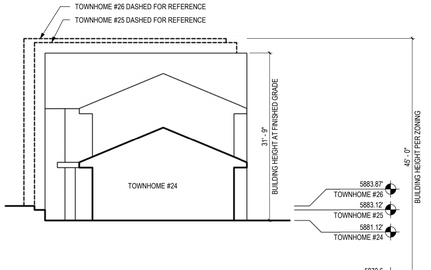
TOWNHOME CLUSTER (G-14) - TRIPLEX



TOWNHOME CLUSTER (G-15) - TRIPLEX

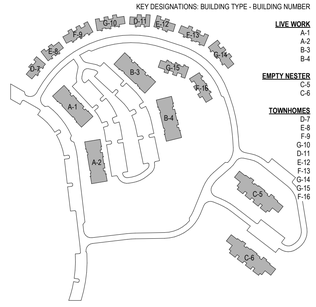


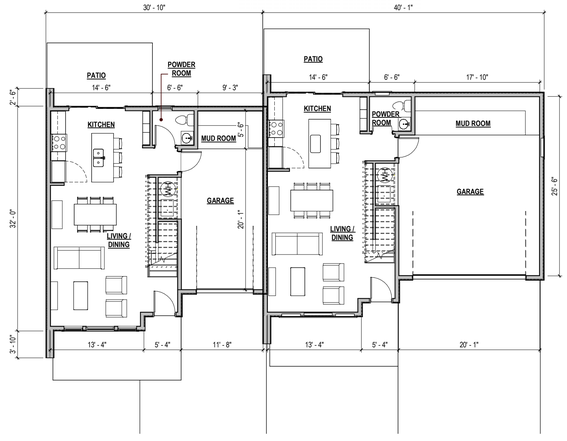
TOWNHOME CLUSTER (F-16) - TRIPLEX



townhome zoning heights

3/32" = 1'-0"



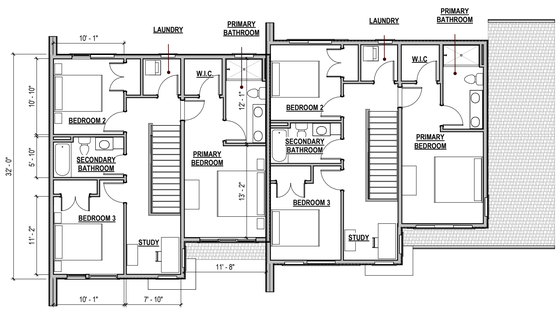


townhome duplex 1st floor

NOT TO SCALE

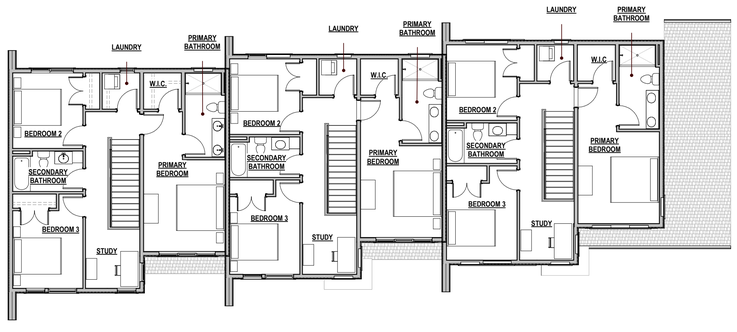
townhome triplex 1st floor

NOT TO SCALE



townhouse duplex 2nd floor

NOT TO SCALE



townhouse triplex 2nd floor

NOT TO SCALE

© 2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513 407 8260
www.designwithma.com

NEW CASTLE RESIDENTIAL - TOWNHOMES

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS:

PRELIMINARY
NOT FOR CONSTRUCTION

REVISION:

PROJECT NUMBER:
23192

DATE:
31 OCTOBER 2024

SHEET NAME:
TOWNHOME PLANS

SHEET NUMBER:
A4.1

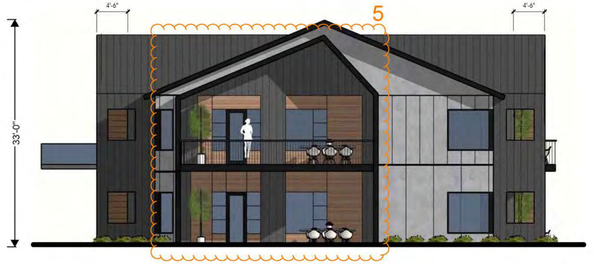
Empty Nesters Comparisons - Elevations

Front Elevation

Preliminary Application

Side Elevation

Preliminary Application



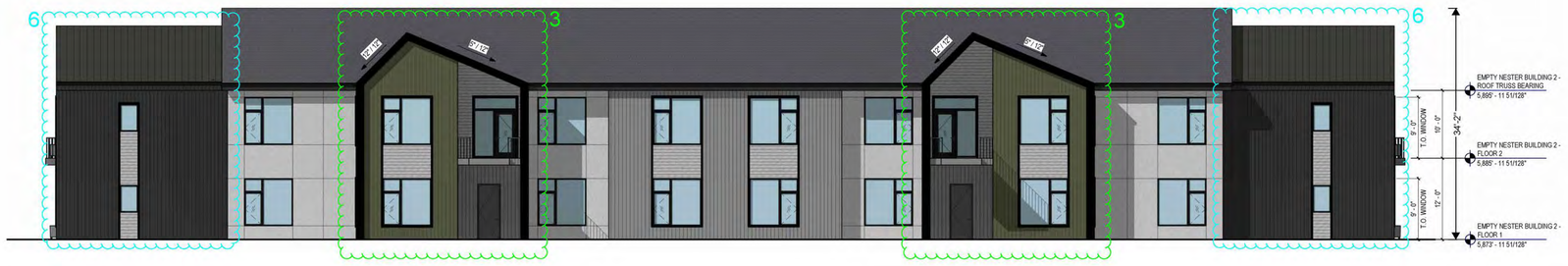
Final Application

Final Application

Back Elevation

Preliminary Application

Final Application

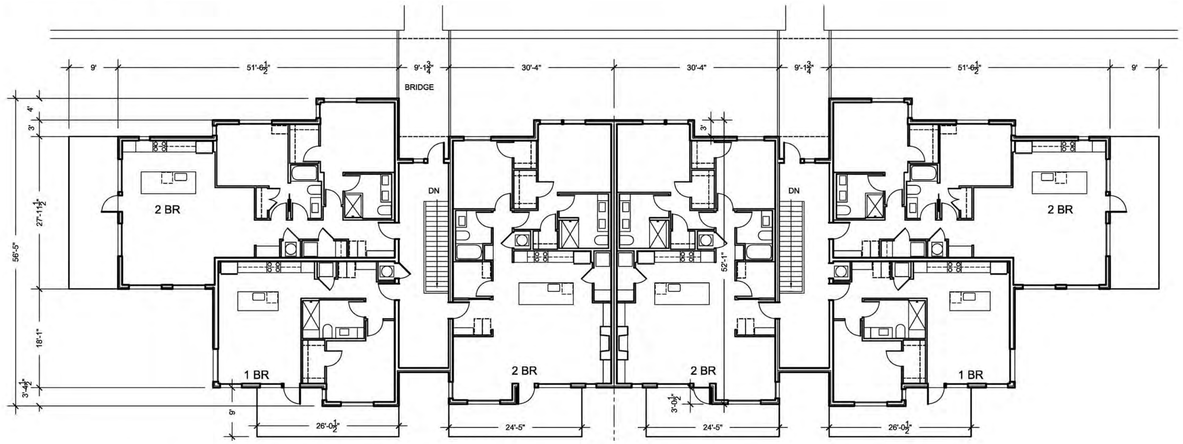


General Changes:
1. Window sizes and groupings changed to more accurately reflect available materials
2. Cut outs added in extended gable roof forms to allow for more views from units.
3. Fiber Cement siding colors updated (see color legend on re-submitted Elevation pages)

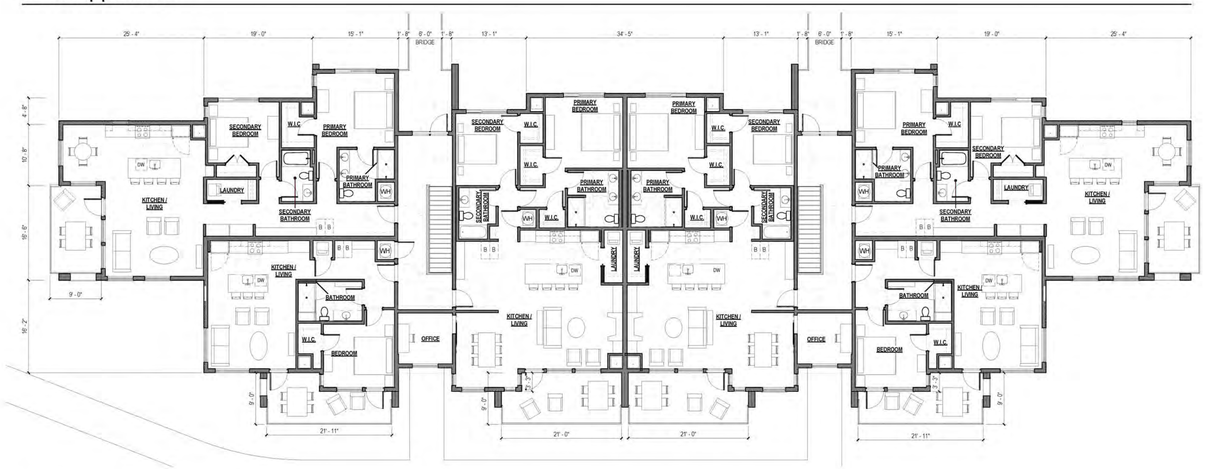
Specific Changes:
1. Zoning Roof Heights requirements shown
2. Gable locations changed to offer better views from inside the living rooms, but retain the spirit of the design
3. Gable locations changed to better align with the entrance to the building on the back elevation to allow coverage from weather and align better with the floor plan
4. Building Entrances given more color to delineate Unit from Building Entrance
5. In the 2 bedroom End Unit (see re-submitted Unit plans) the balcony was adjusted to allow for a breakfast nook. The exterior wall is now in line with the balcony as seen on the side elevation.
6. Material Change - Vertical Fiber Cement siding to be used on the wall, original proposed standing seam roof to stay

Empty Nesters Comparisons - 2nd Floor Plan

Preliminary Application

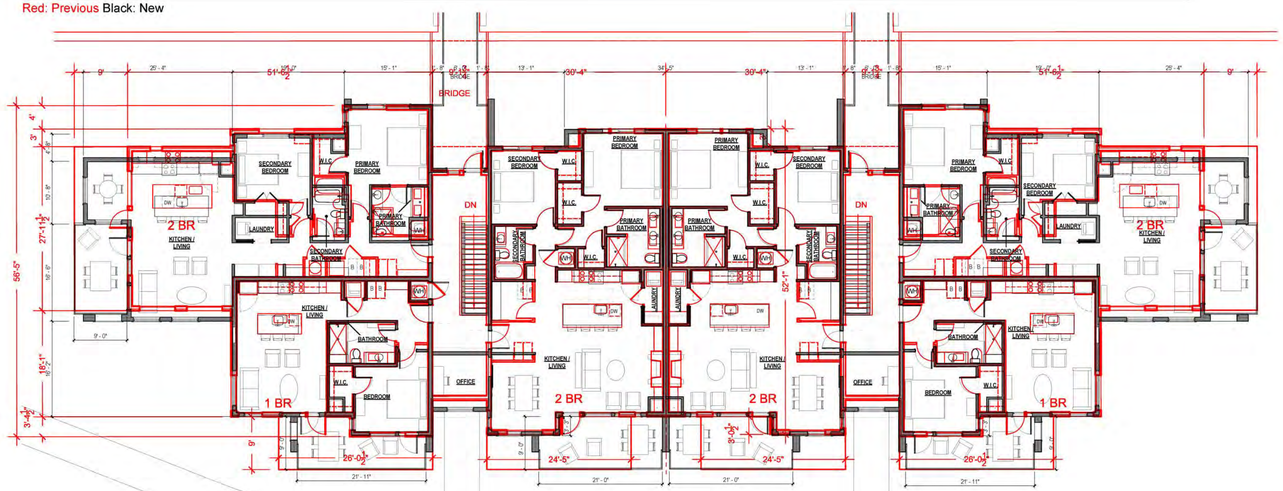


Final Application



Comparison

Red: Previous Black: New



Changes:
1. End 2 Bedroom Unit - adjusted exterior wall locations and interior layout (see re-submitted unit plans) added square footage for additional breakfast nook
2. Balcony locations adjusted to align better with units and views (see re-submitted elevations)
3. Central 2 bedroom units expanded to capture extra room in the hallway on second floor only. This space to be used as an office (see re-submitted unit plans) original office space to be used for additional outdoor gear storage space.

*Changes are similar on first floor

Live Work Comparisons 2 Story - Elevations

Front Elevation

Preliminary Application

Final Application

Side Elevation

Preliminary Application

Final Application

Back Elevation

Preliminary Application

Final Application

General Changes:
1. Window sizes and groupings changed to more accurately reflect available materials
2. Material Change - all roofs will be asphalt shingle
3. Fiber Cement siding colors updated (see color legend on re-submitted Elevation pages)

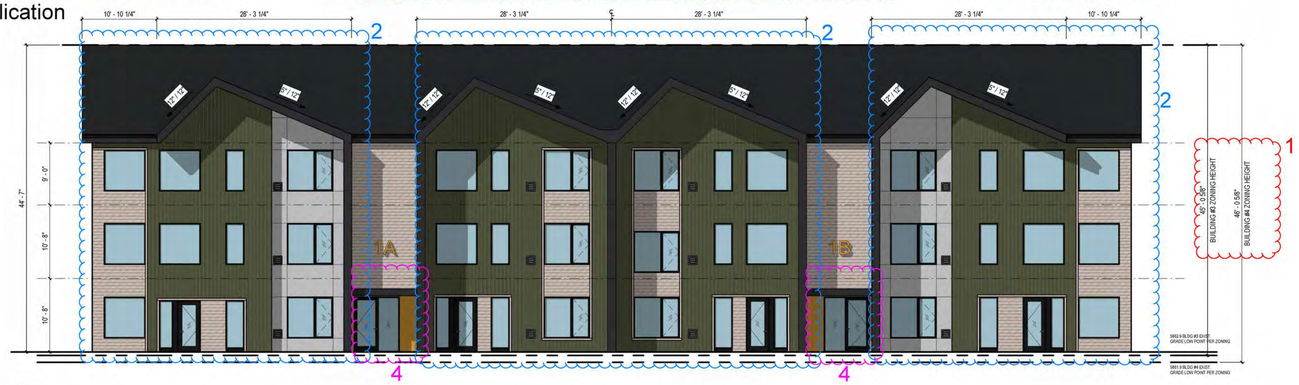
Specific Changes:
1. Adjusted Overall roof height
2. Gable locations changed to offer better views from inside the living rooms, but retain the spirit of the design
4. Building Entrances given more color to delineate Unit from Building Entrance

Live Work Comparisons 3 Story - Elevations

Front Elevation

Preliminary Application

Final Application



Back Elevation

Preliminary Application

Final Application

Side Elevation

Preliminary Application

Final Application

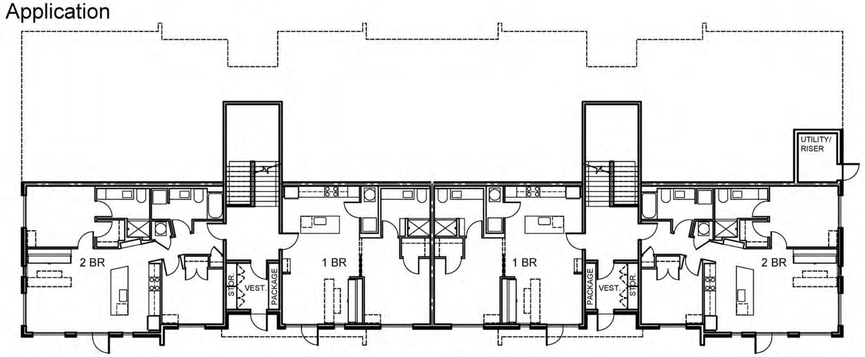
live work 3-story - left elevation

General Changes:
1. Window sizes and groupings changed to more accurately reflect available materials
2. Material Change - all roofs will be asphalt shingle
3. Fiber Cement siding colors updated (see color legend on re-submitted Elevation pages)

Specific Changes:
1. Zoning Roof Heights requirements shown, Roof heights adjusted
2. Gable locations changed to offer better views from inside the living rooms, but retain the spirit of the design
4. Building Entrances given more color to delineate Unit from Building Entrance

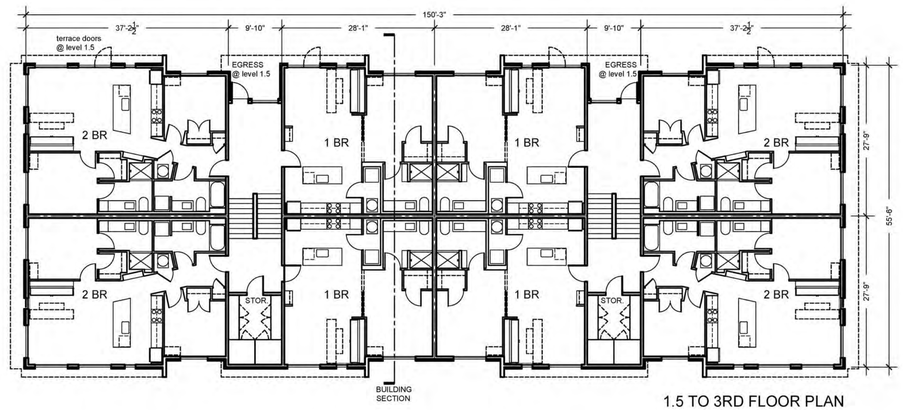
Live Work Comparisons - Plans

Preliminary Application

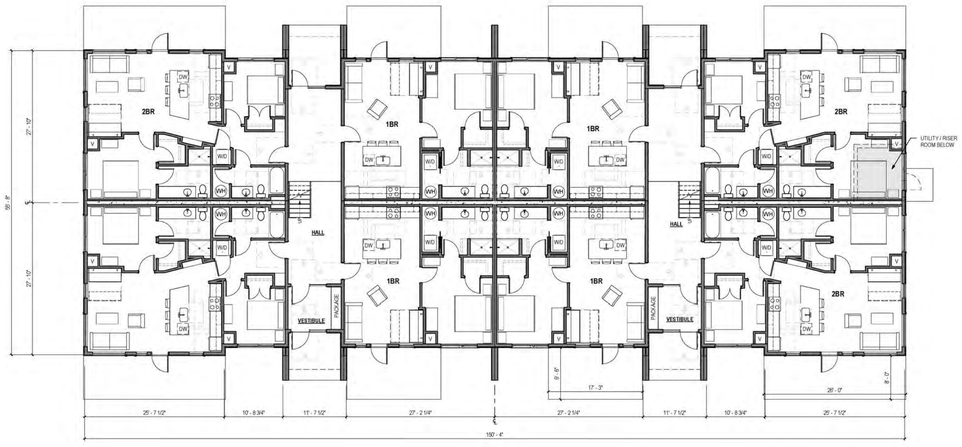


Floor 1 - Floor Plan

Final Application



1.5 TO 3RD FLOOR PLAN

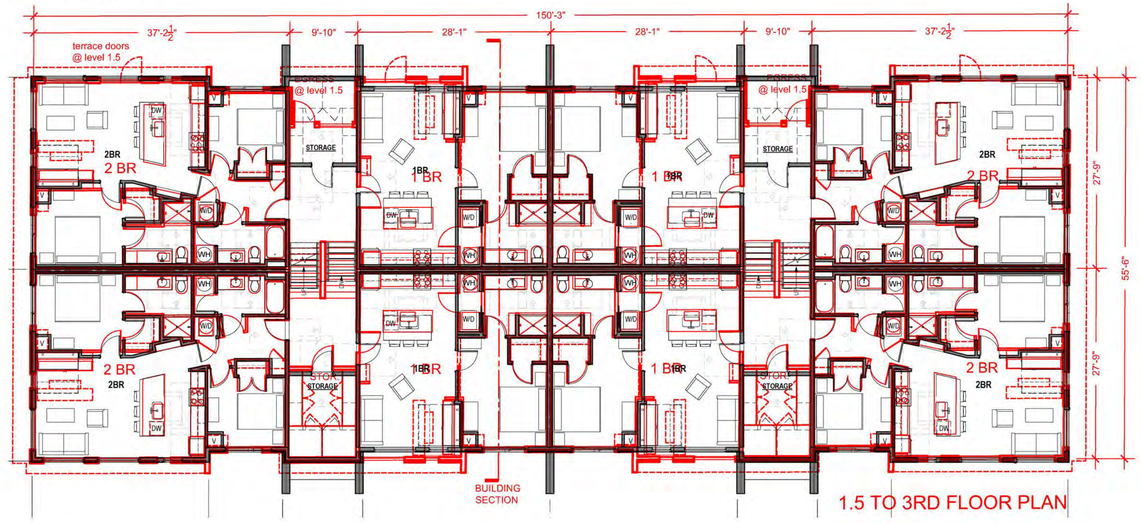


live work - 1 & 1.5 floor plan

live work - 2 & 2.5 floor plan

Comparison

Red: Previous Black: New



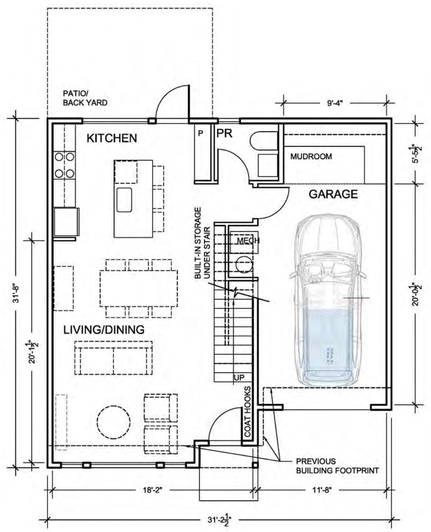
1.5 TO 3RD FLOOR PLAN

Changes:
1. All unit layouts revised to include 6' ORI Pocket Office System in place of 8' ORI Pocket Office System.
2. All unit layouts revised to include VTAC mechanical units in bedrooms.
3. Interior bike storage removed from all units.
3. End 2 bedroom unit plans revised to incorporate kitchen, bathroom and door clearances.
4. End 2 bedroom unit plans revised to show switched locations of Washer / Dryer and unit Water Heater.
5. Central 1 bedroom units exterior bedroom wall pushed in 1'6" to align with walls above.
6. Central 1 bedroom unit plans revised to incorporate kitchen, bathroom and door clearances.
7. Central 1 bedroom unit plans revised to have Mechanical / Laundry access from unit bathroom.
8. Minor window location adjustments throughout.

*Changes are similar on all floors.

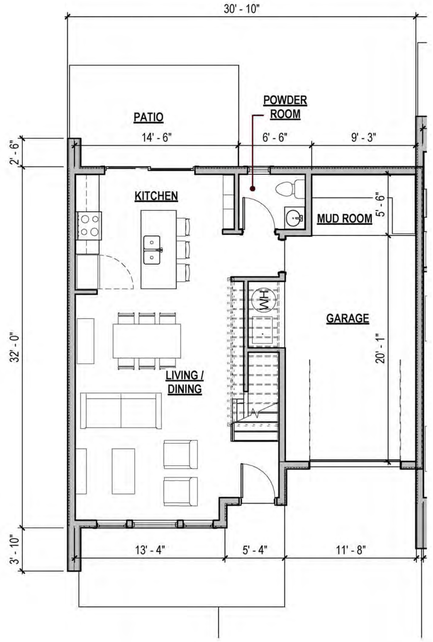
Town home Comparisons - Plans

Preliminary Application



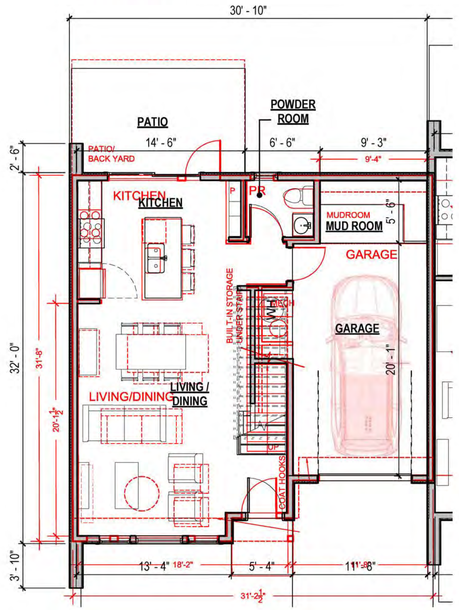
1ST FLOOR PLAN
550 nsf without garage

Final Application



Comparison

Red: Previous Black: New



Changes:
1. Door to backyard patio changed to a sliding door
2. Living Room Windows adjusted (see elevations)

Town home Comparisons - Elevations

Preliminary Application

Final Application

Comparison

Changes:
1. Window sizes and groupings changed to more accurately reflect available materials
2. Color Palette changed, each home gets designated color from a range of 4 colors (see color legend on re-submitted sheets)
3. Roof alignment adjusted for ease of waterproofing and construction
4. Overall roof height changed from 28'-3" to 31'-9"
5. Back elevations to reflect front elevations color. All the same material with the exception of the 2 car garage, where the Fiber Cement panel wraps to the back elevation

GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.

PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FFE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE

INV:5873.62'
(2) 88 L.F. 48" ADS N12 CULVERTS @ 4.4% SLOPE
EACH CULVERT SHALL HAVE A FLARED END SECTION ON BOTH ENDS. INSTALL 5'X10' D50+6" RIPRAP.

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

NORTH

Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	09-13-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
GRADING PLAN - EX SPOTS

DRAWING NO.
C-2.10

G:\2023\33011 CVR #2 RES\CIVIL\CIVIL DWGS\PLOT\33011-C20 GRADING.DWG - Sep 13, 2024 - 12:26pm

VIEWSHED RENDERINGS

DISTANT VIEW APPROACHING FROM THE SOUTH ALONG WILD HORSE DRIVE

VIEW APPROACHING FROM THE SOUTH ALONG WILD HORSE DRIVE

VIEWSHED RENDERINGS

DISTANT VIEW FROM INTERIOR OF VIX PARK

VIEW FROM INTERIOR OF VIX PARK

FINAL PLAT OF:

CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9

A PORTION OF THE 'OPTION PROPERTY' BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M.
TOWN OF NEW CASTLE, COLORADO

SHEET 1 OF 5

SHEET 1 - SUBJECT PROPERTY DESCRIPTION, CERTIFICATES AND NOTES, AND MONUMENT CONTROL
SHEET 2 - THE PUD SUBDIVISION BOUNDARY, LOTS, RIGHTS-OF-WAY AND PARCELS
SHEET 3 - DRAINAGE EASEMENTS
SHEET 4 - TRAIL AND EMERGENCY ACCESS EASEMENTS
SHEET 5 - UTILITY EASEMENTS

CERTIFICATE OF DEDICATION AND OWNERSHIP

KNOW ALL MEN BY THESE PRESENTS THAT CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY, BEING SOLE OWNER IN FEE SIMPLE OF ALL THAT REAL PROPERTY DESCRIBED AS FOLLOWS:

A PARCEL OF LAND BEING A PORTION OF THE 'OPTION PROPERTY', AS DESCRIBED IN THAT QUIT CLAIM DEED, RECORDED SEPTEMBER 21, 2009 AS RECEPTION NO. 775392, AND BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M., COUNTY OF GARFIELD, STATE OF COLORADO, SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE 1/4 CORNER, BETWEEN SAID SECTIONS 29 AND 30, A 3.25" BRASS CAP ON 2" IRON PIPE STAMPED "1/4 S30/29 BLM 1988", THENCE N 89° 36' 48" E THE ASSUMED BASIS OF BEARINGS ALONG THE SOUTHERLY LINE OF THE 2ND AMENDED EXEMPTION PLAT OF LAKOTA CANYON RANCH, RECORDED FEBRUARY 4, 2008 AS RECEPTION NO. 742257, A DISTANCE OF 1308.59 FEET TO THE NORTHEAST CORNER OF SAID 'OPTION PROPERTY', BEING A #5 REBAR & 1.25" YELLOW PLASTIC CAP STAMPED "CLAYCOMB ENG L.S. 3174", SAID CORNER BEING COINCIDENTAL WITH WESTERLY AND SOUTHERLY LINES OF RECEPTION NO. 742257;

THENCE S 00°55'44" E, ALONG EASTERLY LINE OF SAID 'OPTION PROPERTY', AND THE SAID COINCIDENTAL WESTERLY LINE OF RECEPTION NO. 742257, A DISTANCE OF 1002.40 FEET, TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED, RECORDED APRIL 15, 2010 AS RECEPTION NO. 784749;

THENCE THE FOLLOWING TWENTY-ONE (21) COURSES ALONG THE NORTHERLY, WESTERLY, EASTERLY AND NORTHERLY LINES OF SAID RECEPTION NO. 784749;

1. N 89°54'27" W A DISTANCE OF 116.87 FEET;
2. S 54°50'38" W A DISTANCE OF 173.10 FEET;
3. S 00°02'34" E A DISTANCE OF 167.50 FEET;
4. S 32°41'48" E A DISTANCE OF 88.46 FEET;
5. S 00°55'44" E A DISTANCE OF 289.40 FEET;
6. S 14°00'12" W A DISTANCE OF 22.45 FEET;
7. S 28°56'08" W A DISTANCE OF 541.68 FEET;
8. 122.69 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 219.00 FEET, A CENTRAL ANGLE OF 32°05'54", THE CHORD OF WHICH BEARS S 44°59'05" W, A DISTANCE OF 121.09 FEET;
9. 102.92 FEET ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 481.00 FEET, A CENTRAL ANGLE OF 12°15'33", THE CHORD OF WHICH BEARS S 54°54'14" W A DISTANCE OF 102.72 FEET;
10. N 51°02'22" W A DISTANCE OF 247.25 FEET;
11. 30.23 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 6°17'51", THE CHORD OF WHICH BEARS S 42°06'34" W A DISTANCE OF 30.21 FEET;
12. N 44°48'48" W A DISTANCE OF 174.82 FEET;
13. N 56°40'07" W A DISTANCE OF 55.13 FEET;
14. N 63°30'38" W A DISTANCE OF 55.33 FEET;
15. N 71°43'03" W A DISTANCE OF 57.57 FEET;
16. 104.09 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 970.00 FEET, A CENTRAL ANGLE OF 6°08'54", THE CHORD OF WHICH BEARS N 11°34'51" E A DISTANCE OF 104.04 FEET;
17. N 16°07'55" E A DISTANCE OF 50.00 FEET;
18. N 18°54'59" E A DISTANCE OF 221.52 FEET;
19. N 30°00'58" E A DISTANCE OF 50.41 FEET;
20. N 67°17'36" W A DISTANCE OF 131.42 FEET;
21. 104.00 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 250.00 FEET, A CENTRAL ANGLE OF 23°50'05", THE CHORD OF WHICH BEARS N 79°12'39" W, A DISTANCE OF 103.25 FEET, TO A POINT ON THE NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, AS DESCRIBED IN THAT SPECIAL WARRANTY DEED RECORDED SEPTEMBER 25, 2007 AT RECEPTION NO. 733780;

THENCE THE FOLLOWING FOUR (4) COURSES ALONG SAID NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, BEING SITUATED PARALLEL TO AND 67.50 FEET NORTHEASTERLY OF THE WESTERLY LINE OF SAID 'OPTION PROPERTY', ALSO A COINCIDENTAL LINE WITH THE NORTH PARK PARCEL RECORDED APRIL 17, 2007 AT RECEPTION NO. 721291;

1. 38.30 FEET ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 491.25 FEET, A CENTRAL ANGLE OF 4°28'00", THE CHORD OF WHICH BEARS N 04°02'01" W A DISTANCE OF 38.29 FEET;
2. N 06°16'01" W A DISTANCE OF 314.42 FEET;
3. 263.68 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 281.25 FEET, A CENTRAL ANGLE OF 53°43'01", THE CHORD OF WHICH BEARS N 33°07'31" W, A DISTANCE OF 254.13 FEET;
4. N 59°59'02" W A DISTANCE OF 338.00 FEET, TO A POINT ON THE WESTERLY LINE OF SAID 'OPTION PROPERTY';

THENCE THE FOLLOWING THREE (3) COURSES ALONG THE WESTERLY LINES OF SAID 'OPTION PROPERTY';

1. N 21°44'01" E A DISTANCE OF 132.03 FEET;
2. N 02°06'39" E A DISTANCE OF 226.38 FEET;
3. N 00°23'12" W A DISTANCE OF 381.09 FEET, TO A POINT ON THE NORTH LINE OF THE TO A SW1/4 OF SECTION 30;

THENCE S 89°47'18" E ALONG SAID NORTH LINE SW1/4 OF SECTION 30, A DISTANCE OF 308.87 FEET, TO THE POINT OF BEGINNING,

COUNTY OF GARFIELD, STATE OF COLORADO.

AND CONTAINING 59.066 ACRES, MORE OR LESS; HAVE BY THESE PRESENTS LAID OUT, PLATTED AND SUBDIVIDED THE SAME INTO LOTS AND BLOCKS AS SHOWN HEREON AND DESIGNATE THE SAME AS 9 N WILD HORSE PUD SUBDIVISION IN THE TOWN OF NEW CASTLE, COUNTY OF GARFIELD, STATE OF COLORADO; AND DOES HEREBY GRANT AND CONVEY TO THE TOWN OF NEW CASTLE, COLORADO, FOR PUBLIC USE THE TOWN R.O.W. DEPICTED HEREON FOR PUBLIC STREET PURPOSES, THE 10' TRAIL EASEMENTS SHOWN HEREON FOR PUBLIC RECREATIONAL TRAIL PURPOSES AS FURTHER DEFINED IN THE REFERENCED EASEMENT, THE 16' AND 12' EMERGENCY ACCESS EASEMENT DEPICTED HEREON FOR EMERGENCY ACCESS PURPOSES, ALL UTILITY EASEMENTS FOR UTILITY PURPOSES ONLY, AND THOSE CERTAIN DRAINAGE EASEMENTS DEPICTED AS (TOWN AND HOA) FOR DRAINAGE PURPOSES ONLY AND FOR ACCESS THERETO; AND TO THE 9 NORTH WILD HORSE PROPERTY OWNER'S ASSOCIATION ALL OTHER DRAINAGE EASEMENTS SHOWN HEREON FOR DRAINAGE AND MAINTENANCE PURPOSES; AND SO FURTHER STATE THAT THIS SUBDIVISION SHALL BE SUBJECT TO THE PROTECTIVE COVENANTS FILED AND RECORDED FOR THIS SUBDIVISION IN THE OFFICE OF THE CLERK AND RECORDER OF GARFIELD COUNTY, COLORADO AS DOCUMENT NO. _____;

EXECUTED THIS ___ DAY OF _____, A.D. 2025.

OWNER CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY, LLC BY:_____

AS:_____ STATE OF COLORADO)

COUNTY OF GARFIELD) SS.

TOWN OF NEW CASTLE)

THE FOREGOING DEDICATION WAS ACKNOWLEDGED BEFORE ME THIS ___ DAY OF ___, A.D. 2025 BY _____, AS _____ OF CTS INVESTMENTS, LLC, A COLORADO LIMITED LIABILITY COMPANY, LLC.

WITNESS MY HAND AND SEAL

_____

NOTARY PUBLIC

TITLE INSURANCE COMPANY CERTIFICATE

LAND TITLE GUARANTEE COMPANY DOES HEREBY CERTIFY THAT _____ HAS EXAMINED THE TITLE TO ALL LANDS DEDICATED AND SHOWN UPON THIS PLAT, AND TITLE TO SUCH LANDS IS IN THE DEDICATOR FREE AND CLEAR OF ALL LIENS, TAXES, AND ENCUMBRANCES EXCEPT AS FOLLOWS:

_____

_____

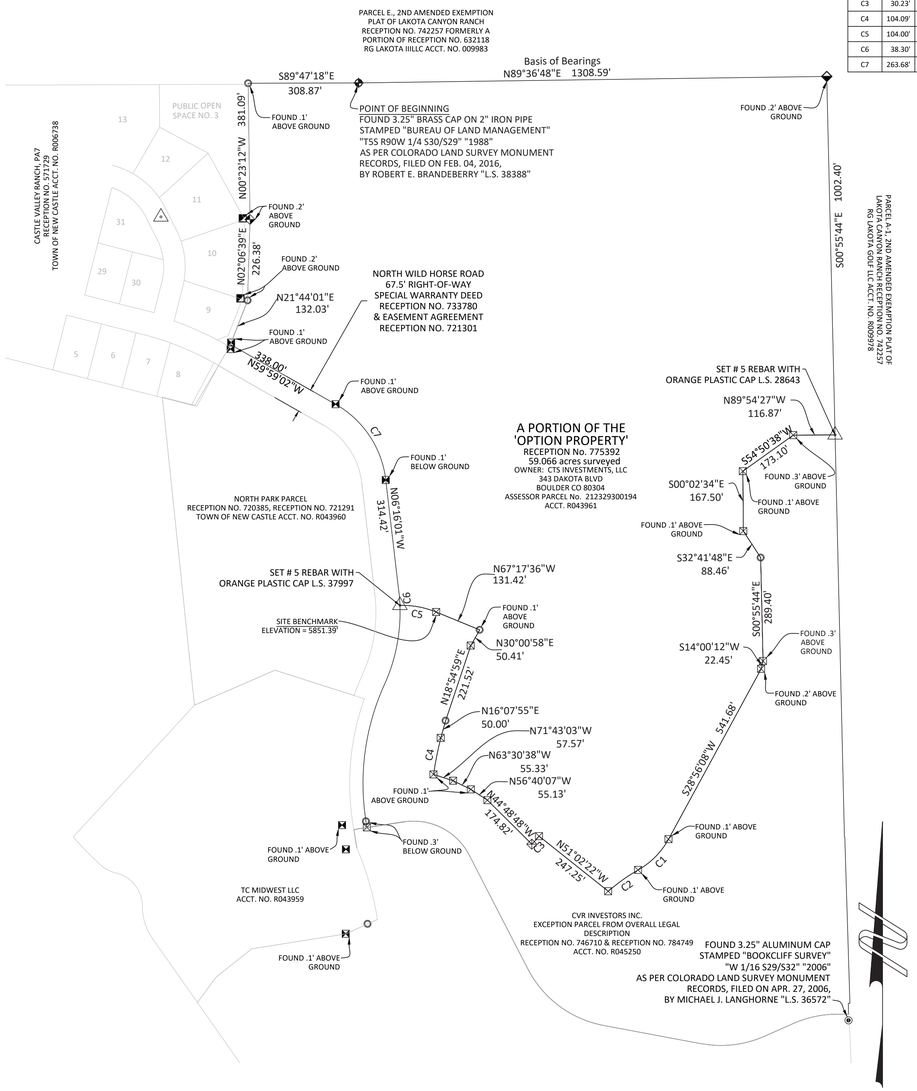
_____

_____

BY: _____

AS: _____ OF LAND TITLE GUARANTEE COMPANY

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



Property Boundary Curve Table						
Curve #	Length	Radius	Tangent	Delta	Chord Direction	Chord
C1	122.69'	219.00'	63.00'	32°05'54"	S44° 59' 05"W	121.09'
C2	102.92'	481.00'	51.66'	12°15'33"	S54° 54' 14"W	102.72'
C3	30.23'	275.00'	15.13'	6°17'51"	S42° 06' 34"W	30.21'
C4	104.09'	970.00'	52.09'	6°08'54"	N11° 34' 51"E	104.04'
C5	104.00'	250.00'	52.76'	23°50'05"	N79° 12' 39"W	103.25'
C6	38.30'	491.25'	19.16'	4°28'00"	N04° 02' 01"W	38.29'
C7	263.68'	281.25'	142.43'	53°43'01"	N33° 07' 31"W	254.13'

MONUMENT LEGEND

- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND #5 REBAR
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 13501"
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 3174"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 36572"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 38182"
- FOUND #5 REBAR & RED PLASTIC CAP STAMPED "L.S. 20133"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 28643"
- SET MONUMENT-L.S. 28643

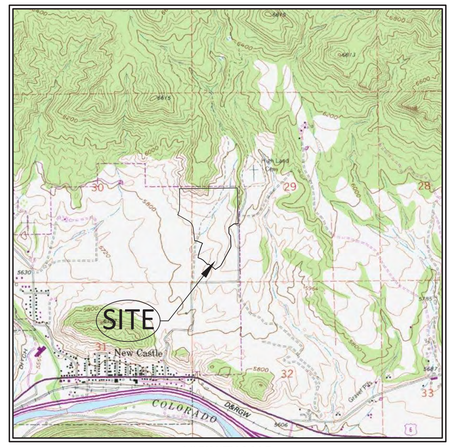
MONUMENTS WERE FOUND FLUSH WITH THE GROUND UNLESS OTHERWISE STATED

GRAPHIC SCALE

200 0 100 200 400 800

(IN U.S. SURVEY FEET)
1 inch = 200 ft.

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



VICINITY MAP
SCALE: 1" = 2000'

SURVEY/PLAT NOTES

1. DATE OF FIELD WORK: DECEMBER 5 - 6 AND 18 - 21, 2023.
2. DATE OF PREPARATION: MARCH - DECEMBER, 2024 AND JANUARY - FEBRUARY, 2025.
3. LINEAR UNITS: 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.
4. BASIS OF BEARING: BEARINGS SHOWN HEREON ARE BASED ON AN ASSUMED BEARING OF N89°36'48"E, BETWEEN FOUND MONUMENTS FOR THE 1/4 CORNER COMMON TO SAID SECTION 30 AND SECTION 29 BEING A 3.25" BRASS CAP ON 2" IRON PIPE, STAMPED "1/4 S30/29 BLM 1988" AND THE NORTHEAST CORNER OF THE OPTION PARCEL BEING A #5 REBAR & 1.25" YELLOW PLASTIC CAP, STAMPED "CLAYCOMB ENG L.S. 3174".
5. BASIS OF SURVEY: FINAL PLAT OF CASTLE VALLEY RANCH SUBDIVISION EXEMPTION MAP AND ALTA/ACSM LAND SURVEY PLAT RECORDED AS RECEPTION NUMBER 721291, ALTA NSPS LAND TITLE SURVEY OF THE SUBJECT PROPERTY PREPARED BY SGM DATED NOVEMBER 5, 2021, 2ND AMENDED EXEMPTION PLAT OF LAKOTA CANYON RANCH RECEPTION NUMBER 742257, CASTLE VALLEY RANCH, PA7 RECEPTION NUMBER 571729 AND VARIOUS DOCUMENTS OF RECORD.
6. 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 ITEMS LISTED IN NOTE 5 AND THE TITLE COMMITMENT PREPARED BY LAND TITLE GUARANTEE COMPANY ORDER NUMBER ABS63019458 WITH AN EFFECTIVE DATE OF 03-31-2023.
7. ALL RECEPTION NUMBERS REFERENCED HEREON REFER TO THE RECORDS OF GARFIELD COUNTY CLERK AND RECORDER'S OFFICE.
8. THE PROPERTY IS LOCATED WITHIN PA 8 AND PA 9 OF THE CASTLE VALLEY RANCH PUD AND IS ZONED RESIDENTIAL / MF-2.
9. THE 10' TRAIL EASEMENT EXTENDS 5 FEET ON EITHER SIDE OF THE LINE DEPICTED HEREON, AND IS FURTHER DESCRIBED IN THAT CERTAIN TRAIL EASEMENT RECORDED AS RECEPTION NO. _____.
10. MUNICIPAL CODE SECTION 13.20.130: MAINTENANCE OF SERVICE PIPES AND FIXTURES SHALL APPLY TO THE RAW WATER TAPS AND SERVICE LINES.
11. THE FINAL DEVELOPMENT PLAN AND FINAL SUBDIVISION PLAT FOR THIS PROJECT DOES NOT CONFER ANY DEVELOPMENT RIGHTS ON LOT 4.

TOWN COUNCIL CERTIFICATE

THIS PLAT APPROVED BY THE TOWN COUNCIL OF THE TOWN OF NEW CASTLE, GARFIELD COUNTY, COLORADO, THIS ___ DAY OF _____, A.D. 2025, FOR FILING WITH THE CLERK AND RECORDER OF GARFIELD COUNTY AND FOR CONVEYANCE TO THE TOWN OF THE PUBLIC DEDICATIONS SHOWN HEREON, SUBJECT TO THE PROVISION THAT APPROVAL IN NO WAY OBLIGATES THE TOWN OF NEW CASTLE FOR FINANCING OR CONSTRUCTING OF IMPROVEMENTS ON LAND, STREETS OR EASEMENTS DEDICATED TO THE PUBLIC EXCEPT AS SPECIFICALLY AGREED TO BY THE TOWN COUNCIL. CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9 IS SUBJECT TO THE TERMS AND CONDITIONS OF TOWN OF NEW CASTLE ORDINANCE NO. 2024 - ___ (THE "APPROVAL ORDINANCE")

_____
MAYOR

WITNESS MY HAND AND THE SEAL OF THE TOWN OF NEW CASTLE.

ATTEST:

_____
TOWN CLERK

SURVEYOR'S CERTIFICATE

I, GEOFFREY R. KELLER, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR LICENSED UNDER THE LAWS OF THE STATE OF COLORADO, THAT THIS PLAT IS A TRUE, CORRECT AND COMPLETE PLAT OF THE 9 NORTH WILDHORSE PUD SUBDIVISION AS LAID OUT, PLATTED, DEDICATED AND SHOWN HEREON, THAT SUCH PLAT WAS MADE FROM AN ACCURATE SURVEY OF SAID PROPERTY BY ME AND UNDER MY SUPERVISION AND CORRECTLY SHOWS THE LOCATION AND DIMENSIONS OF THE LOTS, EASEMENTS AND STREETS OF SAID SUBDIVISION AS THE SAME ARE STAKED UPON THE GROUND IN COMPLIANCE WITH _____ REGULATIONS GOVERNING THE SUBDIVISION OF LAND.

IN WITNESS WHEREOF I HAVE SET MY HAND AND SEAL THIS ___ DAY OF ___, AD. 2025.

DRAFT

_____
GEOFFREY R. KELLER
REGISTERED LAND SURVEYOR #37997

CLERK AND RECORDER'S CERTIFICATE

THIS PLAT WAS FILED FOR RECORD IN THE OFFICE OF THE CLERK AND RECORDER AT ___ O'CLOCK ___. M., _____, 2024, AND IS DULY RECORDED IN BOOK ___, PAGE NO.___ AS RECEPTION NUMBER _____.

_____
CLERK AND RECORDER

BY: _____
DEPUTY

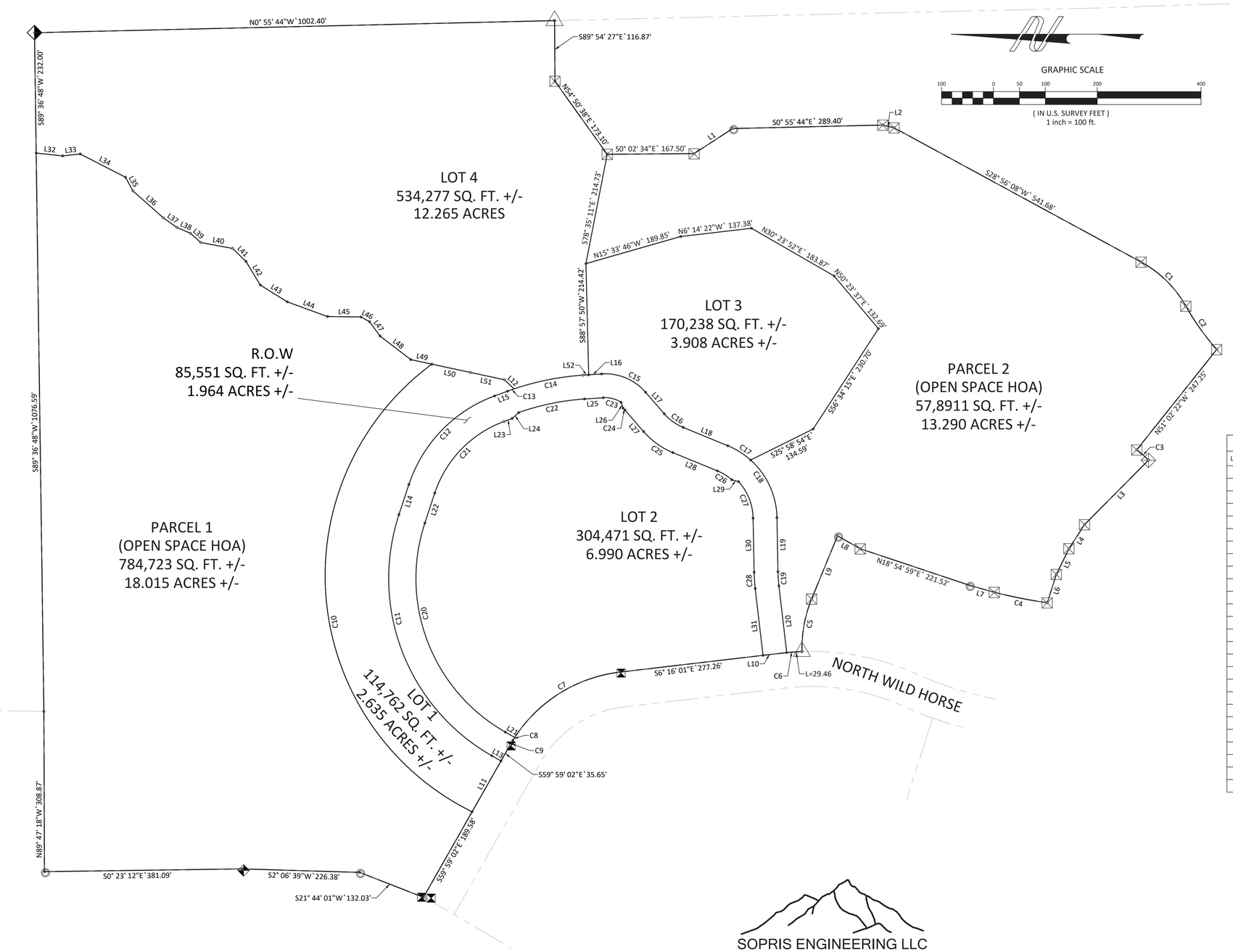
G:\2023\23011 CVR NEW\SURVEY\DWGS\SURVEY\PLAT\23011-PLAT.DWG - Feb 03, 2025 - 2:55pm

FINAL PLAT OF:

CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9

A PORTION OF THE 'OPTION PROPERTY' BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M.
TOWN OF NEW CASTLE, COLORADO

THE PUD SUBDIVISION BOUNDARY, LOTS, RIGHTS-OF-WAY AND PARCELS



GRAPHIC SCALE

100 0 50 100 200 400

(IN U.S. SURVEY FEET)
1 inch = 100 ft.

MONUMENT LEGEND

- FOUND BRASS CAP
- FOUND ALUMINUM CAP
- FOUND #5 REBAR
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 13501"
- FOUND #4 REBAR & YELLOW PLASTIC CAP STAMPED "L.S. 3174"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 36572"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 38182"
- FOUND #5 REBAR & RED PLASTIC CAP STAMPED "L.S. 20133"
- FOUND #5 REBAR & ORANGE PLASTIC CAP STAMPED "L.S. 28643"
- SET MONUMENT-L.S. 28643

MONUMENTS WERE FOUND FLUSH WITH THE GROUND UNLESS OTHERWISE STATED

LAND AREA SUMMARY

FATHERING PARCEL	SQ. FT±	ACRES ±
9 NORTH WILDHORSE.	2,572,932	59.066
9 NORTH WILDHORSE PUD SUB DIVISION		
LOT #	SQ. FT±	ACRES ±
1	114,762	2.635
2	304,471	6.990
3	170,238	3.908
4	534,277	12.265
ROW	85,551	1.964
PARCEL 1	784,723	18.015
PARCEL 2	578,911	13.290
	2,572,933	59.066

PARCEL & LOT TABLES

Line Table		
Line #	Direction	Length
L10	S6° 16' 01"E`	37.17'
L11	S59° 59' 02"E`	112.77'
L12	N44° 00' 51"E`	25.61'
L13	S30° 00' 58"W`	20.34'
L14	N71° 18' 18"W`	61.12'
L15	N19° 46' 22"W`	26.48'
L16	S3° 26' 55"E`	24.86'
L17	S49° 31' 43"W`	54.84'
L18	S22° 45' 24"W`	92.96'
L19	N89° 20' 38"E`	104.39'
L20	N83° 43' 59"E`	129.67'
L21	S30° 00' 58"W`	20.85'
L22	N71° 18' 18"W`	61.12'
L23	N19° 46' 22"W`	16.82'
L24	N42° 16' 22"W`	16.89'
L25	N3° 26' 55"W`	36.20'
L26	N72° 01' 43"E`	11.56'
L27	N49° 31' 43"E`	54.84'
L28	N22° 45' 24"E`	92.96'
L29	N16° 06' 51"E`	13.58'
L30	N89° 20' 38"E`	104.39'
L31	N83° 43' 59"E`	129.59'
L32	S6° 37' 21"W`	51.28'
L33	S5° 55' 59"E`	34.00'
L34	S27° 36' 01"W`	98.08'
L35	S61° 46' 46"W`	30.05'

Line Table		
Line #	Direction	Length
L36	S41° 54' 22"W`	78.50'
L37	S35° 50' 28"W`	31.46'
L38	S23° 53' 07"W`	28.51'
L39	S42° 11' 13"W`	26.79'
L40	S10° 58' 05"W`	62.67'
L41	S44° 37' 07"W`	35.86'
L42	S59° 15' 49"W`	53.20'
L43	S32° 16' 29"W`	61.43'
L44	S20° 30' 45"W`	82.28'
L45	S1° 02' 59"W`	64.48'
L46	S29° 05' 56"W`	18.84'
L47	S54° 12' 15"W`	34.55'
L48	S37° 54' 23"W`	74.47'
L49	S12° 34' 16"W`	117.40'
L50	N12° 34' 16"E`	75.79'
L51	N12° 30' 14"E`	67.24'
L52	N3° 26' 55"W`	36.20'

Curve Table						
Curve #	Length	Radius	Tangent	Delta	Chord Direction	Chord
C7	246.82'	281.25'	131.99'	50°16'56"	S31° 24' 30"E`	238.98'
C8	6.51'	277.83'	3.25'	1°20'30"	S57° 32' 44"E`	6.51'
C9	10.35'	281.25'	5.18'	2°06'32"	S58° 55' 46"E`	10.35'
C10	1038.68'	507.31'	832.89'	117°18'33"	S85° 16' 20"W`	866.53'
C11	539.67'	393.00'	322.12'	78°40'44"	S69° 21' 20"W`	498.26'
C12	245.54'	273.00'	131.77'	51°31'56"	N45° 32' 20"W`	237.35'
C13	149.01'	523.00'	75.01'	16°19'27"	N11° 36' 39"W`	148.50'
C14	149.01'	523.00'	75.01'	16°19'27"	N11° 36' 39"W`	148.50'
C15	95.24'	103.00'	51.33'	52°58'38"	S23° 02' 24"W`	91.88'
C16	45.32'	97.00'	23.08'	26°46'19"	S36° 08' 34"W`	44.91'
C17	52.12'	153.00'	26.32'	19°31'06"	S32° 30' 57"W`	51.87'
C18	150.52'	153.00'	81.98'	56°21'55"	N61° 09' 40"E`	144.52'
C19	27.13'	277.00'	13.57'	5°36'39"	N86° 32' 18"E`	27.12'
C20	467.58'	340.50'	279.09'	78°40'44"	S69° 21' 20"W`	431.70'
C21	198.32'	220.50'	106.43'	51°31'56"	N45° 32' 20"W`	191.70'
C22	129.96'	477.00'	65.38'	15°36'36"	N11° 15' 13"W`	129.55'
C23	36.13'	57.00'	18.70'	36°19'12"	N14° 42' 41"E`	35.53'
C24	5.67'	50.50'	2.84'	6°25'44"	N46° 18' 51"E`	5.66'
C25	69.85'	149.50'	35.58'	26°46'19"	N36° 08' 34"E`	69.22'
C26	32.62'	100.50'	16.45'	18°35'48"	N32° 03' 18"E`	32.48'
C27	77.31'	107.00'	40.43'	41°23'47"	N68° 38' 44"E`	75.64'
C28	31.63'	323.00'	15.83'	5°36'39"	N86° 32' 18"E`	31.62'

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

DRAFT

GEOFFREY KELLER
REGISTERED LAND SURVEYOR #37997

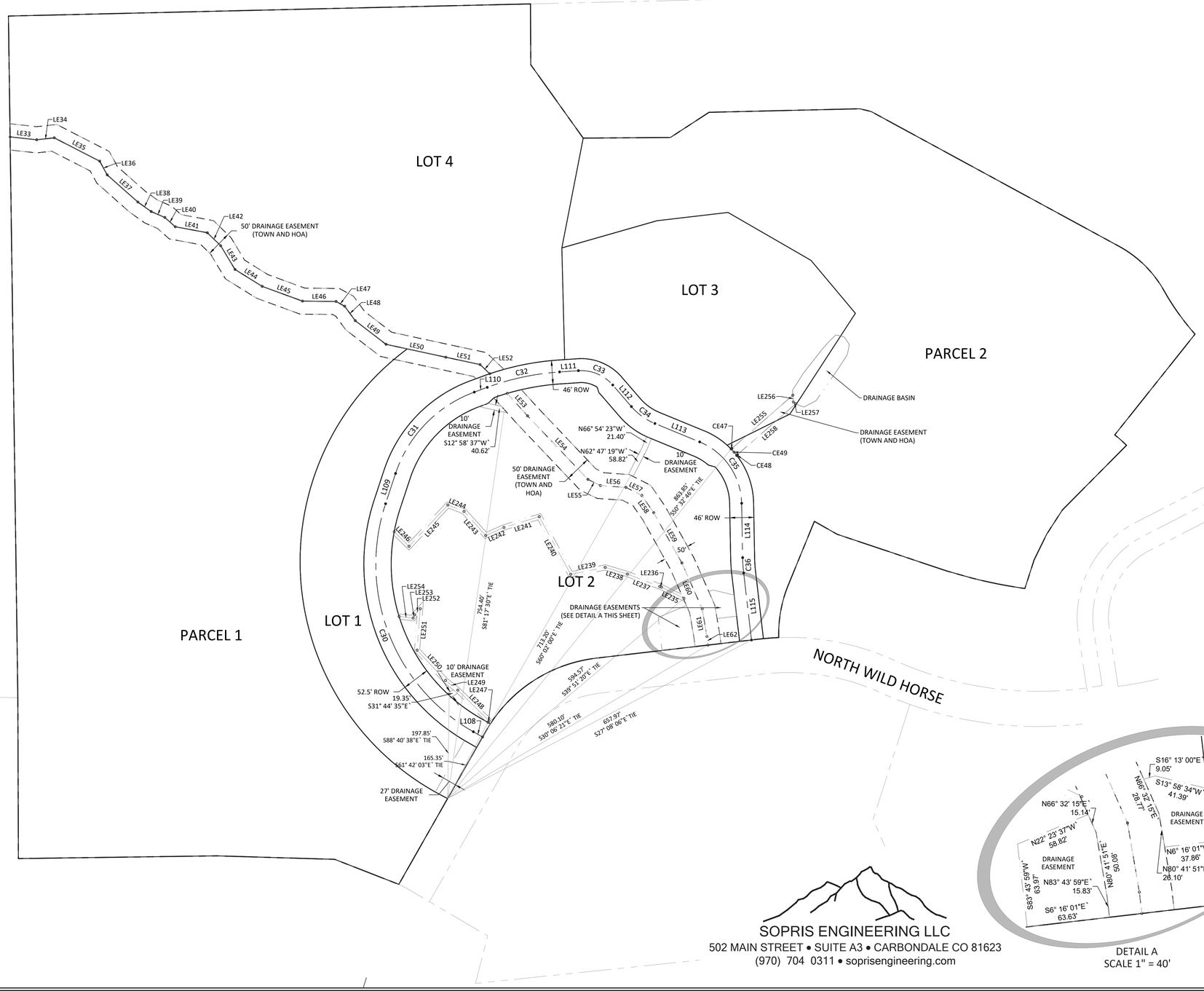
G:\2023\23031 CVR 82 NEST\SURVEY\SURVEY DWGS\SURVEY PLOTS\23031 1PLAT-SHT2.DWG - Feb 03, 2025 - 2:59pm

FINAL PLAT OF:

CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9

A PORTION OF THE 'OPTION PROPERTY' BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M.
TOWN OF NEW CASTLE, COLORADO

SHEET 3 OF 5
DRAINAGE EASEMENTS



DRAINAGE EASEMENT TABLES

Line Table		
Line #	Direction	Length
LE33	S6° 37' 21"W`	51.28'
LE34	S5° 55' 59"E`	34.00'
LE35	S27° 36' 01"W`	98.08'
LE36	S61° 46' 46"W`	30.05'
LE37	S41° 54' 22"W`	78.50'
LE38	S35° 50' 28"W`	31.46'
LE39	S23° 53' 07"W`	28.51'
LE40	S42° 11' 13"W`	26.79'
LE41	S10° 58' 05"W`	62.67'
LE42	S44° 37' 07"W`	35.86'
LE43	S59° 15' 49"W`	53.20'
LE44	S32° 16' 29"W`	61.43'
LE45	S20° 30' 45"W`	82.28'
LE46	S1° 02' 59"W`	64.48'
LE47	S29° 05' 56"W`	18.84'

Line Table		
Line #	Direction	Length
LE48	S54° 12' 15"W`	34.55'
LE49	S37° 54' 23"W`	74.47'
LE50	S12° 34' 16"W`	117.40'
LE51	S12° 30' 14"W`	67.24'
LE52	S44° 00' 51"W`	25.61'
LE53	S48° 20' 16"W`	58.21'
LE54	S46° 51' 39"W`	168.15'
LE55	S26° 32' 16"W`	26.81'
LE56	S4° 36' 48"W`	49.02'
LE57	S27° 12' 41"W`	34.17'
LE58	S55° 43' 55"W`	40.37'
LE59	S61° 08' 15"W`	110.58'
LE60	S66° 32' 15"W`	96.39'
LE61	S80° 41' 51"W`	53.85'
LE62	S83° 43' 59"W`	16.50'

Line Table		
Line #	Direction	Length
LE235	N26° 49' 59"E`	48.32'
LE236	N20° 35' 53"E`	3.50'
LE237	N21° 28' 49"E`	66.56'
LE238	N16° 58' 43"E`	44.42'
LE239	N10° 53' 25"W`	67.51'
LE240	N61° 46' 50"E`	126.04'
LE241	N16° 29' 29"W`	70.83'
LE242	N23° 32' 51"W`	38.25'
LE243	N48° 23' 10"E`	62.29'
LE244	N22° 03' 47"E`	33.36'
LE245	N46° 22' 21"W`	108.94'
LE246	N45° 00' 00"E`	39.91'
LE247	S54° 51' 12"E`	3.67'
LE248	N44° 57' 58"E`	84.05'
LE249	N38° 30' 31"E`	29.97'
LE250	N47° 10' 57"E`	79.65'
LE251	S85° 19' 09"E`	79.86'
LE252	N47° 29' 38"W`	16.01'
LE253	N63° 42' 25"W`	6.77'
LE254	N6° 47' 17"E`	26.99'

Line Table		
Line #	Direction	Length
LE255	S40° 42' 34"E`	155.28'
LE256	S86° 36' 12"W`	13.26'
LE257	S35° 09' 23"W`	5.63'
LE258	N40° 42' 34"W`	148.62'

Curve Table					
Curve #	Radius	Length	Chord Direction	Tangent	Chord
CE47	15.00	2.02	S36° 50' 43"E`	1.01'	2.02'
CE48	15.00	2.02	N44° 34' 26"W`	1.01'	2.02'
CE49	153.00	16.28	N49° 17' 26"E`	8.15'	16.27'

GRAPHIC SCALE

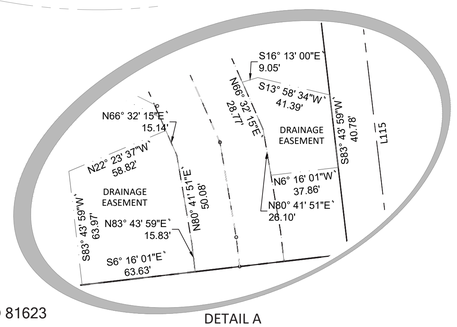
100 0 50 100 200 400

(IN U.S. SURVEY FEET)
1 inch = 100 ft.

RIGHT-OF-WAY CENTERLINE EASEMENT TABLES

Curve Table					
Curve #	Radius	Length	Chord Direction	Tangent	Chord
C30	370.00	508.09	N69° 21' 20"E`	303.27'	469.10'
C31	250.00	224.85	S45° 32' 20"E`	120.67'	217.35'
C32	500.00	142.46	S11° 36' 39"E`	71.71'	141.97'
C33	80.00	73.97	S23° 02' 24"W`	39.87'	71.36'
C34	120.00	56.07	S36° 08' 34"W`	28.56'	55.56'
C35	130.00	151.08	S56° 03' 01"W`	85.37'	142.72'
C36	300.00	29.38	S86° 32' 18"W`	14.70'	29.37'

Line Table		
Line #	Direction	Length
L108	N30° 00' 58"E`	20.34'
L109	S71° 18' 18"E`	61.12'
L110	S19° 46' 22"E`	26.48'
L111	S3° 26' 55"E`	36.20'
L112	S49° 31' 43"W`	54.84'
L113	S22° 45' 24"W`	92.96'
L114	S89° 20' 38"W`	104.39'
L115	S83° 43' 59"W`	129.67'



DETAIL A
SCALE 1" = 40'

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

COLORADO LICENSED GEOFFREY KELLER 37997 PLS

DRAFT

GEOFFREY KELLER
REGISTERED LAND SURVEYOR #37997

G:\2021\21018\CAD\PLAT\21018 PLAT SHT 3 DRAINAGE EASEMENTS.DWG, 2/25/2022 10:49:41 AM, DWG To PDF.pc3

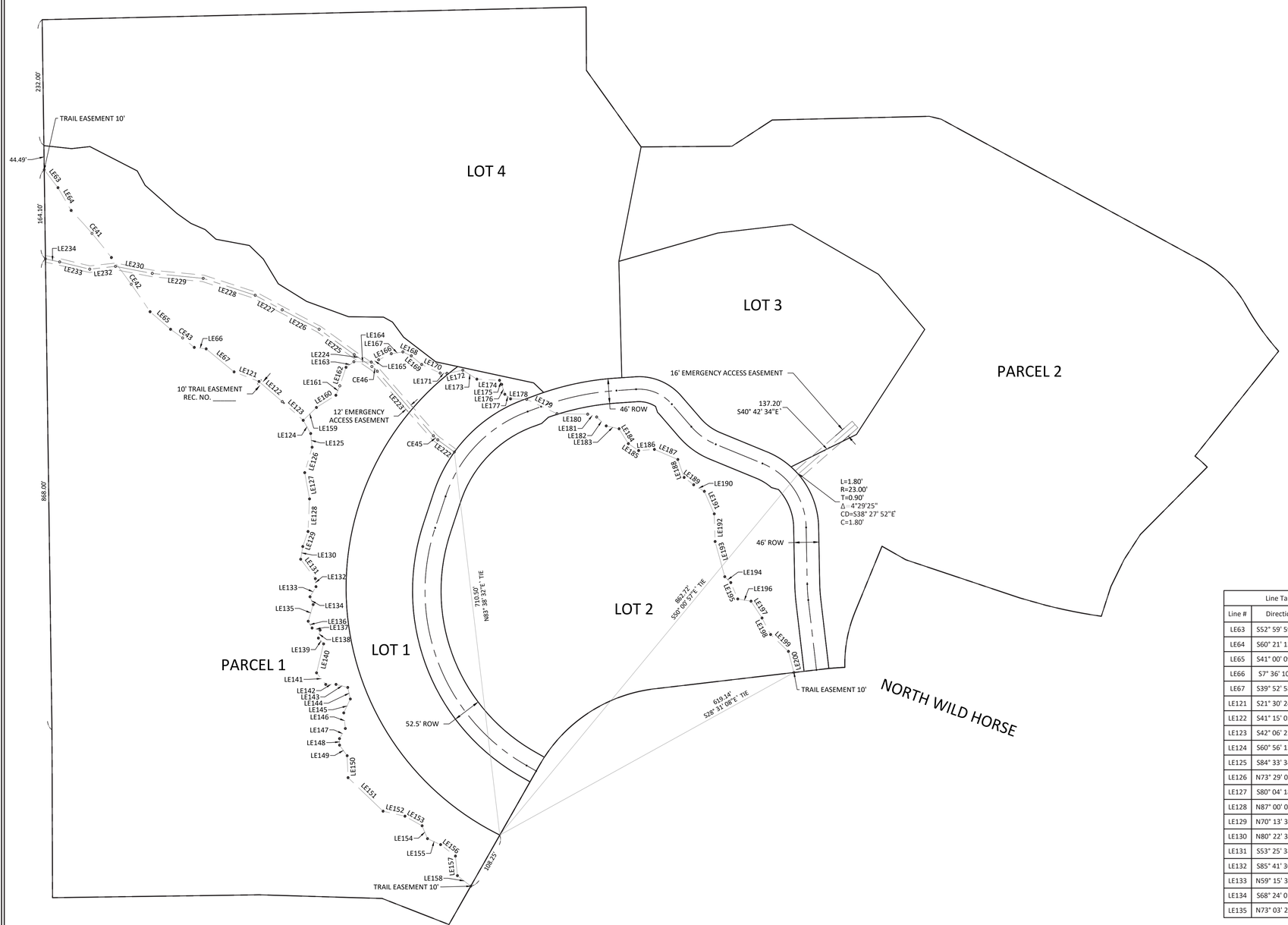
FINAL PLAT OF:

CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9

A PORTION OF THE 'OPTION PROPERTY' BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31,
AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M.
TOWN OF NEW CASTLE, COLORADO

SHEET 4 OF 5

TRAIL AND EMERGENCY ACCESS EASEMENTS



TRAIL CENTERLINE EASEMENT TABLES

Curve Table					
Curve #	Radius	Length	Chord Direction	Tangent	Chord
CE41	915.33	114.23	S49° 52' 11"W`	57.19'	114.16'
CE42	1692.11	122.64	S54° 52' 41"W`	61.35'	122.61'
CE43	504.41	54.96	S37° 45' 57"W`	27.51'	54.93'
CE45	50.00	11.11	N43° 01' 11"E`	5.58'	11.09'
CE46	50.00	13.14	N41° 51' 35"E`	6.61'	13.10'

Line Table		
Line #	Direction	Length
LE63	S52° 59' 59"W`	41.63'
LE64	S60° 21' 13"W`	48.43'
LE65	S41° 00' 09"W`	49.64'
LE66	S7° 36' 10"W`	22.14'
LE67	S39° 52' 58"W`	66.63'
LE121	S21° 30' 24"W`	49.18'
LE122	S41° 15' 05"W`	56.80'
LE123	S42° 06' 22"W`	51.47'
LE124	S60° 56' 13"W`	28.11'
LE125	S84° 33' 34"W`	25.37'
LE126	N73° 29' 00"W`	48.74'
LE127	S80° 04' 18"W`	49.14'
LE128	N87° 00' 01"W`	60.16'
LE129	N70° 13' 38"W`	29.33'
LE130	N80° 22' 39"W`	23.72'
LE131	S53° 25' 38"W`	44.72'
LE132	S85° 41' 30"W`	14.80'
LE133	N59° 15' 38"W`	21.67'
LE134	S68° 24' 01"W`	15.41'
LE135	N73° 03' 27"W`	32.04'

Line Table		
Line #	Direction	Length
LE136	S60° 35' 35"W`	14.37'
LE137	S15° 24' 51"W`	15.26'
LE138	N77° 23' 56"W`	14.99'
LE139	S48° 25' 37"W`	14.32'
LE140	N75° 59' 12"W`	54.90'
LE141	S52° 00' 17"W`	27.16'
LE142	S0° 24' 17"W`	19.00'
LE143	S15° 00' 50"W`	22.30'
LE144	S77° 55' 24"W`	21.80'
LE145	N64° 25' 05"W`	28.22'
LE146	S84° 39' 57"W`	28.88'
LE147	N59° 36' 31"W`	21.59'
LE148	S89° 40' 47"W`	12.01'
LE149	S54° 42' 25"W`	23.96'
LE150	S88° 02' 15"W`	40.48'
LE151	S44° 08' 39"W`	89.29'
LE152	S13° 22' 19"W`	41.33'
LE153	S29° 33' 39"W`	36.20'
LE154	S67° 47' 30"W`	25.69'
LE155	S24° 46' 28"W`	26.53'

Line Table		
Line #	Direction	Length
LE156	S38° 05' 25"W`	34.57'
LE157	S84° 37' 27"W`	36.22'
LE158	S38° 36' 08"W`	31.33'
LE159	S43° 56' 20"E`	33.99'
LE160	S31° 40' 40"E`	42.34'
LE161	S67° 05' 41"E`	18.75'
LE162	S70° 58' 24"E`	35.95'
LE163	S35° 16' 50"E`	17.86'
LE164	S1° 46' 53"W`	31.94'
LE165	S16° 53' 33"E`	14.23'
LE166	S25° 24' 42"E`	25.99'
LE167	S8° 18' 20"E`	21.54'
LE168	S25° 32' 42"W`	17.16'
LE169	S40° 06' 24"W`	24.93'
LE170	S25° 23' 15"W`	37.49'
LE171	S3° 02' 53"W`	12.48'
LE172	S11° 16' 11"E`	29.86'
LE173	S33° 01' 56"W`	30.78'
LE174	S3° 25' 32"W`	41.87'
LE175	S62° 24' 56"W`	8.58'

Line Table		
Line #	Direction	Length
LE176	S72° 59' 12"W`	18.90'
LE177	S39° 08' 12"W`	13.64'
LE178	S2° 05' 09"W`	29.61'
LE179	S25° 42' 45"W`	61.67'
LE180	S1° 20' 12"W`	56.73'
LE181	S18° 02' 18"W`	17.26'
LE182	S43° 21' 02"W`	24.15'
LE183	S12° 51' 32"W`	24.24'
LE184	S58° 27' 57"W`	32.26'
LE185	S34° 23' 32"W`	22.87'
LE186	S3° 50' 00"E`	29.13'
LE187	S23° 42' 31"W`	47.03'
LE188	S71° 09' 27"W`	35.03'
LE189	S37° 46' 58"W`	22.13'
LE190	S31° 59' 29"W`	23.12'
LE191	S66° 43' 32"W`	45.34'
LE192	S88° 38' 42"W`	50.99'
LE193	S74° 57' 46"W`	67.21'
LE194	S44° 56' 27"W`	15.46'
LE195	S67° 20' 56"W`	32.82'

Line Table		
Line #	Direction	Length
LE196	S9° 46' 43"W`	24.78'
LE197	S57° 21' 30"W`	37.02'
LE198	S62° 48' 48"W`	34.33'
LE199	S43° 53' 35"W`	45.19'
LE200	S75° 40' 43"W`	40.16'
LE222	N36° 39' 06"E`	37.92'
LE223	N49° 23' 17"E`	157.64'
LE224	N34° 19' 54"E`	39.21'
LE225	N36° 17' 01"E`	79.74'
LE226	N28° 08' 01"E`	76.97'
LE227	N28° 45' 08"E`	56.48'
LE228	N18° 24' 24"E`	100.80'
LE229	N5° 56' 16"E`	94.28'
LE230	N11° 18' 14"E`	68.93'
LE232	N5° 51' 44"W`	47.74'
LE233	N13° 57' 52"E`	57.01'
LE234	N12° 41' 37"E`	26.70'

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

GEOFFREY KELLY
REGISTERED LAND SURVEYOR #37997

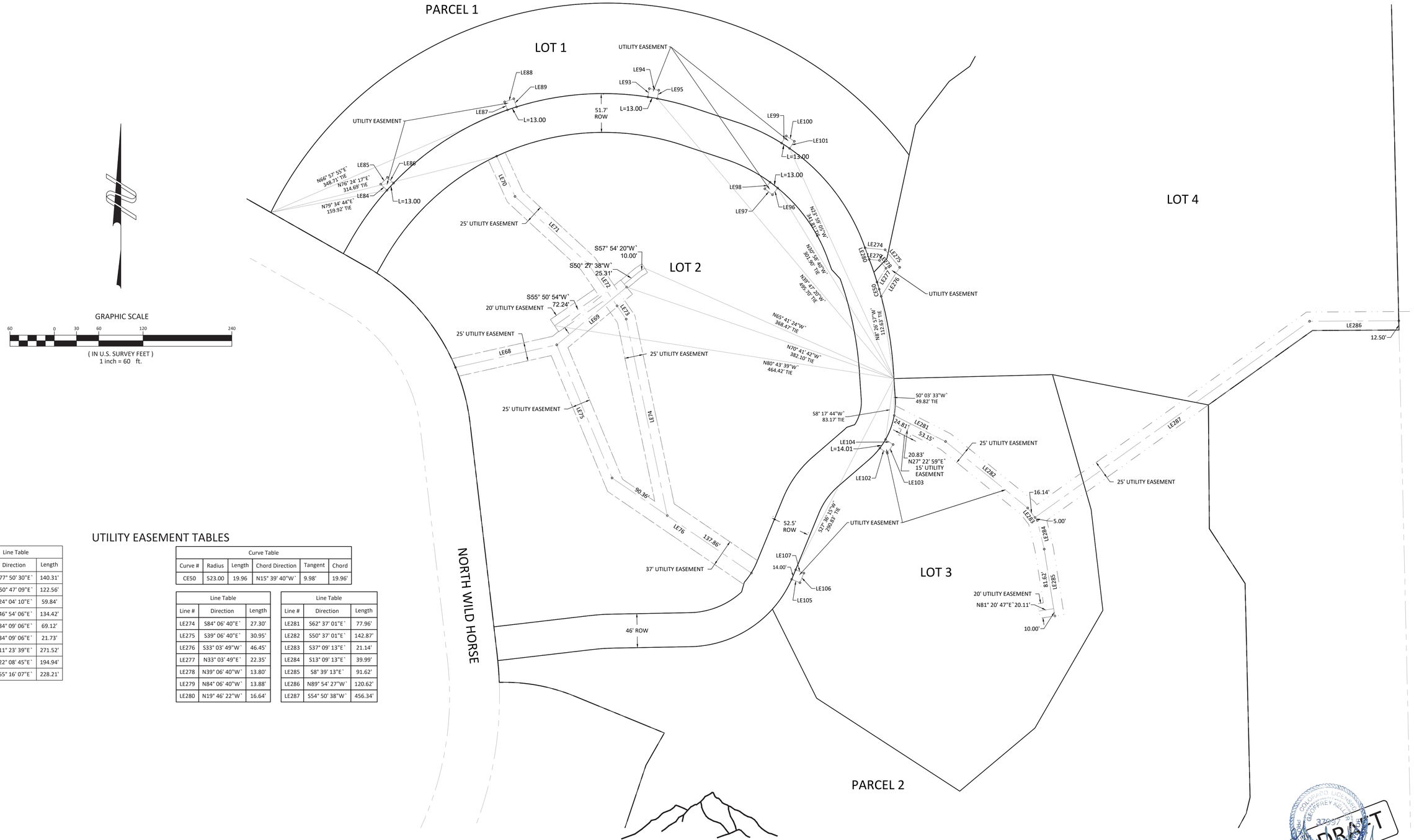
G:\2021\21101\PLAT\FINAL PLAT\21101 FINAL PLAT SHEETS.DWG, 2/10/2022 2:53:04 PM, Feb 10, 2022 - 2:53pm

FINAL PLAT OF:

CASTLE VALLEY RANCH FILING 13, PA 8 & PA 9

A PORTION OF THE 'OPTION PROPERTY' BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31,
AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M.
TOWN OF NEW CASTLE, COLORADO

UTILITY EASEMENTS



GRAPHIC SCALE

60 0 30 60 120 240

(IN U.S. SURVEY FEET)
1 inch = 60 ft.

UTILITY EASEMENT TABLES

Line Table		
Line #	Direction	Length
LE68	N77° 50' 30"E`	140.31'
LE69	N50° 47' 09"E`	122.56'
LE70	S24° 04' 10"E`	59.84'
LE71	S46° 54' 06"E`	134.42'
LE72	S34° 09' 06"E`	69.12'
LE73	S34° 09' 06"E`	21.73'
LE74	S11° 23' 39"E`	271.52'
LE75	S22° 08' 45"E`	194.94'
LE76	S55° 16' 07"E`	228.21'

Curve Table					
Curve #	Radius	Length	Chord Direction	Tangent	Chord
CE50	523.00	19.96	N15° 39' 40"W`	9.98'	19.96'

Line Table		
Line #	Direction	Length
LE274	S84° 06' 40"E`	27.30'
LE275	S39° 06' 40"E`	30.95'
LE276	S33° 03' 49"W`	46.45'
LE277	N33° 03' 49"E`	22.35'
LE278	N39° 06' 40"W`	13.80'
LE279	N84° 06' 40"W`	13.88'
LE280	N19° 46' 22"W`	16.64'

Line Table		
Line #	Direction	Length
LE281	S62° 37' 01"E`	77.96'
LE282	S50° 37' 01"E`	142.87'
LE283	S37° 09' 13"E`	21.14'
LE284	S13° 09' 13"E`	39.99'
LE285	S8° 39' 13"E`	91.62'
LE286	N89° 54' 27"W`	120.62'
LE287	S54° 50' 38"W`	456.34'

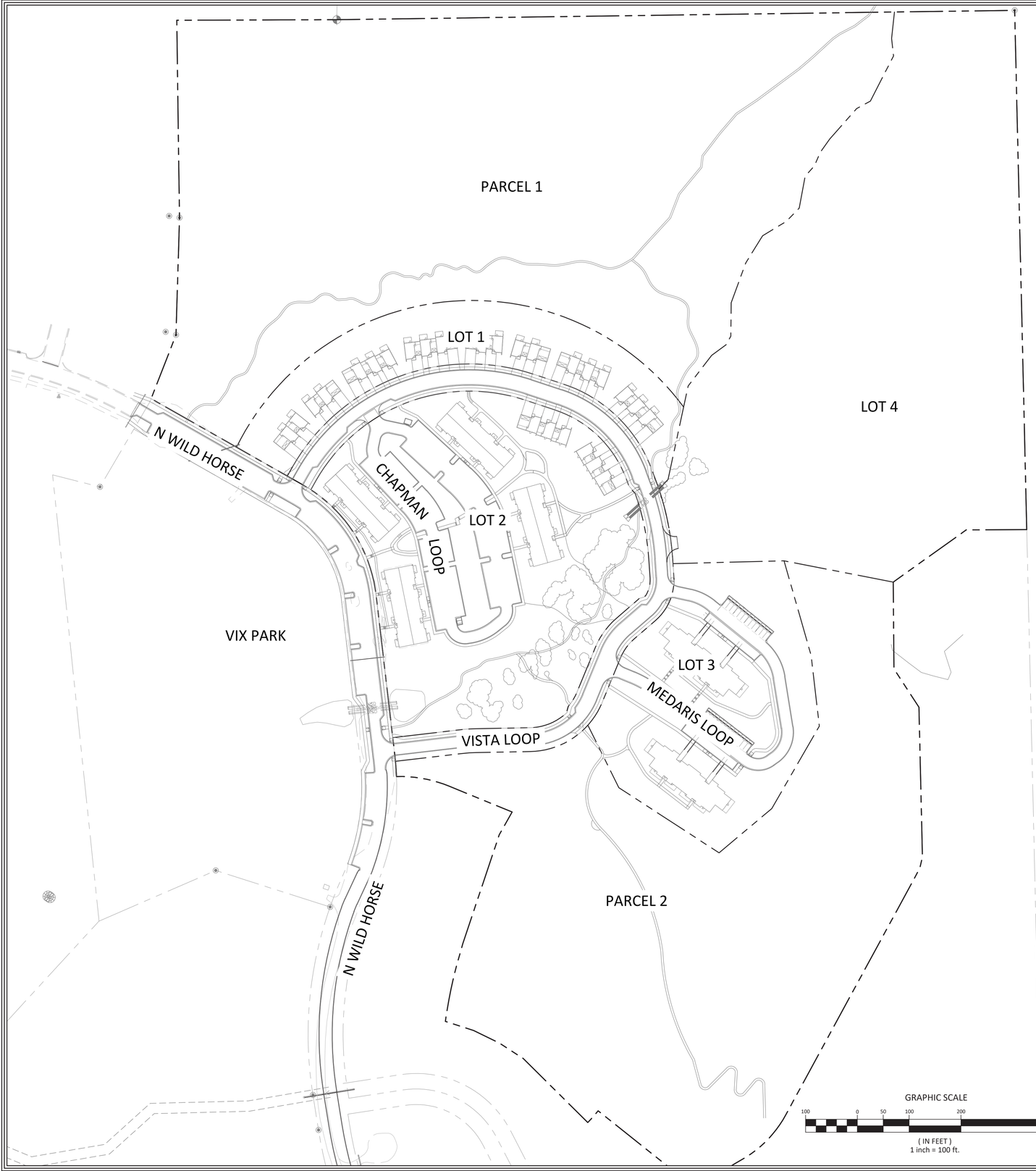
SOPRIS ENGINEERING LLC
502 MAIN STREET • SUITE A3 • CARBONDALE CO 81623
(970) 704 0311 • soprisengineering.com

COLORADO LICENSED
GEOFFREY KELLY
37997
PLS

DRAFT

GEOFFREY KELLY
REGISTERED LAND SURVEYOR #37997

G:\2023\33011 CVR P2 RES\SURVEYS\SURVEY DWGS\SURVEY PLOTS\33011-PLAT-SHT.DWG - Feb 03, 2025 - 2:55pm



VICINITY MAP
SCALE: 1" = 500'

SHEET INDEX

C0.0 - COVER SHEET
C0.1 - NOTES
C1.0 - SITE PLAN
C1.1 - SITE PLAN SECTIONS
C1.2 - SIGNAGE AND STRIPING PLAN
C1.3 - EROSION CONTROL PLAN
C2.0 - OVERALL GRADING PLAN
C2.1 - VISTA LOOP PLAN/PROFILE
C2.2 - MEDARIS LOOP PLAN/PROFILE
C2.3 - CHAPMAN LOOP PLAN/PROFILE
C2.4 - N. WILD HORSE PLAN/PROFILE
C2.5 - NORTH WEST GRADING
C2.6 - NORTH EAST GRADING
C2.7 - WEST GRADING
C2.8 - EAST GRADING
C2.9 - SOUTH EAST GRADING
C3.0 - OVERALL UTILITY PLAN
C3.1 - SITE UTILITY SHEET
C3.2 - SEWER A PLAN/PROFILE
C3.3 - SEWER B PLAN/PROFILE
C3.4 - WATER MAIN A PLAN/PROFILE 1
C3.5 - WATER MAIN A PLAN/PROFILE 2
C3.6 - WATER MAIN B PLAN/PROFILE
C3.7 - WATER MAIN C PLAN/PROFILE
C4.0 - STORM PLAN A, B, & C
C4.1 - STORM PROFILES A, B, & C
C4.2 - STORM PLAN D, E, & F
C4.3 - STORM PROFILES D, E, & F
C4.4 - STORM PLAN G, H, J, M, & N
C4.5 - STORM PROFILES G, H, J, M, & N
C4.6 - STORM PLAN K & L
C4.7 - STORM PROFILES K & L
C5.0 - SITE DETAILS
C5.01 - TOWN SITE DETAILS
C5.1 - GRADING DETAILS
C5.2 - SIGNAGE DETAILS
C5.3 - WATER DETAILS
C5.4 - SEWER DETAILS
C6.0 - EXISTING DRAINAGE EXHIBIT
C6.1 - PROPOSED DRAINAGE EXHIBIT
C6.2 - SITE DRAINAGE EXHIBIT

Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	01-31-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
COVER SHEET

DRAWING NO.
C-0.0

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLAT\33011-02R-COVER.DWG - Jan 31, 2024 - 1:10pm

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST DESIGN STANDARDS OF TOWN OF NEW CASTLE AND THE RESPECTIVE UTILITY COMPANY UNLESS OTHERWISE NOTED.
2. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED). EXISTING CONDITIONS ARE BASED ON AN IMPROVEMENT SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
3. ALL EXISTING UTILITIES EITHER UNDERGROUND OR OVERHEAD, SHALL BE MAINTAINED IN CONTINUOUS SERVICE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY DAMAGE TO, OR INTERRUPTION OF SERVICES CAUSED BY THE CONSTRUCTION.
4. ALL CONTRACTORS AND SUBCONTRACTORS SHALL HAVE A SET OF APPROVED CONSTRUCTION DOCUMENTS ON SITE AT ALL TIMES.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING CONDITIONS OUTSIDE THE DESIGNATED IMPROVEMENT AREA FROM DAMAGE. ANY DAMAGE TO EXISTING AREAS OUTSIDE THE DESIGNATED IMPROVEMENT AREA DURING CONSTRUCTION SHALL, AT A MINIMUM, BE RESTORED TO A STATE EQUAL TO ITS PRE CONSTRUCTION STATE.
6. THE GENERAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE WORK, AND SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. IDENTIFYING THE NEED FOR A PERMIT, PREPARING THE APPLICATION, AND PAYING THE SUBMITTAL AND REVIEW FEES NECESSARY TO SECURE PERMITS WILL BE THE TOTAL RESPONSIBILITY OF THE GENERAL CONTRACTOR. A COPY OF ALL PERMITS MUST BE POSTED AND WEATHER PROOFED ON SITE AT ALL TIMES.
7. THE GENERAL CONTRACTOR SHALL PERFORM THE WORK ACCORDING TO ALL LOCAL GOVERNMENT, COUNTY, STATE, AND FEDERAL SAFETY AND HEALTH REGULATIONS. IN PARTICULAR, THE "TRENCHING" AND "OPEN EXCAVATION" OPERATIONS SHALL COMPLY WITH ALL CURRENT O.S.H.A. REGULATORY REQUIREMENTS.
8. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING THEIR OWN DISPOSAL SITE FOR ALL DISPOSED MATERIALS.
9. COORDINATION WITH OTHER AGENCIES: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING INSPECTIONS PERFORMED BY OTHER GOVERNMENTAL AGENCIES, AND THE ENGINEER OF RECORD, AS PRESCRIBED IN THEIR PERMITS AND APPROVALS.
10. MAINTAIN TRAFFIC CONTROL DEVICES: THE CONTRACTOR SHALL INSTALL AND MAINTAIN FENCES, BARRIERS, LIGHTS AND SIGNS THAT ARE NECESSARY TO GIVE ADEQUATE WARNING TO THE PUBLIC AND TRAVELING MOTORISTS AT ALL TIMES.
11. NO MATERIAL OR EQUIPMENT SHALL BE STORED IN THE PUBLIC RIGHT-OF-WAY WITHOUT PRIOR APPROVAL FROM THE TOWN OF NEW CASTLE.
12. NOTIFY UTILITY OWNERS: CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY OWNERS FORTY-EIGHT HOURS (OR AS REQUIRED BY UTILITY COMPANIES) PRIOR TO COMMENCEMENT OF WORK ADJACENT TO THE UTILITY.
13. IT IS THE CONTRACTORS RESPONSIBILITY TO SCHEDULE INSTALLATION INSPECTIONS AND SCHEDULE/OBTAIN AS-BUILT SURVEY DATA DURING CONSTRUCTION OF ALL IMPROVEMENTS TO INCLUDE, BUT NOT LIMITED TO, STORM PIPE INVERTS AT ALL BENDS, INLETS, OUTFALLS, AND UTILITY INFRASTRUCTURE.
14. COORDINATION WITH OTHER CONTRACTORS: WHERE TWO OR MORE CONTRACTORS ARE WORKING IN THE SAME AREA, EACH SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER AS NOT TO CAUSE ANY UNNECESSARY DELAY OR HINDRANCE TO THE OTHER. WHERE CONFLICTS CANNOT BE AVOIDED, THE LOCAL GOVERNMENT WILL DETERMINE WHICH CONTRACTOR(S) HAVE CONSTRUCTION PRIORITY OVER THE OTHER CONTRACTORS AND THE TERMS OF SUCH CONSTRUCTION PRIORITY.
15. THE CONTRACTOR AND SUB-CONTRACTOR MUST MAKE EVERY ATTEMPT TO PREVENT DAMAGE TO EXISTING TREES AND ASSOCIATED ROOTS IN AND AROUND THE WORK AREA.

CONCRETE FLATWORK SPECIFICATIONS

1. CONCRETE MATERIAL AND PLACEMENT SHALL BE CDOT CLASS D MIX, WITH 4000 PSI COMPRESSIVE STRENGTH.
2. WEATHER PROTECTION SHALL BE PROVIDED IN COMPLIANCE WITH CDOT STANDARD SPECIFICATIONS (LATEST STANDARDS) SECTION 412 & 601.
3. PERMITTEE SHALL SCHEDULE A FORM INSPECTION AND OBTAIN APPROVAL PRIOR TO POURING WITHIN TOWN OF NEW CASTLE RIGHT-OF-WAY.
4. DAMAGED CONCRETE PAVEMENT SHALL BE REMOVED AND REPLACED AS A FULL PANEL SECTION WITH DOWELS SET INTO ADJACENT PANELS IN COMPLIANCE WITH CDOT STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION AND M&S STANDARDS (LATEST EDITION).
5. DAMAGED FLATWORK AND CURB AND GUTTER SHALL BE REPLACED IN FULL SECTIONS FROM EXISTING CONTRACTION JOINTS. PARTIAL SECTION REPLACEMENT SHALL NOT BE PERMITTED.
6. CONCRETE REMOVED ADJACENT TO ASPHALT PAVEMENTS SHALL BE SAWCUT A MINIMUM OF 2' STRIP ALONG THE ABUTTING EDGE PRIOR TO REMOVAL IN ORDER TO REMOVE WITHOUT DAMAGE TO THE ASPHALT PAVEMENT. THE SAWCUT EDGE SHALL NOT BE USED AS A FORM FOR THE NEW CONCRETE. TEMPORARY FORMWORK SHALL BE PLACED ALONG THE SAWCUT EDGE IN THE DESIRED ALIGNMENT. THE TOP EDGE OF THE REPLACED CONCRETE SECTION (CONC. LIP) SHALL BE STRAIGHT AND TRUE WITHOUT WARPING OR IRREGULARITY. AFTER THE FORMWORK IS REMOVED, THE GAP SHALL BE RE-PAVED WITH ASPHALT. DAMAGE CAUSED TO THE EDGE OF THE ASPHALT PAVEMENT SHALL RESULT IN THE ASSESSMENT OF A RESTORATION FOR ASPHALT RESURFACING.
7. SUBGRADE ELEVATION SHALL BE BROUGHT UP TO +/- 0.05 FOOT OF FINAL GRADE PER PLANS, WITH APPROVED MATERIALS PRIOR TO PLACING FORMS.
8. NO WATER SHALL BE PLACED ON CONCRETE SURFACE TO ASSIST FINISHING.
9. VARIATIONS OF CONCRETE SURFACE SHALL NOT EXCEED $\frac{1}{8}$ INCH IN TEN FEET (10') IN ALL DIRECTIONS.
10. LIQUID MEMBRANE CURING COMPOUND SHALL BE PLACED IN COMPLIANCE WITH CDOT STANDARD SPECIFICATIONS (LATEST EDITION) SECTION 601.13.36 AT A RATE TO COMPLETELY COAT ALL EXPOSED SURFACES.
11. PERMITTEE SHALL BE RESPONSIBLE FOR REPAIRING SIDEWALK, CURB, OR GUTTER DAMAGED FROM WORK ACTIVITIES OF PERMITTEE.
12. PERMITTEE SHALL BE RESPONSIBLE FOR INSTALLATION OF NEW SIDEWALK, CURB AND GUTTER PER TOWN OF NEW CASTLE CODE, AND FOR REPAIR OF SIDEWALK, CURB AND GUTTER PER TOWN OF NEW CASTLE CODE.
13. ALL CONTRACTION JOINTS SHALL BE SAWN JOINTS AND MUST BE CUT WITHIN 12 HOURS OF PLACEMENT. SAWN JOINTS SHALL BE STRAIGHT AND TRUE AND 1/8 IN WIDTH AND 1/3 OF CONCRETE THICKNESS AND CUT AT INTERVALS EQUAL TO THE WIDTH OF SIDEWALK.
14. BASE FOR FLATWORK SHALL BE AT LEAST 6" OF CDOT CLASS 6 ABC COMPACTED TO 95% OF STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
15. COARSE BROOM FINISH SHALL BE PROVIDED PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL ON SIDEWALK AND RAMPS AND PERPENDICULAR TO THE DIRECTION OF WATER FLOW ON CURB AND GUTTER.

EROSION CONTROL NOTES:

1. CONTRACTOR MUST UTILIZE "BEST MANAGEMENT PRACTICES" (BMP), TO CONTROL EROSION AND SEDIMENTATION DURING CONSTRUCTION, TO INCLUDE THE INSTALLATION OF INLET PROTECTION AROUND THE NEAREST DOWNSTREAM RECEIVING INLET LOCATED WITHIN THE TOWN OF NEW CASTLE'S ROW.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF ALL TEMPORARY EROSION CONTROL MEASURES.
3. DUST CAUSED BY EXCAVATION, TOPSOIL REMOVAL OPERATIONS, OR ROAD BASE PLACEMENT SHALL BE CONTROLLED BY THE CONTRACTOR AT HIS EXPENSE. THE ENGINEER OR TOWN OF NEW CASTLE MAY REQUIRE THE CONTRACTOR AT ANY TIME TO DISCONTINUE CONSTRUCTION ACTIVITIES UNTIL DUST CONDITIONS ARE REDUCED TO THE TOWN OF NEW CASTLE'S SATISFACTION.
4. THE CONTRACTOR WILL BE REQUIRED TO FURNISH AND APPLY A DUST PALLIATIVE ON THE SITE AS DIRECTED BY THE TOWN OF NEW CASTLE. DUST PALLIATIVE MAY CONSIST OF WATER OR A NON-POLLUTING SOLUTION. SPREADING OF WATER OR WATER MIXTURE SHALL BE DONE WITH ACCEPTABLE SPRINKLING EQUIPMENT. ALL DUST CONTROL SHALL EXTEND BEYOND THE CONSTRUCTION AREA PROPER TO THE SIDE STREETS ENTERING AND EXISTING THE PROJECT, WHERE MUD AND DIRT FROM CONSTRUCTION EQUIPMENT, AS WELL AS LOCAL TRAFFIC, MAY GET ONTO THE SIDE STREETS. CLEANUP OF THESE AREAS WILL BE REQUIRED AS NECESSARY OR AS DIRECTED BY THE TOWN OF NEW CASTLE/OWNER/ENGINEER.
5. MAINTENANCE OF PROPER DRAINAGE AND CLEANING TEMPORARY SEDIMENT CONTAINMENT DURING THE PROGRESS OF THE CONTRACT IS ESSENTIAL. ANY DAMAGE DUE TO IMPROPER MAINTENANCE OF SAID DRAINAGE PRIOR TO FINAL ACCEPTANCE OF THE PROJECT WILL BE THE CONTRACTOR'S RESPONSIBILITY.
6. BMP'S SHALL BE INSTALLED BEFORE ANY EARTH DISTURBING ACTIVITIES COMMENCE.
7. STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SHALL NOT CAUSE, HAVE THE REASONABLE POTENTIAL TO CAUSE, OR MEASURABLY CONTRIBUTE TO AN EXCEEDANCE OF ANY WATER QUALITY STANDARD.
8. CONSTRUCTION SHALL BE PHASED IN A MANNER TO LIMIT EARTH DISTURBING ACTIVITIES (I.E. THE ENTIRE PROJECT SITE SHOULD NOT BE DISTURBED IF CONSTRUCTION WILL ONLY BE OCCURRING IN ONE PARTICULAR SECTION).
9. SEDIMENT CAUSED BY ACCELERATED SOIL EROSION SHALL BE REMOVED FROM RUNOFF WATER BEFORE IT LEAVES THE CONSTRUCTION SITE.
10. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND ANY OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS.
11. THE EROSION CONTROL PLAN SHALL BE CONTINUOUSLY UPDATED TO REFLECT NEW OR REVISED BEST MANAGEMENT PRACTICES (BMP'S) DUE TO CHANGES IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE OF THE CONSTRUCTION SITE. UPDATES MUST BE MADE WITHIN 72 HOURS FOLLOWING THE CHANGE IN BMP'S.
12. THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE (INCLUDING ALL BMP'S, STORAGE CONTAINERS, AND CONSTRUCTION EQUIPMENT) A MINIMUM OF EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OR SNOW MELT THAT MAY CAUSE SURFACE EROSION.
13. THE CONTRACTOR SHALL KEEP A RECORD OF ALL INSPECTIONS ON SITE AND AVAILABLE FOR REVIEW BY TOWN OF NEW CASTLE STAFF. INSPECTION REPORTS MUST IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT.
14. STRAW BALES SHALL NOT BE USED FOR PRIMARY EROSION OR SEDIMENT CONTROL (I.E. STRAW BALES MAY BE USED FOR REINFORCEMENT BEHIND ANOTHER BMP SUCH AS SILT FENCE).
15. BMP'S INTENDED FOR SHEET FLOW SEDIMENT RUNOFF SHALL BE PLACED PARALLEL TO THE SLOPE.
16. ALL BMP'S SHALL BE CLEANED WHEN SEDIMENT LEVELS ACCUMULATE TO HALF THE DESIGN OF THE BMP UNLESS OTHERWISE SPECIFIED.
17. A VEHICLE TRACKING PAD (VTP) SHALL BE PLACED AT ALL EXITS FROM THE SITE TO PREVENT TRACK-OUT ONTO TOWN OF NEW CASTLE STREETS. IF TRACK-OUT DOES OCCUR, THE CONTRACTOR SHALL IMMEDIATELY SWEEP THE STREET OF DEBRIS.
18. ALL PORTA-POTTY STRUCTURES MUST BE FIRMLY SECURED WITH #4 REBAR ANCHORS OR EQUAL. MUST BE PLACED AWAY FROM FLOW LINES OF STREET, SWALES, RAIN GARDENS & AWAY FROM INLETS.
19. A CONCRETE WASHOUT AREA (CWA) MUST BE PROVIDED AND ROUTINELY MAINTAINED. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS OR STREAMS IS ALLOWED.
20. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT AREAS (CWA).
21. ON-SITE TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS AND MUST BE CLEANED OUT OR REPLACED BEFORE THE WASHOUT IS 75% FULL.
22. STOCKPILES OF SOIL OR OTHER ERODABLE MATERIALS MUST BE MANAGED SO THAT STORMWATER DOES NOT COME IN CONTACT WITH THE PILE AND POTENTIALLY WASH POLLUTANTS OFFSITE. AT A MINIMUM STOCKPILES SHALL BE ROUTINELY WETTED AND/OR BLANKETED AS WELL AS INCLUDE AN EROSION SOCK PERIMETER BARRIER TO PREVENT WIND EROSION AND SEDIMENT TRANSPORT OFFSITE. STOCKPILES THAT ARE INACTIVE FOR MORE THAN 7 DAYS WILL REQUIRE SOIL BINDER OR HAVE MUCLH/MULCH TACKIFIER APPLIED.
23. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES EXCEEDING 3:1.

POTABLE WATER INSTALLATION SPECIFICATIONS:

1. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE TOWN OF NEW CASTLE PUBLIC WORKS MANUAL DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTAL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. POTABLE WATER MAIN AND WATER SERVICES LARGER THAN 4" SHALL BE GASKETED C900 PVC DR14 OR APPROVED EQUAL.
3. WATER SERVICES SMALLER THAN 4" SHALL BE AWWA PURE CORE OR APPROVED EQUAL. THE WATER SERVICE TAPS ON THE WATER MAIN MUST BE A MINIMUM OF 4 FEET FROM EACH OTHER, AND MUST BE MORE THAN 4' FROM A FITTING OR A JOINT.
4. THE PIPE BEDDING MATERIAL SHALL BE $\frac{3}{4}$" INCH CRUSHED SCREENED ROCK HAULED IN FOR BEDDING AND NOT NATIVE EXCAVATED MATERIAL.
5. THE BACKFILL MATERIAL FROM 12 INCHES ABOVE THE TOP OF THE PIPE TO THE TOP OF THE TRENCH SHALL BE CLASS 6 AGGREGATE BASE COURSE MATERIAL.
6. MINIMUM COVER OF WATER MAINS AND SERVICE LINES SHALL BE 5.5 FEET DEEP FROM TOP OF PIPE TO FINISHED GRADE.
7. MINIMUM COVER OF 5.5 FEET SHALL BE MAINTAINED AT STORM SEWER CROSSINGS. BLUE BOARD INSULATION SHALL BE INSTALLED 1" THICK FOR EVERY FOOT LESS THAN THE MINIMUM COVER. CONTRACTOR SHALL PROVIDE INSULATION SUBMITTAL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. REFER TO INSULATION TRENCH DETAIL FOR MORE INFORMATION.
8. ALL FITTINGS MUST HAVE MEGA LUG FITTINGS IN ADDITION TO CONCRETE THRUST BLOCKS.
9. FIRE HYDRANTS SHALL BE KENNEDY, INSTALLED PER LATEST DETAIL AND SPECIFICATIONS IN THE TOWN PUBLIC WORKS MANUAL
10. VALVES: GATE VALVES SHALL BE INSTALLED FOR ALL VALVES 12" AND SMALLER AND SHALL BE A MUELLER OR PRE APPROVED EQUIVALENT RESILIENT SEAT, EPOXY COATED MECHANICAL JOINT, NON-RISING VALVE STEM AND SHALL OPEN BY TURNING TO THE LEFT, COUNTER-CLOCKWISE. VALVES SHALL CONFORM TO AWWA SPECIFICATIONS C-509; OR THE LATEST REVISION THEREOF; IN ZONES WHICH HAVE STATIC PRESSURES GREATER THAN 80 PSI THE VALVE APPLICATION WILL BE A CLASS 250 BUTTERFLY VALVE OF THE ABOVE MENTIONED MANUFACTURERS WITH EPOXY INTERIOR AND EXTERIOR COATINGS. AT INTERSECTIONS, GATE VALVES SHALL BE INSTALLED WITHIN 3' OF A TEE, CROSS, OR BEND, ALL CONNECTIONS SHALL HAVE MEGA-LUGS ON THE FITTINGS EXCEPT WHERE THE TEE BRANCH AND BRANCH VALVE ARE FLANGED. ALL MECHANICAL JOINT FITTINGS WILL HAVE MEGA-LUG FITTINGS, AND CONCRETE THRUST BLOCKS. TIE RODS MAY BE USED ONLY WERE APPROVED.
11. PRESSURE REDUCING VALVE SHALL BE CLA-VAL OR APPROVED EQUAL.
12. ALL WATER MAIN CONSTRUCTION SHALL BE OBSERVED AND COORDINATED WITH THE TOWN OF NEW CASTLE OR AUTHORIZED REPRESENTATIVE.
13. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO COMMENCING ANY WORK.

IRRIGATION RAW WATER INSTALLATION SPECIFICATIONS:

1. BURY DEPTH SHALL BE MINIMIZED WHERE POSSIBLE. MINIMUM BURY DEPTH IS 2 FEET.
2. IRRIGATION MAIN LINES SHALL HAVE GRAVITY DRAINS FOR WINTERIZATION, LOCATED AT ELEVATION LOW POINTS.
3. IRRIGATION MAIN LINES SHALL BE 4" GASKETED BELL C900 DR 18, PURPLE IN COLOR. 14 GUAGE TRACER WIRE REQUIRED ON ALL IRRIGATION MAINS.
4. RAW WATER MAIN LINES SHALL BE CONSTRUCTED WITH MECHANICAL JOINTS AND A THRUST BLOCK, OR MECHANICAL JOINTS WITH MEGA LUG CONNECTIONS.
5. RAW WATER SERVICE TAPS SHALL INCLUDE A WEEPING CURB STOP AND GRAVEL DRAINAGE PIT.

PAVING SPECIFICATIONS:

PAVEMENT REMOVAL:

1. ALL ASPHALT PAVEMENT CUTS SHALL BE IN STRAIGHT NEAT LINES. IRREGULAR SHAPED CUTS WITH MORE THAN FOUR (4) SIDES OR CUTS WITHIN EXISTING PATCHES SHALL NOT BE ALLOWED. ALL CUTS SHALL BE RECTANGULAR IN SHAPE, AND EDGES SHALL BE PARALLEL OR PERPENDICULAR TO THE FLOW OF TRAFFIC.
2. IN ORDER TO PROVIDE STRAIGHT EDGES, ALL ASPHALT PAVEMENT CUTS SHALL BE CUT BY A MECHANICAL SAW CUTTING EQUIPMENT, ROTOMILLING, OR OTHER APPROVED METHOD WHICH ASSURES A NEAT STRAIGHT EDGE FOR THE REQUIRED DEPTH OF THE CUT.
3. ASPHALT PAVEMENT CUTS SHALL BE SUCH THAT NO LONGITUDINAL JOINT LIES WITHIN THE WHEEL TRACK; ANY PATCH WHICH PENETRATES A WHEEL PATH MUST BE EXTENDED TO FULL LANE WIDTH.
4. CONCRETE PAVEMENT SHALL BE REMOVED AND REPLACED FROM EXISTING PANEL JOINTS ONLY.
5. STRESS CRACKING OF EXISTING PAVEMENT MAY OCCUR DURING EXCAVATION FOR A VARIETY OF REASONS. IF THIS OCCURS, THE CONTRACTOR MUST SAWCUT AT LEAST 12" BEYOND THE LIMIT OF VISIBLE CRACKS AND REMOVE ALL STRESSED PAVEMENT.

ASPHALT PAVEMENTS:

6. THE MINIMUM PATCH DIMENSIONS SHALL BE TWELVE INCHES (12" MIN.) BEYOND EACH SIDE OF THE TRENCH OR EXCAVATION; REFER TO DETAILS AND TOWN OF NEW CASTLE'S LATEST DESIGN STANDARDS.
7. THE LONGITUDINAL EDGES OF THE PATCH SHALL NOT FALL WITHIN THE EXISTING WHEEL TRACKS WHENEVER POSSIBLE.
8. PRIOR TO PLACING THE PERMANENT PATCH, THE EXISTING PAVEMENT SHALL BE SAWCUT TO A NEAT STRAIGHT-LINE, SQUARE TO THE TRAVEL LANE.
9. ASPHALT MIX SHALL BE CDOT, S-MIX ($\frac{1}{2}$"). PATCH BACK AREAS GREATER THAN ONE HUNDRED TWENTY SQUARE FEET (120 S.F.) SHALL REQUIRE THE SUBMITTAL AND APPROVAL OF A MIX DESIGN TO THE ENGINEER PRIOR TO PLACEMENT.
10. COMPACTION SHALL BE AT LEAST 95% OF MAX. DENSITY WITHIN 2% OPTIMUM MOISTURE AS DEFINED BY ASTM 1557 METHOD "C".
11. COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING CORNERS AND EDGES OF PATCH.
12. HOT BITUMINOUS PATCHES SHALL BE PLACED A MIN. OF 5-INCHES OR MATCH EXISTING DEPTH, WHICHEVER IS GREATER. PLACEMENT SHALL BE PERFORMED IN A MIN. OF 2 LIFTS. THE BOTTOM COURSE SHALL BE 3-INCHES AND THE TOP SHALL BE 2-INCHES.
13. PATCHES SHALL ALSO HAVE A CROSS SLOPE SECTION CONSISTENT WITH THE DESIGN OF THE EXISTING ROADWAY.
14. TEMPORARY OR PERMANENT ASPHALT PATCHES SHALL BE PLACED WITHIN TWENTY FOUR (24) HOURS OF TRENCH BACKFILLING. WHENEVER PERMANENT PATCHES ARE NOT CONSTRUCTED WITHIN TWENTY FOUR (24) HOURS FOLLOWING TRENCH BACKFILLING OPERATIONS, TEMPORARY PAVEMENT PATCHES CONSISTING OF A MINIMUM OF THREE INCHES (3") OF HOT OR COLD PLANT MIX OR STEEL PLATES MUST BE PLACED TO PROVIDE THE REQUIRED NUMBER OF PAVED TRAVEL LANES. TEMPORARY PAVEMENT PATCHES MAY BE LEFT IN PLACE FOR A MAX. OF FIVE (5) WORKING DAYS FOLLOWING COMPLETION OF BACKFILLING OPERATIONS UNLESS OTHERWISE APPROVED BY THE ENGINEER OF RECORD OR THE TOWN OF NEW CASTLE PAVING INSPECTOR .
15. THE PERMITTEE SHALL MONITOR TEMPORARY PATCHES ON A DAILY BASIS AND TEMPORARY PATCHES EXHIBITING RUTS, HUMPS, OR DEPRESSIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.
16. A PERMANENT HOT PATCH SHALL BE MADE WITHIN FIVE (5) DAYS AFTER THE AREA IS OPEN TO TRAFFIC, WEATHER PERMITTING.
17. IF FINAL PATCHING IS NOT COMPLETED WITHIN THE SPECIFIED TIME, NO NON-EMERGENCY PERMITS SHALL BE GRANTED TO THE PERMITTEE UNTIL ALL OUTSTANDING WORK IS COMPLETED.
18. UPON COMPLETION OF THE PERMANENT PATCH, THE SURFACE SHALL BE THOROUGHLY COMPACTED, SMOOTH AND FREE FROM RUTS, HUMPS, DEPRESSIONS, OR IRREGULARITIES. WHEN A STRAIGHTEDGE TEN FEET (10') LONG IS LAID ACROSS THE PERMANENT PATCH PARALLEL TO THE CENTERLINE, THE SURFACE SHALL NOT VARY MORE THAN $\frac{1}{4}$" FROM THE LOWER EDGE OF THE STRAIGHT EDGE. PATCHES EXHIBITING DEVIATIONS GREATER THAN $\frac{1}{4}$" SHALL BE REPLACED PRIOR TO ACCEPTANCE OF PATCH. IF THE EXISTING STREET EXCEEDS THE ABOVE TOLERANCES, THEN THE PATCH SHALL BE EQUAL OR BETTER THAN THE CONDITION OF THE SURROUNDING PAVEMENT. IN MOST CASES, AND PARTICULARLY IN THE CASES OF EXTENSIVE EXCAVATION AND REPAIRS, IT IS DESIRABLE TO SURVEY THE EXISTING PAVEMENT CONDITIONS WITH A REPRESENTATIVE OF THE TOWN OF NEW CASTLE PRIOR TO THE WORK. AFTER COMPLETION OF THE WORK, SURVEY THE PAVEMENT CONDITION AGAIN TO VERIFY THAT THE PAVEMENT CONDITION HAS BEEN MAINTAINED OR IMPROVED. IN THE CASE OF MINOR REPAIRS, THESE PAVEMENT SURVEYS CAN BE MADE BY VISUAL OBSERVATION.

PUBLIC IMPROVEMENTS NOTE:

1. PUBLIC IMPROVEMENTS SHALL BE IN COMPLIANCE WITH THE TOWN OF NEW CASTLE ENGINEERING STANDARDS AND TOWN OF NEW CASTLE ROW STANDARDS. PUBLIC IMPROVEMENTS IN THE ROW MUST MEET THE TOWN OF NEW CASTLE'S CONSTRUCTION AND EXCAVATION STANDARDS.

UTILITY LOCATE NOTE:

1. PER STATE SB 18-167, ALL SUBSURFACE UTILITIES WILL NEED TO BE ELECTRONICALLY LOCATABLE USING TRACER WIRE, MAGNETIC TAPE, ETC. THIS INCLUDES MAIN AND SERVICE LINES. CONTRACTOR SHALL PROVIDE LOCATE MATERIAL SUBMITTAL FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD AND THE UTILITY COMPANY PRIOR TO CONSTRUCTION.

GRAVITY SANITARY SEWER SERVICE LINE INSTALLATION SPECIFICATIONS:

1. ALL SANITARY SEWER MAIN CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE TOWN OF NEW CASTLE PUBLIC WORKS MANUAL DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTAL FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. ALL SEWER SERVICES SHALL BE PVC CLASS-SDR 35.
3. FITTINGS: PVC PUSH JOINT-ASTM D1784.
4. CLEAN ALL PIPE, FITTINGS AND RELATED MATERIALS THOROUGHLY OF ALL FOREIGN MATERIAL AND INSPECT FOR CRACKS, EXCESSIVE DEFLECTION FLAWS OR OTHER DEFECTS PRIOR TO AND AFTER INSTALLATION.
5. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE SEWER LINES DURING CONSTRUCTION. IF THIS DEBRIS SHOULD ENTER THE PIPE LINE SYSTEM, THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS NECESSARY TO CLEAN THE SYSTEM. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR FLUSH THE DEBRIS INTO AN EXISTING SANITARY SEWER SYSTEM.
6. ALL PIPES MUST BE INSTALLED WITH A LASER. IF BENDING OF THE BEAM DUE TO AIR TEMPERATURE VARIATIONS BECOMES APPARENT WITH "IN PIPE" UNITS, A FAN SHALL BE PROVIDED TO CIRCULATE AIR IN THE PIPE. AIR VELOCITY SHALL NOT BE SO EXCESSIVE AS TO CAUSE PULSATING OR VIBRATING OF THE BEAM. IF, IN THE OPINION OF THE ENGINEER, THE BEAM CANNOT BE ACCURATELY CONTROLLED, THIS METHOD OF SETTING LINE AND GRADE SHALL BE ABANDONED.
7. PIPE SHALL BE LAID TRUE TO LINE AND GRADE, IN AN UPHILL DIRECTION, WITH BELL ENDS FACING IN THE DIRECTION OF LAYING. WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN END OF PIPE SHALL BE CLOSED BY A WATERTIGHT PLUG.
8. MANHOLES & CLEANOUTS SHALL BE FURNISHED AND INSTALLED TO DEPTHS AND DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS AND/OR STAKED IN THE FIELD. MANHOLES SHALL BE CONSTRUCTED OF CAST-IN-PLACE OR PRECAST CONCRETE IN ACCORDANCE WITH DETAILS SHOWN ON THE CONSTRUCTION DRAWINGS.
9. CONNECTIONS TO EXISTING SEWER FACILITIES WHERE LIVE FLOWS EXIST SHALL BE MADE ONLY AFTER PRIOR CONSULTATION WITH AND RECEIPT OF WRITTEN PERMISSION FROM THE ENGINEER. NO BYPASS OF SEWAGE TO THE SURFACE WILL BE ALLOWED IN THE COMPLETION OF THIS CONNECTION. CONNECTIONS SHALL BE MADE AS SHOWN ON THE DRAWINGS. ALL CONNECTIONS BETWEEN PIPES OF DIFFERENT MATERIALS SHALL BE MADE WITH APPROVED MANUFACTURED CONNECTORS.
10. THE CONTRACTOR IS REQUIRED TO PROVIDE AS-BUILTS AND CCTV THE INSTALLED SEWER SERVICE MAIN LINES AFTER CONSTRUCTION.

CONTACTS:
DESIGN ENGINEER-SOPRIS ENGINEERING: CONTACT JOHN PETAISTO, PE AT 970-316-5212

NEW CASTLE PUBLIC WORKS: (POTABLE WATER, IRRIGATION, SANITARY SEWER) JOHN WENZEL, 970-984-0669. & DANIEL BECKER 970-989-0007
ELECTRIC & NATURAL GAS: XCEL ENERGY, SAMANTHA WAKEFIELD, 970-201-4860
TELEPHONE- LUMEN: JASON SHARPE, 970-328-8290
CABLE- COMCAST: KODY DAVIS, 970-618-0483

COLORADO RIVER FIRE RESCUE: 970-625-1243

NOTE:
CONTRACTOR MUST NOTIFY ALL UTILITY COMPANIES, APPROPRIATE TOWN OF NEW CASTLE PERSONNEL AND ENGINEER AS NOTED ABOVE, PRIOR TO DEMOLITION WORK.

811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
NOTES

DRAWING NO.
C-0.1

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C00-COVER.DWG - Dec 20, 2024 - 11:48am

SITE NOTES:

1. THE EXISTING BOUNDARY AND TOPOGRAPHIC SURVEY WAS PERFORMED BY SOPRIS ENGINEERING, LLC, BASED ON THE ALTA SURVEY PERFORMED BY SGM INC.
2. THE EASEMENTS SHOWN HERE ON FOR SITE PLAN REFERENCE. REFER TO THE FINAL PLAT FOR FINAL RIGHT-OF-WAY AND EASEMENT DEDICATIONS.
3. REFER TO THE ARCHITECT'S PLANS FOR BUILDING INFORMATION.
4. REFER TO THE LANDSCAPE ARCHITECT'S PLANS REGARDING THE SITE LANDSCAPE IMPROVEMENTS.
5. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.

PROPOSED LEGEND

- PROPERTY LINE
- EASEMENT
- SETBACK (STBK)
- LOT LINE
- CENTERLINE
- STORM SEWER (PSD)
- DRAINAGE DRY-WELL
- FIRE HYDRANT
- SIGN
- STORM INLET
- ASPHALT PAVEMENT
- CONCRETE/SIDEWALK
- SNOW STORAGE

EXISTING LEGEND

- EXISTING CONTOUR
- EXISTING CONTOUR INTERVAL (7900)
- EXISTING WATER MAIN (XWL)
- EXISTING SANITARY SEWER MAIN (XSA)
- EXISTING GAS (XGAS)
- EXISTING TELEPHONE (XUT)
- EXISTING UNDERGROUND ELECTRIC (XEL)
- EXISTING CABLE (XTV)
- EXISTING EASEMENT
- EXISTING PROPERTY LINE
- EXISTING WIRE FENCE
- EXISTING SEWER MANHOLE
- EXISTING GUY WIRE
- EXISTING POWER POLE
- EXISTING GAS METER
- EXISTING ELECTRIC TRANSFORMER
- EXISTING ELECTRIC METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING CATV PEDESTAL
- EXISTING LIGHT POLE

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

PARCEL 1
AREA=18.015 AC.

LOT 1
AREA=2.635 AC.

LOT 2
AREA=6.990 AC.

LOT 3
AREA=3.908 AC.

LOT 4
AREA=12.265 AC.

ROW
AREA = 1.963 AC.

PARCEL 2
AREA=13.289 AC.

TOWNHOMES (TYP.)
TRASH ENCLOSURE
MAILBOX LOCATION
TH-B7
TH-B8
TH-B9
TH-B10
TH-B11
TH-B12
TH-B13
TH-B14
TH-B15
TH-B16
VISTA LOOP
LIVE/WORK-1
LIVE/WORK-2
LIVE/WORK-3
LIVE/WORK-4
CHAPMAN LOOP
MEDARIS LOOP
EMPTY NESTER-5
EMPTY NESTER-6
N. WILD HORSE
CASTLE VALLEY BLVD
CASTLE VALLEY RANCH
PROPERTY LINE
LAKOTA CANYON RANCH PROPERTY LINE
VIX PARK
CROSSWALK
TRAIL, RE: LANDSCAPE PLANS.
50.0' DRAINAGE EASEMENT
10' WIDE BRUSH FIRE TRUCK ACCESS
67.5' ROW
52.5' ROW
46.0' ROW
25' UTILITY EASEMENT
37' UTILITY EASEMENT
18' SETBACK
100 YR FLOOD THROUGH CULVERT, RE: DRG. CALCS.
APPROXIMATE LOCATION OF FUTURE ACCESS FOR LOT 4
OFFSITE 100 YR FLOOD LIMIT± RE: DRG. CALCS.
CARPORT WITH RESIDENTIAL STORAGE UNITS. RE: ARCHITECTS PLANS.
TRASH ENCLOSURE
MAILBOX LOCATION
16' WIDE FIRE TRUCK ACCESS

811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

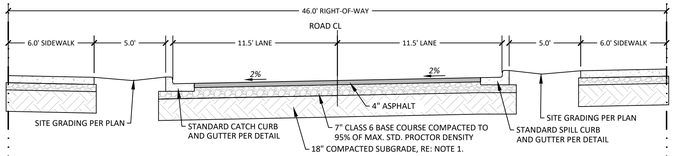
FINAL PLAN

DATE	REVISION

TITLE
SITE PLAN

DRAWING NO.
C-1.0

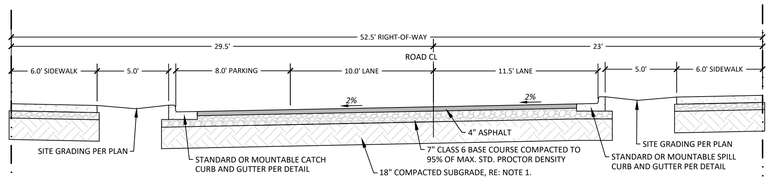
G:\33011\33011 CVR RX RES\CIVIL\CIVIL DWGS\PLOT\33011-C10 SITE.DWG - Dec 20, 2024 - 12:47pm



SITE ROAD SECTION - NO PARKING

PUBLIC: VISTA LOOP,
PRIVATE: SUNSET LOOP, LIVE/WORK LOOP ROADS
N.T.S.

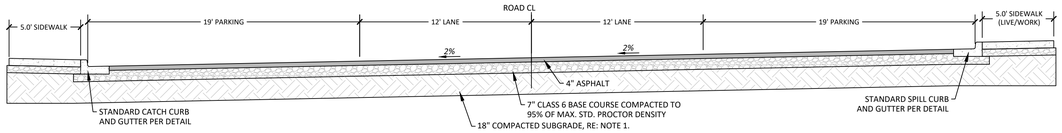
NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.
3. REFER TO SITE PLAN FOR SIDEWALK LOCATION AND EXTENTS.



SITE ROAD SECTION - PARALLEL PARKING ON 1 SIDE

VISTA LOOP PUBLIC ROAD
N.T.S.

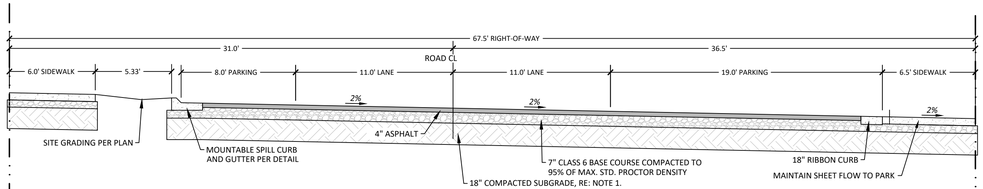
NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.
3. REFER TO SITE PLAN FOR SIDEWALK LOCATION AND EXTENTS.
4. REFER TO PLAN FOR PARKING LOCATIONS.
5. MOUNTABLE CURB PROPOSED ADJACENT TO TOWNHOMES. LANDSCAPE WIDTH REDUCED TO ACCOUNT FOR WIDER CURB.



PRIVATE SITE ROAD SECTION - PERPENDICULAR PARKING

EMPTY NESTER & LIVE/WORK UNITS
N.T.S.

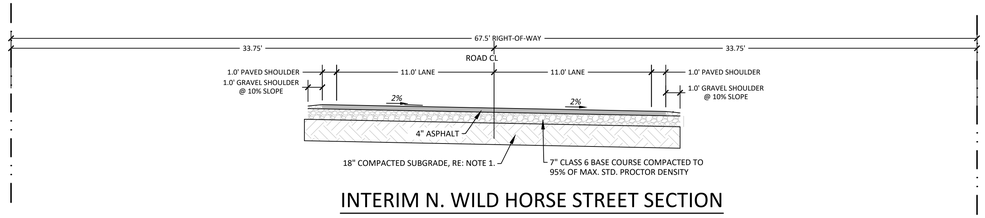
NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.
3. REFER TO SITE PLAN FOR SIDEWALK LOCATION AND EXTENTS.
4. REFER TO PLAN FOR PARKING LOCATIONS.



PROPOSED N. WILD HORSE PARKING STREET SECTION

LOOKING SOUTH
N.T.S.

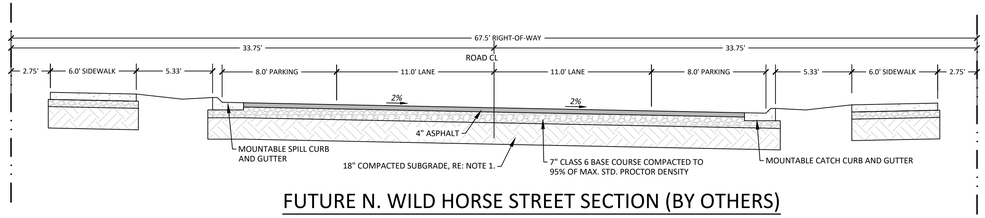
NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.
3. REFER TO SITE PLAN FOR SIDEWALK LOCATION AND EXTENTS.
4. REFER TO PLAN FOR PARKING LOCATIONS.



INTERIM N. WILD HORSE STREET SECTION

SOUTH OF VIX PARK, LOOKING SOUTH
N.T.S.

NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.
3. SECTION INCLUDES TRAVEL LANES TO ALLOW FOR FUTURE BUILD OUT OF ROAD BY OTHERS.



FUTURE N. WILD HORSE STREET SECTION (BY OTHERS)

SOUTH OF VIX PARK, LOOKING SOUTH
N.T.S.

NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR.
2. SOILS ENGINEER SHALL OBSERVE AND TEST COMPACTION DURING CONSTRUCTION.

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

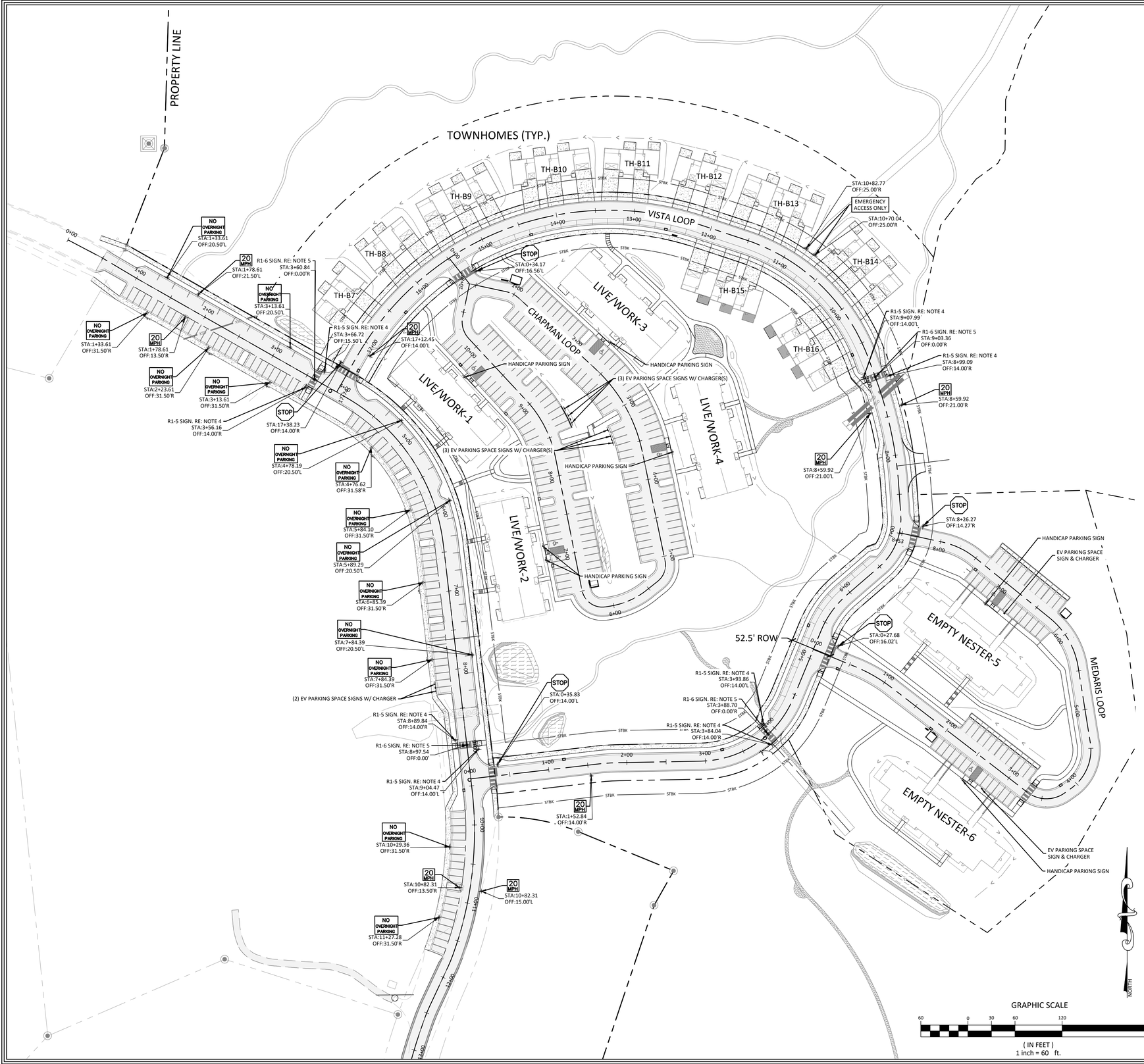
DATE	REVISION
06/18/24	TOWN COMMENTS

TITLE
ROAD SECTIONS

DRAWING NO.
C-1.1

Know what's **below.** **Call** before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

© \\SOS\33011 CVR R2 RES\COM\CIVIL DWGS\PLOTS\33011-C1D SITE.DWG - Dec 20, 2024 - 12:47pm



GRAPHIC SCALE

60 0 30 60 120 240

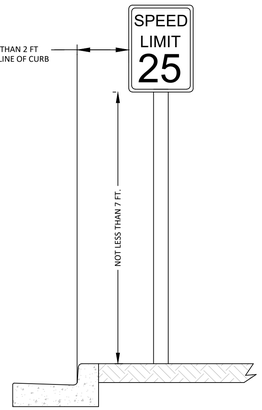
(IN FEET)
1 inch = 60 ft.

SIGNAGE & STRIPING NOTES

1. ALL SIGN LOCATION AND CONSTRUCTION TO MUTCD & TOWN OF NEW CASTLE STANDARDS. ALL STREET SIGNS TO BE HIGH INTENSITY PRISMATIC SIGNS. REFER TO SIGN DETAIL ON THIS SHEET.
2. ALL CROSSWALK MARKINGS, AND STOP BARS TO BE WHITE REFLECTIVE THERMOPLASTIC. REFER TO DETAIL ON THIS SHEET.
3. STREET NAME SIGNS TO BE MOUNTED ABOVE STOP AND YIELD SIGNS ONSITE. STREET SIGNS TO CONFORM TO TOWN OF NEW CASTLE STANDARDS.
4. INSTALL R1-5 "YIELD HERE TO PEDESTRIAN" SIGN. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR TOWN AND ENGINEER APPROVAL PRIOR TO CONSTRUCTION.
5. DOUBLE SIDED R1-6 PEDESTRIAN CROSSING SIGN AND PANEL ASSEMBLY, WITH RUBBER BASE, QUICK RELEASE PIN, AND SPRING MECHANISM. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR TOWN AND ENGINEER APPROVAL PRIOR TO CONSTRUCTION.

LEGEND

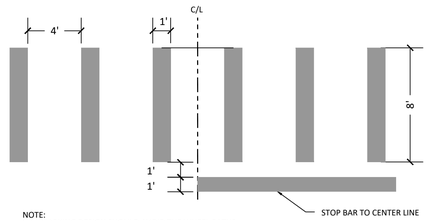
- PROPOSED SIGN
- STOP — PROPOSED STOP SIGN INSTALLED TO MUTCD STANDARDS
- YIELD — PROPOSED YIELD SIGN INSTALLED TO MUTCD STANDARDS
- 20 MPH — PROPOSED 20 MPH SPEED LIMIT & "UNLESS POSTED OTHERWISE" SIGNS INSTALLED TO MUTCD STANDARDS
- NO OVERNIGHT PARKING — PROPOSED NO OVERNIGHT PARKING & "UNLESS POSTED OTHERWISE" SIGNS INSTALLED TO MUTCD STANDARDS
- EMERGENCY ACCESS ONLY — "EMERGENCY ACCESS ONLY" SIGN INSTALLED TO MUTCD STANDARDS
- R1-5: PROPOSED CROSSWALK SIGN "YIELD HERE TO PEDESTRIANS" INSTALLED TO MUTCD STANDARDS
- R1-6: PROPOSED CROSSWALK SIGN "IN-STREET PEDESTRIAN CROSSING (YIELD)" INSTALLED TO MUTCD STANDARDS



ROADSIDE SIGN DETAIL

N.T.S.

HEIGHT AND LATERAL LOCATION OF ROADSIDE SIGNS FOR TYPICAL INSTALLATION MUTCD SECTION 2A.16



NOTE:
1. MARKING DESIGN SHOULD AVOID THE WHEEL PATHS
2. CROSSWALK AND STOP BAR TO BE WHITE REFLECTIVE THERMOPLASTIC PAVEMENT MARKING MATERIAL, MILLED INTO THE ASPHALT.
3. NO MARKING OR STRIPING ON CONCRETE.

PEDESTRIAN CROSS WALK DETAIL

N.T.S.

Know what's **below.** **Call** before you dig.

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

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

DATE:	02-06-2025
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

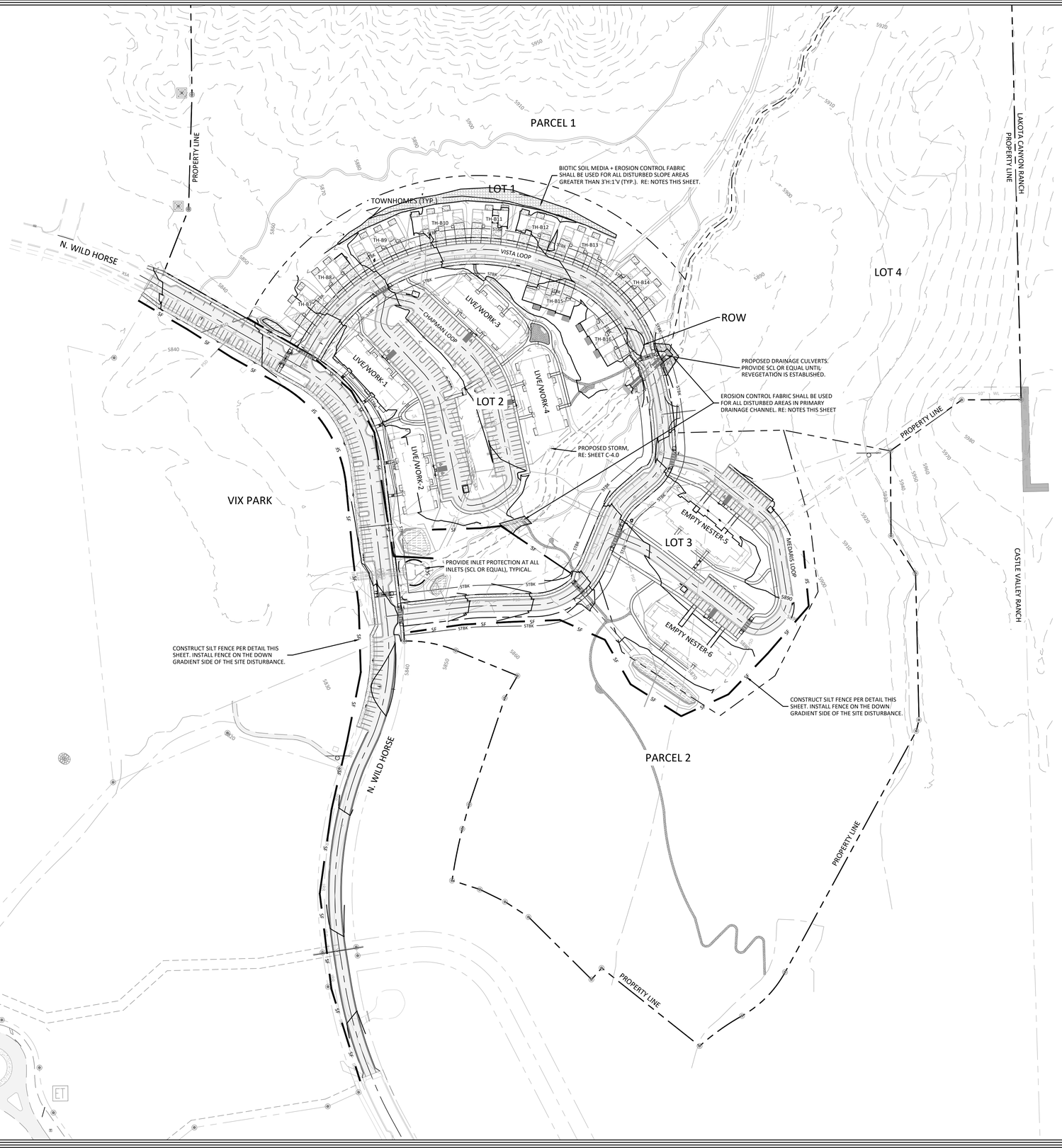
9 NORTH WILD HORSE
NEW CASTLE, COLORADO
FINAL PLAN

DATE	REVISION

TITLE
SIGNAGE & STRIPING PLAN

DRAWING NO.
C-1.2

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\PLOTS\33011-C103 SITE.DWG - Feb 06, 2025 - 12:20pm



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LANDSCAPE EROSION CONTROL NOTES:

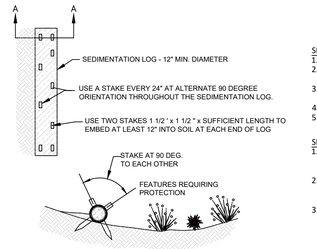
TEMPORARY GROUND COVER:

1. AREAS OF INTERIM DISTURBANCE WHERE FINAL GRADE HAS NOT BEEN ESTABLISHED OR THAT ARE ANTICIPATED TO BE DISTURBED REPEATEDLY SHALL BE SEEDED WITH A STERILE ANNUAL RYE SEED IF SAID DISTURBANCE IS TO REMAIN BARE FOR LONGER THAN 60 DAYS. CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION TO THESE AREAS TO THE EXTENT PRACTICAL.

PERMANENT EROSION CONTROL:

2. AREAS WHERE FINAL GRADE HAS BEEN ESTABLISHED SHALL BE SEEDED AND IRRIGATED PER THE LANDSCAPE PLANS.
3. FOR SLOPES EXCEEDING 3:1 GRADE, CONTRACTOR SHALL APPLY PROFILE PROGANICS BIOTIC SOIL MEDIA PER MANUFACTURER'S SPECIFICATIONS. NO TOPSOIL IS REQUIRED WHERE PROGANICS IS APPLIED, SEE MANUFACTURER'S INSTRUCTIONS FOR APPLICATION RATES.
4. HYDROMULCH SHALL BE PROFILE PROMATRIX EFM OR AN APPROVED EQUAL AND SHALL BE INSTALLED PER THE MANUFACTURER'S MIXING AND APPLICATION INSTRUCTIONS.
5. FOR SLOPES EXCEEDING 3:1 GRADE, EROSION CONTROL FABRIC SHALL BE APPLIED OVERTOP OF THE HYDROMULCH APPLICATION. EROSION CONTROL FABRIC SHALL ALSO BE INSTALLED OVER ALL DISTURBANCE WITHIN THE LIMITS OF THE 100 YEAR FLOODPLAIN OF THE PRIMARY DRAINAGE WAY AS SHOWN AND NOTED ON THESE PLANS.
6. EROSION CONTROL FABRIC SHALL BE US-2SCNN DOUBLE NET STRAW/COCONUT BLANKET MANUFACTURED BY CORE AND MAIN GEOSYNTHETICS OR APPROVED EQUAL. FABRICS SHALL BE NON-TOXIC TO VEGETATION AND SHALL NOT INHIBIT GERMINATION OF NATIVE SEED MIX. THE MATERIALS SHALL NOT BE TOXIC OR INJURIOUS TO HUMANS OR WILDLIFE.

REFER TO ADDITIONAL EROSION CONTROL NOTES ON C-0.1



SECTION A - A

SEDIMENT CONTROL LOG INSTALLATION NOTES:

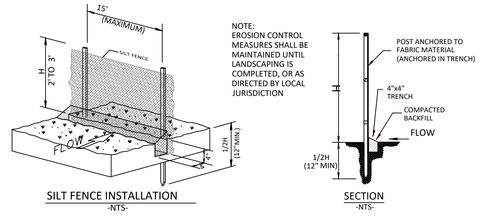
1. SEE PLAN VIEW FOR LOCATION OF SEDIMENT CONTROL LOG.
2. SEDIMENT CONTROL LOGS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER.
4. NOT FOR USE IN CONCENTRATED FLOW AREAS.
5. THE SEDIMENT CONTROL LOGS SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2-INCHES.

SEDIMENT CONTROL LOG MAINTENANCE NOTES:

1. THE SWMP MANAGER SHALL INSPECT SEDIMENT CONTROL LOGS DAILY, DURING AND AFTER ANY STORM EVENT & MAKE REPAIRS OR CLEANOUT UPSTREAM SEDIMENT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM DEPTH IS WITHIN 1/2 THE HEIGHT OF THE CREST OF LOG.
3. SEDIMENT LOGS SHALL BE REMOVED AT THE END OF CONSTRUCTION, ONCE PROPER VEGETATION HAS BEEN ESTABLISHED. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL IT SHALL BE COVERED WITH TOPSOIL AND REVEGEETATED/ STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

2 / C1040 SEDIMENT CONTROL LOG — SCL —

SCALE: N.T.S.



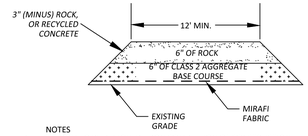
NOTE:
EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL LANDSCAPING IS COMPLETED, OR AS DIRECTED BY LOCAL JURISDICTION

SILT FENCE INSTALLATION -NTS-

SECTION -NTS-

1 / C1040 SILT FENCE DETAIL — SF —

SCALE: N.T.S.



NOTES

1. ALL ROCK TO BE REMOVED UPON COMPLETION OF CONSTRUCTION.
2. PUBLIC ROADWAY TO BE KEPT CLEAN AND FREE OF MUD, DIRT AND DEBRIS AT ALL TIMES.
3. ALIGNMENT OF CONSTRUCTION ACCESS SHALL PROVIDE A MINIMUM LENGTH OF 40-FT MEASURED FROM THE CENTERLINE.

3 / C1040 VEHICLE TRACKING CONTROL

SCALE: N.T.S.

811 Know what's below. Call before you dig.

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

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

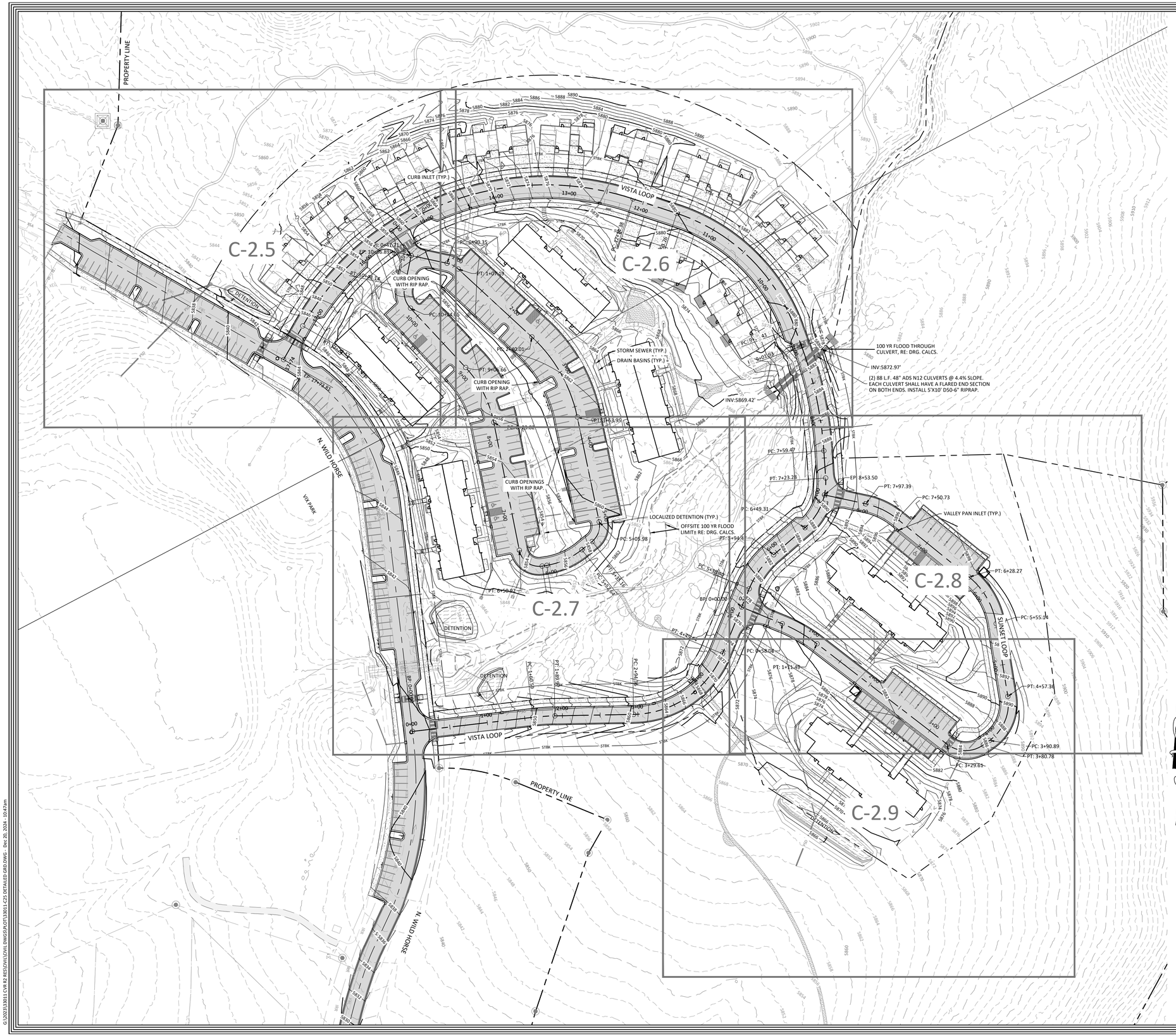
FINAL PLAN

DATE	REVISION

TITLE
EROSION CONTROL PLAN

DRAWING NO.
C-1.3

G:\33011\33011 CVR RX RES\CIVIL\CIVIL DWGS\PLOT\33011-C10 SITE.DWG - Dec 20, 2024 - 12:48pm



GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEEED 3':1'.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- 2.0% — PROPOSED SLOPE
- FL: 32.0 — PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

Know what's **below.** **Call** before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

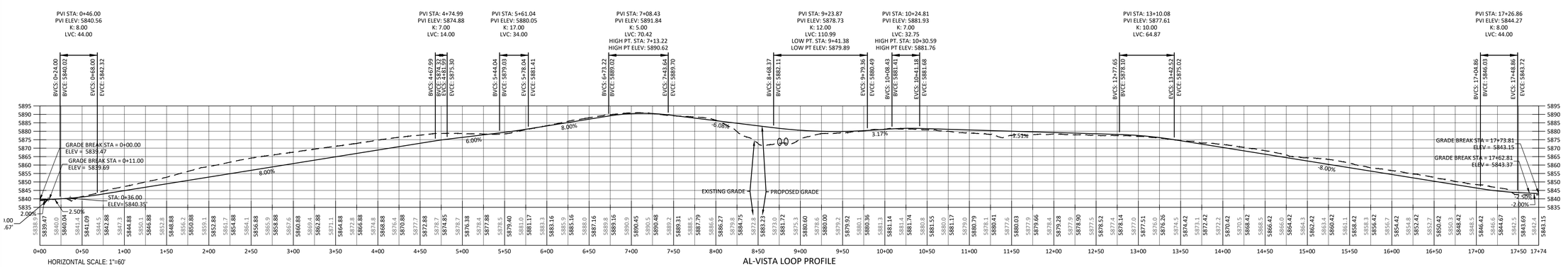
FINAL PLAN

DATE	REVISION

TITLE
OVERALL GRADING PLAN

DRAWING NO.
C-2.0

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C25 DETAILED GRD.DWG - Dec 20, 2024 - 10:47pm



PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- 7900 — PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FFE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE
TW = TOP OF WALL

Know what's **below.** **Call** before you dig.

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

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
VISTA LOOP
PLAN/PROFILE

DRAWING NO.
C-2.1

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C05 GRADING.DWG - Dec 20, 2024 - 6:47pm

PROPOSED LEGEND

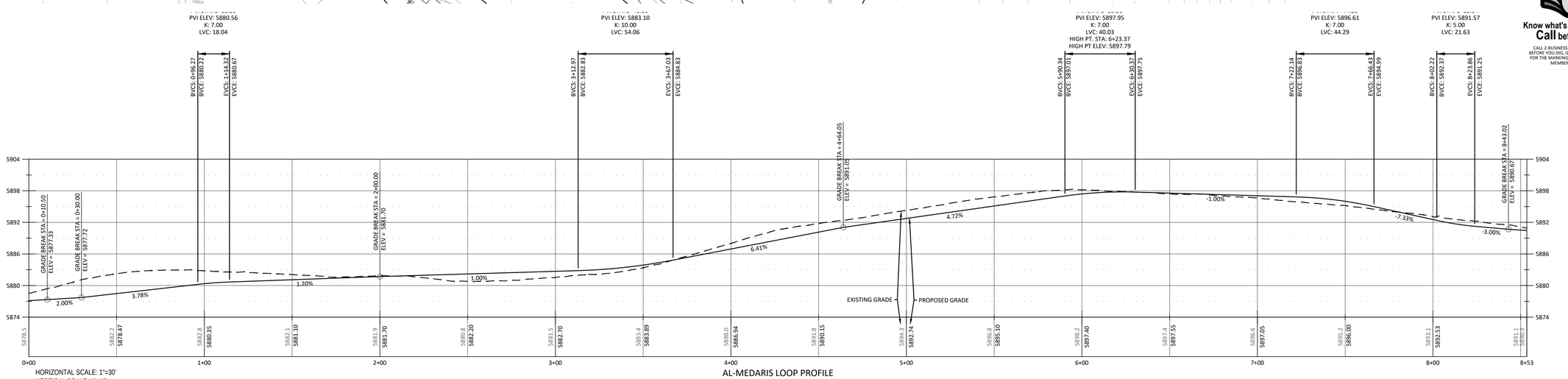
- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PSD PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FFE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE
TW = TOP OF WALL



HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=10'

AL-MEDARIS LOOP PROFILE

Know what's **below.** **Call** before you dig.

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

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

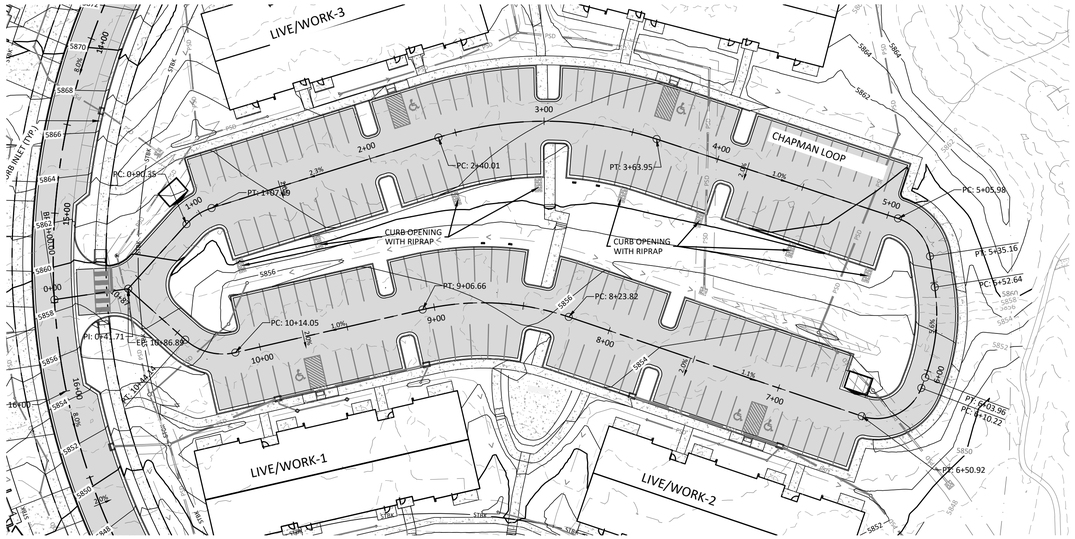
FINAL PLAN

DATE	REVISION

TITLE
MEDARIS LOOP
PLAN/PROFILE

DRAWING NO.
C-2.2

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\PLOTS\33011-C05 GRADING.DWG - Dec 20, 2024 - 6:47pm



PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FFE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE
TW = TOP OF WALL

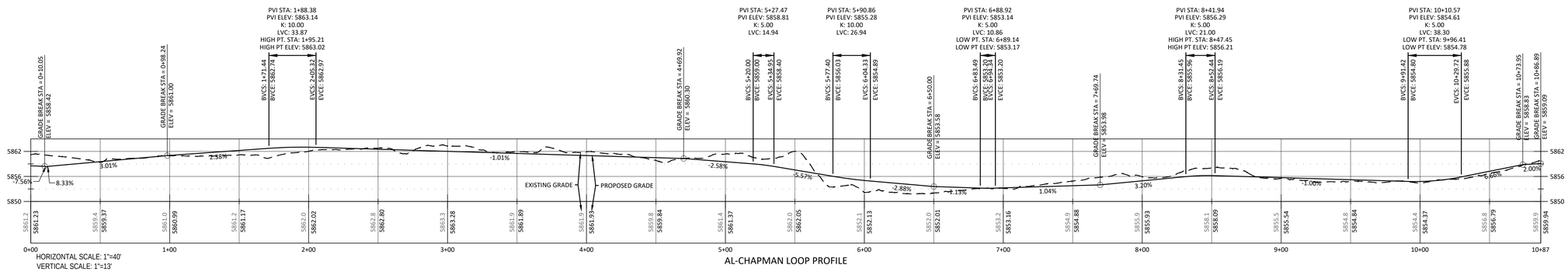
GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Know what's **below.** **Call** before you dig.

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



HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=13'

AL-CHAPMAN LOOP PROFILE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

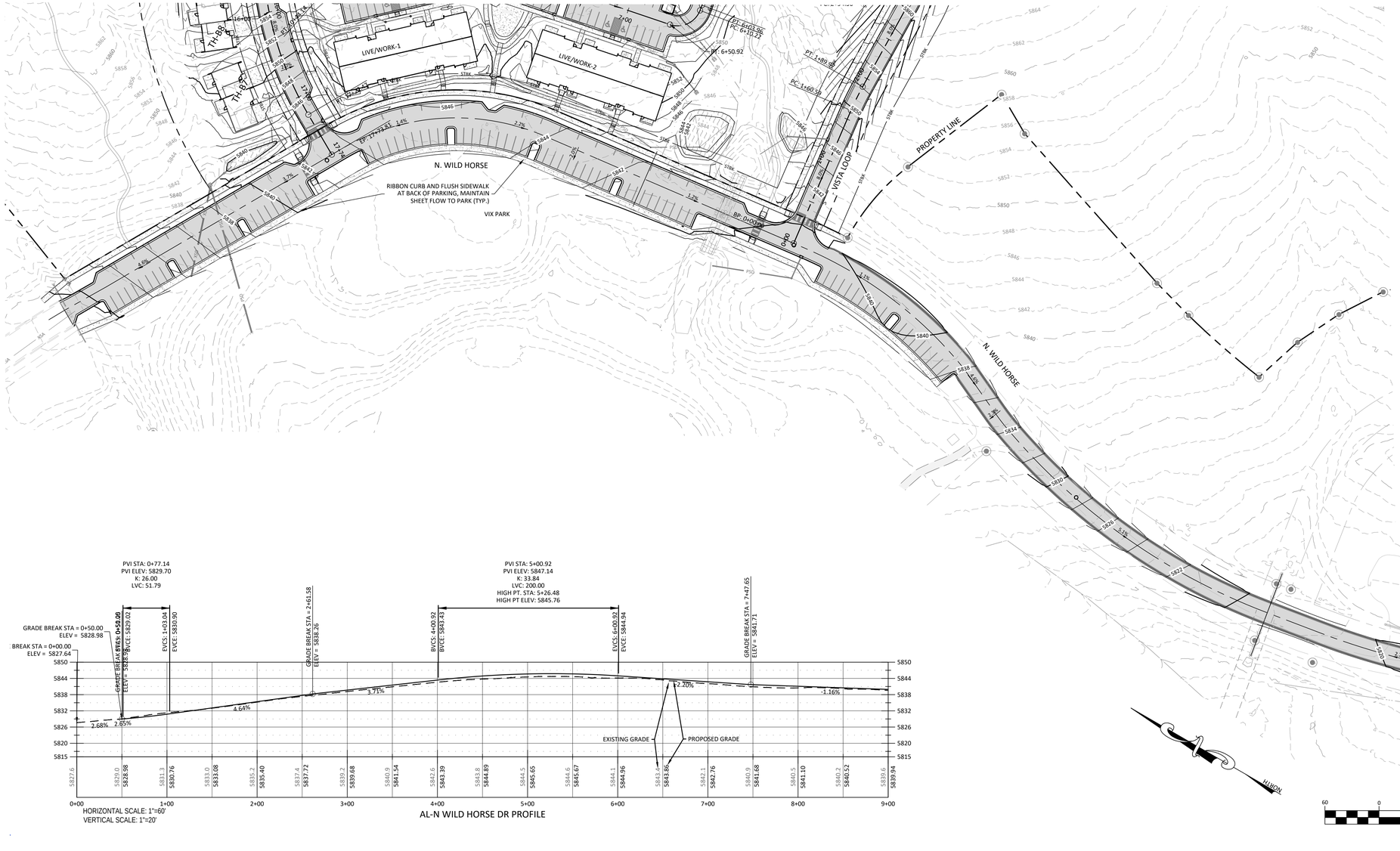
FINAL PLAN

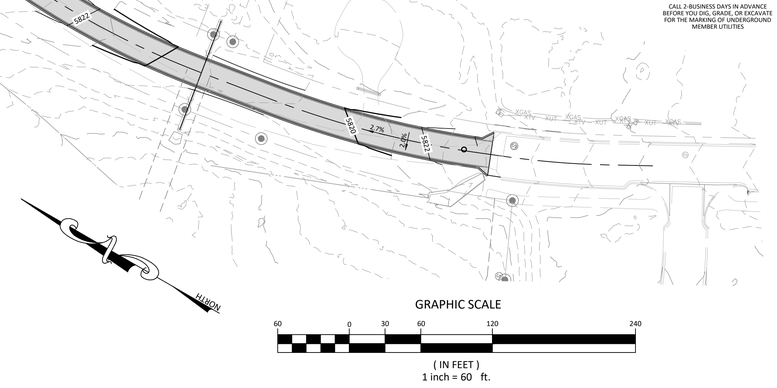
DATE	REVISION

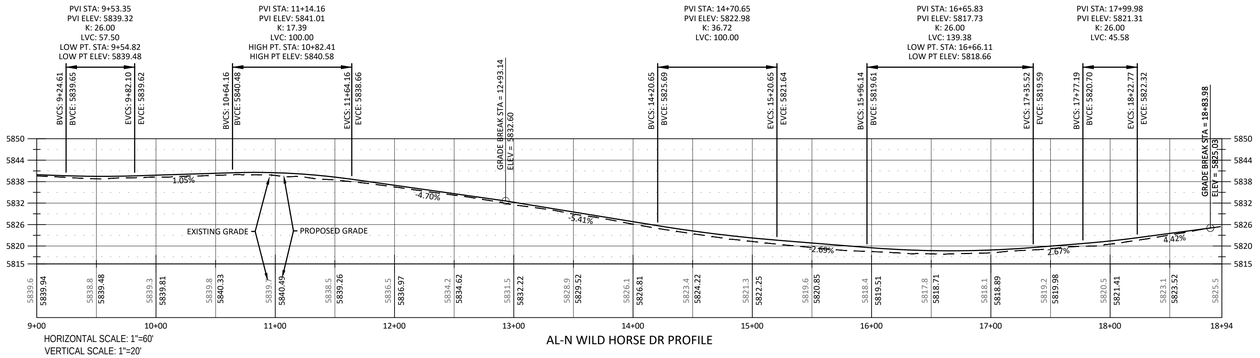
TITLE
CHAPMAN LOOP
PLAN/PROFILE

DRAWING NO.
C-2.3

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C03 GRADING.DWG - Dec 20, 2024 - 6:48pm







PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- 7900 — PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FFE = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TOC = TOP OF CONCRETE
TW = TOP OF WALL

811 Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
N. WILD HORSE PLAN/PROFILE

DRAWING NO.
C-2.4

G:\JOB\33011 CVR RX RES\CIVIL\CIVIL DWGS\PLOT\33011-C03 GRADING.DWG - Dec 20, 2024 - 6:48am

GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 3':1'.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- EXISTING CONTOUR INTERVAL
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION
- PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.
NORTH

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

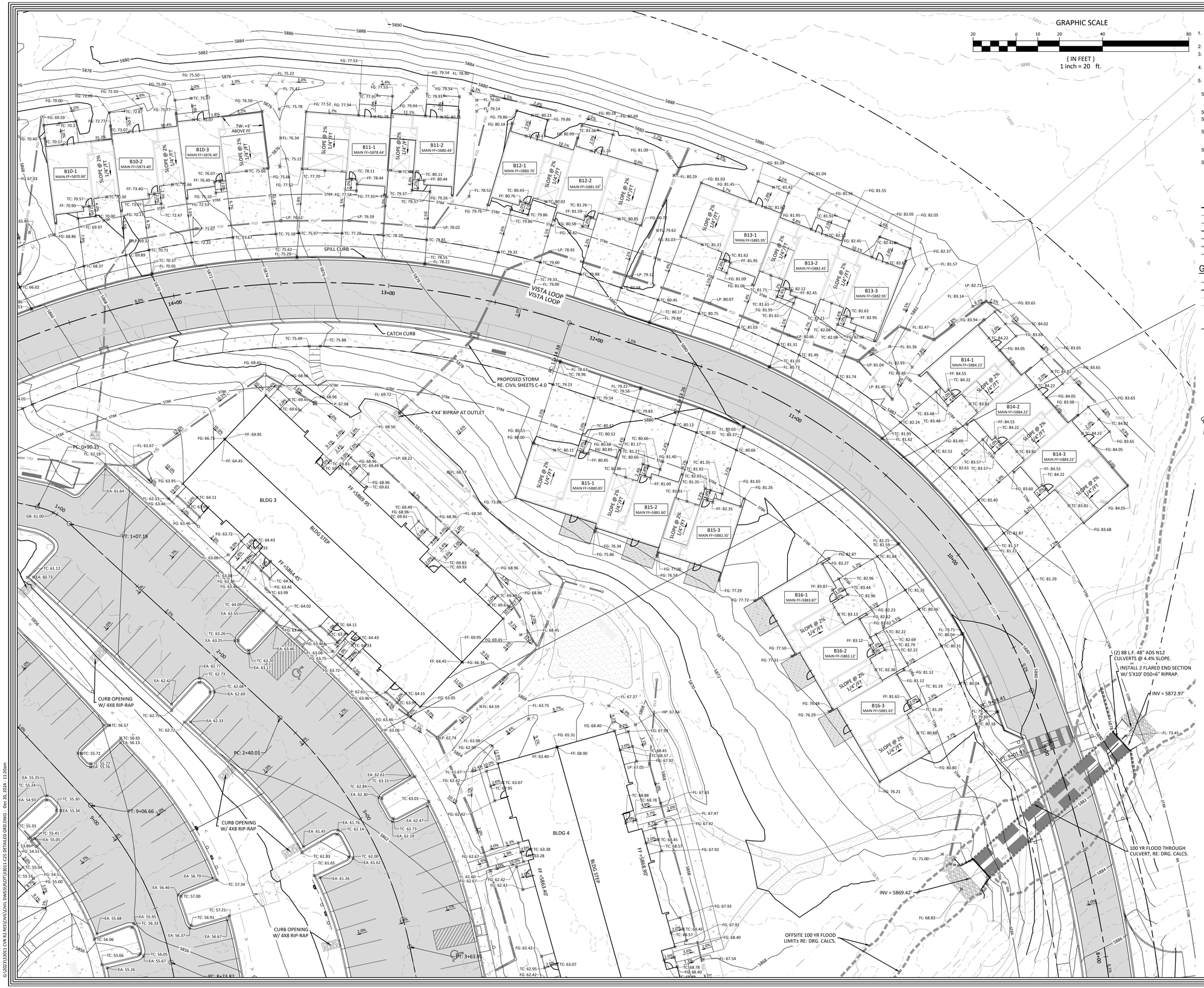
FINAL PLAN

DATE	REVISION

TITLE
NORTH WEST GRADING

DRAWING NO.
C-2.5

G:\33011\33011 CVR R3 RES\CIVIL\CIVIL DWGS\PLOT\33011-C03 DETAILED GRD.DWG - Dec 20, 2024 - 11:20am



GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 3:1.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- 2.0% — PROPOSED SLOPE
- × FL: 32.0 — PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
NORTH EAST GRADING

DRAWING NO.
C-2.6

G:\2023\33011 CVW R2 HOS\CIVIL\CIVIL DWGS\PLOT\33011-C2D_DETAILED GRD.DWG - Dec 20, 2024 - 11:20am

GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 3':1'.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- STBK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- 2.0% — PROPOSED SLOPE
- × FL: 32.0 — PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NORTH

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
WEST GRADING

DRAWING NO.
C-2.7

G:\33011\33011 CVR R3 RES\CIVIL\CIVIL DWGS\PLOT\33011-C03 DETAILED GRD.DWG - Dec 20, 2024 - 11:20am

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NORTH

GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 3:1.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- STRK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- 2.0% — PROPOSED SLOPE
- FL: 32.0 — PROPOSED SPOT ELEVATION
- PSD — PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

BLDG 5
UPPER FF =5900.70'
LOWER FF=5888.70'

PROPOSED STORM
RE. CIVIL SHEETS C-4.0

SUNSET LOOP

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
EAST GRADING

DRAWING NO.
C-2.8

G:\33013\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C2S DETAILED GRD.DWG - Dec 20, 2024 - 11:20am

GENERAL GRADING NOTES:

1. THE EXISTING CONTOUR INTERVAL IS TWO (2) FEET (DASHED) FROM A SURVEY PERFORMED BY SOPRIS ENGINEERING, LLC.
2. THE PROPOSED CONTOUR INTERVAL IS TWO (2) FEET.
3. ALL GEOTECHNICAL ENGINEERING RECOMMENDATIONS SHALL BE ADHERED TO.
4. GRADING AROUND THE BUILDINGS IS PRELIMINARY. FINAL GRADING DETAIL WILL BE PROVIDED FOR BUILDING PERMIT.
5. SHALLOW DETENTION BASIN GRADING SHALL BE CONSTRUCTED AS NOTED ON PLAN. DETENTION BASIN SPECIFICATIONS:
   - 5.1. FILL BERM SUBGRADE SHALL BE COMPACTED IN LIFTS TO 90% STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE.
   - 5.2. FILL BERM SHALL HAVE A TWO FOOT WIDE FLAT TOP.
   - 5.3. MAXIMUM BERM AND DETENTION BASIN SIDE SLOPES SHALL NOT EXCEED 3:1.
   - 5.4. OUTLET PIPE HAS BEEN SIZED TO ATTENUATE STORM WATER RUNOFF TO THE PRE-DEVELOPMENT RATE FOR THE OVERALL DRAINAGE BASIN (REFER TO DRAINAGE REPORT CALCULATIONS).
   - 5.5. REFER TO STORM SEWER PROFILE FOR DRAIN BASIN RIM, PIPE SIZE, & INVERTS
   - 5.6. REFER TO LANDSCAPE PLAN FOR TOPSOIL AND PLANTING SPECIFICATIONS.

SITE LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- PROPOSED EASEMENT
- 5BK — PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE

GRADING LEGEND:

- PROPOSED 1' CONTOUR
- 7900 — PROPOSED 5' CONTOUR
- EXISTING CONTOUR
- 7900 — EXISTING CONTOUR INTERVAL
- 2.0% — PROPOSED SLOPE
- FL: 32.0 — PROPOSED SPOT ELEVATION
- PSD — PROPOSED STORM SEWER
- PROPOSED STORM INLET

SPOT ELEVATION LEGEND

BOW = BOTTOM OF WALL
EOA = EDGE OF ASPHALT
EX = EXISTING GRADE
FF = FINISHED FLOOR ELEVATION
FG = FINISHED GRADE
FL = FLOW LINE
GB = GRADE BREAK
HP = HIGH POINT
LP = LOW POINT
ME = MATCH EXISTING
RIM = RIM ELEVATION
TBC = TOP BACK OF CURB
TC = TOP OF CONCRETE

PC: 0+58.08
PT: 1+11.49
PROPOSED STORM RE. CIVIL SHEETS C-4.0
PT: 4+57.36
PC: 3+90.89
PT: 3+80.78
PC: 3+29.61
BLDG 6
UPPER FF =5885.95'
LOWER FF=5873.95'
DETENTION BASIN, RE: C-6.2 & NOTE 5
PROPOSED STORM RE. CIVIL SHEETS C-4.0

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NORTH

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

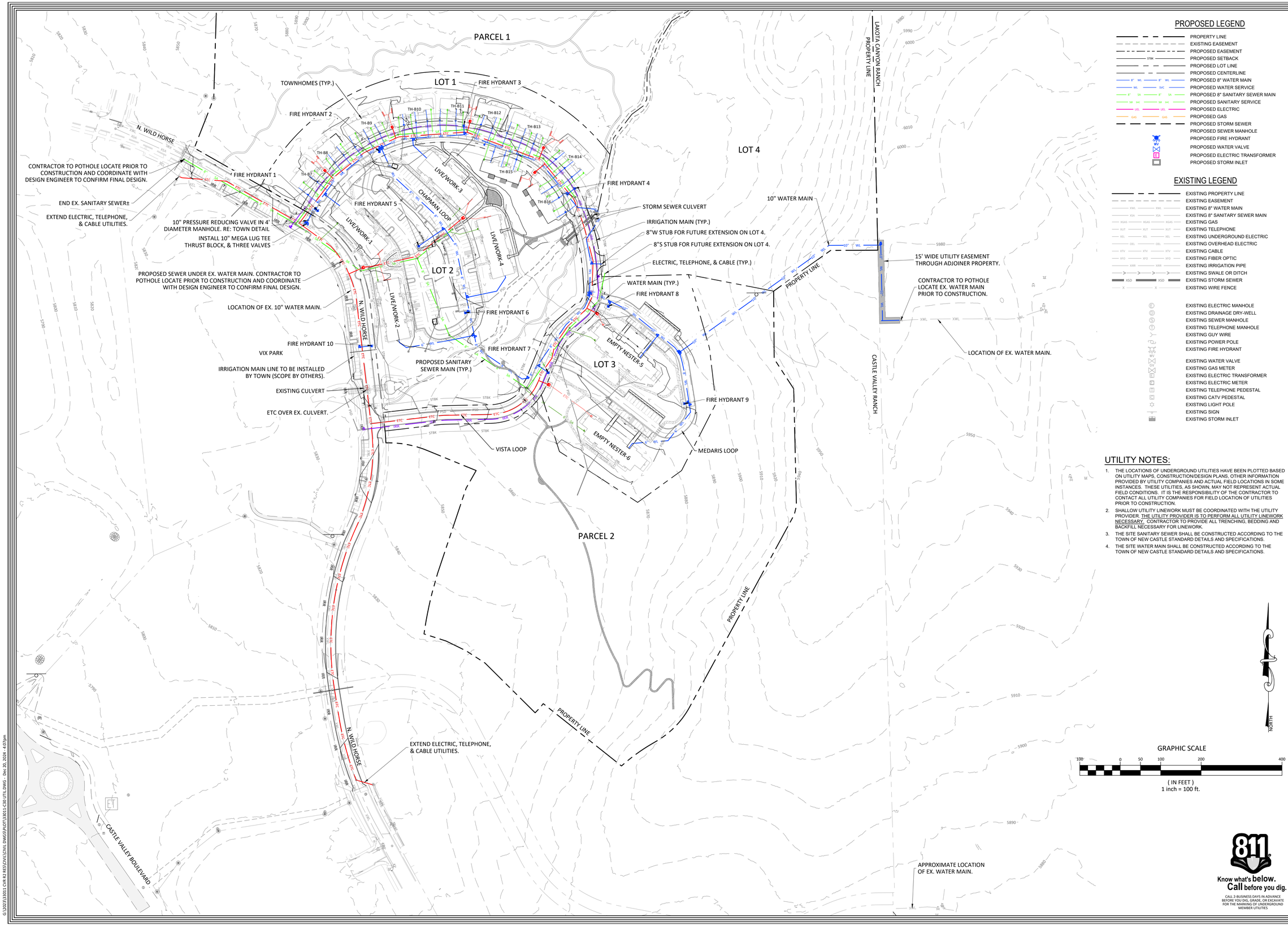
FINAL PLAN

DATE	REVISION

TITLE
SOUTH GRADING

DRAWING NO.
C-2.9

G:\33013\33011 CVR RX RES\CIVIL\CIVIL DWGS\PLOT\33011-C03 DETAILED GRD.DWG - Dec 20, 2024 - 11:20am



PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE
- PROPOSED 8" WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED 8" SANITARY SEWER MAIN
- PROPOSED SANITARY SERVICE
- PROPOSED ELECTRIC
- PROPOSED GAS
- PROPOSED STORM SEWER
- PROPOSED SEWER MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED STORM INLET

EXISTING LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING 8" WATER MAIN
- EXISTING 8" SANITARY SEWER MAIN
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING CABLE
- EXISTING FIBER OPTIC
- EXISTING IRRIGATION PIPE
- EXISTING SWALE OR DITCH
- EXISTING STORM SEWER
- EXISTING WIRE FENCE
- EXISTING ELECTRIC MANHOLE
- EXISTING DRAINAGE DRY-WELL
- EXISTING SEWER MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING GUY WIRE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC TRANSFORMER
- EXISTING ELECTRIC METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING CATV PEDESTAL
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING STORM INLET

UTILITY NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN PLOTTED BASED ON UTILITY MAPS, CONSTRUCTION/DESIGN PLANS, OTHER INFORMATION PROVIDED BY UTILITY COMPANIES AND ACTUAL FIELD LOCATIONS IN SOME INSTANCES. THESE UTILITIES, AS SHOWN, MAY NOT REPRESENT ACTUAL FIELD CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY COMPANIES FOR FIELD LOCATION OF UTILITIES PRIOR TO CONSTRUCTION.
2. SHALLOW UTILITY LINEWORK MUST BE COORDINATED WITH THE UTILITY PROVIDER. THE UTILITY PROVIDER IS TO PERFORM ALL UTILITY LINEWORK NECESSARY. CONTRACTOR TO PROVIDE ALL TRENCHING, BEDDING AND BACKFILL NECESSARY FOR LINEWORK.
3. THE SITE SANITARY SEWER SHALL BE CONSTRUCTED ACCORDING TO THE TOWN OF NEW CASTLE STANDARD DETAILS AND SPECIFICATIONS.
4. THE SITE WATER MAIN SHALL BE CONSTRUCTED ACCORDING TO THE TOWN OF NEW CASTLE STANDARD DETAILS AND SPECIFICATIONS.

NORTH

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
OVERALL UTILITY PLAN

DRAWING NO.
C-3.0

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C3D UTIL.DWG - Dec 20, 2024 - 4:07pm

LOT 1

LOT 2

LOT 3

LOT 4

WATER METER & REDUCED PRESSURE ASSEMBLY CHECK VALVE INSTALLED IN FRONT LEFT CORNER OF GARAGE (TYP.)

TOWNHOMES (TYP.)

FIRE HYDRANT 2

FIRE HYDRANT 3

WATER SERVICE FOR TOWN TEST STATION. THE TOWN WILL PROVIDE THE STATION. THE APPROXIMATE STATION SIZE IS 12"X12". COORDINATE WITH TOWN DURING CONSTRUCTION.

SEWER SERVICE (TYP.)

ELEC, TELE, CABLE SERVICES (TYP.)

INSULATION REQUIRED (TYP.) RE: WATER NOTE 7 / C-0.1

WATER METER & REDUCED PRESSURE ASSEMBLY CHECK VALVE IN MECH ROOM (TYP.)

LIVE/WORK-3

CHAPMAN LOOP

FIRE HYDRANT 1

MANHOLE-PRV STA 0+09.89 RE: X/C-5.1

SEWER SERVICE

ETC SERVICE & METER

LIVE/WORK-1

LIVE/WORK-4

FIRE HYDRANT 4

STORM SEWER CULVERT

100 YR FLOOD THROUGH CULVERT, RE: DRG. CALCS.

IRRIGATION MAIN (TYP.)

INSTALL 10" MEGA LUG TEE & T.B., THREE VALVES

FIRE HYDRANT 5

8"W STUB FOR FUTURE EXTENSION ON LOT 4.

8"S STUB FOR FUTURE EXTENSION ON LOT 4.

PROPOSED SEWER UNDER EX. WATER MAIN. CONTRACTOR TO POTHOLE LOCATE PRIOR TO CONSTRUCTION AND COORDINATE WITH DESIGN ENGINEER TO CONFIRM FINAL DESIGN.

ELECTRIC, TELEPHONE, & CABLE (TYP.)

WATER MAIN (TYP.)

FIRE HYDRANT 8

LOCATION OF EX. 10" WATER MAIN.

N. WILD HORSE

LIVE/WORK-2

FIRE HYDRANT 6

OFFSITE 100 YR FLOOD LIMIT± RE: DRG. CALCS.

ETC SERVICE & METER

EMPTY NESTER-5

FIRE HYDRANT 10

VIX PARK

FIRE HYDRANT 7

PROPOSED SANITARY SEWER MAIN (TYP.)

IRRIGATION MAIN LINE TO BE INSTALLED BY TOWN (SCOPE BY OTHERS).

EXISTING CULVERT

ETC OVER EX. CULVERT.

FIRE HYDRANT 9

ETC SERVICE & METER

SEWER SERVICE

EMPTY NESTER-6

VISTA LOOP

MEDARIS LOOP

PROPOSED LEGEND

- PROPERTY LINE
- EXISTING EASEMENT
- PROPOSED EASEMENT
- PROPOSED SETBACK
- PROPOSED LOT LINE
- PROPOSED CENTERLINE
- PROPOSED 8" WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED 8" SANITARY SEWER MAIN
- PROPOSED SANITARY SERVICE
- PROPOSED ELECTRIC
- PROPOSED GAS
- PROPOSED STORM SEWER
- PROPOSED SEWER MANHOLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED ELECTRIC TRANSFORMER
- PROPOSED STORM INLET

EXISTING LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- OFFSITE 100 YR FLOOD±
- EXISTING 8" WATER MAIN
- EXISTING 8" SANITARY SEWER MAIN
- EXISTING GAS
- EXISTING TELEPHONE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING CABLE
- EXISTING FIBER OPTIC
- EXISTING IRRIGATION PIPE
- EXISTING SWALE OR DITCH
- EXISTING STORM SEWER
- EXISTING WIRE FENCE
- EXISTING ELECTRIC MANHOLE
- EXISTING DRAINAGE DRY-WELL
- EXISTING SEWER MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING GUY WIRE
- EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING GAS METER
- EXISTING ELECTRIC TRANSFORMER
- EXISTING ELECTRIC METER
- EXISTING TELEPHONE PEDESTAL
- EXISTING CATV PEDESTAL
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING STORM INLET

NORTH

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

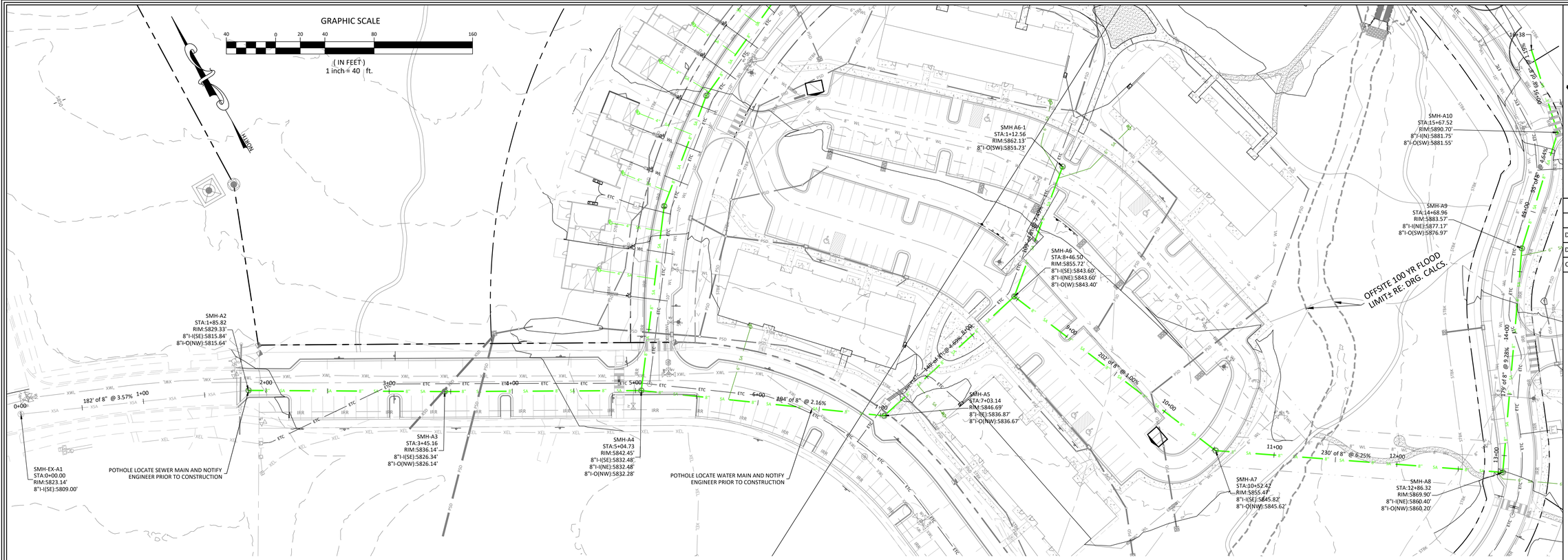
FINAL PLAN

DATE	REVISION

TITLE
SITE UTILITY PLAN

DRAWING NO.
C-3.1

G:\2023\33011 CVR #2 RES\CIVIL\CIVIL DWGS\PLOT\33011-C3D UTIL.DWG - Dec 20, 2024 - 4:07pm



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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

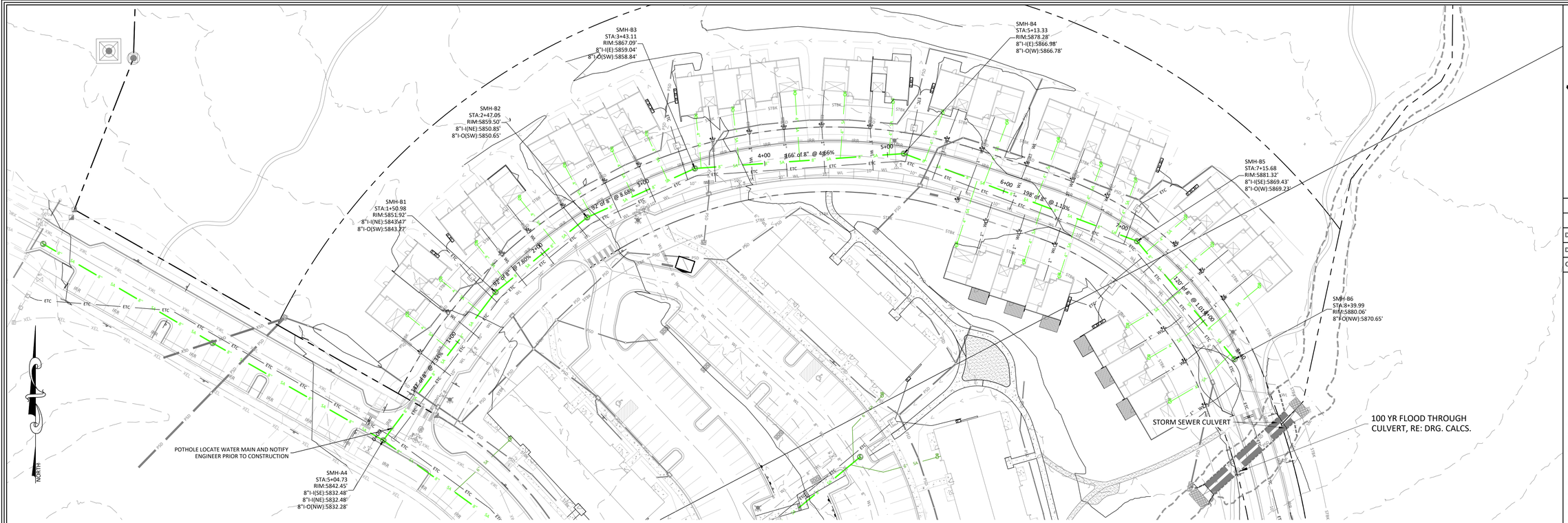
DATE	REVISION

TITLE
SEWER MAIN A

DRAWING NO.
C-3.2

Know what's **below.** **Call** before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

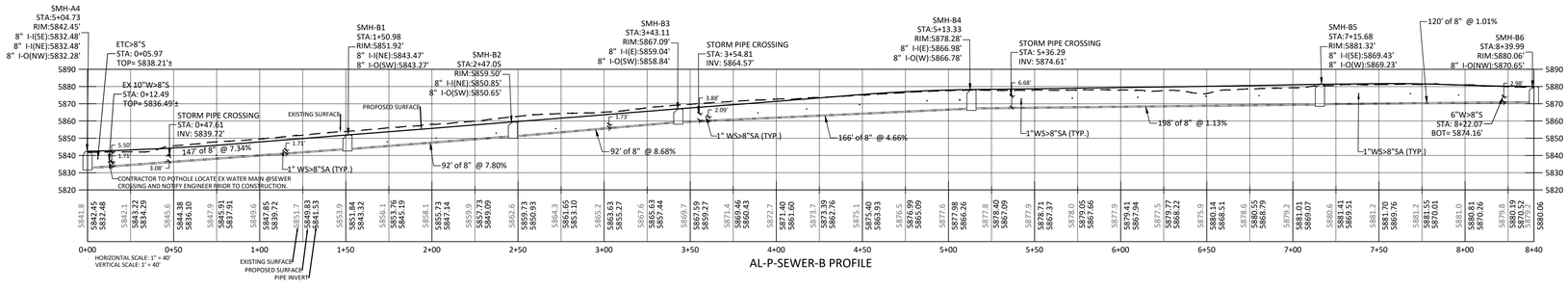
G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\PLOTS\33011-C3D UTIL.DWG - Jan 31, 2025 - 2:59pm



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



AL-P-SEWER-B PROFILE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

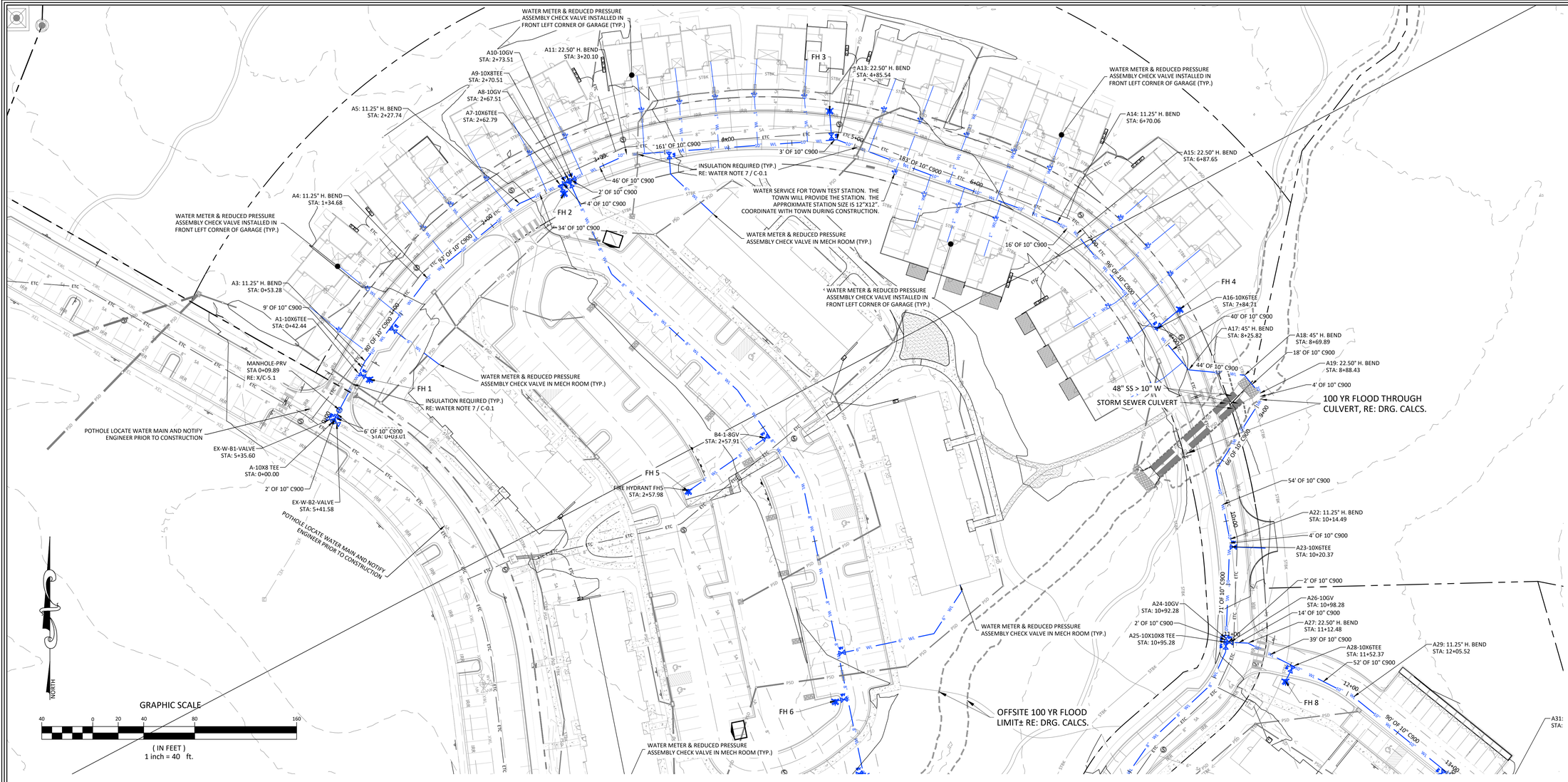
DATE	REVISION

TITLE
SEWER MAIN B

DRAWING NO.
C-3.3

811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C3D UTIL.DWG - Dec 20, 2024 - 4:07pm



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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

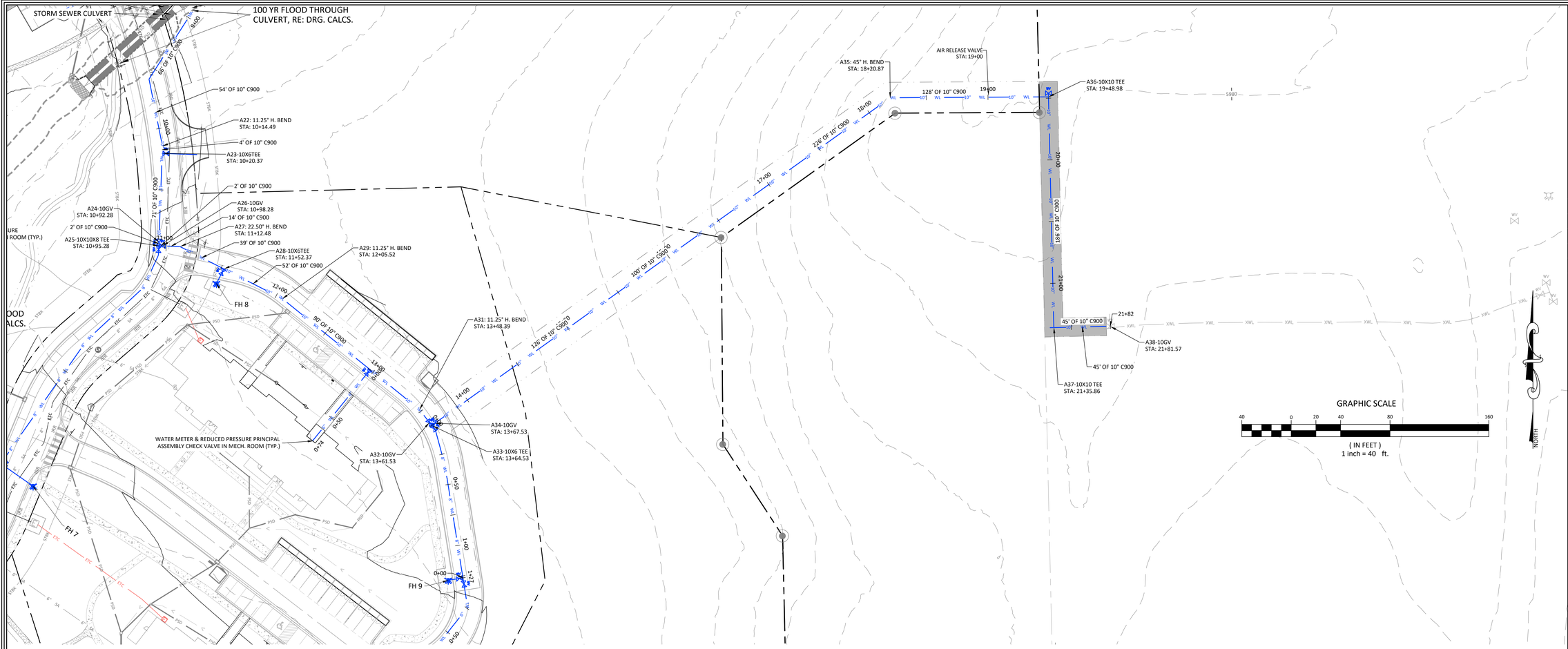
FINAL PLAN

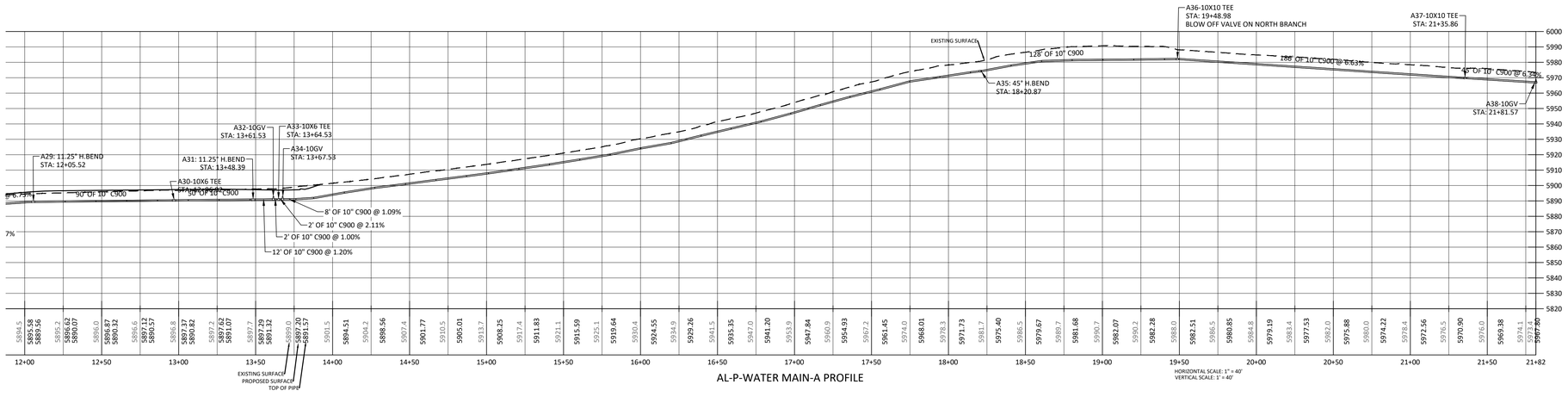
DATE	REVISION

TITLE
WATER MAIN A STA 0+00 - 12+00

DRAWING NO.
C-3.4

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C3D LITL.DWG - Dec 20, 2024 - 4:09pm





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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

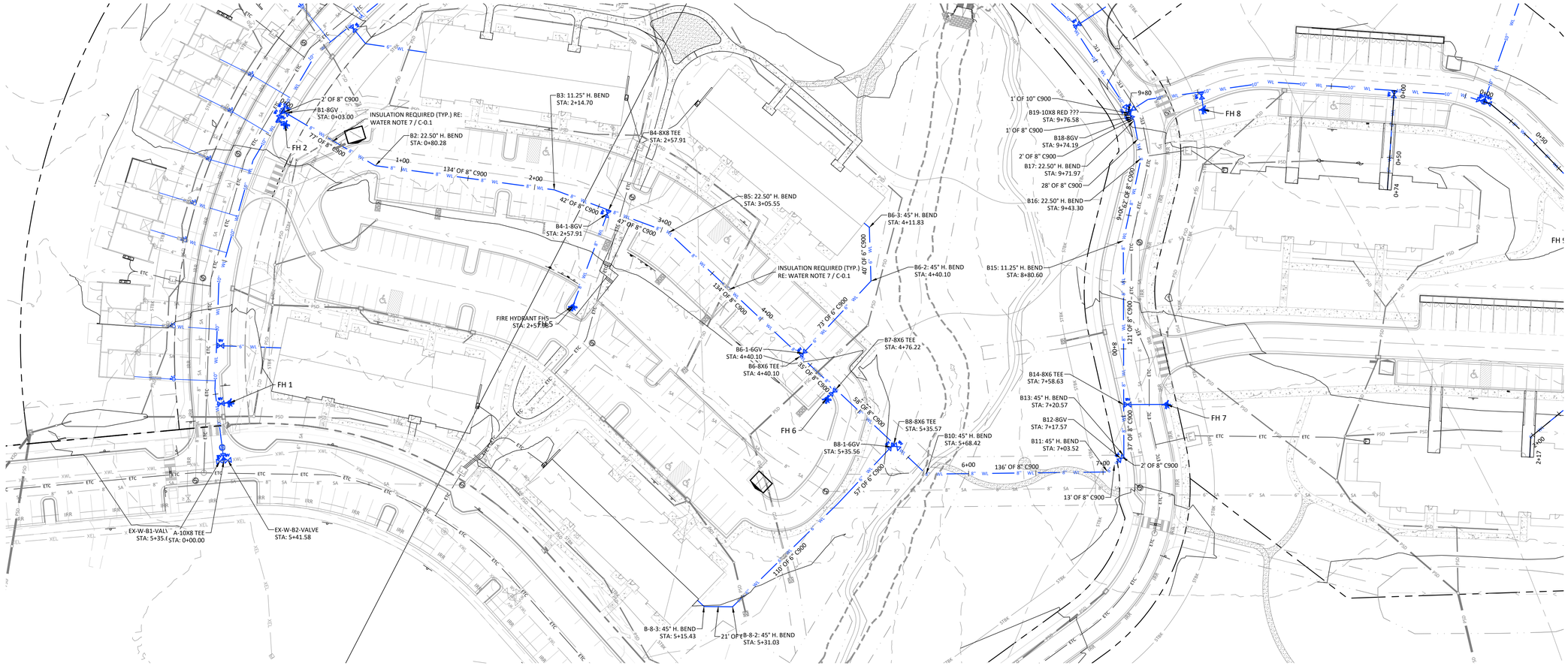
FINAL PLAN

DATE	REVISION

TITLE
WATER MAIN A STA 12+00 - 19+91

DRAWING NO.
C-3.5

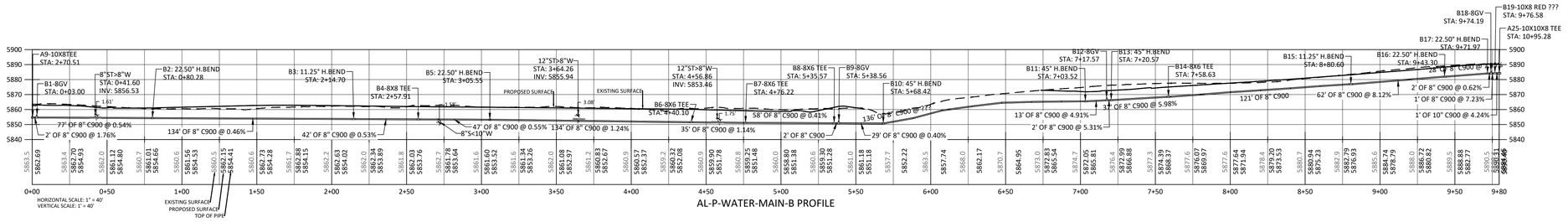
G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C30 UTIL.DWG - Dec 20, 2024 - 4:09pm



GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.



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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

DATE	REVISION

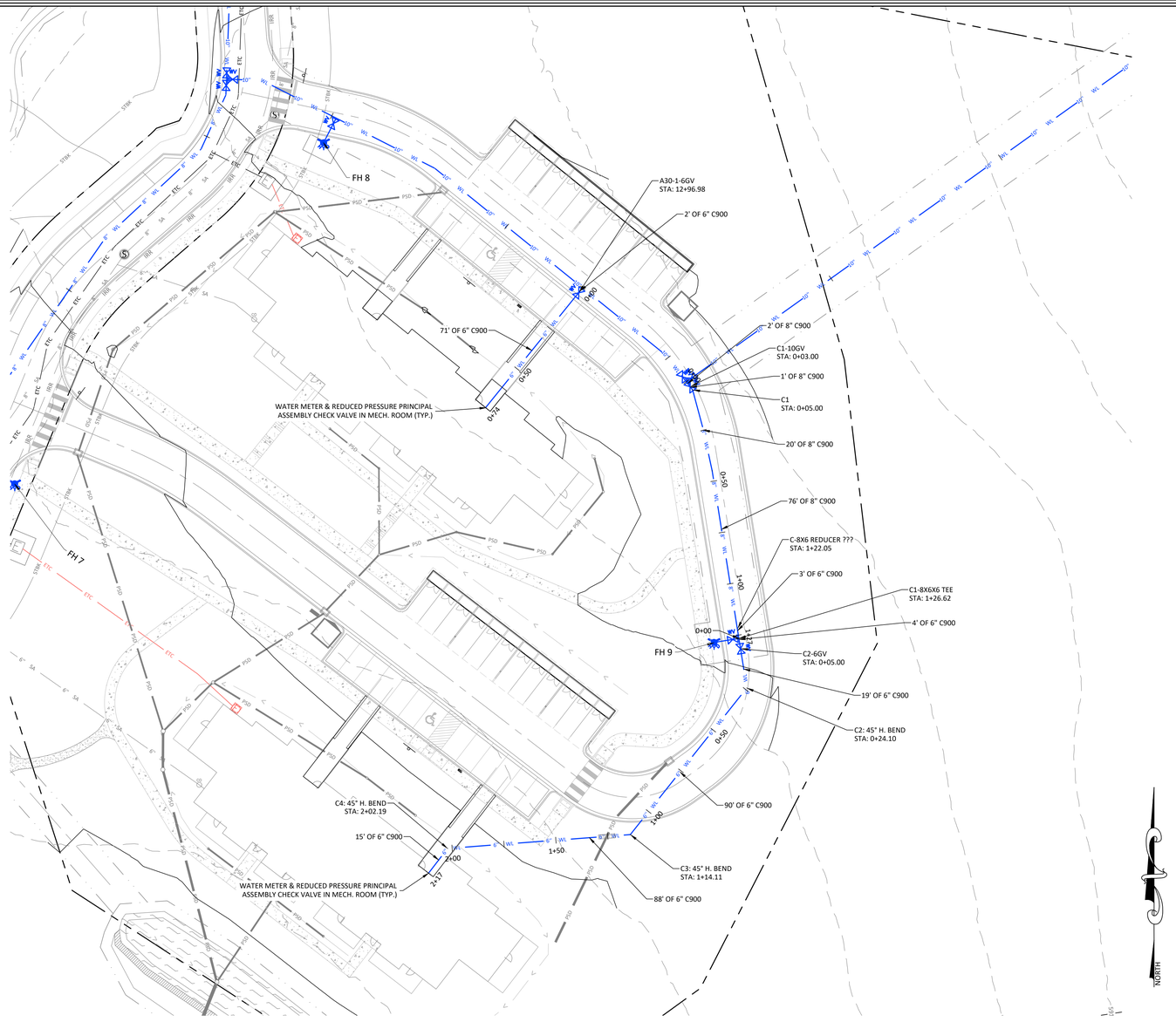
9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

TITLE
WATER MAIN B

DRAWING NO.
C-3.6

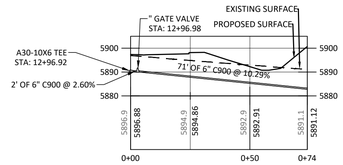
G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C30 UTIL.DWG - Dec 20, 2024 - 4:08pm



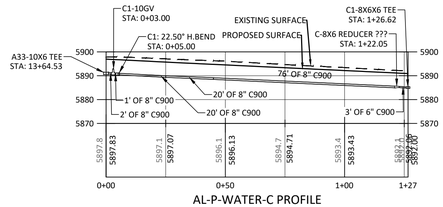
GRAPHIC SCALE

30 0 15 30 60 120

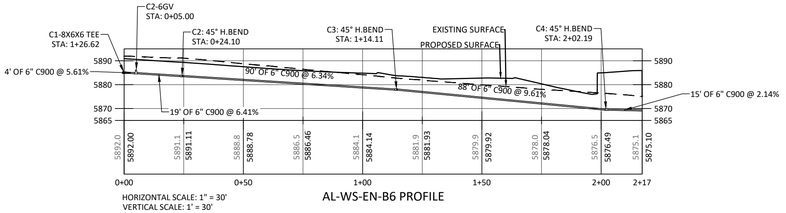
(IN FEET)
1 inch = 30 ft.



AL-WS-EN-B5 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1' = 30'



AL-P-WATER-C PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1' = 30'



AL-WS-EN-B6 PROFILE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1' = 30'

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
WATER MAIN C & PLAN/PROFILE

DRAWING NO.
C-3.7

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C3D LITL.DWG - Dec 20, 2024 - 4:09pm

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PLAN
A, B, & C

DRAWING NO.
C-4.0

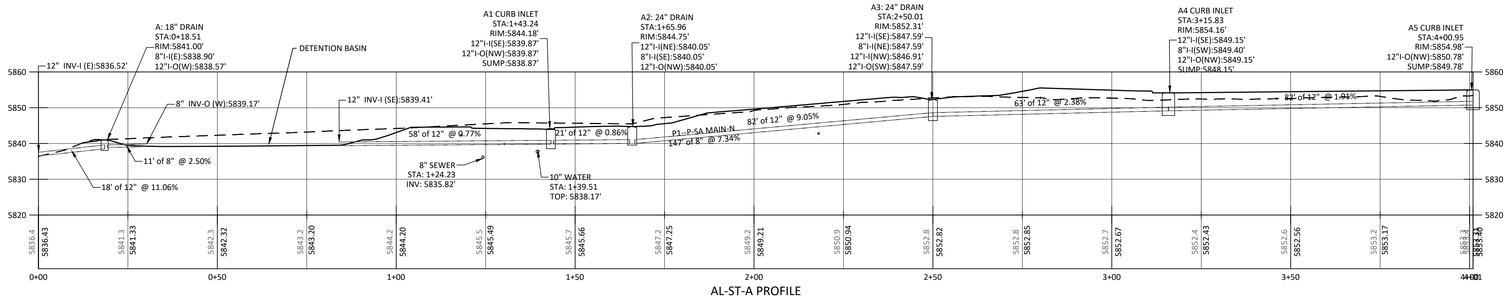
G:\2023\33011 CWW RJ HIST\Civil\Cmp DWGS\PLOT\33011-C40-STORM OWE - Dec 20, 2024 - 2:08pm

GRAPHIC SCALE

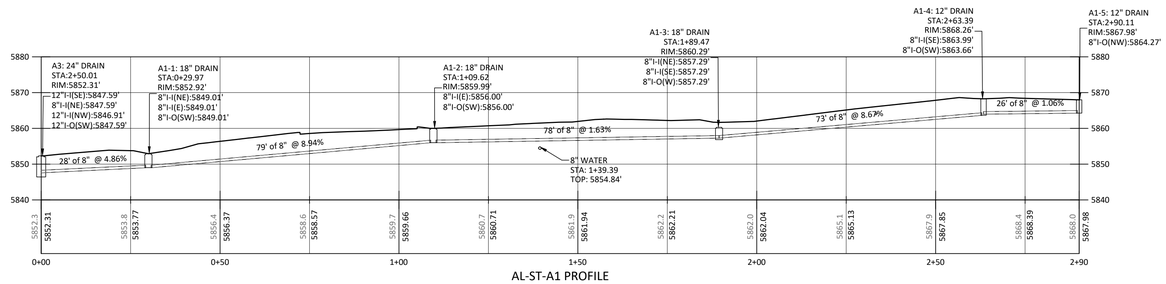
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

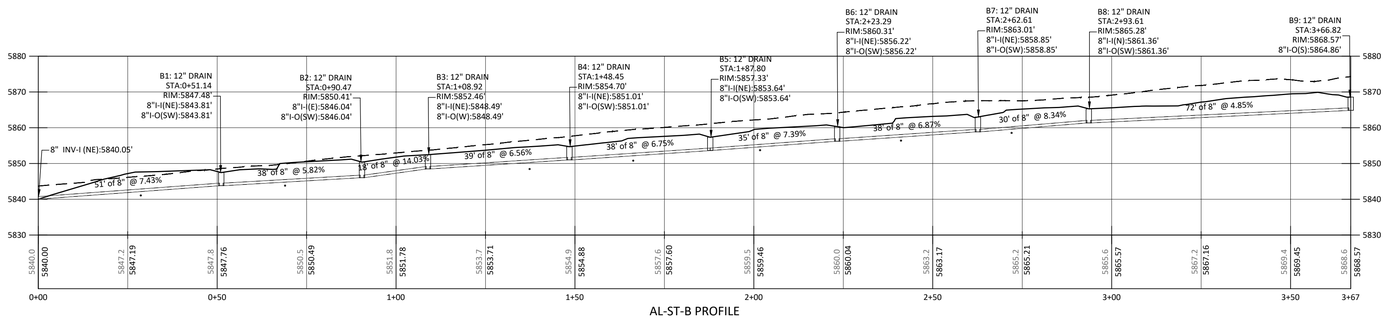
NORTH



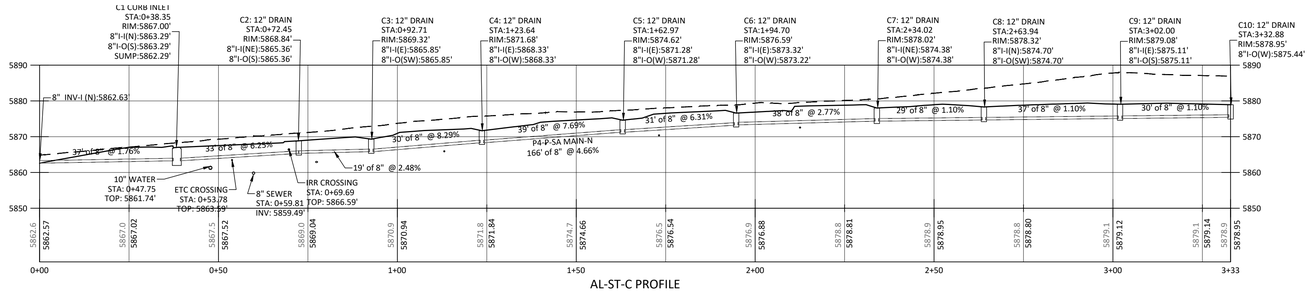
AL-ST-A PROFILE



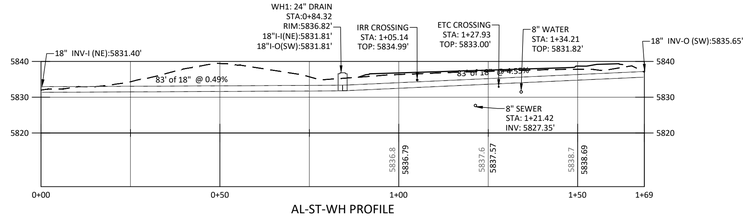
AL-ST-A1 PROFILE



AL-ST-B PROFILE



AL-ST-C PROFILE



AL-ST-WH PROFILE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PROFILES
A, B, & C

DRAWING NO.
C-4.1

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C4B STORM.DWG - Dec 20, 2024 - 2:08pm

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	JPP
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PLAN
D, E, & F

DRAWING NO.
C-4.2

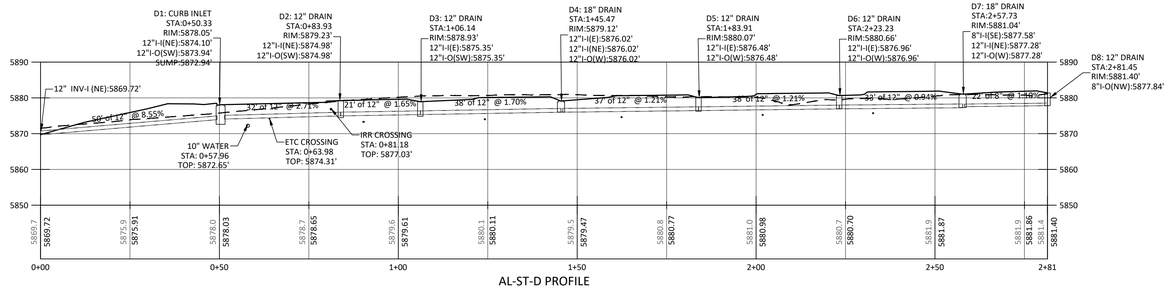
G:\2023\33011 CVR RX RES\CIVIL\CIVIL DWGS\PLOT\33011-C40 STORM.DWG - Dec 20, 2024 - 2:09pm

GRAPHIC SCALE

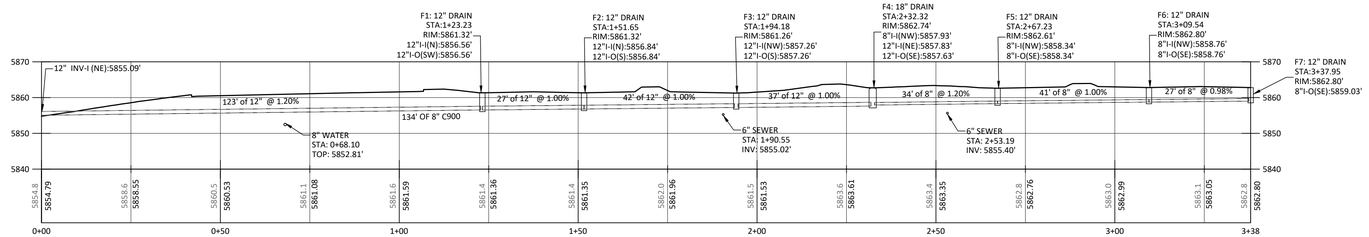
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

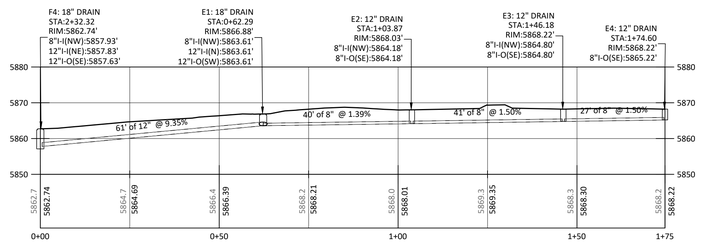
NORTH



AL-ST-D PROFILE



AL-ST-F PROFILE



AL-ST-E PROFILE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PROFILES
D, E, & F

DRAWING NO.
C-4.3

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C40 STORM.DWG - Dec 20, 2024 - 2:09pm

SHEET FLOW TO PARK (TYP.)

J1: 12" BASIN
STA:0+00.00
RIM:5847.83'
8" I-O(S):5843.94'

J2: 12" BASIN
STA:0+32.00
RIM:5846.52'
8" I-I(N):5842.79'
8" I-O(S):5842.79'

38' of 8" @ 0.58%

J3: 12" BASIN
STA:0+70.75
RIM:5846.83'
8" I-I(N):5842.57'
8" I-O(S):5842.57'

33' of 8" @ 0.58%

J4: 12" BASIN
STA:1+04.92
RIM:5846.72'
8" I-I(N):5842.34'
8" I-O(S):5842.34'

27' of 8" @ 0.63%

J5: 12" BASIN
STA:1+33.33
RIM:5846.72'
8" I-I(N):5842.16'
8" I-O(S):5842.16'

68' of 8" @ 5.21%

RIBBON CURB AND FLUSH SIDEWALK AT BACK OF PARKING, MAINTAIN SHEET FLOW TO PARK (TYP.)

J6: 12" BASIN
STA:2+01.86
RIM:5842.68'
8" I-I(N):5838.59'
8" I-O(SE):5838.59'

55' of 8" @ 5.86%

J7: 18" BASIN
STA:2+56.13
RIM:5841.58'
8"I-I(NW):5838.12'
6"I-O(S):5838.29'
SUMP:5837.12'

36' of 6" @ 6.53%

INV: 35.65

INV: 30.60

88' of 12" @ 4.08%

N1: 12" BASIN
STA:0+88.88
RIM:5838.69'
12" I-I(E):5834.19'
12" I-O(N):5834.19'

24' of 12" @ 0.84%

N2: CURB INLET:
STA:1+14.86
RIM:5838.40'
12" I-O(W):5834.40'
SUMP:5833.40'

BLDG 2

H2.3: 12" BASIN
STA:0+80.49
RIM:5852.07'
8" I-O(S):5849.91'

H2.2: 12" BASIN
STA:0+38.22
RIM:5852.31'
8" I-I(N):5849.29'
8" I-O(S):5849.29'

H2.1: 12" BASIN
STA:0+09.76
RIM:5852.31'
8" I-I(N):5848.87'
8" I-O(E):5848.87'

10' of 8" @ 2.00%

H1: CURB INLET:
STA:1+82.80
RIM:5853.51'
12" I-O(S):5849.34'
SUMP:5848.34'

123' of 12" @ 1.20%

INV: 54.79

CURB OPENING
W/ 4X8 RIP-RAP

H2: CURB INLET:
STA:0+95.65
RIM:5852.56'
8" I-I(W):5848.68'
12" I-I(N):5848.48'
12" I-O(S):5848.48'
SUMP:5847.48'

G2: 12" BASIN
STA:1+10.97
RIM:5853.89'
12" I-I(E):5850.13'
12" I-O(S):5850.13'

43' of 12" @ 1.00%

G1: 12" BASIN
STA:0+66.56
RIM:5853.80'
12" I-I(N):5849.69'
12" I-O(S):5849.69'

H3: 18" BASIN
STA:0+37.78
RIM:5851.80'
12" I-I(N):5847.65'
12" I-O(S):5847.65'

39' of 12" @ 1.00%

INV: 47.03

INV: 49.02

M1: 18" BASIN
STA:0+36.25
RIM:5844.78'
12"I-I(SE):5841.67'
4"I-O(NW):5842.34'
SUMP:5840.67'

INV: 37.41

36' of 4" @ 13.78%

M2: CURB INLET:
STA:0+80.63
RIM:5846.26'
12" I-I(E):5842.26'
12" I-O(NW):5842.26'
SUMP:5841.26'

45' of 12" @ 1.33%

119' of 12" @ 5.08%

G3: 12" BASIN
STA:2+30.60
RIM:5860.22'
8" I-I(NE):5856.35'
12" I-O(W):5856.18'

12" I-O(SW):5856.56'

90' of 8" @ 8.10%

G4: 12" BASIN
STA:3+28.79
RIM:5865.45'
8" I-I(N):5861.40'
8" I-O(SW):5861.40'

97' of 8" @ 5.14%

M3: CURB INLET:
STA:2+82.30
RIM:5862.55'
12" I-O(W):5858.55'
SUMP:5857.55'

200' of 12" @ 8.19%

VISTA LOOP

12" INV:5873.13'

29' of 12" @ 5.98%

Q1: CURB INLET:
STA:0+29.90
RIM:5878.28'
12" I-O(NW):5874.28'
SUMP:5873.28'

K5: 18" BASIN
STA:3+85.59
RIM:5879.80'
8" I-I(NE):5875.72'
8" I-O(S):5875.72'

103' of 8" @ 6.95%

K4: CURB INLET:
STA:3+33.13
RIM:5877.74'
8" I-I(N):5873.06'
8" I-O(S):5873.06'
SUMP:5872.06'

K3: 24" BASIN
STA:1+92.92'
RIM:5871.76'
8" I-I(N):5867.42'
8" I-I(NE):5868.76'
12" I-O(S):5867.08'

105' of 8" @ 4.05%

32' of 8" @ 8.19%

K2: 24" BASIN
STA:1+74.45
RIM:5871.35'
12" I-I(N):5866.79'
12" I-O(S):5866.79'

24' of 12" @ 4.60%

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

NORTH

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PLAN
G, H, J, M, & N

DRAWING NO.
C-4.4

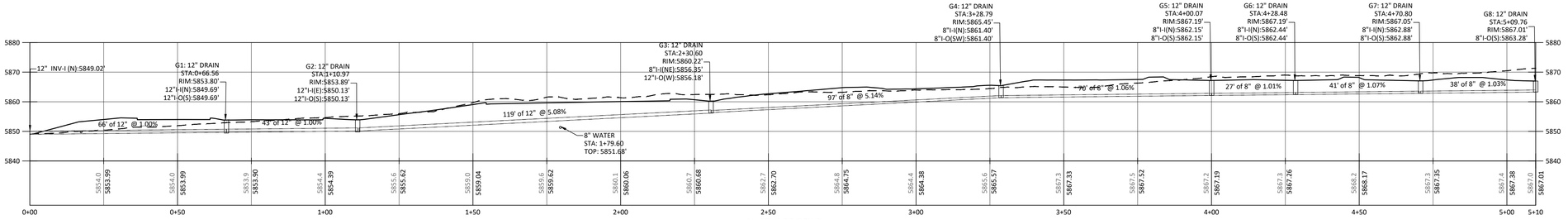
G:\2023\33011 CW K2 RES\CIVIL\CIVIL DWGS\PLOT\33011-C4B STORM.DWG - Dec 20, 2024 - 2:09pm

GRAPHIC SCALE

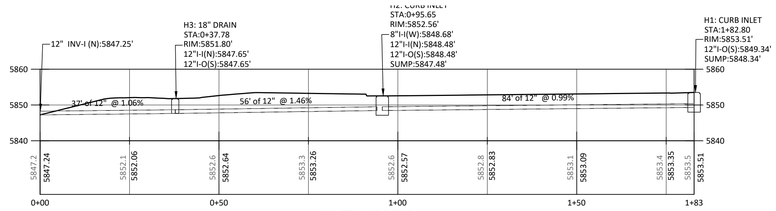
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

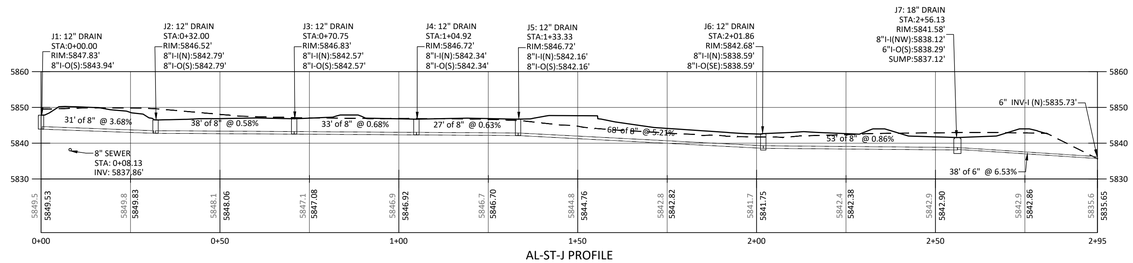
NORTH



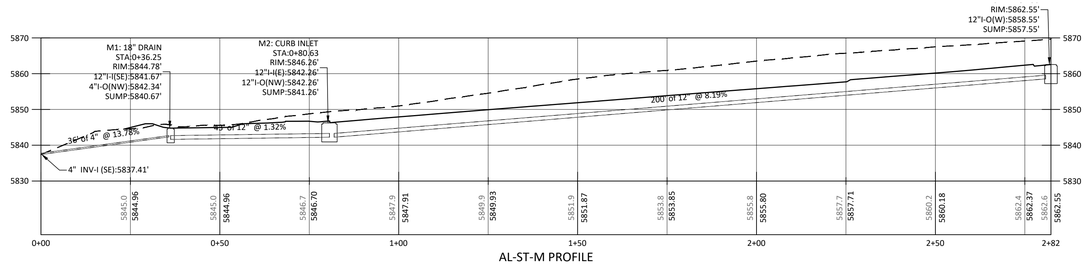
AL-ST-G PROFILE



AL-ST-H PROFILE



AL-ST-J PROFILE



AL-ST-M PROFILE

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PROFILES
G, H, J, & M

DRAWING NO.
C-4.5

G:\2023\33011 CVR K2 HES\CIVIL\CIVIL DWGS\PLOT\33011-C4S-STORM.DWG - Dec 20, 2024 - 2:10pm

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

DATE:	12-20-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
STORM PLAN
K & L

DRAWING NO.
C-4.6

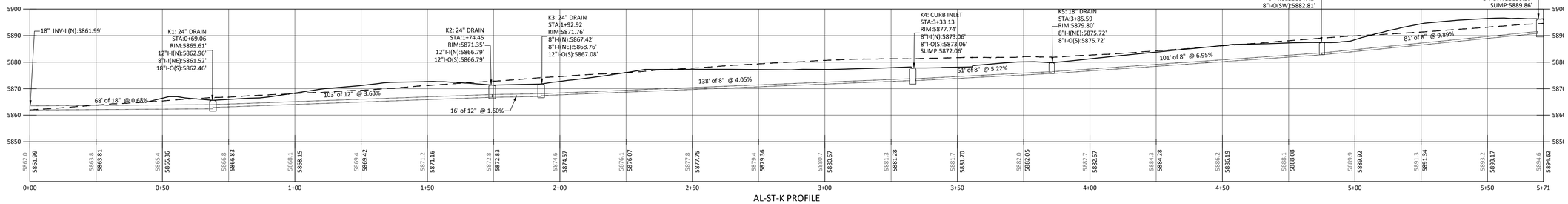
G:\2023\33011 CWW R2 HES\Civil\Civil DWGS\PLOT\33011-C4D-STORM.DWG Dec 20, 2024 - 2:10pm

GRAPHIC SCALE

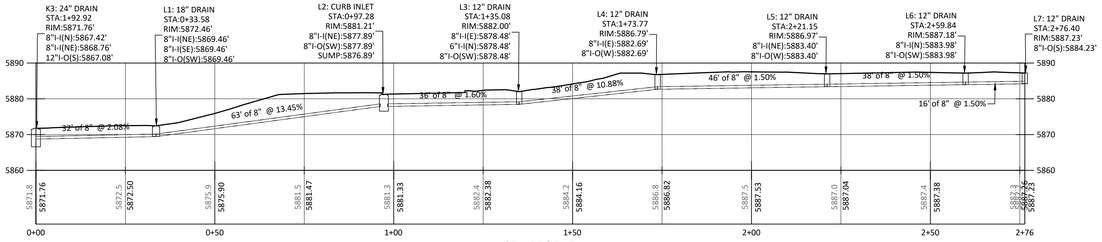
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

NORTH



AL-ST-K PROFILE



AL-ST-L PROFILE

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

DATE:	12-20-2024
JOB NO.	33011.01
DESIGNED BY	JPP
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

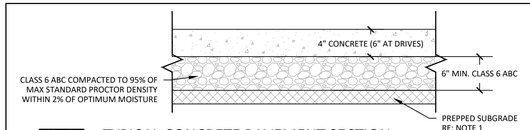
FINAL PLAN

DATE	REVISION

TITLE
STORM PROFILES
K & L

DRAWING NO.
C-4.7

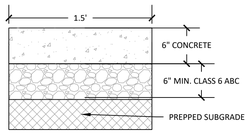
G:\33013\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C40 STORM.DWG - Dec 20, 2024 - 2:10pm



1 C5.0 TYPICAL CONCRETE PAVEMENT SECTION

SCALE: N.T.S.

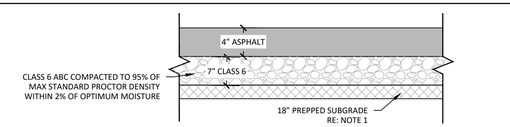
NOTES:
1. CONTRACTOR TO STRIP ALL TOPSOIL, SCARIFY SUBGRADE TO A DEPTH OF 8", MOISTURE TREATED TO WITHIN 2 PERCENT OF OF OPTIMUM MOISTURE CONTENT, AND RE-COMPACT TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
2. AGGREGATE BASE COURSE SHALL BE LAID IN THIN LIFTS NOT TO EXCEED 6-INCHES, MOISTURE TREATED TO WITHIN 2 PERCENT OF OF OPTIMUM MOISTURE CONTENT, AND COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
3. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE IN 6" LIFTS A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR WITHIN 2% OF OPTIMUM MOISTURE. SOILS ENGINEER SHALL OBSERVE AND PERFORM COMPACTION TESTING DURING CONSTRUCTION.
4. THE SUBGRADE & BASE COURSE SHALL BE PROOF ROLLED AFTER THE REQUIRED COMPACTION HAS BEEN OBTAINED AND THE SUBGRADE HAS BEEN SHAPED TO THE REQUIRED CROSS SECTION. PROOF ROLLING SHALL BE PERFORMED IN ACCORDANCE WITH CDOT SPECIFICATIONS WITH A VEHICLE WITH A MINIMUM AXLE LOAD OF 18 kips PER AXLE AND OBSERVED BY PROJECT ENGINEER AND/OR PROJECT GEOTECHNICAL ENGINEER.
5. THE PUBLIC PEDESTRIAN AREAS HAVE BEEN DESIGNED PER THE AMERICAN'S WITH DISABILITIES ACT (ADA) STANDARDS. THE ADA CORRIDORS HAVE BEEN DESIGNED WITH A MAXIMUM CROSS SLOPE OF 2%. THE CONTINUOUS LONGITUDINAL SLOPES ARE ALL LESS THAN THE MAXIMUM 5% (1:20) SLOPE. HANDICAP PEDESTRIAN AREAS SHALL BE CONSTRUCTED TO MEET ALL ADA STANDARDS AND SPECIFICATIONS, INCLUDING, BUT NOT LIMITED TO; ACCESS WIDTHS, CROSS SLOPE, LONGITUDINAL SLOPE, CHANGE IN LEVEL, SLOT OPENINGS, SURFACE TEXTURE, AND SCORE JOINT WIDTHS.



3 C5.0 STANDARD RIBBON CURB

SCALE: N.T.S.

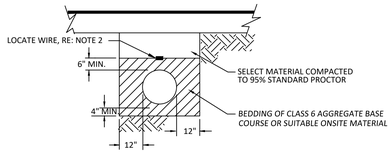
NOTES:
1. CONTRACTOR TO STRIP ALL TOPSOIL, SCARIFY SUBGRADE TO A DEPTH OF 8", MOISTURE TREATED TO WITHIN 2 PERCENT OF OF OPTIMUM MOISTURE CONTENT, AND RE-COMPACT TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
2. AGGREGATE BASE COURSE SHALL BE LAID IN THIN LIFTS NOT TO EXCEED 6-INCHES, MOISTURE TREATED TO WITHIN 2 PERCENT OF OF OPTIMUM MOISTURE CONTENT, AND COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY.



2 C5.0 TYPICAL ASPHALT PAVEMENT DETAIL

SCALE: N.T.S.

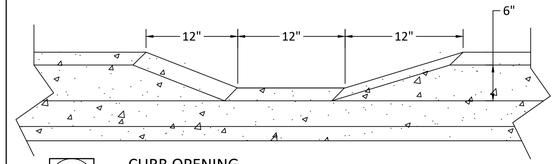
NOTES:
1. STRIP ALL TOPSOIL, SCARIFY, OVEREXCAVATE, AND RECOMPACT SUBGRADE IN 6" LIFTS A MINIMUM OF 18" DEPTH TO 95% STANDARD PROCTOR WITHIN 2% OF OPTIMUM MOISTURE. SOILS ENGINEER SHALL OBSERVE AND PERFORM COMPACTION TESTING DURING CONSTRUCTION.
2. ASPHALT DESIGN MIX SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.
3. 4" ASPHALT DEPTH W/ 2" BASE LAYER AND 2" TOP LAYER.
4. THE SUBGRADE & SUBBASE SHALL BE PROOF ROLLED AFTER THE REQUIRED COMPACTION HAS BEEN OBTAINED AND THE SUBGRADE HAS BEEN SHAPED TO THE REQUIRED CROSS SECTION. PROOF ROLLING SHALL BE PERFORMED IN ACCORDANCE WITH CDOT SPECIFICATIONS WITH A VEHICLE WITH A MINIMUM AXLE LOAD OF 18 kips PER AXLE AND OBSERVED BY PROJECT ENGINEER AND/OR PROJECT GEOTECHNICAL ENGINEER.



4 C5.0 TRENCH CROSS-SECTION FOR PVC OR HDPE LINES

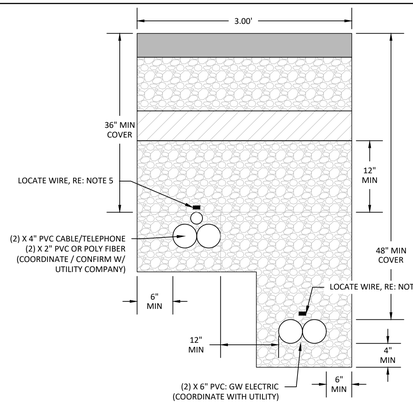
SCALE: N.T.S.

NOTES:
1. SELECT MATERIAL SHALL BE SUITABLE ONSITE MATERIAL THAT IS FREE OF ORGANICS, SCREENED 3" MINUS COMPACTED TO 95% OF STANDARD PROCTOR DENSITY. IF SUITABLE ONSITE MATERIAL IS NOT AVAILABLE, CONTRACTOR SHALL IMPORT CLASS 2 STRUCTURAL BACKFILL OR APPROVED EQUAL.
2. PER STATE SB 18-167, ALL SUBSURFACE UTILITIES WILL NEED TO BE ELECTRONICALLY LOCATABLE USING TRACER WIRE, MAGNETIC TAPE, ETC. THIS INCLUDES MAIN AND SERVICE LINES. CONTRACTOR SHALL PROVIDE LOCATE MATERIAL SUBMITTAL FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD AND THE UTILITY COMPANY PRIOR TO CONSTRUCTION.



10 C5.0 CURB OPENING

SCALE: N.T.S.



11 C5.0 ON-SITE COMMON UTILITY TRENCH

SCALE: N.T.S.

NOTES:
1. BEDDING MATERIAL TO BE CLASS 6 ABC.
2. MIN 4" BEDDING MATERIAL UNDER CONDUITS.
3. MIN 12" CLASS 6 ABC OVER TOP OF CONDUITS.
4. WARNING TAPE TO BE INSTALLED ABOVE CONDUITS PER UTILITY COMPANY STANDARDS.
5. PER STATE SB 18-167, ALL SUBSURFACE UTILITIES WILL NEED TO BE ELECTRONICALLY LOCATABLE USING TRACER WIRE, MAGNETIC TAPE, ETC. THIS INCLUDES MAIN AND SERVICE LINES. CONTRACTOR SHALL PROVIDE LOCATE MATERIAL SUBMITTAL FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD AND THE UTILITY COMPANY PRIOR TO CONSTRUCTION.
6. TRENCH WALLS ARE TO BE SLOPED PER CURRENT OSHA AND COSH STANDARDS. DEPTH OF TRENCH IS TO BE MEASURED FROM FINISHED GRADE.

TOWN OF NEW CASTLE DETAILS

STREET, WATER, SANITARY SEWER, AND IRRIGATION UTILITY IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE LATEST COPY OF THE TOWN OF NEW CASTLE PUBLIC WORKS MANUAL. DETAILS ARE INCLUDED ON THESE PLANS AMENDED PER THE FOLLOWING NOTES.

1. WHERE THE PLANS AND TOWN OF NEW CASTLE REGULATIONS DIFFER THE CONTRACTOR SHALL HOLD TO THE MORE STRINGENT CRITERIA.
2. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. PURE CORE IS AN ALLOWABLE WATER SERVICE MATERIAL.
4. CONTRACTOR SHALL COMPLY WITH ALL COUNTY, STATE, AND FEDERAL SAFETY AND HEALTH REGULATIONS. IN PARTICULAR, THE "TRENCHING" AND "OPEN EXCAVATION" OPERATIONS AND ALL CURRENT O.S.H.A. REGULATORY REQUIREMENTS.

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

DATE:	01-31-2025
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

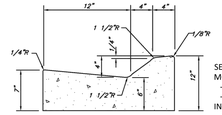
FINAL PLAN

DATE	REVISION

TITLE
SITE DETAILS

DRAWING NO.
C-5.0

G:\2023\33011 CVR #2 RESTOVIL\CIVIL DWGS\PLOT\33011-C50 DETAILS.DWG - Jan 31, 2025 - 1:04pm

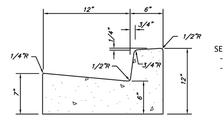


SE NOTE:
MOUNTABLE CURB (18" PAN) USED
- DOWNHILL SIDE OF NORTH WILD HORSE
- DOWNHILL SIDE TOWNHOMES ON VISTA LOOP

INVERTED MOUNTABLE CURB (12" PAN) USED
- UPHILL SIDE OF NORTH WILD HORSE
- UPHILL SIDE TOWNHOMES ON VISTA LOOP

MOUNTABLE CURB & GUTTER

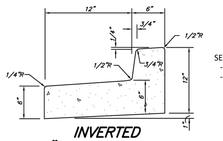
SCALE: 1 1/2"= 1'-0"



SE NOTE: 24" CURB (18" PAN) USED
- DOWNHILL SIDE OF VISTA LOOP
- DOWNHILL SIDE OF PRIVATE ROADS.

18" CURB & GUTTER

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

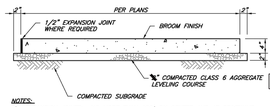


SE NOTE: 18" INVERTED CURB USED
- UPHILL SIDE OF VISTA LOOP
- UPHILL SIDE OF PRIVATE ROADS.

INVERTED 18" CURB & GUTTER

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

24" CURB AND GUTTER DETAILS	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-10

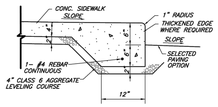


SE NOTE: REFER TO 1/C5.0

NOTES:
1) EXPANSION JOINTS: NO MORE THAN 100' ON CENTER AND AT DRIVEWAYS.
2) DUMMY JOINTS: 1" DEEP BY 1/8" – 1/4" WIDTH AT INTERVALS EQUAL TO SIDEWALK WIDTH.
3) USE 1/4" RADIUS ON ALL EDGES.
4) USE 6" DEPTH OF CONCRETE ON ALL DRIVEWAYS.
5) CURE FOR 72 HOURS USING CURING COMPOUND, PLASTIC COVERING OR MOISTURE.
6) USE 3750 PSI CONCRETE WITH FIBERMESH ADDITIVE AT 1-1/2 LBS./C.Y. MAXIMUM SLUMP 4".

CONCRETE SIDEWALK

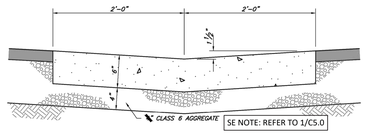
SCALE: 1"= 1'-0"



TYP. DETACHED SIDEWALK W/ THICKENED EDGE

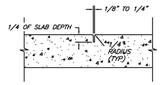
SCALE: 1"= 1'-0"

TYPICAL SIDEWALK AND SIDEWALK W/THICKENED EDGE	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-40



VALLEY PAN DETAIL

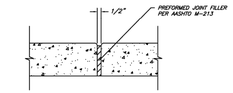
SCALE: 1½"= 1'-0"



NOTE: LOCATION OF CONTRACTION JOINTS TO BE AS DETAILED OR AS DETERMINED IN FIELD WITH AND APPROVED BY TOWN.

STANDARD CONTRACTION JOINT

N.T.S.

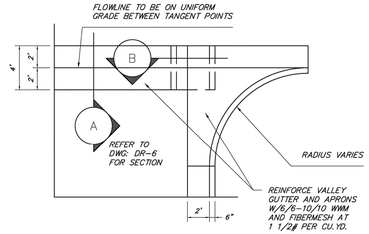


NOTE: EXPANSION JOINTS TO BE LOCATED ADJACENT TO ANY EXISTING CONCRETE OR FIXED STRUCTURE.

STANDARD EXPANSION JOINT

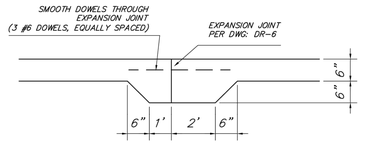
N.T.S.

VALLEY PAN DETAIL AND EXPANSION AND CONTRACTION JOINT DETAILS	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-60



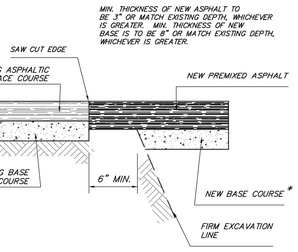
PLAN VIEW

N.T.S.



SECTION B

VALLEY GUTTER AT INTERSECTION	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-70



NOTE: WHERE EXISTING PAVEMENT IS A SEAL COAT OR ROAD MIX ASPHALTIC SURFACE, A PREMIXED COLD APPLIED ASPHALTIC CONCRETE MAY BE USED.

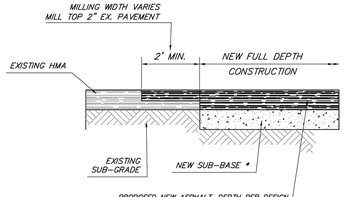
WHERE EXIST. PAVEMENT IS A MACHINE PLACED HOT MIXED ASPHALTIC CONCRETE, A PREMIXED HOT APPLIED CONCRETE WILL BE USED.

ALL REPLACEMENT MATERIAL SHALL BE COMPACTED TO A DENSITY OF 95% OPTIMUM DENSITY.

TEMPORARY A.C. REPAIR TO BE PLACED THE SAME DAY AS COMPLETION OF BACKFILL. CONTRACTOR WILL MAINTAIN TEMPORARY REPAIR UNTIL PERMANENT REPAIR HAS BEEN COMPLETED.

* NOTE: SEE DETAIL DR-140 FOR FLOW FILL OPTION FOR BACKFILL IN ARTERIAL STREETS.

ASPHALTIC PAVEMENT REPLACEMENT	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-130



NOTES:
WHERE EXIST. PAVEMENT IS A MACHINE PLACED HOT MIXED ASPHALTIC CONCRETE, A PREMIXED HOT APPLIED CONCRETE WILL BE USED.

ALL REPLACEMENT MATERIAL SHALL BE COMPACTED TO A DENSITY OF 95% OPTIMUM DENSITY.

TEMPORARY A.C. REPAIR TO BE PLACED THE SAME DAY AS COMPLETION OF BACKFILL. CONTRACTOR WILL MAINTAIN TEMPORARY REPAIR UNTIL PERMANENT REPAIR HAS BEEN COMPLETED.

* NOTE: SEE DETAIL DR-140 FOR FLOW FILL OPTION FOR BACKFILL IN ARTERIAL STREETS.

ASPHALTIC PAVEMENT REPLACEMENT T-TOP	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: DR-135

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

DATE:	01-31-2025	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

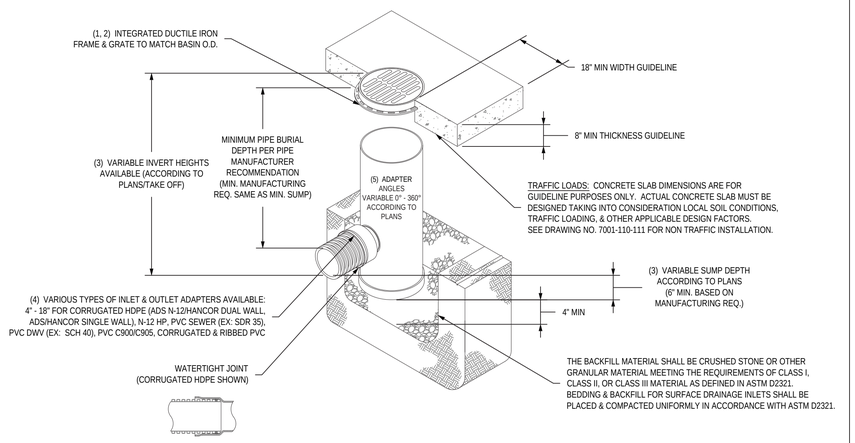
DATE	REVISION

TITLE
SITE DETAILS

DRAWING NO.
C-5.01

G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOTS\33011-C50 DETAILS.DWG - Jan 31, 2025 - 1:04pm

NYLOPLAST DRAIN BASIN: 2818AG _ _ X



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1818RCGP	7003-110-272
BICYCLE SAFE	MEETS H-20	1818RCGB	7003-110-273
SOLID COVER	MEETS H-20	1818RCGC	7003-110-274
DOME	N/A	1818RCGD	7003-110-275
GRATE W/ LINER	LIGHT DUTY	1818GL	7003-110-914

1 C5.1 NYLOPLAST INLET DETAIL

SCALE: N.T.S.

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

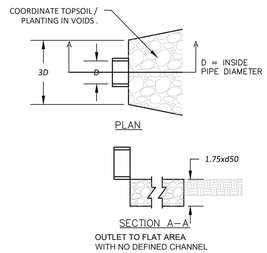
THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST. ©2013 NYLOPLAST

DRAWN BY	EBC	MATERIAL	
DATE	04-03-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-14-16		
DWG SIZE	A	SCALE 1:30	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: 18 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-191 REV E



RIPRAP SIZING NOTES:
RIPRAP SHALL CONFORM TO THE MATERIAL, GRADATION AND CONSTRUCTION REQUIREMENTS OF SECTION 506, RIPRAP, OF THE STATE DEPARTMENT OF HIGHWAYS, DIVISION OF HIGHWAYS, STATE OF COLORADO, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. TABLE 506-2E IS REDUCED BELOW.

TABLE 5-1 - CLASSIFICATION AND GRADATION OF ORDINARY RIPRAP

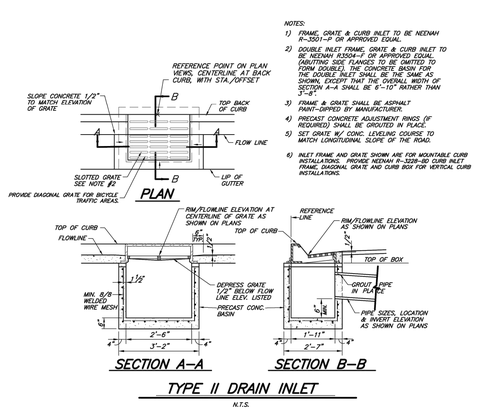
RIPRAP DESIGNATION	% SMALLER THAN GIVEN SIZE BY WEIGHT	INTERMEDIATE ROCK DIM (IN)	d50*(IN)
TYPE VL	70-100	12	6
	50-70	9	
	35-50	6	
	2-10	2	

*d50=NOMINAL STONE SIZE =6"

SITE RIPRAP NOTES:
1. SEE PLANS FOR D (INSIDE DIAMETER OF CULVERT WHERE APPLICABLE) & NOMINAL STONE SIZE (d50)
2. PLACE EXCAVATED SOIL AND GRAVEL MATERIAL IN RIPRAP VOIDS. PLACE EXCAVATED SOIL AND GRAVEL MATERIAL IN RIPRAP VOIDS. COORDINATE PLANTING WITH LANDSCAPE ARCHITECT'S PLANS AND SPECIFICATIONS.
3. ALL RIPRAP APRONS SHALL CONSIST OF d50=6" ANGULAR ROCK. THE TOP OF THE EMBEDDED RIPRAP APRONS TO BE CONSTRUCTED TO MATCH THE FLOW LINE OF THE SWALE OR THE CULVERT INVERT GRADES.

2 C5.1 RIPRAP DETAIL

SCALE: N.T.S.



TYPE II DRAIN INLET

N.T.S.

DRAIN INLET TYPE 2

TOWN OF NEW CASTLE

NOT TO SCALE | DWG: DR-100

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

DATE:	01-31-2025	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

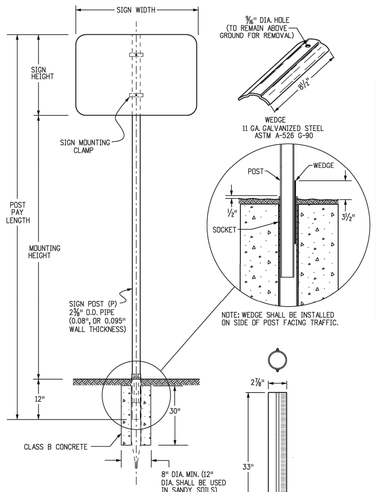
DATE	REVISION

TITLE: GRADING AND DRAINAGE DETAILS

DRAWING NO. C-5.1

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\PLOT\33011-C50 DETAILS.DWG - Jan 31, 2025 - 1:04pm

TUBULAR STEEL POSTS
(SOCKET SYSTEM) (FOR USE WITH ALL P-POST INSTALLATIONS)
(SEE SHEET 2 FOR P1 AND P2 POST INSTALLATIONS)



POST NOTES

THE POST MAY BE PRE-PUNCHED WITH ⅜" DIA HOLES AND THE SIGN MOUNTED DIRECTLY TO THE POST, OR AN APPROVED MOUNTING CLAMP MAY BE USED TO MOUNT THE SIGN TO THE POST. IF THE POST IS PRE-PUNCHED, THE HOLES SHALL BE SPACED THE FOLLOWING DISTANCES FROM THE TOP:

1", 3", 10", 16", 21", 23", 24", 27", 33", 37", 39", AND 45"

TUBULAR CONCRETE FOOTING
12 GA GALVANIZED
STEEL ASTM - 787

SIGNPOST SELECTION GUIDE (90 MPH WIND LOAD DESIGN)
(FOR SOCKET SYSTEM AND SLIPBASE INSTALLATIONS USING P, P1 OR P2 POSTS)

7' MOUNTING HEIGHT — SIGN HEIGHT (FT)	SIGN WIDTH (FT) 1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P	P1				
2.5	P	P	P	P	P	P1				
3	P	P	P	P	P	P1				
4	P	P	P	P	P1	P1				
5				P1	P1	P1	TWO P1'S			
6	SIZES NOT USED			P1	P1	P1				TWO P2'S
7				P1	P1	▼P2	TWO P1'S			TWO P2'S

▼ SEE CHART NOTE 4.

8' MOUNTING HEIGHT — SIGN HEIGHT (FT)	SIGN WIDTH (FT) 1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P1	P1				
2.5	P	P	P	P	P1	P1				
3	P	P	P	P1	P1	P1				
4	P	P	P1	P1	P1	P1				
5			P1	P1	P1	▼P2	TWO P1'S			
6	SIZES NOT USED		P1	P1	P1					TWO P2'S
7			P1	P1	TWO P1'S	TWO P1'S				TWO P2'S

9' MOUNTING HEIGHT — SIGN HEIGHT (FT)	SIGN WIDTH (FT) 1	2	2.5	3	4	5	6	7	8	9
1	P	P	P	P	P	P1	SIZES NOT USED			
2	P	P	P	P	P1	P1				
2.5	P	P	P	P1	P1	P1				
3	P	P	P1	P1	P1	P1				
4	P	P1	P1	P1	P1	P1				
5			P1	P1	P1	▼P2	TWO P1'S			TWO P2'S
6	SIZES NOT USED		P1	P1	P1	TWO P1'S				TWO P2'S
7			P1	P2	TWO P1'S	TWO P1'S				SIZES NOT USED

CHART NOTES

1. TYPICAL POST MOUNTING HEIGHTS FROM GROUND TO BOTTOM OF SIGN PANEL ARE 7, 8 OR 9 FEET. OTHER HEIGHTS MAY BE REQUIRED WHEN SIGNS ARE MOUNTED ON STEEPER FILL OR CUT SLOPES.
2. FOR SIGNS MOUNTED ON TWO POSTS, THE MINIMUM DISTANCE BETWEEN POSTS SHALL BE 2 FEET AND THE MAXIMUM DISTANCE SHALL BE 8 FEET. DISTANCE FROM POST TO EDGE OF SIGN PANEL(S) SHALL BE 0 TO 4 INCHES. WHEN BACKING ZEES ARE USED, POSTS SHALL BE INSTALLED WITH A MINIMUM OF 2 INCHES TO THE EDGE OF THE BACKING ZEE.
3. ALL SIGN PANELS GREATER THAN 60 INCHES IN WIDTH MUST BE MOUNTED ON TWO POSTS TO PREVENT TURNING.
4. THE POST SIZES SHOWN ARE THE MINIMUM SIZES REQUIRED. TWO P1 POSTS MAY BE SUBSTITUTED WHERE ONE P2 POST IS INDICATED. P2 POSTS MAY SUBSTITUTED FOR P1 POSTS WHEN DIRECTED BY THE ENGINEER.

GENERAL NOTES

1. SIGNS BETWEEN 37 IN. AND 60 IN. WIDTH WITH ONE POST INSTALLATION REQUIRE A T OR U SIGN SUPPORT BRACKET IN ADDITION TO THE BACKING ZEE REQUIREMENTS. WHEN DIRECTED BY THE ENGINEER, SIGN PANELS LESS THAN 48 IN. IN WIDTH MAY ATTACHED DIRECTLY TO T OR U BRACKETS WITHOUT ZEES.
2. U-BRACKETS MAY BE USED FOR MULTIPLE SIGN INSTALLATIONS.
3. FOR BACKING ZEE REQUIREMENTS AND DETAILS, SEE STANDARD PLANS S-614-3 AND S-614-4.

POST SPECIFICATIONS

POST SIZE	OUTSIDE DIAMETER	WALL THICKNESS	MATERIAL	**COATING	MAX ALLOW MOMENT	PAID FOR AS:
P	2.375"	.080"	ASTM-513	ASTM A-653 G-210 WITH 3.0 MIL POLYMER COATING PER ASTM A123 CLEAR COATING	1.47 KIP FT	STEEL SIGN SUPPORT (2 INCH ROUND)
P1	2.875"	.160"	ASTM-513		4.02 KIP FT	STEEL SIGN SUPPORT (2½ INCH ROUND NP-40)
P2	2.875"	.276"	ASTM-500	GC HDT DIPPED PER ASTM-123	5.13 KIP FT	STEEL SIGN SUPPORT (2½ INCH ROUND SCH 80)

** COLOR POWDER COATING MAY BE ADDED ACCORDING TO MANUFACTURER SPECIFICATIONS FOR SPECIAL LOCATIONS WHEN SHOWN ON THE PLANS.

Computer File Information	
Creation Date: 07/04/12	Initials: KEN
Last Modification Date: 03/05/13	Initials: NNC
Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans	
Drawing File Name: S-614-08.dgn	
CAD Ver.: MicroStation V8i Scale: Not to Scale	Units: English

Sheet Revisions	
Date:	Comments
03/05/13	SHTS 1 & 2 - UPDATED DETAIL TITLES

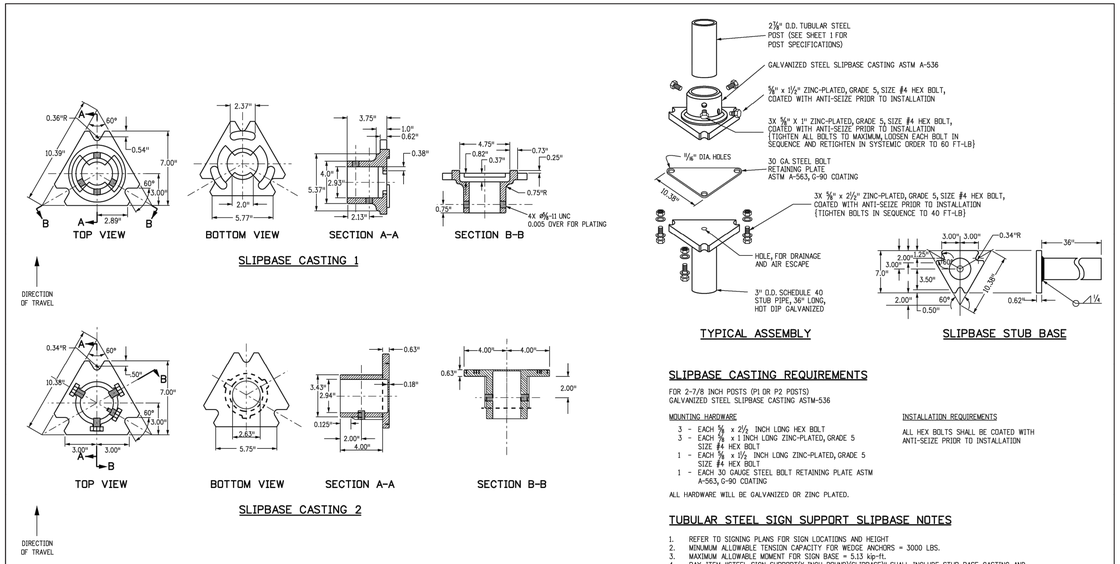
Colorado Department of Transportation
2829 W Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

TUBULAR STEEL SIGN SUPPORT DETAILS

STANDARD PLAN NO. S-614-8

Issued By: Safety & Traffic Engineering Branch July 4, 2012

Sheet No. 1 of 7



STEEL SIGN SUPPORT SLIPBASE INSTALLATION

TYPICAL ASSEMBLY

SLIPBASE STUB BASE

SLIPBASE CASTING REQUIREMENTS

FOR 2-7/8 INCH POSTS (P1 OR P2 POSTS)
GALVANIZED STEEL SLIPBASE CASTING ASTM-536

MOUNTING HARDWARE

- 3 - EACH ⅝ x 2½ INCH LONG HEX BOLT
- 3 - EACH ⅝ x 1 INCH LONG ZINC-PLATED, GRADE 5 SIZE #4 HEX BOLT
- 1 - EACH ⅝ x 1½ INCH LONG ZINC-PLATED, GRADE 5 SIZE #4 HEX BOLT
- 1 - EACH 30 GAUGE STEEL BOLT RETAINING PLATE ASTM A-563, G-90 COATING

ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.

INSTALLATION REQUIREMENTS

ALL HEX BOLTS SHALL BE COATED WITH ANTI-SEIZE PRIOR TO INSTALLATION

TUBULAR STEEL SIGN SUPPORT SLIPBASE NOTES

1. REFER TO SIGNING PLANS FOR SIGN LOCATIONS AND HEIGHT
2. MINIMUM ALLOWABLE TENSION CAPACITY FOR WEDGE ANCHORS = 3000 LBS.
3. MAXIMUM ALLOWABLE MOMENT FOR SIGN BASE = 5.13 kip-ft.
4. PAY ITEM "STEEL SIGN SUPPORT(X-INCH ROUND)(SLIPBASE)" SHALL INCLUDE STUB BASE, CASTING AND NECESSARY HARDWARE (SLIPBASE CASTING MOUNTING HARDWARE AS SHOWN ON STD S-614-8, SHEET 3)
5. PAY ITEM "STEEL SIGN SUPPORT CASTING" SHALL INCLUDE CASTING AND NECESSARY MOUNTING HARDWARE (SLIPBASE CASTING MOUNTING HARDWARE AS SHOWN ON STD S-614-8, SHEET 3)
6. PAY ITEM "STEEL SIGN GROUND STUB BASE (36)" SHALL INCLUDE SLIPBASE STUB BASE

Computer File Information	
Creation Date: 07/04/12	Initials: KEN
Last Modification Date: 04/12/18	Initials: DINARDO
Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans	
Drawing File Name: S-614-08.dgn	
CAD Ver.: MicroStation V8i Scale: Not to Scale	Units: English

Sheet Revisions	
Date:	Comments
10/23/14	NEW SHEET INCLUDES "SLIP BASE DETAILS PLUS 4" BASE PLATE DETAIL
04/01/16	UPDATES TO METRO-FIT HARDWARE
12/01/16	ADDED DETAILS FOR SLIPBASE 2
04/12/18	ADDED TORQUE VALUES NEW PAY ITEM FOR SLIPBASE CASTING

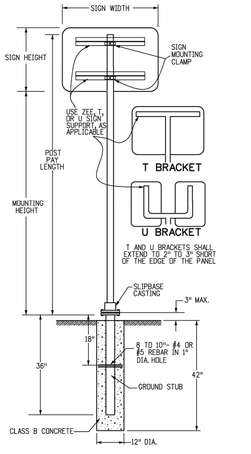
Colorado Department of Transportation
2829 W Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

TUBULAR STEEL SIGN SUPPORT DETAILS

STANDARD PLAN NO. S-614-8

Issued By: Safety & Traffic Engineering Branch July 4, 2012

Sheet No. 3 of 7



TUBULAR STEEL POST
(WITH SLIPBASE)
(FOR USE WITH ALL P1 AND P2 POST INSTALLATIONS)
(SEE SHEET 1 FOR P-POST INSTALLATIONS)

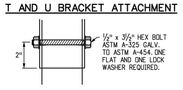
GENERAL NOTE

THE CONTRACTOR SHALL INSTALL THE POSTS PER THE MANUFACTURER'S RECOMMENDATIONS WITHOUT ADDITIONAL COMPENSATION.

DIMENSIONS FOR MOUNTING CLAMP (ALL DIMENSION ARE IN INCHES)

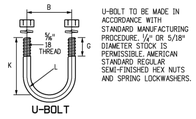
STANDARD PIPE SIZE	A	B	C	D	E	F	G	K	L	R_1	R_2
2	3¾	2⅞	1½	1⅛	½	⅜	1	2⁹⁄₁₆	1⁷⁄₃₂	1¼	1⅜
2½	4¼	3¼	2	1¼	½	¼	1	3⅜	1¹⁵⁄₃₂	1½	1⅝

T AND U BRACKET ATTACHMENT



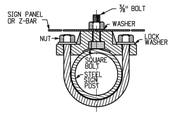
PIPE CLAMP CASTING

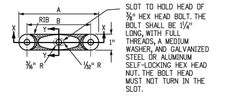
PIPE CLAMP CASTING SHALL BE ASTM B26 OR B108 ALUMINUM ALLOY A444.0-T4 OR 356.0-F. ALL SIGN MOUNTING CLAMP PARTS NOT MADE FROM ALUMINUM SHALL BE GALVANIZED STEEL IN CONFORMANCE WITH ASTM A153 OR STAINLESS STEEL.



U-BOLT TO BE MADE IN ACCORDANCE WITH STANDARD MANUFACTURING PROCEDURE. ¼" OR 5/16" DIAMETER STOCK IS PERMISSIBLE. AMERICAN STANDARD REGULAR SEMI-FINISHED HEX NUTS AND SPRING LOCKWASHERS.

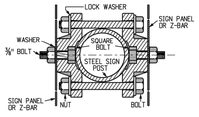
TYPICAL SINGLE BRACKET

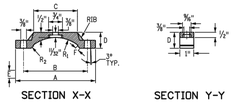




SLOT TO HOLD HEAD OF ⅜" HEX HEAD BOLT. THE BOLT SHALL BE 1¼" LONG, WITH FULL THREADS, A MEDIUM WASHER, AND GALVANIZED STEEL OR ALUMINUM SELF-LOCKING HEX HEAD NUT. THE BOLT HEAD MUST NOT TURN IN THE SLOT.

TYPICAL BACK TO BACK





DETAILS FOR SIGN PANEL ATTACHMENT

MOUNTING CLAMP FOR SOCKET OR SLIPBASE

Computer File Information	
Creation Date: 07/04/12	Initials: SCL
Last Modification Date: 10/23/14	Initials: KEN
Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans	
Drawing File Name: S-614-08.dgn	
CAD Ver.: MicroStation V8i Scale: Not to Scale	Units: English

Sheet Revisions	
Date:	Comments
03/05/13	UPDATED DETAIL TITLES
10/23/14	MOVED SLIPBASE DETAILS TO SHEET 3

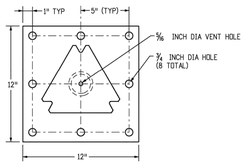
Colorado Department of Transportation
2829 W Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

TUBULAR STEEL SIGN SUPPORT DETAILS

STANDARD PLAN NO. S-614-8

Issued By: Safety & Traffic Engineering Branch July 4, 2012

Sheet No. 2 of 7



SURFACE MOUNT SLIPBASE BASE PLATE FABRICATION REQUIREMENTS

BASE PLATE - ¾ INCH ASTM A 36 PLATE STEEL
PIPE STUB - 3 INCH NOMINAL SCHEDULE 80, ASTM A-500 GRADE B
TOP PLATE - MEET REQUIREMENTS OF STD PLAN NO. S-614-8, SHEET 3

MEET ASTM A-123 GALVANIZING AFTER FABRICATION IS COMPLETE

SURFACE MOUNT SLIPBASE TUBULAR STEEL SIGN BASE REQUIREMENTS

FOR 2-7/8 INCH POSTS (P1 OR P2 POSTS)
FOR CONCRETE SURFACES GREATER THAN 7 INCHES THICK
FOR CONCRETE SURFACES GREATER THAN 12 INCHES IN WIDTH

MOUNTING HARDWARE

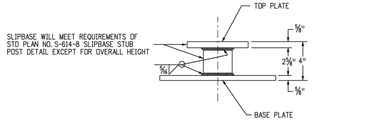
- 8 - EACH ⅝ x 5½ INCH LONG "HILTI KWIK HUS-EZ SCREW ANCHORS
- 16 - EACH ⅝ INCH FLAT WASHERS
- 8 - EACH ⅝ INCH LOCK WASHERS
- 8 - EACH ⅝ INCH NUTS

INSTALLATION REQUIREMENTS:

DRILL: (8) - ⅝ INCH HOLES 6 INCH DEEP, CLEAN HOLE PRIOR TO INSTALLING ANCHORS

USE ADDITIONAL WASHERS FOR SHIMMING TO LEVEL BASE PLATE.

ALL HARDWARE WILL BE GALVANIZED OR ZINC PLATED.



SURFACE MOUNT SLIPBASE BASE PLATE

SURFACE MOUNT SLIPBASE TUBULAR STEEL SIGN SUPPORT SURFACE MOUNT SLIPBASE NOTES

1. REFER TO SIGNING PLANS FOR SIGN LOCATIONS AND HEIGHT
2. REFER TO STD PLAN NO. S-614-8, SHEET 3 FOR SLIPBASE CASTING INFORMATION
3. MINIMUM ALLOWABLE TENSION CAPACITY FOR WEDGE ANCHORS = 3000 LBS.
4. MAXIMUM ALLOWABLE MOMENT FOR SIGN BASE = 5.13 kip-ft.
5. PAY ITEM "STEEL SIGN SURFACE MOUNT BASE PLATE (SLIPBASE)" SHALL INCLUDE BASE PLATE, CASTING AND ALL NECESSARY HARDWARE (SLIPBASE CASTING MOUNTING HARDWARE AS SHOWN ON STD S-614-8, SHEET 3 AND SURFACE MOUNT SLIPBASE MOUNTING HARDWARE AS SHOWN ON STD 6-14-8, SHEET 4)
6. PAY ITEM "STEEL SIGN SURFACE MOUNT BASE PLATE" SHALL INCLUDE BASE PLATE AND NECESSARY HARDWARE (SURFACE MOUNT SLIPBASE MOUNTING HARDWARE AS SHOWN ON STD S-614-8, SHEET 4)

SURFACE MOUNT SLIPBASE INSTALLATION

Computer File Information	
Creation Date: 04/12/18	Initials: DINARDO
Last Modification Date:	Initials:
Full Path: www.coloradodot.info/library/traffic/traffic-s-standard-plans	
Drawing File Name: S-614-08.dgn	
CAD Ver.: MicroStation V8i Scale: Not to Scale	Units: English

Sheet Revisions	
Date:	Comments

Colorado Department of Transportation
2829 W Howard Place
Denver, Colorado 80204
Phone: 303-757-9543 FAX: 303-757-9219
Safety & Traffic Engineering KCM

TUBULAR STEEL SIGN SUPPORT DETAILS

STANDARD PLAN NO. S-614-8

Issued By: Safety & Traffic Engineering Branch July 4, 2012

Sheet No. 4 of 7

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

DATE:	01-31-2025
JOB NO.	33011.01
DESIGNED BY	AKC
DRAWN BY	JPP
CHECKED BY	YTN

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

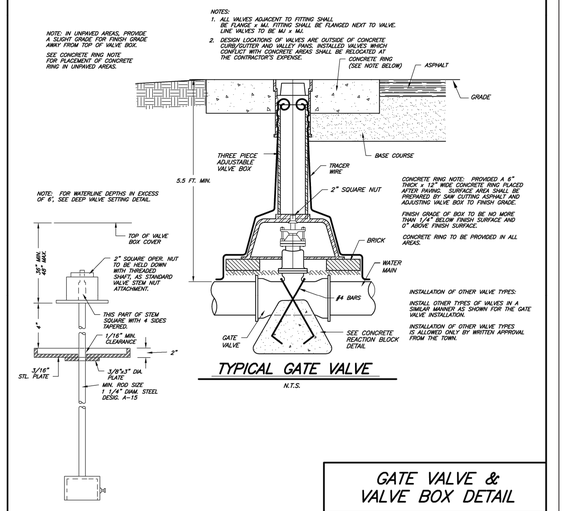
FINAL PLAN

DATE	REVISION

TITLE
SIGNAGE DETAILS

DRAWING NO.
C-5.2

G:\33\33011.00\R2\RESTON\LOWIL DWGS\PLAN\33011-CDD DETAILS.DWG - Jan 31, 2025 - 1:04pm

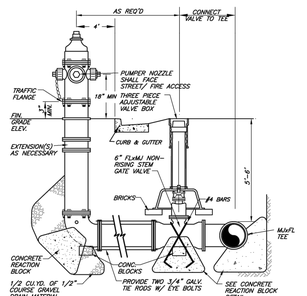


TYPICAL GATE VALVE

N.T.S.

DEEP VALVE SETTING

GATE VALVE & VALVE BOX DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-10



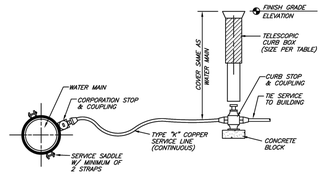
NOTES:
1) ALL JOINTS FROM MAIN TO HYDRANT SHALL BE HARNESSED MECHANICAL JOINTS OR FLANGED JOINTS.
2) HYDRANT, VALVE AND FITTINGS TO BE 250 P.S.I. RATED.
3) POLYETHYENE WRAP SHALL COVER D.I.P. ASSEMBLY FROM HYDRANT BASE TO WATER MAIN.
4) ALL HYDRANT LEAD PIPING TO BE 6" D.I.P.
5) CENTERLINE OF HYDRANT TO BE 4'-0" FROM BACK OF CURB UNLESS OTHERWISE NOTED.
6) FOR FIRE HYDRANTS ON END OF WATER LINE.
7) CARE SHOULD BE TAKEN TO ASSURE THAT WEEP HOLE REMAINS FREE DRAINING.

FIRE HYDRANT ASSEMBLY INSTALLATION DETAIL

FIRE HYDRANT SETTING DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-20

SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
3/4"	3/4"	3/4"	3"
1"	1"	1"	3"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4" - 1 1/2"	1 1/2"	3"
2"	1/2" - 2"	2"	3"

NOTE: CONTRACTOR TO VERIFY THE REQUIRED SERVICE SIZE WITH THE TOWN PRIOR TO INSTALLATION. THE TOWN WILL REQUIRE INDIVIDUAL DEMAND REQUIREMENTS BY THE SERVICE PRIOR TO SERVICE SIZE VERIFICATION.

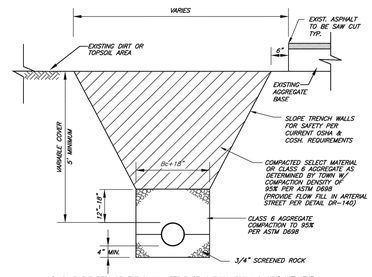


TYP. WATER SERVICE DETAIL

NOTE:
1. LEAVE CORPORATION STOP AT MAIN IN THE "ON" POSITION.
2. LOCATE THE CURB STOP (AND SERVICE BOX) ON PRIVATE PROPERTY WITHIN TWO (2') FEET OF THE PROPERTY LINE OR AS APPROVED BY THE TOWN.
3. DIRECT TAPS ARE AN ACCEPTABLE ALTERNATIVE GIVEN WRITTEN TOWN APPROVAL.

SE NOTE: PURE CORE IS ALSO AN ALLOWABLE WATER SERVICE MATERIAL, AS COORDINATED WITH TOWN ENGINEER.

WATER SERVICE INSTALLATION DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-30

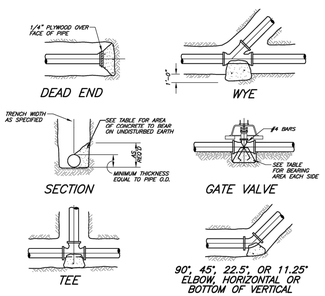


1) PAVEMENT REPLACEMENT SHALL MEET EXISTING THICKNESS AND KIND WITH THE FOLLOWING MINIMUMS: ASPHALT SURFACING = 3" MIN., AGGREGATE BASE COURSE = 6" MIN.
2) FOR UNPAVED SURFACES, BASE COURSE REPLACEMENT SHALL MEET EXISTING THICKNESS WITH THE FOLLOWING MINIMUMS: AGGREGATE BASE COURSE = 12" MIN.
3) DIRT / TOPSOIL PLACEMENT SHALL MEEET EXISTING THICKNESS AND KIND WITH THE FOLLOWING MINIMUMS: 4" TOPSOIL.
4) SELECT MATERIAL AS FOLLOWS: 6" MAXIMUM SIZE IN TOP 12" OF BACKFILL 12" MAXIMUM SIZE IN REMAINDER OF BACKFILL
5) PROVIDE TRACER WIRE, TAPED TO THE TOP OF PIPE FOR PVC INSTALLATIONS. (TYPE OF TAPE TO BE APPROVED BY THE TOWN.)
6) PROVIDE POLYETHYLENE WRAP AROUND DUCTILE IRON PIPE INSTALLATIONS. USE A MINIMUM OF 12" LAPS WITH THE POLYETHYLENE WRAP. TAPE WRAP WITH TOWN APPROVED TAPE AT 3'-0" O.C.
7) DETAIL ABOVE FOR "DRY TRENCH" CONDITIONS. FOR UNSTABLE OR "WET TRENCH" CONDITIONS PROVIDE A MINIMUM OF 4" OF 1 1/2" SCREENED ROCK UNDER BEDDING MATERIAL WITH FILTER FABRIC PLACED BELOW AND ABOVE THE SCREENED ROCK.

TRENCH CROSS SECTION

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

STANDARD WATER MAIN TRENCH SECTION	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-40



SIZE (INCHES)	ELBOWS 90° (SQ. FT.)	45° (SQ. FT.)	22.5° (SQ. FT.)	11.25° (SQ. FT.)	TEES & DEAD ENDS	GATE VALVES
4	1.8	1.0	0.5	0	1.3	0.5
6	4.0	2.2	1.1	0	2.8	0.7
8	7.1	3.8	2.0	1.0	5.0	2.4
10	11.1	6.0	3.0	1.5	7.8	4.5
12	16.0	8.6	4.4	2.2	11.3	7.5
14	21.7	11.8	6.0	3.0	15.4	11.0
16	28.4	15.3	8.0	4.0	20.0	16.6
18	36.0	19.4	10.0	5.0	25.4	24.9

AREAS GIVEN IN TABLE ARE BASED UPON AN INTERNAL STATIC PRESSURE OF 100 P.S.I. AND A SOIL BEARING CAPACITY OF 1000 LBS. PER SQ. FT. BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING THE TABULATED VALUES BY A CORRECTION FACTOR "F".

F= ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF LBS.
ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF LBS. PER SQ. FT.

INSTALLATION OF THRUST BLOCKS ARE NOT ALLOWED FOR CONDITIONS, OUTSIDE OF THOSE LISTED UNTIL SUBMITTAL OF CALCULATIONS FOR THE CORRECTION FACTOR ARE SUBMITTED TO AND REVIEWED BY THE TOWN AND WRITTEN APPROVAL BY THE TOWN IS GIVEN.

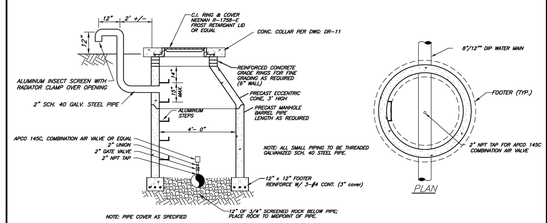
TABLE OF BEARING AREAS IN SQ. FT.

TYP. CONCRETE REACTION BLOCK DETAILS

THRUST BLOCKING DETAILS	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-50

MANHOLE CONSTRUCTION NOTES:

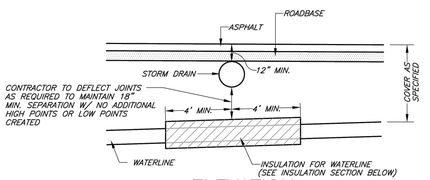
1. Use Rub-R-Nek preformed gasket (2 layers) or grout in place between all bottom section, barrel sections, concrete grade rings, and top castings.
2. Backfill within 24" of manhole: Class 2 aggregate or native materials with less than 3" size.
3. Precast rings or metal riser ring course shall be utilized where required with 2 courses minimum and 12 courses maximum (2 minimum, 12" maximum height).
4. Grade adjustment as follows: Greater than, or equal to, 1 foot, concrete barrel sections; less than 1 foot, concrete or metal grade rings.
5. Finish grade as follows: With asphalt or concrete pavements flush; with base course surface or dirt/topsoil -3" below grade.



COMBINATION AIR VALVE MANHOLE DETAIL

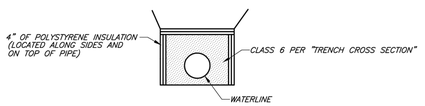
N.T.S.

COMBINATION AIR VALVE MANHOLE	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-60



ELEVATION
WATERLINE/CULVERT CROSSING

NO SCALE

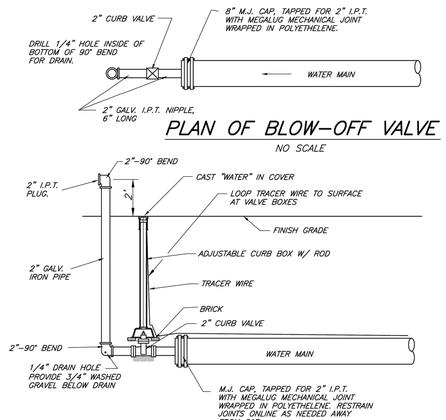


INSULATION SECTION

NO SCALE

NOTE: AS DRAWN, THE INSULATION DETAIL ADDRESSES CULVERT CROSSINGS. PROVIDE THE SAME DETAIL FOR THOSE INSTANCES WHERE THE WATERLINE IS INSTALLED WITHIN 5' OF OPEN AIR.

WATERLINE INSULATION DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-80



PLAN OF BLOW-OFF VALVE

NO SCALE

ELEVATION OF BLOW-OFF VALVE

NO SCALE

BLOW OFF DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: WA-90

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

DATE:	01-31-2025	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

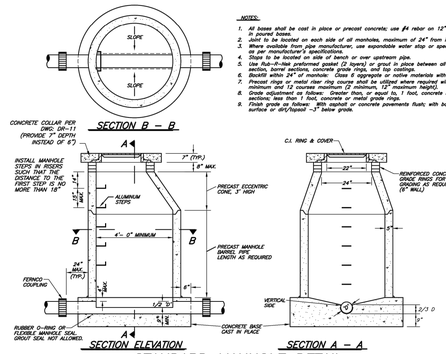
FINAL PLANS

DATE	REVISION

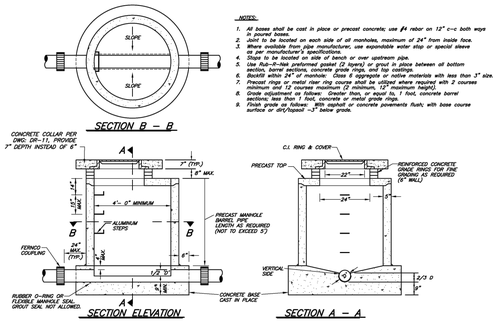
TITLE
WATER DETAILS

DRAWING NO.
C-5.3

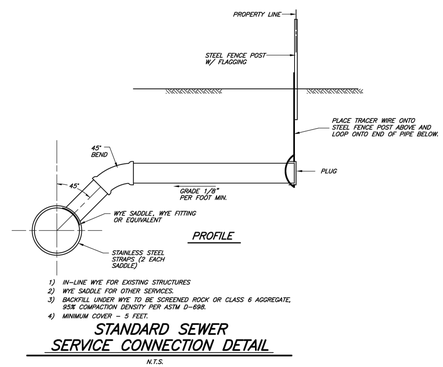
G:\2023\33011 CVR RZ RES\CIVIL\CIVIL DWGS\PLOT\33011-C00 DETAILS.DWG - Jan 31, 2025 - 1:06pm



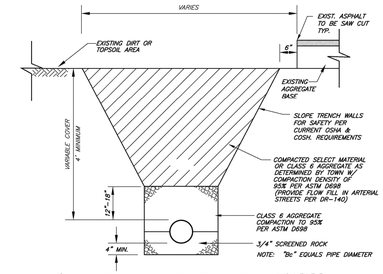
STANDARD SEWER MANHOLE DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-10



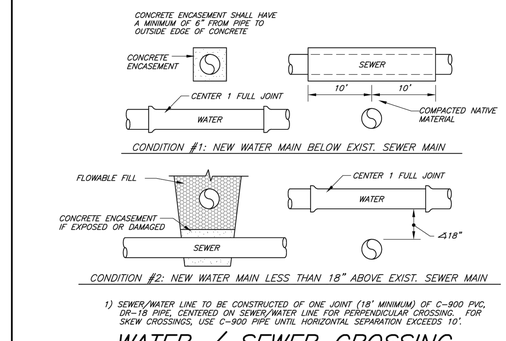
SHALLOW SEWER MANHOLE DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-20



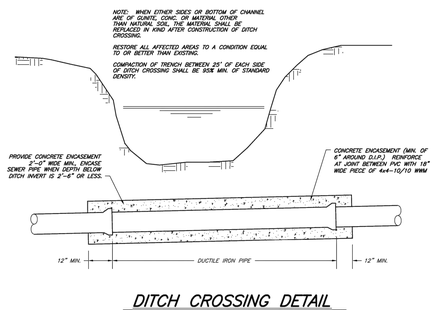
SEWER SERVICE CONNECTION DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-40



STANDARD SEWER MAIN TRENCH SECTION	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-50



WATER/SEWER CROSSING DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-60



DITCH CROSSING DETAIL	
TOWN OF NEW CASTLE	
NOT TO SCALE	DWG: SW-70

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

DATE:	01-31-2025	
JOB NO.	33011.01	
DESIGNED BY	AKC	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
SEWER DETAILS

DRAWING NO.
C-5.4

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\PLOT\33011-CSD DETAILS.DWG - Jan 31, 2025 - 1:05pm

DRAINAGE NOTES/ASSUMPTIONS

1. EXISTING OFFSITE DRAINAGE BASIN OS-01 DRAINAGE CALCULATED USING THE USGS STREAM STATS PROGRAM. Q = 130 CFS. REFER TO THE ENGINEERING REPORT APPENDIX FOR CALCULATIONS.

EXISTING ONSITE DRAINAGE BASIN PEAK RUNOFF SUMMARY

TABLE 1: EXISTING DRAINAGE SUMMARY (25 YEAR-30 MIN STORM)

BASIN ID	Area (ac)	Weighted C	Precip. (in/hr)	Q (cfs)
EX-01	11.94	0.33	1.93	7.61
EX-02A	3.07	0.33	2.37	2.40
EX-02B	8.42	0.33	1.88	5.23
EX-03	19.17	0.33	1.62	10.27

[1] TIME OF CONCENTRATION (Tc) FOR EXISTING BASINS CALCULATED USING THE SCS TR-55 METHOD. REFER TO OUTPUT REPORTS IN DRAINAGE REPORT APPENDIX.

[2] RATIONAL C FACTORS ARE BASED ON THE PERCENT IMPERVIOUS FROM CHAPTER 6 OF THE MHFD - MILE HIGH FLOOD DISTRICT DRAINAGE CRITERIA MANUAL.

[3] RAINFALL INTENSITY IS FROM THE NOAA 14 IDF CURVE FOR NEW CASTLE, CO

EXISTING LEGEND

- EXISTING CONTOUR
- 7900 EXISTING CONTOUR INTERVAL
- EXISTING FLOW PATH
- EXISTING DRAINAGE BASIN
- DP # DESIGN POINT

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NORTH

Know what's **below.** **Call** before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	09-16-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

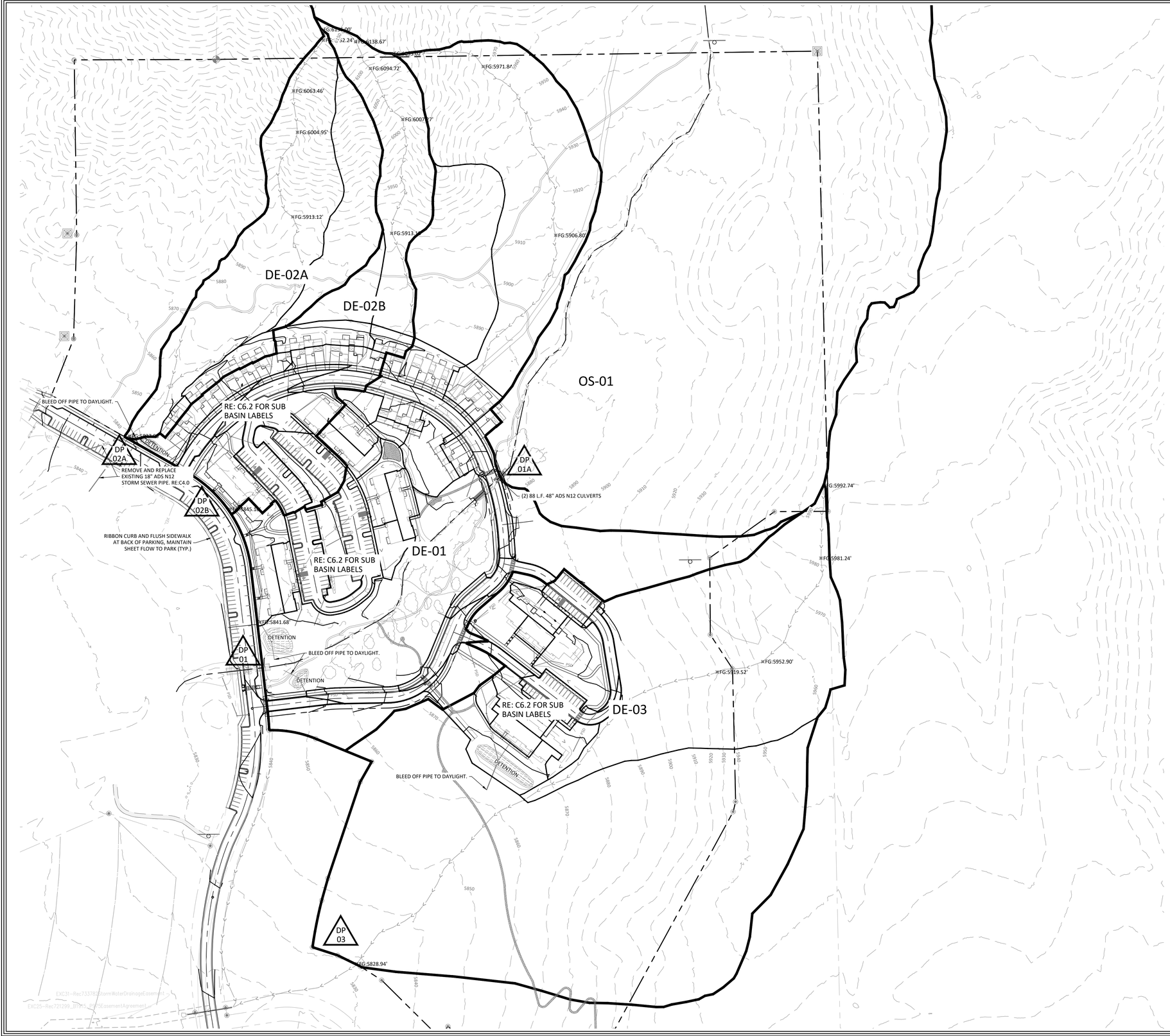
DATE	REVISION

TITLE
EXISTING DRAINAGE EXHIBIT

DRAWING NO.
C-6.0

G:\2023\33011 CVR PZ RES\CIVIL\DWG\SHEETS\DWG\33011-DRG.DWG - Sep 14, 2024 - 11:24am

EXCEL Order 133782 Boundary Drainage Easement
EXCEL Rec 721299 Bk 915 Pg 1 Easement Agreement



DEVELOPED DRAINAGE BASIN PEAK RUNOFF SUMMARY

TABLE 2: DEVELOPED DRAINAGE SUMMARY (25 YEAR-30 MIN STORM)

BASIN ID	Area (ac)	Weighted C	Precip. (in/hr)	Q (cfs)
DE-01	8.58	Varies	Varies per Tc	7.48
DE-02A	4.16	Varies	Varies per Tc	3.09
DE-02B	4.79	Varies	Varies per Tc	3.36
DE-03	18.87	Varies	Varies per Tc	9.83

[1] TIME OF CONCENTRATION (Tc) FOR EXISTING BASINS CALCULATED USING THE SCS TR-55 METHOD. Tc FOR PROPOSED BASINS ASSUMED EQUAL TO 10 MINUTES EXCEPT FOR 100% IMPERVIOUS SUB-BASINS WHERE Tc = 5 MINUTES, REFER TO OUTPUT REPORTS IN DRAINAGE REPORT APPENDIX.

[2] RATIONAL C FACTORS ARE BASED ON THE PERCENT IMPERVIOUS FROM CHAPTER 6 OF THE MHFD - MILE HIGH FLOOD DISTRICT DRAINAGE CRITERIA MANUAL. REFER TO OUTPUT REPORTS IN DRAINAGE REPORT APPENDIX.

[3] RAINFALL INTENSITY IS FROM THE NOAA 14 IDF CURVE FOR NEW CASTLE, CO

DEVELOPED DRAINAGE DETENTION RUNOFF SUMMARY

DESIGN POINT SUMMARY - DEVELOPED DETENTION

DESIGN PT I.D.	EX Q_{25} (cfs)	DET Q_{25} (cfs)	DET. REQ. (cf)	DET. PROV. (cf)	+/- Q (cfs)
1	7.61	7.48	4,861	4,861	-0.13
2A	2.40	3.09	0	0	0.69
2B	5.23	3.36	1,153	1,153	-1.87
3	10.27	9.83	0	2,708	-0.44

[1] TIME OF CONCENTRATION (Tc) FOR EXISTING BASINS CALCULATED USING THE SCS TR-55 METHOD. Tc FOR PROPOSED BASINS ASSUMED EQUAL TO 10 MINUTES EXCEPT FOR 100% IMPERVIOUS SUB-BASINS WHERE Tc = 5 MINUTES

[2] RATIONAL C FACTORS ARE BASED ON THE PERCENT IMPERVIOUS FROM CHAPTER 6 OF THE MHFD - MILE HIGH FLOOD DISTRICT DRAINAGE CRITERIA MANUAL.

[3] RAINFALL INTENSITY IS FROM THE NOAA 14 IDF CURVE FOR NEW CASTLE, CO

PROPOSED LEGEND

- PROPOSED CONTOUR
- 7900 PROPOSED CONTOUR INTERVAL
- PROPOSED FLOW PATH
- PROPOSED DRAINAGE BASIN
- DP # DESIGN POINT

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

NORTH

OFFSITE DRAINAGE LEGEND

- EXISTING GIS CONTOUR
- OFFSITE DRAINAGE BASIN
- TRAVEL PATH FOR Tc COMPUTATIONS
- DP # DESIGN POINT
- EXISTING FLOW ARROW

811 Know what's below. Call before you dig.
CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	09-16-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

FINAL PLAN

DATE	REVISION

TITLE
DEVELOPED DRAINAGE EXHIBIT

DRAWING NO.
C-6.1

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\DE\DRG\33011-DRG.DWG - Sep 14, 2024 - 11:24am

DE-02B-EX1
DE-02B-EX2
DE-02B3
DE-02B4
DE-01A-EX1
DE-02A-EX1
DE-02A3
DE-02B5
DE-01A3
DE-01A-EX2
DE-02B6
DE-01A4
DE-02B7
DE-01A5
BLEED OFF PIPE TO DAYLIGHT.
DE-02B8
DE-02A4
DE-01A10
DE-01A6
DE-02B9
DETENTION
DP 02A
DE-02B10
DE-01A11
DE-01A7
DE-01A8
DP 01A
REMOVE AND REPLACE EXISTING 18" ADS N12 STORM SEWER PIPE. RE:C4.0
DE-02B12
DE-02B11
DP 02B
(2) 88 L.F. 48" ADS N12 CULVERTS
DE-01A12
DE-01A13
RIBBON CURB AND FLUSH SIDEWALK AT BACK OF PARKING, MAINTAIN SHEET FLOW TO PARK (TYP.)
DE-01A14
DE-01A15
DE-01A-EX9
DE-01A18
DE-01A16
DE-01A17
DE-01B2
DE-01B-EX1
DE-03A3
DE-03A5
DE-03A7
DE-01B3
DE-03A8
DETENTION
DP 01
BLEED OFF PIPE TO DAYLIGHT.
DE-03A9
DE-03A6
DE-03A4
DE-03A-EX1
DETENTION
DE-01B4
DE-01B5
DE-03A13
DE-03A11
DE-03A10
DE-01B6
DE-03A14
DE-03A12
DE-03A15
DETENTION
BLEED OFF PIPE TO DAYLIGHT.
DE-03A-EX2

DRAINAGE SUB-BASIN NOTE:

1. DRAINAGE SUB-BASINS SHOWN HERE GRAPHICALLY. REFER TO REPORT APPENDIX FOR DETAILED ROUTING, RUNOFF, FLOW RATES, TIME OF CONCENTRATION, ETC.

PROPOSED LEGEND

- PROPOSED CONTOUR
- 7900 PROPOSED CONTOUR INTERVAL
- PROPOSED FLOW PATH
- PROPOSED DRAINAGE BASIN
- DP # DESIGN POINT

OFFSITE DRAINAGE LEGEND

- EXISTING GIS CONTOUR
- OFFSITE DRAINAGE BASIN
- TRAVEL PATH FOR Tc COMPUTATIONS
- DP # DESIGN POINT
- EXISTING FLOW ARROW

NORTH

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

811 Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES

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

DATE:	09-16-2024	
JOB NO.	33011.01	
DESIGNED BY	JPP	
DRAWN BY	JPP	
CHECKED BY	YTN	

9 NORTH WILD HORSE
NEW CASTLE, COLORADO

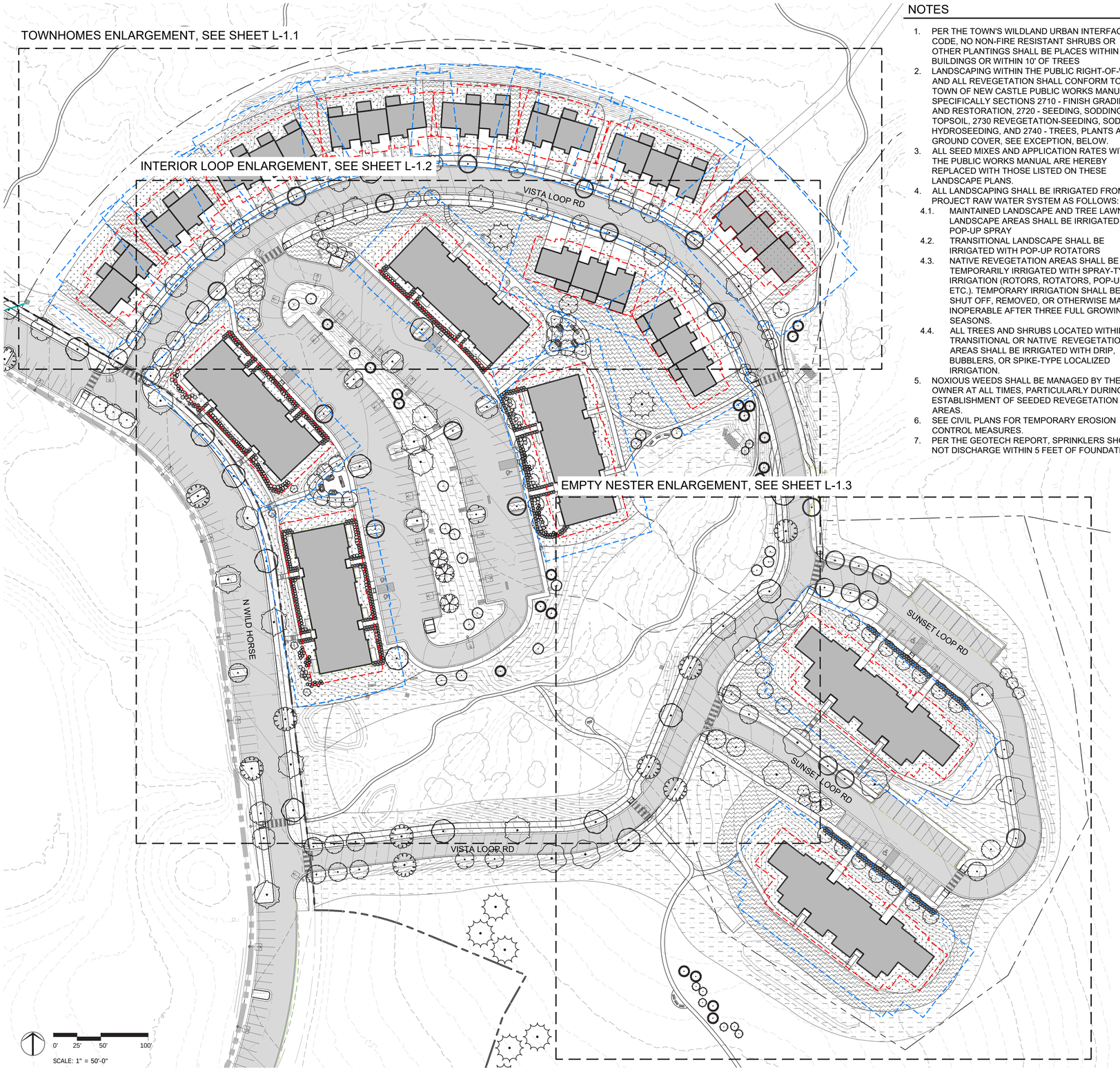
FINAL PLAN

DATE	REVISION

TITLE
DEVELOPED DRAINAGE SUB-BASINS

DRAWING NO.
C-6.2

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\04\DR6\33011-DR6.DWG - Sep 14, 2024 - 11:24am



NOTES

1. PER THE TOWN'S WILDLAND URBAN INTERFACE CODE, NO NON-FIRE RESISTANT SHRUBS OR OTHER PLANTINGS SHALL BE PLACES WITHIN 5' OF BUILDINGS OR WITHIN 10' OF TREES
2. LANDSCAPING WITHIN THE PUBLIC RIGHT-OF-WAY AND ALL REVEGETATION SHALL CONFORM TO THE TOWN OF NEW CASTLE PUBLIC WORKS MANUAL, SPECIFICALLY SECTIONS 2710 - FINISH GRADING AND RESTORATION, 2720 - SEEDING, SODDING AND TOPSOIL, 2730 REVEGETATION-SEEDING, SODDING, HYDROSEEDING, AND 2740 - TREES, PLANTS AND GROUND COVER, SEE EXCEPTION, BELOW.
3. ALL SEED MIXES AND APPLICATION RATES WITHIN THE PUBLIC WORKS MANUAL ARE HEREBY REPLACED WITH THOSE LISTED ON THESE LANDSCAPE PLANS.
4. ALL LANDSCAPING SHALL BE IRRIGATED FROM THE PROJECT RAW WATER SYSTEM AS FOLLOWS:
   - 4.1. MAINTAINED LANDSCAPE AND TREE LAWN LANDSCAPE AREAS SHALL BE IRRIGATED WITH POP-UP SPRAY
   - 4.2. TRANSITIONAL LANDSCAPE SHALL BE IRRIGATED WITH POP-UP ROTATORS
   - 4.3. NATIVE REVEGETATION AREAS SHALL BE TEMPORARILY IRRIGATED WITH SPRAY-TYPE IRRIGATION (ROTORS, ROTATORS, POP-UPS, ETC.). TEMPORARY IRRIGATION SHALL BE SHUT OFF, REMOVED, OR OTHERWISE MADE INOPERABLE AFTER THREE FULL GROWING SEASONS.
   - 4.4. ALL TREES AND SHRUBS LOCATED WITHIN TRANSITIONAL OR NATIVE REVEGETATION AREAS SHALL BE IRRIGATED WITH DRIP, BUBBLERS, OR SPIKE-TYPE LOCALIZED IRRIGATION.
5. NOXIOUS WEEDS SHALL BE MANAGED BY THE OWNER AT ALL TIMES, PARTICULARLY DURING THE ESTABLISHMENT OF SEEDED REVEGETATION AREAS.
6. SEE CIVIL PLANS FOR TEMPORARY EROSION CONTROL MEASURES.
7. PER THE GEOTECH REPORT, SPRINKLERS SHOULD NOT DISCHARGE WITHIN 5 FEET OF FOUNDATIONS.

LEGEND

- PROPERTY BOUNDARY
- INTERNAL LOT LINES
- EXISTING VEGETATION TO REMAIN
- 10' WILDLAND URBAN INTERFACE TREE CLEARANCE ZONE
- 30' WILDLAND URBAN INTERFACE FUEL MODIFICATION ZONE

PLANT SCHEDULE

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
TREES			
	ACER PLATANOIDES 'DEBORAH' DEBORAH NORWAY MAPLE	2.5" CAL B&B	18
	ACER PLATANOIDES 'ROYAL RED' ROYAL RED NORWAY MAPLE	15 GAL	21
	CELTIS OCCIDENTALIS 'CHICAGOLAND' CHICAGOLAND HACKBERRY	15 GAL	17
	CRATAEGUS CRUS-GALLI 'CRUSADER' CRUSADER® COCKSPUR HAWTHORN	15 GAL	18
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST	15 GAL	13
	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' SKYLINE HONEY LOCUST	15 GAL	11
	JUNIPERUS MONOSPERMA ONESEED JUNIPER	15 GAL	20
	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER	3" B&B	8
	KOELREUTERIA PANICULATA GOLDEN RAIN TREE	15 GAL	9
	MALUS X 'SPRING SNOW' SPRING SNOW CRABAPPLE	15 GAL	53
	PINUS EDULIS PINYON PINE	15 GAL	19
	PINUS SYLVESTRIS SCOTCH PINE	15 GAL	10
	POPULUS X ACUMINATA LANCELEAF COTTONWOOD	2.5" CAL B&B	3
	PRUNUS PADUS MAYDAY TREE	15 GAL	9
	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	15 GAL	9
	ULMUS AMERICANA 'PRINCETON' PRINCETON AMERICAN ELM	2.5" CAL B&B	14

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY
SHRUBS			
	ACER GINNALA FLAME AMUR FLAME MAPLE	5 GAL	4
	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY	5 GAL	108
	LONICERA TATARICA TATARIAN HONEYSUCKLE	5 GAL	102
	PHILADELPHUS LEWISII 'CHEYENNE' CHEYENNE MOCKORANGE	5 GAL	745
	RHUS TRILOBATA 'AUTUMN AMBER' AUTUMN AMBER SUMAC	5 GAL	68

MAINTAINED LANDSCAPE:
ORNAMENTAL TREES AND SHRUBS PER THE WILDLAND URBAN INTERFACE CODE, AND MOWED TURF GRASS

TRANSITIONAL REVEGETATION SEED MIX

BOTANICAL NAME	COMMON NAME	MIX	PLS lbs/ac
Achnatherum hymenoides	indian ricegrass	13%	3.00
Bouteloua gracilis	blue grama	25%	6.00
Festuca campestris	rough fescue	25%	6.00
Festuca ovina 'Arriba'	Arriana fescue	25%	6.00
Poa secunda	sandberg bluegrass	13%	3.00
	Total	**100%**	**24.00**

NATIVE REVEGETATION SEED MIX

BOTANICAL NAME	COMMON NAME	MIX	PLS lbs/ac
SHRUBS			
Artemisia tridentata wyomingensis	Wyoming big sagebrush	3%	0.25
Artemisia tridentata vaseyana	mountain big sagebrush	3%	0.25
Artemisia nova	black sagebrush	3%	0.25
Ericameria nauseosa ssp. nauseosa var.	tall green rabbitbrush	7%	2.00
GRASSES			
Achnatherum hymenoides	indian ricegrass	7%	2.00
Bouteloua gracilis	blue grama	13%	3.00
Elymus trachycaulus	slender wheatgrass	19%	5.00
Festuca ovina 'Arriba'	Arriana fescue	4%	1.00
Nassella viridula	green needlegrass	13%	3.00
Pascopyrum smithii	western wheatgrass	19%	5.00
Pseudoroegneria spicata	bluebunch wheatgrass	7%	2.00
FORBS & WILDFLOWERS			
Artemesia frigida	fringed sage	3%	0.25
Castilleja linariaefolia	Indian paintbrush	3%	0.25
Chrysopsis villosa	hairy golden aster	3%	0.25
Gaillardia aristata	blanketflower	2%	0.50
Lupinus argenteus	silver lupine	7%	2.00
	Total	**100%**	**27.00**

TREE LAWN SPECIES MIX:
TREE LAWN GRASS MIX SHALL CONSIST OF A "MEDIUM" WATER-USE TURF, SUCH AS "NATURE'S PRAIRIE TURF", A MIXTURE THE FOLLOWING SPECIES:

- *bouteloua curtipenula* - sideoats grama
- *deschampsia cespitosa* - tufted hairgrass
- *festuca ovina* - sheep fescue
- *festuca rubra ssp. rubra* - creeping red fescue
- *koeleria cristata* - prairie junegrass

NATURE'S PRAIRIE TURF IS AVAILABLE FROM:
TURF MASTER
3327 GIDDINGS ROAD
FORT COLLINS, CO 80524
(970) 493-8311

DHM DESIGN
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:

REVISIONS:
REV-1 12/20/2024
REV-2 02/02/2025

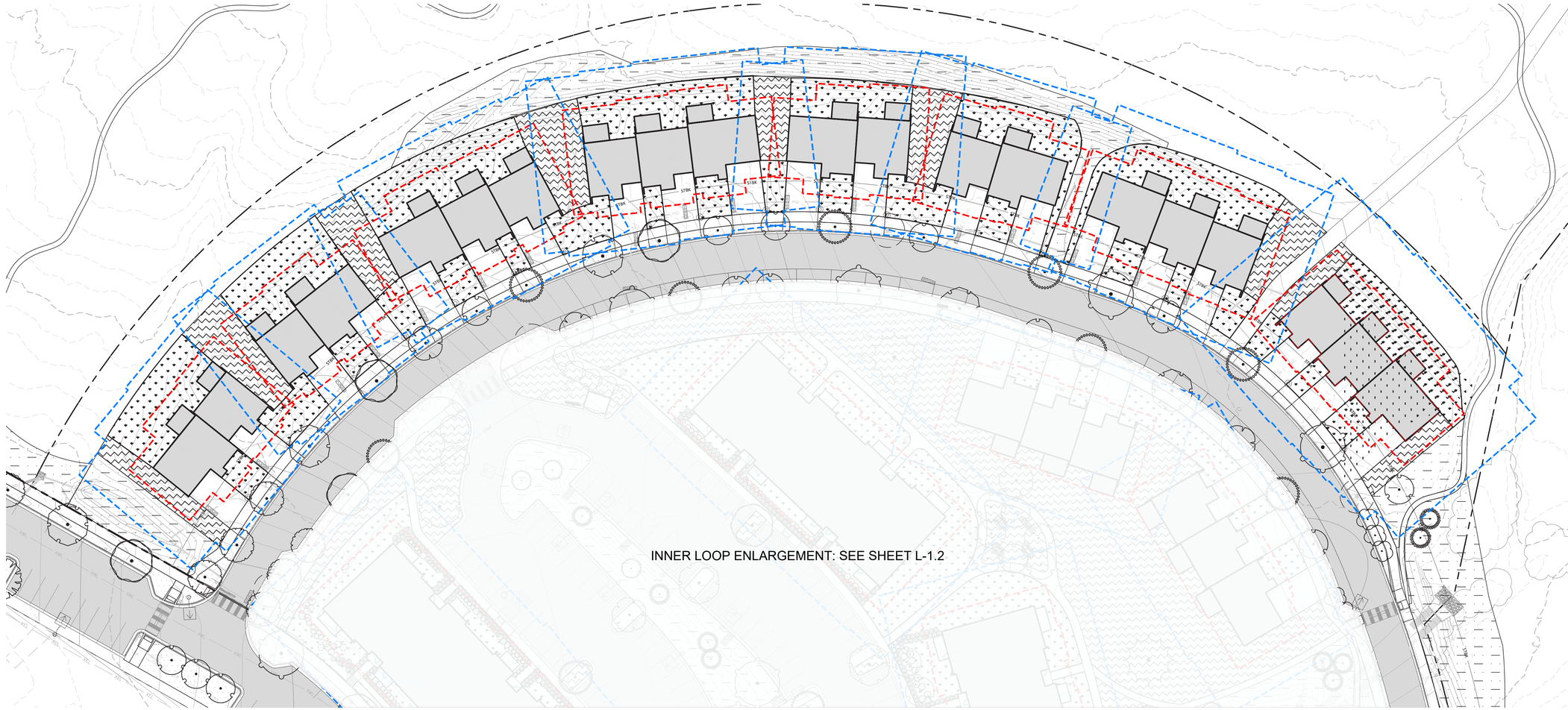
JOB DESCRIPTION:

SHEET TITLE:
LANDSCAPE PLAN

SCALE:

SHEET NUMBER:
L-1.0

SHEET_____OF_____



LEGEND

- PROPERTY BOUNDARY
- INTERNAL LOT LINES
- EXISTING VEGETATION TO REMAIN
- 10' WUI TREE CLEARANCE ZONE
- 30' WUI FUEL MODIFICATION ZONE
- 10' RADIUS HYDRANT CLEAR ZONE

NOTES

1. PER THE WILDLAND-URBAN INTERFACE CODE, NO NON-FIRE RESISTANT SHRUBS OR OTHER PLANTINGS SHALL BE PLACES WITHIN 5' OF BUILDINGS OR WITHIN 10' OF TREES
2. PER THE GEOTECH REPORT, SPRINKLERS SHOULD NOT DISCHARGE WITHIN 5 FEET OF FOUNDATIONS.

PLANT SCHEDULE TOWNHOMES

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
TREES			
	ACER PLATANOIDES `DEBORAH` DEBORAH NORWAY MAPLE	2.5" CAL B&B	4
	ACER PLATANOIDES 'ROYAL RED' ROYAL RED NORWAY MAPLE	15 GAL	4
	CELTIS OCCIDENTALIS `CHICAGOLAND` CHICAGOLAND HACKBERRY	15 GAL	3
	CRATAEGUS CRUS-GALLI `CRUSADER` CRUSADER® COCKSPUR HAWTHORN	15 GAL	3
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST	15 GAL	4
	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' SKYLINE HONEY LOCUST	15 GAL	1
	KOELREUTERIA PANICULATA GOLDEN RAIN TREE	15 GAL	2
	MALUS X 'SPRING SNOW' SPRING SNOW CRABAPPLE	15 GAL	6
	ULMUS AMERICANA `PRINCETON` PRINCETON AMERICAN ELM	2.5" CAL B&B	3

MAINTAINED LANDSCAPE:
ORNAMENTAL TREES AND SHRUBS (LIMITED QUANTITIES) AND SEEDED MIXED GRASSES THAT CAN BE MOWED IF DESIRED

TRANSITIONAL REVEGETATION SEED MIX

BOTANICAL NAME	COMMON NAME	MIX	PLS lbs/ac
Achnatherum hymenoides	indian ricegrass	33%	3.00
Bouteloua gracilis	blue grama	25%	6.00
Festuca campestris	rough fescue	25%	6.00
Festuca ovasa 'Arriba'	Arriana fescue	25%	6.00
Poa secundo	sandberg bluegrass	33%	3.00
	Total	100%	24.00

NATIVE REVEGETATION SEED MIX

BOTANICAL NAME	COMMON NAME	MIX	PLS lbs/ac
SHRUBS			
Artemisia tridentata wyomingensis	Wyoming big sagebrush	3%	0.25
Artemisia tridentata vaseyana	mountain big sagebrush	3%	0.25
Artemisia nova	black sagebrush	3%	0.25
Eriogonia neuneria ssp. eaucetosa var.	keli green rabbitbrush	7%	2.00
GRASSES			
Achnatherum hymenoides	indian ricegrass	7%	2.00
Bouteloua gracilis	blue grama	11%	3.00
Elymus trachycaulus	slender wheatgrass	19%	5.00
Festuca ovina 'Arriba'	Arriana fescue	4%	1.00
Nassella viridula	green needlegrass	11%	3.00
Pascopyrum smithii	western wheatgrass	19%	5.00
Pseudoroegneria spicata	bluebunch wheatgrass	7%	2.00
FORBS & WILDFLOWERS			
Artemesia frigida	fringed sage	3%	0.25
Castilleja linariaefolia	indian paintbrush	3%	0.25
Chrysopsis villosa	hairy golden aster	3%	0.25
Gaillardia aristata	blanketflower	2%	0.50
Lupinus argenteus	silver lupine	7%	2.00
	Total	100%	27.00

TREE LAWN SPECIES MIX:
TREE LAWN GRASS MIX SHALL CONSIST OF A "MEDIUM" WATER-USE TURF, SUCH AS "NATURE'S PRAIRIE TURF", A MIXTURE THE FOLLOWING SPECIES:

- *bouteloua curtipenula* - sideoats grama
- *deschampsia cespitosa* - tufted hairgrass
- *festuca ovina* - sheep fescue
- *festuca rubra ssp. rubra* - creeping red fescue
- *koeleria cristata* - prairie junegrass

NATURE'S PRAIRIE TURF IS AVAILABLE FROM:
TURF MASTER
3327 GIDDINGS ROAD
FORT COLLINS, CO 80524
(970) 493-8311

DHM DESIGN
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:

REVISIONS:
REV-1 12/20/2024
REV-2 02/02/2025

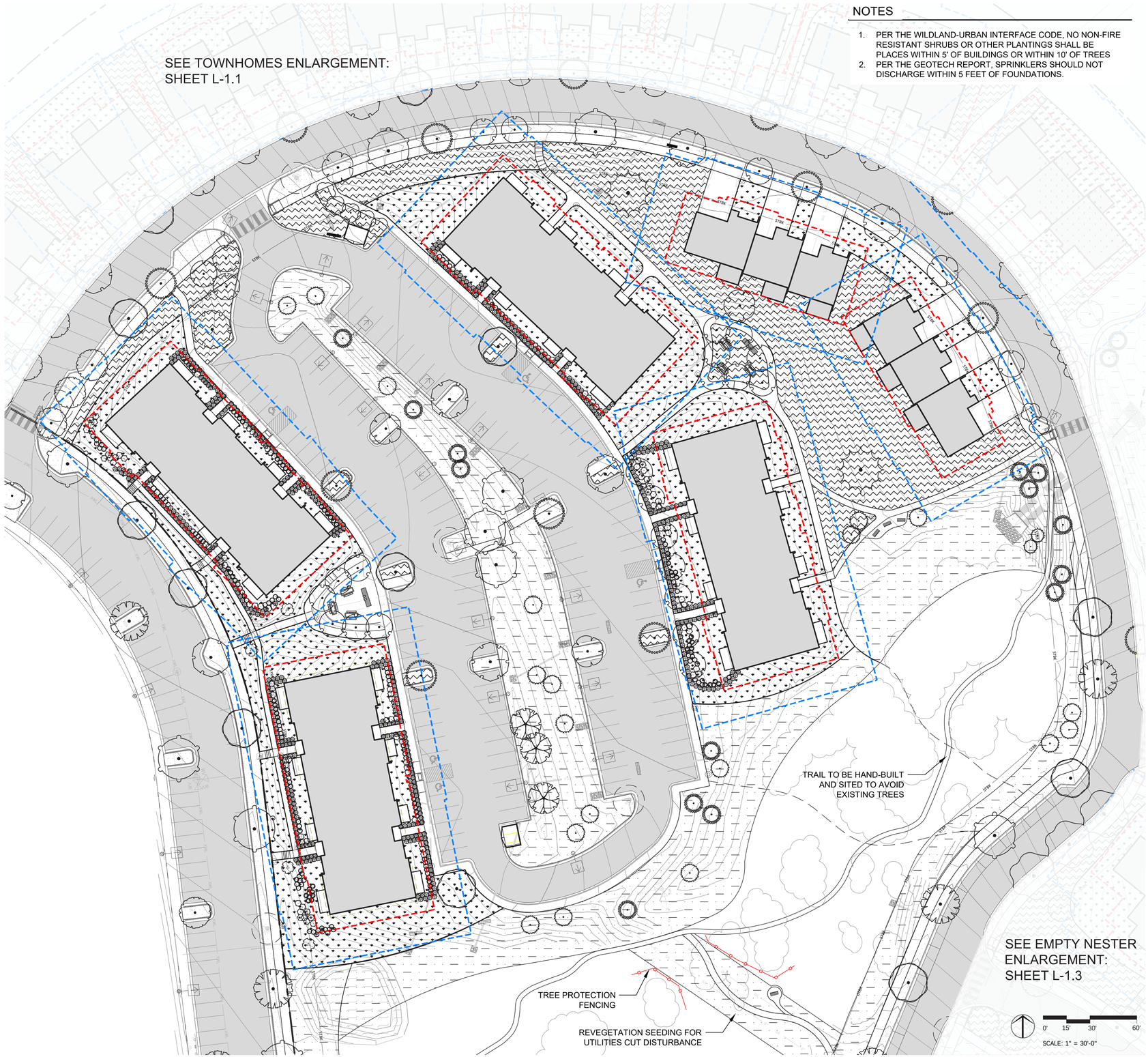
JOB DESCRIPTION:

SHEET TITLE:
LANDSCAPE PLAN ENLARGEMENT

SCALE:

SHEET NUMBER:
L-1.1

SHEET____OF____



NOTES

1. PER THE WILDLAND-URBAN INTERFACE CODE, NO NON-FIRE RESISTANT SHRUBS OR OTHER PLANTINGS SHALL BE PLACES WITHIN 5' OF BUILDINGS OR WITHIN 10' OF TREES
2. PER THE GEOTECH REPORT, SPRINKLERS SHOULD NOT DISCHARGE WITHIN 5 FEET OF FOUNDATIONS.

LEGEND

- PROPERTY BOUNDARY
- INTERNAL LOT LINES
- EXISTING VEGETATION TO REMAIN
- 10' WUI TREE CLEARANCE ZONE
- 30' WUI FUEL MODIFICATION ZONE
- 10' RADIUS HYDRANT CLEAR ZONE

PLANT SCHEDULE INNER LOOP

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
TREES			
	ACER PLATANOIDES `DEBORAH` DEBORAH NORWAY MAPLE	2.5" CAL B&B	13
	ACER PLATANOIDES 'ROYAL RED' ROYAL RED NORWAY MAPLE	15 GAL	6
	CELTIS OCCIDENTALIS `CHICAGOLAND` CHICAGOLAND HACKBERRY	15 GAL	10
	CRATAEGUS CRUS-GALLI `CRUSADER` CRUSADER® COCKSPUR HAWTHORN	15 GAL	7
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST	15 GAL	8
	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' SKYLINE HONEY LOCUST	15 GAL	5
	JUNIPERUS MONOSPERMA ONESEED JUNIPER	15 GAL	14
	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER	3` B&B	2
	KOELREUTERIA PANICULATA GOLDEN RAIN TREE	15 GAL	5
	MALUS X 'SPRING SNOW' SPRING SNOW CRABAPPLE	15 GAL	27
	PINUS EDULIS PINYON PINE	15 GAL	19
	PINUS SYLVESTRIS SCOTCH PINE	15 GAL	2
	POPULUS X ACUMINATA LANCELEAF COTTONWOOD	2.5" CAL B&B	3
	ULMUS AMERICANA `PRINCETON` PRINCETON AMERICAN ELM	2.5" CAL B&B	7

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY
SHRUBS			
	ACER GINNALA FLAME AMUR FLAME MAPLE	5 GAL	4
	BERBERIS THUNBERGII 'ATROPURPUREA' RED LEAF JAPANESE BARBERRY	5 GAL	108
	LONICERA TATARICA TATARIAN HONEYSUCKLE	5 GAL	102
	PHILADELPHUS LEWISII 'CHEYENNE' CHEYENNE MOCKORANGE	5 GAL	569
	RHUS TRILOBATA 'AUTUMN AMBER' AUTUMN AMBER SUMAC	5 GAL	68

- MAINTAINED LANDSCAPE: ORNAMENTAL TREES AND SHRUBS (LIMITED QUANTITIES) AND SEEDED MIXED GRASSES THAT CAN BE MOWED IF DESIRED
- TRANSITIONAL REVEGETATION SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)
- NATIVE REVEGETATION SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)
- TREE LAWN SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)

DHM DESIGN
R2
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:

REVISIONS:
REV-1 12/20/2024
REV-2 02/02/2025

JOB DESCRIPTION:

SHEET TITLE: LANDSCAPE PLAN ENLARGEMENT

SCALE:

SHEET NUMBER: L-1.2

SHEET_____OF_____

SEE INNER LOOP ENLARGEMENT:
SEE SHEET L-1.2

NOTES

1. PER THE WILDLAND-URBAN INTERFACE CODE, NO NON-FIRE RESISTANT SHRUBS OR OTHER PLANTINGS SHALL BE PLACES WITHIN 5' OF BUILDINGS OR WITHIN 10' OF TREES
2. PER THE GEOTECH REPORT, SPRINKLERS SHOULD NOT DISCHARGE WITHIN 5 FEET OF FOUNDATIONS.

LEGEND

- PROPERTY BOUNDARY
- INTERNAL LOT LINES
- EXISTING VEGETATION TO REMAIN
- 10' WUI TREE CLEARANCE ZONE
- 30' WUI FUEL MODIFICATION ZONE
- 10' RADIUS HYDRANT CLEAR ZONE

PLANT SCHEDULE EMPTY NESTER

SYMBOL	BOTANICAL / COMMON NAME	CONT	QTY
TREES			
	ACER PLATANOIDES `DEBORAH` DEBORAH NORWAY MAPLE	2.5" CAL B&B	1
	ACER PLATANOIDES 'ROYAL RED' ROYAL RED NORWAY MAPLE	15 GAL	10
	CELTIS OCCIDENTALIS `CHICAGOLAND` CHICAGOLAND HACKBERRY	15 GAL	1
	CRATAEGUS CRUS-GALLI `CRUSADER` CRUSADER® COCKSPUR HAWTHORN	15 GAL	8
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST	15 GAL	1
	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE' SKYLINE HONEY LOCUST	15 GAL	2
	JUNIPERUS MONOSPERMA ONESEED JUNIPER	15 GAL	6
	JUNIPERUS SCOPULORUM ROCKY MOUNTAIN JUNIPER	3` B&B	6
	KOELREUTERIA PANICULATA GOLDEN RAIN TREE	15 GAL	2
	MALUS X 'SPRING SNOW' SPRING SNOW CRABAPPLE	15 GAL	17
	PINUS SYLVESTRIS SCOTCH PINE	15 GAL	8
	PRUNUS PADUS MAYDAY TREE	15 GAL	9
	TILIA CORDATA 'GREENSPIRE' GREENSPIRE LITTLELEAF LINDEN	15 GAL	9
	ULMUS AMERICANA `PRINCETON` PRINCETON AMERICAN ELM	2.5" CAL B&B	1

SYMBOL	BOTANICAL / COMMON NAME	SIZE	QTY
SHRUBS			
	PHILADELPHUS LEWISII 'CHEYENNE' CHEYENNE MOCKORANGE	5 GAL	176

- MAINTAINED LANDSCAPE: ORNAMENTAL TREES AND SHRUBS (LIMITED QUANTITIES) AND SEEDED MIXED GRASSES THAT CAN BE MOWED IF DESIRED
- TRANSITIONAL REVEGETATION SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)
- NATIVE REVEGETATION SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)
- TREE LAWN SEEDING (SEE SHEET L-1.0 FOR FULL SEED MIX)

0' 15' 30' 60'
SCALE: 1" = 30'-0"

DHM DESIGN
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:

REVISIONS:
REV-1 12/20/2024
REV-2 02/02/2025

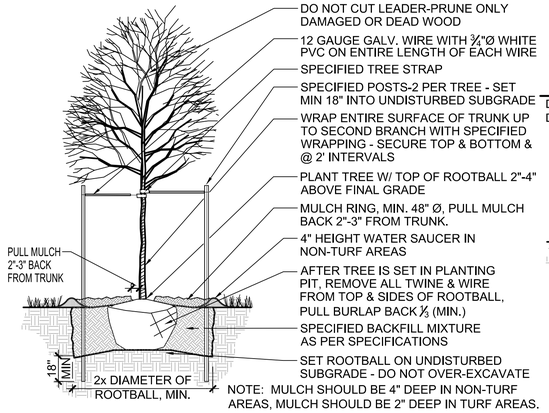
JOB DESCRIPTION:

SHEET TITLE:
LANDSCAPE PLAN ENLARGEMENT

SCALE:

SHEET NUMBER:
L-1.3

SHEET_____OF_____

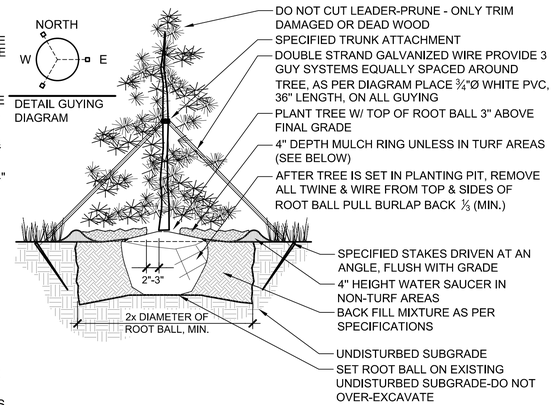


NOTE: MULCH SHOULD BE 4" DEEP IN NON-TURF AREAS, MULCH SHOULD BE 2" DEEP IN TURF AREAS.

1 DECIDUOUS TREE PLANTING

NOT TO SCALE DCS-PL-01

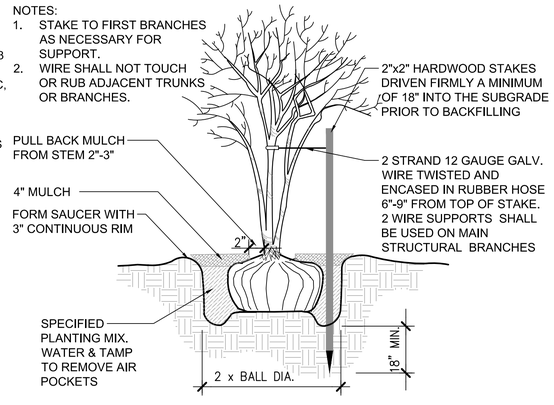
DETAIL GUYING DIAGRAM



2 EVERGREEN TREE PLANTING

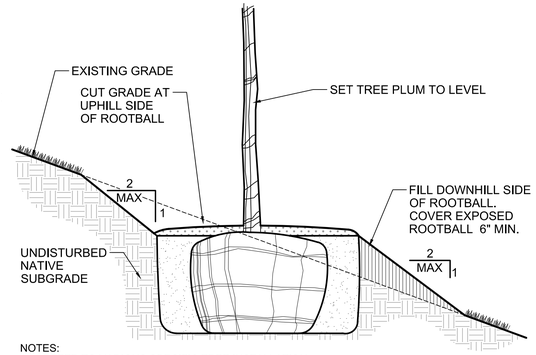
NOT TO SCALE DCS-PL-02

NOTES:
1. STAKE TO FIRST BRANCHES AS NECESSARY FOR SUPPORT.
2. WIRE SHALL NOT TOUCH OR RUB ADJACENT TRUNKS OR BRANCHES.



3 MULTI-TRUNK TREE STAKING

1" = 1" DCS-PL-04



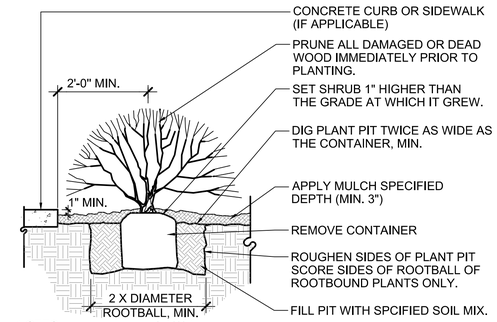
NOTES:
1. REFER TO VARIOUS SPECIFIC TREE INSTALLATION DETAILS FOR STAKING, GUYING, MULCHING, ETC.
2. THIS INSTALLATION SHALL APPLY TO ALL TREE TYPES AND SIZES PLANTED ON SLOPES LESS THAN 2:1.

4 TREE PLANTING ON SLOPE

NOT TO SCALE DCS-PL-03

NOTES

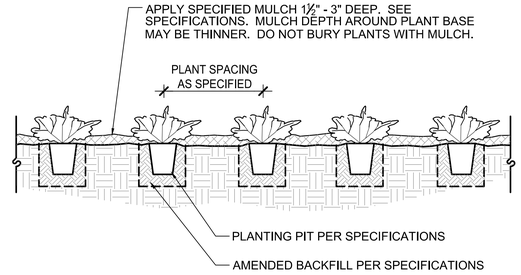
1. LANDSCAPING WITHIN THE PUBLIC RIGHT-OF-WAY AND ALL REVEGETATION SHALL CONFORM TO THE TOWN OF NEW CASTLE PUBLIC WORKS MANUAL, SPECIFICALLY SECTIONS 2710 - FINISH GRADING AND RESTORATION, 2720 - SEEDING, SODDING AND TOPSOIL, 2730 REVEGETATION-SEEDING, SODDING, HYDROSEEDING, AND 2740 - TREES, PLANTS AND GROUND COVER, SEE EXCEPTION, BELOW.
2. ALL SEED MIXES AND APPLICATION RATES WITHIN THE PUBLIC WORKS MANUAL ARE HEREBY REPLACED WITH THOSE LISTED ON THESE LANDSCAPE PLANS.



NOTES:
1. ANY BROKEN OR CRUMBLING ROOTBALLS WILL BE REJECTED.
2. REMOVING THE CONTAINERS WILL NOT BE AN EXCUSE FOR DAMAGED ROOTBALLS.
3. HOLD GRADE 1" BELOW EDGE OF WALK OR CURB

5 SHRUB PLANTING

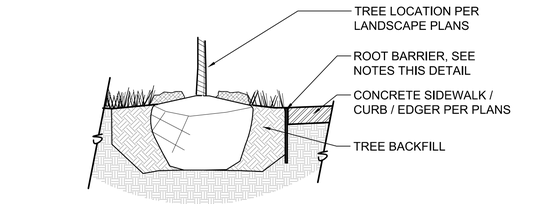
NOT TO SCALE DCS-PL-05



NOTE:
1. REMOVE PLANT FROM CONTAINER PRIOR TO INSTALLATION.
2. SEE ALSO TRIANGULAR SPACING DETAIL FOR MASSING PLANTING AS REQUIRED.

6 GROUNDCOVER AND PERENNIAL PLANTING

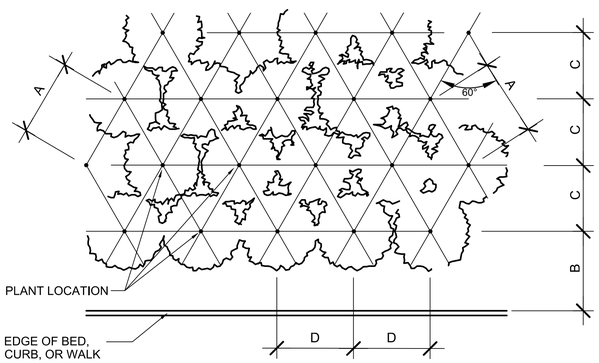
NOT TO SCALE DCS-PL-06



NOTES:
1. ALL TREES WITHIN 10'-0" OF PROPOSED HARDSCAPE AND WHERE INDICATED ON PLANS SHALL RECEIVE ROOT BARRIER.
2. ROOT BARRIER TO BE 18" UNIVERSAL GUIDE, MODEL UB 18-2 BY DEEP ROOT PARTNERS, PH: 800-458-7668, BISHOP COMPANY, WHITTIER, CALIFORNIA, 1-800-421-4833; OR APPROVED EQUAL.
3. INSTALL AND STAKE ROOT BARRIER PER MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
4. INSTALL ROOT BARRIER 10'-0" MINIMUM IN EACH DIRECTION FROM CENTER OF TREE TRUNK (20'-0" TOTAL LENGTH MIN.) ALONG EDGE OF HARDSCAPE.
5. TOP OF ROOT BARRIER SHALL BE 1" BELOW TOP OF ADJACENT HARDSCAPE FINISH SURFACE, TYPICAL.
6. SEE ALSO TREE PLANTING DETAILS.

7 ROOT BARRIER INSTALLATION

NOT TO SCALE DCS-PL-11

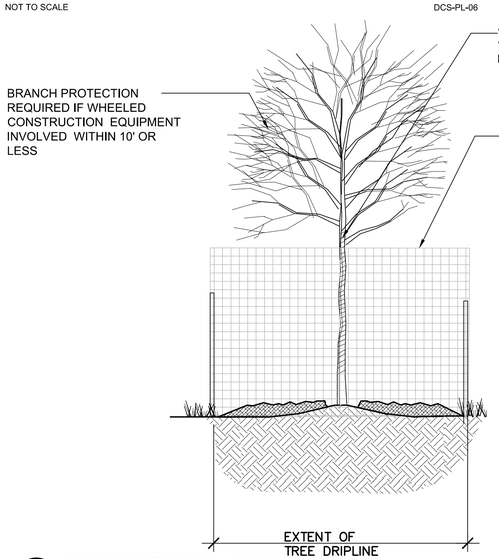


PLANT SPACING	A	B	C	D
6"	6"	6"	5"	6"
8"	8"	6"	7"	8"
12"	12"	8"	10"	12"
18"	18"	9"	15½"	18"
24"	24"	18"	21"	24"
30"	30"	15"	26"	30"
36"	36"	30"	31"	36"
48"	48"	30"	42"	48"
60"	60"	36"	52"	60"

NOTE: ALIGN FRONT ROW PARALLEL TO BED LINE

8 TRIANGULAR SPACING LAYOUT FOR SHRUBS / GROUNDCOVER / FLOWERS

NOT TO SCALE DCS-PL-08



NOTES
1. CONTRACTOR WILL PRESERVE & PROTECT EXISTING TREES ON SITE, DURING DEMOLITION AND CONSTRUCTION OPERATIONS AS NECESSARY, INCLUDING CANOPIES, TRUNKS, AND ROOT SYSTEMS.
2. TREES THAT ARE IN PERIL OF DAMAGE, OR TREES WITHIN 10' OF DEMOLITION OF CONSTRUCTION ACTIVITIES, OR TREES IDENTIFIED SPECIFICALLY BY OWNER, SHALL RECEIVE TREE PROTECTION.
3. CONTRACTOR SHALL CONTACT OWNER IF FIELD CONDITIONS ARE SIGNIFICANTLY DIFFERENT THAT WHAT IS SHOWN ON THE PLANS.
4. IT IS ACKNOWLEDGED THAT CONSTRUCTION AND DEMOLITION ACTIVITIES WILL OCCUR CLOSE TO TRUNKS AND OVER CRITICAL ROOT ZONES. HOWEVER, THE CONTRACTOR WILL AVOID ALL UNNECESSARY DAMAGE TO TREES.
5. IN AREAS WHERE FENCING WILL INTERFERE WITH TRAIL CONSTRUCTION, OR WHERE FENCING CANNOT BE INSTALLED, WRAP TRUNK WITH BURLAP AS PER DETAIL. CONSULT WITH OWNER PRIOR TO APPLYING PROTECTIVE WRAP TO VERIFY CONDITIONS.
6. ALL DISTURBED ROOTS SHALL BE TRIMMED TO BE CLEAN CUTS. DO NOT LEAVE BARE ROOTS EXPOSED. COVER WITH A BREATHABLE TEMPORARY COVER SUCH AS GEOTECH FABRIC AND A 1" LAYER OF SOIL IF ROOTS ARE TO BE UNCOVERED FOR MORE THAN ONE DAY. WATER AS NECESSARY TO KEEP ROOTS ALIVE.
7. TREES TO BE REMOVED WITHIN EXISTING GROUPS OF TREES IDENTIFIED AS TO REMAIN ARE TO BE REMOVED BY HAND EQUIPMENT ONLY. FOOT TRAFFIC ONLY ALLOWED IN ROOT PROTECTION ZONE, AND ONLY DURING THE TREE REMOVAL PHASE. FELL TREES DIRECTLY TO AVOID DAMAGE TO EXISTING TREES TO REMAIN.
8. IRRIGATION OF EXISTING TREES IS REQUIRED THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT.

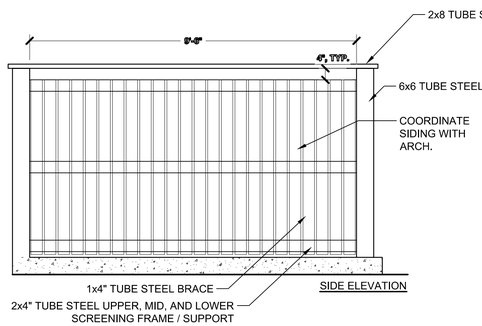
9 TREE PROTECTION DETAIL

NOT TO SCALE

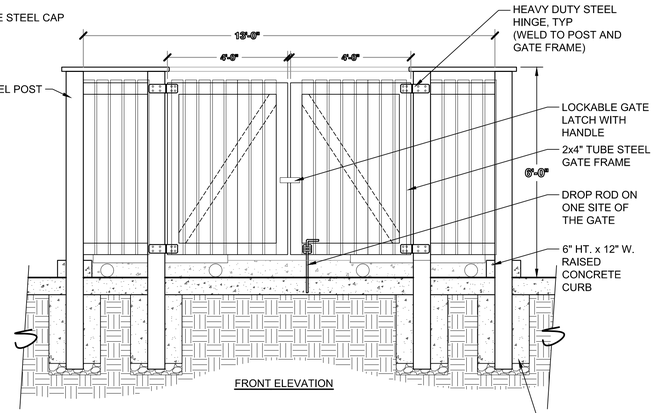
DHM DESIGN
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:
REVISIONS: Revision 12/20/2024
JOB DESCRIPTION:
SHEET TITLE: LANDSCAPE DETAILS
SCALE:
SHEET NUMBER: L-2.0
SHEET_____OF_____

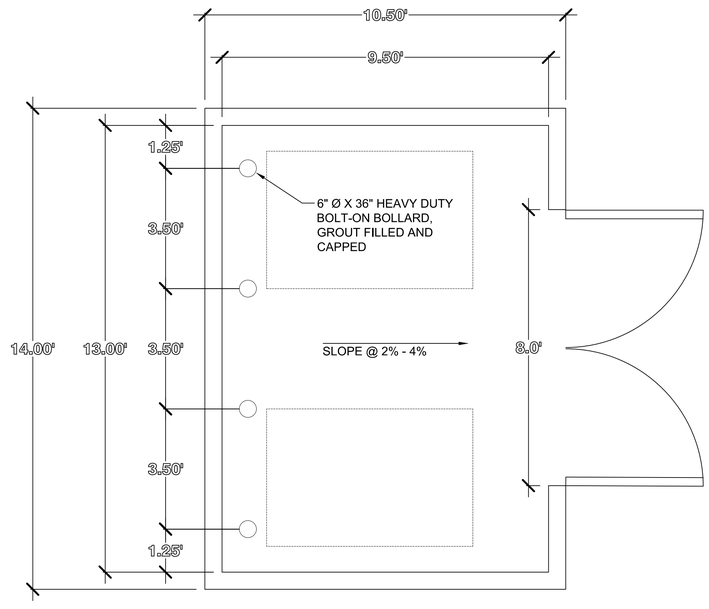


SIDE ELEVATION



FRONT ELEVATION

NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF ENCLOSURE FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.



1 TRASH ENCLOSURE
1/2" = 1'-0"

DHM DESIGN

Land+Shelter
ARCHITECTURE AND PLANNING

ma design

SOPRIS ENGINEERING LLC

JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:

REVISIONS:
Revision 12/20/2024

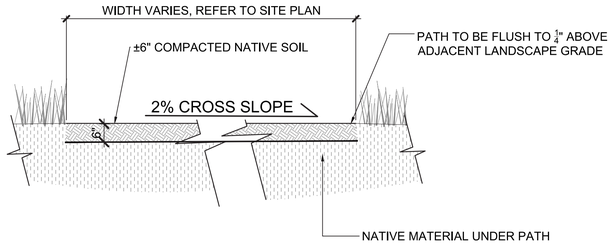
JOB DESCRIPTION:

SHEET TITLE:
TRASH ENCLOSURE

SCALE:

SHEET NUMBER:
L-2.1

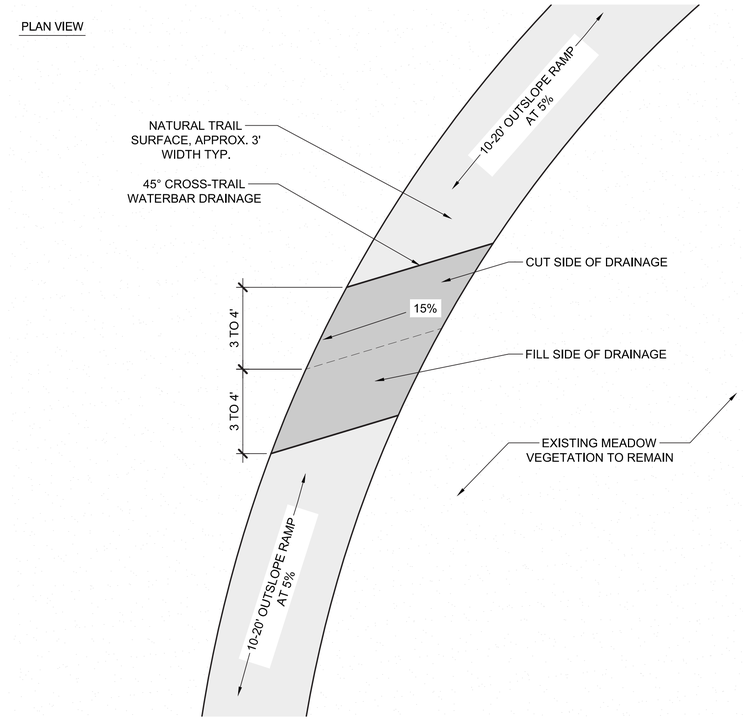
SHEET____OF____



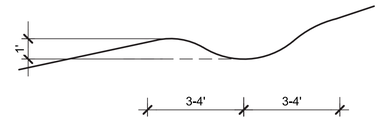
NOTES:
1. TRAILS ARE TO BE 24-36 INCHES WIDE, OF COMPACTED NATIVE SOIL.
2. PREPARE TRAIL BED BY REMOVING EXISTING VEGETATION, SURFACE ROOTS AND ROCKS, AND SUBSURFACE ROOTS TO A DEPTH OF 6 INCHES. LOOSEN AND RAKE SOIL TO ACHIEVE A CONSISTENT TRAIL BED. COMPACT WITH PLATE, JUMPING JACK, OR HAND TAMP.
3. WIDTH OF PATH VARIES, SEE SITE PLANS.
4. CROSS SLOPE DIRECTION TO BE DETERMINED IN FIELD.

1 NATURAL SURFACE TRAIL
1/2" = 1'-0"

PLAN VIEW



CROSS SECTION



NOTES:
1. WATERBAR DRAINAGE TO BE LOCATED ON SITE, AT APPROXIMATELY EVERY 10 FEET OF GRADE CHANGE ALONG THE TRAIL.

2 NATURAL SURFACE TRAIL DRAINAGE
1" = 2'-0"

3 NATURAL SURFACE TRAIL SECTION
1" = 5'-0"

DHM DESIGN
Land+Shelter ARCHITECTURE AND PLANNING
ma design
SOPRIS ENGINEERING LLC
JVAM

9 NORTH WILD HORSE
New Castle, Colorado

PROJECT NUMBER: Project #23100
DATE: 09/09/2024
DESIGNED:
DRAWN:
CHECKED:
REVISIONS: Revision 12/20/2024
JOB DESCRIPTION:
SHEET TITLE: TRAIL DETAILS
SCALE:
SHEET NUMBER: L-2.2
SHEET_____OF_____

GENERAL NOTES

1. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY FOR A COMPLETE AND FUNCTIONING LIGHTING SYSTEM.
2. THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR(S), AND LOW VOLTAGE CONTRACTOR(S) SHALL REFER TO THE LIGHTING PLANS, SCHEDULES, AND DETAILS HEREIN, INCLUDING ANY ATTACHED LIGHTING SPECIFICATIONS AND PRODUCT CUTSHEETS FOR ADDITIONAL INFORMATION.
3. THE CONTRACTOR SHALL LAY OUT ALL LIGHT FIXTURE LOCATIONS AND TRANSFORMER LOCATIONS PRIOR TO INSTALLATION FOR APPROVAL BY ALPENGLOW LIGHTING DESIGN, INC., ARCHITECT, INTERIOR DESIGNER, ENGINEER(S), AND OWNER.
4. MATERIALS AND INSTALLATION SHALL COMPLY WITH CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
5. MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY UL., ETL, GSA OR ANOTHER RECOGNIZED TESTING LAB.
6. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE ELECTRICAL WORK.
7. THE CONTRACTOR SHALL PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES AND UTILITY COMPANIES ANY SHOP DRAWINGS AS REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL.
8. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, OWNER, AND LIGHTING DESIGNER OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES OR REGULATIONS OF AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH THE BUILDING AND STANDARDS AND LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
10. ALL MATERIALS, AND EQUIPMENT SHALL BE ERECTED, INSTALLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
11. ALL CUTTING, DRILLING, AND PATCHING OF MASONRY, STEEL OR IRON WORK BELONGING TO THE BUILDING MUST BE DONE BY THIS CONTRACTOR IN ORDER THAT HIS WORK MAY BE PROPERLY INSTALLED, BUT UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ARCHITECT, ENGINEER, OR THEIR REPRESENTATIVE.
12. ALL MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED.
13. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE INSTALLATION AS SHOWN ON DRAWINGS INCLUDING LABOR, EQUIPMENT, AND MATERIALS SHALL BE IN STRICT COMPLIANCE WITH THE BUILDING STANDARDS.
14. COMMERCIAL APPLICATIONS: THE CONTRACTOR MAY PROVIDE COMPLETE METAL RACEWAY SYSTEMS AND ENCLOSURES FOR ALL WIRING THROUGHOUT THE EXTENT OF THE REQUIRED SYSTEM. RESIDENTIAL APPLICATIONS MAY USE NON METALLIC WIRE (ROMEX).
15. MC CABLE MAY BE USED FOR ALL BRANCH CIRCUITING. MC CABLE SHALL NOT ENTER INTO PANELBOARDS. ELECTRICAL CONTRACTOR SHALL UTILIZE EMT OUT OF THE PANELBOARD INTO A FULL BOX, GUTTER, OR SIMILAR DEVICE, AND THEN RUN MC CABLE FOR THE REMAINDER OF BRANCH CIRCUITING RUN. MINIMUM RACEWAY SIZE SHALL BE 1/2" UNLESS OTHERWISE INDICATED. MC CABLE MAY ONLY BE USED IN CONCEALED LOCATIONS.
16. FLEXIBLE CONDUIT CONNECTIONS TO RECESSED LIGHTING FIXTURES SHALL BE MADE WITH FLEXIBLE STEEL CONDUIT, ¾" MINIMUM.
17. ALL NEW CIRCUITS SHALL HAVE A GROUND WIRE INSTALLED.
18. ALL WIRE NOT INSTALLED IN CONDUIT AND IN THE CEILING SHALL BE PLENUM RATED.
19. REMOTE POWER SUPPLIES AND TRANSFORMERS SHALL BE CONCEALED IN ATTICS, CRAWL SPACES, OR SIMILAR ACCESSIBLE LOCATIONS. MAXIMUM WIRE RUN TO THE END OF THE FIXTURE SHALL NOT EXCEED 75 FEET.
20. IN SUSPENDED CEILINGS, SUPPORT CONDUIT AND JUNCTION BOXES DIRECTLY FROM THE STRUCTURAL SLAB, DECK, OR FRAMING PROVIDED FOR THAT PURPOSE. LIGHTING BRANCH CIRCUIT CONDUITS SHALL NOT BE CLIPPED TO THE CEILING SUPPORT WIRES OR SPLINE UNLESS THE CEILING HAS BEEN SPECIFICALLY DESIGNED FOR THAT PURPOSE.
21. SHOULD ACTUAL FIELD CONDITIONS REQUIRE INDICATED CIRCUIT DESIGNATIONS TO VARY, INDICATE THE CIRCUIT NUMBER USED ON THE AS-BUILT DRAWINGS.
22. ALL FACE PLATE AND DEVICE COLORS SHALL BE APPROVED BY ARCHITECT, INTERIOR DESIGNER, AND OWNER.
23. ALL BATTERY BACKUP EMERGENCY LIGHTING AND EXIT LIGHTS SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING, UNLESS OTHERWISE NOTED.
24. THE CONTRACTOR SHALL VERIFY THE CEILING TYPE BEFORE ORDERING LIGHTING FIXTURES.
25. THE CONTRACTOR IS TO REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ALL FIRE-RATED PENETRATION INSTALLATION REQUIREMENTS.
26. THE CONTRACTOR IS TO NOTIFY THE ARCHITECT PRIOR TO INSTALLING ANY FIXTURES WITHIN A FIRE RATED CEILING OR WALL. FIRE RATING MUST BE MAINTAINED FOR THIS TYPE OF INSTALLATION WITH DRYWALL TENTING OR LISTED FIREBOX ASSEMBLY.
27. BIDS SHALL HAVE LINE-ITEM PRICING. BIDS WHICH SHOW LOT PRICING FOR LIGHTING FIXTURES AND/OR LIGHTING CONTROLS SHALL BE REJECTED WITHOUT CONSIDERATION. BIDDER SHALL HAVE FIVE (5) BUSINESS DAYS TO RESUBMIT LINE-ITEM PRICING. AFTER FIVE (5) BUSINESS DAYS, BID SHALL BE CONSIDERED TO BE NULL AND VOID AND WILL BE REJECTED. BIDDERS WARRANT THEIR COMPLIANCE WITH THE ROBINSON-PATMAN AND CLAYTON ACTS.
28. SUBMIT PRODUCT DATA DESCRIBING FIXTURES, LAMPS, BALLASTS, AND EMERGENCY LIGHTING UNITS WITHIN 30 DAYS OF DIRECTION TO PROCEED FROM THE OWNER. ALL NOTATIONS SHALL BE .PDF FORMAT OR LASER PRINTED. ARRANGE PRODUCT DATA FOR FIXTURES IN ORDER OF FIXTURE DESIGNATION. AFTER 30 DAYS, A MINIMUM OF EIGHT HOURS OF PROFESSIONAL TIME TO CONSIDER ANY SUBMITTAL SHALL BE PAID FOR BY THE CONTRACTOR. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. COSTS INCURRED TO THE PROJECT DUE TO PROBLEMS ARISING FROM LATE SUBMITTALS ARE TO BE PAID BY THE CONTRACTOR. TWO (2) RESUBMITTALS SHALL BE ALLOWED PER PROJECT. AFTER TWO (2) RESUBMITTALS, A MINIMUM OF EIGHT HOURS OF PROFESSIONAL TIME TO CONSIDER ANY RESUBMITTALS SHALL BE PAID FOR BY THE CONTRACTOR. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. COSTS INCURRED TO THE PROJECT DUE TO PROBLEMS ARISING FROM MULTIPLE RESUBMITTALS ARE TO BE PAID FOR BY THE CONTRACTOR.
29. THE EXPRESSION "..OR AS APPROVED" OR "..OR APPROVED EQUAL" OR "..OR EQUAL" MEANS THAT COMPETING PRODUCTS OF A SIMILAR NATURE ARE THOUGHT TO EXIST. THE CONTRACTOR IS ENCOURAGED TO PROPOSE SUBSTITUTION REQUESTS OF SUCH EQUIVALENT PRODUCTS AS LONG AS THE PRODUCT CONFORMS TO ALL PARTS OF THIS SPECIFICATION. WHERE THE ABOVE NOTED EXPRESSIONS ARE OMITTED OR EXPRESSION SUCH AS "NO SUBSTITUTIONS" APPEARS THE CONTRACTOR SHALL PROVIDE ONLY THE PRODUCT INDICATED.
30. SUBSTITUTION REQUESTS AND VALUE ENGINEERING RECOMMENDATIONS FROM THE CONTRACTOR WILL BE CONSIDERED IF SUBMITTED WITHIN 30 DAYS OF DIRECTION TO PROCEED FROM THE OWNER. EACH LUMINAIRE SUBSTITUTION REQUEST SHALL INDICATE THE ESTIMATED OR POTENTIAL SAVINGS TO THE OWNER FOR THAT LUMINAIRE FROM THE SPECIFIED DESIGN. THE PROFESSIONAL TIME TO CONSIDER ANY SUBSTITUTION REQUEST OR V.E. REQUEST SHALL BE PAID FOR BY THE CONTRACTOR, AT A MINIMUM OF EIGHT HOURS. SUCH PAYMENT DOES NOT GUARANTEE APPROVAL. AFTER 30 DAYS, A MINIMUM OF EIGHT HOURS OF PROFESSIONAL TIME TO CONSIDER ANY SUCH REQUEST SHALL BE PAID FOR BY THE CONTRACTOR. SUBMITTAL OF ANY SUBSTITUTION REQUEST OR VALUE ENGINEERING RECOMMENDATION SHALL NOT BE CONSTRUED AS APPROVAL IN ANY WAY. THE OWNER, ARCHITECT AND LIGHTING DESIGNER RESERVE THE RIGHT TO REJECT ANY SUBSTITUTION OR VALUE ENGINEERING RECOMMENDATION WITHOUT EXPLANATION.
31. CONTRACTOR MAY BE REQUIRED TO PROVIDE TABLE TOP SAMPLES AND/OR A FAIR MOCKUP OF SPECIFIED FIXTURE AND PROPOSED ALTERNATE. THIS REQUIREMENT SHALL BE EXERCISED AT THE OPTION OF OWNER, ARCHITECT, OR LIGHTING DESIGNER. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL COSTS INCURRED BY SUBSTITUTION REQUEST SAMPLE AND/OR MOCKUP PRODUCTION AND REVIEW INCLUDING PROFESSIONAL TIME AND TRAVEL EXPENSES.
32. SUBSTITUTIONS OR VALUE ENGINEERING RECOMMENDATIONS SHALL ACCOMMODATE THE IMPACT ON OTHER SPECIFIED SYSTEMS OR PRODUCTS, SUCH AS BALLASTS, DRIVERS, AND DIMMING SYSTEMS. THE LIGHTING SYSTEMS ARE DESIGNED AS COMPLETE AND IT IS THE CONTRACTOR'S RESPONSIBILITY FOR ANY IMPACTS OF ANY CHANGE RECOMMENDED. CONTRACTOR SHALL SUBMIT PRODUCTS WHICH RESULT IN A FULLY FUNCTIONING LIGHTING SYSTEM WHICH OPERATES AS ORIGINALLY DESIGNED.
33. SUBSTITUTION REQUESTS AND VALUE ENGINEERING RECOMMENDATIONS SHALL BE DESCRIBED ON CSI STANDARD FORMS AND SHALL INCLUDE PRODUCT CUTSHEET. PRODUCTS SUBMITTED WITHOUT PROPER CSI FORMS SHALL NOT BE APPROVED.
34. WHEN REQUESTING A SUBSTITUTION, CONTRACTOR SHALL PROVIDE UNIT AND EXTENDED PRICING FOR SPECIFIED LIGHT FIXTURE, UNIT AND EXTENDED PRICING FOR PROPOSED ALTERNATE, AND UNIT AND EXTENDED DELTA SAVINGS TO OWNER TO BE REALIZED BY USING PROPOSED ALTERNATE. CONTRACTOR SHALL PROVIDE UNIT PRICING FOR EACH FIXTURE TYPE SPECIFIED TO PROVIDE BASELINE COMPARISON FOR SUBSTITUTION REQUEST. CONTRACTOR SHALL GUARANTEE PRICING ON ALL FIXTURE TYPES FOR WHICH A SUBSTITUTION REQUEST HAS BEEN GRANTED. THIS PRICE GUARANTEE SHALL BE PER UNIT AND SHALL BE MAINTAINED THROUGH THE END OF CONSTRUCTION REGARDLESS OF QUANTITY PURCHASED. LIGHTING FIXTURE SUBSTITUTION REQUESTS FOR PRODUCTS USED AS EGRESS OR EMERGENCY LIGHTING SYSTEMS OR EXTERIOR SITE AND ROADWAY LIGHTING SHALL INCLUDE LIGHTING CALCULATION DATA DEMONSTRATING COMPLIANCE WITH RELEVANT CODES AND ORDINANCES. PROVIDE HARDCOPY CALCULATIONS AND DATAFILE IN DIALUX (.evo) FORMAT. SUBSTITUTION REQUESTS WITHOUT SUCH DATA WILL BE REJECTED WITHOUT CONSIDERATION. VE REVIEW TIME SHALL BE PAID FOR BY THE CONTRACTOR.
35. EQUIPMENT DELIVERY LEAD-TIME SHALL NOT BE HELD AS A VALID REASON FOR REQUESTING FIXTURE SUBSTITUTION UNLESS FIXTURE LEAD-TIME FROM SPECIFIED MANUFACTURER IS IN EXCESS OF 14 WEEKS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE NECESSARY EQUIPMENT LEAD TIMES, DELIVER SUBMITTALS FOR REVIEW IN A TIMELY FASHION, AND PLACE ORDERS ACCORDINGLY TO ENSURE TIMELY DELIVERY.
36. CONTRACTOR SHALL ADJUST AIMABLE LUMINARIES AS DIRECTED BY LIGHTING DESIGNER. CONTRACTOR SHALL PROVIDE MANPOWER AND EQUIPMENT, INCLUDING LADDERS, LIFTS, TOOLS, ETC., AND ALLOW FOR THIS ACTIVITY TO OCCUR DURING PREMIUM NIGHT AND/OR WEEKEND TIME. CONTRACTOR SHALL INCLUDE A MINIMUM OF 20 HOURS IN HIS BID FOR THIS EFFORT.
37. THE GENERAL CONTRACTOR, ELECTRICAL CONTRACTOR(S), AND LOW VOLTAGE CONTRACTOR(S) SHALL ASK QUESTIONS VIA TELEPHONE, EMAIL, OR WRITTEN CORRESPONDENCE PRIOR TO MAKING A COMPLETE MESS OF THINGS. CONTRACTORS WHO FAIL TO ASK QUESTIONS SHALL BE FED TO THE RAVENOUS BUGBLATTER BEAST OF TRAAL.
38. THE GENERAL CONTRACTOR SHALL CONFIRM THAT ALL BIDDERS AND SUBCONTRACTORS HAVE READ THE PRECEDING THIRTY-EIGHT NOTES BY SUBMITTING A SCAN OR PHOTOGRAPH OF THIS NOTE, SIGNED BY THE BIDDER(S). BIDDERS WHO FAIL TO SUBMIT THIS NOTE SHALL HAVE THEIR BIDS REJECTED WITHOUT CONSIDERATION.
39. THE GENERAL CONTRACTOR SHALL PROVIDE A MINIMUM OF TWELVE (12) PERFORATED PASTRY UNITS AND COFFEE AT ALL CONSTRUCTION MEETINGS. DECAFFEINATED COFFEE SHALL BE REJECTED WITHOUT CONSIDERATION. THE CONTRACTOR SHALL PROTECT THE CONSTRUCTION DOCUMENTS FROM DIRECT CONTACT WITH THE PERFORATED PASTRY UNITS.

POWER DEVICES

SYMBOL	DESCRIPTION
	SIMPLEX RECEPTACLE - WALL, CEILING, ON ALT.
	DUPLEX RECEPTACLE - WALL, CEILING, ON ALT.
	DOUBLE DUPLEX RECEPTACLE - WALL, CLG, ON ALT.
AB	RECEPTACLE TYPE SHOWN -WALL -ABOVE COUNTER BACKSPLASH. SEE ARCHITECTURAL DRAWINGS.
"ON ALT."	SHADED RECEPTACLES NOTED "ON ALT." ABOVE ARE CONNECTED TO ALTERNATE POWER SOURCE (EMERG., STANDBY, UPS, ETC.) PER CIRCUITING INDICATED
	DUPLEX RECEPTACLE - WALL - HALF SWITCHED
	COMBINATION SWITCH/DUPLEX RECEPTACLE
GFCI	DUPLEX RECEPTACLE - WALL - WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER
WP	RECEPT. TYPE SHOWN W/ WEATHERPROOF COVER
+42"	RECEPT. TYPE SHOWN AT SPECIAL HEIGHT
	CLOCK HANGER RECEPTACLE
	MOTORIZED SHADE. VERIFY MOTOR LOCATIONS WITH SHADE VENDOR AND INSTALLER.
	FLUSH FLOOR BOX DEVICE - DEVICE TYPE PER SYMBOLS ABOVE
	PEDESTAL FLOOR DEVICE - DEVICE TYPE PER SYMBOLS ABOVE
	IN RAISED FLOOR - SEE ARCH DWGS; WITH MULTI-SERVICE FLOOR BOX CAST IN CONC. OR RECEPTACLES & SIGNAL OUTLETS AS NOTED.
	JUNCTION BOX PROVIDE BLANK COVER U.N.O.

LIGHTING

SYMBOL	DESCRIPTION
	RECESSED LENSED TROFFER (SIZE/SHAPE VARIES)
	RECESSED PARABOLIC TROFFER (SIZE/SHAPE VARIES)
	SURFACE LENSED LUMINAIRE (SIZE/SHAPE VARIES)
	SURFACE PARABOLIC TROFFER (SIZE/SHAPE VARIES)
	SHADING OF ANY LUMINAIRE INDICATES CONNECTION TO ALTERNATE POWER SOURCE (EMERGENCY, UPS, STANDBY, ETC.) PER CIRCUITING INDICATED
	SUSPENDED LINEAR PENDANT (SIZE/SHAPE VARIES)
	NON LINEAR PENDANT (SIZE, SHAPE VARIES)
	DOWNLIGHT OR POINT SOURCE - SURFACE, RECESSED CEILING MTD.
	DIRECTIONAL OR WALLWASH - SURFACE, RECESSED CEILING MTD.
	RECESSED BATH FAN OR FAN/LIGHT
	SURFACE OR PENDANT CEILING FAN - PROVIDE APPROPRIATE BRACED JUNCTION BOX
	LINEAR LOW VOLTAGE COVE OR UNDERCABINET
	TRACK OR LOW VOLTAGE LIGHTING WITH HEADS
	STRIPLIGHT
	STRIPLIGHT WITH REFLECTOR OR LENS
	SCONCE, "FOOT" INDICATES WALL MOUNTING. VERIFY HEIGHT WITH ARCHITECT, INTERIOR DESIGNER.
	WALL MOUNTED LINEAR (SIZES VARY)
	RECESSED STEPLIGHT
	BATTERY POWER EMERGENCY UNIT EQUIPMENT (SEE LUMINARE SCHEDULE FOR QUANTITY OF HEADS) - WALL, CEILING MOUNTED.
	ILLUMINATED EXIT SIGN, SHADED QUADRANT INDICATES FACES, ARROWS AS SHOWN
	FLOOR OR GRADE MOUNTED BOLLARD
	FLUSH GRADE POINT SOURCE
	POLE MOUNTED LUMINAIRE- SINGLE OR DUAL HEAD ARROW INDICATES OPTICAL ORIENTATION
	POLE TOP MOUNTED LUMINAIRE

L# 1071

D# 1071 1071DC

X# 1071

LUMINAIRE MARKING CONVENTIONS:
LETTER DESIGNATION FOLLOWED BY SEQUENTIAL NUMBER

L# = LED
D# = DECORATIVE
S# = SITE SPECIFIC
X# = EXIT SIGN
E# = EMERGENCY SPECIFIC

CIRCUITING CONVENTION:
107# = ARCHITECTURAL ROOM NUMBER
###1 = SEQUENTIAL CIRCUIT IN ROOM.
####DC = 0-10VDC CONTROL CIRCUIT

SWITCHING & CONTROLS

SYMBOL	DESCRIPTION
S_a	SINGLE POLE SWITCH (SUPERSCRIPT DENOTES SIMILARLY MARKED LUMINAIRES CONTROLLED TOGETHER. NO SUBSCRIPT INDICATES SWITCH TO CONTROL ALL LIGHTING WITHIN ROOM, U.O.N.).
S^2	TWO POLE SWITCH
S^3	THREE WAY SWITCH
S^4	FOUR WAY SWITCH
S^K	KEY OPERATED SWITCH
D	DIMMER SWITCH. NUMBER INDICATES WATTAGE RATING. IF NOT SHOWN THEN EQUAL TO LOAD.
S_{JAMB}	JAMB SWITCH
S^{TS}	TIMER SWITCH
S^{XP}	EXPLOSION PROOF SWITCH
S^{WP}	WEATHERPROOF SWITCH
S^{FAN}	LINE VOLTAGE, VARIABLE SPEED FAN CONTROL LOCATE ADJACENT TO ADJACENT TO LIGHT SWITCHES
$S_{(\#)}$	MULTI-BUTTON LIGHTING CONTROL SWITCH INDIVIDUAL SWITCH CONFIGURATION VARIES.
PC	PHOTOCELL
TC	TIME CLOCK
OS	OCCUPANCY SENSOR - WALL MOUNTED
OS	360 DEGREE OCCUPANCY SENSOR - CEILING MTD.
OS→	180 DEGREE OCCUPANCY SENSOR - CEILING MTD.
←OS→	CORRIDOR/AISLE OCCUPANCY SENSOR - CEILING MOUNTED
S^bOS^a	OCCUPANCY SENSOR & SWITCH GANGED UNDER A COMMON COVER PLATE. OCCUPANY SENSOR TO CONTROL ALL LIGHT FIXTURES IN ROOM WITH 1/2 LIGHT REDUCTION CONTROLLED BY SWITCH, DESIGNATED BY LETTER.
LCP #	LIGHTING CONTROL PANEL AND ASSOCIATED COMPONENTS. PROVIDE 120V OR 277V CONTROL POWER AS REQUIRED OR AS INDICATED.
T	REMOTE MOUNTED LINE TO LOW-VOLTAGE FUSED TRANSFORMER OR POWER SUPPLY. CONCEAL FROM VIEW.

LIGHTING REFERENCES

1. IESNA HANDBOOK 9TH EDITION, 2010
2. NATIONAL ELECTRIC CODE VERSION 2023
3. IECC 2021
4.

LIGHTING SHEET INDEX

LIGHT-000 LIGHTING LEGEND
LIGHT-100 SITE LIGHTING
LIGHT-101 SITE LIGHTING CALCULATIONS
LIGHT-102 SITE LIGHTING CUTSHEETS

FINAL PLAN
original issue date: 8/26/24
revision dates:

9 NORTH WILDHORSE
NEW CASTLE, COLORADO

ALPENGLOW LIGHTING DESIGN, INC.
4341 county road 113, carbondale, colorado 81623
(970) 948-2657 aaron@alpenglowmtc.com

Lighting design, arrangements, plans, specifications, and ideas presented by these drawings are the sole property and copyright of Alpenglow Lighting Design, Inc. and shall not be used without written permission.

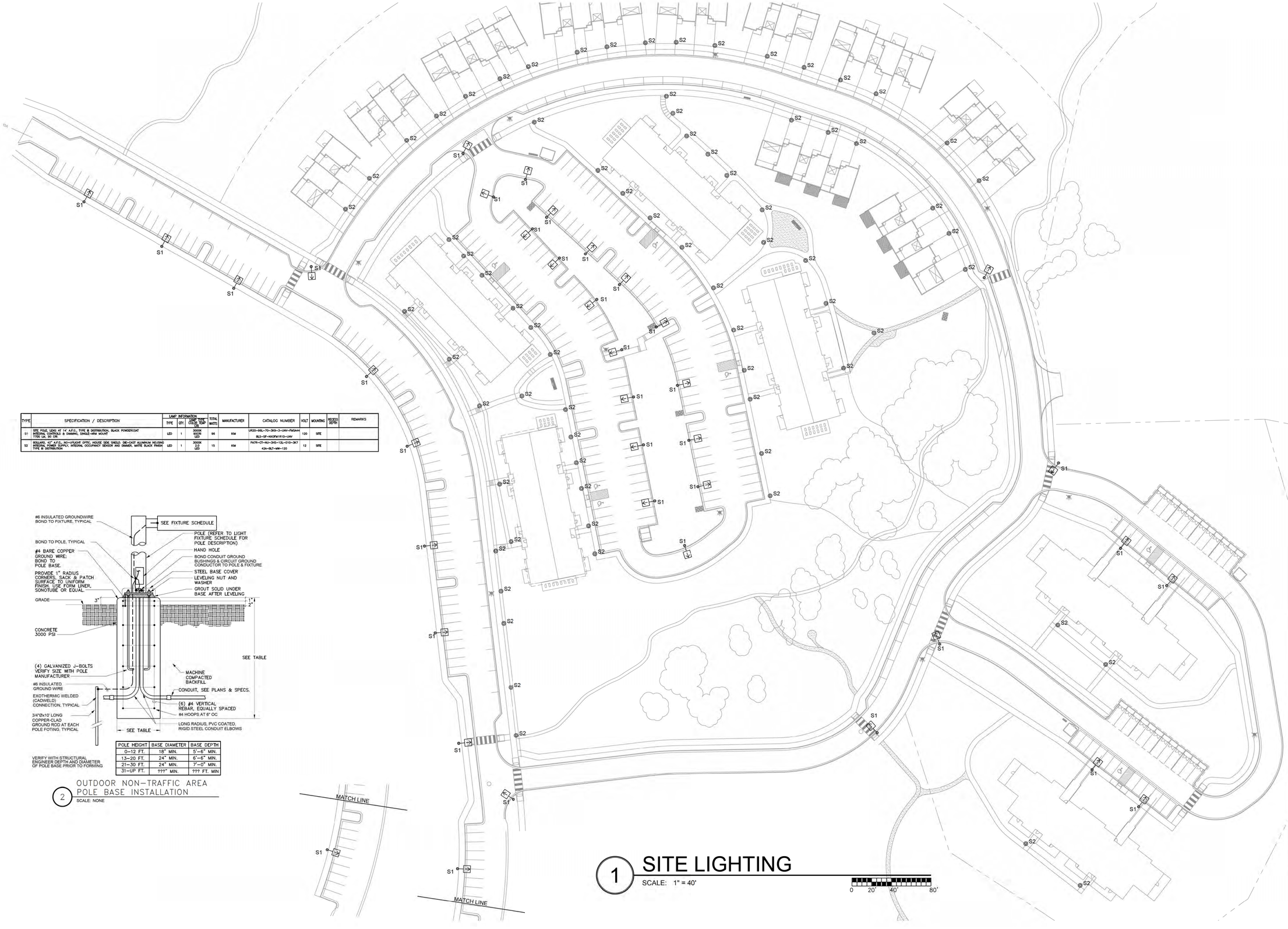
LIGHTING LEGEND

LIGHT-000

TYPE	SPECIFICATION / DESCRIPTION	LAMP INFORMATION			TOTAL WATTS	MANUFACTURER	CATALOG NUMBER	VOLT	MOUNTING	RECESS DEPTH	REMARKS
		TYPE	QTY.	LAMP TYPE COLOR TEMP CRI							
S1	SITE POLE, LENS AT 14' A.F.G., TYPE II DISTRIBUTION, BLACK POWDERCOAT INTERNAL CONTROLS & DIMMING, SINGLE-ARM MOUNT 7700 LM, 90 LW	LED	1	3000K 90CRI LED	96	KIM	LR20-96L-70-3K9-3-UNV-FMS44 BLS-SF-NIGFM1R1D-UNV	120	SITE		
S2	BOLLARD, 42" A.F.G., NO-UPLIGHT OPTIC, HOUSE SIDE SHIELD, DIE-CAST ALUMINUM HOUSING INTERNAL POWER SUPPLY, INTERNAL OCCUPANCY SENSOR AND DIMMER, MATTE BLACK FINISH TYPE III DISTRIBUTION	LED	1	3000K 2.0 LED	15	KIM	PA7R-CT-NU-3K0-13L-010-3K7 42A-BLT-MM-120	12	SITE		

POLE HEIGHT	BASE DIAMETER	BASE DEPTH
0–12 FT.	18" MIN.	5'–6" MIN.
13–20 FT.	24" MIN.	6'–6" MIN.
21–30 FT.	24" MIN.	7'–0" MIN.
31–UP FT.	???" MIN.	??? FT. MIN

2 OUTDOOR NON-TRAFFIC AREA POLE BASE INSTALLATION
SCALE: NONE



1 SITE LIGHTING
SCALE: 1" = 40'
0 20' 40' 80'

FINAL PLAN
original issue date:
8/26/24
revision dates:

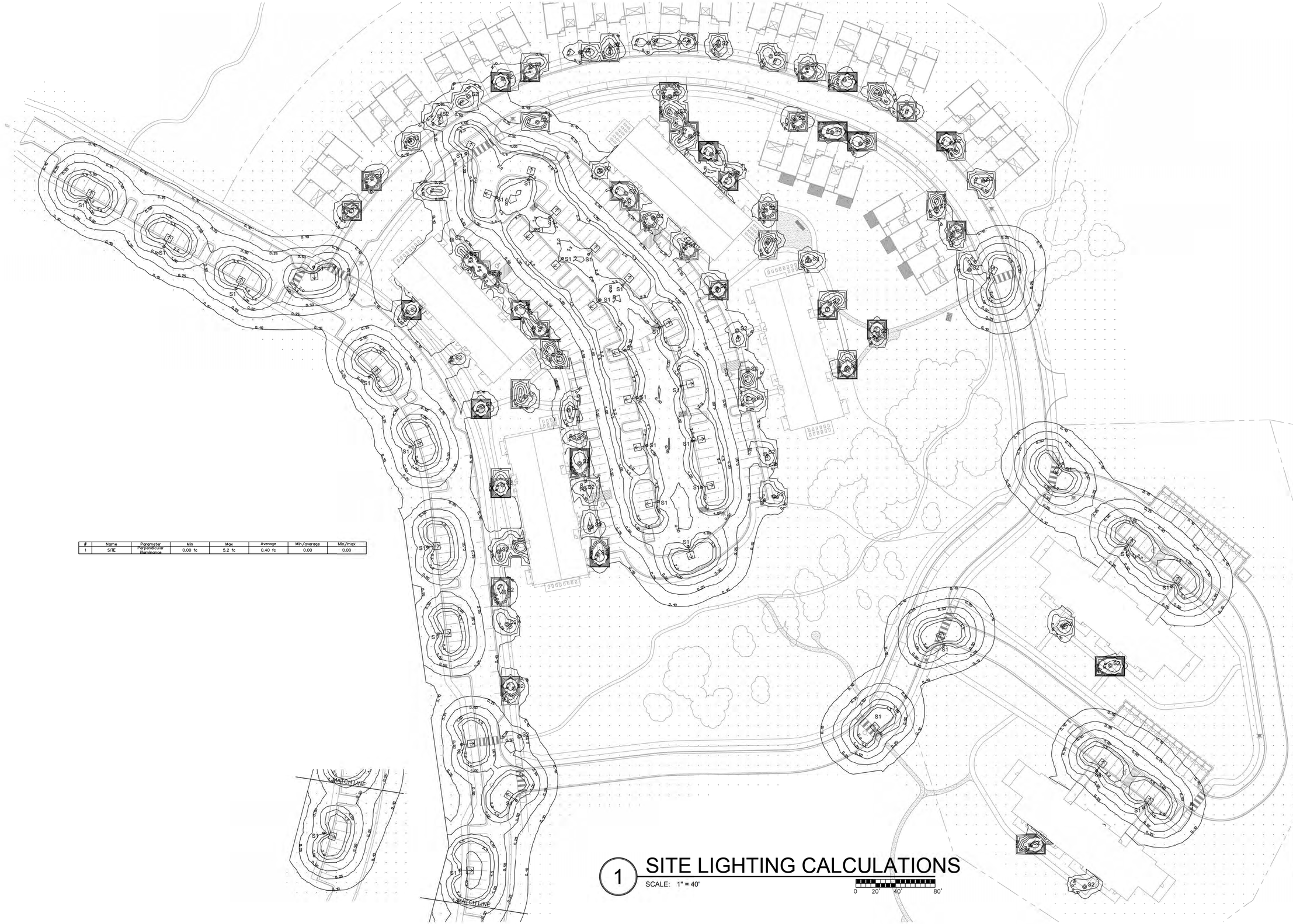
9 NORTH WILDHORSE
NEW CASTLE, COLORADO

ALPENGLOW LIGHTING DESIGN, INC.
4941 county road 113, carbondale, colorado 81625
(970) 948-2457 aaron@alpenglowinc.com

Lighting design, arrangements, plans, specifications, and ideas presented by these drawings are the sole property and copyright of Alpenglow Lighting Design, Inc. and shall not be used without written permission.

SITE LIGHTING PLAN

LIGHT-100



#	Name	Parameter	Min	Max	Average	Min/average	Min/max
1	SITE	Perpendicular Illuminance	0.00 fc	5.2 fc	0.40 fc	0.00	0.00

1 SITE LIGHTING CALCULATIONS

SCALE: 1" = 40'

0 20' 40' 80'

FINAL PLAN
original issue date:
8/26/24
revision dates:

9 NORTH WILDHORSE
NEW CASTLE, COLORADO

ALPENGLOW LIGHTING DESIGN, INC.
4541 county road 113, carbondale, colorado 81623
(970) 948-2657 aaron@alpenglowinc.com

Lighting design, arrangements, plans, specifications, and ideas presented by these drawings are the sole property and copyright of Alpenglow Lighting Design, Inc. and shall not be used without written permission.

SITE LIGHTING CALCULATIONS

LIGHT-101

KIM LIGHTING

DATE: LOCATION: TYPE S1

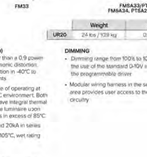
TYPE: PROJECT:

CATALOG #:

UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

ouro EDGE-LIT



FEATURES

- 20" size is singlehead lam (end look) pole and wall mount
- High performance optics up to 15,227 delivered lumens
- Elegant form factor
- Edge-Lit Light Guide
- NX lighting controls
- UL/cUL listed for wet locations, IP66 and 4G/3.5G vibration rated

IP66 RATED LUMINAIRE

CONTROL TECHNOLOGY

NX LIGHTGRID

SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece, low profile luminaire
- Molded silicone gasket throughout ensures the sealing between the two components and provides ingress protection
- Housing is designed with integral heat sink fins to aid in thermal transfer of the electrical component
- IK07 rated enclosure protects electrical equipment against external mechanical impacts
- All fasteners are stainless steel
- Cover is secured to lens frame by the latch and hinge
- One-piece low copper aluminum alloy die-cast lens frame is secured to housing with a tool-less latch and integral offset hinge
- LEDs mount to a metal primed circuit board assembly (MCPCB)

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed
- High voltage configurations, 347-480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components

Weight	EPA
UR20: 24 lbs / 11.38 kg	0.02 ft.²

ELECTRICAL (CONTINUED)

- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C
- Surge protection: 10kV and 20kA in series
- Wiring: No. 18AWM rated 105°C, wet rating

CONTROLS

7PR

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by others.

Standard customer operation modes:

- Traditional on/off photoelectric control
- 5-pin wireless photoelectric control for added dimming feature.
- 7-pin wireless photoelectric control for for dimming and additional I/O connections for customer use.

DIMMING

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry

(Specifications continued on page 5)

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S1

TYPE: PROJECT:

CATALOG #:

UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

CATALOG #

Example: UR20-96L-50-3KB-3-UNV-FMSA33-BLS-TPR

HOUSING

UR20

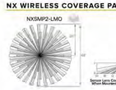
Model	LED Engine	CCT	Distribution	Rotation	Voltage	Mounting
UR20	Ouro	**Type 3M and 3**	**3K7** 3000K 70 CRI	**2M7** Type II Medium	(Blank) No rotation	**UNV** 120-277V	**FM33** Flush mt 3.0" OD arm, 3" fixture tenon
		96L-30 2,900 lm	**3KB** 3000K, 80 CRI	**3T** Type III Short		**347** 347V	**FM44** Flush mt 3.6" to 4.0" OD arm, 4" fixture tenon
		96L-50 5,000 lm	**3K9** 3000K, 90 CRI	**5W*** Type V Wide		**480** 480V	**PT23** 3" Post Top mount for 2-3/8" OD x 4" Long Tenon
		96L-70 7,800 lm	**4K7** 4000K, 70 CRI				**PT24** 4" Post Top mount for 2-7/8" OD x 4" Long Tenon
		96L-90 9,300 lm	**4KB** 4000K, 80 CRI				**PT36** 4" Post Top mount for 2-7/8" OD x 6" Long Tenon
		96L-135 12,000 lm	**5K7** 5000K, 70 CRI				**FMSA33** Side-Arm Post Top Mount 33" to 43" OD Pole, 4" fixture base
		Type 5W	Contact factory for other CCTs and CRIs				**FMSA44** Side-Arm Post Top Mount 33" to 43" OD Pole, 4" fixture base
		192L-30 5,000 lm					**FT14x23** 2" Side-Arm Flat Top Mount for 4" - 4.99" OD x 4" Long Tenon
		192L-40 7,000 lm					**PTSA34** 4" Side-Arm Post Top Mount for 2-3/8" OD x 4" Long Tenon
		192L-75 10,500 lm					**PTSA34** 4" Side-Arm Post Top Mount for 2-7/8" OD x 4" Long Tenon
		192L-135 15,000 lm				

Fixture Finish		Control Options		Options		Control Accessories	
BLS	Black-Gloss Smooth	**7PR-TL**	7-pin PCR with twist lock photocontrol	**SF**	Single Fuse	**WR-RME-L**	LightGRID™ External Fixture Module
BLT	Black-Matte Textured	**7PR-SC**	7-pin PCR with snorting cap	**DF**	Double Fuse	**NXGFMRPD-UNV**	NX Fifty Two(52)Lo® with NX Networked Wireless Radio, Integral Photocontrol, Integral Protocol, Integral Single Pole Relay with Dimming and Bluetooth Programming
DBS	Dark Bronze Gloss Smooth	**7PR**	7-pin PCR, wireless control-enabled	**TPL**	Tamper Proof Latch		
DBT	Dark Bronze Matte Textured	**AD-01***	Astro/DIM 50% output at mid-night	**WBFM4**	Wall Bracket Arm for FMA4 or FMSA44		
GTT	Graphite Matte Textured	**AD-02***	Astro/DIM 50% output midnight to 4 AM	**WBFM4**	Wall Bracket Arm for FMA4 or FMSA44		
LGS	Light Grey Gloss Smooth	**AD-03***	Astro/DIM 50% output 10PM to 4AM	**TAFM2.7***	Twin Arm mount for FMSA or FMSA33		
LGT	Light Grey Matte Textured	**AD-04***	Astro/DIM 50% output 10PM to 4AM	**TAFM4.1***	Twin Arm mount for FMA4 or FMSA44		
PSS	Platinum Silver Gloss Smooth	**NXB***	NX Networked Wireless Radio Module (NXRM) and Bluetooth Programming, without Sensor				
VGT	Verde Green Matte Textured	**WSP-40F**	Dimming Occ Sensor for up to 40' MH, 120-480V				
WHS	White Gloss Smooth						
WHT	White Matte Textured						
Color Option							
CC*	Custom Color						

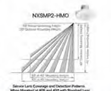
1 Consult factory for custom color, marine and corrosion finish options
2 Consult factory for custom color and textures exterior options.
3 Not available with BKW and BWW
4 Only available with 96L
5 Only available with 7PR
6 Post requires 4.25" x 4" Long tenon
7 Requires Wall Bracket Arm Part No FMA4-MT4A
8 Clicker time for each pair of fixtures per pole.

NX WIRELESS COVERAGE PATTERNS

NX5MP2-UMO



NX5MP2-HMO



NX LIGHTING CONTROLS FREE APP

The NX Lighting Controls App is free to use, meets application for programming both NX Lighting Controls wireless and Bluetooth® Smart devices. Download the app from your preferred app store and search for discover and setup wireless enable luminaires and program NX system settings.

Apple App: https://apps.apple.com/us/app/nx-lighting-controls/id1562112258

Google Play: https://play.google.com/store/apps/details?id=com.nxai.l4&hl=en_US&gl=US

Apple App

Google Play

CONTROLS TECH SUPPORT 800-888-8006 (7:00 AM - 7:00 PM)

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S1

TYPE: PROJECT:

CATALOG #:

UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

LIGHTGRID

Control Option Ordering Logic & Description		Control Option Functionality										Control Option Components
		Motion/Ambient	Dimming	Scheduling	Occupancy/ Vacancy Sensor	Daylight Harvesting	0-10V Dimming	DA DT Control	Bluetooth App Programming	Astro Logic	Sensor Height	
Standalone	NX5MP2-UMO: 360° Ceiling Mount with PIR, Photocell Sensor, Motion Sensing, Single Button Dimming, Bluetooth Programming, and Wireless Mesh Networking	✓	✓	✓	✓	✓	✓	✓	✓	–	–	NXSPKIT-UNV
	NX5M: 360° Recessed Wireless Radio Module (NXRM) with PIR Occupancy Sensor and Bluetooth Programming	✓	✓	✓	–	–	✓	✓	✓	–	–	NX5M-U
	NX5MP2: 360° Recessed Wireless Wireless Radio Module (NXRM) with PIR Occupancy Sensor and Bluetooth Programming	✓	✓	✓	✓	✓	✓	✓	✓	YES	–	NX5MP2-UMO
	NX5MSMO: 360° Recessed Wireless Radio Module (NXRM) with Bluetooth Programming	–	✓	✓	✓	✓	✓	✓	✓	YES	–	NX5MSMO-UMO

DEFAULT SETTINGS

Standalone	Occupancy Sensor	Enabled	
	Occupancy Sensor Sensitivity	4	
	Occupancy Sensor Timeout	10 Minutes	
	Occupied Dim Level	100%	
	Unoccupied Dim Level	10%	
	Daylight Sensor	Disabled	
	Bluetooth	Unlocked	
	2.4GHz Wireless Mesh	On	
	"Firmware Factory Protection: NX5MRDT"	System	

Networked	Occupancy Sensor	Enabled	
	Occupancy Sensor Sensitivity	4	
	Occupancy Sensor Timeout	5 Minutes	
	Occupied Dim Level	100%	
	Unoccupied Dim Level	10%	
	Daylight Sensor	Disabled	

NX WIRELESS COVERAGE PATTERNS

NX5MP2-UMO

NX5MP2-HMO

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S1

TYPE: PROJECT:

CATALOG #:

UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

OUTDOOR LIGHTING CONTROLS OPTIONS

CONTROLS FUNCTIONALITY

Control Option Ordering Logic & Description		Control Option Functionality										Control Option Components
		Remote/Astro	Dimming	Scheduling	Occupancy/ Vacancy Sensor	Daylight Harvesting	0-10V Dimming	Xn-DIM Control	Bluetooth App Programming	Astro Logic	Sensor Height	
Standalone	ABC	–	–	✓	Wired/ wall mount control	–	–	✓	–	–	–	ABC
	Ono	Ono remote/astro	–	–	Wired/ wall mount control	–	–	Wired/ wall mount control	–	–	–	Ono
	PMSC	7-Pin Receptacle	–	–	–	–	–	–	–	–	–	PMSC
	Wireless	7-Pin Wirelessly with Analog Dim	–	–	–	✓	–	–	–	–	–	PR-7L

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S1

TYPE: PROJECT:

CATALOG #:

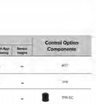
UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

DIMENSIONS

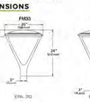
FM33

PT23

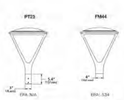


FM44

PT24 / PT34



FMSA33/PTSA23
FMSA34, PTSA24, PTSA34



TAFM2.7/TAFM4

WBFM3/WBFM4

ARM	DIAMETER
FMSA33	3" diameter
FMSA44	4" diameter
PTSA23	3" diameter with Tenon mount
PTSA24	4" diameter with Tenon mount
PTSA34	4" diameter with tenon mount

MOUNTING INSTALLATION

SENSOR PLACEMENT

MOUNTING VIBRATION RATINGS

UR 20 mm		UR 20 Post Top		UR 20 Side Arm	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	FM33	4G	FMSA33	1.5G
A34	4G	FM44	1.5G	FMSA44	1.5G
A46	4G	PT23	4G	PTSA23	1.5G
MAF	4G	PT24	4G	PTSA24	1.5G
		PT34	1.5G	PTSA34	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications.
Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Bridge/Overpass Applications

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S1

TYPE: PROJECT:

CATALOG #:

UR20 EDGE-LIT Post Top

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS

LEDs #	Lumens Package	Drive Current (mA)	Nominal Watts	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI			
					Lumen	BUG Rating B	U	G	lm/w	Lumen	BUG Rating B	U	G	lm/w	Lumen	BUG Rating B	U	G	lm/w
96L	3,000	350	30	Type 3	2958	2	0	2	104.9	2995	2	0	2	106.2	3025	2	0	2	107.3
	5,000	600	50		4835	3	0	3	103.7	4896	3	0	3	105.1	4945	3	0	3	106.1
	7,000	870	70		6862	3	0	3	99.3	6949	3	0	3	100.6	7019	3	0	3	101.6
	9,050	1150	90		9050	3	0	3	100.3	9163	3	0	3	101.6	9256	3	0	3	102.6
	12,000	1450	135		11696	4	0	4	84.6	11843	4	0	4	85.6	11963	4	0	4	86.5
96L	3,000	350	30	Type 3	3329	1	0	2	117.1	3368	1	0	2	118.4	3402	1	0	2	120.0
	5,000	600	50		5437	1	0	2	116.7	5505	1	0	2	118.1	5560	1	0	2	119.3
	7,000	870	70		7718	2	0	3	117	7815	2	0	3	118.1	7894	2	0	3	119.2
	9,000	1150	90		10178	2	0	3	112.8	10306	2	0	3	114.3	10410	2	0	3	115.4
	12,000	1450	135		13154	3	0	4	97.5	13319	3	0	4	98.3	13454	3	0	4	97.3
192L	3,000	350	30	Type 5W	3278	2	0	2	119.0	3316	2	0	2	120.3	3348	2	0	2	121.7
	5,000	560	45		5191	3	0	2	117.7	5256	3	0	2	119.2	5309	3	0	2	120.4
	7,000	800	60		7343	3	0	3	122.6	7435	3	0	3	123.5	7510	3	0	3	124.8
	9,000	960	75		9753	3	0	3	119.9	9883	3	0	3	120.4	9983	3	0	3	121.6
	12,000	680	105		12204	4	0	3	114.5	12357	4	0	4	116.0	12482	4	0	4	117.2
	15,000	840	135		14887	4	0	4	109.8	15075	4	0	4	111.2	15227	4	0	4	112.3

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S2

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

FEATURES

- IDA Dark Sky Compliant, No Up-light configuration
- Elegant form factor blended with Performance Optics
- Integral NEMA 3R Enclosure
- Dual receptacle power panel
- PA System capability
- Bluetooth® enabled RGBW accent

CONTROL TECHNOLOGY

Bluetooth® DMX phoros

SPECIFICATIONS

CONSTRUCTION

HOUSING:

- Castings are low copper aluminum alloy die-cast
- Gaskets are molded silicone to prevent harmful ingress to the lamp and driver compartment
- IP65 rated

SHAFT:

- Aluminum shaft(s) is 3.25" thick extruded aluminum 6061 alloy
- Concrete shaftbag conforms to current specifications for "Portland Cement," ASTM C150, Type I or II. Aggregates shall meet current requirements of "Specifications for Concrete Aggregates," ASTM C33. Water shall be clean and free from deleterious amounts of silt, oil, acids, alkalies or organic materials. Wire for reinforcement shall conform to ASTM A185. Steel for lugs and plates shall conform to ASTM A36, or A283 grade D
- Concrete shaftbag is medium sand blasted with anti-graffiti sealer. Last material color shall be integral to the concrete mix
- Concrete shaftbag is cured to allow for completion of the hydration process, and result in a 28 day compressive strength of not less than 4,500 psi
- Concrete shaft(s) is cast from fiberglass molds used to insure uniform parts. Mold parting lines maybe slightly visible in finished parts.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.
- IxD configurations have an optically clear flat tempered glass lens, all other configurations have either an optically clear or high transmission diffused acrylic lens

INSTALLATION

- Aluminum shaft configurations will have four 3/8" x 10" x 2" zinc plated L-hook anchor bolts shall to be installed with an included template. Nuts and washers are provided to level and secure the mounting plate to the anchor bolts.
- Aluminum shaft configurations will have a mounting plate and be able to be rotated 20° in either direction during installation for aiming adjustment
- Concrete shaft configurations will have four steel mounting tabs for installation on four 12" x 10" x 2" zinc electroplated L-hook anchor bolts. Each anchor bolt is supplied with two nuts, two washers, and a rigid pressed board template
- Concrete shaft configurations are palletized with adequate hold-downs to prevent load movement in transit
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

Pavilion

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed
- High voltage configurations, 208-277. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers are greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire is capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

(Specifications continued on page 3)

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S2

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

ORDERING GUIDE

CATALOG #

Example: PA7R-FT-NU-7QL-DIO-SK7-2AA-BLS-UNIV-EM

HOUSING

PA7R

Model	Top		Option		Distribution		Light Engine [1,2]
PA7R	Product 7" Ø Round	FT * Flat Top CT * Crowned Top	NU No Up-light		1 Type I		**12L-010-3AR *** 1,146 Monochromatic Amber
			CH Clear Horizontal Lens		2 Type II		**12L-010-3K7** 1,141 (1000 nominal lm), 3000K, 70 CRI
			CL * Clear Vertical Lens		3 Type III		**12L-010-4K7** 1,142 (1000 nominal lm), 4000K, 70 CRI
			DL ** Diffuse Vertical Lens		3HS Type III + House side shield		**12L-010-5K7** 1,144 (1000 nominal lm), 5000K, 70 CRI
			LV Louvers		4 Type IV		**12L-020-AMB *** 2,276 Monochromatic Amber
			GC Grille with clear vertical lens		5 Type V		**12L-020-3K7** 2,279 (2000 nominal lm), 3000K, 70 CRI
			GD * Grille with diffuse vertical lens				**12L-020-4K7** 2,278 (2000 nominal lm), 4000K, 70 CRI
							12L-020-5K7 2,284 (2000 nominal lm), 5000K, 70 CRI
							Consult factory for other CCTs (2700K - 6500K) and CRIs (80, 90 CRI)

Body		Fixture Finish		Voltage		Options	
24A	24" DAH, Aluminum	**BLS**	Black-Gloss Smooth	**UNV**	120-277V	**BW ***	Battery Backup
42A	42" DAH, Aluminum	**BLT**	Black-Matte Textured	**120***	120V	**LR ***	Luminous Accent
42B-C	42" DAH, Square Concrete	**DBS**	Dark Bronze Gloss Smooth	**277***	208-277V	**SF ***	Single Fuse
42CH-C	42" DAH, Charcoal Concrete	**DBT**	Dark Bronze Matte Textured	**347***	347V	**DF ***	Double Fuse
42NG-C	42" DAH, Natural Gray Concrete	**GTT**	Graphite Matte Textured	**480***	480V		
42WH-C	42" DAH, White Concrete	**LGS**	Light Grey Gloss Smooth				
42A-ROP *	42" DAH, Aluminum + Dual Receptacle Outlet Panel and Locking Cover	**LGT**	Light Grey Matte Textured				
42A-2GEB	42" DAH, Aluminum + Integral Recessed 2 Gang Electrical Box	**PSS**	Platinum Silver Gloss Smooth				
42A-SG3	42" DAH, Aluminum + Speaker Grille Enclosure for 3" ID speaker	**VGT**	Verde Green Matte Textured				
44A	44" Non-Impact Resistant DAH, Aluminum	**WHS**	White Gloss Smooth				
44A-ROP	44" Non-Impact Resistant DAH, Aluminum + Dual Receptacle Outlet Panel and Cover	**WHT**	White Matte Textured				
44A-ROPL	44" Non-Impact Resistant DAH, Aluminum + Dual Receptacle Outlet Panel and Locking Cover	Color Option					
44A-2GEB	44" Non-Impact Resistant DAH, Aluminum + Recessed 2 Gang Electrical Box	**CC ***	Custom Color				
44A-SG3	44" Non-Impact Resistant DAH, Aluminum + Speaker Grille Enclosure for 3" ID speaker						

For Impact-Rated 44" DAH-Round Pedtal

1 Adds .6 / 15mm to OAH(out at height)
2 CL and DL configurations shall be MCP
3 Only Available with * Type 2 or 5 * SK7 combinations only
4 Only Available with * Type 2 or 5 * 4K7 combinations only
5 Dedicated Input voltage, required for Wifi Wireless sensing
6 3"C, non-clamp luminaire, 90+ minute run time, output equivalent to 12L-010-4K7
7 Adds +5 watts and 4" / 10mm to overall height.
8 SF for 120, 277 and 347 input voltage, DF for 208, 240 and 480 input voltage.
9 Type 3 Only
10 Consult factory for custom color / recess and luminaire finish options
11 5-Hole MacAdam Ellipse Binning standard. Consult factory for 3-step MacAdam Ellipse Binning

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S2

TYPE: PROJECT:

CATALOG #:

PA7R

BOLLARD

SPECIFICATIONS CONT'D

CONTROLS

- Standard fixtures dimming range shall be from 10% to 100% and be compatible with 0-10V, user-defined, control devices

WIRELESS CONTROLS

BLUETOOTH®:

- The integral module shall enable the adjustment of the Luminous Accent to dim or change color to the desired setting when paired with RGBW Remote App via cellular/tablet device
- The integral module shall be compatible with Bluetooth Low Energy (BLE) or Bluetooth® Smart mobile devices operating on iOS8 or Android Gingerbread operating systems or newer
- Mobile App dimming range from 0% to 100% through the use of RGBW app (available on IOS and Android)
- Color selection and adjustment
- Camera function for color matching
- Intensity slider for dimming/ramping up
- Save and rename up to 10 presets
- Group and rename fixtures
- Fixture is password protected, refer to instructions to set unique password

DMX:

- 5 wires: Red (DMX+), Brown (DMX-), Yellow (DMX Ground), Black (+/- Voltage), White (common), and Green (Ground)
- Single DMX universe with six slots/addresses of virtual control which are pre-programmed at the factory:
- DMX slot/address 1 = red
- DMX slot/address 2 = green
- DMX slot/address 3 = blue
- DMX slot/address 4 = white
- Fully DMX RDM compatible
- Mobile App specification in additional information section

OPTIONAL BACKUP BATTERY

- Integral battery backup provides emergency path of egress lighting for the required 90 minutes for DTL emergent environments.

CAUTION:

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- IP65 rated
- IK7 (4J/3J) Mechanical Impact Code (IK10)
- IDA approved, 3000K and warmer CCTs only
- RoHS compliant
- Emergency battery pack options are California Energy Commission (CEC) Title 20 Compliant
- This product meets federal procurement law requirements under the Buy American Act (FAR 52.225-5) and Trade Agreements Act (FAR 52.225-7). See Buy America(n) Solutions link to https://www.currentlighting.com/resources/compliance-solutions/

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information

Bluetooth App Store Google Play

© 2023 KL Solutions, Inc. All rights reserved. Information and specifications subject to change without notice. All values are design or typical values when measured under laboratory conditions.

KIM LIGHTING

DATE: LOCATION: TYPE S2

TYPE: PROJECT:

CATALOG #:

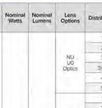
PA7R

BOLLARD

DIMENSIONS

FT
Flat Top

CT
Crowned Top



I/O

OPTICS
Clear Lens

Diffuse Lens

DELIVERED LUMENS

Drive Current	LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI				4000K 70CRI				5000K 70CRI			
						Lumen	BUG Rating B	U	G	lm/w	Lumen	BUG Rating B	U	G	lm/w	Lumen	BUG Rating B	U	G	lm/w
350mA	12L	22	2,000	NU, UO Optics	1	1044	0	0	0	48	1136	0	0	0	52	1164	0	0	0	54
					2	1199	0	0	0	55	1305	0	0	0	60	1336	0	0	0	62
					3	928	0	0	1	52	1228	0	0	1	57	1257	0	0	1	58
					3HS	953	0	0	0	44	1037	0	0	0	48	1062	0	0	1	49
					4	1362	0	0	0	63	1482	0	0	1

Garfield County Land Explorer

Parcel	Physical Address	Owner	Account Num	Mailing Address
212303400954	Not available NEW CASTLE	BUREAU OF LAND MANAGEMENT	R030107	2300 RIVER FRONTAGE ROAD SILT, CO 81652
212329200190	Not available NEW CASTLE	RG LAKOTA III LLC	R009983	350 MARKET STREET STE 304 BASALT, CO 81621
212329300185	1000 CLUBHOUSE DR NEW CASTLE	RG LAKOTA GOLF LLC	R009978	350 MARKET STREET STE 304 BASALT, CO 81621
212329300194	Not available NEW CASTLE	CTS INVESTMENTS, LLC	R043961	343 DAKOTA BLVD BOULDER, CO 80304
212329300197	Not available NEW CASTLE	CVR INVESTORS INC	R045250	PO BOX 1380 CAREFREE, AZ 85377
212330400001	Not available NEW CASTLE	GARFIELD SCHOOL DISTRICT RE-2	R380824	839 WHITERIVER AVENUE RIFLE, CO 81650-3515
212330400003	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R043960	PO BOX 90 NEW CASTLE, CO 81647
212330423007	631 N WILD HORSE DR NEW CASTLE	LORD, JAMES T & KELLY M	R006709	631 N WILD HORSE DRIVE NEW CASTLE, CO 81647
212330423008	627 N WILD HORSE DR NEW CASTLE	RATAJCZAK, ZDZISLAW & HALINA	R006710	627 NORTH WILDHORSE DRIVE NEW CASTLE, CO 81647
212330423009	6 BUCKSKIN CIR NEW CASTLE	YOUNG, DAVID A & FRAMBACH, JANE	R006711	6 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423010	10 BUCKSKIN CIR NEW CASTLE	CLASSEN, ROBERT SETH & GONZALEZ CLASSEN, GLORIA ELIZABETH	R006712	10 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423011	14 BUCKSKIN CIR NEW CASTLE	BADOLATO, AARON & ANNE	R006713	14 BUCKSKIN CIRCLE NEW CASTLE, CO 81647
212330423012	18 BUCKSKIN CIR NEW CASTLE	WHITCOMB, RANDALL K LIVING TRUST	R006714	1302 MAUS WICHITA, KS 67212
212330423036	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R006738	PO BOX 90 NEW CASTLE, CO 81647-0166
212330423037	Not available NEW CASTLE	NEW CASTLE, TOWN OF	R006739	PO BOX 90 NEW CASTLE, CO 81647-0166
212332200195	Not available NEW CASTLE	CVR INVESTORS INC	R043962	PO BOX 1380 CAREFREE, AZ 85377
ROW	Not available null			

New Castle Public Works

Memo

To: Paul Smith

From: John Wenzel

Date: October 21, 2024

Re: R2 CVR

The Town of New Castle Public Works Department has had the chance to review the R2 CRV **Final** Plan Application and has the following comments:

Raw Water Irrigation:

- Municipal Code 13.20.130 “Maintenance of service pipes and fixtures” should apply to the raw water taps and service lines. This language should be included in the final plat or SIA.

Water and Sewer Utilities:

- All potable water connections must be protected by a Reduced Pressure Principle Assembly check valve. This is not indicated in the final drawings.
- Provide a single water service for a test station. The town will provide the station. The approximate station size is 12”x12”. Location requires 5 residents above and five below. This is not indicated in the final drawing
- No 10” hot tap valve at the existing mainline. We can isolate with no interruption to other services. Please use a standard mega lug fitting
- The manhole spacing, connecting the existing sewer on N. Wildhorse and West Vista Loop (SMH-A2and SMH-A3), is too great. Maximum spacing 175 ft. We are concerned about the steep grade in this area. There is a possibility that we may not be able mechanically push a jetter hose the entire 300 length.

From: Orrin Moon
To: Paul Smith; John Wenzel; jeffs (jeffs@sgm-inc.com); mjs@mountainlawfirm.com
Cc: Remi Bordelon; Dave Reynolds
Subject: Re: R2 Final Plan Deadlines
Date: Friday, October 18, 2024 11:40:19 AM
Attachments: image001.png
Outlook-430xkt1v.png
Outlook-dky5iah1.png

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Paul,
I have reviewed the final plans for this project and only have the following comment:

I need to see a Civil plan with fire hydrants on a landscape overlay. This will allow me to see fire hydrant and tree planting locations. Nothing in the landscape plan addresses planting trees or vegetation next to fire hydrants. As the construction process progresses this will be missed unless it's outlined in the plans. I will be watching for obstructed fire hydrants and or the potential of having fire hydrants obstructed in the future.

Please feel free to contact me with any questions.

Thank You,

Orrin D. Moon
Prevention Division Chief/Fire Marshal
Colorado River Fire Rescue
970-625-1243
orrin.moon@crfr.us

January 29, 2025

Mr. Paul Smith, Town Planner/Inspector
Town of New Castle
P.O. Box 90
New Castle, Colorado 81647

RE: Castle Valley Ranch, 9 North Wildhorse Subdivision
Final Plan Review

Dear Paul,

The purpose of this letter serves to provide concurrence to the on-going coordination regarding the final design of the 9 North Wildhorse Subdivision. Sopris Engineering and SGM are still coordinating all of the final design issues needed to bring the drawings to final construction level. We have met with Sopris Engineering and are providing a variety of pieces of information such as PDF's of public works details for their drawings as well as pressure reducing vaults, blow offs and drains for the water system requested in our last review letter. Likewise, we are incorporating their proposed water system design into the Town's water model to confirm fire flow, redundant connection needs and service pressures throughout. Finally, once Sopris has had an opportunity to incorporate the details provided and have submitted these to the Town, we will need to review the final construction drawings to confirm EQR ratings (unit and lawn watering requirements) and responses in their 12/20/2024 letter to us.

As we noted in our prior review of the Final Plan drawings and as we are bringing these final concerns to conclusion we do note that the there are no issues that we have identified that will compromise the technical aspects of the subdivision as long as a condition of approval can be made that requires the developer to continue to work with Town Staff to resolve our concerns with the construction drawings. As previously noted, until specific final construction drawings are provided along with an up-to-date cost estimate for security, requisite easement provisions and water right dedications are made, a final technical approval or recording of the subdivision plat cannot occur.

Upon your receipt and review, if you have any questions, please don't hesitate to call.

Respectfully,
SGM

Jefferey S. Simonson, P.E.
Principal

AFFIDAVIT AS TO NOTICE OF PUBLIC HEARING

We, **R2 Partners**, do hereby certify that pursuant to ordinances of the Town of New Castle, Colorado, we provided notice of a Public Hearing on **November 13, 2024,** regarding a **proposed development** by doing the following:

1. At least fifteen **(15) days prior** to such hearing, we sent a copy of the attached Notice of Public Hearing by **certified mail to the owners of all property within two hundred fifty (250) feet** of the subject property and to the Town of New Castle.

2. If required by Chapter 16.10 of the new Castle Municipal Code, at least thirty **(30) days prior** to such hearing, I sent a copy of the attached Notice of Public Hearing by certified mail to the **owners of mineral estates** who have requested notification with respect to the subject property at the Garfield County Clerk and Recorder.

3. At least fifteen (15) days prior to such hearing, **we posted Notice of Public Hearing on the property on a sign** approved by the Town at least twenty-two (22) inches wide, twenty-six (26) inches high, with letters at least one (1) inch in height. The sign was posted so that it was visible from a public street.

4. At least (15) days prior to such hearing, the attached Notice of Public Hearing was published on the **Town's website**.

Signature

STATE OF COLORADO)
) ss.
COUNTY OF Garfield)

Subscribed and sworn to before me this 5th day of November, 2024, by Luis Wilsher.

Witness my hand and official seal.

Notary Public
My commission expires: 8/21/27

KATIE JOHNSON
NOTARY PUBLIC · STATE OF COLORADO
Notary ID #20154033231
My Commission Expires 8/21/2027

NOTICE OF PUBLIC HEARING
Town of New Castle

Virtual Meetings are subject to internet and technical capabilities.

To join by computer, smart phone or tablet:
https://us02web.zoom.us/j/7096588400

If you prefer to telephone in:
Please call: 1-346-248-7799
Meeting ID: 709 658 8400

Follow the prompts as directed. Be sure to set your phone to mute until called on.

Date:	November 13, 2024
Time:	7:00 PM
Place of meeting:	New Castle Town Hall, 450 W Main St, New Castle, CO
Brief description of meeting:	Presentation of the 9 North Wild Horse Multi-Family Housing, consisting of 16 total buildings with 130 rental units, combining townhomes, apartments and open space on ~47.6 acres in Castle Valley Ranch, east of VIX Ranch Park.
Legal description:	See Exhibit A
Common address:	TBD (East of VIX Ranch Park)
Applicant:	R2 Partners
Landowner:	CTS Investments, LLC

The complete application is available at the Town Clerk's office at 450 West Main Street, P.O. Box 90, New Castle, CO 81647. All interested persons are invited to appear and state their views, protests, or objections. If you cannot appear personally at such hearing, then you are urged to state your views by letter.

EXHIBIT A

Legal Description

A parcel of land being a portion of the 'Option Property', as described in that Quit Claim Deed, recorded September 21, 2009 at Reception No. 775392, and being situated in the SW1/4, Section 29, SE1/4, Section 30, the NE1/4, Section 31, and the NW1/4, section 32, Township 5 South, Range 90 West of the 6th P.M.., County of Garfield, State of Colorado, said parcel of land being more particularly described as follows:

Beginning at the 1/4 corner between said Sections 29 and 30, a 3.25" Brass Cap on 2" iron pipe Stamped 1/4 S30/29 BLM 1988, thence N 89° 36' 48" E, the assumed basis of bearings along the southerly line of the 2nd Amended Exemption Plat of Lakota Canyon Ranch, recorded February 4, 2008 as Reception No. 742257, a distance of 1308.59 feet, to the Northeast Corner of said 'Option Property', being a 1.25" yellow plastic cap with illegible stamping on a 5/8" rebar, said corner being coincidental with westerly and southerly lines of said Reception No. 742257,
Thence S 00°55'44" E, along easterly line of said Option Property, and the said coincidental westerly line of Reception No. 742257, a distance of 1002.40 feet, to a point on the northerly line of that parcel of land described in the Special warranty Deed, recorded April 15, 2010 at Reception No. 784749;
Thence the following twenty (21) courses along the northerly, westerly, easterly and then northerly lines of said Reception No. 784749;

1. N 89°54'27" W a distance of 116.87 feet;
2. S 54°50'38" W a distance of 173.10 feet;
3. S 00°02'34" E a distance of 167.50 feet;
4. S 32°41'48" E a distance of 88.46 feet;
5. S 00°55'44" E a distance of 289.40 feet;
6. S 14°00'12" W a distance of 22.45 feet;
7. S 28°56'08" W a distance of 541.68 feet;
8. 122.69 feet along a curve to the right, having a radius of 219.00 feet, a central angle of 32°05'54", the chord of which bears S 44°59'05" W, a distance of 121.09 feet;
9. 102.92 feet along a non-tangent curve to the left, having a radius of 481.00 feet, a central angle of 12°15'33", the chord of which bears S 54°54'14" W a distance of 102.72 feet;
10. N 51°02'22" W a distance of 247.25 feet;
11. 30.23 feet along a non-tangent curve to the right, having a radius of 275.00 feet, a central angle of 6°17'51", the chord of which bears S 42°06'34" W a distance of 30.21 feet;
12. N 44°48'48" W a distance of 174.82 feet;
13. N 56°40'07" W a distance of 55.13 feet;
14. N 63°30'38" W a distance of 55.33 feet;
15. N 71°43'03" W a distance of 57.57 feet;
16. 104.09 feet along a non-tangent curve to the right, having a radius of 970.00 feet, a central angle of 6°08'54", the chord of which bears N 11°34'51" E a distance of 104.04 feet;
17. N 16°07'55" E a distance of 50.00 feet;
18. N 18°54'59" E a distance of 221.52 feet;
19. N 30°00'58" E a distance of 50.41 feet;
20. N 67°17'36" W a distance of 131.42 feet;
21. 104.00 feet along a curve to the left, having a radius of 250.00 feet, a central angle of 23°50'05", the chord of which bears N 79°12'39" W, a distance of 103.25 feet, to a point on the northeasterly line of North Wild Horse Road, as described in that Special Warranty Deed recorded September 25, 2007 at Reception No. 733780;
Thence the following four (4) courses along said northeasterly line of North Wild Horse Road, being situated parallel to and 67.50 feet northeasterly of the westerly line of said Option Property, also a coincidental line with the North Park Parcel, recorded April 17, 2007 at Reception No. 721291;

1. 38.30 feet along a non - tangent curve to the left, having a radius of 491.25 feet, a central angle of 4°28'00", the chord of which bears N 04°02'01" W a distance of 38.29 feet;

2. N 06°16'01" W a distance of 314.42 feet;
3. 263.68 feet along a curve to the left, having a radius of 281.25 feet, a central angle of 53°43'01", the chord of which bears N 33°07'31" W, a distance of 254.13 feet;
4. N 59°59'02" W a distance of 338.00 feet, to a point on the westerly line of said Option Property, thence the following three (3) courses along westerly lines of said Option Property;

1. N 21°44'01" E a distance of 132.03 feet;
2. N 02°06'39" E a distance of 226.38 feet;
3. N 00°23'12" W a distance of 381.09 feet, to a point on the north line of the SW1/4, Section 30, thence S 89°47'18" E along said North line, SW1/4, Section 30, a distance of 308.87 feet, to the point of beginning, County of Garfield, State of Colorado.

The above legal description was created by Scott A. Hemmen for and behalf of SGM
118 West Sixth Street, Suite 200, Glenwood Springs, CO 81601
970-945-1004

New Castle, Colorado
Planning and Zoning Commission
Wednesday, November 13, 2024, 7:00 PM

Call to Order
Commission Chair Apostolik called the meeting to order at 7:00 p.m.

Roll Call

Present	Chair Apostolik
	Commissioner Cotey
	Commissioner Martinez
	Commission Alternate Rittner
	Commissioner Alternate Parks
	Commissioner Sass
	Commissioner McDonald
Absent	Commissioner Westerlind
	Commissioner Art Riddile

Also present at the meeting was Town Administrator Dave Reynolds, Town Planner Paul Smith, Assistant Town Planner Lauren Prentice, Town Attorney Mike Sawyer, Public Works Director John Wenzel, Town Engineer Jeff Simonson, Deputy Town Clerk Remi Bordelon, and members of the public.

Meeting Notice
Deputy Town Clerk Bordelon verified that her office gave notice of the meeting in accordance with Resolution TC 2024-1.

Conflicts of Interest
There were no conflicts of interest.

Citizen Comments on Items NOT on the Agenda
There were no citizen comments.

Public Hearing

Consider Resolution PZ 2024-6, A Resolution of the New Castle Planning and Zoning Commission Recommending Conditional Approval of a Final PUD Development Plan and a Final Subdivision Plat for Castle Valley Ranch PUD Filing 13 (9 N Wild Horse Drive)

Prior Meeting Verification from June 26, 2024

- Commissioner Martinez verified she read the prior meeting minutes.
- Commissioner Sass verified she read the prior meeting minutes.

Chair Apostolik opened the public hearing at 7:02 p.m.

Town Planner Paul Smith stated that the application from Preliminary to Final had not changed much. He said the intention for Final was to focus on the fine tuned details of the application unlike the Preliminary meeting that tackled the bigger issues/questions.

Staff Report
9 North Wild Horse
Castle Valley Ranch PA8 & PA9 Final Plan, Filing 13
Resolution PZ #2024-06
Planning & Zoning Commission (P&Z) – November 13th, 2024

Report Compiled: 11/7/2024

Project Information

Name of Applicant:	*R2 Partners*
Applicant's Mailing Address:	*1009 Delta Avenue* *Cincinnati, OH 45208*
Phone/Email:	*614-266-7629/b.rosenberg@r2partners*
Property Owner:	*CTS Investments, LLC*
Owner Mailing Address	*343 Dakota Blvd.* *Boulder, CO 90304*
Proposed Use:	*130 rental townhomes/apartments in 16 buildings*
Approximate Residents:	*~ 310-340*
Bulk Density:	*2.73 units/acre*
Open Space:	*34 acres passive open space;* *9.6 acres developed open space;*
Proposed Zoning:	*MF-2 per the Castle Valley Ranch PUD*
Surrounding Zoning:	*Single family residential homes (N Wild Horse Dr.)* *Open Space (VIX Park, LCR Golf Course)* *Mixed Use/Commercial zoning (TC Midwest, LLC)* *Residential zoning (CVRI & LCR)*

I Introductory Summary

R2 Partners has been both a developer and owner of multifamily rental projects for over the past 60 years. Based in Cincinnati and serving various areas in Colorado, R2 is rethinking multifamily residential living. Their current application in Castle Valley Ranch (CVR), Planning Areas 8 & 9, embraces the quality of life prized by all New Castle residents. The proposal contemplates 130 multi-family rental units with three distinct floorplans:

- *Model 1: "Empty-nester" targets retirees valuing convenience and practicality (~770-1,470sf);*
- *Model 2: "Live/Work" focuses on professionals looking for adaptive designs and multi-functional space focused on a work-from-home end user (~680-960sf);*
- *Model 3: "Townhomes" are conventional urban/suburban concepts available for starters or those looking to downsize (~1,420sf);*

Dispersed over approximately 47.6 total acres, the proposal contemplates 43.6 acres of passive & active open space (91.6% of total acreage) and includes the completion of the N Wild Horse Dr. connector with updated VIX parking. The Applicant will maintain public access to several existing single track trails that traverse the property from VIX park to the BLM. Prior to the current preliminary hearing, the Applicant convened for public meetings on the following dates:

- *October 25th, 2023 – P&Z Sketch Plan*
- *November 7th, 2023 – Council Sketch Plan*
- *December 7th, 2023 – Community Open House Meeting*
- *January 24th, 2024 – P&Z Sketch Plan Revised Site Plan*
- *June 26th, 2024 – P&Z Preliminary Plan*

The final plan submittal was deemed complete on September 30th, 2024. As the final of three application steps for new planned unit developments ("PUD") & subdivisions, final PUD reviews assess zoning conformance, compliance with Public Works requirements, the suitability of utilities and infrastructure, compatibility with the comprehensive plan, and address any adverse impacts to the town. By final approval, all civil drawings should attain construction level readiness.

Within thirty (30) days after the close of the public hearing, or within such time as is mutually agreed by the P&Z and the Applicant, the commission shall make one (1) of three (3) recommendations to Town Council regarding the application: 1) approve the application unconditionally; 2) approve the application with conditions; 3) deny the application. The commission's decision will be made by written resolution. A continuance may be granted pursuant to Section 16.08.040(G) of this title.

Within sixty (60) days from the date of the P&Z's written recommendation on the application, or within such time as is mutually agreed by the Town Council and the Applicant, the Town Council shall approve the application, with or without conditions, or deny the application. Town Council's decision will be made by ordinance which shall be introduced twice at a Town Council meeting and, if approved, shall take effect 14 days after final publication pursuant to Article IV of the New Castle municipal code.

Planner Smith noted that comments were included from Fire Marshall Orrin Moon, Director of Public Works John Wenzel and Town Engineer Jeff Simonson. He clarified that their comments had not changed much from Preliminary.

Planner Smith reviewed the general design of the development. He identified the ten units of triplexes and townhomes located North of the development, the 'Live/Work' units located in the center of the site with two two-story units facing North Wild Horse Drive as well as two three-story units planned for the center of the development, while two 'Empty Nesters' units were planned for a smaller separate loop. He explained that all units were rental units to be managed by the developer. He outlined the loop road 'Vista Loop' which he stated would be maintained by the Town, the other roads and parking lots within the development would be privately maintained. He added that the developer agreed to connect/pave the remainder of North Wild Horse Drive.

Planner Smith reminded the commission that the resolution was a draft to consider as recommendations to Council for approval. He said the recommendations to Council included staff and legal input. He stated that the commission had the opportunity to amend, change, add or remove recommendations that would go to Council for final consideration. Planner Smith stated that Council would need to make a decision within 60 days of the Planning & Zoning Commission's recommendation. He said there was concern of meeting that deadline with the upcoming holidays as well as platting and engineering details to work through. He stated staff had communicated with Council and R2 Partners to discuss a reasonable timeframe in which R2 Partners would meet with Council to negotiate.

II Changes from June, 2024 Preliminary Plan

At the June 26th hearing, the Commission unanimously approved the application with the conditions listed in Resolution PZ #2024-05. Though the general site plan remains consistent with the preliminary application, a few key changes are identified below:

Preliminary Plan	***Final Plan***
• *130 residential rental units: 26twnh, 80 apartments, 24 empty nesters*	• *No change*
• *2.73 units/acre*	• *No change*
• *91.6% gross area open space*	• *No change*
• *229 off-street residential parking spaces*	• *No change*
• *Netzero construction: discussed*	• *5%-15% reduction in energy use*
• *16 total buildings*	• *No change*

• *4 apartment bldgs.; 10 townhome bldgs.*	• *No change*
• *Apartments B-3 & B-4 are three story*	• *No change*
• *Passive open space with courtyards*	• *No change*
• *MF-2 zoning: 40 building height limit*	• *No change*
• *Tallest building: B3/B4 (Live/Work) @ 38.8'*	• *Tallest building: B3/B4 (Live/Work) ~ 46'*
• *1,600sf min lot area*	• *No change*
• *Snow Storage: 20.5% of road area*	• *18.7% of road area;*
• *Live/Work units balconies removed*	• *No change*
• *Open space: Applicant owned*	• *No change*
• *Pull-in parking included on west side of N Wild Horse for VIX Park users*	• *Cost share requested*
• *Townhomes: two-story duplexes and tri-plexes*	• *No change*
• *Workforce housing: 5 live/work @ 75% FMV*	• *No change*
• *Vista Loop: Town owned and maintained*	• *No change*
• *Chapman & Medaris Loops: Owner maintained*	• *No change*
• *EV charging capacity: Discussed*	• *EV charging capacity: Complies with state requirements*
• *Temporary construction easement: Considered*	• *Temporary construction easement: Concept proposed*

Planner Smith reviewed the changes that occurred from Preliminary to Final (utilizing the table above from his staff report). He highlighted the changes as:

- Netzero Construction: He clarified that netzero was not in town code as a requirement. He stated R2 Partners felt netzero was a priority to them. He stated that R2 Partners had committed to all electric units for the development. Planner Smith identified that going all electric was an important step towards netzero with the prospect of future solar installation or future local energy suppliers/utility companies providing energy sources via solar or other renewables to their customers.
- Tallest Building: Planner Smith stated that the tallest building at Preliminary was shown to reach thirty eight feet and eight inches. He stated that the height limits for that particular zone was forty feet. He stated that due to the topography of the land and elevations, the thirty eight feet and eight inches building height for two of the buildings equated to forty six feet.
- VIX Parking: Planner Smith stated that R2 Partners had asked for the Town's assistance in sharing the cost responsibility of paving the VIX Park parking lot.
- Workforce Housing: Planner Smith explained that there would be five units: three one-bedroom and two two-bedroom units offered to town staff with rent reductions. He said a topic for discussion would be if it would be limited to town staff or expandable to other workforce renters.
- EV Charging: Planner Smith stated he worked with the DHM team on charging ability to ensure the state requirement of capacity.
- Temporary Construction Easement: Planner Smith stated traffic flow and construction traffic would come from the south side of North Wild Horse Drive. Due to the potential for traffic congestion, Planner Smith said Katherine Senior agreed to a temporary construction easement of thirty feet following the property boundary of TC Midwest to the Castle Valley Boulevard roundabout.

Commissioner Cotey asked if the town had any inclusionary zoning requirements as part of the Town's policy. Town Attorney Mike Sawyer stated the Town had a comprehensive plan provision that stated developments must include affordable housing components. He added that one of the five criteria for approving a final plat was compliance with the comprehensive plan. Commissioner Cotey said the five proposed units equated to about three percent of the development. She added that the industry standard was closer to ten percent and that the City of Basalt requires twelve percent of a development be affordable housing. She stated that five units was on the low side of what was comparable to the area. Planner Smith responded that knowing the industry standard was important context and explained that based on town needs, five units seemed adequate at the time but did not include the possibility for workforce residents outside of town staff.

II Staff Review:

Throughout the application process, application documents will be reviewed pursuant to the criteria outlined in the Municipal Code (MC) for planned unit developments (PUDs) and subdivisions. At the final plan stage, an application shall show conformity to the following criteria (MC 17.100.050(H)):

1. *Consistency with the comprehensive plan;*
2. *Compliance with zoning and density requirements;*
3. *Compatibility to neighboring land uses;*
4. *Availability of town services from public works (including water and sewer services), fire, and police;*
5. *Adequacy of off-street parking and vehicle, bicycle, and pedestrian circulation;*
6. *The extent to which any required open space or parks are designed for active or passive use by residents of the subdivision or the public; and*
7. *Development is consistent with the natural character, contours, and viewsheds of the land.*

1) Is the proposal consistent with the comprehensive plan?

*Applicants are expected to demonstrate substantial conformity with the CP in all applications (**Policy CG-1B**). The checklist below, though not exhaustive, provides a tool for reviewers to assess conformance with the CP:*

- ☐ *Foster distinctive, attractive communities with a strong sense of place and quality of life.*
- ☐ *Demonstrate that individual project fits into a fully-balanced community land use structure.*
- ☐ *Ensure a mix of uses that complement the existing New Castle land-use patterns.*
- ☐ *Create walkable communities with non-vehicular interconnection between use areas.*
- ☐ *Guarantee a balance of housing types that support a range of affordability.*
- ☐ *Preserve open space, farmland, natural beauty, critical environmental areas, and wildlife habitat.*
- ☐ *Encourage economic development and supporting hard & soft infrastructure.*
- ☐ *Concentrate development in ways which provide efficient and cost-effective services.*

***Quality of Life:** According to the application packet (**Exhibit A, page 3**), the proposal aligns with numerous New Castle goals and values favorable for Smart Growth and a high standard of living (**Goal CG-5**). The proposal focuses on conservation of the natural environment (**Goals EN-1 thru EN-8**), sensitivity to architectural aesthetics, and an active lifestyle (**Goal RT-1**) that together support community and sustainability.*

*As part of a Smart Growth strategy, policy **Goal CG-4** expects large residential development (greater than 50 units) to integrate commercial services and conveniences. Though not included with this application, commercial development is anticipated on the vacant parcel south of VIX Park. To meet Smart Growth objectives, P&Z should consider*

the adjoining commercial parcel owned by TC Midwest, LLC in its evaluation. Though independently owned, the two developments may mutually complement each other and resonate with the CVR Master Plan.

Trails/Open Space/Recreation: *The trails shown on* ***Exhibit A, page 7,*** *align with currently existing use-trails and trail agreements. Two trails will originate from VIX Park and lead east towards the locally dubbed "Sunset Trail" that terminates with public lands to the north. The goal is for a seamless trail experience connecting routes already prized by residents (**Goal POST-3**). Preservation of these trail corridors should also be supportive of existing wildlife habitat (**Goal POST-4**). Other walking trails are dispersed internal to the development. Altogether the trail network will be conducive to recreational opportunities and non-vehicular access to adjoining developments.*

Environmental Impact: *New Castle is committed to stewardship of the natural environment and therefore is careful to consider potential negative impacts of new development. The Town partners with Colorado Parks and Wildlife (CPW) to identify and protect critical environmental resources (**Goal EN-1**). CPW has provided referral comment and Jake Stanton, the District Wildlife Manger, recommends the following best management practices:*

1. *Bear-resistant trash containers with regular trash disposal during construction;*
2. *Bear-resistant dumpsters and/or trash bins for all resident refuse;*
3. *Wildlife friendly fencing per CPW specifications;*
4. *Use of non-fruiting trees, shrubs, and flowers for landscaping;*
5. *Prohibition of at-large and outdoor feeding of pets;*
6. *Prohibition of feeding wildlife;*

For its part, the Town regulates off-leash dogs, excessive light trespass, preservation of native vegetation, and/or limiting fences in certain areas. In some development applications, the Town has encouraged additional landscape buffers to neutralize the effects of an urban setting on wildlife habitat.

*New Castle has also made progress in terms of energy conservation. The current building codes require sustainable building practices, that reduce fuel consumption and promote use of renewable energy (**Goal EN-7**). All buildings will comply with the state of Colorado's solar and electrical readiness provisions. Moreover, the Applicant is committed in the direction of Netzero construction. A Netzero building is one that is optimally efficient and generates energy onsite using clean renewable resources in a quantity equal to or greater than the total amount of energy consumed. Net-zero/all-electric appliances pared with solar PV or ground source heating are feasible methods to exploit especially considering local, state, and federal incentives currently available. At this time, fully functioning solar array is not being considered at initial build, but the Applicant maintains that the efficiency steps already being proposed (**Exhibit A-Appendix, page 183**) will reduce consumption by 5-15%.*

The Applicant has also proposed raw water as the means to irrigate landscaping. Raw water is non-potable water which bypasses the town's treatment facility thereby eliminating the processing step. The Applicant also receives a 25% reduction in water tap fees as a result of implementation. Opting for raw water is ultimately an economical and sustainability win for all.

Affordability: *The rental aspect of the proposal is unique. Rental communities provide a fully managed property for tenants who do not have the time nor inclination to fuss with general repairs and upkeep. Rental communities also provide a way for retirees to downsize in communities dominated by larger single-family homes and a way for younger families to participate in communities in which they may otherwise be priced-out. The proposal also offers units for professionals seeking adaptable spaces serving dual*

purposed living area plus functional office space. In sum, the diversity of housing modalities works to stratify rent prices making housing attainable to varying income levels.

*9 North Wild Horse offers a community promoting quality of life. Quality of life is potentially disadvantaged when a disproportionate share of household income is dedicated to housing costs. The Applicant has been committed to rent rates that are sensible for New Castle. Prices will vary with unit type and should track with those in New Castle and Glenwood Springs. Of the 130 total units (**Exhibit A-Application, page 33**), the types include 80 live/work units; 24 empty nester units, and 26 conventional townhome units. Live/work & Empty Nester units will consist of 1-2 bedroom units with the townhomes all at 3-bedroom. For context, Garfield County "Fair Market Rent" for 2023 is $1,357 for 1-bedroom, $1,861 for 2-bedroom, and $2,275 for 3-bedroom. Locally, a Staff search has found asking prices ranging from $1,650 (850sf) to $4,000 (2,000sf) with an average two-bedroom going for $2,600.*

*Discussions about affordable housing in New Castle are bracketed by several features: 1) Per vested rights, there are currently no price caps on rent (or sales) prices; 2) the CP indicates that the town will create and preserve affordable housing merely as an element of all new development (**Goal HO-2**); 3) the CP does not define "affordability" though the US Department of Housing and Urban Development (HUD) maintains that monthly housing expenses should not exceed 30% of household income. This discussion aside, the Applicant has generously offered the town five, one-bedroom live/work units at 25% off the then-current market rate on a rolling availability (**Exhibit A-Appendix, page 174**). Additionally, the Applicant has made significant adjustments to the site plan and building architecture to address these economic impacts.*

***Fiscal Impact:** A fiscal impact study was performed (Triple Point Strategic Consulting) comparing estimated revenues with costs associated with the new development. The study helps determine whether the Town can meet the new demand on services (**Policy CG-7B, CP pg. 54**). The analysis projects a population increase of 2,004 for the entire town of New Castle with approximately 313 associated specifically with the new development. The analysis then projects revenues and costs based on the Town's budget averaged between the tax years of 2021 and 2024. The results show a yearly net benefit to the town of $190,177. The cumulative net benefit by 2045 is estimated to be $7 million with $3.2 million coming in the initial two years of construction. The Town's finance department has reviewed the assumptions and projected outcomes separately with comparable results.*

Planner Smith addressed that a covenant for affordable housing was included as an exhibit to the packet. He reiterated that R2 Partners had stayed consistent in wanting to commit to making affordable housing available. Planner Smith stated that it would be preferred that the agreement be made in perpetuity, not a twenty year affordable housing plan, with the understanding that the available units would be made available to town staff initially and if unneeded would then be offered fair market for R2 Partners to rent out. Commissioner Cotey asked if the affordable housing units would only be offered to town staff and Planner Smith confirmed. Commissioner Cotey proposed the town consider a lottery program to offer affordable housing to the broader general workforce community of New Castle. Town Administrator Dave Reynolds acknowledged the possibility for Town Council to take that into consideration.

Commissioner McDonald asked how the affordable housing units would be rotated and available if they switch to fair market due to a lack of need. R2 Partners Principal Barry Rosenburg clarified that renters would sign a twelve month lease. Once the contract expired and if there was a need for affordable housing, the unit would be offered first

to town staff. Mr. Rosenburg added that R2 Partners was open to offering affordable housing units to residents outside of town staff, dependent on the Town's preference. Director of Public Works John Wenzel asked if the five units kept for town staff were specific units or of like kind. R2 Partners Attorney Chad Lee with JVAM Law confirmed that the way the agreement was currently written, the five units were specific locations. Mr. Rosenburg reiterated that a renter's contract would expire every year and become available to offer to town staff or an agreed upon rental pool of applicants. Town Attorney Mike Sawyer stated the agreement for the five affordable housing units should not be designated to specific locations, but rather be an agreement for general units available that met the three one-bedroom and two two-bedroom housing description. He advised that language be added as a recommendation. Planner Smith asked R2 Partners Attorney Lee for confirmation of the Town's authority to designate a renter of their choosing for the available affordable housing. R2 Partners Attorney Lee confirmed the Town had the authority to choose a designee of their choice to utilize the five units of affordable housing, given an approved background check. R2 Partners Attorney Lee added that was their intent with the agreement and would be happy to clear up the language in which it was written for further clarification.

Alternate Commissioner Rittner asked if R2 Partners would consider providing additional units of affordable housing for onsite property management staff. Mr. Rosenburg confirmed that the five affordable housing units would be a separate agreement for any onsite management units. Mr. Rosenburg stated that they had not finalized an onsite management plan but had discussed the possibility of hired on-site staff.

2) Does the proposal demonstrate compliance with zoning and density requirements?

Zoning: *The Applicant has elected Castle Valley Ranch MF-2 zoning criteria. According to MC 17.104.080 MF-2 is a "multifamily district allowing higher density including apartments." The following land uses are those permitted by right:*

- *Attached dwelling units in structures containing more than two units;*
- *Public parks, playgrounds and related accessory structures 5,000 sq. ft. or less;*
- *Parking facilities;*
- *Recreation facilities including, but not limited to health facilities, hobby rooms, activity rooms, meeting rooms, pools, gymnasiums, ball fields, tennis or basketball courts, volleyball courts, and any building of fields or play surfaces;*
- *Pedestrian and bicycle trails;*
- *Open space and parks*

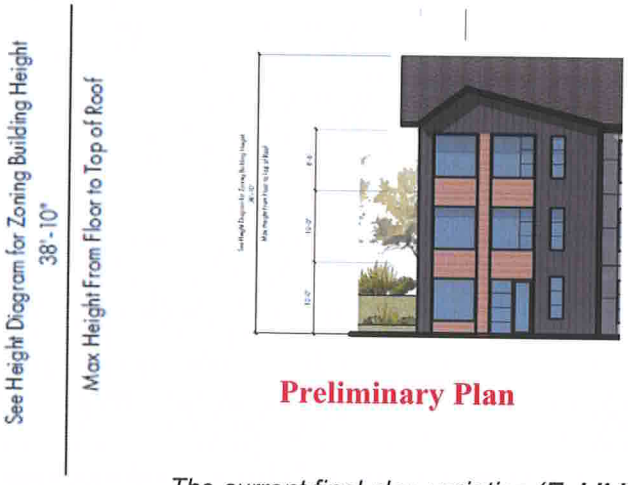
The main differences between MF-1 and MF-2 is that the former allows detached dwelling units, slightly lower density, and lower maximum building height (35'). All proposed uses are permitted by right.
The Master PUD allows for the following density standards:

- *Minimum lot area of 2,200sf;*
- *Minimum lot area per dwelling unit of 1,600sf or 27.2 units per acre;*
- *Maximum building height of 40';*
- *Minimum front yard setback 18';*
- *Minimum side yard setback of 0';*
- *Minimum rear yard setback of 10';*
- *Minimum distance between buildings of 10';*

Density: *As shown in the submittal packet (**Exhibit A-Application, page 8**) overall bulk density reaches 2.73 units per acre which is far below the 27.2 units per acre allowed. The live/work units have the highest localized density within the overall 46.7 acres. However, the live/work density is no more than 12.3 units/acre which is one unit/acre less than Eagle's Ridge Ranch and five units/acre less than the Senior Housing. Setbacks for each building lot will be finalized at final application.*

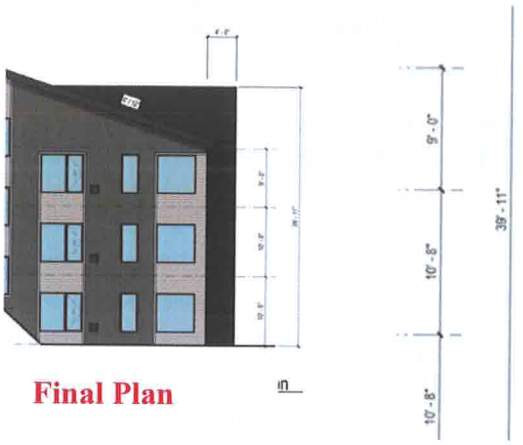
Building Height: *As architectural designs became refined, the maximum building height for the three story live/work buildings (Buildings B3 & B4 **Exhibit A-Application, page 18**) was reexamined in relation to the building height definition in Section 17.04.050. At the preliminary hearing the building height was shown as 38.8' measured from the bottom slab to the top ridge as shown below:*

Planner Smith explained that the common assumption for measuring building height involved measuring the top to the bottom of the building. He explained for the particular zoning that the development was in spoke differently to identifying building height. He clarified that the Castle Valley Ranch (CVR) height definition considered the slope/hillside in which a building would be developed in an effort to avoid designing callosal structures that appeared taller than they actually were. He explained that the buildings with a planned height of thirty eight feet and eight inches would have a 'virtual' height of forty six feet due to the visual downslope twenty five feet from the building, termed the "Slope Effect." He concluded that the thirty eight foot and eight inches building heights were technically six feet above the limits of the code definition for building heights, but also below the forty foot max building height for a structure. He said the slope effect applied to all four 'Live/Work' units. Planner Smith added that the town had taken into consideration the slope effect and allowed development plans similar to this height difference in the past. He said the resolution was a draft and the first condition addressed the six foot height difference for the commission to either accept as illustrated in the packet or offer alternatives for Town Council to consider.



Preliminary Plan

*The current final plan variation (**Exhibit A-Application, page 18**) shows a slightly increased height from slab of 39.9' (though not the uppermost part of the roof):*

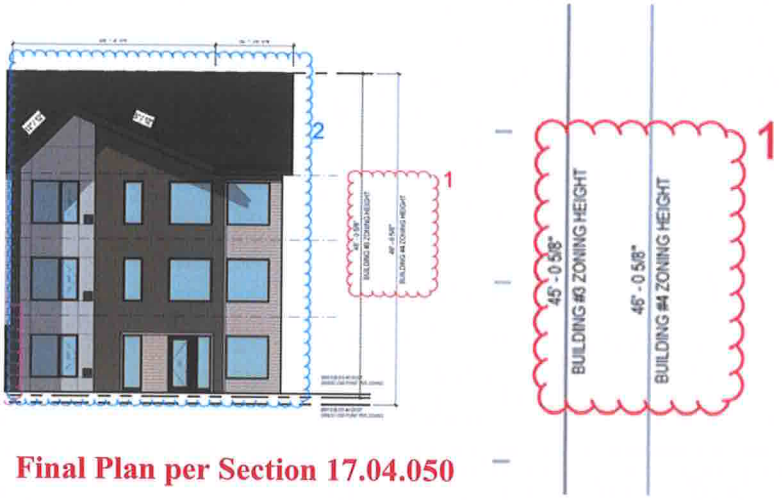


Final Plan

However, per the code, the initial point of reference for height measurements is not the bottom floor slab. Rather, the building height is defined as follows:

> *"Building height" means the vertical distance measured from the lowest point of the natural grade on the lot within twenty-five (25) feet of the tallest side of the building to the uppermost point of the roof of the building; provided, however, that if the lot upon which a building is to be built has a slope greater than fifteen (15) percent, building height shall be defined as the vertical distance measured from the average existing grade within the building setback envelope to the uppermost point of the roof of the building.*

Taking into account the code's definition renders the building height at approximately 46' or 6' above the 40' zoning maximum (See also 41.5' for B;1 43.8' for B2, Exhibit A-Application, page 19):



Final Plan per Section 17.04.050

The Town has allowed deviations to height limits in the past. Most recently the Town granted a 9' exception for a single building in the Lakota Canyon Ranch Longview application. In that instance, certain factors informed P&Z's decision. For one, the Longview building was closely situated to other buildings that also exceeded their respective height maximums (i.e. Shibui, CRFR Firehouse, and the Senior Housing). At that time, P&Z was also generally persuaded by the fact that the building's excess height

would be obscured by two-story structures immediately adjacent. Story ballons were erected on site to demonstrate this idea.

At the June preliminary hearing, P&Z expressed concern with the visual impacts of adding a third level to Buildings B3 & B4. At least two methods to mitigate were explored: 1) obscure east elevations using the 2-story Buildings B-1 & B-2. In this way building mass will step gradually with the grade from N Wild Horse to the east; 2) Blunting of roof pitches (compare Live/Work gables with sketch plan exhibits). With massing alternatives, structure orientation, and roof articulation, the Applicant felt the concerns with increased building height on the surrounding views would be relieved. Staff has suggested returning to stepped structures as illustrated in the original sketch plan (see above) to better approximate the appearance of surrounding single family and multi-family homes. Alternatively, the structures could be modestly sunken into the topography, effectively lowering the building height. This precedent was also set during the Longview application.

Sketch Plan Live/Work Massing

For the Applicant to move forward with these alternatives, P&Z would have to be equally convinced as before that Buildings B1-B4 fit the surrounding residential neighborhood currently comprised of SF homes and triplexes. P&Z would also need to be mindful that the precedent set with this height exception may prompt other future developers in the area to do the same. Overall, P&Z should come away from the decision with the confidence that consistency with the surroundings is preserved no matter what height is decided.

3) ***Does the proposal demonstrate compatibility to neighboring land uses?***
The parcel lies in the vicinity of various land uses within CVR: larger SF homes on N Wild Horse Dr, Buckskin Cir. & TBD Filing 12 to the south, VIX Park to the west, a commercial parcel (TC Midwest, LLC) to the southwest and two Garfield RE-2 schools within walking distance. BLM land and the Lakota Links Golf Course lie directly north of the parcel.

P&Z and Council have generally understood compatibility in terms of style and function. A use is considered more or less compatible in style to the degree it is similar in architecture, landscaping, and site planning (e.g. roads, trails, open space). A use is considered compatible in function to the degree its purpose serves the community similarly to surrounding uses. At times when compatibility is questionable, P&Z and Council have been hospitable to adding transitional features between developments to mute perceived incongruities in style or function. In such cases "buffering", for example landscape screening and open space, can soften the juxtaposition between two architecturally dissimilar developments. Likewise, small scale retail, professional services uses, and open space can function to temper alleged incompatibility between a SF development and, say, an industrial zone.

9 North Wild Horse is a multifamily rental property located within a rural residential setting. As a higher density product, building structures will naturally have more mass and height than those surrounding it. In anticipation of this, the Applicant includes open space buffering (~150' separation) adjacent to homes along Buckskin Dr. Greater distancing is expected to the east and south near future Silverado Dr. and N Wild Horse

*homes. Architectural features derive articulation and texturing from neighboring residential designs. Townhomes units will have horizontal and vertical displacement (stepping) to better resemble the SF home context. As noted elsewhere, live/work and empty nester buildings (**Exhibit A-Application, pages 18-26**) exhibit less vertical displacement than surrounding structures and adjoining topography. This style might be deemed less compatible than what was viewed originally at sketch plan. Feedback from P&Z, Council, and the community has been mixed with respect to the more urban, block style multifamily buildings characteristic of developments in Denver, Vail Valley, and the Roaring Fork mid-valley. Therefore, P&Z will need to consider whether the current architectural signatures (i.e. roof pitches, elimination of balconies, taller windows) are an adequate tradeoff.*

*On the other hand, with a more conventionally urban approach the Applicant successfully minimizes sprawl which is supportive of the idyllic areas of CVR. Parking for the live/work lots is nested within the interior of the building site plan while Empty-Nester units obscure vehicle volume with covered parking spaces (**Exhibit A-Application, page 7**). Parking is also restricted to one side of the street on Vista Loop to reduce on-street congestion. Landscaping will be used sparsely to minimize disruption to otherwise unspoiled terrain. All things considered, the Applicant has made efforts to preserve the overarching feel and function of CVR at N Wild Horse Dr. and attempts transitioning features to address instances where compatibility may be questionable.*

4) ***Is there availability of town services from public works (including water and sewer services), fire, and police?***

***Police:** At Sketch Plan, the Applicant anticipated an increase of approximately 338 new residents at build-out. The Police Department currently consists of eleven FTEs which is ideal for a town the size of New Castle. Generally, additional FTEs are considered for every increase of 500 residents. Therefore, the Police Chief concludes that there would be no compromise with police service as a result of the expected population increase.*

***Fire:** In light of the current multi-year drought and the ongoing expansion of the wildland-urban interface, Colorado River Fire Rescue now stresses improving the resiliency of structures and expanding the surrounding defensible space (**Goal EN-8**). Replacing conventional materials with those of more robust fire resistance, particularly in buildings along the perimeter of the development, buys time for firefighters during a wildland fire incident and inhibits fires from spreading from the source. In 2024, the Town adopted standards for the requirement of fire resistant materials and improved defendable space requirements for new structures. To extend their firefighting potential, CRFR requests two-track roads for fire apparatus be designed along the periphery of the outer structures and a singular vehicle route extending towards the Lakota Links property, **Exhibit C**. The Applicant has updated the site plan to address this concern (**Exhibit A-Application, page 7**). It is important that these routes be improved sufficiently enough to carrier the weight of the necessary fire apparatus. These routes should also be permanently signed "Emergency Access Only".*

***Public Works:** The CVR PUD is approved for 1,400 residential units and 100,000sf of commercial space. These totals were primarily the result of calculations performed on the basis of water dedicated from Elk Creek. At present the PUD has approximately 895 built units and no commercial development. With 130 proposed units in this Application, the PUD remains well short of the 1,400 total rooftops allocated for CVR. The current sewer treatment plant is also sufficiently sized to process the full build-out of both CVR and Lakota.*

Streets: The Town contemplates maintenance of Vista Loop and the N. Wild Horse connector once all public improvements are accepted. Remaining streets will be private. Public Works agrees that speed, safety, and costs are priorities in road design. On-street

parking serves to accommodate overflow vehicle parking for guests, deliveries, trash collection, extra resident vehicles, and emergency vehicles. Staff and the Applicant have worked closely to provide street designs that satisfy all these concerns. ***Exhibit A-Application, page 45*** *shows the agreed upon designs.*

*Snow Storage: Snow removal is located on the site plan (**Exhibit A-Application, page 12**). 17.8% of total roadway area has been designated for snow storage which is 2.8% more than required. Ample snow storage is demonstrated on all separated sidewalks, Staff's preferred storage location.*

Raw Water: Raw water is available at the north end of VIX Park and is expected to irrigate all common landscaping areas within the new PUD. The raw water infrastructure will need to be extended and looped with the installation of the N Wild Horse road connection.

5) ***Is there adequate off-street parking and vehicle, bicycle, and pedestrian circulation?***

Parking: *The purpose of off-street parking in the PUD "is to ensure that safe and convenient off-street parking is provided to serve the requirements of all land uses in the Castle Valley Ranch PUD and to avoid congestion in the streets" (MC 17.104.100). As shown on **Exhibit A-Application, page 9**, the following Town standards apply:*

- *Duplex, tri-plex or four-plex – Two spaces per dwelling unit;*
- *Five or more dwelling units in one structure – One and one-half spaces per dwelling unit + 1 recreational vehicle parking space for every 5 units in a 5-plex or greater;*

Off-Street Parking: *Per the standards, required off-street parking totals 229 spaces. The distribution is as follows: The Townhome models provide for a mix of one and two car garages. Regardless of garage size, all units will include two-car driveways (**Exhibit A, page 11**), or 3-4 off-street parking spaces where only two are required. This provision solves for issues related to garages used as miscellaneous storage rather than vehicles. The Code reduces parking to 1.5 spaces per unit for Empty Nester and Live/Work models. The Applicant, familiar with the complications of high density residential parking, has offered at least two spaces per unit for the Empty Nester models and has exceeded the parking for the Live/Work units. Based on P&Z input, no differentiation will be made between seasonal/RV parking and other parking, but seasonal spaces will be included in the over parking count.*

*One dilemma to the parking total will be the requirements for EV charging equipment. Approximately 10 spaces will require EV ready equipment, designated solely for EV use per state statute. These spaces may only be occupied by electric vehicles which may result in less overall parking for non-EV owners. The Applicant has therefore planned to install two fully equipped EV parking spaces at VIX park. The Applicant has added a parking site plan since the preliminary (**Exhibit A-Application, page 10**). Staff also recommend a parking management plan be added to the covenants prior to final approval with provisions for reserved parking in shared lots and prohibitions on overnight parking along N Wild Horse Dr. adjacent to VIX park.*

Vehicular Circulation: *Road, sidewalk, and trail design is a critical component to any new development in New Castle. To optimize circulation, the Applicant is committed to connecting N Wild Horse Dr. completing the underdeveloped section between Alder Ave. and Castle Valley Blvd. Of note, nearly 1/5th of this new road section is outside the Applicant's property boundary. However, because of the importance of circulation and public safety, the Applicant has agreed to work with the neighboring property owners, particularly CVR Investors, to complete this link. Staff anticipates that the connector will match the Town standard ROW, including detached sidewalks with landscaping.*

Nonvehicular Circulation: *The Applicant has made a point not to disrupt the general trail alignment between VIX Park and the BLM land. Separated sidewalks allow easy circulation to all inhabited portions of the property with additional soft trails extending to the periphery for easier interface with surrounding neighborhoods (**Exhibit A-Application, page 7**). To meet pedestrian safety concerns, high visibility crosswalks with bump outs were added per P&Z request.*

Planner Smith said in the event of any parking issues, such as staff/police called out to the site, there was wording in the included covenant that stated the town may require a parking management plan. Mr. Rosenburg said it was difficult to predict the parking situation twenty years down the road. He said R2 Partners modeled their proposal after the Romero Group development plan in regard to parking that allowed for flexibility for the Town to require changes if problems arose. Commissioner Cotey explained that the Romero Group development was mixed use, so the comparison in planning was not the same. Mr. Rosenburg explained that the wording gave the Town the authority to address any parking issues in the future. Planner Smith advised to add that wording to the conditions and Mr. Rosenburg stated he did not feel that was a problem.

6) ***Are the required open space or parks designed for active or passive use by residents of the subdivision or the public?***
*As previously discussed, 91.6% of the property will remain as open space. Within that area, the Applicant has preserved existing public use trails with various connecting trails added (**Exhibit A-Application, page 7**). To reduce the overall development footprint, small, active parks have been replaced with passive open space and two small sitting areas (**Exhibit A-Application, pages 79-81**). Since the open space requirements for CVR have already been met, no open space will be dedicated to the Town. However, the Applicant contemplates ongoing public access to all residents with an easement agreement.*

7) ***Is the development consistent with the natural character, contours, and viewsheds of the land?***
*The site plan (**Exhibit A-Application, page 48**) follows the sloping topography downhill from northeast to southwest. Each building generally terraces with the existing slope (**Exhibit A-Application, pages 44-52**). Terracing of structures limits cut-and-fill and reduces the need for unsightly landscape retention. The approach also softens the blunt, "blocky" appearance, that may otherwise disrupt the undulating, natural landscape. The Live/Work units and the Empty Nesters are formidable in size, stretching approximately 150'. As the architecture is being finalized Staff recommends revisiting the massing particularly of the live/work units. Since roof step-downs at the stair corridors were eliminated, there is concern that an uninterrupted roof ridge for the entire length of the building conflicts with the contours of surrounding topography. And, per **Policy EN-6B** of the CP, visual access to the ridgeline is expected. The Applicant, in **Exhibit A-Application, page 37**, has contemplated modestly sized berms and drought resistant trees or shrubs partially as a screening strategy to mitigate building mass. Ultimately, P&Z should consider whether these structures, coupled with screening, is enough to maintain consistency with the natural character of the land. To conserve water and limit landscape maintenance such as mowing, Staff requests the Applicant consider drought resistant vegetation and seeding with native grasses to restore disturbed areas to their original state. Sod and landscape irrigation, likewise,*

should be used sparingly to limit the need for landscape maintenance. Modestly mowed buffers and borders can provide a satisfying manicured look needing little maintenance.

V Staff Recommendations

Staff offer the following recommendations to the final PUD application:

A. *The maximum building height of Buildings B1, B2, B3, & B4 shall not exceed the building elevations presented in* ***Exhibit A-Application, pages 18-26****. Alternatively, the Applicant shall consider height reductions, additional screening, architectural modifications, or any combination of these to these structures to optimize consistency with the natural character of the land. All other structures shall comply with the building height requirements specified in Section 17.04.050.*

DHM Design Principal Jason Jaynes commented that a couple townhomes fell into the previous discussion regarding height and slope effect. He identified the two buildings as the townhomes to the right of the 'Live/Work' units. He said those two townhomes would not meet the code definition, similar to the 'Live/Work' units. Planner Smith asked how much the building heights exceed. Mr. Jaynes said the buildings were under thirty five feet, but it would be best to look at it in detail.

B. *All site specific development applications subject to the provisions of the International Fire Code or matters requiring fire alarms and/or fire suppression shall be submitted to the Fire Marshal for review and comment.*

C. *The Applicant shall comply with all recommendations of the Town Engineer, Town Public Works Director, and Town Attorney provided in response to review of the Application,* ***Exhibits C, D, & E****.*

D. *All exterior lighting to be dark-sky compliant per the comprehensive plan. Demonstrate that all exterior lighting will limit trespass. Parking lot lighting should be on timers to reduce the light duration at night while maintaining security lighting as needed.*

Planner Smith stated the dark-sky compliance had been resolved, but that staff kept the wording for ease of access for future reference.

E. *The location and manufacturer of any electric vehicle supply equipment install within the public right of way shall be at the discretion of Public Works.*

Planner Smith said there were two equipped EV ready spaces at VIX park planned at the discretion of Public Works for which manufacture to use.

F. *Fire Access roads illustrated in* ***Exhibit A-Application, page 7*** *shall be signed "Emergency Access Only", per fire marshal referral in* ***Exhibit B****.*

Planner Smith said Fire Marshal Moon would like to have the road traveling north towards the golf course to be regraded, cleared of brush and flattened (Exhibit A). Planner Smith stated that road would be an emergency access only with signage.

G. *A temporary construction easement, generally conforming to that depicted in* ***Exhibit F****, shall be constructed to accommodate construction vehicle circulation for the buildout of PA 8 & 9 (R2 Partners LLC) and PA 12 (TC Midwest, LLC) until the completion of either PA 12 or PAs 8 & 9, whichever is first. The easement shall consist of a semi-impervious surface, a track pad at the intersection with Castle Valley Blvd. and include safety fencing along the hazardous to the public. Any damage to public infrastructure, including but not limited to asphalt bike paths,*

landscape irrigation, underground utilities, landscaping shall be the responsibility of the Applicant.

Planner Smith said the easement would apply to both R2 Partners and a potential development from TC Midwest. Whichever build finished first would terminate the agreement at the discretion of TC Midwest.

H. *All trash dumpsters shall be located within an approved trash enclosure that extends six feet high and includes a bear resistant latching mechanism. Trash receptacles for townhomes shall be of a bear resistant type and stored inside.*

Planner Smith noted that trash receptacles should have a structured storage space, particularly with the townhomes that were designed with one car garages.

I. *A declaration of covenants for the common interest community that are to the satisfaction of the Town Attorney. The form of the declaration of covenants shall be finalized before consideration of the Final Plat by the town council. Recordation of the declaration of covenants shall be accomplished at or before recording of the Final Plat.*

J. *A parking management plan shall be added to the covenants prior to final approval with provisions for reserved parking in shared lots as necessary. Signage on both sides of N Wild Horse Dr adjacent to VIX park shall read "No Overnight Parking".*

Planner Smith suggested changing the language to model after what existed in the parking definition and management of the covenants as previously discussed.

K. *A subdivision improvements agreement ("SIA") containing an engineer's stamped cost estimate of public improvements, to the satisfaction of the Town Attorney. The form of the SIA shall be finalized before consideration of the Final Plat by the town council. Recordation of the SIA shall be accomplished at or before recording of the Final Plat.*

Planner Smith said Item K would be presented and discussed at Town Council.

L. *Provide a construction phasing plan for inclusion in a subdivision improvements agreement. Identify, at minimum, each of the following components:*

- *Buildout phases if necessary;*
- *Schedule that identifies the sequencing of construction, sequencing of occupancy, traffic flow, and traffic control plans during construction;*
- *Storage and staging areas for construction equipment and materials;*
- *Illustrate drainage and erosion control best management practices (BMP's);*
- *Conformance to all requirements and specifications approved by the fire marshal concerning temporary access to the project;*

Planner Smith said R2 Partners has addressed Item L in the packet, as a single phase development.

M. *Landscaping shall incorporate native grasses and plants that minimize maintenance, mowing, and irrigating. The PUD landscaping plan shall be approved by Public Works. Plans submitted for building permit for any building shall demonstrate no more than 2,500 square feet of sod per dwelling unit as specified in 13.20.060 of the Municipal Code.*

N. *All disturbed areas in the project shall be revegetated and maintained in a*

predominantly weed free condition.

O. *All representations of the Applicant made verbally or in written submittals presented to the Town in conjunction with the Application before the Commission or Town Council shall be considered part of the Application and binding on the Applicant.*

P. *The Applicant shall reimburse the Town for any and all expenses incurred by the Town regarding this approval, including, without limitation, all costs incurred by the Town's outside consultants such as legal and engineering costs.*

Q. *The sale of individual lots, parcels or units may not occur until a plat creating the lot, parcel or unit is recorded with Garfield County and security for the public improvements has been received by the Town.*

R. *The Applicant and Town reach final agreement on the form of an affordable housing covenant that includes definition of the number of restricted units, the calculation of below market rents, the workforce that qualify to live in the units, and the term for which the affordable housing covenant shall be in force. The affordable housing covenant shall be finalized before consideration of the Final Plat by the town council. Recordation of the affordable housing covenant shall be accomplished at or before recording of the Final Plat.*

S. *Finalization of water rights dedication requirements for the project. Calculation of irrigated areas and finalization of EQR dedication requirements. A warranty deed conveying the required water rights in the Coryell Ditch shall be executed and recorded together with the final plat.*

Planner Smith said Item S would be built into the Subdivision Improvement Agreement which would be presented to Town Council.

T. *Vested rights be granted for a period of __ years.*

Planner Smith stated that staff discussed vested rights with R2 Partners and they were content with the ten year vesting. He said ten years seemed reasonable to all parties.

Mr. Jaynes discussed building height in detail, specifically the 'slope effect.' He explained that the height was measured from the existing grade based on town code. He added that the identified line for initial measurement would not exist after R2 Partners filled in the soil, flattened and built platforms for the structures. He said the initial baseline did not account for the grading that would take place during development as depicted in Exhibit B. Commissioner Cotey noted the difference between lowering the buildings' heights, which would require a retaining wall, versus having a balanced site grading as it was currently planned. Mr. Jaynes highlighted the comparison of building heights from Preliminary to Final (Exhibit C) where he added that the buildings were not breaking the ridgeline. He outlined the architectural changes made to the building designs, including making the broom pitches steeper for snow, but it only affecting the height of the design slightly.

Alternate Commissioner Rittner expressed concern regarding the visual mass of the front of the buildings. Andrea Korber with Land and Shelter Architecture stated that the two-story buildings were the only visible structures from North Wild Horse Drive. She said the height concern was not visible from the public way. She added that the height definition was unique and restrictive when involving larger buildings. Ms. Korber

said the design placement of the buildings intentionally placed the lower height structures toward the road. She described the architectural design of the buildings to be a classic, tradition residential look with cross gables, with the goal of blending the development in with the larger neighborhood.

Commissioner Cotey asked if R2 Partners would consider adding trees to the south side of the two-story buildings to help blend into the landscape. She said it would visually breakup the massing of the buildings. Ms. Korber said that seemed like a reasonable request, that the landscaping plan could still evolve, and the location of tree planting was not set in stone.

Gary Cupples, a New Castle resident, asked if a wildfire evacuation plan had been reviewed or modified to account for the added population from the new development. Planner Smith stated there was an approved evacuation plan that was available online to review. He said the evacuation plan took into consideration total buildout of Castle Valley Ranch. Mr. Cupples asked if R2 Partners had been involved with multiphase developments in the past. Mr. Rosenburg confirmed they had and explained the development had planned to be built in one phase by category, meaning (as an example) 'Live/Work would be built first, followed by 'Empty Nesters' followed by the townhomes. Town Attorney Sawyer clarified that the understanding was all public improvements would be completed at the same time. Mr. Rosenburg confirmed and noted the buildings would open overtime.

Robin Bauer, a New Castle resident, asked what the traffic control plan was involving construction traffic on North Wild Horse Drive. Mr. Rosenburg explained there was an agreement with TC Midwest for a construction access easement that would detour construction traffic off the Castle Valley Ranch roundabout north to the boundary of VIX Park and reconnect to North Wild Horse Drive. He referenced the visual map of the easement (Exhibit D). Mr. Rosenburg added that the traffic study and design of North Wild Horse Drive included full buildout of Castle Valley Ranch and accounted for the development. Mr. Bauer expressed concern regarding larger dump truck vehicles on North Wild Horse Drive and explained the single lane road did not accommodate larger vehicles to the point that other vehicles had to pull over to allow a dump truck to pass. Public Works Director Wenzel said the buildout of the road met the Town's design standards and would be a comfortable travel lane. He explained that most travel lanes were ten feet wide, however the extension/connection of North Wild Horse Drive would be eleven feet wide with two eight foot parking lanes on either side of the road. Town Engineer Simonson added that the road would accommodate the capacity of the new development based on the traffic report that was conducted.

Denise Scheberle, a New Castle resident, asked for clarification on the ninety one and sixth tenths percent gross area of open space. Mr. Jaynes referred to the Open Space Diagram (Exhibit E) and explained that the majority of the property would be undeveloped. Mr. Rosenburg explained that the size of the property was estimated to be sixty acres and the development only planned to build within ten acres. Ms. Scheberle asked if that would stay open space in perpetuity and Planner Smith confirmed that was the case. Mr. Rosenburg clarified there was an agreement with Steve Cravin to build six more units within a triangle section of land North-East of the development. She asked how the new R2 Partners development would blend with what

exists on North Wild Horse Drive in regard to traffic and pedestrian crossings. Commissioner Cotey stated there are traffic calming solutions that the town could explore.

Julia Koch, a New Castle resident, asked if R2 Partners was planning to sell any townhomes as she felt it was important to provide New Castle residents the opportunity to own affordable housing. Mr. Rosenburg explained the entire development would be rentals only. He explained that their market study revealed the majority of families were not able to afford to buy their own home, so the townhomes were catered to accommodate those who otherwise could not purchase a home. He added that the biggest issue for home purchasing was young families affording the down payment.

Lynne Cassidy, a New Castle resident, commented that she would like to see the affordable housing language clarified further with the option of expanding the rental pool of applicants, as previously discussed.

Chair Apostolik closed the public hearing at 8:39 p.m.

Chair Apostolik asked Public Works Director Wenzel about the change from a ten inch hot tap to a megalug fitting. Public Works Director Wenzel confirmed they experienced issues with hot taps in the past and that it was a minor change. Chair Apostolik asked if Public Works Director Wenzel was in agreement with the plans thus far in regard to road widths, side parking and snow storage. Public Works Director Wenzel verified he felt any issues in those categories had been resolved.

Chair Apostolik asked Town Engineer Simonson if he felt everything was resolvable that had previously been discussed and identified; Town Engineer Simonson confirmed.

Chair Apostolik noted comments from Fire Marshall Moon that the fire hydrants needed a ten foot zone to avoid any issues with trees. Mr. Jaynes confirmed that they planned for a ten foot zone despite the design drawings. He stated R2 Partners would make an exhibit that clearly identified the ten foot zone for fire hydrants.

Chair Apostolik asked to make an addition to Item Four 'establishment of disturbed areas during construction' to include temporary irrigation if there existed a long build out time. Commissioner Cotey added to include drainage protection through the corridor during construction in the effort for preservation and Mr. Rosenburg agreed. Mr. Jaynes confirmed that disturbance would be present in the area due to a water line crossing through. He noted that they would need to revegetate the disturbed area and had a plan in place including the use of native plants. He added that they would be preserving most of the area and revegetating the disturbed areas.

Chair Apostolik asked R2 Partners to confirm that besides Xcel and the megalugs, construction traffic would not utilize North Wild Horse Drive. He said the way the phasing was planned, R2 Partners would be on the North side of the parking area on North Wild Horse Drive. Mr. Jaynes stated that R2 Partners had planned to rough the private road in from what was existing off of North Wild Horse Drive. He said they would then put the utilities in, begin construction of the buildings and then before they

received their certificate of occupancy, pave North Wild Horse Drive. Chair Apostolik stated that during that timeframe, whether it be one to three years, the public should not have an issue with use of VIX Park parking access. Mr. Jaynes confirmed that was correct. Chair Apostolik added the importance of R2 Partners protecting the development site from the public as VIX Park was used for multiple recreation activities, kids, animals and parking was utilized daily by the public. Mr. Rosenburg agreed to take that into account.

Commissioner Sass asked if the affordable housing units were comparable to past developments. Town Administrator Dave Reynolds confirmed it was comparable aside from the twenty year limit. Commissioner Sass asked if developers typically did not include a limit to affordable housing. Administrator Reynolds shared the example of the Romero Group, which was in perpetuity, and the only development in which the town had an affordable housing agreement. He confirmed that the comprehensive plan did not outline a specific length of time for affordable housing units. Commissioner Cotey noted that the comprehensive plan was established thirty years ago with a different housing market than present day. She suggested the town revisit the parameters of affordable housing and stated she felt it should be in perpetuity. Mr. Rosenburg said they would be more open to a benchmark of twenty years where they would revisit the need from the town and renew an agreement every twenty years. He added that affordable housing impacts the value of the property and he did not know what the market would look like in twenty years' time. Commissioner Cotey said that sounded fair. Town Attorney Sawyer said having certain renewal periods could be built into a covenant. He added that if the property were to ever change hands, sell or subdivide, during that time it would be brought back to the Town to discuss.

Commissioner Cotey said she thought it would be Town Council's role to determine the appropriate language for identifying who would qualify for affordable housing but that the commission could recommend broadening the pool of potential renters. Administrator Reynolds said Town Council might be more open to prioritizing affordable housing to the workforce that works in New Castle, in an effort to avoid casting too large of a net that encompassed the entire valley. Commissioner Cotey identified the challenge of New Castle not having a large jobs market. Chair Apostolik clarified that the workforce of New Castle would be first priority in a list of pool priorities that qualify a renter for affordable housing. Mr. Rosenburg stated that how the affordable housing agreement was written gave the town full authority to choose who they felt was a priority as long as they passed the background check. Commissioner Cotey asked if the way the affordable housing agreement was written currently was at the discretion of the town and was not limited to just town staff. Mr. Rosenburg said that was correct. Commissioner McDonald asked if there was a plan to administer the program within the town. Administrator Reynolds confirmed Town Council would discuss the program and noted Town Council made it very clear that their first priority was town staff and then the workforce of New Castle.

Alternate Commissioner Rittner expressed the importance of public safety and the need for an onsite property manager. She asked how R2 Partners would handle a situation where the Town felt safety was a concern or better management was needed. Mr. Rosenburg said he didn't want to be locked into something but was open to adding language that provided the opportunity to have a discussion with the town about any

issues that may arise and present a plan that everyone would agree upon. Commissioner McDonald asked if R2 Partners had any other properties in the area. Mr. Rosenburg confirmed they did and said the assigned management team may manage both sites. He added that R2 Partners had discussed with Dywane Romero the option to utilize the same management team that Mr. Romero was currently using. Commissioner McDonald asked if R2 Partners would have a rental office on site and Mr. Rosenburg confirmed there would be an onsite rental office for a property management team to work out of.

Town Attorney Sawyer asked for clarification on what the commission would like to recommend as a condition in regard to an onsite property management team and outline expectations should any issues arise. Alternate Commissioner Rittner said having language that allowed for some provisions to revisit with R2 Partners on the chance that issues came up was important. Mr. Rosenburg added to include language that spoke of multiple issues that were persistent would warrant a return to Town Council to discuss. Chair Apostolik said the commission had done this in the past with conditional use permits and could utilize similar language for this condition. Alternate Commissioner Parks stated that the commission had expressed interest for an onsite property manager. He asked if the commission should make that a condition. Chair Apostolik clarified that the commission did not have the authority to require onsite management from R2 Partners. Alternate Commissioner Rittner asked if it would become their right to require if the development experienced persistent issues in the future and would need to revisit with R2 Partners. Chair Apostolik confirmed it could be part of that discussion should they need to review R2 Partners in the future. Commissioner Sass clarified that the word 'onsite' did not necessarily mean a property manager living on the property and that the definition for 'onsite' would also need to be discussed.

Commissioner Cotey revisited the building heights and stated she was not concerned with the difference of the slope effect. The commission agreed they did not feel that was an issue and felt it was explained well enough.

Alternate Commissioner Parks noted that the suggested speed limit was twenty five miles per hour and suggested it be dropped to twenty miles per hour to match the surrounding neighborhoods. Mr. Rosenburg stated he did not have a problem with that. Alternate Commissioner Parks added a suggestion to the grading plan to include soil stabilization for revegetation for slope ratios two to two and a half to one slopes with control blankets. Mr. Rosenburg said he would check that but was under the understanding that the slope ratio was three to one.

Town Attorney Sawyer said that the resolution stated a recommendation for approval subject to conditions identified by the staff report, verbatim, as well as modifications made by the commission. He said the commission could motion to recommend approval subject to staff conditions with modifications that he and Planner Smith would review with the commission. He said the revised resolution would be rewritten and presented at the next Planning & Zoning Commission Meeting for official signature.

Planner Smith reviewed each of the conditions as outlined in the staff report and draft resolution with added modifications from the commission.

Conditions:

A. Planner Smith noted Condition A would add townhomes 15 and 16, except as drawn, and remove the language: *Alternatively, the Applicant shall consider height reductions, additional screening, architectural modifications, or any combination of these to these structures to optimize consistency with the natural character of the land. All other structures shall comply with the building height requirements specified in Section 17.04.050.*
B. Condition B was unchanged.
C. Condition C was unchanged.
D. Condition D was unchanged.
E. Condition E was unchanged.
F. Condition F was unchanged.
G. Regarding Condition G, Mr. Rosenburg clarified that R2 Partners did not own the property but were in negotiations. Town Attorney Sawyer clarified it was a recommendation. Commissioner Sass noted that the use of safety fencing was included in the condition. Commissioner Martinez asked if R2 Partners was not granted the construction easement, then they would have to utilize North Wild Horse Drive. Mr. Rosenburg confirmed that was correct. Chair Apostolik said if R2 Partners did not get the construction easement, that the commission would need to discuss with them the use of North Wild Horse Drive. Town Attorney Sawyer suggested adding that the easement be drafted as a formal agreement prior to final plat approval by Town Council. Mr. Rosenburg said he did not have a problem with that addition.
H. Condition H was unchanged.
I. Condition I was unchanged.
J. Planner Smith said he recommended adopting language in the covenants for Condition J and add signage to North Wild Horse Drive.
K. Condition K was unchanged.
L. Planner Smith said Condition L was a catch all for the management of the construction. He added that the building department had many review procedures within the permitting process to assess construction of each building including issues of erosion. He said Construction Management Plans (CMPs) were also included and would be reviewed by Public Works and Engineering. Chair Apostolik asked if the town required CMPs with permit applications. Planner Smith confirmed they did. Engineer Simonson added that the state also required CMPs and said there was an erosion control plan to discuss involving the soils report and slope ratios. He said the soils report identified a stable slope being a two to one slope. He suggested treating the final slope with erosion mitigation surfaces along with seeding. Planner Smith added that reseeding would require temporary irrigation as well. Commissioner Cotey asked to add a condition for a tree protection plan.
M. Condition M was unchanged.
N. Planner Smith said Condition N was unchanged but would be an appropriate line item for any revegetation conditions.
O. Condition O was unchanged.
P. Condition P was unchanged.
Q. Condition Q was unchanged.

R. Planner Smith asked if the commission wanted to add a twenty year renewal period to the affordable housing agreement for Condition R. Town Attorney Sawyer suggested the commission recommend an initial term of twenty years with potential for renewal terms after.
S. Condition S was unchanged.
T. Planner Smith said Condition T would have ten years of vested rights.

Town Attorney Sawyer suggested wording for an additional condition regarding property management. He read the condition as: *should issues arise about property management or community security, which are not cured after Town notice, that the matter can come back for Planning & Zoning and Council review and the potential imposition of additional responsive conditions.* R2 Partners Lee said he felt that was good enough as a condition and added he and Mr. Rosenburg would revise the covenants accordingly.

MOTION: Chair Apostolik made a motion to approve with conditions Resolution PZ 2024-6, A Resolution of the New Castle Planning and Zoning Commission Recommending Conditional Approval of a Final PUD Development Plan and a Final Subdivision Plat for Castle Valley Ranch PUD Filing 13 (9 N Wild Horse Drive). Commissioner McDonald seconded the motion, and it passed on a roll call vote. Commissioner McDonald: Yes; Commissioner Cotey: Yes; Alternate Commissioner Parks: Yes; Alternate Commissioner Rittner: Yes; Chair Apostolik: Yes; Commissioner Sass: Yes; Commissioner Martinez: Yes.

Staff Reports
Planner Smith reported there were no further meetings scheduled for 2024. To come, he added that the property above McDonalds and Maverick on Castle Valley Boulevard had new buyers who would speak to P&Z regarding amendments to the originally approve development plan. He said there was a traffic study being conducted and the new buyers seemed motivated.

Commissioner Martinez asked when the Romero Group would start construction. Planner Smith said the date was unknown. He added that the Romero Group just finished the plat for Phase 1.

Commission Comments and Reports
Alternate Commissioner Parks reported that the Historic Preservation Commission would be presenting the recommendation to historically designate Highland Cemetery to Town Council on December 3, 2024.

Review Minutes from Previous Meeting
MOTION: Chair Apostolik made a motion to approve the July 24, 2024 meeting minutes. Alternate Commissioner Parks seconded the motion and it passed unanimously.

MOTION: Chair Apostolik made a motion to adjourn the meeting. Commissioner Sass seconded the motion and it passed unanimously.

The meeting adjourned at 9:28 p.m.

Respectfully Submitted,

Chuck Apostolik, Chair

Remi Bordelon, Deputy Town Clerk

THE TOWN OF NEW CASTLE
PLANNING & ZONING COMMISSION
COLORADO

ILLUSTRATIVE SITE PLAN

DHM DESIGN LANDSCAPE ARCHITECTURE
ECOLOGICAL PLANNING
LAND PLANNING + URBAN DESIGN

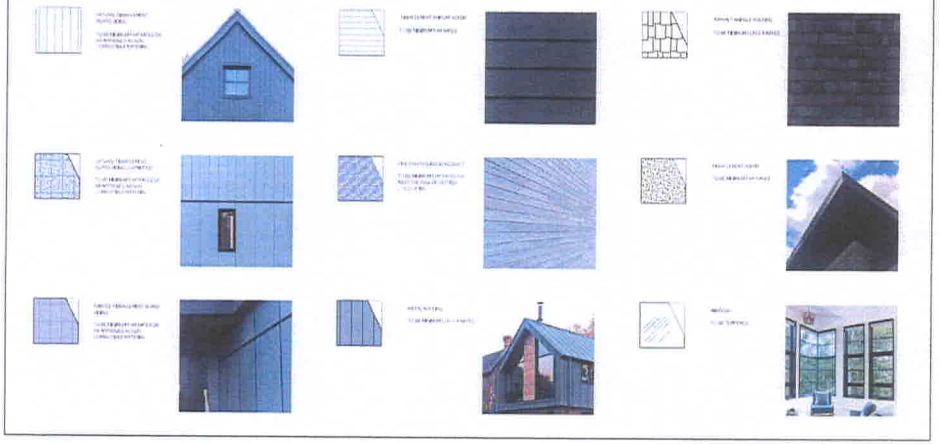
COLOR LEGEND

Natural Linen	Secret Garden
Woven Wicker	Tricorn Black (Accents)
Clary Sage	Truepenny / Trinket (Accents)

*Or Equivalent Tone

MATERIAL LEGEND

ELEVATION



live work 3-story - left elevation
NOT TO SCALE

live work 3-story - rear elevation
NOT TO SCALE

live work 3-story - right elevation
NOT TO SCALE

live work 3-story - front elevation
NOT TO SCALE

©2024 MA Design

ma design
1410 Race Street
Cincinnati, OH 45202
p 513.487.5260
www.designwithma.com

NEW CASTLE RESIDENTIAL - LIVE WORK

9 NORTH WILDHORSE DRIVE | NEW CASTLE, CO 81647 |

STATUS
PRELIMINARY
NOT FOR CONSTRUCTION

REVISION

PROJECT NUMBER
25192

DATE
31 OCTOBER 2024

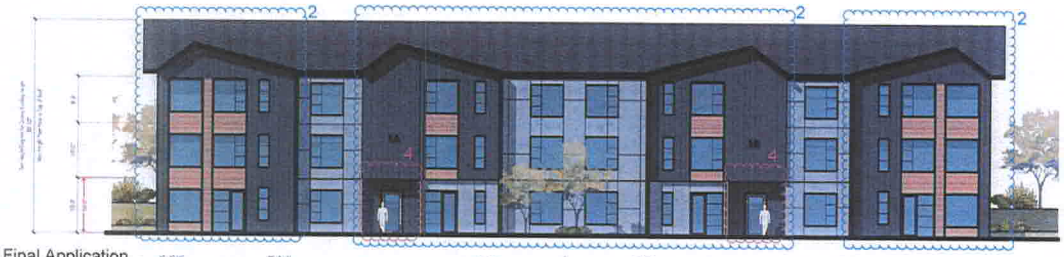
SHEET NAME
LIVE WORK 3-STORY - BUILDING ELEVATIONS

SHEET NUMBER
A2.3

Live Work Comparisons 3 Story - Elevations

Front Elevation

Preliminary Application

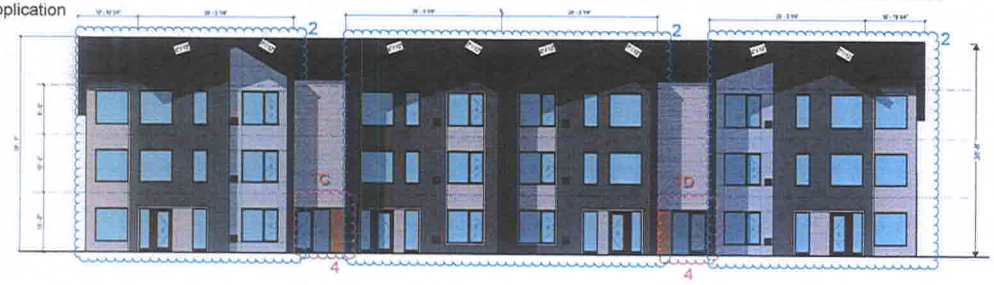


Final Application

Back Elevation

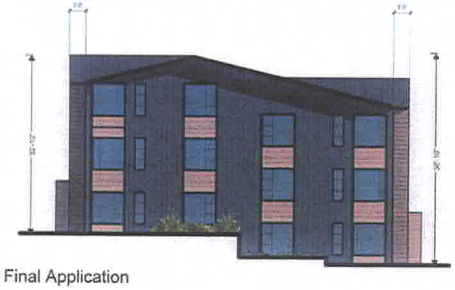
Preliminary Application

Final Application



Side Elevation

Preliminary Application



Final Application

live work 3-story - left elevation

General Changes:
1. Window sizes and groupings changed to more accurately reflect available materials
2. Material Change - all roofs will be asphalt shingle
3. Fiber Cement siding colors updated (see color legend on re-submitted Elevation pages)

Specific Changes:
1. Zoning Roof Heights requirements shown, Roof heights adjusted
2. Gable locations changed to offer better views from inside the living rooms, but retain the spirit of the design
4. Building Entrances given more color to delineate Unit from Building Entrance

TC MIDWEST: CONSTRUCTION EASEMENT EXHIBIT

9 NORTH WILD HORSE

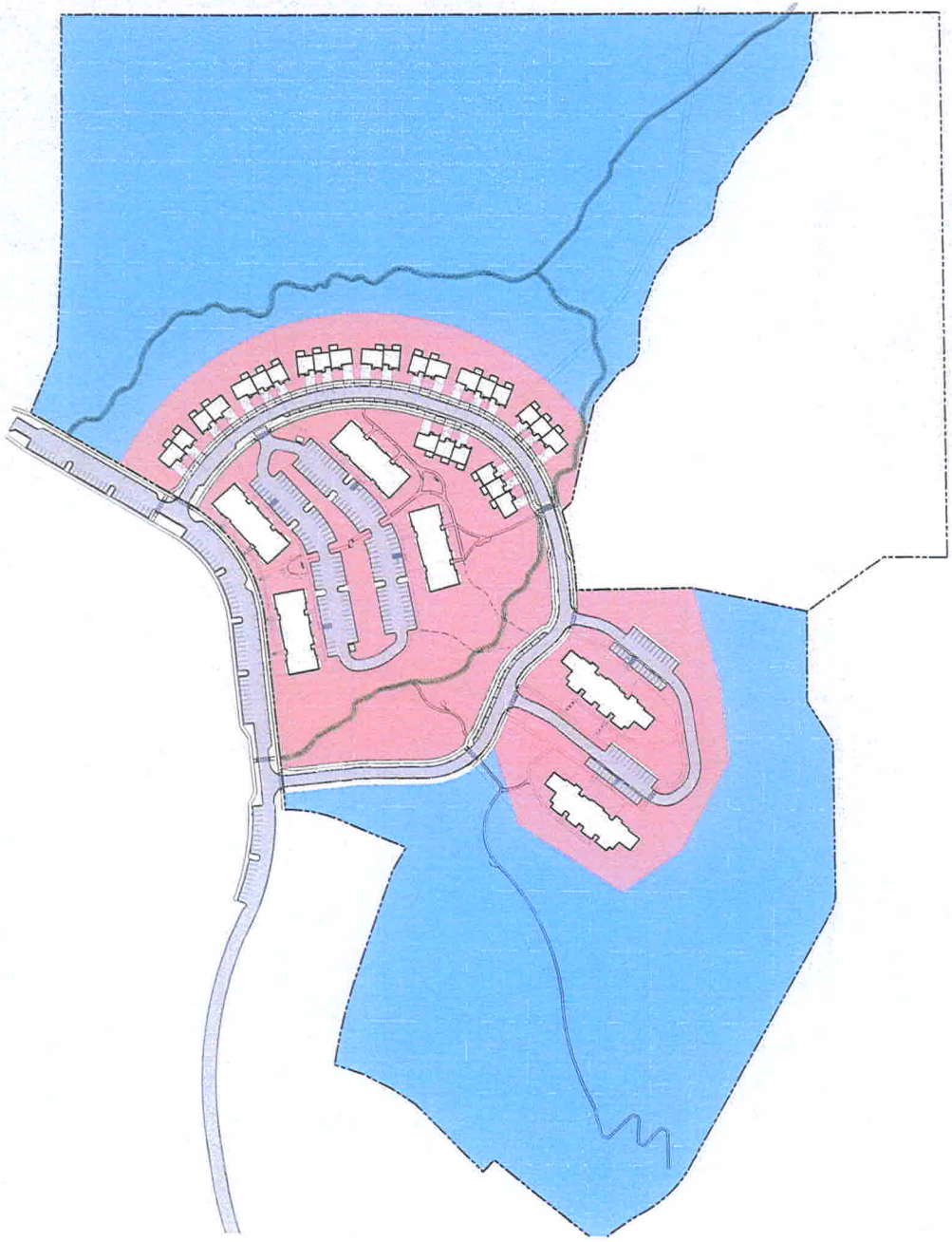
NEW CASTLE, COLORADO.

SHEET 1 OF 1

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

G:\2023\33011 CVR R2 RES\CIVIL\CIVIL DWGS\DE\33011-SITE.DWG - Oct 23, 2024 - 8:39am

OPEN SPACE DIAGRAM:



LEGEND

PASSIVE OPEN SPACE
OWNED BY HOA / CIC
1,365,480 sq ft (31.3 acres) TOTAL

DEVELOPMENT OPEN SPACE
OWNED BY HOA / CIC
405,761 sq ft (9.3 acres) TOTAL

PUBLIC ACCESS TRAIL EASEMENT

NOTES

1. PASSIVE OPEN SPACE TO INCLUDE UNDISTURBED ACREAGE AND TRAILS OUTSIDE OF THE AREA OF DEVELOPMENT. PUBLIC ACCESS EASEMENTS TO BE DEFINED FOR TRAIL USAGE.
2. DEVELOPMENT OPEN SPACE TO INCLUDE OPEN SPACE SUCH AS LAWNS, LANDSCAPED AREAS, NATURAL AREAS, RECREATION AREAS AND TRAILS WITHIN THE AREA OF DEVELOPMENT. DEVELOPMENT OPEN SPACE MAY INCLUDE TRAIL EASEMENTS FOR PUBLIC USE.

0' 50' 100' 200'

SCALE: 1" = 100'-0"

TOWN OF NEW CASTLE, COLORADO
RESOLUTION NO. PZ 2024-6

A RESOLUTION OF THE NEW CASTLE PLANNING AND ZONING COMMISSION RECOMMENDING CONDITIONAL APPROVAL OF A FINAL PUD DEVELOPMENT PLAN AND A FINAL SUBDIVISION PLAT FOR CASTLE VALLEY RANCH PUD FILING 13 (9 N WILD HORSE DR)

WHEREAS, CTS Investments, LLC ("Owner") is the owner of certain real property within the Town of New Castle described in the attached Exhibit A, which property is located within the Castle Valley Ranch PUD (the "Property,"); and

WHEREAS, Owner has authorized R2 Partners ("Applicant") to file a land use application for preliminary plan approval for the Property; and

WHEREAS, on March 21, 2024, Applicant submitted an application requesting approval of a Preliminary PUD Development Plan ("Preliminary Plan") and a Preliminary Plat ("Preliminary Plat") for the Property;

WHEREAS, the Town of New Castle Planning & Zoning Commission ("Commission") held a duly noticed public hearing on June 26, 2024 approving the Preliminary Plan and Preliminary Plat with conditions; and

WHEREAS, the Applicant submitted an application requesting approval of a final PUD development plan ("Development Plan") and a final subdivision plat ("Final Plat"); and

WHEREAS, the Commission has considered the Application materials, testimony, and other evidence from Staff, the Applicant, and members of the public concerning the Application; and

WHEREAS, based on the Application, testimony, and other information presented, subject to compliance with the terms and conditions of this Resolution, the Commission finds that the Application complies with the following review criteria set forth in Sections 16.16.030(G) and 17.100.060(F) of the Code:

1. Consistency with the comprehensive plan;
2. Compliance with zoning and density requirements;
3. Compatibility to neighboring land uses;
4. Availability of town services from public works (including water and sewer services), fire, and police;
5. Adequacy of off-street parking and vehicle, bicycle, and pedestrian circulation;
6. Required open space or parks designed for active or passive use by residents of the subdivision and the public; and
7. Development consistent with the natural character, contours, and viewsheds of the land

NOW, THEREFORE, BE IT RESOLVED BY THE PLANNING AND ZONING COMMISSION OF THE TOWN OF NEW CASTLE, COLORADO:

1. Recitals. The foregoing recitals are incorporated by reference as findings and determinations of the Planning and Zoning Commission.

2. Definition of the Application. The "Application" consists of the documents and information identified on Exhibit B, plus all representations of and other documents presented by the Applicant reflected in the minutes of the Planning and Zoning Commission public hearing held on November 13, 2024.

3. Action regarding Final Plan: The Final Plan proposes:
   a. The construction of 130 residential units as rental apartments and townhomes as depicted on the most updated site plan included in the Application;

   b. The subdivision of the Property into 4 lots and 2 Parcels as shown on the Preliminary Plat dated April 12, 2024; and

   c. The construction of public and private improvements as depicted on the most updated construction documents included in the Application.

The Planning Commission hereby recommends approval of the Development Plan and Final Plat, subject to compliance with all conditions set forth in Section 5 of this Resolution.

4. Zoning. The development and use of the Property shall be subject to the following restrictions and requirements:

   a. the restrictions and requirements of the MF-2 per the Castle Valley Ranch PUD; and

   b. all other applicable provisions of the Code; and

   c. all applicable Ordinances of the Town.

5. Conditions. Approval of the Application is subject to and contingent up on satisfaction of the following conditions:

   a. The maximum building height of Buildings B1, B2, B3, & B4 and Townhomes G-15 and F-16 shall not exceed the building elevations presented in Exhibit A-Plan, pages 18-26.

   b. All site specific development applications subject to the provisions of the International Fire Code or matters requiring fire alarms and/or fire suppression shall be submitted to the Fire Marshal for review and comment.

c. The applicant shall comply with all recommendations of the Town Engineer, Town Public Works Director, and Town Attorney provided in response to review of the Application.

d. All exterior lighting to be dark-sky compliant per the comprehensive plan. Demonstrate that all exterior lighting will limit trespass. Parking lot lighting should be on timers to reduce the light duration at night while maintaining security lighting as needed.

e. The location and manufacturer of any electric vehicle supply equipment installed within the public right of way shall be at the discretion of Public Works.

f. Fire access roads as depicted in the Application shall be permanently signed "Emergency Access Only".

g. A temporary construction easement, generally conforming to that depicted in the Application, shall be constructed to accommodate construction vehicle circulation for the buildout of PA 8 & 9 (R2 Partners LLC) and PA 12 (TC Midwest LLC) until the completion of either PA 12 or PAs 8 & 9, whichever is first. The easement shall consist of a semi-impervious surface, a track pad at the intersection with Castle Valley Blvd. and include standard safety fencing along the length of the easement to prevent unauthorized entry into the easement area. Any damage to public infrastructure, including but not limited to asphalt bike paths, landscape irrigation, underground utilities, landscaping shall be the responsibility of the Applicant. The design of the easement shall be approved by the Public Works Department and Town Engineer prior to permitting. Landscaping and grade of PA 12 shall be restored to its initial state once construction operations are completed. The Town Council shall approve the temporary construction easement with the Final Plat.

h. All trash dumpsters shall be located within an approved trash enclosure that extends six feet high and includes a bear resistant latching mechanism. Trash receptacles for townhomes shall be of a bear resistant type and stored inside.

i. A declaration of covenants for the common interest community that are to the satisfaction of the Town Attorney. The form of the declaration of covenants shall be finalized before consideration of the Final Plat by the town council. Recordation of the declaration of covenants shall be accomplished at or before recording of the Final Plat.

j. A parking management plan shall be added to the covenants prior to final approval with provisions for reserved parking in shared lots as necessary. Signage on both sides of N Wild Horse Dr adjacent to VIX park shall read "No Overnight Parking".

k. A subdivision improvements agreement ("SIA") containing an engineer's stamped cost estimate of public improvements, to the satisfaction of the Town Attorney. The form of the SIA shall be finalized before consideration of the Final Plat by the town council. Recordation of the SIA shall be accomplished at or before recording of the Final Plat.

l. Provide a construction phasing plan for inclusion in a subdivision improvements agreement. Identify, at minimum, each of the following components:

- Buildout phases if necessary;
- Schedule that identifies the sequencing of construction, sequencing of occupancy, traffic flow, and traffic control plans during construction;
- Storage and staging areas for construction equipment and materials;
- Illustrate drainage and erosion control best management practices (BMP's);
- Conformance to all requirements and specifications approved by the fire marshal concerning temporary access to the project;
- Provisions for the protection and preservation of all existing vegetation, including trees, shrubs, and native grasses that do not interfere with the construction of buildings, roads, or utility infrastructure.

m. Landscaping shall incorporate native grasses and plants that minimize maintenance, mowing, and irrigating. The landscaping plan shall be approved by the Parks Department. Plans submitted for building permit for any building shall demonstrate no more than 2,500 square feet of sod per dwelling unit as specified in 13.20.060 of the Municipal Code.

n. All disturbed areas in the project shall be revegetated and maintained in a predominantly weed free condition.

o. All representations of the Applicant made verbally or in written submittals presented to the Town in conjunction with the Application before the Commission or Town Council shall be considered part of the Application and binding on the Applicant.

p. The Applicant shall reimburse the Town for any and all expenses incurred by the Town regarding this approval, including, without limitation, all costs incurred by the Town's outside consultants such as legal and engineering costs.

q. The sale of individual lots, parcels or units may not occur until a plat creating the lot, parcel or unit is recorded with Garfield County and security for public improvements has been received by the Town.

r. The Applicant and Town reach final agreement on the form of an affordable housing covenant that includes definition of the number of restricted units, the calculation of below market rents, the workforce that qualify to live in the units, and the term for which the affordable housing covenant shall be in force. The affordable housing covenant shall impose an initial twenty-year term with an option to renew the twenty-year period for additional terms following discussions between the Town and R2 or its successors after expiration of the initial twenty-year term. The affordable housing covenant shall designate the total number of units allocated as affordable housing units, including the general housing type description for each unit, without specifying the exact location of each affordable housing unit. The affordable housing covenant shall designate authority to the Town to choose qualified renters that have passed background checks to live in the affordable housing units, with priority first given to town staff and then to members of the workforce of New Castle. If the property or any affordable housing unit were ever to be part of a further subdivision or if Lots 1, 2, and 3, as depicted on the Final Plat, are ever sold into separate ownership, the Town will apply its then-current affordable housing regulations and modify the affordable housing covenant accordingly. The affordable housing covenant shall be finalized before consideration of the Final Plat by the town council. Recordation of the affordable housing covenant shall be accomplished at or before recording of the Final Plat.

s. Finalization of water rights dedication requirements for the project. Calculation of irrigated areas and finalization of EQR dedication requirements. A warranty deed conveying the required water rights in the Coryell Ditch shall be executed and recorded together with the final plat.

t. Vested rights be granted for a period of 10 years.

u. Should issues arise about property management or community security, which are not cured after Town notice, the matter can come back for Planning & Zoning and Council review and the potential imposition of additional responsive conditions.

6. Severability. Each section of this Resolution is an independent section and a holding of any section or part thereof to be unconstitutional, void, or ineffective for any cause or reason shall not be deemed to affect the validity or constitutionality of any other section or part hereof, the intent being that the provisions of this Resolution are severable.

7. Effective Date. This Resolution shall be effective upon adoption.

SO RESOLVED this 13th day of November, 2024, by a vote of __7__ to __0__.

TOWN OF NEW CASTLE
PLANNING & ZONING
COMMISSION

Chuck Apostolik, Chairman

ATTEST:

Remi Bordelon, Deputy Town Clerk

THE TOWN OF NEW CASTLE
PLANNING & ZONING COMMISSION
COLORADO

Exhibits:

Exhibit A: Legal Description
Exhibit B: List of Application materials

EXHIBIT A
Legal Description

A parcel of land being a portion of the 'Option Property', as described in that Quit Claim Deed, recorded September 21, 2009 as Reception No. 775392, and being situated in the SW1/4 of Section 29, SE1/4 of Section 30, the NE1/4 of Section 31, and the NW1/4 of SECTION 32, Township 5 South, Range 90 West of the 6TH P.M., County of Garfield, State of Colorado, said parcel of land being more particularly described as follows:

Beginning at the 1/4 corner, between said sections 29 and 30, a 3.25" brass cap on 2" iron pipe stamped "1/4 S30/29 BLM 1988", thence N 89° 36' 48" E the assumed Basis of Bearings along the southerly line of the 2nd Amended Exemption Plat of Lakota Canyon Ranch, recorded February 4, 2008 as Reception No. 742257, a distance of 1308.59 feet to the Northeast corner of said 'Option Property', being a #5 rebar & 1.25" yellow plastic cap stamped "CLAYCOMB ENG L.S. 3174", said corner being coincidental with Westerly and Southerly lines of Reception No. 742257;

Thence S 00°55'44" E, along Easterly line of said 'Option Property', and the said coincidental Westerly line of Reception No. 742257, a distance of 1002.40 feet, to a point on the Northerly line of that parcel of land described in the Special Warranty Deed, recorded April 15, 2010 as Reception No. 784749;

Thence the following twenty-one (21) courses along the Northerly, Westerly, Easterly and Northerly lines of said Reception No. 784749;

1. N 89°54'27" W a distance of 116.87 feet;
2. S 54°50'38" W a distance of 173.10 feet;
3. S 00°02'34" E a distance of 167.50 feet;
4. S 32°41'48" E a distance of 88.46 feet;
5. S 00°55'44" E a distance of 289.40 feet;
6. S 14°00'12" W a distance of 22.45 feet;
7. S 28°56'08" W a distance of 541.68 feet;
8. 122.69 feet along a curve to the right, having a radius of 219.00 feet, a central angle of 32°05'54", the chord of which bears S 44°59'05" W, a distance of 121.09 feet;
9. 102.92 feet along a non-tangent curve to the left, having a radius of 481.00 feet, a central angle of 12°15'33", the chord of which bears S 54°54'14" W a distance of 102.72 feet;
10. N 51°02'22" W a distance of 247.25 feet;
11. 30.23 feet along a non-tangent curve to the right, having a radius of 275.00 feet, a central angle of 6°17'51", the chord of which bears S 42°06'34" W a distance of 30.21 feet;
12. N 44°48'48" W a distance of 174.82 feet;
13. N 56°40'07" W a distance of 55.13 feet;
14. N 63°30'38" W a distance of 55.33 feet;
15. N 71°43'03" W a distance of 57.57 feet;
16. 104.09 feet along a non-tangent curve to the right, having a radius of 970.00 feet, a central angle of 6°08'54", the chord of which bears N 11°34'51" E a distance of 104.04 feet;
17. N 16°07'55" E a distance of 50.00 feet;
18. N 18°54'59" E a distance of 221.52 feet;
19. N 30°00'58" E a distance of 50.41 feet;
20. N 67°17'36" W a distance of 131.42 feet;
21. 104.00 feet along a curve to the left, having a radius of 250.00 feet, a central angle of 23°50'05", the chord of which bears N 79°12'39" W, a distance of 103.25 feet, to a point on the Northeasterly line of North Wild Horse Road, as described in that Special Warranty Deed recorded September 25, 2007 at Reception No. 733780;

Thence the following four (4) courses along said Northeasterly line of North Wild Horse Road, being situated parallel to and 67.50 feet Northeasterly of the westerly line of said 'Option Property', also a coincidental line with the North Park Parcel recorded April 17, 2007 at Reception No. 721291;

1. 38.30 feet along a non-tangent curve to the left, having a radius of 491.25 feet, a central angle of 4°28'00", the chord of which bears N 04°02'01" W a distance of 38.29 feet;
2. N 06°16'01" W a distance of 314.42 feet;
3. 263.68 feet along a curve to the left, having a radius of 281.25 feet, a central angle of 53°43'01", the chord of which bears N 33°07'31" W, a distance of 254.13 feet;
4. N 59°59'02" W a distance of 338.00 feet, to a point on the westerly line of said 'Option Property';

Thence the following three (3) courses along the westerly lines of said 'Option Property';

1. N 21°44'01" E a distance of 132.03 feet;
2. N 02°06'39" E a distance of 226.38 feet;
3. N 00°23'12" W a distance of 381.09 feet, to a point on the North line of the TO A SW1/4 of Section 30;

Thence S 89°47'18" E along said North line SW1/4 of Section 30, a distance of 308.87 feet, To the Point of Beginning,

County of Garfield, State of Colorado.

and containing 59.056 acres, more or less; have by these presents laid out, platted and subdivided the same into lots and blocks as shown hereon and designate the same as 9 NUMB

EXHIBIT B

Final PUD Application Materials

A. Applicant Final Plan Application & Appendix – September 30, 2024
B. CRFR Fire Marshal Referral, Orrin Moon – October 18, 2024
C. Town Engineer Comments, Jefferey Simonson – October 18, 2024
D. Town Public Works Director Comments, John Wenzel – October 21, 2024
E. Town Attorney Comments, Michael Sawyer – November 5, 2024
F. Temporary Easement Access Referral, TC Midwest, LLC – October 28, 2024
G. Public Hearing Notice, with Legal Description for Final Plan P&Z – November 13, 2024
H. Notarized Affidavit of Public Hearing Notice – November 5, 2024
I. List of Adjacent Property Owners within 250 Feet

TOWN OF NEW CASTLE, COLORADO
ORDINANCE NO. TC 2025-1

AN ORDINANCE OF THE NEW CASTLE TOWN COUNCIL GRANTING CONDITIONAL APPROVAL OF A FINAL PUD DEVELOPMENT PLAN AND A FINAL SUBDIVISION PLAT FOR CASTLE VALLEY RANCH PUD FILING 13 (9 N WILD HORSE DR) AND VESTED RIGHTS FOR THE SAME

WHEREAS, R2 Partners, LLC ("Owner") is the owner of certain real property within the Town of New Castle, Colorado (the "Town") described in the attached Exhibit A, which property is located within the Castle Valley Ranch PUD (the "Property"); and

WHEREAS, the Property is zoned Residential Multifamily (MF-2) within the Castle Valley Ranch PUD; and

WHEREAS, on June 26, 2024, the Planning & Zoning Commission approved a Preliminary PUD Development Plan ("Preliminary Plan") and Preliminary Plat ("Preliminary Plat") for the Property; and

WHEREAS, on November 13, 2024, Owner ("Applicant") submitted an application requesting approval of a Final PUD Development Plan ("Final Plan") and a Final Plat (the "Final Plat") for the Property (collectively, the "Application" as further defined below);

WHEREAS, the Application proposes the construction of 130 residential units (26 townhomes and 104 apartments, 80 of which are "live/work" residences in two (2) two-story buildings and two (2) three-story buildings and 24 of which are "empty nester" units in two (2) two-story buildings) and open space areas on a total of 31.92 acres; and

WHEREAS, the Town of New Castle Planning & Zoning Commission ("Commission") held a duly noticed public meeting on _____ __, 2025, to consider the Application and recommended that Town Council approve the Application with conditions; and

WHEREAS, Applicant has requested vested rights for the Final Plan, which Final Plan constitutes a site-specific development plan under Section 16.36.020 of the Town Municipal Code; and

WHEREAS, pursuant to Code Section 16.36.060, a duly-noticed public meeting was held by Town Council on _____ __, 2025, to consider the Application and vested rights for the Final Plan; and

WHEREAS, Town Council has considered the Application materials, testimony, and other evidence from Staff, the Applicant, and members of the public concerning the Application; and

WHEREAS, Town Council has determined pursuant to Section 16.36.050 of the Code that vested rights for the Final Plan are appropriate considering the development of the Property; the substantial benefits conferred upon the Town and its citizens by the additional open space, sales tax revenue, employment opportunities, and affordable housing opportunities incorporated into the Property's residential multifamily development; and the other unique characteristics of the proposed development; and

WHEREAS, based on the Application, testimony, and other information presented, subject to compliance with the terms and conditions of this Ordinance, Town Council finds that the Application complies with the following review criteria set forth in Sections 16.16.020(G) and 17.100.050(H) of the Code:

1. Consistency with the comprehensive plan;
2. Compliance with zoning and density requirements;
3. Compatibility to neighboring land uses;
4. Availability of town services from public works (including water and sewer services), fire, and police;
5. Adequacy of off-street parking and vehicle, bicycle, and pedestrian circulation;
6. The extent to which any required open space or parks are designed for active or passive use by residents of the subdivision or the public; and
7. Development consistent with the natural character, contours, and viewsheds of the land; and

WHEREAS, Town Council finds further that the Application meets the goals described in Code Section 16.04.010, satisfies the criteria set forth in Code Section 17.72.090, and conforms or will conform with the conditions of approval of the Preliminary Plan; and

WHEREAS, Town Council now desires to approve the Application and vested rights for the Final Plan and Final Plat pursuant to the terms and conditions of this Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF NEW CASTLE, COLORADO:

1. Recitals. The foregoing recitals are incorporated by reference as findings and determinations of Town Council.

2. Definition of the Application. The "Application" consists of the documents and information identified on Exhibit B, plus all representations of and other documents presented by the Applicant reflected in the recordings and minutes of the Planning and Zoning Commission public meeting held on November 13, 2024, and the Town Council public meetings held on _____ __, 2025, _____ __, 2025, and _____ __, 2025.

3. Approval of Final Plan: The Final Plan proposes:

a. The development of 130 residential units (26 townhomes and 104 apartments, 80 of which are "live/work" residences in two (2) two-story buildings and two (2) three-story buildings and 24 of which are "empty nester" units in two (2) two-story buildings) and open space areas as depicted on the Final Plat/Plan for the 9 North Wild Horse PUD Subdivision dated _____ on a total of 31.92 acres, and as otherwise described in the Application;

b. Multifamily use areas in the locations and with the acreage depicted on the Final Plat dated _____ __, 2024;

c. Use and other zoning standards as described and depicted in the Final Plan;

d. Building elevations and architectural design and materials as described and architectural drawings and floor plans depicted in the Final Plan, and;

e. The subdivision of the Property into three development lots and two open space parcels as shown on the Final Plat/Plan; and

f. Amended final plats for the parcels will be submitted for approval at the staff level, provided that the amended final plats and multifamily buildings are in substantial conformance with the approved Application.

Town Council hereby approves the Final Plan and Final Plat, subject to compliance with all conditions set forth in Section 7 of this Ordinance.

4. Zoning. Development and use of the Property under the Final Plan is subject to the following restrictions and requirements:

a. The restrictions and requirements of the MF-2 Zone District of the 9 North Wild Horse PUD Zoning Regulations, Section 17.104.080 of the Code, as set forth in Exhibit C hereto and as such regulations may be amended or recodified from time to time;

b. All other applicable provisions of the Code; and

c. All applicable Ordinances of the Town.

6. Vested Rights. Town Council finds that the requirements of Section 16.36 for obtaining vested rights have been satisfied and hereby approves the vested rights period for the Property to be ten (10) years from the effective date of this Ordinance.

7. Conditions. Approval of the Application, Final Plan, and Final Plat are subject to and contingent upon satisfaction of the following conditions:

a. The maximum building height of Buildings B1, B2, B3, & B4 and Townhomes TH-B15 and TH-B16 shall not exceed the building elevations presented in the

Final Plan,. Alternatively, the Applicant shall consider height reductions, additional screening, architectural modifications, or any combination of these to these structures to optimize consistency with the natural character of the land. All other structures shall comply with the building height requirements specified in Section 17.04.050.

b. All site specific development applications subject to the provisions of the International Fire Code or matters requiring fire alarms and/or fire suppression shall be submitted to the Fire Marshal for review and comment.

c. The applicant shall comply with all recommendations of the Town Engineer, Town Public Works Director, and Town Attorney provided in response to review of the Application.

d. All exterior lighting to be dark-sky compliant per the comprehensive plan. Parking lot lighting should be on timers to reduce the light duration at night while maintaining security lighting as needed.

e. The location and manufacturer of any electric vehicle supply equipment installed within the public right of way shall be at the discretion of Public Works.

f. A temporary construction easement, generally conforming to that depicted in the Application, is constructed to accommodate construction vehicle circulation for the buildout of PA 8 & 9 (R2 Partners LLC) and PA 12 (TC Midwest LLC) until the completion of either PA 12 or PAs 8 & 9, whichever is first. The easement shall consist of a semi-impervious surface, a track pad at the intersection with Castle Valley Blvd. and include safety fencing along the length of the easement to prevent unauthorized entry into the easement area. Any damage to public infrastructure, including but not limited to, asphalt bike paths, landscape irrigation, underground utilities, and landscaping shall be the responsibility of the Applicant. The design of the easement shall be approved by the Public Works Department and Town Engineer prior to permitting. Landscaping and grade of PA 12 shall be restored to its initial state once construction operations are completed. The Town Council shall approve the temporary construction easement with the Final Plat.

g. All trash dumpsters shall be located within an approved trash enclosure that extends six feet high and includes a bear resistant latching mechanism. Trash receptacles for townhomes shall be of a bear resistant type and stored inside.

h. A declaration of covenants for the common interest community that are to the satisfaction of the Town Attorney. The form of the declaration of covenants shall be finalized before consideration of the Final Plat by the town council. Recordation of the declaration of covenants shall be accomplished at or before recording of the Final Plat.

i. A subdivision improvements agreement ("SIA") containing an engineer's stamped cost estimate of public improvements, to the satisfaction of the Town Attorney. The form of the SIA shall be finalized before consideration of the Final Plat by the town council. Recordation of the SIA shall be accomplished at or before recording of the Final Plat.

j. Provide a construction phasing plan for inclusion in a subdivision improvements agreement. Identify, at minimum, each of the following components:

- Buildout phases if necessary;
- Schedule that identifies the sequencing of construction, sequencing of occupancy, traffic flow, and traffic control plans during construction;
- Storage and staging areas for construction equipment and materials;
- Illustrate drainage and erosion control best management practices (BMP's);
- Conformance to all requirements and specifications approved by the fire marshal concerning temporary access to the project;
- Provisions for the protection and preservation of all existing vegetation, including trees, shrubs, and native grasses that do not interfere with the construction of buildings, roads, or utility infrastructure.

k. Landscaping shall incorporate native grasses and plants that minimize maintenance, mowing, and irrigating. The landscaping plan shall be approved by the Parks Department. Plans submitted for building permit for any building shall demonstrate no more than 2,500 square feet of sod per dwelling unit as specified in 13.20.060 of the Municipal Code.

l. All disturbed areas in the project shall be revegetated and maintained in a predominantly weed free condition.

m. All representations of the Applicant made verbally or in written submittals presented to the Town in conjunction with the Application before the Commission or Town Council shall be considered part of the Application and binding on the Applicant.

n. The Applicant shall reimburse the Town for any and all expenses incurred by the Town regarding this approval, including, without limitation, all costs incurred by the Town's outside consultants such as legal and engineering costs.

o. The sale of individual lots, parcels or units may not occur until a plat creating the lot, parcel or unit is recorded with Garfield County and security for public improvements has been received by the Town.

p. The Applicant and Town Council shall reach agreement on an affordable housing covenant that includes one of two options:

1) 3-one bedroom units offered at 75% of the current market rate in perpetuity;

Or,

2) 3-one bedroom units & 2-two bedroom units offered with the following pricing arrangement:

- Years 0-20 after certificate of occupancy – all rent reduced units shall be offered at 75% of current market rate;
- Greater than 20 years up to 23 years after CO – all rent reduced units shall be offered at 80% of current market rate;
- Greater than 23 years and up to 26 years after CO – all rent reduced units shall be offered at 85% of current market rate;
- Greater than 26 years and up to 30 years after CO – all rent reduced units shall be offered at 90% of current market rate;
- Greater than 30 years after CO – the affordable housing covenant shall expire;

The affordable housing covenant shall designate the general housing type for each unit as necessary, without specifying the exact location of each affordable housing unit. The affordable housing covenant shall designate authority to the Town to choose qualified renters that have passed background checks to live in the affordable housing units, with priority first given to town staff and then to members of the workforce of New Castle. If the property or any affordable housing unit were ever to be part of a further subdivision or if Lots 1, 2, and 3, as depicted on the Final Plat, are ever sold into separate ownership, the Town will apply its then-current affordable housing regulations and modify the affordable housing covenant accordingly. The affordable housing covenant shall be finalized before consideration of the Final Plat by the Town Council. Recordation of the affordable housing covenant shall be accomplished at or before recording of the Final Plat.

q. Finalization of water rights dedication requirements for the project. Calculation of irrigated areas and finalization of EQR dedication requirements. A warranty deed conveying the required water rights in the Coryell Ditch shall be executed and recorded together with the Final Plat.

r. Should issues arise about property management or community security, which are not cured after Town notice, the matter can come back for Planning & Zoning and Council review and the potential imposition of additional responsive conditions.

s. **[Place holder for the cost share agreements]**

8. Severability. Each section of this Resolution is an independent section and a holding of any section or part thereof to be unconstitutional, void, or ineffective for any cause or reason shall not be deemed to affect the validity or constitutionality of any other section or part hereof, the intent being that the provisions of this Resolution are severable.

9. Effective Date. This Ordinance shall be effective 14 days after final publication pursuant to Article IV of the Town Charter.

INTRODUCED on first reading on _____ __, 2025, and again on _____ __, 2025, at which time copies were available to the Town Council and to those persons in attendance at the meeting, read by title, passed on first reading, and ordered published in full and posted in at least two public places within the Town as required by the Charter.

INTRODUCED a second time at a regular meeting of the Town Council of the Town of New Castle, Colorado, on _____ __, 2025, read by title and number, passed without amendment, approved, and ordered published as required by the Charter.

TOWN OF NEW CASTLE, COLORADO
TOWN COUNCIL

By: _____
Art Riddile, Mayor

ATTEST:

_____
Mindy Andis, Town Clerk

Exhibits: Exhibit A: Legal Description; Exhibit B: List of Application materials; Exhibit C: Code Section 17.1-4.080

EXHIBIT A
Legal Description

A PARCEL OF LAND BEING A PORTION OF THE 'OPTION PROPERTY', AS DESCRIBED IN THAT QUIT CLAIM DEED, RECORDED SEPTEMBER 21, 2009 AS RECEPTION NO. 775392, AND BEING SITUATED IN THE SW1/4 OF SECTION 29, SE1/4 OF SECTION 30, THE NE1/4 OF SECTION 31, AND THE NW1/4 OF SECTION 32, TOWNSHIP 5 SOUTH, RANGE 90 WEST OF THE 6TH P.M., COUNTY OF GARFIELD, STATE OF COLORADO, SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE 1/4 CORNER, BETWEEN SAID SECTIONS 29 AND 30, A 3.25" BRASS CAP ON 2" IRON PIPE STAMPED "1/4 S30/29 BLM 1988", THENCE N 89° 36' 48" E THE ASSUMED BASIS OF BEARINGS ALONG THE SOUTHERLY LINE OF THE 2ND AMENDED EXEMPTION PLAT OF LAKOTA CANYON RANCH, RECORDED FEBRUARY 4, 2008 AS RECEPTION NO. 742257, A DISTANCE OF 1308.59 FEET TO THE NORTHEAST CORNER OF SAID 'OPTION PROPERTY', BEING A #5 REBAR & 1.25" YELLOW PLASTIC CAP STAMPED "CLAYCOMB ENG L.S. 3174", SAID CORNER BEING COINCIDENTAL WITH WESTERLY AND SOUTHERLY LINES OF RECEPTION NO. 742257;

THENCE S 00°55'44" E, ALONG EASTERLY LINE OF SAID 'OPTION PROPERTY', AND THE SAID COINCIDENTAL WESTERLY LINE OF RECEPTION NO. 742257, A DISTANCE OF 1002.40 FEET, TO A POINT ON THE NORTHERLY LINE OF THAT PARCEL OF LAND DESCRIBED IN THE SPECIAL WARRANTY DEED, RECORDED APRIL 15, 2010 AS RECEPTION NO. 784749;

THENCE THE FOLLOWING TWENTY-ONE (21) COURSES ALONG THE NORTHERLY, WESTERLY, EASTERLY AND NORTHERLY LINES OF SAID RECEPTION NO. 784749;

1. N 89°54'27" W A DISTANCE OF 116.87 FEET;
2. S 54°50'38" W A DISTANCE OF 173.10 FEET;
3. S 00°02'34" E A DISTANCE OF 167.50 FEET;
4. S 32°41'48" E A DISTANCE OF 88.46 FEET;
5. S 00°55'44" E A DISTANCE OF 289.40 FEET;
6. S 14°00'12" W A DISTANCE OF 22.45 FEET;
7. S 28°56'08" W A DISTANCE OF 541.68 FEET;
8. 122.69 FEET ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 219.00 FEET, A CENTRAL ANGLE OF 32°05'54", THE CHORD OF WHICH BEARS S 44°59'05" W, A DISTANCE OF 121.09 FEET;
9. 102.92 FEET ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 481.00 FEET, A CENTRAL ANGLE OF 12°15'33", THE CHORD OF WHICH BEARS S 54°54'14" W A DISTANCE OF 102.72 FEET;
10. N 51°02'22" W A DISTANCE OF 247.25 FEET;
11. 30.23 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 275.00 FEET, A CENTRAL ANGLE OF 6°17'51", THE CHORD OF WHICH BEARS S 42°06'34" W A DISTANCE OF 30.21 FEET;
12. N 44°48'48" W A DISTANCE OF 174.82 FEET;
13. N 56°40'07" W A DISTANCE OF 55.13 FEET;
14. N 63°30'38" W A DISTANCE OF 55.33 FEET;
15. N 71°43'03" W A DISTANCE OF 57.57 FEET;
16. 104.09 FEET ALONG A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 970.00 FEET, A CENTRAL ANGLE OF 6°08'54", THE CHORD OF WHICH BEARS N 11°34'51" E A DISTANCE OF 104.04 FEET;
17. N 16°07'55" E A DISTANCE OF 50.00 FEET;
18. N 18°54'59" E A DISTANCE OF 221.52 FEET;
19. N 30°00'58" E A DISTANCE OF 50.41 FEET;
20. N 67°17'36" W A DISTANCE OF 131.42 FEET;
21. 104.00 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 250.00 FEET, A CENTRAL ANGLE OF 23°50'05", THE CHORD OF WHICH BEARS N 79°12'39" W, A DISTANCE OF 103.25 FEET, TO A POINT ON THE NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, AS DESCRIBED IN THAT SPECIAL WARRANTY DEED RECORDED SEPTEMBER 25, 2007 AT RECEPTION NO. 733780;

THENCE THE FOLLOWING FOUR (4) COURSES ALONG SAID NORTHEASTERLY LINE OF NORTH WILD HORSE ROAD, BEING SITUATED PARALLEL TO AND 67.50 FEET NORTHEASTERLY OF THE WESTERLY LINE OF SAID 'OPTION PROPERTY', ALSO A COINCIDENTAL LINE WITH THE NORTH PARK PARCEL RECORDED APRIL 17, 2007 AT RECEPTION NO. 721291;

1. 38.30 FEET ALONG A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 491.25 FEET, A CENTRAL ANGLE OF 4°28'00", THE CHORD OF WHICH BEARS N 04°02'01" W A DISTANCE OF 38.29 FEET;
2. N 06°16'01" W A DISTANCE OF 314.42 FEET;
3. 263.68 FEET ALONG A CURVE TO THE LEFT, HAVING A RADIUS OF 281.25 FEET, A CENTRAL ANGLE OF 53°43'01", THE CHORD OF WHICH BEARS N 33°07'31" W, A DISTANCE OF 254.13 FEET;
4. N 59°59'02" W A DISTANCE OF 338.00 FEET, TO A POINT ON THE WESTERLY LINE OF SAID 'OPTION PROPERTY';

THENCE THE FOLLOWING THREE (3) COURSES ALONG THE WESTERLY LINES OF SAID 'OPTION PROPERTY';

1. N 21°44'01" E A DISTANCE OF 132.03 FEET;
2. N 02°06'39" E A DISTANCE OF 226.38 FEET;
3. N 00°23'12" W A DISTANCE OF 381.09 FEET, TO A POINT ON THE NORTH LINE OF THE TO A SW1/4 OF SECTION 30;

THENCE S 89°47'18" E ALONG SAID NORTH LINE SW1/4 OF SECTION 30, A DISTANCE OF 308.87 FEET, TO THE POINT OF BEGINNING,

COUNTY OF GARFIELD, STATE OF COLORADO.

EXHIBIT B

Final PUD Application Materials

A. Applicant Final Plan Application & Appendix – February 18, 2025;
B. CRFR Fire Marshal Referral, Orrin Moon – October 18, 2024
C. Town Engineer Comments, Jefferey Simonson – January 29, 2025
D. Town Public Works Director Comments, John Wenzel – October 21, 2024
E. Temporary Easement Access Referral, TC Midwest, LLC – October 28, 2024
F. Public Hearing Notice, with Legal Description for Final Plan P&Z – November 13, 2024
G. Notarized Affidavit of Public Hearing Notice – November 5, 2024
H. List of Adjacent Property Owners within 250 Feet

EXHIBIT C
Code Section 17.104.080

17.104.080 Zone districts for updated PUD master plan.

This section defines the zone district classifications set forth above in Section 17.104.020(F) throgh (L), which shall apply to all PUD development plan applications filed on or after March 1, 2002.

A. Residential.

1. SF-1: large lot single-family detached residential district providing lower density housing in areas for larger lots.

2. SF-2: small lot single-family detached residential district allowing for a variety of single-family housing alternatives within Castle Valley Ranch.

3. MF-1: multifamily townhouse and patio home district allowing for creative approaches to development with housing alternatives that are sensitive to existing and surrounding land uses.

4. MF-2: multifamily district allowing higher density including apartments.

B. Mixed Use.

1. MU-1: mixed use district providing a mix of residential and nonresidential land uses within close proximity to each other that are suitably located within the community core. All residential uses shall conform to the requirements of the SF-1, SF-2, MF-1, or MF-2 zones described above, which shall be determined (or may be modified) at the time of approval of a PUD development plan for property within an MU-1 zone.

2. MU-2: mixed use district providing a mix of residential and light industrial, office uses within close proximity to each other where complementary business uses may be permitted, and where higher intensity uses will be permitted that may not be suitable within the community core. All residential uses shall conform to the requirements of the SF-1, SF-2, MF-1, or MF-2 zones described above, which shall be determined (or may be modified) at the time of approval of a PUD Development Plan for property within an MU-2 zone.

C. Open Space and Parks.

1. OS/P: open space and parks district providing recreation and open space opportunities to the community of Castle Valley Ranch and the town of New Castle.

D. Schedule of Permitted Land Uses—Purpose and Intent. The purpose of the schedule of permitted uses of land is to show which uses are permitted, conditionally permitted, or prohibited. No person shall use any land within Castle Valley Ranch PUD except according to the following schedule of uses.

Schedule of Permitted Land Uses							
Use	OS/P	SF-1	SF-2	MF-1	MF-2	MU-1	MU-2
Detached dwelling units	*	P	P	P	*	P	P
Attached dwelling units with rear yards	*	*	*	P	P	P	P
Patio homes/dwelling units oriented to the side of the lot	*	*	P	P	P	P	P

Attached dwelling units in structures containing more than two units	*	*	*	P	P	P	P
Including detached garages/studios and granny flats	*	P	P	P	P	P	P
Child care facilities	*	C	C	C	C	P	P
Churches, synagogues, chapels and temples	*	C	C	C	C	P	P
Fire stations	C	C	C	C	C	C	C
Technical and administrative	*	*	*	*	*	P	P
Banks	*	*	*	*	*	P	P
Personal service shops	*	*	*	*	*	P	P
Restaurants and taverns	*	*	*	*	*	P	P
Gasoline service	*	*	*	*	*	P	P
Retail businesses	*	*	*	*	*	P	P
Office warehouse	*	*	*	*	*	P	P
Warehouses and storage (other than office warehouse)	*	*	*	*	*	*	P
Manufacturing uses	*	*	*	*	*	*	P
Service industrial uses	*	*	*	*	*	*	P
Parking facilities	P	C	C	P	P	P	P
Public parks, playgrounds and related accessory structures 5,000 sq. ft. or less	P	P	P	P	P	P	P
Private parks and playgrounds and related accessory structures 5,000 sq. ft. or less	*	P	P	P	P	P	P
Recreation facilities including, but not limited to health facilities, hobby rooms, activity rooms, meeting rooms, pools, gymnasiums, ball fields, tennis or basketball courts, volleyball courts, and any building of fields or play surfaces designated for	P	P	P	P	P	P	P
Pedestrian and bicycle trails	P	P	P	P	P	P	P
Private horse stables	*	C	*	*	*	*	*
Entry and monumentation	P	C	C	C	C	C	C
Open space and parks	P	P	P	P	P	P	P
Scientific, environmental, or interpretive educational uses	C	*	*	*	*	*	*

P: permitted uses

C: conditional uses

*: use prohibited

E. Bulk and Density Standards—Purpose and Intent. The purpose of the bulk density is to indicate the requirements for building location and height in both residential and nonresidential developments. Also included are regulations indicating the lot area, setbacks and fence heights.

Bulk and Density Standards							
Zoning Requirements	OS/P	SF-1	SF-2	MF-1	MF-2	MU-1	MU-2
Minimum lot area	n/a	8,000 sq. ft.	4,000 sq ft.	2,200 sq. ft.	2,200 sq. ft.	n/a	n/a
Minimum lot area per dwelling unit	n/a	8,000 sq. ft.	4,000 sq. ft.	2,200 sq. ft.	1,600 sq. ft.	n/a	n/a
Minimum lot frontage	n/a	none	none	none	none	none	none
Maximum floor area/ land ratio	n/a	n/a	n/a	n/a	n/a	0.6:1	0.6:1
Maximum principal building height	35′	35′	35′	35′	40′	40′	40′
Maximum accessory building height	20′	20′	20′	20′	20′	25′	25′
Minimum front yard setback	n/a	25′	18′	18′	18′	15′	15′
Minimum front yard setback with side-on garage	n/a	15′	10′	10′	10′	n/a	n/a
Minimum side yard setback	n/a	8′	5′	0′	0′	5′	5′
Minimum distance between buildings, not including architectural projections of up to 2 feet	n/a	16′	10′	10′	10′	10′	10′
Minimum side yard setback adjacent to Castle Valley Blvd	n/a	25′	20′	20′	20′	20′	20′
Minimum side yard setback adjacent to collector street	n/a	15′	15′	15′	15′	15′	15′
Minimum rear yard setback	n/a	20′	10′	10′	10′	10′	10′
Maximum front yard fence height,	n/a	42″	42″	42″	42″	n/a	n/a

fencing facing and visible from street, or located closer than 6 feet behind the front of the principal structure towards the street							
Maximum side yard fence height	n/a	72″	72″	72″	72″	n/a	n/a
Maximum rear yard fence height	n/a	72″	72″	72″	72″	n/a	n/a
Maximum rear and side yard fence height adjacent to public road (in.)	n/a	60″	60″	60″	60″	n/a	n/a
Minimum setback, rear and side yard fence adjacent to public road (ft.)	n/a	15′	10′	10′	10′	n/a	n/a

(Prior code § 13-22-080)

TOWN OF NEW CASTLE, COLORADO
RESOLUTION NO. TC2025-05

A RESOLUTION OF THE TOWN OF NEW CASTLE TOWN COUNCIL SUPPORTING THE APPLICATION FOR A GRANT FROM THE GARFIELD COUNTY FEDERAL MINERAL LEASE DISTRICT FOR THE REPLACEMENT OF TOWN HALL'S ROOFTOP HVAC SYSTEM

WHEREAS, the Town of New Castle is a political subdivision of the State of Colorado, and therefore an eligible applicant for a grant awarded by the Garfield County Federal Mineral Lease District ("GCFMLD"); and

WHEREAS, the Town of New Castle has submitted a Grant Application for the replacement of Town Hall's rooftop HVAC System, requesting a total award of $30,000.00; and

WHEREAS, the Town of New Castle supports the completion of the replacement of Town Hall's rooftop HVAC System.

NOW, THEREFORE, BE IT RESOLVED BY THE Town of New Castle THAT:

1. The above recitals are hereby incorporated as findings by the Town of New Castle.

2. The Town of New Castle strongly supports the Grant Application.

3. If the grant is awarded, the Town of New Castle strongly supports the replacement of Town Hall's rooftop HVAC System.

4. The Town of New Castle authorizes the expenditure of funds necessary to meet the terms and obligations of any grant awarded pursuant to a Grant Agreement with the GCFMLD.

5. The proposed building and systems security are owned by the Town of New Castle and will be owned by The Town of New Castle for its foreseeable, useful life. The Town of New Castle will continue to maintain the new rooftop HVAC system in a high-quality condition and will appropriate funds for maintenance annually. The estimated annual maintenance cost for the rooftop unit is $700.

6. If a grant is awarded, the Town of New Castle hereby authorizes the Mayor to sign a Grant Agreement with the GCFMLD.

Introduced, Read and Adopted at a Regular Meeting of the Town Council of the Town of New Castle, Colorado, on February 18, 2025.

TOWN OF NEW CASTLE

_____
Mayor Art Riddile

ATTEST:

_____
Town Clerk Mindy Andis, CMC

TOWN OF NEW CASTLE, COLORADO
RESOLUTION NO. TC2025-06

A RESOLUTION OF THE TOWN OF NEW CASTLE TOWN COUNCIL SUPPORTING THE APPLICATION FOR A GRANT FROM THE GARFIELD COUNTY FEDERAL MINERAL LEASE DISTRICT FOR CAPITAL STREET MAINTENANCE THROUGHOUT THE TOWN OF NEWCASTLE

WHEREAS, the Town of New Castle is a political subdivision of the State of Colorado, and therefore an eligible applicant for a grant awarded by the Garfield County Federal Mineral Lease District ("GCFMLD"); and

WHEREAS, the Town of New Castle has submitted a Grant Application for Capital Street Maintenance, requesting a total award of $180,000, with a total project cost of $360,000.

WHEREAS, the Town of New Castle supports Capital Street Maintenance if a grant is awarded by the GCFMLD.

NOW, THEREFORE, BE IT RESOLVED BY THE Town of New Castle THAT:

1. The above recitals are hereby incorporated as findings by the Town of New Castle.

2. The Town of New Castle strongly supports the Grant Application.

3. If the grant is awarded, the Town of New Castle strongly supports the Round-about Landscape Construction Project

4. The Town of New Castle authorizes the expenditure of funds necessary to meet the terms and obligations of any grant awarded pursuant to a Grant Agreement with the GCFMLD.

5. The project property is owned by the Town of New Castle and will be owned by The Town of New Castle for its foreseeable, useful life. The Town of New Castle will continue to maintain the public streets in a high-quality condition and will appropriate funds for maintenance annually. The estimated annual maintenance cost of the newly improved streets will be $ 2,500.00 annually.

6. If a grant is awarded, the Town of New Castle hereby authorizes the Mayor to sign a Grant Agreement with the GCFMLD.

Introduced, Read and Adopted at a Regular Meeting of the Town Council of the Town of New Castle, Colorado, on February 20, 2024.

TOWN OF NEW CASTLE

_____
Mayor Art Riddile

ATTEST:

_____
Town Clerk Mindy Andis, CMC

Town of New Castle
450 W. Main Street
PO Box 90
New Castle, CO 81647

Administration Department
Phone: (970) 984-2311
Fax: (970) 984-2716
www.newcastlecolorado.org

Memorandum

To: Mayor & Council

From: David Reynolds

Re: Agenda Item – Consider Approval of CDOT Temporary Easement

Date: 02/18/2025

The purpose of this agenda item is to consider a Temporary Easement Agreement with CDOT for a parcel of land near the bridge at the west end of Town. To complete the construction of the new bridge at the west end of town, CDOT requires the temporary use of a small parcel of land which will serve as a bypass for the construction of the new bridge.

Attached please find the proposed agreement which has been reviewed by our attorney and town engineer.

COLORADO
Department of Transportation
Region 3
222 South 6th Street, Room 317
Grand Junction, CO 81501-2769

Project No.: FBR 0063-066
Location: US Hwy 6/New Castle Elk Creek
Project Code: 24493
Parcel: TE-4

January 23, 2025

Via: Email and Certified Mail

Town of New Castle
Attn: David Reynolds
PO Box 90
New Castle, CO 81647-0166

Re: Offer to Acquire and Summary of Just Compensation for 801 West Main Street, New Castle, CO

Dear Mr. Reynolds,

The Colorado Department of Transportation (CDOT) is proceeding with the bridge replacement project on US Highway 6 in New Castle, Colorado. The project consists of bridge replacement, reconstructing the adjacent highway, constructing a new pedestrian bridge, and performing all associated traffic control and erosion control required to complete the work. The purpose of the project is to replace the Elk Creek Bridge to improve transportation, safety, pedestrian, and traffic flow for the traveling public on US 6 in New Castle. The proposed construction start is anticipated in the fall of 2025.

In order to construct and maintain these improvements, the project needs to acquire a Temporary Easement parcel (TE-4) from you. CDOT is offering to acquire the rights to the parcel depicted on the enclosed Right of Way plan sheet (**Exhibit "A"**) and summarized as TE-4.

Pursuant to applicable Federal regulations and Colorado law, CDOT has prepared an estimate of value (waiver valuation) based upon credible market data and has estimated a unit value of $7.00/sf. This approved estimated value is considered the Fair Market Value and is the basis for our offer to acquire.

CDOT hereby offers you just compensation in the amount of **Eleven Thousand Three Hundred Sixty and 00/100 Dollars ($11,360.00)** for the property interest described above. This amount is offered as total compensation for all interests in the parcel and includes all damages and benefits, if any, to the remaining portions of your property. Below is a summary of the compensation components:

Land:

Parcel TE-4 contains a total area of 10,817 square feet (0.248 ac) for the purpose of removal and replacement of a bridge. TE-4 is legally described on the attached Exhibit A and depicted on the Right of Way plan sheet. This temporary easement has a duration of 18 months, the period to begin on the date of entry for actual construction and expires no later than 18 months from the said entry date. The estimated unit value of the land is $7.00/square foot. The annual rental rate for the 18 month duration was determined to be 10% of the fee simple unit value. Therefore, the offer for this temporary easement acquisition is as follows:

$7.00/sf x 10,817 square feet x 10%/year x 1.5 yrs (18 months) = $11,358.00 rounded to $11,360.00

Affected Improvements/Fixtures:

- None

Summary:

The sum of the above listed composition components with permissible rounding results in a just compensation totaling $11,360.00, as summarized below:

Parcel TE-4	= $11,358.00
Applying the permissible rounding	**= $11,360.00**

Accompanying this letter is a Memorandum of Agreement (MOA) for your consideration. The MOA constitutes CDOT's formal offer to acquire that becomes a contract when fully executed by all parties. If you are in agreement with CDOT's offer, please complete, sign and date the:

- MOA in the box identified as "Grantor" at the bottom of the form.
- Statement of Authority - please sign in the presence of a Notary Public. I am a Notary Public, and can help you with this.
- IRS form W9

Please return the original forms (MOA, Statement of Authority and W-9 form) in the enclosed return envelope to Mike Cooper, CDOT ROW, 222 South 6th Street, Rm 317, Grand Junction CO 81501.

Finally, enclosed is a Demographic Information form. Completing this form is voluntary; it is used to document CDOT's compliance with several federal civil rights laws. If you choose to complete this information, please return it in the enclosed pre-paid envelope addressed to our Denver, Colorado address.

Please contact me at 970-424-4718 if you have any questions or concerns regarding this offer letter or the enclosures. Thank you for your assistance in this important public improvement project.

Sincerely,

Mike Cooper
Region 3 Real Estate Specialist

Enclosures:
Memorandum of Agreement form 784 with Legal Description
Plan sheet
Summary of Fair Market Value form 240
Request for Taxpayer Identification form W-9
Statement of Authority
Demographic Information Form
Self addressed stamped envelopes (2)

STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION

OFFER OF FAIR MARKET VALUE

COLORADO
Department of Transportation
Region 3

Project Code: 24493
Parcel No: TE-4
Project No: FBR 0063-066
Location: US Hwy 6/New Castle Elk Creek
Date: January 23, 2025

Dear Property Owner:

The Colorado Department of Transportation offers you the following amount as fair market value compensation for your property. The amount offered was determined in accordance with applicable Federal and State laws and requirements.

1. Land .....$ n/a
2. Permanent & Slope Easements .....$ n/a
3. Temporary Easements .....$ 11,358.00
4. Improvements .....$ n/a
5. Damages .....$ n/a
6. Less Benefits (credit) .....$ n/a
7. TOTAL .....$ 11,360.00 rounded

We based our determination on the following information:

a. Identification of the real property to be acquired: TE-4

b. Type of interest being acquired: TE-4- Temporary Easement (18-month duration)

c. Identification of all improvements, including fixtures, to be acquired: n/a

d. Identification of real property improvements, including fixtures, to be acquired which are not owned by the landowner: n/a

Sincerely,

Mike Cooper
Real Estate Specialist Region 3

Attachment

cc: Project Development Branch (ROW Services)
Region ROW

EXHIBIT "A"

PROJECT CODE: 24493
PROJECT NUMBER: FBR 0063-066
TEMPORARY EASEMENT NUMBER: TE-4
DATE: OCTOBER 28, 2024

LEGAL DESCRIPTION

A Temporary Easement No. TE-4 of the Department of Transportation, State of Colorado, Project Code 24493, Project Number FBR 0063-066, containing 10817 square feet (0.248 acres), more or less, located in, Garfield County, Colorado, said temporary easement being more particularly described as follows:

Commencing at a point on southerly ROW of US 6, whence the West Quarter Corner of Section 31 bears North 86° 49' 26" West, a distance of 1498.18 feet, said point being the TRUE POINT OF BEGINNING;

1. Thence leaving said ROW South 30°35'16" West, a distance of 67.39 feet;
2. Thence North 89°49'09" West, a distance of 120.14 feet,
3. Thence North 71°22'09" West, a distance of 114.65 feet to existing ROW,
4. Thence along said ROW to a point on a curve to the right having a radius of 1086.00 feet, along the arc of said curve a distance of 236.35 feet (said arc subtended by a chord bearing N84°46'08"E, a distance of 235.88 feet),
5. Thence along said ROW South 88°58'49" East, a distance of 28.18 feet to the TRUE POINT OF BEGINNING.

The above described Parcel contains 10817 square feet (0.248 acres), more or less.

The purpose of the above described Temporary Easement is for the Removal, Detour, and Replacement of a Bridge.

Basis of Bearings: All bearings are based on a line connecting NGS Stainless Steel Rod "Winchester and NGS Bench Mark "Q 158", being a U.S. Coast and Geodetic Survey control monument with a 3-1/2" Brass Cap in concrete post, as bearing South 84° 16' 48" East.

For and on Behalf of the
Colorado Department of Transportation
Mark Wagner, PLS 38138
222 South 6th Street
ROW Unit, Room 308
Grand Junction, CO 81501

Colorado Department of Transportation
222 South 6th Street
Room 317
Grand Junction, CO 81501
Phone: 970-683-6201
Fax: 970-683-6227
Region 3 DCH

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Sheet Revisions		
Date	Description	Initials

Right of Way Plans
Plan Sheet

Project Number: FBR 0063-066
Project Location: US HIGHWAY 6/NEW CASTLE
ELK CREEK BRIDGE

Project Code:	Last Mod. Date	Subset	Sheet No.
24493	10/17/24	7.01 to 7.03	7.02

T 5 S, R 90 W, 6th P.M.
Section 31
Garfield County

NW¼Sec. 31
SW¼Sec. 31

CASTLE MP 11+00

12+00

US HWY NO. 6 (West Main St.)

S89° 25'28"E
5.18'
S89° 02'42"E
134.03'

PI STA. 10+42.26
N81° 41'09"E
30.74'
PI STA. 11+44.92
PI STA. 12+11.48

HIGHWAY 6
N80° 07'29"E
28.63'

PT 10+55.88
PC 10+86.62
PT 12+02.99
PC 12+08.17
PT 12+14.79

POB = STA. 10+00.00

TOP OF PIPE 5549.60'

PC 10+28.63

PE-5

Unknown Ownership
No Address
Vacant Land

Proposed Detour

PI = 11+44.92
Δ = 08° 53'23" RT
Tc = 58.30'
Dc = 07° 38'22"
Lc = 116.37'
Rc = 750.000'
e = %

PI = 12+11.48
Δ = 00° 22'46" RT
Tc = 3.31'
Dc = 05° 43'46"
Lc = 6.62
Rc = 1000.000'
e = %

T.P.O.B. TE-4 & TE-5
Tie: W¼ Corner Sec. 31
Bears N86° 49'26"W 1498.18'

PI = 10+42.26
Δ = 01° 33'40" RT
Tc = 13.62'
Dc = 05° 43'46"
Lc = 27.25'
Rc = 1000.000'
e = %

US HWY NO 6 PROJ. NO. FAP 145-C

S88° 58'49"E
28.18'
S88° 58'4
14.83'

301 PP 170
PP 106
410
411
412

Rc = 1086.00'
Δc = 34° 36'52"
Lc = 656.09'
C = 646.16'
CB = N73° 42'57"E

Rc = 1086.00'
Δc = 12° 28'10"
Lc = 236.35'
C = 235.88'
CB = N84° 46'08"E

4173
0.096

300

Utility Easement
Shilo Sub
Rec #553022

PE-5

S30° 35'16"W
67.39'

Begin R-O-W
STA: 9+88.93

N71° 22'09"W
114.65'

10817 sf
0.248 ac.

TE-4

304

N89° 49'09"W
120.14'

N89° 49'09"W
54.

415

414

TE-4

Town of New Castle
801 West Main St.
New Castle, CO 81647
PID# 212331307002

Utility Easement
Public Service
Rec #586422

Elk Creek

Match Line

N
0' 5' 10' 20'
Scale: 1" = 20'
Lineal Units = U. S. Survey Feet

COLORADO LICENSED
38166
10/17/2024
PROFESSIONAL LAND SURVEYOR

10/17/2024 bonnerj 12:19:30 PM E:\S. Bonner\24493_US6_Elk_Creek\Scott Working\24493row_plan7-02.dgn

Outlook

RE: CDOT Temporary Easement Location

From Jeff Simonson <JeffS@sgm-inc.com>
Date Thu 2/6/2025 11:30 AM
To Rochelle Firth <rfirth@newcastlecolorado.org>
Cc Dave Reynolds <dreynolds@newcastlecolorado.org>

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Rochelle,

I reviewed the location of the easement… being in the NE corner of the Town's Public Works property. They are going to utilize this area for the detour, staging and material storage for the bridge replacement project. Both the written legal description and mapping are concurrent.

Their intention is to replace the area, when complete, with native seeding/soil and retention blanket. For all of the trees removed to accommodate the project, they are going to replace with 3 deciduous trees. I don't have access to the MOU and do not know what the Town's expectations or concerns may be in this regard albeit, the cottonwood trees that are there are certainly a maintenance issue. Thus, removing a large number of trees may be of no concern.

Thanks!

Jeff Simonson, PE
Civil Services Sector Leader/Principal, **SGM**

phone (970) 384-9005

From: Rochelle Firth <rfirth@newcastlecolorado.org>
Sent: Thursday, February 6, 2025 10:37 AM
To: Jeff Simonson <JeffS@sgm-inc.com>
Cc: Dave Reynolds <dreynolds@newcastlecolorado.org>
Subject: CDOT Temporary Easement Location

Hi Jeff,

It's been a long time. Hope you are well!

I am wondering if you could take a look at the location CDOT has laid out in the attached paperwork and map and verify the that the location that they are requesting an easement for is

correct? All the information should be in there for you but let us know if there are any further questions you may have. We spoke with our attorney, David, and he's good with everything in the paperwork, but he asked that we confirm this information/location with you before moving forward.

Let me know if you have any questions. Thanks for your help!

Rochelle Firth

Admin Assistant to the Town Administrator

PIO

Town of New Castle

[www.newcastlecolorado.org]www.newcastlecolorado.org

Phone: 970-984-2311 ext 114

New Castle Town Council Regular Meeting
Tuesday, January 21, 2025, 7:00 PM

Call to Order
Mayor Art Riddile called the meeting to order at 7:00 p.m.

Pledge of Allegiance

Roll Call

	Councilor Carey
	Councilor Mariscal
	Councilor Hazelton
	Mayor A. Riddile
	Councilor Leland
	Councilor G Riddile
Absent	Councilor Copeland

Also present at the meeting were Town Clerk Mindy Andis, Administrator Dave Reynolds, and members of the public.

MOTION: Mayor A. Riddile made a motion to excuse Councilor Copeland's absence. Councilor Mariscal seconded the motion and it passed unanimously.
Meeting Notice

Clerk Andis verified that her office gave notice of the meeting in accordance with resolution TC 2025-1.

Conflicts of Interest
There were no conflicts of interest.

Agenda Changes
There were no agenda changes

Citizen Comments on Items not on the Agenda
There were no citizen comments

Consultant Reports
Consultant Attorney – not present
Consultant Engineer – not present

Items for Consideration

Consider a Letter of Interest from Julia Koch for Appointment to Seat on Climate and Environment Commission

Town Administrator Dave Reynolds introduced Julia Koch as being interested in one of the two vacant seats on Climate and Environment Commission (CEC) Ms. Koch submitted a letter of interest and attended the last CEC meeting.

DRAFT

Mayor A. Riddile asked Ms. Koch how long she had lived in New Castle, to which she replied a year and a half.
Ms. Koch provided background on her experience, mentioning her doing trail crew work at Rocky Mountain National Park for a few summers. She explained how this work gave her a new appreciation for resourcefulness and respect for nature. Ms. Koch currently works in healthcare at Valley View Hospital in the physical therapy department.
Councilor Leland noted Ms. Koch's trail work experience and mentioned that the town was planning on funding some trail cleanup. He suggested Ms. Koch experience could be valuable for those efforts.
Councilor Carey expressed appreciation for Ms. Koch's trail work experience. She informed Ms. Koch about the Roaring Fork Outdoor Volunteer group in case Julia wanted to continue doing trail work.

MOTION: Councilor Leland made a motion to appoint Julia Koch to the Climate and Environment Commission, Councilor Carey seconded the motion and it passed unanimously.

Presentation – Colorado River Valley Economic Development Partnership (CRVEDP) Alicia Gresley

Administrator Reynolds introduced Alicia Gresley to the council.
Ms. Gresley gave a presentation on the organization's work (Exhibit A). She explained that the partnership was formed by town managers from municipalities in Western Garfield County to approach economic development in a new way, focusing on diversifying the economic environment and providing better jobs close to home.
Ms. Gresley highlighted the unique aspects of each municipality in the region and emphasized the importance of keeping people working and spending time within the region. She outlined the organization's values: community vitality, innovation, empowerment, resilience, and collaboration.
Ms. Gresley reported that CRVEDP had received a capacity-building grant from the Colorado Energy Office for $80,000 per year over three years. This funding will allow them to pursue projects such as a Western Garfield County data project to better understand the region's economic landscape.
Mayor A. Riddile asked other than the grant received from Colorado Energy Office, how is CRVEDP being financed. Ms. Gresley said the first year, funding was from the municipalities contributing, including New Castle. Garfield County Libraries; and CHAPHA also contributed for a total of about $75,000. In 2025 AGNC allowed use of their contribution project list, which is a tax credit incentive. Any contribution made by an individual business organization to CRVEDP gets a 25% state tax credit in addition to them being a tax deductible under the 501((C)(3).
Ms. Gresley said they are always looking for grants to fit them, not building a project to fit a grant. Also, they believe the majority of funding should come from private industry, big utilities such as oil and gas, and big businesses that want see success in the future of our region. Also, they are looking at a possible revolving loan fund. Which is done by a lot of other economic development organizations. The revolving loan is built up to become self-

DRAFT

funded, using the interest charges. Long-term goal for CRVEDP is to become more self-funded rather than expecting municipalities to continue to fund it.
Councilor Hazelton said there are a couple of bills being introduced on clean energy involving nuclear energy. He asked what role, if any will CRVEDP have. Ms. Gresley said that is where the relationship with AGNC will be pivotal.
Councilor Leland said would like to see one or wo projects get started. New Castle has been subject to a lot of studies. Most recently, New Castle had a study of Main Street leading to a downtown comprehensive plan. The town has lots of studies, lots of opinions, and nothing's gotten off the ground. Ms. Gresley asked what project the town would like to see get off of the ground. Councilor Leland said to make sure to preserve the downtown businesses. Ms. Gresley said from a regional perspective, the opportunities are transportation and exploring opportunities, whether it's with RFTA or Parachute Area Transit System (PATS).
Councilor G. Riddile asked if CRVEDP is trying to tackle the housing problems. Ms. Gresley said currently there are several organizations out there trying to tackle the housing issue. As a partnership CRVEDP could help connect the resources to drive towards the common goal of live, work and play in our communities.

Update – Garfield County Public Environmental Health Department (Mosquito Control Program) Jannette Whitcomb

Administrator Reynolds said each year Garfield County Environmental Health works county wide to provide cost-effective mosquito control programs. Often hiring qualified contractors, the program works to utilize environmentally sensitive techniques to control the mosquito population without negatively impacting the environment. The county relies on municipal support to manage these programs within municipal boundaries.
Administrator Reynolds introduced Jannette Whitcomb to the council.
Ms. Whitcomb presented an overview of the county's cooperative mosquito control program (Exhibit B). She explained that Vector Disease Control International (VDCI) is the contracted specialist that conducts mosquito surveillance and control work. Ms. Whitcomb provided details on the West Nile virus transmission cycle and the life cycle of mosquitoes. She outlined the surveillance and control work conducted by VDCI, including larval control and adult mosquito surveillance. In New Castle, 14.4 acres were treated with larvicide in the previous year. Ms. Whitcomb also discussed the adult mosquito surveillance program and the testing for West Nile virus. She reported that in 2024, there were no West Nile virus cases detected in Garfield County, compared to a higher number of cases in previous years.
Mayor A. Riddile asked Ms. Whitcomb what attributed the downturn of the West Nile Virus too, because the treatment seems be the same for every year. Mr. Josh Willimas, said that usually the drier the summer, the more stressed the birds become. As the birds become more stressed with the lack of water, their diseases increase. There is more disease for mosquitos to spread. Control is a little bit more complicated cycle because it balances disease control and nuisance population control. They also strive to keep a consistent program regardless of weather patterns. VDCI is constantly checking sites to see when the mosquitoes are active.

DRAFT

Councilor Mariscal asked how information is getting put out and is it in Spanish. Ms. Whitcomb said the community outreach person will reach out to the Spanish radio stations as well as the newspaper in Spanish. The posters are in English and Spanish. If there is a human case of West Nile, the communications specialist will step up the outreach.

Proclamation Honoring the Coal Ridge High School Coed Cheer Team
Mayor A. Riddile read the proclamation into the record.

Consent Agenda
Items on the consent agenda are routine and non-controversial and will be approved by one motion. There will be no separate discussion of these items unless a council member or citizen requests it, in which case the item will be removed from the consent agenda.

January 7, 2025 minutes

MOTION: Mayor A. Riddile made a motion to approve the Consent Agenda. Councilor Mariscal seconded the motion and it passed unanimously.

Staff Reports
Town Administrator – – Administrator Reynolds said he had a meeting with Jeanne Golay and representatives from Garfield County Community Development regarding the county's review of Nutrient Farms application. The application will be going to the county P&Z board Wednesday, January 29, 2025. The county has been taking comments about Nutrient Farms proposal. One issue raised was owners' suggestion of using the Lova Trail's bridge as an emergency route if access to Nutrient Farms is cut off. The Lova Trail has not been built. The MOU that the town entered into in 2018 with the then prospective buyer of the land, said within the next two years an easement through Nutrient Farms for the LOVA trail would be established, along with a construction easement through the property. Unfortunately, the project fell apart for various reasons. The LOVA trail is in concept only. The MOU has dissolved because the town didn't meet the two-year deadline. Administrator Reynolds said he has drafted a letter to submit to Garfield County Planning & Zoning as what the town's position is. The town still has a desire for Lova Trail to connect New Castle through Nutrient Farm and eventually through South Canyon. But even without LOVA, the town is interested in a trail connection through Nutrient Farm. The town's Comprehensive Plan specifies that new development proposals include trail connectivity. Administrator Reynolds said there was also discussion regarding wastewater discharge from Nutrient Farms. This is a unique situation because the farm does not tie into any municipal wastewater treatment plant. However, the property does have several series of septic systems of holding ponds. The town's comment on that is that as the project moves along, the town certainly reserves the right for our engineers to review those systems and then figure out what type of permitting and what type of effects it would have on the river. Nutrient Farms is within our area of disturbance of land and wastewater discharge, the town engineer will need to review when plans are complete. Those plans aren't ready yet for the town to review. Nutrient Farms are currently going

DRAFT

before the County for zoning changes. Administrator Reynolds said the town is concerned about the traffic on the bridge across to County Road 335. Nutrient Farm Owner Andy Bruno has discussed these issues with the county, and they are aware of our concerns. As a dark sky compliant town, we also focus on minimizing light trespass. We want to avoid noticeable lighting impacts from the proposed venue along I-70. He said police coverage was also discussed. Given its proximity to town, our police are likely to be the first responders if an incident occurs, despite it being in the county. The town offers mutual support with the county for emergency coverage. Administrator Reynolds said the county has talked with Town Planner Paul Smith about the industrial zone. The industrial Zone is the western portion of the project. Nutrient Farm does border with residential neighbors the town is looking at its compatibility with the neighboring property.

Councilor G. Riddile asked if the town's engineer would be looking at the traffic study up to County Road 335 interchange. Administrator Reynolds said yes, the engineer has looked at the study. The report called for minor improvements of the intersection.

Councilor G. Riddile said he was fine with the industrial zoning where it's being proposed.

Councilor Carey said she has concerns about the industrial zoning close to residential. Administrator Reynolds said currently by Riverpark there is a yard full of heavy equipment. At some point Mr. Burno did advertise equipment for lease on the Nutrient Farms property. Councilor Carey said if the industrial zone was more inside of the property and not right on the edge of the property would work better.

Councilor Leland said there have been a lot of comments online and the biggest concern was traffic. The traffic from County Road 335 would being using the bridge, with a lot of the traffic going onto the highway, which will exacerbate the ramp situation, which CDOT said they'll fix. Then, some of the traffic will be coming into town, which is good because it brings some business, but at the same time it brings more traffic problems.

Councilor Hazelton said the county will have some control over Nutrient Farms. But the county does not have control over the 36-acre parcels that are stacked up on each other. We are going to start to see storage yards and such.

John Leybourne from Garfield County said the 36-acre parcels are currently zoned as rural. The county has had a lot of people go in without permits and the county had done a lot of actions on those. The owners have been required to submit permits through the town for watershed protection. Therefore, the county is keeping an eye on those lots, making sure the lots are being developed correctly.

Administrator Reynolds said he, Planner Smith and Assistant Rochelle Firth did a presentation for the Glenwood Springs Realtors Association. They were able to give them an update on projects that the town is working on, events and developments.

Administrator Reynolds said the town is continuing to work with the Wildfire Collaborative. The Collaborative has applied for a grant for hiring a director and should know in a couple of weeks if they received it. He had spoken with FMLD to see if there were any partnership grant possibilities between the town and CRFR for wildfire mitigation work.

Administrator Reynolds said he would like to schedule a capitol committee meeting because there are grant cycles coming up.

Administrator Reynolds said he had a meeting with New Castle Trails. The conversation was about who New Castle Trails are now and what their vision is for the future. He also

DRAFT

talked with RFMBA about trails maintenance. The conclusion was New Castle Trails would like to bring back some version of Rides and Reggae. New Castle Trails have agreed to attend the POSTR meetings. The first POSTR meeting will be February 5, 2025. Public Works Director John Wenzel will prepare the agenda and get it posted. At some point New Castle Trails will be introduced to the council.
Administrator Reynolds asked the council for ideas for the Board of County Commissioner Joint Meeting. Administrator Reynolds said the joint meeting is normally held in the big room at the community center or the library, however both are booked. Staff are trying to figure out where to hold the meeting.
Administrator Reynolds said he and Planner Smith have been in conversations with the owner of TC Midwest who owns the commercial parcels and residential parcels in Castle Valley Ranch. TC Midwest will be taking a step back and reevaluating the properties and what would be best for New Castle. Administrator Reynolds had suggested to TC Midwest to have a meet and greet meeting with the council.
Administrator Reynolds said on March 4, 2025, Amy Moyer will be coming to council to give an update about the Shoshone Water Rights.
Administrator Reynolds said he will be out of the office January 30 & 31, 2025 and again from February 7-14, 2025.

Town Clerk – Clerk Andis said she had nothing to report.
Town Treasurer – not present
Town Planner – not present
Public Works Director – not present

Commission Reports
Planning & Zoning Commission – have not met
Historic Preservation Commission – have not met
Climate and Environment Commission – Councilor Leland said the commission appointed Sharon Morris as commission chair and Myrna Candreia as commission vice chair. The commission confirmed the Elemental Film for February 12, 2025, at 6pm at the library. The commission approved the bag fee budget with the council's recommendations. The bag fee budget will come to the council for final approval. Administrator Reynolds said the law says there has to be an approved budget or plan for the bag fee. Since CEC is an advisory board to the council, the council would need to formally approve the budget or plan. Councilor Leland said the town is being recognized particular Earth Days and being a model for rest of the county. Councilor Leland said Commission Chair Tom Elder had passed away and his memorial service will be early April. The commission is suggesting planting a tree with a plaque in his honor. The commission will coordinate with the parks department.
Senior Program –have not met
RFTA – Mayor A. Riddile said in the years past RFTA has received approximately $45 million in grants. $35 million was for the completion of the Glenwood Maintenance Facility, which includes a new office building, with housing for employees and 5 electric buses. Most of the grant money came from the FTA.
AGNC – have not met

DRAFT

GCE – Councilor Leland said they discussed the energy saving programs that are available to the public. They will be continuing the energy saving rebates. GCE didn't get the grant money for the EV charging stations which they had applied for.
EAB – have not met
Detox – have not met

Council Comments
Councilor Carey asked staff to look at the Siberian Elm Tree next to the green bridge. The property owner is concerned because the tree is leaning and afraid it will fall on his or his neighbor's house. However, the owner is not sure whose property the tree is on.
Mayor A. Riddile said he, Administrator Reynolds and Public Works Director Wenzel had attended the FMLD awards luncheon. FMLD in the spring had awarded $400k for the roundabout and $25k for playground equipment for Kay Willimas Park. Then in the fall had awarded $500k for the wastewater offices and, $25K for the community center air conditioning, which totals $950k worth of grants for the town. FMLD had also awarded $160k to KSE, which the town had partnered with. The town has also received the Grantee of the year for the second time from FMLD which comes with $10k mini grant. The town is the only organization to have received the award twice. To receive the award there are 5 conditions that have to be met: alignment with the district's mission and the Federal Mineral Lease District Act, quality of the projects, quality of the applications, timeliness of project completions, and compliance with program rules and guidelines. Mayor A. Riddile offered huge thanks to our grant writers. Mayor A. Riddile said he has to resign from the P&Z Commission due to health issues. The seat needs to be filled with another councilor. Administrator Reynolds said there is a meeting tomorrow night and we are having a difficult time getting a quorum. Administrator Reynolds suggested having a councilor attend the meeting tomorrow night and then at the next meeting appoint a councilor to fill the remaining time of the seat. Clerk Andis said the seat will need to be filled until May 1, 2025, and Councilor G. Riddile will start May 1, 2025. There was a brief conversation and Councilor G. Riddile agreed to fill in tomorrow night if he could. Councilor Carey said she could if Councilor G. Riddile couldn't but would be a little late.

Items for Future Council Agenda
Councilor Carey asked to have the 36-acre parcels discussion for the joint BOCC meeting. Mayor A. Riddile asked to have renderings of the landscaping for the roundabout at the joint meeting.

Adjourn

MOTION: Mayor A. Riddile made a motion to adjourn. Councilor Mariscal seconded the motion and it passed unanimously.
The meeting adjourned at 8:56p.m.

Respectfully submitted,

DRAFT

Mayor Art Riddile

Town Clerk Mindy Andis, CMC

DRAFT

New Castle Town Council Regular Meeting
Tuesday, February 4, 2025, 7:00 PM

Call to Order
Mayor Art Riddile called the meeting to order at 7:00 p.m.

Pledge of Allegiance

Roll Call

	Councilor Carey
	Councilor Mariscal
	Councilor Hazelton
	Mayor A. Riddile
	Councilor Copeland
	Councilor Leland
	Councilor G Riddile
Absent	None

Also present at the meeting were Town Clerk Mindy Andis, Administrator Dave Reynolds, Town Planner Paul Smith, Town Treasurer Viktoryia Ehlers, Administrative Assistant Michelle Huster, Town Attorney David McConaughy and members of the public.

Clerk Andis verified that her office gave notice of the meeting in accordance with resolution TC 2025-1.

Conflicts of Interest
Councilor Hazelton recused himself from agenda item A.

Agenda Changes
There were no agenda changes

Citizen Comments on Items not on the Agenda
There were no citizen comments

Consultant Reports
Consultant Attorney – Attorney McConaughy said he was present for agenda items only.
Consultant Engineer – not present

Items for Consideration

Consider Resolution TC 2025-04 - a Resolution of the New Castle Town Council Approving A Conditional Use Permit for Outdoor Vehicle Storage on Property Located in the Industrial Zone District.
Planner Smith reviewed his staff report with the council (Exhibit A). Planner Smith presented the proposed CUP for vehicle storage on a property located in the industrial park on the south side of the Colorado River. He explained that the proposal was for approximately 70 spaces in an enclosed area. Planner Smith noted that the town had revised its code on parking in the right of way about a year or two earlier, which limited or prohibited RVs, trailers, and other vehicles from parking in the right of way for extended

DRAFT

period of time. This had created a demand for storage parking elsewhere.
Applicant Grady Hazelton introduced himself to the council and he gave a brief explanation of the purpose of the application. Mr. Hazelton said he wanted to have business in New Castle and has noticed a need for outdoor storage for RVs and boats in the area. He said similar facilities nearby are full and have a waiting list for storage of RVs and boats. Mr. Hazelton has leased the property and believes the property is the best place to have outdoor vehicle storage.

Planner Smith said anytime a CUP land use application is brought to staff. Staff will review the application to determine what part of the town code applies to the application and where the use falls into conditional use, permitted or non-permitted. Planner Smith reviewed the list of conditional use, permitted or non-permitted with the council. Planner Smith the application went before Planning & Zoning Commission on January 26, 2025. The commission decided the application didn't fit within the permitted or in the non-permitted use and it fit better as a conditional use. Planning and Zoning did recommend approval with conditions.
Planner Smith said tonight the council will need to decide to approve with conditions, approve outright or deny. Planner Smith explained the conditions in the resolution with the council.
Mayor A. Riddile asked who would be overseeing the leakage, break-ins, security video and how often. Mr. Hazelton said he would be, because this is important to him and wants to make sure it's done correctly. He said that he would be onsite frequently and multiple times a week. The cameras that will be installed will be monitored from home or cell phone. The security video will not just be DVR if something does happen, he can monitor the situation. Mr. Hazelton said the hours of 8am to 8pm is temporary, once the automatic gate is installed which will also monitor who is coming into the facility the hours will be from 6am to 10pm. The idea of the increased hours is for the convenience of the renters. Mr. Hazelton explained the reason for not having the facility available to be 24 hours is because something does happen and the police sees lights in the yard they wouldn't know something is going on that shouldn't be. The renter will have a code to get into the yard, the police and fire departments will have their own code once the automated gate gets installed.
Councilor Carey asked Mr. Hazelton for some clarification of one of the conditions (NO TANKS OF ANYKIND IE>>>GRAY BLACK OR FUEL CAN BE DRAINED ON THE PREMISE WITH THE EXCEMPTION OF FRESH<POITABLE WATER. Mr. Hazleton said the conditions list is still work in progress and the list is a very rough draft. He said what it means and will be clearer about is there is nothing can be drained but potable water.
Attorney McConaughy suggested changing resolution condition 4A ~~Applicant shall comply with the management policies presented to Town Council.~~ Applicant shall comply with the management policies presented to Town Council. Changes to the policies may be approved on a staff level.
Mayor A. Riddile opened the public hearing at 7:33pm.
There were no public comments.
Mayor A. Riddile closed the public hearing at 7:33pm.

DRAFT

Councilor G. Riddile wanted to stress this type of applications should be a conditional use and a use by right so it doesn't turn into a storage yard.

MOTION: Councilor Carey made a motion to Resolution TC 2025-04 - a Resolution of the New Castle Town Council Approving A Conditional Use Permit for Outdoor Vehicle Storage on Property Located in the Industrial Zone District with amending condition 4A to state Applicant shall comply with the management policies presented to Town Council. Changes to the policies may be approved on a staff level, Councilor Mariscal seconded the motion, and it passed unanimously.

Introduction to new Castle Valley Ranch Property Owner

Administrator Reynolds said as the council is aware, a large portion of undeveloped land in Castle Valley Ranch that was previously owned by CVRI has recently sold. As the new property owner, TC Midwest is excited about their connection to New Castle and looks forward to working with the town in a way that compliments the great things that New Castle has already accomplished. Staff would like to take this time to introduce TC Midwest team to the council.

TC Midwest team introduced themselves to the council. Zach Schaffer said he started working for the company in 2024 when they had purchased the store he was working at. Joe Whiteside works for TC Midwest for Engineering and Surveying for 3 three and half years. Brooke has been with the company for 13 years. She has assisted with several projects TC Midwest has done in Texas as well as Colorado. They have done a few projects up valley including Aspen and Glenwood Springs.

Councilor G. Riddile said he is excited to see what TC Midwest does and the town would be liking at connecting North Wild Horse Drive from R2 development through and connecting to the current North Wild Horse Drive. Part of the road runs through TC Midwest property. Administrator Reynolds said staff have had that conversation with TC Midwest.

The council welcomed TC Midwest team and is looking forward to working with them.

Councilor Appointment for Planning & Zoning

Clerk Andis said at the last council meeting Mayor A. Riddile had resigned from the Planning and Zoning Commission as the council rep. Councilor G. Riddile had agreed to attend the P&Z meeting on January 22, 2025, meeting. Clerk Andis said council will need to appoint a councilor to be the rep on P&Z until May 1, 2025. Councilor G. Riddile will become the council rep on P&Z starting May 1, 2025.

Councilor G. Riddile said he would be willing to replace Mayor A. Riddile on P&Z.

MOTION: Councilor Hazelton made a motion to Appoint Councilor G. Riddile to P&Z as the Council Representative, Councilor Carey seconded the motion, and it passed unanimously.

DRAFT

Approval of Bag Fee Budget

Climate Environment Committee (CEC) Chair Sharon Morris said the commission spent most of 2024 talking and listening to the public and getting a lot of feedback from the public. With feedback from the public and help from town staff, there was a few CEC meetings trying to create a budget and a plan for spending the bag fee money.

Administrator Reynolds reminded the council of the plastic bag fees that have been collected over the past two years in accordance with Colorado's Plastic Reduction Act HB 21-1162. Per state law, municipalities that receive funding through the program are obligated to create programs to use the funds toward certain approved programs that ultimately help to reduce waste and clean the environment. Town Council has tasked the CEC with developing and overseeing projects that meet the guidelines of this program, but ultimately it is town council's responsibility to approve the Bag Fee budget.

Proposal for Bag Fee Fund

Rebates of $500-$800 to businesses which perform new sustainability/environmental projects (for example, replacing Styrofoam to go boxes; providing recycle containers for patrons; ~~installing energy-efficient appliances; planting a tree~~) $8,000

Earth Day Drawing: Ten 6-month EverGreen ZeroWaste subscriptions: $1,500

Purchase reusable bowls, cups, spoons, plates, forks, mugs ~~for Chili Cookoff~~ town events (replace disposable paper products) ~~$750.00~~ $1,148.20

Public Education Program (schools, library, contests, etc.) $1,000

Cleanup Day for East Elk Trails, Shooting Range, Mt. Medaris, Trailheads, etc. (supplies, lunch, ~~donation~~ to RFOV and RFMBA) $2,500

Town contribution to Colorado River Wildfire Collaborative $3,000

Additional funds to CEC for sustainability/environmental project TDB ~~$1,000~~ $4,630.80

DRAFT

Earth Day advertising and supplies		$500.00
	Total	~~$18,250~~ $22,279

Administrator Reynolds said there will need to be some coordination between CEC and the town staff to make sure the project CEC is wanting to start fits within the parameters of the bill.
Ms. Morris thanked the council for allowing the CEC to have a say in the bag fee budget.

Motion: Councilor Leland made a motion to approve the Bage Fee Budget, Councilor G. Riddile seconded the motion, and it passed unanimously.

Executive Session for the purpose of discussing the purchase, acquisition, lease, transfer, or sale of real, personal or other property interest pursuant to C.R.S. 24-6-402(4)(e) and determining positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and/or instructing negotiators regarding the same pursuant to C.R.S. 24-6-402(4)(e)

Motion: Councilor Leland made a Motion at 8:06p.m. to go into Executive Session for the purpose of discussing the purchase, acquisition, lease, transfer, or sale of real, personal or other property interest pursuant to C.R.S. 24-6-402(4)(e) and determining positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and/or instructing negotiators regarding the same pursuant to C.R.S. 24-6-402(4)(e) Mayor A. Riddile seconded the motion and it passed unanimously.

Executive session concluded.

At the end of the executive session, Mayor Art Riddile made the following statement:

"The time is now 8:31p.m. and the executive session has been concluded. The participants in the executive sessions were: Councilor Mariscal, Councilor Carey, Councilor Hazelton; Councilors Copeland, G Riddile, Councilor Leland, Town Administrator Reynolds, Town Clerk Andis, Town Attorney McConaughy, Town Planner Smith, Assistant Huster and Town Treasurer Ehlers. For the record, if any person who participated in the executive session believes that any substantial discussion of any matters not included in the motion to go into the executive session occurred during the executive session, or that any improper action occurred during the executive session in violation of the Open Meetings Law, I would ask that you state your concerns for the record."

No concerns were stated.

DRAFT

Consent Agenda
Items on the consent agenda are routine and non-controversial and will be approved by one motion. There will be no separate discussion of these items unless a council member or citizen requests it, in which case the item will be removed from the consent agenda.

Councilor Leland asked for the minutes to be removed from the Consent Agenda for further review and corrections.

~~January 21, 2025 minutes~~
January Bills $1,021,236.34
Liquor License Renewal Lazy Bear Restaurant

MOTION: Councilor Leland made a motion to approve the Consent Agenda items January Bills and Liquor License Renewal Lazy Bear. Mayor A. Riddile seconded the motion, and it passed unanimously.

Staff Reports
Town Administrator – Administrator Reynolds said the clerks are trying a new program for minutes that uses what is captured on ZOOM to do a transcript and the transcript is put into the program to give an initial draft minutes, then it is up to the clerks to review and correct what needs to be corrected. The clerks are still learning the program and hoping once they learned it would same time for doing the minutes.
Administrator Reynolds gave an update for the U-Haul and Drifters. Administrator Reynolds asked the council for direction on the U-Haul and Drifters properties. The U-Haul has more than 10 trucks and trails as agreed to. Drifters have stuff in the back of their building along the alley and that was supposed to be cleaned up a year ago. Staff have had conversations with both businesses and the conversations end the same way. Administrator Reynolds said it is time to move forward and give them written notices.
Councilor Carey asked what is entailed in a written warning. Administrator Reynolds said staff really haven't done one. There was one that was done a few months ago another property. It's a notice stating the property owner is in violation code number…. Which states you can't have trash and rubbish in your yard and the town is giving you x number of days to clean it up. The notice is sent by certified mail. If the property owner doesn't comply with the written notice, then it would be taken to the town's prosecutor for his input.
Councilor Carey asked in the town lease for the U-Haul what were the penalties for not complying with the lease. Administrator Reynolds said in the lease it is spelled out what can be on the lot. The lease does have a penalty for not complying. Councilor Carey said not so much concerned for the U-Haul but more concerned with the personal items and the town needs to enforce the lease. Drifters would be a code enforcement issue and can't handle the same way.
Councilor Hazelton said Drifters had told the council that they were going to have a food truck and on occasion there would be two food trucks. There are currently two food trucks and one of them has not been open since mid-December. The second food truck is on

DRAFT

blocks to level the truck.
Administrator Reynolds said there is a dip in the road at the east end of the green bridge. The Public Works department is working with a leak detector company to locate the water leak.
Administrator Reynolds said there is a Parks, Open Space, Trails and Recreation Committee (POSTR) meeting Thursday, February 6, 2025, at 5pm at town hall. POSTR will be talking with the New Castle Trails and discussing trails maintenance and projects and Rides and Reggae.
Administrator Reynolds said he would be out of the office from February 7th – 14th but would be available by phone.
Administrator Reynolds discussed with the council about the joint Board of County Commissioners (BOCC) meeting agenda. The meeting will be at the library and food will be served. The council would like to have the joint meeting to be held at the town hall. The council would like to make sure there would be time for discussion with the BOCC.
Administrator Reynolds said staff have been looking at the west end of Castle Valley Boulevard and how to slow traffic down. Staff will be bringing a few ideas to the council soon. Staff have received a request for a crosswalk at the intersection of Castle Valley Boulevard, Alder Avenue and Rio Grande Avenue.
Administrator Reynold said Spring FMLD Grants are due at the end of February. The town is applying for a Mini grant for a new A/C unit for Town Hall since it is starting to fail and the spring traditional grant for capital road projects.
Administrator Reynolds said staff are looking at replacing the lights on the first floor of town hall with LED lights. Staff have contacted CLEER for rebates and programs are available to assist with the cost.
Administrator Reynolds said there is a slogan contest for the town. The results will be given to the council at the next meeting.
Town Clerk – Clerk Andis said Assistant Huster is shadowing and learning on how to run a council meeting and cross training for preparing council agendas and packets. Assistant Huster will be attending a couple council meetings to get familiar with the procedure.
Town Treasurer – Treasurer Ehlers said W2 have been sent out and 1099 have been reported to the IRS. Treasurer Ehlers completed the opioid fund reporting to the state. Treasurer Ehlers said she is currently working n=on the Pinnacle Audit for 2024 year. Treasurer Ehlers said she has hired a third person for the finance department and is now fully staffed and is in the middle of training.
Town Planner – Planner Smith said the final plan for R2 (9 North Wild Horse) will be going to council at the next meeting. The application is for 130 rental units.
Public Works Director – not present

Commission Reports
Planning & Zoning Commission – Councilor G. Riddile said they had approved the CUP for the outdoor vehicle storage.
Historic Preservation Commission – have not met
Climate and Environment Commission – Councilor Leland asked the council to read the report from Chair Morris.
Senior Program –Clerk Andis said they had reviewed and made changes to the Bylaws.

DRAFT

She gave numbers to the Traveler for 2024. There were 610 riders, 9,197 rider miles and 22,364 rider minutes on the Traveler.
RFTA – have not met
AGNC – have not met
GCE – have not met
EAB – have not met
Detox – Councilor Mariscal said there will be a special meeting on Thursday, February 6, 2025 to discuss the closure of Detox.

Council Comments
Councilor Leland reminded the council about the fire film at the library on Wednesday, February 12, 2025, at 6pm. Spellabration is Friday, February 7, 2025.
Councilor Carey asked Planner Smith about the outdoor lights at Elk Creek Elementary School and how bright they are. Councilor Carey asked if the school could shade or hooded, so they are not so bright.
Councilor Hazelton said the county planning & zoning meeting was well attended for the Nutrient Farm application. The concerns the town had regarding Nutrient Farm was well noted by the county. There was a lot of concern for water and water rights for the development. The water issue is for the water court not for New Castle. Councilor Hazelton thanked everyone for their work on his CUP application and is looking forward to the new business.
Mayor A. Riddile said the turnout for Founders Day was good and was a nice event. Councilor Copeland did a great job introducing Joe & Lorraine McNeal. Mayor A. Riddile presented the proclamation for the Coal Ridge Co-Ed Cheer Team to the team during a high school assembly.

Items for Future Council Agenda
There were no items for future council agenda.

Adjourn

MOTION: Mayor A. Riddile made a motion to adjourn. Councilor Carey seconded the motion and it passed unanimously.

The meeting adjourned at 9:21p.m.

Respectfully submitted,

_____
Mayor Art Riddile

_____
Town Clerk Mindy Andis, CMC

DRAFT

APPLICANT ID: 764851

DR 8400 (02/16/24)
COLORADO DEPARTMENT OF REVENUE
Liquor Enforcement Division
PO BOX 17087
Denver CO 80217-0087
(303) 205-2300

Submit to Local Licensing Authority

HOGBACK PIZZA
PO BOX 257
New Castle CO 81647

Fees Due	
Annual Renewal Application Fee	$
Renewal Fee	750.00
Storage Permit $100 X _____	$
Sidewalk Service Area $75.00	$
Additional Optional Premise Hotel & Restaurant $100 X _____	$
Related Facility - Campus Liquor Complex $160.00 per facility	$
Amount Due/Paid	$ 750.00

Make check payable to: Colorado Department of Revenue. The State may convert your check to a one- time electronic banking transaction. Your bank account may be debited as early as the same day received by the State. If converted, your check will not be returned. If your check is rejected due to insufficient or uncollected funds, the Department may collect the payment amount directly from your banking account electronically.

Retail Liquor License Renewal Application

Please verify & update all information below. Return to city or county licensing authority by due date.

Note that the Division will not accept cash.

☒ Paid by check
☐ Paid Online

Uploaded to MoveIt on Date

Licensee Name
HOGBACK PIZZA LLC

Doing Business As Name (DBA)
HOGBACK PIZZA

Liquor License Number	License Type
03-16096	Hotel & Restaurant (city)

Sales Tax License Number	Expiration Date	Due Date
01244016-0000	03/31/2025	02/14/2025

Business Address

Street Address
457 WEST MAIN STREET

Phone Number
9709843435

City, State, ZIP Code
New Castle CO 81647

Mailing Address

Street Address
PO BOX 257

City, State, ZIP Code
New Castle CO 81647

Email
hogbackpizza@gmail.com

Operating Manager	Date of Birth
Diane Chapin	3-8-72

Home Address

Street Address	Phone Number
[redacted]	[redacted]

City	State	ZIP Code
New Castle	CO	81647

1. Do you have legal possession of the premises at the street address? ..... ☒ Yes ○ No

Are the premises owned or rented? ☒ Owned ○ Rented*

*If rented, expiration date of lease

2. Are you renewing a storage permit, additional optional premises, sidewalk service area, or related facility? ..... ○ Yes ☒ No

If yes, please see the table in the upper right hand corner and include all fees due.

3. Are you renewing a takeout and/or delivery permit? ..... ☒ Yes ○ No

(**Note:** must hold a qualifying license type and be authorized for takeout and/or delivery license privileges) If selecting 'Yes', an additional $11.00 is required to renew the permit.

If so, which are you renewing? ..... ○ Delivery ☒ Takeout ○ Both Takeout and Delivery

4. Since the date of filing of the last application, has the applicant, including its manager, partners, officer, directors, stockholders, members (LLC), managing members (LLC), or any other person with a 10% or greater financial interest in the applicant, been found in final order of a tax agency to be delinquent in the payment of any state or local taxes, penalties, or interest related to a business? ○ Yes ☒ No

Since the date of filing of the last application, has the applicant, including its manager, partners, officer, directors, stockholders, members (LLC), managing members (LLC), or any other person with a 10% or greater financial interest in the applicant failed to pay any fees or surcharges imposed pursuant to section 44-3-503, C.R.S.? ..... ○ Yes ☒ No

5. Since the date of filing of the last application, has there been any change in financial interest (new notes, loans, owners, etc.) or organizational structure (addition or deletion of officers, directors, managing members or general partners)? ..... ○ Yes ☒ No

If yes, explain in detail and attach a listing of all liquor businesses in which these new lenders, owners (other than licensed financial institutions), officers, directors, managing members, or general partners are materially interested.

DR 8495 (02/16/24)
COLORADO DEPARTMENT OF REVENUE
Liquor Enforcement Division
PO BOX 17087
Denver CO 80217-0087
(303) 205-2300

Tax Check Authorization, Waiver, and Request to Release Information

I, Diane Chapin

am signing this Tax Check Authorization, Waiver and Request to Release Information (hereinafter "Waiver") on behalf of

(the "Applicant/Licensee")

Hogback Pizza

to permit the Colorado Department of Revenue and any other state or local taxing authority to release information and documentation that may otherwise be confidential, as provided below. If I am signing this Waiver for someone other than myself, including on behalf of a business entity, I certify that I have the authority to execute this Waiver on behalf of the Applicant/Licensee.

The Executive Director of the Colorado Department of Revenue is the State Licensing Authority, and oversees the Colorado Liquor Enforcement Division as his or her agents, clerks, and employees. The information and documentation obtained pursuant to this Waiver may be used in connection with the Applicant/Licensee's liquor license application and ongoing licensure by the state and local licensing authorities. The Colorado Liquor Code, section 44-3-101. et seq. ("Liquor Code"), and the Colorado Liquor Rules, 1 CCR 203-2 ("Liquor Rules"), require compliance with certain tax obligations, and set forth the investigative, disciplinary and licensure actions the state and local licensing authorities may take for violations of the Liquor Code and Liquor Rules, including failure to meet tax reporting and payment obligations.

The Waiver is made pursuant to section 39-21-113(4), C.R.S., and any other law, regulation, resolution or ordinance concerning the confidentiality of tax information, or any document, report or return filed in connection with state or local taxes. This Waiver shall be valid until the expiration or revocation of a license, or until both the state and local licensing authorities take final action to approve or deny any application(s) for the renewal of the license, whichever is later. Applicant/Licensee agrees to execute a new waiver for each subsequent licensing period in connection with the renewal of any license, if requested.

By signing below, Applicant/Licensee requests that the Colorado Department of Revenue and any other state or local taxing authority or agency in the possession of tax documents or information, release information and documentation to the Colorado Liquor Enforcement Division, and is duly authorized employees, to act as the Applicant's/Licensee's duly authorized representative under section 39-21-113(4), C.R.S., solely to allow the state and local licensing authorities, and their duly authorized employees, to investigate compliance with the Liquor Code and Liquor Rules. Applicant/Licensee authorizes the state and local licensing authorities, their duly authorized employees, and their legal representatives, to use the information and documentation obtained using this Waiver in any administrative or judicial action regarding the application or license.

6. Since the date of filing of the last application, has the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) been convicted of a crime? ○ Yes ⊗ No

If yes, attach a detailed explanation.

7. Since the date of filing of the last application, has the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) been denied an alcohol beverage license, had an alcohol beverage license suspended or revoked, or had interest in any entity that had an alcohol beverage license denied, suspended or revoked? ○ Yes ⊗ No

If yes, attach a detailed explanation.

8. Does the applicant or any of its agents, owners, managers, partners or lenders (other than licensed financial institutions) have a direct or indirect interest in any other Colorado liquor license, including loans to or from any licensee or interest in a loan to any licensee? ○ Yes ⊗ No

If yes, attach a detailed explanation.

Affirmation & Consent

I declare under penalty of perjury in the second degree that this application and all attachments are true, correct and complete to the best of my knowledge.

Type or Print Name of Applicant/Authorized Agent of Business

Diane Chapin

Title

Owner

Signature

Date (MM/DD/YY)

1-30-25

Report & Approval of City or County Licensing Authority

The foregoing application has been examined and the premises, business conducted and character of the applicant are satisfactory, and we do hereby report that such license, if granted, will comply with the provisions of Title 44, Articles 4 and 3, C.R.S., and Liquor Rules.

Therefore this application is approved.

Local Licensing Authority For

Title

Attest

Signature

Date (MM/DD/YY)

Name (Individual/Business)

Hogback Pizza

Social Security Number/Tax Identification Number	Home Phone Number	Business/Work Phone Number
90 0260562		970 984 3435

Street Address

457 W. Main / PO Box 257

City	State	ZIP Code
New Castle	CO	81647

Printed name of person signing on behalf of the Applicant/Licensee

Applicant/Licensee's Signature (Signature authorizing the disclosure of confidential tax information) Date Signed

1-30-25

Privacy Act Statement

Providing your Social Security Number is voluntary and no right, benefit or privilege provided by law will be denied as a result of refusal to disclose it. § 7 of Privacy Act, 5 USCS § 552a (note).