AGENDA
CITY OF GLENWOOD SPRINGS
REGULAR CITY COUNCIL MEETING
DECEMBER 3, 2020
101 W. 8TH STREET
6:15 PM

The agenda is subject to *change, including the addition of items 24 hours in advance or the deletion of items at any time.*
The order and times of agenda items listed are approximate and intended as a guideline for the City Council.

ZOOM INSTRUCTIONS

1. You are invited to a Zoom webinar.

   When: Dec 3, 2020 Work Sessions start at 3:30pm and Regular Meeting at 06:15 PM Mountain Time (US and Canada)

   Topic: 2020/12/03 Regular Council Meeting

   Please click the link below to join the webinar:

   https://us02web.zoom.us/j/89764901430

   Or iPhone one-tap :

   US: +12532158782,,89764901430# or +13462487799,,89764901430#

   Or Telephone:

   Dial(for higher quality, dial a number based on your current location):

   US: +1 253 215 8782 or +1 346 248 7799 or +1 669 900 6833 or +1 301 715 8592 or +1 312 626 6799 or +1 929 205 6099

   Webinar ID: 897 6490 1430

   International numbers available: https://us02web.zoom.us/u/kcwFDRI4YJ

WORK SESSION

3:30pm	2.	Council Chambers Technology Discussion	Information/Discussion
4:00pm	3.	8th Street Crossing Development	Information/Discussion
4:30pm-5:00pm	4.	Boards and Commissions	Information/Discussion

Meeting Set-up

REGULAR SESSION

6:15pm	5.	Roll Call	Quorum

	6.	Pledge of Allegiance	
	7.	Agenda Changes & Conflicts	Information
	8.	Citizens Appearing Before Council (for items not on the Agenda-comments limited to 3 minutes)	Information
	9.	Council Comments	Information
6:30pm	10.	Consent Agenda	Discussion and/or Action

All matters under consent are considered to be routine and will be enacted by one motion and vote. The titles will not be read aloud.

A. Resolution 2020-39; A Resolution of the City Council of the City of Glenwood Springs, Colorado, Adopting the Colorado Municipal Election Code of 1965 and Delegating the Authority and Responsibility of Appointing Election Judges for the City of Glenwood Springs Regular Municipal Election on April 6, 2021

B. Valley View and City of Glenwood Springs Agreement Renewal

C. Ordinance No. 25, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Fixing and Certifying the Mill Levy on the 2020 Assessment for Collection in Fiscal Year 2021 and Providing for a Temporary Tax Credit (SECOND READING)

D. Ordinance No. 26, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Fixing and Certifying the Mill Levy on the 2020 Assessment for Collection in Fiscal Year 2021 for the Glenwood Springs General Improvement District No. 1980 and Providing for a Temporary Tax Credit (SECOND READING)

E. Ordinance No. 27, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Amending Sections of Titles 050 and 070 of the Glenwood Springs Municipal Code Related to Regulation of Marijuana Businesses Within the City of Glenwood Springs, Colorado (SECOND READING)

F. Receipt of August 20,2020 Minutes

ACTIONS AND/OR PRESENTATIONS

6:35pm	11.	Mind Springs School Programming Update	Presentation
6:55pm	12.	51-20 Consideration of a Special Use Permit for a retail marijuana establishment in the M2-Mixed Use Central Core zoning district in Glenwood Meadows, pursuant to Municipal Code section 070.030.030(e)(11).	Discussion and/or Action
7:25pm	13.	Planning File 27-20 Consideration of a Major Architectural Plan Review for the Expansion of the Iron Mountain Hot Springs including a new Entry Building, Mineral Pools, and an Enclosed Pool. The Application Consideration of an Alternative Equivalence Compliance for an Architectural Design that Meets the intent of 070.040.090-Non-residential Design Standards.	Discussion and/or Action
7:55pm	14.	Ordinance No 28, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Appropriating Funds for Fiscal Year 2021 (ONE READING)	Discussion and/or Action

8:05pm 15. COVID-19 Update — Discussion and/or Action
-Information Campaign
-Current State Regulations regarding Garfield County

8:10pm 16. Report from City Administration — Information

A. City Manager
South Canyon RFP

B. City Attorney

C. Correspondence Incoming/Outgoing
-Metro Mayor's Caucus Letter
-City of Glenwood Springs Acceptance of Oath and Bond Notice

8:15pm 17. Adjournment

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Council Chambers Technology Discussion

Action Requested: NA

Department: Information Technology

Presented By: Alissa Owsley, Director of Information Technology

Background Info: City Council has requested staff explore how to update City Council Chambers to allow remote participation by the public. This work session will allow staff to further define the wishes of Council before moving forward with a solution.

Issues: There is no funding in the 2021 Budget for this activity. However staff is discussing funds that can be used to still carry this out in 2021.

Staff Recommendation: NA

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: 8th Street Crossing Development

Action Requested: This is a work session discussion item.

Department: Economic and Community Development

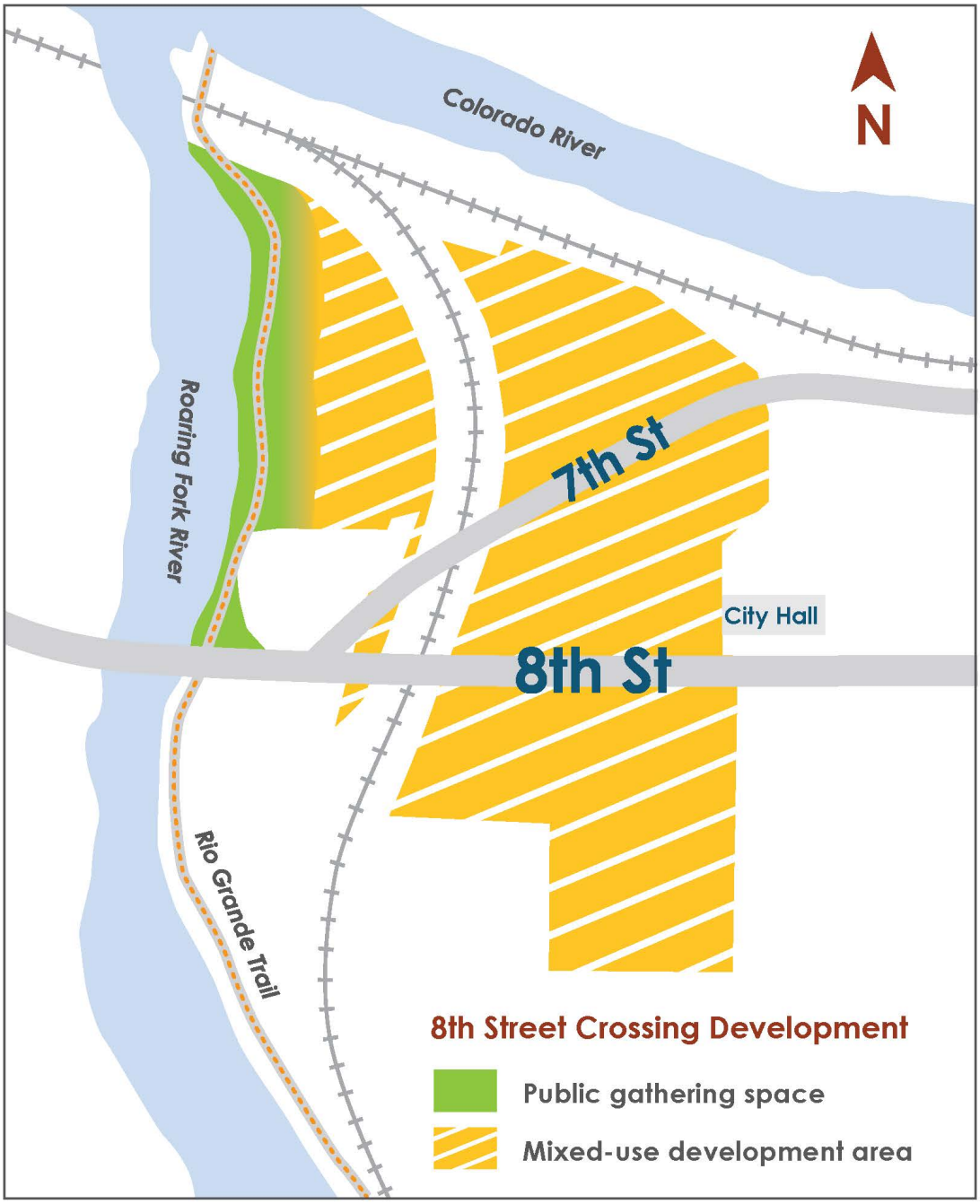
Presented By: Jennifer Ooton, Assistant City Manager

Background Info: Please find attached materials from the three finalist developer teams for the 8th Street Crossing Development (formerly k
the Confluence). On September 30, 2020, staff emailed the three master development teams that were selected for intervi
Each team expressed some level of interest moving forward in a project.

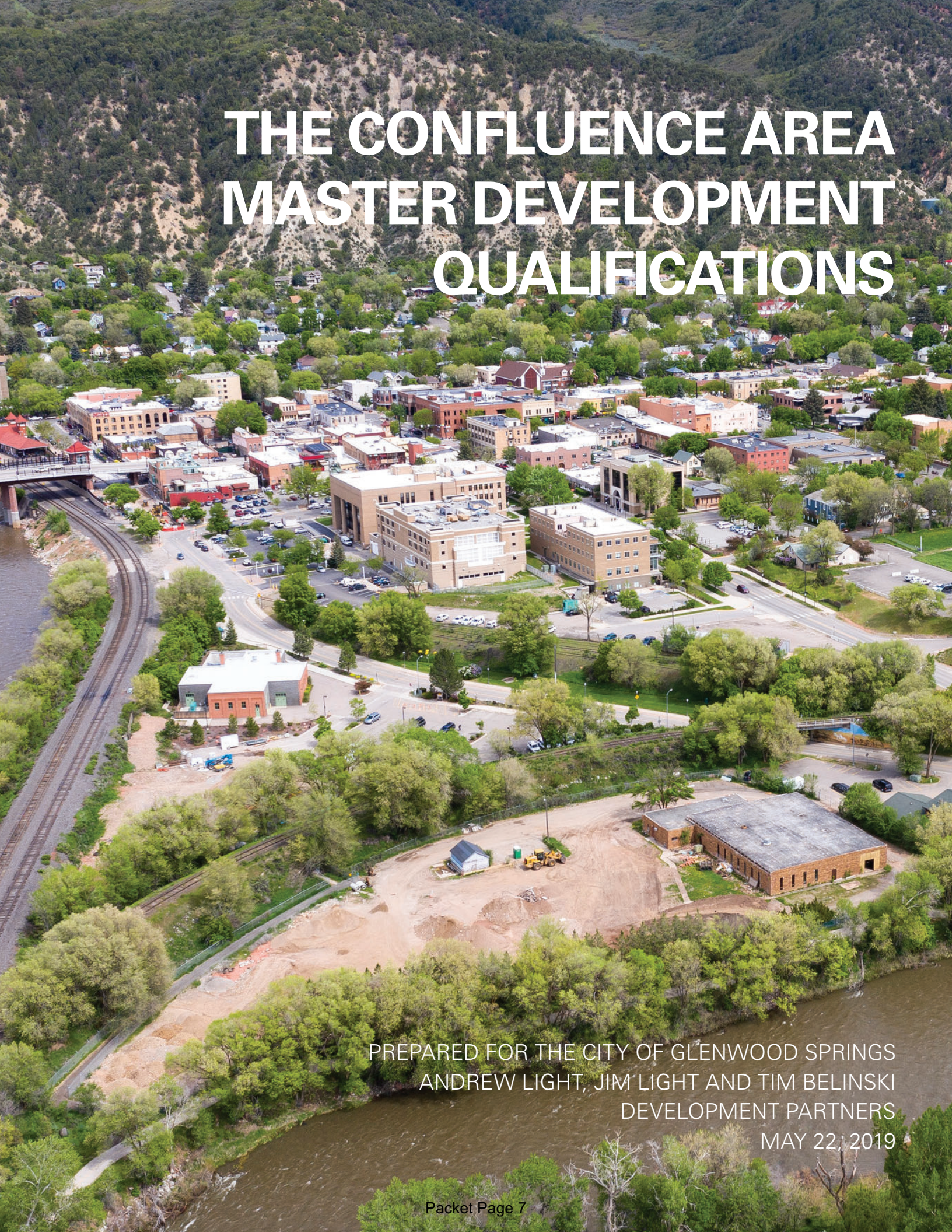
Link to Trailbreak PowerPoint (PowerPoint was too large to upload into the system)

Issues: Staff is seeking direction on how City Council would like to move forward with this item.

Staff Recommendation: NA


Colorado River
N
Roaring Fork River
7th St
City Hall
8th St
Rio Grande Trail
8th Street Crossing Development
Public gathering space
Mixed-use development area

THE CONFLUENCE AREA MASTER DEVELOPMENT QUALIFICATIONS



PREPARED FOR THE CITY OF GLENWOOD SPRINGS
ANDREW LIGHT, JIM LIGHT AND TIM BELINSKI
DEVELOPMENT PARTNERS
MAY 22, 2019

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Work Plan	25

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970.948.2737

Jim Light
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970.948.7729

Tim Belinski
tbelinski@indventures.com
970.274.4711

May 22, 2019

Mayor & City Council
City of Glenwood Springs
Glenwood Springs, CO 80162

Re: RFQ - Master Developer for Confluence Area | BD# 2019-013

Greetings:

This RFQ response is submitted by our team of four local firms with extensive experience creating and developing residential and mixed-use communities in the Roaring Fork Valley and throughout the country. We have included illustrative land-use and other ideas but fully recognize the importance of working closely with the City as well as residents and businesses. We have also suggested ideas related to the design and approval process which reflect our experience with similar public/private projects, and have emphasized the importance of taking advantage of the current incentives under the Opportunity Zone legislation.

The quality of our projects can be seen first-hand. We have demonstrated over some decades our commitment to working with elected officials, municipal staff, and volunteers in RFV communities. Equity and debt financing of more than $ 500 million has been secured from multiple financial institutions and private equity sources based on the requirements of each project.

- Chaffin Light Management has been involved with community and residential development in the RFV since 1978; starting with Snowmass Village and later Basalt, Aspen, and Garfield County. Principals James W. Light and Andrew Light will be the partners responsible for this venture with the City of Glenwood Springs. Our CV's are attached and our websites provide additional information. Chaffin Light has developed in excess of $500 million in property. Our references include several current and former elected officials and financial sources.

- Independence Ventures is led by Tim Belinski and has been the lead project manager for the mixed-use Willits Town Center in Basalt, CO for the past eleven years and prior to that, Obermeyer Place in Aspen. Total development capital under management has exceeded $150 million.

- Design Workshop is an international design studio integrating the fields of urban design, landscape architecture, urban design, planning, economics and community engagement. This international perspective has been applied to local projects in the RFV for 50 years. We recognize the importance of the Confluence Areas within the greater fabric of the City of Glenwood Springs and the opportunity to redevelop the land as an exceptional community asset. The 2017 Confluence Redevelopment and the Moving Forward Together Plans are sensible and clearly articulate the community goals for success. We will design the Confluence Area through this lens.

- Roaring Fork Engineering measures it's success by contributing to the achievements of our clients and making a positive difference in the communities we live. Many RFE employees call Glenwood Springs home, making implementation and success of this development significant both professionally and personally. RFE staff's design expertise and history of engineering projects in Glenwood Springs intensifies our unique ability to use local knowledge and engineering judgment while our familiarity with the project area, on-site utility infrastructure, development within the floodplain, and frequent work with the Union Pacific Railroad, RFTA and Public Utilities Commission eliminates delays and inefficient data collection.

We are committed to work with the City of Glenwood Springs officials and residents to create a vital community gathering place and desirable, authentic neighborhood that successfully engages the rivers and downtown. The design will respect the City's architectural and western history while anticipating the market demands and culture of its future residents. We are excited to be involved with such an important legacy opportunity for the City.

This RFQ response is based on months of due diligence including:

- Review of the demand for rental apartments including: current inventory of apartments and townhouses in the Glenwood Springs market area, current and projected competition from the two projects underway and the approved Bell Rippy site; and market research through the Valley including our recently completed projects in Willits.
- Meetings with large employers as prospective tenants.
- Review of data on the for-sale market in Garfield County and the market area including Glenwood Springs and Carbondale.
- Recent activity in the commercial sector.
- Site tours with several equity capital sources for Opportunity Zones.
- Meetings with prospective construction and long-term lenders.
- Meetings with the Colorado Housing Finance Authority.
- Preliminary cost estimates from prospective general contractors.

KEY REDEVELOPMENT GOALS/ISSUES

We have outlined a process to work with the City and residents to define a multi-year development program that will address each of the City's Goals in the 2017 Confluence Redevelopment Plan including: "Connect to the River", "Create Connections", "Prioritize the Pedestrian", "Promote Catalytic Development", "Create Community Spaces", "Complement the Downtown" and "Expand Housing Choices". While not explicitly addressed in the City's document, a development program must be financially feasible for both the City and the developer/investors.

Placemaking and Community Spaces | Place-making is an essential ingredient to achieve the overall goals. The Confluence must be appealing to the current Glenwood Spring residents, new residents, visitors who live in the Valley, and those who visit the City and area as tourists. A new park, for example, will be a gathering place for all users. The pedestrian area could include art as well as a walking history tour similar to one we built in our Idarado Legacy pedestrian park in Telluride and one in Basalt. Place-making must take advantage of the spectacular river front natural environment, be authentic by being true to the City's traditions, create opportunities for shared experiences and education, offer innovative food and beverage opportunities, inspire visitors from the Valley to come often and enjoy a break from their day-to-day lives, and encourage participation. Excellent planning will balance the needs of each property type and creative design will create enduring appeal.

Activate the Neighborhood | The Vogelaar property is suited for innovative residential development which, along with some civic uses, will begin to activate the neighborhood and drive demand for current local services and those planned on the Confluence. Rental apartments (and possibly some for-sale) will be designed to attract mixed incomes and different age groups. We will review the feasibility of a hotel.

Attract Businesses of the Future | Parcels along 7th Street and toward the intersection with 8th Street will complement the existing commercial and the City and Garfield County offices. We envision shared office spaces and incubator space for the emerging tech-minded workforce and other non-traditional flex work spaces. Our team will also seek employers to become part of the new office opportunities in the Confluence.

Create a Community Gathering Place | The Confluence Property along the Roaring Fork River provides an opportunity for a unique Park which will be both a gathering spot for residents and an educational/ special events attraction for visitors. Destination food and beverage may include a brew pub and an entertainment district with event space and occasional pop-up venues for special events in a farmers market style setting.

Mix of Housing Products | Affordable and multi-generational housing may include a mix of product within some projects e.g. the Vogelaar property or purpose-built projects to secure tax-benefits including the designation by the Colorado Housing Finance Agency for tax credits. We will also evaluate for-sale units.

Create Connections to River | Pedestrian and bike trails will connect the existing retail along 7th and 8th street to the River and others will be added to connect the new residential properties.

Transit-Oriented Development and Parking Program | We recognize that current parking patterns that depend on the automobile are changing and may change dramatically in the future. While additional parking will be needed, we will work with the City, the County and RFTA to formulate a program to address both the current needs and those anticipated in future. Our experience in Willits will be critical to helping find the right balance.

Take Advantage of the Opportunity Zone | The planning and approval process must be defined and followed on a timely basis to take advantage of the current tax benefits of the Opportunity Zone legislation which will decline quickly after 2020.

Longer-term Opportunities | Working with RFTA may allow new opportunities to integrate the existing rail lines into the redevelopment and improve pedestrian access to the river.

CONCEPTUAL SITE PLAN

We have included a list of Successful Land Attributes of a Conceptual Master Development Plan. The site reuse plans from the "Moving Forward Together Plan" are great starting points for conversation. A more detailed plan would require input from the City and other stakeholders through a design review and market evaluation process.

RELEVANT DEVELOPMENT PROJECTS

The attached RFP response includes a summary of project experience but a few notable projects include:

Willits Town Center

- The Willits plan is appealing to pedestrians and hosts community events that activate the neighboring areas beyond the project itself.
- The mix of civic, commercial and residential use is illustrative for the Confluence.
- Tim Belinski and Andrew Light are currently partnering on a block in Willits and this involvement provides us with accurate financial information including costs, and rental rates for both commercial and residential.
- Capital investment was $80 million.

Snowmass Village

- Chaffin Light worked with the Town of Snowmass to create a livable community which we felt was essential for the successful expansion of the resort.
- We developed several affordable housing projects including for-sale and rental.
- We developed the Snowmass Club and a variety of innovative resort and residential projects which have withheld their values over decades.
- We donated several parcels of land for public amenities and civic uses including the Anderson Ranch Art Center.
- We were active in many community non-profits.
- The development was profitable over a multiple-year program.
- Capital investment exceeded $200 million.

Roaring Fork Club

- We pioneered in the mid-1990's the development of high quality amenities and unique residential products in a market that had not yet been seen as an attractive residential address.
- Through development leadership, we proposed the Roaring Fork Conservancy -- and co-founded it with the Town of Basalt –which has become a very important non-profit for the protection of the entire Roaring Fork Watershed. Funding has included a real estate transfer assessment and continuing efforts to raise private donations.
- Capital investment included more than $50 million for Club assets and more than $200 million of residential development.

OUTLINE OF A DEVELOPMENT APPROACH

Our team is prepared to enter into agreements with the City of Glenwood Springs to purchase the Vogelaar Park property and some or all of the Phase II Confluence parcels. If desired, we will act as a development manager for the confluence properties which are more civic in nature. The quality, design, and economic feasibility of the development on the Parcel A will be critical since it will be the first phase of the overall Confluence Redevelopment and will establish vitality and demand for uses on the remaining parcels. In addition, community engagement will be an essential component of the master plan process. We recommend a professional public relations firm of the City's choice be included. We see project phasing as follows:

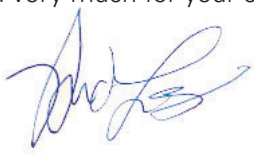
Phase I | Vogelaar Property. We propose to purchase and develop the Vogelaar property with multi-income and multi-generational residential and, if appropriate, some civic uses. This approach will provide funds to City, activate the neighborhood, benefit existing businesses, and provide momentum and credibility for the balance of the development.

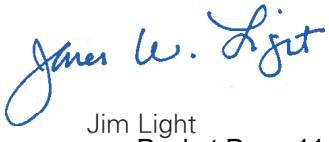
Phase II | Plan for Confluence. This phase will begin concurrently with the start of Phase I and will continue until the City approves the overall development program. We will either purchase additional sites or serve, if requested, as the agent for the City e.g., for joint use and ownership of structured parking or the City Park.

Schedule | Timing will be critical, particularly for the Vogelaar property, to take advantage of the Opportunity Zone legislation as well as the current access to reasonably cost financing.

Thank you very much for your consideration, and please contact us with any questions.

Sincerely,





Andrew Light
Development Partners

Jim Light

Tim Belinski

Who We Are

The master development team will be led by Jim Light, Tim Belinski and Andrew Light in partnership with Design Workshop and Roaring Fork Engineering. Collectively the team brings decades of experience in residential, retail and mixed use projects, with an emphasis on creative placemaking, environmental stewardship, and collaborative, long term relationships. Based in the Roaring Fork Valley, the team offers a local presence with national expertise and a network of leading capital sources, including Opportunity Zone focused capital.

Sources of Funding

Our team has investment relationships with institutional capital partners and high net worth individuals, and maintains lending relationships with First Bank, Vectra Bank, ANB Bank, Bank of Colorado and MidFirst Bank, among others.

In addition, we have toured the property with several Opportunity Zone funds that specialize in areas that are Opportunity Zones. We capitalize each project separately, matching the capital with the risk profile, project type and expected duration of the venture.

Tim Belinski

DEVELOPMENT PARTNER

Tim Belinski brings extensive solutions-minded local real estate development expertise, interacting with local communities, municipalities, agencies, and lenders, especially in complex, politically sensitive realms. In particular, two projects have remarkably changed their towns and neighborhoods, Willits Town Center in Basalt and Aspen's Obermeyer Place.

Belinski was Chief Financial Officer for 18 years at Sport Obermeyer (Aspen), and prior to that was a licensed CPA with Arthur Andersen & Co. (Denver), and has held numerous board president/chairman and treasurer positions for local non-profit organizations, including Valley View Hospital (1996-2004), Aspen Valley Ski and Snowboard Club (2006-2012), Art Base (2008-2019), Basalt's Chamber of Commerce (2017-2019), and Snowmass Water and Sanitation District (2016-current).

Education
Bachelor of Accounting, University of Denver

Licensure
CPA (not practicing)

Professional Affiliations
International Council of Shopping Centers

Andrew Light

DEVELOPMENT PARTNER

Andrew Light focuses on residential and commercial real estate and debt investments in the Aspen/Snowmass regional market. His development experience includes office, for sale residential, multifamily and retail. He is also a co-owner of Aspen Snowmass Sotheby's International Realty, the leading brokerage firm in the Aspen/Snowmass market with annual sales of over $1.2 billion. From 2006 to 2011 Light was focused on resort projects in Colorado and Mexico.

Prior to Chaffin Light, Light sourced retail, residential and distressed loan acquisitions for Village Properties, a private real estate investment firm in San Francisco with a track record of over $1.5 billion in real estate investments. His experience also includes positions with Menlo Equities, a Palo Alto, CA based commercial real estate investment firm, Goldman Sachs, and INCAE, an executive education program founded by the Harvard Business School in Costa Rica.

Education
Master of Business Administration, Stanford University

Bachelor of Economics Magna Cum Laude, Duke University

Professional Affiliations
Snowmass Village Rotary
Urban Land Institute

Jim Light

DEVELOPMENT PARTNER

Jim Light is nationally recognized for his skill in general management, community planning and development, careful design and structuring of project financing. As a young man, he was put in charge of the planning and execution for Harbour Town at Sea Pines Plantation on Hilton Head Island, the most ambitious private harbor development ever built on the East Coast.

Since 1978 Light and his 50/50 partner Jim Chaffin have led Chaffin/Light Associates from Snowmass Village, Colorado, a single venture in a 3,000-acre ski resort community, into recreation community development ventures in Colorado, Washington State, Florida, South Carolina, and North Carolina. As part of a cooperative process with the newly incorporated Town of Snowmass Village, they provided significant community benefits including: development of more than 150 units of affordable housing; dedication of land for Anderson Ranch Art Center, the Snowmass Chapel, the Conference Center; and miles of trails and other recreation facilities. They have co-founded with their partners four environmental non-profit organizations. The CLA Mission Statement is "to create authentic, natural and livable communities, clubs and neighborhoods that provide rewarding life experiences for the clients who become part of them and the teams that helped to develop them."

Education
Master of Business Administration, Harvard Business School

Bachelor of Economics & English, University of North Carolina

Professional Affiliations
Urban Land Institute

Roaring Fork Conservancy Founding Board Member

Becky Zimmermann

DESIGN WORKSHOP: URBAN DESIGN

Becky has devoted her career to solving complex issues in the areas of community planning, market and economics, and resorts and tourism. She is recognized for her work in leading communities, companies and organizations in strategic and business planning, market definition and strategy, development entitlements, real estate economics, facilitation and advisory services. She has also been integrally involved in leading community participation processes and facilitation for projects.

Selected Project Experience

City of Steamboat Springs Downtown Plan - Steamboat Springs, Colorado
Comprehensive, long-range planning services for Old Town, improving community core areas, mobility and parking, mixed-use and event space, in addition to developing affordable housing and preserving historic resources.

Town of Avon Properties + Development Strategies - Avon, Colorado
Plan that transformed the Town Center into a vibrant enhancement of the overall character, circulation, community services, and economic viability of Avon.

Crested Butte Mountain Village Market Study - Crested Butte, Colorado
Land planning and building programming services that developed a preliminary proforma and instituted development strategies for the Prospect Homestead Affordable Housing development.

Pikes Peak Multi-Use Plan - Colorado Springs, Colorado
Analysis of 200-square-mile area allowed the master plan to synchronize land use needs with appropriate landscape types.

Education
Master of Business Administration; University of Colorado, Denver

Bachelors of Communications/ Journalism and Business Administration; Trinity University, San Antonio

Licensure and Certifications
American Institute of Certified Planners

Professional Affiliations
Urban Land Institute, YPO- Gold, American Planning Association

Darla Callaway

DESIGN WORKSHOP: URBAN DESIGN

A manager of Design Workshop's real estate-related projects, Darla leads complex urban redevelopment projects, mountain resort master plans, site design, community visioning plans and facilitates public engagement. Her clients trust her with the responsibility of moving a project successfully through complex land use approvals because she always represents their best interests, anticipates road blocks well in advance and adapts to unexpected challenges. The aspect she enjoys most is leading her teams and clients through project implementation within the physical constraints of mountain site development; including political and public processes. She addresses these with patience, determination and a constant awareness of the need to adapt to new ideas.

Selected Project Experience

City of Steamboat Springs Downtown Plan - Steamboat Springs, Colorado
Comprehensive, long-range planning services for Old Town, improving community core areas, mobility and parking, mixed-use and event space, in addition to developing affordable housing and preserving historic resources.

Redevelopment of Downtown Historic Pedestrian Malls - Aspen, Colorado
A complex renovation design of the malls is currently underway to ensure historic integrity is maintained while planning for sustainable future infrastructure.

Parks, Urban Spaces and Streetscape Master Plan for CB - Alberta, Canada
A master plan of parks, urban spaces and streetscapes link together the redevelopment of an old air force base into a new mixed use community.

Education
Harvard Graduate School of Design, Advanced Management Development Program in Real Estate (expected July 2019)

Bachelor of Landscape Architecture, Oklahoma State University

Licensure and Certifications
Licensed Landscape Architect

LEED AP, BD+C

American Institute of Certified Planners

Richard Goulding

ROARING FORK ENGINEERING: STRATEGIC INFRASTRUCTURE AND ENGINEERING

Richard's 20 years of experience in the Valley includes working for the City of Aspen Engineering Department, SGM in Glenwood, and establishing RFE in 2012. He has considerable experience in municipal work. While at the City of Aspen, his focus was capital improvement projects and right-of-way management. During his time at SGM, he was the Deputy Town Engineer for Palisade, Snowmass and Starwood. He also undertook and completed several important design projects for the Mid Valley Metro District, the City of Glenwood Springs, and Redstone's Water and Station District.

In his role as the founder and President of RFE Richard leads the design of, oversees construction of, and provides inspection oversight on multiple infrastructure projects for the City of Aspen Assets, Engineering & Water Departments, Pitkin County, Town of Carbondale, Aspen Consolidated Sanitation District and Aspen Skiing Company. He is currently the on-call engineer for the Town of Carbondale providing engineering for the Town's infrastructure. His areas of expertise include water, utility, storm water management design, street improvements and construction administration.

Education
Civil and Environmental Engineering, University College Cork

Master of Business Administration, University of Wyoming

Licensure and Certifications
Professional Engineer:
CO

Selected Project Experience

City Offices and Rio Grande Place Infrastructure - Aspen, Colorado
Town of Carbondale, On-call Engineer – Carbondale, Colorado
Aspen Valley Polo Club Facilities – Carbondale, Colorado
Rubey Subdivision - Aspen, Colorado

Adam Racette

ROARING FORK ENGINEERING: STRATEGIC INFRASTRUCTURE AND ENGINEERING

Adam has 17 years of experience. He has considerable design experience in municipal work on projects for the City of Rifle, Town of Silt, Town of New Castle, City of Glenwood Springs, Roaring Fork Water and Sanitation District, Mid Valley Metropolitan District, Town of Carbondale, Basalt Sanitation District, City of Aspen, and many more. Adam's main focus is water and wastewater distribution, conveyance and treatment. He also has extensive background in construction administration and observation.

Adam's time at the City of Aspen and City of East Lansing gave him a greater understanding of the competing municipal challenges that face client's today. Not only are there shrinking budgets and constantly changing political climates, but also the need to balance the responsibility of maintaining existing infrastructure and effectively planning for the future. Adam's focus is meeting the current and future needs of a community within their budget.

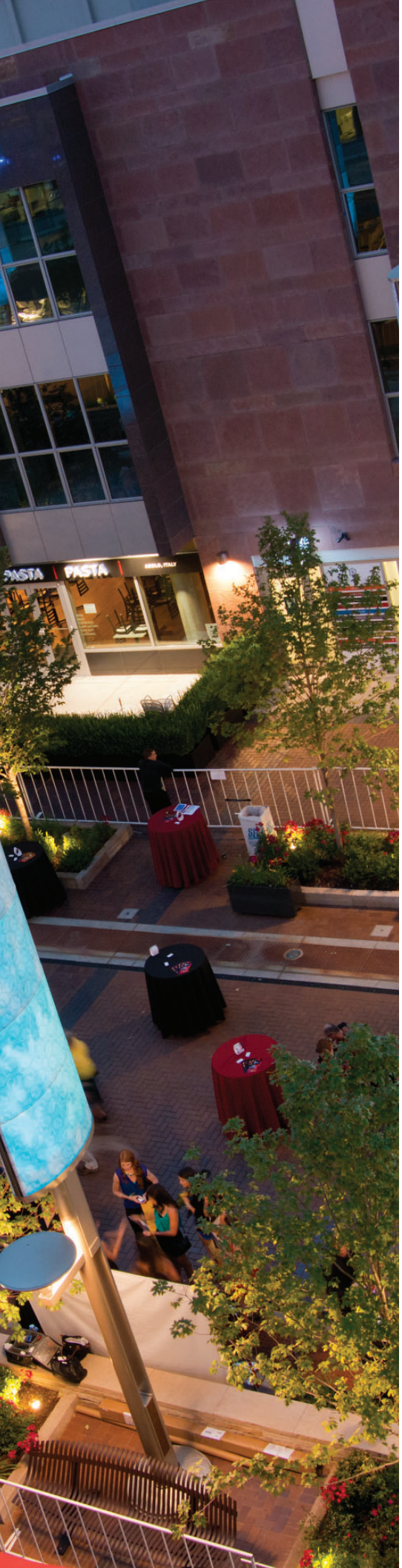
Education
Bachelor of Science in Civil Engineering, Michigan State University

Licensure
Professional Engineer:
CO

Selected Project Experience

Basalt Sanitation District, District Engineer - Basalt, Colorado
Town of Carbondale Wastewater Treatment Facility - Carbondale, Colorado
City of Glenwood Springs Force Main and Conveyance - Glenwood, Colorado
Glenwood Springs Wastewater Treatment Facility - Glenwood, Colorado

Cherry Creek North and Fillmore Plaza: Denver, Colorado



RELEVANT EXPERIENCE

ECONOMIC GROWTH

NEIGHBORHOOD DEVELOPMENT

INNOVATION

ENVIRONMENTAL PROTECTION

PLACEMAKING

PARTNERSHIPS

Riverfront Park

Denver, Colorado

Design Workshop

Design Workshop led the master planning/ entitlement effort and form-based code for Riverfront Park. To achieve this, we led a multi-disciplinary team of real estate economists, financing experts, business leaders, transportation planners, engineers and lawyers to create the master plan, urban design guidelines and streetscape plan that transformed the 65-acre railyard site into a 21-block mixed-use urban village. The planning of the project was intended to create measurable goals as a model for successful infill.

Why it matters

Since development began, there have been significant increases in land values and the tax base, and each year these continue to grow. Our team has experience in creating master plans driving economic growth.

Additionally, this project required extensive cooperation and collaboration with the City of Denver, whose investment in this redevelopment was critical to its success.

URBAN LAND INSTITUTE
AWARD OF EXCELLENCE

RICHARD J. DRIEHAUS
FORM-BASED CODE AWARD

2017 ASLA COLORADO
LANDMARK AWARD

CONGRESS FOR NEW URBANISM
CHARTER AWARD

ECONOMIC GROWTH

NEIGHBORHOOD DEVELOPMENT

Willits Town Center

Basalt, Colorado

Development Partners

Willits is a mixed-use neighborhood that includes residential and commercial properties. Built around a central town square with plenty of green space, parks and walking paths, Willits is the only sustainable community of its kind in the Roaring Fork Valley. The neighborhood is anchored by Whole Foods Market, Element Hotel by Westin and Starbucks, and is home to many locally owned shops, restaurants, health and spa services.

Why it matters

Willits Town Center is evidence of successful implementation of a mixed-use project in the Roaring Fork Valley. Through development leadership, the neighborhood vision was

maintained through various stakeholder input (CDOT, Town of Basalt, RFTA and merchants).

Public amenities include a RFTA Park N RIde with highway underpass and numerous neighborhood pocket parks.

Project Cost

The project cost was $80 million and was financed by private equity funds.

discoverwillits.com

One Willits Place

Basalt, Colorado

Development Partners

One Willits Place is a collection of exceptional rental apartments, business spaces, and for-sale residences in the heart of the thriving Willits community. Through thoughtful design, contemporary design with a warm, mountain character was balanced with its urban context. Articulated roof-lines, a natural mix of materials and generous windows reflect the adjacent neighborhood character.

Why it matters

One Willits Place includes design and construction of infrastructure for the Art Center in Willits.

The project includes relevant cost and market information.

Project Cost

One Willits Place is being developed by Andrew Light and Tim Belinski. The project cost is $20 million; financing is being provided by First Bank and individual capital partners.

onewillitsplace.com

Hurley Place

Denver, Colorado

Design Workshop

Hurley Place is a 6-acre mixed-use development in one of the most vibrant and exciting neighborhoods in Denver, River North Arts District (RiNo). Adjacent to the South Platte River, this project capitalizes on the strong connection to the City of Denver's greatest natural asset. Hurley Place is currently anchored by a historic brick building that is the new home of Blue Moon Brewery.

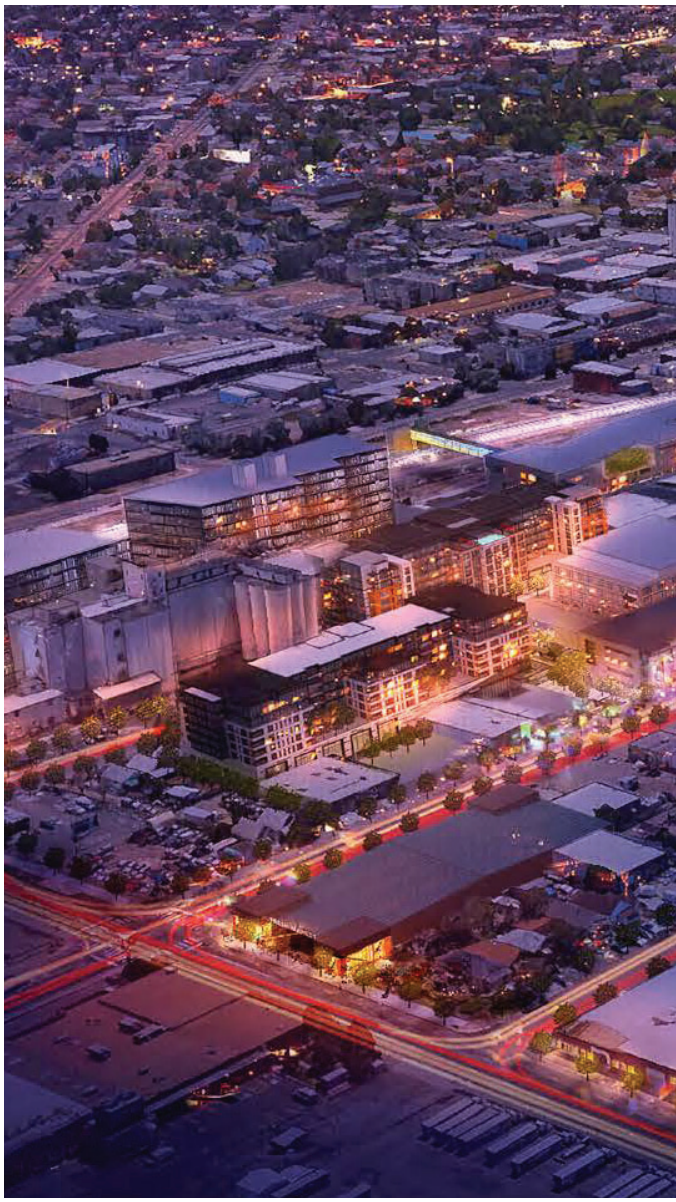
A main public plaza lies at the heart of this project and connects the development to the River and to the new brewery. The plan includes two plazas, residential, hotel, office, and multiple music venues, including a main stage adjacent to the South Platte River.

Hurley Place consisted of temporary pop-up programming during summer of 2016 at the designated "Hurley Field." Across from Blue Moon Brewery, this empty 1.8 acre lot hosted the RiNo Live Music Festival, food trucks, public art, and outdoor games. The intent of this phase was to create an energy and interest in Hurley Place before any project even breaks ground. Phases 1 through 3 will integrate office space, retail, residences, and a hotel.

Design Workshop developed site design criteria and is now leading the developer through the City of Denver review process.

Why it matters

Innovation is found in connecting to the historic and natural assets of adjacent neighborhood context.



INNOVATION

Roaring Fork Conservancy Co-Founded by Roaring Fork Club

Basalt, Colorado

Development Partners

As an integral part of the plan for the Roaring Fork Club, the partners co-founded the Roaring Fork Conservancy.

One primary focus of the river front project was to create a sustainable neighborhood which reflected the natural context of the surrounding area.

The development program was sensitively integrated into the environment in a way that restores and enhances existing riparian areas. Important components of the restoration process are the bio-islands, or landscape zones that provide a transition between the highly manicured golf course and the ranchstead landscape that dominates the area. These unique and diverse natural environments and the sensitive development encourage a symbiosis among people, nature and wildlife.

Why it matters

As a result of managing partners' values, the development program was balanced with environmental protection and advocacy.

The development team has proven commitment to protect the natural features that allow our communities to thrive.

ENVIRONMENTAL PROTECTION

Parks, Urban Spaces and Streetscape Master Plan for CB

Calgary, Alberta, Canada

Design Workshop

Currie Barracks (CB) is a new urbanism master plan for the second phase of development for the 176 acre Currie Barracks site, a decommissioned Air Force base southwest of downtown Calgary. As development patterns have evolved since the original Outline Plan was submitted in 2007, the proposed land uses, scale and character of the plan have been revised to reflect the ongoing urbanization occurring in and around the site.

Design Workshop's primary responsibility was the development of a robust network of public spaces within the mixed-use, master planned community, including streetscapes, urban parks and trails in addition to guiding best practices for stormwater management. Design Workshop worked with the City of Calgary and neighboring communities to develop a park and public space program that is responsive to the needs of both the existing and anticipated community members.

Why it matters

The development team has proved experience in design of public spaces to create a sense of plan and integrate infill development within the broader community fabric.

ALBERTA PROFESSIONAL PLANNERS INSTITUTE
AWARD OF EXCELLENCE

CONGRESS FOR THE NEW URBANISM
MERIT AWARD

PARTNERSHIPS

Basalt Vista

Basalt, Colorado

Roaring Fork Engineering, Inc.

In 2016 RFE was engaged by Habitat for Humanity (HFH) to determine the feasibility of building teacher housing on the Roaring Fork School District's 6-acre site behind Basalt High School. The project was a partnership between the School District, Pitkin County, the Town of Basalt and HFH. RFE collaborated with the Owner and design team from conceptual to land use, permitting and final closeout of the infrastructure phase of the construction. RFE, with HFH staff, facilitated site visits to explain the project to Basalt Planning and Zoning and Town Council in the land use process.

The civil infrastructure phase of the project is complete and HFH is currently constructing

homes for the future residents. The project is the first Net Zero community in rural Colorado and is serving as a model for future energy projects across the state: they are solar powered to make long-term expenses practical for the qualifying homeowners. Basalt Vista enables affordable and sustainable homeownership.

Why it matters

Strategic partnerships are critical to success.

The development team understands strategic and complex infrastructure planning.

Other Notable Experience

Mixed Use/ Transit Oriented
Obermeyer Place, Aspen CO
Denargo Market, Denver CO
The Domain, Austin TX
Kendall Railyards Redevelopment, Spokane WA
Affordable Housing
Willits Affordable and School District Housing, Basalt CO
Ironbridge School District Housing, Glenwood Springs CO
Creekside Affordable Housing with Snowmass Village Housing Authority
505 Housing at the Aspen Police Station, Aspen CO
Brownfield and Strategic Infrastructure Planning
City of Ogden Rail Redevelopment, Ogden UT
Basalt Sanitation District On-call Services
Town of Carbondale Infrastructure On-call Services
Hardy Yards Redevelopment, Houston TX
Redevelopment of Aspen's Historic Downtown Pedestrian Malls, Aspen CO
Idarado Legacy Trail and Neighborhood, Telluride CO
Lodging, Hospitality & Entertainment
The Element Hotel, Basalt CO
A-Lift Neighborhood Boutique Hotel, Copper Mountain CO
Snowmass Club, Snowmass Village CO
Lift 1A: Public Private Parnership with City of Aspen
Park, Trail and Public Space Design
Heritage Park Master Plan, Idaho Falls ID
Daybreak Parks, Open Space and Trails Master Plan, South Jordan UT
Story Mill Community Park, Bozeman MT

References

Development Team	Design Workshop	Roaring Fork Engineers
Brendan Matthias FirstBank of Glenwood Spring 970.928.5982	Tyler Gibbs Former Commercial Development Director City of Steamboat Springs 303.912.0272	Scott Gilbert President for Habitat for Humanity 970.948.8264
Rob Stein Superintendent of RFSD 970.384.6000	Kathleen Wanatowicz PR Studio 970.618.5114	Dan Richardson Mayor for the Town of Carbondale 970.510.1345
Dan Blankenship RFTA Chief Executive Officer 970.384.4886	Brandon Cooper Deputy Director of Community & Economic Development, Ogden, Utah 801.629.8910	Tom Newland Newland Project Resources, Inc. 970.927.4645
Julie-Ann Woods Community Development Director Town of Snowmass Village 970.922.2235		
Ryan Mahoney Basalt Town Manager 970.927.4701		
Jody Edwards Klein Cote Edwards Citron 970.925.8700		

Heritage Park Master Plan: Idaho Falls, Idaho

WORK PLAN

PHASE 1: VOGELAAR PARK SITE DEVELOPMENT

PHASE 2: CONFLUENCE AREA MASTER PLAN

Phase 1 Vogelaar Park Site Development

The Vogelaar Park Site presents an immediate opportunity to reactivate the neighborhood. Redevelopment of the site for mixed-income residential housing has been previously considered by members of this development team with the conclusion it is a viable catalyst to the overall Confluence Area.

Benefits of this Approach

- Timing is critical to take advantage of the Opportunity Zone legislation as well as the current access to reasonable priced financing.
- Vogelaar Park has been envisioned as a future housing site by the community. The ability to deliver a mixed-income neighborhood early in the process will demonstrate the effectiveness of the public/ private partnership to the community of Glenwood Springs, building trust for future redevelopment.
- It will contribute to the goal of expanding and diversifying local housing options.
- Redevelopment of the Vogelaar Park Site is an innovative strategy to fund the overall master planning process of the Confluence Area.
- Developing housing adds to downtown vibrancy and economic viability of future redevelopment.

Phase 1
Vogelaar Park Site

Phase 2 Confluence Area Master Plan

Task One: Vetting Project Opportunities for the Confluence Area

Understanding Markets

Understanding current market conditions is a critical component to planning for economically supported land-uses. Successful development must be based on the residential and commercial markets as well as the City's goals. The team will assess the new market conditions to inform the master development plan.

Capitalizing on the Place

The physical opportunities and constraints for the site will inform a context sensitive approach to urban design. Proximity to the river, topography, site restoration, views, proximity to transit and parking, existing utility infrastructure, floodplain and zoning will shape physical design plan.

Measures for Success

How will we know we have created a successful master development plan? To achieve success, we believe the 2017 Confluence Plan Community Goals are the baselines for developing comprehensive metrics (measures of success). The team will develop specific, measurable and implementable metrics to the following goals.

- Connect to the River
- Create Connections
- Prioritize the Pedestrian
- Promote Catalytic Development
- Authentic Design
- Create Community Spaces
- Complement the Downtown
- Expand Housing Choices

Phase 2
Confluence Area
Master Plan
Phase 1
Vogelaar Park Site

Task Two:

Successful Attributes of a Development Plan

Development Strategy

1. Diverse inventory of housing types to support locals living in Downtown.
2. Neighborhood commercial to support the new residents.
3. Green connections and a new river park to connect the Confluence with Downtown.

Land Use Attributes

Vogelaar Park Site: Residential is a compatible land use adjacent to the school and can be implemented right away.

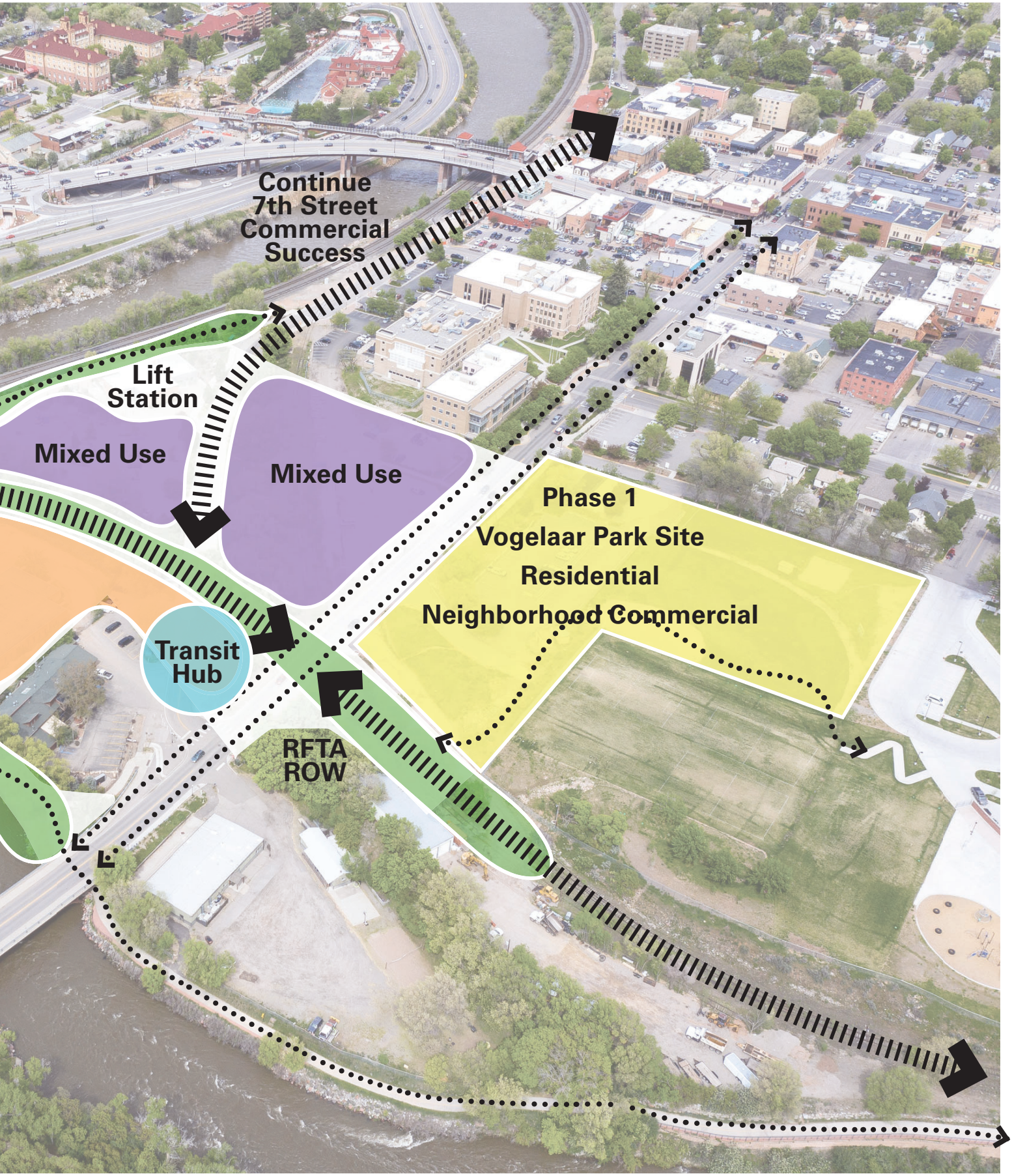
Multi-Family Residential: The shortfall of housing in Glenwood Springs is spread across every income level. The development plan will seek a variety of housing types to support a mixed-income and multi-generational approach.

River Park: The river park is an opportunity to connect to the regional parks, open space and trails network.

Park Connection to Downtown: By extending a green buffer and trail towards Downtown, pedestrian connections are strengthened and the residential uses are buffered from the active rail line.

RFTA ROW: Our team sees this as an opportunity to weave the site's history into the development plan, contribute to a defined neighborhood character and offer an additional "green" mode of connectivity.

Transit Hub: Our team agrees transit service is critical infrastructure for the success of the neighborhood. An appropriate solution will be vetted through the partnership with the City and RFTA.


Continue
7th Street
Commercial
Success
Lift
Station
Mixed Use
Mixed Use
Phase 1
Vogelaar Park Site
Residential
Neighborhood Commercial
Transit
Hub
RFTA
ROW

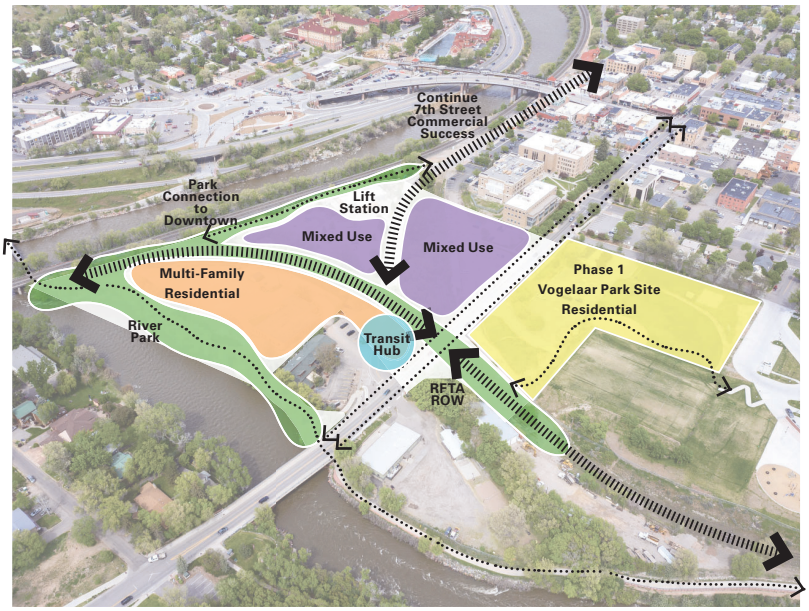
Task Three: Development Evaluation

Implementation and Prioritization Analysis

In addition to the physical planning of the Confluence Area, the development plan's costs and potential for sequencing will be evaluated. This information will be used to prioritize elements of the development plan and determine phasing.

Refined Master Development Plan and Land Use Approvals

From the implementation + prioritization analysis and community input, a refined master development plan will be prepared. It is anticipated this plan would be entitled through the City's land use approval process.



Development Evaluation

- Infrastructure Costs
- Public Improvements
- Public Amenities
- Project Revenues
- Financing Options
- Ability of Plan to Meet Community Goals
- Phasing and Sequencing

Community Engagement

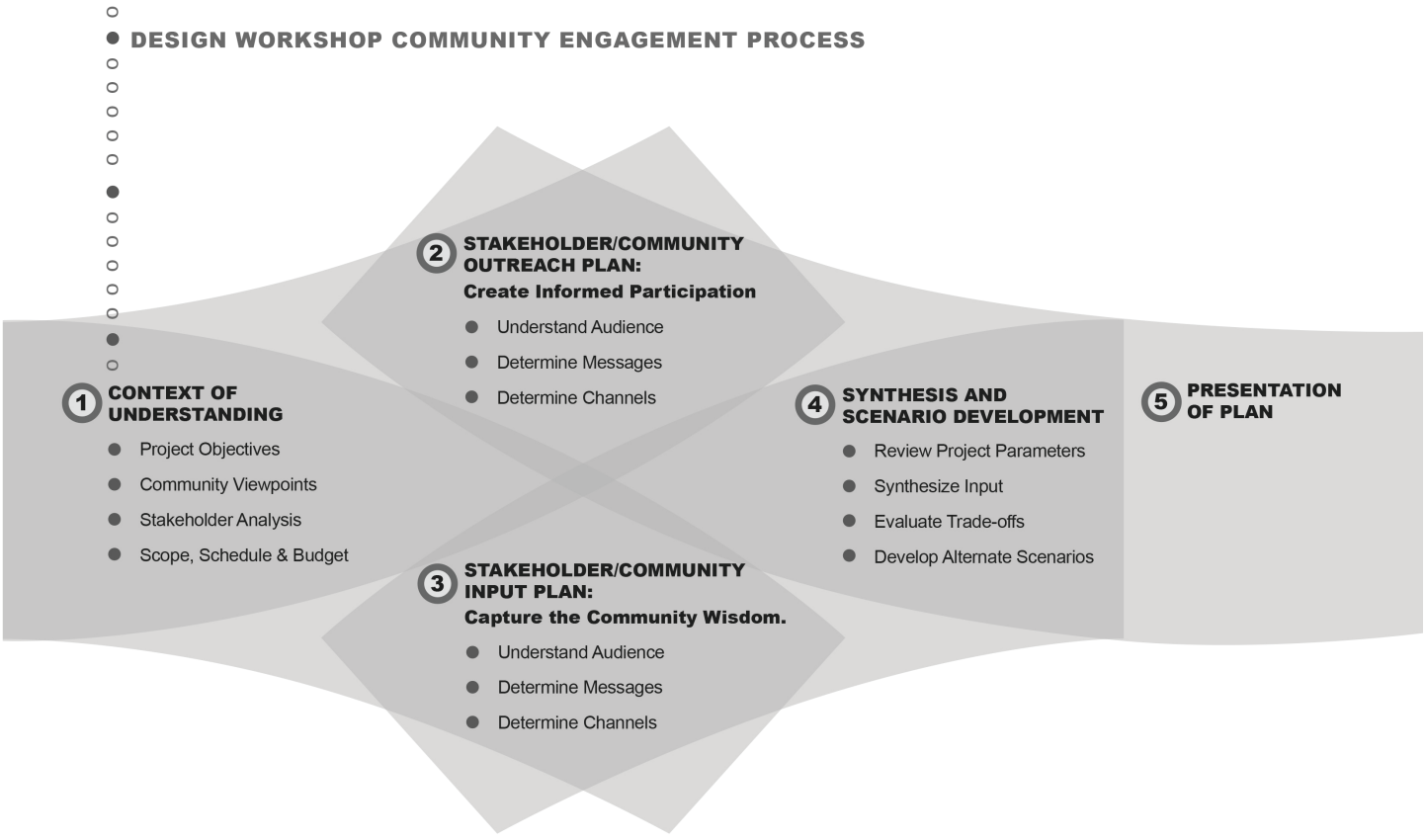
Past community input has informed the goals for the Confluence Area. Our team is prepared to continue the process of community involvement. We believe community engagement is important to each phase of the project; beginning with defining the measurable metrics for successful achievement of the Confluence goals.

Design Workshop's understanding of community involvement techniques stems from years of design and land use planning charrettes, workshops, meetings, digital media, social outreach and program surveys.

When effectively and creatively implemented, a combination of outreach tools can encourage stakeholders to get involved and help clients and project teams reach out to groups that may traditionally not be involved in planning conversations.

We take community involvement very seriously on all projects by offering the following four important benefits to our clients:

- We ensure all stakeholders have a voice in the public conversation by identifying the geographic, demographic, and interest groups that make up the fabric of the community.
- We provide clear and timely communication to all interested citizens by understanding outreach issues and design approaches that meet the community's needs.
- We ensure that public involvement is truly meaningful to the community by understanding and focusing on the key issues it faces.
- We create implementable actions by carefully navigating the community to a consensus position.



The development team is committed to a collaborative public/ private partnership. We will deliver a creative and innovative infill development to connect the City's Downtown to the Roaring Fork River, celebrate the area's natural surroundings and create a mixed-use neighborhood that is compatible with the surrounding neighborhoods.

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

ADDENDUM NUMBER ONE FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

Relevant documents for the Confluence Area can be found at:

https://www.gwsco.gov/DocumentCenter/Index/345

The master folder in the Document Center has separate subfolders with documents.

This addendum must be acknowledged.

This Addendum may be faxed to 970-945-2597, emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: Design Workshop, Inc. Fax: _____
Address: 120 East Main Street City/State: Aspen, CO Zip: 81611
Contact Person: Darla Callaway Title: Principal Phone: 970.399.1417
Authorized Representative's Signature: Darla Callaway Phone: 970.399.1417
Printed Name: Darla Callaway Title: Principal Date: 5/22/19

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

ADDENDUM NUMBER TWO FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

The land exchange between the City and the Roaring Fork School District to convert Vogelaar Park 6F's designation to another equivalent property has been delayed with an unknown completion date. This does not affect other developable land.

This addendum must be acknowledged.

This Addendum may be faxed to 970-945-2597, emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: Design Workshop, Inc. Fax: _____

Address: 120 East Main Street City/State: Aspen, CO Zip: 81611

Contact Person: Darla Callaway Title: Principal Phone: 970.399.1417

Authorized Representative's Signature: Darla Callaway Phone: 970.399.1417

Printed Name: Darla Callaway Title: Principal Date: 5/22/19

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

ADDENDUM NUMBER THREE FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

Phase I and Phase II Environmental Site Assessments for the City's decommissioned Wastewater Treatment Plant and the as-built documents for the Lift Station can be found at:

https://www.gwsco.gov/DocumentCenter/Index/345

This addendum must be acknowledged.

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Printed Name: Darla Callaway Title: Principal Date: 5/22/19

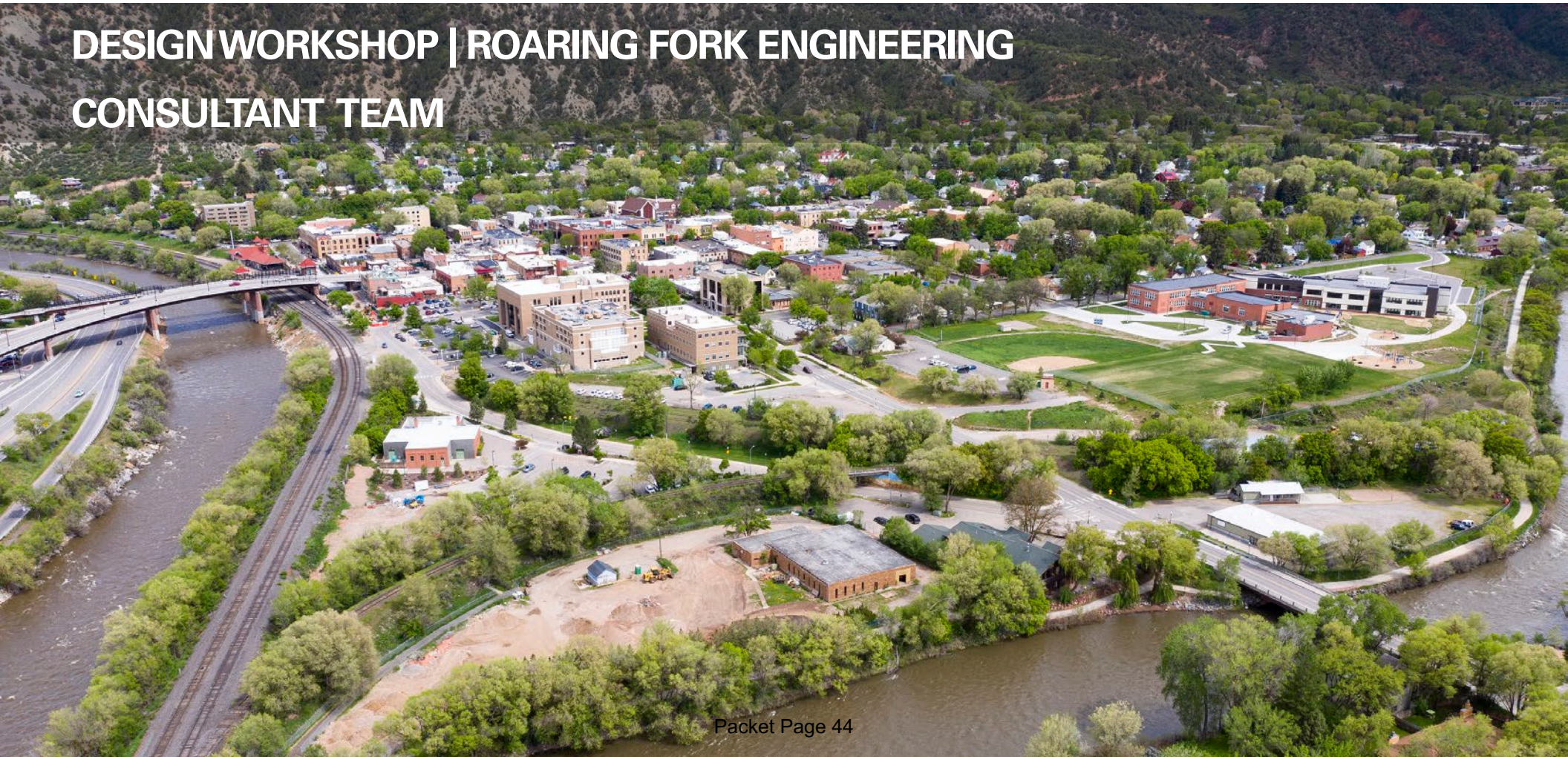
4/17/19

THE CONFLUENCE AREA MASTER DEVELOPMENT

ANDREW LIGHT | JIM LIGHT | TIM BELINSKI
DEVELOPMENT PARTNERS

DESIGN WORKSHOP | ROARING FORK ENGINEERING

CONSULTANT TEAM



LOCAL PARTNERS WITH NATIONAL EXPERIENCE

CREATIVE COMMUNITY ENGAGEMENT

URBAN DESIGN VISIONING

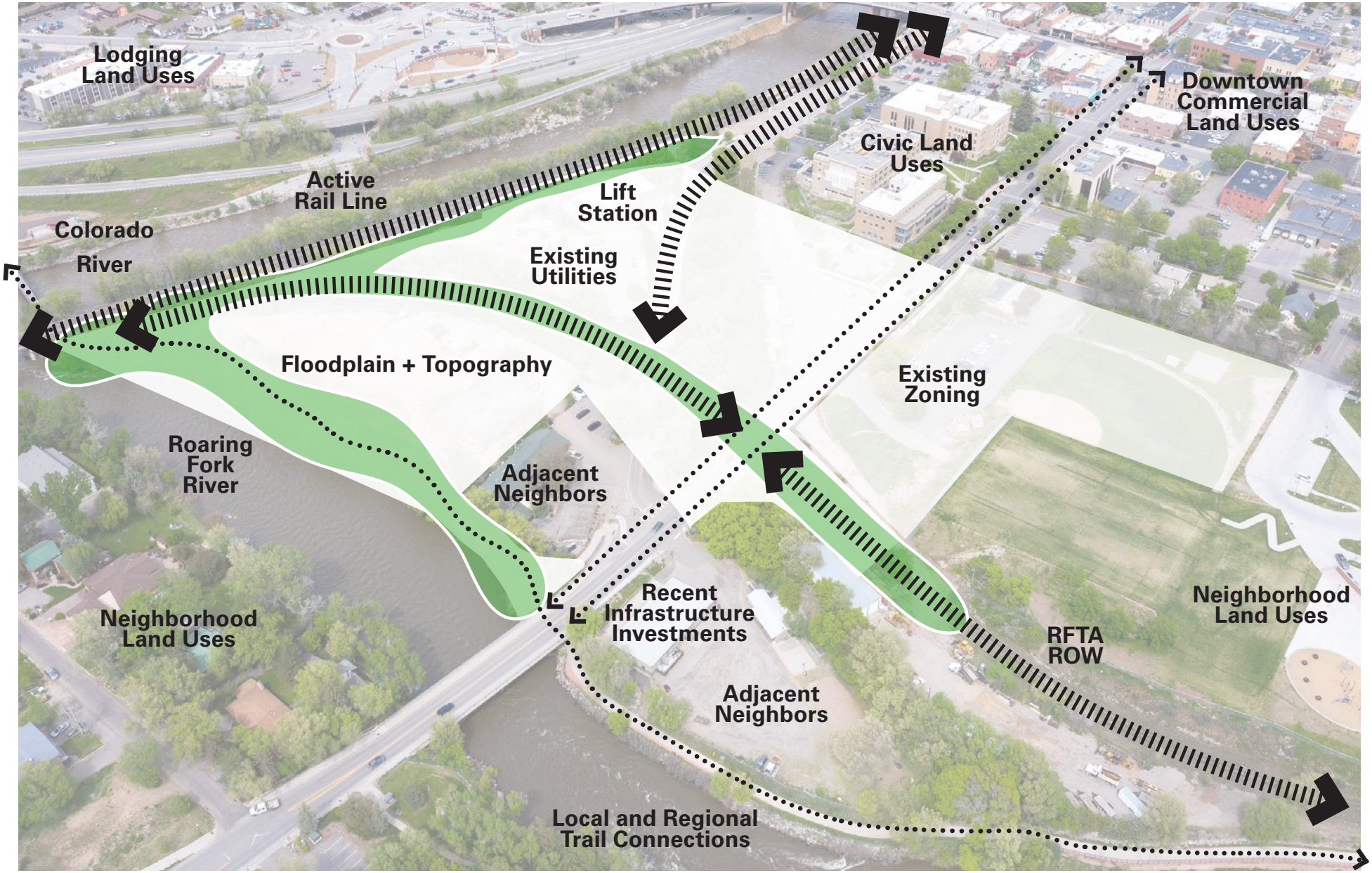
PROVEN SUCCESS

LOCAL ENTITLEMENTS

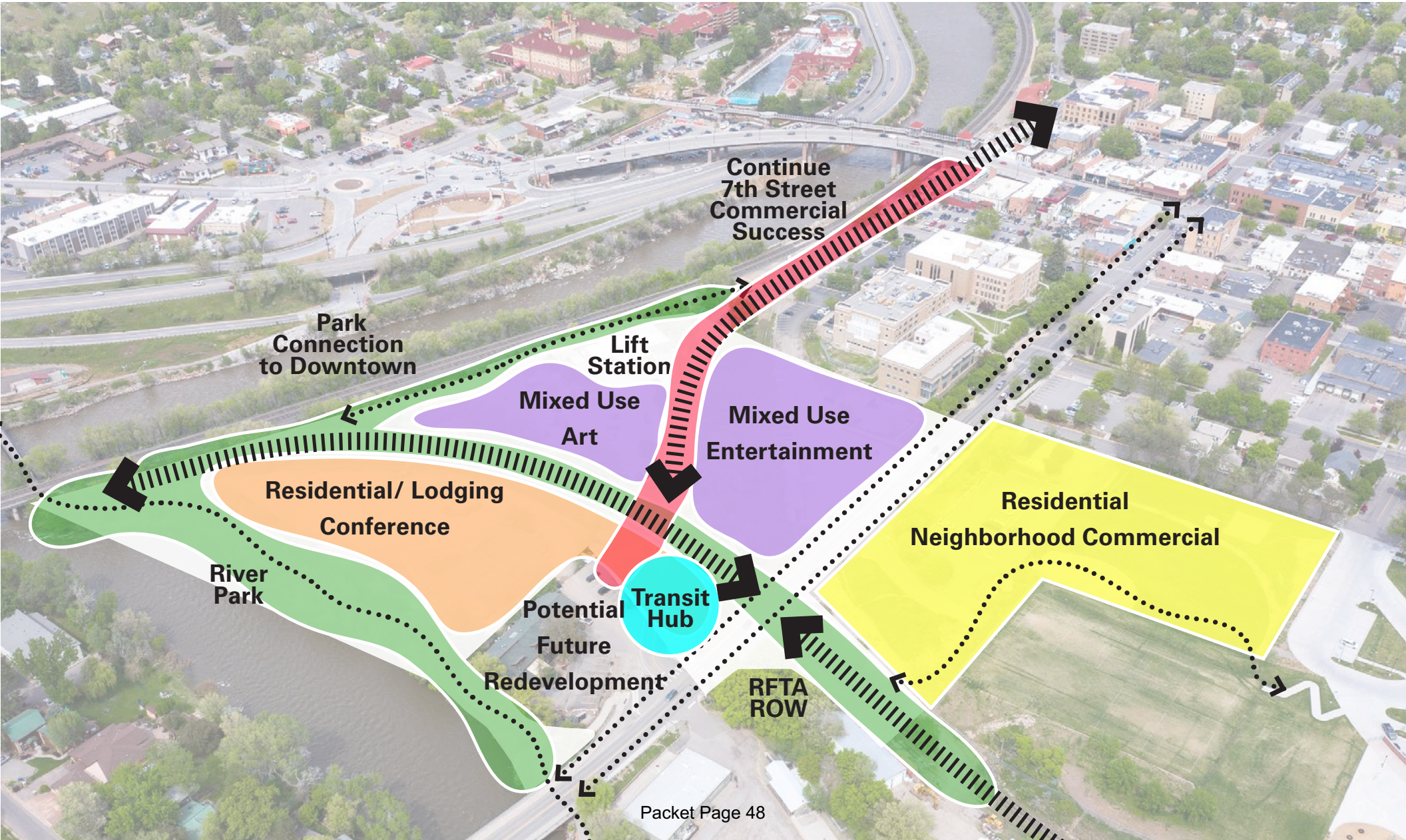
IMPLEMENTATION

EXISTING CONDITIONS

CRITICAL DRIVERS OF DESIGN



COMMUNITY-VETTED MASTER PLAN



BEGIN WITH THE END IN MIND

STRATEGIC PHASING

RUNNING ON PARALLEL TRACKS

RIVER PARK

MIXED USE VITALITY

LOCAL RETAIL

HUMAN CONNECTIONS

HEALTHY LIVING

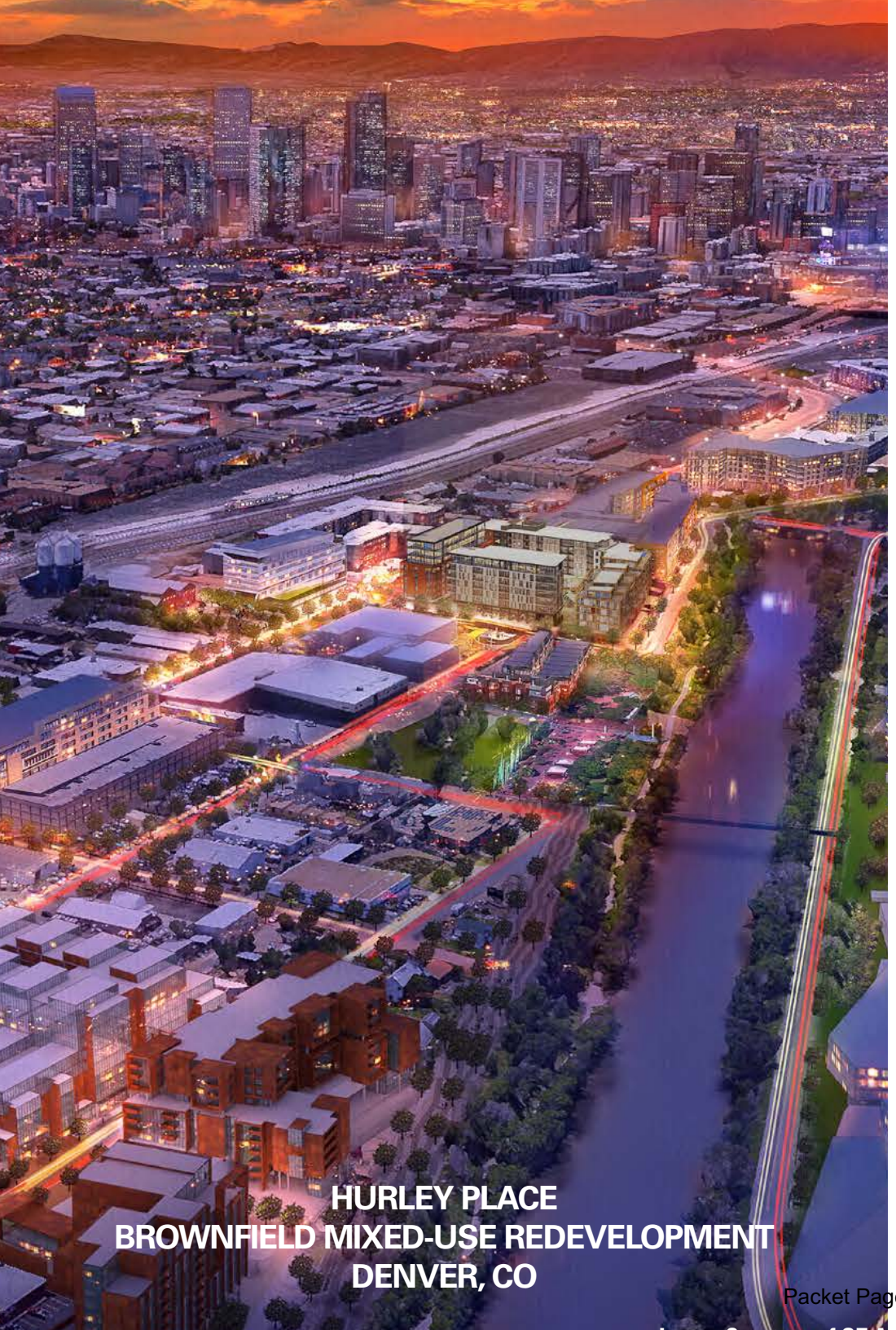
USING HISTORY TO CREATE PLACE IDENTITY

ENVIRONMENTAL STEWARDSHIP

FINANCING

Planning for Project Economics

- **Limited window of time for Opportunity Zone incentives.**
- **Time needed for additional land acquisition.**
- **Developing public/ private partnership with defined roles.**



HURLEY PLACE
BROWNFIELD MIXED-USE REDEVELOPMENT
DENVER, CO

TOGETHER, WE WILL MERGE INSPIRING IDEAS.

WILLITS TOWN CENTER
MIXED-USE DEVELOPMENT
BASALT, COLORADO

VETTED IN COMMUNITY VALUES

+

MARKET REALITIES.

STORYMILL COMMUNITY PARK
BOZEMAN, MONTANA

HOW DO WE GET THERE?

A COLLABORATIVE WORK PLAN

BUILDING FROM A STRONG FOUNDATION OF COMMUNITY ENGAGEMENT

COMMUNITY BUILDERS

COMMUNITY GOALS

The following goals were crafted from community input and vetted by both the public and the Project Advisory Team (PAT). These goals are to be used as the guiding principles for future projects within the Confluence:

Connect to the River
Embrace and enhance the rivers, and improve access and recreation.

Create Connections
Improve circulation and connectivity within the area and to nearby commercial centers, parks, and neighborhoods.

Prioritize the Pedestrian
Design for complete streets to create safe, walkable and bikeable connections within and to the area.

Promote Catalytic Development
Provide a mix of uses and development types to activate the area and create economic vitality.

Authentic Design
Incorporate authentic, visually appealing design that complements the historic character of the downtown.

Create Community Spaces
Design public spaces and facilities where people can gather, relax and recreate.

Complement the Downtown
Encourage uses and amenities that support the downtown.

Expand Housing Choices
Expand and diversify local housing options.

01 / Strategic Area Plan

01

I Executive Summary
01 The Area-Wide Plan
1.1 Background
1.2 Target Reuse Planning Areas
1.3 Market Summary
1.4 Community Engagement & Guiding Principles for Reuse
02 Site Reuse Planning
03 Public Facilities and Implementation Strategies
Appendix A Background Report
Appendix B Business Development Opportunities Report

VISIONING

UNDERSTANDING CONSTRAINTS

SYNTHESIS OF
VISION + SITE CONSTRAINTS + MARKET REALITIES

KNOWING YOUR AUDIENCE

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
CONSTITUENT	General public.	Interested public.	Key stakeholder groups.	Implementers.	Decision-makers.
GOAL	To provide info and aid understanding.	To obtain feedback.	To involve in the outcome.	To partner in the outcome.	To inform final decisions.
PROMISE	We will inform you.	We will acknowledge concerns and aspirations.	We will work towards addressing concerns.	We will provide each other support in formulating solutions.	We will implement your decision.
TECHNIQUE	Fact sheets, websites, public speaking engagements, press releases and open houses.	Public comment, surveys, public meetings, workshops and social media.	Focus groups and deliberative polling.	Advisory committees, task forces, consensus building activities and participatory decision events.	Citizen juries, ballots and delegated decisions.

Regionally-based Businesses.
Non-immediate Neighbors.
Garfield County Housing Authority
Local Non-Profits
GWS Chamber
Others in the General Public

Immediate Neighbors
GWS Elementary School
FH Funeral Home
GWS Police Dept
GWS Church
Other Downtown Businesses

Garfield County
RFTA
Com Dev
Engineering
Parks & Rec
Other GWS Governance Depts

City Council
DDA

ENGAGEMENT TOOLS

Traditional Media

- Flyers, Posters Billboards
- Mailings
- Newspapers
- TV and Radio
- Word of Mouth Information Sharing
- Pop-up Marketing

Social Media

- FaceBook, Twitter, Instagram, Podcasts

Project Website

- Project Content, On-line Surveys, Updates, Schedules

Facilitated Events

- Large or Small Group Meetings
- Ice Breakers, Mapping Exercises, Keypad Polling, Visualizations
- Virtual Reality with 3-D Models

VIRTUAL REALITY

AN ENGAGEMENT +
PARTNERSHIP TOOL

A PARALLEL PROCESS

Phase 2 Confluence Area Master Plan

Task One: Vetting Project Opportunities for the Confluence Area

Understanding Markets

Understanding current market conditions is a critical component to planning for economically supported land-uses. Successful development must be based on the residential and commercial markets as well as the City's goals. The team will assess the new market conditions to inform the master development plan.

Capitalizing on the Place

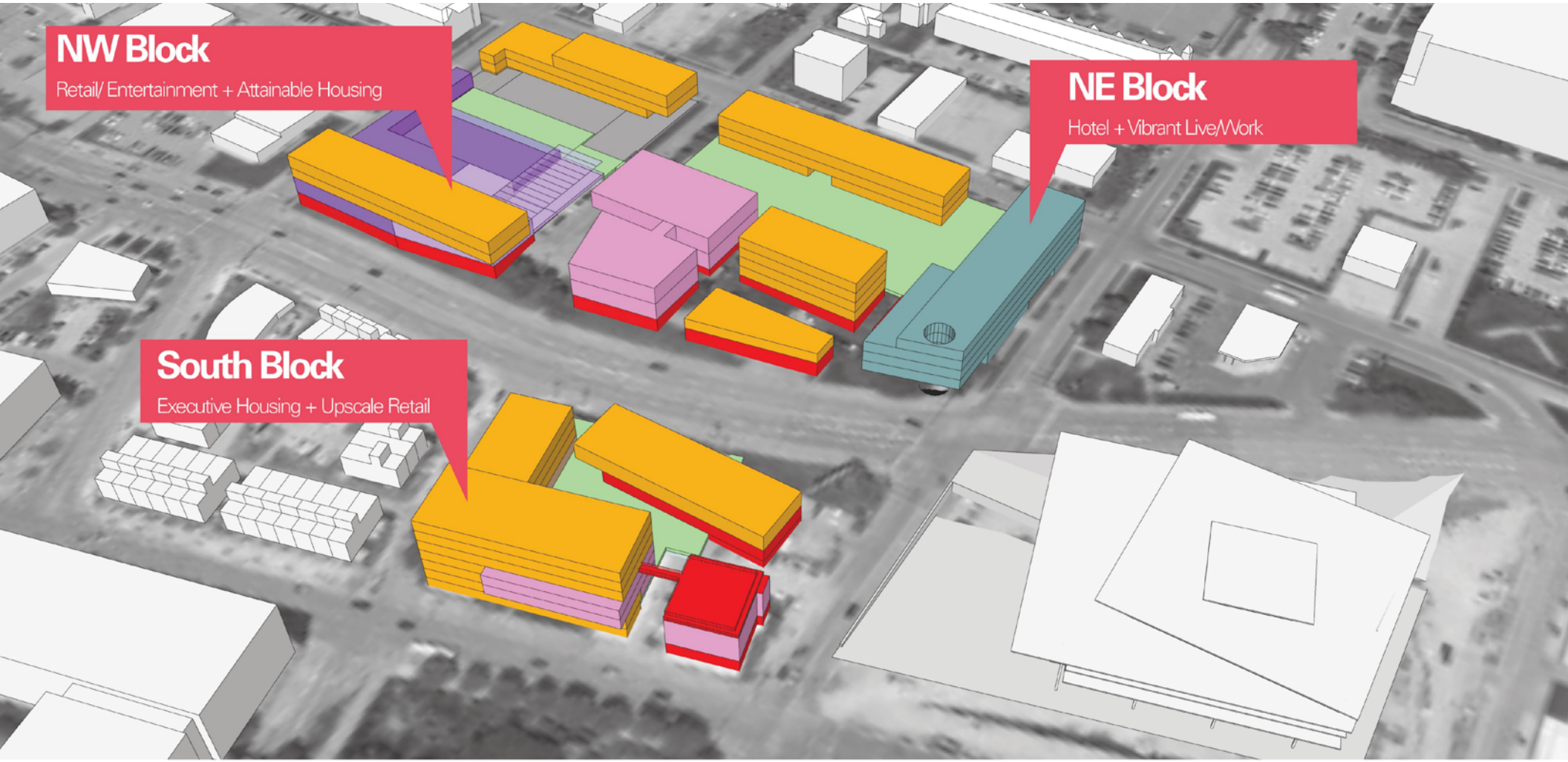
The physical opportunities and constraints for the site will inform a context sensitive approach to urban design. Proximity to the river, topography, site restoration, views, proximity to transit and parking, existing utility infrastructure, floodplain and zoning will shape physical design plan.

Measures for Success

How will we know we have created a successful master development plan? To achieve success, we believe the 2017 Confluence Plan Community Goals are the baselines for developing comprehensive metrics (measures of success). The team will develop specific, measurable and implementable metrics to the following goals.

- Connect to the River
- Create Connections
- Prioritize the Pedestrian
- Promote Catalytic Development
- Authentic Design
- Create Community Spaces
- Complement the Downtown
- Expand Housing Choices

THE RIGHT MIX OF LAND USES

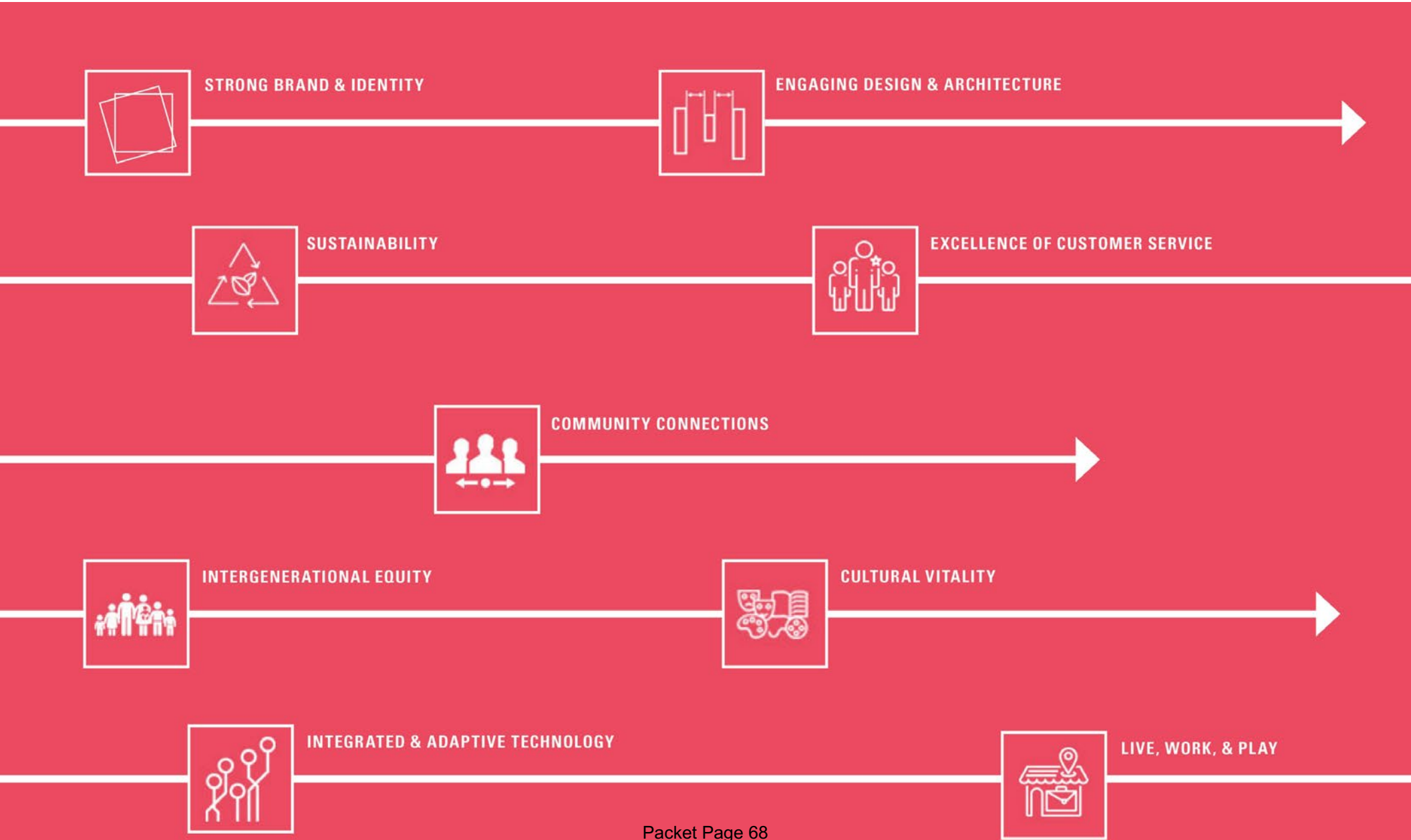


SF Plate Gross	Hotel Keys	Res. Units	Retail SF	Office SF	Parking Needed	Parking Provided
505,000	117	272	71000	69200	1132	1080

program key

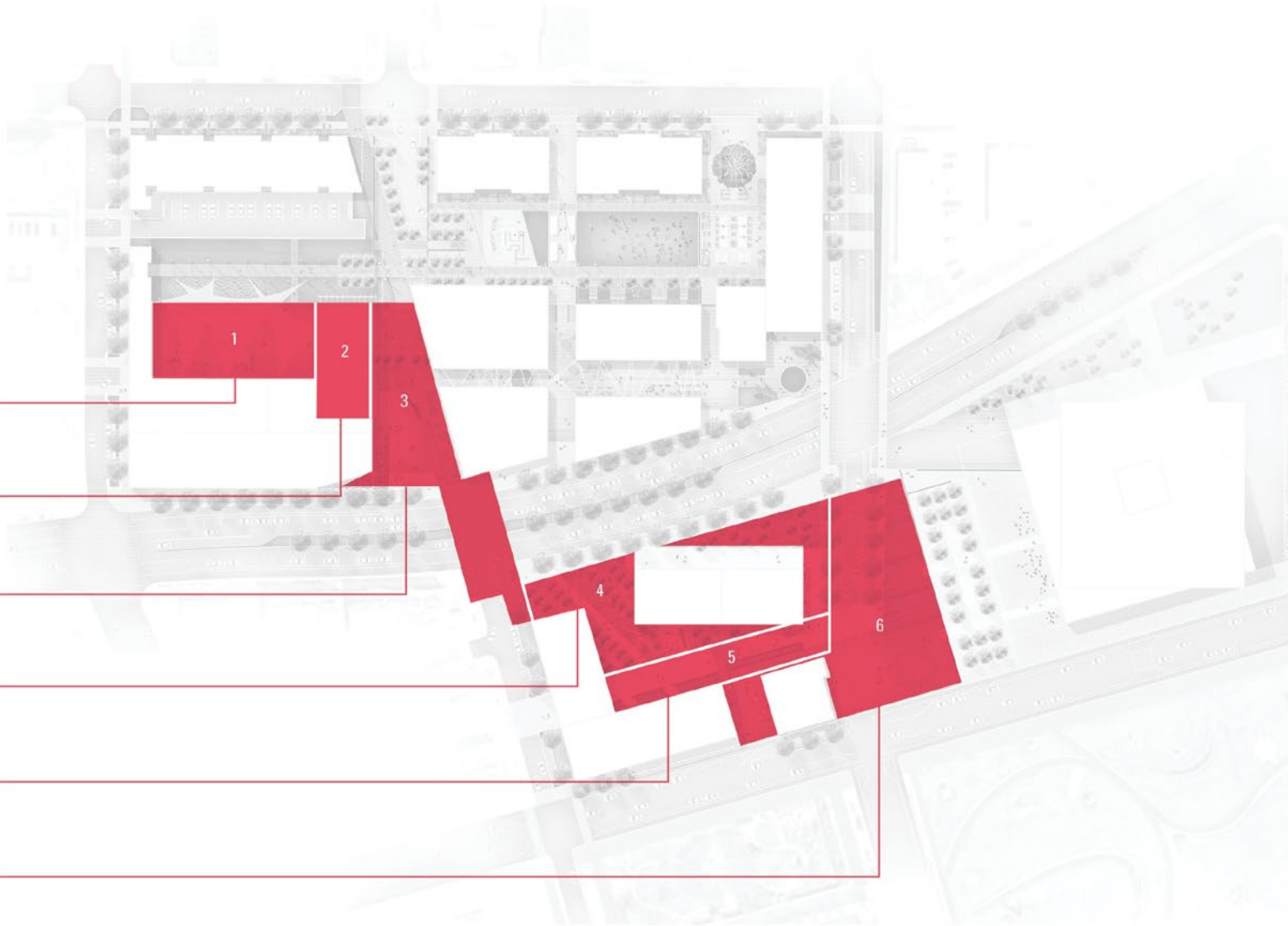
- housing
- hotel
- retail
- office
- active entertainment
- music entertainment
- public green space

PLACEMAKING PRINCIPLES



SEAMLESS PUBLIC SPACE

A DESTINATION FOR THE CITY



ACTION VENUE

OUTDOOR GAMES // FOOD & DRINK // SHADE STRUCTURE

THE STAGE

LIVE MUSIC // VIEWS DOWNTOWN // PERFORMANCE TRELLIS

PIAZZA DES MOINES

BIG STAIR SEATING // DINING PATIOS // FLEXIBLE EVENTS

HANGING GARDENS

PICNIC SEATING // PLANTING AS ART // SANDWICH BISTRO

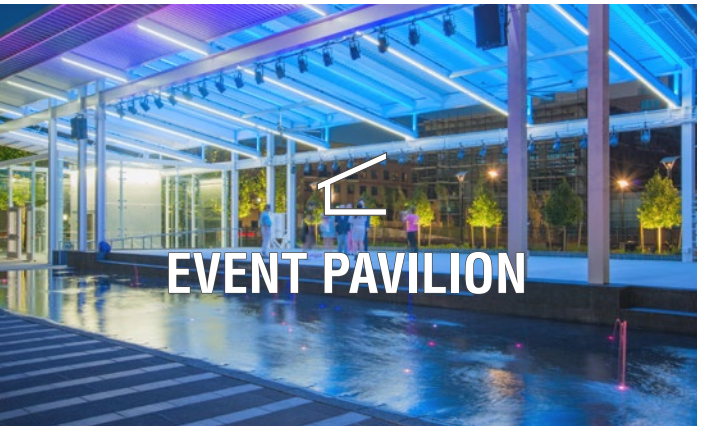
TERAZZA

GRAND STAIRCASE // COFFEE CORNER // VERTICAL GARDENS

ARTS CROSSING

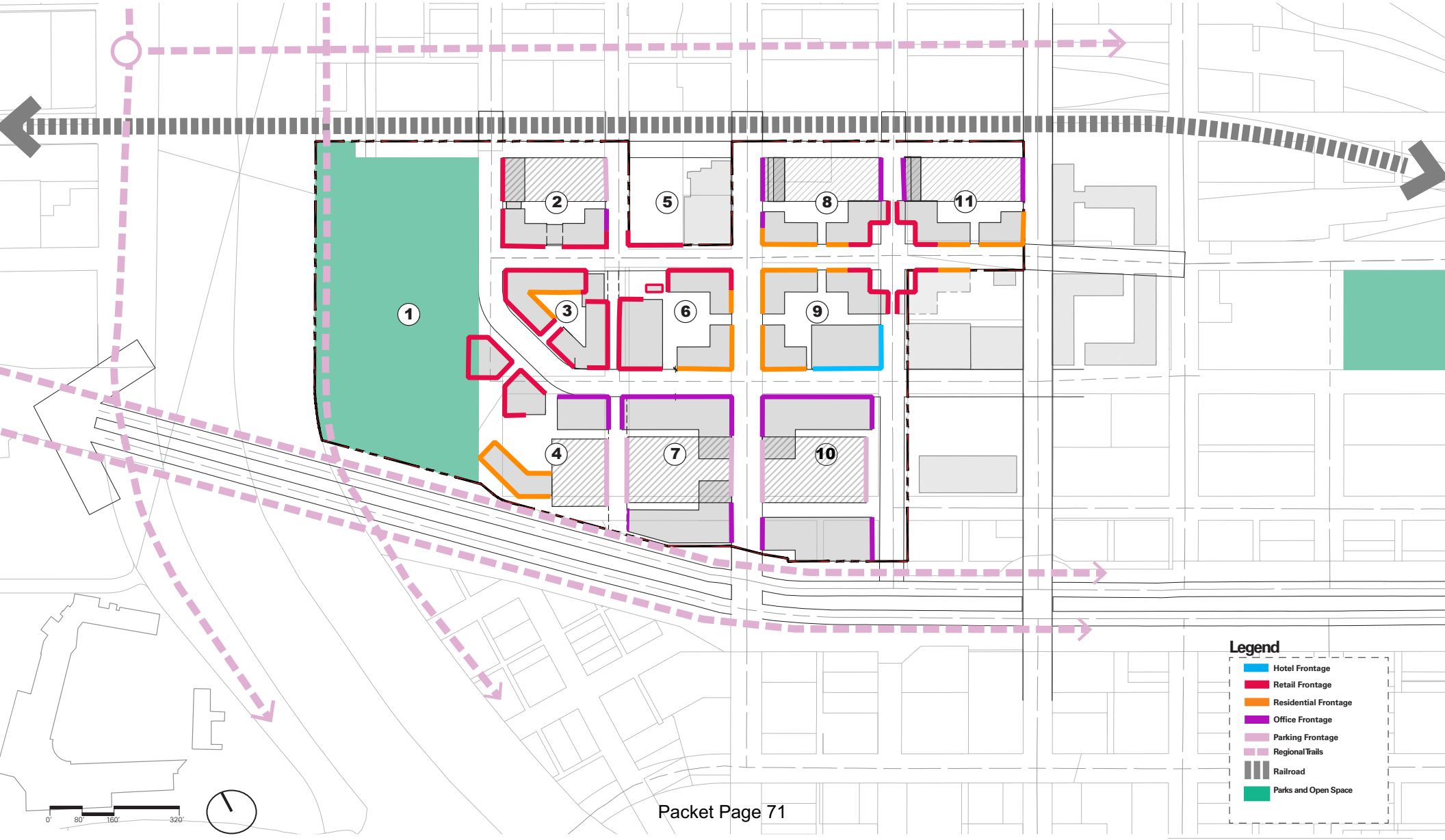
WATER AS ART // STREETFRONT PARKLET // MUSE STREET

CREATE MEMORABLE PLACES

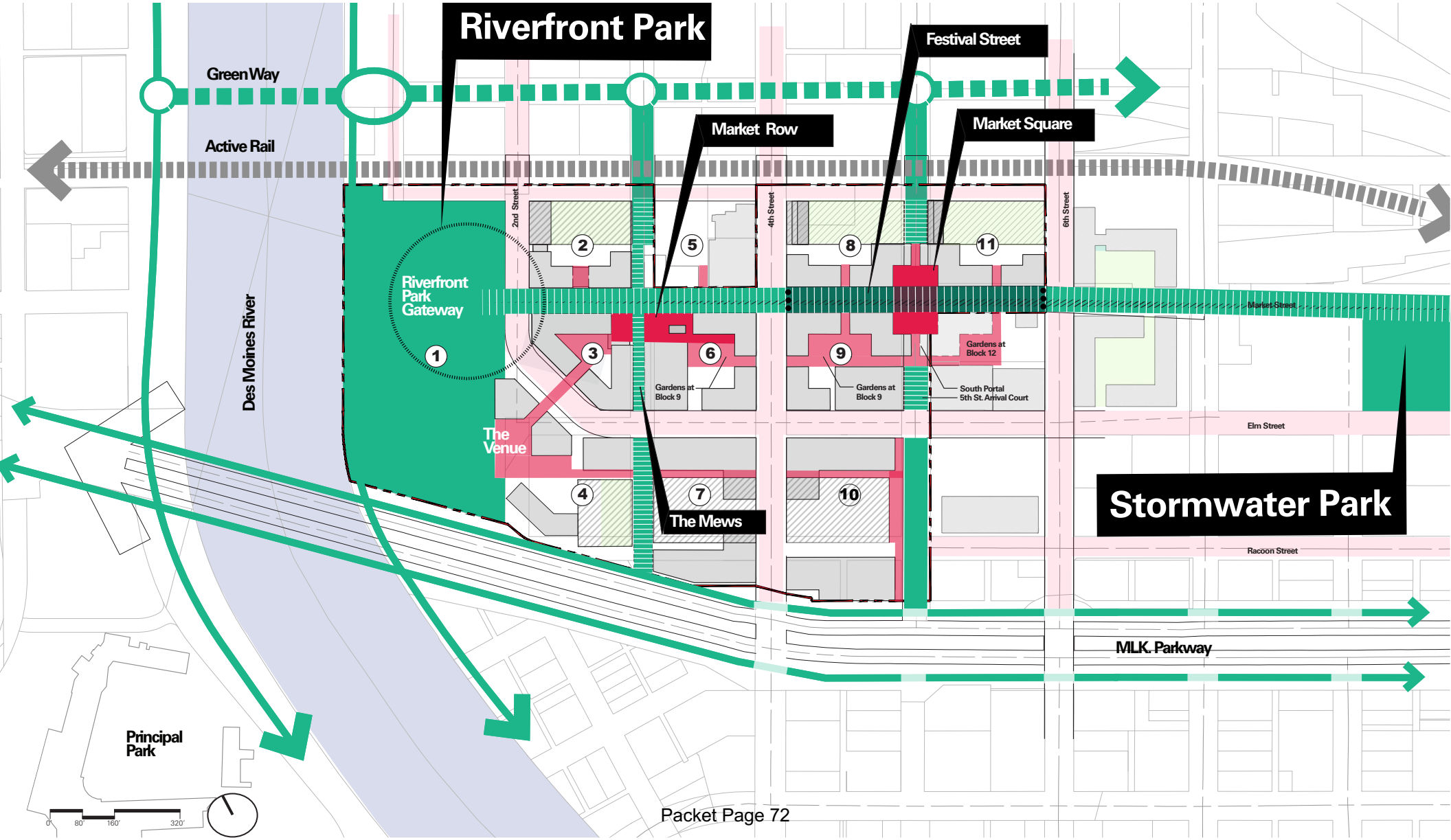


CONFLUENCE

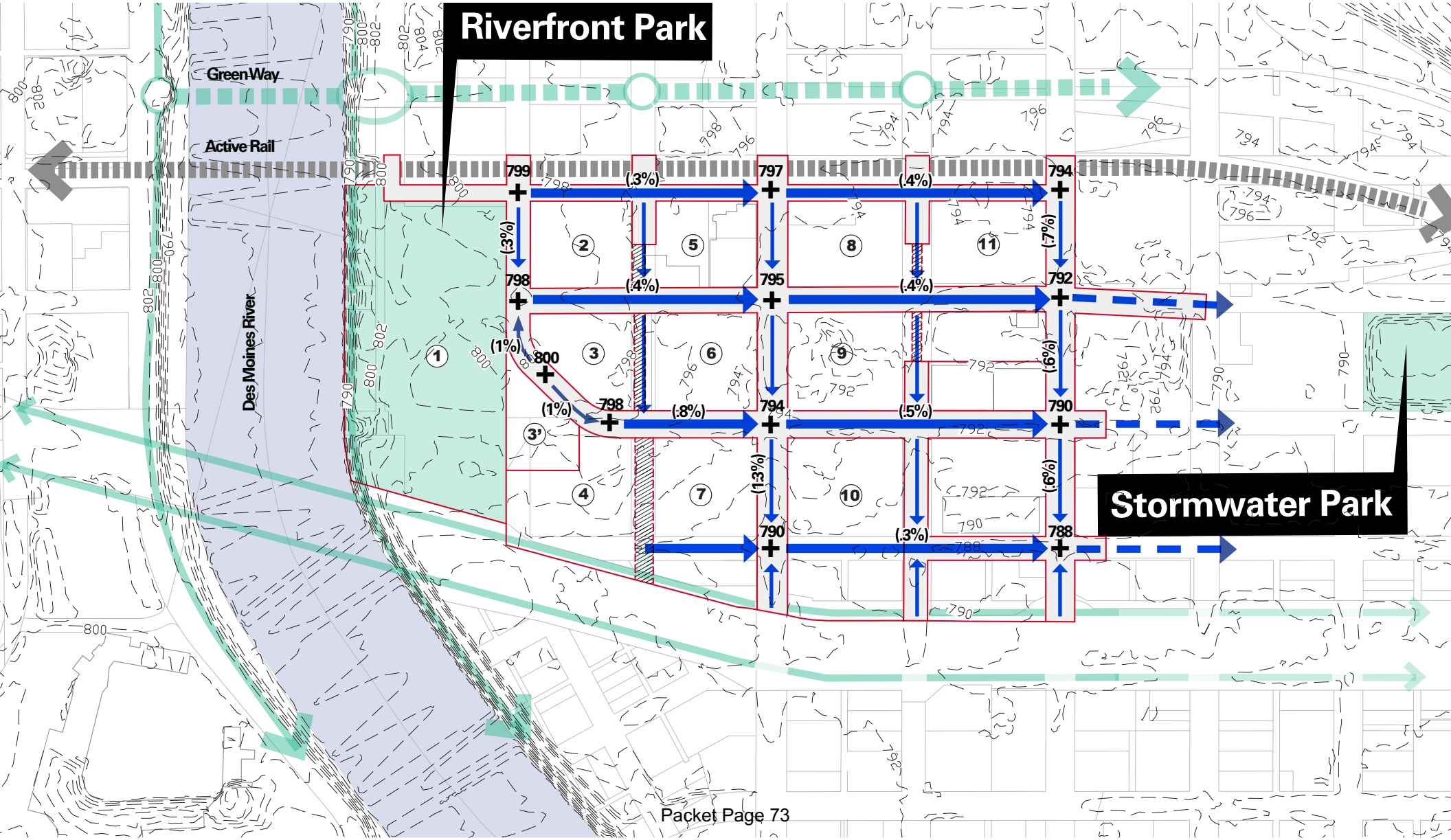
ACTIVE FRONTAGES



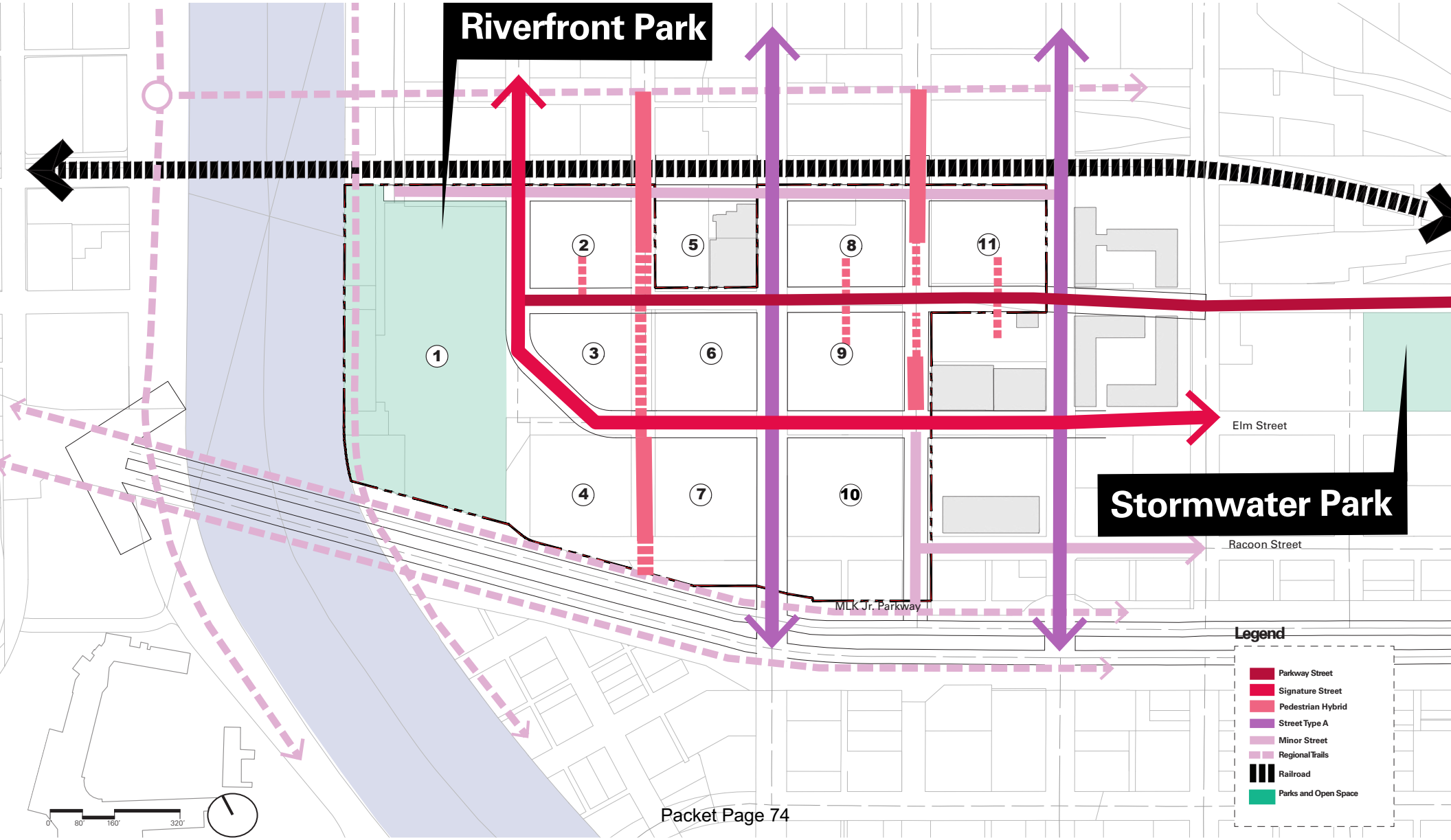
PROGRAMMING



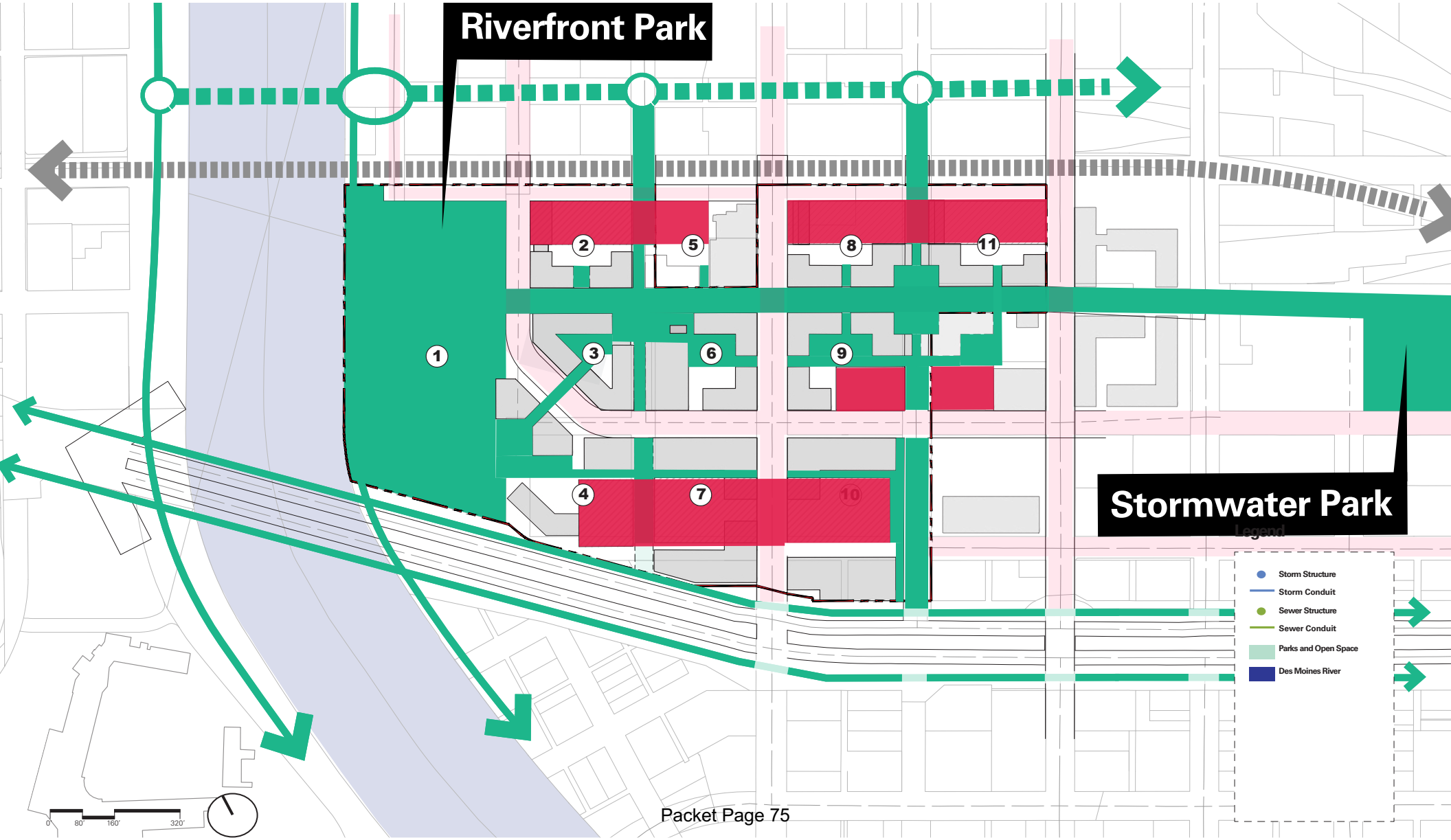
INTEGRATED INFRASTRUCTURE



CONNECTIONS + LINKAGES



PEDESTRIANS FIRST



A SUCCESSFUL MASTER DEVELOPMENT PLAN BEGINS WITH PLACEMAKING AND SEAMLESSLY SYNTHESIZES MANY INGREDIENTS.

OUR COMMITMENT

Why this Team

- **We will contribute holistic and innovative thinking to the Confluence Area.**
- **We will partner with the City of Glenwood Springs in a way that is transparent, honest and rigorous.**
- **We will apply lessons learned from our local and national experience in mixed-use development, urban design and community engagement.**
- **We will deliver a comprehensive master development plan vetted in community values and market realities.**

DISCUSSION

ANDREW LIGHT | JIM LIGHT | ANDREW BELINSKI
DEVELOPMENT PARTNERS

DESIGN WORKSHOP | ROARING FORK ENGINEERING
CONSULTANT TEAM

July 29, 2019

Mayor & City Council
City of Glenwood Springs
Glenwood Springs, CO 80162

RE: Confluence RFQ – Additional Information

Greetings:

Thank you for the opportunity to provide additional information to our response to the City's Request for Qualifications (RFQ). During our call last week with City staff they suggested that we summarize our discussion in writing and share additional detail on master plan concepts. Questions that we discussed are as follows.

How can we get to a win-win business agreement with the City?

As we presented to City Council earlier this month, based on our team's qualifications, local successes, and track record for delivering on promises, we would hope to be selected by Council and enter into a Development Agreement where we would activate the community planning for the site and return to Council with a development plan that encompasses a balanced, vibrancy-creating, mixed use and multi-phased plan that embraces a park on the river. During this work the outside consultants would be paid a fee and the land owner - the City - would support the work at a budgeted cost that is shared with the developer. We like the idea of pursuing the Vogelaar site as the initial phase while allowing the river frontage and mixed-use areas to get additional community and development attention.

Ultimately the development plan would include a sale by the City of the land for development along with the forthcoming land use entitlements in place. The property would be appraised with its entitlements in order to assure a fair value for the City. We believe that the City needs to have a development team whose members understand the local scale of Glenwood Springs and its economic realities. We believe there will be added value for the City with a team who is truly "on the ground." We bring a reality-based perspective with the understanding of the local and regional markets. Every one of our development team members lives in the valley and has a personal stake in success here. If the community engagement is not successful and the community is unwilling to rally around a plan, it could lead to controversies and set back ***any*** action plan for some time.

How do we expect to finance the project?

The eventual mix of capital sources will depend on the land uses which are ultimately approved at the Confluence. We have experience with a broad range of financing mechanisms for neighborhood scale and mixed-use projects. Depending on the final cost of infrastructure we and the City may consider a Metro District in which revenue (not general obligation) bonds would fund much of the qualified infrastructure and would be repaid from assessments similar to

415 East Hyman Avenue Aspen, CO 81611
970 948 7729

projected additional property taxes. Tax Increment Financing (TIF) may be appropriate if the development includes enough sales-generating uses and property taxes. Three of our past projects (Willits, Basalt River Park, and the Roaring Fork Club) have real estate transfer assessments (RETAs) that fund specific programs - the Willits Art Center, The Art Base, and the Roaring Fork Conservancy, respectively. A RETA could be used at the Confluence to provide ongoing support for vitality-enhancing programs.

As we mentioned in our initial submittal we have relationships with many private and institutional capital sources and have toured the Confluence area with several of them, including Tim's partner on the hotel in Willits and two Opportunity Zone-focused investment groups.

In addition, there are tax credit incentive programs for affordable housing and we have discussed such programs with the Colorado Housing Finance Agency (CHFA). Additionally, the new Opportunity Zone incentives for the area provide incentives for the development as well.

Can you provide additional detail on your master plan concepts?

We have attached two illustrations of our land use ideas with at least one important alternative — the size of the Confluence Park — which we anticipate to be a key decision. Based on our understanding of the City's RFQ, we had previously focused primarily on our professional backgrounds in the Roaring Fork Valley, the public and private experiences of Roaring Fork Engineering, as well as the Colorado and national experiences of Design Workshop, which we invite you to review again. We did not try to show a detailed block-by-block plan for two reasons. First, we strongly believe that the correct Vision and ultimate land use plan will be the result of an open and effective process with the City officials and staff and with the citizens of Glenwood Springs including the immediate neighbors. Second, we feel that virtually any land use plan which is too specific too soon could become an unnecessary lightning rod and stress point for community members who may have objections to one or more of the specific lands uses (that weren't vetted adequately with the public). By starting with a somewhat more general plan, we would attempt to gain the community's confidence in the plan and their continuing support as the preliminary master plans evolve.

Our attached illustrations include the following alternatives.

Scenario 1, a large **Destination River Park** which could consume most or virtually all of the land west of the "Y". We consider this scenario less likely but it illustrates our view that the size and location of the park might become the driver of other land uses. A park of this size would reduce the size of the remaining development.

Scenario 2, a smaller **Community Riverfront Park**, illustrates a more linear park which would connect to the entire new system of parks including the rail beds and would be bike friendly and pet friendly. Ideas include a chain of fountains and water features, a safe train viewing area, places for non-profits to promote themselves, displays of the history of Glenwood Springs, and waterfront connections with the Roaring Fork River. An iconic restaurant and bar would offer an attractive place for residents and families to gather. The adjacent mixed uses could complement and extend the vibrancy of the current downtown and connect it to the Roaring Fork River.

Similar to the recent riverfront park development by the Town of Basalt, there would be opportunities for environmental education. A smaller but well-designed park may well be adequate for the City's goals and serve as a successful complement to other parks in the City.

It is important to note that most of the area west of the "Y" is within the floodplain which will be a critical factor in setting the building floor elevations. We note that the City should be aware of this constraint when evaluating any proposal which includes an extension of the 7th street with vehicular connection under the RFTA "Y" and right of way.

Hotel and Conference Facilities. Scenario 1 includes a Hotel with conference facilities near the existing pump station on 7th Street. Scenario 2 shows some options referred to as "Mixed Use" adjacent to the "Community Riverfront Park". While not illustrated, there would be adequate land for a larger Conference Hotel or more Residential.

Vitality Zone/ Retail, Office and special gathering places. In order to connect the Confluence to the existing 7th Street both Scenarios 1 and 2 include a Vitality Zone, which would include space for events. Since demand for retail is currently changing across the nation, the users are likely to include service businesses and offices, including space specifically for non-profit groups and shared co-work environments, which can survive the seasonality of retail demand. Pop ups and food trucks may be added for special events.

Residential. As mentioned in our first presentation, we think that residential can be started on the Vogelaar parcel and mixed throughout the entire plan. If a hotel is not feasible, residential can be included with the Downtown Park. We propose to include Senior housing and to mix different income levels.

Affordable Housing. We would include locations for affordable housing throughout the new neighborhood. We anticipate that at least one parcel could be developed with low income housing tax credits.

Water Features. We would promote the idea of having water amenities, such as fountains and streams, within the project and have included some photos to illustrate the ideas.

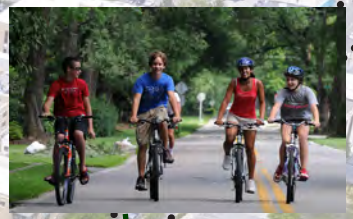
Thank you very much for your consideration, and please contact us with any questions.

Sincerely,

Andrew, Tim and Jim

COMMUNITY-VETTED MASTER PLAN CONCEPTS

SCENARIO 1



Continue 7th Street Commercial Success

VITALITY DISTRICT

Park Connection to Downtown

Hotel/ Conference

Commercial/ Mixed-Use

Residential: Affordable, Senior, Market

Destination River Park

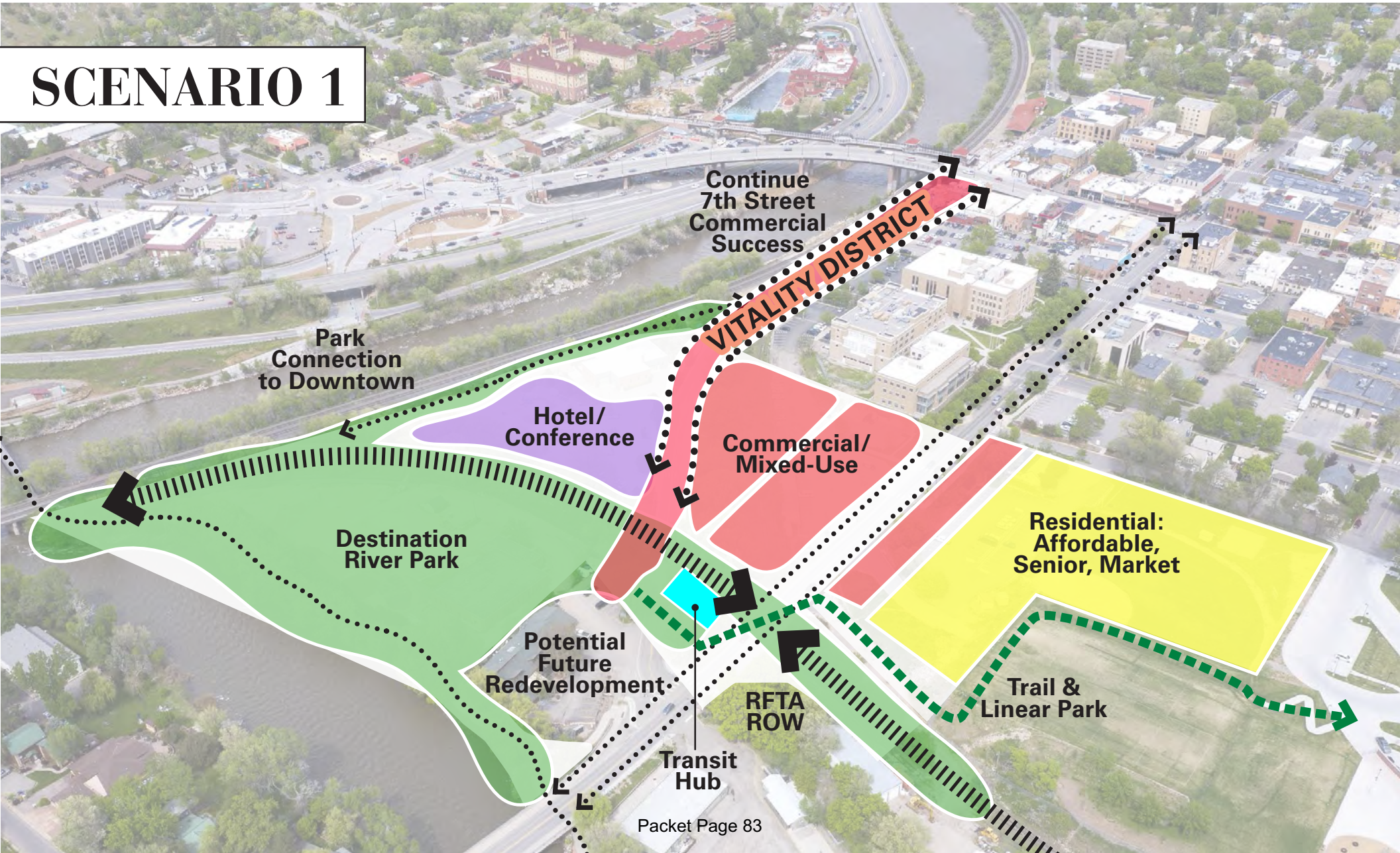
Potential Future Redevelopment

RFTA ROW

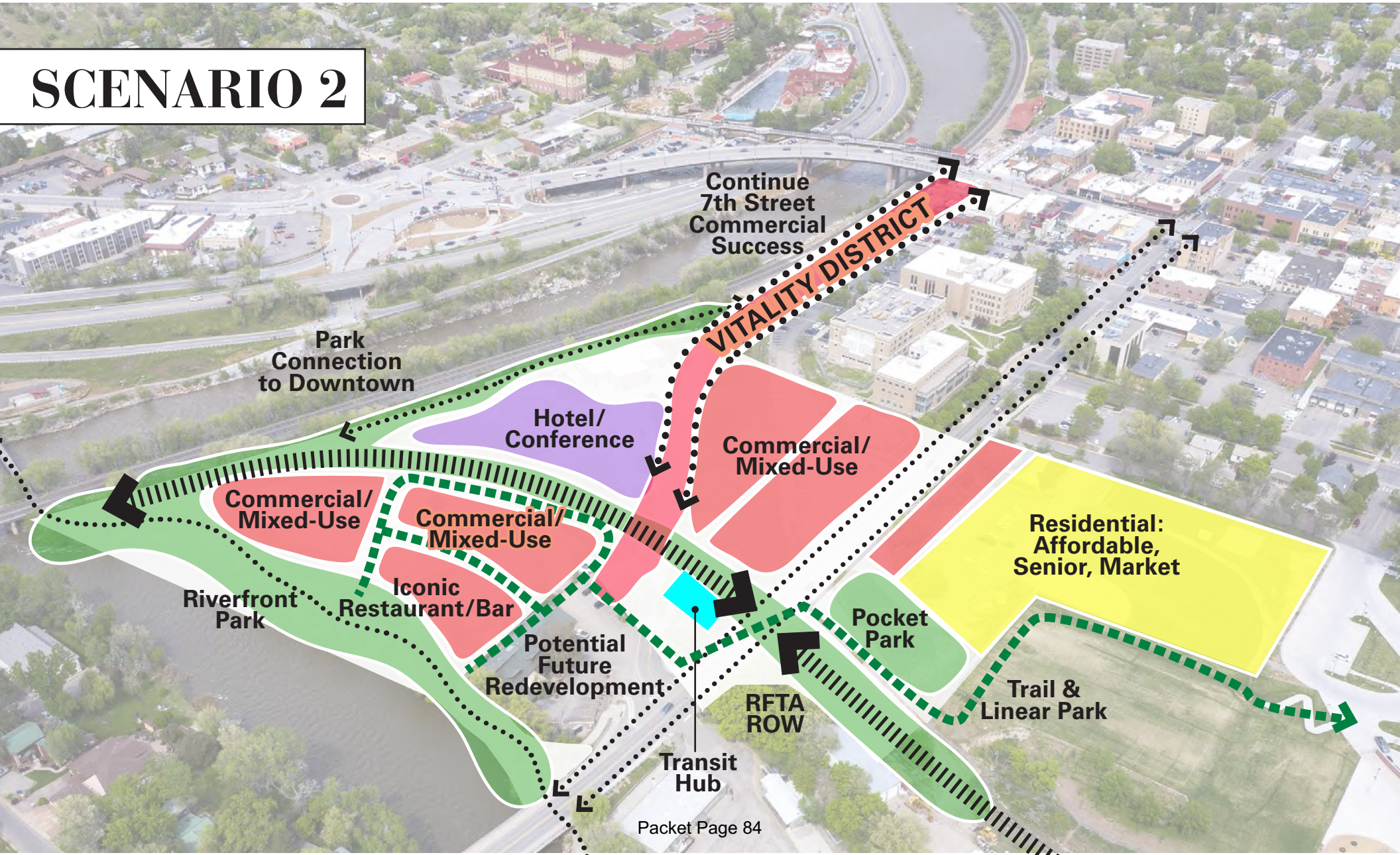
Trail & Linear Park

Transit Hub

COMMUNITY-VETTED MASTER PLAN CONCEPTS



COMMUNITY-VETTED MASTER PLAN CONCEPTS



DEVELOPMENT PARTNERS

February 19, 2020

Mayor & City Council
City of Glenwood Springs
Glenwood Springs, CO 80162

RE: Confluence Property

Greetings:

I am writing to bring you up to date on Development Partners, our locally-based project team.

First, we remain very committed to working with the City of Glenwood Springs on an overall joint development program for the Confluence property. We are open to discussing different legal structures (e.g. from simple land sales to joint ventures) to ensure that the City will be able to achieve its goals.

Second, we would like to call to the attention of the City Council that moving forward sooner than later is essential if the City wishes to take advantage of the "Opportunity Zone" designation. Under the terms of this 2017 Federal legislation, certain tax incentives will go away quickly as time passes.

Finally, we remind you and the City Council of our earlier proposal in which we would acquire the Vogelaar Parcel as soon as the City is prepared to move forward. One key benefit for the City is that proceeds of the sale can be used by the City to fund a variety of pre-development and development costs on the remainder of the site. See the attached GWS Confluence "Master Plan Concepts." In both Scenario 1 and 2, the Vogelaar Parcel is highlighted in yellow.

As an update, members of Development Partners are completing a mixed-use project on a block in Willits Town Center. Tim is also working on final approval by the Town of Basalt of a mixed-use development - which will include a new art center - on the very sensitive River Park parcel. This co-operative process is an example of how a private developer can work with the municipality as well as an important non-profit to create a land-use of long-term benefit to the overall community. We would be glad to brief you and the City Council on this development.

Thanks,

Andrew Light, Partner

CC: Tim Belinski, Darla Callaway, Richard Goulding, Jim Light, Becky Zimmerman

415 East Hyman Avenue Aspen, CO 81611

970 948 7729

Jennifer Ooton

From: Andrew Light <andrew@twocreeksinvestments.com>
Sent: Tuesday, November 24, 2020 8:20 AM
To: Jennifer Ooton; Debra Figueroa; Karl Hanlon
Cc: Tim Belinski (TBelinski@IndVentures.com); Darla Callaway; Jim Light (Jlight@chaffinlight.com); Richard Goulding
Subject: RE: Confluence ... Now Known as the 8th Street Crossing Development

Hi Jenn,

Our team remains very interested in the 8th Street Crossing. Our update to share with City Council would be that we 1) have completed and sold out a for-sale townhome project in Willits, 2) are almost finished with an mixed use apartment project in Willits, and 3) just closed this week on riverfront land in downtown Basalt for Basalt River Park, a mixed use development with a destination restaurant that will break ground this spring . This property involved a multi-year, politically sensitive approval process with the Town of Basalt. We believe our local presence and specific experience are a perfect fit for 8th Street Crossing, and we live full time in the valley so can meet any time.

Here is a link to an Aspen Times article this week about our Basalt River Park property:

https://www.aspentimes.com/news/basalt-developer-complete-purchase-of-pan-and-fork-property/

In terms of pre-development costs, we suggest the City have someone prepare an updated topo survey, title summary, soil report, and an environmental Phase I/Phase II report as needed. These reports are not expensive and will help move everyone forward. It would also be helpful to update the status of the Vogelaar property.

Thank you.

Andrew W. Light
415 E. Hyman Avenue
Aspen, CO 81611
Mobile: 970 948 2737

From: Jennifer Ooton <jenn.ooton@cogs.us>
Sent: Monday, November 23, 2020 9:56 AM
To: Debra Figueroa <debra.figueroa@cogs.us>; Karl Hanlon <kjh@mountainlawfirm.com>
Subject: RE: Confluence ... Now Known as the 8th Street Crossing Development

Good morning,
City Council has asked for a work session to talk about moving the 8th Street Crossing Development forward at the Dec. 3 meeting, but at this time is not looking for a presentation from any of the teams. I am indicating that there is some level of interest from all of the teams. If you have anything additional to include in the packet or are no longer interested, please let me know. I also can include any information that you would like included related to the question of what you would need from the city in pre-development costs. I have made an effort to provide all of the submittals that you have previously provided into the packet (which is finalized tomorrow morning because of the holiday).

The work session will be in the late afternoon, and will be held via Zoom. The agenda will be available sometime next Monday at https://cogs.us/129/Agendas-Minutes

Happy Thanksgiving!
Jenn

Jenn Ooton
Assistant City Manager, Economic and Community Development
City of Glenwood Springs
970-384-6404 (o)
970-471-8684 (m)

COVID-19 Awareness
https://covid19.colorado.gov/about-covid-19
https://city-of-glenwood-springs-coronavirus-response-gwsco.hub.arcgis.com/

STOP THE SPREAD
By commiting to the five containment strategies;
WEAR a mask in public.
WASH your hands.
MAINTAIN 6 feet of distance from anyone not in your household.
STAY home when sick.
SEEK testing and isolate, if you are feeling unwell.

Stay informed on the latest City of Glenwood Springs news, cone zones, events, and more by signing up to receive email or text notifications at cogs.us/notifyme

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From: Jennifer Ooton
Sent: Wednesday, September 30, 2020 8:54 AM
To: Debra Figueroa (debra.figueroa@cogs.us) <debra.figueroa@cogs.us>; Gretchen E Ricehill <gretchen.ricehill@cogs.us>; Terri Partch <terri.partch@cogs.us>; Karl Hanlon <kjh@mountainlawfirm.com>
Subject: Confluence ... Now Known as the 8th Street Crossing Development

Good morning,
City Council at its most recent meeting asked staff to bring back the conversation regarding the 8th Street Crossing Development (the development formerly known as the Confluence.). This email is going to all three master development teams that were selected for interviews by City Council, and I'm looking to gauge your interest in moving forward. This conversation came up during a Council discussion item about the 6F land swap/Vogelaar Park – I have spent the last several months working to bring that land swap project to fruition.

Our city, like many cities, is facing a projected decline in revenue in 2021, so in addition to your interest in pursuing this project, I'd like to know from each of the teams what you would expect from the city in terms of pre-development costs.

Thanks, and I hope you are enjoying this beautiful autumn day.

Jenn

Jenn Ooton
Assistant City Manager, Economic and Community Development
City of Glenwood Springs
970-384-6404 (o)
970-471-8684 (m)

COVID-19 Awareness
https://covid19.colorado.gov/about-covid-19
https://city-of-glenwood-springs-coronavirus-response-gwsco.hub.arcgis.com/

STOP THE SPREAD
By commiting to the five containment strategies;
WEAR a mask in public.
WASH your hands.
MAINTAIN 6 feet of distance from anyone not in your household.
STAY home when sick.
SEEK testing and isolate, if you are feeling unwell.

Stay informed on the latest City of Glenwood Springs news, cone zones, events, and more by signing up to receive email or text notifications at cogs.us/notifyme

Master Developer
Confluence Area Request for Qualifications

Submitted By
The Confluence Development Group

#BD 2019-013
Master Developer for the Confluence Area
May 22, 2019

City of Glenwood Springs
Procurement Department, First Floor
101 W. 8th Street
Glenwood Springs, CO 81601

Contact
Brian Marshack
Confluence Development Group
PO Box 6327
Snowmass Village, CO 81615
(970) 274-0303
BMarshack@Gmail.com

A·B·A
HOSPITALITY

May 21, 2019

City of Glenwood Springs
Procurement Department, First Floor
101 W. 8th Street
Glenwood Springs, CO 81601

Re: Master Developer for Confluence Area #BD 2019-013

To Whom it May Concern:

On behalf of the Confluence Development Group, I am excited to submit the following proposal for a Master Developer for the Confluence Area in Glenwood Springs, Colorado. The Confluence Development Group is a partnership between ABA Hospitality located in Snowmass Village, Colorado and Oak City Development out of Raleigh, North Carolina. Our combined group has completed over $10 billion in real estate development and investments over a 30-year period, specializing in master planned communities, hospitality, residential, and mixed-use properties. We are a strong locally based group with several of our key team members residing in the Roaring Fork Valley for over 30 years. Our teams commitment to the Valley extends to numerous real estate investments, which include the Snowmass Club and recent acquisition of the Tree Farm property near Basalt, Colorado.

As a Master Developer of numerous projects and communities, our experience has led us to believe that the best development plans are the result of legitimate engagement and collaboration with community stakeholders and municipal officials. We have assembled a world class team of Colorado based design professionals, engineers, and consultants that have the unique skill set, relevant project experience, and qualifications to develop the right master plan for the site, with the development and investment team to execute that plan to the highest standards.

We are very optimistic about the opportunities that the Confluence area site presents on a local and regional level. Our proposal demonstrates our teams qualifications and financial capacity, with references and a history of successfully completed projects The high level concept plan provides a foundational layer to explore and discuss some of our initial thoughts and ideals in regards to the development potential for the site.

Thank you for allowing us to submit this proposal to the City of Glenwood Springs. If you have any questions or require additional information, please feel free to contact me anytime.

Cordially,

Scott Brown
Chief Executive Officer
ABA Hospitality, llc

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

CITY OF GLENWOOD SPRINGS FINANCE

ADDENDUM NUMBER FOUR FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

1) Where are the flood plain/FEMA locations for the Confluence area?
Attached is a tif file of the current flood plain for the downtown area, including the confluence. FEMA is currently reworking the maps based on new hydrology information for the Colorado River (water levels have gone down). They are also in the middle of a process to better define the small channel hydraulics in Glenwood, a Base Level Engineering study. The BLE is unlikely to affect the confluence area.

2) Which portions of the train tracks must remain and which are being removed?
What is described as the east leg of the "wye" has been abandoned and is fully owned by the City of Glenwood Springs and may be removed. The hatched railroad right of way that is shown on the map on page 3 of the RFQ, is not an active railroad. It is referred to as the Roaring Fork Transportation Authority (RFTA) right of way within the Area Wide Plan, and is under rail-banked status. Changes to this right of way would have to be negotiated with RFTA.

3) Should a river kayak park be a part of this development? Within the river itself, is that the City's responsibility or the Developer's or some type of collaboration?
The City anticipates the proposals to address the land area only.

4) Should we include the elementary school property in our conceptual design?
The only portion of the elementary school property that should in included in the conceptual design is within the yellow mapped area in the RFQ.

5) Should we include the mortuary and the church property in the design as well?
No. Those properties are not owned by the City.

This addendum must be acknowledged.

This Addendum may be emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: ABA Hospitality LLC Fax: _____
Address: PO Box 6327 City/State: Snowmass Village Zip: 81615
Contact Person: Brian Marshak Title: COO Phone: 970-274-0303
Authorized Representative's Signature: _____ Phone: _____
Printed Name: Brian Marshall Title: COO Date: 5-22-2019

4/24/19

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

CITY OF GLENWOOD SPRINGS FINANCE

ADDENDUM NUMBER THREE FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

Phase I and Phase II Environmental Site Assessments for the City's decommissioned Wastewater Treatment Plant and the as-built documents for the Lift Station can be found at:

https://www.gwsco.gov/DocumentCenter/Index/345

This addendum must be acknowledged.

This Addendum may be emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: ABA Hospitality LLC Fax: _____
Address: PO Box 6327 City/State: Snowmass CO Zip: 81615
Contact Person: Brian Marshall Title: COO Phone: 970-274-8303
Authorized Representative's Signature: _____ Phone: _____
Printed Name: Brian Marshall Title: COO Date: 5-22-2019

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

CITY OF GLENWOOD SPRINGS FINANCE

ADDENDUM NUMBER TWO FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

The land exchange between the City and the Roaring Fork School District to convert Vogelaar Park 6F's designation to another equivalent property has been delayed with an unknown completion date. This does not affect other developable land.

This addendum must be acknowledged.

This Addendum may be faxed to 970-945-2597, emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: AIBA HOSPITALITY, LLC Fax: _____
Address: PO BOX 6327 City/State: SNOWMASS VILLAGE, CO Zip: 81615
Contact Person: BRIAN MARSHACK Title: COO - CDG Phone: 970-274-0303
Authorized Representative's Signature: _____ Phone: _____
Printed Name: BRIAN MARSHACK Title: COO - CDG Date: _____

3/22/19

City of Glenwood Springs Procurement Department
101 West 8th Street
Glenwood Springs, Colorado 81601

CITY OF GLENWOOD SPRINGS FINANCE

ADDENDUM NUMBER ONE FOR
MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

THIS ADDENDUM MUST BE ACKNOWLEDGED.

THIS ADDENDUM SHALL BECOME A PART OF THIS SOLICITATION.

The following information is being added or amended as indicated as a part of the Invitation to Bid:

Relevant documents for the Confluence Area can be found at:

https://www.gwsco.gov/DocumentCenter/Index/345

The master folder in the Document Center has separate subfolders with documents.

This addendum must be acknowledged.

This Addendum may be faxed to 970-945-2597, emailed to bidresponse@cogs.us or included with your bid submittal.

PRINT OR TYPE YOUR INFORMATION

Name of Company: ABA Hospitality LLC Fax: _____
Address: PO BOX 6327 City/State: SNOWMASS VILLAGE, CO Zip: 81615
Contact Person: Brian Marshak Title: COO - COG Phone: 970-274-0303
Authorized Representative's Signature: _____ Phone: _____
Printed Name: Brian Marshak Title: COO - COG Date: _____

3/20/19

Introduction

Confluence Development Group

Confluence Development Group is a partnership between ABA/Hospitality based in Snowmass Village, Colorado and Oak City Development, located in Raleigh, North Carolina. Combined the two firms have over 30 years of experience in real estate development and investment with over $10 billion in completed projects throughout the United States. The firms have extensive real estate development experience with expertise in master-planned communities, hospitality, retail, residential, and mixed-use projects.

ABA Hospitality, LLC

Snowmass Village, Colorado www.Abahospitalityllc.com

ABA Hospitality, LLC is a real estate investment management and development firm with offices in Snowmass Village, Colorado and Naples, Florida. ABA makes investments where there is a significant value add opportunity to its real estate transactions. History has proven time and time again that there are unique opportunities created in each of the real estate market cycles. The ABA team uses its extensive market knowledge and vast experience to generate high quality risk-adjusted and absolute returns. Our core focus is in mixed use developments, hotels, and luxury high-rise condominium projects. With over $7 billion of completed projects and $1 billion of hospitality projects alone, ABA adds value to its core investments through its in-house experience and industry relationships across all major hotel brands and hotel management companies. The ABA team leverages these relationships to identify unique acquisition opportunities and draws on its internal resources and industry expertise to complete the necessary due diligence, acquisitions, entitlements, financial planning and modeling, design, development, construction, construction management and asset management of its core investment properties.

Oak City Development

Raleigh, North Carolina www.OakCityDev.com

The leadership team at Oak City Development has over 100 years of combined experience in real estate development. The founding partners have created and developed more than 65 master-planned communities, mixed use projects, resorts and commercial centers during their careers. Led by partners Steve Vining, Hampton Pitts, Pete Sullivan and Rachel Vradenburgh, Oak City Development was born from decades of experience and a strong commitment to achieving best in class communities. The team's vast knowledge encompasses all facets of real estate and land development. Our driving focus on sustainable design and technology, mixed with our passion for preservation, conservation and restoration, enable our developments to look to the future while preserving the past. Community engagement and incorporating philanthropy throughout each project develops roots within the local communities.

Finance

ABA Hospitality and Oak City Development are well capitalized companies with over 30 years of real estate development and investment experience. In addition to having strong financial balance sheets, the companies have equity investment relationships at the highest levels with multiple financial institutions. Primarily the two largest investment partners include Pacific Investment Management Company (PIMCO), which manages over $1.6 trillion in assets, and the Baupost Group out of Boston, Massachusetts, presently the 10th largest private equity hedge fund in the world with over $32 Billion in assets.

Local Connection and Commitment to the Community

The development team has strong ties with the Glenwood Springs community, as several key team members have resided full-time in the Roaring Fork Valley for over 30 years. ABA Hospitality owns and operates the Snowmass Club, and together with Oak City Development, have made several significant investments in properties throughout the Valley. Being locally based, the team understands the issues surrounding the Confluence Area and Downtown Glenwood Springs and are committed to working closely with the community to deliver a unique and sustainable legacy project that will endure for generations.

Relationships

Our commitment to Glenwood Springs and the Confluence Area Master Developer RFQ extends beyond the assembly of a highly qualified team and creation of a high-level concept plan. We believe that long term success is based on relationships and going beyond what is expected to deliver results that lead to success. This has led us to reach out to our network to assess the viability of developing the Confluence Area site. Out meetings with community stakeholders, business owners, and community leaders have resulted in a very in-depth understanding of the issues surrounding the planning and development of the site. This has assisted us in our design team and consultant selection, as well as providing preliminary insight on developing the framework for the high level conceptual plan. This process has also led to some unexpected positive results as noted below.

Farnum Holt Funeral Home

Our long-term optimism in the project has led us to having numerous meetings with Trey Holt, which is the family representative of the Farnum Holt Funeral Home. Based on our relationship with Mr. Holt, we are presently negotiating the purchase the Funeral Home property. Our team is confident that we can create a transaction that allows for the acquisition of the Funeral Home, while we assist the Holt family in finding a new location for their business in the community. We are looking forward to working collaboratively with Mr. Holt and his family in structuring a transaction that is in the best interest of all related parties.

Hyatt

In addition to our efforts in securing the Farnum Holt Funeral Home, the Confluence Development Group's relationship with the Hyatt corporation has resulted in receiving preliminary interest for the development of a hotel and conference center on the Confluence Area site. A conference hotel will provide a venue to attract meetings, conferences, events, and weddings to Glenwood Springs. This will not only benefit the immediate Downtown area, but benefits will extend throughout the entire community and existing hotel properties.

The Team

Our group has spent a considerable amount of time studying the Confluence Area site and surrounding Downtown Glenwood Springs properties. Taking direction from the goals in the RFQ and Confluence Area Plan, as well as talking with numerous members of the community, we set out to assemble a development team of design specialists and consultants with the requisite experience, skill set, and proven track record of work on this type of project. It is evident that the Confluence Area site is a very difficult and challenging property with multiple constraints and issues that need to be worked out before a viable and sustainable development plan can be developed. With that in mind, where others see difficulties, the Confluence Development Group and its team see opportunity.

Contact

The Primary Contact for the Confluence Development Group is as follows:

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Confluence Development Group
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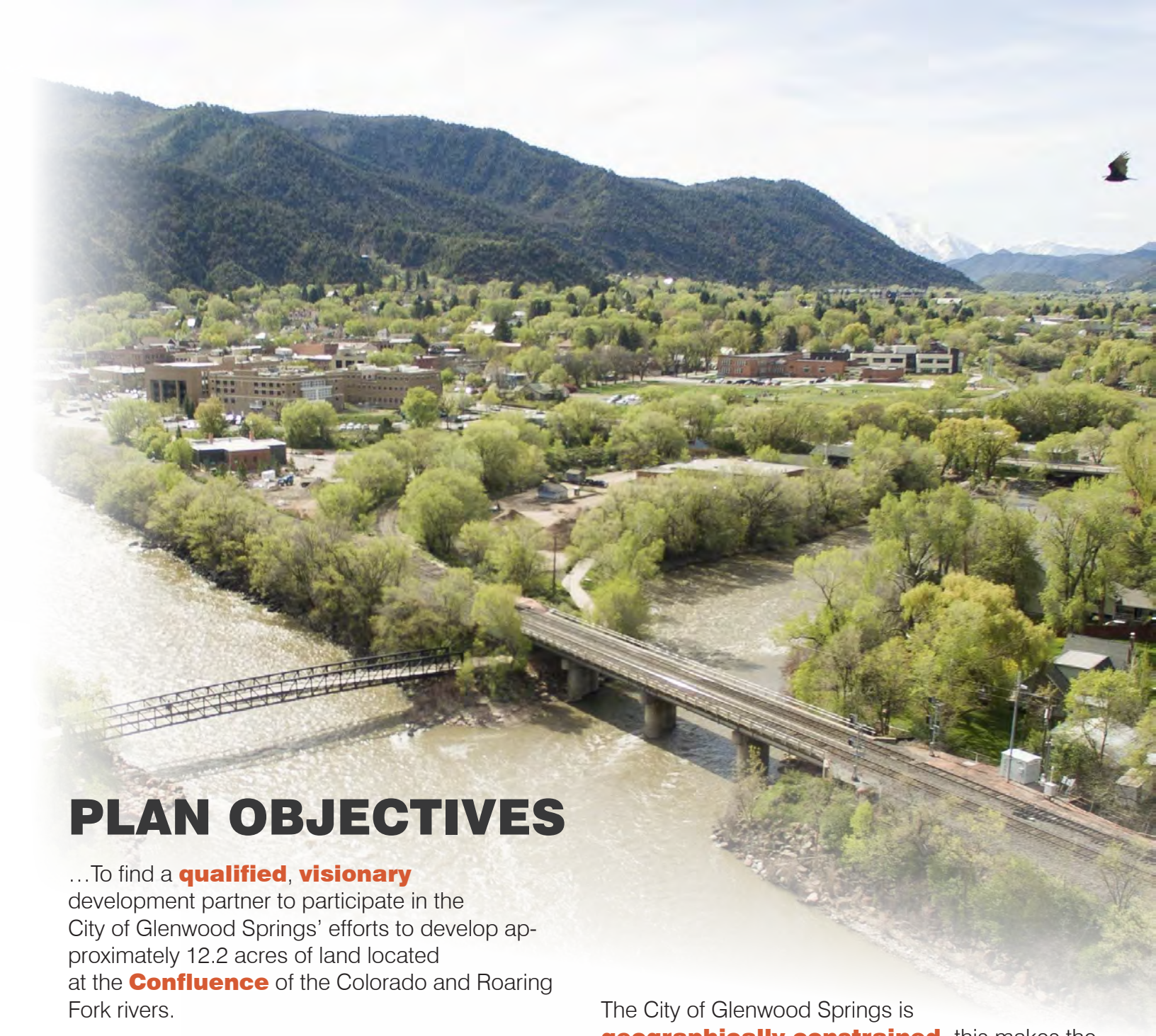


PLAN OBJECTIVES

…To find a **qualified**, **visionary** development partner to participate in the City of Glenwood Springs' efforts to develop approximately 12.2 acres of land located at the **Confluence** of the Colorado and Roaring Fork rivers.

And to enter into a **collaborative** public/private partnership to develop **creative** and **innovative** approaches to this property.

To extend the City's **Downtown** to the Roaring Fork River, **celebrate** the area's **natural surroundings**, and **create** a mixed-use **neighborhood** that is **compatible** with the surrounding residential and commercial architecture.

…**diverse mix** of entertainment and **cultural** venues

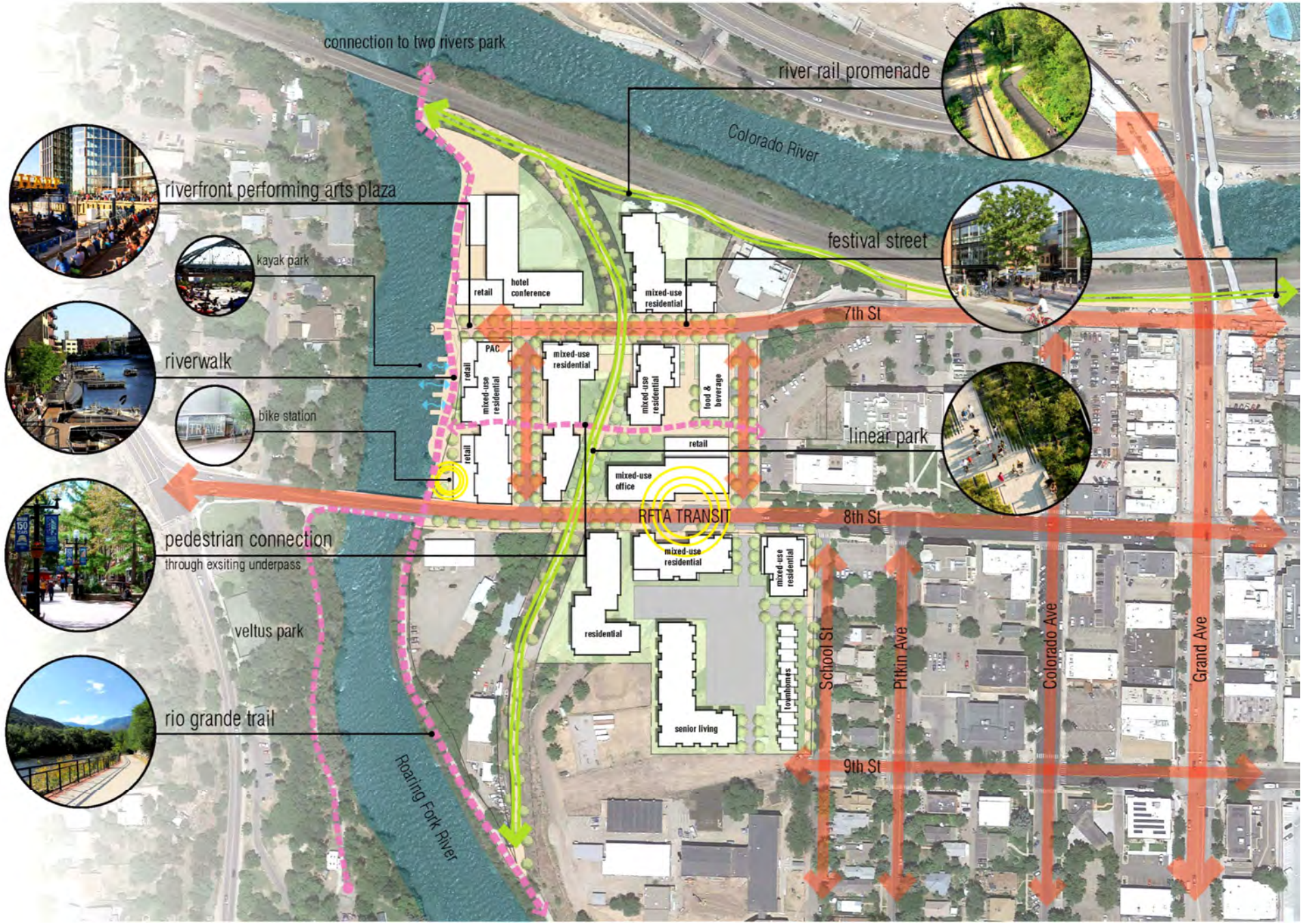
The City of Glenwood Springs is **geographically constrained**, this makes the Confluence Area a prime piece of property in the **heart of the City**,
…create a **destination** development with **river access**

…**proximity** to many **natural resources** attracts **outdoor enthusiasts**

The **Area Wide Plan** includes an implementation strategy to **revitalize the brownfields** located along the Colorado and Roaring Fork Rivers in the City's core.

EXISTING CONDITIONS

Confluence Area Site Diagram



Confluence Area Site Plan

plaza
retail
hotel
conference
mixed-use
residential
7th Street
retail
performing
arts
center
kayak park
mixed-use
residential
mixed-use
residential
linear park
mixed-use
residential
food
and
bev
mixed-use office
pedestrian connection
retail
restaurant
mixed-use office
8th Street
RFTA
RFTA
mixed-use
residential
mixed-use
residential
residential
senior housing
townhomes
School St
Pitkin Ave
N
0'
150'

Active Riverfront Promenade Images

7th Street Arts and Entertainment District

Pedestrian Friendly Living Street that connects the existing Grand Avenue Downtown Business District to the Roaring Fork River.

- Black Box Theatre/Performing Art Center
- Riverfront Performing Arts Plaza
- 4-6 Screen state-of-the-art Movie Cinema
- Bowling Alley and Entertainment Venue
- Art Galleries and Studios
- Live Music Venue/Restaurant/and Bar
- Microbreweries and Craft Distillers
- Public Market and Food Hall that features locally based tenants and Merchants
- Ice Cream, Coffee and Tea Houses
- Visitor Center, Railroad Museum, History Museum
- Fitness Studios

Neighborhood Housing

Provide a mix of housing options in a pedestrian friendly neighborhood..

- Senior Housing
- Affordable and Work Force Housing
- Live Work Lofts
- Townhomes
- For Sale Condominiums
- Market Rate & Affordable Apartments
- Transit Orientated Development with access to RFTA bis stop along 8th Avenue.
- Pedestrian and Bicycle Friendly Neighborhood
- Resident Clubhouse and Senior Center
- Parks, Promenades, and Plazas
- Family and Pet Friendly Design and Amenities

Linear Rail Line Park Precedent Images

Confluence Development Group
Key Team Members

Scott Brown

ABA Hospitality: Chief Executive Officer & Founder
Snowmass Village, Colorado

Through his years working in the hospitality industry, Mr. Brown has established relationships with many leading U.S. hotel brands, hotel management companies and investment banks. In 2007, Mr. Brown raised over $100 million of seed capital in a financing deal with a boutique U.S. private equity firm. Mr. Brown's hotel development experience includes partnering with the Hyatt group in his first two-hotel development projects and building a portfolio of hotels in California. Mr. Brown merged ABA with Connor & Gaskins, a general contractor specializing in full-service hotel, select service hotel and multi-family luxury residential developments. Prior to founding ABA, Mr. Brown was a Vice President in the Private Banking and Investment Group (PBIG) at Merrill Lynch, Pierce, Fenner & Smith. During Mr. Brown's nine-year career at Merrill Lynch, he raised over $1.5 billion of new capital for his team and managed the investment direction of those assets. Prior to Merrill Lynch, Mr. Brown spent four years in Australia and New Zealand as the operations manager for Columbia Sportswear Australia. Mr. Brown is responsible for setting the vision for ABA, overseeing its operations, sourcing new development opportunities and managing investor relationships for the Partnership.

Hampton Pitts

Oak City Development: Managing Partner
Raleigh, North Carolina

As the Managing Partner in the firm, Hampton brings 30 years of real estate development, homebuilding, and operational leadership to our team. As an accomplished real estate development and home building executive, he most recently served in the capacity of Regional Executive Vice President – Texas and Carolinas markets, for Ashton Woods Homes, one of the nation's 5 largest private home builders. As both Executive Vice President and the founding Raleigh Division President, Hampton was responsible for managing over 250 employees and daily operations in the company's six North Carolina and Texas offices, as well as developing strategic plans for their future growth. Prior to that, he worked with national public builder Centex Homes for over 16 years as founding Division President in Myrtle Beach, SC and later as the company's Division President in Raleigh, NC. Hampton is a graduate of NC State University and is currently the Chair of the Poole College of Management Dean's Advisory Board. He is past Chair of the Deans Advisory Board for the College of Humanities and Social Sciences. Other current and past community leadership roles include involvement in the Home Builders Association of Raleigh-Wake County and the Home Builders Association of Durham, Orange and Chatham Counties, the Midtown Raleigh Alliance Advisory Board, the City of Raleigh's Environmental Advisory Board and leadership council for the Church of the Apostles in Raleigh.

Steven Vining

Oak City Development: Managing Partner/General Counsel
Raleigh, North Carolina

Steven Vining is Managing Partner and General Counsel for Oak City Development. Steve has overseen the acquisition of more than 65 developments, including more than 30,000 residential units and millions of square feet of commercial space over the last ten years. In addition to being responsible for all contract negotiations, environmental compliance, legal underwriting, risk management, and zoning review at Oak City Development, Steve also manages the accounting and risk management groups. Prior to co-founding Oak City Development, Steve spent more than twenty years in private law practice, with a focus on land use and real estate law, first in California then in North Carolina. He has broad expertise in permitting complex zoning and land use applications in onerous regulatory environments across Massachusetts, California and the Carolinas. As part of the senior management team, Steve has responsibility for all aspects of Oak City business, including the oversight of all planning, permitting, acquisition and operations management for Oak City's portfolio.

Confluence Development Group
Key Team Members

Pete Sullivan

Oak City Development: Partner & VP of Construction & Engineering
Raleigh, North Carolina

Pete has 27 years of engineering, due diligence underwriting and construction management experience, including work on over forty-five projects with over 10,000 lots in the Southeast. As a licensed Professional Engineer (NC and SC), Pete provides valuable experience to the site design and engineering process. Prior to starting Oak City, Pete served as Vice President of Land for KB Home in the Raleigh-Durham Division. He was responsible for land development and site selection in Raleigh for the firm. Pete has overseen the design, permitting and development of over 5,400 units, including the management of engineering and development for the first Martha Stewart Community in the nation. Pete oversees civil engineering, permitting, and infrastructure construction for Oak City. His specific responsibilities include management of due diligence, oversight of the engineering design, construction cost estimating and bidding, and oversight of utility, pavement and lot construction. He is also instrumental in homebuilder underwriting and lot disposition. Pete works very closely with the acquisition team to underwrite each asset and to create disposition strategies. He also plays a key role in market analysis and assists with site selection.

Rachel Vradenburgh, SPHR, SHRM-SCP

Oak City Development: Partner & VP of Human Resources & Risk Management
Raleigh, North Carolina

As one of the founding members, Rachel assists with the design of the company's overall strategy and operations resulting in the development of more than 65 financially successful communities across 15 states. She is a senior executive, with over 30 years of experience in various disciplines including human resources, risk management among all assets, talent advancement, and is fondly dubbed the company's "culture keeper". Prior to Oak City, Rachel was Senior Vice President at a logistics company where she managed operations and human resources while guiding its US expansion efforts. As the firm continues to expand, Rachel's passion is to maintain a positive workplace that promotes innovation, acceptance and community involvement.

Brian Marshack

Chief Operating Officer Confluence Development Group
Snowmass Village, Colorado

Over the last 30 years Mr. Marshack has enjoyed a diverse career in the real estate development and investment industry, specializing in multifamily residential, urban infill/redevelopment, low-income housing, specialty retail, and mixed-use ventures. As the principal director of Cityview Properties, a commercial real estate brokerage, consulting, and development firm, he worked on complex development and redevelopment projects in San Diego, Los Angeles, and Denver, Colorado. Notable experience includes facilitating public private partnerships for several national retailers in California, working on acquisition, design, entitlements, and financing for over $500 million of new property development including multifamily residential, specialty retail, and mixed-use commercial residential properties. In addition to working in the private sector, Mr. Marshack was the founding Director of Housing and Community Development for one of Denver's largest non-profit organizations, leading initiatives on low-income housing development, implementing a first-time home ownership program, and implementing several programs for neighborhood economic development and investment. On a more adventurous note, Mr. Marshack has spent time in Kampala, Uganda as a consultant for a proposed $25 million children's hospital, as well as volunteered on the planning and construction of a children's home and medical clinic in Fort Portal, Uganda. A graduate from the University of California, San Diego with degrees in Urban Studies and Planning, and Economics, Mr. Marshack resides in Snowmass Village, Colorado and is presently a commissioner on the towns Planning Commission.

Confluence Development Group
Key Team Members

Erik Cavarra

Snowmass Village, Colorado

Erik is a Licensed Partner and Managing Broker for Engel Volkers and has closed over 375+ transactions in his career with over $475 million sold since 2005**.** Erik's resume includes the successful re-start and sell out of the Mountain Sage Townhomes in Carbondale and, the Shadowrock Townhomes in El Jebel. Erik is also the Preferred Broker for the Residences at Snowmass Club, and has been officially inducted into the luxury real estate company's Private Office network, successfully passing the company's ultra-competitive vetting and nomination process for inclusion. Out of more than 11,000 real estate professionals who represent the Engel & Völkers brand in more than 30 countries worldwide, Erik is among only 108 advisors selected to carry the title Private Office advisor in the Americas. Erik has extensive knowledge of the Roaring Fork Valley and Glenwood Springs market and has been a involved with several local philanthropic groups since beginning his career as a golf professional at the Snowmass Club, and resides in Carbondale with his family.

Bill Maron, RA, NCARB, CSI

Senior Project Manager, Entitlements Specialist
Basalt, Colorado

Bill is a licensed Architect and has lived in the Roaring Fork Valley for 32 years. He has experience in project entitlements, design, project management and contract administration. Bill is knowledgeable in all phases of resort development having worked on projects in California, Washington, Montana, and New Mexico as well as throughout Colorado. He has an intimate knowledge of many different elements of the local built environment, from affordable housing, multi-family mixed use, hospitality, infrastructure delivery and structure parking facilities. As a member of the Construction Specification Institute (CSI) and the National Council of Architectural Registration Boards, he brings a vast range of experience and knowledge to development projects.

Having grown up in Colorado, Bill has seen the state through many transitions and is poised to help usher this portion of the state through the current challenges in front of our cities and towns. Bill has served as a planning and zoning commissioner in the town of Basalt for the last 22 years and as chairman for the last seven. He is spearheading the current Master Plan update as he has for the previous two plans.

Bill earned a master's degree in architecture from the University of Colorado and a Bachelor of Fine Art from the Minneapolis College of Art and Design.

ABA Hospitality
Representative Developments

The Snowmass Club
Snowmass Village, Colorado

In 2018 ABA Hospitality acquired the Snowmass Club from Toll Brothers in an all cash purchase. Situated in the heart of Snowmass Village, the private member club features an 18-hole golf course, a 19,000 square foot athletic club, 13 tennis courts, 3 pools, 47 fractional hotel units, and two restaurants. Since its acquisition, ABA Hospitality is preparing to invest millions into upgrading the facilities as well as build a sizeable number of new employee housing units on site. ABA's management of the club and plans to upgrade has been positively received by its members as well as the Snowmass Village Community.

The Tree Farm
Eagle, County Colorado

The Tree Farm is a proposed 43-acre master planned community located between the communities of Basalt and El Jebel, Colorado. ABA Hospitality and Oak City Development have recently entered into a partnership with the existing owner, and will manage the design, financing, and development of the property. Proposed uses include a hotel, 340 residential units, and approximately 134,000 square feet of commercial space. The site is fully entitled and over 50% of the site will be set aside for open space.

The Ritz Carlton
Napa, California

Adjacent to the Napa Riverwalk and Central Downtown Napa, .ABA Hospitality developed the site plan and design for a $200 million Five Star Ritz Carlton Hotel, conference, center, condominium, and fractional ownership property. The property design incorporates trails and parks situated along the Napa River that connect directly to Downtown Napa.

Oak City Development
Representative Developments

Savannah Quarters®

Pooler, Georgia http://www.SavannahQuarters.com

Voted as the Best New Home Community 2018, Savannah Quarters® is a premier new home community in the southeast located 10 miles west of the Savannah city center in Pooler, Georgia. The 2,588-acre master-plan community offers charm, relaxation, beauty and recreation. The fun and relaxed Club at Savannah Quarters® features resort-style amenities such as fitness, tennis, swimming, and a stunning clubhouse with year-round dining services. Residents can also enjoy the 18-hole Greg Norman Signature Golf Course woven throughout the community.

The Village at Savannah Quarters® is a 152-acre commercial destination featuring the best in shopping, dining, recreation and offices – all just minutes from historic Savannah. The Village is designed with pedestrian walkability and easy traffic access in mind. Anchored by leading grocery chain Publix, The Village is a neighborhood shopping area including Savannah Coffee Roasters, Taco Stache, Nail Boutique & Spa and several other tenants offering convenience to the local community. St. Joseph's/Candler's Pooler campus is a 170,000 square-foot, 18-acre facility that recently opened its doors by the entrance to the community. Plans are also underway to develop hotels, offices and additional retail opportunities. Easy access to I-95 and I-16 puts residents and visitors a short drive from the activities and culture in the heart of Georgia and South Carolina's coastal playground.

Grande Dunes

Myrtle Beach, South Carolina http://www.GrandeDunes.com

Grande Dunes is a 2,200-acre master-planned community located in Myrtle Beach, SC. Upon completion, the community will have approximately 5,000 single-family homes, villas, home sites and 2 million square feet of retail and commercial properties. Grande Dunes stretches from the Atlantic Ocean to west of the Intracoastal Waterway, and from Water Tower Road to Grissom Parkway. Homes start from the low $200,000 to more than a million dollars.

Adding to the value of the community are a range of private and public club amenities, including, the private Members Club and golf courses, including an 18–hole Nick Price/Craig Schreiner designed championship course. This private 25,000 square foot Ocean Club and resort style pool enjoys beach access to the Atlantic Ocean. Grande Dunes Tennis Center offers 10 Har-Tru clay courts that are nestled along the Intracoastal Waterway. Located on the Intracoastal Waterway is the 126-slip Marina at Grande Dunes and the popular Anchor Café. At the southern edge of the community is the Claire Chapin Epps Family YMCA. The development also features Marina Park, a large public amenity that offers events open to the public year round and a brand new trail along the waterway.

Sycamore Hills

Claremont, California http://www.SycamoreHillsCA.com

The 80,000 square foot shopping center, Sycamore Hills Plaza, is a new premier shopping center in Upland and Claremont, CA located in the master-planned community of Sycamore Hills. The shopping center serves the more than 1,000 new residents in Sycamore Hills, as well as the patrons in Claremont, Upland and Rancho Cucamonga. The list of retailers includes Whole Foods Market 365, its anchor store, CVS Pharmacy, Starbucks®, MOD Pizza, Orangetheory® Fitness, Supercuts Hair Salon, Jersey Mike's Subs, Spireworks Modern Doner, Organic Nails, Corky's Kitchen, Dog Haus Restaurant and Biergarten, and the UPS Store®.

The 42-acre community in Upland, CA features approximately 325 homes in distinct neighborhoods. Not only do residents have easy, walkable access to the plaza, they also enjoy a lifestyle that includes two pools and playgrounds, outdoor grilling areas, and multiple active open spaces. The location, just off highway 210, connects the cities of Upland and Claremont, and is convenient to Los Angeles and all points east. Convenient freeway access and great visibility contribute to the excellent location for both the community and shopping plaza.

Development Team References

The following references are provided for Oak City Development and ABA Hospitality with additional references available upon request.

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Confluence Development Group
Design Team Members and Consultants Overview

The Confluence Development Group has assembled a world class team of highly qualified design professionals and consultants for the Confluence Area Site. The unique attributes associated with infill riverfront development sites requires a team of seasoned professionals that understand the relevant environmental constraints and regulatory issues, while delivering real world solutions and innovative designs.

- Our land use planning and architectural team from Shears Adkins and Rockmore have successfully master planned several riverfront sites which include the River Mile and Denargo Market properties in Denver. Their expertise and experience in designing projects in urban environments have led to many innovative and successful projects that have transformed their surrounding communities. Notable projects include the Dairy Block in Denver, 15th and Pearl, and Pearl West in Boulder, Colorado.
- Our landscape architect, Wenk Associates, have a long list of designing exciting projects in both urban and riverfront settings. This includes Confluence Park and River Mile in Denver, the Steamboat Base Area, and Town of Vail Streetscape.
- We have retained Matrix Design as our civil engineering team. Their Water Resources practice in Colorado provides our team with the expertise in river restoration, channel stabilization and floodplain permitting.
- Felsburg Holt & Ullevig expertise in the transportation planning and traffic engineering will be a major component to the overall success of any development on this site.
- Economic and Planning Systems expertise in public private partnerships, economic feasibility, and financial modeling are necessary to move the project forward on a fiscally responsible and transparent level.

Shears Adkins and Rockmore Architects
Land Use Planning and Architecture

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Wenk Associates
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Matrix Design Group
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Felsburg Holt & Ullevig
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Confluence Development Group
Design Team Members and Consultants

Shears Adkins Rockmore Architects: SA+R

Land Use Planning and Architecture

Denver, Colorado www.sararch.com

SHEARS ADKINS ROCKMORE specializes in the design of urban projects. Our work is based upon proven planning, urban design, and architectural principles. We approach each project as a new challenge with unique opportunities, constraints, client expectations, and contextual issues. We seek sustainable design concepts, with an environmentally logical and responsible approach to each of our projects. We believe that great buildings have integrity. That good design honestly expresses use, satisfies the client's program, contributes contextually and is sensitive to the spirit of place. Buildings should be of their time and distinguish themselves with characteristics that reflect the vision established by the client and the design team. Successful relationships are integral to the success of our work. We have a unity of purpose to imaginatively fulfill the needs of our clients, serve the community's interests, satisfy our professional objectives, and design and execute our work to the highest level of quality.

Key Team Members

Chris Shears

Principal: FAIA

In his decades of practice here in the Denver region, Chris has engaged with clients and has been an active participant in all phases of the master planning and architectural design processes. He has directed the design efforts for many of Denver's more substantial new projects, including many mixed-use parking structures, representing a construction value of over $1.5 billion. As a weaver of urban fabric, Chris is recognized for his leadership in forming public policy and has helped to build a firm based on equality whose work is consistently catalytic - transforming cities and peoples' lives. Working with city officials for more than 30 years to expand established entitlements while engaging communities and stakeholders, Shears specializes in creative interpretation of zoning ordinances and design standards to achieve economically sound contextual solutions. His involvement in each project begins with programming and early concept generation and continues through to final material selections.

Kevin Eronimous

Principal: AIA

Kevin has a background in individual and collaborative design for residential, commercial, and mixed-use projects. A passionate supporter of creating sustainable built environments, his respect for the contributions of all members of a design team complement his pursuit for excellence in design. Today, Kevin serves as a senior advisor across the firm's project collection, applying both his design and construction experience in leading the team through project management improvements, guiding clients through project decision making processes, strengthening the quality control of individual projects, and exploring new sustainable design solutions to enhance firm projects. Kevin has worked on a number of the firm's most notable projects including PearlWest, Dairy Block, and most recently 1480 Wewatta - an aparthotel in Denver's LoDo district.

Ryan Meeks

Senior Associate: AIA

Ryan joined SA+R in 2014 and has brought to the team a remarkable passion for design. He works with a clear creative process and appreciation for the importance of smart, inspired design decision making. With a breadth of work experience from Seattle to New York, internationally, and 12 years in the Front Range market; he contributes big picture thinking and creative problem solving to all projects with intimate understanding of our clients' budgets and schedules. Ryan has a strong background in zoning, planning, neighborhood issues and construction feasibility from his work on dozens of infill sites in the Denver metro area. He also has a consistent eye for crafting high-quality design renderings, models, and conceptual tools to help investors, board members, stakeholders and donors all understand a project's design well before construction begins. Ryan was named the 2018 Colorado Young Architect of the Year as a result of his design leadership and will be an invaluable player on the team.

SA+R Representative Projects

The Dairy Block

Denver Colorado

www.sararch.com/projects/hospitality/dairyblock

The Dairy Block is located on a prominent city block within Denver's Lower Downtown Historical District. SA+R converted what was previously two historic buildings amid three-quarters of a block of surface parking into a mixed use commercial project that includes a 6 story, 200,000sf multi-tenant office building, a 120,000sf 8 story hotel (JNS), 60,000sf of ground level lobby and mixed use retail space, and 150,000sf of below grade parking on 3 levels. The building may be entered from main lobbies off Wazee or Blake Street while a pedestrian alleyway bisects the site between 18th and 19th Streets to provide access to retail shops and restaurants from the alley.

15th and Pearl

Boulder, Colorado

www.sararch.com/projects/office/15th-and-pearl/

The 15th and Pearl Mixed-Use Structure combines a parking structure with retail and office space. It has sparked renewal of a six-block section of Pearl Street, the primary shopping street in Boulder, not only by supplying much-needed parking, but by creating an active new retail block. Since 15th and Pearl was completed, other designers are following its lead creating a new architectural context with a strong sense of contemporary detail.

PearlWest

Boulder, Colorado

www.sararch.com/projects/office/pearl-west/

PearlWest is a new, mixed-use commercial development located at the Western edge of the Pearl Street Pedestrian Mall at the transition between Boulder's urban core and the trailheads of the Rocky Mountains. The 160,000sf site was created by the vacancy of a former surface parking lot and newspaper building that spanned from Pearl to Walnut Streets, creating one of the largest re-development parcels in the heart of the Downtown Historic District. An exciting mix of uses include retail, restaurants, office, and below grade parking.

River Mile Master Plan

Denver, Colorado www.sararch.com/projects/in-progress/river-mile-master-plan

The River Mile is a new, urban mixed-use neighborhood to be built along a one mile stretch of the South Platte River between Speer Blvd. and Auraria Parkway in Downtown Denver. Adjacent to two transit stations and the birthplace of the city, the plan calls for a bike and pedestrian-oriented public realm, new waterfront parks and public spaces. Spanning across 60 acres, the site is currently home to the Elitch Gardens Theme Park as well as swaths of parking lots, a total of over 15 million square feet of vibrant mixed uses is planned for the development at completion.

9th & Colorado Master Plan

Boulder, Colorado www.sararch.com/projects/planning/9th-and-colorado-master-plan

After the University of Colorado decided to close its Health Sciences Center campus at 9th Avenue and Colorado Boulevard in Denver's core, the 28-acre parcel was eyed as the future site of a mixed-use urban project. The master plan, completed in 2015, was designed to reintegrate the site into the surrounding neighborhood fabric and street grid by blending apartments and townhomes with retail, offices and new public green spaces. A creative mix of both residential and commercial structures, the plan also included the adaptive reuse of some of the historic, iconic buildings within the former health care campus. The entire site is designed to be walkable and bike-friendly and is projected to see a 40% decrease in automobile traffic from its health campus days. The final program includes 1,000 residential units, 150,000 square feet of office space, 40-50 retail tenants, and multiple entertainment venues. Full build-out is expected to be a $500 million economic investment.

Belleview Station Master Plan

Denver, Colorado wwwsararch.com/projects/planning/belleview-station

SA+R develop the overall masterplan for a new TOD Station along Denver's new E & F light rail lines along the I-25 corridor. The Belleview Station master plan was driven by a critical opportunity – 17.5 acres with excellent access to the Denver Region via both public transportation and freeways. Seizing this opportunity required the implementation of urban design strategies that promote activity and interaction between people and their environment at an urban and pedestrian scale, an approach that was decidedly different from surrounding existing developments.

SA+R Representative Projects

Confluence Development Group
Design Team Members and Consultants

Wenk Associates

Landscape Design and Architecture
Denver, Colorado: www.wenkla.com

Wenk Associates provides full-service site planning, urban design, and landscape architecture. Located at the foot of the Rocky Mountains in Denver, Colorado, we work with a broad range of communities and private, public, and institutional clients in cities across the U.S. The firm is known for creative solutions that incorporate urban infrastructure and water facilities into designs that consider recreation, habitat preservation, sustainability, and aesthetics. Wenk's use elemental resources of earth, water, and air to create enduring places that connect people to natural processes. We listen to our clients and to the land. We observe. We develop suitable possibilities — and only then do we begin to test ideas. We work with a broad range of collaborators including engineers, scientists, ecologists, and artists to develop simple and elegant design solutions that integrate social, technical, and design challenges, and add value to the site.

Key Team Members

Bill Wenk

FASLA: President

Bill Wenk is the Founder and President of Wenk Associates. For over 36 years, he has been influential in the restoration and redevelopment of urban river and stream corridors, the transformation of derelict urban land, and the design of public parks and open spaces. He is recognized nationally for utilizing stormwater as a resource. Bill is a Fellow of the American Society of Landscape Architects. He holds a Master of Landscape Architecture from the University of Oregon and a Bachelor of Science, Landscape Architecture from Michigan State University.

Greg Dorolek

PLA, ASLA: Principal

Greg is a principal at Wenk Associates with over 18 years of experience leading the firm's urban design and campus projects. Many of Greg's projects incorporate green infrastructure strategies that treat and manage stormwater runoff to enhance ecological, human, and economic value. As Lead Designer, Greg is invaluable in workshops and charrettes with his ability to communicate quickly and effectively in real time with hand sketches that bring ideas to life. Greg is a professional landscape architect in the state of Colorado. He holds a Master of Landscape Architecture from the Harvard Graduate School of Design and a Bachelor of Landscape Architecture from the University of Georgia.

Nicole Horst

PLA, ASLA: Principal

Nicole is a principal at Wenk Associates with over 18 years of experience guiding some of the firm's most complex recreation, park, open space, and greenway projects. She is skilled at managing and coordinating large multidisciplinary consultant teams and engaging multiple stakeholder groups to ensure project success from master planning through construction. Nicole is a professional landscape architect in the states of Colorado and Wyoming. She holds a Bachelor of Landscape Architecture from Iowa State University.

Wenk Associates Representative Projects

Confluence Park

Denver Colorado www.wenkla.com/projects/confluence-park

Confluence Park, named for its location at the confluence of the South Platte River and Cherry Creek, marks the birthplace of Denver and is a place where people have been drawn to congregate for centuries. Wenk Associates was commissioned by the City to develop a master plan which envisioned the park's transformation into a new urban park and gathering place. The plan greatly expanded opportunities to access the river's edge, recommended additional recreational uses and leisure opportunities, and improved pedestrian and bicycle circulation and access.

River Mile

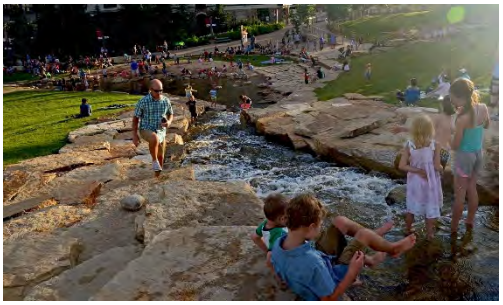
Denver, Colorado www.wenkla.com/projects/river-mile

Parks and open spaces will be the heart of the future River Mile redevelopment near downtown Denver. Proposed to be located along a one mile stretch of South Platte River frontage, the design will provide a major opportunity for the city to connect with the river in new and meaningful ways. The River Mile plan provides a variety of open spaces for recreation and leisure along the South Platte River that are complemented by pocket parks, plazas, and playgrounds throughout the interior of the development. A Central Plaza, located along the river, is designed to be the primary urban gathering space for day-to-day activity and special events.

Steamboat Base Area Redevelopment

Steamboat Springs, Colorado www.wenkla.com/projects/river-north-park

After decades of being constrained to a pipe underneath the ski slopes, Burgess Creek was daylighted and restored, and with a new adjacent promenade linking major base area destinations, brought renewed life and economic vitality back to the mountain village in the summer. Inspired by the forms, materials, and geological processes found in the surrounding mountain landscape, the creek now flows through pools, canyons, and riffles, providing safe water access for all in the summer.



Vail Village Streetscapes:

Vail, Colorado www.wenkla.com/projects/ vail-village-streetscape

Wenk Associates worked with the Town to oversee close to $15 million in major streetscape and public space improvements in the heart of the Village, strengthening the retail environment and providing new opportunities for public gatherings and festivals. A distinctive identity for the Village was established through the development of a consistent vocabulary of furnishings and site treatments. Improvements expanded informal seating areas and extended pedestrian zones to enhance retail activity. The iconic Children's Fountain was renovated and is now one of the most popular gathering places in the community.

Wenk Associates Representative Projects

Confluence Development Group
Design Team Members and Consultants

Matrix Design Group

Civil Engineering
Denver, Colorado www.matrixdesigngroup.com

Founded in 1999, Matrix Design Group, Inc. and Matrix Environmental Services, LLC, a wholly owned subsidiary of Matrix Design Group, Inc. (collectively, Matrix), is an award-winning, interdisciplinary firm that provides professional engineering, environmental, and land planning services for both the public and private sectors. Matrix currently have more than 150 employees in 12 offices nationwide that are fully integrated and work together regularly and seamlessly. Matrix provides a full spectrum of Engineering and Environmental Services ranging from infrastructure master planning and due diligence to the preparation of construction documents.

Water Resources: Matrix has a well-known Water Resources practice in Colorado with expertise in river restoration, channel stabilization and floodplain permitting. Matrix has an extensive portfolio of natural stream restoration projects and has completed 40 river projects for the Urban Drainage & Flood Control District. Matrix completed the *Roaring Fork River Stewardship Master Plan* for the Town of Basalt and designed the *Roaring Fork River Restoration* downstream of Midland Avenue. Matrix also completed the *Stormwater Assessment and Education Report* for the City of Glenwood Springs under the direction of the Roaring Fork Conservancy.

Environmental: Matrix offers expert qualifications and relevant experience completing Phase I and II Environmental Site Assessments (ESAs), as well as additional site investigation related services including materials management, waste handling and oversight needs, implementing risk-based remediation design, and coordinating between and negotiating with regulatory, jurisdictional, and public stakeholders. Matrix's capabilities range from environmental investigations to soil and groundwater remediation, and asbestos surveys. Matrix professionals have experience in conducting Phase I and Phase II ESAs; brownfield redevelopment, facilitating complex environmental issues with regulatory agencies and negotiating appropriate remedial alternatives; complying with regulatory agency requirements; and finding creative solutions to environmental remediation.

Key Team Members

Robert Krehbiel

PE, Vice President

Mr. Krehbiel is the Director of Water Resources and Co-Founder of Matrix Design Group, Inc. He is a licensed Professional Engineer in Colorado and has over 30 years of experience as a Civil Engineer with a Water Resource Engineering specialty. His experience includes watershed hydrology, hydraulic analysis, river mechanics, channel stabilization, floodplain analysis, MS4 Permitting, water rights investigation, water resource planning, utility design, storm drainage design and cost estimating. Mr. Krehbiel has worked with Denver Water on watershed master planning studies for the Urban Drainage & Flood Control District to protect waterlines under the channels. He has also designed waterlines under the creeks to protect them from channel erosion. He has also facilitated numerous community meetings and briefings with state and local officials, as well the general public.

RELEVANT EXPERIENCE

River Restoration: Mr. Krehbiel has developed many river restoration plans for channels in Colorado such as the South Platte River, Westerly Creek, Coal Creek, Sand Creek, Cherry Creek, Sanderson Gulch, and Lakewood Gulch. He was the Project Manager on a major river restoration project for the Town of Basalt on the Roaring Fork River, designated Gold Medal Waters, to reduce flood hazards and allow for new redevelopment opportunities for the Town. The river restoration improved channel stability, restored the natural ecological function of the river, and reduced flood hazards to the community. The Westerly Creek restoration project at the Stapleton Redevelopment area won the Grand Award for Engineering Excellence for comprehensive stormwater management.

Confluence Development Group
Design Team Members and Consultants

Felsburg Holt & Ullevig

Transportation Planning and Traffic Engineering
Centennial, Colorado www.fhueng.com

Felsburg Holt & Ullevig (FHU) is a multidisciplinary consulting firm specializing in multimodal transportation planning, traffic engineering, transportation operations and safety, environmental services, civil engineering (roadway, structures, water), and construction management services. Founded in 1984, FHU is a firm of 160+ technical professionals that collaborates with both public and private sector clients to achieve their goals in how to best service the interests of their communities and constituencies. We have broad geographic experience across Colorado, with a long project history working with mountain corridor communities, including Vail, Eagle County, Edwards, Breckenridge Copper Mountain, Snowmass, Estes Park, and Silverthorne, to name a few.
Our team has completed hundreds of residential and mixed-use traffic and transportation analyses in our 35-year history, and we continue to do so successfully, working with public agencies as well as private sector developers. These projects have ranged in size from several dwelling units on smaller residential parcels to mixed-use efforts on sites spanning several hundred acres. We bring a similarly accomplished team of multimodal planners, allows us to consider the transportation system from a variety of modal perspectives. Our bicycle/pedestrian planners have completed dozens of corridor- to system-level plans and infrastructure designs throughout Colorado. FHU has one of the state's leading transit planning teams, which is currently engaged on RTD's Regional BRT Plan, the SH 119 BRT NEPA and Preliminary Design, and recently concluded Denver's Speer/Leetsdale Corridor Study. FHU's sustained engagement with mountain corridor municipalities is the basis of our deep understanding of the challenges and aspirations for a proposed redevelopment area and its integration within the municipal network.

Key Team Members

Paul Brown

PE, POTE, Associate

Mr. Paul is a senior transportation engineer with 27 years of experience in a wide variety of civil engineering projects. His traffic engineering background includes project management, traffic analyses, parking studies, trip generation microsimulations, and construction traffic control. Paul's transit experience includes planning-level corridor demand analyses, station site evaluations, and design-build oversight for transit projects. He has participated in bus, light rail, and commuter rail efforts, and understands how these various modes relate to each other and the surrounding transportation network.

Paul works closely with project teams, coordinating efforts between clients, contractors, regulatory agencies, and consultants. He regularly presents information to stakeholders, including agency and public meetings, technical conferences, and expert witness testimony. Paul has demonstrated successful outcomes on projects ranging from small traffic studies to multi-billion-dollar capital programs.

Confluence Development Group
Design Team Members and Consultants

Economic and Planning Systems

Financial and Public Private Partnership Consulting
Denver, Colorado www.epsys.com

Cities are complex systems, subject to cycles of growth, stability, decline, and regeneration. EPS has addressed real estate development and land use issues in all phases of the urban life cycle for public and private sector clients throughout the western United States for more than 30 years. EPS excels in collaborating with our clients to create and maintain places that are economically, socially, and ecologically sustainable. Every day, our assignments require us to creatively solve complex challenges in real estate development, land use policy, and local government finance. We offer a wealth of experience in all facets of real estate economics, a robust tool kit of technical expertise, and the ability to think creatively to address the challenges and opportunities of urban development.

EPS provides research and analysis to support the reuse of major public and private facilities into vibrant centers of business and civic activity. EPS's extensive experience with major reuse projects includes military bases, airports, rail yards, waterfronts, and other industrial areas. Our approach to redevelopment combines the use of market studies, project feasibility analyses, public-private partnership opportunities, and infrastructure financing strategies to deliver advisory services that are comprehensive, strategic, and implementable.

Key Team Members

Andrew Knudtsen

Managing Principal

Andrew is a planner and economist with 20 years of experience in the areas of real estate feasibility analysis, market assessment, public-private partnership formation, fiscal impact assessment, and affordable housing strategic planning and development. Andrew has expertise in evaluating project feasibility and has quantified economic viability using pro forma modeling to test a range of factors and assumptions about market conditions and risk tolerance. He has worked with numerous clients to provide data and findings that can be incorporated into their decision making processes, including projects sponsored by public sector entities that entail community involvement. Andrew has developed implementation strategies that leverage investment and externalize costs by incorporating public finance. His work involves a range of funding tools applied to a variety of projects across different states, including tax increment finance, special improvement districts, downtown development authorities, housing authorities, and urban renewal authorities. Affordable housing work spans from regional needs assessments to policy formation and implementation strategies.

Andrew's work is generally split between public and private sector clients. For public sector clients, he underpins public policy formation with data-driven processes that elevate the discussion and enable elected officials to find consensus around clearly defined implementation plans. He has advised a number of private sector clients on projects that have 'gone vertical'; he provides developers with alternatives grounded in market findings that identify an optimal development program based on projected returns and acceptable risk. Andrew brings a highly collaborative approach to each client and builds a sense of teamwork among client stakeholders and his EPS colleagues. Andrew holds a Bachelors of Environmental Design, Magna Cum Laude from the University of Colorado. When he's not in the office (or on a plane), he enjoys skiing, hiking, and hooking worms on his son's fishing line.

Confluence Development Group
Response to Staff Questions

On behalf of the Confluence Development Group, I am happy to submit the following responses to the questions that were asked from staff from our call on July 23, 2019. If you should need any additional information or have any questions, please feel free to contact me anytime.

Brian Marshack
Confluence Development Group

Telephone: (970) 274-0303
Fax: (970) 923-9222

Email: Bmarshack@Eastpacinvestco.com

Mail: PO Box 8530
Aspen, CO 81612

1. Project Financing

At this point of the Confluence RFQ Master Developer selection process, it is difficult for our team to commit to any one type of funding plan until we are further along in the project planning and financial structuring process. Once there is a deal structure is in place, the team anticipates that most of the funding will come from a combination of private equity and personal capital. ABA Hospitality and Oak City Development are well capitalized companies with over 30 years of real estate development and investment experience. The combined team has an extensive track record of delivering successful projects to its investor and partnership groups, which includes over $10 billion in real estate development and investment transactions. In addition to having strong financial balance sheets, the companies have equity investment relationships at the highest levels with multiple financial institutions. Primarily the two largest investment partners include Pacific Investment Management Company (PIMCO), which manages over $1.6 trillion in assets, and the Baupost Group out of Boston, Massachusetts, presently the 10th largest private equity hedge fund in the world with over $32 Billion in assets.

2. What arrangements do you see with the city from a partnership & financial commitment?

The Confluence Development Group sees the City of Glenwood Springs as an integral partner in this effort. We think that the best outcome from this process will be one in which the City and the development team work closely together, with frequent interaction and opportunity for communication and input. It will be important for the community to recognize that both the City and the Developer are jointly pursuing a common goal regarding the Confluence site, specifically one that increases community vitality, activates a long-dormant parcel of city-owned land, and helps create economic development opportunities.

In terms of financial commitments, there are many options. The Confluence Development Group team includes Economic & Planning Systems (EPS), who has worked with a wide range of public entities (cities, counties, urban renewal authorities, etc.) to structure public-private development terms. From this experience, the team understands the range of options available to the public sector to implement real estate development projects. The spectrum is wide, and cities can choose where they would like to be, from reliance on public funding and decisions driven by the public sector, to terms that rely more on the private sector for implementation.

For this project, the team, together with EPS, expects to incorporate several work sessions with the City Council and Staff regarding the available financing options in order to understand the implications in terms of risk and return, and the various ways the City can measure success, such as requirements for civic improvements and investments, fiscal revenue, as well as economic impact. Depending on what rises to the top in terms of priorities, the joint venture terms can be structured to

recognize the City's priorities and role in a partnership. Generally, the development team believes that the best role that the City of Glenwood Springs can play in this process is to be a leader in terms of land use policy and entitlements. The specific partnership terms between the two entities will be negotiated incrementally, through a fiscally responsible and transparent process. We look forward to defining specific elements of the scope of work with you and finding a division of labor and costs that works for all parties involved.

3. Public Outreach and Engagement

Our team believes that any successful development venture is a result of implementing a bottom-up grass roots approach to community outreach and engagement. Several members of our team have resided full-time in the Roaring fork Valley for 25 years and have conducted Master Planning processes and related public outreach for about the same amount of time. Bill Maron ran the Our Town Planning process in Basalt with extensive citizen and stakeholder input and participation culminating in definitive project consensus. Other team members have also engaged in other such processes in Boulder, Denver, Aspen and Snowmass Village. Together with our design and development team, we are all in agreement that the best projects are a result of collaboration through a true public outreach process with the community. By providing a forum where the developer and design team can engage directly with community stakeholders, neighborhood groups, individuals, municipal leaders, and city staff, inspirational ideals are discussed, project related issues are addressed, solutions are formed, and at the end of the day, project support ultimately is achieved throughout a broad coalition of community leaders and individuals.

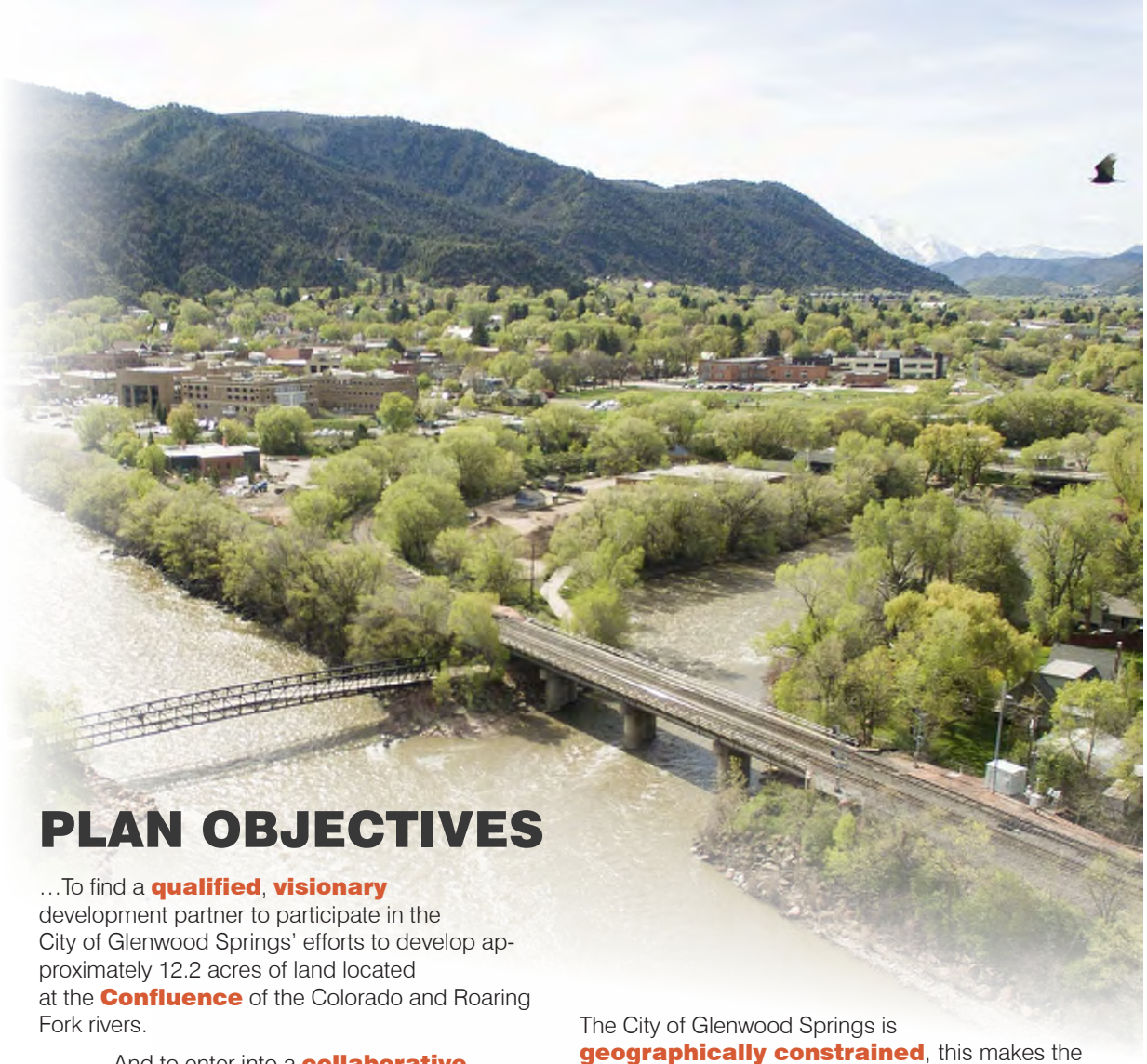
The high-level concept plan that we presented in our RFQ response is just that, a high-level plan, designed to discuss some land use ideas and concepts that will eventually form the foundation and starting framework in the project design process. A collaborative community engagement process is where the real plan is born.

Following is a preliminary overview of our public outreach strategy for the Confluence redevelopment site.

1. Grassroots meetings, small scale:
    - Meet with neighborhood influencers and leaders.
    - Small scale, 4 to 8 people, in people's homes and business.
    - Flip chart meetings for low impact record.
    - Promote via word of mouth and informal networks.
2. Stakeholder, Business community meetings, medium scale:
    - Meet with business groups, e.g. DDA, Chamber of commerce and similar groups in remote locations around town.
    - Closely targeted marketing to special interest groups and other community segments.
    - Meet with planning departments, referral agencies and area NGO's.
    - Flip chart and video record the meetings for data collection.
3. Design Charrettes / larger informational outreach meetings:
    - Broadly advertise to various community wide groups.
    - Targeted meetings for various design segments: parks and open space, connectivity, transit, urban design/ architecture, environmental issues and infrastructure / engineering.
    - Video record meetings with posted results and summaries online.
4. Summary phase with council and community wide presentations.

The above would be supplemented with traditional and online data gathering, such as: Mail and phone surveys, Survey Monkey and Bang the Table services. Interim results for each phase would be posted on interactive project web pages, Facebook and Instagram accounts. we will also be making regular public service announcements to the local news media outlets. Our ultimate goal is to have the broadest community consensus possible with any of the possible outcomes.

SA+R
SHEARS ADKINS ROCKMORE ARCHITECTS



PLAN OBJECTIVES

…To find a **qualified**, **visionary** development partner to participate in the City of Glenwood Springs' efforts to develop approximately 12.2 acres of land located at the **Confluence** of the Colorado and Roaring Fork rivers.

And to enter into a **collaborative** public/private partnership to develop **creative** and **innovative** approaches to this property.

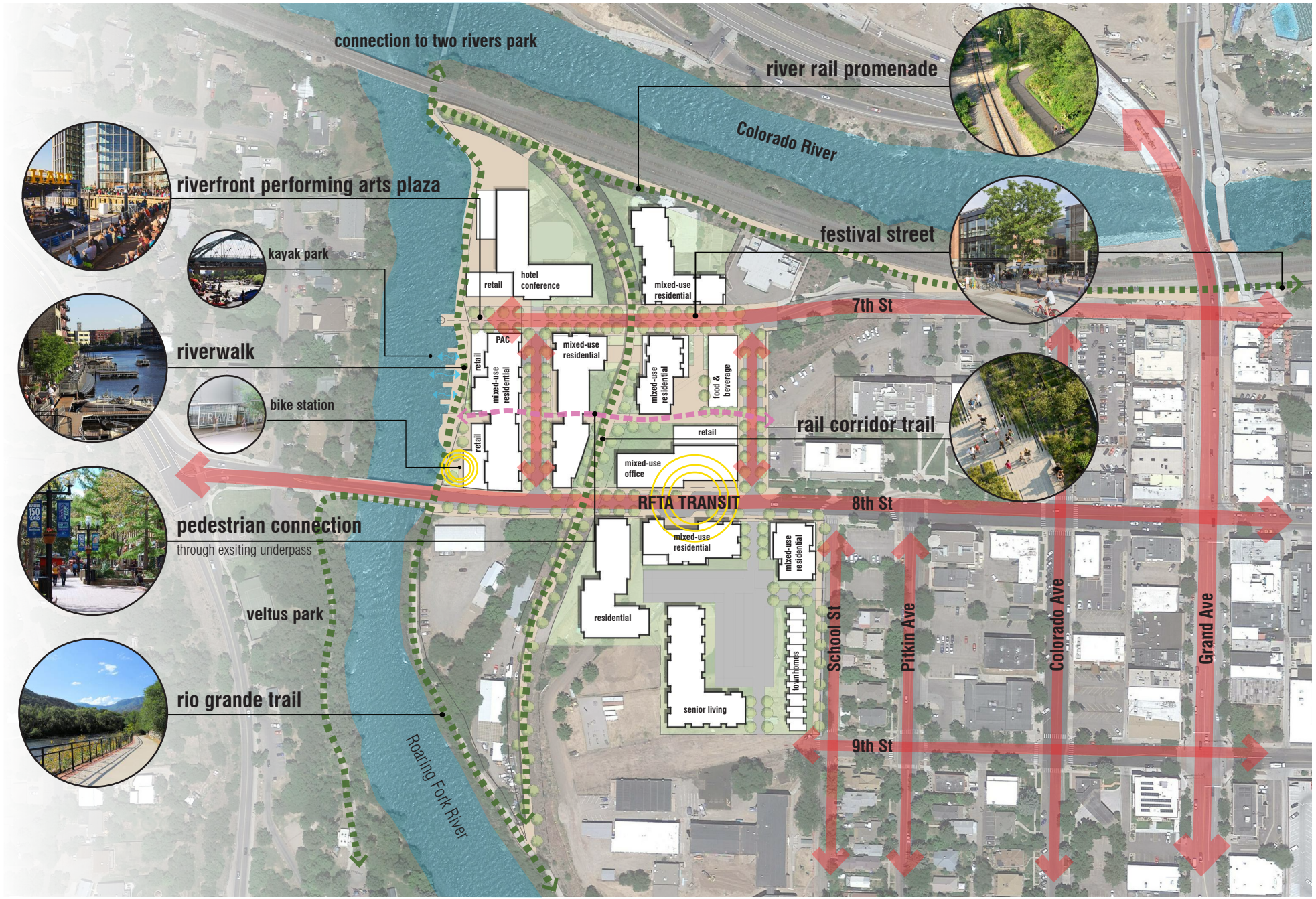
To extend the City's **Downtown** to the Roaring Fork River, **celebrate** the area's **natural surroundings**, and **create** a mixed-use **neighborhood** that is **compatible** with the surrounding residential and commercial architecture.

…**diverse mix** of entertainment and **cultural** venues

The City of Glenwood Springs is **geographically constrained**, this makes the Confluence Area a prime piece of property in the **heart of the City**,
…create a **destination** development with **river access**

…**proximity** to many **natural resources** attracts **outdoor enthusiasts**

The **Area Wide Plan** includes an implementation strategy to **revitalize the brownfields** located along the Colorado and Roaring Fork Rivers in the City's core.


connection to two rivers park
river rail promenade
Colorado River
riverfront performing arts plaza
kayak park
festival street
riverwalk
bike station
rail corridor trail
pedestrian connection
through exsiting underpass
RFTA TRANSIT
veltus park
rio grande trail
Roaring Fork River
retail
hotel
conference
mixed-use
residential
7th St
PAC
food &
beverage
mixed-use
office
8th St
residential
senior living
townhomes
School St
Pitkin Ave
Colorado Ave
Grand Ave
9th St

Confluence Area Site Plan

plaza
retail
hotel
conference
mixed-use
residential
7th Street
retail
performing
arts
center
kayak park
mixed-use
residential
mixed-use
residential
linear park
mixed-use
residential
food
and
bev
mixed-use office
pedestrian connection
retail
restaurant
mixed-use office
RFTA
8th Street
RFTA
mixed-use
residential
mixed-use
residential
residential
townhomes
senior housing
School St
Pitkin Ave
N
0'
150'

SA+R Representative Projects

Neighborhood Housing

Provide a mix of housing options in a pedestrian friendly neighborhood..

- Senior Housing
- Affordable and Work Force Housing
- Live Work Lofts
- Townhomes
- For Sale Condominiums
- Market Rate & Affordable Apartments
- Transit Orientated Development with access to RFTA bis stop along 8th Avenue.
- Pedestrian and Bicycle Friendly Neighborhood
- Resident Clubhouse and Senior Center
- Parks, Promenades, and Plazas
- Family and Pet Friendly Design and Amenities

Pearl West

15th and Pearl

WATERFRONTS

STEAMBOAT BASE AREA

CONFLUENCE PARK, DENVER

BLUE RIVER, BRECKENRIDGE

STREETSCAPES + PROMENADES

VAIL VILLAGE STREETSCAPES

THE RIVER MILE PROMENADE, DENVER

YAMPA STREET, STEAMBOAT SPRINGS

wenk ASSOCIATES

Linear Rail Line Park Precedent Images

Active Riverfront Promenade Images

CONFLUENCE SITE REDEVELOPMENT

GLENWOOD SPRINGS, COLORADO

EPS Project Approach

Economic & Planning Systems, Inc.
The Economics of Land Use

730 17th Street, Suite 630 ▪ Denver, CO 80202
303.623.3557 ▪ www.epsys.com

EPS

REAL ESTATE ECONOMICS

PUBLIC FINANCE

LAND USE & TRANSPORTATION

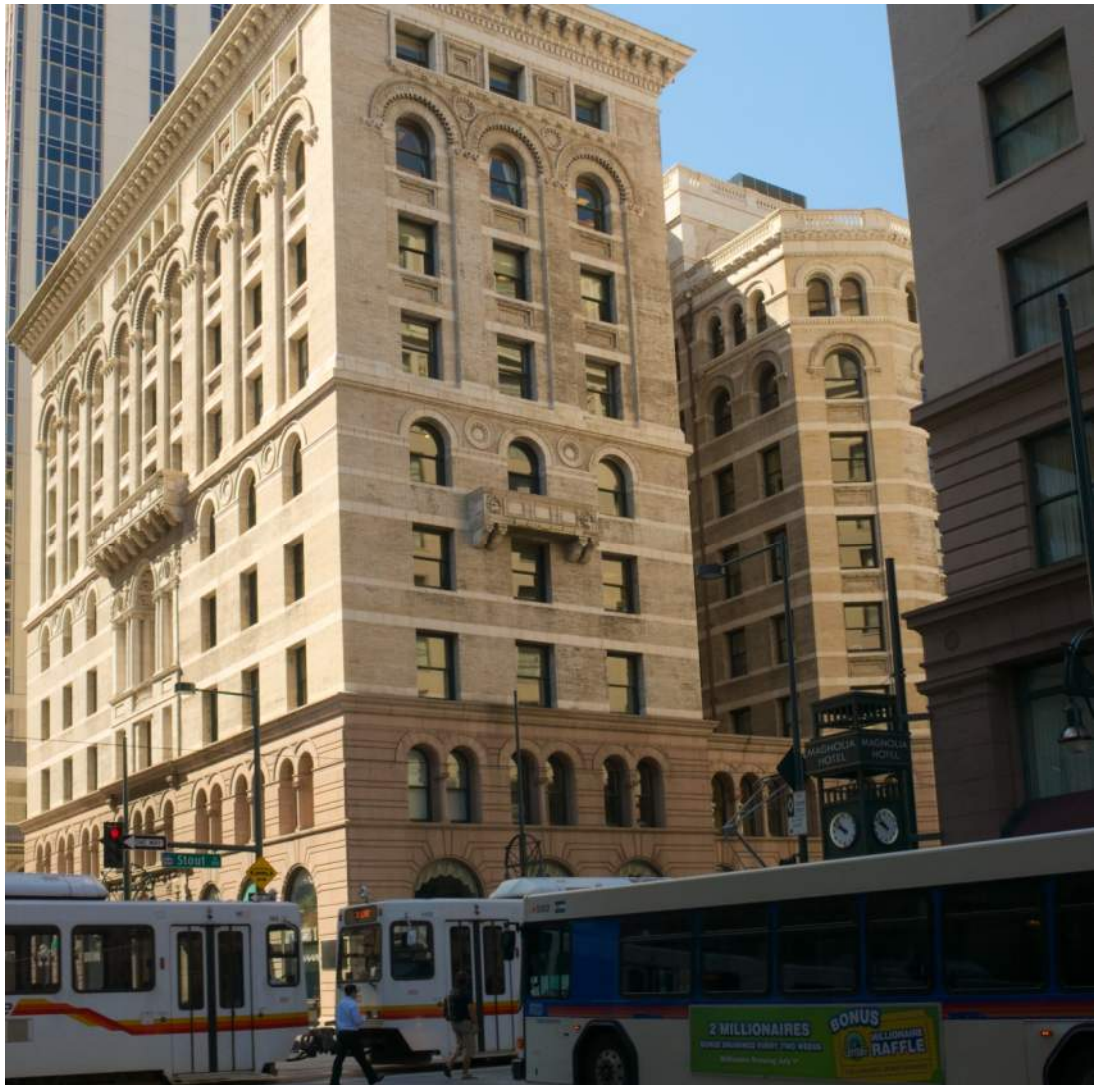
ECONOMIC DEVELOPMENT & REVITALIZATION

FISCAL & ECONOMIC IMPACT ANALYSIS

HOUSING POLICY

PUBLIC PRIVATE PARTNERSHIPS (P3)

PARKS & OPEN SPACE ECONOMICS



City of
Wheat Ridge

The City of
Rifle Colorado

TOWN OF ERIE
1874

City of
Fort Collins

Northglenn

Brighton

DENVER
THE MILE HIGH CITY

TELLURIDE
FOUNDATION

TOWN OF
CASTLE ROCK
COLORADO

City of
Louisville

PARKER
COLORADO

GLENWOOD
SPRINGS
COLORADO

BOZEMAN MT

city of
PUEBLO
colorado

CITY OF ARVADA

COLORADO
SPRINGS

CITY OF LONGMONT
COLORADO

City of
Steamboat Springs

RELEVANT PROJECT EXPERIENCE

Public Finance

- Clear Creek Crossing
  Wheat Ridge, CO
- Manufacturing
  Pueblo, CO
- 6th Ave Corridor
  Glenwood Springs, CO

Partnerships

- Historic Adaptive Reuse and P3
  San Antonio, TX
- Large Scale Urban Redevelopment
  Denver, CO
- Mixed Income JV Housing Authority
  San Antonio, TX

Market Research

- Hotel/Retail/ Residential
  Downtown Arlington, TX
- Mixed Income Housing
  Denver, CO
- Kennecott Master Planned Communities
  Salt Lake City, UT

Affordable Housing

- Regional Plan
  San Antonio, TX
- Housing Needs Assessments
  Roaring Fork, CO
  Eagle County, CO
  Telluride, CO
  Lake County, CO
  Summit County, CO

PRESENTATION OVERVIEW

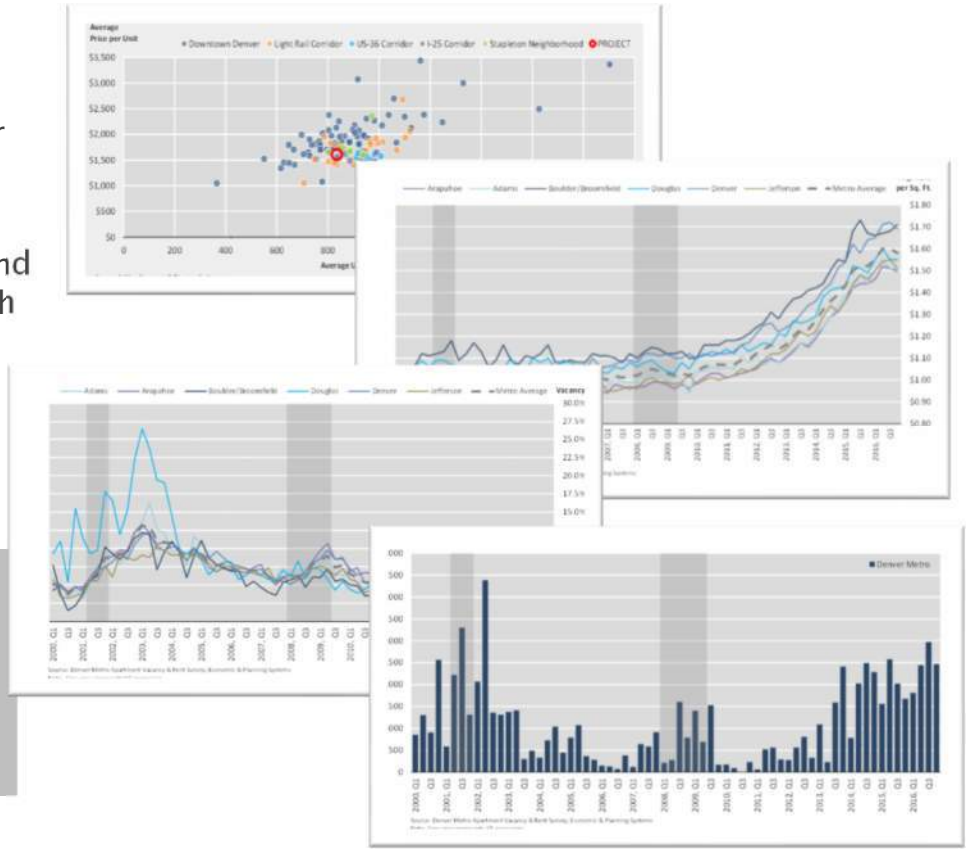
KEY COMPONENTS OF SCOPE OF WORK

- Conduct Market Research
  - Depth of Support and Revenue Inputs
- Incorporate Cost Estimates
- Apply Public Financing Tools and Revenue Projections
- Construct Project Financing Model
  - Focus on Gaps and Surpluses, by scenario
- Develop JV Terms
  - Account for Risk and Return
  - Define terms that work for City and Developer

MARKET RESEARCH AND DEPTH OF SUPPORT

APPROACH AND DELIVERABLES

- Assess degree of market support that exists for various uses identified through the planning process.
- Provide high-level integration of quantitative and qualitative insight to inform the degree to which a given use can be supported from a market perspective.
- Define ranges for reasonable revenue inputs.



DELIVERABLE

- Summary of market findings
- Excel model that summarizes potential revenues, utilization rates, land values

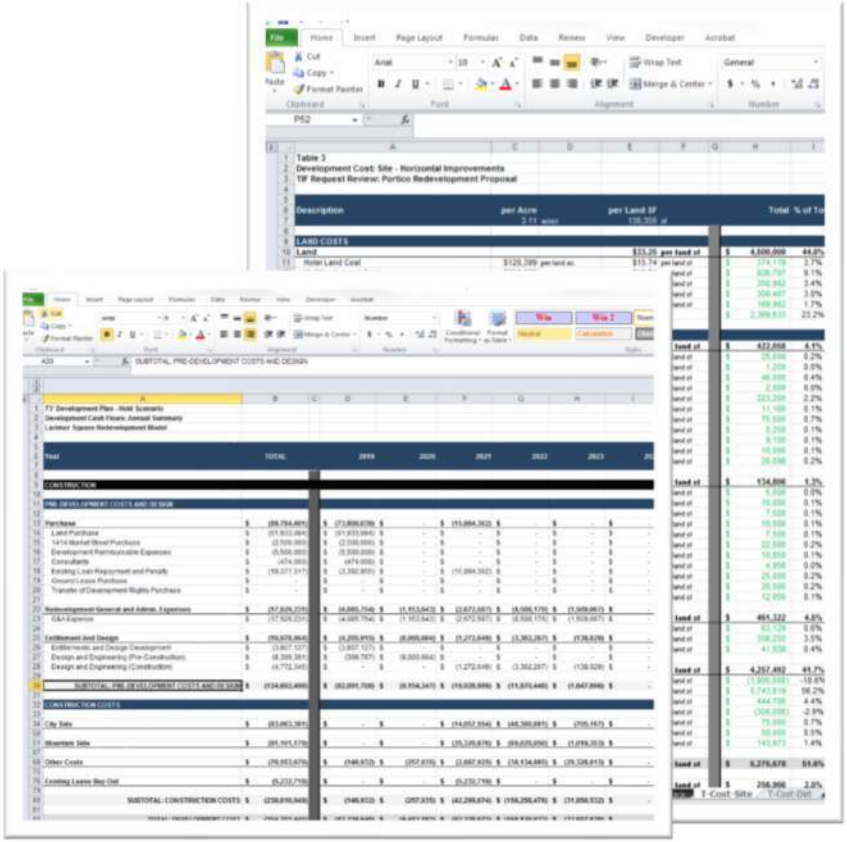
DEVELOPMENT COST SUMMARY

APPROACH AND DELIVERABLES

- Account for full range of project costs
- Account for timing assumptions, which will be a critical component of the time series model.
- Factor costs into the model using 'dials' such that certain projects can be included or excluded in various model runs.
- Identify the funding and financing gaps that may occur during the redevelopment timeline.

DELIVERABLE

- Excel model that includes summary of development costs under alternative redevelopment strategies



PUBLIC FINANCING TOOLS AND REVENUE PROJECTIONS

APPROACH AND DELIVERABLES

- Identify the range of relevant public financing tools available to generate resources for this project.
- Each source will be evaluated from a quantitative and qualitative perspective
- Advantages and disadvantages of each strategy will be summarized
- Potential public revenue will be quantified and forecasted
- Results of analysis will be incorporated into the model, which will have the flexibility to test alternative public funding gap closure strategies

DELIVERABLE

- Summary of potential public funding strategies
- Incorporation of analysis into Excel model that includes summary of potential revenues under various scenarios

PUBLIC FINANCING TOOLS

TIF
BID
GID
PIF
DDA
COPs
Title 32
Land Sales
Land Leasing
JV Terms

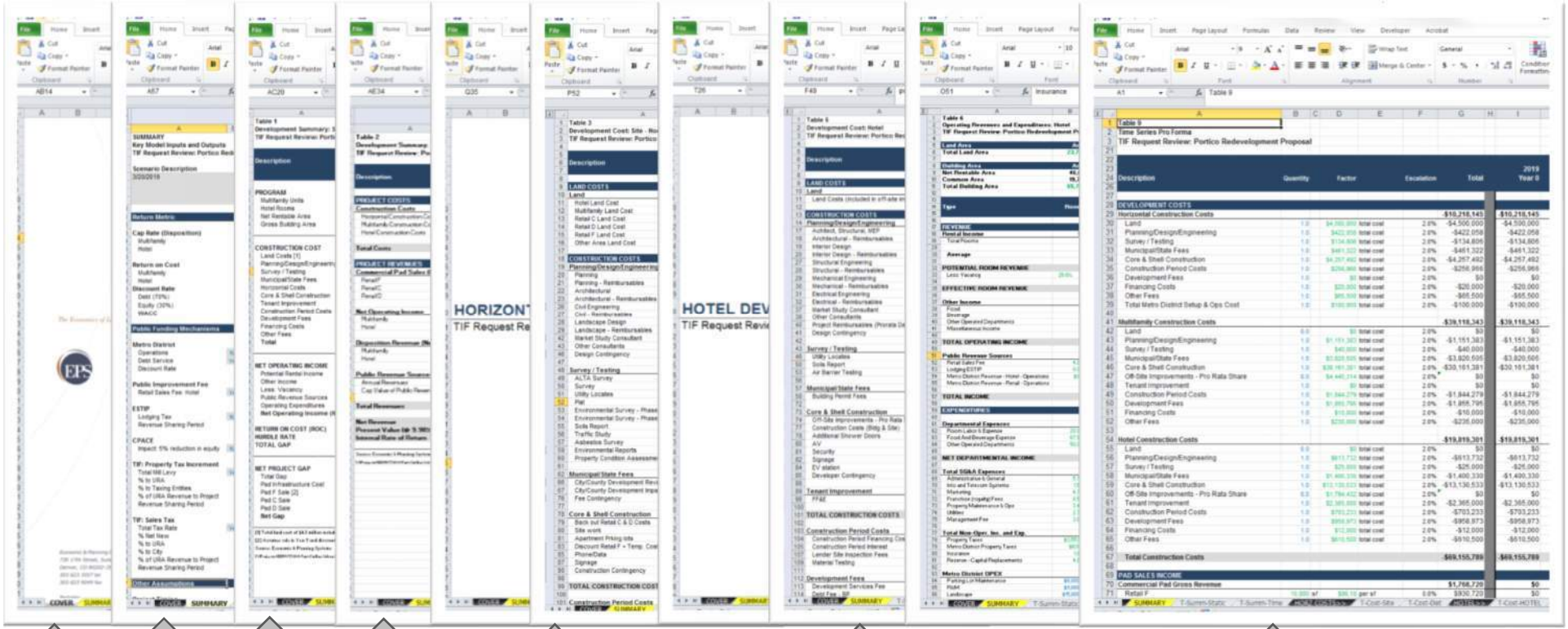
FINANCIAL MODEL OVERVIEW

DEFINITION AND APPLICATION

- **What is the "financial model"?** Financial model that accounts for potential project revenues and costs and provides an estimate of development return and funding gaps.

- **What can the model do?** Test alternative redevelopment programs, cost and revenue scenarios, and gap closure strategies.

- **What terms will the City of Glenwood Springs find acceptable?** Define financial implications for specific scenarios, accounting for risk and return, and define the optimal combination of public and private capital.



Cover Page

Summary of Inputs and Outputs

Summary of Static Returns

Summary of Time Series Returns

Horizontal Cost Summary

Project Vertical Costs and Revenues

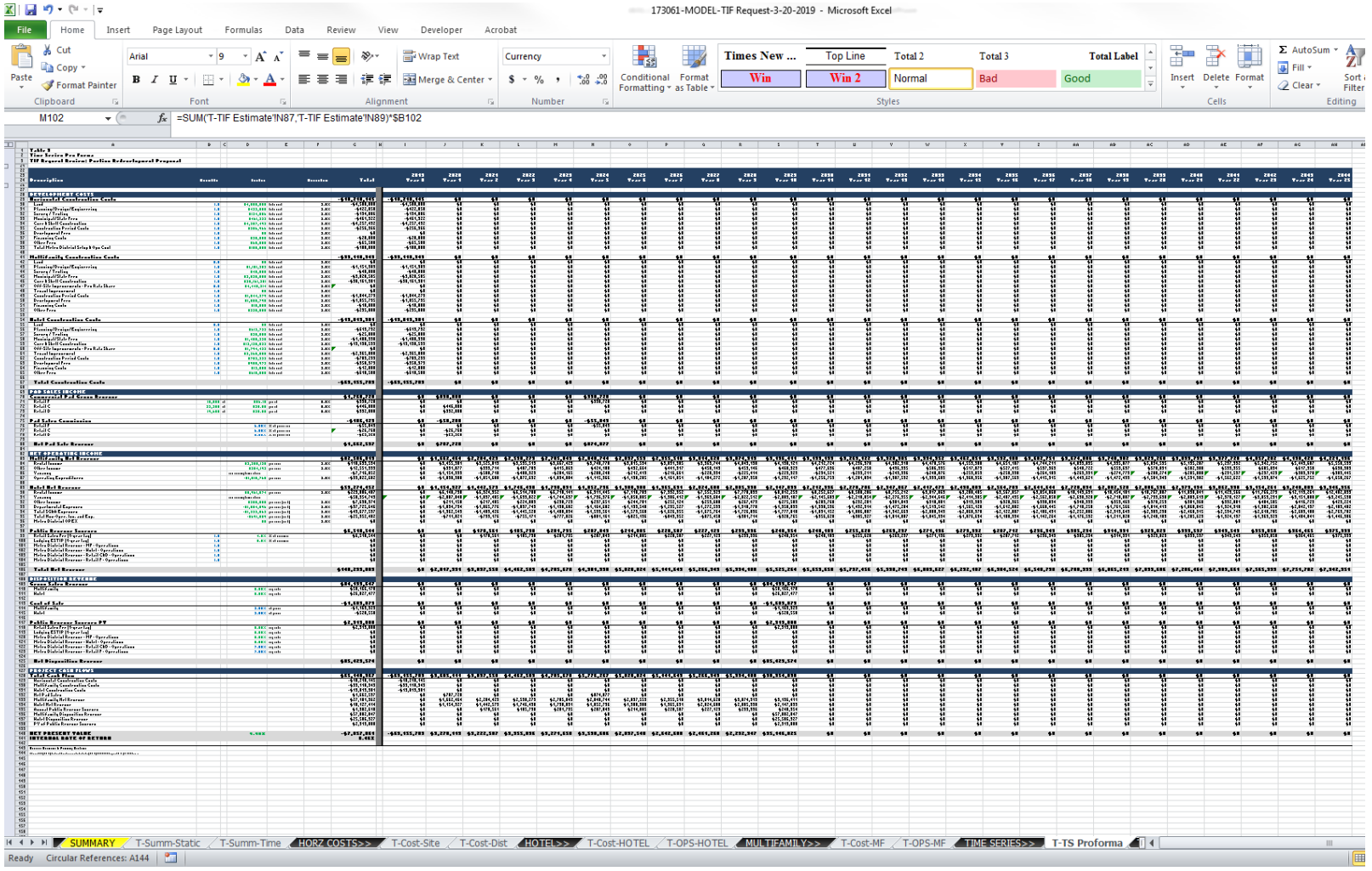
Time Series Summary

Project Costs

Project Revenues

Public Revenue Sources

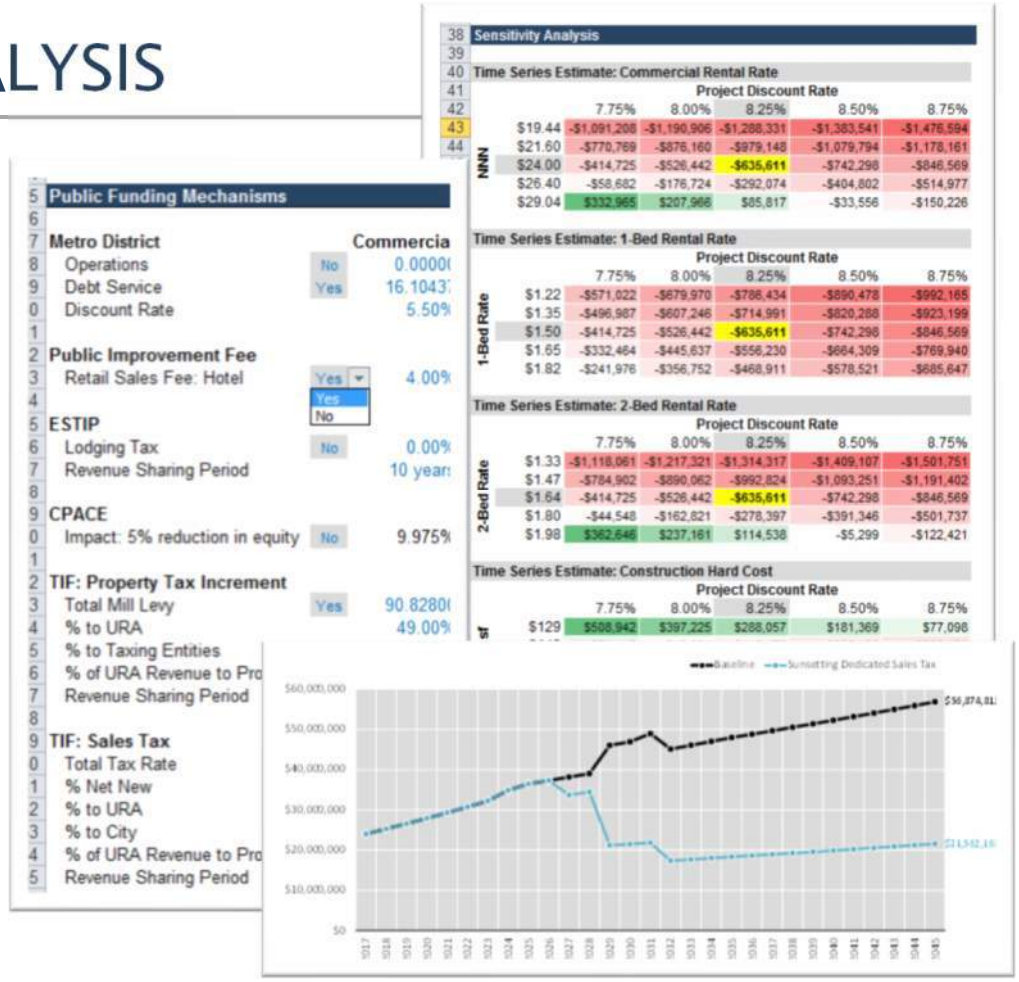
Net Cash Flow



MODEL SENSITIVITY ANALYSIS

RANGE OF TESTS AND SCENARIOS

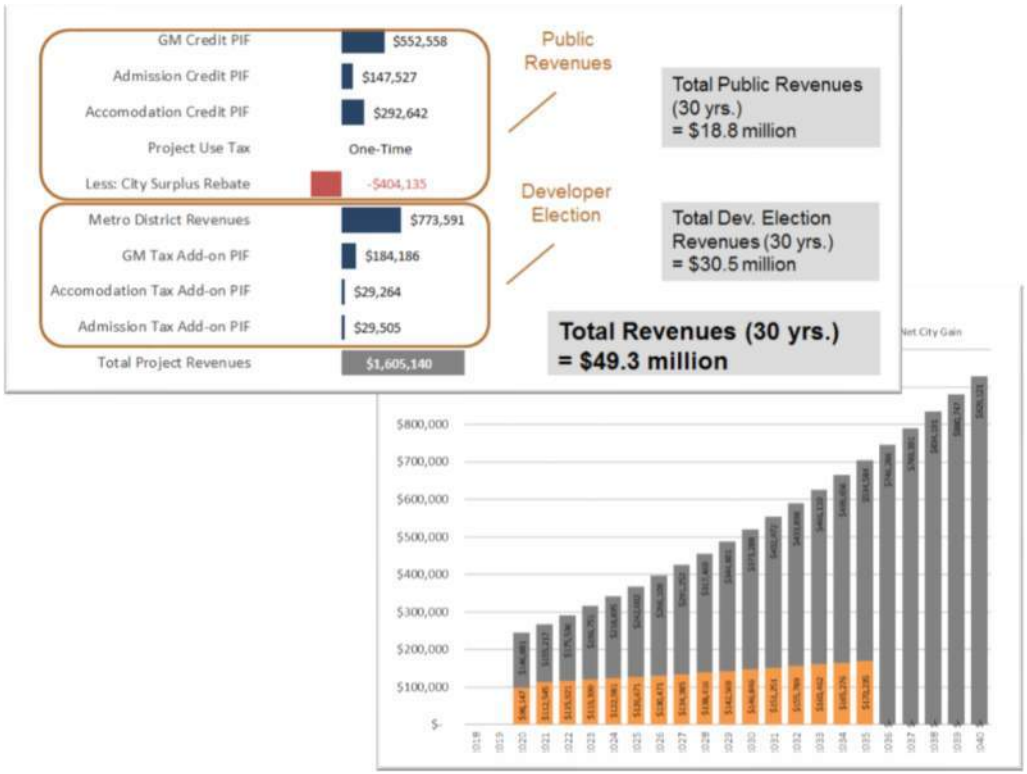
- Model constructed in order to complete a wide range of sensitivity analysis
- Potential Sensitivities include:
  - Alternative development strategies
  - Range of economic conditions such as changing construction costs and revenue inputs
  - Alternative public funding gap closure strategies
- Sensitivity analysis used to develop distinct scenarios that provide a clear options for a path forward



MODEL OUTPUT

CLEAR, CONCISE, AND EASY TO UNDERSTAND

- Develop JV Terms
  - Account for Risk and Return
  - Define terms that work for City and Developer
- Potential Scenarios:
  - Low risk, low financial outlay by City
  - Moderate risk, financial outlay based on increment generated by developer
  - Higher risk, with financial commitment viewed as partner
- Can model any scenario and help derive optimal set of terms



WHY THE CONFLUENCE DEVELOPMENT GROUP?

1. Fresh Perspective for Glenwood
   - Extensive work in local region
   - National experience
   - Bring both to the Confluence Opportunity

2. Grass Roots Approach
   - Driven to listen
   - Experience speaks to engagement
   - Full breadth of outreach tools
     - Stakeholder engagement
     - Steering committee
     - Open House
     - One on one outreach
     - Workshops

3. Design Expertise
   - Complex challenges
   - Planning, architectural, and landscape architecture expertise
   - Constructed projects

4. Economic Modeling
   - Enable City to understand the value of its asset
   - Provide options for City and Development team to derive equitable JV terms

5. Authenticity
   - Commitment of team members
   - Manifested in short-term and long-term deliverables and development

A·B·A
HOSPITALITY

January 29, 2020

Mayor Jonathan Godes and the City of Glenwood Springs Council Members:

On behalf of the Confluence Development Group, I would like to thank Mayor Godes, the City of Glenwood Springs Council Members, and Staff for selecting our team as one of the three finalists for the Confluence Master Developer Request for Qualifications (RFQ) selection. At this point, our team remains committed to the project, and we respectfully encourage the City to move the selection process forward to choose a development team as soon as possible. Since it has been over six months since our last interview with Council and Staff, we would like to highlight some of the key points that our team discussed which includes the following:

- If our team is selected, we would like to negotiate a financial structure that will accommodate the needs of all parties involved. As we stated in our August 15, 2019 submittal:

  > "In terms of financial commitments, there are many options. The Confluence Development Group team includes Economic & Planning Systems (EPS), who has worked with a wide range of public entities (cities, counties, urban renewal authorities, etc.) to structure public-private development terms. From this experience, the team understands the range of options available to the public sector to implement real estate development projects. The spectrum is wide, and cities can choose where they would like to be, from reliance on public funding and decisions driven by the public sector, to terms that rely more on the private sector for implementation. Once there is a deal structure is in place, the team anticipates that most of the funding will come from a combination of private equity and personal capital."

- The City of Glenwood Springs issued a Master Developer Request for Qualifications and not a Request for Proposals. With the RFQ asking for a high-level concept plan from each team, it is often the case that the plans become the focus of attention and not the qualifications. As we stated in our July 8th interview with City Council, the plan that we submitted was to demonstrate the capabilities and experience of our team members and, without any authentic community outreach and discussion, we felt very uncomfortable designing such a plan without any true community involvement as envisioned in our submission. With an RFQ process, the winning team is selected based on qualifications, experience, and financial strength, with the intent of developing an economically viable master plan in partnership with the City and community.

- The Confluence Development Group intends to facilitate any development activity on the site through a Public Private Partnership structure with the City of Glenwood Springs. This would allow the City to generate long-term revenues through a profit-sharing structure as well as increased tax revenues. A Public Private Partnership structure will also eliminate the requirement for a special election if the property were to be sold to a private development entity. As we stated in our August 15, 2019 submittal:

275 SACRAMENTO STREET, 8TH FLOOR, SAN FRANCISCO, CA 94111

"The Confluence Development Group sees the City of Glenwood Springs as an integral partner in this effort. We think that the best outcome from this process will be one in which the City and the development team work closely together, with frequent interaction and opportunity for communication and input. It will be important for the community to recognize that both the City and the Developer are jointly pursuing a common goal regarding the Confluence site, specifically one that increases community vitality, activates a long-dormant parcel of city-owned land, and helps create economic development opportunities."

"Generally, the development team believes that the best role that the City of Glenwood Springs can play in this process is to be a leader in terms of land use policy and entitlements. The specific partnership terms between the two entities will be negotiated incrementally, through a fiscally responsible and transparent process."

Through a Public Private Partnership structure, envisioned in our Proposal, the City of Glenwood Springs would be able to retain equity in the property allowing for long term financial participation through a fiscally responsible and transparent ownership structure.

The key points that I have outlined in this letter are areas that we have already discussed in our interviews or have submitted in our written responses. Should you require any additional information or clarification on any of these areas, please feel free to contact me anytime.

Thank you again for your consideration.

Cordially,

Brian Marshack
Chief Operating Officer
Confluence Development Group

Jennifer Ooton

From: Brian Marshack <bmarshack@gmail.com>
Sent: Friday, October 2, 2020 1:38 PM
To: Jennifer Ooton
Cc: 'Scott Brown'; hamptonpitts222@gmail.com; 'Bill Maron'
Subject: 8th Street Crossing Development

On behalf of the Confluence Development Group, I would like to inform you that our team's enthusiasm for the 8th Street Crossing Development remains high, and we would very much like to see the Council move forward in the selection of a Master Developer. As we all know, a lot has transpired over the last few months; however, we would like to inform you that our development team, consultants, and capital sources remain intact, and we are ready to move forward with the selection process as soon as possible.

We understand the present financial constraints that the City of Glenwood Springs is experiencing, and our team would have no problem moving forward with a financial structure that would accommodate the needs of all parties involved. Therefore, we envision a process that would require a minimal amount of initial capital from the City of Glenwood Springs (to cover its own expenses) while both parties negotiate the terms of a Public Private Partnership Agreement. As we have stated in our January 20th letter to the Mayor and City Council, "Once there is a deal structure is in place, the team anticipates that most of the project funding will come from a combination of private equity and personal capital."

The 8th Street Crossing Development represents a unique opportunity to create a vibrant and diverse transit orientated district that provides long term benefit to the community through economic development and sustainable planning. As a finalist, our team is looking forward to working with Council and Staff in the selection process and are available to provide additional information or meet in person at your earliest convenience.

Thank you again for your consideration.

Cordially,

Brian Marshack
Chief Operating Officer
Confluence Development Group

Telephone: (970) 274-0303
Fax: (970) 923-9222
Email: Bmarshack@Eastpacinvestco.com
Mail: PO Box 8530
Aspen, CO 81612

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May 22, 2019

City of Glenwood Springs
Procurement Department, First Floor
101 W. 8th Street
Glenwood Springs, CO 81601

RE: Request for Master Developer Qualifications for the Confluence Area
#BD2019-013

To Whom It May Concern,

What an exciting opportunity! The redevelopment of the Confluence Area offers the City of Glenwood Springs and its residents an amazing opportunity to imagine a great place and catalyze its downtown with a new inspired identity that creates a sustainable community and economic development base for the City while respecting and preserving the town's distinct historic character.

With an irreplaceable location adjacent to the confluence of the mighty Roaring Fork and Colorado Rivers, the City's vibrant and historic downtown, and the Rio Grande Trail, the Confluence Area is truly unique in its ability to connect downtown to the riverfront. Traibreak Partners commits to providing a signature project with inspiring design, based on detailed market analysis and careful study of the priorities of Glenwood Springs residents and businesses while being environmentally conscious and providing long lasting economic vitality.

This project was made for US! We have assembled a highly experienced team of real estate development professionals with national experience and local presence that share in the vision of Glenwood Springs for the Confluence Area redevelopment project. Our team includes Trailbreak Partners (Master Developer), Van Meter Williams Pollack (Urban Planning and Design) and NV5 (Program Management and Engineering Resources). The Trailbreak Partners team offers to the City of Glenwood Springs a thoughtful and reliable "partner" with demonstrable experience as master developers navigating the complexities of infill master planning and infrastructure, (TOD) transit-oriented development, (PPP) public private partnerships, community engagement, federal, state and local public finance, and brownfield redevelopment; all critical factors

in the success of the Confluence Area. Entrepreneurs at heart, Trailbreak Partners is not a "widget maker." Rather, our approach is to identify the unique needs of each project we undertake and build best in class teams to deliver the right product while managing risk. Our current development portfolio is a reflection of this approach and includes master development of sites including for-sale attainable housing, (LIHTC) low income housing tax credit apartments, market rate townhomes and apartments, retail/commercial spaces, and industrial.

Our project team's composition is intentionally constructed to meet the long term demands that this project will require. Specific attributes that provide value to the City include Trailbreak Partners and Van Meter Williams Pollack historical working relationship recently completing a mixed-use, mixed-income master planned and public financed development in Denver, Van Meter William Pollack's experience as the design firm of the 2017 Confluence Redevelopment Plan, and NV5's local presence and expertise and the ability to call upon its global network of company resources. The Trailbreak Partners team has also made arrangements to add supplemental local resources available, including Haselden Construction as a resource for live cost estimating to ensure accuracy of pricing and feasibility early in the planning process, and Community Builders to assist as appropriate in community outreach and engagement.

Our projects represent a track record of excellence in designing, financing, and creating vibrant and engaging buildings and sustainable communities. As a team, we are dedicated to the ideals of collaboration working with the City of Glenwood Springs and its constituents as a means to shepherd this project from vision to reality. This approach is grounded in the practice of working together to endow real estate assets with tangible physical characteristics that elevate the resulting project above the typical and expected. We strive not simply to achieve a series of built products, but to create places of lasting value.

We plan to create a place of vibrancy driven from a mix of uses including residential, neighborhood retail, hospitality and creative office – a sustainable, quality mixed use development that meets the needs of the residents of the City of Glenwood Springs. We believe that if planned well, the Confluence Area should catalyze and complement, rather than compete with, current downtown businesses. Every aspect of our plan will be thoroughly justified, based on a market and income analysis, and a master plan that balances highest and best use with an optimized density for the site. We plan to build homes and commercial buildings with architecturally significant design, community amenities, engage with the river assets, and provide environmental design creating a

place of refuge in the community for all ages. The true value created by this project will ultimately be measured by both asset appreciation and the enhancement in quality of life of Glenwood Springs residents.

To realize this outcome, Glenwood Springs needs a team that can create and execute such a vision. Our team would like to be the master developer of the Confluence Area. We offer the best combination of vision, experience and resources to reduce project execution risk and create an inspired new place that will set Glenwood Springs apart both now and into the future; a place where people truly want to be. On behalf of the entire development team, thank you for the opportunity to submit our qualifications.

Sincerely,

Douglas Elenowitz
Principal
Trailbreak Partners, LLC

Development Team

Trailbreak Partners, Master Developer

Trailbreak Partners is a Denver-based private equity firm focused on real estate and middle market operating companies in Colorado. At Trailbreak, we leave no stone unturned. We are meticulous in our approach to investing, constantly monitoring the market for projects that fit our diverse array of expertise and personal interests. From project inception through completion we execute with strategic oversight and methodical control in order to capture value for all stakeholders, every step of the way.

Development is one of our core capabilities. Our experience as master developers allows us to skillfully oversee and execute compelling urban development projects. We bring resources in planning, development, finance and public-private partnerships to create a tailored, comprehensive development program for each project we pursue. Through the process of site selection, design and entitlement we utilize a wide array of sophisticated tools that naturally align our projects for future performance. We seek to develop projects that create a sense of place in the infill environment, benefiting our communities, partners, and investors alike.

Brownfield redevelopment is an important subset within our real estate development capabilities. Trailbreak has unrivaled experience in managing the regulatory clean-up process and coordinating remediation, demolition and development in order to isolate liability and manage financial risk of environmentally distressed properties. Our expertise provides unique visibility in determining the optimal path to extract value that can otherwise be difficult to identify.

Trailbreak Partners has completed and is currently working on nearly $300 million worth of real estate development volume. Our investment and syndication platform harbor a wide array of capital sources that span hundreds of high net worth individual investors to family office and institutional capital sources. *(Representative projects noted in more detail Trailbreak Partners Development Capacity & Experience).*

Trailbreak Partners Contact Information

Address: 802 E. 19th Avenue, Denver, CO 80218

Phone: (720) 263-6255

VAN METER WILLIAMS POLLACK LLP

Van Meter Williams Pollack, Planning and Architecture

Van Meter Williams Pollack is an award-winning Architecture and Urban Design firm based in San Francisco and Denver. Since 1989 VMWP has provided a full range of comprehensive design and planning services for a variety of project types, scales and clients. The partners and staff bring their knowledge and expertise to all aspects and phases of our projects. VMWP's comprehensive and innovative design approach considers environmental, social, economic, and client needs to create buildings and communities that resonate with people. From small towns grappling with pressures of sprawl, to major urban centers requiring infill and redevelopment, one of our strengths is the ability to work in the variety of communities that make up diverse, growing regions. *(Representative projects noted in more detail in Exhibit B).*

Van Meter Williams Pollack Contact Information

Address: 1738 Wynkoop St, Ste. 203 Denver, CO 80202
Phone: (303) 298-1480
Email: tim@vmwp.com

NV5, Program Management and Engineering Resource

NV5 is a leading provider of professional and technical engineering and consulting solutions for public and private sector clients in the infrastructure, construction, real estate, and environmental markets. The company primarily focuses on five business verticals: Construction Quality Assurance (Materials Testing and Inspection), Energy, Environmental, Infrastructure and Program Management. With a staff of more than 2,000 and more than 100 offices nationwide and abroad, NV5 is able to provide services supporting all aspects of a project's life cycle from conceptual or preliminary design through facility operations. Our clients trust us to provide integrated engineering, consulting, and management solutions that enable success regardless of project size and complexity. NV5 has full-time staff that resides in Glenwood Springs that will be utilized for the Confluence Area redevelopment project. *(Representative projects noted in more detail in Exhibit B).*

NV5 Contact Information

Address: 2650 18th Street, Suite 202 | Denver, CO 80211
Phone: (720) 936-8787
Email: nate.torres@nv5.com

Team Resources:

Haselden Construction, Preconstruction and Cost Estimating

For more than four decades, Haselden Construction has provided exceptional client-centric construction services to customers in Colorado. These services include general contracting, construction management, design/build, turnkey development and a comprehensive range of preconstruction services. Municipal and institutional, commercial, and private clients have entrusted Haselden to deliver enduring value, outstanding customer service and our legacy of achievement and quality in their building projects. Since our first project in the Valley in 1989, Haselden has maintained a strong presence building where we live and raise our families. We opened our Glenwood Springs office in 2015 to better service the clients who call the Roaring Fork Valley or Greater Western Slope their home.

Brian Hunt, Regional Director
6950 South Potomac Street, Centennial, CO 80112
Office: (303) 728-3764
BrianHunt@haselden.com

Community Builders, Community Outreach and Engagement

Many communities throughout the American West are working to become more prosperous, sustainable places to live—and they're finding creative ways to do it. Simply put, they are working to become more livable. Livable communities are those that respond strategically to the needs of their people, their environment and their economy. Livable places are equitable places. Our work focuses on four key pillars of community livability: Housing, Transportation, Economy, and Land Use. Working in partnership with local leaders, business, and community members, Community Builders is there to assist a community or region, and creatively engage the public and build the strategic partnerships and leadership necessary for creating lasting change.

Clark Anderson, Executive Director
817 Colorado Ave. #200, Glenwood Springs, CO 81601
Office: (970) 928-3410
Email: clark@communitybuilders.org

TRAILBREAK PARTNERS DEVELOPMENT CAPACITY & EXPERIENCE

General

Trailbreak Partners has an exceptional track record of performance in leading in a collaborative manner challenging infill and master development projects throughout Colorado. Our team brings together a diverse array of expertise that has allowed us to capture value and execute projects with precision using a well-balanced skill set. Our team's core capabilities include the acquisition and development of all major asset classes, with specialty experience in the niche subset of brownfield real estate. Our vertical development expertise is complemented with integration into master planning and site design that seamlessly blends the horizontal and vertical development worlds together.

Our Process

Vision, Strategy & Initial Verification

When we first engage in a master development project, verification of a strategic vision and guiding principles are paramount to the overall success of the program. It is valuable at this early stage to gather critical path information and hone the direction of the project through an exercise that we call "collaborative verification."

With support of the City leadership and technical staff, we will complete a high level investigation of key aspects of the project including: policy objectives, site design and circulation, connectivity to the existing environment, architectural aesthetic, density and allocation of use, zoning constraints, and a meticulous understanding of financial feasibility in program elements as they relate to all market factors at play. This baseline "nuts and bolts" information gathering, much of which the City has prepared in prior studies, will enable the team to quickly get up to speed and be in a position to facilitate the master development process and provide informed insights and recommendations to the City and community.

During this stage, in a unified effort open to all stakeholders, together we establish and verify a set of guiding principles for the project to serve as a reference tool against which future project decision can be measured. We have found that taking the time to do this at the beginning of the project pays dividends because it creates the framework for efficient project team decision making at later stages and starts early the process of building stakeholder trust through transparency.

Given the significant planning and outreach work the City of Glenwood Springs has completed, we do not see this phase as a "restart"; rather the opportunity to present back elements of the City's work and synthesize them into a more specific road map. We view ourselves as stewards of the work that has been completed before our involvement, and want to ensure that we have fully captured the visions before taking it forward into an executable plan.

We align our projects for success at this early stage which allows future performance to fall into place.

Pre-Development

The transition into Pre-Development is a continuation down the funnel toward project execution. At this stage, we will identify and prioritize data collection needs, secure proposals to establish an investigation budget and schedule, and complete those investigations necessary to develop the property consistent with the goals set forth through initial confirmation.

Completion of this work will require the engagement of additional resources likely to include landscape architecture as well as civil, transportation, geotechnical, environmental, and natural resource engineering professionals. Having worked in PPP and public finance environments, we are sensitive to policy goals and procurement requirements of our public agency partners. While we have specific additional technical team members we can bring to the table, we have intentionally limited the members of our initial Master Development Team, leaving open the ability to collaborate with the City on the method to secure additional project team members and vendors.

This period of discovery is a naturally iterative process of site planning and data evaluation to determine overall feasibility. All of the physical factors of site design are integrated with our deep understanding of financial feasibility. Detailed assessments of the development program will be rigorously tested in both the physical realm of design and construction and the financial realm of project cost, capital structuring, and cash flow analysis that brings the real estate to life. Proprietary financial models are used to understand development outcomes so that micro adjustments can be made as we move through the process. A financing plan is modeled and established that satisfies investor requirements unique to each project contemplated within the master development. During this time physical phasing of the master project is also quantified and adjusted to meet existing and future conditions of the market.

The ultimate goal will be to refine the development to establish a financially viable preferred plan for execution. With a preferred plan defined, project entitlement will commence during which we will work in partnership with the City to obtain the required zoning, site plan, and engineering approvals supportive of the preferred plan. In parallel we will execute upon the plan of finance to secure required debt, equity and, if applicable, the sources of public finance necessary to execute the project.

Development & Project Execution

When the time comes for execution, we are ready. We are experienced in executing public procurements to engage the local business community and overseeing compliance and reporting programs that accompany PPP's. With a team in place, our meticulous attention to detail from project inception acts as a catalyst for streamlined development. Our development team and consultants work together, guiding the project to a successful delivery that meets or exceeds underwriting projections and expectations. Once delivered, our hands-on asset management capabilities guide existing portfolio projects through their operational lifecycle and investment horizon.

REPRESENTATIVE MASTER DEVELOPMENT PROJECTS & REFERENCES

West Line Village, Lakewood Colorado

West Line Village is an assemblage of eight acres of land adjacent to the Sheridan Station light rail station in Lakewood, Colorado. Leveraging the region's investment in light rail, Trailbreak Partners has carried forward to reality the concepts of enhanced and diversified housing and thoughtfully increased density identified in a multi-year Station Area planning effort led by the City of Lakewood. Nearly 50% complete, West Line Village is a transit-oriented development (TOD) that consists of 184 units of for-sale rowhomes within the urban ring of Denver. This master planned micro-neighborhood provides high quality and high design attainable homeownership to metro Denver residents in a convenient bus and rail served location, 10 minutes from downtown Denver.

As a continuation of the master development project, Trailbreak Partners has acquired an additional two acres of land adjacent to the east. Currently under development, the $65 million West Line Village Apartments will be a 281-unit class "A" apartment community that continues to provide a diverse array of attainable housing options just west of downtown Denver, next to the Sheridan Station light rail station. Our ultimate goal as the rowhome project commenced was to profitably deliver market rate yet attainable housing that targeted a segment of the market we refer to as "the missing middle": those who cannot afford higher priced luxury homes and also do not qualify

for truly deed restricted affordable housing. This was accomplished through careful attention to cost control with product design, innovative density, and the use of a metropolitan district that allowed us to pass though cost saving from our infrastructure project to residents by selling homes at lower prices than would otherwise be possible.

West Line Village Apartments had similar goals in mind. The creative capital structure and physical design of the building will allow us to deliver market rate apartments at a discount to the high prices being demanded in Denver's urban core while retaining a highly competitive amenity package and in-unit finishes. Amenities include resort style plunge pools, a modern clubhouse, a state-of-the-art fitness center, coworking offices and a roof deck with unimpeded views of downtown Denver and the Front Range.

Additionally, West Line Village Apartments is located in a US Department of the Treasury designated Opportunity Zone census tract and will afford investors several federal tax benefits including the deferral and reduction of capital gains tax on gains associated with invested capital as well as the avoidance of capital gains tax generated upon the sale of the Project. The organizational structure and equitization of the West Line Village Apartments was executed in compliance with Opportunity Zone legislation. Trailbreak Partners intends to capitalize on the full benefit of the Opportunity Zone program for our investors.

Total Capitalization: $115 million
Sources of Capital: Private Equity, Bank Debt, Metropolitan District Bond Financing
Date Completed: Currently Under Construction

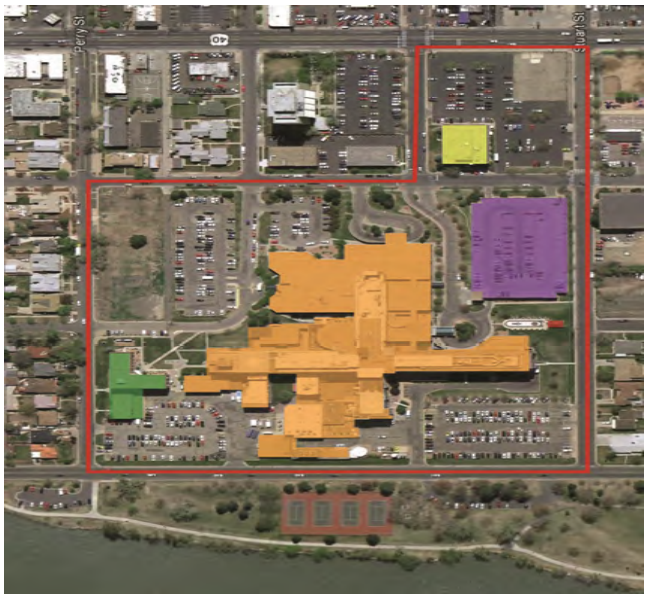
References:
Mayor Adam Paul, City of Lakewood Colorado, (303) 987-7040
Michael Martines, CEO, Martines Palmeiro Construction, (303) 926-4949
Paul Malone, President, DIRC Homes, (720) 642-7307

Saint Anthony Central Hospital Redevelopment, Denver, Colorado

When Saint Anthony's Hospital vacated the 19 acre 1.5 million square foot Denver site from which it provided health care services since 1892, it left a void in the fabric of the City and an opportunity to create an urban neighborhood of lasting value fronting Sloan's Lake, Denver's second largest urban park and 10 minutes from the central business district. As the Principal-in-Charge, Trailbreak Partners principal Doug Elenowitz had lead responsibility for all aspects of the purchase and redevelopment of the former St. Anthony's Hospital Campus. Mr. Elenowitz led purchase negotiations, completion of due diligence, selection of the project team, oversight of master planning, entitlement, community engagement, demolition, marketing and sale of the project. Upon completing the site development, Mr. Elenowitz structured transactions with multiple different builders to support the vision of an authentic neighborhood diversity of development styles. Today, SLOANS, the former hospital campus is a sustainable and vibrant urban mixed-use neighborhood and contains nearly 1,100 new residences both market rate and affordable as well as 150,000 square feet of commercial and retail space.

Total Capitalization: $30 million
Sources of Capital: Private Equity and Metropolitan District Bond Financing
Date Completed: Purchased in January 2012. Completion expected in 2020.

References:
Tracy Huggins, Denver Urban Renewal Authority, (303) 606-4825
Cameron Bertron, Enviro Finance Group, (303) 996-0840



Sloan's Block 3, Denver, Colorado

After the acquisition of Saint Anthony's Hospital and subsequent to land improvement, Trailbreak Partners purchased Sloan's Block 3 as a standalone vertical project. Sloan's Block 3 consists of the redevelopment of a full city block born from the previous master planning and redevelopment of Saint Anthony's Hospital into a catalytic mixed use, mixed income development on the shores of Sloan's Lake. Trailbreak Partners originated the project and completed it in a joint venture structure with Koelbel & Company. The project includes the design, construction and adaptive reuse of the 6 story 1938 vintage Kuhlman Building into 49 multifamily affordable housing units (4% LIHTC) and a 5,200 square foot restaurant combined with a newly constructed 2,500 square foot roof deck. Additionally, the site contains a ground up 2,200 square foot single story restaurant, 27 luxury townhomes, and a 4,300 square foot public plaza for the enjoyment of the community.

Total Capitalization: $41 million
Sources of Capital: Developer Equity, $7 million Tax Increment Financing, $4.6 million LIHTC, City Performance Loan, Bank Debt.
Date Completed: March 2019

References:
Carl Koelbel, Koelbel and Company, (303) 300-8785
Tracy Huggins, Denver Urban Renewal Authority, (303) 606-4825

TEAM'S KEY PERSONNEL

(Select full resumes attached in Exhibit A)

Trailbreak Partners LLC

Doug Elenowitz, Principal, Trailbreak Partners LLC. Doug is a co-founder and Principal of Trailbreak Partners where his focus is development of Colorado real estate. He is an expert in urban redevelopment, having managed the origination, structuring, and execution of urban infill and environmentally complex real estate developments across the United States for nearly two decades. Previously, Doug was Executive Vice President and Director of Development of EnviroFinance Group, a national brownfield development company he joined following its 2011 acquisition of Brownfield Partners, the company Doug co-founded in 2003. In Denver, Doug oversaw redevelopment of the former Saint Anthony Central Hospital, a 19-acre TOD urban mixed-use development. Doug also oversaw redevelopment of the ASARCO Globe Smelter/Crossroads Commerce Center, a challenging public private partnership and one of the nation's most significant remediation and urban redevelopment projects. He is an expert in public finance, having originated more than $35 million in financings including establishing urban renewal areas, tax increment financing agreements, metropolitan districts, HUD loans, and federal and local grants. Doug holds a Bachelor of Science from the University of Georgia and an M.B.A. from the University of Colorado, Leeds School of Business.

Jordan Scharg, Principal, Trailbreak Partners LLC. Jordan is a co-founder and Principal of Trailbreak Partners where he brings finance, advisory, and private equity investing expertise to the organization. Previously, Jordan was a principal at Raindrop Partners where he focused on private equity investments. Prior to Raindrop, Jordan was a managing director at Braddock Capital Management where he was responsible for sourcing and executing deals and managing the firm's private equity investment portfolio. For the seven years before that, Jordan was a director at the Anschutz Investment Company, where he focused on private equity, distressed debt, and turnaround investments. Prior to joining the Anschutz Investment Company in 2002, Jordan was an investment banker in the Leveraged Finance Group at Credit Suisse First Boston in New York, where he focused on high yield financings and leveraged buyouts. Jordan received a B.B.A. degree with high distinction from the University of Michigan Business School.

Ethan Argov, Vice President, Trailbreak Partners LLC. Ethan is Vice President at Trailbreak Partners, where he brings an extensive background in real estate private equity investment and development. Ethan's expertise includes project sourcing, financial analysis, capital structuring, land use, project design and operational oversight. Previously, Ethan was Vice President of Acquisitions for Panther Residential, a Boston based real estate private equity firm that specializes in multifamily real estate investment and development. At Panther, he assisted in the oversight and execution of $400 million worth of acquisition, development and disposition volume. Prior to joining Panther Residential, Ethan worked for Jamestown Properties, an international real estate investment firm headquartered in New York and Atlanta. During his tenure with Jamestown, Ethan assisted in asset management and acquisitions for the company's Boston portfolio consisting of over 1.5 million square feet and 175 commercial tenants. Ethan holds a B.A. from Eckerd College and an M.B.A. with a concentration in real estate finance and development from the University of Colorado at Boulder, Leeds School of Business.

Van Meter Williams Pollack

Tim Van Meter, Firm Partner and Founder. Tim is a leading architect and urban designer whose work has focused on green architecture and sustainable urban design. Tim heads the firm's Denver office, which he established in 1999. He has led the design team on many of the firm's complex and award-winning architecture and urban design projects in Colorado, Hawaii, Texas, New Mexico, and California. He is experienced in a wide range of architecture and urban design projects at various scales, focusing on transit-oriented development, neighborhood design, mixed-use urban infill, and affordable housing.

On the national level, Tim is the Urban Design Adviser for the U.S. Environmental Protection Agency's Smart Growth Program. He also was co-chair of CNU XVII, the 2009 national conference of the Congress for the New Urbanism. A graduate of the University of Colorado School of Environmental Design, Tim has traveled extensively worldwide, studying design, planning, and environmental issues and their effects on communities. He is a community design consultant for numerous communities and organizations, and has extensive experience achieving consensus through the public process. He lectures on issues of urban and sustainable design and development across Colorado's Front Range and throughout the West and Hawaii.

NV5

Nate Torres, PE , Senior Project Manager. A resident of Glenwood Springs, Nate has 13 years of experience as a Structural Engineer and Owner's Representative/Project Manager. Given his design experience as a licensed engineer, Nate excels at preconstruction and design team management and verification of design document coordination. Additionally, his strengths include managing multiple stakeholders, project team management, quality control, general contractor and sub-contractor management, and implementation of sustainable/environmental initiatives. With public and private development experience, Nate understands that every project has unique requirements and constraints and he can effectively manage the owner's risk while maximizing the project's value.

Haselden Construction

Brian Hunt, Regional Director. Brian boasts more than two decades of experience and is continuously exploring new ways to improve and enhance the services Haselden offers to its clients. The experience he brings to his leadership role provides a unique perspective and depth of experience that enables him to relate to clients and employees alike. Notable projects include: Colorado Mountain College Student Success Center, Valley View Hospital (multiple projects), Riverview School, One Snowmass Village, Aspen Valley Hospital, W Hotel, Hotel Jerome.

Community Builders

Clark Anderson, Executive Director. Clark Anderson is co-founder and Executive Director of Community Builders. For the past decade, Clark has helped communities throughout the Western US better align their local planning, transportation, economic development and natural resource management goals. Previously, Clark was the Rocky Mountain Regional Director for the Sonoran Institute and the Water and Land Use program manager for the Local Government Commission. A native of western Colorado, Clark currently lives in Glenwood Springs, Colorado with his wife Kayce, daughter Blu, and dog Truman. He holds a bachelor's degree in biology from the University of Colorado and a master's in geography from the University of California, Davis.

CONCEPTUAL SITE PLAN

Preliminary Thoughts Regarding the Confluence Area

Our approach will build off of the existing vision frameworks identified in the 2017 Confluence Area Plan and U.S. EPA Area-Wide Planning (AWP) project which we feel were well constructed. The overarching goal will be a project that thoughtfully addresses both public and private activities, creating highly desirable places for people. While presenting its own identity given the uniqueness of its location along the Roaring Fork, the Confluence Area should maintain a character that seamlessly ties to the established pattern of the City enhancing physical, functional, and social connections to the core of downtown.

For purposes of this RFQ, we present two (2) concept alternatives based on achieving the vision and goals determined through the planning process varying one key assumption – modification of the RFTA ROW berm. Top of mind in both plans is ensuring meaningful public realm, attention to building size, and overall density within the Confuence Area. While use of subsidies can inform this, generally, in today's market a series of smaller buildings are financially inefficient to construct and manage. Counterbalancing this, it is important to be sensitive to the physical context and market demand to ensure that buildings do not overwhelm the environment and that not more product than is called for is introduced. Therefore, both of these plans look to define larger building footprints that would be more cost effective to build and manage yet not be entirely out of proportion with the character of the surrounding area.

Concept #1- New Infrastructure is a variant of the AWP that explores reservation of the RFTA ROW but elimination of the berm. This approach may offer a "win-win" to stakeholders as berm material is used to raise the Confluence Area and mitigate flood plain constraint, visual and functional connectivity is enhanced between the downtown and river, and the potential for future transit along the RFTA ROW is maintained. The approach creates an efficient and organized pedestrian and transportation network, larger efficient building pads, a greatly enhanced and connected public realm, and enables a central transit station at 7th Avenue and Defiance Avenue serving regional transit needs and creating sustained activity in the area. The program includes up to 25,000 square feet of retail/restaurant space, 25,000 square feet of commercial office space in mixed-use buildings, and 410 residential units in the form of townhome, apartment, and condominiums. The project is parked with 614 parking spaces (498 covered) contained within both a district parking facility adjacent to the lift station and private parking within buildings. With the berm removed, tremendous value is created by opening connectivity at 7th Avenue and Defiance Avenue enhancing the area's

circulation. This program offers tremendous "place making" opportunities with a range of areas to congregate from quiet courtyards adjacent to buildings, large public plazas for events throughout the year, a restored landscape enhancing the natural features of the river's edge, and a direct connection to the river to provide new recreation opportunities and complement activities at Two Rivers Park.

Concept #2 – Keep Infrastructure more closely aligns with Alternative C from the AWP maintaining the RFTA ROW and berm and upgrading the 7th Street underpass. As a result, the physical site constraints result in discrete but connected activity nodes generally aligned along 7th Avenue and west of the RFTA berm.

As in Concept #1, we look to define larger building footprints that would be more cost effective to build and manage yet not be entirely out of proportion with the character of the surrounding area. This efficiency is created in a linear building fronting on the riverfront that is serviced by an access drive on the berm side of the development. Concept #2 includes up to 23,000 square feet of retail/restaurant space, 13,000 square feet of commercial office space in mixed-use buildings, and 340 residential units in the form of townhome, apartment, and condominiums. The project is parked with 461 parking spaces (244 covered) contained within both a district parking facility and private parking within buildings. While circulation is less organic and overall density is lower in Concept #2, reduced site development cost may ultimately outweigh the efficiency and placemaking benefits ascribed to Concept #1. While less connected, this plan does preserve the opportunity to create a large public plaza and event space adjacent to the river, a restored natural landscape along the river edge, and connections to the river to provide new recreation opportunities.

Addenda Acknowledgement

ADDENDUM NUMBERS ONE THROUGH FOUR FOR MASTER DEVELOPER FOR CONFLUENCE AREA
BID NUMBER 2019-013

PRINT OR TYPE YOUR INFORMATION

Name of Company: Doug Elenowitz — Fax: _____
Address: 802 E 19th Ave, Suite 2B — City/State: Denver, CO — Zip: 80218
Contact Person: Doug Elenowitz — Title: Principal — Phone: (720) 263-6255
Authorized Representative's Signature: _____ — Phone: (720) 263-6255
Printed Name: Doug Elenowitz — Title: Principal — Date: 5/20/19

EXHIBIT A: SELECT TEAM RESUMES

DOUGLAS A. ELENOWITZ

CAREER SUMMARY

Real estate development executive and successful entrepreneur with 17 years' experience managing interdisciplinary teams of real estate, engineering, construction, financial, and legal professionals to acquire real estate and execute complex redevelopment projects in primary and secondary markets across the U.S. Specific expertise in:

PROFESSIONAL EXPERIENCE

TRAILBREAK PARTNERS, LLC, 2014 - Present — DENVER, COLORADO
Co-Founder and Principal

- Direct responsibility for establishing a real estate platform at private investment and advisory firm. Focus is on value-add income acquisitions and redevelopment projects in urban areas or mountain communities with high barriers to entry in Colorado.
- Current Projects include –Development of a $65 million 280 unit Class-A TOD apartment building in Lakewood, Colorado, capitalized to maximize Opportunity Zone benefits; development of a $50 million, 178 unit for-sale TOD townhome community in Lakewood, Colorado; $30 million apartment, restaurant, and townhome mixed-use redevelopment of Block 3 at the former St. Anthony's Hospital, Denver, Colorado; 247 unit mixed use townhome community in Longmont, Colorado, Fee Developer/Owners Representative of Clear Creek Transit Village, a 21-acre mixed-use TOD site in Adams County, Colorado.

ENVIROFINANCE GROUP, LLC, 2011 - 2013 — DENVER, COLORADO
Executive Vice President and Director of Development

- Primary responsibility to originate, negotiate, close and execute redevelopment projects undertaken by EFG. Duties included deal sourcing and negotiation, pre-acquisition due diligence, financial modeling, risk management, community and political outreach, entitlement, design, permitting, remediation, demolition, construction, and disposition of assets.
- Principal-in-Charge of the redevelopment of the former St. Anthony Central Hospital Campus, a $30 million seven (7) block residential mixed-use TOD project in Denver, Colorado with direct responsibility project sourcing, underwriting, purchase negotiation, retention of consultants and contractors, entitlement, public finance, construction oversight, and land sales to master plan asset class builders.
- Principal-in-Charge of the former Asarco Globe Smelter, a $25 million public/private partnership to remediate and master develop an 80 acre industrial park in Denver and Adams County, Colorado.

BROWNFIELD PARTNERS, LLC, 2004 - 2011 — DENVER, COLORADO
Co-Founder and Partner

- Successfully started and managed growth of the company to complete $50 million in redevelopment work, $2.5 million in advisory services, and the successful sale of the company to EnviroFinance Group, LLC in January of 2011.
- Co-managed the evaluation of more than 100 General Motor's facilities to establish the Debtor-in-Possession (DIP) financing requirements related to legacy real estate holdings and environmental liabilities as court approved advisor to the General Motors bankruptcy proceedings.
- Partner-in-Charge of the Dahlia Square Shopping Center redevelopment, a $9 million a public/private partnership with the Denver Urban Renewal Authority.

THE LANDBANK GROUP, INC., *Real Estate Project Manager* 2002 - 2004 — DENVER, COLORADO
ZEBRA PROPERTY FUND LP., *Associate* 2001 — NEW YORK, NEW YORK
ZURICH US, *Environmental Underwriter* 1997-2000 — ATLANTA, GEORGIA

EDUCATION

- Master of Business Administration, Leeds School of Business, University of Colorado, Boulder, Colorado, 2002
- Bachelor of Science, Environmental Health Science, University of Georgia, Athens, Georgia, 1996

REPRESENTATIVE PRESENTATIONS

- Bisnow – Opportunity Zone Conference, March 2019
- Chair, ULI Building Healthy Places Workshop Quigg Newton Homes, September 2018.
- Public Private Partnerships and Public Finance, 2017 AICPA Construction & Real Estate Conference.
- Mineral Avenue Light Rail Station: ULI Technical Advisory Panel (TAP), Panel Member, Development and Public Finance, April 2014.
- West Market and St. Anthony Redevelopment – Presentation, ULI Colorado TOD Marketplace II: West Line Edition, Spring 2013.
- ASARCO Redevelopment: Straddling Communities, Politics and Vision, Colorado Brownfields Conference, Fall 2011.

PROFESSIONAL AFFILIATIONS, ACCOMPLISHMENTS, & AWARDS

- Board Member, Executive Committee, Foundation for Sustainable Urban Communities.
- Mentor, Real Estate Diversity Initiative, Urban Land Institute Colorado and the Denver Office of Economic Development, 2013- 2015.
- Member, 2013 Leadership Exchange (LEX), Denver Metro Chamber Leadership Foundation.
- Appointee, Denver Public Schools 2008 and 2012 Citizen's Bond and Mill Levy Oversight Committee.
- Leadership Denver Class of 2011, Denver Metro Chamber Leadership Foundation.
- Industry's Next Innovator Award, 2009 – University of Colorado Real Estate Center.

PARTNER RESUMÉ

Tim Van Meter

Architect, AIA / Urban Designer

PROFESSION

Architect, Licensed in the States of Colorado, California, Utah, Texas & Hawaii

TEACHING

Adjunct Professor of Sustainable Real Estate Development

University of Colorado Boulder - Leeds School of Business MBA Program

EDUCATION

- University of Colorado, Boulder; Bachelor of Environmental Design
- University of Colorado, Denver; Graduate Studies in Architecture & Planning
- Miami University, Europe; Graduate Studies in Urban Design

PERSONAL PROFILE

Tim Van Meter, a firm partner and founder, is a leading architect and urban designer whose work has focused on green architecture and sustainable urban design. Tim heads the firm's Denver office, which he established in 1999. He has led the design team on many of the firm's complex and award-winning architecture and urban design projects in Colorado, Hawaii, Texas, New Mexico, and California. He is experienced in a wide range of architecture and urban design projects at various scales, focusing on transit-oriented development, neighborhood design, mixed-use urban infill, and affordable housing.

On the national level, Tim is the Urban Design Adviser for the U.S. Environmental Protection Agency's Smart Growth Program. He also was co-chair of CNU XVII, the 2009 national conference of the Congress for the New Urbanism.

A graduate of the University of Colorado School of Environmental Design, Tim has traveled extensively worldwide, studying design, planning, and environmental issues and their effects on communities. He is a community design consultant for numerous communities and organizations, and has extensive experience achieving consensus through the public process. He lectures on issues of urban and sustainable design and development across Colorado's Front Range and throughout the West and Hawaii.

AWARDS

- ULI - Winner - Colorado Impact Award, Fire Clay Lofts, 2013
- ULI - Winner - Jack Kemp Award, Fire Clay Lofts, 2010
- APA Hawaii Chapter - Sustainability Award, Waipahu Neighborhood TOD
- AIA - Colorado Young Architect's Award, Railyard Lofts 2008
- National AIA/HUD Housing Secretary's Award, Valencia Gardens 2008
- AIASF - Special Commendation Award, Valencia Gardens 2007
- SF Busines Times - Winner Affordable Housing, Valencia Gardens 2007
- Gold Nugget - Merit Award Best Affordable Housing, Valencia Gardens, 2007
- ULI - Award for Excellence, Belmar, 2006
- AIA - Colorado Architect's Choice Award, Railyard Lofts, 2006
- BSA - Boston Society of Architects First Prize, Westwood Square, 2005
- EPA - National Smart Growth Award, Belmar, 2005

VAN METER WILLIAMS POLLACK LLP

BTS | PROGRAM MANAGEMENT
Rifle, CO
Nate.Torres@NV5.com
720.936.8787

EDUCATION
B.S., Chemical Engineering & Petroleum Refining, Colorado School of Mines, Golden, CO

EXPERIENCE
13 years

REGISTRATIONS
Licensed Professional Engineer, CO #43380, NM #25475

Wilderness First Responder (WFR)

Outdoor Emergency Care (OEC)

Advanced CPR & First Aid

AFFILIATIONS
Member, International Code Council — Colorado Chapter

Member, American Society of Civil Engineers (ASCE)

NATE TORRES, PE

Senior Project Manager

Nate has 13 years of experience as a Structural Engineer and Owner's Representative/Project Manager. Given his design experience as a licensed engineer, Nate excels at preconstruction and design team management and verification of design document coordination. Additionally, his strengths include managing multiple stakeholders, project team management, quality control, general contractor and sub-contractor management, and implementation of sustainable/environmental initiatives. With public and private development experience, Nate understands every project has unique requirements and constraints and he can effectively manage the Owner's risk while maximizing the project's value.

Project Experience

MUNICIPAL

PEDESTRIAN MALL IMPROVEMENTS
CITY OF ASPEN
Aspen, CO

NEW CASTLE WASTE WATERPPLANT
CITY OF NEW CASTLE
New Castle, CO

GLENWOOD SPRINGS WASTE WATER FACILITY
CITY OF GLENWOOD
Glenwood, CO

DONEGAN AVENUE
CITY OF GLENWOOD SPRINGS
Glenwood Springs, CO

BLACK DIAMOND MINE ROAD
GARFIELD COUNTY
Glenwood Springs, CO

RIFLE WASTE WATER PLANT
CITY OF RIFLE
Rifle, CO

200 EAST REDS ROAD
PRIVATE OWNER
Aspen, CO

RFTA RIO GRANDE TRAIL BRIDGES QA/QC
RFTA
Roaring Form, CO

K-12 EDUCATION

BASALT HIGH SCHOOL RENOVATION & EXPANSION
ROARING FORK SCHOOL DISTRICT
Basalt, CO

BRIDGES HIGH SCHOOL RENOVATION & EXPANSION
ROARING FORK SCHOOL DISTRICT
Carbondale, CO

SOPRIS ELEMENTARY PLAYGROUND ENHANCEMENTS & SITE GRADING UPGRADES
ROARING FORK SCHOOL DISTRCT
Glenwood Springs, CO

HOSPITALITY

WESTIN RESORTS BASE LODGE EXPANSION
WESTIN
Snowmass, CO

MONARCH RESORT BASE LODGE EXPANSION
MONARCH SKI RESORT
Salida, CO

HOTEL JEROME RENOVATION & EXPANSION
AUBERGE RESORTS & FRIEDKIN GROUP
Aspen, CO

** Project under previous employment*

EXHIBIT B:
ADDITIONAL RELEVANT EXPERIENCE & QUALIFICATIONS

Current Advisory:
Clear Creek Transit Village

Located at the Gold Line Clear Creek/Federal commuter rail station, the Clear Creek Transit Village TOD site will incorporate a mix of residential and commercial uses and is designed to maximize accessibility to public transport and natural amenities. Only a 7 minute ride to Denver's Union Station, the sustainable transit village will offer a unique amenity rich lifestyle option and remarkable access to more than 400,000 jobs, entertainment, and services.

As a local representative on behalf of the New Orleans based ownership group, Trailbreak Partners Principal Doug Elenowitz is working with Adams County, and other stakeholders to finalize land use, plan and finance infrastructure, and with the brokerage community to identify builders, and to position the project's first phase to break ground shortly after the Gold Line opens for service in late 2018. Trailbreak Partners is facilitating an initial project with acclaimed Denver based developer Dana Crawford and in addition has the ability to develop portions of the property in conjunction with current ownership.

http://clearcreektransitvillage.com/

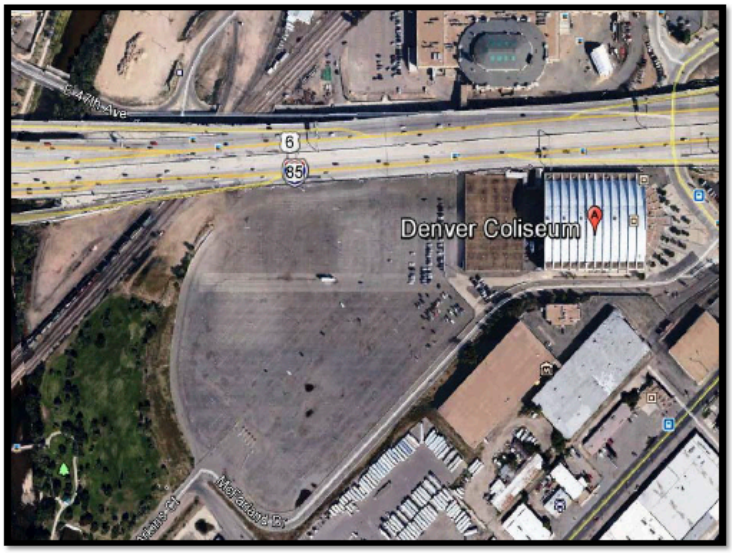
Prior Advisory:
National Western Center/Denver Coliseum

in 2015, the foundation was laid for the National Western Center Master Plan by the City & County of Denver, Colorado State University, Western Stock Show Association, Denver Museum of Nature & Science and History Colorado. The Plan established a long-range vision, guiding principles, and goals for the redevelopment of the National Western Complex and Denver Coliseum, and the revitalization of this historical region of Denver.

An Advisor on the team leading spearheading the Master Plan, Doug Elenowitz of Trailbreak Partners completed an analysis of the Denver Coliseum, a 30.4 acre property improved with a 170,000 square foot indoor arena with a focus on developing recommendations its future.

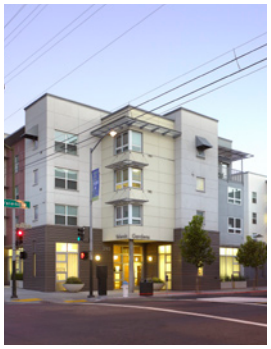
The study included an evaluation of current real estate market factors, the creation of several alternative land use concepts for a redeveloped Denver Coliseum property, an approximation of the market value for each alternative, and recommendations on the highest and best use.

Acknowledging the environmental impacts known to exist in the area, the study introduced strategies to support the efficient and timely remediation and development of the Coliseum property.



VAN METER WILLIAMS POLLACK LLP

Environmentally intelligent building design and urban planning are crucial to the world's future.



Van Meter Williams Pollack is an award-winning Architecture and Urban Design firm based in San Francisco and Denver. Since 1989 we have provided a full range of comprehensive design and planning services for a variety of project types, scales and clients. The partners and staff bring their knowledge and expertise to all aspects and phases of our projects.

VMWP's comprehensive and innovative design approach considers environmental, social, economic, and client needs to create buildings and communities that resonate with people. From small towns grappling with pressures of sprawl, to major urban centers requiring infill and redevelopment, one of our strengths is the ability to work in the variety of communities that make up diverse, growing regions.

OUR PRINCIPLES

- **meet** the unique requirements of every client
- **engage** the communities in which we live and work
- **work** within the realities of economic constraints
- **create** the highest quality design and planning
- **commit** to sustainable design principles in all planning & design

Van Meter Williams Pollack's Architecture and Urban Design projects emphasize pedestrian and transit-oriented development patterns that serve a community's economic, social and cultural needs. Our success in master planning, community design, mixed-use developments, and revitalizing urban infill sites demonstrates that there are alternatives to the outward expansion of cities, towns and suburbs. High-density urban infill, transit-oriented development, and pedestrian-focused streetscapes support sustainable development.

We have advanced economically viable plans that address transportation and infrastructure, community development, population growth and diversity, historic preservation, and sustainable growth patterns to a wide range of clients throughout the United States. Our greatest assets are an understanding of land use patterns, development types, and appropriate pedestrian environments for each community; our commitment to an open, clear, and direct process; and our ability to implement a community vision.

MIXED-USE DEVELOPMENT

Mixed-use projects connect communities and create pedestrian-friendly neighborhoods where people can drive less and use resources more efficiently. The right mix, concentration and placement of uses can spark a neighborhood's identity. VMWP specializes in designing projects that combine living, working, shopping and leisure, within one shared environment. Access to local necessities invites people to walk more, drive less, brings life to the street, and supports both business and the environment.

INFILL DEVELOPMENT

Infill development presents an opportunity to transform underused urban areas into inviting public realms. Responsive infill gives a place new life, making it more functional, exciting, beautiful and sustainable, while at the same time preserving its character and history.

Our aim is to create straightforward, comfortable spaces, using good design and intimate scale to evoke a unique sense of renewal. Projects as diverse as the Rail Yard Lofts in Denver and 55 Laguna in San Francisco highlight our approach to infill development.

AFFORDABLE HOUSING

We plan, design and build a wide variety of affordable housing from high-density urban communities to small-lot single-family housing. Our work has received numerous design awards in national and local design competitions. Most recently, our Valencia Gardens Hope VI project was awarded the 2008 National AIA/HUD Secretary's Housing and Community Design Award for Excellence in Affordable Housing. As cost and quality of life are primary concerns in our housing, we use simple elements of construction, building materials and scale to create beautiful spaces.

DEVELOPMENT FEASIBILITY

We specialize in quick, comprehensive studies to assess the layout and feasibility of development opportunities. Our practical understanding of the economic and implementation issues involved lays a firm foundation for all of our projects. **VMWP's** architects and urban designers bring in-depth experience and knowledge of development prototypes, project phasing and implementation techniques to this process.

COMMUNITY PROCESS

Community involvement is essential to any project's success. As part of our commitment to community design, we promote the active participation of a variety of stakeholders in the planning process. We work with both market rate and non-profit, community-based developers and jurisdictions to ensure that this participation is an inclusive, efficient, effective and (most of all) fun process. VMWP has developed an engaging community participation model that effectively uncovers the needs and concerns of future residents and the surrounding neighborhood. This approach also elicits community-driven alternatives, which facilitate consensus on design and other community issues. Often, the most important discussions are not about technical issues, but instead revolve around "concern with change," or concern for creating a "sense of place."

TRANSIT-ORIENTED DEVELOPMENT

Our transit-oriented projects combine mixed-use and infill development with pedestrian-friendly streets close to public transportation. These comprehensive plans create lively villages that inspire people to buy locally, use more public transit and drive less. Our TOD projects have included land use plans and urban design guidelines, master plans for new mass transit station areas, and infill visions for park-and-ride lots. VMWP works with municipalities to develop implementation strategies as well as guidelines with which to evaluate development proposals.

MASTER PLANNING & SPECIFIC DESIGN

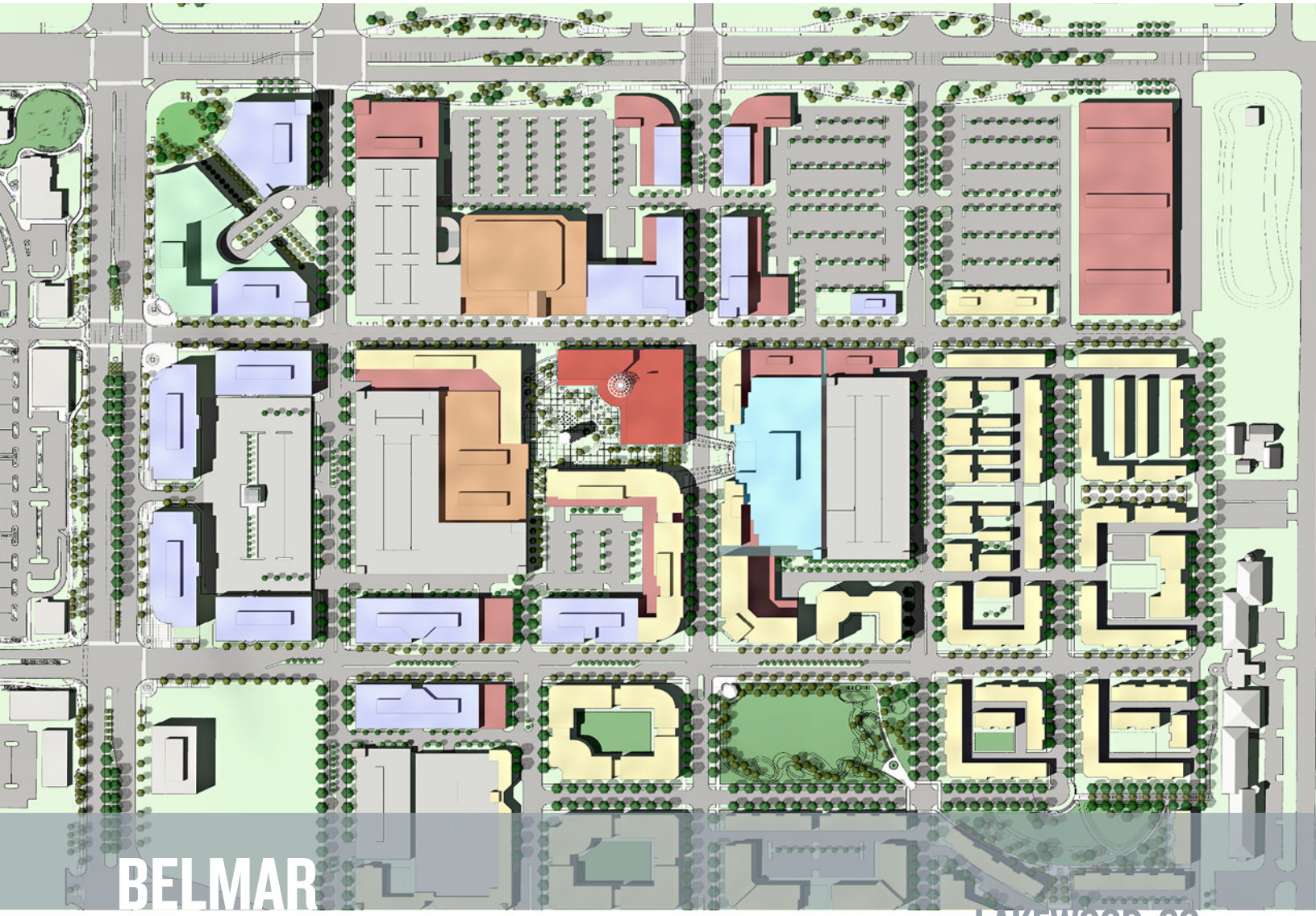
VMWP's master planning experience includes plans for new town centers, neighborhoods, mixed-use urban infill and redevelopment projects. Our pedestrian-oriented approach to master planning and urban design creates a dynamic urban environment. Corridor planning and streetscape projects range in scale from land use and design analysis along regional thoroughfares and local networks, to local commercial streetscape designs focused on improving the pedestrian experience and the commercial viability of districts and neighborhoods.

DESIGN GUIDELINES

We build on the best qualities of a place to strengthen and enhance the existing character of a neighborhood, a street corridor, or an entire city. The process of setting such standards is a crucial way for a community to transform its vision into a reality, while creating an invaluable tool to both shape and accommodate a city's future. VMWP has written guidelines and created development prototypes for single and multi-family residential development, neighborhood commercial centers, large-scale new development, and transit villages.

STREETSCAPE DESIGN

Great streets happen when pedestrians, cars and bicycles all get along. Our streetscape projects focus on making streets more comfortable to walk and gather, and better connected to a variety of retail districts and neighborhoods. When there are inviting places to sit, linger and enjoy private or social time, people feel more connected to their communities.



Multi-Purpose, Thoughtful Planning Creates Community

DESCRIPTION Belmar is the redevelopment of a failed 1960's 100 acre enclosed shopping mall into a vibrant urban village. The site is bordered by two high volume state highways adjacent to Lakewood's civic center, community park and single family neighborhoods. The urban design is organized as a traditional street grid that emphasizes pedestrian movement with shops oriented closely to the street. The program calls for: 777,000 sf. of retail; 868,000 sf of office space; a 75,000 sf cinema; a 190,000 sf hotel;1,048 residential units in 8 prototypes; community parks and plazas. VMWP was the lead for the urban residential and assisted in urban design, mixed use and commercial design. VMWP was the Prime Architect on Belmar Urban Apartments and 7133 West Virginia at Belmar.

VISION Belmar was envisioned as a vibrant, mixed-use downtown with shopping, dining, cultural amenities, offices and a wide variety of rental and for sale housing options.

PROJECT REQUIREMENTS Build a downtown with a real sense of community, reconnect the site to the surrounding area, celebrate the public rather than the private realm, and create a diverse environment that is more pedestrian and transit rather than automobile oriented.

Client: Continuum Partners, LLC

Building size/acres:
104 acres

Number of units—density:
1300+ Residential units, 1.9 M Sq. Ft. Commercial

Completion: Phase I completed 2004, Total build out 2012

Construction est.: Phase I $230M, Total build out $750M

Contact:

Continuum Partners, LLC
1430 Wynkoop Street Suite 100
Denver, CO 80202

DESIGN FEATURES

- Great urban streets designed for maximum walkability
- 9 acres of plazas, parks, and public spaces
- Extensive public art program and a major cultural facility

AWARDS

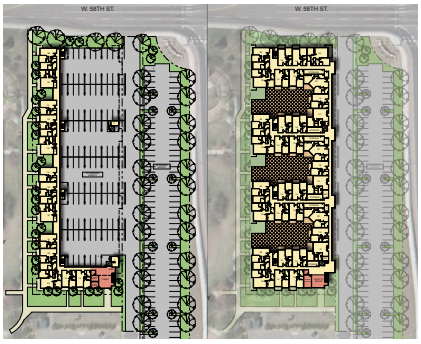
- CNU Charter Award 2006
- ULI Award for Excellence 2006
- EPA Award for Smart Growth Achievement 2005

PARK PLACE OLDE TOWN

ARVADA, CO

Light Rail is Catalyst for High Density Housing in Olde Town

DESCRIPTION Development of the new light rail station in Olde Town is the catalyst for growth in the Town of Arvada. Park Place Olde Town is envisioned as the model of higher residential density to attract new residents to discover the dynamic Town. The five-story multifamily residential building will be the first, five-story building in town and will provide 152 dwelling units. The units will have views of the adjacent McIlvoy Park and most units will enjoy views of the Rockies to the west and downtown Denver to the southeast. The units are organized around three raised courtyards (each unique in character) which act as extensions of the park and open views from the courtyard units. The five-story building's mass takes it's cues from the idea of "Familiarity" with the nearby "Olde Town" feel of 2 story masonry buildings. The units at grade level with the park are scaled to feel like two story buildings that include walk-up entries and patios fronting the park. The building exceeds energy code requirements with high efficiency building envelope, appliances, and HVAC system. Certified green materials are incorporated into the framing as well as finish materials.



VAN METER WILLIAMS POLLACK LLP

La Peer Hotel
West Hollywood, CA

Cleveland Clinic Cancer Center
Cleveland, OH

Aspen Police Department
Aspen, CO

WHY NV5?

NV5 is a leading provider of professional and technical engineering and consulting solutions for public and private sector clients in the infrastructure, construction, real estate, and environmental markets. The company primarily focuses on five business verticals: Construction Quality Assurance (Materials Testing and Inspection), Energy, Environmental, Infrastructure and **Program Management.**

With a staff of more than 2,000 and more than 100 offices nationwide and abroad, NV5 is able to provide services supporting all aspects of a project's life cycle from conceptual or preliminary design through facility operations.

Our clients trust us to provide integrated engineering, consulting, and management solutions that enable success regardless of project size and complexity.

PROGRAM MANAGEMENT

Our services are based on the core principles of efficiency, transparency and client-centered services, in which innovation, creativity and entrepreneurial initiative are encouraged. We pride ourselves on maintaining the personal feel of working with a small company while having the stability and backbone of a national firm.

"The quality of work, the level of commitment to the project and our community, and the experience of working with our on-site team are all reasons that I would gladly work with NV5 again."

Dr. Wendy Wyman, Superintendent
Lake County School District R-1

ENR Engineering News-Record #45 Top 500 DESIGN FIRMS 2018

2017 CSE CX GIANTS Top 25 #7

2017 CSE MEP GIANTS Top 100 #44

100 LOCATIONS WORLDWIDE
2,000 EMPLOYEES
1,300 TECHNICALLY LICENSED

Top Ranked #1 2018 HOT FIRM ZWEIG GROUP

FORTUNE #13 Fastest Growing Companies 2017

#25 Top 100 Pure Designers 2018 ENR Engineering News-Record

BD+C 2017 #1 Top 30 Hotel Engineering Firms

PROGRAM MANAGEMENT OVERVIEW

Brickell City Centre
Miami, FL

Cambridge Inpatient Tower & Vertical Expansion | Kansas City, KS

Thurgood Marshall Middle School
Lynn, MA

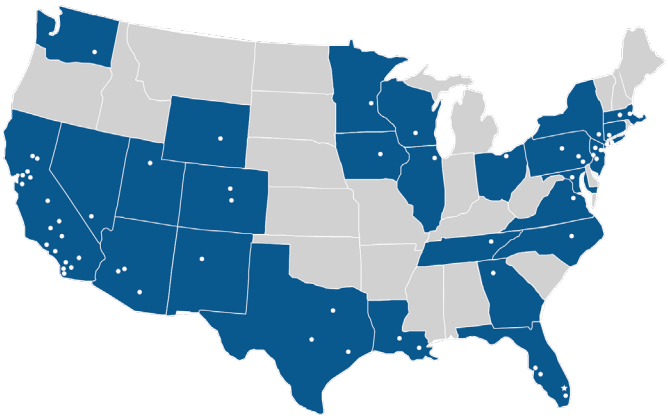
PROGRAM MANAGEMENT SERVICES

Project Initiation/ Pre-Design	Pre-Construction/ Design Management	Construction	Project Close-Out
• Property Condition Assessments • Facility Analysis • Project Scoping • Public Outreach • Pro-forma Support • Program/Need Assessments • Master Schedule & Budget Development	• Team Selection • Consultant Team Coordination • Constructability Reviews • On-site/Off-site Scope Coordination • Permitting • Sustainability • Project Cost Accounting • BIM Management • Cost Estimating	• Project Controls • Contract Administration • Procurement • Change Order Validation • Project Cost Accounting • Schedule Management • QA/QC Oversight • Submittal & RFI Coordination • FF&E Management • Status Reports • Media Relations	• Training • Transition Planning • End User Move-in • Accounting Close-Out • Punch List Oversight • Warranty Management • Expert Testimony • Litigation Support

MARKET SECTORS

- **Education**
- **Healthcare**
- **Hospitality**
- **Industrial**
- **Mixed Use**
- **Municipal**
- **Office**
- **Residential**
- **Retail**
- **Senior Housing**

NV5 OFFICES NATIONWIDE



CONTACT US

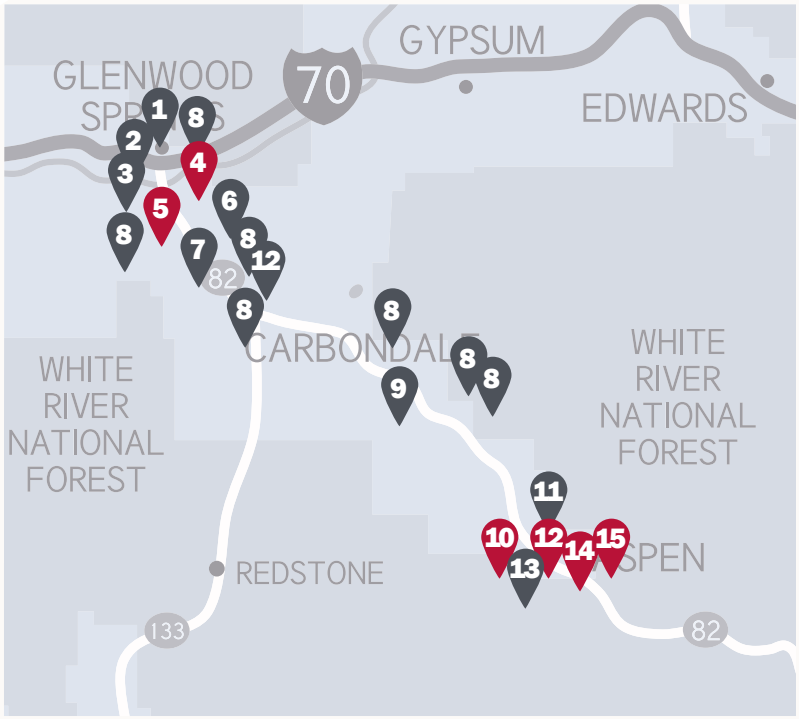
John Bills, LEED® AP
2650 18th Street, Suite 202
Denver, CO 80211

Office: 303.220.6400
Email: John.Bills@NV5.com

WE ARE PROUD OF OUR LEGACY OF SUCCESS BUILDING IN THE ROARING FORK VALLEY. SINCE OUR FIRST PROJECT IN THE VALLEY IN 1989, HASELDEN HAS MAINTAINED A STRONG PRESENCE BUILDING WHERE WE LIVE AND RAISE OUR FAMILIES. WE OPENED OUR OFFICE IN GLENWOOD SPRINGS IN 2015 TO BETTER SERVE THE CLIENTS WHO CALL THE ROARING FORK VALLEY OR GREATER WESTERN SLOPE THEIR HOME.

HASELDEN'S ROARING FORK VALLEY SUCCESSES

1: Haselden Western Regional Office
2: Garfield County Detention Center
3: Colorado Mountain College Student Success Center
4: Valley View Hospital (multiple projects)
5: Riverview School
6: St. Stephan's Catholic Church
7: Holy Cross Energy Administration Building
8: Roaring Fork School District Six Schools
9: Willits Medical Center
10: One Snowmass Village
11: Burlingame Ranch Affordable Housing
12: Aspen Valley Hospital
13: Aspen Elementary and Middle School
14: W Hotel
15: Hotel Jerome



4 VALLEY VIEW HOSPITAL

A *client for life* since 1994, Haselden has constructed multiple additions and renovations at Valley View Hospital, including but not limited to their Pharmacy, Catheterization Lab, 2nd Floor Kitchen, 3rd Floor Brain & Spine, 4th Floor Build Out, MRI, and Medical Office Building.

5 RIVERVIEW PK-8 SCHOOL

Another longtime partnership, since 1993, Haselden has built 7 different schools for the Roaring Fork School District. The most recent project, Riverview School, was completed in 2017, and is designed and built to accomodate 450 students, allowing for future community growth.

10 ONE SNOWMASS VILLAGE

One Snowmass includes 41 condominiums totaling approximately 80,000 SF of residential square footage, as well as four employee housing units. The project also includes significant amenity space, as well as a clinic to address minor to moderate ski and snowboard injuries.

12 ASPEN VALLEY HOSPITAL

Haselden has completed more than $125M in construction for Aspen Valley Hospital since we initiated the relationship in 2009. In addition to two major expansions, renovations, and infrastructure, Haselden built affordable housing units on site for hospital employees.

14 W HOTEL

This 128,000 SF, 4-story building is located at the base of Aspen Mountain in the heart of downtown. The hotel will have 93 rooms, 11 of which will be fractional ownership units.

15 HOTEL JEROME

Haselden has completed two separate renovations to the historic Hotel Jerome, noted on the National Register of Historic Buildings. Renovations and additions address both rooms and amenity areas.

TRAILBREAK
PARTNERS

July 29, 2019

Jennifer Ooton
Assistant City Manager, Economic and Community Development
City of Glenwood Springs
101 W. 8th Street
Glenwood Springs, CO 81601

Karl J. Hanlon
City Attorney
City of Glenwood Springs
101 W. 8th Street
Glenwood Springs, CO 81601

RE: Comments to Supplement the July 16, 2019 Confluence Area Call

Dear Ms. Ooton and Mr. Hanlon,

We appreciate the opportunity earlier this week to further discuss with you our proposal to serve as Master Developer of the Confluence Area pursuant to a public private partnership (PPP) with the City of Glenwood Springs. This letter is offered as a supplement to add additional commentary to the three questions the City presented for discussion during the July 16, 2019 call.

A restatement of the three (3) questions asked as we understand them and our associated commentary are as follows:

1. How do we envision the financing of the project? What tools are we considering that might be brought to bear on the project?

A central assumption to the Confluence Area financing is that if natural market forces were sufficient to support the redevelopment of the property in the manner desired by the City and its residents, then a PPP would not be necessary. Consequently, we anticipate that the overall plan of finance will include not only traditional developer sponsored debt and equity financing but will also require the use of public finance tools that may including tax increment financing (TIF) in coordination with the Downtown Development Authority or through creation of an Urban Renewal Area and/or Title 32 Metropolitan District bond proceeds. Furthermore, if affordable housing is desired we would foresee including low-income housing tax credits (LIHTC), state housing funds, and deferred developer fees into the plan of finance for that specific asset. Not having yet confirmed a definitive Master Plan or identified City priority projects within the Confluence Area, we speak to project financing at a conceptual level. Finally, both Trailbreak Partners and Community Builders have experience in working with Federal and State low interest loan and grant programs and we will explore the availability and applicability of such sources of funds during project underwriting.

When underwriting a master development of this nature we typically evaluate a site development financial model as discrete from the vertical model for each anticipated building. We have found that this approach simplifies the identification of economic gaps in the project and is sensitive to the reality that

land is financed differently than individual vertical projects. In simplistic terms, one estimates the retail value of finished pads and subtracts the cost required to complete those finished pads. As presented during our interview, at high level and in absence of complete data, we are encouraged that our initial rough order of magnitude (ROM) estimates suggest that the hard and soft costs to develop the site may be proximally equivalent to the value associated with the finished pads identified within the conceptual site plan. If true, the potential exists that pre-arranged contracts to vertical projects (i.e. contracting for revenues derived from the sale of finished pads) could be used as a source of repayment to facilitate financing of the site development. Alternatively, we have worked in structures in which escrowed funds associated with the forward sale of finish pads are released similar to a construction loan to fund site improvements. If and to the extent after financing there is a remaining gap in the capital necessary to complete the site development, the project might look to other sources of funding such as tax increment or metro district bond revenue as a source of project financing. An important assumption to the plan of finance is that the City will contribute the land to the project. Common in PPP's, municipal partners as property owners may reasonably consider the new property and sales taxes as well as civic and social outcomes of a project as a return on investment. Furthermore, on select verticals, we will explore the possibility a subordinated position associated with land that may afford the City future economic participation in the outcome of such project. Should the City have a different position on land contribution, it may be possible to solve. However, it will increase the overall financing challenges of the project.

Our approach to underwriting also includes developing a financial model for each individual building project contemplated in the Master Plan. This allows us to complete a land residual analysis to determine what price a builder can pay for a finished pad while maintaining an economically viable vertical project. The land residual analysis, in addition to comparable sales of similar land, is used to inform the revenue side of the site development model discussed above. It is worth noting that it is possible for an economic gap to exist in a vertical project as well. The cause of gaps in vertical projects can result from many factors including excess construction costs or fees, insufficient rents or sales revenues, or policy driven projects wherein a certain outcome is desired despite the absences of market conditions to support the use.

In our experience, the sources of funding to resolve economic gaps in real estate are somewhat fungible; meaning sources of public finance may be more effective in one project versus another. For example, land is not eligible for generating tax credits in LIHTC projects and grant income can be punitive, therefore a land lease or other structure may be more financialy efficient. In that land revenue associated with the LIHTC site would then be reduced, it might increase the gap in another part of the project where the assignment of TIF could be more effective. Ultimately it is our intention that after establishing the Master Plan in collaboration with the City and identifying the scope of economic gaps, if any, we would work to match the most efficient financing tools to each respective project.

A few final thoughts that impact financing. First, as discussed during our City Council Interview, while it is Trailbreak Partners' intention to serve as Master Developer and Vertical Developer for many buildings within the Confluence Area, it is not our intent to vertically develop 100% of the Master Plan projects. We believe this enhances diversity in the vertical realm, leading to a more authentic project and provides flexibility in project financing and the timing of delivery.

2. What do we think the partnership with the City looks like? It was intended that this question lean more heavily towards the "financial" partnership vs. regulatory.

As Master Developer in a PPP with Glenwood Springs, we anticipate the relationship with the City to be collaborative and engaged. Our goal is to align interests and incentives and not unfairly transfer risk to one party or the other. While we will lead a process and drive decision making to support the

ultimate objectives, we are not so presumptuous to believe we hold the monopoly on good ideas. Rather, we seek to be partners with the City in determining and executing the Master Plan. We are sensitive to the dynamics of PPP's and the often divergent interests of stakeholders and are prepared to lead through the challenges common in the PPP process. We see our role through the project as an objective partner in helping to present alternatives, the associated opportunities and constraints, and support thoughtful and timely decision making. We will seek the assistance of the City in key areas including engagement with key agencies (e.g. RFTA, School District, Garfield County), project financing, and to navigate the regulatory processes necessary to complete the project. Our objective is to structure the PPP to align interests such that there is a shared sense of urgency and equitable sharing of risk.

Regarding the financial partnership, the objective is to limit cash requirements and complete the project in large part with land contribution and, to the extent necessary, participating with the use of public finance tools. Being fully transparent, at this pre-project stage it is uncertain if there would be a need for the City to bring other capital to the table to complete the horizontal development, but as discussed in the question about the plan of finance, early indications are favorable and it will remain our collective objective to avoid such a requirement.

Notwithstanding this overarching goal, it is our observation that project uncertainties exist at this time, many of which the outcome are beyond the control of our project team, and should the project not advance would inequitably convey financial risk to our project team. Therefore, it would be our proposal to negotiate a Development Agreement structure wherein the project team is compensated for its time and expenses of completing that work which benefits the City and the Confluence Area until such time the project has advanced to a risk profile associated with more traditional development. To be clear, such a structure is not intended to be a profit center, rather a risk mitigant as it is acknowledged that at this stage the Confluence Area lacks market viability without support, requires significant site engineering data, and while supported generally by the City, lacks community and political consensus as to use and entitlement. Additionally, alignment of interests and a shared sense of urgency is vital to the success of a PPP, and our experience has taught us that in absence of such an investment early on, the potential for the lack of timely participation and project advancement on the part of the City may exist. To be equitable and transparent, the structure would not be that of a “blank check”; rather, tied to a mutually agreed upon scope, schedule and budget to receive approval of a PUD, Site Plan, Plat and any necessary components of public finance. The scope and schedule will be progressive and designed with cost management in mind such that information critical to major design decisions and/or cost assumptions is prioritized. Under this concept, substantially all of these costs, which will be included in the overall project budget, would therefore be eligible to be recaptured by the City as the project moves forward. Once the predevelopment regulatory and political risk under the control of the City has been ameliorated, project execution risk is largely transferred to the development team and borne by the Master Developer and its financial partners. For example, provide project approvals have been received the cost responsibility for preparation of Construction Development (CD’s) would be borne by the Master Developer.

After entering into a Development Agreement, we anticipate the work to be completed will be that which is necessary to i) complete a Rezoning to Planned Unit Development (PUD), Site Plan, and Preliminary Architectural Plan (collectively, “Entitlements”), and ii) to arrange for required sources of public financing (e.g. approval of a Metropolitan District Service Plan, TIF Agreement).

Generally, this work would include:

<u>Background Investigations</u>
Meetings with Confluence Area stakeholders including City Staff, Councilmembers, Downtown Development Authority, School District, RFTA, Garfield County, and select community and business leaders.

Stakeholder Engagement

Stakeholder engagement, including community, business, and civic is a critical element of the master planning process. We will design an engagement strategy for the Confluence Area that responds to the needs and is aligned with the project schedule and milestones in an effort to build consensus on the Master Development plan. We will also explore strategic partnerships with regional stakeholders who may have critical needs related to operations or labor that might be address by development within the Confluence Area.

Technical Due Diligence

Background data collection required for design, cost estimating, and development of the property will be necessary. Items such as survey, geotechnical investigations, civil and transpiration studies will be completed. This information is required for design of the property and also specifically needed for the Entitlement application and approval process.

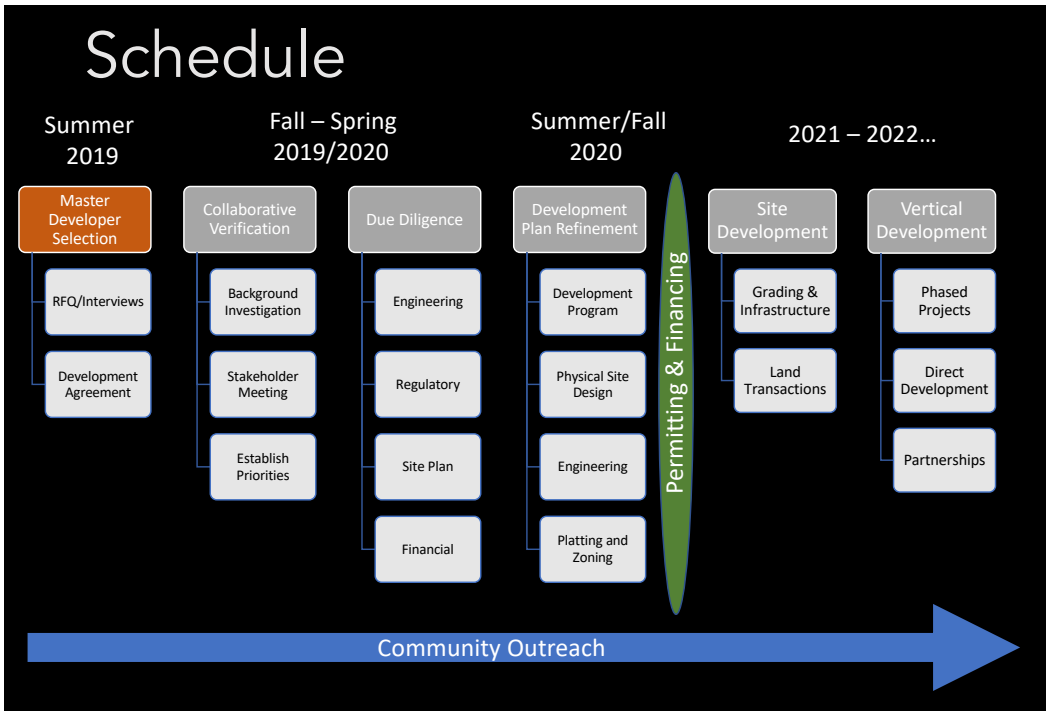
Planning and Entitlement

The work necessary to receive Planning and Zoning Commission and City Council approval of the Entitlements is likely to include a pre-application meetings with the City, multiple neighborhood meetings, City and Public Works meetings, design of site plan alternatives, selection and refinement of a final concept plan, traffic study, ecological resource studies, engineering plans, and development of illustrative exhibits.

Finance and Market

At key milestones throughout the process we will be completing costs estimates to inform design decisions. We will underwrite project revenue assumptions and economic and demand drivers which involves evaluation of historical transactions, market fundamentals, forecasting and engagement with the brokerage and development community. This is an iterative process with a focus validation of key assumptions that impact the project financial strategy and performance. We will also be exploring, sizing, and seeking to organize private and public financing for the project. All of this information will inform the proformas and plans of finance that we will build and update for both site and vertical development.

A schematic of the process and conceptual schedule, which would ultimately require refinement with the City is presented below.



3. How do we anticipate managing public engagement?

We are committed to real and meaningful stakeholder engagement and we have a successful history of engaging the community in our past projects. From presentations and workshops in large auditoriums to informal meetings with small groups of neighborhood leaders on living room couches and in coffee shops, we are comfortable engaging stakeholders and are willing to meet people where they are. While this takes time and can be difficult, it's absolutely critical to creating quality projects that best respond to the community's needs.

Rather than a wholesale outsourcing of this important task to consultants, we believe Trailbreak Partners leadership should maintain directly involvement with engagement and are typically involved in most, if not all outreach. We plan to continue that model in the case of the Confluence Area augmented by the deep roots of Community Builders in Glenwood Springs. Community Builders was hand-picked for our team due to their history working on the Confluence Area as well as their deep connection to the community (it's their home town). That means that they are committed to seeing the best possible outcomes for the Confluence.

In my conversations with Clark and his team, they have been clear that they are committed to a process that builds on the engagement that has been done to date and results in a project that truly reflects the needs and desires of the community. This commitment, along with their mission of building more livable communities, speaks to the integrity with which our team will approach community engagement.

When it comes to the specifics of our approach, we have intentionally not designed an engagement strategy at this point. We believe that an effective public engagement strategy needs to be crafted to fit the specific needs and context of the situation and that it should be created in collaboration with local partners.

If our team is selected, designing an engagement strategy for the Confluence Area that responds to the projects needs and challenges and is aligned with the projects timeline and critical milestones will be among the first tasks we would undertake. Tactically, we will begin by educating stakeholders about the depth of engagement and decision making as a means to set the table for their participation in the path forward within the boundaries of the established concepts and principals. Similar to what we did with the redevelopment of the former St. Anthony Central Hospital for which prior community plans has been established, this approach validates that prior work establishing a transparent basis from which to avoid the often experienced request from opponents to go back and revisit earlier efforts and outcomes.
To be effective, we believe the City, as well as other partners, must be proactively engaged in both the design and execution of such a strategy.

Finally, we recognize that redevelopment of the Confluence Area is politically tenuous and that there is not clear consensus within the community regarding what the area should become. There are people who do not want to see the area change. There are others who would like the area to be a public park. And there are many as well who want to see the area become a more activated riverfront with a mix of development and public access and open space. Finding the right path forward will take work, learning, listening and leadership.

The privilege to serve in the role of Master Developer for the Confluence Area remains of great interest to our team and we feel confident in our ability to lead the City and residents of Glenwood Springs through a comprehensive, fair, and transparent process resulting in development of lasting value and pride for Glenwood Springs.

Sincerely,

Douglas Elenowitz
Principal
Trailbreak Partners, LLC

December 13, 2019

TRAILBREAK
PARTNERS

Jenn Ooton
Assistant City Manager, Economic and Community Development
City of Glenwood Springs
101 W. 8th Street
Glenwood Springs, CO 81601

RE: Request for Master Developer Qualifications for the Confluence Area
#BD2019-013

Dear Ms. Ooton:

It was good to debrief with you on the 26th and I appreciate this update regarding Council timing. The Trailbreak Partners team remains very interested in partnering with the City to reimagine the Confluence Area and believe that our thoughtful approach to public private partnerships can bring great value to the residents and City of Glenwood Springs. We are sensitive to the reality that the City and its residents have been working through a series of challenging projects as of late that might be reasonable cause for delaying the Confluence Area project. The Confluence Area is no small undertaking and has the highest likelihood of success when residents, leadership and stakeholders are ready to invest the time and resources to work though the process.

Our team looks forward to revisiting the Confluence Area this fall and do ask that the City re-engage with the firms that invested considerable time and resources to respond to the initial RFQ. We remain available to discuss the project at any time and look forward to staying in touch.

All the best,

Sincerely,

Douglas Elenowitz

802. E 19th Avenue | Denver, Colorado | 80218

December 1, 2020

TRAILBREAK
PARTNERS

Jenn Ooton
Assistant City Manager, Economic and Community Development
City of Glenwood Springs
101 W. 8th Street
Glenwood Springs, CO 81601

RE: Expression of Continued Interest - Master Developer of the 8th Street Crossing Development (formerly the "Confluence Area")

Dear Ms. Ooton:

This letter is offered in response to your November 23rd email notifying us that the 8th Street Crossing Development will be a topic of discussion during the December 3rd City Council meeting. The Trailbreak Partners team remains interested in partnering with the City and serving as Master Developer of the 8th Street Crossing project. We believe that our thoughtful approach to public private partnerships can bring great value to the residents and City of Glenwood Springs.

Our team sympathizes with the consequences that COVID-19 and the Grizzly Creek fire have had to the local economy including near term budget challenges and yet to be realized long-term impacts. Despite these realities, Glenwood Springs remains a vibrant and desirable community and, in our view, over time there will be the housing and commercial demand to support the development of the 8th Street Crossing area. Having said that, the project uncertainties discussed in our *Comments to Supplement the July 16, 2019 Confluence Area Call* remain an obstacle. To manage the risk of the uncertainties, we proposed that the City and Trailbreak Partners negotiate a Development Agreement pursuant to which the project team would be compensated for its time and the expenses of due diligence investigations, design, underwriting, and entitlement work until such time the project has advanced to a risk profile associated with more traditional development. Trailbreak Partners believes this approach remains correct; however, in light of the current economic realities, Trailbreak Partners proposes to dedicate its time without current compensation and split a mutually agreed upon amount of the third-party expense. If during this predevelopment period the project fails to proceed or Trailbreak Partners in good faith determines that the project is not viable, then Trailbreak Partners would be reimbursed by the City for its time and expense incurred up to a mutually agreeable financial cap. This equitable and transparent structure will align interests, materially reduce the City's out of pocket cost, and allow the project to advance during this period of budgetary distress.

To serve in the role of Master Developer for the 8th Street Crossing remains of great interest to our team and we feel confident in our ability to lead the City and its residents through a comprehensive and transparent process resulting in development of lasting value and pride for Glenwood Springs. We remain available to discuss the project at any time and look forward to staying in touch.

Sincerely,

Douglas Elenowitz

802. E 19th Avenue | Denver, Colorado | 80218

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item:	Boards and Commissions
Action Requested:	NA
Department:	City Administration
Presented By:	Debra Figueroa, City Manager
Background Info:	City Council requested a work session to discuss Boards and Commissions.
Issues:	NA - Council will lead this discussion.
Staff Recommendation:	NA

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Resolution 2020-39; A Resolution of the City Council of the City of Glenwood Springs, Colorado, Adopting the Colorado Municipal Election Code of 1965 and Delegating the Authority and Responsibility of Appointing Election Judges for the City of Glenwood Springs Regular Municipal Election on April 6, 2021

Action Requested: Adopt Resolution 2020-39 of the Colorado Municipal Election Code of 1965 and Delegating the Authority and Responsibility of Appointing Election Judges for the City of Glenwood Springs Regular Municipal Election on April 6, 2021

Department: City Clerk

Presented By:

Background Info: A general election is held biennially on the first Tuesday of the month in April in odd numbered years. This year there will be 3 seats open in Ward 2, At Large and Ward 5.

Issues: N/A

Staff Recommendation: Approve Resolution 2020-39.

RESOLUTION 2020-39

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, ADOPTING THE COLORADO MUNICIPAL ELECTION CODE OF 1965 AND DELEGATING THE AUTHORITY AND RESPONSIBILITY OF APPOINTING ELECTION JUDGES FOR THE CITY OF GLENWOOD SPRINGS' REGULAR MUNICIPAL ELECTION ON APRIL 6, 2021.

WHEREAS, pursuant to the requirements of the Glenwood Springs Charter, a regular municipal election is to be conducted on April 6, 2021; and

WHEREAS, Section 31-10-101, *et. seq*., C.R.S., as amended, permits a municipality to utilize the requirements and procedures of the Colorado Municipal Election Code of 1965 with respect to any municipal election; and

WHEREAS, the City Council of the City of Glenwood Springs wishes to adopt the Colorado Municipal Election Code of 1965 relating to the mail ballot election for the April 6, 2021 regular municipal election; and

WHEREAS, the governing body of any political subdivision may determine that an election may be held by mail ballot; and

WHEREAS, the election official of the City of Glenwood Springs has recommended that the City Council authorize a mail ballot election for the April 6, 2021 regular municipal election.

NOW, THEREFORE, IT IS RESOLVED BY THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, THAT:

Section 1. The City of Glenwood Springs hereby adopts the provisions of the Colorado Municipal Election Code of 1965 for the conduct of the April 6, 2021 regular municipal election.

Section 2. Notwithstanding the provisions of the Glenwood Springs Municipal Code to the contrary, the provisions of the Colorado Municipal Election Code of 1965, as amended, shall prevail.

Section 3. Registered voters shall have the opportunity to cast ballots in person as provided by the Mail Ballot Election Act, C.R.S. § 1-7.5-101 *et seq.*, at a polling place located in the City's Clerk's office at City Hall, 101 W. 8th Street, Suite 325, Glenwood Springs, Colorado.

Section 4. The authority and responsibility for appointing the election judges for this regular municipal election is hereby delegated to the City Clerk, pursuant to Section 31-10-401 C.R.S., as amended.

Section 5. The ballots shall be paper ballots and recorded by sworn election judges.

Section 6. If any clause, sentence, paragraph or part of this Resolution or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect the remaining provisions of this Resolution.

Section 7. The City Council of the City of Glenwood Springs finds and declares that this Resolution is promulgated and adopted for the public health, safety, and welfare and this Resolution bears a rational relation to the legislative objective sought to be obtained.

INTRODUCED, READ, AND PASSED THIS 3rd DAY OF DECEMBER, 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

ATTEST:

_____
Jonathan Godes, Mayor

_____
Catherine Mythen Fletcher, City Clerk

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Valley View and City of Glenwood Springs Agreement Renewal

Action Requested: The Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) establishes a relationship between medical providers like Valley View Hospital (VVH) and Emergency Medical Service providers such as the City of Glenwood Springs Fire and EMS departments that is designed to protect patient confidentiality. This agreement is renewed each year with VVH establishing the City as a "Business Associate" of VVH and mutually agreeing to comply with HIPPA requirements.

Department: City Administration

Presented By: Steve Boyd, COO

Background Info: Changes to this agreement from prior years:
1. Caps indemnification at Government Immunity level.
2. Disclosure accommodates CORA requirements.

Issues: None

Staff Recommendation: Approval for Mayor to execute agreement.

BUSINESS ASSOCIATE AGREEMENT

This Business Associate Agreement ("Agreement") is entered into by and between **Valley View Hospital Association, a Colorado non-profit Corporation** ("Hospital" or the "Covered Entity") and **City of Glenwood Springs** (the "Business Associate" or "BA") (collectively referred to herein the "Parties" or individually as a "Party") to be effective as of the 4th day of November, 2020 ("Effective Date").

WHEREAS, Covered Entity has a business relationship with Business Associate that is memorialized in a separate agreement(s) (the "Underlying Agreement") pursuant to which Business Associate may be considered a "Business Associate" of Covered Entity as defined in the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") including all pertinent regulations (45 CFR Parts 160 and 164) issued by the U.S. Department of Health and Human Services as either have been amended by Subtitle D of the Health Information Technology for Economic and Clinical Health Act (the "HITECH Act"), as Title XIII of Division A and Title IV of Division B of the American Recovery and Reinvestment Act of 2009, 42 U.S.C. §§17921, 17931-17932 & 17934; and

WHEREAS, the nature of the contractual relationship between Covered Entity and Business Associate involves the disclosure of Protected Health Information ("PHI") as that term is defined under HIPAA; and

For good and lawful consideration as set forth in the Underlying Agreement, Covered Entity and Business Associate enter into this Agreement for the purpose of ensuring compliance with the requirements of HIPAA, its implementing regulations, the HITECH Act and the laws of the State of Colorado.

NOW THEREFORE, in consideration of the mutual covenants contained herein which are made a contractual part hereof and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby agree as follows:

Section 1. Definitions.

Terms used, but not otherwise defined, in this Agreement shall have the same meaning as those terms in the Privacy Rule.

(A) "Breach" shall have the same meaning as the term "breach" in the HITECH Act, 42 USC §17921 and 45 CFR 164.402, which states that, in general, "the term 'breach' means the unauthorized acquisition, access, use, or disclosure of protected health information which compromises the security or privacy of such information, except where an unauthorized person to whom such information is disclosed would not reasonably have been able to retain such information."

(B) "Business Associate" shall have the same meaning as the term "business associate" in 45 CFR 160.103.

(C) "Designated Record Set" shall have the same meaning as the term "designated record set" in 45 CFR §164.501.

(D) "Electronic Health Record" shall have the meaning given to such term in the HITECH Act, which is an electronic record of health-related information on an individual that is created, gathered, managed, and consulted by authorized health care clinicians and staff.

(E) "Electronic Protected Health Information" or "ePHI" shall mean Protected Health Information that is maintained in or transmitted by electronic media.

(F) "Individual" shall have the same meaning as the term "individual" in 45 CFR §164.501 and shall include a person who qualifies as a personal representative in accordance with 45 CFR §164,502(g).

(G) "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Part 160 and Part 164, Subparts A and E, as amended by the HITECH Act and as may otherwise be amended from time to time.

(H) "Protected Health Information" or "PHI" shall have the same meaning as the term "PHI" in 45 CFR §160.103, limited to the information created or received by Business Associate from or on behalf of Covered Entity. In general, "health information" means information in any form that relates to the past, present, or future physical or mental health or condition of an individual; the provision of health care to an individual; or the past, present, or future payment for the provision of health care to an individual. "Protected health information," for purposes of this Agreement, is health information that identifies the individual or can reasonably be used to identify the individual.

(I) "Required By Law" shall have the same meaning as the term "required by law" in 45 CFR §164.501.

(J) "Secretary" shall mean the Secretary of the U.S. Department of Health and Human Services or his designee.

(K) "Security Rule" shall mean the Security Standards at 45 CFR Parts 160, 162 and 164.

(L) "Unsecured PHI" shall mean PHI that is not rendered unusable, unreadable or indecipherable to unauthorized individuals through the use of a technology or methodology specified by the Secretary of HHS in guidance or as otherwise defined in 45 CFR 164.402 and §13402(h) of the HITECH Act.

(M) All other terms used, but not otherwise defined in this Agreement shall have the same meaning as those terms in 45 CFR 160.103 and 164.501.

Permitted Uses and Disclosures by Business Associate.

Except as otherwise limited in the Underlying Agreement and/or this Agreement, Business Associate may use or disclose PHI to perform functions, activities, or services for, or on behalf of, Covered Entity as specified in this Agreement, provided that such use or disclosure would not violate the Privacy Rule or the HITECH Act if done by Covered Entity or the minimum necessary policies and procedures of the Covered Entity, as follows:

(N) **Permitted Uses**. Except as otherwise limited in this Agreement, Business Associate may use PHI for the proper management and administration of the Business Associate or to carry out the legal responsibilities of the Business Associate. Business Associate shall not use PHI in any manner that would constitute a violation of the Privacy Rule or the HITECH Act if so used by the Covered Entity.

(O) **Data Aggregation**. Business Associate may use PHI to provide Data Aggregation services to Covered Entity as permitted by 45 CFR §164.504(e)(2)(i)(B) to the extent specifically required under the Agreement.

(P) **Permitted Disclosures**. Business Associate shall not disclose PHI except for the purpose of performing the Business Associate's obligations under the Underlying Agreement or this Agreement or as required by the Colorado Open Records Act or other applicable law. If Business Associate discloses PHI to a third party for purposes of performing the Business Associate's obligations, Business Associate must obtain, prior to making any such disclosure:

(1) reasonable written assurances from such third party that such PHI will be held confidential as provided pursuant to this Agreement and only disclosed as required by law or for the purposes for which it was disclosed to such third party, and

(2) a written agreement from such third party to immediately notify Business Associate within 24 hours of the discovery of any breaches, as defined in Section 1A., or suspected breaches of confidentiality of the PHI.

Section 2. Prohibited Uses and Disclosures.

(A) **Prohibited Uses and Disclosures**. Business Associate shall not use or disclose PHI for fundraising or marketing purposes or any other purpose not permitted by this Agreement, the Underlying Agreement or the Privacy Rule or HITECH Act. Business Associate shall not disclose PHI to a health plan for payment or health care operations purposes if the patient has requested this special restriction, and has paid out of pocket in full for the health care item or service to which the PHI solely relates, as required by 42 U.S.C. § 17935(a). Business Associate shall not directly or indirectly receive remuneration in exchange for PHI, except with the prior written consent of Covered Entity and as permitted by the HITECH Act, as described in 42 U.S.C. § 17935(d)(2); however, this prohibition shall

not affect payment by Covered Entity to Business Associate for services provided pursuant to the Underlying Agreement.

(B) **Re-creation of Information.** Business Associate may not use PHI received or created pursuant to the Agreement to create information that is not individually identifiable health information (De-identified Information), unless specifically provided in the Agreement or unless Covered Entity gives its written permission to do so, in writing and in advance. Such permission may be withheld in the sole discretion of Covered Entity. In either event, Covered Entity shall have sole ownership of any De- identified information, unless Covered Entity specifically agrees otherwise in writing, in advance of its creation by Business Associate.

Section 3. Obligations and Activities of Business Associate.

(A) **Compliance.** Business Associate shall comply with all provisions of the HIPAA standards as required by Sections 13403 and 13404 of the HITECH Act and this Agreement. Business Associate shall be directly responsible for full compliance with the relevant requirements of the Privacy Rule to the same extent as Covered Entity.

(B) **Use and Disclosures of Protected Health Information**. Business Associate agrees not to use of disclose PHI other than as permitted or required by this Agreement or by law. Any use or disclosure of PHI that is not permitted shall be considered an Unauthorized Use or Disclosure for the purposes of this Agreement.

(C) **Appropriate Safeguards**. Business Associate shall implement appropriate safeguards as are necessary to prevent the use or disclosure of PHI and electronic PHI, otherwise than as permitted by the Underlying Agreement or this Agreement, including, but not limited to, administrative, physical and technical safeguards that reasonably and appropriately protect the confidentiality, integrity and availability of the PHI and electronic PHI, in accordance with 45 C.F.R. §§ 164.308, 164.310, and 164.312. Business Associate shall comply with the policies and procedures and documentation requirements of the HIPAA Security Rule, including but not limited to, 45 C.F.R. § 164.316 and the HITECH Act, 42 U.S.C. § 17931.

(D) **Business Associate's Agents**. Business Associate agrees to ensure that any agent, including a subcontractor, to whom it provides PHI received from, or created or received by Business Associate on behalf of Covered Entity, agrees to the same restrictions and conditions that apply through this Agreement to Business Associate with respect to such information. This provision shall not, however, be deemed to provide Business Associate with a right to assign or subcontract its responsibilities, except as specifically provided in the Underlying Agreement. In the event Business Associate creates, maintains, receives or transmits electronic PHI

on behalf of the Covered Entity, Business Associate shall implement the safeguards required by Section 4(B) above with respect to electronic PHI.

(E) **Duties of Business Associate Involving Breach or Unauthorized Access. Use of Disclosure of PHI.**

(1) **Discovery of Breaches**. A Breach shall be treated as discovered by Business Associate as of the first day on which such Breach is known to the Business Associate, or by exercising reasonable diligence would have been known to the Business Associate.

(2) **Reporting of Improper Access, Use or Disclosure**. Business Associate shall report to Covered Entity in writing of any access, use or disclosure of PHI not permitted by this Agreement or the Underlying Agreement, and any Breach of Unsecured PHI of which it becomes aware within five (5) days of discovery. Written notice shall contain: (a) the date of discovery of the breach; (2) a listing of the identification of individuals and/or classes of individuals who are subject to the breach; and (3) a general description of the nature of the Breach. Business Associate shall provide Covered Entity with updates of information concerning the details of such Breach and the final results of its Risk Assessment as required in Section 4(D)(4) as needed to ensure that such information remains current.

(3) **Notification of Breach**. Business Associate shall notify Covered Entity within five (5) days after discovery of any suspected or actual breach of security, intrusion or unauthorized use or disclosure of PHI of which Business Associate becomes aware and/or any actual or suspected use or disclosure of data in violation of any applicable federal or state laws or regulations. Business Associate shall take prompt corrective action to cure any such deficiencies and any action pertaining to such unauthorized disclosure required by applicable federal and state laws and regulations.

(4) **Risk Assessment and Investigation**. Business Associate shall perform an appropriate risk assessment immediately following the discovery of any unauthorized access, use or disclosure of PHI to determine whether use, access, or disclosure is one that "poses a significant risk of financial, reputational, or other harm to the individual." In performing the Risk Assessment, Business Associate should consider a combination of factors such as: (a) who impermissibly used the PHI or to whom the PHI was impermissibly disclosed; (b) was the impermissibly disclosed PHI returned prior to it being accessed for improper purpose; and (c) the type and amount of PHI involved in the impermissible use or disclosure. The results of such Risk Assessment shall be provided to Covered Entity in writing without unreasonable delay and in no

case later than 15 days from the date of discovery of the unauthorized access, use or disclosure. In addition to the Risk Assessment conducted by Business Associate, Covered Entity reserves the right to conduct its own investigation of any unauthorized access, use or disclosure of PHI occurring at any facility, site or location of Business Associate, its agents or subcontractors or through any systems under the control of the Business Associate, its agents or subcontractors. Business Associate shall cooperate with Covered Entity to conduct such investigation. Covered Entity agrees to provide advance notice of such investigation and to protect the confidentiality of all confidential and proprietary information of Business Associate to which Covered entity has access during the course of such investigation.

(5) **Mitigation of Harm**. In the event of a Breach of Unsecured PHI, Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a use or disclosure of PHI by Business Associate in violation of the requirements of this Agreement or the Underlying Agreement, such as promptly obtaining assurance from the recipient that the information will not be further used or disclosed in a confidentiality agreement or will be destroyed.

(6) **Notification to the Individual**. It is the sole responsibility of the Covered Entity to notify its patients of any breach of PHI. At no time, is the Business Associate to contact or speak directly to any of Covered Entity's patients/individuals who are the subject of any Breach. Any such inquiries should be directed to the Covered Entity's Compliance and/or Privacy Officer. Business Associates shall cooperate with Covered Entity as necessary to provide such notification and any details pertaining to any Breach of PHI.

(7) **Cooperation with Law Enforcement**. Business Associate shall cooperate with Covered Entity in the event law enforcement officials institute an investigation that involves a Breach of PHI under this Agreement.

(8) **Notification to Media**. For a Breach of Unsecured PHI involving more than 500 individuals, it is solely the responsibility of Covered Entity to notify the media and appropriate law enforcement and federal and state agencies as required by the HITECH Act, 45 C.F.R. §164.406. At no time is the Business Associate to contact or speak directly to the media without the prior authorization of Covered Entity. Business Associate shall cooperate with Covered Entity as necessary to provide such notification to the media.

(F) **Access to PHI**. Business Associate agrees to provide access, at the request of Covered Entity, to PHI in a Designated Record Set, to Covered Entity

or, as directed by Covered Entity, to an Individual in order to meet the requirements under 45 CFR § 164.524.

(G) **Governmental Access to Records**. Business Associate agrees to make its internal practices, books, and records, including policies and procedures relating to the use and disclosure of PHI received from, or created or received by Business Associate on behalf of, Covered Entity available to the Covered Entity, or to the Secretary, for purposes of the Secretary determining Covered Entity's compliance with the Privacy Rule.

(H) **Minimum Necessary**. Business Associate shall request, use and disclose only the minimum amount of PHI necessary to accomplish the purpose of the request, use or disclosure in the Underlying Agreement. The Minimum Amount of PHI shall mean the minimum necessary as meant by the intended language of the HITECH Act.

(I) **Data Ownership**. Business Associate acknowledges that Business Associate has no ownership rights with respect to the PHI,

(J) **Amendments of PHI.** Business Associate agrees to make any amendment(s) to PHI in a Designated Record Set that the Covered Entity directs or agrees to pursuant to 45 CFR § 164.526 at the request of Covered Entity or an Individual.

(K) **Accounting Rights**. Business Associate and its agents or subcontractors shall make available to Covered Entity the information required to provide an accounting of disclosures to enable Covered Entity to fulfill its obligations under the Privacy Rule and the HITECH Act as determined by Covered Entity. Business Associate agrees to implement a process that allows for an accounting to be collected and maintained by Business Associate and its agents or subcontractors for at least six years prior to the request. However, accounting of disclosures from an Electronic Health Record for treatment, payment or health care operations purposes are required to be collected and maintained for only three years prior to the request, and only to the extent that Business Associate maintains an electronic health record and is subject to this requirement. At a minimum, the information collected and maintained shall include: (i) the date of disclosure; (ii) the name of the entity or person who received the PHI and if known, the address of the entity or person; (iii) a brief description of PHI disclosed; and (iv) a brief statement of purpose of the disclosure that reasonably informs the individual of the basis for the disclosure, or a copy of the individual's authorization or a copy of the written request for disclosure. Business Associate is expected to meet the requirements described in this Section 4(J) with respect to Electronic Health Records by the Compliance Date as set forth in the HITECH Act of February 17, 2010.

Continuing Obligations/Termination.

(L) **Term**. The Obligations of Business Associate set forth herein shall commence on the Effective Date and shall terminate when the Agreement terminates and all of the PHI provided by Covered Entity to Business Associate, or created or received by Business Associate on behalf of Covered Entity, is destroyed or returned to Covered Entity, or, if it is infeasible to return or destroy PHI, the terms of this Agreement are extended to cover such information and survive termination of this Agreement.

(M) **Termination With Cause**. Upon Covered Entity's knowledge of a material breach by Business Associate to the terms of this Agreement, Covered Entity may terminate this Agreement, and sever all business relationships with Business Associate, including, the termination of the Underlying Agreement and any and all Agreements with Business Associate if the breach remains uncured for more than 15 days after Covered Entity gives written notice to Business Associate of the breach. The effective date of such termination will be the 16th day from the date of the written notice of breach. If Business Associate has successive breaches within a one year period, then Covered Entity may terminate this Agreement immediately upon written notice to the Business Associate of the breach.

(N) **Immediate Termination**. In the event Business Associate has breached a material term of this Agreement and cure is not possible, Covered Entity may immediately terminate this Agreement, and sever all business relationships with Business Associate, including, the termination of Underlying Agreement and any and all Agreements with Business Associate. Covered Entity may report such violation to the Secretary.

(O) **Effect of Termination**.

(1) Except as provided in Section 5(D)(2) of this Agreement, upon termination of the Agreement, for any reason, Business Associate shall return or destroy all PHI received from Covered Entity, or created or received by Business Associate on behalf of Covered Entity. This provision shall apply to PHI that is in the possession of subcontractors or agents of Business Associate. Business Associate shall retain no copies of the PHI.

(2) In the event that Business Associate determines that returning or destroying the PHI is infeasible, Business Associate shall provide to Covered Entity notification of the conditions that make return or destruction infeasible. Business Associate shall extend the protections of this Agreement to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such PHI.

(3) The provisions of this Section 5(D) shall survive termination of this Agreement.

(P) **Remedies In Event of Breach**. Business Associate expressly acknowledges and agrees that the breach, or threatened breach, by it of any provision of this Agreement may cause Covered Entity to be irreparably harmed and that Covered Entity may not have an adequate remedy at law. Therefore, Business Associate agrees that upon such breach, or threatened breach, Covered Entity will be entitled to seek injunctive relief to prevent Business Associate from commencing or continuing any action constituting such breach without having to post a bond or other security and without having to prove the inadequacy of any other available remedies. Nothing in this Section 5(E) will be deemed to limit or abridge any other remedy available to Covered Entity at law or in equity. The provisions of this Section 5(E) shall survive termination of this Agreement.

Section 4. Obligations of Covered Entity to Inform Business Associate of Privacy Practices and Individual Restrictions.

(A) **Notice of Privacy Practices**. Covered Entity shall provide Business Associate with the notice of privacy practices that Covered Entity produces in accordance with 45 CFR §164.520, as well as any changes to such notice.

(B) **Changes in Permitted Use**. Covered Entity shall provide Business Associate with any changes in, or revocation of, permission by Individual to use or disclose PHI, if such changes affect Business Associate's permitted or required uses and disclosures.

(C) **Restrictions on Use**. Covered Entity shall notify Business Associate of any restriction to the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 CFR §164.522.

Section 5. Insurance and Indemnification.

(A) Insurance.

(1) **Commercial General Liability**. Business Associate shall maintain Commercial General Liability insurance with a limit of not less than $1,000,000 per occurrence and $2,000,000 general aggregate. This policy shall include Bodily Injury, Property Damage, Personal Injury, Advertising Injury and Products/Completed Operations.

(B) **Indemnity**. To the extent allowable by law, Business Associate hereby agrees to indemnify and hold harmless Covered Entity and its parent corporation and subsidiaries, their directors, officers, agents, servants, and employees (collectively "the Indemnitees") to the extent any claims, causes of action, liabilities, judgments, fines, assessments, penalties, damages, awards or other expenses of any kind or nature whatsoever, including, without limitation, reasonable attorney's fees, expert witness fees, and costs of investigation, litigation or dispute resolution to which the Indemnitees may become subject are the result of any: (i) breach of this Agreement by Business Associate; (ii) failure of Business Associate to perform its obligations hereunder; or (iii) negligence or legal fault of Business Associate, its directors, officers, agents, or employees. Nothing contained herein shall be construed or interpreted as

a waiver of any of the immunities, rights, benefits, protections or other provisions of the Colorado Governmental Immunity Act, C.R.S. §§ 2410-101, et seq.

Section 6. General Provisions.

(A) **Regulatory References**. A reference in this Agreement to a section in the Privacy Rule and HITECH Act means the section as in effect or as amended.

(B) **Amendment**. The Parties agree to take such action as is necessary to amend this Agreement from time to time as is necessary for Covered Entity to comply with all federal, state and local laws and regulations, including, but not limited to, the requirements of the Privacy Rule, the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191 and the HITECH Act. This Agreement shall be changed, modified or amended only by an instrument in writing signed by a duly authorized representative of each of the Parties, effective as of the date stipulated therein and attached hereto.

(C) **Survival**. The respective rights and obligations of Business Associate with respect to PHI shall survive the termination of this Agreement.

(D) **Interpretation**. Should there be any conflict between the language of this Agreement and any other Agreement entered into between the Parties, the language of and provisions of this Agreement shall control and prevail unless the Parties specifically refer in a subsequent written agreement to this Agreement by its title and date and specifically state that the provisions of the later written agreement shall control over this Agreement. Any ambiguity in this Agreement shall be resolved to permit Covered Entity to comply with the Privacy Rule and HITECH Act.

(E) **Governing Law**. This Agreement shall be construed in accordance with, interpreted and governed by the laws of the State of Colorado without regard to any other state's conflicts of law provisions. Any action or proceeding regarding this Agreement shall be instituted and conducted in the parish where the Hospital is located. The provisions of this Section 8(E) shall survive the termination of this Agreement.

(F) **Notices**. Any notices required or permitted hereunder shall be sufficiently given if sent by registered or certified mail, postage prepaid, or personally delivered, addressed or delivered to the addresses set forth below in the signatures to this Agreement or to such other addresses as shall be furnished in writing by either party to the other party; and any such notice shall be deemed to have been given, if mailed, as of the date mailed, and, if personally delivered, as of the date delivered. Notices pertaining to unauthorized use or access of PHI or Breaches of PHI should be submitted to the Covered Entity's Compliance and/or Privacy Officer with contact information of Business Associate's designated representative responsible for investigating such incidents.

(G) **Entire Agreement**. With regard to the subject matter herein, this Agreement supersedes prior discussions, agreements, understandings, and representations between the Covered Entity and Business Associate.

Except as set forth specifically above, the terms of the Underlying Agreement remain in full force and effect.

IN WITNESS WHEREOF, the parties have hereunto caused this Agreement to be executed as by law provided.

HOSPITAL OR COVVERED ENTITY: **Valley View Hospital Association**	**BUSINESS ASSOCIATES:** **City of Glenwood Springs**
By:_____ **Title:** _____ **Printed Name:** _____ **Address:** **1906 Blake Avenue** **Glenwood Springs, CO 81601**	**By:**_____ **Title:** Mayor **Printed Name:** _____ **Address:** **101 West 8th Street** **Glenwood Springs, CO 81601**

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Ordinance No. 25, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Fixing and Certifying the Mill Levy on the 2020 Assessment for Collection in Fiscal Year 2021 and Providing for a Temporary Tax Credit (SECOND READING)

Action Requested: Approve Mill Levy Certifications for collection year 2021 for the City of Glenwood Springs.

Department: Finance

Presented By: Yvette Gustad, Finance Director

Background Info: Property Tax collection is set each year for the voter approved Mill Levy's. The amounts are set based on net assessed value of properties within the City of Glenwood Springs. This must be approved and certified to Garfield County by December 15th of each year. The numbers presented in Exhibit A reflect preliminary assessed valuation numbers provided by Garfield County and will be updated to actual when final assessments are received later in November.

Issues: None

Staff Recommendation: Staff recommends approval of the Ordinance to certify the Mill Levy for 2021.

ORDINANCE NO. 25

Series of 2020

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO, FIXING AND CERTIFYING THE MILL LEVY ON THE 2020 ASSESSMENT FOR COLLECTION IN FISCAL YEAR 2021.

WHEREAS, the City Council of the City of Glenwood Springs has adopted by Resolution 2020-37 the budget for fiscal year 2021 commencing January 1, 2021 and ending December 31, 2021; and

WHEREAS, the City Council of the Glenwood Springs desires to fix a mill levy pursuant to Section 9.7 of the Municipal Charter of the City of Glenwood Springs to enable the City to have sufficient revenues to pay the proposed expenditures for fiscal year 2021; and

WHEREAS, pursuant to Section 4.1 of the Municipal Charter of the City of Glenwood Springs, the City Council is required to levy taxes by ordinance.

NOW, THEREFORE, IT IS ORDAINED BY THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, THAT:

Section 1. The mill levy for general purposes that shall be assessed upon each dollar of the assessed valuation of all taxable property within the corporate limits of the City of Glenwood Springs, shall be fixed at the rate set forth on **Exhibit A** attached hereto and incorporated herein.

Section 2. The City Manager is hereby directed to certify said mill levy to Garfield County as required by law, no later than the 15th day of December 2020.

INTRODUCED, READ ON FIRST READING, PASSED, AND ORDERED PUBLISHED BY TITLE ONLY THIS 19TH DAY OF NOVEMBER 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____
Jonathan Godes, Mayor

ATTEST:

_____
Catherine Mythen Fletcher, City Clerk

INTRODUCED, READ ON SECOND READING, AND ORDERED PUBLISHED BY TITLE ONLY TO BE EFFECTIVE TEN DAYS FOLLOWING THE DATE OF SECOND PUBLICATION THIS ___ DAY OF _____ 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____
Jonathan Godes, Mayor

ATTEST:

_____
Catherine Mythen Fletcher, City Clerk

County Tax Entity Code _____ PRELIMINARY EXHIBIT A DOLA LGID/SID _____

CERTIFICATION OF TAX LEVIES for NON-SCHOOL Governments

TO: County Commissioners[1] of Garfield County, Colorado.

On behalf of the City of Glenwood Springs[A],

the City Council[B]

of the City of Glenwood Springs[C]

Hereby officially certifies the following mills to be levied against the taxing entity's GROSS assessed valuation of: $ 250,210,000
(GROSS[D] assessed valuation, Line 2 of the Certification of Valuation Form DLG 57[E])

Note: If the assessor certified a NET assessed valuation (AV) different than the GROSS AV due to a Tax Increment Financing (TIF) Area[F] the tax levies must be calculated using the NET AV. The taxing entity's total property tax revenue will be derived from the mill levy multiplied against the NET assessed valuation of: $ 249,482,510
(NET[G] assessed valuation, Line 4 of the Certification of Valuation Form DLG 57)
USE VALUE FROM FINAL CERTIFICATION OF VALUATION PROVIDED BY ASSESSOR NO LATER THAN DECEMBER 10

Submitted: 12/12/2020 (mm/dd/yyyy) for budget/fiscal year 2021 (yyyy).
(no later than Dec. 15)

	PURPOSE (see end notes for definitions and examples)	**LEVY**[2]		**REVENUE**[2]
1.	General Operating Expenses[H]	8.603	mills	$ 2,146,298
2.	<**Minus**> Temporary General Property Tax Credit/ Temporary Mill Levy Rate Reduction[I]	< >	mills	$ < >
	SUBTOTAL FOR GENERAL OPERATING:	8.603	**mills**	**$** 2,146,298
3.	General Obligation Bonds and Interest[J]		mills	$
4.	Contractual Obligations[K]		mills	$
5.	Capital Expenditures[L]		mills	$
6.	Refunds/Abatements[M]	.097	mills	$ 24,200
7.	Other[N] (specify):		mills	$
			mills	$
	TOTAL: [Sum of General Operating Subtotal and Lines 3 to 7]	8.700	**mills**	**$** 2,170,498

Contact person: (print) Yvette Gustad Daytime phone: (970) 384-6421

Signed: _____ Title: Finance Director

Include one copy of this tax entity's completed form when filing the local government's budget by January 31st, per 29-1-113 C.R.S., with the Division of Local Government (DLG), Room 521, 1313 Sherman Street, Denver, CO 80203. Questions? Call DLG at (303) 864-7720.

[1] If the *taxing entity's* boundaries include more than one county, you must certify the levies to each county. Use a separate form for each county and certify the same levies uniformly to each county per Article X, Section 3 of the Colorado Constitution.
[2] Levies must be rounded to three decimal places and revenue must be calculated from the total *NET assessed valuation* (Line 4 of Form DLG57 on the County Assessor's **FINAL** certification of valuation).

THIS SECTION APPLIES TO TITLE 32, ARTICLE 1 SPECIAL DISTRICTS THAT LEVY TAXES FOR PAYMENT OF GENERAL OBLIGATION DEBT (32-1-1603 C.R.S.). Taxing entities that are Special Districts or Subdistricts of Special Districts must certify separate mill levies and revenues to the Board of County Commissioners, one each for the funding requirements of each debt (32-1-1603, C.R.S.) Use additional pages as necessary. The Special District's or Subdistrict's total levies for general obligation bonds and total levies for contractual obligations should be recorded on Page 1, Lines 3 and 4 respectively.

CERTIFY A SEPARATE MILL LEVY FOR EACH BOND OR CONTRACT:

BONDS[J]:

1. Purpose of Issue: _____
   Series: _____
   Date of Issue: _____
   Coupon Rate: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

2. Purpose of Issue: _____
   Series: _____
   Date of Issue: _____
   Coupon Rate: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

CONTRACTS[K]:

3. Purpose of Contract: _____
   Title: _____
   Date: _____
   Principal Amount: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

4. Purpose of Contract: _____
   Title: _____
   Date: _____
   Principal Amount: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

Use multiple copies of this page as necessary to separately report all bond and contractual obligations per 32-1-1603, C.R.S.

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Ordinance No. 26, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Fixing and Certifying the Mill Levy on the 2020 Assessment for Collection in Fiscal Year 2021 for the Glenwood Springs General Improvement District No. 1980 and Providing for a Temporary Tax Credit (SECOND READING)

Action Requested: Approve Mill Levy Certifications for collection year 2021 for the General Improvement District No. 1980.

Department: Finance

Presented By: Yvette Gustad, Finance Director

Background Info: Property Tax collection is set each year for the voter approved Mill Levy's. The amounts are set based on net assessed value of properties within the General Improvement District (GID). This must be approved and certified to Garfield County by December 15th of each year. The numbers presented in Exhibit A reflect preliminary assessed valuation numbers provided by Garfield County and will be updated to actual when final assessments are received later in November.

Issues: None

Staff Recommendation: Recommend approval of Ordinance to certify the GID Mill Levy for 2021.

ORDINANCE NO. 26

Series of 2020

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO, FIXING AND CERTIFYING THE MILL LEVY ON THE 2020 ASSESSMENT FOR COLLECTION IN FISCAL YEAR 2021 FOR THE GLENWOOD SPRINGS GENERAL IMPROVEMENT DISTRICT NO. 1980.

WHEREAS, the City Council of the City of Glenwood Springs has established the Glenwood Springs General Improvement District No. 1980; and

WHEREAS, the City Council of the City of Glenwood Springs has adopted, by Resolution 2020-37 the budget for fiscal year 2020 commencing January 1, 2021 and ending December 31, 2021; and

WHEREAS, the City Council, as the ex-officio Board of Directors of the Glenwood Springs General Improvement District No. 1980, desires to fix a mill levy on the 2020 assessment for collection in fiscal year 2021 commencing January 1, 2021 and ending December 31, 2021, in order to fund improvements within the Glenwood Springs General Improvement District No. 1980.

NOW, THEREFORE, IT IS ORDAINED BY THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, THAT:

Section 1. The mill levy which shall be assessed upon each dollar of the assessed valuation of all taxable property within the Glenwood Springs General Improvement District No. 1980 shall be fixed at the rate set forth on **Exhibit A** attached hereto and incorporated herein.

Section 2. The City Manager is hereby directed to certify said mill levy to Garfield County as required by law, no later than the 15th day of December 2020.

INTRODUCED, READ ON FIRST READING, PASSED, AND ORDERED PUBLISHED BY TITLE ONLY THIS 19TH DAY OF NOVEMBER 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____

Jonathan Godes, Mayor

ATTEST:

_____
Catherine Mythen Fletcher, City Clerk

INTRODUCED, READ ON SECOND READING, AND ORDERED PUBLISHED BY TITLE ONLY TO BE EFFECTIVE TEN DAYS FOLLOWING THE DATE OF SECOND PUBLICATION THIS ___ DAY OF _____ 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____
Jonathan Godes, Mayor

ATTEST:

_____
Catherine Mythen Fletcher, City Clerk

PRELIMINARY EXHIBIT A

County Tax Entity Code _____ DOLA LGID/SID _____

CERTIFICATION OF TAX LEVIES for NON-SCHOOL Governments

TO: County Commissioners[1] of Garfield County, Colorado.

On behalf of the G.I.D. #1980[A], (taxing entity)

the City Council[B] (governing body)

of the City of Glenwood Springs[C] (local government)

Hereby officially certifies the following mills to be levied against the taxing entity's GROSS assessed valuation of: $ 21,173,580
(GROSS[D] assessed valuation, Line 2 of the Certification of Valuation Form DLG 57[E])

Note: If the assessor certified a NET assessed valuation (AV) different than the GROSS AV due to a Tax Increment Financing (TIF) Area[F] the tax levies must be calculated using the NET AV. The taxing entity's total property tax revenue will be derived from the mill levy multiplied against the NET assessed valuation of: $ 20,883,080
(NET[G] assessed valuation, Line 4 of the Certification of Valuation Form DLG 57)
USE VALUE FROM FINAL CERTIFICATION OF VALUATION PROVIDED BY ASSESSOR NO LATER THAN DECEMBER 10

Submitted: 12/12/2020 (mm/dd/yyyy) for budget/fiscal year 2021 (yyyy).
(no later than Dec. 15)

PURPOSE (see end notes for definitions and examples)	**LEVY**[2]		**REVENUE**[2]
1. General Operating Expenses[H]	2.287	mills	$ 47,760
2. <**Minus**> Temporary General Property Tax Credit/ Temporary Mill Levy Rate Reduction[I]	< .292 >	mills	$ < 6,098 >
SUBTOTAL FOR GENERAL OPERATING:	1.995	**mills**	**$** 41,662
3. General Obligation Bonds and Interest[J]		mills	$
4. Contractual Obligations[K]		mills	$
5. Capital Expenditures[L]		mills	$
6. Refunds/Abatements[M]	.018	mills	$ 376
7. Other[N] (specify): _____		mills	$
_____		mills	$
TOTAL: [Sum of General Operating Subtotal and Lines 3 to 7]	2.013	**mills**	**$** 42,038

Contact person: (print) Yvette Gustad Daytime phone: (970) 384-6421

Signed: _____ Title: Finance Director

Include one copy of this tax entity's completed form when filing the local government's budget by January 31st, per 29-1-113 C.R.S., with the Division of Local Government (DLG), Room 521, 1313 Sherman Street, Denver, CO 80203. Questions? Call DLG at (303) 864-7720.

[1] If the *taxing entity's* boundaries include more than one county, you must certify the levies to each county. Use a separate form for each county and certify the same levies uniformly to each county per Article X, Section 3 of the Colorado Constitution.
[2] Levies must be rounded to three decimal places and revenue must be calculated from the total *NET assessed valuation* (Line 4 of Form DLG57 on the County Assessor's **FINAL** certification of valuation).

THIS SECTION APPLIES TO TITLE 32, ARTICLE 1 SPECIAL DISTRICTS THAT LEVY TAXES FOR PAYMENT OF GENERAL OBLIGATION DEBT (32-1-1603 C.R.S.). Taxing entities that are Special Districts or Subdistricts of Special Districts must certify separate mill levies and revenues to the Board of County Commissioners, one each for the funding requirements of each debt (32-1-1603, C.R.S.) Use additional pages as necessary. The Special District's or Subdistrict's total levies for general obligation bonds and total levies for contractual obligations should be recorded on Page 1, Lines 3 and 4 respectively.

CERTIFY A SEPARATE MILL LEVY FOR EACH BOND OR CONTRACT:

BONDS[J]:

1. Purpose of Issue: _____
   Series: _____
   Date of Issue: _____
   Coupon Rate: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

2. Purpose of Issue: _____
   Series: _____
   Date of Issue: _____
   Coupon Rate: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

CONTRACTS[K]:

3. Purpose of Contract: _____
   Title: _____
   Date: _____
   Principal Amount: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

4. Purpose of Contract: _____
   Title: _____
   Date: _____
   Principal Amount: _____
   Maturity Date: _____
   Levy: _____
   Revenue: _____

Use multiple copies of this page as necessary to separately report all bond and contractual obligations per 32-1-1603, C.R.S.

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Ordinance No. 27, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Amending Sections of Titles 050 and 070 of the Glenwood Springs Municipal Code Related to Regulation of Marijuana Businesses Within the City of Glenwood Springs, Colorado (SECOND READING)

Action Requested: **Action 1 - Code Amendment** - to revise the marijuana related business and cultivation regulations in Title 050 and Title 070 of the *Glenwood Springs Municipal Code*.

Department: Economic and Community Development

Presented By: Trent Hyatt, Senior Planner

Background Info: The Planning and Zoning Commission (Commission) is the recommending body to City Council on Code Amendment to Title 070 of the Glenwood Springs Municipal Code (Code).For a complete summary and analysis of the proposal, please refer to the attached Commission staff report dated October 27, draft minutes from the October 27, 2020 Commission meeting, and other items attached materials.

Issues:

Planning and Zoning Commission Discussion

Staff provided background on the proposal to the Commission at their their October 27, 2020 meeting where public comment was also taken. The Commission discussed various issues related to the current proposal but specifically the definition of park and related buffers. The Commission recommended using areas defined as parks in Title 090 of the Code but excluding trails. Please note, the attached map is intended to serve as a guide for the review of the proposed Code Amendment and depicts certain smaller neighborhood level parks not identified in 090. Staff will update the map accordingly if/when any regulatory changes are adopted by City Council.

Another applicable issue is whether or not the City applies setback requirements to liquor stores or other uses involving alcohol sales. While the state maintains a standard 500 foot setback from all schools and colleges, the City does not have such a requirement.

Planning and Zoning Commission Recommendation

The Commission voted unanimously 6-0 to recommend approval of the Code Amendment to City Council with the park clarification discussed above.

Staff Recommendation:

Action Alternatives

Section 070.060.030(g)(1)d of the Code outlines the review and decision procedures for applications being considered by City Council stating, “The applicable review body shall approve, approve with conditions, or deny the application based on the applicable approval criteria listed in the application specific procedures. The body may also continue the hearing or refer the application to another authority as provided in 070.060.050(a)(2)c, Referral and Call- Up Procedures."

Action 1 - Code Amendment - to revise the marijuana related business and cultivation regulations in Title 050 and Title 070 of the *Glenwood Springs Municipal Code*.

Staff Recommendation

Staff recommends approval of the Code Amendment with the findings below.

Recommended Findings:

1. The proposed amendment is consistent with the Comprehensive Plan and other City policies;
2. The proposed amendment does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code;
3. The proposed amendment is necessary to address a demonstrated community need;
4. The proposed amendment is necessary to respond to substantial changes in conditions; and
5. The proposed amendment is consistent with the general purpose and intent of the Municipal Code.

ORDINANCE NO. 27

SERIES OF 2020

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO, AMENDING SECTIONS OF TITLES 050 AND 070 OF THE MUNICIPAL CODE RELATING TO REGULATION OF MARIJUANA BUSINESSES WITHIN THE CITY OF GLENWOOD SPRINGS, COLORADO.

WHEREAS, the City of Glenwood Springs ("Glenwood Springs" or the "City") is a home rule municipality organized under Article XX of the Colorado Constitution and with the authority of the Glenwood Springs Home Rule Charter; and

WHEREAS, Title 050 of the Municipal Code contains provisions regulating the licensing of marijuana businesses within the City, and Title 070 of the Municipal Code contains provisions related to the land use regulation of marijuana businesses in the City; and

WHEREAS, state laws, rules, and regulations regulating medical and retail marijuana businesses have been modified, including revised terminology and combining the Colorado Medical Marijuana Code and the Colorado Retail Marijuana Code into what is now known as the Colorado Marijuana Code; and

WHEREAS, staff recommends updating the pertinent provisions in Titles 050 and 070 of the Municipal Code to incorporate the non-substantive changes to Colorado law regulating marijuana; and

WHEREAS, Colorado Constitution Art. XVIII, Section 16 (5)(f) provides that "a locality may enact government may enact ordinances or regulations, not in conflict with this section or with regulations or legislation enacted pursuant to this section, governing the time, place, manner and number of marijuana establishment operations;" and

WHEREAS, City Council wishes to add regulations to the Code relating to the location and number of marijuana businesses in the City; and

WHEREAS, pursuant to Section 070.060.030(c)(3)d.1. of the Glenwood Springs Municipal Code, the Planning and Zoning Commission considered amendments to Title 070 at a public hearing held on October 27, 2020 and recommended approval of the amendments to Title 070 set forth in **Exhibit A**; and

WHEREAS, the City Council finds that the amendments to Sections 050 and 070 in the Municipal Code set forth in **Exhibit A** are necessary to incorporate changes in Colorado law and to preserve the public health, safety and welfare of the citizens of Glenwood Springs.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, ORDAINS:

Section 1. The foregoing recitals are incorporated herein as if set forth in full.

Section 2. Titles 050 and 070 of the Glenwood Springs Municipal Code are hereby amended as set forth in **Exhibit A** attached hereto.

INTRODUCED, READ ON FIRST READING, PASSED AND ORDERED PUBLISHED BY TITLE ONLY THIS 19TH DAY OF NOVEMBER 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____
Jonathan Godes, Mayor

ATTEST:

_____
Catherine Fletcher, City Clerk

INTRODUCED, READ ON SECOND READING, AND ORDERED PUBLISHED BY TITLE ONLY TO BE EFFECTIVE TEN DAYS FOLLOWING THE DATE OF SECOND PUBLICATION THIS ___DAY OF _____2020.

CITY OF GLENWOOD SPRINGS, COLORADO

_____
Jonathan Godes, Mayor

ATTEST:

_____
Catherine Fletcher, City Clerk

EXHIBIT A

The following sections of the Municipal Code are amended as follows with double underlined text added and ~~strike through text deleted~~.

ARTICLE 050.080 – MEDICAL MARIJUANA

050.080.010 – Purpose.

The City Council intends to regulate the use, acquisition, production and distribution of medical marijuana in a manner consistent with Article XVIII, Section 14 of the Colorado Constitution, C.R.S. Article ~~43.3~~ 10 of Title ~~12~~ 44 and any other applicable laws and regulations of the state. Nothing within this article is intended to promote or condone the production, use, sale or distribution of medical marijuana other than in compliance with applicable state law.

050.080.020 – Definitions

***

Colorado ~~Medical~~ Marijuana Code or *C~~M~~MC* shall mean C.R.S. Article 10 of Title 44 ~~43.3 of Title 12~~, as amended.

Cultivation ~~shall have the same meaning as set forth in~~ Article 070.070 ~~of the City Code~~ means the process by which a person promotes the germination and growth of a seed to a mature marijuana plant. Cultivation does not include the storing or watering of mature marijuana plants without the aid of grow lighting.

Good cause shall have the same meaning as set forth in the Colorado ~~Medical~~ Marijuana Code.

Licensed premises means the premises specified in an application for a license under this article, owned or in the possession of the licensee, and within which the licensee is authorized to operate a medical marijuana business in accordance with the provisions of this article and the Colorado ~~Medical~~ Marijuana Code.

Licensee means a person as defined and licensed pursuant to this article and the Colorado ~~Medical~~ Marijuana Code.

***

Medical marijuana means marijuana grown and sold, for Medical Use pursuant to the provisions of this article, the Medical Marijuana Amendment and the Colorado ~~Medical~~ Marijuana Code.

***

Medical marijuana cultivation facility shall have the same meaning as set forth in the Colorado Marijuana Code. See C.R.S. § 44-10-103(37), as amended.

Medical Marijuana ~~Center~~ Store shall have the same meaning as set forth in the Colorado ~~Medical~~ Marijuana Code. See C.R.S. § 44-10-103(40)~~12-43.3-104(8) and § 12-43.3-402~~, as amended.

Medical marijuana~~-infused~~ product shall have the same meaning as set forth in the Colorado ~~Medical~~ Marijuana Code. See C.R.S. § 44-10-103(38) ~~12-43.3-104(9)~~, as amended.

Medical marijuana~~-infused~~ products manufacturer shall have the same meaning as set forth in the Colorado ~~Medical~~ Marijuana Code. See C.R.S. § 44-10-103(39) ~~12-43.3-104 (10) and § 12-43.3-404~~, as amended.

***

~~*Optional premises* shall have the same meaning as set forth in the Colorado Medical Marijuana Code. See C.R.S. § 12-43.3-104(11), as amended.~~

~~*Optional premises cultivation operation* shall have the same meaning as set forth in the Colorado Medical Marijuana Code. See C.R.S. § 12-43.3-104(12) and § 12-43.3-403, as amended.~~

***

Retail marijuana means marijuana grown and sold pursuant to the provisions of the Retail Marijuana Amendment and the Colorado ~~Retail~~ Marijuana Code.

Retail marijuana ~~establishment~~ business shall have the same meaning as set forth in Article 050.090 of the City Code.

050.080.030 - License required.

***

(a) A medical marijuana business holding a valid City business license that commenced operation prior to the effective date of the ordinance adopting this article, may continue to operate pending final action on an application for a license pursuant to this article, when the medical marijuana business: possesses a valid sales tax license from the City; and possesses a valid medical marijuana business license under the Colorado ~~Medical~~ Marijuana Code from the State of Colorado; and is located in a zone district where the business qualifies as a permitted use ~~permitted by right~~ or is a preexisting non-conforming use.

(b) Any medical marijuana business commencing operation after the effective date of the ordinance adopting this article shall comply with the licensing requirements of this article, the Colorado ~~Medical~~ Marijuana Code, and any other applicable state or local laws and regulations.

(c) Pursuant to the provisions of the Colorado ~~Medical~~ Marijuana Code, medical marijuana businesses shall be licensed by the City in at least one (1) of the following categories:

(1) *Medical marijuana ~~centers~~ store*. Such ~~centers~~ stores shall meet all criteria and requirements of the Colorado ~~Medical~~ Marijuana Code, as well as all other regulatory requirements applicable to medical marijuana ~~centers~~ stores set forth within this article and any other applicable state or local laws and regulations.

(2) *Medical marijuana~~-infused~~ products manufacturer*. Such manufacturers shall meet all criteria and requirements of the Colorado ~~Medical~~ Marijuana Code, as well as all other regulatory requirements applicable to medical marijuana~~-infused~~ products manufacturing set forth within this article and any other applicable state or local laws and regulations.

(3) *Medical marijuana ~~Optional premises~~ cultivation ~~operation~~ facility*. Such operations shall meet all criteria and requirements of the Colorado ~~Medical~~ Marijuana Code, as well as all other regulatory requirements applicable to medical marijuana cultivation facilities ~~optional cultivation operations~~ set forth within this article and any other applicable state or local laws and regulations.

***

(e) No license for a medical marijuana store ~~center~~, medical marijuana~~-infused~~ products manufacturer or ~~optional premises~~ medical marijuana cultivation facility ~~operation~~ shall be issued by the City until a license for such use, at the location designated in the application, has been submitted or issued and the State license application fee has been received, by the Department of Revenue of the State of Colorado.

***

(j) If the State prohibits the sale, cultivation or other distribution of marijuana through medical marijuana businesses in the Colorado ~~Medical~~ Marijuana Code, any license issued by the City pursuant to this article shall be deemed to be immediately revoked by operation of law, with no ground for appeal or other redress on behalf of the licensees.

050.080.040 - Application.

(a) An application for a medical marijuana business license shall be made on the ~~Colorado Business Medical Marijuana License Application, Colorado Associated Person and Associated Key Medical Marijuana License Application, Colorado Employee Key Medical Marijuana~~

~~License Application and Colorado Support Employee Medical Marijuana License Application~~ forms, as applicable, provided by the State of Colorado and any additional forms required by the Local Licensing Authority for such purposes. The application shall be used to demonstrate compliance with the provisions of this article, the City Code, Colorado ~~Medical~~ Marijuana Code, Medical Marijuana Amendment and any other applicable law, rule or regulation. In addition to general information required, the application shall include the following information:

***

(4) An area map, drawn to scale, indicating, within a radius of ~~five hundred (500)~~ 1,000 feet from the boundaries of the property upon which the medical marijuana business is located, the proximity of the property to any kindergarten through 12th grade public or private school; any park designated in Section 090.030.010(b) but excluding subsection (15); any mental health facility or drug treatment facility; and ~~within a radius of nine hundred (900) feet of~~ the proximity of the property to any other medical marijuana ~~business~~ or retail marijuana business ~~establishment~~ or marijuana cultivation facility.

***

(6) Any other information necessary to determine compliance with any provision of the City Code, the Colorado ~~Medical~~ Marijuana Code or any other applicable law or regulation.

***

(d) The Local Licensing Authority shall conduct an initial review of the medical marijuana business license application materials to determine the following:

(1) the proposed licensed premises location is allowed pursuant to the zoning, land use laws, and distance requirements in the City Code;

***

(3) the application for a license concerns a particular location that is ~~the same as or~~ greater than five hundred (500) feet of a location for which, within ~~the~~ two (2) years ~~next~~ preceding the date of the application, the State or a Local Licensing Authority denied an application for the same class of license for the reason that the reasonable requirements of the neighborhood and the desires of the adult inhabitants were satisfied by the existing businesses ~~establishments~~; and

***

Within forty-five (45) days of receipt of the medical marijuana ~~establishment~~ business license ~~approval~~ application material, if the ~~approval~~ application does not meet one or more of the review items in subsection (d) above, the Local Licensing Authority shall notify the Colorado Department

of Revenue Marijuana Enforcement Division and the applicant that the application is denied without further review. If the application is not denied upon completion of this initial review, the Local Licensing Authority shall forward the application to city departments for review of compliance with the provisions of this article, the City Code, the C~~M~~MC, and any other applicable law, rule or regulation. Nothing shall prevent the Local Licensing Authority from later denying the application based upon the criteria detailed in subsection (d) above, the application containing any false or misleading information, or the failure to meet any applicable laws, rules or regulations.

(e) All applications for a medical marijuana business license shall require a public hearing before the Local Licensing Authority, inclusive of publication and posting requirements as set forth in the Colorado ~~Medical~~ Marijuana Code and below.

***

(4) If the building in which the medical marijuana business ~~establishment~~ is to be located is in existence at the time of the application, any sign posted as required in subsections (1) and (2) of this subsection (e) shall be placed so as to be conspicuous and plainly visible to the general public. If the building is not constructed at the time of the application, the applicant shall post notice on the premises upon which the building is to be constructed in such a manner that the notice shall be conspicuous and plainly visible to the general public.

***

(6) Before entering any decision approving or denying the application, the Local Licensing Authority shall consider whether the application meets the requirements of the C~~M~~MC and City Code, the facts and evidence adduced as a result of its investigation, as well as any other facts, the reasonable requirements of the neighborhood for the class of license for which application has been made, the desires of the adult inhabitants and any other pertinent matters affecting the qualifications of the applicant for the ~~conduct of the~~ type of business ~~establishment~~ proposed.

***

050.080.050 - Persons prohibited as licensees.

The criteria for determination of those persons who are not eligible to receive a medical marijuana business license shall be as provided in the Colorado ~~Medical~~ Marijuana Code.

050.080.060 - Location of licensed business.

Medical marijuana businesses shall be located in areas of the City only as allowed in the City Code. No medical marijuana business shall be located:

(1) Within ~~five hundred (500)~~ 1000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade; any park designated in Section 090.030.010(b) excluding subsection (15); mental health facility; or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the medical marijuana business; or

(2) Within ~~nine hundred (900)~~ 1,000 feet of another medical marijuana business, ~~or any~~ retail marijuana business ~~establishment~~, or marijuana cultivation facility. A medical marijuana business may locate on the same licensed premises as a retail marijuana business ~~establishment~~ or marijuana cultivation facility of the same class and same ownership, only if the licensed premises ~~is located to~~ meets the distance requirements from other medical marijuana ~~businesses~~ and retail marijuana businesses ~~establishments~~ and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two (2) facilities.

(3) In any zone district not specifically allowed by the City Code.

050.080.070 - Persons allowed on premises.

A licensee shall only allow persons authorized under the Colorado ~~Medical~~ Marijuana Code and City Code on the licensed premises, including the following:

***

(3) if operated on the same licensed premises with a retail marijuana business ~~establishment~~ as authorized in this article and Article 050.090, no person under twenty-one (21) years of age is allowed on the licensed premises.

050.080.080 - Requirements related to operation of medical marijuana business.

(a) Medical marijuana businesses shall meet all operational criteria for the procurement, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the Colorado ~~Medical~~ Marijuana Code.

***

(3) Medical marijuana businesses shall apply for a sign permit through the Community Development Department. All exterior signage associated with a medical marijuana business will meet the standards established in the Colorado ~~Medical~~ Marijuana Code, the Code of Colorado Regulations, and in the City Code. In addition, no sign associated with a medical marijuana business shall use the word "marijuana," "cannabis," or any other word or phrase commonly understood to refer to marijuana or a graphic/image of any portion of a marijuana plant, or paraphernalia associated with medicinal marijuana use unless immediately preceded by the word "medical" or the message of such sign includes the words "for medical use" or "for medicinal purposes" in letters that are no smaller than the largest letter on the sign.

***

(8) There shall be posted in a conspicuous location in each medical marijuana business legible signs containing the following:

***

c. A warning that loitering in or around the medical marijuana ~~dispensary~~ business is prohibited by state law;

***

j. If operated on the same licensed premises with a retail marijuana business ~~establishment~~ as authorized in this article and Article 050.090~~; No~~, no person under twenty-one (21) years of age is allowed on the licensed premises.

050.080.090 - Inspection of Books, Records, Premises and Inventory.

(a) Any medical marijuana business licensed by the City pursuant to this article may be required to demonstrate, upon demand by the City Manager or his/her duly authorized representative(s), or by law enforcement officers, that the source and quantity of any marijuana found upon the licensed premises is in full compliance with any applicable state law or regulation. Each licensee of a medical marijuana business shall keep and maintain a complete set of books and records necessary to show fully the business transactions of such licensee, in full compliance with the laws and regulations of the state. All such records shall be open at all times during business hours for inspection and examination by the City Manager or his/her duly authorized representative(s), or by law enforcement officers. The City may require the licensee to furnish such information as it considers necessary for the proper administration of this article.

***

(d) Acceptance of a medical marijuana business license from the City constitutes consent by the licensee, owners, managers, and employees of such business to permit the City Manager, or his/her authorized representative, or law enforcement officers to conduct routine inspections during business hours and other times of apparent activity, of any licensed medical marijuana business premises to assure compliance with this article, the City Code, the Colorado ~~Medical~~ Marijuana Code or any other applicable law, rule or regulation.

050.080.100 - Disciplinary Actions.

The grounds for suspension, revocation or other disciplinary actions of a medical marijuana business license and the procedures for such suspension or revocation or other disciplinary action shall be as provided in the Colorado ~~Medical~~ Marijuana Code and any and all applicable rules and regulations adopted pursuant thereto. In addition, a violation of any of the provisions of this article shall be grounds for suspension, revocation or other disciplinary action of a medical marijuana business license. In addition to suspension, revocation or other disciplinary actions, the Local Licensing Authority is hereby authorized to impose civil penalties or license violations to the same extent and according to the same standards as is utilized by the Colorado Department of Revenue Marijuana Enforcement Division in imposing fines for State license violations under the C~~M~~MC and any and all applicable rules and regulations adopted pursuant thereto.

****

ARTICLE 050.090 – RETAIL MARIJUANA

050.090.010 - Purpose.

The City Council intends to allow state-licensed retail marijuana businesses ~~establishments~~ to exist in Glenwood Springs in accordance with Article XVIII, Section 16 of the Colorado Constitution, C.R.S. Article 12 of Title 44 ~~43.4 of Title 12~~, and any other applicable state laws and regulations as well as the additional local licensing requirements and other restrictions set forth in the Glenwood Springs Municipal Code. Nothing within this article is intended to promote or condone the production, use, sale, testing or distribution of marijuana other than in compliance with applicable state law.

050.090.020 - Definitions.

Except as may be amended below, all definitions set forth in Article XVIII, Section 16 of the Colorado Constitution, C.R.S. Article 12 of Title 44 ~~43.4 of Title 12~~, and any adopted State of Colorado rules related to C.R.S. Article 12 of Title 44 ~~43.4 of Title 12~~ are incorporated into this article. The following words, terms and phrases, when used in this article, have the following

meanings ascribed to them except where the context clearly indicates that City Council intended a different meaning:

***

Business ~~*Establishment*~~ *manager* means the individual designated by the owner of the retail marijuana business ~~establishment~~ and registered with the City as the person responsible for all operations of the business ~~establishment~~ during the owner's absence from the licensed premises.

***

Colorado ~~*Retail*~~ *Marijuana Code* or *C*~~*R*~~*MC* shall mean C.R.S. Article 12 of Title 44 ~~43.4 of Title 12~~, as amended, including the Colorado Marijuana Rules in the Code of Colorado Regulations issued by the Colorado Department of Revenue Marijuana Enforcement Division, ~~Permanent Rules Related to the Colorado Retail Marijuana Code, dated September 9, 2013~~, as amended.

Cultivation ~~shall have the same meaning as set forth in Title 070 of the City Code~~ means the process by which a person promotes the germination and growth of a seed to a mature marijuana plant. Cultivation does not include the storing or watering of mature marijuana plants without the aid of grow lighting.

~~*Establishment manager* means the individual designated by the owner of the retail marijuana establishment and registered with the City as the person responsible for all operations of the establishment during the owner's absence from the licensed premises.~~

Licensed premises means the premises specified in a state application for a license supplied for approval pursuant to this article, owned or in the possession of the licensee, and within which the licensee is authorized to operate a retail marijuana business ~~establishment~~ in accordance with the provisions of this article and the C~~R~~MC.

Licensee means a person licensed pursuant to the C~~R~~MC and approved pursuant to this article.

***

Retail marijuana means marijuana grown and sold pursuant to the provisions of this article, the Amendment 64, and the Colorado ~~Retail~~ Marijuana Code.

Retail marijuana business ~~*establishment*~~ shall have the same meaning as set forth in Title 070 of the City Code.

050.090.030 - License required.

It shall be unlawful for any person to operate a retail marijuana business ~~establishment~~ without first having obtained local approval for a state-issued conditional license pursuant to the provisions of this article and having paid all fees therefor.

(1) Any retail marijuana business ~~establishment~~ shall comply with the approval requirements of this article, the C~~R~~MC, and any other applicable state or local laws and regulations.

***

(3) Approval of a separate state-issued conditional license shall be required for each location from which a retail marijuana business ~~establishment~~ is operated.

(4) Retail marijuana businesses ~~establishments~~ shall prove compliance with the C~~R~~MC and City Code criteria and requirements before approval of a license by the City in the following classes:

a. Retail marijuana store.
b. Retail m~~M~~arijuana products manufacturer~~ing facility~~.
c. Retail m~~M~~arijuana cultivation facility.
d. Retail m~~M~~arijuana testing facility.

~~(e) Prior to July 1, 2014, no retail marijuana store or marijuana product manufacturing facility shall be licensed in the city unless:~~

~~(1) As of October 1, 2013, the applicant for licensing of a retail marijuana store or product manufacturing facility was operating a State of Colorado and City licensed medical marijuana business of the same class, under the same ownership, in good standing, and in a location that complies with the location requirements of Section 050.090.070; and the applicant proposes to surrender the existing medical marijuana license upon receipt of a retail marijuana license of equal class, thereby entirely converting an existing medical marijuana licensed business into a retail marijuana licensed establishment; or~~

~~(2) As of October 1, 2013, the applicant for licensing of a retail marijuana store or marijuana product manufacturing facility was operating a State of Colorado and City licensed medical marijuana business of the same class, under the same ownership, in good standing, and in the location that complies with the location requirements of Section 050.090.070; and the applicant proposes to retain the existing medical marijuana license while locating the same class of retail marijuana licensed operation at the same location, to the extent allowed by the CRMC and this City Code.~~

~~(f) A medical marijuana business operating in good standing as of October 1, 2013 under a State of Colorado and City license which obtains a change of location for that medical marijuana~~

~~business within the City may qualify for licensing as a retail marijuana establishment, of equal class as allowed in subsection (e), in the new location. To qualify for a retail marijuana business establishment license, the change of location must be in compliance with the requirements of the City Code.~~

~~(g) A licensed medical marijuana business that changes ownership after October 1, 2013 shall not be authorized for retail marijuana establishment licensing until July 1, 2014 or thereafter.~~

~~(h) On or after July 1, 2014, any person who otherwise qualifies for licensing under applicable state and city law may apply for approval of a state-issued retail marijuana establishment license within the City, regardless of whether the applicant holds a medical marijuana business license within the City.~~

~~(i) On or after January 2, 2014, an applicant may apply for approval of a state-issued retail marijuana cultivation facility or retail marijuana testing facility license regardless of whether the applicant holds a medical marijuana business license within the City.~~

(5j) All retail marijuana business ~~establishment~~ licenses approved by the City shall be valid for a period of one (1) year from the date such license is issued.

(6~~k~~) Renewal applications shall be subject to review as detailed in the C~~R~~MC and any local rules, policies and procedures.

(7~~l~~) Licensees shall report and submit to review each transfer or change of ownership interest, change in business ~~establishment~~ manager, change in location or change in financial interest as detailed in the C~~R~~MC and any local rules, policies and procedures.

050.090.040 - Limitations of license.

(a) ~~Under no circumstances shall the Local Licensing Authority act upon any application for local approval before the issuance of a state-issued conditional license and the state's full regulatory oversight as specified in CRMC. The Local Licensing Authority shall not act upon any applications filed independent from the state licensing process such as: the state fails to process applications by October 1, 2013, the state fails to act within ninety (90) days of application filing, or the state fails to issue licenses by January 1, 2014.~~

(~~b~~) Approval of a state-issued conditional retail marijuana business ~~establishment~~ license pursuant to this article does not create a defense, exception or provide immunity to any person in regard to any potential criminal liability the person may have for the production, distribution or possession of marijuana.

(b~~c~~) If the state prohibits the sale, cultivation or other distribution of marijuana through retail marijuana businesses ~~establishments~~ authorized in the C~~R~~MC, any state-issued conditional license approved by the City pursuant to this article shall be deemed to be immediately

revoked by operation of law, with no grounds for appeal or other redress on behalf of the Licensees.

050.090.050 - Application.

(a) An application for a retail marijuana business ~~establishment~~ license shall be made as required by the C~~R~~MC. The application shall be used to demonstrate compliance with the provisions of this article, the City Code, C~~R~~MC, Amendment 64 and any other applicable law, rule or regulation. In addition to general information required, the application for approval of the state-issued conditional license shall include the following information:

(1) An operating plan for the proposed retail marijuana business ~~establishment~~ which includes a description of the products and services to be provided by the business ~~establishment~~, including whether the business ~~establishment~~ proposes to engage in the production of retail sale of food or other products containing retail marijuana, and whether any retail marijuana products or services will be provided at a location different than the premises on the license application.

(2) A dimensional floor plan of the licensed premises, clearly labeled, and indicating the principal uses of the floor area, including but not limited to: areas open to employees only; storage areas; retail sales areas and areas where retail marijuana will be distributed; and production areas.

(3) Sign, security and lighting plans indicating how the applicant will comply with the requirements of the C~~R~~MC and the City Code.

(4) An area map, drawn to scale, indicating, within a radius of ~~five hundred (500)~~ 1,000 feet from the boundaries of the property upon which the retail marijuana business ~~establishment~~ is located, the proximity of the property to any kindergarten through 12th grade public or private school; park designated in Section 090.030.010(b) excluding subsection (15); mental health facility or drug treatment facility, and indicating, within a radius of ~~nine hundred (900)~~ 1,000 feet, any other retail marijuana ~~establishment~~ or medical marijuana business or marijuana cultivation facility.

(5) Any other information necessary to determine compliance with any provision of the City Code, the C~~R~~MC or any other applicable law or regulation.

(b) An application for approval of a state-issued conditional retail marijuana business ~~establishment~~ license shall be accompanied by the operating fee. Such fee shall be established by resolution of the City Council.

(c) The Local Licensing Authority shall conduct an initial review of the retail marijuana business ~~establishment~~ license application materials to determine the following:

(1) the proposed licensed premises location is allowed pursuant to the zoning, land use laws and distance requirements in the City Code;

(2) the application is full and complete and has been fully reviewed by the Colorado Department of Revenue Marijuana Enforcement Division;

(3) the application for a license concerns a particular location that is ~~the same as or~~ greater than five hundred (500) feet of a location for which, within the two (2) years ~~next~~ preceding the date of the application, the State or a Local Licensing Authority denied an application for the same class of license for the reason that the reasonable requirements of the neighborhood and the desires of the adult inhabitants were satisfied by the existing businesses ~~establishments~~; and

(4) the applicant is, or will be, entitled to possession of the premises for which application is made under a lease, rental agreement, or other arrangement for possession of the premises, or by virtue of ownership thereof.

(d) Within forty-five (45) days of receipt of the retail marijuana business ~~establishment~~ license approval application material, if the approval application does not meet one (1) or more of the review items in subsection (c) above, the Local Licensing Authority shall notify the Colorado Department of Revenue Marijuana Enforcement Division and the applicant that the application is denied without further review. If the application is not denied upon completion of this initial review, the Local Licensing Authority shall forward the application to city departments for review of compliance with the provisions of this article, the City Code, the C~~R~~MC, and any other applicable law, rule or regulation. Nothing shall prevent the Local Licensing Authority from later denying the application based upon the criteria detailed in subsection (c) above, the application containing any false or misleading information, or the failure to meet any applicable laws, rules or regulations.

(e) All applications for local approval of a state-issued conditional retail marijuana business ~~establishment~~ license shall require a public hearing before the Local Licensing Authority, inclusive of publication and posting requirements as set forth in the C~~R~~MC and below.

***

(4) If the building in which the retail marijuana business ~~establishment~~ is to be located is in existence at the time of the application, any sign posted as required in subsections (1) and (2) of this section shall be placed so as to be conspicuous and plainly visible to the general public. If the building is not constructed at the time of the application, the applicant shall post notice on the premises upon which the building is to be constructed in such a manner that the notice shall be conspicuous and plainly visible to the general public.

***

(6) Before entering any decision approving or denying the application, the Local Licensing Authority shall consider whether the application meets the requirements of the C~~R~~MC and City Code, the facts and evidence adduced as a result of its investigation, as well as any other facts, the reasonable requirements of the neighborhood for the class of license for which application has been made, the desires of the adult inhabitants and any other pertinent matters affecting the qualifications of the applicant for the conduct of the type of business ~~establishment~~ proposed.

***

(8) An inspection of the proposed retail marijuana business ~~establishment~~ by the City, including, but not limited to, building and fire inspectors and law enforcement officers, shall be required prior to local approval of a state-issued conditional license. Such inspection shall occur after the licensed premises are ready for operation but prior to the opening of the business ~~establishment~~ to the public. The inspection shall verify that the premises are constructed and operated in accordance with the submitted application, and that such premises are in compliance with applicable City Codes, the C~~R~~MC, and laws and regulations of the State of Colorado.

***

050.090.060 - Persons prohibited as licensees.

The criteria for determination of those persons who are not eligible to receive a retail marijuana business ~~establishment~~ license shall be as provided in the C~~R~~MC.

050.090.070 - Location of licensed business ~~establishment~~.

Retail marijuana businesses ~~establishment~~ shall be located only in areas of the City as allowed in the City Code. No retail marijuana business ~~establishment~~ shall be located:

(1) Within ~~five hundred (500)~~ 1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade; any park designated in Section 090.030.010(b) excluding subsection (15); mental health facility; or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the retail marijuana businesses ~~establishment~~;

(2) Within ~~nine hundred (900)~~ 1,000 feet of another retail marijuana business, ~~establishment establishment or a~~ medical marijuana business, or marijuana cultivation facility. A retail

marijuana businesses ~~establishment~~ may locate on the same licensed premises as a medical marijuana business of the same class and same ownership, only if the licensed premises ~~is located to~~ meets the distance requirements from other retail marijuana ~~establishments~~ and medical marijuana businesses and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two (2) facilities; and

(3) In any zone district not specifically permitted by the City Code.

050.090.080 - Persons allowed on licensed premises.

(a) A licensee shall only allow persons authorized under the C~~R~~MC and City Code on the licensed premises including, but not limited to, law enforcement officers, inspectors and other officials or employees of any federal, state or local government or agency engaged in the lawful performance of their official duties.

(b) Any retail marijuana business ~~establishment~~ shall not allow anyone under the age of twenty-one (21) to be present on the licensed premises.

(c) A retail marijuana business ~~establishment~~ allowed to locate on the same licensed premises as a medical marijuana business in accordance with this article shall not allow anyone under the age of twenty-one (21), including medical marijuana patients, on the Licensed Premises.

050.090.090 - Requirements related to operation of a Retail Marijuana Business ~~Establishment~~.

(a) Retail marijuana businesses ~~establishments~~ shall meet all operational criteria for the procurement, display, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the C~~R~~MC.

(b) In addition, all retail marijuana businesses ~~establishment~~ shall comply with the following local restrictions:

***

(3) A sign permit shall be obtained through the Community Development Department. All exterior signage associated with a retail marijuana business ~~establishment~~ will meet the standards established in the C~~R~~MC, the Code of Colorado Regulations, and in the City Code.

(4) A lighting plan shall be submitted to the Community Development Department and comply with the requirements of the City Code and C~~R~~MC.

(5) No licensee shall allow the smoking of marijuana in public or consumption of any marijuana products on the licensed premises as prohibited by the C~~R~~MC, other state law and City Code.

***

(7) No licensed premises shall be managed by any person other than the licensee or the business ~~establishment~~ manager listed on the application for the license, renewal application, or change of manager application. Such licensee or business ~~establishment~~ manager shall be responsible for all activities that occur within the licensed premises.

(8) There shall be posted in a conspicuous location in each retail marijuana business ~~establishment~~ legible signs as required by the C~~R~~MC, including but not limited to:

***

d. A warning that consumption of marijuana within a retail marijuana business ~~establishment~~ is prohibited;

***

g. The name and contact information for the owner or owners and any business manager of the retail marijuana business ~~establishment~~;
h. The retail marijuana business ~~establishment~~ license; and
i. All sales tax/business licenses.

050.090.100 - Inspection of Books, Records, Licensed Premises, and Inventory.

(a) Any retail marijuana business ~~establishment~~ approved by the City pursuant to this article may be required to demonstrate, upon demand by the City Manager or his duly authorized representative(s), or by law enforcement officers, that the source and quantity of any marijuana found upon the licensed premises is in full compliance with any applicable state law or regulation. Each licensee of a retail marijuana business ~~establishment~~ shall keep and maintain a complete set of books and records as required by the C~~R~~MC. All such records shall be open at all times required by the C~~R~~MC. The City may require the licensee to furnish such information as it considers necessary for the proper administration of this article.

***

(c) Acceptance of a retail marijuana business ~~establishment~~ license approved by the City constitutes consent by the licensee, owners, managers, and employees of such business ~~establishment~~ to permit the City Manager, or his/her authorized representative, or law enforcement officers to conduct routine inspections during business ~~establishment~~ hours and other times of apparent activity, of any licensed retail marijuana business ~~establishment~~ premises to ensure compliance with this article, the City Code, the C~~R~~MC or any other applicable law, rule or regulation.

***

050.090.120 - Disciplinary Actions.

A violation of any provisions of the C~~R~~MC or the City Code shall be grounds for suspension, revocation or other disciplinary actions of a retail marijuana business ~~establishment~~ license. The procedures for such suspension or revocation or other disciplinary action shall be as provided in the C~~R~~MC, the City Code and any and all applicable rules and regulations adopted pursuant thereto. In addition to suspension, revocation, or other disciplinary actions, the Local Licensing Authority is hereby authorized to impose civil penalties for license violations to the same extent and according to the same standards as is utilized by the Colorado Department of Revenue Marijuana Enforcement Division in imposing fines for state license violations under the C~~R~~MC and any and all applicable rules and regulations adopted pursuant thereto.

****

ARTICLE 070.030 – USE REGULATIONS

****

070.030.020 – Table of Allowed Uses.

***

(e) *Table of Allowed Uses.*

COMMERCIAL USES	
Marijuana ~~Establishments~~ Businesses	Medical marijuana business, excluding cultivation
	Retail marijuana ~~establishment~~ business, excluding cultivation

***

INDUSTRIAL USES	
Marijuana ~~Establishments~~ Businesses	Marijuana cultivation, with or without retail or medical business ~~or medical establishment~~

***

070.030.030 – Use-Specific Standards.

***

(e) *Commercial Uses.*

***

(10) *Medical Marijuana Business*

a. *Purpose*

The City Council intends to regulate the use, acquisition, production, and distribution of medical marijuana in a manner consistent with Article XVIII, Section 14 of the Colorado Constitution, Article 10 ~~43.3~~ of Title 44 ~~12~~ Colorado Revised Statutes and any other applicable laws and regulations of the state. Nothing within this article is intended to promote or condone the production, use, sale, or distribution of medical marijuana other than in compliance with applicable state law.

b. *License Required*

Medical marijuana businesses shall comply with the City Code Article 050.080.

c. *Location of a Licensed Business***.** Medical marijuana businesses shall be located in areas of the city only as allowed in the City Code. The ability to operate a medical marijuana business on any given property shall cease upon a three year period of the use not occurring thereon. No medical marijuana business shall be located:

1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade; park designated in Section 090.030.010(b) excluding subsection (15); mental health facility; or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the medical marijuana business;
2. Within ~~900~~1,000 feet of another medical marijuana business, ~~or any~~ retail marijuana business ~~establishment~~, or a marijuana cultivation facility. A medical marijuana business may locate on the same licensed premises as a retail marijuana business ~~establishment~~ or marijuana cultivation facility of the same class and same ownership, only if the licensed premises ~~is located to~~ meets the distance requirements from other medical marijuana businesses, ~~and~~ retail marijuana businesses ~~establishments~~, and marijuana cultivation facilities. This

distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities.

3. In any zoning district not specifically allowed by the City Code.

d. *Requirements Related to Operation of a Medical Marijuana Business.*

1. Medical marijuana businesses shall meet all operational criteria for the procurement, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the Colorado ~~Medical~~ Marijuana Code and the City Code Article 050.080.

2. In addition, all medical marijuana businesses shall comply with the following local restrictions:

i. Medical marijuana businesses shall limit their hours of operation to between 8:00 a.m. and 7:00 p.m. Monday through Sunday or as otherwise limited by state law;

ii. Medical marijuana businesses shall apply for a sign permit through the Community Development Department. All exterior signage associated with a medical marijuana business will meet the standards established in the Colorado ~~Medical~~ Marijuana Code, the Code of Colorado Regulations, and in the City Code. In addition, no sign associated with a medical marijuana business shall use the word "marijuana," "cannabis," or any other word or phrase commonly understood to refer to marijuana or a graphic/image of any portion of a marijuana plant, or paraphernalia associated with medicinal marijuana use unless immediately preceded by the word "medical" or the message of such sign includes the words "for medical use" or "for medicinal purposes" in letters that are no smaller than the largest letter on the sign; and

iii. Marijuana plants, products, accessories, and associated paraphernalia contained in a medical marijuana facility shall not be visible from a public sidewalk, public street or right-of-way, or any other public place.

iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

(11) *Retail Marijuana Business ~~Establishment~~*

a. *Purpose*. The City Council intends to allow state-licensed retail marijuana businesses ~~establishments~~ to exist in Glenwood Springs in accordance with Article XVIII, Section 16 of the Colorado Constitution, Article 10 ~~43.4~~ of Title 44 ~~12~~ Colorado Revised Statutes, and any other applicable state laws and regulations as well as the additional local licensing requirements and other restrictions set forth in the Glenwood Springs Municipal Code. Nothing within this Article is intended to promote or condone the production, use, sale, testing or distribution of marijuana other than in compliance with applicable state law.

b. *License Required*. Retail marijuana businesses ~~establishments~~ shall comply with City Code Article 050.090.

c. *Location of Licensed Business ~~Establishment~~*. Retail marijuana businesses ~~establishments~~ shall be located only in areas of the city as allowed in the City Code. The ability to operate a retail marijuana business on any given property shall cease upon a three year period of the use not occurring thereon. No retail marijuana business ~~establishment~~ shall be located:

1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade; park designated in Section 090.030.010(b) but excluding subsection (15); mental health facility; or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the retail marijuana business ~~establishment~~;
2. Within ~~900~~1,000 feet of another retail marijuana business ~~establishment, or a~~ medical marijuana business, or a marijuana cultivation facility. A retail marijuana business ~~establishment~~ may locate on the same licensed premises as a medical marijuana business or marijuana cultivation facility of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other retail marijuana businesses ~~establishments, and~~ medical marijuana businesses, and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities; or
3. In any zoning district not specifically permitted by the City Code.

d. *Requirements Related to Operation of a Retail Marijuana Business ~~Establishment~~*.

1. Retail marijuana businesses ~~establishments~~ shall meet all operational criteria for the procurement, display, dispensing, labeling, sanitation, security, and any

other criteria as required by the state pursuant to the C~~R~~MC and the City Code Article 050.090.

2. In addition, all retail marijuana businesses ~~establishments~~ shall comply with the following local restrictions:

   i. Hours of operation shall be limited to between 8:00 a.m. and 7:00 p.m. Monday through Sunday; and

   ii. A sign permit shall be obtained through the Community Development Department. All exterior signage associated with a retail marijuana business ~~establishment~~ will meet the standards established in the ~~CRMC~~ Colorado Marijuana Code and in the City Code.

   iii. Storage of retail marijuana shall be considered an accessory use. Not more than 25 percent of the licensed premises of a retail marijuana business shall be used for such purposes.

   iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

***

(f) *Industrial Uses.*

***

(3) *Marijuana Cultivation.*

a. No marijuana cultivation facility shall be located or operated:

~~a.~~1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade; park as designated in Section 090.030.010(b) but excluding subsection (15); mental health facility; or drug treatment facility. This distance shall be computed by a straight line measurement from the nearest property line of the school property; park as designated in Section 090.030.010(b) but excluding subsection (15); mental health facility; or drug treatment facility to the nearest property line of the site housing the marijuana cultivation facility.; ~~or~~

~~b.~~ 2. Within ~~900~~1,000 feet of another marijuana cultivation facility, medical marijuana business, or retail marijuana business ~~establishment~~. A marijuana cultivation facility may locate on the same licensed premises as a medical marijuana business or retail marijuana business of the same class and same ownership, only if the licensed premises meets the distance requirements from other retail marijuana businesses, medical marijuana businesses, and marijuana cultivation facilities. This distance shall

be computed by a straight line measurement between property lines of the sites housing the two facilities.

3. In a zoning district where it is not specifically permitted by the City Code.

b. The ability to operate a marijuana cultivation facility on any given property shall cease upon a three year period of the use not occurring thereon.

c. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

***

ARTICLE 070.060 – ADMINISTRATION AND PROCEDURES

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070.060.020 – Summary Table of Development Review Procedures.

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Notes:

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[4] Special Use Permits involving Medical Marijuana Business, Retail Marijuana Business ~~Establishment~~, and Marijuana Cultivation uses require hearings before the Planning and Zoning Commission and City Council. The Planning and Zoning Commission has review and recommending authority and City Council has review and decision making authority.

***

ARTICLE 070.070 – RULES OF CONSTRUCTION AND DEFINITIONS.

****

070.070.020 – Definitions of Use Categories and Specific Use Types.

***

(c) *Commercial Uses.*

***

(7) Marijuana Businesses ~~Establishments~~. Uses in this category are primarily engaged in cultivating, manufacturing, testing, and sales of medical and/or retail marijuana.

a. *Medical Marijuana Business, Excluding Cultivation.* Marijuana that is grown, produced, manufactured, sold, transmitted, or dispensed for medical use to the extent permitted by Article IVIII, Section 14 of the Colorado Constitution, Article ~~43.3~~ 10 of Title ~~122~~ 44 C.R.S., and any other applicable state or City law or regulation. The term "medical marijuana business" shall not include the private possession, distribution, and medical use of marijuana and cultivation of up to six

(6) plants by an individual patient or caregiver for one (1) patient in the residence of the patient to the extent permitted by Article XVIII, Sec. 14 of the Colorado Constitution, Article ~~43.3~~ 10 of Title ~~12~~ 44 C.R.S. and any other applicable state or City law or regulation. The presence of more than six (6) marijuana plants on a property shall constitute a "medical marijuana business" regardless of the number of patients residing on the property.

b. *Retail Marijuana ~~Establishment~~ Business, Excluding Cultivation.* The retail sale, storage, product manufacturing or testing of marijuana to the extent permitted by Article XVIII, Section 16 of the Colorado Constitution and in various provisions of the Colorado ~~Retail~~ Marijuana Code, Article ~~43.4~~ 10 of Title ~~12~~ 44, C.R.S., and any other applicable state or City law or regulation.

***

(d) *Industrial Uses.*

***

(3) Marijuana ~~Establishments~~ Businesses. Uses in this category are primarily engaged in cultivating, manufacturing, testing, and sales of medical and/or retail marijuana.

a. *Marijuana Cultivation, with or without Retail or Medical Business ~~or Medical Establishment~~.* The retail sale, cultivation, storage, product manufacturing or testing of marijuana to the extent permitted by Article XVIII, Section 16 of the Colorado Constitution and in various provisions of the Colorado ~~Retail~~ Marijuana Code, Article ~~43.4~~ 10 of Title ~~12~~ 44, C.R.S., and any other applicable state or City law or regulation.

Planning and Zoning Commission Report

Date: October 27, 2020
To: Planning and Zoning Commission
From: Trent L. Hyatt, Senior Planner
Subject: #63-20 – Marijuana Related Uses Code Amendment

REQUEST	Consideration of a Code Amendment to Sections 070.030.030(e)(10), (11), and (f)(3) of the *Glenwood Springs Municipal Code* regarding the City's marijuana related special use regulations.
APPLICANT	City of Glenwood Springs
ZONE	Applies to all non-residential zone districts

ACTION ITEM:

The Planning and Zoning Commission (Commission) is the recommending body to City Council on any and all revisions to the Title 070 of the *Glenwood Springs Municipal Code* (Code).

Action 1 - **Code Amendment** - to revise the marijuana related special use regulations in Sections 070.030.030(e)(10), (11), and (f)(3) of the Glenwood Springs Municipal Code.

Staff recommendation: *Staff recommends approval of the Code Amendment with the findings on page 5.*

BACKGROUND/ANALYSIS

Proposal
The City has been operating under the current marijuana regulations since September 2015 (excluding minor modifications associated with the development code redraft in 2018). The basic premise of our regulations is the requirement for a special use review/permit to evaluate compliance with the various use specific regulations and the general special use approval criteria. These standards are provided in ***bold italics*** below.

Section 070.030.030(e)(10) addresses medical marijuana businesses whereas Section 070.030.030(e)(11) addresses retail marijuana establishments. However, the language below is representative of both sections.

b. License Required
Medical marijuana businesses shall comply with City Code Article 050.090.
c. Location of a Licensed Business
Medical marijuana businesses shall be located only in areas of the city as allowed in the City Code. No medical [or retail] marijuana businesses shall be located:

1. ***Within 500 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade. The distance shall be property computed by a straight line measurement from the nearest property line of the school to the nearest property line of the site housing the retail marijuana establishment;***
2. ***Within 900 feet of another medical marijuana business or any retail marijuana establishment. A medical marijuana business may locate on the same licensed premises as a retail marijuana establishment of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other medical marijuana businesses and retail marijuana establishments. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities; and***
3. ***In any zoning district not specifically permitted by the City Code.***

d. Requirements Related to Operation of a Medical Marijuana Business

1. ***Medical marijuana businesses shall meet all operational criteria for the procurement, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the Colorado Medical Marijuana Code and the City Code Article 050.080.***
2. ***In addition, all medical marijuana businesses shall comply with the following local restrictions:***
   - ***i. Medical marijuana businesses shall limit their hours of operation to between 8:00 a.m. and 7:00 p.m. Monday through Sunday or as otherwise limited by state law;***
   - ***ii. Medical marijuana businesses shall apply for a sign permit through the Community Development Department. All exterior signage associated with a medical marijuana business will meet the standards established in the Colorado Medical Marijuana Code and in the City Code. In addition, no sign associated with a medical marijuana business shall use the word "marijuana," "cannabis," or any other word or phrase commonly understood to refer to marijuana or a graphic/image of any portion of a marijuana plant, or paraphernalia associated with medicinal marijuana use unless immediately preceded by the word "medical" or the message of such sign includes the words "for medical use" or "for medicinal purposes" in letters that are no smaller than the largest letter on the sign; and***
   - ***iii. Marijuana plants, products, accessories, and associated paraphernalia contained in a medical marijuana facility shall not be visible from a public sidewalk, public street or right-of-way, or any other public place.***
   - ***iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.***

Section 070.030.030(f)(3) of the Code addresses marijuana cultivation facilities as follows:

No marijuana cultivation facility shall be located:

a. Within 500 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade. This distance shall be computed by a straight line measurement from the nearest property line of the school property to the nearest property line of the site housing the marijuana cultivation facility; or

b. Within 900 feet of another marijuana cultivation facility, medical marijuana business, or retail marijuana establishment. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities.

c. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

Section 070.060.050(e)(3)e.2 of the Code outlines the review criteria for all Land Uses as depicted below.

i. The use will be compatible with the surrounding area;
ii. The impacts of the use on surrounding areas have been adequately minimized;
iii. The use will be consistent with the general purpose and intent of this Code;
iv. The use will comply with all applicable standards of this Code;
v. The use is in conformance with the Comprehensive Plan and other City plans and policies; and
vi. The use minimizes adverse impacts to the health, safety, and welfare of the inhabitants of the surrounding areas and the city.

Proposed Code Amendment

Following the review of various marijuana related business special use applications, the Commission has discussed potentially reevaluating the regulations. More recently, City Council requested the Commission review the regulations and provide recommendations for revisions thereto, if applicable. The Commission conducted work sessions related to the issue on July 28, August 25, and September 15 of this year where various maps, proposed buffers, and other potential changes were considered. At the last of these work sessions, staff was directed to bring forth code amendments related to the following:

1. An increased buffer of 1000 feet between/from marijuana related business and schools;
2. The addition of buffers for parks, mental health facilities, and drug treatment facilities;
3. Language addressing occurrences where a marijuana related business ceases operation at a specific site; and
4. The addition of a marijuana related business density maximum related to the City's population.

The attached proposed revised language attempts to address the Commission's requests. Additions to existing language are <u>underlined</u> and deletions are ~~struck-through~~. Staff has also included revised references to various guiding state regulations and terms. Additionally, we provide a density cap related to cultivation which maintains the current number of facilities. Future revisions to the City licensing requirements, as outlined in Title 050, will likely result from any the current Code Amendment.

Code Amendment Approval Criteria

Section 070.060.040(c)(3)d.3 of the Code outlines the approval criteria for revision thereto. Each of the criteria are listed in **bold** below along with comments from staff.

i. Is consistent with the Comprehensive Plan and other City policies;

"Promote long-term, sustainable, diverse, economic development" and "maintain Glenwood Springs as the regional tourism, retail, commercial and governmental center of Garfield County" are community goals outlined in the executive summary and subsequent chapters of the Glenwood Springs Comprehensive Plan. Specific objectives and strategies related to these goals are outlined in the table below.

Comprehensive Plan Goal	Objective and Strategy
-Promote long-term, sustainable, diverse economic development	-Attract diverse businesses and industries (Chapter 4, Page 50)
Staff Comment: The proposed text amendment helps to promote new business types as the proliferation of marijuana related uses potentially limits retail space availability.	
-Maintain Glenwood Springs as the regional tourism, retail, commercial and governmental center of Garfield County	-Attract diverse businesses and industries (Chapter 4, Page 50)
Staff Comment: The proposed text amendment helps to promote new business types as the proliferation of marijuana related uses potentially limits retail space availability.	

ii. Does not conflict with other provisions of this Code or other provisions in the Glenwood Springs
Municipal Code;

It does not appear the proposal conflicts with other provisions of the Code. Instead, the proposal provides additional guidance on how to manage the specific use.

iii. Is necessary to address a demonstrated community need;
iv. Is necessary to respond to substantial changes in conditions and/or policy; and

As discussed above, concerns over the proliferation of the use have been raised by the Commission for a number of years now and more recently by City Council. While additional instances of the use have occurred, tax revenues have not necessarily seen a relative increase.

v. Is consistent with the general purpose and intent of this Code.

The proposal appears to be consistent with the general purpose and intent of the Code outlined in Section 070.010.030. The subject Code Amendment is simply an update to existing similar standards already addressed in the Code and supports the "promoting orderly, efficient, and integrated development within the city" and "regulating the development and use of land based upon the impact of such development or use on surrounding areas or the city" intents outlined therein.

Reviewing Agency Comments
No official comments have been received regarding the proposal. However, staff worked with the Attorney's office and Police Department in preparation of the revisions.

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

Section 070.060.040(c)(3)d.1 of the Code explains, "*The Planning Commission shall review the Code amendment application and recommend approval, approval with conditions, or denial of the amendment in accordance with 070.060.030(g) and the approval criteria in paragraph 3 below* [addressed by staff above]. The Planning Commission may also continue the hearing.

Action 1 -<u>Code Amendment</u> - to revise the marijuana related special use regulations in Sections 070.030.030(e)(10), (11), and (f)(3) of the Glenwood Springs Municipal Code.

Staff recommendation: Staff recommends **approval** of the Code Amendment with the **findings** below:

Recommended Findings:

1. The proposed amendment is consistent with the Comprehensive Plan and other City policies as outlined on pages 3-5 of the staff report;
2. The proposed amendment does not conflict with other provisions of this Code or other provisions in the Glenwood Springs Municipal Code as outlined on page 4 of the staff report;
3. The proposed amendment is necessary to address a demonstrated community need as outlined on page 4 of the staff report;
4. The proposed amendment is necessary to respond to substantial changes in conditions and/or policy as outlined on page 4 of the staff report; and
5. The proposed amendment is consistent with the general purpose and intent of this Code as outlined on page 4 of the staff report.

MINUTES
City of Glenwood Springs
Planning and Zoning Commission
Regular Meeting
October 27, 2020
Zoom
6:00PM

1. **Roll Call**

Present at roll call were Commissioners:	George Shaver, Marco Dehm, Carolyn Cipperly, Sumner Schachter, Ben West, Kathryn Grosscup
Absent at roll call were Commissioners:	Amber Wissing
Also present were:	Jenn Ooton, Asst. City Manager, Terri Partch, City Engineer, Gretchen Ricehill, Asst. Economic/Community Development Director, Trent Hyatt, Senior Planner, Anna S. Itenberg, City Attorney's Office, Alissa Owsley, IT Director, Steve Boyd, Chief Operating Officer

1. **Seating of Alternate Commissioner**
Commissioner Schachter made a motion to seat Alternate Commissioner West. Commissioner Cipperly seconded the motion.

Motion passed unanimously.

2. **Receipt of Minutes**
Commissioner Grosscup made a motion to approve the meeting minutes from the 9/22/2020 meeting. Commissioner Shaver seconded the motion to approve.

Motion passed unanimously.

Commissioner Schachter made a motion to approve the meeting minutes from the 9/29/2020 meeting. Commissioner Shaver seconded the motion to approve. Commissioner Grosscup recused herself from the vote due to her absence at the 9/29/2020 meeting.

Motion passed unanimously.

3. Public Comments

Comments from citizens appearing for items not on the agenda. No citizens were present.

4. New Items

a. Planning File 27-20*: Consideration of a Major Site Architectural Plan Review for the expansion of the Iron Mountain Hot Springs including a new entry building, mineral pools, and enclosed pool. This item includes a consideration of an Alternative Equivalence Compliance for an architectural design that meets the intent of 070.040.090 Nonresidential Design Standards.*

Assistant Director Ricehill introduced the item and summarized the proposed project to the Commission. Ricehill explained that Action Item 1 of this proposal was for a major site/architectural plan review for new construction, that Action Item 2 was to considers alternative equivalence compliance for meeting design requirements, and that the applicant looks to provide alternative equivalence compliance with the construction of an earthen roof on the enclosed pool building. Ricehill indicated that staff supported the applicant's suggested design for meeting alternative equivalence compliance.

Commissioner Grosscup asked for staff for clarification on the amount of parking. Ricehill explained that the current proposal meets parking requirements and that any future uses would require additional review for parking requirements. Grosscup asked if the ten proposed pools would be exclusive to the future proposed hotel and the location of the required sidewalk.

Commissioner Schachter asked if the River Commission had any comments on this proposal. Ricehill confirmed that the River Commission reviewed the proposed riparian improvements Schachter requested that be recorded. Schachter also asked about potential future parking requirements associated with the hotel.

Applicants Doug Pratte from the Land Studio, Mike Foster from Triumph Architecture, and Steve Beckley from Iron Mountain Hot Springs (IMHS) provided the Commission with a short presentation on the proposed project. Beckley explained that the proposed parking area would not be shared with tramway users and that IMHS would provide a new traffic study for the future planned hotel. Doug Pratte also explained that the applicants would be working with the River Commission on the riparian design. Beckley explained they hold a permit from Army Corps of Engineers to develop the riverfront but that they were no longer interested in allowing access to the river and that all proposed riparian design features would be designed with intent to prevent access to the river from the facility.

Commissioner Cipperly had questions regarding pool design, impervious surfaces, ADA access on site, and parking access. Applicant Steve Beckley provided further explanation on those items, including confirming that pathways on the property were designed with ADA access and requirements in mind.

Commissioner Shaver asked about history of the shoreline, proposed riparian improvements, and the high-water mark of the river on the property. Applicants provided an explanation of proposed riparian landscaping and associated permits from the State of Colorado and the Army Corps of Engineers.

Commissioner Grosscup commented on pedestrian access and connectivity on site and asked if there would be any planned electric vehicle parking. Grosscup also asked about the ceiling space related to the garage doors. Applicants confirmed the walkways would be 8' wide and that there would likely be some electric vehicle parking provided.

Commissioner Schachter asked about the number and placement of bike racks. Applicant indicated that the number was indicated in the narrative and locations would be provided.

Commissioner Dehm asked staff if the parking lot met the landscaping requirements. Assistant Director Ricehill confirmed that the proposed parking lot design met code requirements. Dehm also asked if the parking lot was required to be paved, which Ricehill confirmed.

Commissioner Dehm opened the discussion to public comment. No members of the public had any comments. Commissioner Dehm closed the public comment.

Commissioner Schachter made a motion to continue the item to the next scheduled meeting on November 9th. Commissioner Grosscup seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

b. Planning File 51-20: *Consideration of a Special Use Permit for a retail marijuana establishment in the M2-Mixed Use Central Core Zoning district in Glenwood Meadows, pursuant to Municipal Code Section 070.030.030(e)(11).*

Senior Planner Trent Hyatt introduced the item and provided a summary of the proposed project to the Commission. Hyatt indicated that the staff supported approval of the item with findings and conditions listed on page 8 of the staff report.

Commissioner Shaver asked if there were any additional design requirements due to the proposed project's location within the Glenwood Meadow's development and had additional question on extension of City utility lines to the site. Staff provided explanation on both items.

Commissioner Grosscup asked if the proposed retail space would have multiple tenants. Hyatt confirmed that future use of that space could accommodate several users.

Commissioner Schachter asked if Glenwood Meadows sign code would apply to this project, which Hyatt confirmed.

Commissioner Dehm asked if the proposed building had fire suppression, which was confirmed by staff.

Applicant Chris Hawkins, Alpine Planning provided a presentation on the proposed project. Hawkins also provided a list of all members of the project team.

Commissioner Shaver asked the applicant for the size of proposed storage. Applicant Chris Hawkins confirmed the amount of storage was approximately 290 square feet.

Commissioner Grosscup asked the applicant if there was any interest for the proposed retail space. Applicant indicated they were not aware of a potential tenant.

Commissioner Dehm opened the discussion to public comment. No members of the public presented for comment. Commissioner Dehm closed the discussion to public comment.

Commissioner Schachter made a motion to continue the item to the next scheduled meeting on November 9th. Commissioner Cipperly seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

c. Planning File 54-20*: Consideration of a Location and Extent Review application for the construction of a new 11,000 square foot vehicle storage and office building and a 2,100 square foot communication building with 60-foot tall communication tower at the Colorado Department of Transportation maintenance facility.*

Assistant Director Ricehill introduced the item and provided a summary of the proposed project to the Commission. Ricehill indicated that staff recommended approval of the application with the finding and conditions listed on page 7 of the staff report.

Commissioner Grosscup asked if where CDOT staff at this facility would be parking. Ricehill explained that some of the parking at the nearby Caverns Village development would be open to CDOT employees. Applicant Erin Lucero, CDOT, provided more information on CDOT employee parking. Lucero estimated most parking would occur at the Caverns Village development with less parking occurring on the vehicle storage location.

Commissioner Cipperly asked about the type of parking surfaces to be used and the size of storage tanks on the property. Applicant Erin Lucero, CDOT provided explanation of parking surfaces on site, most of which would be asphalt. Lucero also stated that new storage tanks on the property were not part of this project and that the existing tanks would remain on site.

Commissioner Schachter asked regarding lighting of the proposed tower and use of paint in the design of the building. Applicant Erin Lucero explained the change in location caused the need to increase the height of the tower and that the tower was not lit. Lucero also explained that the variation in paint color would provide break-up in the visual appearance of the building and that CDOT would be open to color suggestions from the City.

Commissioner Shaver asked about effluent from the existing vehicle wash. Lucero explained the site was linked to the City system and that the proposed indoor wash bay would have a sand/oil interceptor installed. Shaver also asked if the proposed tower would have a flashing red aviation warning light.

Applicant Erin Lucero, CDOT provided a short explanation on the project, emphasizing the improved pedestrian access in the area.

Commissioner Dehm opened the item for public comment. No members of the public presented for comment. Commissioner Dehm closed the item for public comment.

Commissioner Dehm asked staff to confirm that this item was to be voted on at this night's meeting. Staff confirmed that a vote would take place at this meeting.

Commissioner Grosscup made a motion to approve the item with finding and conditions listed on page 7 of the staff report. Commissioner Schachter seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

d. Planning File 63-20*: Consideration of a Code Amendment to Section 070.030.030 Use Specific Standards of the Glenwood Springs Municipal Code for marijuana related businesses and cultivation facilities.*

Senior Planner Trent Hyatt made a presentation to the Commission and provided a summary of the proposed code amendments to *Section 070.030.030.*

Commissioner Shaver asked if there was an official designation or definition for a park, citing the Wulfshon area trails. Hyatt explained that the city designated parks were included on the map and that there was not a specific definition for a park space, citing the Confuence area and Rio Grande Trail as examples of areas that function as a park. Shaver also asked how the density requirements would be affected if the population decreased.

Commissioner Schachter asked if Planning & Zoning approval would send the draft regulations for City Council approval and asked for confirmation regarding code language on page 5d. Schachter also asked about the definition of parks in the code language.

Community Development Director Jen Ooton explained that there was a specific list of designated parks in the City and provided a list of all the designated parks.

Commissioner Cipperly also asked about the definition of parks and how it relates to the code amendment. Cipperly also expressed support for the proposed 1,000 foot setbacks and also questioned the use of population to set a density limit as people from outside of Glenwood would shop at these stores.

Commissioner Dehm opened the item for public comment. No members of the public presented for comment. Commissioner Dehm closed the public comment period.

Commissioner Grosscup made a motion to recommend approval of the proposed code amendments with the findings and conditions of page 5 of the staff report and the condition of using a definition of parks that excluded pathways.

Commissioner Schachter seconded the motion.

Commissioner Shaver asked if the grow facilities in town grow exclusively for their own use. Hyatt stated that any retail outlet must produce a certain percentage of the product they sell. Shaver expressed concern over potential odor from growth facilities and expressed support for the limits on growth facilities listed in the code amendment.

Commissioner Cipperly asked Commission to further discuss the limits set by population in the code amendment. Commissioner Schachter asked how this draft would apply to the current population of the City. Hyatt explained that the number of stores would depend on the Census counts. Commissioner Grosscup stated support for the population limits, citing previous population counts.

Commissioner Dehm called for the question.

Motion passed unanimously.

5. Commissioner Comments

Commissioner Shaver asked if there was anything in the Glenwood Meadows Development Code that would preclude a mixed use residential and commercial use building. Hyatt explained that was allowed in Glenwood Meadows.

Commissioner Schachter mentioned the public meeting on the Blake gate development and asked what the process would be to fill the new vacancy on Planning & Zoning Commission.

6. Director Comments

Director Jenn Ooton explained the process for filling the new vacancy on Planning & Zoning Commission.

7. Adjournment

Meeting was adjourned at 9:12 PM.

DRAFT

Section 070.030.030(e)

(10) **Medical Marijuana Business**

a. **Purpose**

The City Council intends to regulate the use, acquisition, production, and distribution of medical marijuana in a manner consistent with Article XVIII, Section 14 of the Colorado Constitution, Article 10 ~~43.3~~ of Title 44 ~~12~~ Colorado Revised Statutes and any other applicable laws and regulations of the state. Nothing within this article is intended to promote or condone the production, use, sale, or distribution of medical marijuana other than in compliance with applicable state law.

b. **License Required**

Medical marijuana businesses shall comply with the City Code Article 050.080.

c. **Location of a Licensed Business**

Medical marijuana businesses shall be located in areas of the city only as allowed in the City Code. The ability to operate a medical marijuana business on any given property shall cease upon a three year period of the use not occurring thereon. No medical marijuana business shall be located:

1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade, park, mental health facility, or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the medical marijuana business; ~~or~~
2. Within ~~900~~1,000 feet of another medical marijuana business, ~~or any~~ retail marijuana business~~establishment~~, or a marijuana cultivation facility. A medical marijuana business may locate on the same licensed premises as a retail marijuana business~~establishment~~ or marijuana cultivation facility of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other medical marijuana businesses, ~~and~~ retail marijuana businesses~~establishments~~, and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities.
3. In any zoning district not specifically allowed by the City Code.

d. **Requirements Related to Operation of a Medical Marijuana Business**

1. Medical marijuana businesses shall meet all operational criteria for the procurement, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the Colorado ~~Medical~~ Marijuana Code and the City Code Article 050.080.

2. In addition, all medical marijuana businesses shall comply with the following local restrictions:
    i. Medical marijuana businesses shall limit their hours of operation to between 8:00 a.m. and 7:00 p.m. Monday through Sunday or as otherwise limited by state law;
    ii. Medical marijuana businesses shall apply for a sign permit through the Community Development Department. All exterior signage associated with a medical marijuana business will meet the standards established in the Colorado ~~Medical~~ Marijuana Code, the Code of Colorado Regulations, and in the City Code. In addition, no sign associated with a medical marijuana business shall use the word "marijuana," "cannabis," or any other word or phrase commonly understood to refer to marijuana or a graphic/image of any portion of a marijuana plant, or paraphernalia associated with medicinal marijuana use unless immediately preceded by the word "medical" or the message of such sign includes the words "for medical use" or "for medicinal purposes" in letters that are no smaller than the largest letter on the sign; and
    iii. Marijuana plants, products, accessories, and associated paraphernalia contained in a medical marijuana facility shall not be visible from a public sidewalk, public street or right-of-way, or any other public place.
    iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

e. **Density**

The number of marijuana businesses permitted to operate within the City shall be based on population . A maximum of one medical and/or retail marijuana business shall be permitted for every 1,000 people living within the City or a fraction thereof (i.e. a maximum of two marijuana businesses is allowed for a population of 2500 people). Population shall be based on the decennial census conducted by the United States Census Bureau. In all other years, population shall be based on annual estimates by the Colorado State Demography Office.

(11) **Retail Marijuana Business~~Establishment~~**

a. **Purpose**

The City Council intends to allow state-licensed retail marijuana businesses~~establishments~~ to exist in Glenwood Springs in accordance with Article XVIII, Section 16 of the Colorado Constitution, Article 10 ~~43.4~~ of Title 44 ~~12~~ Colorado Revised Statutes, and any other applicable state laws and regulations as well as the additional local licensing requirements and other restrictions set forth in the Glenwood Springs Municipal Code. Nothing within this Article is intended to promote or condone the production, use, sale, testing or distribution of marijuana other than in compliance with applicable state law.

b. **License Required**

Retail marijuana businesses~~establishments~~ shall comply with City Code Article 050.090.

c. **Location of Licensed Business~~Establishment~~**

Retail marijuana businesses ~~establishments~~ shall be located only in areas of the city as allowed in the City Code. The ability to operate a retail marijuana business~~establishment~~ on any given property shall cease upon a three year period of the use not occurring thereon. No retail marijuana business~~establishment~~ shall be located:

1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade, park, mental health facility, or drug treatment facility. The distance shall be computed by a straight line measurement from the nearest property line of the school, park, mental health facility, or drug treatment facility property to the nearest property line of the site housing the retail marijuana business~~establishment~~;
2. Within ~~900~~1,000 feet of another retail marijuana business~~establishment~~, ~~or a~~ medical marijuana business, or a marijuana cultivation facility. A retail marijuana business~~establishment~~ may locate on the same licensed premises as a medical marijuana business or marijuana cultivation facility of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other retail marijuana businesses~~establishments, and~~ medical marijuana businesses, and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities. ; and
3. In any zoning district not specifically permitted by the City Code.

d. **Requirements Related to Operation of a Retail Marijuana Business~~Establishment~~**

1. Retail marijuana businesses ~~establishments~~ shall meet all operational criteria for the procurement, display, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the Colorado Marijuana Code ~~CRMC~~ and the City Code Article 050.090.
2. In addition, all retail marijuana businesses~~establishments~~ shall comply with the following local restrictions:
    i. Hours of operation shall be limited to between 8:00 a.m. and 7:00 p.m. Monday through Sunday; and
    ii. A sign permit shall be obtained through the Community Development Department. All exterior signage associated with a retail marijuana business~~establishment~~ will meet the standards established in the Colorado Marijuana Code and in the City Code.

iii. Storage of retail marijuana shall be considered an accessory use. Not more than 25 percent of the licensed premises of a retail marijuana business shall be used for such purposes.

iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

e. **Density**

The number of marijuana businesses permitted to operate within the City shall be based on population. A maximum of one retail and/or medical marijuana business shall be permitted for every 1,000 people living within the City or a fraction thereof (i.e. a maximum of two marijuana businesses is allowed for a population of 2500 people). Population shall be based on the decennial census conducted by the United States Census Bureau. In all other years, population shall be based on annual estimates by the Colorado State Demography Office.

Section 070.030.030(f)

(3) **Marijuana Cultivation**

a. No marijuana cultivation facility shall be located or operated:

1. Within ~~500~~1,000 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade, park, mental health facility, or drug treatment facility. This distance shall be computed by a straight line measurement from the nearest property line of the school property, park, mental health facility, or drug treatment facility to the nearest property line of the site housing the marijuana cultivation facility; ~~or~~

2. Within ~~900~~1,000 feet of another marijuana cultivation facility, medical marijuana business, or retail marijuana business~~establishment~~. A marijuana cultivation facility may locate on the same licensed premises as a medical marijuana business or retail marijuana business~~establishment~~ of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other retail marijuana businesses~~establishments~~, medical marijuana businesses, and marijuana cultivation facilities. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities The ability to operate a marijuana cultivation facility on any given property shall cease upon a three year period of the use not occurring thereon;

3. In a zoning district where it is not specifically permitted by the City Code.

b. The ability to operate a marijuana cultivation facility on any given property shall cease upon a three year period of the use not occurring thereon.

c. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

d. The number of marijuana cultivation facilities permitted to operate within the City shall be based on population. A maximum of one marijuana cultivation facility shall be permitted for every 5,000 people living within the City or a fraction thereof (i.e. a maximum of two retail marijuana businesses is allowed for a population of 10,500 people). Population shall be based on the decennial census conducted by the United States Census Bureau. In all other years, population shall be based on annual estimates by the Colorado State Demography Office.

COMPARISON - MARIJUANA REGULATIONS

Jurisdiction	Population (2019 est)	Marijuana Uses Allowed		Distance / Separation / Buffering Requirements	Other Restrictions
Frazier	1219	Retail Medical	1000 500 200	educational institutions, public or private any existing medical marijuana business licensed child care facility	Not allowed in any building containing a residential dwelling or lodging use
Crested Butte	1487		500 500 175	educational institutions or schools, public and private licensed child care public park or playground	not allowed adjacent to a residential dwelling separated by a vertical wall
New Castle	4518	NO MARIJUANA USES ALLOWED			
Gunnison	5054	Retail Medica Manufacturing Testing Cultivation	1000 1000 1000	schools day care mental health facility	not allowed adjacent to residential zoning district
Carbondale	6427	Retail Medical Manufacturing	500 500 400	school or day care alcohol or drug treatment retail and/or medical marijuana	no more than 5 retail or medical no more than 5 product manufacturing no more than 5 testing no more than 3 cultivation
Eagle	6454	Retail Medical Manufacturing Cultivation			1 of each type of facility allowed / 5000 people restricted to one location/area - east of Nogal Gulch

COMPARISON - MARIJUANA REGULATIONS

Jurisdiction	Population (2019 est)	Marijuana Uses Allowed		Distance / Separation / Buffering Requirements	Other Restrictions
Avon	6511	NO MARIJUANA USES ALLOWED			
Glenwood Springs	**9437**	**Retail** **Medical** **Manufacturing** **Cultivation**	**500** **900**	**k-12 grade schools** **retail and/or medical marijuana facility**	
Rifle	9706	Retail Medical Cultivation	1000 1000 1000	k-12th grade schools alcohol or drug treatment facilities child care facilities	3 licensed stores allowed, total 7 licensed cultivation facilities allowed, total locations restricted to south of I-70, light industrial zones, industrial PUDs if listed as an allowed use 0 allowed in central business district
Steamboat Springs	11,810	Retail Medical Manufacturing Testing Cultivation	1,000 1,000	schools, colleges, seminaries, child care (cultivation uses allow for a 500 foot buffer to child care facilities) parks	
Gunnison County	14,474	Manufacturing Testing Cultivation			Retail & medical stores prohibited Allowed in only 3 designated zoning districts

COMPARISON - MARIJUANA REGULATIONS

Jurisdiction	Population (2019 est)	Marijuana Uses Allowed		Distance / Separation / Buffering Requirements	Other Restrictions
Summit County	31,011	Retail	50	residentially used property, or residential zone district, or residential use in a PUD	
		Medical	1,000	licensed child care facility	
		Manufacturing	1,000	any school, public or private including colleges	
		Testing	500	halfway house or correctional facility	
		Cultivation	500	any marijuana business	
Longmont	97,261	Retail	250	residential zoning districts	No more than 4 licenses allowed in the city
		Medical	1,000	K - 12th grade schools	1 license/application allowed per person or company Testing, manufacturing and cultivation are not allowed
Pueblo	102,550	Retail	1,000	Schools	
		Medical	500	hospital or substance abuse treatment centers	
		Testing	300	residential use or residential zone district	
		Cultivation			
Thornton	137,000	Retail	1,000	schools, public and private	Cultivation is not allowed
		Medical	500	licensed child care facilities	Only 1 retail marijuana store allowed in each of the city's 4 quadrants
		Testing	500	alcohol or drug treatment facility	
			1,500	any other retial marijuana store	

COMPARISON - MARIJUANA REGULATIONS

Jurisdiction	Population (2019 est)	Marijuana Uses Allowed		Distance / Separation / Buffering Requirements	Other Restrictions
Aurora	322,522	Retail	1,000	preK - 12th grade, excluding day care	Allow up to 4 retail marijuana licenses in each Council ward, or 24 in total
		Medical	500	hospitals, substance abuse treatment centers	Cultivation, manufacturing/testing not restricted as to total number
		Cultivation	300	residential uses (applies to Cultivation-only)	
		Manufacturing & testing	300	parks and open space (applies to Cultivation-only)	
			300	residential uses in adjacent jurisdictions (applies to Cultivation-only)	
Boulder County	326,196	Retail	500	any other marijuana establishment in the same zoning district	
		Medical	1000	alcohol or drug treatment facility	
		Manufacturing	1000	licensed child care	
		Testing	1000	educational facilities below college level	
		Cultivation			

Marijuana Related Businesses and Potential 1000 Foot Buffers

Location of Commercial Zoned Property Where Marijuana Related Bussinesses are Permitted Depicted in Blue

Glenwood Springs Montessori School
Glenwood Springs Middle School
Glenwood Springs Charter School
The Green Solution
The Dispensary (proposed)
Green Dragon
Osiris
Martin's Recreational
Yampah Mountain High School
Doctor's Garden
Glenwood Springs ElementarySchool
Green Joint
Colorado Mountain College Glenwood Springs Center Children's Mini College
Glenwood Springs High School
Saint Stephen School
Columbine School
Green Dragon
The Stash (proposed)
Sopris Elementary School
The Skylark School

Schools
Marijuana Related Business (9 approved, 7 open)
Parks
Mental Health and Drug Treatment Facilities
City Boundary

0 1,000 2,000 Feet

This map was produced by the Community Development Department. Use of this map should be for general purposes only. The City of Glenwood Springs does not warrant the accuracy of the data contained herein. Map is based on best available data as of September 2020.
V:\Comm Dev\GIS\Marijuana\Schools_Marijuana_Locations_Discussion_092220_1000_Feet.mxd
Phone - 970.384.6427 http://www.cogs.us/ Layout: THyatt

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Mind Springs School Programming Update

Action Requested: NA

Department: City Administration

Presented By: Debra Figueroa, City Manager

Background Info: Hans Lutgring with Mind Springs Health will provide an update on youth mental health programming being funded by the Marijuana Excise tax approved by voters in 2017. This funding is included in the 2021 Budget.

Issues: NA

Staff Recommendation: NA

Student Groups provided at Yampah for 2020

Gabrielle Touchette, MSW, LCSW
Paul Hassel, LPC, CAS

- Seeking Safety: This is a psychoeducational and process group that addresses drug and alcohol use. The group operates through a harm reduction lens, with the priority of making sure students are safe and know the risks and consequences of using substances. Roughly 30 students participated over the past year.

- DBT Skills Training for Adolescents: This skills-based group teaches the modules of mindfulness, emotion regulation, distress tolerance and interpersonal effectiveness. Roughly 25 students participated over the past year.

- Health and Wellness: This class focused on a variety of topics including coping with anxiety, mental health awareness, suicide prevention, self-care, physical health, goal setting and healthy communication. Roughly 40 students participated over the past year.

Part of our Clinician's role at Yampah was being available to talk with students who became dysregulated during classes. Our Clinician served as resource hub for students and faculty when additional community resources were needed to support students outside of the school setting.

Yampah staff feedback for 2020 programming

- The counselor helped some students in crisis that would have taken several staff away from other students and their immediate instructional needs. She also was able to support most all of our students through participation in educational topics on mental health and wellness.
- Gabby is extremely valuable at Yampah. We are grateful for her expertise.
- It is a good way to spend tax dollars collected from Marijuana.
- How grateful we are, and that we would like the position to continue.
- Good use of money going back into our community, that was helpful.
- The Mind Springs counselor program was very beneficial in communicating healthy lifestyle content to our at-risk students.
- Any mental help assistance is good. Our kids need all the help they can get!
- The program helps schools make connections to resources for our students.
- Gabby was great as a counselor and as a facilitator.

School Based Mental Health Services, 2018-2019

Erin Quinn, MSW, LCSW

Mind Springs Health, Inc.

Eight hours/week

Two Rivers Community School	# of students
# of unduplicated students referred to services and/or supports	250
# of students receiving DBT-A	20
# of students receiving conflict resolution skills	
# of students receiving interpersonal and friendship skills	64
# of students receiving peer aggression and bullying awareness/education	22
# of students receiving self regulation skills	34

St Stephens Catholic School	# of students
# of unduplicated students referred to services and/or supports	150
# of students receiving DBT-A	6
# of students receiving conflict resolution skills	54
# of students receiving interpersonal and friendship skills	86
# of students receiving peer aggression and bullying awareness/education	25
# of students receiving self regulation skills	7

# of parents receiving support from counselor	27
# of staff receiving MBSR, individual coaching, classroom management from counselor, or were trained in YMHFA	12

# of parents receiving support from counselor	4
# of staff receiving MBSR, individual coaching, classroom management from counselor, or were trained in YMHFA	17

*The numbers will not add up to total of students receiving services, as not all groups are listed above, and there are duplicated students in many groups/whole class education.

Mind Springs Health, Inc.

Four hours/week

Sopris Elementary School	# of students
# of unduplicated students referred to services and/or supports	15
# of students receiving conflict resolution skills	10
# of students receiving interpersonal and friendship skills	6
# of students receiving peer aggression and bullying awareness/education	6

Glenwood Springs Elementary School	# of students
# of unduplicated students referred to services and/or supports	75
# of students receiving conflict resolution skills	27
# of students receiving interpersonal and friendship skills	10
# of students receiving peer aggression and bullying awareness/education	11

	# of students receiving self regulation skills	1	# of students receiving self regulation skills	5
	# of staff receiving MBSR, individual coaching, classroom management from counselor, or were trained in YMHFA	1	# of staff receiving MBSR, individual coaching, classroom management from counselor, or were trained in YMHFA	1
	Qualititaive Responses		Qualitative Responses	

"This program was an incredible addition to our social emotional programming at TRCS. We are so grateful for the work Erin has done at this school. The work she did in the classroom and with small groups had a significant positive impact on the mental health of our student population...This program has been such an incredible resource for Two Rivers Community School. Working with Erin and the people at Mind Springs Health has become a truly great asset to our school community. We are so grateful to see the revenues from Glenwood Springs' marijuana tax utilized in a meaningful way. We are hopeful that this program will continue to serve the public into the future." – Jamie Nims, Head of School, Two Rivers Community School.

Please know that at Two Rivers Community School, Erin is not just a once a week guest in our school. She has made strong relationships with our families during our weekly parent SEL meetings, with our staff when she taught in their class or conducted information sessions, and with our students when she ran her weekly groups. Personally, as the Social/Emotional Coordinator at our school, her knowledge and willingness to help create a safe and healthy culture was a lifeline for me." – Amy Spradlin, Social Emotional Coordinator, Two Rivers Community School.

Student Reports

"After this class, program, group, I feel better able to":	
- get help from a trusted adult	- support my friends even when it is hard

- calm myself	- know where to get help if someone I know is suicidal
- stand up to peer pressure	- know where to get help if I am suicidal
- manage disagreements with my peers	

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: 51-20 Consideration of a Special Use Permit for a retail marijuana establishment in the M2-Mixed Use Central Core zoning district in Glenwood Meadows, pursuant to Municipal Code section 070.030.030(e)(11).

Action Requested: **Action Item 1 - Special Use Permit** - for a retail marijuana establishment in the Mixed-Use Core (M2) District.

Department: Economic and Community Development

Presented By: Trent Hyatt, Senior Planner

Background Info: The Planning and Zoning Commission (Commission) is the recommending body to City Council special use review related to marijuana uses. For a complete summary and analysis of the proposal, please refer to the attached Commission staff report dated October 27, draft minutes from the October 27, 2020 Commission meeting, draft minutes from the November 9, 2020 Commission meeting, and other attached materials.

Issues:

Planning and Zoning Commission Discussion

Staff provided background on the proposal to the Commission at their their October 27, 2020 and November 9 meetings where public comment was also taken. The Commission discussed various issues related such the separate retail space included in the proposal, adjacent uses, site layout and building design, and site screening/fencing.

Planning and Zoning Commission Recommendation

The Commission voted unanimously 5-0 to recommend approval of the Special Use Permit to City Council.

Staff Recommendation:

Action Alternatives

Section 070.060.050(e)(1)e.1 of the Code explains, "The Planning Commission shall review and approve, approve with conditions, or deny the special use permit application in accordance with 070.060.030(g) and the approval criteria in paragraph 2 below . The Planning Commission may also remand the application back to the Director for further consideration." Section 070.060.030(g)(1)d also states, "The body may also continue the hearing or refer the application to another authority as provided in 070.060.050(a)(2)c, Referral and Call-Up Procedures. In the instance of marijuana related business, Section 070.060.020(d)/ Table 060.1 Summary of Development Review Procedures outlines the Commission is the review and recommending authority to City Council.

Action Item 1 - Special Use Permit - for a retail marijuana establishment in the Mixed-Use Core (M2) District.

Staff Recommendation

Staff recommends approval with conditions of the Special Use Permit with the findings and conditions outlined below.

Recommended Findings:

1. The use is compatible with the surrounding area;
2. The impacts of the use on surrounding areas have been adequately minimized;

3. The use is consistent with the general purpose and intent of this Code;
4. The use complies with all applicable standards of this Code;
5. The use is in conformance with the Comprehensive Plan and other City plans and policies; and
6. The use minimizes adverse impacts to the health, safety, and welfare of the inhabitants of the surrounding areas and the city.

Recommended Conditions:
1. The applicant shall provide evidence of approval of licenses from the State of Colorado and the City of Glenwood Springs for a retail marijuana establishment prior to operating the Special Use.
2. Any future physical changes or improvements to the property or buildings on the parcel are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the Glenwood Springs Municipal Code and the Glenwood Meadows Zoning and Development Plan.
3. The proposed retail marijuana establishment shall comply with all verbal representations made by the applicant during the public hearings and plans/application materials submitted by the applicant or revised per conditions of the Special Use Permit and approved by the Community Development Director prior to issuance of a Special Use Permit.
4. Any changes to signage on the site shall require a sign permit and demonstrated compliance with applicable requirements of the of the Glenwood Springs Municipal Code.
5. The use shall comply with the standards and special review criteria for marijuana uses specified in the Glenwood Springs Municipal Code at all times. Failure to comply with the applicable standards may result in an enforcement action or the incorporation of additional mitigation methods for Code compliance.
6. If complaints are received from adjacent property owners regarding any odors emitting from the site or any other matter regulated by the Code, City Council shall have the ability to re-evaluate or revoke the special use permit. The special use permit shall be subject to reconsideration and revocation by City Council within sixty (60) days of notification of the violation if the business owners are convicted by the City's Municipal Court of two Glenwood Springs Municipal Code nuisance violations pertaining to odors, etc. emitting from the site within a six (6) month period.
7. The applicant shall submit a building permit application as required. All contractors must receive a license to work in the City of Glenwood Springs.
8. The applicant shall address and comply with all comments received from referral agencies and as otherwise required by the Glenwood Springs Municipal Code.
9. Prior to submitting a building or grading permit application, the applicant shall:
a. Submit a Construction Plans application in accordance with Municipal Code section 070.060.050(c);
b. Enter into a development agreement with the City which shall be recorded with the Garfield County Clerk and Recorder;
c. Submit an engineer's estimate of all public improvement and submit a financial security for any required improvement not yet completed;
d. Schedule a pre-construction meeting with applicable City departments;
e. The applicant shall obtain a grading permit from Engineering Department.

Planning and Zoning Commission Report

Date: October 27, 2020
To: Planning and Zoning Commission
From: Trent L. Hyatt, Senior Planner
Subject: #51-20 - Special Use Review for a Retail Marijuana Establishment, Kind Castle

REQUEST	Consideration of a request for a special use permit for a retail marijuana establishment
APPLICANT	Chris Hawkins/Alpine Planning, LLC
OWNER	Glenwood Meadows, LLC
LOCATION	150 Wulfsohn Road, Lot 11B Glenwood Meadows No. 5, A Minor Subdivision of Glenwood Meadows No. 4 Lot Line Adjustment (PIN: 2185-081-41-004)
ZONE	Mixed-Use Core (M2) District
SURROUNDING LAND USES	North: Hotel lodging South: Multi-family residential East: Civic West: Multi-family residential
LOT SIZE	Approximately 0.40 acres/17,816 square feet

ACTION ITEM:
The Planning and Zoning Commission (Commission) is the recommending body to City Council on marijuana related uses requiring a special use permit.

Action 1 - **Special Use Permit** - for a retail marijuana establishment in the Mixed-Use Core (M2) District.

Staff recommendation: *Staff recommends **approval (with conditions)** of the Special Use Permit with the findings and conditions on page 8.*

BACKGROUND/ANALYSIS

Proposal

The applicant, Chris Hawkins of Alpine Planning, LLC on behalf of Kind Castle, proposes the construction a new approximately 4,504 square foot, two unit retail building at 150 Wulfsohn Road to accommodate the retail sale of cannabis and related products as well as another retail use to be determined at a later date. The retail marijuana establishment will occupy 3,720 square feet of the proposed building, whereas, the future retail use will occupy 784 square feet.

The proposed use falls under the definition of a *retail marijuana establishment* as defined by Section 070.070.020(c)(7)b of the *Glenwood Springs Municipal Code* (Code) outlined in *italics* below. This use requires additional licensing through the State of Colorado and City of Glenwood Springs.

Retail marijuana establishment *means the retail sale, cultivation, storage, product manufacturing or testing of marijuana to the extent permitted by Article XVIII, Section 16 of the Colorado Constitution and in various provisions of the Colorado Retail Marijuana Code, C.R.S. Article 43.4 of Title 12, and any other applicable state or city law or regulation.*

Special Review Criteria

There are two sets of criteria in the Municipal Code to consider in the analysis of marijuana related businesses. Section 070.030.030(e)(11) of the Code are use specific standards which apply to retail marijuana businesses. Section 070.060.050(e)(3)e.2 applies generally to special review uses. Staff lists each of the criteria in **bold** below along with comments.

Existing southeast view (Google Maps)

Section 070.030.030(e)(11) – Retail Marijuana Establishment

b. License Required

Retail marijuana establishments shall comply with City Code Article 050.090.

The applicant shall apply for a City business license for the proposed use prior to future operation.

c. Location of Licensed Establishment Retail marijuana establishments shall be located only in areas of the city as allowed in the City Code. No retail marijuana establishment shall be located:

1. Within 500 feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade. The distance shall be property computed by a straight line measurement from the nearest property line of the school to the nearest property line of the site housing the retail marijuana establishment;

The retail marijuana establishment is located over 1,700 feet from Yampah Mountain High School to the southeast, the closest in proximity.

2. **Within 900 feet of another retail marijuana establishment or a medical marijuana business. A retail marijuana establishment may locate on the same licensed premises as a medical marijuana business of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other retail marijuana establishments and medical marijuana businesses. This distance shall be computed by a straight line measurement between property lines of the sites housing the two facilities; and**

The proposed retail establishment is located over 1,800 from The Green Dragon along Devereux Road to the northwest.

3. **In any zoning district not specifically permitted by the City Code.**

The use is proposed in a zone district, M2, which allows retail marijuana establishments. Additionally, the Commission determined the use is permitted in the Glenwood Meadows development at a special meeting on August 5, 2020.

d. Requirements Related to Operation of a Retail Marijuana Establishment

1. **Retail marijuana establishments shall meet all operational criteria for the procurement, display, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the CRMC and the City Code Article 050.090.**

The operation shall apply for and receive all applicable permits from the state and City and maintain compliance therewith.

2. **In addition, all retail marijuana establishments shall comply with the following local restrictions:**
   i. **Hours of operation shall be limited to between 8:00 a.m. and 7:00 p.m. Monday through Sunday; and**

The business shall comply with the restricted hours of operation.

   ii. **A sign permit shall be obtained through the Community Development Department. All exterior signage associated with a retail marijuana establishment will meet the standards established in the CRMC and in the City Code.**

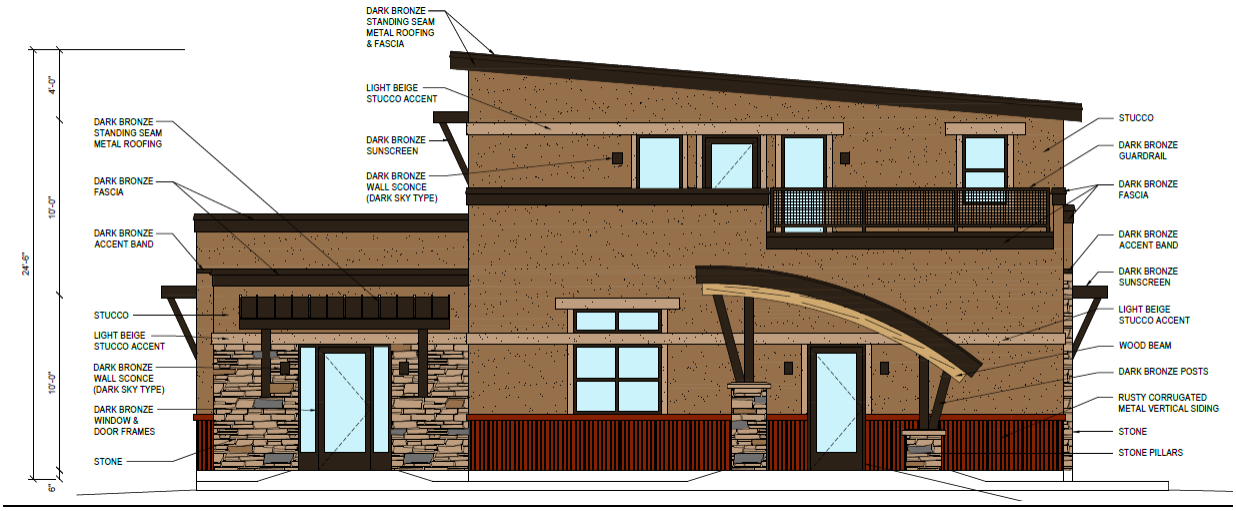
The applicant shall apply for and receive a sign permit prior erecting any signage at the site.

   iii. **Storage of retail marijuana shall be considered an accessory use. Not more than 25 percent of the licensed premises of a retail marijuana business shall be used for such purposes.**

All cannabis product stored onsite shall be for retail sale. Significantly less than 25 percent of the floor plan is proposed for storage at approximately 289 square feet, or nine percent.

iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises.

Odor is a concern with any marijuana related business and is an expected nuisance. However, the issue is more closely related to grow facilities as the City has generally not received complaints for sales only businesses. That being said, the applicant proposes a negative air heating and air conditioning system having an activated carbon filter exhaust system. Additionally, four independent activated carbon filtration units will operate inside the retail establishment to combat any potential odors at the site. In addition, the applicant proposes off site prepackaging of flower products. As is the norm with all applications associated with marijuana businesses, staff is recommending a condition of the special use permit that requires compliance with the above criteria at all times. In the event that documented inspections of the premises by City staff, preceded by complaints, indicate that odor is an issue, the applicant will need to employ alternative methods to mitigate odors or be at risk of losing their City license.



Section 070.060.050(e)(3)e.2 – All Land Uses

i. The use will be compatible with the surrounding area;

Similar retail uses, are currently operating in the vicinity of the site in the Glenwood Meadows development. A mix of uses are located in close proximity including lodging, multi-family residential, veterinary services, and banking/office. It appears the use is compatible with the surrounding area.

ii. The impacts of the use on surrounding areas have been adequately minimized;

The Engineering Department has requested additional information related to traffic impacts for the use/site. Various mitigation techniques, such as a right in-right out access or a four way stop at the adjacent intersection, has been discussed to mitigate the issue.

the proposed use is not expected to create any additional impacts than currently exist at the site.

iii. The use will be consistent with the general purpose and intent of this Code;

The use/proposal appears to be consistent with the general purpose and intent of the Code.

iv. The use will comply with all applicable standards of this Code;

The use is in compliance with the Code or will be following amendments by the applicant related to staff comments.

v. The use is in conformance with the Comprehensive Plan and other City plans and policies; and

As shown below, Map 2.1 Future Land Use – North Portion of the City of the Glenwood Springs of the Comprehensive Plan (Comp Plan) identifies the property as being split between the "Mixed-use" (in fuschia) and "Parks Open Space" (green) classifications. The parcel was rezoned M2 by City Council in June 2020 so the Mixed-use classication was intended and is appropriate. According to the Comp Plan, the "Mixed-use" designation "*…allows for a variety of uses including commercial, retail, office,restaurant, entertainment and multi-family housing co-existing through design either in a horizontal or vertical fashion"* in line with the current proposal

Numerous community goals and related objectives and strategies outlined in the Executive Summary and subsequent chapters of the Comp Plan encourage economic development, preserving our small-town character, convenient transportation, infill development, housing opportunities, social diversity, and preserving natural resources all of which are supported by this proposal. These goals are outlined in the following table.

Comprehensive Plan Goal Supported	**Objectives and Strategies**
-Promote long-term, sustainable, diverse, economic development	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Attract diverse businesses and industries (Chapter 4, Page 50) -Maintain the role as regional center (Chapter 4, Page 54) -Retain role as a regional center (Chapter 7, Page 83)
Staff Comment: The objective/strategy outlined above are supported by the current application	

as it includes infill retail development/redevelopment.	
-Maintain Glenwood Springs as the regional tourism, retail, commercial, and governmental center of Garfield County	-Attract diverse businesses and industries (Chapter 4, Page 50) -Maintain the role as regional center (Chapter 4, Page 54) -Retain role as a regional center (Chapter 7, Page 83)
Staff Comment: Creating additional space for retail, as proposed, helps to maintain/retain the City's role as a regional center.	
-Preserve small town character while maintaining the livability of Glenwood Springs and increasing the vibrancy and commercial success of the downtown	-Develop according to the vision (Chapter 4, Page 34) -Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Enhance pedestrian–friendliness while facilitating traffic (Chapter 3, Page 36) -Maintain the role as regional center (Chapter 4, Page 54) -Retain role as a regional center (Chapter 7, Page 83) -Direct growth inward (Chapter 9, Page 102)
Staff Comment: Infill, as proposed, makes improvements more cost effective. The use is in character with surrounding the site area and aligns with zone district purpose.	
-Address transportation and provide multiple convenient travel choices	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34)
Staff Comment: Infill, as proposed, is a land use strategy used to address transportation issues per the Comp Plan.	
-Direct development to locations and building forms that are cost effective to serve	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Direct growth to areas where utilities and services can be provided efficiently (Chapter 7, Page 82) -Retain role as a regional center (Chapter 7, Page 83) -Direct growth inward (Chapter 9, Page 102)
Staff Comment: The objective/strategy outlined above are supported by the current application as it includes infill development/redevelopment.	
-Support social diversity	-Direct development into a compact form: infill and redevelopment (Chapter 3, Page 34) -Retain role as a regional center (Chapter 7, Page 83) -Direct growth inward (Chapter 9, Page 102)
Staff Comment: The objective/strategy outlined above are supported by the current application as it includes infill development/redevelopment.	
-Preserve natural resources	-Promote water conservation (Chapter 7, Page 84)

	-Direct growth inward (Chapter 9, Page 102)
Staff Comment: The objective/strategy outlined above are supported by the current application as it includes infill development/redevelopment.	

vi. The use minimizes adverse impacts to the health, safety, and welfare of the inhabitants of the surrounding areas and the city.

The use/proposal does not appear to negatively impact health, safety, and welfare of the inhabitants of the surrounding areas and the city.

Reviewing Agency Comments

An overview of comments received from referral agencies is provided below. Said comments are also attached.

Electric Department-Comments address the need to comply with the City's line extension, potential conflict between proposed bicycle parking and transformer location, and the need for electric load information.

Engineering Department-Comment address the need for a utility plan, updates to the traffic analysis, restricted access movements or a four way stop at the adjacent intersection, and submittals required for the Construction Plans review phase, if applicable.

Public Works-Outline the need for various line extension to the site and related street cuts, restricted access to the site, electric load requirements, pedestrian access, and fire suppression water service needs.

Transportation-Outline the need for bicycle parking at the site.

Adjacent Property Owner Comments

None were received as of the drafting of the staff report.

ACTION ALTERNATIVES AND STAFF RECOMMENDATION:

Section 070.060.050(e)(1)e.1 of the Code explains, "The Planning Commission shall review and approve, approve with conditions, or deny the special use permit application in accordance with 070.060.030(g) and the approval criteria in paragraph 2 below [addressed above in in this instance]. The Planning Commission may also remand the application back to the Director for further consideration." Section 070.060.030(g)(1)d also states, "The body may also continue the hearing or refer the application to another authority as provided in 070.060.050(a)(2)c, *Referral and Call-Up Procedures*. In the instance of marijuana related business, Section 070.060.020(d)/ Table 060.1 Summary of Development Review Procedures outlines the Commission is the review and reminding authority to City Council.

Action 1 - Special Use Permit - for a retail marijuana establishment in the Mixed-Use Core (M2) District.

Staff recommendation: Staff recommends **approval with conditions** of the Special Use Permit application with the **findings** and **conditions** below:

Recommended Findings:

1. The use is compatible with the surrounding area;
2. The impacts of the use on surrounding areas have been adequately minimized;
3. The use is consistent with the general purpose and intent of this Code;
4. The use complies with all applicable standards of this Code;
5. The use is in conformance with the Comprehensive Plan and other City plans and policies; and
6. The use minimizes adverse impacts to the health, safety, and welfare of the inhabitants of the surrounding areas and the city.

Recommended Conditions:

1. The applicant shall provide evidence of approval of licenses from the State of Colorado and the City of Glenwood Springs for a retail marijuana establishment prior to operating the Special Use.
2. Any future physical changes or improvements to the property or buildings on the parcel are subject to the review and approval of the Community Development Director for compliance with applicable requirements of the *Glenwood Springs Municipal Code* and the *Glenwood Meadows Zoning and Development Plan*.
3. The proposed retail marijuana establishment shall comply with all verbal representations made by the applicant during the public hearings and plans/application materials submitted by the applicant or revised per conditions of the Special Use Permit and approved by the Community Development Director prior to issuance of a Special Use Permit.
4. Any changes to signage on the site shall require a sign permit and demonstrated compliance with applicable requirements of the of the *Glenwood Springs Municipal Code*.
5. The use shall comply with the standards and special review criteria for marijuana uses specified in the *Glenwood Springs Municipal Code* at all times. Failure to comply with the applicable standards may result in an enforcement action or the incorporation of additional mitigation methods for Code compliance.
6. If complaints are received from adjacent property owners regarding any odors emitting from the site or any other matter regulated by the Code, City Council shall have the ability to re-evaluate or revoke the special use permit. The special use permit shall be subject to reconsideration and revocation by City Council within sixty (60) days of notification of the violation if the business owners are convicted by the City's Municipal Court of two *Glenwood Springs Municipal Code* nuisance violations pertaining to odors, etc. emitting from the site within a six (6) month period.
7. The applicant shall submit a building permit application as required. All contractors must receive a license to work in the City of Glenwood Springs.
8. The applicant shall address and comply with all comments received from referral agencies and as otherwise required by the *Glenwood Springs Municipal Code*.
9. Prior to submitting a building or grading permit application, the applicant shall:
   - **a.** Submit a Construction Plans application in accordance with Municipal Code section 070.060.050(c);
   - **b.** Enter into a development agreement with the City which shall be recorded with the Garfield County Clerk and Recorder;
   - **c.** Submit an engineer's estimate of all public improvement and submit a financial security for any required improvement not yet completed;
   - **d.** Schedule a pre-construction meeting with applicable City departments;
   - **e.** The applicant shall obtain a grading permit from Engineering Department.

MINUTES
City of Glenwood Springs
Planning and Zoning Commission
Regular Meeting
October 27, 2020
Zoom
6:00PM

1. **Roll Call**

Present at roll call were Commissioners:	George Shaver, Marco Dehm, Carolyn Cipperly, Sumner Schachter, Ben West, Kathryn Grosscup
Absent at roll call were Commissioners:	Amber Wissing
Also present were:	Jenn Ooton, Asst. City Manager, Terri Partch, City Engineer, Gretchen Ricehill, Asst. Economic/Community Development Director, Trent Hyatt, Senior Planner, Anna S. Itenberg, City Attorney's Office, Alissa Owsley, IT Director, Steve Boyd, Chief Operating Officer

1. **Seating of Alternate Commissioner**
Commissioner Schachter made a motion to seat Alternate Commissioner West. Commissioner Cipperly seconded the motion.

Motion passed unanimously.

2. **Receipt of Minutes**
Commissioner Grosscup made a motion to approve the meeting minutes from the 9/22/2020 meeting. Commissioner Shaver seconded the motion to approve.

Motion passed unanimously.

Commissioner Schachter made a motion to approve the meeting minutes from the 9/29/2020 meeting. Commissioner Shaver seconded the motion to approve. Commissioner Grosscup recused herself from the vote due to her absence at the 9/29/2020 meeting.

Motion passed unanimously.

3. Public Comments

Comments from citizens appearing for items not on the agenda. No citizens were present.

4. New Items

a. Planning File 27-20*: Consideration of a Major Site Architectural Plan Review for the expansion of the Iron Mountain Hot Springs including a new entry building, mineral pools, and enclosed pool. This item includes a consideration of an Alternative Equivalence Compliance for an architectural design that meets the intent of 070.040.090 Nonresidential Design Standards.*

Assistant Director Ricehill introduced the item and summarized the proposed project to the Commission. Ricehill explained that Action Item 1 of this proposal was for a major site/architectural plan review for new construction, that Action Item 2 was to considers alternative equivalence compliance for meeting design requirements, and that the applicant looks to provide alternative equivalence compliance with the construction of an earthen roof on the enclosed pool building. Ricehill indicated that staff supported the applicant's suggested design for meeting alternative equivalence compliance.

Commissioner Grosscup asked for staff for clarification on the amount of parking. Ricehill explained that the current proposal meets parking requirements and that any future uses would require additional review for parking requirements. Grosscup asked if the ten proposed pools would be exclusive to the future proposed hotel and the location of the required sidewalk.

Commissioner Schachter asked if the River Commission had any comments on this proposal. Ricehill confirmed that the River Commission reviewed the proposed riparian improvements Schachter requested that be recorded. Schachter also asked about potential future parking requirements associated with the hotel.

Applicants Doug Pratte from the Land Studio, Mike Foster from Triumph Architecture, and Steve Beckley from Iron Mountain Hot Springs (IMHS) provided the Commission with a short presentation on the proposed project. Beckley explained that the proposed parking area would not be shared with tramway users and that IMHS would provide a new traffic study for the future planned hotel. Doug Pratte also explained that the applicants would be working with the River Commission on the riparian design. Beckley explained they hold a permit from Army Corps of Engineers to develop the riverfront but that they were no longer interested in allowing access to the river and that all proposed riparian design features would be designed with intent to prevent access to the river from the facility.

Commissioner Cipperly had questions regarding pool design, impervious surfaces, ADA access on site, and parking access. Applicant Steve Beckley provided further explanation on those items, including confirming that pathways on the property were designed with ADA access and requirements in mind.

Commissioner Shaver asked about history of the shoreline, proposed riparian improvements, and the high-water mark of the river on the property. Applicants provided an explanation of proposed riparian landscaping and associated permits from the State of Colorado and the Army Corps of Engineers.

Commissioner Grosscup commented on pedestrian access and connectivity on site and asked if there would be any planned electric vehicle parking. Grosscup also asked about the ceiling space related to the garage doors. Applicants confirmed the walkways would be 8' wide and that there would likely be some electric vehicle parking provided.

Commissioner Schachter asked about the number and placement of bike racks. Applicant indicated that the number was indicated in the narrative and locations would be provided.

Commissioner Dehm asked staff if the parking lot met the landscaping requirements. Assistant Director Ricehill confirmed that the proposed parking lot design met code requirements. Dehm also asked if the parking lot was required to be paved, which Ricehill confirmed.

Commissioner Dehm opened the discussion to public comment. No members of the public had any comments. Commissioner Dehm closed the public comment.

Commissioner Schachter made a motion to continue the item to the next scheduled meeting on November 9th. Commissioner Grosscup seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

b. Planning File 51-20: *Consideration of a Special Use Permit for a retail marijuana establishment in the M2-Mixed Use Central Core Zoning district in Glenwood Meadows, pursuant to Municipal Code Section 070.030.030(e)(11).*

Senior Planner Trent Hyatt introduced the item and provided a summary of the proposed project to the Commission. Hyatt indicated that the staff supported approval of the item with findings and conditions listed on page 8 of the staff report.

Commissioner Shaver asked if there were any additional design requirements due to the proposed project's location within the Glenwood Meadow's development and had additional question on extension of City utility lines to the site. Staff provided explanation on both items.

Commissioner Grosscup asked if the proposed retail space would have multiple tenants. Hyatt confirmed that future use of that space could accommodate several users.

Commissioner Schachter asked if Glenwood Meadows sign code would apply to this project, which Hyatt confirmed.

Commissioner Dehm asked if the proposed building had fire suppression, which was confirmed by staff.

Applicant Chris Hawkins, Alpine Planning provided a presentation on the proposed project. Hawkins also provided a list of all members of the project team.

Commissioner Shaver asked the applicant for the size of proposed storage. Applicant Chris Hawkins confirmed the amount of storage was approximately 290 square feet.

Commissioner Grosscup asked the applicant if there was any interest for the proposed retail space. Applicant indicated they were not aware of a potential tenant.

Commissioner Dehm opened the discussion to public comment. No members of the public presented for comment. Commissioner Dehm closed the discussion to public comment.

Commissioner Schachter made a motion to continue the item to the next scheduled meeting on November 9th. Commissioner Cipperly seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

c. Planning File 54-20*: Consideration of a Location and Extent Review application for the construction of a new 11,000 square foot vehicle storage and office building and a 2,100 square foot communication building with 60-foot tall communication tower at the Colorado Department of Transportation maintenance facility.*

Assistant Director Ricehill introduced the item and provided a summary of the proposed project to the Commission. Ricehill indicated that staff recommended approval of the application with the finding and conditions listed on page 7 of the staff report.

Commissioner Grosscup asked if where CDOT staff at this facility would be parking. Ricehill explained that some of the parking at the nearby Caverns Village development would be open to CDOT employees. Applicant Erin Lucero, CDOT, provided more information on CDOT employee parking. Lucero estimated most parking would occur at the Caverns Village development with less parking occurring on the vehicle storage location.

Commissioner Cipperly asked about the type of parking surfaces to be used and the size of storage tanks on the property. Applicant Erin Lucero, CDOT provided explanation of parking surfaces on site, most of which would be asphalt. Lucero also stated that new storage tanks on the property were not part of this project and that the existing tanks would remain on site.

Commissioner Schachter asked regarding lighting of the proposed tower and use of paint in the design of the building. Applicant Erin Lucero explained the change in location caused the need to increase the height of the tower and that the tower was not lit. Lucero also explained that the variation in paint color would provide break-up in the visual appearance of the building and that CDOT would be open to color suggestions from the City.

Commissioner Shaver asked about effluent from the existing vehicle wash. Lucero explained the site was linked to the City system and that the proposed indoor wash bay would have a sand/oil interceptor installed. Shaver also asked if the proposed tower would have a flashing red aviation warning light.

Applicant Erin Lucero, CDOT provided a short explanation on the project, emphasizing the improved pedestrian access in the area.

Commissioner Dehm opened the item for public comment. No members of the public presented for comment. Commissioner Dehm closed the item for public comment.

Commissioner Dehm asked staff to confirm that this item was to be voted on at this night's meeting. Staff confirmed that a vote would take place at this meeting.

Commissioner Grosscup made a motion to approve the item with finding and conditions listed on page 7 of the staff report. Commissioner Schachter seconded the motion.

Commissioner Dehm called for the question.

Motion passed unanimously.

d. Planning File 63-20*: Consideration of a Code Amendment to Section 070.030.030 Use Specific Standards of the Glenwood Springs Municipal Code for marijuana related businesses and cultivation facilities.*

Senior Planner Trent Hyatt made a presentation to the Commission and provided a summary of the proposed code amendments to *Section 070.030.030.*

Commissioner Shaver asked if there was an official designation or definition for a park, citing the Wulfsohn area trails. Hyatt explained that the city designated parks were included on the map and that there was not a specific definition for a park space, citing the Confluence area and Rio Grande Trail as examples of areas that function as a park. Shaver also asked how the density requirements would be affected if the population decreased.

Commissioner Schachter asked if Planning & Zoning approval would send the draft regulations for City Council approval and asked for confirmation regarding code language on page 5d. Schachter also asked about the definition of parks in the code language.

Community Development Director Jen Ooton explained that there was a specific list of designated parks in the City and provided a list of all the designated parks.

Commissioner Cipperly also asked about the definition of parks and how it relates to the code amendment. Cipperly also expressed support for the proposed 1,000 foot setbacks and also questioned the use of population to set a density limit as people from outside of Glenwood would shop at these stores.

Commissioner Dehm opened the item for public comment. No members of the public presented for comment. Commissioner Dehm closed the public comment period.

Commissioner Grosscup made a motion to recommend approval of the proposed code amendments with the findings and conditions of page 5 of the staff report and the condition of using a definition of parks that excluded pathways.

Commissioner Schachter seconded the motion.

Commissioner Shaver asked if the grow facilities in town grow exclusively for their own use. Hyatt stated that any retail outlet must produce a certain percentage of the product they sell. Shaver expressed concern over potential odor from growth facilities and expressed support for the limits on growth facilities listed in the code amendment.

Commissioner Cipperly asked Commission to further discuss the limits set by population in the code amendment. Commissioner Schachter asked how this draft would apply to the current population of the City. Hyatt explained that the number of stores would depend on the Census counts. Commissioner Grosscup stated support for the population limits, citing previous population counts.

Commissioner Dehm called for the question.

Motion passed unanimously.

5. Commissioner Comments

Commissioner Shaver asked if there was anything in the Glenwood Meadows Development Code that would preclude a mixed use residential and commercial use building. Hyatt explained that was allowed in Glenwood Meadows.

Commissioner Schachter mentioned the public meeting on the Blake gate development and asked what the process would be to fill the new vacancy on Planning & Zoning Commission.

6. Director Comments

Director Jenn Ooton explained the process for filling the new vacancy on Planning & Zoning Commission.

7. Adjournment

Meeting was adjourned at 9:12 PM.

DRAFT

MINUTES
City of Glenwood Springs
Planning and Zoning Commission
Regular Meeting
November 9th, 2020
Zoom
6:00PM

1. **Roll Call**

Present at roll call were Commissioners:	Marco Dehm, Carolyn Cipperly, Sumner Schachter, Ben West, Kathryn Grosscup
Absent at roll call were Commissioners:	Amber Wissing, George Shaver
Also present were:	Jenn Ooton, Asst. City Manager, Gretchen Ricehill, Asst. Economic/Community Development Director, Trent Hyatt, Senior Planner, Anna S. Itenberg, City Attorney's Office, Alissa Owsley, IT Director, Steve Boyd, Chief Operating Officer

1. **Public Comments**
Comments from citizens appearing for items not on the agenda. No citizens were present.

2. **Continued Items**

a. Planning File 27-20*: Consideration of a Major Site Architectural Plan Review for the expansion of the Iron Mountain Hot Springs including a new entry building, mineral pools, and enclosed pool. This item includes a consideration of an Alternative Equivalence Compliance for an architectural design that meets the intent of 070.040.090 Nonresidential Design Standards.*

Assistant Community Development Director Gretchen Ricehill stated that no additional public comment had been received for this item. Ricehill also explained that the application had been discussed at the River Commission meeting on November 4th, 2020. Ricehill provided a summary of the River Commission's comments and how the applicant and staff would be addressing those concerns.

Applicant Doug Pratte, Land Studio, described the applicant's response to the River Commission comments. This response includes adding tree plantings to the project in the riparian area.

Commissioner Schachter made a motion to approve the Major Site Architectural Plan Review (Action Item 1) with findings and conditions of page 11 of the staff report.

Commissioner Grosscup seconded the motion. Commissioner Dehm called for the question.

Motion passed unanimously.

Commissioner Schachter made a motion to approve the Alternative Equivalence Compliance request for architectural design with findings and conditions of page 12 of the staff report.

Commissioner Cipperly seconded the motion. Commissioner Dehm called for the question.

Motion passed unanimously.

b. Planning File 51-20: *Consideration of a Special Use Permit for a retail marijuana establishment in the M2-Mixed Use Central Core Zoning district in Glenwood Meadows, pursuant to Municipal Code Section 070.030.030(e)(11).*

Senior Planner Trent Hyatt explained that staff received one public comment on the item, which was read into the record.

Amy Roggie stated support for Planning & Zoning Commission to deny the permit citing proximity to Glenwood Springs Community Center and trail system as well as potential odors and conflict with neighboring land uses.

Applicant Chris Hawkins, Alpine Planning, LLC responded to the public comment, stating that the proposed store meets all distance setback requirements described in Code. Hawkins also explained that odor would not be an issue due to odor mitigation measures and that the property would be separated from the recreation center by a 6' screening fence.

Commissioner Schachter asked staff if there had been any odor complaints for retail marijuana establishments. Hyatt explained there had been one complaint for a retail operation which upon further investigation was not related to that operation.

Commissioner Cipperly asked for clarification on the materials and design of the screening fence. Applicant Chris Hawkins confirmed the location and design of the fence, which applicant indicated would be a wooden fence. Hyatt mentioned height may be limited on the north side of the property due to sight distance requirements.

Commissioner Schachter made a motion to approve the item with the findings and conditions listed on page 8 of the staff report.

Commissioner Cipperly seconded the motion. Commissioner Dehm called for the question.

Motion passed unanimously.

3. Commissioner Comments

Commissioner Grosscup mentioned upcoming City meetings on road improvements on South Midland.

Commissioner Dehm discussed the potential for future meetings on housing, including adding housing discussions as agenda items for future Planning & Zoning meetings.

4. Director Comments

Director Jenn Ooton provided a summary of upcoming agenda items.

5. Adjournment

Meeting was adjourned at 6:35 PM.

DRAFT

ABBREVIATIONS

@	-AT
#	-NUMBER
A.B.	-ANCHOR BOLT
A.F.F.	-ABOVE FINISH FLOOR
ARCH.	-ARCHITECTURAL
BLDG.	-BUILDING
BM.	-BEAM
BRG.	-BEARING
BLK.	-BLOCK
C/C	-CENTER TO CENTER
CLG.	-CEILING
C.J.	-CONTROL JOINT
CONC.	-CONCRETE
CONT.	-CONTINUOUS
C/L	-CENTER LINE
DBL.	-DOUBLE
DIA.	-DIAMETER
DWG.	-DRAWING
EA.	-EACH
ELECT.	-ELECTRICAL
EQ.	-EQUAL
EXIST.	-EXISTING
EXT.	-EXTERIOR
F.D.	-FLOOR DRAIN
FLR.	-FLOOR
FOUND.	-FOUNDATION
FT.	-FOOT/FEET
FBRGLS.	-FIBERGLASS
FTG.	-FOOTING
GYP. BD.	-GYPSUM BOARD
G.F.I.	-GROUND FAULT INTERRUPT
IN.	-INCHES/INCHES
INSUL.	-INSULATION
INT.	-INTERIOR
JT.	-JOINT
L.	-LONG
LAV.	-LAVATORY
LBR.	-LUMBER
LBS.	-POUNDS
MAX.	-MAXIMUM
MTL.	-METAL
MIN.	-MINIMUM
M.O.	-MASONRY OPENING
MECH.	-MECHANICAL
MOIST.	-MOISTURE
N.I.C.	-NOT IN CONTRACT
N/A	-NOT APPLICABLE
N.T.S.	-NOT TO SCALE
O.C.E.W.	-ON CENTER EACH WAY
O.C.	-ON CENTER
O.H. DR.	-OVERHEAD DOOR
PEMB	-PRE ENG. METAL BLDG
PSI	-POUNDS PER SQUARE INCH
PSF	-POUNDS PER SQUARE FT.
PLMG.	-PLUMBING
PRE-ENG	-PRE-ENGINEERED
PLYWD.	-PLYWOOD
PL.	-PLATE
REQ.	-REQUIRED
REINF.	-REINFORCED/REINFORCING
R.O.	-ROUGH OPENING
RESIST.	-RESISTANT
RETARD.	-RETARDANT
S.F.	-SQUARE FOOT/FEET
STD.	-STANDARD
SQ.	-SQUARE
STL.	-STEEL
STYRO.	-STYROFOAM
SH.	-SHELF
T & B	-TOP AND BOTTOM
TYP.	-TYPICAL
WD.	-WOOD
W.W.M.	-WELDED WIRE MESH
W/	-WITH

SYMBOLS LEGEND

North

NORTH ARROW

1

KEY NOTE

1 / A3

ENLARGED DETAIL REFERENCE

ELEVATION DATUM

PARKING CALCULATIONS (NET S.F.)

MAIN FLOOR:

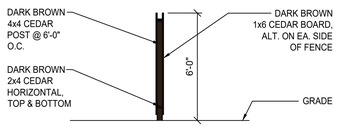
DISPENSARY	RETAIL	TOTAL
430 LOBBY	703	1,586
928 DISPLAY		703
228 COUNTER		2,289
1,586		

UPPER FLOOR:

DISPENSARY	TOTAL
699 LOBBY	1,126
289 DISPLAY	
138 COUNTER	
1,126	

TOTAL BUILDING:

2,289 MAIN FLOOR
1,126 UPPER FLOOR
3,415 TOTAL BUILDING / 300 S.F. = 11.38 SPACES --> USE 12 SPACES



(PROPOSED)

WOOD BOARD ON BOARD FENCE DETAIL

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

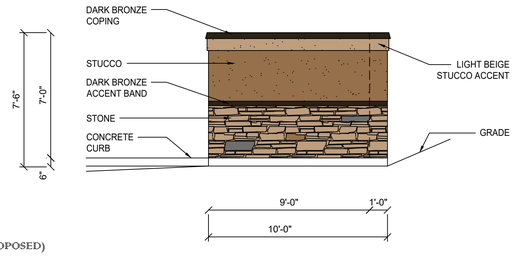
PROPOSED NEW DISPENSARY:

THE KIND CASTLE

(GLENWOOD MEADOWS, LOT 11B) WULFSOHN ROAD GLENWOOD SPRINGS, CO 81601

PROJECT INFORMATION

PROPERTY ADDRESS:	LOT 11B, GLENWOOD MEADOWS, FILING 5 WULFSOHN ROAD GLENWOOD SPRINGS, COLORADO 81601
PROPERTY OWNER:	GLENWOOD MEADOWS LLC 710 E DURANT AVENUE, SUITE W6 ASPEN, CO 81611
APPLICANT:	KIND WEST GLENWOOD, LLC 1888 SHERMAN STREET, SUITE 200 DENVER, CO 80203
ZONING:	M2 MIXED USE CENTRAL CORE

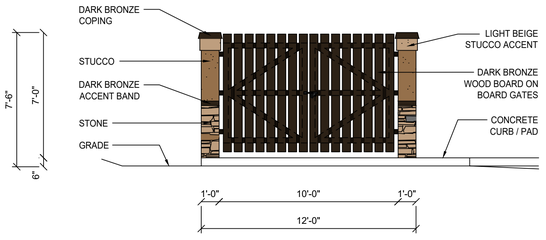


(PROPOSED)

REFUSE ENCLOSURE (WEST) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6



(PROPOSED)

REFUSE ENCLOSURE (NORTH) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

SHEET INDEX

CS1	COVER SHEET
SP1	PROPOSED SITE CONCEPT PLAN
LS1	PROPOSED LANDSCAPING CONCEPT PLAN
LS2	PROPOSED PLANT SCHEDULE & LANDSCAPE AREA PLANS
C2	CONCEPTUAL GRADING PLAN
--	PLAT / TOPOGRAPHIC MAP
A1	PROPOSED EXTERIOR ELEVATIONS
A2	PROPOSED EXTERIOR ELEVATIONS
A3	PROPOSED FLOOR PLAN - MAIN LEVEL
A4	PROPOSED FLOOR PLAN - UPPER LEVEL

PROJECT SUMMARY TABLE

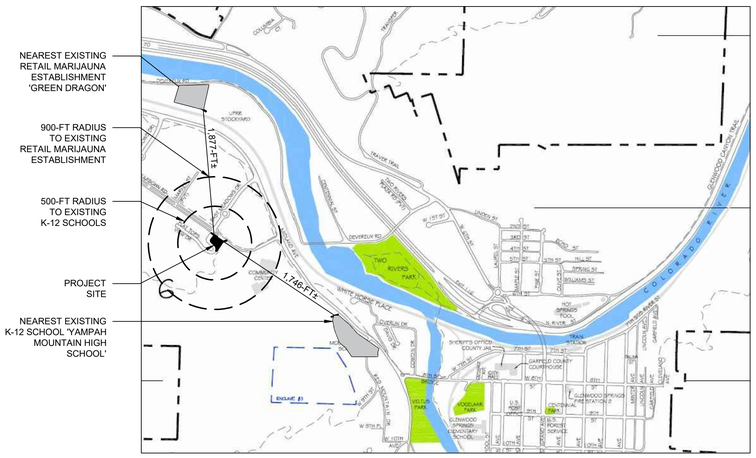
LOT SIZE:	ACRES	SF	LOT COVERAGE:	REQUIRED (SF)	PROPOSED (SF)
	0.409	17,816		0	.229
LIMITS OF DISTURBANCE:	EXISTING (SF)	PROPOSED (SF)	AVERAGE SLOPE WITHIN LIMITS OF DISTURBANCE:	SLOPE (%)	SLOPE (%)
	0	7,428		9.6%	9.6%
OFF-STREET PARKING:	REQUIRED (SP)	PROP. (SPACES)	BICYCLE PARKING:	REQUIRED (SP)	PROPOSED (SP)
	12	15		3	3
RESIDENTIAL UNITS:	EXISTING (UNITS)	PROPOSED (UNITS)	NON-RESIDENTIAL USES:	TYPE(S)	GR. FLR AREA (SF)
	0	0		RETAIL MARIJAUNA RETAIL	3,297 784
OPEN SPACE:	REQUIRED (SF)	PROPOSED (SF)	TOTAL LANDSCAPED AREA:	EXISTING (SF)	PROPOSED (SF)
	2,672	2,750		NONE	1,091 (6.1%)
BUILDING HEIGHT:	MAX ALLOWED (FT)	PROPOSED (FT)	TOTAL IMPERVIOUS AREA:	EXISTING (SF)	PROPOSED (SF)
	40'-0"	24'-6"		0	8,545
SNOW STORAGE:	REQUIRED (SF)	PROPOSED (SF)	LOT AREA:	MINIMUM (SF)	PROPOSED (SF)
	1,709	1,709		NONE	17,816
PARKING LOT LANDSCAPING:	REQUIRED (SF)	PROPOSED (SF)	OTHER:		
	855	892			

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

North

VICINITY MAP



Architecture and Planning Inc.
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237
pgilmore-psi@frontier.net

PSIM

PROPOSED NEW DISPENSARY
THE KIND CASTLE
WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/22/20 - REVISED PER STAFF COMMENTS
11/20/20 - REVISED PER OWNER COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PRG

CS1
SHEET 1 OF 10

WULFSOHN ROAD

EAST MEADOWS

5794 5795 5796 5797 5798 5799 5800 5801 5802 5803 5804 5805 5806 5807 5808 5809

FRONT YARD SETBACK 0'-0"

9.50' N 55° 42' 22" W

3.38' S 34° 18' 29" W

SITE DISTANCE (150'-0")

DRIVEWAY APPROACH

14.90' S 79° 21' 20" W R 9.50'

NEW CONCRETE BICYCLE PARKING (3 SPACES)

NEW CONCRETE SIDEWALK 8'-0"

NEW CONCRETE SIDEWALK 8'-0"

147.01' N 55° 34' 28" W

SITE DISTANCE (150'-0")

NEW FENCE (6'-0" H) STOP AT EDGE OF PARKING AREA

12.0' ENTRY 6.0' 6.0'

5'-0" ENTRY 4.8' 4.8' 5.3'

9.3' 6.3' 17.8' 4.0'

PLANTER

PROPOSED 2-STORY BUILDING
4,081 S.F. GROSS
FIN. FLR. = 5799.9'

PM TV

22.0' 16.0'

HC

5'-0" 19'-0" 24'-0" 19'-0" 24'-0" 5'-0"

1.0' 20.0' 1.0' 14.0'

5'-0" 14'-6"

EXISTING CONCRETE SIDEWALK

42.85' S 34° 25' 02" W

21.7'

14.3'

7 SPACES

8 SPACES

9'-0"

NEW ASPHALT PARKING AREA

SNOW STORAGE AREA

CORNER SIDE YARD SETBACK 0'-0"

33.6' 15.0' 4.0' 5'-0"

EXIT EXIT

NEW CONCRETE SIDEWALK

ZONED M2
LOT 11B
17,816 S.F.

PARKING AREA LIGHTING (DARK SKY TYPE) (TYP OF 4)

REFUSE ENCLOSURE

12.0' 10.0'

52.40' S 06° 09' 24" E R 37.00'

63.03' S 46° 43' 50" E

5'-0" EXISTING CONCRETE SIDEWALK

SIDE YARD SETBACK 0'-0"

EXISTING FENCE

162.50' N 34° 22' 27" E

REAR YARD SETBACK 0'-0"

FLAT TOPS VIEW DRIVE

15'-0" ACCESS & MAINTENANCE EASEMENT

92.13' N 11° 03' 49" W R 74.00'

10.98' S 55° 34' 28" E

(PROPOSED)
SITE CONCEPT PLAN

North

SCALE 1"=10'-0"

0 1 2 3 4 5 10 20 30

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

PSTM
Architecture and Planning Inc
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237
pstmarchitect@frontier.net

PROPOSED NEW DISPENSARY
THE KIND CASTLE
WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
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11/20/20 - REVISED PER OWNER COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PRG

SP1
SHEET 2 OF 10

WULFSOHN ROAD

EAST MEADOWS

3.38' S 34° 18' 29" W
9.50' N 55° 42' 22" W

LANDSCAPE AREA #1

FRONT YARD SETBACK 0'-0"

DRIVEWAY APPROACH

SITE DISTANCE (150'-0")

14.90'
S 79° 21' 20" W
R 9.50'

NEW CONCRETE BICYCLE PARKING (3 SPACES)

NEW CONCRETE SIDEWALK

147.01' N 55° 34' 28" W

NEW CONCRETE SIDEWALK

SITE DISTANCE (150'-0")

ENTRY

ENTRY

PLANTER

LANDSCAPE AREA #2

LANDSCAPE AREA #7

NEW FENCE (6'-0" H) STOP AT EDGE OF PARKING AREA

PROPOSED
2-STORY
BUILDING
4,081 S.F. GROSS
FIN. FLR. = 5799.9'

LANDSCAPE AREA #5

LANDSCAPE AREA #6

HC

7 SPACES

8 SPACES

NEW ASPHALT PARKING AREA

SNOW STORAGE AREA

EXISTING CONCRETE SIDEWALK

42.85' S 34° 25' 02" W

CORNER SIDE YARD SETBACK 0'-0"

ZONED M2
LOT 11B
17,816 S.F.

PARKING AREA LIGHTING (DARK SKY TYPE) (TYP OF 4)

EXIT

NEW CONCRETE SIDEWALK

EXIT

LANDSCAPE AREA #4

SIDE YARD SETBACK 0'-0"

52.40'
S 06° 09' 24" E
R 37.00'

LANDSCAPE AREA #3

OPEN SPACE (15%)
2,750+ S.F.

10.0'

REFUSE ENCLOSURE

63.03' S 46° 43' 50" E

EXISTING CONCRETE SIDEWALK

12'-0" x 8'-0" CONC. PAD W/ 8'-0" L. METAL / WOOD BENCH FOR COMMUNITY

5'-0" W. CONC. WALK

REAR YARD SETBACK 0'-0"

FLAT TOPS VIEW DRIVE

15'-0" ACCESS & MAINTENANCE EASEMENT

92.13'
N 11° 03' 49" W
R 74.00'

EXISTING FENCE

162.50' N 34° 22' 27" E

10.98'
S 55° 34' 28" E

5794 5795 5796 5797 5798 5799 5800 5801 5802 5803 5804 5805 5806 5807 5808 5809

(PROPOSED)
LANDSCAPE PLAN

North

SCALE 1"=10'-0"

0 1 2 3 4 5 10 20 30

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

PSTM
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970-682-3237
pstmarchitect@frontier.net

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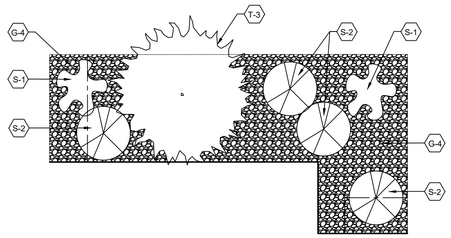
CHECKED: PRG
DRAWN: JAS

LS1
SHEET 3 OF 10



(PROPOSED)

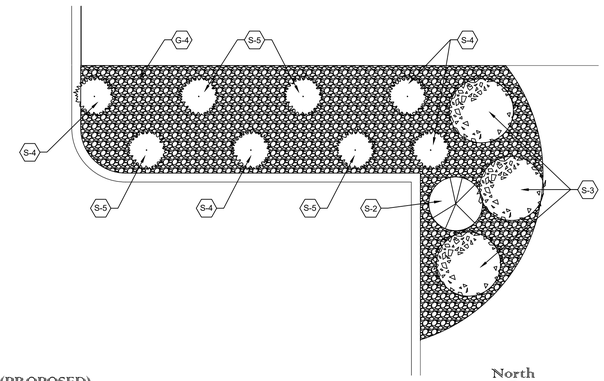
LANDSCAPE AREA PLAN #1

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

140 SQUARE FEET



(PROPOSED)

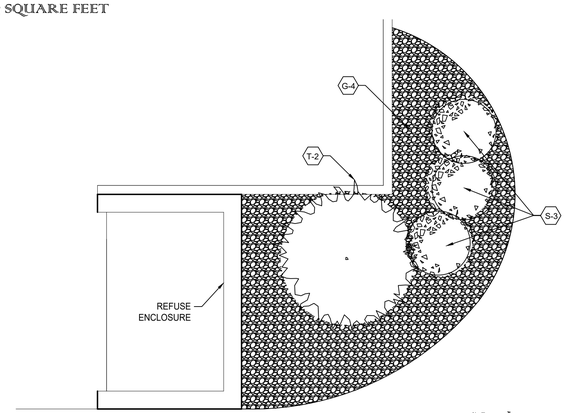
LANDSCAPE AREA PLAN #2

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

197 SQUARE FEET



(PROPOSED)

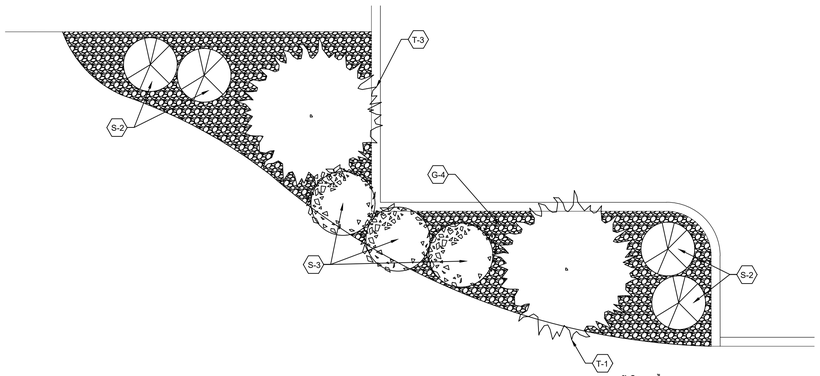
LANDSCAPE AREA PLAN #3

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

191 SQUARE FEET



(PROPOSED)

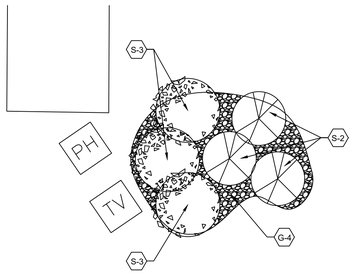
LANDSCAPE AREA PLAN #4

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

217 SQUARE FEET



(PROPOSED)

LANDSCAPE AREA PLAN #5

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

59 SQUARE FEET

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

PLANT SCHEDULE

T - TREES "APPLY ADEQUATE WATER DURING FIRST YEAR OF GROWTH. REDUCE IRRIGATION AFTER FIRST YEAR."

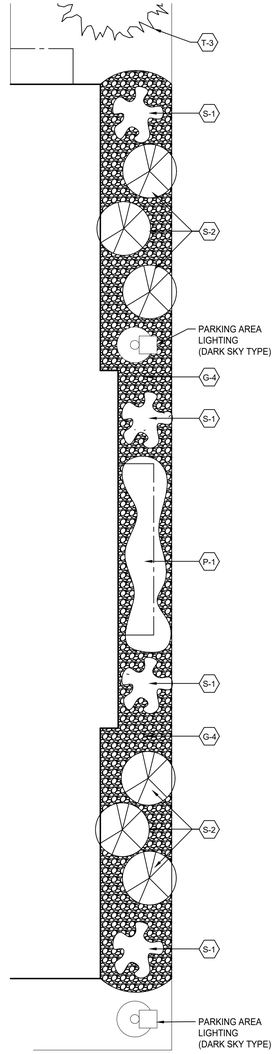
KEY	SIZE	BOTANICAL NAME	COMMON NAME	QTY.	REMARKS
T-1	2 1/2"	ACER GLABRUM	ROCKY MOUNTAIN MAPLE	10	--
T-2	2 1/2"	GLEDITSIA TRIACANTHOS	SHADEMASTER HONEY LOCUST	10	--
T-3	2 1/2"	KRAUTER VESUVIUS PLUM	PLUM TREE	4	--
T-4	2 1/2"	POPULUS TREMULOIDES	QUAKING ASPEN	4	--
T-5	6'	PINUS EDULIS	PINON PINE	7	--
T-6	6'	ABIES CONCOLOR	WHITE FIR	7	--
T-7	10'	PICEA PUNGENS	COLORADO SPRUCE	4	--

S - SHRUBS

KEY	SIZE	BOTANICAL NAME	COMMON NAME	QTY.	REMARKS
S-1	5 GAL.	BUDDLEIA	BUTTERFLY BUSH	8	--
S-2	5 GAL.	PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	20	--
S-3	5 GAL.	CALAMAGROSTIS ACUTIFLORA	KARL FOERSTER FEATHER REED GRASS	12	--
S-4	3'-0"	BOXUS GREEN VELVET	GREEN VELVET BOX WOOD	7	--
S-5	3'-0"	EUONYMUS FORTUNE	CANANDALE GOLD	8	--

G - GROUND COVERS

KEY	DESCRIPTION	REMARKS
G-1	NATIVE SOIL	OUTSIDE OF LIMITS OF DISTURBANCE, LEAVE NATIVE CONDITIONS IN PLACE
G-2	UPLAND SEED MIX	N/A
G-3	CEDAR MULCHING	CEDAR MULCHING TO BE APPLIED 4" DEEP IN AREAS INDICATED ON PLANS. INSTALL WEED MAT BELOW ALL AREAS TO RECEIVE MULCH.
G-4	WASHED GRAVEL	3/4" WASHED GRAVEL TO BE APPLIED 2"-3" DEEP IN AREAS INDICATED ON PLANS. INSTALL WEED MAT BELOW ALL AREAS TO RECEIVE GRAVEL.
P-1	MIXED PERENNIALS	MIXED PERENNIALS TO INCLUDE SMALL LEAF FUSSY TOES, WESTERN COLUMBINE, INDIAN PAINT BRUSH, PRAIRIE CONEFLOWER, JAMES PENSTEMMON. PROVIDE 1 GALLON CONTAINERS, SPACE AT 18" O.C. THROUGHOUT PLANTING AREA. PROVIDE CEDAR MULCH AROUND PLANTINGS.



(PROPOSED)

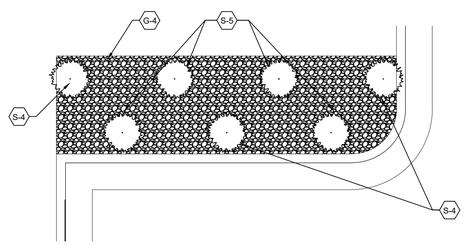
LANDSCAPE AREA PLAN #6

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

184 SQUARE FEET



(PROPOSED)

LANDSCAPE AREA PLAN #7

North

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

103 SQUARE FEET

PSTM
Architecture and Planning Inc.
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237
pgstimmons@frontier.net

PROPOSED NEW DISPENSARY

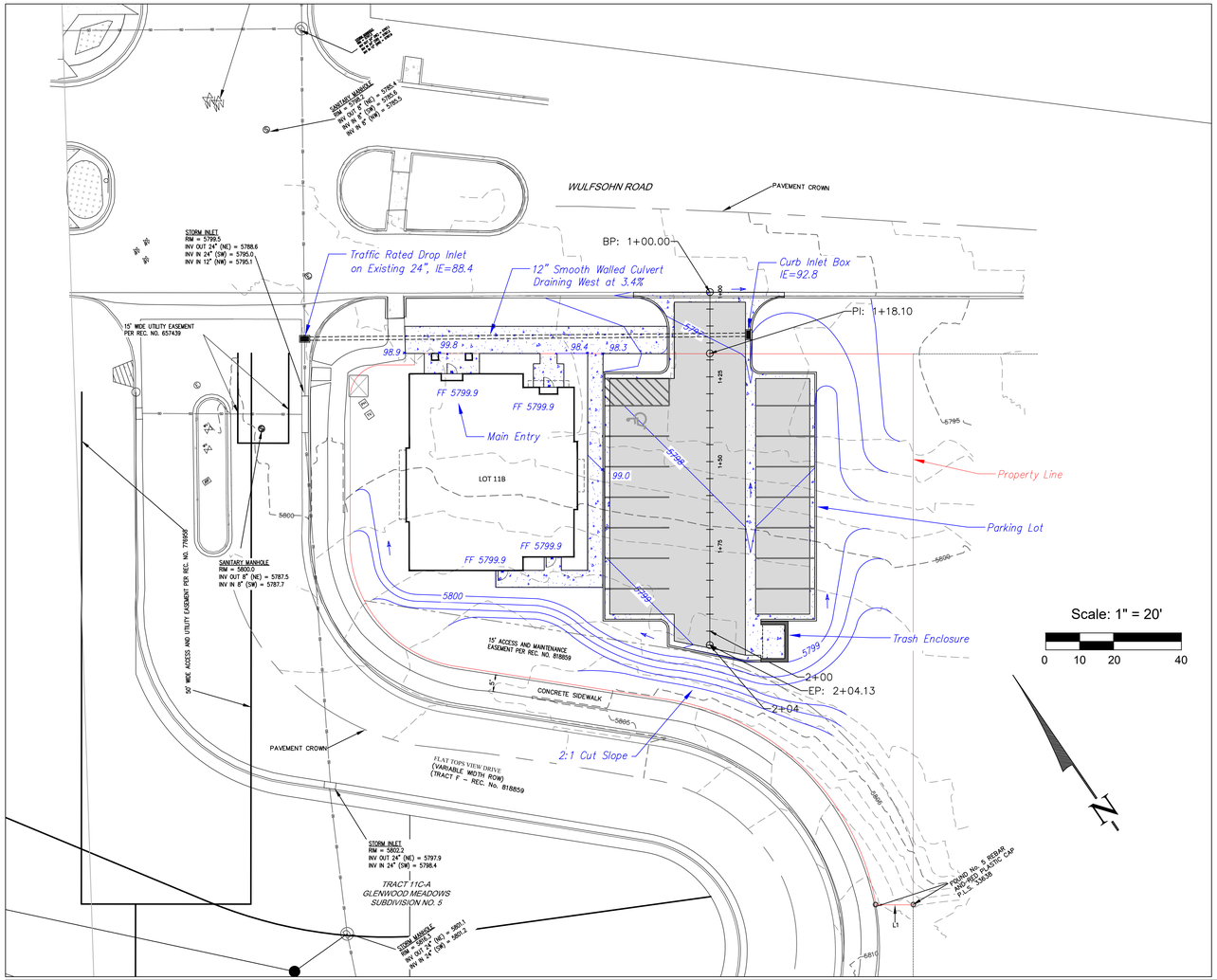
THE KIND CASTLE

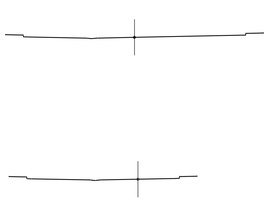
WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/22/20 - REVISED PER STAFF COMMENTS
11/20/20 - REVISED PER OWNER COMMENTS

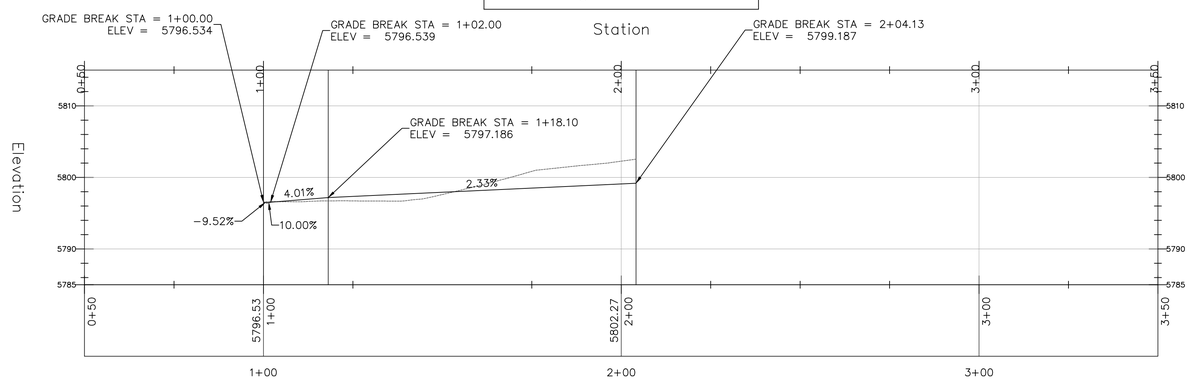
JOB NO. 19-233
DATE: 11/30/2020
DRAWN: JAS
CHECKED: PRG

LS2
SHEET
4 OF 10





Parking Lot Profile



Scale: 1" = 20'
0 10 20 40

Uncompahgre Engineering, LLC

P.O. Box 3945
Telluride, CO 81435
970-729-0683

SUBMISSIONS:

SUBMITTAL	2020-09-09
SUBMITTAL	2020-11-20

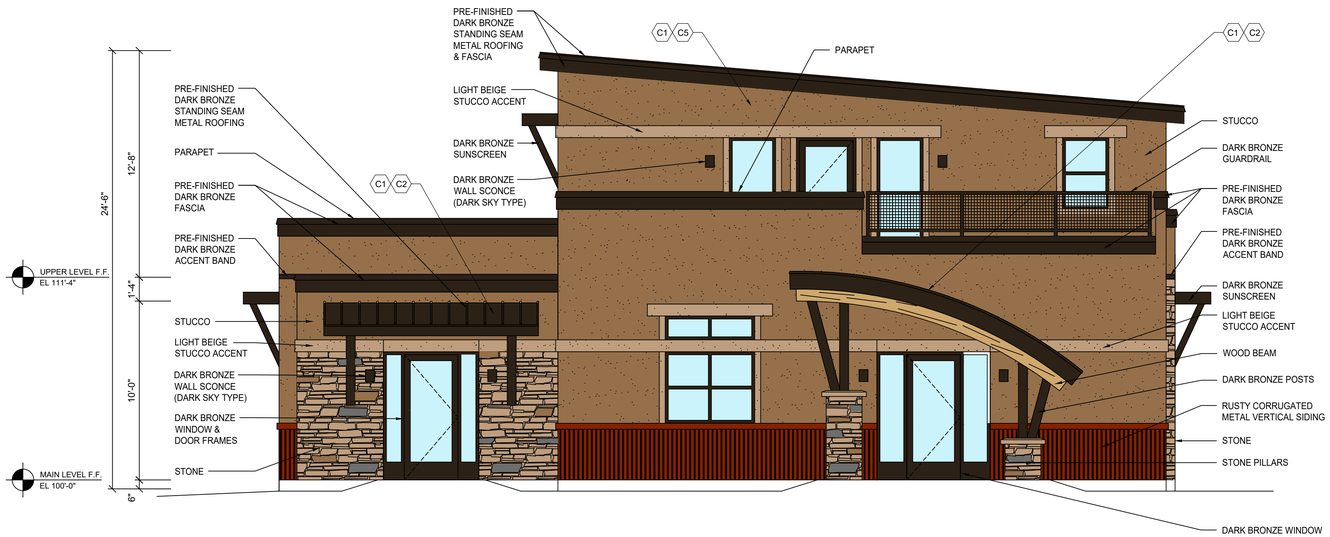
Kind Kastle
Glenwood Springs, CO

COLORADO LICENSED 29645 PROFESSIONAL ENGINEER
11-20-20
NOT FOR CONSTRUCTION

CONTRACTOR TO REVIEW AND COMPARE ALL CHAPTERS AND INTERDISCIPLINARY DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO ANY FIELD WORK BEING DONE IN ACCORDANCE WITH AIA DOCUMENT A201

Site Grading with Parking Lot Profile

C2



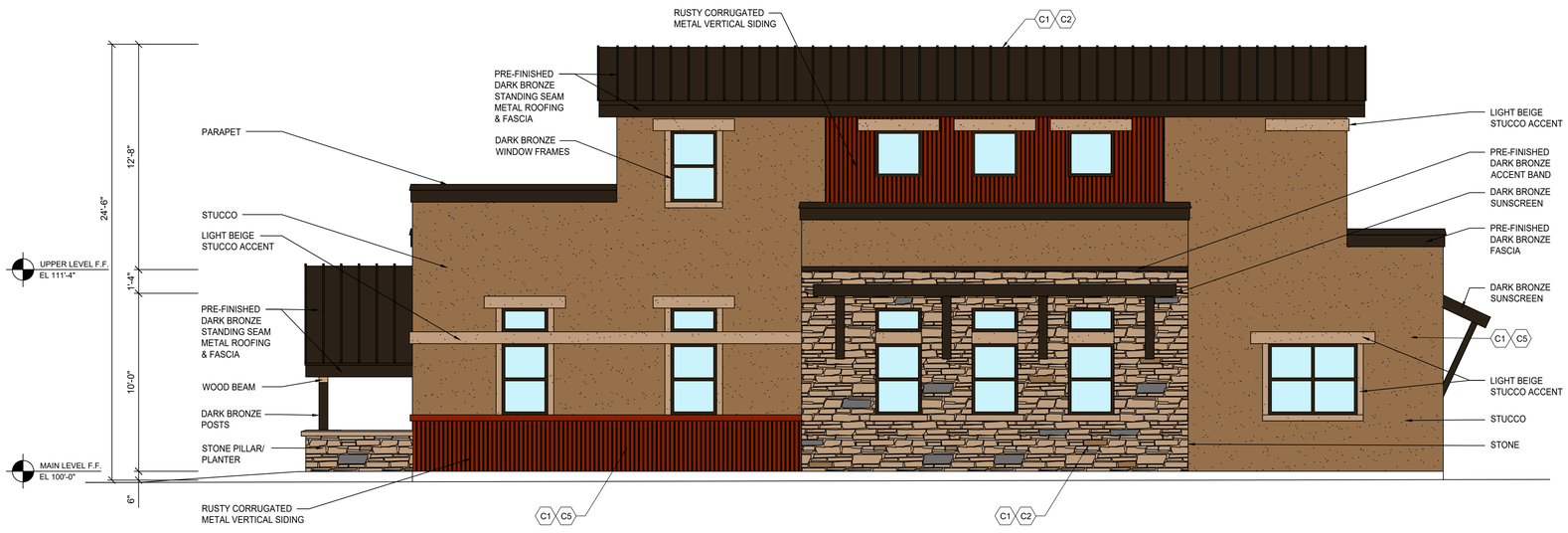
(PROPOSED)

FRONT (NORTH) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

NOTE: 70% SUBDIVIDED



(PROPOSED)

SIDE (WEST) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

NOTE: 56% SUBDIVIDED

SECTION VC & D KEYNOTES

C1 - COLOR CHANGE, TEXTURE, MATERIAL
C2 - PROJECTION REVEAL
C5 - SUBDIVISION ELEMENT

GENERAL NOTES

THESE ELEVATIONS ARE CONCEPTUAL IN NATURE. INDIVIDUAL BUILDING ELEVATIONS MAY VARY, BUT WILL BE EVALUATED FOR COMPLIANCE WITH DESIGN STANDARDS CONTAINED WITHIN TITLE 070 OF THE GLENWOOD SPRINGS MUNICIPAL CODE AT THE TIME OF SUBMITTING A BUILDING PERMIT APPLICATION.

MATERIALS SUMMARY TABLE

FRONT ELEVATION (NORTH)			REAR ELEVATION (SOUTH)		
GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*	GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*
	1,008	100%		1,014	100%
NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*
	455	45%		688	68%
NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*
	66	6%		53	5%
NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*
	83	8%		89	9%
NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*
	88	9%		3	<1%
NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*
	160	16%		111	11%
NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*
	36	4%		0	0%
NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*
	58	6%		48	5%
NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*
	65	6%		22	2%
SIDE ELEVATION (EAST)			SIDE ELEVATION (WEST)		
GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*	GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*
	1,260	100%		1,129	100%
NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*
	665	53%		523	46%
NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*
	96	8%		56	5%
NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*
	183	15%		187	17%
NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*
	76	6%		132	12%
NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*
	154	12%		110	10%
NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*
	0	0%		0	0%
NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*
	0	0%		0	0%
NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*
	85	7%		119	11%

*NET EXCLUDES ROOF FORMS, AWNINGS AND SIMILAR FEATURES. INCLUDES GLAZED WINDOWS AND DOORS.

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

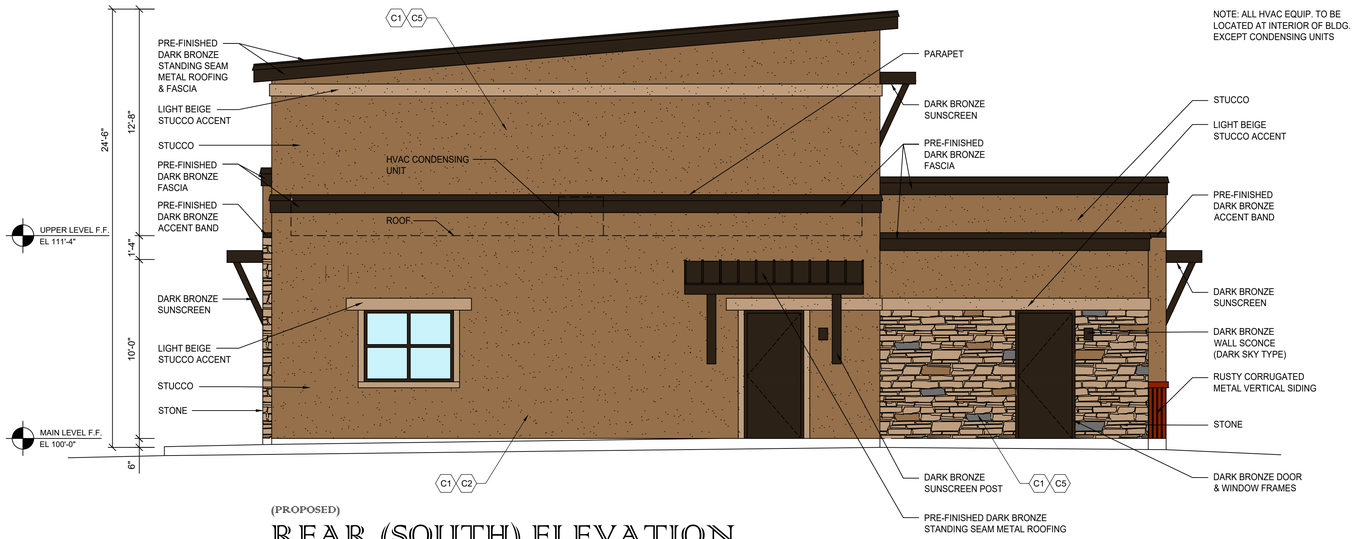
PSIM
Architecture and Planning Inc.
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237
pgelinas-psim@frontier.net

PROPOSED NEW DISPENSARY
THE KIND CASTLE
WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/12/20 - REVISED PER STAFF COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PRG

A1
SHEET 7 OF 10

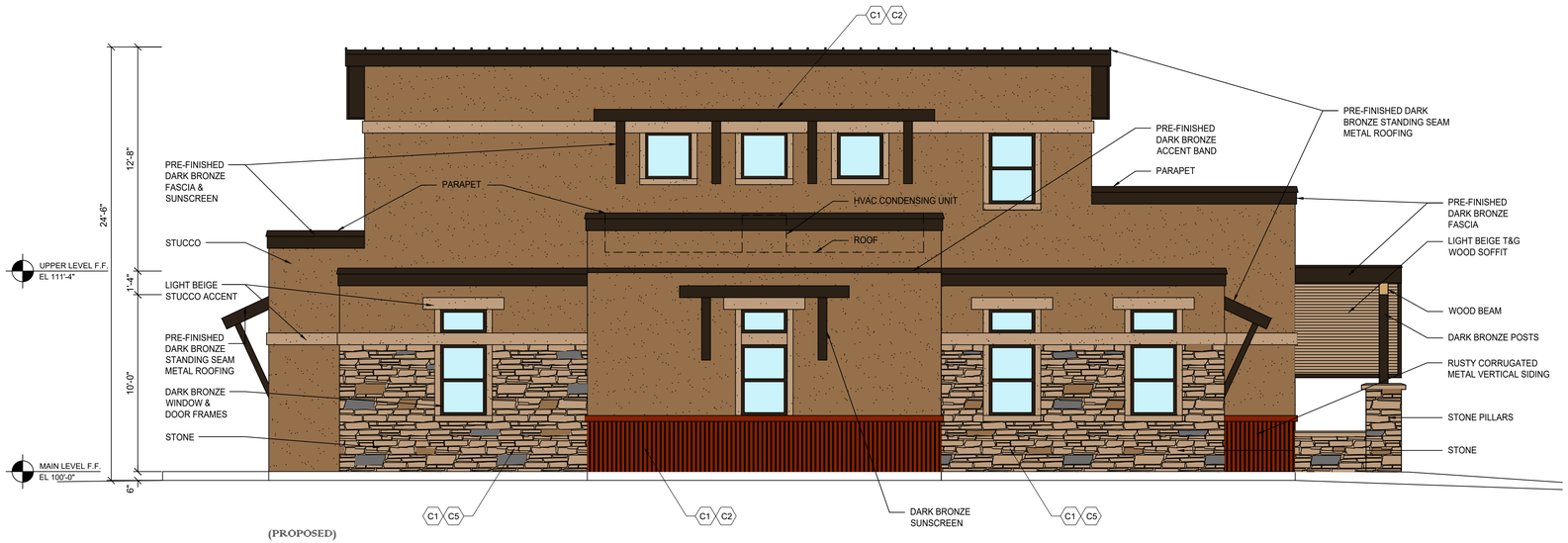


(PROPOSED)

REAR (SOUTH) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6



(PROPOSED)

SIDE (EAST) ELEVATION

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

NOTE: 42% SUBDIVIDED

SECTION VC & D KEYNOTES

C1 - COLOR CHANGE, TEXTURE, MATERIAL
C2 - PROJECTION REVEAL
C5 - SUBDIVISION ELEMENT

GENERAL NOTES

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MATERIALS SUMMARY TABLE

FRONT ELEVATION (NORTH)			REAR ELEVATION (SOUTH)		
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NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*
	455	45%		688	68%
NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 2: STUCCO - LIGHT	SURFACE AREA (SF)	PERCENT OF NET*
	66	6%		53	5%
NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 3: STONE	SURFACE AREA (SF)	PERCENT OF NET*
	83	8%		89	9%
NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*
	88	9%		3	<1%
NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*
	160	16%		111	11%
NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*
	36	4%		0	0%
NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*
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NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*
	65	6%		22	2%
SIDE ELEVATION (EAST)			SIDE ELEVATION (WEST)		
GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*	GROSS OF WALL:	SURFACE AREA (SF)	PERCENT OF NET*
	1,260	100%		1,129	100%
NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 1: STUCCO - DARK	SURFACE AREA (SF)	PERCENT OF NET*
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NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 4: METAL SIDING	SURFACE AREA (SF)	PERCENT OF NET*
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NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 5: METAL TRIMS	SURFACE AREA (SF)	PERCENT OF NET*
	154	12%		110	10%
NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 6: GUARDRAIL	SURFACE AREA (SF)	PERCENT OF NET*
	0	0%		0	0%
NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 7: DOORS	SURFACE AREA (SF)	PERCENT OF NET*
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NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*	NET* MATERIAL 8: WINDOWS	SURFACE AREA (SF)	PERCENT OF NET*
	85	7%		119	11%

*NET EXCLUDES ROOF FORMS, AWNINGS AND SIMILAR FEATURES. INCLUDES GLAZED WINDOWS AND DOORS.

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

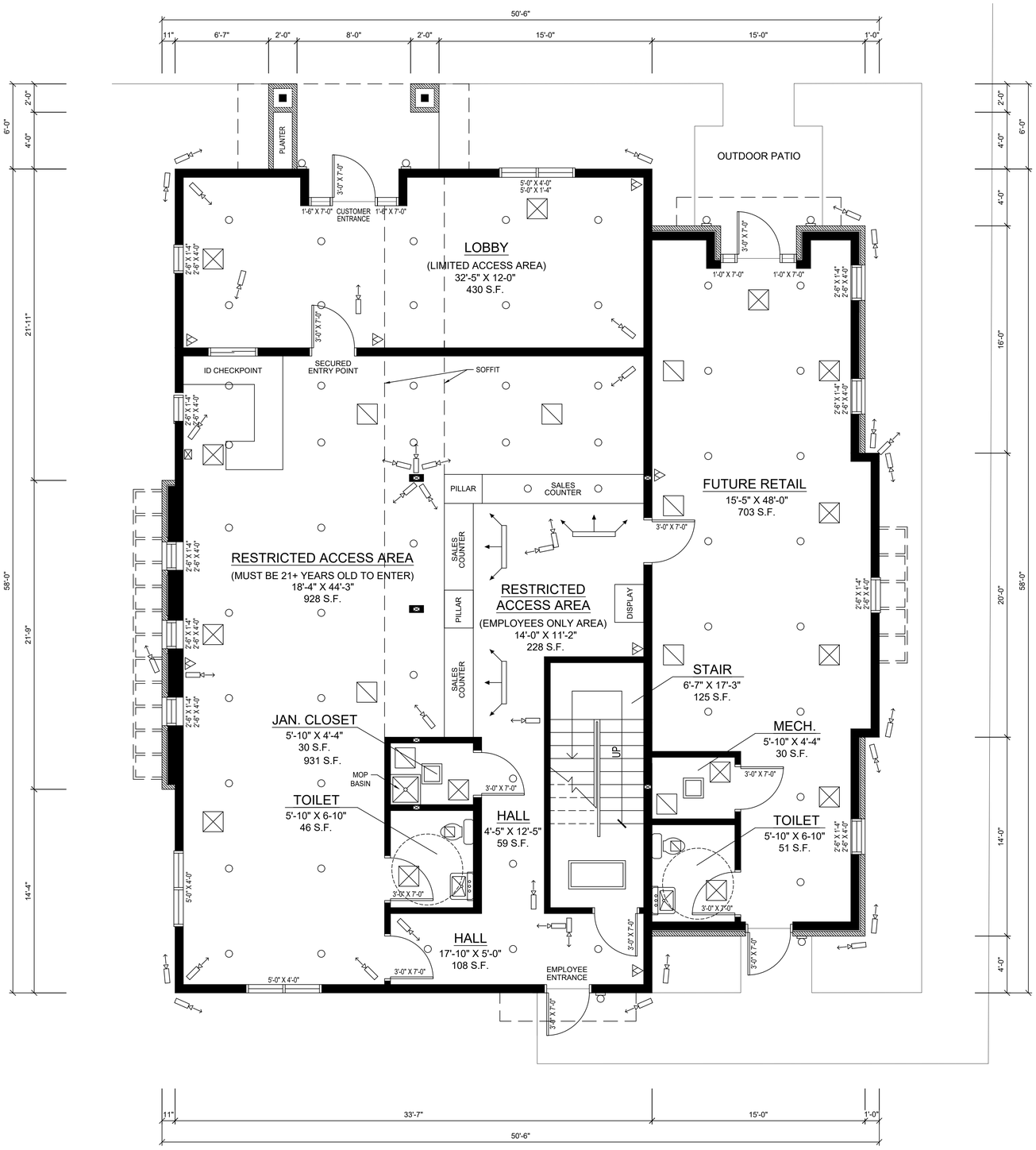
PSIM
Architecture and Planning Inc.
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237
pgelsinger@frontier.net

PROPOSED NEW DISPENSARY
THE KIND CASTLE
WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/12/20 - REVISED PER STAFF COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PRG

A2
SHEET
8 OF 10



(PROPOSED)

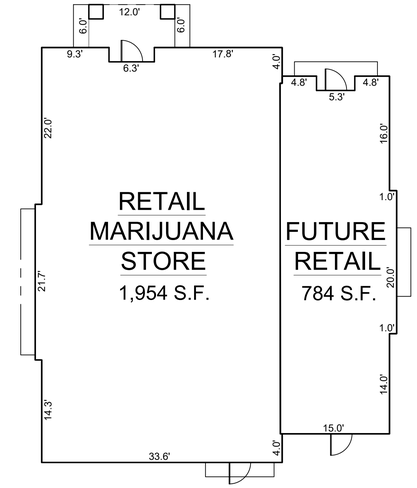
MAIN LEVEL FLOOR PLAN

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

2,738 SQUARE FEET

North



(PROPOSED)

MAIN LEVEL AREA PLAN

NOT TO SCALE

2,738 SQUARE FEET

North

BUILDING AREA SUMMARY

RETAIL MARIJUANA STORE (RMS):	
MAIN LEVEL	1,954 S.F.
UPPER LEVEL	1,343 S.F.
RMS TOTAL	3,297 S.F.

FUTURE RETAIL (FR):	
MAIN LEVEL	784 S.F.
FR TOTAL	784 S.F.

TOTAL BUILDING:	
MAIN LEVEL - RMS	1,954 S.F.
MAIN LEVEL - FR	784 S.F.
MAIN LEVEL TOTAL	2,738 S.F.
UPPER LEVEL - RMS	1,343 S.F.
UPPER LEVEL TOTAL	1,343 S.F.
MAIN LEVEL TOTAL	2,738 S.F.
UPPER LEVEL TOTAL	1,343 S.F.
TOTAL BUILDING	4,081 S.F.

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

PSTM
Architecture and Planning Inc
320 Jenkins Ranch road Durango, Colorado 81301
970-682-3237

PROPOSED NEW DISPENSARY

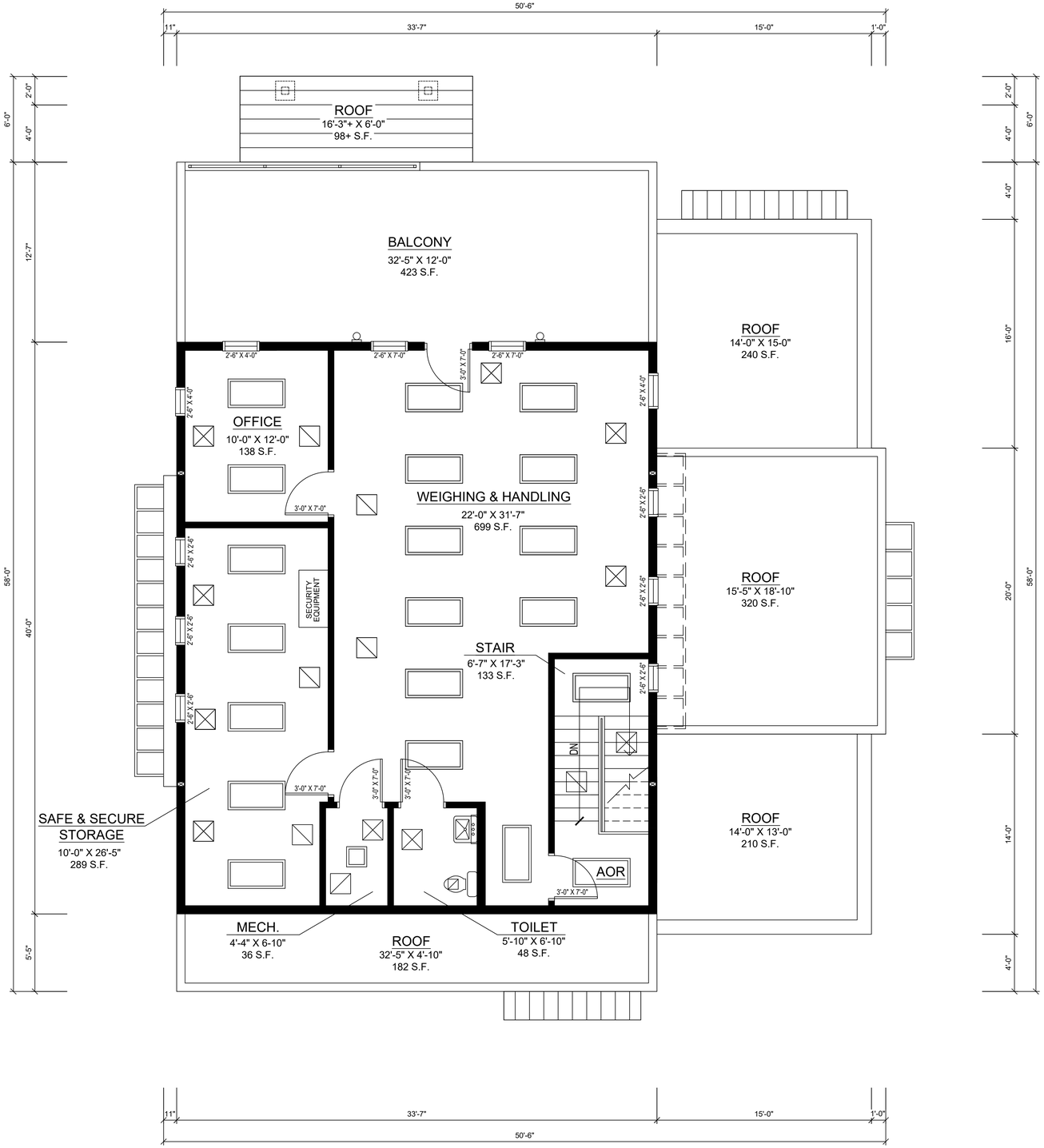
THE KIND CASTLE

WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/22/20 - REVISED PER STAFF COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PRO

A3
SHEET
9 OF 10



(PROPOSED)

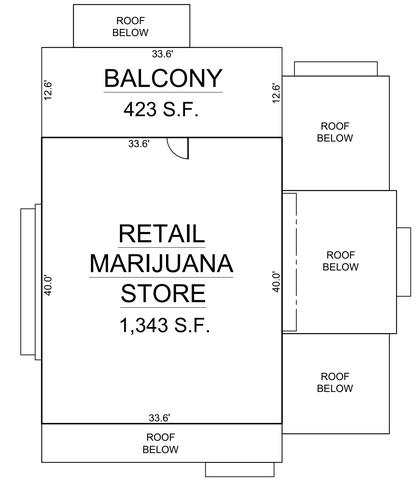
UPPER LEVEL FLOOR PLAN

SCALE 1/4"=1'-0"

0 1 2 3 4 5 6

1,766 SQUARE FEET (INCLUDING 423 SF BALCONY)

North



(PROPOSED)

UPPER LEVEL AREA PLAN

NOT TO SCALE

1,766 SQUARE FEET (INCLUDING 423 SF BALCONY)

North

BUILDING AREA SUMMARY

RETAIL MARIJUANA STORE (RMS):	
MAIN LEVEL	1,954 S.F.
UPPER LEVEL	1,343 S.F.
RMS TOTAL	3,297 S.F.
FUTURE RETAIL (FR):	
MAIN LEVEL	784 S.F.
FR TOTAL	784 S.F.

TOTAL BUILDING:	
MAIN LEVEL - RMS	1,954 S.F.
MAIN LEVEL - FR	784 S.F.
MAIN LEVEL TOTAL	2,738 S.F.
UPPER LEVEL - RMS	1,343 S.F.
UPPER LEVEL TOTAL	1,343 S.F.
MAIN LEVEL TOTAL	2,738 S.F.
UPPER LEVEL TOTAL	1,343 S.F.
TOTAL BUILDING	4,081 S.F.

PROPERTY DESCRIPTION

LOT 11B, GLENWOOD MEADOWS, FILING 5; SECTION 8, T. 6 S., R. 89 W., OF THE 6th P.M.;
CITY OF GLENWOOD SPRINGS; GARFIELD COUNTY, COLORADO

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PROPOSED NEW DISPENSARY

THE KIND CASTLE

WULFSOHN ROAD
GLENWOOD SPRINGS, CO 81601

REVISIONS:
10/22/20 - REVISED PER STAFF COMMENTS

JOB NO. 19-233
DATE: 11/20/2020
DRAWN: JAS
CHECKED: PKG

A4
SHEET 10 OF 10

From: Mark Mayasich
To: Trent Hyatt
Subject: Glenwood Meadows Dispensary
Date: Monday, October 26, 2020 7:23:00 PM

To whom it may concern,
As a resident of Glenwood Springs that resides in the Lofts right next door to this site; I request that the planning and zoning commission and city council approve The Kind Castle at 150 Wulfshon Road. There are are currently no other marijuana stores in the Glenwood Meadows area and therefore there is a need and a desire for a new marijuana retailer. This new dispensary will encourage walkability within the community and decrease traffic to the downtown area which is in direct alignment with city of Glenwood Springs strategic plan. Thank you for your time.

Respectfully Submitted,

Mark Mayasich
300 Wulfsohn Road #E211
Glenwood Springs, CO 81601
P: (970) 989-0312

From:	Richard A. Myers
To:	Jonathan Godes; Shelley Kaup; Steve Davis; Charlie Willman; Paula Stepp; Tony Hershey; Jennifer Ooton; Trent Hyatt
Subject:	Kind Castle application
Date:	Tuesday, October 27, 2020 9:24:52 AM

Dear Mayor Godes, City Council Members, Planning and Zoning Commission and City of Glenwood Springs Community Development Staff:

On behalf of the owners of The Lofts at Red Mountain, I wish to urge your support of the 'Kind Castle' application for a retail marijuana outlet at Glenwood Meadows. One of the strengths of Glenwood Meadows is its vision to create a walkable, mixed-use community that provides a great variety of retail stores, services and restaurants. This vision is primarily what attracted us to invest tens of millions of dollars in Glenwood Meadows. Kind Castle is another quality retail store that will be appreciated by our residents at The Lofts. We hope you will promptly approve their application.

Thank you very much for your consideration of this letter.

Richard Myers
Managing Director
Realty Capital Management
909 Lake Carolyn Parkway, Suite 150
Irving, Texas 75039
Myers@RealtyCapital.com
469-533-4180 – Office
817-313-5000 – Cell

From:	Steve Shoflick
To:	Jonathan Godes; Shelley Kaup; Steve Davis; Charlie Willman; Paula Stepp; Tony Hershey; Jennifer Ooton; Trent Hyatt
Subject:	Kind Castle Retail Marijuana Outlet Special Use Permit application
Date:	Tuesday, October 27, 2020 9:34:13 AM

Dear Mayor Godes, City Council Members, Planning and Zoning Commission and City of Glenwood Springs Community Development Staff:

We are the Developer, Manager and an Owner of the Glenwood Meadows Shopping Center. As you know, the proposed Kind Castle Retail Marijuana Outlet would be located adjacent to the Shopping Center.

We believe adding a quality retail marijuana operation, as previously authorized by the citizens of Colorado and Glenwood Springs, will add to the synergy and success of Glenwood Meadows as a destination shopping experience. We understand Kind Castle is such a quality operator and has carefully planned their facility to meet all state and local regulations including rigorous security and odor control. We believe that adding synergistic users to Glenwood Meadows benefits all the retail operators, further enabling Meadows to grow its sales tax base.

We support the addition of Kind Castle to Glenwood Meadows.

Warm regards,

Steve Shoflick
Principal

MILLER
REAL ESTATE INVESTMENTS

6900 E. Belleview Ave., Suite 300
Greenwood Village, CO 80111
303-996-6328

From:	Navin C Dimond
To:	Jonathan Godes
Cc:	Jennifer Ooton; Trent Hyatt
Subject:	Support for Kind Castle
Date:	Monday, October 26, 2020 7:47:46 PM
Attachments:	image752001.png

Dear Mayor Godes –

Please allow this message as my support for this application before you –

My name is Navin Dimond and I am the Managing Partner for the Residence Inn and Courtyard by Marriott hotels at Glenwood Meadows –

Respectfully,

Navin

STONEBRIDGE
COMPANIES

Navin C Dimond
CEO and Chairman

www.sbcos.com

ndimond@sbcos.com

+1-303-785-3100 x122

DocuSign Envelope ID: 3597896F-FAD2-497E-B162-5F93C7B4C070

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, JAMIE HASELTON, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 1319 CTY RD 117 GLENWOOD SPRINGS
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: DocuSigned by: [signature] 4958098BCCD74EB... Date: 10/27/2020

DocuSign Envelope ID: 843A0855-D3B1-41C5-9AD1-8613818AA39D

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, KAREN SCRIPTER, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 135 White Horse Place
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: DocuSigned by: KAREN SCRIPTER FDFD8037DA5B470... Date: 10/27/2020

DocuSign Envelope ID: 33EE68AF-2735-417D-BB45-96BD3C4E0087

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Kyle Jones, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 2314 Bennett Ave Unit A
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: DocuSigned by: Kyle Jones AF5FA846962F4A7... Date: 10/27/2020

DocuSign Envelope ID: E6CE1FAB-6E24-4ABB-A1DB-9740B82501F8

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, RACHAEL HENDERSON, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 348 East Vista dr
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: DocuSigned by: 1FCC97866A37407... Date: 10/27/2020

DocuSign Envelope ID: 80429539-3B81-47CD-A35B-5D27D0F2BCA6

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, ZEPH WILLIAMS, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 75 Ptarmigan Lane, Glenwood Springs CO 81601
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: DocuSigned by: 01472EFD573D4CB... Date: 10/27/2020

AFFIDAVIT

IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Mark Joseph Mayasich, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 300 Wulfsohn Road E211, Glenwood Springs, CO 8160
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at 150 Wulfshon Road in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at 150 Wulfshon Road in the City of Glenwood Springs, Colorado.
14. **Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at 150 Wulfshon Road, Glenwood Springs.**

Signature: _____ Date: 10/27/2020

NOTARIZATION FOR DOCUMENT AS AN AFFIDAVIT IN SUPPORT OF KIND WEST GLENWOOD LLC

STATE OF Colorado)
)
COUNTY OF Garfield)

Sworn to before me this 27th day of October, 2020
by Mark Joseph Mayasich.

KERI BLYTH JENSEN
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #20074022842
My Commission Expires June 11, 2023

Notary Public K Blyth Jensen

My Commission Expires: 06/11/2023

AFFIDAVIT

IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Jessica Stevens, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 300 Wulfsohn Rd, #E211, Glenwood Springs, CO 81601
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at 150 Wulfshon Road in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at 150 Wulfshon Road in the City of Glenwood Springs, Colorado.
14. **Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at 150 Wulfshon Road, Glenwood Springs.**

Signature: _____ Date: 10/27/2020

NOTARIZATION FOR DOCUMENT AS AN AFFIDAVIT IN SUPPORT OF KIND WEST GLENWOOD LLC

STATE OF Colorado)
)
COUNTY OF Garfield)

Sworn to before me this 27th day of October, 2020, by Jessica Anne Stevens.

Notary Public

My Commission Expires: 12/13/2023

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Kevin Brockelew, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

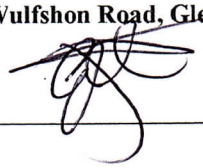
1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 100 Timber Creek Dr
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: _____ Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Erka Magueda, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 121 Soccer Field Rd Glenwood Springs CO 81601
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature:  Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, INGRID Y. JIMENEZ, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 110 MARKET DRIVE #1 GLENWOOD SPGS. CO.
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: _____ Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Sierra Taylor, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 20 Market Street
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
3. The residents of Glenwood Springs desire a retail marijuana store in the Glenwood Meadows area. There are currently no marijuana retailers in the neighborhood of this proposed marijuana retailer. The residents in nearby apartments have a need.
4. This business encourages walkability in this neighborhood which is a strong need for our community. There is a strong need in the city to reduce vehicular traffic and this new store helps accomplish this need since many residents can walk there.
5. This business use is certainly compatible with surrounding uses, even more so than other city-approved marijuana retailers, especially with the retail plaza, designed to handle high traffic and full of all types of retailers, located right across the street.
6. This business's building design is compatible with surrounding uses and residential apartments nearby.
7. I believe the landscape plans and fence proposed by this business will provide a substantial and strong enough buffer to Glenwood Community Garden and Glenwood Springs Recreation Center.
8. I do not think this business will cause any issues with odor. This business has a strong odor mitigation and air filtration plan, and the city has not received any complaints of odor from any other retailers.
9. The city has a substantial Hispanic population and there is a strong need for Spanish-speaking employees at marijuana retailers in our city. Currently, existing marijuana retailers in the city have not met this need. This business promises to hire many Spanish-speaking employees to meet this need.
10. Since the City of Glenwood Springs voted to allow retail marijuana sales, there has been significant development in City as a result of the new retail marijuana stores. There has also been an increase in visitors and tourism for marijuana products. The demand for marijuana products has increased overall. Many residents drive to this business's other location in Parachute.
11. This business offers better prices, quality and more options than the existing stores in the city.
12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: Sierra Taylor Date: 10/27/20

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Jose A Argueta, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 220 Flat Top Views DR Apt B
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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Signature: _____ Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Helida Morales, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 26 Storm King Rd, Glenwood Springs, 81601
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Nich Rodriguez, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is:

   _____

2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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Signature: Nich Rodriguez Date: 10/27/20

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, 1128 Pitkin Ave Carlos Gonzalez, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 1128 Pitkin Ave
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: _____ Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Haley Greytak, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 903 NoName Lane 81601 Glenwood Springs
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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12. I support The Kind Castle and their application to receive a special use permit and retail marijuana store license at **150 Wulfshon Road** in the City of Glenwood Springs. I also support the continuous renewal of this license and permit annually.
13. I believe The Kind Castle meets all requirements set forth by the City of Glenwood Springs to operate a retail marijuana business at **150 Wulfshon Road** in the City of Glenwood Springs, Colorado.
14. Based on the foregoing, I request that the City of Glenwood Springs, including its City Council, Planning and Zoning Commission, and its Licensing Authority, approve The Kind Castle's application for a retail marijuana store license and special use permit at **150 Wulfshon Road, Glenwood Springs**.

Signature: Haley Greytak Date: 10.27

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RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, William Nicholls Dawsey, state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 1434 Summerville Aly
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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Signature: DocuSigned by: William Nicholls Dawsey 951EF8DB3D4446D... Date: 10/27/2020

RESIDENT PETITION IN SUPPORT OF THE APPLICATION FOR KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE TO RECEIVE CITY APPROVALS FOR ITS RETAIL MARIJUANA STORE LICENSE AND SPECIAL USE PERMIT AT 150 WULFSHON ROAD

I, Lezly Borrego Soto., state the following in support of **Kind West Glenwood LLC** d/b/a The Kind Castle's (hereinafter "**The Kind Castle**") application to apply for and receive all license and permit approvals from the city operate a retail marijuana store at **150 Wulfshon Road, Glenwood Springs, CO 81601**:

1. As a Party in Interest, 21 years of age or older, I reside in the City of Glenwood Springs, Colorado. My address is: 51519 hwy 6 GWS 81601
2. I believe approving this retail marijuana store license and special use permit meets the needs of the neighborhood and desires of the adult inhabitants in the City of Glenwood Springs since this approval will bring additional customers to the area and surrounding businesses, providing jobs to residents, increase walkability for residents, thereby improving the economy and ultimately benefiting the city. There have been no noticeable negative effects related to the retail marijuana stores in the city.
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Signature: _____ Date: 10/29/2020.

From: Gretchen E Ricehill
To: Trent Hyatt
Subject: FW: P&Z comments - Kind Castle application
Date: Thursday, November 5, 2020 5:04:38 PM

Trent
FYI
Gretchen

-----Original Message-----
From: Amy Roggie <amy12dre@hotmail.com>
Sent: Thursday, November 5, 2020 5:03 PM
To: Gretchen E Ricehill <gretchen.ricehill@cogs.us>
Subject: Re: P&Z comments

To whom it may concern,

I understand that the commission is continuing the discussion on Kind Castle requesting to have a pot shop on the southeast corner of Wulfsohn Rd and Flat Tops Drive in the Meadows. My hope is that this special use request is denied due to its location. The Glenwood Springs Community/Recreation Center is very close to this location. My children and I recreate frequently at the recreation center in the outdoor spaces (tennis courts and hockey rink). We are all in leagues and use the space for training and practice as well. We also use the trail system near by. The odors from the various shops currently in town are atrocious. My fear is that this one too will be too close to and not compliant with noxious odor regulations, and not a good neighbor for the adjacent lodging, recreating facilities, which will cause folks to have to recreate elsewhere. This will impact various sports leagues and potentially limit the nearby lodging facilities ability to compete fairly with other hotels that aren't so close.

I understand that someone wants us to be a shopping hub for other towns, but be mindful of the current residents and visitors. There are numerous shops throughout town. Having these odors so close to parks and sporting facilities is detrimental to those who wish to live, recreate, and breathe in a healthy environment.

Thank you for serving our community and taking my thoughts into consideration!

Sent from my iPhone
Amy Roggie

> On Nov 5, 2020, at 4:28 PM, Gretchen E Ricehill <gretchen.ricehill@cogs.us> wrote:
>
> Amy
> You can submit your comments to me via email if that's easiest.
> Alternatively, you could drop your comments off to city hall in the utility payment box. Make sure that you address your envelope to Gretchen Ricehill, Community Development Dept.
>
> Let me know if you have additional questions Gretchen
> 970-384-6428
>
> -----Original Message-----
> From: Amy Roggie <amy12dre@hotmail.com>
> Sent: Thursday, November 5, 2020 4:23 PM
> To: Gretchen E Ricehill <gretchen.ricehill@cogs.us>
> Subject: P&Z comments
>
> Good afternoon,
>
> How do I submit public comments in favor or against any item on the P & Z agenda?

CITY OF GLENWOOD SPRINGS

Engineering Department

Engineering Department **Ryan Johnson** **Asst. City Engineer**	**Date:** October 9, 2020 **To:** Community Development **Re:** Kind Castle Lot 11B Glenwood Meadows No. 5 – Technical Review Comments

Please see the following comments from Engineering for the technical review submittal.

1. Provide a Utility Plan
    a. Show the proposed water service and sewer service locations.
2. Traffic Analysis
    a. Given the existing configuration of Wulfsohn Rd. a westbound driver heading to the business would be temped to turn directly into the facility through the existing striping in lieu of taking a u-turn at intersection as noted in the report. Report should consider additional alternatives to the existing configuration.
        i. Access configuration for a Right-in Right-Out
        ii. Is a left turn lane into the facility a feasible option and desired option?
            1. Is a left turn out of the business problematic?
    b. As noted in the Narrative, traffic analysis should discuss whether or not a four way stop at Wulfsohn and flat top is necessary from a traffic volume and/or operational safety perspective.
    c. What is the Peak hour of the business versus the Peak Hour on Wulfsohn?
    d. A number of new multi family developments have occurred on Wulfsohn since 2018. Please recount Wulfsohn.
    e. Please evaluate the following intersections for existing and proposed LOS and queue lengths.

        East Wulfsohn and Midland

        East Meadow Drive and Midland

        West Meadow Drive and Midland

        West Wulfsohn and Midland

f. Two other projects are currently proposed in this area that will also affect these intersections. Analysis of the intersections could be coordinated between the other projects if the developer elects to do that.

To be completed for Construction Documents Review

1. Site Specific Geotechnical report should address geohazards and mitigation techniques for the proposed site, including but not limited to: hydrocompactive soils and debris flow.

    a. The report can reference the existing mitigation for debris flow but should provide recommendations for the hydrocompactive soils, as that will affect the foundation recommendations.

2. Major drainage report will be required and coordinated with existing drainage master plans and adjacent development drainage reports.

    a. The report at a minimum will need to provide supporting documentation and report excerpts to address the following:

        i. Downstream storm sewer capacity.

        ii. Downstream pond capacity.

        iii. Verify any offsite pass through flows that may need to be passed through the property.

    b. Additional adjacent report documentation is can be found at the link below.

https://glenwoodsprings-my.sharepoint.com/:f:/g/personal/ryan_johnson_cogs_us/Ehupuo-XErVOsbQPkz33wlYB3PPT7_NNU99nIiWhDQwKHg?e=aboJ8E

3. Subsurface Utility Engineering

    a. Provide S.U.E. plan per Colorado Law CRS 9-1.5-102 requirements or provide a stamped letter determining why this is not a Subsurface Utility Engineering-Required Project.

Matthew Langhorst DPW
(970) 384-6438 (o)

CITY OF GLENWOOD SPRINGS PUBLIC WORKS

101 West 8th Street
Glenwood Springs, CO 81601

Public Works Comments:

Planning Item: 51-20, Kind Castle GW Meadows
Applicant: Chris Hawkins, Alpine Planning, LLC
Owner: Glenwood Meadows, LLC
Location: 150 Wulfsohn Road
Zone: Mixed Use Core (M2)
Parcel: 2185-081-41-004

1. The lot does not have sanitary sewer or water services to it since it is an adjusted lot from the original plans. There is no sewer within Wulfsohn Road in front of this lot. The simplest way to connect to sewer and water will be to pull it from Flat Tops View Drive. The sewer in Flat Tops View Drive is quite deep to connect to the sewer manhole in Wulfsohn. NO street cuts are shown which will need to be per City standards. None of this is shown on the plans.
2. There is a switch cabinet at this location already, but the developer will need to fill out a Load Form and submit it to the Electric department. A new transformer will need to be set at the site for the building's needs which will need to be coordinated with the Electric Department. None of this is shown on the plans.
3. Will this access be right in and right out only due to the center island and striping in Wulfsohn?
4. Sidewalk to extend across the lot? It shows stopping at the driveway.
5. Site engineer should review Flat Tops View Drive site lines at the intersection of Wulfsohn to make sure the building does not impede safe turning movements. I do not see any site lines on the plans attached.
6. Has the storm sewer being collected in inlets and hooked to the Glenwood Meadows metro district storm sewer system been approved by the district?
7. Any fire sprinkler system will need to meet the NFPA 24 design requirements.
    - Here are items that we will need to see on the plans before we can approve:
        - Since the new tap and service will be used for combined potable/fire, the service will need to be designed, installed, and tested to meet NFPA 24 requirements. Prior to construction, an engineered detail of the service line must be submitted to the City for review and approval. At a minimum, the detail must show the following:
            1) A plan and profile view of the piping alignments extending from the tap location to the building interior penetration.
            2) Materials for construction.
            3) Thrust restraint locations and specifications.
            4) A comment indicating that the design conforms to all NFPA 24 requirements .
            5) A note indicating that the service line must be pressure- and flow-tested in accordance with NFPA 24.
            6) The stamp and signature of the Professional Engineer (PE) certifying the design.

The applicant is responsible for providing the City with a signed copy of the completed “Contractor’s Material and Testing Certificate for Underground Piping” form (attached) prior to issuance of a Certificate of Occupancy. This form certifies that the service line was designed, installed, and tested in accordance with all NFPA 24 requirements

From: Linda DuPriest
To: Trent Hyatt
Subject: RE: Planning Item #51-20, Kind Castle GW Meadows Referral
Date: Monday, October 19, 2020 1:40:17 PM
Attachments: image001.png

HI Trent:

We've got an emergency situation with the airport so sorry I couldn't be there today. The only thing I would've commented on is (per usual) bike parking.

Good luck,
LInda

From: Trent Hyatt <trent.hyatt@cogs.us>
Sent: Monday, October 19, 2020 10:10 AM
To: Doug Hazzard <doug.hazzard@cogs.us>; Emery Ellingson <emery.ellingson@cogs.us>; Greg Bak <greg.bak@cogs.us>; Gretchen E Ricehill <gretchen.ricehill@cogs.us>; Jake Velasquez <jake.velasquez@cogs.us>; Jennifer Ooton <jenn.ooton@cogs.us>; Joseph Deras <jderas@glenwoodpolice.com>; Linda DuPriest <linda.dupriest@cogs.us>; Lisa DiNardo <lisa.dinardo@cogs.us>; Matt Nuñez <matt.nunez@cogs.us>; Matthew Langhorst <matthew.langhorst@cogs.us>; Mike Hoffman <mike.hoffman@cogs.us>; Peter Hayes <peter.hayes@cogs.us>; Ryan Johnson <ryan.johnson@cogs.us>; Terri Partch <terri.partch@cogs.us>; Trent Hyatt <trent.hyatt@cogs.us>; Victor Meraz <victor.meraz@cogs.us>; Warren Hays <warren.hays@cogs.us>; Brian Smith <brian.smith@cogs.us>; Doug Hazzard <doug.hazzard@cogs.us>; Emery Ellingson <emery.ellingson@cogs.us>; Greg Bak <greg.bak@cogs.us>; Jake Velasquez <jake.velasquez@cogs.us>; Jennifer Ooton <jenn.ooton@cogs.us>; Jessica Bowser <jessica.bowser@cogs.us>; Lisa DiNardo <lisa.dinardo@cogs.us>; Matt Nuñez <matt.nunez@cogs.us>; Matthew Langhorst <matthew.langhorst@cogs.us>; Mike Hoffman <mike.hoffman@cogs.us>; Peter Hayes <peter.hayes@cogs.us>; Ryan Johnson <ryan.johnson@cogs.us>; Terri Partch <terri.partch@cogs.us>; Victor Meraz <victor.meraz@cogs.us>; Warren Hays <warren.hays@cogs.us>
Subject: RE: Planning Item #51-20, Kind Castle GW Meadows Referral

Hi all,
I only received comments on this proposal from the Engineering Department. If you have any official comments, please submit those to me ASAP. As a reminder, we have a department review meeting for this item today at 1:30PM.

Thanks,

Trent L. Hyatt
970.384.6427 (p)
trent.hyatt@cogs.us

From:	Doug Hazzard
To:	Trent Hyatt
Subject:	RE: Planning Item #51-20, Kind Castle GW Meadows Referral
Date:	Monday, October 19, 2020 10:35:21 AM
Attachments:	City of GS Line Extension Policy.pdf Load information.pdf image001.png

Trent,

The Line extension will apply . I did not see where a transformer location was called out but it can be placed near the electrical cabinet on corner. They may have to give up a bicycle parking spot. I will need the Load information sheet filled out to determine single phase or three phase load. Pretty simple on our end.

Thanks

Doug

From: Trent Hyatt <trent.hyatt@cogs.us>
Sent: Monday, October 19, 2020 10:10 AM
To: Doug Hazzard <doug.hazzard@cogs.us>; Emery Ellingson <emery.ellingson@cogs.us>; Greg Bak <greg.bak@cogs.us>; Gretchen E Ricehill <gretchen.ricehill@cogs.us>; Jake Velasquez <jake.velasquez@cogs.us>; Jennifer Ooton <jenn.ooton@cogs.us>; Joseph Deras <jderas@glenwoodpolice.com>; Linda DuPriest <linda.dupriest@cogs.us>; Lisa DiNardo <lisa.dinardo@cogs.us>; Matt Nuñez <matt.nunez@cogs.us>; Matthew Langhorst <matthew.langhorst@cogs.us>; Mike Hoffman <mike.hoffman@cogs.us>; Peter Hayes <peter.hayes@cogs.us>; Ryan Johnson <ryan.johnson@cogs.us>; Terri Partch <terri.partch@cogs.us>; Trent Hyatt <trent.hyatt@cogs.us>; Victor Meraz <victor.meraz@cogs.us>; Warren Hays <warren.hays@cogs.us>; Brian Smith <brian.smith@cogs.us>; Doug Hazzard <doug.hazzard@cogs.us>; Emery Ellingson <emery.ellingson@cogs.us>; Greg Bak <greg.bak@cogs.us>; Jake Velasquez <jake.velasquez@cogs.us>; Jennifer Ooton <jenn.ooton@cogs.us>; Jessica Bowser <jessica.bowser@cogs.us>; Lisa DiNardo <lisa.dinardo@cogs.us>; Matt Nuñez <matt.nunez@cogs.us>; Matthew Langhorst <matthew.langhorst@cogs.us>; Mike Hoffman <mike.hoffman@cogs.us>; Peter Hayes <peter.hayes@cogs.us>; Ryan Johnson <ryan.johnson@cogs.us>; Terri Partch <terri.partch@cogs.us>; Victor Meraz <victor.meraz@cogs.us>; Warren Hays <warren.hays@cogs.us>
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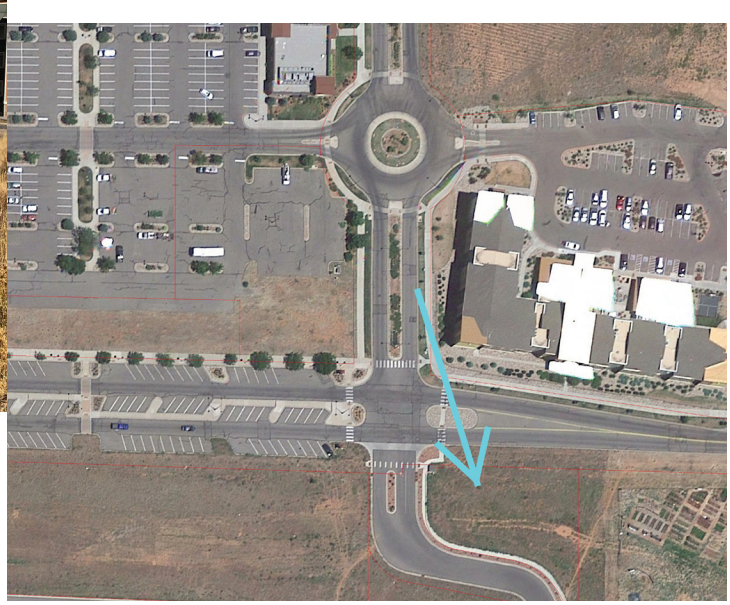
Thanks,

Trent L. Hyatt
970.384.6427 (p)
trent.hyatt@cogs.us

From: Trent Hyatt
Sent: Monday, September 21, 2020 4:02 PM
To: Anna S. Itenberg <asi@mountainlawfirm.com>; Bill Kimminau <bkimminau@glenwoodpolice.com>; Brian Smith <brian.smith@cogs.us>; Debra Figueroa <debra.figueroa@cogs.us>; Doug Hazzard <doug.hazzard@cogs.us>; Emery Ellingson <emery.ellingson@cogs.us>; Greg Bak <greg.bak@cogs.us>; Gretchen Ricehill (gericehi@ci.glenwood-springs.co.us) <gretchen.ricehill@cogs.us>; Jake Velasquez

Retail Marijuana Store Special Use Permit



The KIND Castle
Retail Marijuana Stores

PROJECT TEAM

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stars2stonessurveying@yahoo.com

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BACKGROUND

Kind West Glenwood, LLC ("**Applicant**") is under contract to purchase Lot 11B, Glenwood Meadows No. 5, A Minor Subdivision of Glenwood Meadows No. 4 Lot Line Adjustment ("**Site**") as shown in Figure 1. The Applicant intends to purchase the Site and construct a new retail marijuana facility ("**Facility")** if the Special Use Permit and required license are approved by the City of Glenwood Springs ("**City**"). The Applicant also intends to construct a future retail space on the east side of the building. The Applicant will submit the required Site/ Architectural Plan Review application and construct the Facility and associated improvements starting in the spring of 2021 if the special use permit and retail license are approved by the City. Exhibit A contains the Retail Marijuana Store Plan Summary

The Property is located in the M2 Zone District as shown in Figure 2. The City of Glenwood Springs Development Code ("**Development Code**") Section 070.030.020, Table of Allowed Uses, establishes that a retail marijuana business is an allowed use in the M2 Zone District subject to the approval of a special use permit.

The Property contains 0.406 acres and was created by the platting and construction of Flat Tops View Drive which resulted in the small sized parcel. The Property has approximately 147 lineal feet of frontage onto the Wulfshon Road Right-of-Way on its northern border. Flat Tops View Drive wraps around the Property on the west and south sides. The Property is gently sloping except for the grading for Flat Tops View Drive that is located within a 15-foot Access and Maintenance Easement. The slopes outside of the easement area range from a high USGS elevation of 5803 and a low USGS elevation of 5795 on the northeast corner for an overall change of eight (8) feet with a 12% grade. The Property is vacant with sidewalks along Flat Tops View Drive. Access to the Site will be provided by a new primary access drive off of Wulfshon Road and the current Glenwood Meadows sidewalk system.

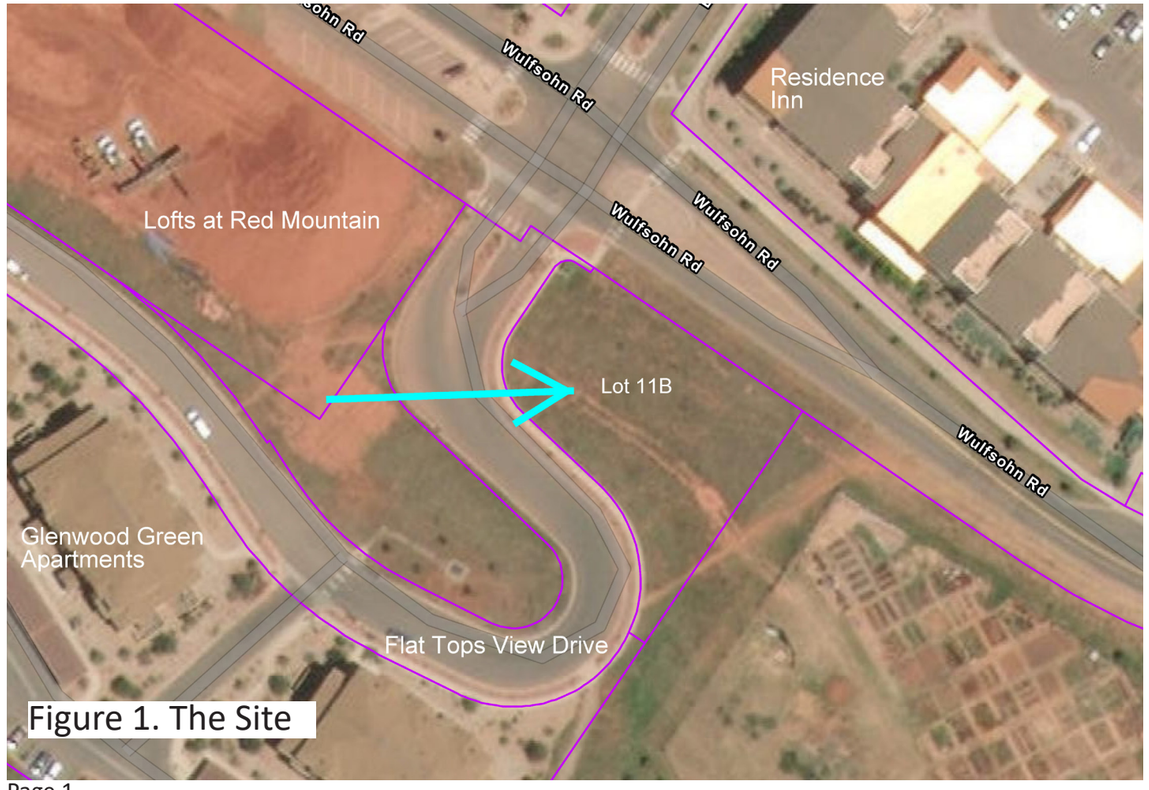


Figure 1. The Site

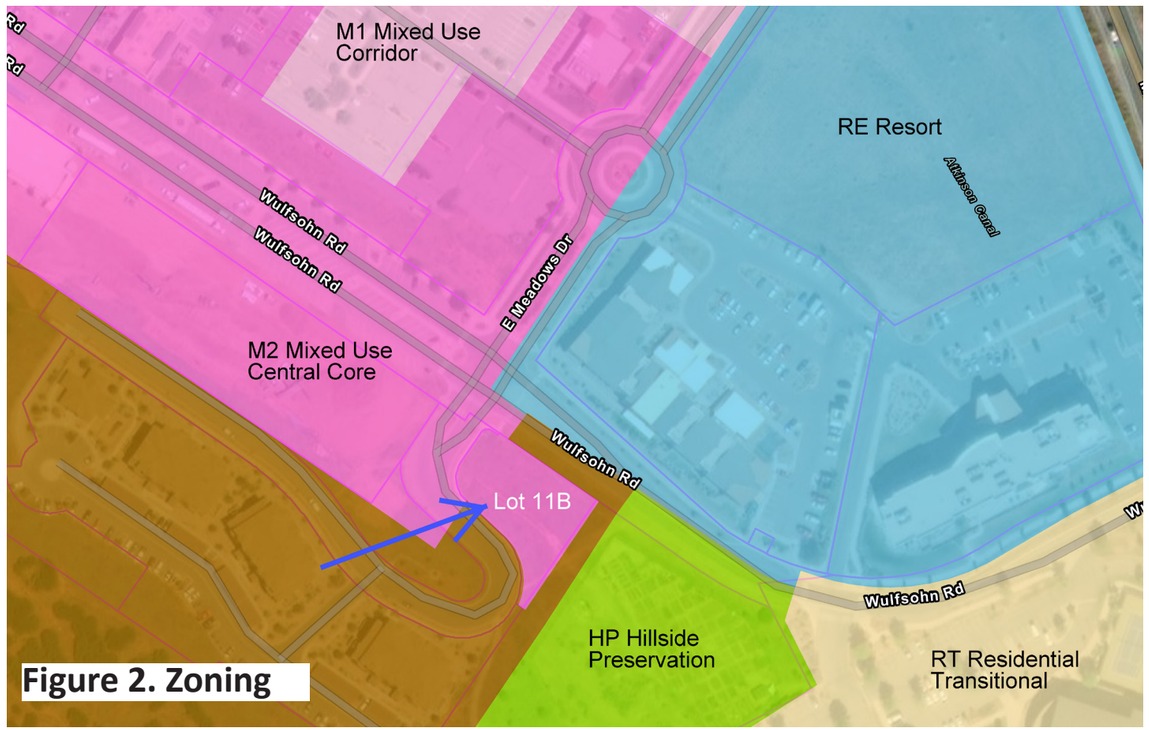


Figure 2. Zoning

SPECIAL USE PERMIT CRITERIA

Development Code Section 070.060.050(e) establishes the special use permit procedures. Section 070.060.050(e)((1) establishes the purpose of the special use permit process:

> "Purpose. The special use permit procedure provides a mechanism for the City to evaluate proposed development and land uses that have unique or widely varying operating characteristics or unusual features. This procedure is intended to ensure compatibility with surrounding areas and that adequate mitigation is provided for anticipated impacts."

This purpose and intent is important because it anticipates that mitigation can be provided to address any anticipated impacts and also assure project compatibility.

The following sections analyze how the project meets the special use permit approval criteria contained in Development Code Section 070.060.050(e)(3)(e)(2).

Section 1. Compatibility with Surrounding Area

The Facility will be compatible with the surrounding area. The Facility is located in a very intensive mixed use area that includes a resort hotel complex to the north, a regional shopping center to the northwest and high density multi-family housing to the west and south. An open space buffer exists to the east in between the Site and the Glenwood Springs Community Center. The Applicant proposes no ground or pole signage and will not depict any marijuana leaf or green crosses on its advertising.

The design of the Site and building will also assure compatibility with surrounding land uses. The Facility was located on the west side of the Site that allows for an extensive 99-foot setback to the eastern property line, and an approximate 143-foot setback to the community garden. A new fence and extensive landscaping along the eastern setback will provide a significant buffer to the community garden and Glenwood Springs Community Center.

The Residence Inn to the north is located approximately 135 feet from the Facility. The Glenwood Green Apartments are located approximately 190 feet too the south of the Facility. The Lofts at Red Mountain, located to the west of the Site, are over 75 feet from the Facility. Thus, there is a lot of space between the Facility and surrounding developments.

The Facility assures compatibility through both architectural and landscape design. The Facility is designed as a contemporary building within the design requirements of the Annexation and Development Agreement Glenwood Meadows, LLC Annexation, recorded as Reception No. 616083 in the Garfield County land records on December 6, 2002" together with all amendments thereto, hereinafter "**ADA**". It therefore looks like any retail building in Glenwood Meadows within a high density, mixed use neighborhood. Extensive landscaping provides buffering to surrounding uses and blend the building and Facility use into the site. Building, walkway and parking area lighting will be dark sky compliant with no off-site glare. All windows have to be covered with an opaque security film so no pedestrians or surrounding properties can view activity inside of the store or the second floor operations.

The Facility will also ensure compatibility through its mechanical conditioning. The Facility will include four (4) activated carbon filtration, "Air Purifier T600 units", with two (2) units serving the first retail level and two (2) units serving the upper floor that contain product storage and the product weighing and handling area. These additional carbon filtration systems are independent to the air filtration system running through the air conditioning/heating systems. The Air Purifier T600 units are an industry leading activated carbon air filtration system that are very effective at handling marijuana terpene emissions and overall odor. The Applicant's plan described herein contains over quadruple the amount of air filtration operation and power for the size of the proposed retail space, as just Air Purifier T600 can remove odors from 2,000 square feet of space. Such odor mitigation efforts significantly exceed those deployed by other marijuana retailers in the city. The Facility mechanical, electrical and plumbing systems will be designed by qualified professionals to ensure the highest levels of performance, energy efficiency and odor prevention. Please refer to Exhibit B that contains more information on the proposed odor mitigation plan.

The Facility will also include a state of the art security, fire, and carbon monoxide systems that will be monitored by an off-site professional security firm. The Applicant will install many more cameras than required to ensure customer safety, neighborhood peace and employee accountability. In accordance with State regulations, security cameras will be installed to monitor and record all of the interior and exterior spaces of the Facility and the Site. Facility staff will be trained to view security cameras covering the customer parking areas and walkways to prevent loitering, excessive noise, or on-site consumption which is expressly prohibited by City and State laws. Staff will also periodically walk the property to ensure compatible and quiet customer use and Facility operations. Please refer to Exhibit C that contains the Retail Marijuana Store summary.

Glenwood Meadows LLC has approved the Applicant's proposal and agreed that the Facility's design and nature of business meets the compatibility criteria of the surrounding area and needs of the neighborhood. The Applicant's Facility meets the demand and needs of the neighborhood including, but not limited to, the following facts: there are currently no other retail marijuana stores operating within or surrounding the Glenwood Meadows plaza; the Facility meets the City's desired walkability and therefore reduces traffic within the city; and the Facility accommodates the new residential growth nearby, hotel patrons and surrounding businesses. All parties associated with the Applicant, including Glenwood Meadows LLC, have concurred that this site is best suited for retail sales and exceeds all compatibility requirements.

Section 2. Minimized Impacts on Surrounding Area

The impacts of the use on surrounding areas have been adequately minimized. The main impacts to surrounding properties for a retail marijuana facility typically can include odor, traffic, and parking.

Odor. Odor will be prevented and mitigated as discussed in Section 1.

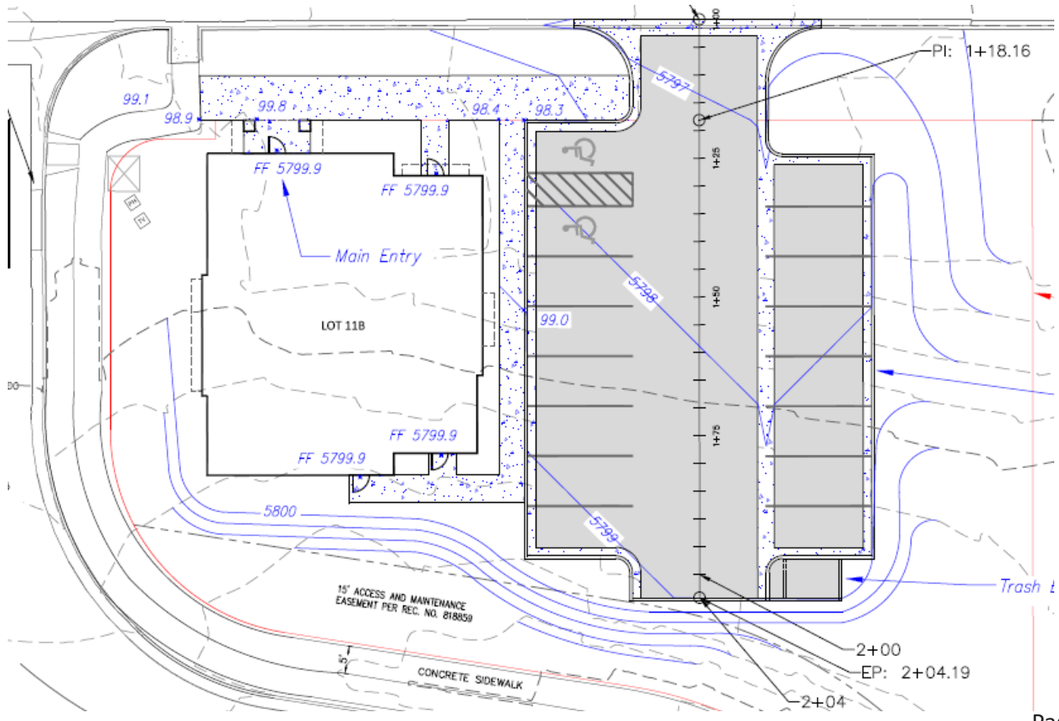
Traffic. There will be no traffic impacts since Wulfshon Road and East Meadows Drive have been designed to accommodate traffic and provide access to the Glenwood Meadows regional shopping center and mixed use development. These arterial and collector roads have great capacity for the traffic that will be generated by the store. We understand that the City may require a four-way stop at the Wulfshon Road-East Meadows Drive intersection in order to slow traffic down and allow for proper and safe flow. If this four-way stop is required by the City, the Applicant will install the stop signs as a part of the project improvements, or pay the City the equivalent money for it to install the stop signs, whichever is desired by the City.

Parking. Parking for the Facility and future retail space is calculated as follows:

Land Use	Habitable Floor Area[1]	Parking Requirement	Required Parking
Retail Marijuana Facility	2,423 sq. ft.	1 space/300 sq. ft.	9 spaces
Future General Retail	703 sq. ft.	1 space/400 sq. ft.	2 spaces
Total Required Parking			11 spaces
Parking Provided			16 spaces
Excess Parking			+5 spaces

Thus, the project provides more than sufficient parking in accordance with the City's Parking Regulations.

1 The Development Code defines floor area as: "The total habitable horizontal area of all floors in a building. Bathroom, toilet compartments, closets, halls, storage or utility space, garages, and similar areas are not considered habitable space."



The Facility will also be designed to fit into the neighborhood like any other retail store with the required architectural and landscaping design per the ADA, with additional mitigation provided by the eastern property fence and landscape buffering and overall site landscaping as shown on the plans. There will be no off-site glare from lighting.

Section 3. Consistency with the General Purposes of the Code

The use will be consistent with the general purpose and intent of this Code. Development Code Section 070.010.030 establishes the following purpose and intent, with comments on the proposed Facility compliance shown in *italics*:

Purpose. The general purpose of this Code is to protect the public health, safety, and welfare of the City and to implement the policies, goals, and strategies adopted by the City of Glenwood Springs, including those set forth in the Glenwood Springs Comprehensive Plan. *Over 60% of the City electorate voted to legalize marijuana under Amendment 64 in 2012 so there is broad support for the use in the city. The City adopted and modified regulations related to retail marijuana since that time with an understanding that the base rules established in the Development Code will protect the public health, safety and welfare while also limiting the number of stores in the city due to the use-specific standards. Retail marijuana facilities are only permitted via the special use permit process in 25% of the City's zoning districts (4 of 16 zone districts) including M1, M2, CO, and I2 zone districts. Retail marijuana facilities are also subject to the retail marijuana use-specific standards contained in Development Code Section 070.030.030(e)(11) as discussed in Section 4. The Facility is located in a zone district that permits the use where it meets the use-specific standards and is compatible with surrounding uses. The Facility also generally conforms to the Glenwood Springs Comprehensive Plan as discussed in Section 5. Therefore, the proposed Facility is consistent with the purpose of the Development Code.*

Intent. More specifically, this Code is intended to create the best built environment for the City by:

1. Promoting orderly, efficient, and integrated development within the City. *The Facility will promote orderly infill development within the City in line with the underlying zoning and the specific requirements of the Development Code. The Facility will integrate a new use into the Glenwood Meadows area that is desired by more than 60% of city residents. This will allow for better diversity of desired retail uses in Glenwood Meadows and reduce traffic traveling outside of the neighborhood with strong pedestrian connectivity to existing and planned resort, high density and mixed use development. The development will be integrated into the Glenwood Meadows neighborhood through the roadway, sidewalks and the ADA design standards.*

2. Providing for a variety of housing and neighborhood types and densities at a range of housing costs, including affordable workforce housing. *No housing is proposed for the Facility because of past City concerns on mixing residential and retail marijuana uses. The Applicant also desires to maximize parking for the proposed Facility and future retail use. The Glenwood Meadows development is already providing a significant amount of housing for the City and region so there is no need to provide additional on-site housing.*

3. Regulating the development and use of land based upon the impact of such development or use on surrounding areas or the City. *The retail marijuana facility use-specific standards will ensure that there are no adverse impacts to surrounding uses. Odor, traffic, parking, lighting and use are mitigated as provided for in this narrative. City zoning rules allow for retail marijuana facilities via the special use permit process to ensure that uses are compatible with the surrounding area, ensure compliance with the use-specific standards and also require appropriate mitigation.*

4. Providing minimum standards for the design and improvement of land, subdivision, and development to ensure that each building site is capable of accommodating a structure devoted to the intended use of the land. *The Facility has been designed in accordance with the applicable standards and requirements of the Development Code as discussed in this narrative, including but not limited to the M2 Zone District dimensional standards (070.020.020); Facility use-specific standards (070.030.030); the site improvement and development standards (070.040.030); the landscaping, screening and fencing standards (070.040.050); access and circulation requirements (070.040.070); commercial building design per the ADA; and exterior lighting requirements (070.040.120)*

5. Guarding against loss from natural hazards such as flooding, falling rock, landslides, snowslides, debris flow, and unstable soils. *The Glenwood Meadows development provides debris flow mitigation. The facility will be designed by a structural engineer to ensure that soils conditions are mitigated and the building will withstand expected and normal events, such as minor earthquakes. A geotechnical report will be provided with the required Architectural Review/building permit process.*

6. Ensuring equitable processing of development proposals by providing uniform procedures and standards. *The Facility is being processed and evaluated in accordance with the special use permit process; the retail marijuana facility use-specific standards; the ADA and other requirements set forth in the Development Code and Municipal Code.*

7. Providing a legally accepted record of lot lines, easements, and dedications in accordance with this Code and Colorado law. *The Site was legally created by the City through the subdivision process that was in effect at the time of platting.*

Section 4. Compliance with Applicable Standards of the Code

The use will comply with all applicable standards of the Development Code.

USE-SPECIFIC STANDARDS

The Facility will meet the use-specific standards contained in Development Code Section 070.030.030, with our

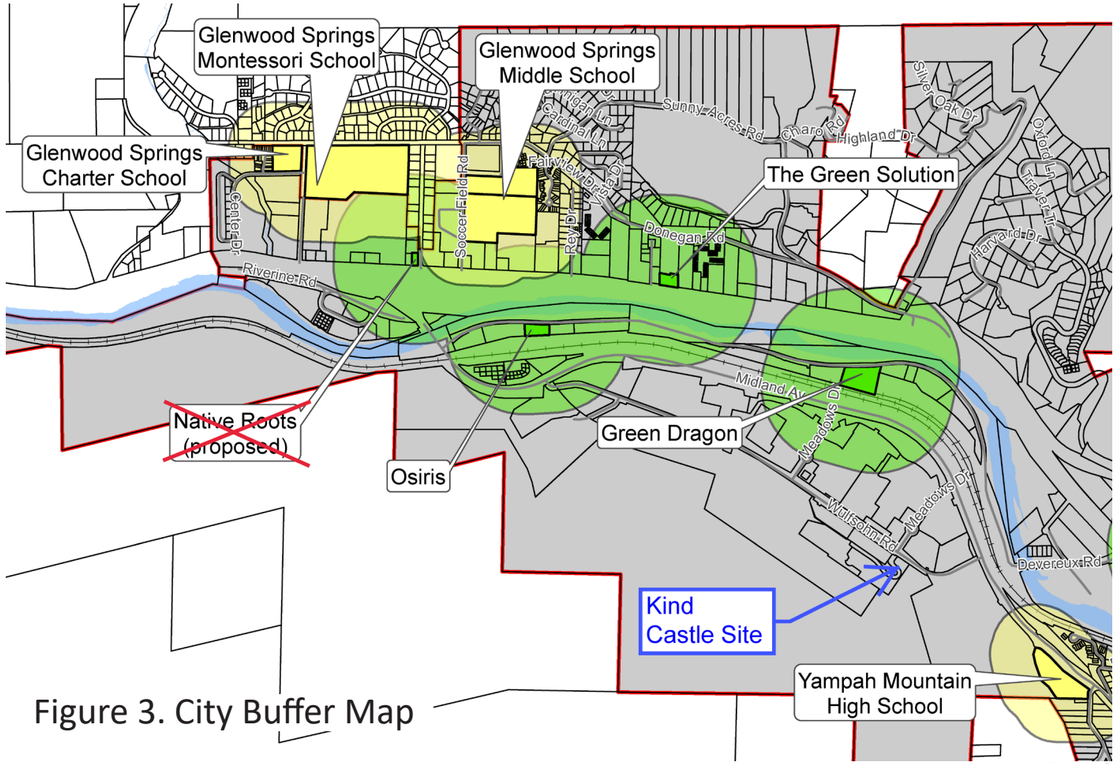


Figure 3. City Buffer Map

compliance comments shown in *italics:*

a. Purpose. The City Council intends to allow state-licensed retail marijuana establishments to exist in Glenwood Springs in accordance with Article XVIII, Section 16 of the Colorado Constitution, Article 43.4 of Title 12 Colorado Revised Statutes, and any other applicable state laws and regulations as well as the additional local licensing requirements and other restrictions set forth in the Glenwood Springs Municipal Code. Nothing within this Article is intended to promote or condone the production, use, sale, testing or distribution of marijuana other than in compliance with applicable state law. *The Facility is proposed under the authority of Article XVIII Section 16 of the Colorado Constitution and the Colorado Marijuana Code in Colorado Revised Statutes Title 44, Article 10. The proposed Facility design and operation will comply with the Colorado Marijuana Code and the applicable requirements of the Glenwood Springs Municipal Code as discussed in this narrative. The Applicant will submit a retail marijuana license to the State of Colorado Department of Revenue Marijuana Enforcement Division ("MED").*

b. License Required. Retail marijuana establishments shall comply with City Code Article 050.090. *The Facility will comply with the requirements of City Code Article 050.090, Retail Marijuana. The Applicant will submit a retail marijuana license and all required plans, materials and forms to the Glenwood Springs City Clerk (Local Licensing Authority). The Facility is not located within 500 feet of an existing public or private school facility where classes are held for K-12 grades. The proposed Facility is located more than 900 feet away from the closest retail marijuana facility, with the closest store, Green Dragon, approximately 1,880 feet away. The Facility is a permitted use in the M2 Zone District. Retail store staff will be trained to ensure compliance with the requirements related to the operation of a retail marijuana facility contained in Development Code Section 050.090.090. Facility staff will be extensively trained in the Colorado Retail Marijuana Code related to procurement, display, dispensing, labeling, sanitation, security and other criteria. Hours of operation will comply with the current city limitations. Facility signage will comply with the City Sign Regulations. Lighting will be designed in accordance with the Lighting Regulations. No on-site consumption will be allowed within the Facility. The Facility manager will be a designated employee of the Applicant that is listed on the required City forms. A sign will be posted in the store with all of the required warnings and notifications per City Code Section 050.090.090(b)(8).*

c. Location of Licensed Establishment. Retail marijuana establishments shall be located only in areas of the City as allowed in the City Code. No retail marijuana establishment shall be located:

1. Within five hundred (500) feet of any existing public or private school facility where classes are held for children aged kindergarten through the 12th grade. The distance shall be computed by a straight line measurement from the nearest property line of the school property to the nearest property line of the site housing the retail marijuana establishment. *The Facility is located over 1,700 feet from the Yampah Mountain High School property located at 695 Red Mountain Drive as shown in Figure 3, and is also located significantly out of the major transit routes to any school.*

2. Within nine hundred (900) feet of another retail marijuana establishment or a medical marijuana business. A retail marijuana establishment may locate on the same licensed premises as a medical marijuana business of the same class and same ownership, only if the licensed premises is located to meet the distance requirements from other retail marijuana establishments and medical marijuana businesses. This distance shall be computed by a straight line measurement between property lines of the sites housing the two (2) facilities. *The closest existing facility is the Green Dragon that is approximately 1,880 feet away from the Site as shown in Figure 3. The other closest stores are Green Solution, Martin's Naturals, and Doctor's Garden that are more than 4,000 feet away.*

3. In any zoning district not specifically permitted by the City Code. *The Facility is located in the M2 Zone District that allows retail marijuana facilities via the special use permit process.*

4.

e. Requirements Related to Operation of a Retail Marijuana Establishment.

1. Retail marijuana establishments shall meet all operational criteria for the procurement, display, dispensing, labeling, sanitation, security, and any other criteria as required by the state pursuant to the CRMC and the City Code Article 050.090. *The Facility will meet the City and State operational requirements. The Applicant has been operating the Kind Castle in Parachute, CO for almost three years without any Town or State MED violations. The Parachute store has won many awards as one of the best stores in Colorado and attracts customers from far distances.*

2. In addition, all retail marijuana establishments shall comply with the following local restrictions:

i. Hours of operation shall be limited to between 8:00 a.m. and 7:00 p.m. Monday through Sunday. *The Facility will comply with the City hours of operation.*

ii. A sign permit shall be obtained through the Community Development Department. All exterior signage associated with a retail marijuana establishment will meet the standards established in the CRMC and in the City Code. *A sign permit will be obtained for the business signage. All signage will comply with the Colorado Marijuana Code, City Sign Regulations and retail marijuana ordinances.*

iii. Storage of retail marijuana shall be considered an accessory use. Not more than twenty-five (25) percent of the licensed premises of a retail marijuana business shall be used for such purposes. *The product storage room is located on the second floor and contains 289 sq. ft. of floor area that represents 8.8% of the total 3,297 gross sq. ft. for the Facility. The storage room size is 11.9% of the floor area of the facility per the Development Code definition of floor area.*

iv. No discernible odor shall be projected beyond the exterior walls of the licensed premises. *The proposed odor mitigation plan is outlined under Section 1. No odor will be projected beyond the exterior walls of the Facility. In general, retail stores typically do not generate an odor nuisance.*

OTHER DEVELOPMENT CODE REQUIREMENTS

The Facility has been designed in accordance with the applicable standards and requirements of the Development Code as discussed in this narrative, including but not limited to the M2 Zone District dimensional standards (070.020.020); facility use-specific standards (070.030.030); the site improvement and development standards (070.040.030); the landscaping, screening and fencing standards (070.040.050); off-street parking and loading standards; access and circulation requirements (070.040.070); commercial building design per the ADA; and exterior lighting regulations (070.040.120).

Drainage. Drainage for the project will be routed to the existing Glenwood Meadows storm drain and detention system that, according to Mike Maples of Glenwood Meadows, LLC, has more than adequate capacity to serve site runoff from the Site. Mr. Maples indicated that some of the hotel projects did not utilize this system which affords more than enough capacity to handle Site runoff via the storm drainage system. The development will have to pay into the Glenwood Meadows Public Improvement Fee that are earmarked to finance certain public improvements in the subdivision, including public roads, traffic and safety controls, water and sewer systems, storm drainage systems, debris flow management systems and landscaping.

Roads and Traffic. The road system has also been designed to handle all of the traffic from the anticipated development within Glenwood Meadows. A traffic impact analysis will be provided to better understand traffic flow at the Site and if a four-way stop is needed at the Wulfshon Road-Flat Tops Drive intersection. This study will be provided as a supplement to the application. The Glenwood Meadows Public Improvement Fee will help offset City road costs for the desired development as outlined in the preceding paragraph. The Applicant

will pay for the installation of the four-way stop signs.

Geotechnical. The Town approved the Glenwood Meadows Subdivision based on detailed geotechnical analyses and reports that included identification and mitigation of geologic hazards. The lots would not have been created unless the City found them buildable with identified hazard mitigation. Glenwood Meadows includes an extensive debris flow mitigation system. A site specific geotechnical analysis will be prepared for building design parameters and submitted with the required Site/Architectural Review process, and the building will be designed to meet the site specific recommendations of the geotechnical report.

Section 5. General Conformance with the Glenwood Springs Comprehensive Plan

The use is in conformance with the Comprehensive Plan and other City plans and policies. The proposed retail marijuana facility conforms to the Glenwood Springs Comprehensive Plan ("**Comprehensive Plan**").

The proposed retail use in envisioned by the Future Land Use Map that shows Mixed-use in the Site area. The Future Land Use Descriptions indicate the following for Mixed-use areas:

> "The Mixed-use land use designation allows for a variety of uses including commercial, retail, office, restaurant, entertainment and multi-family housing co-existing through design either in a horizontal or vertical fashion."

The Facility helps maintain a small town character with a two story building surrounded by taller multi-family and commercial hotel buildings. The Facility provides a walkable retail destination that will serve existing and planned residential development in the area, and also compliments the regional shopping center to the northwest. The Facility is readily served by utility and transportation infrastructure, with all utilities either on or adjacent to the Site and a bus stop located to the west. The sidewalk system will provide direct access to Glenwood Meadows residents and visitors staying in the resort area to the north. This Facility's location, well out of any highway corridor, will provide a local neighborhood shopping option that does not required Glenwood Meadows residents or guests to hop in a car. Ample on-site parking is available for those that have to drive to the store.

The Facility is located in the Glenwood Meadows "secondary commercial center" that provide convenient services, retail and commercial uses. The Comprehensive Plan states that "...these secondary centers are seen as opportune locations for mixed-use neighborhoods that include retail, offices and housing." The Comprehensive Plan further states that:

> "Secondary centers can be redeveloped with buildings up to 4-5 stories. Upper stories should be for residential uses. Development should be scaled in size to the surrounding neighborhoods, be walkable, and be landscaped or include buffering elements that both protect the surrounding neighborhood and integrate the mixed-use secondary center into adjacent established neighborhoods."

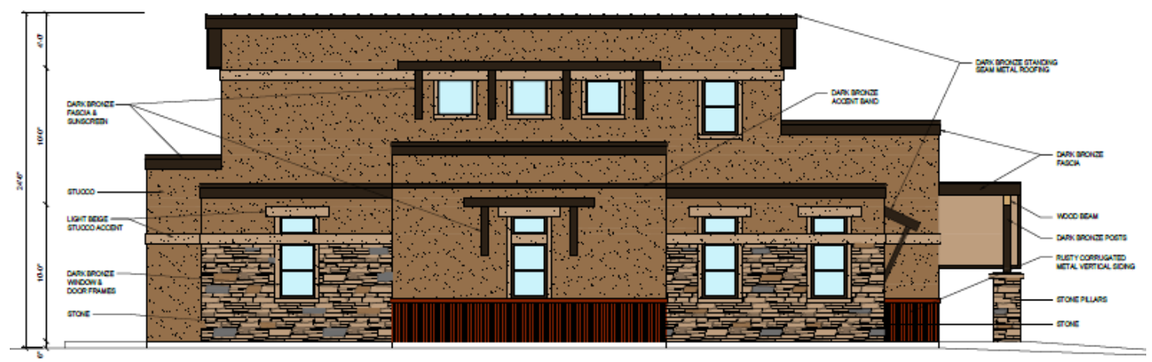
The Facility has been designed to fit the small 0.406 acre lot size that also provides a transition in height from the surrounding taller multi-family and lodging development to the open spaces uses to the east. The Facility's smaller scale provides an appropriate-scaled pedestrian building at the eastern entry to Glenwood Meadows along Wulfshon Road. The Facility has also been designed in accordance with the ADA as required by the Development Code's Nonresidential and Mixed-Use Site and Building Design requirements in Section 070.040.090.

The Facility is also supported by the Comprehensive Plan's economic development policies. First, the approval of the special use permit will create an opportunity for new and expanding local business. The proposed store will employ approximately 12-15 people with good paying jobs and livable wages of $15 to $25 per hour or greater. The proposed store will enhance Glenwood Meadows as a regional business center that is convenient to shoppers and lodgers patronizing Glenwood Meadows stores and hotels.

The Facility will also help Glenwood Springs to further integrate and balance the city's multi-modal transportation system. The Store will reduce traffic from surrounding multi-family, lodging and mixed-use development that would otherwise have to drive to another store in the city. Sidewalks connect to the Facility from all of the surrounding developments. This in turn will reduce traffic on Grand Avenue and other highly congested areas of the city. It will also reduce single-occupant vehicles from leaving Glenwood Meadows that desire to purchase retail marijuana products.

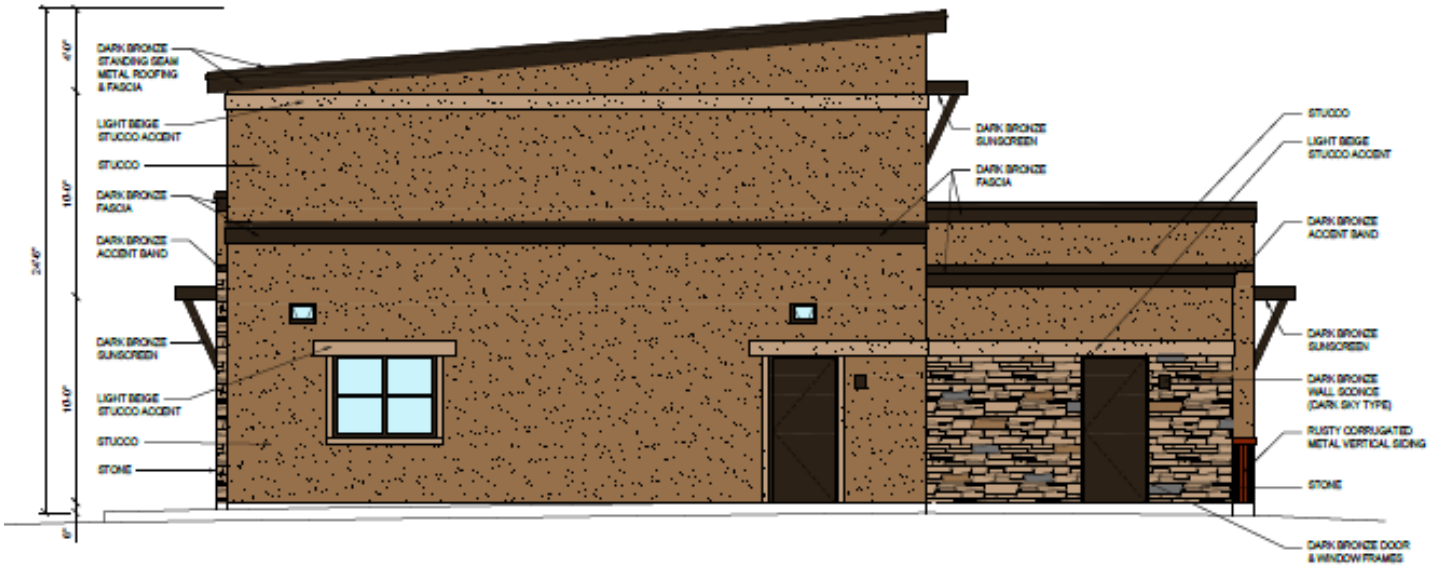
The special use permit directs growth to an area where utilities and services can be efficiently provided. Water, sewer, electricity, natural gas, telecommunications and broadband are provided adjacent to the site. Police service, fire protection and emergency services are provided to the Site from the Glenwood Springs Police Department and the Glenwood Springs Fire Department. Drainage infrastructure for the overall Glenwood Meadows development is already in place. Security and fire alarm services will be provided through a security monitoring firm. The Applicant's security system is an industry-leading system that will ensure the safety and security of the area.

(PROPOSED)
SIDE (WEST) ELEVATION



(PROPOSED)
SIDE (EAST) ELEVATION

The KIND Castle
Retail Marijuana Stores



(PROPOSED)
REAR (SOUTH) ELEVATION

ALPINE PLANNING

PSTM
Architecture and Planning Inc
320 JENKINS RANCH RD. DURANGO, CO 81301 • 970-682-3237

Uncompahgre
Engineering, LLC

VICENTE SEDERBERG LLP

The KIND Castle
Retail Marijuana Stores

Retail Marijuana Store Project Description

Name of Applicant

KIND WEST GLENWOOD LLC d/b/a THE KIND CASTLE

Hours of Operation

Monday – Sunday: OPEN 8am / CLOSED 7pm

Location & Zoning

TBD Wulfshon Road, Glenwood Springs, CO 81601 | M2 - Mixed Use (formerly C/2) Zoning

Lot 11B, Glenwood Meadows No. 5, A Minor Subdivision of Glenwood Meadows No. 4 Lot Line Adjustment

Description of Applicant's Services

The Applicant will provide (to end-use consumers) sales services consisting of the highest quality retail marijuana and marijuana-infused product. Products sold are organic driven. The business nature of the Applicant is a retail/recreational marijuana store and does not include medical sales, product-manufacturing or cultivation. Customers must be 21 years of age or older to enter, which will be **strictly** enforced through the Applicant's customer identification (ID) check/verification process including the first ID checkpoint upon entering into a fully secured, double-door lobby and then a second ID checkpoint at the sales counter. The Applicant will strictly enforce all of its policies and procedures, especially close oversight of its employees to screen all customers diligently for age and in-state/out-of-state residency status. The Applicant has a very strong interest in the knowledge of codes and compliance of this business and therefore the Applicant warrants that the business and its employees will at all times be in full compliance with the codes and regulations of the **City of Glenwood Springs** and the **State of Colorado's Marijuana Enforcement Division**. Furthermore, the Applicant has retained legal and consulting services to contribute to the current and future compliance of this business operation. The retail sales provided by the Applicant will solely occur at the **Applicant's physical business premises located at TBD Wulfshon Road in Glenwood Springs** and the Applicant will not provide delivery service to customers. The Applicant will offer quality products in proper packaging in a safe environment with full respect to the all industry-standard practices.

Lighting Plan (See "Floor Plan")

The Applicant's lighting plan will fully address the safety/security of the public, respective to city code, in addition to enhancing the city's nighttime character yet respecting the residents' value of the local mountain setting. The internal and external areas of the premises will have sufficient lighting for the safety of the customers, business, and surrounding residents, however, the Applicant will take precautions to ensure the safety of the installation/maintenance of such lighting fixtures. The Applicant will be in full compliance with the City code including, but not limited to, parking, display, security, and general purpose lighting structures.

Storage of Products

The Applicant will securely store its products on-site in a room identified as the Product Storage Room, which will house all inventory, receipts and the safe, located in the back portion of the building. The Product Storage Room shall consist of 9" solid brick walls, double-bolt door, and secured safe. The Product Storage Room will also have its own alarm system, only accessible to management level staff. For adequate product safety and odor control, products will be stored inside a locked safe in labeled, sealed containers in a temperature-controlled environment. The Product Storage Room, in addition to the rest of the premises, will be under video surveillance at all times. For more details regarding Applicant's policies relating to Product Storage, see "Storage of Marijuana Products" section of the "Retail Marijuana Store Plan Summary" document accompanying the Retail Marijuana Application.

Security Plan Summary

The Applicant takes security and the safety of the public very seriously. Therefore, an extensive security plan beyond industry-standard practices will govern the business establishment. The Applicant's security plan consists of alarms, video surveillance, monitoring services, motion sensors, and many other components. The Applicant will install and maintain alarms systems on-site at the premises, with remote alarm system monitoring services which operate 24 hours per day, 7 days per week. The alarm systems will have functions of 24/7 remote monitoring services, motion detection devices throughout the premises (particularly at all points of entry/exit including windows), and security measures such as a silent duress alarm in the event of robbery during business hours. Codes for alarm systems will be changed frequently. Employees must complete several training protocols such as a complete security and safety training courses. The Applicant will not employ any person that does not appear to be able to enforce Applicant's security measures.

The Applicant will install and facilitate the full use of full color, high-resolution video surveillance 24 hours per day, 7 days per week. Internally, the video surveillance will sufficiently monitor and capture such recordings of all entrances/exits of the premises, windows, lobby area, restricted areas, Security/Product Storage Room/Safe(s), points of sale, and all rooms/space within. Externally, video surveillance will capture front, side and rear views of the premises in addition to the covering all entrances/exits, surrounding area in front of the establishment, and the alley driveway. See the "Retail Marijuana Store Plan Summary" for additional supporting details relating to the Applicant's security procedures. See Applicant's Floor Plans (drawn to scale) for indications of camera locations throughout the proposed licensed premises.

ID Check Points

The Applicant's strict policy on double checking the unexpired and appropriate identification from both in-state and out-of state customers for age verification ensures no underage person shall be sold any products from this establishment. Our store in the Town of Parachute has passed underage sting operation tests conducted by the State of Colorado's Marijuana Enforcement Division (see attached letter from the MED). All entrants to the premises have their ID checked once at the door and again at the sales counter. Employees undergo extensive and frequent training and compliance enforcements measures to IDs are consistently checked properly.

Ventilation & Odor Mitigation Plan

The Applicant's licensed premises shall include an aggressive plan to mitigate any odor from permeating through the exterior of the building containing the licensed premises. The plan will include utilizing an extensive, top-quality carbon filtration system to be installed in the building at TBD Wulfshon Road, Glenwood Springs, CO 81601. The carbon odor filtration system implemented and installed by the Applicant at the licensed premises shall meet and exceed the odor mitigation requirements set forth in the City of Glenwood's Retail Marijuana Business Ordinance and expectations for such establishment. The carbon filtration shall effectively filter the air and ensure odor is never an issue. In our current operation in almost 3 years, we have never had a complaint about odor. The licensed premises shall operate a fully functional odor elimination and ventilation system as desired by the City of Glenwood Springs.

Waste Disposal Plan

Please see Applicant's "Plan Summary" and "Operations Manual" for all details related to the waste disposal plan.

The Kind Castle
Retail Marijuana Stores

CANNABIS ODOR ELIMINATION

The Kind Castle shall utilize extensive odor mitigation tactics to ensure marijuana odor is filtered from the air to avoid permeating the Applicant's marijuana store site. The new air conditioning/heating system's negative air machine (model #6560 or similar) will be equipped with an activated carbon air filter (made from 100% coconut shells) installed at the vent of the system's air return, which will powerfully draw in air from the premises and force it through the activated carbon filter and therefore eliminating odors from the premises. The filters will be changed routinely to ensure peak operation and performance at consistently and aggressively removing marijuana odor.

Additionally, The Kind Castle shall purchase and operate four (4) additional activated carbon filtration units, with two (2) in the lower level sales area and two (2) in the upstairs storage, product handling and office area. These additional carbon filtration systems are independent to the air filtration system running through the air conditioning/heating system defined above. The four (4) additional individual standalone carbon air filtration systems are called Air Purifier T600, which is known as a leading activated carbon air filtration system as most effective, especially at handling marijuana terpene emissions and overall odor. The Kind Castle's plan describes herein contains over quadruple the amount of air filtration operation and power for the size of the proposed retail space, as just Air Purifier T600 can remove odors from 2,000 square feet of space.

The following pages contain additional product information and technical specifications of the Air Purifier T600.

Air purifier T600

An air purifier specially designed to remove the odors and gases of thousands of noxious chemicals including marijuana odor, carcinogens and tars contained in smoke.

Odor Control

There are a group of compounds found in marijuana called terpenes, in addition to the well-known cannabinoids. These essential oils give marijuana their signature tastes and aromas. Terpenes evaporate quickly making them VOCs (volatile organic compounds). This quick evaporation causes their aromas to disperse easily causing that skunky smell. Your best friend in neutralizing terpenes is activated carbon. An air purifier with the maximum amount of carbon that allows for maximum dwell time of the terpenes over the surface area will remove this smell from the premises.

Why this Air Purifier is considered #1:

- Powerful 26-lb carbon filter adsorbs odors from the air and is very effective in achieving odor mitigation.
- Unique TarBarrier pre-filter traps tars, completely eliminating them from air stream.
- HEPA barrier captures 95% of airborne particles, as small as 1 micron.
- 360° air distribution allows for purification for up to 2000 sq. ft with 2 air exchanges an hour (based on 8-foot ceilings).
- Sleek machine design that will blend in with all decors.
- Easy care and maintenance

Technical Specs

Manufacturer Suggested Room Size (sq.ft)	2,000 sq.ft
Ozone Emissions	No
Performance	
System Efficiency	95% of airborne particles ≥ 1 microns
Fan Speed	560 CFM (Free Flow)
Air Exchange per Hour	2
Filter Configuration	

Filter Configuration	
Chemical gas & odor filter	**3" Carbon Filter**
	26-lbs, Activated Carbon Filter (100% Coconut Shell) Replace: 24 months
	Upgrade Option
	26-lbs, Impregnated Carbon Filter The potassium iodide accelerates the binding of chemicals faster and thus removes them quicker (Potassium Iodide, Coconut Shell Carbon)
Main Particle Filter	**HEPA Barrier**
	95% of airborne particles ≥ 1 micron Replace: 1 year

General Specifications	
Dimension	23" High, 15" Wide
Colors	Black, White, Beige
Housing Materials	Powder coat steel
Fan Speed	Variable
Casters	Yes
Voltage	115 or 220 volts

The KIND Castle
Retail Marijuana Stores

Retail Marijuana Store Plan Summary

The Applicant's premises will meet and exceed the security requirements set forth by the State and City. This Plan Summary will detail extensive security measurements such as secure doors/locks, alarm system equipment/services, video surveillance, and various other measures of security enhancements and safety procedures specified herein. There are no anti-personnel devices that impede entry to the premise by emergency responders. The business does not propose to engage in the production of retail sale of food or other products for human ingestion, and no products or services will be provided at a location different than the address on the license application. There are no toxic, flammable, or other such regulated materials on site other than lighters and lighter fluid which are sold at the sales counters as indicated on the Floor Plan.

Security Alarm Systems

The Applicant's premises will install and maintain a security alarm system, provided by a reputable alarm system installation company. The entire premises will hold a total of two (2) separate alarm system units, one (1) alarm system exclusively dedicated to the Product Storage and Safe Room. Each alarm system and respective suite area of coverage will have its own alarm keypad and unique access code, in addition to accompanying support services from the alarm system provider including motion detection sensors. All perimeter entry points and windows will be covered by the alarms systems.

The Applicant's alarm system records and existing contracts will be kept current and located within the business premises. The name and contact information of the alarm system installation company will be kept available on-site at the business. The Applicant will also maintain records of the location and respective operation of each security alarm system.

Security Monitoring Services

The Applicant will fulfill the requirement by engaging in the services of a monitoring company. The monitoring company will monitor the alarm systems of the premises 24 hours a day, 7 days a week. The monitoring company will notify the Applicant and the local authorities of any identified security breach.

The Applicant's monitoring service records and existing contracts will be kept current and located in the business premises. The name and contact information of the monitoring company will be kept available on-site at the business.

Locking Mechanisms

At all points of ingress and egress at the Applicant's premises, the Applicant will use commercial-grade door locks and locking mechanisms.

Video Camera Surveillance

The Applicant will maintain video surveillance systems at the licensed premises at all times. The internal video surveillance will broadly monitor and record all entrances and exits to/from the premises, including, but not limited to, all windows, the lobby area, limited/restricted access areas, ID checkpoints, product storage and preparation room, and all points of sale. The external video surveillance will monitor and record the front and rear areas of the premises including all entrances/exits, areas surrounding the front/rear of the establishment, and the rear alley driveway.

The following summary of guidelines for the Applicant's video surveillance requirements will be applicable:

Before operating as a Retail Marijuana Store, the Applicant will install a high-specification, full color video surveillance and camera recording system. The video surveillance recording system will record in digital format and meet the

requirements specified in the Retail Code. All video surveillance records and recordings will be stored in a secure area that is only accessible to the Applicant's management staff member(s). Video surveillance equipment will, at a minimum, consist of digital or network video recorders, video monitors, digital archiving devices, a color printer capable of delivering still photos, and cameras capable of meeting the recording requirements described in the Retail Code including, but not limited to, clearly identifying all individuals entering and exiting the Applicant's premises.

The video surveillance systems will be equipped with a failure notification system that provides prompt notification to the Applicant of any prolonged surveillance interruption and/or the complete failure of the surveillance system. The Applicant will ensure that all surveillance equipment is properly functioning and maintained, so that the playback quality is suitable for viewing and the surveillance equipment is capturing the identity of all individuals and activities in the monitored areas. In addition, all video surveillance equipment will have sufficient battery backup to support a minimum of four hours of recording in the event of a power outage and the Applicant will notify the Division of any loss of video surveillance capabilities that extend beyond four hours.

The video cameras will cover all Limited/Restricted Access Areas, point-of-sale areas, security rooms, all points of ingress and egress to Limited Access Areas, all areas where Retail Marijuana or Retail Marijuana Product is displayed for sale, and all points of ingress and egress to the exterior of the Licensed Premises. Camera placement will be capable of identifying activity occurring within 20 feet of all points of ingress and egress and will allow for the clear and certain identification of any individual and activities on the Licensed Premises. At each point-of-sale location, camera coverage will enable recording of the customer(s) and employee(s) facial features with sufficient clarity to determine identity. All entrances and exits to the facility will be recorded from both indoor and outdoor vantage points. The system will be capable of recording all pre-determined surveillance areas in any lighting conditions. Areas where Retail Marijuana is stored will have camera placement in the room facing the primary entry door at a height which will provide a clear unobstructed view of activity without sight blockage from lighting hoods, fixtures, or other equipment. Cameras will also be placed at each location where weighing, packaging, transport preparation, processing, or tagging activities occur. At least one camera will be dedicated to record the access points to the secured surveillance recording area.

The surveillance room or surveillance area will be a Limited Access Area. Surveillance recording equipment will be housed in a designated, locked, and secured room with access limited to authorized employees, agents of the Division and relevant local jurisdiction, state or local law enforcement agencies. The Applicant will keep a current list of all authorized employees and service personnel who have access to the surveillance system and/or room on the Licensed Premises and also keep a surveillance equipment maintenance activity log on the Licensed Premises to record all service activity including the identity of the individual(s) performing the service, the service date and time and the reason for service to the surveillance system. Off-site Monitoring and video recording storage of the Applicant's Premises by the Applicant or an independent third-party will be performed provided the standards exercised at the remote location meet or exceed all standards for on-site Monitoring.

Video Recording/Retention Requirements

All camera views of all Limited/Restricted Access Areas will be continuously recorded 24 hours a day. The use of motion detection will only be used when the Applicant can demonstrate that monitored activities are adequately recorded. All surveillance recordings will be kept for a minimum of 40 days and be in a format that can be easily accessed for viewing. Video recordings will be archived in a format that ensures authentication of the recording as legitimately-captured video and guarantees that no alteration of the recorded image has taken place. The Applicant's surveillance system/equipment will have the capabilities to produce a color still photograph from any camera image, live or recorded, of the Licensed Premises. The date and time will be embedded on all surveillance recordings without significantly obscuring the picture.

Other Records

All records applicable to the surveillance system will be maintained on the Licensed Premises. The Applicant will maintain a map of the camera locations, direction of coverage, camera numbers, surveillance equipment maintenance activity log, user authorization list, and operating instructions for the surveillance equipment. A chronological point-of-sale transaction log will be made available to be used in conjunction with recorded video of those transactions.

In compliance with state and City regulations and in the interest of providing a safe and secure environment for our employees, our products, and our establishment, the premises will be equipped with state of the art security equipment. The Applicant has also established strict policies and procedures, which, under the direction of an on-staff expert of

the Colorado Retail Marijuana Code will guide our employees in all areas of dispensing retail marijuana with strict compliance. The security system will be monitored by an extensive camera operation both inside and outside the establishment.

Applicant's Facility Security Plan includes procedures such as:

- Building and Site Security Measures
- Security of Products
- Employee Parking Safety Precautions
- 24/7 Coverage
- Security Systems
- Maintenance of Security Systems
- Access Control / Ingress & Egress
- Perimeter Security

Applicant's Operational Security Plan shall include:

- Transactional Security
- Security Threats & Contingency Planning
- Security of Product Delivery
- Product Inventory Control
- Human Resource Procedures
- Employee Security Training
- Emergency Response Plan
- Visitor Procedures
- Neighborhood Involvement

The guidelines below shall define the security measures of the building, which includes access control hardware, intrusion detection, surveillance, and, at the main entrance at various times, security and/or management personnel for control and screening. All employees and approved contractors will enter through the front door of the building. Access in the building will be through the use of electronic access control mechanisms. This type of entrance prevents unauthorized access. Cameras will monitor and log all persons entering/exiting the facility.

Layer 1 - Entry Procedure:

- All employees will be badged and documented by the state of Colorado;
- Employees will use access credentials only to open the secure door;
- Each employee must open the door with his/her credentials, and only one employee may pass through the door at any given time;
- Vetted and registered guests may only enter the facility under the constant supervision of an employee after they have been photo ID verified, logged in, and issued a temporary ID;
- In the instance that two or more unique visitors arrive at the same time, they will be instructed via intercom to enter the foyer one at a time for processing; and
- All deliveries must be verified and logged in at the front entrance prior to receiving access to the loading areas.

Layer 2 - Entry Foyer:

- Be equipped with a secured lobby with hardened door to separate the public entry from the secure areas;
- Be equipped with a duress alarm;
- Have a log in sheet stating name, date, time, and reason for entry to the security room for legitimate purposes with the entry being witnessed by a security camera;
- Be locked at all times, even during business hours;

- Be equipped with “daytime annunciating” entry/exit doors;
- Have all activity in this area visible on CCTV and monitored by the security office;
- Have motion detectors located inside; and
- Have high security contacts on all doors.

Layer 3 - Entrance into the Office Area

The third layer of control will be to segregate with doors and hardware the generally accessible public area (reception area) to the staff-only areas. Additionally, staff-only areas will also have highly restricted access.
Staff Morning Procedures:

- Office staff will be restricted electronically to only the office areas;
- Office staff will wear photo ID badges at all times;
- General office doors will not use key card access control;
- Dispensary staff will wear photo ID badges at all times;
- Dispensary staff will continue to limited and restricted access areas;

The Office Area Will:

- Be equipped with motion sensors;
- Be segregated by a hardened door with an electronic lock;
- Be accessible to all levels of office employees;
- Be equipped with hardwired and wireless emergency police call devices;
- Have video cameras monitoring all doors (exit and entrance) and doors accessing limited and restricted access areas where marijuana is for sale or stored;
- Include the security office that will remain locked and will not be used for any other function; and
- Have limited access to security, surveillance, and access control systems areas

Layer 4 - Access, Shipping and Receiving

Moving throughout the facility will be restricted even among staff. Employees will only be permitted in areas where they have specific tasks assigned. Employees will be given electronic access cards permitting entry to specific location(s) at specific time(s). Only the minimum number of staff required to perform assigned tasks will be permitted in the restricted access areas.

Staff Restrictions:

- Any picture or video recording on the premises is strictly prohibited;
- Having an access-controlled door leading from the limited access areas to the restricted areas;
- Allowing access only by assigned access credentials provided to workers as they are assigned tasks in specific areas;
- Granting and monitoring access by access credentials to the minimum number of authorized personnel needed (whether production personnel or laboratory employees) in secured areas where marijuana is kept;
- A clear schedule of who should be in what room, at what time, that will be monitored both visually and electronically by the facility manager and/or director of security;

Receiving Area Will:

- Have all doors controlled electronically;
- Be on a “time lock” to only be accessible during regular business hours;
- Have all doors remain closed and locked when not in use; and
- Have all working areas equipped with CCTV surveillance.

Layer 5 - Secure Safe Room

- Highly secure safe for all finished product with locking day gate;
- Must be opened by the manager or two employees with two unique codes simultaneously;

- Will be on a "time lock" to only be accessible during regular business hours;
- Inventory will be performed and documented at the close of each day on the contents of the safe room;
- Keep all equipment, safe(s), and any areas used for the storage of marijuana, securely locked unless in use;
- All lighting and security devices within the safe will be on emergency power; and
- Entrance doors to the safe will be monitored by CCTV.

General Security Guidelines

- Background checks for current/new employees, particularly if the employee is to be accessing restricted areas;
- Request employees to watch for suspicious activities and ask persons they don't recognize to identify themselves and state their reasons for being at the facility;
- Adopt a security whistleblower protection policy;
- Retrieve keys and employment identification cards from an employee and change computer access passwords when their employment ends;
- Arrange for a 24-hour security service when there are unusual or extraordinary challenges to security;
- Keep all access system credentials, access codes, access cards, passwords, etc., secure and accessible only to specifically authorized personnel;
- Arrange for prompt and safe disposal of materials;
- All employees will be trained on emergency procedures;
- Post emergency response numbers, including fire, law enforcement, and executive team in several locations in the facility; and
- Quarterly security reviews with the Director of Security (and security staff) as it is their responsibility to constantly review and make recommendations for improvement to the Applicant's Security Policy and Procedure Manual with all recommended changes being reviewed and approved by the members prior to implementation.

Summary of Restricted and Limited Access Areas

Limited Access Areas

"Limited Access Area" means a building, room, or other contiguous area upon the Licensed Premises where Retail Marijuana is grown, cultivated, stored, weighed, packaged, sold, or processed for sale, under control of the Licensee. All persons in a Limited Access Area will be required to hold and properly display a current license badge issued by the Division at all times. Proper display of the license badge will consist of wearing the badge in a plainly visible manner, at or above the waist, and with the photo of the Licensee visible. In addition, the business will be compliant with provisions from the Retail Code "Visitors in Limited Access Areas" and "Required Signage".

Point of Sale: Restricted Access Areas

"Restricted Access Area" means a designated and secure area within a Licensed Premises in a Retail Marijuana Store where Retail Marijuana and Retail Marijuana Product are sold, possessed for sale, and displayed for sale, and where no one under the age of 21 is permitted. Purchases Only Within Restricted Access Area. A customer must be physically present within the Restricted Access Area of the Retail Marijuana Store's Licensed Premises to purchase Retail Marijuana or Retail Marijuana Product. The purpose of this rule is to establish that a Retail Marijuana Store must control and safeguard access to certain areas where Retail Marijuana and Retail Marijuana Product will be sold to the general public and prevent the diversion of Retail Marijuana and Retail Marijuana Product to people under 21 years of age.

A. Identification of Restricted Access Area. All areas where Retail Marijuana or Retail Marijuana Product are sold, possessed for sale, displayed, or dispensed for sale will be identified as a Restricted Access Area and will be clearly identified by the posting of a sign which will be not less than 12 inches wide and 12 inches long, composed of letters not less than a half inch in height, which will state, "Restricted Access Area – No One Under 21 Years of Age Allowed."

B. Customers in Restricted Access Area. The Restricted Access Area must be supervised by a Licensee at all times when customers are present to ensure that only persons who are 21 years of age or older are permitted to enter. When allowing a customer access to a Restricted Access Area, Owners and Occupational Licensees will make

reasonable efforts to limit the number of customers in relation to the number of Owners or employees in the Restricted Access Area at any time.

C. Display of Retail Marijuana. The display of Retail Marijuana and Retail Marijuana Product for sale is allowed only in Restricted Access Areas. Any product displays that are readily accessible to the customer must be supervised by the Owner or Occupational Licensees at all times when customers are present.

Summary of Transportation Plan

No stops will be made when transporting marijuana. The transportation manager will ensure that all delivery times and routes are randomized, vehicles and equipment are in good working order, and personnel are appropriately trained. Prior to transport, a dispensary agent will weigh, inventory, and account for on video and in the inventory system all marijuana products. The dispensary agent responsible for packaging a delivery order will complete a shipping manifest in a form and manner dictated by state regulations, for retention by the origination location, carry a copy of the manifest with the products being transported, and obtain an original signature from the recipient. Each delivery vehicle will be equipped with two-way radio communication equipment. The transportation manager will ensure the system is operational and each dispensary agent who transports marijuana is trained appropriately on its use, according to our Transportation Plan and any applicable state and local regulations. Radio contact will be maintained throughout the delivery day.

The transportation manager will be responsible for reporting all transportation events. In case of an emergency stop or an accident, a detailed reporting in the transportation event log must be recorded describing the reason for the event, the duration, the location, and any activities of personnel exiting the vehicle. In accordance with state regulations, the Applicant will immediately report any loss or theft of marijuana or marijuana products to state regulators and local law enforcement.

Summary of Inventory Plan

The Applicant will utilize comprehensive seed-to-sale tracking of all inventory and will use METRC, a compliant software system designed specifically for the intricacies of the marijuana industry. This will have online systems for Point of Sale (POS) tracking, inventory, sales, grow management, and other components of the business. Using a comprehensive tracking system will allow for real time reporting and oversight, as well as preventing diversion by increasing accountability. Inventory control will be implemented to account for all products. Inventory levels will be based on projected demand and adjusted to anticipate future customer needs. Beginning inventories will be established based on demand projected in this business plan. The Inventory Manager, along with department managers, will be responsible for tracking marijuana and marijuana-related products. All damaged, defective, expired, or contaminated marijuana will await disposal.

The Inventory Manager will ensure that inventory management and point of sale systems are accurate and capable of producing the necessary reports upon request. The Inventory Manager will direct department managers to perform certified inventory counts on a regular basis utilizing a cycle count method. A cycle count requires the department manager to perform a complete count of the inventory over a period of time counting inventory groups individually. The Inventory Manager, in consultation with Mark Mayasich, the Chief of Operations, along with back-up support by Trevor McGarvey Attorney-at-Law, will verify adherence to law, procedures, and policies. Department managers are responsible for the accurate recording of all inventory transactions in their department. The Compliance Officer is responsible to ensure that our cumulative inventory of usable marijuana reflects the projected needs of customers. Inventory limits will be adjusted by the Compliance Officer to anticipate future customer needs.

Inventory Tracking Requirements

1. In addition to all other tracking requirements set forth in these rules, a Licensee will utilize MITS to ensure its waste materials are identified, weighed and tracked while on the Licensed Premises until disposed of.
2. All Retail Marijuana waste must be weighed before leaving any Retail Marijuana Establishment. A scale used to weigh Retail Marijuana waste prior to entry into the MITS system will be certified in accordance with measurement standards established in Article 14 of Title 35, C.R.S. See Rule R 309 – Retail Marijuana Establishments: Marijuana Inventory Tracking Solution (MITS).
3. A Licensee is required to maintain accurate and comprehensive records regarding waste material that accounts for, reconciles, and evidences all waste activity related to the disposal of Marijuana.

Compliance / Quality Assurance / Quality Control

Quality Assurance and Quality Control. The Applicant will establish and follow a strict quality assurance and quality control program to ensure sufficient monitoring of laboratory processes and quality of results reported.

Identification

The purpose of this rule is to establish guidelines for the acceptable forms of identification for verifying the lawful sale of Retail Marijuana or Retail Marijuana Product.

Acceptable Forms of Identification for Retail Sales

Valid Identification to Verify Age Only. A Licensee will refuse the sale of Retail Marijuana or Retail Marijuana Product to anyone, unless such person can produce a form of valid identification of 21 years of age. If the identification contains a picture and date of birth, the kind and type of identification deemed adequate will be limited to the following, so long as such identification is valid and not expired:

1. An operator's, chauffeur's or similar type driver's license, issued by any state within the United States, any U.S. Territory;
2. An identification card, issued by any state for the purpose of proof of age using requirements similar to those in sections 42-2-302 and 42-2- 303, C.R.S.;
3. A United States military identification card;
4. A passport; or
5. Enrollment card issued by the governing authority of a federally recognized Indian tribe located in the state of Colorado, if the enrollment card incorporates proof of age requirements similar to sections 42-2-302 and 42-2- 303, C.R.S.
6. See below for valid identification to verify Colorado residency.

Valid Identification to Verify Colorado Residency. A Licensee will refuse the sale of more than one quarter of an ounce of Retail Marijuana or its equivalent in Retail Marijuana Product to anyone, unless such person can produce a form of valid identification of Colorado residency. As long as it contains a picture and date of birth, the kind and type of identification deemed adequate to establish Colorado residency for purchase will be limited to the following:
1. Valid state of Colorado driver's license;
2. Valid state of Colorado identification card; or
3. Any other valid government-issued picture identification that demonstrates that the holder of the identification is a Colorado resident.
4. No combination of identification or documents may be used to establish residency.

Storage of Marijuana Products

The Applicant's storage area will be climate controlled and have adequate lighting, ventilation, temperature, humidity, space, and equipment. There will be a separate area for storage of marijuana that is outdated, damaged, deteriorated, mislabeled, contaminated, or whose containers or packing have been opened or breached, until such products are destroyed.

All storage areas will be maintained in a clean and orderly condition, be free from infestation of pests, and maintained in accordance with the security requirements of Colorado state law. All marijuana in the process of preparation, transport or analysis will be housed and stored in locked containers and only the minimum number of specifically authorized employees will have access. At the end of the day, all marijuana and infused products will be returned to a secure, locked, and designated area. All safes, vaults, and any other equipment areas used for the storage of marijuana and MIPs will be securely locked and protected from entry at all times except for the actual time required to remove or replace marijuana. Surveillance cameras will be pointed directly at these storage areas and the camera's field for view will not be obstructed.

Storage and transportation of finished products will be held under conditions that protect them against physical, chemical, and microbial contamination as well as against deterioration of them or their container. Marijuana will be stored in approved, secured, and surveyed areas and each will be labeled with a batch number throughout the process.

Storage and Display Limitations. The business will not display Retail Marijuana and Retail Marijuana Product outside of a designated Restricted Access Area or in a manner in which Retail Marijuana or Retail Marijuana Product can be seen from outside the Licensed Premises. Storage of Retail Marijuana and Retail Marijuana Product will otherwise be maintained in Limited Access Areas or Restricted Access Area.

Labeling / Packaging

The Applicant will comply with the State Licensing Authority's Retail Code to regulate and establish labeling and secure packaging requirements for Retail Marijuana, Retail Marijuana concentrates, and Retail Marijuana Product. The Applicant will ensure that all Retail Marijuana and Retail Marijuana Product are sold and delivered to lawful consumers in packaging that is not easily opened by children.

Waste Disposal

That waste is properly removed and the operating systems for waste disposal are maintained in an adequate manner so that they do not constitute a source of contamination in areas where Retail Marijuana or Retail Marijuana Product are exposed. That the Licensee provides adequate screening or other protection against the entry of pests. Rubbish will be disposed of so as to minimize the development of odor
and minimize the potential for the waste becoming an attractant, harborage, or breeding place for pests. A Retail Marijuana Testing Facility will properly dispose of all Samples it receives, that are not transferred to another Retail Marijuana Testing Facility, after all necessary tests have been conducted and any required period of storage.

A. All Applicable Laws Apply. Retail Marijuana and Retail Marijuana Product waste must be stored, secured, locked, and managed in accordance with all applicable federal, state, and local statutes, regulations, ordinances, or other requirements.
B. Liquid Waste. Liquid waste from Retail Marijuana Establishments will be disposed of in compliance with the applicable Water Quality Control Division statutes and regulations.
C. Hazardous Waste. Disposal of hazardous and chemical waste must be conducted in a manner consistent with federal, state and local laws.
D. Waste Must Be Made Unusable and Unrecognizable. Retail Marijuana and Retail Marijuana Product waste must be made unusable and Unrecognizable prior to leaving the Licensed Premises.
E. Methods to Make Waste Unusable and Unrecognizable. Retail Marijuana and Retail Marijuana Product waste will be rendered unusable and Unrecognizable through one of the following methods:

Grinding and incorporating the marijuana waste with non-consumable, solid wastes listed below such that the resulting mixture is at least 50 percent non-marijuana waste: Paper waste; Plastic waste; Cardboard waste; Food waste; Grease or other compostable oil waste; Bokashi or other compost activators; Other wastes approved by the Division that will render the Retail Marijuana waste unusable and Unrecognizable; and Soil. After Waste is Made Unusable and Unrecognizable. Licensees will not dispose of Retail Marijuana waste in an unsecured waste receptacle not in possession and control of the Licensee. After the Retail Marijuana waste is made unusable and Unrecognizable, then the rendered waste will be:

1. Disposed of at a solid waste site and disposal facility that has a Certificate of Designation from the local governing body;
2. Deposited at a compost facility that has a Certificate of Designation from the Department of Public Health and Environment; or
3. Composted on-site at a facility owned by the generator of the waste and operated in compliance with the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-2, Part 1) in the Department of Public Health and Environment.

G. Proper Disposal of Waste. A Licensee will not dispose of Retail Marijuana and Retail Marijuana Product waste in an unsecured waste receptacle not in possession and control of the Licensee.

All marijuana or marijuana containing items that are disposed shall be placed in the secured dumpster outside that shall be locked at all times.

Health & Safety

The Applicant and its employees will remain diligent at keeping intact the public's interest of health and safety. All state and City regulations pertaining to the health and safety of the public will be followed.

The site building will be maintained in a sanitary condition as follows;

- Toxic cleaning compounds, sanitizing agents, and pesticide chemicals will be identified, held, and stored in a manner that protects against contamination of Retail Marijuana or Retail Marijuana Product and in a manner that is in accordance with any applicable local, state, or federal law, rule, regulation or ordinance.
- All operations in the receiving, inspecting, transporting, segregating, preparing, manufacturing, packaging, and storing of Retail Marijuana or Retail Marijuana Product will be conducted in accordance with adequate sanitation principles.
- Employees are provided with adequate and readily accessible toilet facilities that are maintained in a sanitary condition and good repair.
- Retail Marijuana or Retail Marijuana Product that can support the rapid growth of undesirable microorganisms will be held in a manner that prevents the growth of these microorganisms.

Records / Reporting / Taxes

All business records will be accurately kept up-to-date and on-site. All taxes will be remitted in a timely and accurate fashion.

Testing requirements

The Applicant will ensure that all products sold or offered from its premises meet all current and future product testing and standardization requirements.

THE KIND CASTLE DISPENSARY
GLENWOOD MEADOWS

TRAFFIC ASSESSMENT

Project Location: Lot 11B Glenwood Meadows No. 5
Glenwood Springs, CO

Prepared By: APEX Consulting Engineers, LLC
1000 N 9th Street, Suite 44
Grand Junction, CO 81501

Report Date: September 15, 2020

APEX
CONSULTING ENGINEERS
CIVIL ENGINEERS • MANAGEMENT • DEVELOPMENT

Contents

1. Introduction 1
2. Project Location and Description 1
3. Site Access 2
4. Trip Generation 3
5. Access 3
6. Adjacent Intersections 3
7. Parking 3
8. Conclusions 4

Appendices

A. ITE Trip Generation Data

1. Introduction

APEX Consulting Engineers LLC (APEX) prepared this Traffic Assessment for the proposed 2.4 ksf marijuana dispensary to be located at Lot 11B Glenwood Meadows No. 5, Glenwood Springs, Colorado. The Traffic Assessment is being provided in conformance with the City of Glenwood Springs Engineering Design Standards § 5.11.2 for proposed commercial developments that are expected to generate less than 100 peak hour trips.

This Traffic Assessment will determine the expected increase in traffic volume entering and exiting the proposed access to/from Wulfsohn Road.

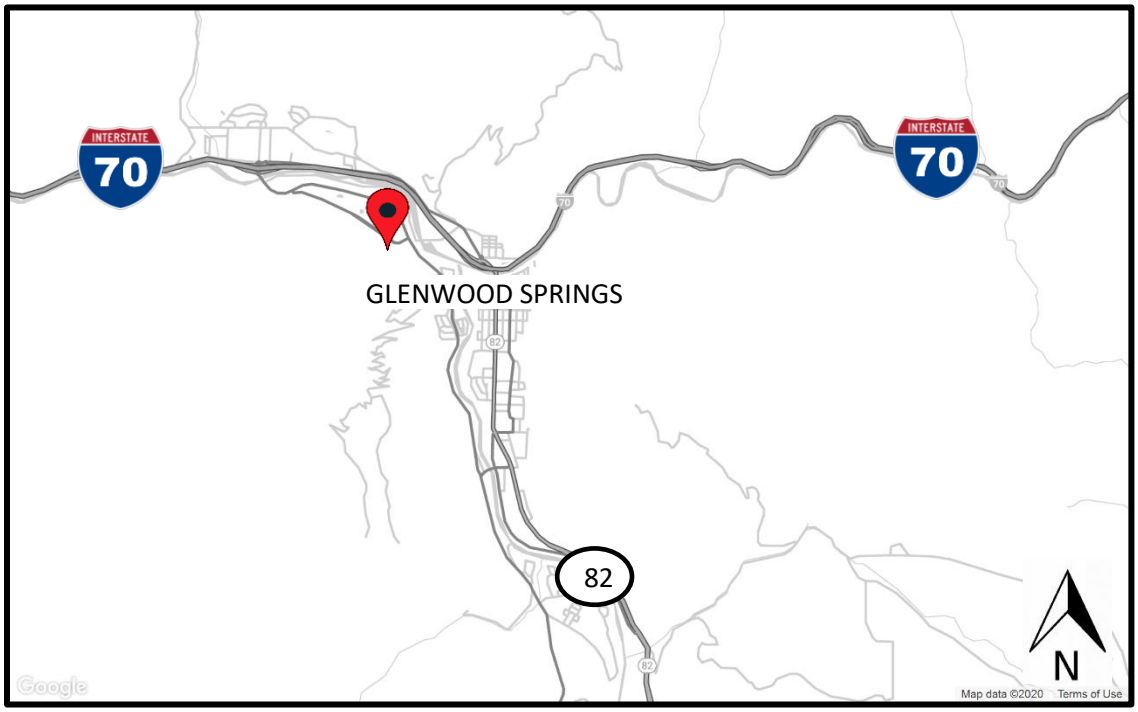
2. Project Location and Description

As shown in Figures 1, 2 and 3, the proposed Project is be located on the south side of Wulfsohn Road and will require a new access.

The Project is a proposed 2.4 ksf marijuana dispensary to be built within an existing mixed use development that currently contains multi-family housing and commercial businesses.

The proposed business will not open until 9:00 am or later, therefore morning peak hour traffic is not evaluated in this assessment.

Figure 1 - Site Location Map



3. Site Access

The site proposes one access, to Wulfsohn Road as shown in Figures 2 and 3.

Figure 2 –Project Site Access

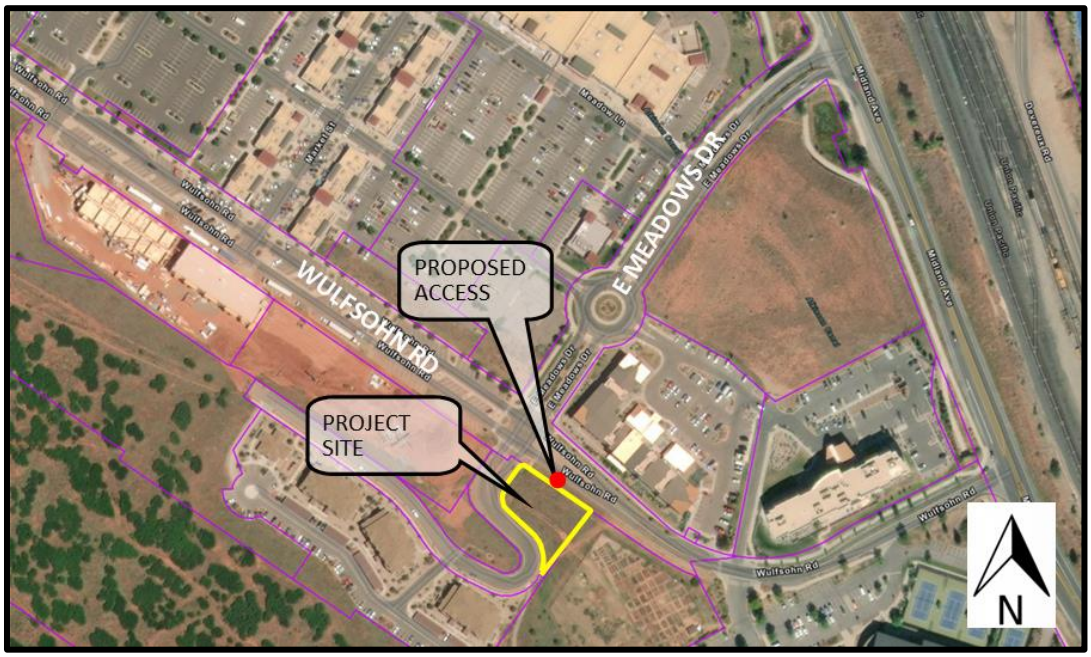
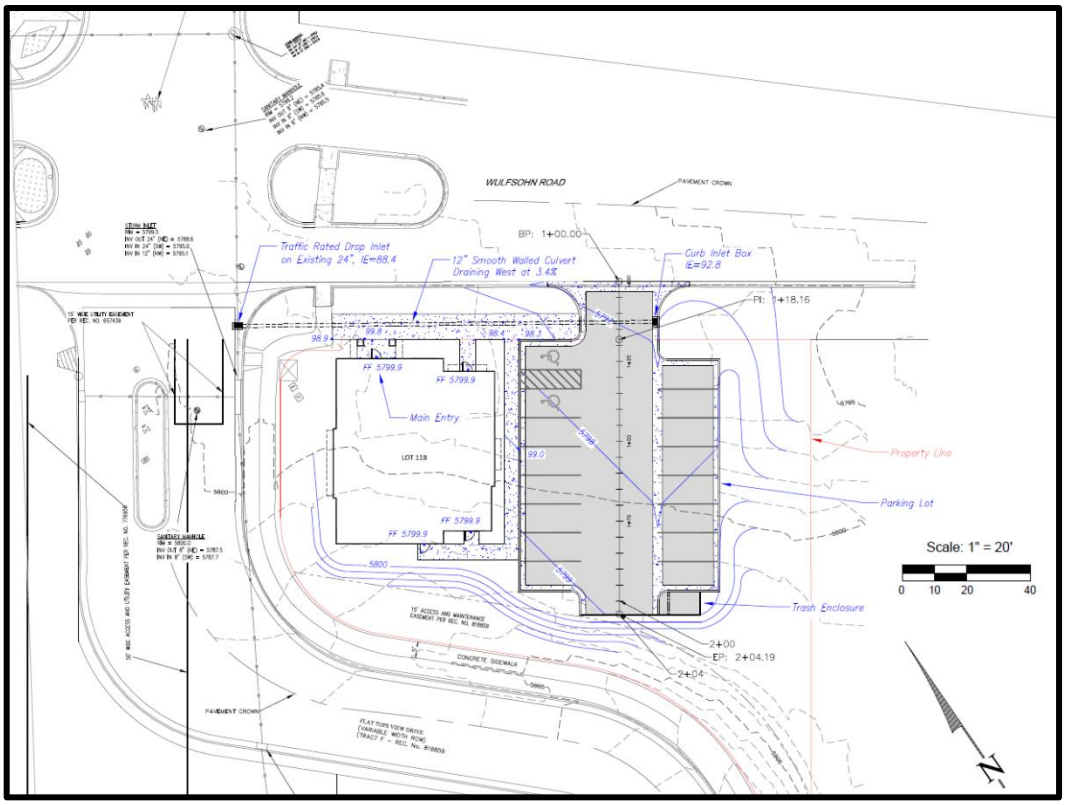


Figure 3 –Site Plan



4. Trip Generation

Land Use Code (LUC) 882, Marijuana Dispensary, from the Institute of Transportation Engineers (ITE) Trip Generation Manual 10TH Edition, is used to determine trip generation. In all peak hour cases, the higher of "either peak hour of roadway" or "peak hour of generator" is used, providing a conservative assessment. In this case, peak hour of generator is used. Trip generation traffic calculations from the ITETripGen Web-based App are attached in Appendix A.

Table 1 – Peak Hour Project Traffic Volumes

Period	Inbound	Outbound	Total
Peak Hour	36	36	72
ADT			606

5. Access

Wulfsohn Road is a two-lane roadway with a solid striped (painted) re-direct taper at the location of the proposed access. The current striping would make westbound left turns into the proposed driveway a prohibited maneuver. However, u-turns are allowed at the intersection of E Meadows Drive and Flat Tops View Drive, allowing westbound traffic to gain access to the Project driveway. If u-turns are not allowed in the future, westbound traffic have the ability to turn right on E Meadows Drive and utilize the round-a-bout to change directions at Wulfsohn Road.

A previous Traffic Impact Study[1] reported the 2018 daily traffic volumes along Wulfsohn Road to range between 1,700 and 1,760 VPD. The same study estimated future growth on the south side of Wulfsohn Road to be from residential development at 15 units per acre and would result in traffic volumes along Wulfsohn Road to be 2,400 and 2,600 VPD where the capacity is 12,000 to 16,000 VPD.

Wulfsohn Road has current and future traffic capacity for the proposed project.

6. Adjacent Intersections

The intersection of E Meadows Drive/Flat Tops View Drive and Wulfsohn Road is approximately 100' to the east. The intersection is a two way stop controlled intersection with stop signs on the north-south roadways (E Meadows Drive and Flat Tops View Drive). Eastbound traffic on Wulfsohn Road has a speed limit of 15 mph whereas west bound traffic has a speed limit of 25 mph until the intersection of Wulfsohn Road and E Meadows Drive. The volume to capacity ratio of roadway are low and the intersection should easily absorb the additional traffic.

The 2018 TIS indicated the intersection of Midland Avenue and Wulfsohn Road operates at a Level of Service (LOS) E and approaches the criteria required to warrant a traffic signal. The additional traffic generated from the proposed dispensary will add traffic to this intersection.

7. Parking

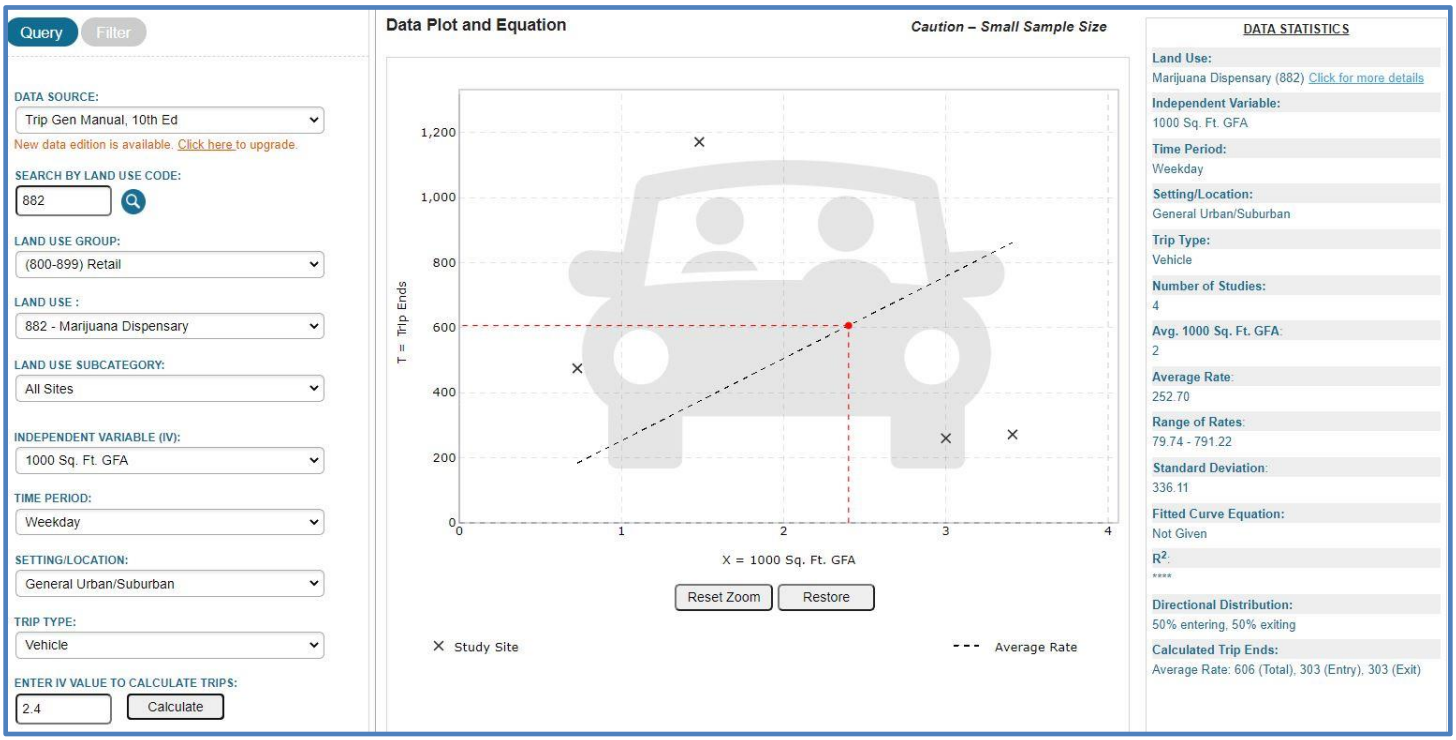
The project will provide 16 parking spaces including 2 ADA reserved spaces. This provides 14 spaces for customers and two for employees. The parking spaces allow for a turnover rate of approximately 22 minutes per parking stall, allowing for one ADA vacancy, during the PM peak hour.

[1] Felsburg Holt & Ullevig, *Wulfsohn Road Commercial Building Traffic Impact Study,* 2018

8. Conclusions

- The project will contribute an estimated 606 VPD to Wulfsohn Road.
- The project will contribute an estimated 72 trips/hour during the weekday PM peak hour.
- Proposed Project parking is adequate.
- Wulfsohn Road has adequate current and future capacity for the additional Project traffic.

Appendix A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New data edition is available. Click here to upgrade.
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(800-899) Retail
LAND USE :
882 - Marijuana Dispensary
LAND USE SUBCATEGORY:
All Sites
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA
TIME PERIOD:
Weekday
SETTING/LOCATION:
General Urban/Suburban
TRIP TYPE:
Vehicle
ENTER IV VALUE TO CALCULATE TRIPS:
2.4
Calculate
Data Plot and Equation
Caution – Small Sample Size
T = Trip Ends
X = 1000 Sq. Ft. GFA
Reset Zoom
Restore
Study Site
Average Rate
DATA STATISTICS
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Marijuana Dispensary (882) Click for more details
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Time Period:
Weekday
Setting/Location:
General Urban/Suburban
Trip Type:
Vehicle
Number of Studies:
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Avg. 1000 Sq. Ft. GFA:
2
Average Rate:
252.70
Range of Rates:
79.74 - 791.22
Standard Deviation:
336.11
Fitted Curve Equation:
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R²:
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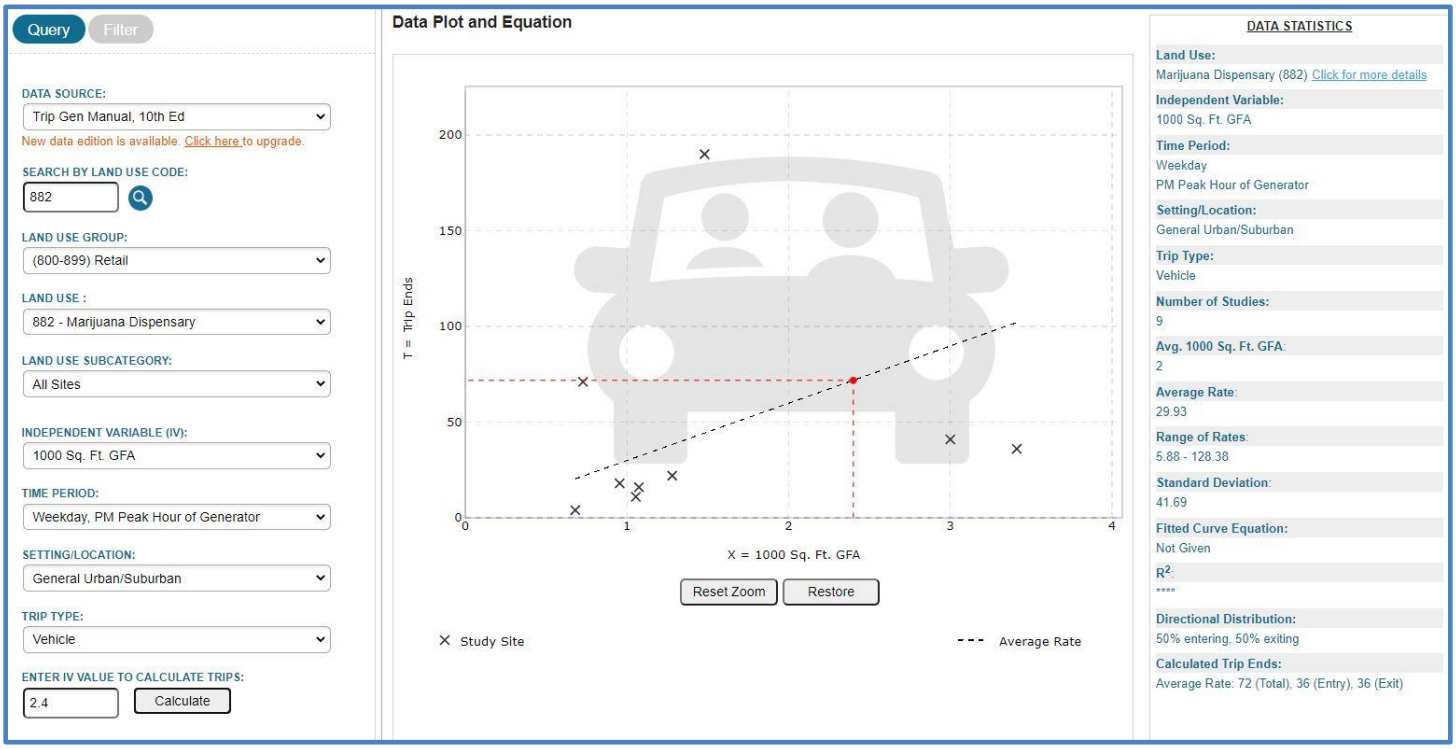
Directional Distribution:
50% entering, 50% exiting
Calculated Trip Ends:
Average Rate: 606 (Total), 303 (Entry), 303 (Exit)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882 - Marijuana Dispensary
LAND USE SUBCATEGORY:
All Sites
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA
TIME PERIOD:
Weekday, PM Peak Hour of Generator
SETTING/LOCATION:
General Urban/Suburban
TRIP TYPE:
Vehicle
ENTER IV VALUE TO CALCULATE TRIPS:
2.4
Calculate
Data Plot and Equation
T = Trip Ends
X = 1000 Sq. Ft. GFA
Reset Zoom
Restore
Study Site
Average Rate
DATA STATISTICS
Land Use:
Marijuana Dispensary (882) Click for more details
Independent Variable:
1000 Sq. Ft. GFA
Time Period:
Weekday
PM Peak Hour of Generator
Setting/Location:
General Urban/Suburban
Trip Type:
Vehicle
Number of Studies:
9
Avg. 1000 Sq. Ft. GFA:
2
Average Rate:
29.93
Range of Rates:
5.88 - 128.38
Standard Deviation:
41.69
Fitted Curve Equation:
Not Given
R²:
****
Directional Distribution:
50% entering, 50% exiting
Calculated Trip Ends:
Average Rate: 72 (Total), 36 (Entry), 36 (Exit)

535877 11/23/1998 04:27P B1099 P585 M ALSDORF
1 of 6 R 31.00 D 706.51 GARFIELD COUNTY CO

SPECIAL WARRANTY DEED

Doc Fee: 706.51

GLENWOOD LAND COMPANY, LLC, a Colorado limited liability company ("Grantor"), with an address of 525 East Cooper, Aspen, Colorado 81611, for $10.00 and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, hereby grants, sells and conveys unto GLENWOOD MEADOWS, LLC, a Colorado limited liability company ("Grantee"), with an address of 525 East Cooper, Aspen, Colorado 81611, that certain real property located in the County of Garfield, State of Colorado, described in Exhibit A attached hereto and made a part hereof (the "Property"), together with all improvements located thereon, subject only to the matters set forth in Exhibit B attached hereto and made a part hereof (the "Permitted Exceptions").

To have and to hold the Property unto Grantee, and its successors and assigns, forever. Grantor shall warrant and forever defend the title to the Property, except for the Permitted Exceptions, against all persons claiming by, through or under the Grantor.

DATED ~~EXECUTED~~ this 16 day of October, 1998.

GLENWOOD LAND COMPANY, LLC, a Colorado limited liability company

By: _____
Name: Robert Duncan Macgregor
Title: Manager

STATE OF COLORADO)
) ss.
COUNTY OF GARFIELD)

The foregoing instrument was acknowledged before me this 16th day of November, 1998, by Robert Duncan Macgregor, as the Manager of Glenwood Land Company, LLC, a Colorado limited liability company.

Witness my hand and official seal.

_____
Notary Public

My commission expires:

MARGARET R. JOY
NOTARY PUBLIC
STATE OF COLORADO
My Commission Expires 12/23/2000

LAND TITLE
SW223043

Return to Tom Hartert
802 Grand
Gws. CO 8160

535877 11/23/1999 04:27P B1099 P386 M ALSDORF
2 of 8 R 31.00 D 786.51 GARFIELD COUNTY CO

EXHIBIT A

PARCEL # 1

ALL THAT PROPERTY LOCATED IN THE NW1/4NW1/4 AND E1/2NW1/4 OF SECTION 8; THAT PORTION OF THE NE1/4 OF SAID SECTION 8 LOCATED SOUTH OF THE SOUTHERLY RIGHT OF WAY LINE OF THE MIDLAND AVENUE RIGHT OF WAY AQUISITION; THAT PORTION OF THE W1/2NW1/4 OF SECTION 9 LOCATED SOUTH OF THE SOUTHERLY RIGHT OF WAY LINE OF SAID MIDLAND AVENUE RIGHT OF WAY AQUISITION; THAT PORTION OF THE SE1/4 OF THE NW1/4 OF SAID SECTION 9 BEING TRIANGULAR IN SHAPE BOUNDED ON THE WEST BY THE WESTERLY LINE OF THE SE1/4NW1/4 OF SAID SECTION 9, ON THE NORTH BY THE SOUTHERLY LINE OF SAID MIDLAND AVENUE RIGHT OF WAY AQUISITION AND ON THE SOUTH BY THE WEST LINE OF THE RED MOUNTAIN DRIVE RIGHT OF WAY; THAT PORTION OF THE S1/2S1/2 OF SECTION 5 LOCATED SOUTH OF THE SOUTHERLY RIGHT OF WAY LINE OF SAID MIDLAND AVENUE RIGHT OF WAY AQUISITION; THAT PORTION OF THE SE1/4SE1/4 OF SECTION 6 LOCATED SOUTH OF THE SOUTHERLY RIGHT OF WAY LINE OF SAID MIDLAND AVENUE RIGHT OF WAY AQUISITION AND THE DENVER & RIO GRANDE WESTERN RAILROAD RIGHT OF WAY; ALL LOCATED IN TOWNSHIP 6 SOUTH RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN. THE PROPERTY AS MENTIONED ABOVE BEING MORE PARTICUALRLY DESCRIBED BY METES AND BOUNDS FOR ACREAGE AS FOLLOWS;

BEGINNING AT THE SOUTH EAST CORNER OF SAID SECTION 6; THENCE S. 75 DEGREES 55'37" W, A DISTANCE OF 1316.16 FEET ALONG THE SOUTHERLY LINE OF SAID SECTION 6 TO THE EAST 1/16 CORNER COMMON TO SAID SECTIONS 6 AND 7; THENCE N 01 DEGREES 07'55" E, A DISTANCE OF 1253.02 FEET ALONG THE WEST LINE OF THE SE1/4SE1/4 OF SAID SECTION 6 TO THE SOUTHERLY RIGHT OF WAY LINE OF SAID DENVER RIO GRANDE WESTERN RAILROAD RIGHT OF WAY; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING (2) COURSES: THENCE N 86 DEGREES 20'11" E, A DISTANCE OF 58.27 FEET; THENCE N 83 DEGREES 38'11" E, A DISTANCE OF 480.07 FEET TO THE SOUTHERLY RIGHT OF WAY LINE OF SAID MIDLAND AVENUE RIGHT OF WAY AQUISITION; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING (47) COURSES, THENCE S 44 DEGREES 35'36" E, A DISTANCE OF 72.53 FEET; THENCE S 53 DEGREES 05'31" E, A DISTANCE OF 232.27 FEET; THENCE ALONG THE ARC OF A CURVE TO THE LEFT A DISTANCE OF 580.98 FEET, HAVING A RADIUS OF 880.00 FEET, THE CHORD OF WHICH BEARS S 72 DEGREES 00'20" E, A DISTANCE OF 570.49 FEET; THENCE N 89 DEGREES 04'52" E, A DISTANCE OF 386.55 FEET; THENCE N 02 DEGREES 31'09" E, A DISTANCE OF 137.01 FEET; THENCE N 62 DEGREES 28'35" E, A DISTANCE OF 379.58 FEET; THENCE N 70 DEGREES 48'52" E, A DISTANCE OF 233.79 FEET; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT A DISTANCE OF 139.27 FEET, HAVING A RADIUS OF 400.00 FEET, THE CHORD OF WHICH BEARS N 80 DEGREES 43'03" E, A DISTANCE OF 137.58 FEET; THENCE S 89 DEGREES 22'47" E, A DISTANCE OF 220.22 FEET; THENCE S 04 DEGREES 05'51" W, A DISTANCE OF 84.94 FEET; THENCE S 88 DEGREES 21'25" E, A DISTANCE OF 29.12 FEET; THENCE N 84 DEGREES 12'24" E, A DISTANCE OF 200.33 FEET; THENCE N 13 DEGREES 23'18" E, A DISTANCE OF 18.04 FEET; THENCE S 79 DEGREES 22'12" E, A DISTANCE OF 693.85 FEET; THENCE S 15 DEGREES 25'14" W, A DISTANCE OF 81.35 FEET; THENCE S 72 DEGREES 50'58" E, A DISTANCE OF 30.90 FEET; THENCE S 87 DEGREES 49'17" E, A DISTANCE OF 164.69 FEET; THENCE N 47 DEGREES 19'34" E, A DISTANCE OF 37.65 FEET; THENCE S 74 DEGREES 59'10" E, A DISTANCE OF 294.83 FEET; THENCE S 08 DEGREES 06'53" E, A DISTANCE OF 62.58 FEET; THENCE S 77 DEGREES 46'27" E, A DISTANCE OF 150.75 FEET; THENCE N 14 DEGREES 20'16" E, A DISTANCE OF 62.19 FEET; THENCE S 79 DEGREES 08'31" E, A DISTANCE OF 369.05 FEET; THENCE S 10 DEGREES 40'31" E, A DISTANCE OF 29.17 FEET; THENCE S 66 DEGREES 03'20" E, A DISTANCE OF 143.01 FEET; THENCE N 25 DEGREES 40'28" E, A DISTANCE OF 42.89 FEET; THENCE S 74 DEGREES 19'33" E, A DISTANCE OF 339.00 FEET; THENCE S 76 DEGREES 23'22" E, A DISTANCE OF 559.87 FEET; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT A DISTANCE OF 3104.51 FEET, HAVING A RADIUS OF 1190.00 FEET, THE CHORD OF WHICH BEARS S 48 DEGREES 18'54" E, A DISTANCE OF 1965.29 FEET; THENCE S 21 DEGREES 43'32" E, A DISTANCE OF 179.06 FEET; THENCE S 68 DEGREES 16'28" W, A DISTANCE OF 31.36 FEET; THENCE S 23 DEGREES 26'58" E, A DISTANCE OF 78.05 FEET; THENCE N 68 DEGREES 16'28" E, A DISTANCE OF 29.01 FEET; THENCE S 21 DEGREES 43'32" E, A DISTANCE OF 764.09 FEET; THENCE ALONG THE ARC OF A CURVE TO THE LEFT A DISTANCE OF 272.22 FEET, HAVING A RADIUS OF 1165.00 FEET, THE CHORD OF WHICH BEARS S 28 DEGREES 25'10" E, A DISTANCE OF 271.61 FEET; THENCE S 35 DEGREES 06'49" E, A DISTANCE OF 21.42 FEET; THENCE S 54 DEGREES 53'11" W, A DISTANCE OF 22.69 FEET; THENCE S 41 DEGREES 40'05" E, A DISTANCE OF 43.30 FEET; THENCE N 54 DEGREES 53'11" E, A DISTANCE OF 17.75 FEET; THENCE S 30 DEGREES 39'49" E, A DISTANCE OF 271.57 FEET; THENCE S 41 DEGREES 04'38" E, A DISTANCE OF 291.31 FEET; THENCE S 23 DEGREES 26'47" E, A DISTANCE OF 143.44

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EXHIBIT A

FEET THENCE ALONG THE ARC OF A CURVE TO THE LEFT A DISTANCE OF 95.96 FEET, HAVING A RADIUS OF 200.00 FEET, THE CHORD OF WHICH BEARS S 50 DEGREES 58'14" E, A DISTANCE OF 92.32 FEET; THENCE S 78 DEGREES 27'41" E, A DISTANCE OF 27.55 FEET; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT A DISTANCE OF 42.95 FEET, HAVING A RADIUS OF 200.00 FEET, THE CHORD OF WHICH BEARS S 72 DEGREES 28'32" E, A DISTANCE OF 42.87 FEET; THENCE S 50 DEGREES 13'26" E, A DISTANCE OF 191.37 FEET; THENCE S 43 DEGREES 26'37" E, A DISTANCE OF 230.95 FEET; THENCE S 54 DEGREES 38'36" E, A DISTANCE OF 373.46 FEET TO THE WESTERLY RIGHT OF WAY LINE OF SAID RED MOUNTAIN DRIVE RIGHT OF WAY; THENCE ALONG SAID RIGHT OF WAY THE FOLLOWING (2) COURSES: THENCE ALONG THE ARC OF A CURVE TO THE LEFT A DISTANCE OF 35.93 FEET, HAVING A RADIUS OF 124.00 FEET, THE CHORD OF WHICH BEARS S 32 DEGREES 55'06" W, A DISTANCE OF 35.80 FEET TO THE EAST LINE OF THE SW1/4NW1/4 OF SAID SECTION 9; THENCE ALONG SAID EAST LINE S 00 DEGREES 39'40" W, A DISTANCE OF 82.52 FEET TO THE CENTER WEST 1/16 CORNER OF SAID SECTION 9; THENCE LEAVING SAID RIGHT OF WAY AND ALONG THE EAST WEST CENTER LINE OF SAID SECTION 9 N 89 DEGREES 48'57" W, A DISTANCE OF 1318.50 FEET TO THE EAST 1/4 CORNER OF SAID SECTION 8; THENCE ALONG THE EAST WEST CENTER LINE OF SAID SECTION 8 N 89 DEGREES 15'16" W, A DISTANCE OF 2735.32 FEET TO THE CENTER 1/4 CORNER OF SAID SECTION 8; THENCE CONTINUING ALONG THE EAST WEST CENTER LINE OF SAID SECTION 8 N 89 DEGREES 15'16" W, A DISTANCE OF 1363.17 FEET TO THE CENTER WEST 1/16 CORNER OF SAID SECTION 8; THENCE ALONG THE WEST LINE OF THE NE1/4NW1/4 OF SAID SECTION 8 N 01 DEGREES 13'52" E, A DISTANCE OF 1360.08 FEET TO THE NW1/16 CORNER OF SAID SECTION 8; THENCE ALONG THE SOUTH LINE OF THE NW1/4NW1/4 OF SAID SECTION 8 N 88 DEGREES 45'05" W, A DISTANCE OF 1367.66 FEET TO THE W1/16 CORNER COMMON TO SAID SECTIONS 7 AND 8; THENCE ALONG THE WEST LINE TO THE NW CORNER OF SAID SECTION 8 N 01 DEGREES 04'56" E, A DISTANCE OF 1369.90 FEET, TO THE POINT OF BEGINNING.

PARCEL # 2
A PARCEL OF LAND SITUATED IN SECTIONS 5 AND 6, TOWNSHIP 6 SOUTH RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF GARFIELD, STATE OF COLORADO, SAID PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT A CONCRETE RIGHT OF WAY MONUMENT FOUND ON THE SOUTHERLY RIGHT OF WAY OF THE DENVER AND RIO GRANDE WESTERN RAILROAD WHENCE THE BLM ALUM. CAP IN PLACE AND PROPERLY MARKED FOR THE SOUTHWEST CORNER OF SAID SECTION 5 BEARS S 23 DEGREES 29'57" W 1196.71 FEET; THENCE ALONG SAID SOUTHERLY RIGHT OF WAY THE FOLLOWING (2) COURSES: THENCE S 83 DEGREES 38'11" W 901.40 FEET; THENCE N 82 DEGREES 39'49" W 183.10 FEET; THENCE S 83 DEGREES 38'11" W 7.05 FEET LEAVING SAID SOUTHERLY RIGHT OF WAY; THENCE ALONG THE NORTHERLY RIGHT OF WAY OF THE MIDLAND AVE. RIGHT OF WAY ACQUISITION THE FOLLOWING (8) COURSES; THENCE S 42 DEGREES 36'53" E 17.15 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 710.00 FEET AND AN ARC LENGTH OF 677.30 FEET, THE CHORD OF WHICH BEARS S 69 DEGREES 59'38" E 651.91 FEET. THENCE N 82 DEGREES 43'44" E 80.93 FEET; THENCE ALONG THE ARC OF A CURVE TO THE LEFT HAVING A RADIUS OF 500.00 FEET AND AN ARC LENGTH OF 194.98 FEET, THE CHORD OF WHICH BEARS N 71 DEGREES 33'27" E 193.75 FEET; THENCE N 60 DEGREES 23'10" E 185.42 FEET; THENCE N 56 DEGREES 38'55" E 230.74 FEET; THENCE N 75 DEGREES 17'22" E 201.74 FEET; THENCE N 06 DEGREES 21'46" W 19.87 FEET LEAVING SAID NORTHERLY RIGHT OF WAY; THENCE ALONG SAID SOUTHERLY RIGHT OF WAY THE FOLLOWING (3) COURSES; THENCE S 83 DEGREES 38'11" W 132.73 FEET; THENCE S 86 DEGREES 30'11" W 200.30 FEET; THENCE S 83 DEGREES 38'11" W 98.60 FEET TO THE POINT OF BEGINNING.

PARCEL # 3
A PARCEL OF LAND SITUATED SOUTHERLY OF THE DENVER & RIO GRANDE WESTERN RAILROAD (D&RGW) RIGHT OF WAY AND NORTHERLY OF THE MIDLAND AVENUE ACQUISITION RIGHT OF WAY (MIDLAND ROW), LOCATED IN THE SW1/4NW1/4 OF SECTION 9, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF GARFIELD, STATE OF COLORADO. THE PARCEL BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID PARCEL WHENCE THE BEARS CAP FOUND AT THE CENTER WEST 1/16 CORNER OF SECTION 9 BEARS S 00 DEGREES 39'40" W 282.52 FEET; THENCE N 00 DEGREES 39'40" E 418.89 FEET, ALONG THE EASTERLY BOUNDARY OF SAID PARCEL ALSO BEING THE EASTERLY LINE OF THE SW1/4NW1/4 OF SAID SECTION 9 TO THE SOUTHERLY LINE OF SAID D&RGW RIGHT OF WAY; THENCE NORTHWESTERLY ALONG THE SAID RIGHT OF WAY THE FOLLOWING (4) COURSES; N 70 DEGREES 07'49" W 195.45 FEET; THENCE N 68 DEGREES 27'19" W 235.00 FEET; THENCE S 24 DEGREES 32'11" W 25.00

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EXHIBIT A

FEET; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 1507.40 FEET AND AN ARC DISTANCE OF 551.12 FEET, THE CHORD OF WHICH BEARS N 54 DEGREES 59'25" W 548.06 FEET; THENCE S 54 DEGREES 50'12" W 20.12 FEET ALONG THE WESTERLY BOUNDARY OF SAID PARCEL ALSO BEING THE NORTHERLY BOUNDARY OF THE MIDLAND ROW; THENCE SOUTHEASTERLY ALONG SAID NORTHERLY BONDARY THE FOLLOWING (10) COURSES; S 35 DEGREES 06'32" E 163.12 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 950.00 FEET AND AN ARC DISTANCE OF 250.62 FEET, THE CHORD OF WHICH BEARS S 42 DEGREES 39'59" E 249.89 FEET; THENCE S 50 DEGREES 13'26" E 91.26 FEET; THENCE S 39 DEGREES 46'34" W 10.00 FEET; THENCE S 50 DEGREES 13'26" E 18.00 FEET; THENCE N 39 DEGREES 46'34" E 10.00 FEET; THENCE S 50 DEGREES 13'26" E 259.08 FEET; THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 1050.00 FEET AND AN ARC DISTANCE OF 133.74 FEET, THE CHORD OF WHICH BEARS S 46 DEGREES 34'29" E 133.65 FEET; THENCE S 42 DEGREES 55'33" E 112.05 FEET; THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 715.00 FEET AND AN ARC DISTANCE OF 198.66 FEET, THE CHORD OF WHICH BEARS S 50 DEGREES 53'08" E 198.02 FEET TO THE POINT OF BEGINNING.

EXCEPTING THEREFROM:

A PARCEL OF LAND SITUATED IN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 9, TOWNSHIP 6 SOUTH, RANGE 89 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF GARFIELD, STATE OF COLORADO SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS

COMMENCING AT THE STREET MONUMENT AT THE INTERSECTION OF 8TH STREET AND MIDLAND AVENUE;
THENCE N 51 DEGREES 15'40" W. 681.29 FEET TO THE WEST CENTER SIXTEENTH CORNER OF SAID SECTION 9, THE TRUE POINT OF BEGINNING
THENCE N 88 DEGREES 48'57" W ALONG THE SOUTHERLY LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER 361.88 FEET
THENCE LEAVING SAID SOUTHERLY LINE N 33 DEGREES 57'41" W 159.48 FEET
THENCE N 50 DEGREES 07'49" W 109.72 FEET
THENCE N 19 DEGREES 54'08" W 208.92 FEET
THENCE N 12 DEGREES 15'32" W 109.78 FEET
THENCE N 17 DEGREES 34'08" E 81.85 FEET TO A POINT IN THE SOUTHERLY RIGHT OF WAY OF MIDLAND AVENUE;
THENCE THE FIVE (5) FOLLOWING COURSES ALONG SAID SOUTHERLY RIGHT OF WAY
1. S 78 DEGREES 26'55" E 27.55 FEET
2. ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 200.00 FEET, A CENTRAL ANGLE 12 DEGREES 18'18" AND A DISTANCE OF 42.95 FEET (CHORD BEARS S 72 DEGREES 17'46" E 42.87 FEET)
3. S 50 DEGREES 12'40" E 131.37 FEET
4. S 43 DEGREES 25'51" E 220.36 FEET
5. S 54 DEGREES 37'50" E 373.48 FEET
THENCE ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS OF 124.00 FEET, A CENTRAL ANGLE OF 16 DEGREES 35'59" AND A DISTANCE OF 35.93 FEET (CHORD BEARS S 32 DEGREES 55'06" W. 35.80 FEET) TO A POINT ON THE EASTERLY LINE OF SAID SOUTHWEST QUARTER OF THE NORTHWEST QUARTER
THENCE S 00 DEGREES 39'40" W ALONG SAID EASTERLY LINE 82.52 FEET TO THE TRUE POINT OF BEGINNING.

COUNTY OF GARFIELD
STATE OF COLORADO

Uncompahgre Engineering, LLC
P.O. Box 3945
Telluride, CO 81435
dballode@msn.com (970) 729-0683

September 21, 2020

To: Chris Hawkins
Alpine Planning LLC

RE: Kind Castle Development, Lot 11B, Filing 5, Glenwood Meadows, Glenwood Springs, CO

Dear Chris:

The proposed Kind Castle lot is within the master-planned Glenwood Meadows development. That development contemplated various areas that were to be developed and their master drainage plan had to assume that all of those lots were at ultimate build-out conditions. That's done so that individual lot owners and developers aren't required to upsize the storm drain system every time a new impervious area is built. It was already contemplated and accounted for.

This lot was part of the Glenwood Meadows development and, therefore, the run-off at its ultimate build-out condition was accounted for in the sizing of that storm drain system. The hydrologic and hydraulic details of the interior of the lot are not final, but the general drainage plan is as follows:

The final site plan will show a large landscaped buffer on all sides. This landscaping will have a fairly low run-off coefficient. Roof gutters and downspouts will be incorporated into the plan so that any concentrated water off of the new impervious building area can be intercepted and dissipated. The northern sidewalk will slope to a greenbelt along Wulfsohn Road. The run-off from the eastern sidewalk and parking lot will be directed to a curb inlet (a large capacity inlet) which will capture the required storm. That inlet will tie in to the existing master storm system via an additional storm junction box near the intersection of Wulfsohn and Flat Top.

Although the hydrology and hydraulic final calculations are not in their final form, this site is so small that the stormwater can easily be intercepted or mitigated. The eastern sidewalk and parking lot is only 0.13 acres. Using the Rational Method, a 25-year storm will generate approx. 0.5 cfs. I'm showing that amount draining to a 12" culvert with a capacity of 2.4 cfs. The roof will be mitigated in the landscaping.

I understand that the final design will require that the city stormwater standards must be followed and a full analysis must be completed. But this site generates so little water that I'd like to defer the full analysis until final landscaping and building details are available.

Please let me know if you need any additional information or clarification.

Sincerely,

David Ballode

David Ballode, P.E.
Uncompahgre Engineering, LLC

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: Planning File 27-20 Consideration of a Major Architectural Plan Review for the Expansion of the Iron Mountain Hot Springs including a new Entry Building, Mineral Pools, and an Enclosed Pool. The Application Consideration of an Alternative Equivalence Compliance for an Architectural Design that Meets the intent of 070.040.090-Non-residential Design Standards.

Action Requested: Approve with conditions the Major Site Architectural Plan review application for the expansion of the Iron Mountain Hot Springs; and

Approve the Alternative Equivalence compliance application for a building design that does not meet the specific requirement of the Non-residential and Mixed Use Building Design Standards (070.040.090(e)).

Department: Economic and Community Development

Presented By: Gretchen Ricehill, Assistant Director of Economic and Community Development

Background Info: At meetings on October 27 and November 9, 2020, the Planning and Zoning Commission conducted public hearings to consider a Major Site/Architectural Plan review application by the Iron Mountain Hot Springs which would allow its expansion south of the existing facility. Plans include
- A 12,000 square foot, two-story entrance building with offices, locker rooms, restaurant and retail uses;
- A freshwater pool in a 4,700 square foot building;
- 10 new mineral pools;
- 4 private cabanas each with small mineral pools;
- Improved and expanded parking area;
- Riverbank restoration; and
- 3 new mineral pools in the existing facility.

The application also includes an Alternative Equivalence Compliance application for a building design that meets the intent but not the letter of the Non-residential and Mixed Use Design standards. At issue is the proposed east elevation of the enclosed pool building and the building's east and west rooflines which exceed the allowed length without providing the code-required articulation. In this case, Iron Mountain Hot Springs proposes an earthen, landscaped roof which serves to break up the roof mass. With regard to the east elevation, the building is designed to work with the existing grade which slopes west towards the river. Along the east side, the building wall will actually be only 5 to 7 1/2 feet in height, and will have the appearance of a retaining wall.

For a complete analysis of the proposed project, refer to the attached November 9, 2020 Planning & Zoning Commission staff report.

Application materials which are also attached for review, include a project narrative, architectural and civil plans, landscaping plans, and related reports.

Issues: None.

Staff Recommendation: **ACTION ITEMS**

For each action item below, Council may approve, approve with conditions, or deny the application based on the applicable approval criteria. Council may also continue the hearing with a request for specific additional information.

Action 1: Consideration of a Major Site/Architectural Plan review for the expansion of Iron Mountain Hot Springs.

At their meeting held November 9, 2020, the Planning & Zoning Commission voted unanimously (5-0) to approve with conditions the Iron Mountain Hot Springs expansion.

Staff recommends that City Council uphold the Planning & Zoning Commission recommendation of approval with findings and conditions listed on page 10 and 11 of the Planning & Zoning Commission staff report dated November 9, 2020.

Action 2: Consideration of an Alternative Equivalence Compliance request for a building design that meets the intent but not the specific standards of 070.040.090(e)-nonresidential and mixed use building design standards.

At their meeting held November 9, 2020, the Planning & Zoning Commission voted unanimously (5-0) to approve the Alternative Equivalence Compliance application.

Staff recommends that City Council uphold the Planning & Zoning Commission recommendation of approval with findings listed on page 12 of the Planning & Zoning Commission staff report dated November 9, 2020.

NOTE: CITY COUNCIL WILL HEAR PRESENTATIONS AND TAKE INITIAL PUBLIC COMMENT BUT WILL NOT VOTE ON THIS ITEM AT ITS DECEMBER 3, 2020 MEETING. THE HEARING WILL BE CONTINUED TO A FUTURE DATE AT WHICH TIME COUNCIL WILL HEAR ADDITIONAL PUBLIC COMMENT AND VOTE ON THIS ITEM.

Planning and Zoning Commission Report – Revised/Updated

Date: ~~October 27, 2020~~ November 9, 2020
To: Planning and Zoning Commission
From: Gretchen Ricehill, Assistant Director Community Development Dept.
Subject: #27-20- Major Site/Architectural Plan Review and Alternative Equivalence Compliance Request

REQUEST	Consideration of a request to expand the existing Iron Mountain Hot Springs to include 13 new mineral pools; an enclosed freshwater pool in a 4,700 square foot building; a new 12,000 square foot two story entrance building; and riparian restoration. The application includes an Alternative Equivalence Compliance request for a building design that meets the intent but not the letter of Municipal Code requirements.
APPLICANT	Doug Pratte, Land Studio, INC
OWNER	Iron Mountain Hot Springs, LLC
ZONE	RE-Resort
LOCATION:	Address 281 Centennial Street PIN: 2185-092-00-031
SURROUNDING LAND USES	North: Interstate 70 South: Commercial/Office; CDOT maintenance facility; city park East: Interstate Highway 70; Commercial; Hotel; Tram West: Colorado River; Railroad; Industrial
LOT SIZE	10.25 acres

ACTION ITEMS

Action 1:

Consideration of a Major Site/Architectural Plan review for the expansion of Iron Mountain Hot Springs including a new 12,000 square foot entrance building, enclosed pool, and new mineral pools.

Staff recommends **approval with findings** and conditions on page 11 of this report. ~~on page 10 and conditions on page 10 and 11~~ of this report.

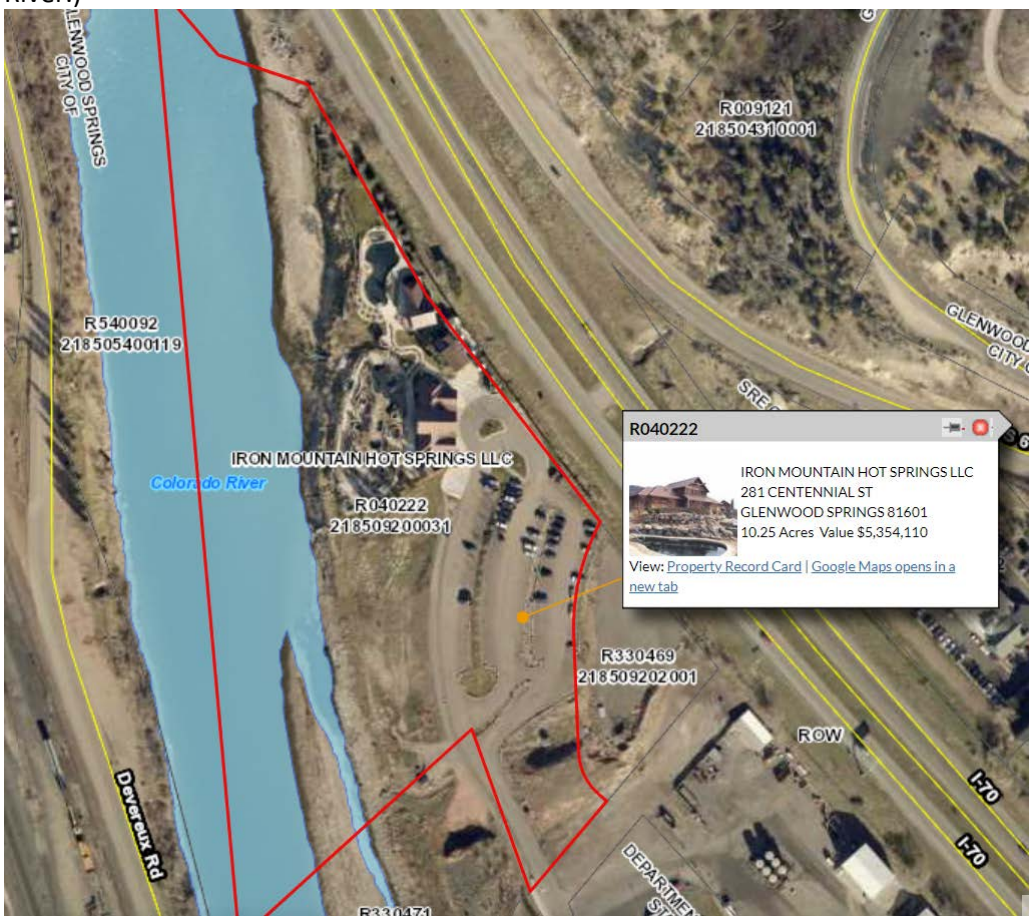
Action 2:

Consideration of an Alternative Equivalence Compliance request for a building design that meets the intent but not the specific standards of 070.040.090(e)-*Nonresidential and Mixed-Use Building Design Standards.*

Staff recommends **approval with findings found on page** 12 ~~11~~ of this report.

INTRODUCTION

The Iron Mountain Hot Springs (IMHS) was originally approved in 2014 and consisted of a 2-story entrance, bathhouse & office building, maintenance and snack buildings, mineral pools and a 90-space parking lot. The development occupies approximately the north half of the 10.25-acre parcel. (Note: as shown on the aerial below, much of the property's acreage includes the Colorado River.)



The proposed project involves expanding the existing Iron Mountain Hot Springs to improve a 146,940 square foot vacant area to the south of the existing development. Plans include-

- a 12,000 square foot, two story entrance building with offices, locker rooms, restaurant and retail uses;
- A freshwater pool in a 4,700 square foot building;
- 10 new mineral pools located south of the existing facility;
- 4 private cabanas each with small mineral pools;
- Improved parking area; and

The proposal also calls for adding three new mineral pools within the existing facility and performing significant riverbank restoration adjacent to the development site.

Application materials which are attached for review include a project narrative, architectural and civil plans, landscaping plan, and related reports.

REVIEW PROCESS
The proposed project expands the existing, approved development which according to Municipal Code section 070.060.030(i)(4), requires a new application that is reviewed in accordance with the full procedure applicable to the original application. Because the original application was a "major development", this proposed amendment will require both Planning and Zoning Commission and City Council review. The Commission will be a recommending body to Council.

REVIEW & ANALYSIS
In reviewing the site/architectural application, the Planning & Zoning Commission shall consider how the project conforms to the following approval criteria –

1. Consistency with the general purpose and intent of the Code
2. Consistency with dimensional, design, development, and all other standards of the Code;
3. Consistency with previously approved land use approval;
4. Consistency with the Comprehensive Plan and other adopted city policies and plans.

The applicant's narrative provides a detailed summary of the project and analysis of Municipal Code requirements. Below is a summary of the more important project components as they relate to the Code, approval criteria, and applicable prior approvals.

Sensitive Area Protection (070.040.020)
The project calls for constructing new mineral pools within 35 feet of the highwater line. Paragraph 24 of Section 070.040.020 (d)-*Development in Waterways and Areas of Special Flood Hazard* (commonly known as riparian zone regulations) was amended by City Council September 17, 2020 to increase and redefine setback requirements and to further define the amount and type of activity allowed/not allowed within the "riparian zone". Improvements, including the development of hot springs pools, which do not result in a material increase in water quality degradation, stream bank erosion, or reduction in the function and quality of a riparian area or wetland is exempt from permitting and engineering studies required elsewhere in the Code.

This project also includes riparian restoration along the shoreline adjacent to the proposed expansion. The applicant provided a Shoreline Enhancement Plan (attached) which shows planting of 50 native shrubs and 60 perennials and grasses. The plan did not include a planting key. Prior to submitting Construction Plans, staff recommends a condition requiring a plan revision to include a key for all trees, shrubs, and perennials/grasses. See additional discussion below- Landscaping & Common Open Space.

Common Open Space & Landscaping
Ten percent of the lot area is required to be common open space. Areas counted as open space include formal plantings and gardens; squares, courtyards, plazas; and required buffer and landscape areas. Similarly, in the RE-resort zoning district ten percent of the lot area is required to consist of landscaping. In this case, the site or lot area is just that portion of the property proposed for new development, or 146,940 square feet. This includes the new, expanded parking and the building and pool areas and is depicted on sheet 2 of the revised Landscaping Plan (dated 8-31-2020).

The project proposes 25,821 square feet of landscaping, and nearly 45,000 square feet of common open space. The latter area includes the ten new mineral pools as they can be classified as open space.

Proposed plantings include the code compliant number of trees, shrubs, and perennials. Note: these plantings are in addition to those shown on the shoreline restoration plan.

Off-street Parking

Number of Spaces Required

Outdoor recreation uses are required to provide 1 parking space per 400 sf of building area plus 1 parking space/ 10,000 sf of site area. For purposes of calculating parking "building area" the Code excludes non-habitable spaces such as utility areas, hallways, restrooms. For simplicity, for this application, staff used the entire building square footages.

Use	Square Footage	Required Parking
Current Development		90*
~~Current Entrance/office building~~	~~7,000~~	~~18~~
Proposed Entrance building:	12,000 sf	30
Proposed enclosed pool building:	4,700 sf	12
Existing site area:	77,025 sf (approx)	8
Proposed site area:	55,561 sf	6
TOTAL REQUIRED PARKING		~~74~~ 146 spaces

*Note: Under the prior code, parking for outdoor uses was calculated as 0.3 spaces per person to the maximum rated capacity.

The parking plan shows a total of 233 spaces which far exceeds the minimum requirement. The Code sets a maximum parking amount of 125% above the required parking. However, it is noted that in the future this parking lot will be shared by a hotel that is planned for construction on an adjoining parcel ~~this parking lot is shared by other related uses, namely the Tram, and future plans call for the construction of a hotel on an adjoining parcel.~~ The sufficiency and supply of parking will be reevaluated at the time the owner submits a development application for the hotel use. This reevaluation may require submission of a parking demand study.

Parking Lot Improvements

In 2014, the original hot springs development consisted of 90 parking spaces. The approved parking plan allowed IMHS to use a gravel surface: deferring paving until 2019. Earlier this year, IMHS was granted an extension to 2021. However, in granting the extension it was noted that IMHS had expanded the number of parking spaces beyond what was originally approved so, the extension was conditioned on IMHS submitting a formal parking expansion plan for review by December 31, 2020. This application suffices for that required plan.

As indicted above, the parking plan submitted with this application shows a total of 233 parking spaces in six rows. Center parking rows are separated by wide planting strips and terminus planting islands. One of the rows (developed in 2014) has been improved with landscaping, the other was developed later and is partially improved, as shown in the aerial at left.

In 2014 IMHS received a variance from parking lot landscaping requirements, allowing the use of a linear landscape island between parking rows rather than individual islands between each eight parking spaces. This center linear island also serves as a stormwater drainage basin for the parking lot.

Plans call for the eastern-most island to be expanded southward, and for both islands to continue functioning as drainage basins for the parking lot.

As the Commission may recall, earlier this year, the Code was recently amended to allow bioswales/linear planting islands as an alternative to constructing a landscape island every 8 parking spaces. Therefore, additional variances for the design, construction and expansion of the bioswale/linear planting island is not required.

The proposed landscaping within the parking lot amounts to nearly 27 percent of the lot area which exceeds the minimum 20 percent Code requirement. The plan also meets the Code required number of trees (30 trees required; 31 provided). Finally, the Code allows no more than 50 percent of the landscape strip to be non-living ground cover. Detailed parking lot landscaping plans were not included in this submission therefore staff has included a condition of approval that the applicant submit plans showing compliance with this Code provision.

Access & Circulation

The applicant submitted a traffic study dated April and July 2019 which included an analysis of the mixed use (Caverns Village) project; a 100-room hotel with 10 private mineral pools for hotel guest use only; and three additional pools at the existing IMHS site. The study included a series of measures to mitigate the development's impact on existing roadway infrastructure. Included were new sidewalks; improvements to Devereux Road, Centennial Street, and US 6 intersections; and removing certain sight obstructions at US 6 and Devereux. Making roadway and pedestrian improvements were a condition of the mixed use (Caverns Village) approval and the state access permit and will need to be completed before the city issues a certificate of occupancy for that building. The Caverns Village development was also approved with the condition that the owner

work with the city on designing a sidewalk or trail along the western edge of Two Rivers Park, and committing to finance 50 percent or up to $300,000 of the construction. The City's Engineering Department, CDOT and Caverns Village owner continue to work through the design details of all pedestrian and roadway improvements associated with the approved Caverns Village development.

Because this proposed development does not include the hotel, Dan Cokley the project engineer, provided an email to City Engineer Terri Partch stating that the ten mineral pools, constructed in advance of the hotel, will not change the typical trip generation rate of the Hotel Land Use as defined in the ITE Trip Generation Manual and as applied in the 2019 traffic study. In fact, he stated that the ten pools will generate fewer design hour trips than the future build out of the hotel. Although he also noted that the pools are planned to be part of the hotel property, staff believes that unlikely due to their location in relation to future hotel site. That said, an update of the traffic study will be required when the hotel development application is submitted. No additional pedestrian improvements are required as part of this development. Per the Engineering Standards, Devereux Road only requires a sidewalk on one side. As noted above, a sidewalk will be constructed as part of the previous Caverns Village approval.

Building Design

The new entrance building's design and materials complement existing IMHS buildings. Materials include a stone base, wood siding and decorative wall shingles, and a metal roof in an earth-tone palette. The tallest portion of the building is about 46 feet from grade to the highest roof ridge. The maximum height of gabled roofs is measured from grade to the midpoint of the ridge therefore, the building meets the maximum 60-foot height requirement of the RE-resort zoning district.

Proposed Entrance Building

The new enclosed, 4,700 square foot pool building, pictured below, is a single-story building with an earthen sloping roof. The primary wall material is stone with wood accents, and all but the east elevation includes large windows, most of which can be opened for indoor/outdoor use. The non-commercial design standards require at least three architectural elements each 30 feet of building length. Additionally, the code requires projections/recessions, dormers, and other changes in roof height every 50 feet of length to reduce the visual impact of roof mass. The applicant submitted an Alternative Equivalence Compliance request to address these deviations from the code for the ease elevation. See discussion and analysis below.

Proposed Enclosed Pool

ALTERNATIVE EQUIVALENCE COMPLIANCE

To encourage creative and unique design, the Code allows consideration of alternative designs that meet the overall intent but not the strict letter of the design standards through what is referred to as "alternative equivalence compliance". This is not a general waiver of regulations. Rather, this process authorizes a site-specific plan that is equal to or better than the strict application of the standard.

At issue is the proposed east elevation of enclosed pool building and the building's east and west rooflines.

The Nonresidential and Mixed-Use Building Design Standards (Section 070.040.090(e)) requires breaking up building elevations such that no wall section exceeds 30 feet without providing certain architectural elements including recessions/projections, window/doors, a change in texture or masonry patter, change in building height, and awnings or canopies. Additionally, the design standards require articulation when the roofline exceeds 50 feet in length.

The general intent of the design standards is to encourage creative design that, among other things-

- Enhances the visual and physical qualities of Glenwood Springs;
- Considers how the building relates to the site, neighboring properties, and the community;
- Provides strong pedestrian orientation by visually connecting the building's interior with the public exterior;
- Uses high quality, long lasting materials with proven ability to withstand Glenwood Springs' environment;
- Incorporates a palette of colors that adds visual interest to the development parcel and the is compatible with the surrounding natural environment.

And to discourage-

- Buildings that are out of scale or have little physical or visual connection to the street, neighboring properties, or the community;
- Building elements, materials, and colors that are out of character with the community;
- Large expanses of blank, flat wall surfaces.

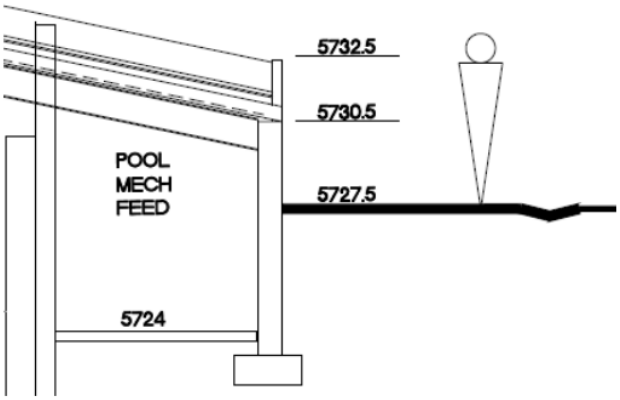
When considering design alternatives, the applicant needs to show that the proposed design –

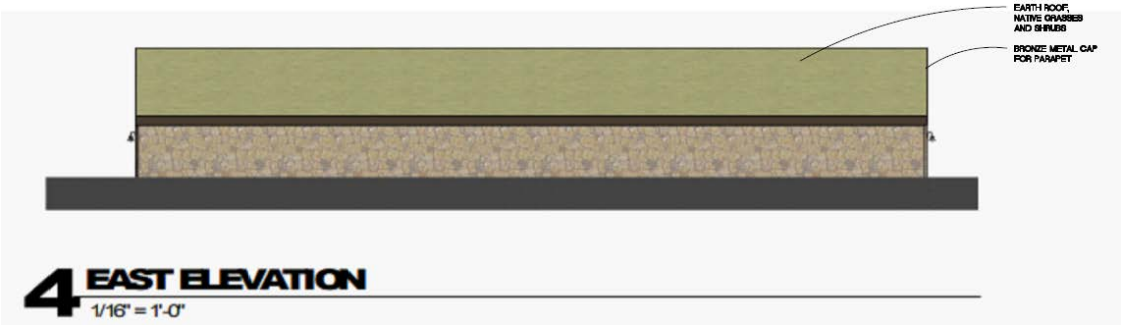
1. Achieves the intent of the subject standard to the same or better degree than the subject standard;
2. Advances the goals and policies of the Code to the same or better degree than the subject standard;
3. Results in benefits to the community that are equivalent to or exceed benefits associated with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

Triumph, the applicant's architect provided a narrative which addressed the benefits of the alternative design (refer to attached Alternative Compliance file).

East Elevation

The east elevation (facing the parking area) is 94'8" inches in length and does not incorporate the Code-required three architectural elements. The applicant's architect noted that the enclosed pool building is designed to work with the property's natural grade which slopes to the west. Tall, glazed windows/doors on the west and south elevations will open allowing for indoor/outdoor use. A mechanical room will be located along the shorter east elevation. From the sidewalk, paralleling the parking area, this east elevation will only be five to 7.5 feet in height. The wall material will be stone so will appear as a retaining wall to pedestrians. Visual impacts of this wall will be mitigated or softened by the earthen, landscaped roof (depicted below – see also example photograph) that gently slopes upward (2:12 pitch).





Roof Design

The enclosed pool building will feature an earthen roof, covered with 12 to 18 inches of soil, and

planted with native grasses. As far as staff is aware, this will be the first such roof in the city. The applicant's architect addressed the unique benefits of this design over the strict Code requirements. Important points include:

- The earthen, landscaped roof which slopes to the east and the parking lot, meets the Code intent of reducing the visual impact of roof mass. The native grasses and vegetation on the roof will be visible as guests arrive and provide a softer appearance than a flat, metal roof;

For reference only:

- The earthen roof will not result in glare as would a standard metal roof. The roof landscaping will blend rather than take away from the view of the Colorado River.

COMPREHENSIVE PLAN COMPLIANCE

The Comprehensive Plan is the community's vision for how it would like to develop into the future and provides a framework for decision making.

The area between the Colorado River, Interstate 70 and Devereux Road is identified on the future land use map as appropriate for commercial development. *"This land use designation provides a wide range of general retail goods and services for both regional and local markets, in attached and freestanding structures….."*

This development proposal which expands an existing tourism or resort use is supported in the Comprehensive Plan with the following goals:

- ***Retain, Enhance and Expand the Long-standing Tourist Market***
- ***Maintain Glenwood Springs as the regional tourism, retail, commercial and governmental center of Garfield County.***
- ***Promote long-term, sustainable, diverse economic development.***
- ***Maintain Glenwood Springs as the regional tourism, retail, commercial and governmental center of Garfield County.***
- ***Direct development to locations and building forms that are cost-effective to serve.***
- ***Preserve natural resources***

And, the shoreline restoration plan is supported with the goal: ***Preserve natural resources*** – *Preserve and enhance the river corridor environment*

REVIEWING AGENCY COMMENTS

Staff distributed the application to City departments and outside agencies for review and comment. We received comment from the Engineering and Public Works Departments which are attached for review. ~~The Planning Department also submitted comments that are attached.~~ The River Commission reviewed the riparian restoration plan at its November 4th meeting and offered the following general direction regarding river restoration efforts:

1. Encourage an increase in riparian tree plantings in the within 35 feet of the ordinary highwater mark.
2. Encourage efforts that increase water quality improvements for entire site drainage and especially within 35 feet of the ordinary highwater mark.
3. Encourage limiting disturbances within the area within 35 feet of the ordinary highwater mark as much as possible.

Regarding the River Commission recommendations: staff notes that the shoreline restoration plan already includes what appears to be about thirteen trees planted within the 35 -foot highwater setback. However as noted earlier in this report, the plan did not include a key to plant species, so staff has recommended a condition of approval (3e) which requires revisions and inclusion of a key. IMHS commented that their design team has selected plant materials (trees and shrubs) within the 35' ordinary highwater mark based on experience of what plant materials would survive as well as an inclusion of six shrub species known to encourage riparian restoration. Regardless, IMHS agreed to explore additional riparian trees in the 35' setback area per the River Commission's request.

Regarding water quality and drainage, IMHS clarified that the overall site was previously analyzed by SGM, Inc. to ensure that the quality of the Colorado River was not compromised due to stormwater runoff, and by Boundaries Unlimited in their Major Drainage Report for the IMHS expansion. IMHS has committed to improvements for the entire site to increase water quality per these studies.

Finally, with regard to limiting disturbance, IMHS's proposed mineral pool expansion is allowed to occur within the 35-foot highwater setback per the recent amendments to section 070.040.020(d)(24) "riparian setback" as long as the development does not result in a material increase in water quality degradation, stream bank erosion, or a reduction in the function and quality of the riparian area. As noted above, IMHS is committed to site improvements that improve water quality and it has committed to a shoreline restoration plan that improves the riparian area beyond the current disturbed site condition.

ACTION ITEMS AND STAFF RECOMMENDATIONS

This project requires that the Planning and Zoning Commission consider 2 separate actions.

Section 070.060.030(g)(1)d outlines the review and decision procedures for applications being considered by the Planning and Zoning Commission and/or City Council. The Commission shall approve, approve with conditions, or deny the application based on the applicable approval criteria listed in the application-specific procedures. The Commission may also continue the hearing with a request for specific additional information.

Action 1:

Consideration of a Major Site/Architectural Plan review for the expansion of Iron Mountain Hot Springs

including a new 12,000 square foot entrance building, enclosed pool, and new mineral pools.

Staff recommends **approval with findings and conditions on page 11 of this report.** ~~**on page 10 and conditions on page 10 and 11** of this report.~~

~~Recommended Findings~~

~~The proposed expansion is –~~

1. ~~Consist with the he general purpose and intent of the Code.~~
2. ~~Consist with dimensional, design, development, and all other standards of the Code.~~
3. ~~Consist with previously approved land use approval.~~
4. ~~Consist with the Comprehensive Plan and other adopted city policies and plans.~~

Recommended Findings:

The proposed expansion is consistent with -

1. The general purpose and intent of the Code.
2. Dimensional, design, development, and all other standards of the Code.
3. Previously approved land use approval.
4. The Comprehensive Plan and other adopted city policies and plans.

Recommended Conditions

1. The applicant shall comply with all verbal representations made in the public hearings, as outlined in all application materials, and/or as revised per conditions herein and approved by the Community Development Director.
2. The applicant shall obtain and abide by all necessary access permits required for the project from the Colorado Department of Transportation.
3. Prior to submitting a building and/or grading permit -
    a. The applicant shall submit a Construction Plans review application per Municipal Code Section 070.060.050(c). Plans shall address applicable conditions of approval and reviewing agency comments; and shall comply with the Engineering Standards and other applicable City standards and policies.
    b. The applicant shall enter into a Development Agreement that memorializes the development approvals and conditions associated with the project.
    c. The applicant shall execute a Cost Reimbursement agreement which reimburses any city attorney services (beyond two hours) and expenses related to this project.
    d. Revise landscape plans to include parking lot landscape strips/bioswales. Plans shall demonstrate compliance with Code requirements including a 50 percent limit on non-living ground covers.
    e. Revise landscape plans and shoreline restoration plans to add planting key for all plant species/types. Explore additional tree plantings within the 35-foot ordinary highwater setback. Additional tree plantings shall be subject to Community Development Director review and approval.
4. Any modifications of the approved plans or condition of approval shall require review and approval of the Community Development Director for compliance with applicable Municipal Code requirements. Modifications may require a new application or amendment of the approved plans per Section 070.060.030(i)(4).

Action 2:

Consideration of an Alternative Equivalence Compliance request for a building design that meets the intent but not the specific standards of 070.040.090(e)-*Nonresidential and Mixed-Use Building Design Standards.*

Staff recommends **approval with findings** found on page **12** ~~11~~ of this report.

Recommended Findings

The alternative design:

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

CITY OF GLENWOOD SPRINGS

Engineering Department

Engineering Department **Ryan Johnson** **Asst. City Engineer**	**Date: September 3, 2020** **To: Community Development** **Re: Iron Mountain Hot Springs – Major Site Plan Submittal**

Please see the following comments from Engineering for the Major Site Plan Submittal. These comments are based on the information provided. Additional comments may be made at the time the development plan and/or the construction documents are submitted.

1. The civil plans indicate connection to storm sewer facilities that are part of the Lift Station Scope of work. Is the lift station construction anticipated before the construction of these facilities?

2. Show the 100-year floodplain line on the civil plans.

3. Better define (hatch) the proposed impervious paving areas adjacent to the pools and buildings. There looks to be a substantial amount of impervious area that it is not clear where it is draining to. Impervious areas will need to have WQ treatment prior to discharge to the Colorado river.

4. Provide the river restoration plans anticipated for this scope of work.

    a. How do these restoration plans correspond in regard to grading to the proposed site and pools? The grading plans should be coordinated between scopes of work.

5. The site has some significant changes to what was approved in the recent traffic report and approved CDOT access permit. A revised traffic analysis should be completed to evaluate if there are any increase in traffic demands. A revised access permit with CDOT may be necessary.

6. The proposed parking seems inadequate for the proposed improvements. There are times that the existing spaces are full in current conditions. It would be difficult to assume that the addition of 108 additional spaces would be sufficient for the addition of potentially 100 rooms and all of the proposed improvements at the pool that could draw more capacity.

    a. The site does not appear to meet ADA parking requirements. If the hotel is not considered, 10 ADA spaces are required. If the hotel is considered, 11 ADA spaces are required.

7. Will this work require 404 permitting? The ordinary high-water elevation is not indicated on the sketch plan. If so, provide the acquired 404 permit submittals to the engineering department.

Items to be addressed prior to Grading/Building Permit issuance:

1. It appears that the combined development improvements will be over one (1) acre and will require a Construction Stormwater Discharges permit from CDPHE.

2. This proposed scope of work will require its own drainage compliance letter/report and address the site drainage areas that are being affected by the proposed work south of the master drainage report basin N2. This drainage report should demonstrate compliance with the current Master drainage report from the site developed by Boundaries Unlimited.

3. A grading permit will be required for the proposed improvements

4. If a revised CDOT Access Permit is required, it should be approved prior to any work taking place on site.

Information only/Requirements Prior to Certificate of Occupancy:

1. The City will require a maintenance plan and agreement with the development for the detention and debris system/s, ***if not already in place***. If the system/s are not being maintained property and having a negative effect on downstream facilities, the City will need access to perform the maintenance and back charge the facility owner.

2. Site improvements will require a certification letter from the design engineer that verifies that all improvements were constructed per the approved plan.

3. Record (as-built) drawings will be required to be submitted to the City along with electronic drawings (CAD).

From: Matthew Langhorst <matthew.langhorst@cogs.us>
Sent: Monday, August 31, 2020 3:27 PM
To: Trent Hyatt <trent.hyatt@cogs.us>; Mike Hoffman <mike.hoffman@cogs.us>; Doug Hazzard <doug.hazzard@cogs.us>; Michael Gardner <michael.gardner@cogs.us>; Gretchen E Ricehill <gretchen.ricehill@cogs.us>
Subject: RE: August 31 Department Review Meeting

- Iron Mountain Hot Springs
    - What is the estimated domestic water consumption for the project in Gallons Per Day?
    - Developer should fill out the Power Load form attached so the City can determine electrical needs, to include the new lift station.
    - Please add Boundaries Unlimited sewer easement to the new Lift Station location for reference.
    - The existing water quality pond will be removed with the new lift station design, where is the WQ pond being replaced at and what is the new WQ system look like with additional WQ needs due to the proposed site?
    - All new sewer services are required to have a sewer backflow preventor installed on private property and maintained by the property owner.
    - Utility Contacts: Public Works: Matthew Langhorst. Sewer/Water: Mike Hoffman. The engineer may want to check the BH contact.
    - Coordinate sewer and water taps with Mike Hoffman, not Matt Langhorst as noted.
    - Please coordinate with Mike Gardner for FO line installation to the new buildings, CBN.
    - Any fire sprinkler system will need to meet the NFPA 24 design requirements.
        - Here are items that we will need to see on the plans before we can approve:
            - Since the new tap and service will be used for combined potable/fire, the service will need to be designed, installed, and tested to meet NFPA 24 requirements. Prior to construction, an engineered detail of the service line must be submitted to the City for review and approval. At a minimum, the detail must show the following:
                1) A plan and profile view of the piping alignments extending from the tap location to the building interior penetration.
                2) Materials for construction.
                3) Thrust restraint locations and specifications.
                4) A comment indicating that the design conforms to all NFPA 24 requirements .
                5) A note indicating that the service line must be pressure- and flow-tested in accordance with NFPA 24.
                6) The stamp and signature of the Professional Engineer (PE) certifying the design.
                7) The applicant is responsible for providing the City with a signed copy of the completed “Contractor’s Material and Testing Certificate for Underground Piping” form (attached) prior to issuance of a Certificate of Occupancy. This form certifies that the service line was designed, installed, and tested in accordance with all NFPA 24 requirements.

Attachments:

- Load Information
- Contractor’s Material and Testing Certificate for Underground Piping

CITY OF GLENWOOD SPRINGS
REQUEST FOR LOAD INFORMATION

Owner's Name: _____ Date: _____

Address: _____

Person Contact: _____

Telephone #: _____

Building Classification:

□ Residential □ Industrial

□ Commercial □ Other _____

Building Features: Square Footage: _____

Type Use (Office, Retail Store, etc.): _____

Electrical Data: Voltage Request:

□ 120/240, 1□, 3-w □ 277/480, 3□, 4-w

□ 120/208, 3□, 4-w □ Other _____

Secondary Main Breaker Size:

□ 100-amp □ 400 amp

□ 200 amp □ Other _____

Load Profile: Total Connected KW: _____

Estimated Maximum Demand KW: _____

Transformer Request Size KVA: _____

Equipment List:

Heat: □ Gas □ Electric □ Other _____

Air Conditioning: □ Yes □ No

Largest Motor Load, HP _____ Qty _____

Largest Resistance Load, KW _____ Qty _____

Utility Service Information

Electrical Summary:

Transformer Size: _____KVA

Service Voltage: _____

Meter Classification:

Voltage Configuration: _____ Amp Classification: _____

Instrument Rated (CTS): _____ Meter Type: _____

Fault Current: _____

Contractor's Material and Test Certificate for Underground Piping

PROCEDURE

Upon completion of work, inspection and tests shall be made by the contractor's representative and witnessed by an owner's representative. All defects shall be corrected and system left in service before contractor's personnel finally leave the job.

A certificate shall be filled out and signed by both representatives. Copies shall be prepared for approving authorities, owners, and contractor. It is understood the owner's representative's signature in no way prejudices any claim against contractor for faulty material, poor workmanship, or failure to comply with approving authority's requirements or local ordinances.

Property name		Date
Property address		
Plans	Accepted by approving authorities (names)	
	Address	
	Installation conforms to accepted plans	❑ Yes ❑ No
	Equipment used is approved If no, state deviations	❑ Yes ❑ No
Instructions	Has person in charge of fire equipment been instructed as to location of control valves and care and maintenance of this new equipment? If no, explain	❑ Yes ❑ No
	Have copies of appropriate instructions and care and maintenance charts been left on premises? If no, explain	❑ Yes ❑ No
Location	Supplies buildings	
Underground pipes and joints	Pipe types and class	Type joint
	Pipe conforms to _____ standard Fittings conform to _____ standard If no, explain	❑ Yes ❑ No ❑ Yes ❑ No
	Joints needing anchorage clamped, strapped, or blocked in accordance with _____ standard If no, explain	❑ Yes ❑ No
Test description	Flushing: Flow the required rate until water is clear as indicated by no collection of foreign material in burlap bags at outlets such as hydrants and blow-offs. Flush at one of the flow rates as specified in 10.10.2.1.3. Hydrostatic: All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi (13.8 bar) or 50 psi (3.5 bar) in excess of the system working pressure, whichever is greater, and shall maintain that pressure ±5 psi (0.35 bar) for 2 hours. Hydrostatic Testing Allowance: Where additional water is added to the system to maintain the test pressures required by 10.10.2.2.1, the amount of water shall be measured and shall not exceed the limits of the following equation (for metric equation, see 10.10.2.2.6): $L = \frac{SD\sqrt{P}}{148{,}000}$ L = testing allowance (makeup water), in gallons per hour S = length of pipe tested, in feet D = nominal diameter of the pipe, in inches P = average test pressure during the hydrostatic test, in pounds per square inch (gauge)	
Flushing tests	New underground piping flushed according to _____ standard by (company) If no, explain	❑ Yes ❑ No
	How flushing flow was obtained ❑ Public water ❑ Tank or reservoir ❑ Fire pump	Through what type opening ❑ Hydrant butt ❑ Open pipe
	Lead-ins flushed according to _____ standard by (company) If no, explain	❑ Yes ❑ No
	How flushing flow was obtained ❑ Public water ❑ Tank or reservoir ❑ Fire pump	Through what type opening ❑ Y connection to flange and spigot ❑ Open pipe

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FIGURE 10.10.1 Sample of Contractor's Material and Test Certificate for Underground Piping.

Hydrostatic test	All new underground piping hydrostatically tested at _____ psi for _____ hours	Joints covered ❑ Yes ❑ No
Leakage test	Total amount of leakage measured _____ gallons _____ hours	
	Allowable leakage _____ gallons _____ hours	
Forward flow test of backflow preventer	Foward flow test performed in accordance with 10.10.2.5.2: ❑ Yes ❑ No	
Hydrants	Number installed / Type and make	All operate satisfactorily ❑ Yes ❑ No
Control valves	Water control valves left wide open If no, state reason ❑ Yes ❑ No	
	Hose threads of fire department connections and hydrants interchangeable with those of fire department answering alarm ❑ Yes ❑ No	
Remarks	Date left in service	
Signatures	Name of installing contractor	
	Tests witnessed by	
	For property owner (signed) / Title / Date	
	For installing contractor (signed) / Title / Date	

Additional explanation and notes

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FIGURE 10.10.1 *Continued*

Iron Mountain Hot Springs Expansion

Glenwood Springs, Colorado

Major Site/Architectural Plan Review

Parcel ID# 218509200031

Parcel 3 (Tracts 1, 2, 3, & 4)
Iron Mountain Hot Springs Parcels
Subdivision Exemption Plat for Lot Line Adjustment

Updated August 7, 2020 for:
Iron Mountain Hot Springs LLC
281 Centennial Street
Glenwood Springs, CO 81601

Prepared by:
The Land Studio, Inc.
365 River Bend Way
Glenwood Springs, CO 81601
Phone: (970) 927-3690
landstudio2@comcast.net

Iron Mountain Hot Springs Expansion
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Land Use Application Form

LAND USE APPLICATION
City of Glenwood Springs
Economic and Community Development Dept.
101 West 8th Street
Glenwood Springs, CO 81601
970-384-6411

Ordinance Amendments		Development Permits	
☐	Rezoning		Site/Architectural Plan Review
☐	Rezoning to Planned Unit Development (PUD)	☐	Administrative
☐	Annexation	☐	Minor
☐	Condominiumization	☒	Major
☐	Annexation	☐	Master Plan
☐	Street Vacation	☐	Construction Plans
☐		☐	Location & Extent
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Other Land Use Applications		☐	Appeal
☐	Outdoor Seating		

Applicant/Property Owner Information:			
The Land Studio, Inc. / Doug Pratte		Iron Mountain Hot Springs, LLC / Steve Beckley	
Applicant		Owner	
Planner / Representative			
Relationship to Owner		Owner	
365 River Bend Way, Glenwood Springs, 81601		281 Centennial Street, Glenwood Springs, CO	
Applicant Address		Owner Address	
970-927-3690	landstudio2@comcast.net	970-618-7127	sbeckley@glenwoodcaverns.com
Phone	Email Address	Phone	Email Address

Property Information:	
281 Centennial St, Glenwood Springs, 81601	218509200031
Address	Parcel Number
Iron Mountain Hot Springs Parcels Subdivision Exemption Plat	Parcel 3 (Tract 1, 2, 3, and 4)
Subdivision	Lot and Block Number
Resort (RE) District	Vacant and Existing IMHS & Parking
Zone District	Existing Land Use

General Project Description:
Expansion of Iron Mountain Hot Springs including new entry building, retail, locker rooms, offices, outdoor pools, enclosed pool, food service, cabanas, river bank restoration, landscape, and reconfigured parking.

Signatures:		
The owner or applicant must be present at the hearing. All public hearings must be property noticed according to G.S.M.C. Section 070.010.030. Signatures of all owners of the property must appear before the application is accepted. Partnerships or corporations may have the authorized general partner or corporate officer sign the application. (Attach additional incorporation documents if necessary.) I declare under the penalty of perjury that the above information is true and correct to the best of my knowledge.		7-28-2020
	Applicant	Date
		7-28-2020
	Owner	Date

Project Description

The Application

Iron Mountain Hot Springs, LLC is submitting a request for Major Site/Architectural Plan Review and a Variance request to the City of Glenwood Springs for expansion of Iron Mountain Hot Springs. The Applicant wishes to expand the existing spa facility to include a new entry building with retail space and food service, including additional men's and women's locker rooms with sauna facilities. The expanded facility will have access control and be a separate experience from the existing pools. The expansion will provide a limited number of entries to keep the environment tranquil and restorative. The Variance request is to provide alternative compliance for the landscape islands required in the IMHS parking lot.

The new expanded area includes ten outdoor mineral pools, and an enclosed heated freshwater pool with an attached hot tub. There will also be a set of private cabanas that have small mineral pools within. Three new mineral pools will also be added to the existing Iron Mountain Hot Springs area. The expansion project will include a comprehensive riverbank restoration plan along the entire Iron Mountain Hot Springs property, which will be incorporated into the new landscape features for the expanded facility. Lastly the parking area will be reconfigured to improve traffic flow, capacity and accessibility and the lot will be paved with asphalt. The Iron Mountain Hot Springs Master Plan, attached as an Exhibit, illustrates all of these improvements in context with existing facilities and the approve Caverns Village Project.

The Development

With close-proximity to the existing Iron Mountain Hot Springs bathhouse, the new development will be an expansion to those services allowing for better points of entrance and egress from the facility. The plan proposes to add a 12,000 SF two level building directly south of existing Iron Mountain Hot Springs structures. A second building will be an enclosed pool structure with 4,700 SF under roof. The hot springs pool count in the expansion is increasing by ten new spas tucked in along the river. Four self-contained Cabanas will provide a private experience for special occasions.

The Applicant believes the proposed plan represents a meaningful improvement to the currently constructed buildings, allowing for entrance to the site through the new structure and exiting through the current path. The new pool and spas will allow for an enhanced guest experience while visiting the resort.

Parking will be shared in the new proposed asphalt paved lot east of the proposed expansion. This parking lot will be shared between the existing facility, the proposed hot springs expansion, and a future hotel.

Overview of Building Design

The new buildings are designed and located to work with the natural grade of the site. Entrance to the resort will now be through the main level, check in to existing spas OR check in and downstairs to the new addition. On this level will be a restaurant/seating, and associated retail. There is an upper floor that will house offices and storage. At the lower level will be walk out for both men's and women's locker rooms and a large mechanical space for the new uses. The Entrance building is planned to be constructed as a wood-framed structure. The lower level will consist of a slab on grade foundation. The second and third floors will be wood framed with 1 1⁄2" of lite weight concrete for code separation and quiet construction.

Exterior materials will be specified to complement the existing palette of the bath house. A stone base is proposed varying in height for building base protection and accents around the structure. Siding material will 1x8 natural channel cedar siding with 2x trims. Shaketown shingles will be installed on the second floor exterior behind heavy timber trusses. The fascia will be 2"x12" with metal gutters and downspouts painted to match. Roofing will be standing seam metal with color to match existing buildings. Aluminum clad windows/doors will create a color contrast.

The new pool building will be approximately 4,700 SF with a single use of a new pool. The large format doors to the south and west will open to allow for indoor/outdoor use. A continuous mechanical room will run along the east side to feed the pool and new spas. The roof is designed with earth cover, this will be 12-18" of soil cover for native grasses. The pool building will be a steel structure to carry the roof load and large spans for the intended use. Expansive glazing for solar gain and guest experience will be a main part of the exterior make up.

The Site

Pathways and seating areas will be a combination of colored/stamped concrete and flagstone. The proposed landscape will complement the existing landscape materials and transition to riverbank restoration and riparian habitat upgrades below the ten new pools to the Colorado River down the slope.

The Landscape Plans and Civil Engineering Plans attached as an Exhibit illustrate the approved parking and access extents as shown on the "Recently Constructed Site Features" plan sheet prepared by SGM and dated 06/30/2015. The previously approved and constructed parking area contains 94 parking spaces including four accessible spaces.

The expanded Iron Mountain Hot Springs proposes 139 additional parking spaces including three accessible parking spaces with two of these sized to accommodate vans. In total Iron Mountain Hot Springs will provide 233 parking spaces with seven accessible parking spaces, which includes two accessible van spaces. The Applicant agrees to monitor parking so that when the parking lot is full no additional vehicles will be allowed at the facility, and no additional guests will be allowed to enter. SGM has prepared a Traffic Impact Study that is attached as an Exhibit that also addresses traffic and parking.

Ownership

Special Warranty Deeds and a Title Commitment are included as an Exhibit to this Application as proof of ownership.

Public Notice

Notice will be mailed to property owners within 300 feet and the mineral owners and lessees on the property.

CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO 81601

COLO RIVER WATER CON DIST
PO BOX 1120
GLENWOOD SPRINGS, CO 81602

TRPP AT 300, LLC
PO BOX 2021
GLENWOOD SPRINGS, CO 81602

1303 GRAND, LLC
PO BOX 1576
GLENWOOD SPRINGS, CO 81602

TWO RIVERS PP OFFICE CONDO ASSOC
PO BOX 1576
GLENWOOD SPRINGS, CO 81602

274 MOUNTAIN SHADOWS DR
GLENWOOD SPRINGS, CO 81601

D&S FAMILY HOLDINGS LLC & HALVERSON TRUST
PO BOX 3780
EAGLE, CO 81631

SRE COLORADO 4 RF LLC
4401 COLWICK ROAD
CHARLOTTE, NC 28211

CDOT
4201 E. ARKANSAS AVE
DENVER, CO 80222

CERTIFICATION OF NOTICE PURSUANT TO C.R.S. 24-65.5-103

I hereby affirm that an examination of the records in the office of the County Clerk and Recorder was made in accordance with C.R.S. 24-65.5-103 et seq. and

(Check applicable box and fill in the information)

☒ After such examination on Nov. 8, 2019, which is not less than thirty (30) days before the date scheduled for the initial public hearing on the application for the development known as _____, notice was sent, by certified mail, return receipt requested, or by a nationally recognized overnight carrier, to the below-named mineral right owner(s) as listed in the records of the County Clerk and Recorder, containing the time and place of the initial public hearing, and contact information of the Community Development Department, the nature of the hearing, the location and legal description of the property that is the subject of the hearing, and the name of the applicant(s). Notice was also sent, by certified mail, return receipt requested, or by a nationally recognized overnight carrier, to the City of Glenwood Springs, containing the name and address of the mineral right owners to whom the foregoing notice was sent. A copy of the notices sent is attached hereto.

Listing of Mineral Right Owner(s)	Address
None	

☒ Such records do not identify any mineral right owners; or

☐ The mineral right owner(s) have provided a signed waiver of the right to notice in writing, a copy of which is attached hereto.

Name: Mogli Cooper
Applicant Signature

Surface Owner's Signature

Iron Mountain Hot Springs LLC, by Mogli Cooper
Print Name

Print Name

1

Subscribed and sworn to before me, a notary public in and for the County of Garfield, State of Colorado, this 8th day of November 2019, A.D.

Witness my hand and official seal

JULIE J. PRATTE
(SEAL) Notary Public
State of Colorado
Notary ID # 19974001570
My Commission Expires 02-11-2021

Julie J Pratte
Notary Public

My commission expires: 2-11-2021

FAILURE TO PROVIDE THIS CERTIFICATION, INDICATING COMPLIANCE WITH C.R.S. 24-65.5-103 ET SEQ., IS LIKELY TO RESULT IN A CONTINUANCE OF THE HEARING.

2

Code Compliance

070.020.130: Zone District, Resort (RE) District

Dimensional Standards:	
Lot area (sq ft)	none
Landscaped area	10%
Setbacks, Front, min	5 ft
Front, max	60 ft
Side, min	5 ft
Rear, min	10 ft
Building height	60 ft.

The proposed Iron Mountain Hot Springs project complies with the above setbacks, which have been illustrated on the Site Plan attached as an Exhibit to this Application.

The maximum building height is 46'-0" at the highest ridge, west side of second floor to new grade. This complies with the allowed maximum building height of 60 ft.

Minimum Landscaped Area is 12,994 sq. ft. Refer to the Landscape Plan attached as an Exhibit regarding conformance to this standard.

070.030.020: Table of Allowed Uses

The proposed entry building, retail space, locker rooms, offices, outdoor pools, indoor pool, food service, and cabanas are permitted uses by right in the RE zone district.

070.040.020(d)(24): Development in Waterways and Areas of Special Flood Hazard.

Article 070.040.020(d)(24) currently states that no improvement, building, structure, excavation, dumping or backfill shall be placed, built, undertaken or approved within a thirty-foot setback area horizontally from the high water mark of any river or live stream, except for bridges, paths for non-motorized use, irrigation structures or flood control and erosion protection devices.

The Applicant is requesting a variance from the requirement of Municipal Code Section 070.040.020(d)(24) Development in Waterways and Areas of Special Flood Hazard to allow mineral pools in the 30' set back from high water line at Iron Mountain Hot Springs. See Variance Request in the Table of Contents for the Applicant's demonstration of compliance with the Variance Criteria contained in the Section 070.060.070(a)(3)(e.)(2) of the Municipal Code.

This Application does contain new mineral pools and paths that encroach on the proposed thirty foot setback from the ordinary high-water mark. To address water quality, stream bank erosion, and riparian area quality, the Applicant has obtained a U.S.

Army Corps of Engineers Clean Water Act Section 404 Permit that proposes shoreline enhancements at Iron Mountain Hot Springs to include grading, bank stabilization, cobble removal, and riparian vegetation enhancements in order to create riverbank protection, improve public safety, and enhance the riparian zone. The Army Corps of Engineers Clean Water Act Section 404 Application and Permit is attached as an Exhibit to this document.

070.040.030 (e): Site Development and Improvement Standards

(1) Drainage Plan.
A Major Drainage Report for Iron Mountain Hot Springs has been prepared by Boundaries Unlimited Inc. and is included as an Exhibit to this Application.

(3) Lot and Block Design.
The project has been designed in conformance with applicable zone district regulations, refer to the Site Plan attached as an Exhibit.

(5) Water Distribution.
A water distribution plan has been included in the Civil Engineering Plans included as an Exhibit to this Application.

(6) Wastewater Collection
A wastewater collection system plan has been included in the Civil Engineering Plans included as an Exhibit to this Application.

(7) Underground Utilities
All Utilities are located on the Civil Engineering Plans included as an Exhibit to this Application.

(5) Fire and Emergency Services Impact Fee
The Applicant agrees to the City calculations for emergency service impact fees.

070.040.040: Common Open Space

Minimum Total Common Open Space required is 10% of 146,940 sq. ft., or 14,694 sq. ft.
Common Open Space provided is 44,927 sq. ft.

Buildings = 10,634 sq. ft.
Parking = 74,385 sq. ft.
Total Non-Open Space = 85,019 sq. ft.
Total Open Space provided = 44,927 sq. ft. or 65%

070.040.050 (c): Landscaping, Screening, and Fencing

(1) Minimum Landscape Site Area required is 10% of 146,940 sq. ft., or 14,694 sq. ft. Landscape Site Area provided, not including parking landscape is 25,821 sq. ft.
(2) Type and amount of Plant Material.

Required perennials 1 per 50 sq. ft. of required landscaped area
Required shrubs 1 per 100 sq. ft. of required landscaped area
Required trees 1 per 400 sq. ft of required landscape area in addition to those required for parking areas.

The minimum number of trees required is 36.
The minimum number of shrubs required is 142.
The minimum number of perennials required is 284.

The Applicant has obtained a U.S. Army Corps of Engineers Clean Water Act Section 404 Permit that proposes shoreline enhancements at Iron Mountain Hot Springs to include grading, bank stabilization, cobble removal, and riparian vegetation enhancements in order to create riverbank protection, improve public safety, and enhance the riparian zone. The Army Corps of Engineers Clean Water Act Section 404 Application and Permit is attached as an Exhibit to this document.

070.040.060 (h) 6: Parking Area Landscaping

Parking area landscaping requirements for this development equal 20 percent of the total surface parking area (70,984 sq. ft) for a total of 14,197 sq. ft. of required landscaping. The proposed parking area landscaping covers 19,151 sq.ft.

Parking Area landscaping requirements also identify that trees shall be planted at a rate of 1 tree per 8 parking spaces and shall be located throughout the parking lot such that at maturity, the parking lot will be shaded, to the greatest extent practicable. Additional parking area screening shall be provided pursuant to 070.040.060(h)(6)(c.)(3), Screening Parking Areas and Drive Aisle. To meet this requirement the Applicant proposes to utilize 10'-15' wide parking islands between the parking bays in the 233 car parking lot. These large islands have been planted with a total of 31 trees, which is one tree per 7.5 parking spaces. These islands have also been planted with shrubs for additional screening. These trees and shrubs will be maintained in good health or replaced as necessary.

Refer to the Landscape Plan attached as an Exhibit to this Application for the locations of the existing plant materials and the species, sizes, and locations of the proposed plant materials.

070.040.060 (c): Off-Street Parking and Loading

Iron Mountain Hot Springs will have 233 existing and proposed parking spaces including seven accessible parking spaces with two of these sized to accommodate vans. The Applicant agrees to monitor parking so that when the parking lot is full no additional vehicles will be allowed at the facility, and no additional guests will be allowed to enter. SGM has prepared a Traffic Impact Study that is attached as an Exhibit that also addresses traffic and parking.

070.040.060 (f): Bicycle Parking

The number of bicycle parking spaces required is 12. The Applicant has provided 18 bicycle parking spaces, which exceeds the requirement of this subsection.

070.040.070: Access and Circulation

SGM has prepared the Iron Mountain Hot Springs Traffic Study, which is attached as an Exhibit. This study is prepared as a CDOT Level Three Traffic Impact Study and provides estimates for peak hour traffic generation for the Iron Mountain Hot Springs (IMHS) property development, proposed to be constructed at the north end of Centennial Street in Glenwood Springs, Colorado. The purpose of the traffic analysis is to document the existing traffic conditions in the vicinity of the site, analyze the trip generation and trip distribution of the proposed development, estimate traffic volumes to the 20-year planning horizon, and analyze the intersections within the study area for operational impacts to the highway or city road system. Access to the site will continue to be provided from Centennial Street and the majority of traffic will use Devereux Road and US 6 for primary access.

070.040.090: Nonresidential and Mixed-Use Site and Building Design

As mentioned earlier in the Project Description, the Applicant wishes to expand the existing spa facility to include a new entry building with retail space and food service, including additional men's and women's locker rooms with sauna facilities. The expanded facility will have access control and be a separate experience from the existing pools. The expansion will provide a limited number of entries to keep the environment tranquil and restorative.

The buildings are designed and located to work with the natural grade of the site. Entrance to the resort will now be through the main level, check in to existing spas OR check in and downstairs to the new addition. On this level will be a restaurant/seating, and associated retail. There is an upper floor that will house offices and storage. At the lower level will be walk out for both men's and women's locker rooms and a large

mechanical space for the new uses. The Entrance building is planned to be constructed as a wood-framed structure. The lower level will consist of a slab on grade foundation. The second and third floors will be wood framed with 1 1⁄2" of lite weight concrete for code separation and quiet construction.

Exterior materials will be specified to complement the existing palette of the bath house. A stone base is proposed varying in height for building base protection and accents around the structure. Siding material will 1"x8" natural channel cedar siding with 2"x trims. Shaketown shingles will be installed on the second floor exterior behind heavy timber trusses. The fascia will be 2"x12" with metal gutters and downspouts painted to match. Roofing will be standing seam metal with color to match existing buildings. Aluminum clad windows/doors will create a color contrast.

The new pool building will be approximately 4,700 SF with a single use of a new pool. The large format doors to the south and west will open to allow for indoor/outdoor use. A continuous mechanical room will run along the east side to feed the pool and new spas. The roof is designed with earth cover, this will be 12"-18" of soil cover for native grasses. The pool building will be a steel structure to carry the roof load and large spans for the intended use. Expansive glazing for solar gain and guest experience will be a main part of the exterior make up.

For details related to the above narrative refer to the Architectural Plans attached as an Exhibit to this Application.

070.040.100 (f): Exterior Lighting, General Lighting Requirements

The proposed project is located within Lighting District 2. The following standards will apply:

Light Trespass Levels must be not more than 0.5 at any point along the property line and 0.2 at a point 10 across property line.

Mounting height for parking area lighting shall not exceed 20 feet, with a minimum of 0.3 foot candles to 3 foot candles at grade.

Lighting of walkways and common areas shall be illuminated to a minimum of .2 foot candles to a maximum of 3 foot candles.

All Fixtures shall be full cut-off

A Lighting Plan that meets the above standards will be developed in the Architectural Plan Set at the time of building permit application.

070.060.030: Neighborhood Meeting

A Neighborhood Meeting was held on July 24, 2020 at 1:00 p.m. to present project details and receive feedback from the neighborhood group. The Applicant presented a site plan and building renderings showing the proposed expansion. Neighborhood attendees asked questions about timing for the project, the existing pump station and its expansion, riverbank restoration and parking configuration. The Applicant did remind the neighbors they would be receiving public notice as public hearings are scheduled with the City of Glenwood Springs.

An Exhibit showing the list of those notified by mail, sent on July 9, 2020, those in attendance at the meeting and a copy of the Exhibits used at the meeting has been included with this application.

Variance Request

The following is a Variance Request to the City of Glenwood Springs. The Applicant is requesting a variance from the requirement of Municipal Code Section 070.040.020(d)(24) Development in Waterways and Areas of Special Flood Hazard Variance to allow mineral pools in the 30' set back from high water line at Iron Mountain Hot Springs.

VARIANCE CRITERIA
In reviewing a Variance Application, the Planning and Zoning Commission must determine that all of the following exist:

1. The subject property has an exceptional shape, topography, building configuration or other exceptional site condition that is not a general condition throughout the zone district;

   The site is the location of a historic hot springs property that has fallen into disrepair along the riverbank where the proposed expansion will take place. The property has little vegetation at the river's edge, the bank is a mix of discarded aggregate materials, stone and rip-rap from when the previous owners abandoned the site. The riverbank along the property line is in stark contrast to the adjacent properties landscaped, retained and stable riverbank.

2. The strict application of the Code standards for which a variance is sought would produce undue hardship;

Without repair, re-vegetation, and incorporation of the riverbank into the expansion of spa area, the property would not be suitable for resort development.

3. The Applicant did not create the hardship by his/her own actions;

   The site was previously abandoned by others and has degraded to a level not suitable to develop without significant riverbank restoration.

4. The variance requested does not harm the public and does not impair the intent or purposes of this Code, goals, and policies, including the specific regulation for which the variance is sought;

   The requested variance will only improve conditions along the river section of property. Having natural spa pools inside the set-back in no way harms the public or impairs the intent of code.

5. The variance request demonstrates exceptional hardship not related to purposes of convenience or financial burden;

   Without the variance the available suitable area for development is below the level at which the property can be developed..

6. The variance request will not violate building or fire code requirements; and

   Allowing natural spa pools inside the river set-back has no effect on the structures in the proposed property and will have no impact on building or fire codes.

7. The variance is the minimum variance that will afford relief of the subject standards of the Code.

   Spa pools inside the river set-back does not adversely affect the flow, direction or level of the adjacent river and is the absolute minimum change condition that will allow the property to be developed.

Exhibits

A. Title Policy and Warranty Deeds

B. Iron Mountain Hot Springs Master Plan

C. CTL Thompson Geologic and Geotechnical Investigation

D. Updated SGM Traffic Impact Study

E. Army Corps of Engineers 404 Permit

F. Civil Engineering Plan Set

G. Architectural Plan Set

H. Landscape Plan

J. Neighborhood Meeting Documents

K. Major Drainage Report for Iron Mountain Hot Springs

TRIUMPH

Triumph Development
www.triumphdev.com

September 4th. 2020

Re: Iron Mountain Hot Springs "Pool building" roof design, Glenwood Springs, CO

Overview of Building Design

The new pool building is designed and located to work with the natural grade of the site, with approximately 4,700 SF under roof. The large format doors to the south and west will open to allow for indoor / outdoor use. A mechanical room will run along the east side to feed the pool and new spas.
The roof is designed with earth cover, this will be 12-18" of soil cover for native grasses.

The pool building will be a steel structure to carry the roof load and large spans for the intended use. Expansive glazing for solar gain and guest experience will be a main part of the exterior make up.

Exterior materials will be specified to match the existing palette of Bath house. Stone base, varying in height for building base protection and accents around the structure. 1x8 natural channel cedar siding with 2x trims finishes the upper portions.
Aluminum clad windows / doors to create that color contrast.

- Roofing of the existing bath house and other structures is a standing seam metal roof. The new entrance building will be of same material. As this building will be in proportion with Bath house, metal roof will continue the existing design theme.
  With the positioning and elevation of the new pool building, this would create a solid barrier with glare. At a 5' spring point at entry sidewalk (and a 24" parapet to support earth), the plantings will present an environmentally friendly solution for this single pitch roof.

- To advance the goals of development code:

(4) *Roofs.*

a. To reduce the visual impact of roof mass, no roofline along any building elevation shall exceed fifty (50) feet in length without a visual variation that incorporates:

The softer earth covering will be in-line with the mission of the town, reducing the visual impact. By allowing for native grasses and vegetation to be visible as guest arrive for their experience, this progresses the resorts mission,

TRIUMPH

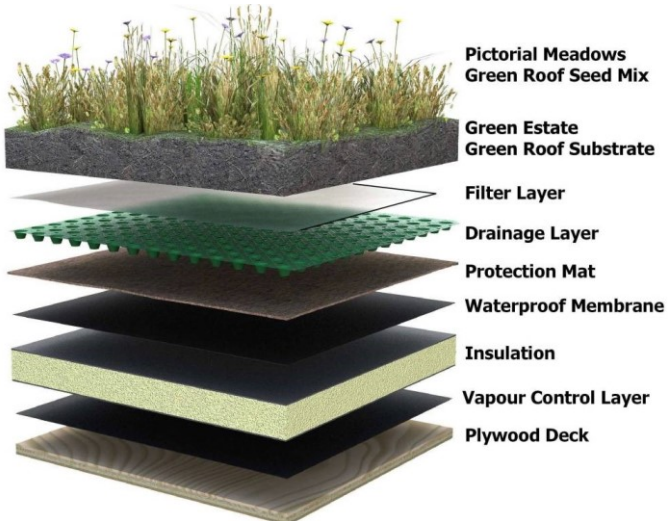
Situated alongside the beautiful Colorado River in Glenwood Springs and surrounded by Rocky Mountain views that soothe and inspire, our 16 geothermal soaking pools offer guests a pure soaking experience—the way nature intended. Our freshwater family pool is cooler and ideal for all ages. An attached elevated jetted spa provides yet another opportunity to relax. Thoughtful amenities are built in throughout: towel tree sculptures at each soaking pool, changing rooms stocked with complimentary shower products and a restaurant that serves food and drinks adds to the ambiance. Welcome to Iron Mountain Hot Springs. We invite you to relax, restore and rejuvenate.

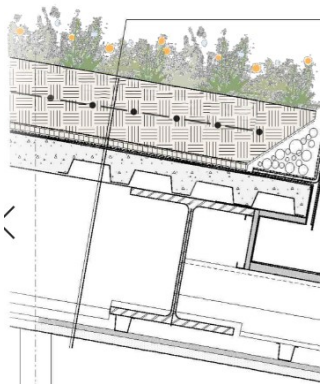
For reference only:

- By creating this earth roof, the community and guest will further experience Rocky Mountain native plantings, resulting in a soft surface. IF staying with conventional roofing materials on this plane, it would not “soothe” as intended.

- By allowing this earth finish, there will be reduction in glare to the surrounding properties. This application will result in the appearance of less structure and not take away from the Colorado River.

- Irrigation: This will need to have permanent irrigation to keep the landscaping green and thriving. Supply lines will be buried for aesthetic reasons, then Multi Stream Rotator irrigation heads will distribute the water in a fashion as to not overspray and create flooding.





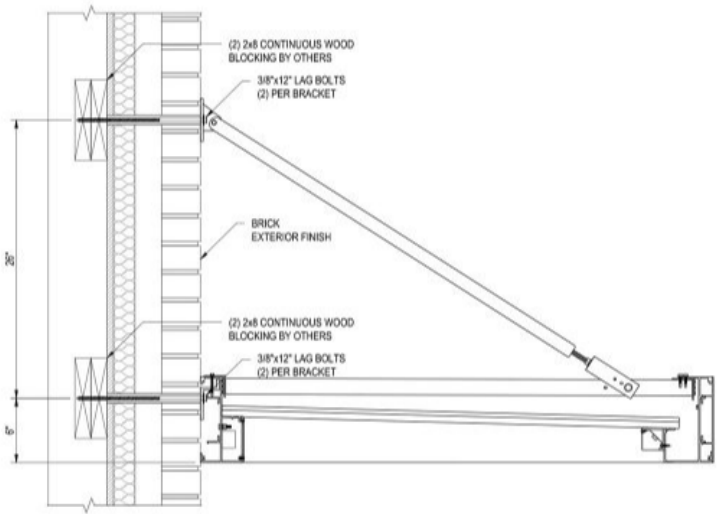
Plant Type	Plant Height	Minimum Soil Depth
Annuals	Any	3”
Turf Grass	NA	4” (3” in warm climates)
Perennials	<8”	4” (3” in warm climates)
Perennials	8”-16”	6”-8”
Perennials/ Ornamental Grasses/ Shrubs	16”-24”	12”-18”

Triumph Development
www.triumphdev.com

September 4th. 2020

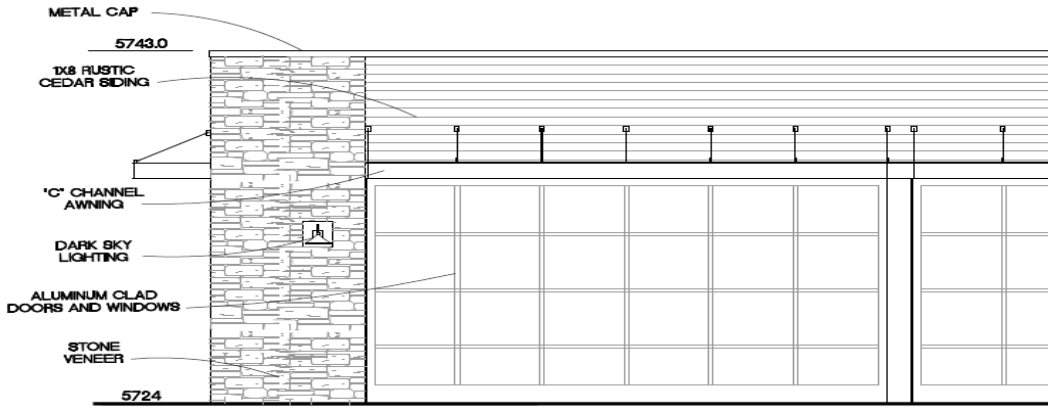
Re: Iron Mountain Hot Springs "Pool building" elevations, Glenwood Springs, CO
Overview of Building Design

After studying the elevations further for the proposed Pool Building,
We have added "C" channel awnings at the operable doors.

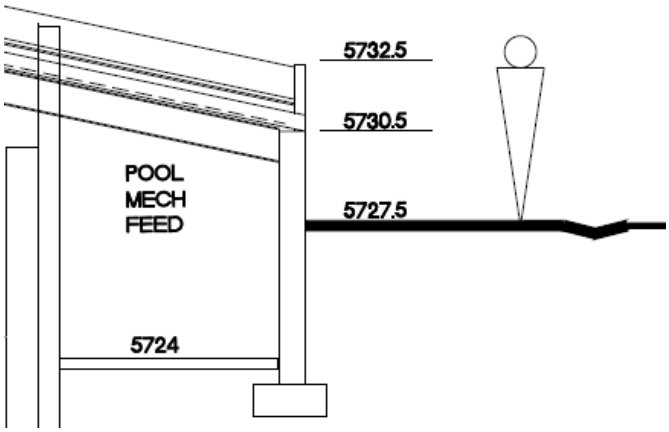


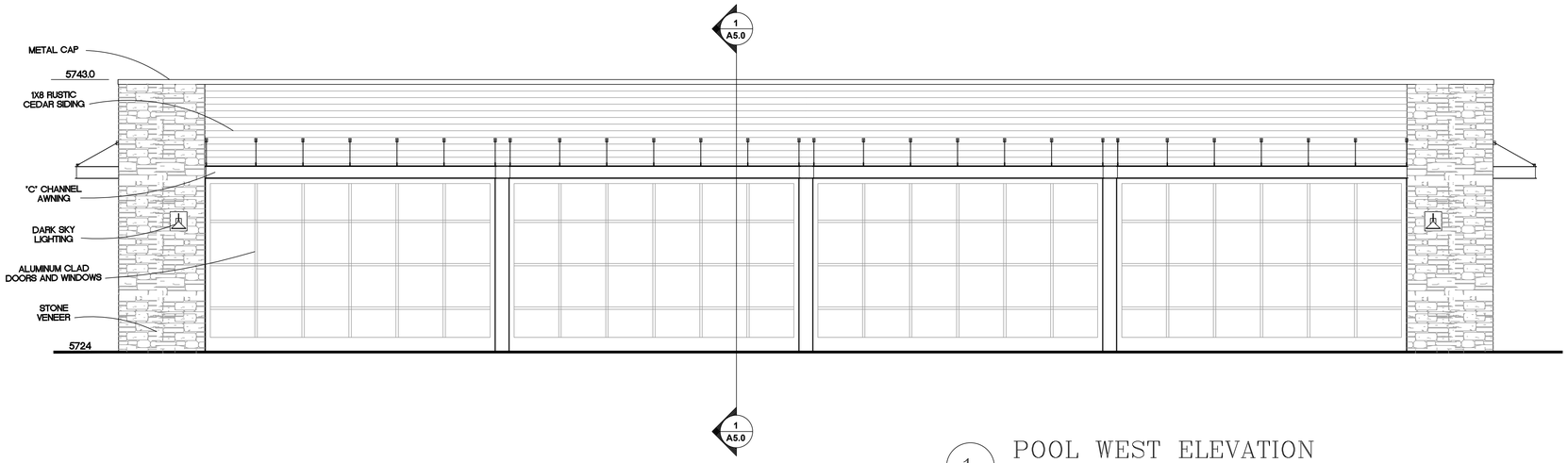
With these adds, we now achieve the "3" elements of approvable elevations.

1. Combination of materials :
- Natural stone to match existing structures / Horizontal wood siding / metal window frames
2. Over 30% of glazing, both windows and operable doors.
3. "C" channel awnings with a 48" projection from façade face.



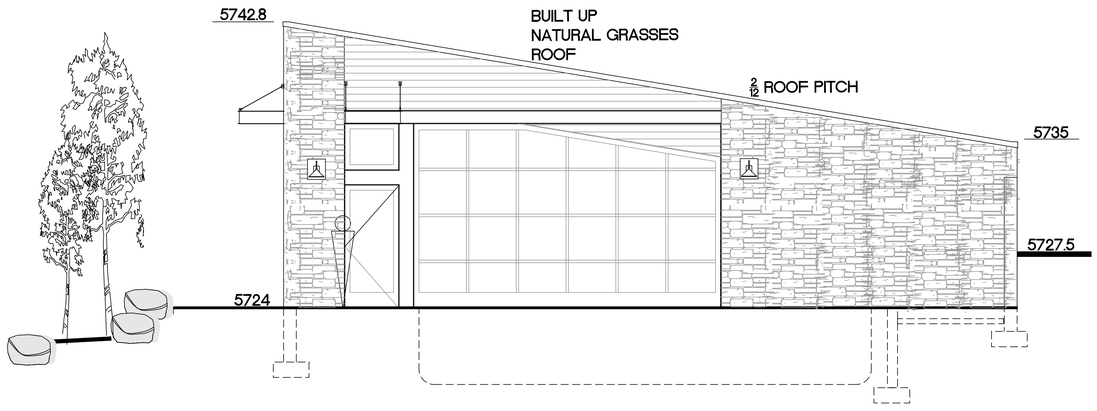
The east wall of the structure, facing parking lot, is to appear as if it is a retaining wall, faced with matching stone. 60” tall with landscaping (earth roof) above, climbing at a 2:12 pitch.





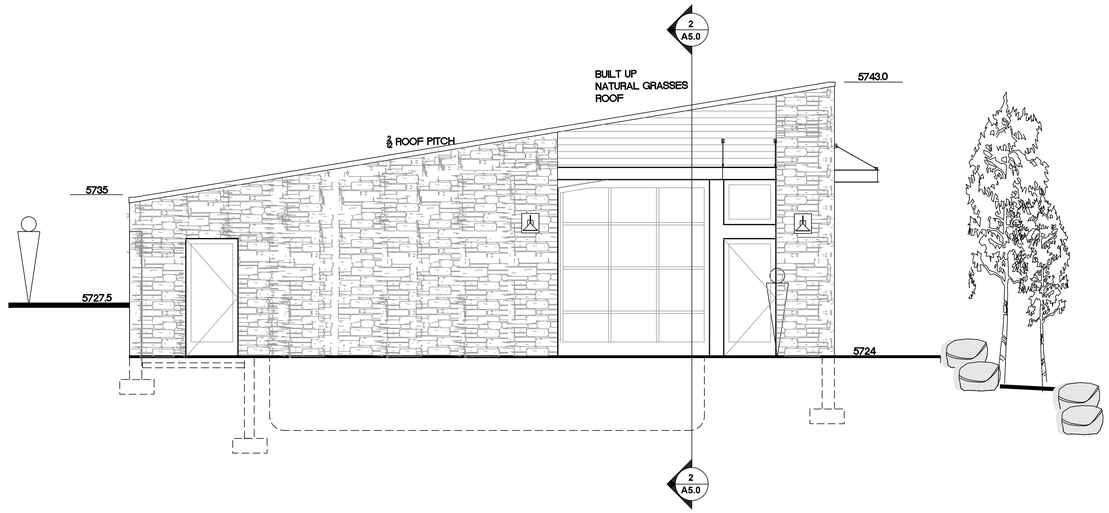
1 POOL WEST ELEVATION

1/4" = 1'-0"



3 POOL SOUTH ELEVATION

1/4" = 1'-0"



2 POOL NORTH ELEVATION

1/4" = 1'-0"

POOL BUILDING

©2020 TRIUMPH

TRIUMPH
Vail Office
12 Vail Road.
Vail, CO 81657
Tel: 970.479.9980
www.triumphdev.com

IRON MOUNTAIN HOT SPRINGS
NEW ENTRANCE BUILDING
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601

Revisions:

Sheet title
POOL
BUILDING
ELEVATIONS

Stamp

Date:	Project No:	Drawn by:	Checked by:
9-04-20		MEF	MEF

Sheet
AB4.0

Commonwealth Title Company
of Garfield County, Inc.

127 E. 5th Street
Rifle, CO 81650
(970) 625-3300 Phone
(970) 625-3305 Fax

Date: August 14, 2014

To: Iron Mountain Hot Springs, LLC, a Colorado limited liability company
51000 Two Rivers Plaza Road
Glenwood Springs, CO 81601

Thank you for your order.
Enclosed please find the following
in connection with our File No. 1307020-3:

£ Commitment

☑ Title Policy

£ Endorsement

£ Tax Certificate

£ Other

POLICY OF TITLE INSURANCE

SCHEDULE A

Amount of Insurance: **$5,000,000.00**

Policy No. **8130606-91758288**

Premium **$8670.00**

File No. **1307020-3**

Date of Policy: **August 1, 2014 at 5:00 PM**

1. Name of Insured

   Iron Mountain Hot Springs, LLC, a Colorado limited liability company

2. The Estate or interest in the land described herein and which is covered by this policy is Fee Simple and is at the date of Policy vested in:

   Iron Mountain Hot Springs, LLC, a Colorado limited liability company

3. The land referred to in this policy is described in the said instrument, is situated in the County ofGARFIELD, State of CO, and is identified as follows:

   See Attached Exhibit "A"

Countersigned: _____

Authorized Officer or Agent

NM I PA 10
ALTA Owner's Policy (6/17/06)
Form 1190-2 Schedule A

File No. 1307020-3

EXHIBIT "A"

Parcel No. 1:

Lot 2
Block 1
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 2:

Lot 1
Block 2
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 3:

Tract 1) That part of Parcel No. 35-A of the State Department of Highways, Division of Highways, State of Colorado, Project No. I 70-1(8)113 Sec. 2, in the NW1/4NW1/4, Section 9, and Lot 8 Section 4, Township 6 South, Range 89 West of the 6th P.M., described as follows:

Beginning at a point on the South line of Section 4, Township 6 South, Range 89 West, from which point the SW corner of Section 4 bears N. 88°21' W. 727.5 feet;
thence S. 88°21' E., along the South line of Section 4, 41.4 feet;
thence along the arc of a curve to the right, having a radius of 5829.6 feet, 174.4 feet (the chord of this arc bears N. 36°02'30" W. 174.4 feet);
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

Tract 2) That part of said Parcel No. 35-A described as follows:

Beginning at a point on the North line of Section 9, Township 6 South, Range 89 West, from which point the NW corner of Section 9 bears N. 88°21' W. 727.5 feet;
thence S. 23°38'30" E., along the Southerly right-of-way line of the Denver & Rio Grande Western Railroad, 561.9 feet to a concrete monument, being that monument described in Book 340 at Page 565, of the Garfield County records;
thence N. 39°06'30" E. 186.2 feet;
thence along the arc of a curve to the right, having a radius of 5829.6 feet, 476.6 feet (the chord of this arc bears N. 39°14' W. 476.4 feet) to the North line of Section 9;
thence N. 88°21' W., along the North line of Section 9, 41.4 feet, more or less, to the point of beginning.

EXCEPTING all that portion of said Parcels 1) and 2) above described as follows, to-wit:

Beginning at the concrete monument referred to in the description of Tract 2) above, being that monument as described in Book 340 at Page 565, of the Garfield County records;
thence N. 39°06'30" E. 186.21 feet;
thence along the arc of a curve to the right having a radius of 5829.6 feet, 137.64 feet (the chord of this arc bears N. 40°53'57" W. 137.64 feet);
thence S. 42°31'33" W. 48.80 feet;
thence S. 85°00' W. 84.50 feet;
thence S. 23°38'30: E. 224.00 feet, more or less, to the point of beginning.

Tract 3) A tract of land in the SW1/4SW1/4 Section 4 and the NW1/4NW1/4 Section 9, Township 6 South, Range 89 West of the 6th P.M., described as follows:

Beginning at a point whence the common corner to Sections 4, 5, 8 and 9, Township 6 South, Range 89 West of the 6th P.M., bears N. 88°21' W. 727.5 feet;
thence S. 23°38'30" E. 561.9 feet;
thence S. 39°06'30" W. 217.5 feet;
thence N. 20°55'30 W, 239.3 feet;
thence S. 46°38'30" W. 435.4 feet;
thence N. 05°33'10" W. 1340.4 feet;
thence S. 41°17'30" E. 579.5 feet;
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

Parcel No. 4:

A tract or parcel of land No. E-35 of the State Department of Highways, State of Colorado, Project No. I 70-1(8)113 Sec. 2, in Lot 8 of Section 4, Township 6 South, Range 89 West of the 6th Principal Meridian, in Garfield County, Colorado, said tract or parcel being more particularly described as follows:

Beginning at a point from which the SW corner of Section 4, Township 6 South, Range 89 West of the 6th P.M., bears S. 79°52'30" W., a distance of 676.5 feet;

1. Thence N. 29°47'30" W., a distance of 336.3 feet;
2. Thence N. 72°07 W., a distance of 130.8 feet;
3. Thence S. 41°17'30"E., a distance of 441.9 feet, more or less to the point of beginning.

SCHEDULE B

This Policy does not insure against loss or damage by reason of the following:

1. Rights or claims of parties in possession not shown by the Public records.
2. Easements, or claims of easements, not shown by the public records.
3. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, and any facts, which a correct survey and inspection of the premises would disclose, and which are 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. Unpatented mining claims, reservations or exceptions in patents or in acts authorizing the issuance thereof.
6. Taxes and assessments for the year 2014, not yet due or payable.
7. Any and all water rights, claims, or title to water, whether or not the matters excepted are shown by the public record.
8. Easements and rights of way for all ditches, pipelines, laterals and canals.
9. Any question, dispute or adverse claims as to any loss or gain as a result of any change in the river bed location by other than natural causes, or alteration through accretion, reliction, erosion or avulsion of the center thread, bank, channel or flow of waters in Colorado lying within subject land; and any questions as to the location of such center thread, bed, bank or channel as a legal description monument or marker for purposes of describing or locating subject lands.
10. Right of the proprietor of a vein or lode to extract and remove his ore therefrom, should the same be found to penetrate or intersect the premises hereby granted and a right of way for ditches or canals as constructed by the authority of the United States, as reserved in United States Patent recorded February 10, 1892 in Book 12 at Page 106.
11. Right of the proprietor of a vein or lode to extract and remove his ore therefrom, should the same be found to penetrate or intersect the premises hereby granted and a right of way for ditches or canals as constructed by the authority of the United States, as reserved in United States Patent recorded April 7, 1892 in Book 12 at Page 131.
12. Permanent Easement granted to the Department of Highways, State of Colorado as described in instrument recorded October 6, 1967 in Book 388 at Page 291.
13. Each and every right or rights of access to and from any part of the right-of-way for I-70 as described in instrument recorded October 6, 1967 in Book 388 at Page 291 and in Book 427 at Page 91.
14. Reservation of the Hobo Spring Pump and Pipeline and an easement for a road right-of-way 10 feet in width and the right to enter the land to produce, pump, direct and convey away any and all fluids and substances from Hobo Spring as described in instrument recorded February 15, 1977 in Book 493 at Page 460.
15. Easements, rights of way and all matters shown on the Final Plat of North Glenwood Center recorded February 13, 1976 at Reception No. 271331.
16. Terms, conditions and all matters set forth in Agreement recorded February 20, 1981 in Book 565 at Page 943.

(Continued)

Exceptions Number 1,2,3 AND 4 are hereby omitted.

American Land Title Association
Owner's Policy Schedule B Form 2005-47

SCHEDULE B
(Continued)

17. Terms, conditions and all matters set forth in City of Glenwood Springs Ordinances as follows:

Ordinance Number	Recording Date	Book	Page
17 Series of 1975	March 12, 1982	594	500
8 Series of 1975	March 12, 1982	594	502
40 Series of 1981	March 12, 1982	594	519

18. Easement for a water line as described in instrument recorded October 23, 1991 in Book 816 at Page 113.

19. Terms, conditions and all matters set forth and described in Settlement Agreement by and between Pitkin Iron Corporation and the Glenwood Hot Springs Lodge and Pool, Inc. recorded October 1, 2007 at Reception No. 734175.

20. Rights of way, apparent easement for overhead utilities, right of way for pedestrian fishing easement, apparent right of way for concrete culvert and all matters shown on Improvement Survey prepared by Gamba and Associates, Inc., dated August 15, 2013, Project No. 13829.

21. Deed of Trust from Iron Mountain Hot Springs, LLC, a Colorado limited liability company to the Public Trustee of Garfield County for the use of Pitkin Iron Corporation, a Colorado corporation, showing an original amount of $4,500,000.00, dated July 31, 2014 and recorded August 1, 2014 as Reception No.852108.

Reception#: 852102
08/01/2014 04:34:28 PM Jean Alberico
1 of 2 Rec Fee:$16.00 Doc Fee:500.00 GARFIELD COUNTY CO

Recorded at _____ o'clock _____ M. _____
Reception No. _____ Recorder.

SPECIAL WARRANTY DEED

THIS DEED, made on July 31, 2014,

between **Delaney Family Investments, LLLP as to an undivided 1/2 interst in Parcel 1; Pitkin Iron Corporation, a Colorado Corporation as to Parcels 2, 3 and as to an undivided 1/2 interest in Parcel 1**

of the County of Garfield, and State of Colorado, grantor,

and **Pow, Inc., a Colorado Corporation as to an undivided 50% interest as tenants in common with Turtlepoop LLC, a Colorado limited liability company as to an undivided 50% interest**

whose legal address is : 51000 Two Rivers Plaza Road, Glenwood Springs, CO 81601

of the County of Garfield, and State of Colorado, grantee:

WITNESS, that the grantor, for and in consideration of the sum of ten dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, has granted, bargained, sold and conveyed, and by these presents does grant, bargain, sell, convey and confirm unto the grantee, its successors and assigns forever, all the real property, together with improvements, if any, situate, lying and being in the County of Garfield and State of Colorado described as follows:

See Attached Exhibit "A"

CWT 1307020

also known by street and number as:

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

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantee, its successors and assigns forever. The grantor, for itself, its successors and assigns does covenant and agree that it shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantee, its successors and assigns, against all and every person or persons claiming the whole or any part thereof, by, through or under the grantor.

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

Delaney Family Investments, LLLP as to an undivided 1/2 interst in Parcel 1

By: _____
Diane Delaney, General Partner

Pitkin Iron Corporation, a Colorado Corporation as to Parcels 2, 3 and as to an undivided 1/2 interest in Parcel 1

By: _____
Diane D. Delaney, Vice-President

STATE OF COLORADO)
) ss.
COUNTY OF GARFIELD)

The foregoing instrument was acknowledged before me on July 31, 2014, by Diane Delaney as General Partner of Delaney Family Investments, LLLP as to an undivided 1/2 interst in Parcel 1; Diane D. Delaney as Vice-President of Pitkin Iron Corporation, a Colorado Corporation as to Parcels 2, 3 and as to an undivided 1/2 interest in Parcel 1.

WITNESS my hand and official seal

_____
Notary Public

My commission expires:

LINDA GABOSSI
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #19894007523
My Commission Expires May 23, 2017

Commonwealth File No. 1307020-2
Return to:
Iron Mountain Hot Springs LLC
51000 Two Rivers Plaza Road
Glenwood Springs, CO 81601

No. 16. Rev. 4-94. SPECIAL WARRANTY DEED

Doc 500.00 2

Reception#: 852102
08/01/2014 04:34:28 PM Jean Alberico
2 of 2 Rec Fee:$16.00 Doc Fee:500.00 GARFIELD COUNTY CO

File No. 1307020-2

EXHIBIT "A"

Parcel No. 1:

Lot 2
Block 1
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 2:

Lot 1
Block 2
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 3:

Tract 1) That part of Parcel No. 35-A of the State Department of Highways, Division of Highways, State of Colorado, Project No. I 70-1(8)113 Sec. 2, in the NW1/4NW1/4, Section 9, and Lot 8 Section 4, Township 6 South, Range 89 West of the 6th P.M., described as follows:

Beginning at a point on the South line of Section 4, Township 6 South, Range 89 West, from which point the SW corner of Section 4 bears N. 88°21' W. 727.5 feet;
thence S. 88°21' E., along the South line of Section 4, 41.4 feet;
thence along the arc of a curve to the right, having a radius of 5829.6 feet, 174.4 feet (the chord of this arc bears N. 36°02'30" W. 174.4 feet);
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

Tract 2) That part of said Parcel No. 35-A described as follows:

Beginning at a point on the North line of Section 9, Township 6 South, Range 89 West, from which point the NW corner of Section 9 bears N. 88°21' W. 727.5 feet;
thence S. 23°38'30" E., along the Southerly right-of-way line of the Denver & Rio Grande Western Railroad, 561.9 feet to a concrete monument, being that monument described in Book 340 at Page 565, of the Garfield County records;
thence N. 39°06'30" E. 186.2 feet;
thence along the arc of a curve to the right, having a radius of 5829.6 feet, 476.6 feet (the chord of this arc bears N. 39°14' W. 476.4 feet) to the North line of Section 9;
thence N. 88°21' W., along the North line of Section 9, 41.4 feet, more or less, to the point of beginning.

EXCEPTING all that portion of said Parcels 1) and 2) above described as follows, to-wit:

Beginning at the concrete monument referred to in the description of Tract 2) above, being that monument as described in Book 340 at Page 565, of the Garfield County records;
thence N. 39°06'30" E. 186.21 feet;
thence along the arc of a curve to the right having a radius of 5829.6 feet, 137.64 feet (the chord of this arc bears N. 40°53'57" W. 137.64 feet);
thence S. 42°31'33" W. 48.80 feet;
thence S. 85°00' W. 84.50 feet;
thence S. 23°38'30: E. 224.00 feet, more or less, to the point of beginning.

Tract 3) A tract of land in the SW1/4SW1/4 Section 4 and the NW1/4NW1/4 Section 9, Township 6 South, Range 89 West of the 6th P.M., described as follows:

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thence S. 39°06'30" W. 217.5 feet;
thence N. 20°55'30 W, 239.3 feet;
thence S. 46°38'30" W. 435.4 feet;
thence N. 05°33'10" W. 1340.4 feet;
thence S. 41°17'30" E. 579.5 feet;
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

Reception#: 852105
08/01/2014 04:34:28 PM Jean Alberico
1 of 2 Rec Fee:$16.00 Doc Fee:0.00 GARFIELD COUNTY CO

SPECIAL WARRANTY DEED

THIS DEED, made on July 31, 2014,

between **Pow, Inc., a Colorado Corporation as to an undivided 50% interest and Turtlepoop LLC, a Colorado limited liability company as to an undivided 50% interest**

of the County of Garfield, and State of Colorado, grantor(s), and

Iron Mountain Hot Springs LLC, a Colorado limited liability company

whose legal address is : 51000 Two Rivers Plaza Road, Glenwood Springs, CO 81601

of the County of Garfield, and State of Colorado, grantees:

WITNESS, that the grantor(s), for and in consideration of the sum of ten dollars and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, have granted, bargained, sold and conveyed, and by these presents do grant, bargain, sell, convey and confirm unto the grantees, their heirs and assigns forever, all the real property, together with improvements, if any, situate, lying and being in the County of Garfield and State of Colorado described as follows:

See Attached Exhibit "A"

also known by street and number as:

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

TO HAVE AND TO HOLD the said premises above bargained and described, with the appurtenances, unto the grantees, their heirs and assigns forever. The grantor(s), for themselves, their heirs, and personal representatives, successors and assigns do covenant and agree that they shall and will WARRANT AND FOREVER DEFEND the above bargained premises in the quiet and peaceable possession of the grantees, their heirs and assigns, against all and every person or persons claiming the whole or any part thereof, by, through or under the grantor(s).

IN WITNESS WHEREOF, the grantor(s) have executed this deed on the date set forth above.

CUST 1307020

Pow, Inc., a Colorado Corporation

By: Steve Beckley, President

Turtlepoop LLC, a Colorado limited liability company

By: Mogli Cooper, Member/Manager

STATE OF COLORADO)
) ss.
COUNTY OF GARFIELD)

The foregoing instrument was acknowledged before me on July 31, 2014, by Steve Beckley as President of Pow, Inc., a Colorado Corporation and Mogli Cooper as Member/Manager of Turtlepoop LLC, a Colorado limited liability company.

WITNESS my hand and official seal

My commission expires:

Notary Public

LINDA GABOSSI
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID #19894007523
My Commission Expires May 23, 2017

Commonwealth File No. 1307020-3
Return to:
Iron Mountain Hot Springs LLC
51000 Two Rivers Plaza Road
Glenwood Springs, CO 81601

Reception#: 852105
08/01/2014 04:34:28 PM Jean Alberico
2 of 2 Rec Fee:$16.00 Doc Fee:0.00 GARFIELD COUNTY CO

File No. 1307020-2

EXHIBIT "A"

Parcel No. 1:

Lot 2
Block 1
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 2:

Lot 1
Block 2
North Glenwood Center
In the City of Glenwood Springs

Parcel No. 3:

Tract 1) That part of Parcel No. 35-A of the State Department of Highways, Division of Highways, State of Colorado, Project No. I 70-1(8)113 Sec. 2, in the NW1/4NW1/4, Section 9, and Lot 8 Section 4, Township 6 South, Range 89 West of the 6th P.M., described as follows:

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thence S. 88°21' E., along the South line of Section 4, 41.4 feet;
thence along the arc of a curve to the right, having a radius of 5829.6 feet, 174.4 feet (the chord of this arc bears N. 36°02'30" W. 174.4 feet);
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

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thence N. 39°06'30" E. 186.2 feet;
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thence along the arc of a curve to the right having a radius of 5829.6 feet, 137.64 feet (the chord of this arc bears N. 40°53'57" W. 137.64 feet);
thence S. 42°31'33" W. 48.80 feet;
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thence S. 23°38'30: E. 224.00 feet, more or less, to the point of beginning.

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Beginning at a point whence the common corner to Sections 4, 5, 8 and 9, Township 6 South, Range 89 West of the 6th P.M., bears N. 88°21' W. 727.5 feet;
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thence S. 39°06'30" W. 217.5 feet;
thence N. 20°55'30 W, 239.3 feet;
thence S. 46°38'30" W. 435.4 feet;
thence N. 05°33'10" W. 1340.4 feet;
thence S. 41°17'30" E. 579.5 feet;
thence S. 23°38'30" E. 152.6 feet, more or less, to the point of beginning.

Iron Mountain Hot Springs Master Plan

Glenwood Springs, Colorado

Updated July 28, 2020 by The Land Studio, Inc.

for City of Glenwood Springs Pre-Application Conference

north

0 60 120 180 300

existing pool

existing cafe
food service

existing
mechanical

existing
locker rooms
retail
offices

proposed river bank restoration

new mineral pools

Existing
Iron Mountain
Hot Springs

New Entry
Building
locker rooms
food service
retail
mechanical

new mineral pools

Iron Mountain
Hot Springs
Expansion

New
Enclosed
Pool

new mineral pools

cabanas

new lift station

proposed river bank restoration

future path connection to the LoVa trail

INTERSTATE 70

Reconfigured
Iron Mountain Hot Springs Parking

Approved Caverns Village
parking

Approved
Caverns
Village
CDOT offices
(19) apartments

Approved Caverns Village
parking

CDOT
maintenance
facility

well

Future Hotel

entry
monument

Glenwood Caverns Adventure Park
additional parking

CTL | THOMPSON INCORPORATED

GEOLOGIC AND GEOTECHNICAL INVESTIGATION IRON MOUNTAIN HOT SPRINGS GLENWOOD SPRINGS, COLORADO

Prepared For:

IRON MOUNTAIN HOT SPRINGS, LLC
51000 Two River Plaza Road
Glenwood Springs, CO 81601

Attention: Ms. Mogli Cooper

Project No. GS05875-145

June 29, 2014

234 Center Drive | Glenwood Springs, Colorado 81601 Telephone: 970-945-2809 Fax: 970-945-7411

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APPENDIX B - GUIDELINE MAINTENANCE RECOMMENDATIONS

SCOPE

This report presents the results of our geologic and geotechnical investigation for the proposed Iron Mountain Hot Springs development to be built in Glenwood Springs, Colorado. The purpose of our investigation was to evaluate site geology, geologic hazards and to provide geotechnical design and construction criteria for the proposed buildings, water features and associated paved parking area and drives. This investigation was conducted in general accordance with our Proposal No. GS 14-0191, dated July 16, 2014.

This report includes descriptions of the site geology and potential geologic hazards and subsoil and groundwater conditions encountered in our previous test pits excavated at the site. We are providing recommended foundation systems and pavement sections and design and construction criteria for details influenced by the subsoils. This report was prepared using data from our 1995 field and laboratory investigations at the site and our experience.

SITE CONDITIONS

The site is a triangle shaped parcel of approximately 7.5 acres. The Colorado River borders the site to the west. Interstate 70 borders the site to the north and east. Colorado Department of Transportation property is adjacent to the east. A vicinity map is shown on Figure 1 of this report. Numerous single family residential buildings, sheds and a hot springs lodge have previously been razed at the site. Man-made fill has been stockpiled at the southeast and southwest parts of the site. Access drives and parking areas are on the southwest and central parts of the site. An artesian geothermal well is located in the south central part of the site.

Ground surfaces are flat to gently rolling and slope down to the west. Vegetation consists of deciduous trees and areas of brush, grasses and weeds along the Colorado River. Existing site conditions are shown on Figure 2 of this report.

PROPOSED CONSTRUCTION

Plans for water features were developed by Fieldscape of Avon, Colorado and were dated July 7, 2014. Building plans were by The Drawingboard of Glenwood Springs and dated July 7, 2014. Locations of the water features and buildings are shown on Figure 3 of this report.

Water features will include an approximately 40 feet by 60 feet main pool with a hot tub and three separate 15 foot diameter pools. An in-ground slide will be accessed by a path from the main pool and drop down to the bottom pond. The slide will go below a new pedestrian bridge connecting heated stone walkways. The bridge will provide access to the northern area of the development.

The main building will be to the east, and above the water features and west of a drop-off circle. A maintenance building and concession building will be north and west of the main building, respectively. The main building will be approximately 30 feet by 60 feet, wood frame with slab-on-grade floors. The building will have a partial basement for storage and will be one-story above ground. Foundation loads are anticipated to be light. The maintenance and concessions buildings will be lightly loaded one-story, wood frame buildings with slab-on-grade floors.

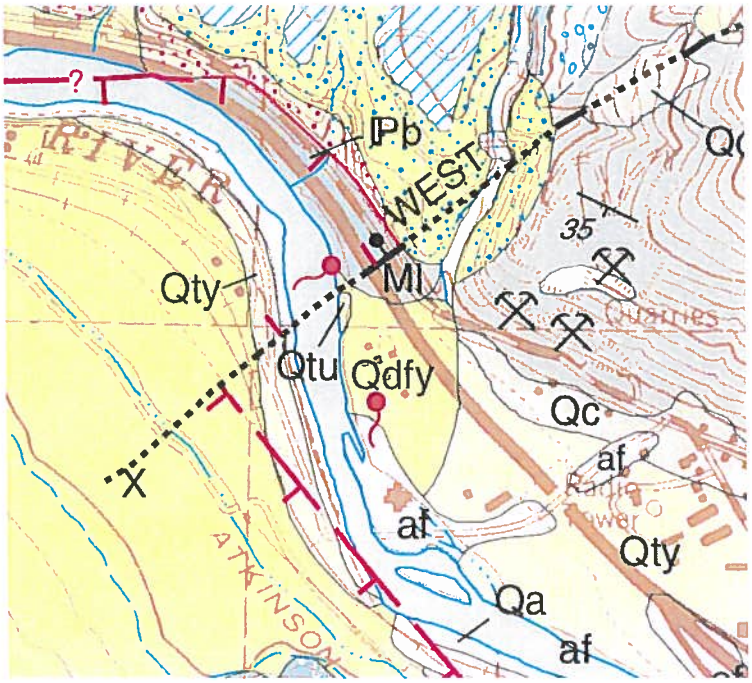
The following elevations are shown on plans we reviewed. Building elevations are finished floor, pool elevations are bottom of pool.

Main Building	5735 feet
Mechanical Building	5738 feet
Concession Building	5728 feet
Main Pool	5728 feet
Smaller Polls	5718 to 5728 feet

SITE GEOLOGY AND GEOLOGIC HAZARDS

Site geology and geologic hazards on the Iron Mountain Hot Springs parcel were evaluated by David A. Glater, P.E., C.P.G., using a review of available literature, aerial photographs and data from our exploratory pits and a site visit on July 20, 2014. This section of the report is intended to address Article 070.100 from the Glenwood Springs City Code entitled "***Development in Areas of Geologic Hazards.***" Literature references are cited at the end of this section.

Mapping by the Colorado Geological Survey (2008, Reference 1) indicates the strata beneath the parcel consist of at thin layer of Younger Debris Flow Fan deposits (map symbol Qdfy) over cobbles and boulders from the Younger Terrace Alluvium of Quaternary age (map symbol Qty). Some of the soils are cemented with calcium travertine related to hot springs activity on and above the site. We believe the debris fan and alluvium deposit continues for many feet to bedrock at an unknown depth. An excerpt from Reference 1 is presented below.



Excerpt from CGS 2008 Geologic Map of Glenwood Springs Quadrangle. The Iron Mountain site is in the approximate center of the map proximate to the red hot spring symbol south of the West Glenwood Fault.

The Iron Mountain Hot Springs parcel is situated along the Colorado River just west of Glenwood Springs. The hot springs activity is related to the West Glenwood Fault, which is considered tectonically inactive. Mineral-rich waters created the travertine deposits.

Geologic hazards typical in Colorado are described in Reference 2. We found no evidence that avalanches, landslides, rockfalls, mudflows, subsidence features, expansive soil and bedrock affect the site. Earthquake hazard is no higher than the regional exposure, and that is considered low risk. The site contains prehistoric debris flow fan deposits. Due to proximity to the Colorado River, we believe the debris flow fan deposits are relatively thin and have likely been reworked and flooded many times in the thousands of years prior to development of Glenwood Springs, thus the hazard from hydrocompactive soils is deemed low. The hazard from future debris flow is considered nil due to urban development that has changed natural drainage patterns. The site contains soils that may be considered highly corrosive to steel and concrete. Special precautions to prevent

premature degradation of structures composed of these materials will have to be taken. The slopes along the river are moderately steep and could be subject to some erosion during high flows. Development is planned above 100-year flood boundaries, which we believe mitigates the hazard from flooding and erosion.

The soil and bedrock units are not expected to respond unusually to seismic activity. Liquifaction potential is considered nil. We believe the parcel can be considered to be Site Class C. Only minor damage to relatively new, properly designed and built structures would be expected.

In summary, we find no geologic hazards that preclude development of this parcel for the planned uses.

Geology Section References

1. "Geologic Map of the Glenwood Springs Quadrangle, Garfield County, Colorado" compiled by Kirkham, et al, Colorado Geological Survey Map Series 38, scale 1:24,000, 2008

2. "Guidelines and Criteria for Identification and Land-Use Controls of Geologic Hazard and Mineral Resource Areas" by W.P. Rogers, et. al, Special Publication 6, Colorado Geologic Survey, 1974

3. Aerial Photography by Google Earth dated September 22, 2011

4. Geologic Hazards of the Glenwood Springs Metropolitan Area, Garfield County Colorado, Colorado Geological Survey Open File Report 78-10, Plate 10, 1978

SUBSURFACE CONDITIONS

We performed field and laboratory investigations at the site in 1995. Subsurface conditions were investigated by excavating twelve (12) test pits. We have included results of our previous field and laboratory investigations in Appendix A. Our representative was on site during excavating operations to log the soils found in our test pits and obtain samples. Test pits were excavated with a trackhoe. Test pit locations, graphic logs of the soils found in our test pits and laboratory test data are presented and summarized on the Table in Appendix A.

Our test pits penetrated up to 2 feet of organic clays underlain by medium dense to very dense, clayey to silty gravels with cobbles. A hard travertine cemented layer was found below the gravels at 3 to 11 feet deep in our test pits TP-1 through TP-4 and TP-7 through TP-12. Very soft to medium dense, sandy to gravely clays and/or man-made fill was above the gravels in our test pits TP-5 and TP-7 through TP-9. Artesian groundwater was encountered below and percolating up through the travertine cemented layer in our test pits TP-1 through TP-4, TP-8 and TP-12. Non artesian groundwater was found in our test pits TP-5 and TP-6.

OVERLOT GRADING

The site will be overlot graded to achieve rough grades for buildings, water features and landscaping. It appears grading on the south half of the site will consist of shallow cuts and thin fills of 5 feet or less. The thickest fills and deepest cuts appear to be required for the slide construction from the bridge to the lower pond. Removal of the overburden soils above the travertine cemented layer could result in heaving and cracking of the layer due to removal of surcharge pressure above and hydrostatic pressure below. The travertine cemented layer must not be disturbed or loss of control of the geothermal resource may result. We recom-

mend limiting excavations at the site to provide a minimum 2 feet deep cover above the travertine cemented layer.

We believe that the clayey to silty gravels are Type C and the clays are Type B as described in the October, 1989 Occupation Safety and Health Administration (OSHA) Standards published by the Department of Labor governing excavations. The publication indicates a maximum temporary slope of 1.5 to 1 horizontal to vertical) for the Type C soils and 1 to 1 for Type B soils above the water table. Excavations will tend to collapse to 4 to 1 or flatter below the water table.

Artesian groundwater was found in our test pits as shallow as 3 feet deep. We are concerned that groundwater may enter excavations on this site during construction. As a precaution, excavation floors should be sloped to direct groundwater to a positive gravity outfall or to sumps where water can be removed by pumping, if needed.

We recommend that foundations bear on the natural gravels or densely compacted granular structural fill (see "Foundation" section). Foundation recommendations will need to be considered during overlot grading. Areas to receive fill should be grubbed and stripped of all man-made fill, organic soils or other deleterious materials. Existing construction and utilities should be completely removed from below and within 5 feet of areas to be built on. The resulting stripped surface should be moisture treated and proof rolled with a heavy pneumatic tired vehicle prior to fill placement. Soils that deflect significantly should be stabilized or removed.

Fill can consist of the on-site clayey to silty gravels or similar free of debris, organics, rock larger than 4 inches in diameter or other deleterious materials. The on-site clays and existing fill, free of organics, vegetation, debris or other deleterious materials can be mixed with the on-site gravels or import materials to achieve a fill material with 100 percent finer than 4 inches and a minimum 5 percent silt

and clay size particles (passing the No. 200 sieve). Specifications should prohibit the use of expansive clay soils below buildings. If import soils are required for fill material, a sample should be evaluated by our office prior to importing to the site. Fill should be moisture conditioned to within 2 percent of optimum moisture content and placed in 10 inch maximum loose lifts and compacted. Structural fill placed below building footprints and adjacent flatwork should be compacted to at least 98 percent of the maximum dry density determined by the standard Proctor density test (ASTM D 698). Fill placed in areas not to be built on can be placed as common fill and be compacted to at least 95 percent of ASTM D 698. The performance of the fill is critical to structure performance. A representative of CTL/Thompson, Inc. should observe fill placement technique and check fill density and moisture during placement.

FOUNDATION

Structures can be founded with footings bearing on the natural gravels or densely compacted, granular structural fill. A positive alternative to footings would be a mat foundation. A mat foundation would act as the building foundation and floor. Mat foundations result in less differential settlement than footings and slabs-on-grade. Resistance to uplift can be achieved with a mass of concrete in the foundation. Installation of micropiles to resist uplift is not recommended because of potential adverse affects of penetrating the travertine cap and subsequent release of groundwater under pressure. The maximum bearing pressure recommended below should result in total settlements on the order of 1 inch. Differential settlement of about one-half of the actual total settlement is anticipated along 10 feet of continuous footing and between footing pads. Future settlement of a mat foundation would be about one-half that anticipated for footings. Because of the granular nature of the soils, settlement due to dead loads will occur during construction and settlements due to live loads upon first application of the live

load. Footings or mat foundations can be designed and constructed using the following criteria:

Footings

1. Footings should bear on the undisturbed natural gravels, granular structural fill placed on the natural gravels or on an at least 3.0 feet thick pad of densely compacted granular structural fill where fill is placed on the natural clays. Soils loosened during the excavation or forming process should be compacted. Footings bearing on the natural gravels can be designed for a maximum soil bearing pressure of 5,000 psf. Footings bearing on structural fill can be designed for a maximum bearing pressure of 4,000 psf on the structural fill and not to exceed 1,000 psf on the natural clays (see Figure 8, Appendix A);

2. Foundation walls for continuous footings should be reinforced top and bottom to span undisclosed loose soils pockets. Reinforcement should be designed by a qualified structural engineer;

3. Minimum footing sizes are desirable. We suggest a minimum width of 16 inches for continuous footings and at least 2 feet by 2 feet for isolated column pads. Larger sizes will be required based on the structural loads;

4. The soils below exterior footings should be protected from freezing. We suggest a frost protection depth of 36 inches. The owner should verify the frost depth requirement with the local area building department;

5. Backfill along foundation walls and in utility trenches should be compacted to between 90 and 95 percent of ASTM D 698.

Mat Foundations

Reinforced concrete mat foundations can be constructed on the undisturbed, natural gravel soils. Mats should be designed for a maximum allowable soil pressure of 2,000 psf if constructed on the undisturbed, natural sand and gravel soil.

Modulus of subgrade reaction (K_s) is normally used for mat foundation design. The modulus of subgrade reaction is dependent upon the compressibility of the foundation soils and the size (or effective loaded area) of the foundation. If the entire mat foundation is uniformly loaded, then a K_s value of 325 pci should be used for the gravel soil.

To resist lateral loads, a coefficient of friction of 0.45 can be used for concrete in contact with the gravel or structural fill. Lateral loads can be resolved by evaluating passive resistance using an equivalent fluid density of 375 pcf for the sand and gravel, provided the backfill is compacted and is not removed. A moist unit weight of 130 pcf can be assumed for backfill soils. These values have not been factored; appropriate factors of safety should be applied in design. The soils beneath the mat should be protected from freezing. We recommend a minimum 4 inch thick layer of clean gravel below the mat to break capillary rise.

FLOOR SLABS

Floors will bear on natural gravels and/or densely compacted fill built with similar granular soils (see OVERLOT GRADING). Fill required below floors should be gravels with a maximum particle diameter of 4 inches and a minimum 5 percent silt and clay size particles (passing the No. 200 sieve). A Colorado Department of Transportation Class 5 or Class 6 aggregate base course would also be suitable fill. Structural fill should be moisture conditioned to within 2 percent of optimum moisture content, placed in 10 inch maximum loose lifts and compacted to at least 98 percent of the maximum dry density determined by a standard Proctor density test (ASTM D 698). Slab-on-grade floors can be designed and constructed using the following criteria:

1. Floor slabs should bear on a minimum 4-inch thick layer of clean gravel (washed 3/4-inch rock) to break capillary rise of water placed atop the natural, silty gravels or fill placed as discussed above;

2. Slabs-on-grade should be separated from exterior walls and interior bearing members. Vertical movement of the slabs should not be restricted;

3. Plumbing and utilities which pass through the slabs should be isolated from the slabs;

4. Exterior flatwork and sidewalks should be separated from the structure. These slabs should be reinforced to function as independent units;

5. Frequent control joints or reinforcement should be provided in all slabs to reduce problems associated with shrinkage. The American Concrete Institute (ACI) recommends joint spacing of 15 feet in both directions.

POOLS

A main pool, hot tubs and water slide with lower pond will be built. It appears the main pool excavation will be in natural gravels and the groundwater will be between 5 to 10 feet below the existing ground surface depending on time of year and runoff. We anticipate that the slide will be approximately 4 to 6 feet deep. We anticipate that the pools and slide will be concrete lined. We believe pool excavations will be made and the excavations will then be coated with several layers of gunite to produce the slide and pools liners. Decking adjacent to the pools and slide will be slabs-on-grade. We recommend a 12 inch thick layer of densely compacted, granular structural fill be placed below the pool deck. Fill should be placed as recommend in the OVERLOT GRADING section.

If a near surface water table develops, buoyancy forces will heave and crack the pool and stream liners. To reduce the potential for development of buoyancy forces, we recommend provision of a gravel sub-drain beneath the pool and slide complex. A detail for construction of the drainage layer is shown on Figure 5.

BELOW GRADE CONSTRUCTION

Building foundation walls which extend below-grade should be designed for lateral earth pressures where backfill is not present to about the same extent on both sides of the wall. Many factors affect the values of the design lateral earth pressure. These factors include, but are not limited to, the type, compaction, slope and drainage of the backfill, and the rigidity of the wall against rotation and deflection. For a very rigid foundation wall where negligible or very little deflection will occur, an "at-rest" lateral earth pressure should be used in design. For walls which can deflect or rotate 0.5 to 1 percent of wall height (depending upon the backfill types), lower "active" lateral earth pressures are appropriate. Our experience indicates that building foundation walls deflect or rotate slightly under normal design loads, and that this deflection results in satisfactory wall performance. Thus, the earth pressures on the walls will likely be between the "active" and "at-rest" conditions.

If the on-site soils, with maximum particle size of 4 inches and free of deleterious material, are used as backfill, we recommend design of below-grade walls using an equivalent fluid density of at least 50 pcf for this site. This equivalent density does not include allowances for sloping backfill, surcharges or hydrostatic pressures. Backfill placed adjacent to foundation wall exteriors should be moisture treated and compacted to between 90 and 95 percent of standard Proctor maximum dry density (ASTM D 698).

We understand that below grade building construction will be limited to a partial basement below the main building. We have recommended a layer of washed gravel to break the capillary rise of water below the floor slabs. We suggest that the below slab layer of gravel be connected to a drain placed along the perimeter of the building to allow removal of water collected in the washed gravel

layer. The drain should consist of slotted PVC pipe encased in "free draining" gravel and lead to a positive gravity outfall. A typical drain detail is presented on Figure 4.

ACCESS ROAD CONSTRUCTION

Utility Construction

We believe excavations for utility installation in the soils at the site can be performed with conventional heavy-duty or large backhoes. Permanent groundwater levels are controlled by, and directly related to, water levels in the Colorado River. If groundwater is encountered during construction in shallow excavations, dewatering can likely be accomplished by sloping excavations to occasional sumps where water can be removed by pumping. Piping would need to be designed to resist buoyancy force.

Utility trenches should be sloped or shored to meet local, State and federal safety regulations. The clay soil will classify as a Type B soil and the gravels will classify as a Type C soil based on OSHA standards. OSHA recommended temporary excavation slopes are provided in the OVERLOT GRADING section. Excavation slopes specified by OSHA are dependent upon soil types and ground water conditions encountered. Contractors should identify the soils encountered in the excavation and refer to OSHA standards to determine appropriate slopes.

Water and sewer lines are usually constructed beneath paved roads. Compaction of trench backfill can have a significant effect on the life and serviceability of pavements. Trench backfill should be placed in thin, loose lifts, and moisture conditioned to within 2 percent of optimum content. Trench backfill should be compacted to at least 95 percent of maximum dry density (ASTM D 698). The placement and compaction of fill and backfill should be observed and

tested by our firm during construction. Backfill soils maximum diameter should be limited to 4 inches to avoid nesting of larger diameter rock in the trench. If imported trench backfill is required, we recommend a CDOT Class 6 aggregate base course.

PAVEMENT CONSTRUCTION

Areas to be paved should be stripped to the natural soils. The subgrade surface below pavements should be moisture treated to within 2 percent of optimum moisture content and compacted to at least 95 percent of the standard Proctor maximum dry density (ASTM D 698) before placement of base course and/or pavement. The entire area should be proof rolled with a heavy pneumatic tire vehicle (i.e. a loaded 10 wheel dump truck) before fill, base course or pavement is placed. Soils which deform excessively should be removed and replaced with structural fill or otherwise stabilized.

For pavement areas for automobile traffic and automobile parking, we suggest 5.0 inches of full depth asphalt or 3.0 inches of asphalt over 6.0 inches of aggregate base course. Areas subject to truck or bus traffic should be paved with 6 inches of portland cement concrete. The performance history of a combination asphalt and aggregate base course section has shown higher maintenance costs and decreased serviceability compared to either full depth asphalt or concrete pavement. The above pavement sections are based on our anticipation of relatively light traffic loads. If requested, we could perform a subgrade investigation and pavement design. We would need anticipated vehicle traffic information for this investigation.

The performance of pavement sections depends on the quality of the materials used. Aggregate base course should conform to the Colorado Department of Transportation specifications for Class 6 aggregate and should have a minimum

R-value of 78. The base course should be moisture conditioned to near optimum moisture content and compacted to at least 95 percent of modified Proctor maximum dry density (ASTM D 1557). Asphalt should have a total resistance (Rt) of at least 94 and should be compacted to at least 95 percent of the maximum laboratory density. Portland cement concrete should contain at least 5.5 sacks of cement per cubic yard, 5 to 7 percent entrained air and have a minimum modulus of Rupture of 650 psi. We recommend observation and testing of material placement by a representative of our firm during construction.

Garbage, drywall, sod and concrete trucks are often times over the legal weight limit. The driving and parking of these types of overweight trucks can cause pavement rutting in areas where the underlying subgrade is wet. We recommend these types of trucks be required to be beneath the legal load limit of 18,000 pounds per axle. Where possible, drivers should be instructed to avoid driving and/or parking near the curb lines. These precautions should reduce the risk of additional pavement damage during construction.

Pavement Materials

Material properties and construction criteria for the pavement alternatives are provided below. These criteria were developed from analysis of the field and laboratory data and our experience. If the materials cannot meet these recommendations, then the pavement design should be reevaluated based upon available materials.

Asphalt Concrete (AC) or Hot Mix Asphalt (HMA)

1. HMA should be composed of a mixture of aggregate, filler, hydrated lime and asphalt cement. Some mixes may require polymer modified asphalt cement, or make use of up to 20 percent reclaimed asphalt pavement (RAP). A job mix design is recommended and periodic checks on the job site should be made to verify compliance with specifications.

2. HMA should be relatively impermeable to moisture and should be designed with crushed aggregates that have a minimum of 80 percent of the aggregate retained on the No. 4 sieve with two mechanically fractured faces.

3. Gradations that approach the maximum density line (within 5 percent between the No. 4 and 50 sieve) should be avoided. A gradation with a nominal maximum size of 1 or 2 inches developed on the fine side of the maximum density line should be used.

4. Total void content, voids in the mineral aggregate (VMA) and voids filled should be considered in the selection of the optimum asphalt cement content. The optimum asphalt content should be selected at a total air void content of approximately 4 percent. The mixture should have a minimum VMA of 14 percent and between 65 percent and 80 percent of voids filled.

5. Asphalt cement should meet the requirements of the Superpave Performance Graded (PG) Binders. We recommend using PG 58-28 or PG 58-22 asphalt cement for this project.

6. Hydrated lime should be added at the rate of 1 percent by dry weight of the aggregate and should be included in the amount passing the No. 200 sieve. Hydrated lime for aggregate pretreatment should conform to the requirements of ASTM C 207, Type N.

7. Paving should only be performed when subgrade temperatures are above 40°F and air temperature is at least 40°F and rising.

8. HMA should not be placed at a temperature lower than 245°F for mixes containing PG 58-28 or PG 58-22 asphalt, and 290°F for mixes containing polymer modified asphalt. The breakdown compaction should be completed before the mixture temperature drops 20°F.

9. The maximum compacted lift should be 3.0 inches and joints should be staggered. No joints should be placed within wheel paths.

10. HMA should be compacted to between 92 and 96 percent of Maximum Theoretical Density. The surface shall be sealed with a finish roller prior to the mix cooling to 185°F.

11. Placement and compaction of HMA should be observed and tested by a representative of our firm. Placement should not commence until the subgrade is properly prepared (or stabilized), tested and proofrolled. Proof rolling should be performed with the heaviest machine

available at the time. The proof roller should be selected from machines providing both mass and high contact pressure.

Aggregate Base Course (ABC)

1. A Class 5 or 6 Colorado Department of Transportation (CDOT) specified aggregate base course should be used. A recycled concrete alternative which meets the Class 5 or 6 designation is also acceptable.

2. Aggregate base course should have a minimum Hveem stabilometer value of 77. Aggregate base course or recycled concrete material must be moisture stable. The change in R-value from 300 psi to 100 psi exudation pressure should be 12 points or less.

3. Aggregate base course or recycled concrete should be laid in thin lifts not to exceed 8 inches; moisture treated to within 2 percent of optimum moisture content and compacted to at least 95 percent of maximum modified Proctor dry density (ASTM D 1557, AASHTO T 180).

4. Placement and compaction of aggregate base course or recycled concrete should be observed and tested by a representative of our firm. Placement should not commence until the underlying subgrade is properly prepared and tested.

Moisture Treated Subgrade

1. Subgrade should be stripped of organic matter, scarified, moisture treated and compacted.

2. Subgrade soils should be moisture conditioned to between 2 percent below and 2 percent above optimum moisture content and compacted to at least 95 percent of standard Proctor maximum dry density (ASTM D 698, AASHTO T 99).

3. Final grading of the subgrade should be carefully controlled so the design cross-slope is maintained and low spots in the subgrade that could trap water are eliminated.

4. Once final subgrade elevation has been reached and the subgrade compacted and tested, the area should be proof-rolled with the heaviest machine available at the time. The proof roller should be

selected from machines providing both mass and high contact pressure.

5. The proof-roll should be performed while moisture contents of the subgrade are still within the recommended limits. Drying of the subgrade prior to proof-roll or paving should be avoided. Areas of soft or wet subgrade should be remedied.

CONSTRUCTION DETAILS

The design of a pavement system is as much a function of the quality of the paving materials and construction as the support characteristics of the subgrade. The construction materials are assumed to possess sufficient quality as reflected by the strength coefficients used in the flexible pavement design calculations. These strength coefficients were developed through research and experience to simulate expected material of good quality, as explained herein. During construction careful attention should be paid to the following details:

- Placement and compaction of trench backfill.
- Compaction at curb lines and around manholes and water valves.
- Excavation of completed pavements for utility construction and repair.
- Design slopes of the adjacent ground and pavement to rapidly remove water from the pavement surface.

MAINTENANCE

Routine maintenance, such as sealing and repair of cracks, is necessary to achieve the long-term life of a pavement system. We recommend a preventive maintenance program be developed and followed for all pavement systems to assure the design life can be realized. Choosing to defer maintenance usually re-

sults in accelerated deterioration leading to higher future maintenance costs, and/or repair. A recommended maintenance program is outlined in Appendix B.

CONCRETE

Soils in the vicinity of mineral springs in the area are known to have high concentrations of water soluble sulfates. We believe that concrete exposed to the natural soils or groundwater will be exposed to severe sulfate exposure. We recommend Type V or equivalent sulfate resistant cement to be used in all concrete exposed to the natural soils or groundwater at this site. We recommend the use of de-icing salts on concrete pavement or exterior flatwork be minimized during the first year after construction.

SURFACE DRAINAGE

Performance of concrete flatwork and foundations is influenced by the moisture conditions in the subsoils. Risk of wetting of the subsoils can be reduced by carefully planned and maintained surface drainage. We recommend the following precautions be observed during construction and maintained at all times after construction is completed:

1. Wetting or drying of open excavations should be avoided;

2. Surface grades should provide for the rapid runoff of water off of pavements and away from buildings. Ponding of water adjacent to buildings or on pavements should be eliminated;

3. The ground surface surrounding the exterior of buildings should be sloped to drain away from the buildings in all directions. We recommend a minimum slope of at least 6 inches in the first 10 feet for landscaped areas. Exterior slabs adjacent to buildings should also slope as much as allowable away from the buildings;

4. Backfill of foundation walls should be moistened and compacted as outlined under "Overlot Grading". Deep backfill zones will settle over time, even with proper compaction. Settlement of 0.5 to 2 percent of the fill height can occur. Support of flatwork, entrances or other structures in backfill zones should consider the potential settlement. The use of structural sections supported on foundation walls should be considered in sensitive areas;

5. Roof downspouts and drains should discharge well beyond the limits of all backfill. Splash blocks and downspout extensions should be provided at all drainage locations;

6. Plastic membranes should not be used to cover the ground surface immediately surrounding the building. These membranes tend to trap moisture and prevent normal evaporation from occurring. Geotextile fabrics can be used to limit weed growth and allow for evaporation.

ADDITIONAL CONSULTATION, CONSTRUCTION OBSERVATIONS AND MONITORING

This report has been prepared for the exclusive use of Iron Mountain Hot Springs, LLC and the design team for the purpose of providing geotechnical design and construction criteria for the proposed project. The information, conclusions, and recommendations presented herein are based upon consideration of many factors including, but not limited to, the type of structures proposed, the geologic setting, and the subsurface conditions encountered. The conclusions and recommendations contained in the report are not valid for use by others. Standards of practice evolve in geotechnical engineering. The recommendations provided are appropriate for about three years. If the proposed project is not constructed within about three years, we should be contacted to determine if we should update this report.

CTL | Thompson, Inc. should provide construction observation services to allow us the opportunity to verify whether soil conditions are consistent with those found during this investigation. If others perform these observations, they must

accept responsibility to judge whether the recommendations in this report remain appropriate.

GEOTECHNICAL RISK

The concept of risk is an important aspect with any geotechnical evaluation, primarily because the methods used to develop geotechnical recommendations do not comprise an exact science. We never have complete knowledge of subsurface conditions. Our analysis must be tempered with engineering judgment and experience. Therefore, the recommendations presented in any geotechnical evaluation should not be considered risk-free. We cannot provide a guarantee that the interaction between the soils and a proposed structure will be as desired or intended. Our recommendations represent our judgment of those measures that are necessary to increase the chances that the structures will perform satisfactorily. It is critical that all recommendations in this report are followed during construction. Home owners must assume responsibility for maintaining the structure and use appropriate practices regarding drainage and landscaping.

LIMITATIONS

Our test pits were located to provide a reasonably accurate picture of subsurface conditions. Variations in the subsurface conditions not indicated by the pits will occur. A representative of our firm should be called to test structural fill placement and to observe the completed foundation excavation to confirm that the exposed soils are suitable for support of the footings as designed.

This investigation was conducted in a manner consistent with that level of care and skill ordinarily exercised by geotechnical engineers currently practicing under similar conditions in the locality of this project. No warranty, express or implied, is

made. If we can be of further service in discussing the contents of this report, please call.

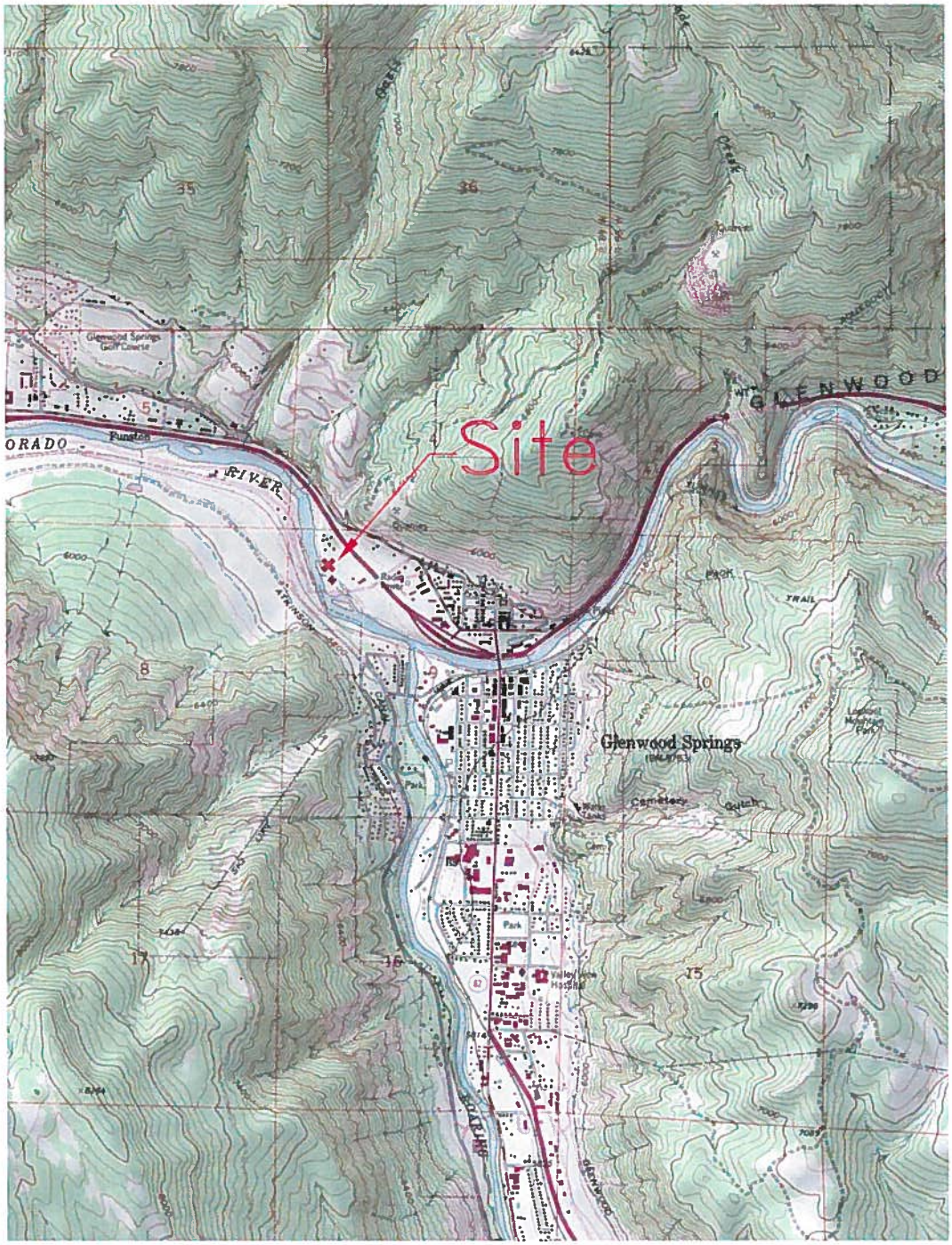
CTL | THOMPSON, INC.

John Mechling, P.E.
Branch Manager

JM:cd

cc: Via email mogli@planbrealestate.com

SCALE: 1" = 2,000'

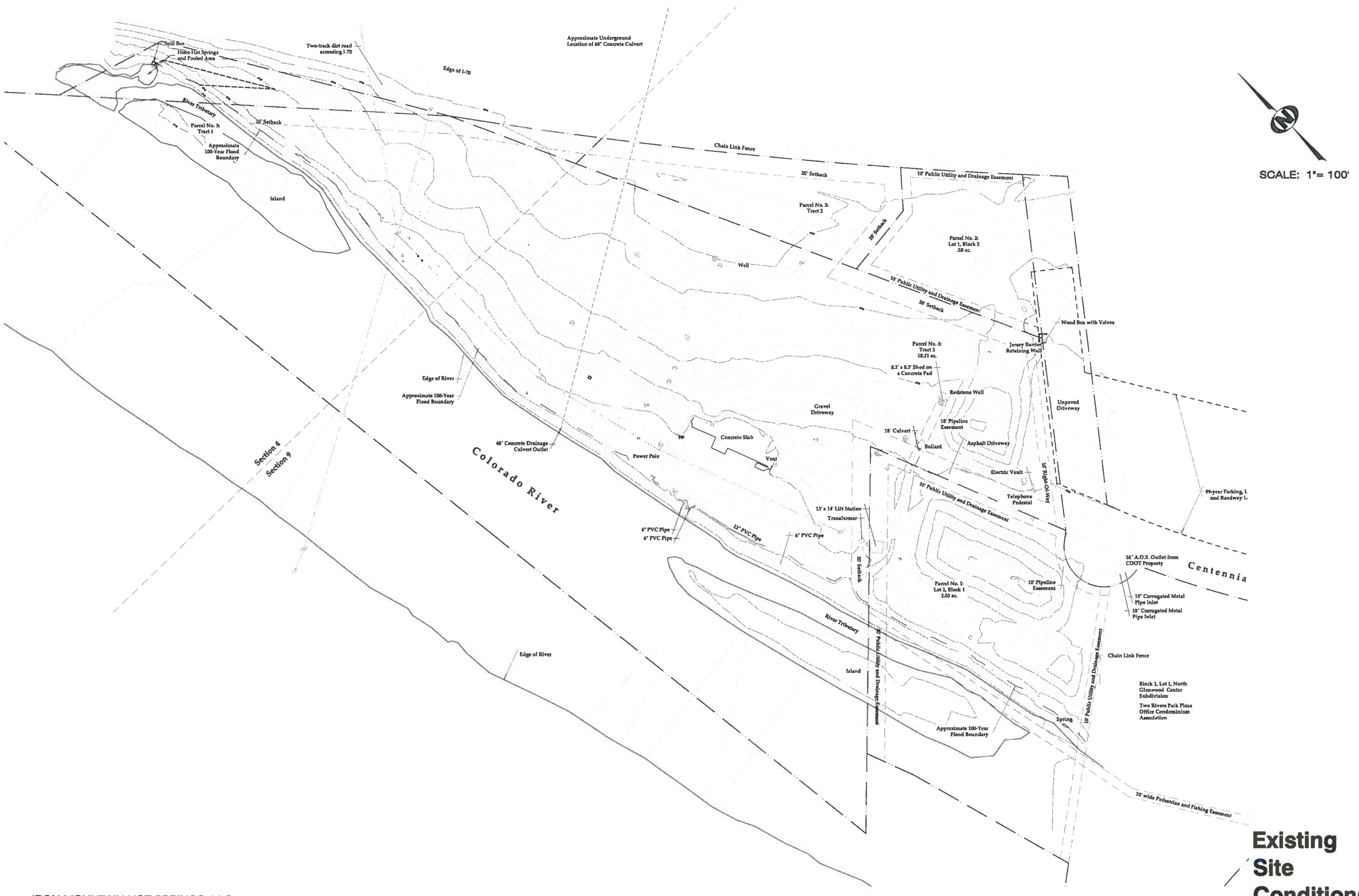


Vicinity Map

IRON MOUNTAIN HOT SPRINGS, LLC
IRON MOUNTAIN HOT SPRINGS
Project No. GS05875-145

Fig. 1

GS05875_F1 07/28/14 ERW

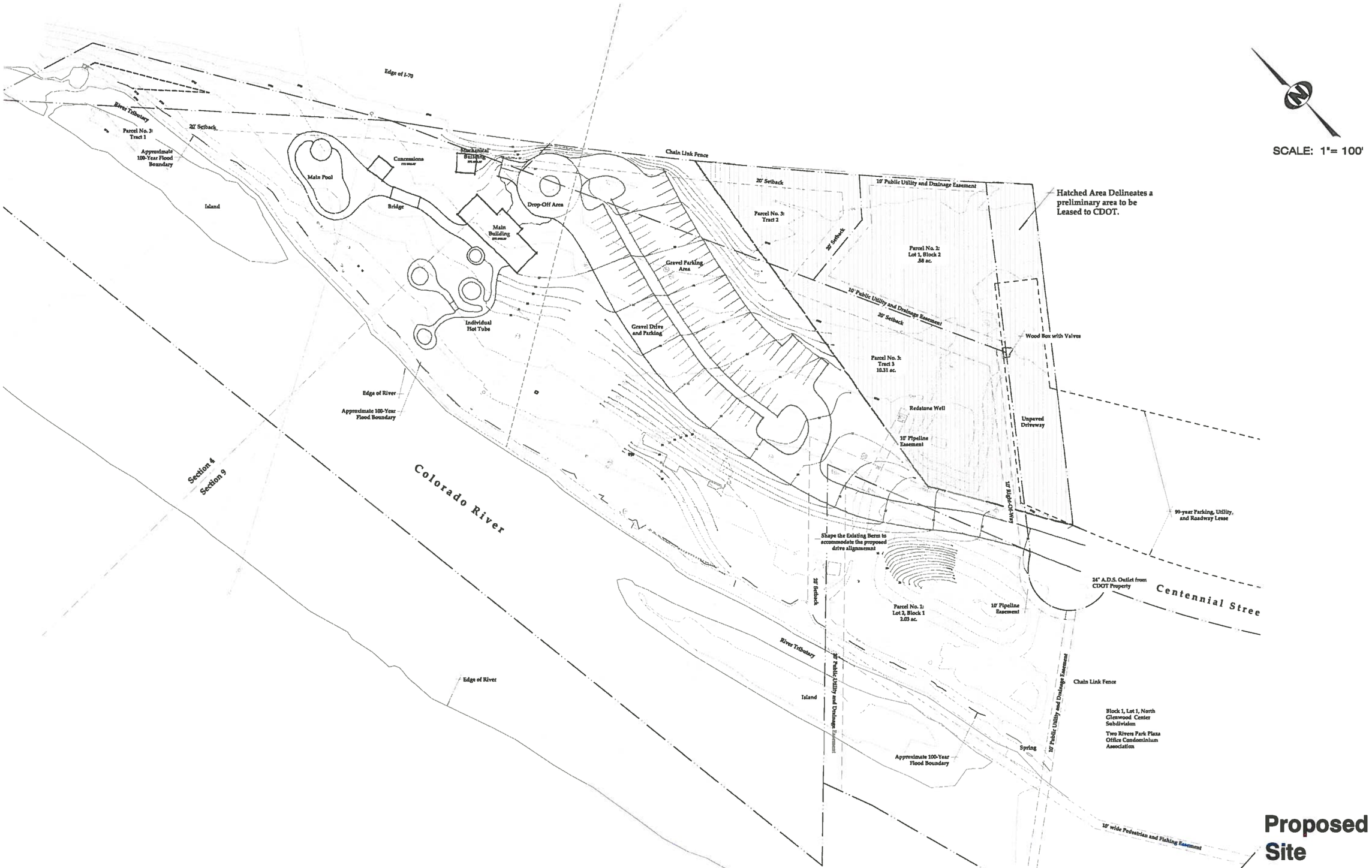


Existing Site Conditions

IRON MOUNTAIN HOT SPRINGS, LLC
IRON MOUNTAIN HOT SPRINGS
Project No. GS05875-145

GS05875_P2 07/28/14 EEW

Fig. 2



SCALE: 1"= 100'

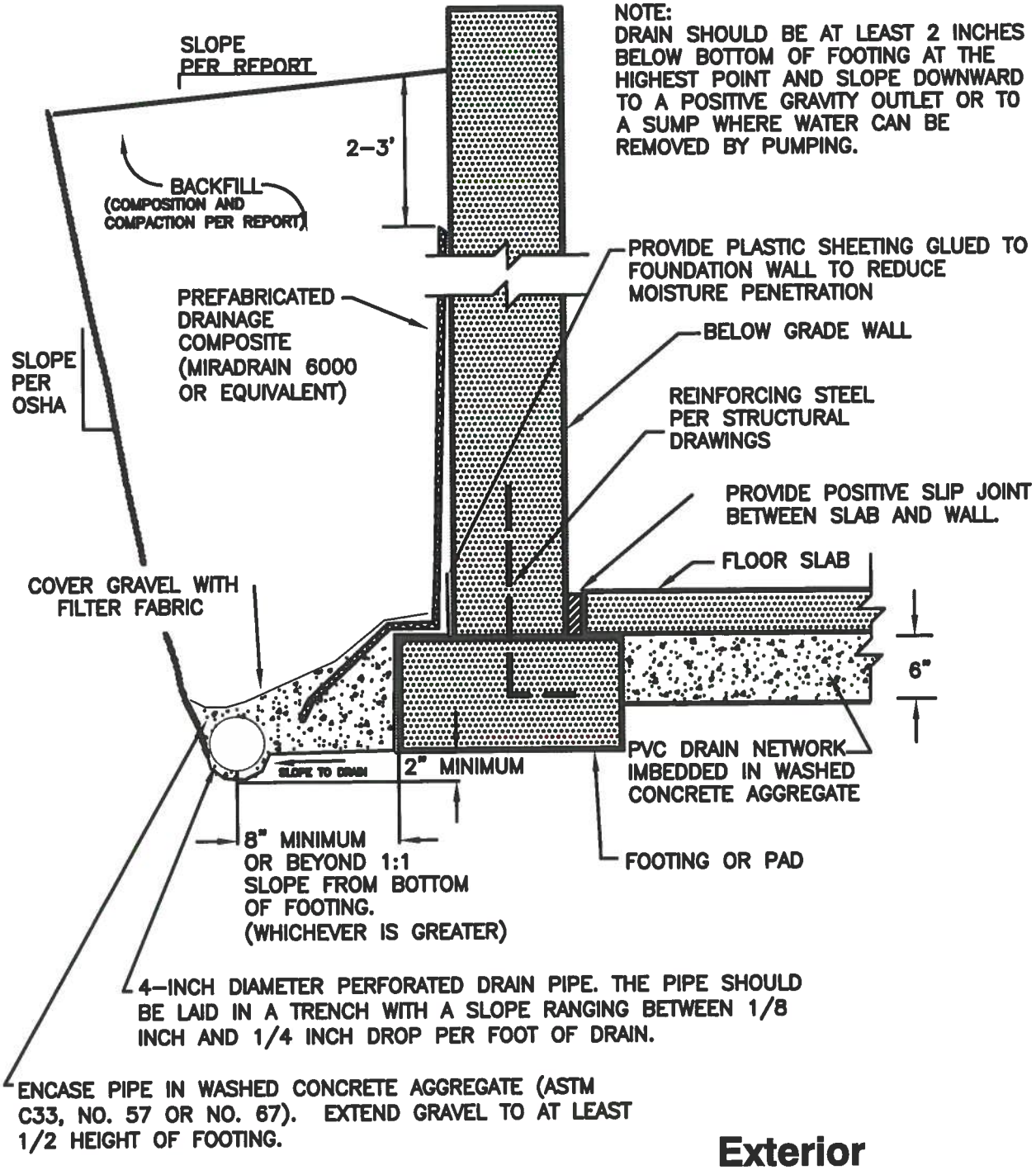
Proposed Site Plan

IRON MOUNTAIN HOT SPRINGS, LLC
IRON MOUNTAIN HOT SPRINGS
Project No. GS05875-145

GS05875_P3 07/28/14 ERW

Fig. 3

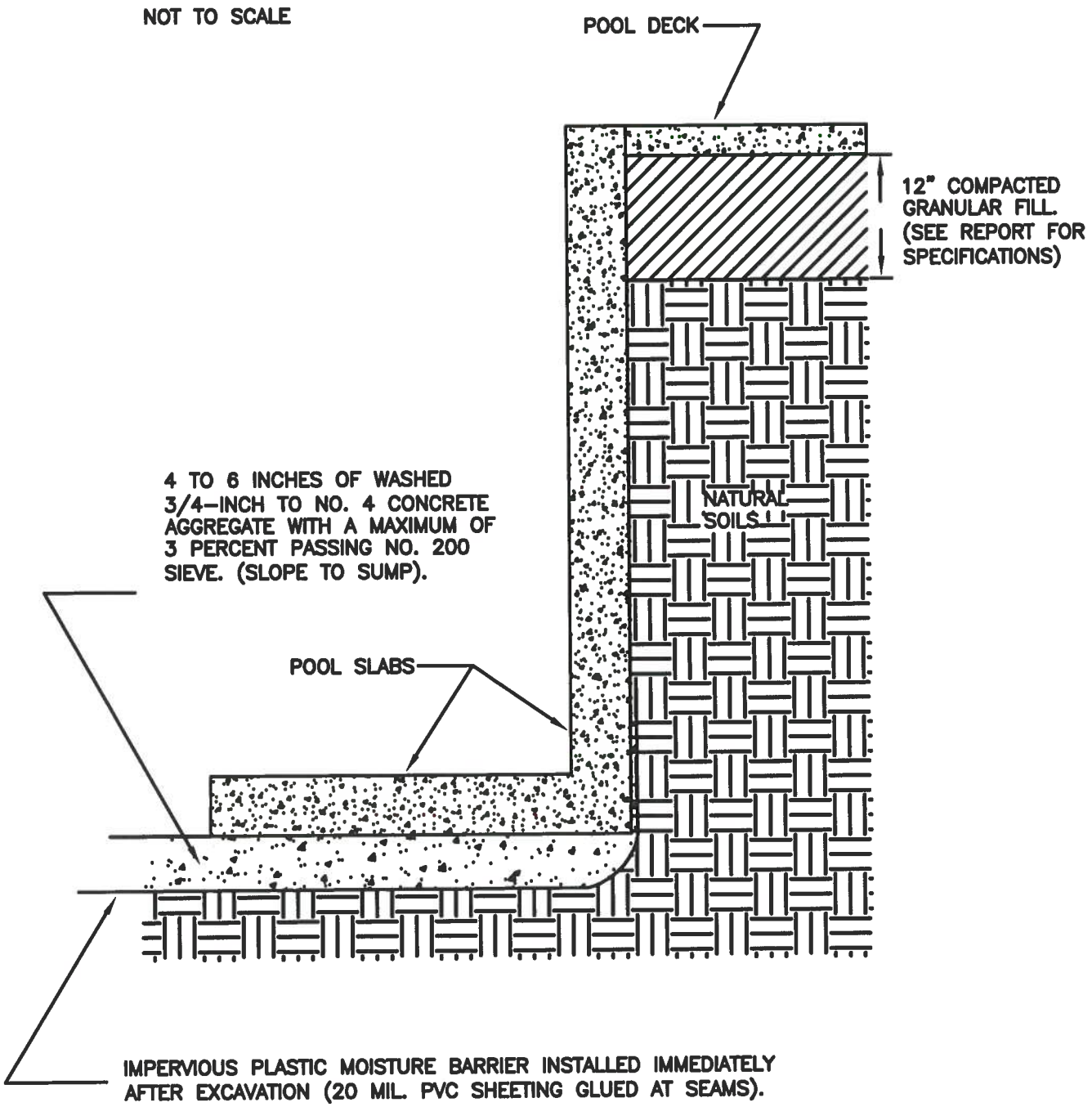
Drain-2-CD 3-13-14



Exterior Foundation Wall Drain

IRON MOUNTAIN HOT SPRINGS, LLC
IRON MOUNTAIN HOT SPRINGS
Project No. GS05875-145

Fig. 4



Recommended Pool Drain Detail

IRON MOUNTAIN HOT SPRINGS, LLC
IRON MOUNTAIN HOT SPRINGS
Project No. GS05875-145

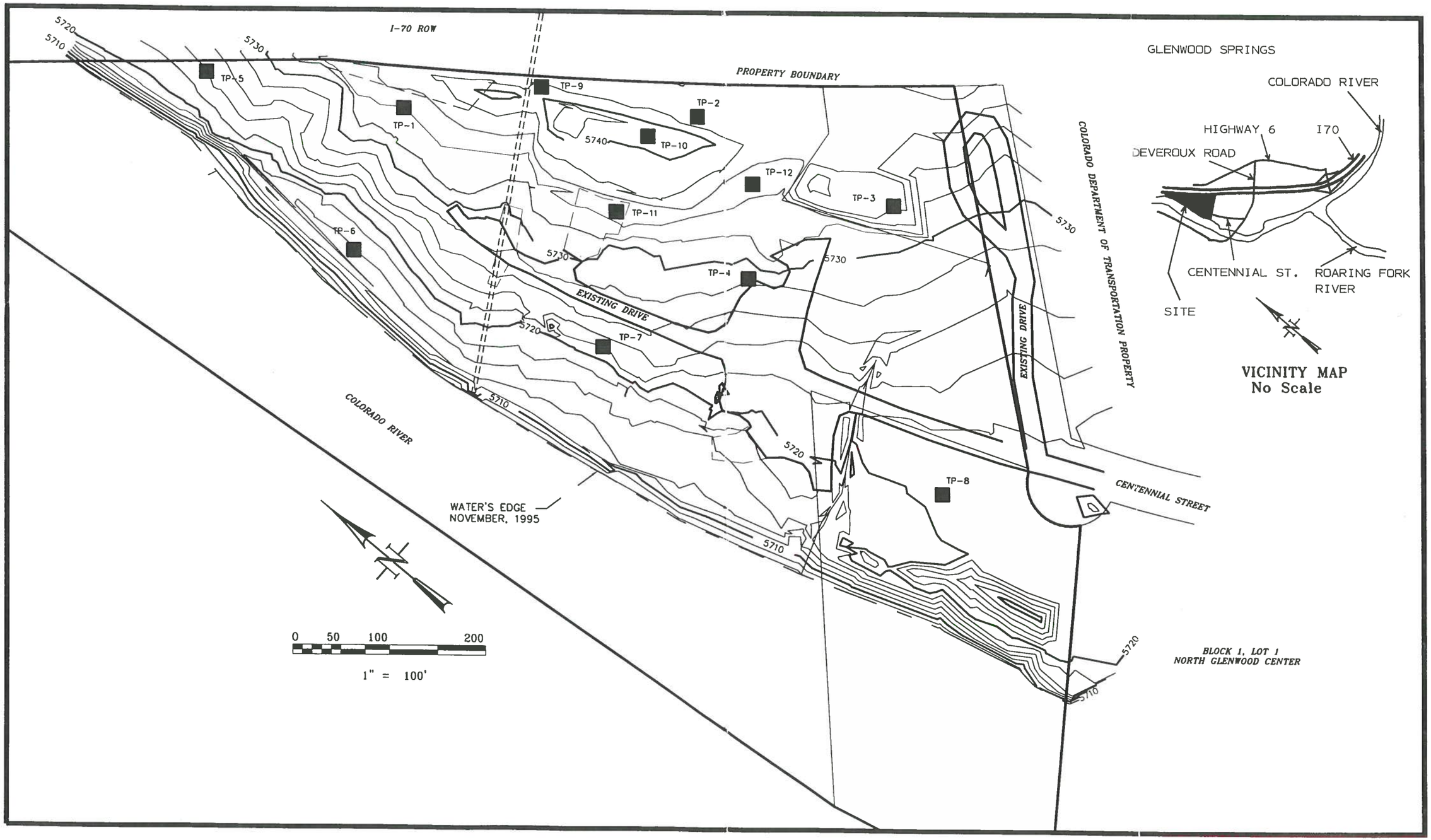
Fig. 5

30-POOL_03 CD

APPENDIX A

FIGURES FROM GS-1727

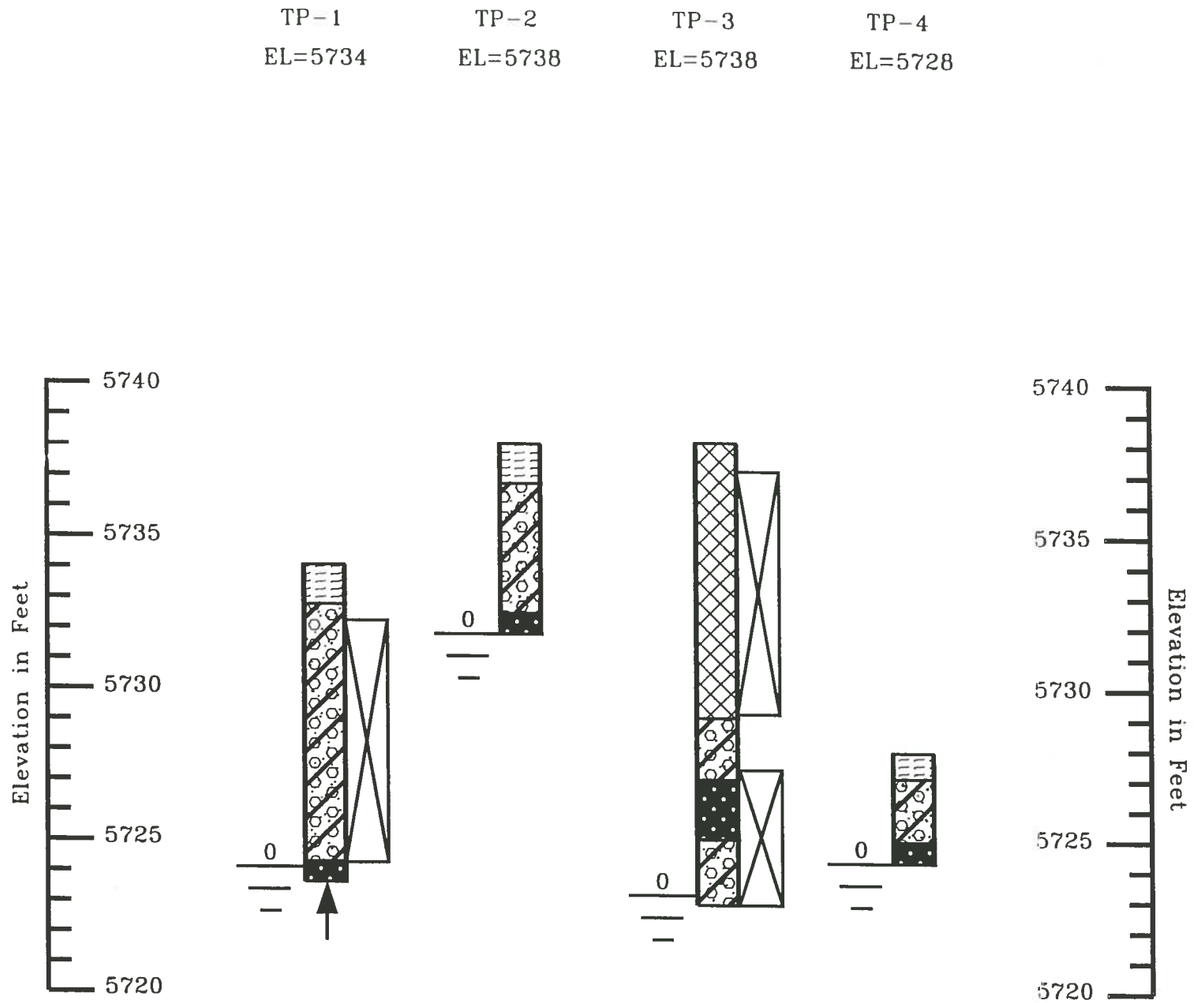
PROPOSED NORTH GLENWOOD WATER PARK
GLENWOOD SPRINGS, COLORADO



LOCATIONS OF TEST PITS

Job No. GS-1727

Fig. 2



LEGEND:

- Organic clays, soft, moist, brown. (OL)
- Man Made Fill – clay, silty to sandy, soft, moist, red brown.
- Gravel, clayey to silty with cobbles, medium dense to very dense, moist to wet, brown. (GM, GC)
- Travertine cemented sandy gravels.
- Clay, sandy to gravely, very soft to medium dense, moist to wet, brown. (CL, SC)
- Indicates bulk sample.
- 0 — Indicates free water level. Numeral indicates number of days after excavating that measurement was taken.
- Indicates backhoe refusal.

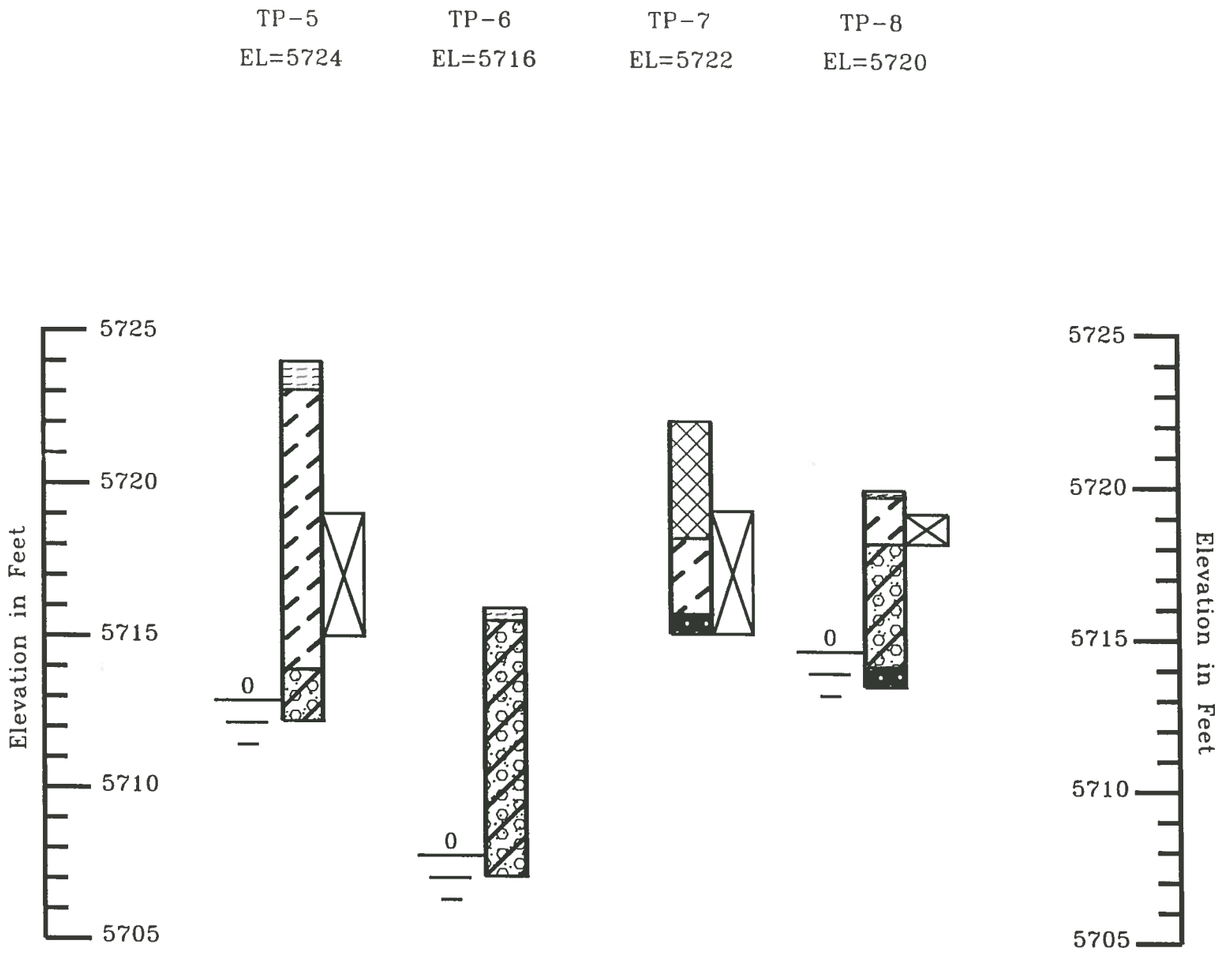
NOTES:

1. Test pits were excavated on December 14, 1995 with a trackhoe.
2. Elevations were obtained from topographic mapping provided by Jerome Gamba & Associates and are approximate.
3. These test pits are subject to the explanations, limitations and conclusions as contained in this report.

SUMMARY LOGS OF TEST PITS

Job No. GS-1727

Fig. 3



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- Organic clays, soft, moist, brown. (OL)
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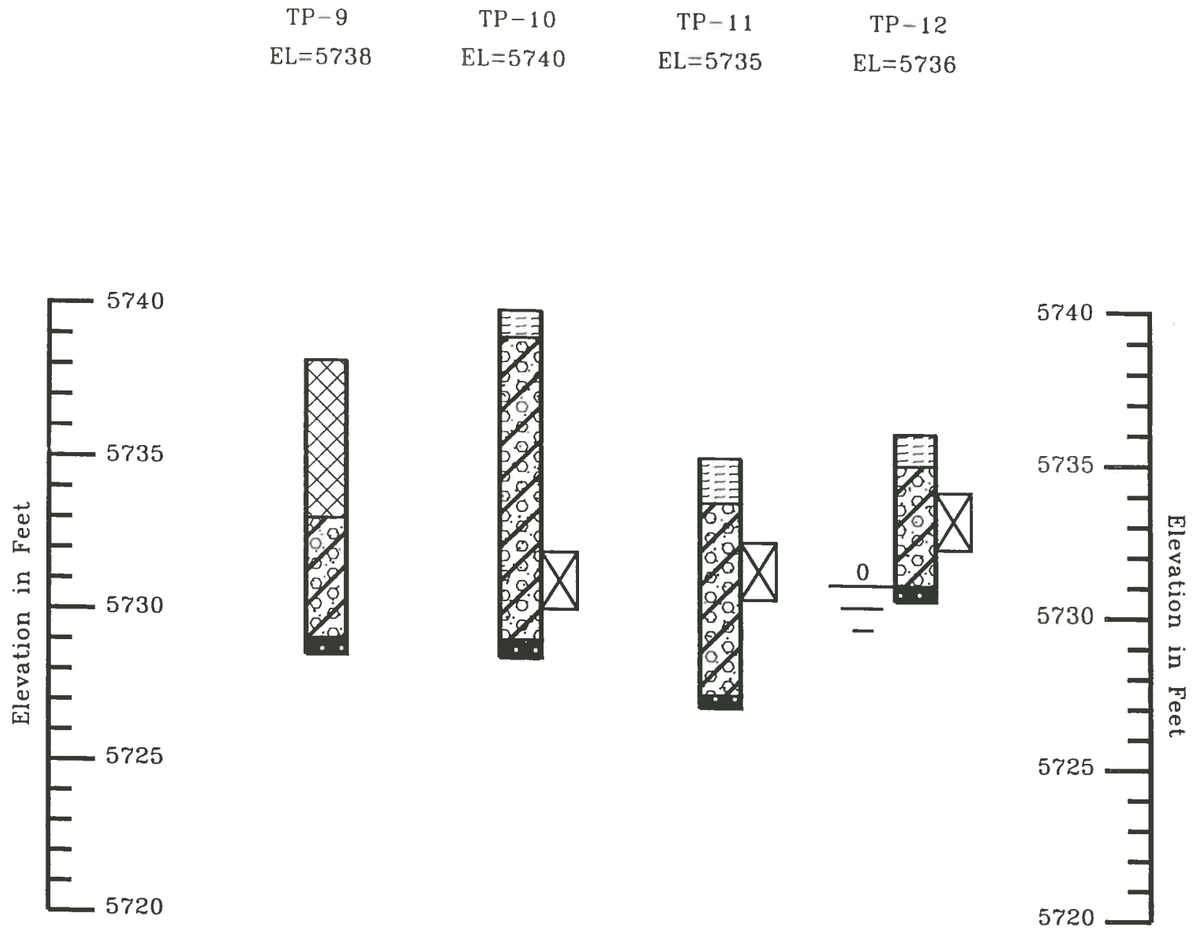
3. These test pits are subject to the explanations, limitations and conclusions as contained in this report.

Job No. GS-1727

SUMMARY LOGS OF TEST PITS

Fig. 4



LEGEND:

- Organic clays, soft, moist, brown. (OL)
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- Gravel, clayey to silty with cobbles, medium dense to very dense, moist to wet, brown. (GM, GC)
- Travertine cemented sandy gravels.
- Clay, sandy to gravely, very soft to medium dense, moist to wet, brown. (CL, SC)
- Indicates bulk sample.
- 0 — Indicates free water level. Numeral indicates number of days after excavating that measurement was taken.
- Indicates backhoe refusal.

NOTES:

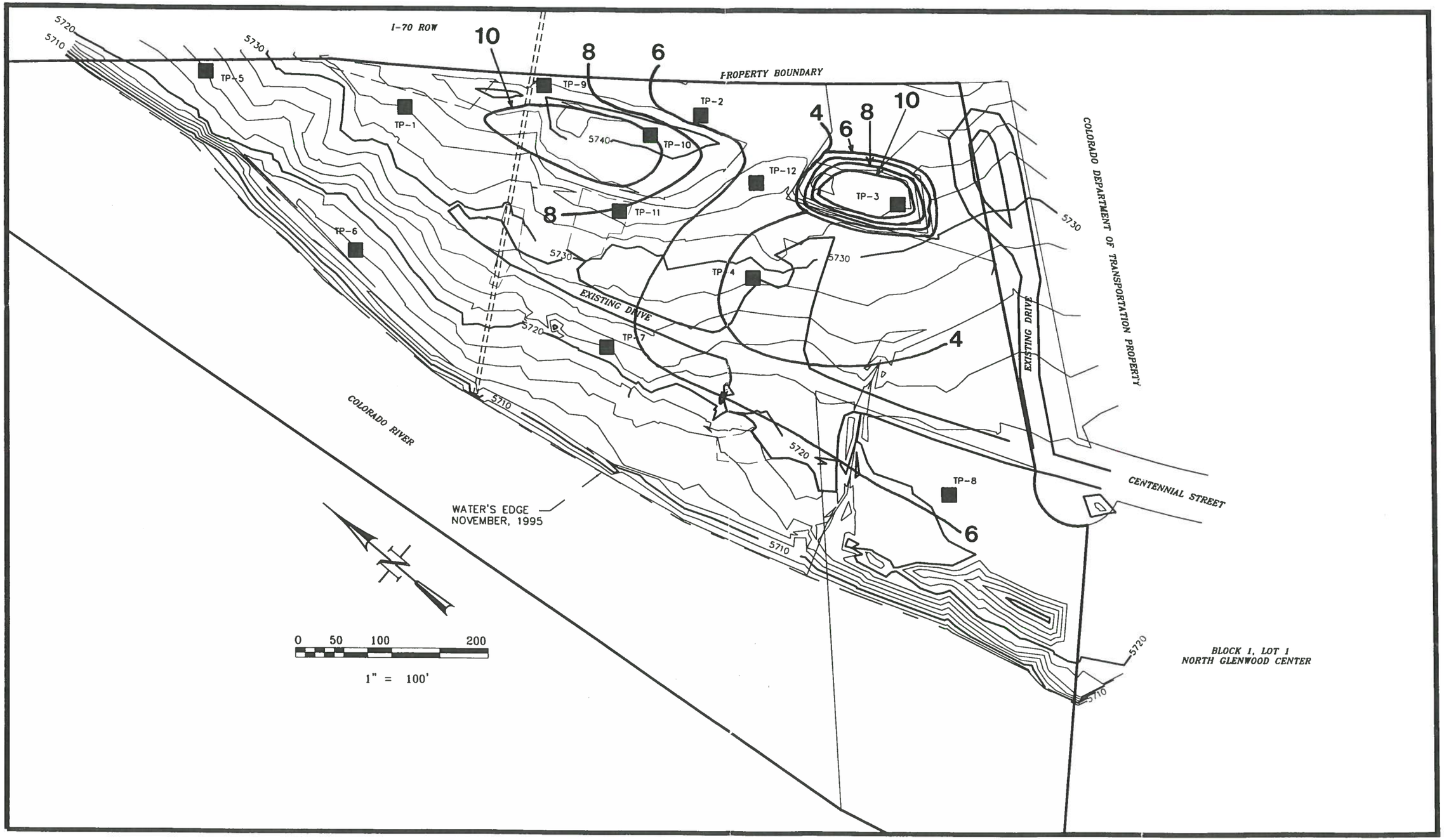
1. Test pits were excavated on January 3, 1996 with a trackhoe.
2. Elevations were obtained from topographic mapping provided by Jerome Gamba & Associates and are approximate.
3. These test pits are subject to the explanations, limitations and conclusions as contained in this report.

Job No. GS-1727

SUMMARY LOGS OF TEST PITS

Fig. 5

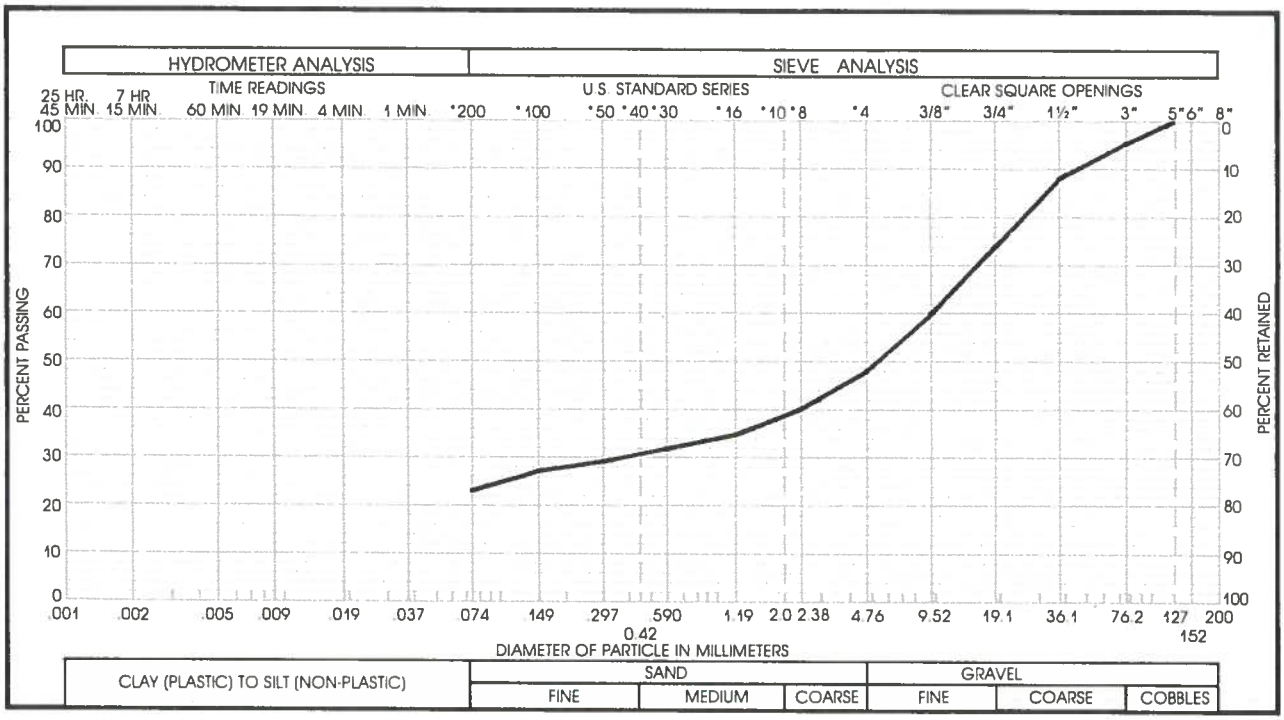
PROPOSED NORTH GLENWOOD WATER PARK
GLENWOOD SPRINGS, COLORADO



APPROXIMATE DEPTH TO TRAVERTINE CEMENTED LAYER CONTOUR MAP

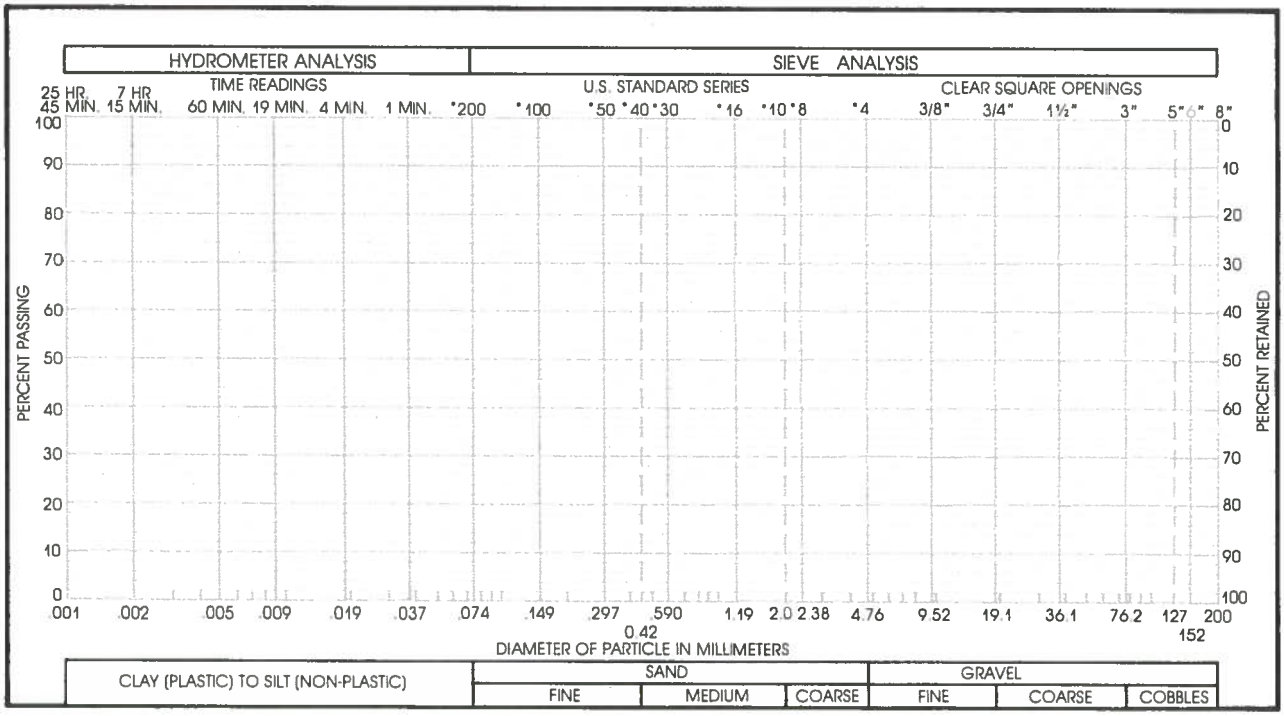
Job No. GS-1727

Fig. 6



Sample of GRAVEL, SILTY (GM)
From TP-1 AT 2 TO 10 FEET

GRAVEL 52 % SAND 25 %
SILT & CLAY 23 % LIQUID LIMIT 23 %
PLASTICITY INDEX 8 %



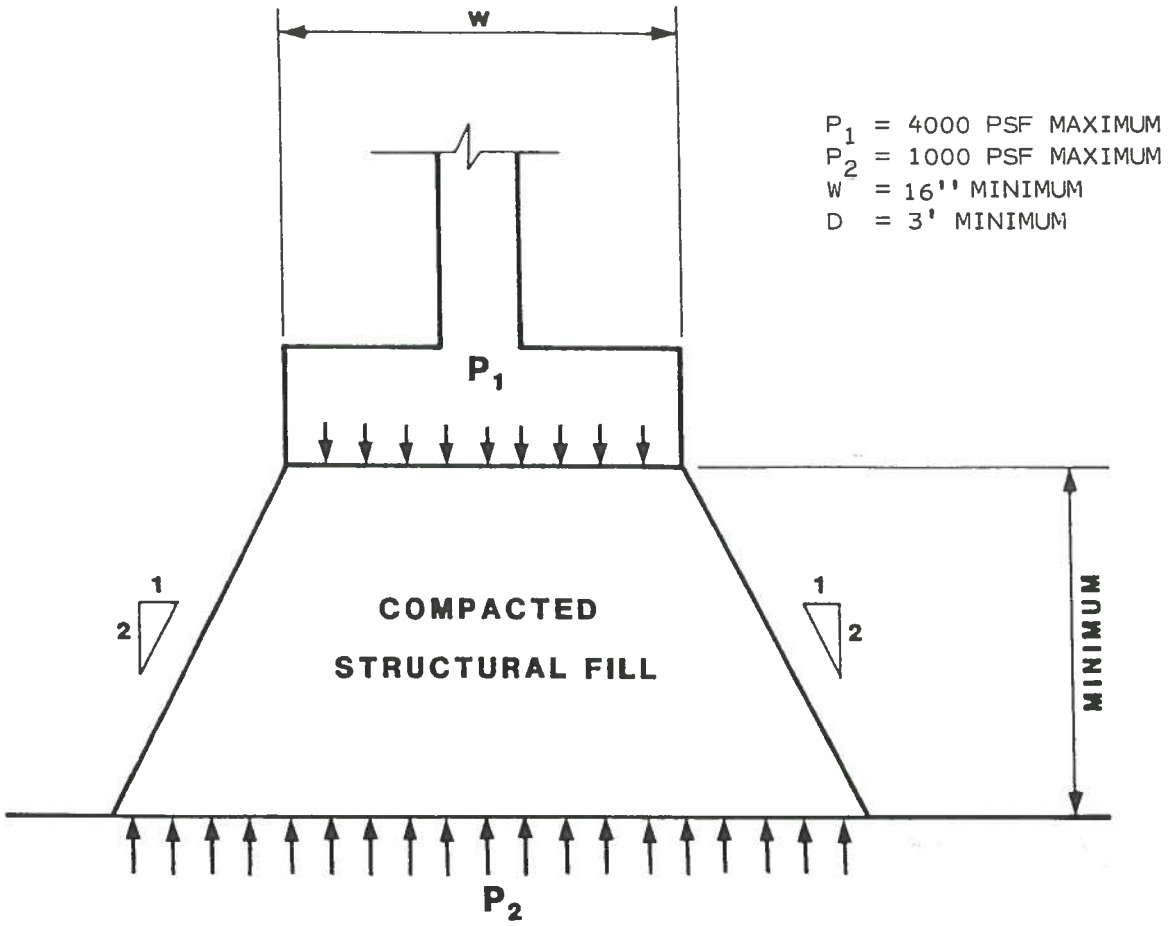
Sample of _____
From _____

GRAVEL _____ % SAND _____ %
SILT & CLAY _____ % LIQUID LIMIT _____ %
PLASTICITY INDEX _____ %

Gradation Test Results

JOB NO. GS-1727

FIG. 7



P_1 = ALLOWABLE PRESSURE ON COMPACTED FILL:

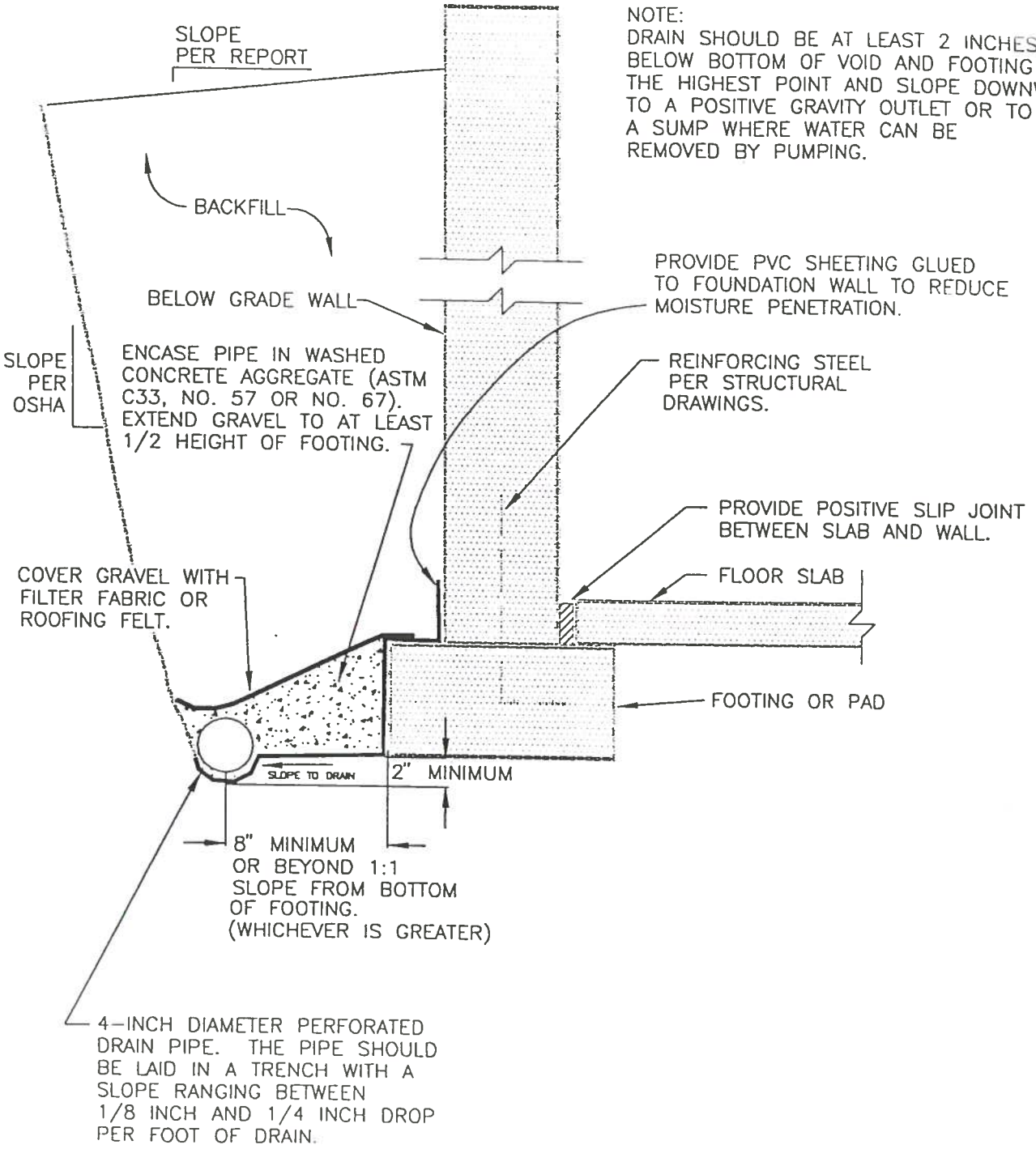
P_2 = ALLOWABLE PRESSURE ON NATURAL SOILS:

$$P_2 = \frac{P_1(w)}{(w+d)}$$

w = WIDTH OF FOOTING
d = DEPTH OF FILL BENEATH THE FOOTING

DISTRIBUTION OF PRESSURE FOR FOOTINGS ON FILL

JOB NO. GS-1727 FIG. 8

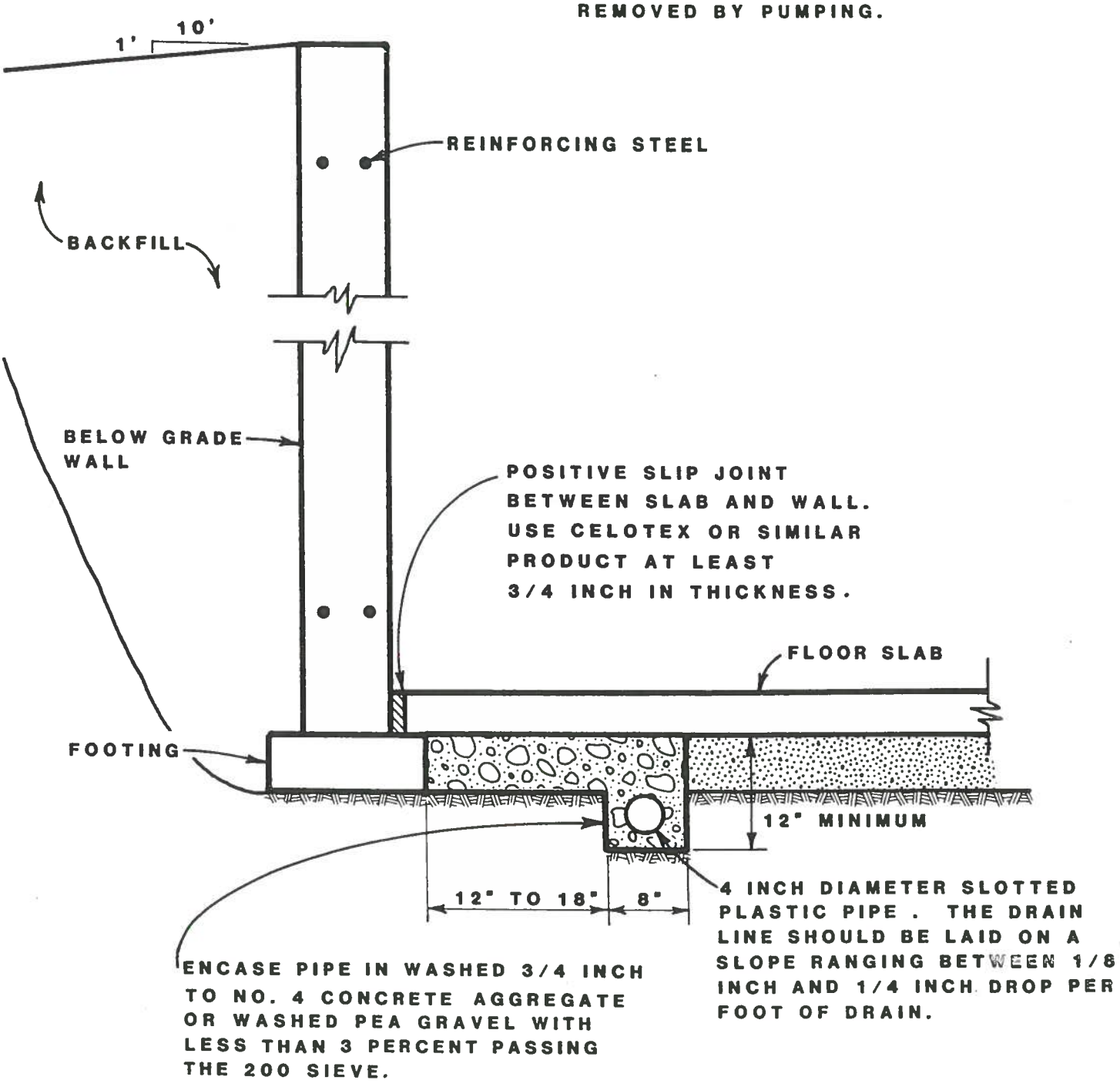


EXTERIOR FOUNDATION WALL DRAIN

JOB NO. GS-1727

FIG. 9

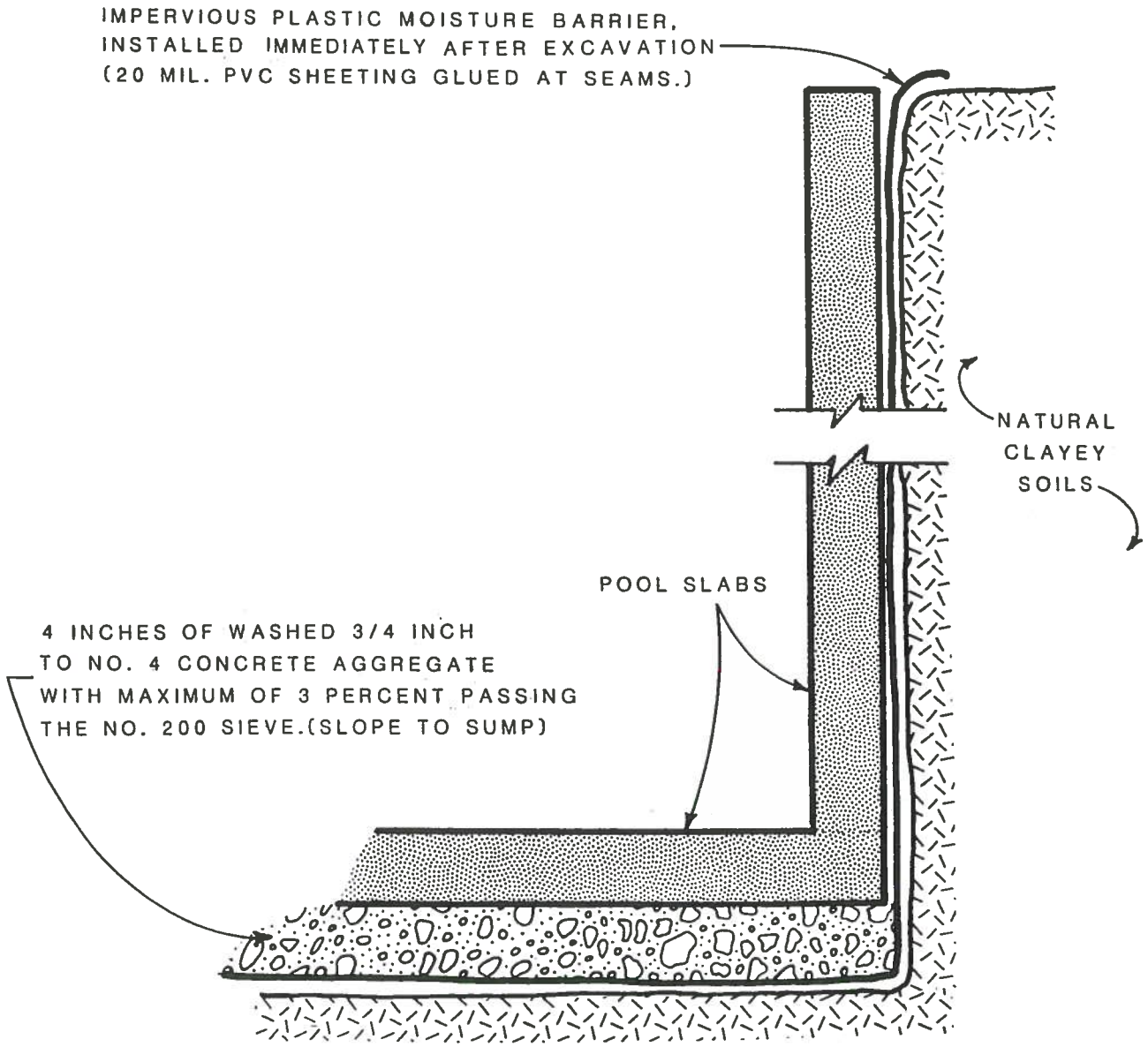
NOTE: DRAIN SHOULD BE 12 INCHES BELOW BOTTOM OF SLAB AT THE HIGHEST POINT AND SLOPE DOWNWARD TO A POSITIVE GRAVITY OUTLET OR TO A SUMP WHERE WATER CAN BE REMOVED BY PUMPING.



TYPICAL DRAIN DETAILS

JOB NO. GS-1727

FIG. 10



RECOMMENDED POOL DRAINAGE DETAIL

JOB NO. GS-1727

FIG. 11

JOB NO. GS-1727

TABLE I

SUMMARY OF LABORATORY TEST RESULTS

HOLE	DEPTH (FEET)	NATURAL MOISTURE (%)	NATURAL DENSITY (pcf)	ATTERBERG LIMITS		UNCONFINED COMPRESSIVE STRENGTH (psf)	SOLUBLE SULFATE (%)	PASSING NO. 4 SIEVE (%)	PASSING NO. 200 SIEVE (%)	SOIL TYPE
				LIQUID LIMIT (%)	PLASTICITY INDEX (%)					
TP-1	2-10			23	8				48	GRAVEL, SILTY (GM)
TP-3	1-9	20.8		31	10				74	CLAY, SANDY (CL)
TP-5	9	27.3		25	8				82	CLAY, SANDY (CL)
TP-7	3-7	21.4							26	GRAVEL, SILTY (GM)
TP-8	2	16.7		28	9				78	CLAY, SANDY (CL)

APPENDIX B

GUIDELINE MAINTENANCE RECOMMENDATIONS

MAINTENANCE RECOMMENDATIONS FOR FLEXIBLE PAVEMENTS

A primary cause for deterioration of pavements is oxidative aging resulting in brittle pavements. Tire loads from traffic are necessary to "work" or knead the asphalt concrete to keep it flexible and rejuvenated. Preventive maintenance treatments will typically preserve the original or existing pavement by providing a protective seal or rejuvenating the asphalt binder to extend pavement life.

1. Annual Preventive Maintenance

    a. Visual pavement evaluations should be performed each spring or fall.
    b. Reports documenting the progress of distress should be kept current to provide information on effective times to apply preventive maintenance treatments.
    c. Crack sealing should be performed annually as new cracks appear.

2. 3 to 5 Year Preventive Maintenance

    a. The owner should budget for a preventive treatment at approximate intervals of 3 to 5 years to reduce oxidative embrittlement problems.
    b. Typical preventive maintenance treatments include chip seals, fog seals, slurry seals and crack sealing.

3. 5 to 10 Year Corrective Maintenance

    a. Corrective maintenance may be necessary, as dictated by the pavement condition, to correct rutting, cracking and structurally failed areas.
    b. Corrective maintenance may include full-depth patching, milling and overlays.
    c. In order for the pavement to provide a 20-year service life, at least one major corrective overlay should be expected.

MAINTENANCE RECOMMENDATIONS FOR RIGID PAVEMENTS

High traffic volumes create pavement rutting and smooth, polished surfaces. Preventive maintenance treatments will typically preserve the original or existing pavement by providing a protective seal and improving skid resistance through a new wearing course.

1. Annual Preventive Maintenance

    a. Visual pavement evaluations should be performed each spring or fall.
    b. Reports documenting the progress of distress should be kept current to provide information of effective times to apply preventive maintenance.
    c. Crack sealing should be performed annually as new cracks appear.

2. 4 to 8 Year Preventive Maintenance

    a. The owner should budget for a preventive treatment at approximate intervals of 4 to 8 years to reduce joint deterioration.
    b. Typical preventive maintenance for rigid pavements include patching, crack sealing and joint cleaning and sealing.
    c. Where joint sealants are missing or distressed, resealing is mandatory.

3. 15 to 20 Year Corrective Maintenance

    a. Corrective maintenance for rigid pavements includes patching and slab replacement to correct subgrade failures, edge damage and material failure.
    b. Asphalt concrete overlays may be required at 15 to 20 year intervals to improve the structural capacity of the pavement.

Email from Dan Cokley to Terri Partch dated July 7, 2020 Regarding IMHS Traffic Study

From: Dan Cokley <DanC@sgm-inc.com>
Date: July 7, 2020 at 8:50:52 AM MDT
To: Terri Partch <terri.partch@cogs.us>
Cc: Steve Beckley <sbeckley@glenwoodcaverns.com>
Subject: IMHS TIS - Pages from Level III_TIS_IronMtnP2-Final_070219

Hi Terri

I understand you recently met with Steve and had concerns about additional pools at IMHS not being accounted for in the approved TIS. I have attached pages of the TIS which describe the project, highlighted the Hotel description and noted on the Site Plan the location of the additional pools. Pools and recreational facilities are included in the ITE description of typical Hotel activities. The additional pools are planned for hotel guests. Cut/pasted from the TIS narrative below…

There are 10 fresh water pools located along the hotel frontage, these pools will be fenced and for hotel guests only.

I believe these pools will not change the typical trip generation rate of the Hotel Land Use as defined by the ITE Trip Generation Manual (10th Ed) and applied in the TIS.

I also understand that the pools are now planned to be constructed prior to the Hotel. The ten pools will generate fewer design hour trips than the future buildout of the Hotel. When the Hotel is constructed, these pools are planned to become part of the Hotel property as described in the TIS.

The current Access Permit volumes account for these planned development activities.

Please contact me to discuss as needed, and let me know if you need additional formal correspondence to address this issue.

Thanks,

Dan Cokley, PE, PTOE
Principal

TRAFFIC IMPACT STUDY

IRON MOUNTAIN HOT SPRINGS - PHASE 2

July 2019

Prepared by

SGM

DAN COKLEY, PE
LICENSE NO. 29799
7/2/2019

2.0 Project Description

The proposed site development shown in Figure 2 is proposed south of the IMHS and will include uses that complement the adjacent recreational uses at IMHS and the Glenwood Caverns Adventure Park (GCAP) by providing a hotel for recreational visitors, additional hot spring pools and an office / apartment building. The developer is negotiating with the State to obtain the parking lot and office structures (Parcel 1) currently owned by the State and occupied by CDOT and CSP.

The proposed development will consist of the following:

- Three (3) additional hot springs pools at IMHS
- Combined use Office (8900 sf) and employee housing apartments (20 units)
- Hotel (100 rooms)
- Procurement of CDOT/CSP office and parking (186 spaces)

The procurement of Parcel 1 will include the existing CDOT and CSP office spaces. These will be used as future operating space for IMHS and GCAP. The new office building located in Parcel 3 will house the relocated CDOT and CSP office space. There will be additional office space within the building, a total of 8900 sf of new office space will be available within the project.

The 20-unit employee housing apartment units will be available for City of Glenwood Springs residents.

The hotel will not include a restaurant, as the current IMHS and GCAP facilities both include restaurants. The hotel is located about 0.1 mile from the IMHS and approximately 0.4 mile from the GCAP tram. There are 10 fresh water pools located along the hotel frontage, these pools will be fenced and for hotel guests only. The hotel will also provide shuttle service.

The additional parking (186 spaces) will be used for GCAP overflow parking and will offset parking lost near the GCAP tram building currently leased from Land Rover (94 spaces). The CDOT/CSP spaces are about ¼ mile walking distance from the tram base and will be served by newly constructed pedestrian connection on the south side of Devereux Rd (along Two Rivers Park) between the overflow parking and the tram.

Walking distance is an important concept in the fields of transportation and public health. A ¼ mile is often used as an acceptable walking distance in U.S. research studies, that distance equates to about a 5-minute walk. Destination attractions significantly increase the potential for walking to a venue, and an increased acceptable walking distance. It is common for attractions such as stadiums and amusement parks to have a significant percentage of parking beyond a ¼ mile radius. The “CDOT” parking is located within a reasonable walking distance to be considered as on-site parking.

An illustrative concept plan is provided in Figure 2 on the following page.

Figure 2 - Proposed Concept Site Development Plan

TRAFFIC IMPACT STUDY

IRON MOUNTAIN HOT SPRINGS - PHASE 2

April 2019

Prepared by

SGM

DAN COKLEY, PE
LICENSE NO. 29799
4/8/2019

COLORADO LICENSED
DANIEL J. COKLEY
29799
04/10/2019
PROFESSIONAL ENGINEER

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1.0 Introduction

This study is prepared as a CDOT Level Three Traffic Impact Study and provides estimates for peak hour traffic generation for the Iron Mountain Hot Springs (IMHS) property Phase 2 development, proposed to be constructed at the north end of Centennial Street in Glenwood Springs, Colorado. The purpose of this traffic analysis is to document the existing traffic conditions in the vicinity of the site, analyze the trip generation and trip distribution of the proposed development, estimate traffic volumes to the 20-year planning horizon, and analyze the intersections within the study area for operational impacts to the highway or city road system. Access to the site will continue to be provided from Centennial Street and the majority of traffic will use Devereux Road and US 6 for primary access.

This study will assess the Level of Service (LOS) and existing auxiliary lanes along US 6 at the Devereux Road intersection to determine if they meet CDOT requirements under future conditions and discuss any other mitigation measures that may reduce the site's impact on the adjacent infrastructure.

IMHS opened in 2015, the remaining undeveloped site (with exception of CDOT/CSP) is shown shaded in red and the study intersections (Centennial Drive & Devereux Road, Devereux Road & US 6, and Traver Trail & US 6) are noted by the star symbol in the Figure 1 below.

Figure 1 -Project Area

2.0 Project Description

The proposed site development shown in Figure 2 is proposed south of the IMHS and will include uses that complement the adjacent recreational uses at IMHS and the Glenwood Caverns Adventure Park (GCAP) by providing a hotel for recreational visitors, additional hot spring pools and an office / apartment building. The developer is negotiating with the State to obtain the parking lot and office structures (Parcel 1) currently owned by the State and occupied by CDOT and CSP.

The proposed development will consist of the following:

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The 20-unit employee housing apartment units will be available for City of Glenwood Springs residents.

The hotel will not include a restaurant, as the current IMHS and GCAP facilities both include restaurants. The hotel is located about 0.1 mile from the IMHS and approximately 0.4 mile from the GCAP tram. There are 10 fresh water pools located along the hotel frontage, these pools will be fenced and for hotel guests only. The hotel will also provide shuttle service.

The additional parking (186 spaces) will be used for GCAP overflow parking and will offset parking lost near the GCAP tram building currently leased from Land Rover (94 spaces). The CDOT/CSP spaces are about ¼ mile walking distance from the tram base and will be served by newly constructed pedestrian connection on the south side of Devereux Rd (along Two Rivers Park) between the overflow parking and the tram.

Walking distance is an important concept in the fields of transportation and public health. A ¼ mile is often used as an acceptable walking distance in U.S. research studies, that distance equates to about a 5-minute walk. Destination attractions significantly increase the potential for walking to a venue, and an increased acceptable walking distance. It is common for attractions such as stadiums and amusement parks to have a significant percentage of parking beyond a ¼ mile radius. The “CDOT” parking is located within a reasonable walking distance to be considered as on-site parking.

An illustrative concept plan is provided in Figure 2 on the following page.

Figure 2 - Proposed Concept Site Development Plan

3.0 Methodology and Assumptions

This traffic analysis has been prepared in accordance with section 2.3(5) of the State Highway Access Code (Code) and the original assumptions have been vetted with the CDOT access manager and engineer for Region 3. The assumptions and methodology will provide a conservative analysis for the purposes of assessing traffic impacts resulting from buildout of the proposed development. Discussions with and concurrence from CDOT regarding methodology are documented in the Appendix.

The unsignalized intersections in the project area were analyzed using the Highway Capacity Manual (HCM) 2010 methodology.

Intersection analysis was performed using the Synchro/SimTraffic 10 analysis package to estimate the capacity of the unsignalized intersections in the study area. The measures of effectiveness that are compared for this study include Level of Service (LOS), delay and estimated 95th percentile queue lengths.

All Synchro/SimTraffic output is contained in the Appendix for reference.

Peak hour factors, heavy vehicle percentages, and other inputs were developed based on existing traffic counts taken in June and September 2018.

To provide a conservative analysis of site traffic impacts, no reductions of site traffic were assumed for multi-modal trips made by users or residents of the development. Users and residents may decide to make pedestrian, bicycle, shuttle, transit, or other trips rather than using their personal car, which should lessen the overall impact of the site when compared to the results of this analysis. The developer has previously committed to the shuttle service between IMHS and GCAP when demand exists.

The assumptions related to Design Hourly Volume (DHV) and background traffic; seasonal, 20-year growth, and parking demands are discussed in the Background Traffic section of this study.

4.0 Existing Traffic Conditions

Local Circulation Network

The Iron Mountain Hot Springs is currently located north of the Centennial Office Building and the CDOT/CSP regional headquarters on an extension of Centennial Street. No turn lanes exist along Devereux Road at the Centennial intersection. The initial IMHS development included the construction of pedestrian facilities consisting of a 6'-8' sidewalk along the west side of Centennial Street extending into the site.

US Highway 6 is the primary arterial that serves the north Glenwood Springs to West Glenwood Springs corridor. The segment of US Highway 6 (006K) within the study area is classified as an NR-B highway by the State Highway Access Category Assignment Schedule (2 CCR 601-1A, 9/13/13) and extends from Traver Trail on the west to the intersection of 6th and Laurel (SH 82) on the east. Westbound US 6 is posted at 25-mph from 6th and Laurel, increasing to 40 mph about 750-feet west of the Devereux intersection, while eastbound US 6 is posted at 35-mph about 800 feet west of the intersection, and then 25-mph at Traver Trail.

The intersection slopes down from west to east at an approximate 3% – 4% grade. Left and right turn deceleration lanes are provided on US 6 at Devereux and a short right turn pocket (60') is provided on the northbound Devereux Road approach controlled by a stop sign. Pedestrian facilities exist on all legs of the intersection, but no crossings are striped in either roadway. Large, painted medians separating the turn lanes at the intersection exist to provide delineation of the turning vehicular movements. Ramps are provided for the crossing of Devereux, but these are not compliant with the current PROWAG guidelines (ADA requirements) for design. The skew of the approach creates the need for drivers to pull ahead of the stop bar (existing) and into the pedestrian crossing when turning onto US 6.

West of Devereux Road, Traver Trail (220' west) is the only access within 1000' feet along US 6. Several intersections are located within 1000' of Devereux Road to the east including Linden Street (225'), W 1st Street south and Best Western driveway north (420'), Silver Spruce driveways south (580' and 740'), Best Western driveway north (790' and 840'), vacant Toyota dealership south (920'), and Hotel Access north (980').

CDOT's "Traffic Data" website provided the tables below. The 2017 Average Daily Traffic (ADT) on US 6, west of the intersection with SH 82/Laurel Street was approximately 10,000 vehicles per day (vpd) on an average weekday, including 6.4% truck traffic.

Table 1 - 2017 AADT at CDOT Station #10039

Route	Ref Point	End Ref Point	Start Point Description	Annual Average Daily Traffic	AADT Year	AADT Single Trucks	AADT Comb. Trucks	Percent Trucks	20 Year Factor	Design Hour Vol (% of AADT)
006K	0	0.338	ON SH 6, WEST 6TH ST W/O SH 82, GLENWOOD	10,000	2017	520	120	6.4%	1.04	8

Devereux Road is a two-lane collector roadway with two 12' travel lanes and a one-foot paved shoulder. The posted speed along Devereux Road is 25 mph. Devereux Road begins as the south leg of the US Highway 6 intersection and extends to the intersection with West Midland Avenue near I-70 interchange 114. The road generally serves recreational, office, industrial and service uses.

Centennial Drive is a two-lane local roadway with travel width that varies at its intersection with Devereux Road on the south, but generally is 24 feet to the north with two travel. The posted speed is 25 mph. Centennial Drive ends at the IMHS entrance and parking lot. Centennial Drive currently serves the Centennial office building, CDOT/CSP and IMHS. There is a three-way intersection with CDOT/CSP that was signed in June 2018 with temporary Stop signs for the northbound and southbound movements, while the westbound movement was uncontrolled.

Existing Traffic Volumes (2018)

The intersections in the immediate vicinity of the project area have had AM and PM peak hour turning movement counts performed within the past year. Those counts are summarized below;

Existing Traffic Count Data

- 6/13/18 Weekday (Wed) (Traver / Devereux / US 6) by All Traffic Data
- 9/29/18 Weekend (Sat) (Centennial; Devereux / Centennial; Devereux / US 6) by SGM
- 2/7/19 Weekday (Thu) (Devereux / Centennial; Devereux / US 6) by SGM

This study will use the weekday traffic data collected on 6/13/18 and the weekend traffic data collected on 9/29/18 for the existing traffic condition scenario.

The existing and proposed recreational / entertainment traffic generators result in peak traffic generation during the weekday PM and weekend mid-day peak hours, therefore the study will analyze the weekday PM and weekend mid-day peak hour scenarios.

Existing 2018 traffic volumes are provided in the Appendix for the study intersections.

Existing (2018) Intersection Capacity Analysis

Weekday PM and weekend mid-day level of service estimates were prepared in accordance with the Highway Capacity Manual (Transportation Research Board, 2010). For unsignalized intersections, the Highway Capacity Manual defines level of service and delay in terms of seconds of stopped delay per vehicle, which is based on the number of acceptable gaps in the conflicting traffic stream. In general, the traffic movements analyzed are those controlled by stop signs or yield signs, and the left turn movements from the uncontrolled major street. The following table represents the level of service criteria for unsignalized intersections:

Table 2 - Level of Service (LOS) Criteria

Unsignalized Intersections

Level of Service	Delay (seconds)
A (Highly Desirable)	< 10.0
B (Desirable)	10.1 to 15
C (Acceptable)	15.1 to 25
D (Acceptable in Urban Areas)	25.1 to 35
E (Unacceptable)	35.1 to 50
F (Unacceptable)	> 50.0

Source: Highway Capacity Manual, 2010

The “overall” intersection level of service at unsignalized intersections corresponds with the highest delay experienced on a minor street approach. In general, CDOT and the City of Glenwood Springs consider overall intersection operations of LOS “D” or better acceptable during the peak hours.

Using the existing 2018 traffic volumes, the capacity analysis was run in Synchro to determine level of service and delay for the study intersections. The following table shows the overall results of the capacity analysis for the impacted intersections in the study area. Upon review of the traffic data, it was determined the Traver Trail and US 6 intersection operates at acceptable LOS at existing conditions. Again, the LOS and delays reported for the unsignalized intersections correspond with the poorest performing side street approach movement (controlled by stop sign). The uncontrolled movements at these intersections all operate at LOS “A” or better.

Table 3 - Existing 2018 Intersection Level of Service Summary

Intersection	Weekday PM		Weekend	
	LOS	DELAY [1] (s)	LOS	DELAY (s)
Devereux & US 6	C	16.7	C	16.9
Traver Trail & US 6	B	13.1	-	-
Centennial & Devereux	A	8.2	A	9.4

1 – Delay expressed as average delay per vehicle in seconds/vehicle

As the table shows, the unsignalized intersections operate acceptably under existing conditions.

Existing (2018) Intersection Queuing Analysis

A second measure of effectiveness that was evaluated in this study was queue length. Queue length was evaluated to provide insight into operations and capacity of existing turn lanes, specifically at the Devereux Road & US 6 intersection. Queuing will be monitored for three approaches at two study intersections to determine peak hour queuing lengths. The three approaches and available storage lengths are:

- US 6 Westbound Left Turn approach to Devereux Rd (200 ft length)
- Devereux Rd Northbound Right Turn approach to US 6 (60 ft length)
- Centennial Southbound approach to Devereux Rd (no lane)

The following table shows the baseline analysis 95th percentile queue lengths estimated by the SimTraffic model. Five simulation runs for 1 hour were conducted to estimate the queue lengths in the table below.

Table 4 - Existing (2018) 95th Percentile Queue Summary

Approach	Weekday PM (ft)	Weekend (ft)	Available Length (ft)
US 6 WB Left Turn	43	55	200
Devereux Rd NB Right Turn	28	14	60
Centennial SB approach	52	47	-

The 95th percentile queue length represents the maximum queue length that occurs during 95% of the hour, so there may be times when it is exceeded for a short period of time during peak hours. The summary above shows that all movements operate at an acceptable level based upon existing storage length.

5.0 20-Year Background Traffic

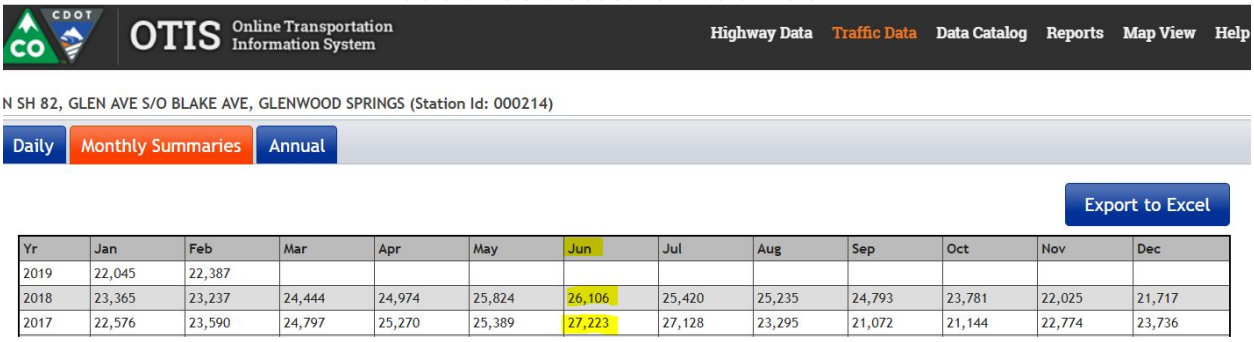
The existing traffic volumes were used as a basis to develop the 20-year background traffic volumes. The 2018 volumes were adjusted for annual seasonal and 20-year growth factors.

Seasonal factors were applied to the existing traffic counts to determine a Design Hourly Volume, which is generally defined as the 30th highest hourly volume in the design year. The definition infers that if a facility is to adequately serve throughout its life, its physical capacity will only be exceeded for about 30 hours out of the total 8,760 hours in the “design” year. The choice of the 30th highest hourly volume is a long-held concept which stems from

research published in A Policy on Geometric Design of Rural Highways from the American Association of State Highway Officials (AASHTO).

A seasonal factor for east-west oriented US 6 through traffic was determined from CDOT's OTIS website, using daily volumes collected at CDOT count station 000214 located just south of Glenwood Springs on SH 82. A monthly summary of that station is shown in Table 5.

Table 5 - US 6 Seasonal Factor Data



Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2019	22,045	22,387										
2018	23,365	23,237	24,444	24,974	25,824	26,106	25,420	25,235	24,793	23,781	22,025	21,717
2017	22,576	23,590	24,797	25,270	25,389	27,223	27,128	23,295	21,072	21,144	22,774	23,736

Table 5 shows that June is generally the highest monthly average volume, therefore a seasonal factor was not applied to the June weekday traffic volumes. Weekend volumes are in the range of 75% of weekday volumes, and those volumes are not driven by consistent commuter traffic. A seasonal factor was not applied to the September weekend traffic counts for US 6.

Seasonal factors for the IMHS and GCAP facilities were calculated using the DHV concept defined above. Attendance records were used to determine the 30th highest daily attendance for each site, those 30th highest attendance days were compared to the attendance on the traffic count days and a seasonal factor calculated. This calculation assumes one peak hour period daily for the facility, weekday PM and weekend midday. See Tables 6 & 7.

Table 6 - 30th Highest Attendance Data

	Attendance Data - IMHS / GCAP		Attendance			Count Day	
			IMHS	GCAP	Combined	IMHS	GCAP
2018	WEEKEND/HOLIDAY'	30th HIGHEST at 1 PH/Day	1237	1277	2514	1342	998
	WEEKDAY	30th HIGHEST	772	1032	1804	503	752
20 yr Growth							
	WEEKEND/HOLIDAY'	*30th HIGHEST at 1 PH/Day*	1468	1867	3335		
	WEEKDAY	*30th HIGHEST*	916	1509	2425		

Table 7 - Seasonal Factor Data

	Seasonal Factors			
	IMHS	GCAP	Combined	Count Day
WEEKEND/HOLIDAY'	92%	128%	107%	9/29/2018
WEEKDAY	153%	137%	144%	6/13/2018
WEEKEND/HOLIDAY'	109%	187%	143%	9/29/2018
WEEKDAY	182%	201%	193%	6/13/2018

The seasonal factors were applied to the existing and 20-year IMHS and GCAP traffic volumes.

The 20-year factor used for US 6 based on CDOT data at count station 000391 was 1.04 (Table 5), or an overall growth of 4% over 20 years applied to the US 6 through traffic at the Devereux Road and Traver Trail intersections.

The 20-year growth factor for IMHS/GCAP was calculated based upon an assumed capacity of 300,000 for each facility as provided by the Owner. The calculation of the 20-year growth factor is shown in Table 8, based upon 2018 annual attendance at each location as compared to the future capacity.

Table 8 - IMHS/GCAP Growth Factor Data

20-year GROWTH FACTOR	GCAP	IMHS	TOTAL
2018 ANNUAL ATTENDANCE	205,208	252,787	457,995
FUTURE CAPACITY	300,000	300,000	600,000
	146%	**119%**	**131%**

Another aspect of the proposed development involves the redistribution of existing parking for the GCAP site. As noted previously, 94 parking spaces located immediately northeast of the tram are currently leased from Land Rover. The Land Rover spaces would no longer be used and would be replaced by 186 spaces that currently exist to the west between Centennial Drive and the existing CDOT/CSP office facility, shown within Parcel 1 of Figure 2. Available parking by location is summarized in Table 9.

Table 9 - Parking Summary

On-Site Parking			
Location	Existing	Proposed	Change
GCAP	345	251	-94
"CDOT"		186	186
IMHS	144	171	27
Hotel		100	100
Housing		40	40
Office		32	32
Total	**489**	**780**	**291**

There is a total of 345 existing parking spaces available for use near the GCAP tram. This study uses a reasonable assumption based on the observation of daily operations that existing parking capacity is exceeded at approximately 1200 visitors, equating to 3.5 visitors per vehicle. Using the 30th highest weekday & weekend attendance coupled with the available re-distributed parking results in the following calculation of parking needs and trips diverted from GCAP to the CDOT parking lot at IMHS. Those results are shown in Table 10.

Table 10 - Parking Diversion

	Pkg Need (veh)		Pkg Diversion (veh)		Design
Location	Weekday	Weekend	Weekday	Weekend	Year
"CDOT"	297	367	46	116	2018
	434	**537**	**183**	**286**	**20-year**

The seasonal and growth factored parking needs and diverted trips are included in the 20-year background traffic

[redacted]20-year Background Traffic Volumes

20-year background traffic volumes (seasonal and growth factored) are provided in the Appendix for the study intersections.

[redacted]20-year Background Intersection Capacity Analysis

Using the 20-year background traffic volumes, the capacity analysis was run in Synchro to determine level of service and delay for the study intersections. The following table shows the overall results of the capacity analysis for all three intersections in the study area. Again, the LOS and delays reported for the unsignalized intersections correspond with the poorest performing side street approach movement (controlled by stop sign). The uncontrolled movements at these intersections all operate at LOS "B" or better.

Table 11 - 20-Year Background Intersection Level of Service Summary

Intersection	Weekday PM		Weekend	
	LOS	DELAY 1 (s)	LOS	DELAY (s)
Devereux & US 6	C	19.7	C	21.2
Traver Trail & US 6	B	13.4	-	-
Centennial & Devereux	A	8.4	A	9.5

As the table shows, the unsignalized intersections operate acceptably under 20-year Background traffic conditions. The weekend Devereux northbound left turn movement delay is just below meeting the LOS D threshold of 25 seconds.

[redacted]20-year Background Intersection Queuing Analysis

The following table shows the baseline analysis 95th percentile queue lengths estimated by the SimTraffic model. Five simulation runs for 1 hour were conducted to estimate the queue lengths in the table below.

Table 12 - 20-year Background 95th Percentile Queue Summary

Approach	Weekday PM (ft)	Weekend (ft)	Available Length (ft)
US 6 WB Left Turn	48	66	200
Devereux Rd NB Right Turn	40	14	60
Centennial SB approach	51	45	-

The 95th percentile queue length represents the maximum queue length that occurs during 95% of the hour, so there may be times when it is exceeded for a short period of time during peak hours. The summary above shows that all movements operate at an acceptable level based upon existing storage length.

6.0 20-year Total Traffic

[redacted] Project Trip Generation

ITE's Trip Generation (10th Edition) was used to provide trip generation rates for the proposed development uses. The reference does not provide trip generation rates for a "Hot Springs" pool facility. However, 2018 weekend traffic counts (9/29/18) at the IMHS entrance on Centennial Drive were used to establish a per pool rate for that day. That rate is adjusted based upon attendance to provide a 30th design hourly rate for weekday and weekend. The GCAP overflow (OF) parking rates are based upon the discussion in section 5.0. The employee housing (apartment), office and hotel rates are based upon standard ITE rates.

Table 13 - Estimated Weekday Traffic Generation Summary

				Weekday Design Hour Traffic			
	Number	ITE	Weekday	AM	AM	PM	PM
Land Use	of Units	Code	Traffic	IN	OUT	IN	OUT
IMHS pool	3	n/a	0	0	0	5	3
Employee Housing	20	220	110	2	8	9	5
Hotel	100	310	702	27	18	25	24
Office	9	710	104	9	1	2	9
GCAP OF Parking	186	n/a	366	0	0	14	14
			1,282	**38**	**27**	**55**	**55**

Table 14 - Estimated Weekend Traffic Generation Summary

				Saturday Design Hour Traffic	
	Number	ITE	Saturday		
Land Use	of Units	Code	Traffic	IN	OUT
IMHS pool	3	n/a		8	5
Employee Housing	20	220		7	7
Hotel	100	310		40	32
Office	8	710		2	2
GCAP OF Parking	186	n/a	372	18	10
				75	**56**

IMHS Pool - based upon 2018 Sat. Count (factored)
ITE Code 220 - Multi-Family Housing (Low-Rise) (20 apartments)
ITE Code 310 - Hotel (100 rooms)
ITE Code 710 - General Office (8900 sf)
GCAP Overflow Parking (occurs at 1200 visitors)

[redacted] Trip Distribution and Assignment

The distribution and assignment of site generated trips follows the distributions established in the original traffic study for Iron Mountain Hot Springs, "Level 2 Traffic Assessment - Iron Mountain Hot Springs" (SGM, December 2014), which generally followed "Iron Mountain PUD – Initial Traffic Evaluation" (Turnkey Consulting, April 2013).

For this analysis, 73% of site traffic is oriented to the east on US 6, 15% is oriented to the west on US 6, 10% is oriented to the west on Devereux Road, and 2% is oriented to and from Traver Trail.

Project Generated Traffic Volumes

The developed project traffic volumes are provided in the Appendix for the study intersections.

20-year Total Traffic Volumes

The 20-year traffic volumes are the sum of the 20-year background traffic volumes plus the proposed site-generated traffic volumes.

The percent increase in traffic at the study intersections, based on the peak hour background plus site-generated traffic versus 2018 volumes are summarized in the table below.

Table 15 - Percentage Increase in Traffic

	Weekday PM		Weekend	
	Overall	Project Leg	Overall	Project Leg
Centennial / Devereux	174%	211%	173%	266%
Devereux / US 6	120%	152%	130%	177%
Traver Trail / US 6	107%	108%	-	-

20-year traffic volumes are provided in the Appendix for the study intersections.

20-year Total Intersection Capacity Analysis

Table 16 - 20-year Intersection Level of Service Summary

Intersection	Weekday PM		Weekend	
	LOS	DELAY [1] (s)	LOS	DELAY (s)
Devereux & US 6	C	24.3	D	27.9
Traver Trail & US 6	B	13.6	-	-
Centennial & Devereux	A	9.3	B	10.2

1 – Delay expressed as average delay per vehicle in seconds/vehicle

Using the 20-year total traffic volumes, the capacity analysis was run in Synchro to determine level of service and delay for the study intersections. The following table shows the overall results of the capacity analysis for the impacted intersections in the study area. The LOS and delays reported for the unsignalized intersections correspond with the poorest performing side street approach movement (controlled by stop sign). The uncontrolled movements at these intersections all operate at LOS “B” or better.

As the table shows, the unsignalized intersections operate acceptably under 20-year Total traffic conditions. The weekend Devereux northbound left turn movement delay increased beyond 25 seconds into the LOS D threshold.

The percent increase in delay at the study intersections, based on the peak hour background plus site-generated traffic versus 2018 volumes are summarized in the table below.

Table 17 - Percentage Increase in Delay (s)

	Weekday PM	Weekend
Centennial / Devereux	145%	273%

Devereux / US 6	131%	109%

20-year Total Intersection Queuing Analysis

The following table shows the baseline analysis 95th percentile queue lengths estimated by the SimTraffic model. Five simulation runs for 1 hour were conducted to estimate the queue lengths in the table below.

Table 18 - 20-year Total 95th Percentile Queue Summary

Approach	Weekday PM (ft)	Weekend (ft)	Available Length (ft)
US 6 WB Left Turn	59	78	200
Devereux Rd NB Right Turn	48	29	60
Centennial SB approach	57	51	-

The 95th percentile queue length represents the maximum queue length that occurs during 95% of the hour, so there may be times when it is exceeded for a short period of time during peak hours. The summary above shows that all movements operate at an acceptable level based upon existing storage length. The Centennial approach is provided as reference to understand another measure of effectiveness. Since the approach operates at an acceptable LOS, a two-lane approach is not recommended at this time.

State Highway Access Permit Evaluation

The need for an access permit at the US 6 and Devereux Road intersection is based on the proposed project generated development traffic volume entering US 6 at the Devereux Road leg divided by the existing volume of traffic on the Devereux Road approach (205 DHV), as provided for in CDOT Access Permit 314157, dated January 27, 2015. The result is 98 DHV / 205 DHV = 47%, an increase greater than 20% requires a new access permit.

Also, per CDOT, when the volume exceeds 205 DHV, a new permit is required. The existing (2018) traffic on that leg is 147 during the AM peak and 305 during the PM peak. Existing PM peak hour traffic currently exceeds the permit volume.

Project generated traffic is projected to add 98 DHV to that leg, while 20-year Total traffic including seasonal and annual growth is projected at 453 DHV.

The passenger car equivalent (PCE) DHV for permit purposes is calculated by applying the 2018 heavy vehicle percentage on the Devereux Road leg of the US 6 intersection, 3.2% to the projected DHV and assuming 2 PCE's per Heavy Vehicle, for a total of 468 PCE's.

20-year Total Traffic Turn Lane Analysis

Auxiliary turn lane requirements for accesses along Colorado State Highways are based on the projected DHV's, the speed limit and geometry of the highway adjacent to the access, and the classification of the highway. For design purposes, the speed limit along US 6 adjacent to the access is 25 mph for the eastbound approach and 25 mph for the westbound approach on an NR-B highway. Based on the State Highway Access Code (Code), a right turn deceleration lane is required when the peak hour turning volume exceeds 50 vph, a left turn deceleration lane is required when the peak hour turning volume exceeds 25 vph.

For the Devereux Road approach, and the Devereux Road and Centennial Drive intersection a similar analysis was completed. Low volume, lVow speed intersections may not typically be analyzed in this fashion, as LOS and Delay are usually indicators of unsignalized intersection operations. Because of the high volume of EB right and SB left turns at the 20-year Total traffic volumes, this provides a method to determine the need for auxiliary lanes. Devereux Road was assumed be classified as a NR-C highway, with a speed limit of 25 mph at each approach.

The Table 19 summarizes the existing conditions, DHV and warrant volumes by intersection and movement.

Table 19 - CDOT SHAC Auxiliary Lane Warrant Analysis

CDOT SHAC Auxiliary Lane Warrant Analysis								
Auxiliary Turn Lane		Existing (2018)		20-year Total		Existing Turn Lane		Design Waiver <100 DHV
Type (Decel)	Required when DHV >	DHV (vph)	Warrant met?	DHV (vph)	Warrant met?	?	Length (ft)	
Devereux & US 6 (NR-B highway)								
WB Left	25	68	Yes	130	Yes	Yes	200	
EB Right	50	47	No	61	Yes	Yes	250	
NB Left	25	37	Yes	50	Yes	Yes	-	
NB Right	50	153	Yes	212	Yes	Yes	60	
Centennial & Devereux (use NR-C highway)								
EB Right	50	3	No	3	No	No		
EB Left	25	13	No	20	No	No		
WB Right	50	31	No	93	Yes	No		29
WB Left	25	11	No	11	No	No		
SB Left	25	66	Yes	124	Yes	No		48

The design of the turn lanes should accommodate 20-year Total traffic turning volumes shown in Table 19 above. The design of NR-B lanes for speeds under 40 mph includes the length of the taper distance plus the length required for storage. Taper rate or distance is based on speed and width of the turn lane, while storage is based on peak hour traffic demand. Both US 6 lanes are currently 12' wide and the required taper rates are 7.5:1. Therefore, the taper distances for required by the Code to be 90 feet. The storage distances would be 50 feet and 130 feet for the eastbound and westbound lanes, respectively.

The eastbound right turn lane should be designed 140 feet long by Code. This lane is currently striped about 250 feet full width (plus 125-foot taper) and develops west of the Traver Trail intersection to the north. The westbound left turn lane should be 220 feet long by Code. This lane is currently striped about 150 feet full width (plus 125-foot taper) and develops east of Linden. The turn lanes of the US 6 corridor of intersection are currently sized to accommodate 20-year Total traffic DHV turning movements projected for the IMHS Phase 2 development plus background traffic.

The northbound Devereux Road approach consists of two unstriped 11 to 12-foot wide approach lanes with a full width length of about 60 feet, the existing taper (5.5:1) is approximately 60 feet long transitioning back to a single 12-foot travel lane width. Based upon the posted speed limit, the 95th percentile queue length and LOS of the northbound movements the operation of the approach is acceptable.

At the Centennial Drive and Devereux Road intersection, westbound right and southbound left turn lanes would be warranted based upon 20-year Total traffic DHV's. The SHAC (3.5 (5)) allows a design waiver for volume warranted movements that have low opposing traffic volumes, generally less than 100 DHV, which applies to these movements. Based upon the 95th percentile queue length, LOS of the intersection, and low opposing volumes to the southbound left and west bound right movements, the operation of the intersection is acceptable.

Sight Distance and Access Conditions

The Devereux Road and US 6 intersection is controlled by a stop sign on the Devereux Road approach. This approach lies within the inside of a horizontal curve and allows about 350 feet of clear sight line to the east and about 550 feet of clear sight line to the west. The Code requires 250 feet for passenger vehicles, 325 feet for single-unit trucks and 425 feet for a Multi-Unit truck for each approach (25 mph) to access the highway. Although almost all users of the proposed development will be driving passenger vehicles, the design vehicle for the proposed development would be an RV or Bus.

Based on the Code, the sight distance meets the Code for the user and design vehicles but is slightly below the minimum standard under today's conditions for multi-unit trucks. Additionally, observations concluded that the vehicles stopping at the stop sign on Devereux sometimes pull forward into the pedestrian crossing area in order to safely view eastbound oncoming traffic before turning onto US 6.

At the Centennial Street intersection with Devereux Road there is adequate sight distance (>425 feet) for traffic entering Devereux Road, a 25-mph roadway, although the westbound sight distance may be obscured by low-lying branches during the summer months. The access is very wide at the throat of the intersection (120 feet). Following the initial development of IMHS, a revised striping plan was implemented to provide for a 90° intersection and 50-foot entering radii. The intersection approach provided better delineation, while maintain access for larger CDOT maintenance vehicles at the intersection.

7.0 Conclusions and Proposed Mitigation Measures

Summary of Conclusions

- A new access permit is required. The new permit volume is calculated to be a DHV of 468 in passenger car equivalents.
- The study intersections operate at an acceptable LOS at the 20-year Total traffic volume condition.
- The study intersections have acceptable auxiliary turn lanes, in terms of width, storage length and taper rates.
- The study intersections generally provide acceptable sight distance, except as noted in Section 7.2 below.
- The study intersections are both at skewed angles and enhanced delineation could be implemented for improved turning and pedestrian movements.
- The Traver Trail and US 6 intersection is not significantly impacted by the 20-year Total traffic volumes.

Proposed Mitigation Measures

- Provide improved delineation at Devereux Road / US 6 and Centennial Drive / Devereux Road intersections. The improvements could include signage, striping, raised medians that would serve to improve the intersection safety for pedestrians and vehicles.
- Provide continuous pedestrian connection from Centennial Drive to Two Rivers Plaza Drive to serve future overflow GCAP parking.
- Remove trees, branches, bushes within the City right-of-way adjacent to the Hampton Inn to improve sight distance to the east at the Devereux Road and US 6 intersection.

Appendix A

Methodology / Assumptions (Correspondence with CDOT)

Appendix #1

Emailed to CDOT 2/4/19 – Dan R and Mark B

Iron Mountain Hot Springs - 2019

Level III Traffic Impact Study Assumptions

This memo documents the initial assumptions that SGM intends to use for the Level 3 traffic analysis for IMHS proposed development at the north end of Centennial Drive in Glenwood Springs.

The proposed development will consist the following mix of potential uses:

- __ Additional hot springs pools.
- __ Hotel.
- __ Parking Lot spaces

Study Intersections and day

This Level 3 study will provide current and future-year operational analysis of the intersections of Devereux & Centennial and Devereux and US 6. Both Weekday AM and PM peak hour plus Saturday peak hour will be analyzed.

Baseline Traffic

SGM collected Saturday peak hour volumes at the study intersections on 9/29/18. Weekday peak hour counts will be performed Wednesday and Thursday February 6-7, 2019 at the study intersection. Counts were collected from 7-9 AM and from 4-6 PM. Counts will be adjusted based upon seasonal variations at nearby CDOT count station.

- Added ADT traffic count from 6/13/18 completed by ADT for Stolfus for CoGS which included Traver Trail intersection

Analysis Years and Growth Rate

Operational analysis of Opening Day traffic (2020) and Future (2040) traffic will be conducted. All baseline traffic volumes at all study intersections will be factored by CDOT's 20-year factor of ~~1.1~~ 1.04 will be used based upon the previous IMHS study in 2014.

Specific Development Trip Generation Rates

- __ Hot springs pools. (Use trip generation rate based on existing traffic and existing pools)
- __ Hotel. (Use ITE Trip Generation Rate for Resort Hotel, ITE Code 330)
- __ Parking Lot spaces (trip generation rate to be determined)

SH 82 Project Traffic Distribution

Follows distributions established in *Iron Mountain PUD Initial Traffic Evaluation by Turnkey, 4/2013;* and previous IMHS Study.

- 73% site traffic east on US 6
- 15% site traffic west on US 6
- 10% site traffic west on Devereux Road
- 2% site traffic north on Traver Trail

Access Permits

The existing Access Permit is 314157

Comments back from Mark Bunnell, 2/4/19

- Study Area Intersections - due to the close proximity of the Devereux Rd and Traver Trail intersections on US-6, the study will need to include the US-6 and Traver Trail intersection.
- Baseline Traffic - The adjustments to the traffic counts will need to specifically include summer season traffic to/from the Glenwood Caverns Adventure Park, not just a seasonal factor from a nearby CDOT count station.

Other Items:

- The traffic analysis for the two US-6 intersections (Devereux Rd and Traver Trail) will need to be conducted using SimTraffic due to the close proximity of these intersections.
- Please provide a traffic signal warrant analysis for US-6 and Devereux Rd/Traver Trail (consider both intersections as one for the warrant analysis)

I would suggest developing the traffic volumes and submitting those for review prior to conducting the traffic analysis.

Following submittal of Trip Generation estimates on 3/4/19, phone call with Mark B on 3/8/19
Email from Mark B 3/8/19

As a follow up to our conversation, here is my recollection of the decisions:

* Use the 30th highest day (assumes one peak hour per day) of combined GCAP & IMHS attendance, which is Friday, March 30, to represent the weekday.
* Use the 31st highest day, which is Saturday, February 12, to represent the weekend.

* Seasonal adjustment - use the CDOT permanent traffic counters on SH-82 south of GWS and I-70 east of GWS to determine an appropriate seasonal factor; use a weekly factor instead of monthly.
* Seasonal adjustment will only be applied to thru traffic on US-6, since traffic to/from Devereux Rd is fairly consistent year-round (except for GCAP and IMHS, which is reflected in other calculations).

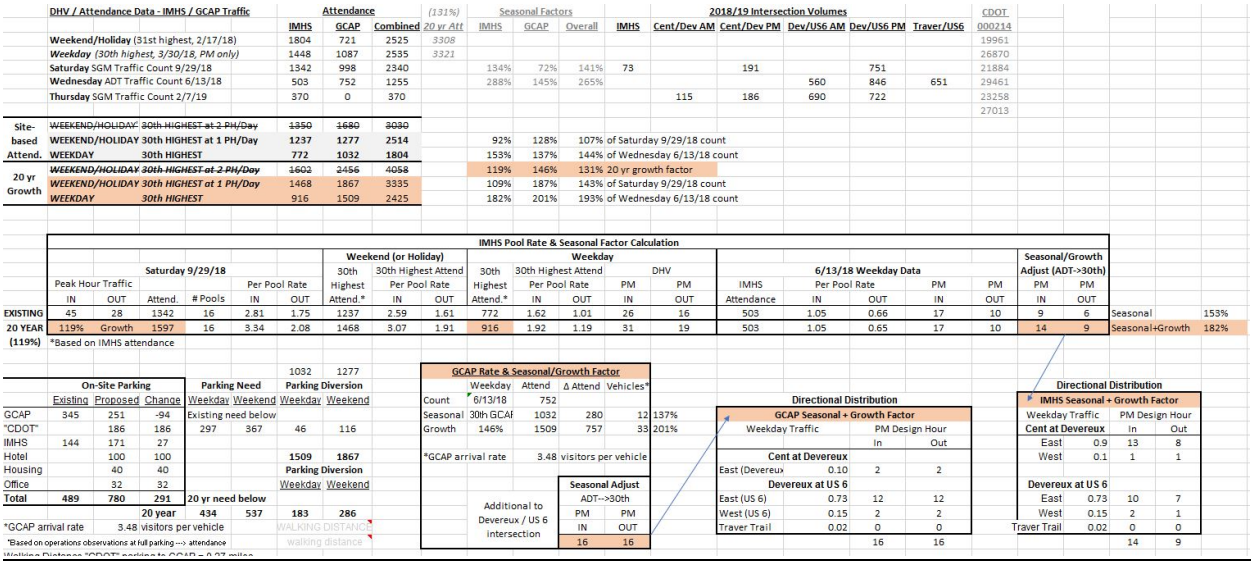
Email to Mark B o 4/1/19 regarding the below

Seasonal and Growth Factor Calculation Summary

US 6 through traffic

- CDOT growth factor at Sta 000391, using a 20 yr factor of 1.04
- In reviewing the 2018 SH 82 volumes at Sta 000214, June is the highest monthly average volume. I am using a weekday count from 6/13/18, and would not adjust those counts volumes for a seasonal variation.
- Seasonal adjustment - use the CDOT permanent traffic counters on SH-82 south of GWS and I-70 east of GWS to determine an appropriate seasonal factor; ~~use a weekly factor instead of monthly.~~
- Seasonal adjustment will only be applied to thru traffic on US-6, since traffic to/from Devereux Rd is fairly consistent year-round (except for GCAP and IMHS, which is reflected in other calculations).

IMHS / GCAP Seasonal Factors



DHV / Attendance Data - IMHS / GCAP Traffic			Attendance			(131%)	Seasonal Factors			2018/19 Intersection Volumes						CDOT
			IMHS	GCAP	Combined	20 yr Att	IMHS	GCAP	Overall	IMHS	Cent/Dev AM	Cent/Dev PM	Dev/US6 AM	Dev/US6 PM	Traver/US6	000214
	Weekend/Holiday (31st highest, 2/17/18)		1804	721	2525	3308										19961
	Weekday (30th highest, 3/30/18, PM only)		1448	1087	2535	3321										26870
	Saturday SGM Traffic Count 9/29/18		1342	998	2340		134%	72%	141%	73		191		751		21884
	Wednesday ADT Traffic Count 6/13/18		503	752	1255		288%	145%	265%				560	846	651	29461
	Thursday SGM Traffic Count 2/7/19		370	0	370						115	186	690	722		23258
																27013
Site-based Attend.	~~WEEKEND/HOLIDAY~~	~~30th HIGHEST at 2 PH/Day~~	~~1350~~	~~1680~~	~~3030~~											
	WEEKEND/HOLIDAY	30th HIGHEST at 1 PH/Day	1237	1277	2514		92%	128%	107%	of Saturday 9/29/18 count						
	WEEKDAY	30th HIGHEST	772	1032	1804		153%	137%	144%	of Wednesday 6/13/18 count						
20 yr Growth	~~WEEKEND/HOLIDAY~~	~~30th HIGHEST at 2 PH/Day~~	~~1602~~	~~2456~~	~~4058~~		119%	146%	131%	20 yr growth factor						
	WEEKEND/HOLIDAY	30th HIGHEST at 1 PH/Day	1468	1867	3335		109%	187%	143%	of Saturday 9/29/18 count						
	WEEKDAY	30th HIGHEST	916	1509	2425		182%	201%	193%	of Wednesday 6/13/18 count						

IMHS Pool Rate & Seasonal Factor Calculation

	Saturday 9/29/18						Weekend (or Holiday)			Weekday					6/13/18 Weekday Data					Seasonal/Growth Adjust (ADT->30th)			
	Peak Hour Traffic				Per Pool Rate		30th Highest	30th Highest Attend	Per Pool Rate	30th Highest	30th Highest Attend	Per Pool Rate	PM	DHV PM	IMHS	Per Pool Rate		PM	PM	PM	PM		
	IN	OUT	Attend.	# Pools	IN	OUT	Attend.*	IN	OUT	Attend.*	IN	OUT	IN	OUT	Attendance	IN	OUT	IN	OUT	IN	OUT		
EXISTING	45	28	1342	16	2.81	1.75	1237	2.59	1.61	772	1.62	1.01	26	16	503	1.05	0.66	17	10	9	6	Seasonal	153%
20 YEAR	119%	Growth	1597	16	3.34	2.08	1468	3.07	1.91	916	1.92	1.19	31	19	503	1.05	0.65	17	10	14	9	Seasonal+Growth	182%
(119%)	*Based on IMHS attendance																						

	On-Site Parking			Parking Need		Parking Diversion	
	Existing	Proposed	Change	Weekday	Weekend	Weekday	Weekend
GCAP	345	251	-94	Existing need below			
"CDOT"		186	186	297	367	46	116
IMHS	144	171	27				
Hotel		100	100			1509	1867
Housing		40	40			Parking Diversion	
Office		32	32			Weekday	Weekend
Total	489	780	291	20 yr need below			
			20 year	434	537	183	286
*GCAP arrival rate		3.48	visitors per vehicle			WALKING DISTANCE	
*Based on operations observations at full parking ---> attendance						walking distance	

					1032	1277	

GCAP Rate & Seasonal/Growth Factor

	Weekday	Attend.	Δ Attend	Vehicles*	
Count	6/13/18	752			
Seasonal	30th GCAF	1032	280	12	137%
Growth	146%	1509	757	33	201%
*GCAP arrival rate		3.48	visitors per vehicle		

Additional to Devereux / US 6 intersection	Seasonal Adjust ADT-->30th PM	IN	OUT
		16	16

Directional Distribution

GCAP Seasonal + Growth Factor

Weekday Traffic		PM Design Hour	
		In	Out
Cent at Devereux			
East (Devereux	0.10	2	2
Devereux at US 6			
East (US 6)	0.73	12	12
West (US 6)	0.15	2	2
Traver Trail	0.02	0	0
		16	16

Directional Distribution

IMHS Seasonal + Growth Factor

Weekday Traffic		PM Design Hour	
Cent at Devereux		In	Out
East	0.9	13	8
West	0.1	1	1
Devereux at US 6			
East	0.73	10	7
West	0.15	2	1
Traver Trail	0.02	0	0
		14	9

This provides the data for the seasonal and growth factor's to be used for IMHS/GCAP background DHV's.

It varies from the 30th highest direction we had decided upon previously. To apply these factors to the data available, I thought they should be applied based on attendance at each venue (IMHS & GCAP). In addition, I do not believe that using the highest weekday attendance (3/30/18) is representative of the 30th highest weekday volume.

I went back to the original thought of 30th highest volumes for each Weekend/Holiday and Weekday (including all weekdays less holidays). I've shown those on the attached image, I can send xls if you would like to see that. The total weekend attendance numbers are very close to the 30th highest numbers in the above scenario. The weekday numbers are more representative of a typical busy weekday, with typical weekday commuter traffic along US 6 and on Devereux to/from Centennial Dr office buildings.

That information is presented with associated seasonal and 20 yr growth factors.

That data is then used to adjust the IMHS traffic data using the Sat 9/29/18 count at the IMHS entrance.

The data is used to adjust the additional GCAP background traffic using attendance, and assumes 3.48 persons/vehicle to generate vehicles. Those vehicles are added to existing counted volume at the GCAP intersection between Centennial and US 6 using the same IMHS directional distribution.

From Mark B 4/3/19

I reviewed the information in your emails and agree with the traffic volume forecast method. Please include a detailed discussion of the forecast method in the TIS.

Appendix B

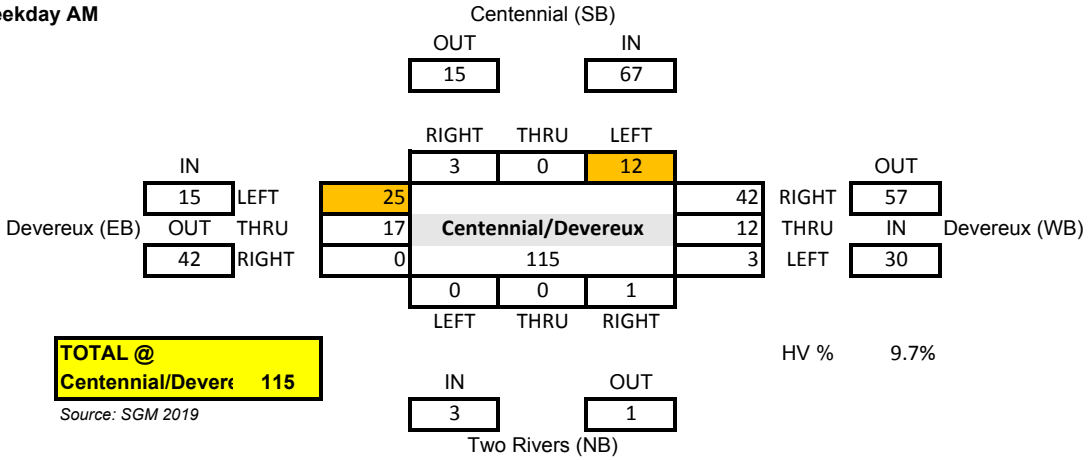
Intersection Traffic Volume Figures (2018, 20-year Background, 20-year Total)

Appendix #2

CENTENNIAL & DEVEREUX

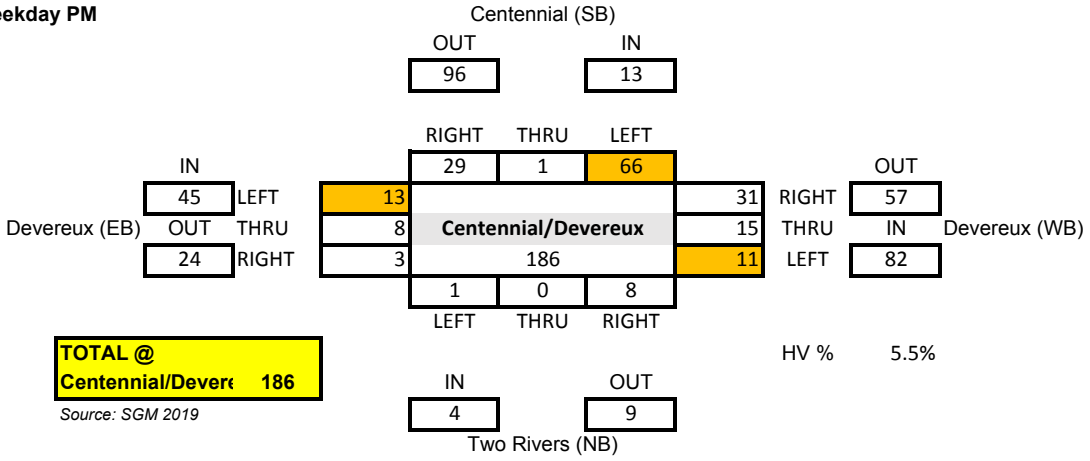
Existing - 2/7/19

Weekday AM



Source: SGM 2019

Weekday PM



Source: SGM 2019

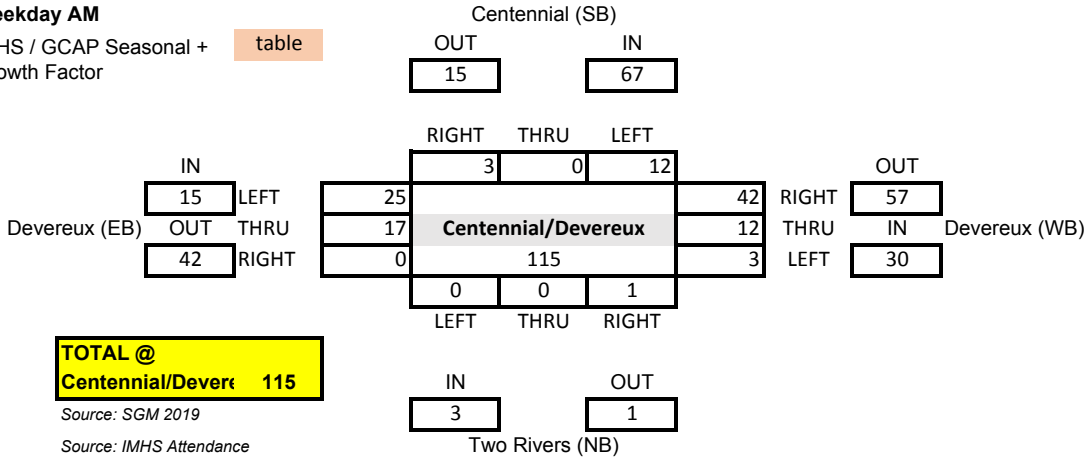
Left "waiver" for conflicting volume < 100 vph (PM)	
EB left --> WB conflicting	57
SB left --> EB/WB/NB conflicting	42
WB left --> EB conflicting	24

CENTENNIAL & DEVEREUX

20 yr Background Traffic - Seasonal & Growth Factor

Weekday AM

IMHS / GCAP Seasonal + Growth Factor — table



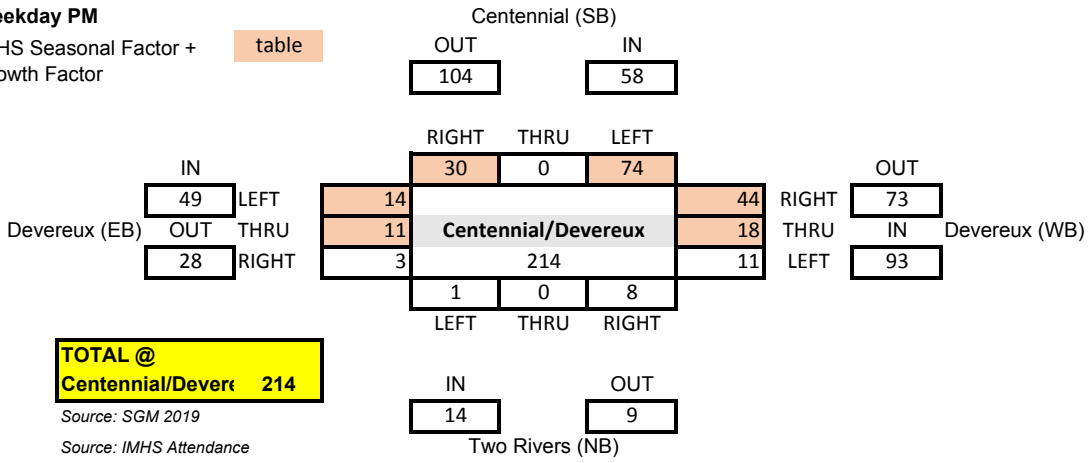
TOTAL @ Centennial/Devere 115

Source: SGM 2019

Source: IMHS Attendance

Weekday PM

IMHS Seasonal Factor + Growth Factor — table



TOTAL @ Centennial/Devere 214

Source: SGM 2019

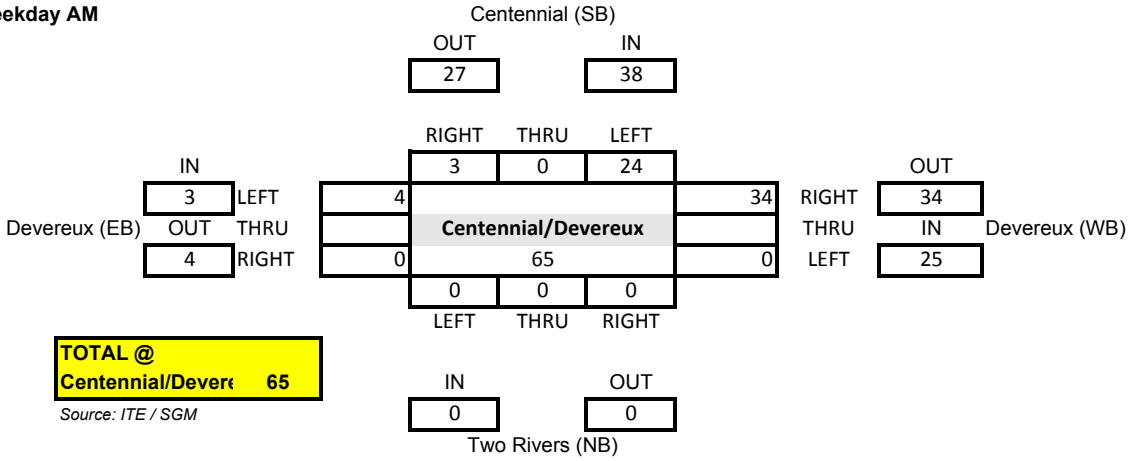
Source: IMHS Attendance

IMHS Seasonal + Growth Factor				IMHS	GCAP
Distribution				**182%**	**201%**
Weekday Traffic		PM Design Hour			
Cent / Devereux		In	Out		
East	0.9	13	8		
West	0.1	1	1		
From GCAP		2	2		
East	0.73				
West	0.15	4	3		
Traver Trail	0.02	0	0		

CENTENNIAL & DEVEREUX

Project Generated

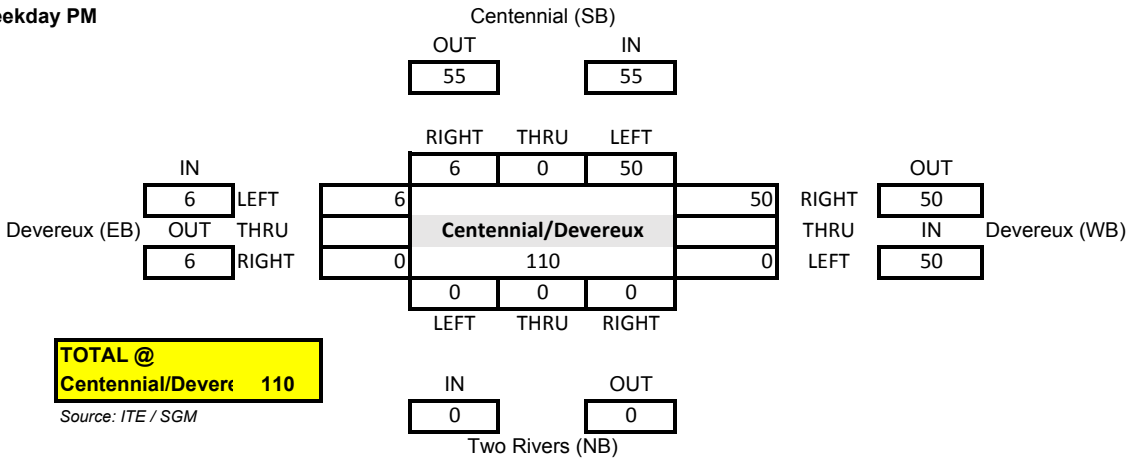
Weekday AM



TOTAL @ Centennial/Devere 65

Source: ITE / SGM

Weekday PM



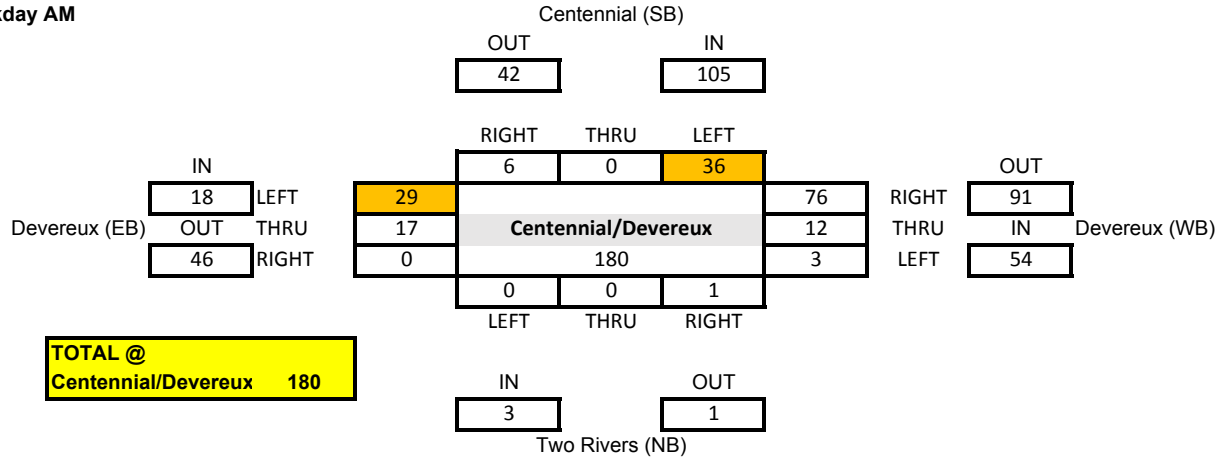
TOTAL @ Centennial/Devere 110

Source: ITE / SGM

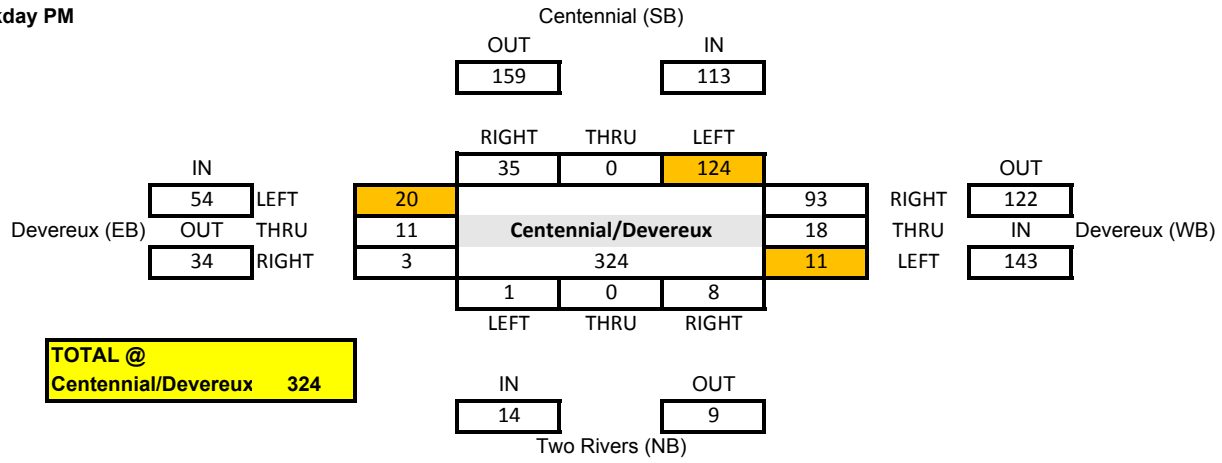
CENTENNIAL & DEVEREUX

20 yr Traffic - Background + Project

Weekday AM



Weekday PM

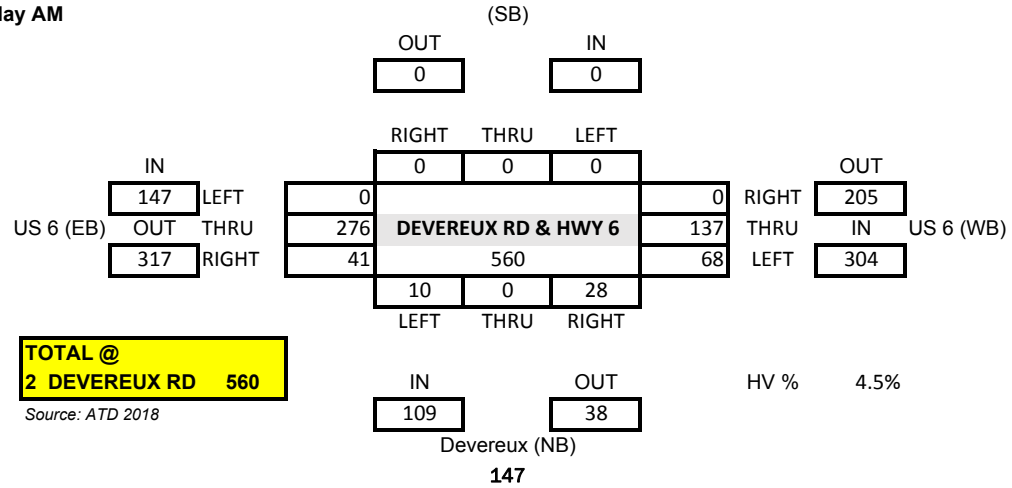


Left "waiver" for conflicting volume < 100 vph (PM)	
EB left --> WB conflicting	122
SB left --> EB/WB/NB conflicting	48
WB left --> EB conflicting	34
WB Right --> WB conflicting	29

DEVEREUX RD & HWY 6

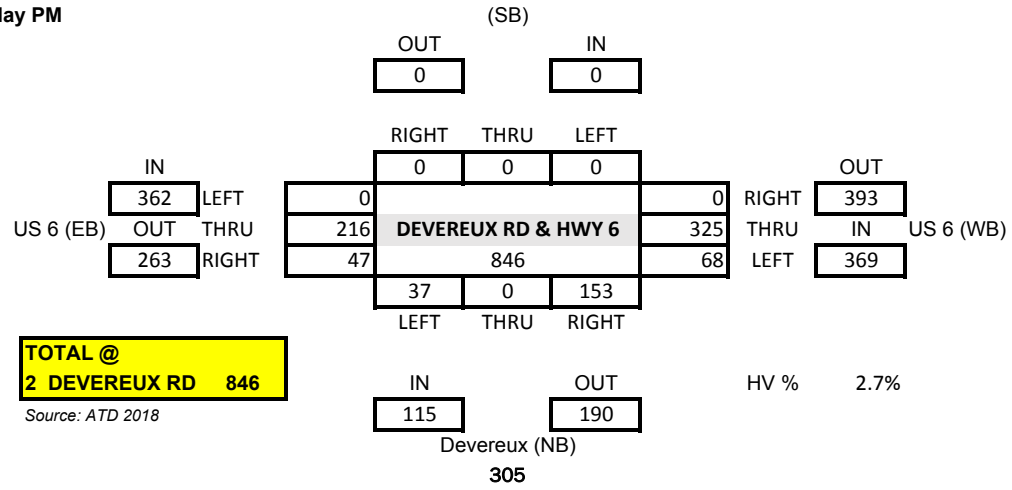
Existing - 6/13/18

Weekday AM



Source: ATD 2018

Weekday PM



Source: ATD 2018

DEVEREUX RD & HWY 6

20 yr Background Traffic - Seasonal & Growth Factor

Weekday AM

US 6 Seasonal Factor	100%
US 6 Growth Factor	104%
IMHS/GCAP Growth Factor	

North (SB)

OUT 0 | IN 0

		RIGHT	THRU	LEFT			
	IN	0	0	0			OUT
	152 LEFT	0			0	RIGHT	210
US 6 (EB)	OUT THRU	287	DEVEREUX RD & HWY 6		142	THRU	IN US 6 (WB)
	328 RIGHT	41	577		68	LEFT	315
		10	0	28			
		LEFT	THRU	RIGHT			

TOTAL @ 2 DEVEREUX RD 577

Source: CDOT OTIS

IN 109 | OUT 38

Devereux (NB)

HV % 4.5%

Weekday PM

US 6 Seasonal Factor	100%
US 6 Growth Factor	104%
IMHS / GCAP Seasonal + Growth Factor	table

North (SB)

OUT 0 | IN 0

		RIGHT	THRU	LEFT			
	IN	0	0	0			OUT
	379 LEFT	0			0	RIGHT	428
US 6 (EB)	OUT THRU	225	DEVEREUX RD & HWY 6		338	THRU	IN US 6 (WB)
	277 RIGHT	52	917		90	LEFT	396
		41	0	172			
		LEFT	THRU	RIGHT			

TOTAL @ 2 DEVEREUX RD 917

Source: CDOT OTIS

Source: IMHS/GCAP Attendance

IN 142 | OUT 213

Devereux (NB)

HV % 2.7%

IMHS Seasonal + Growth Factor — **IMHS 182%**

Distribution			
Weekday Traffic		PM Design Hour	
Cent / Devereux		In	Out
East	0.9	13	8
West	0.1	1	1
Devereux at US 6			
East	0.73	10	7
West	0.15	2	1
Traver Trail	0.02	0	0

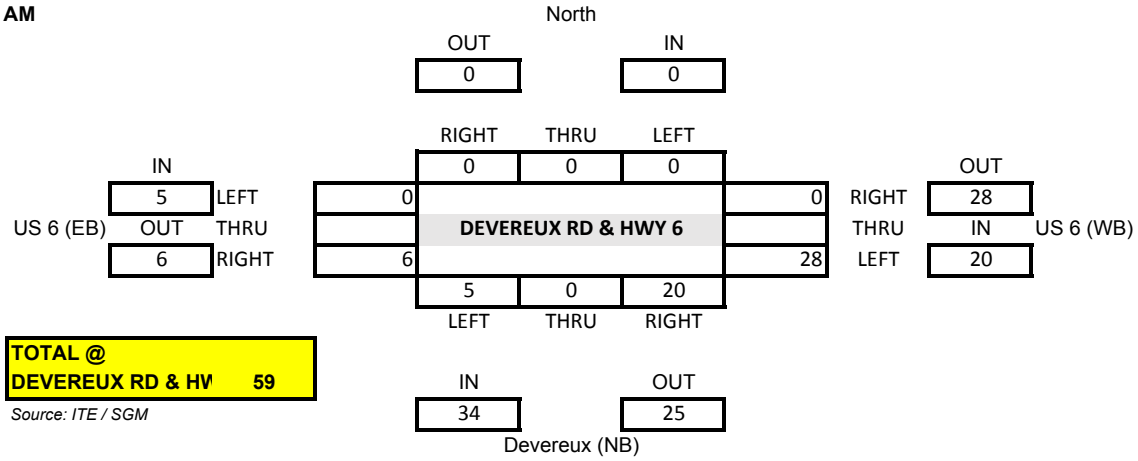
GCAP Seasonal + Growth Factor — **GCAP 201%**

Distribution			
Weekday Traffic		PM Design Hour	
		In	Out
Cent / Devereux			
East (Devere	0.10	2	2
Devereux at US 6			
East (US 6)	0.73	12	12
West (US 6)	0.15	2	2
Traver Trail	0.02	0	0

DEVEREUX RD & HWY 6

Project Generated Traffic

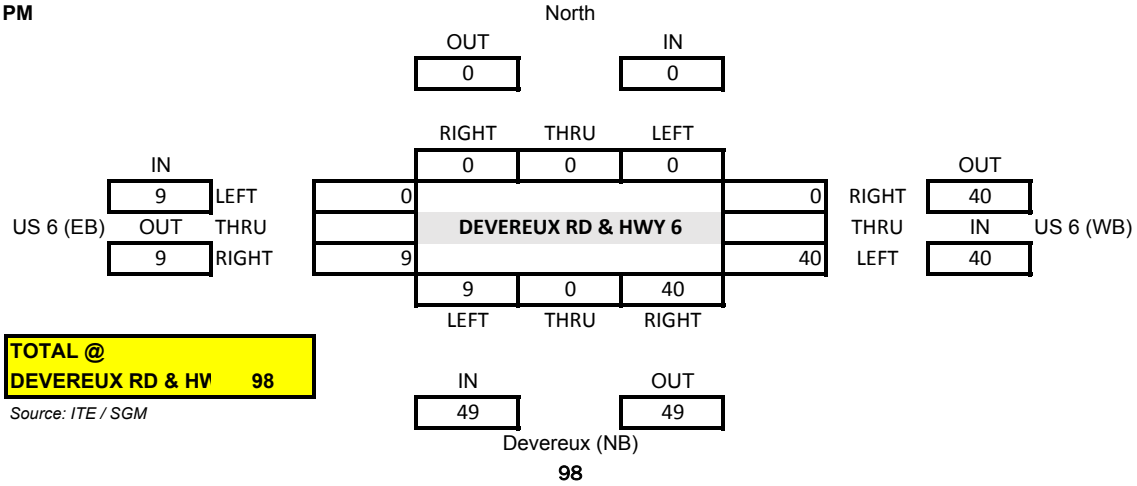
Weekday AM



TOTAL @ DEVEREUX RD & HW 59

Source: ITE / SGM

Weekday PM



TOTAL @ DEVEREUX RD & HW 98

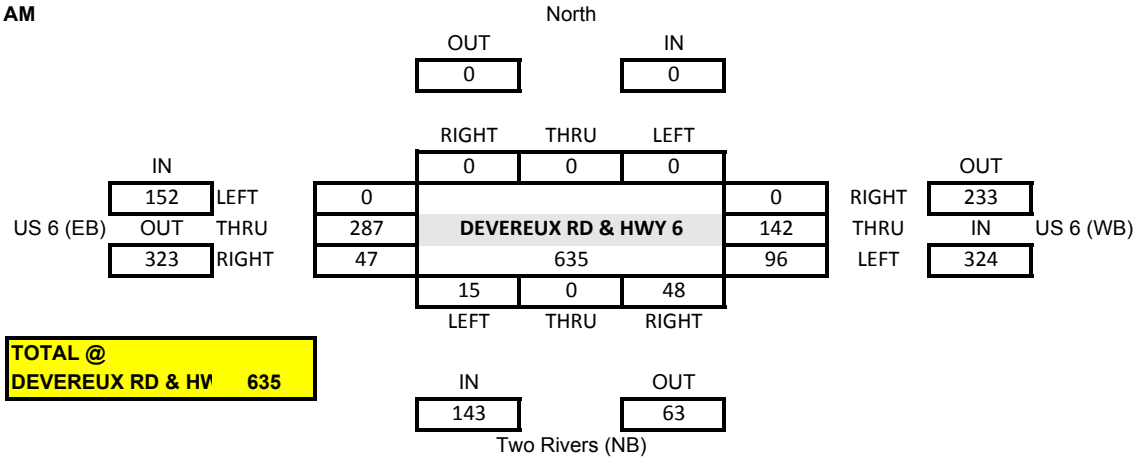
Source: ITE / SGM

98

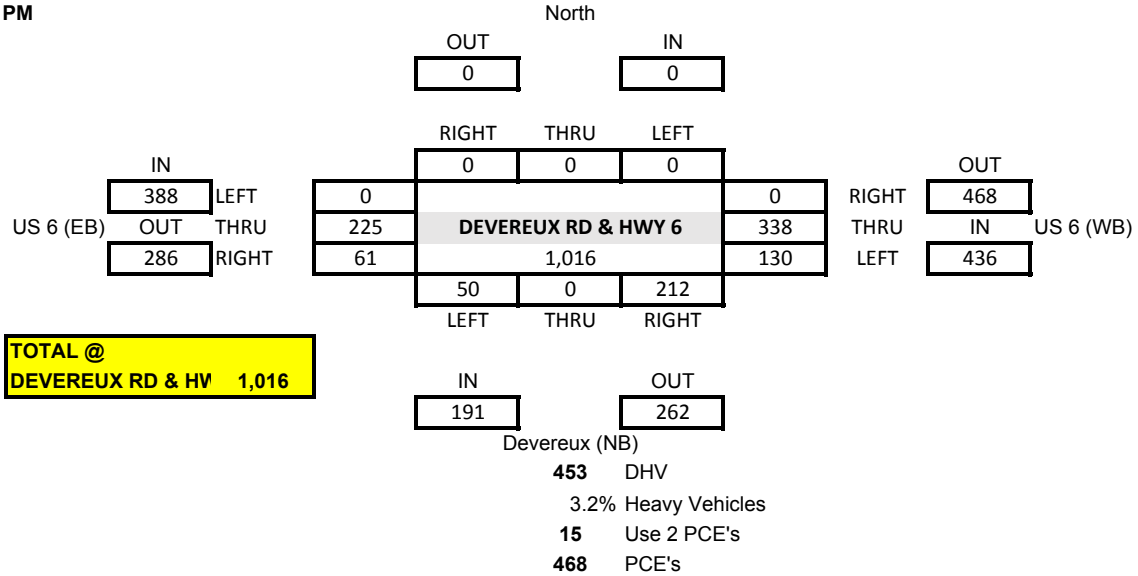
DEVEREUX RD & HWY 6

20 yr Traffic - Background + Project

Weekday AM



Weekday PM



453 DHV

3.2% Heavy Vehicles

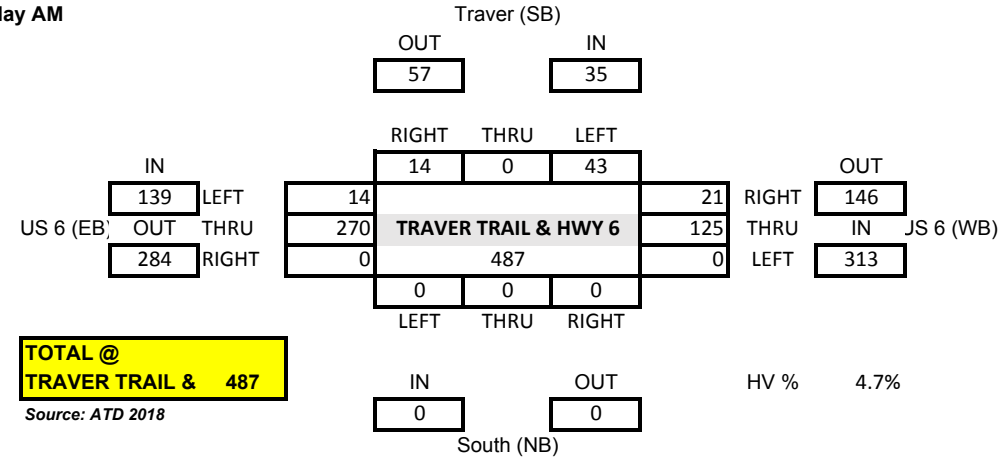
15 Use 2 PCE's

468 PCE's

TRAVER TRAIL & HWY 6

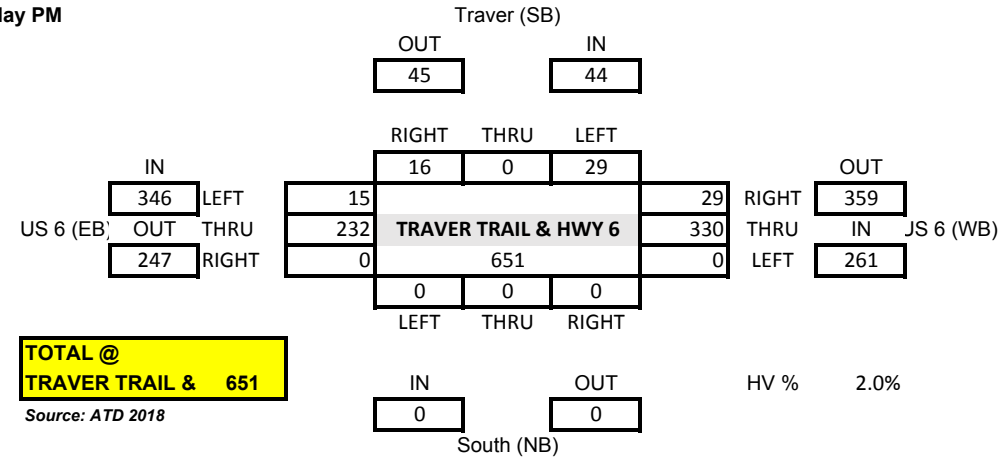
Existing - 6/13/18

Weekday AM



Source: ATD 2018

Weekday PM



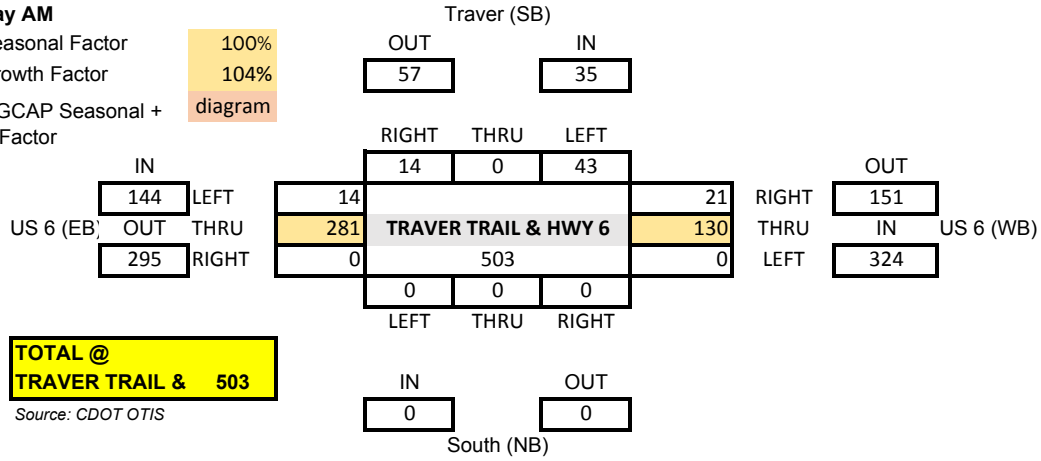
Source: ATD 2018

TRAVER TRAIL & HWY 6

20 yr Background Traffic - Seasonal & Growth Factor

Weekday AM

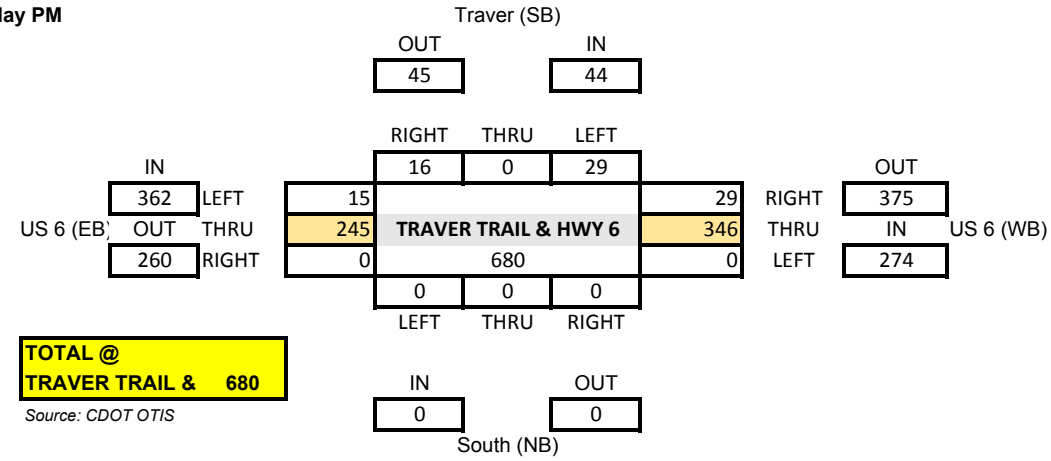
US 6 Seasonal Factor	100%
US 6 Growth Factor	104%
IMHS / GCAP Seasonal + Growth Factor	diagram



TOTAL @ TRAVER TRAIL & 503

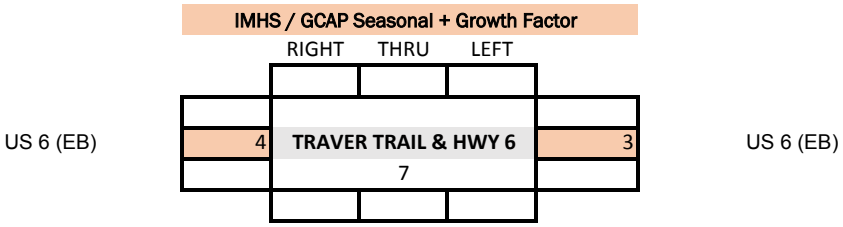
Source: CDOT OTIS

Weekday PM



TOTAL @ TRAVER TRAIL & 680

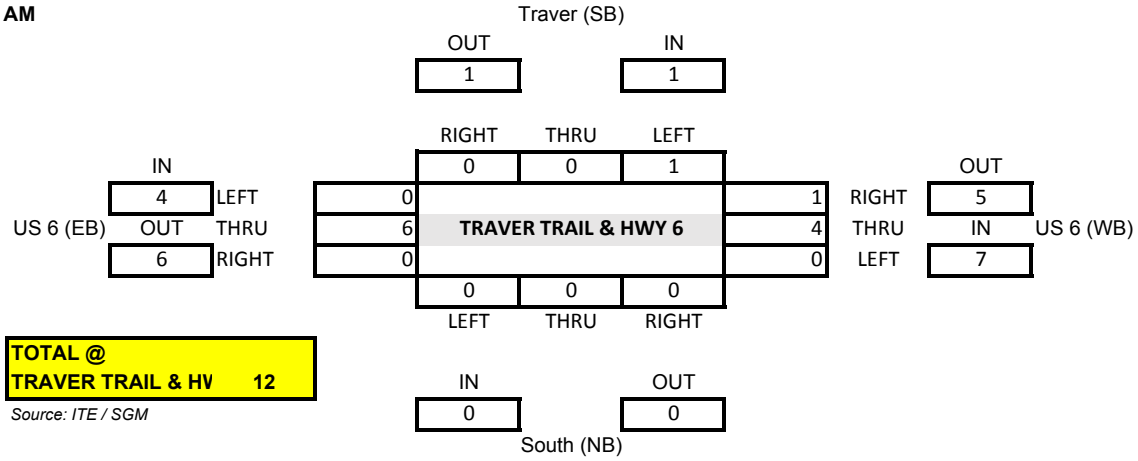
Source: CDOT OTIS



TRAVER TRAIL & HWY 6

Project Traffic

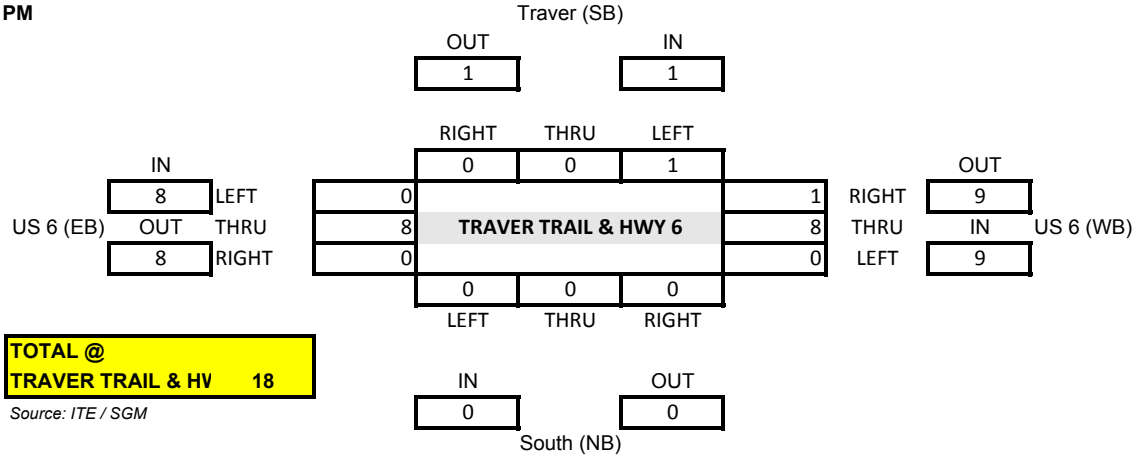
Weekday AM



TOTAL @ TRAVER TRAIL & HV 12

Source: ITE / SGM

Weekday PM



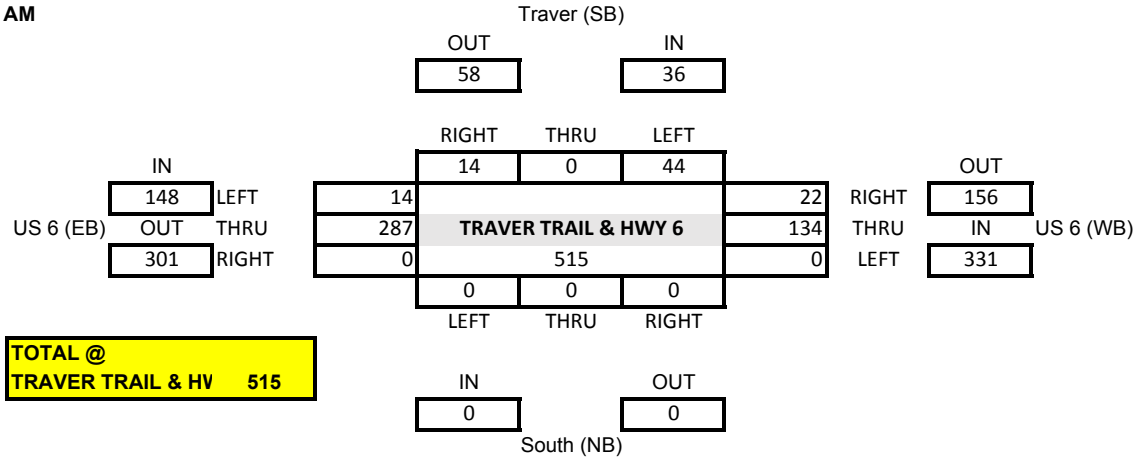
TOTAL @ TRAVER TRAIL & HV 18

Source: ITE / SGM

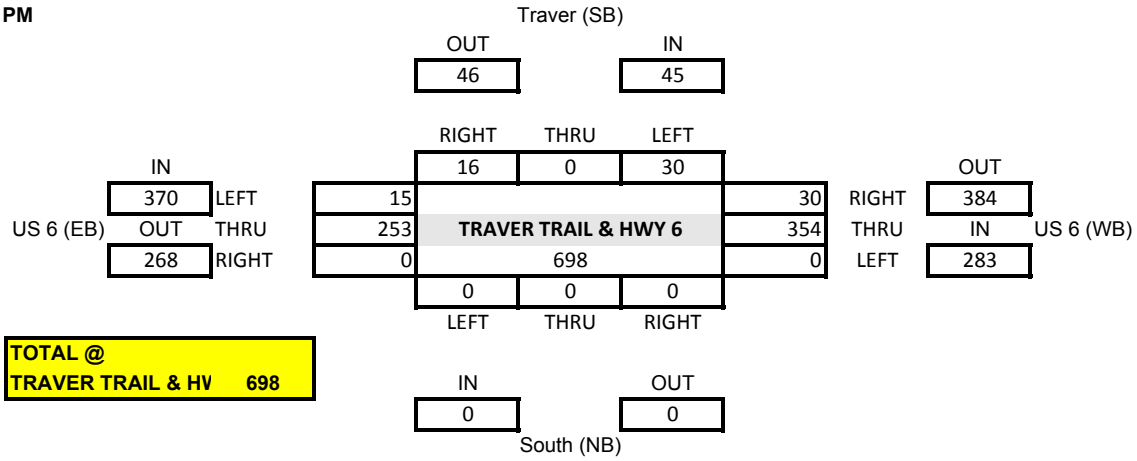
TRAVER TRAIL & HWY 6

20 yr Traffic - Background + Project

Weekday AM



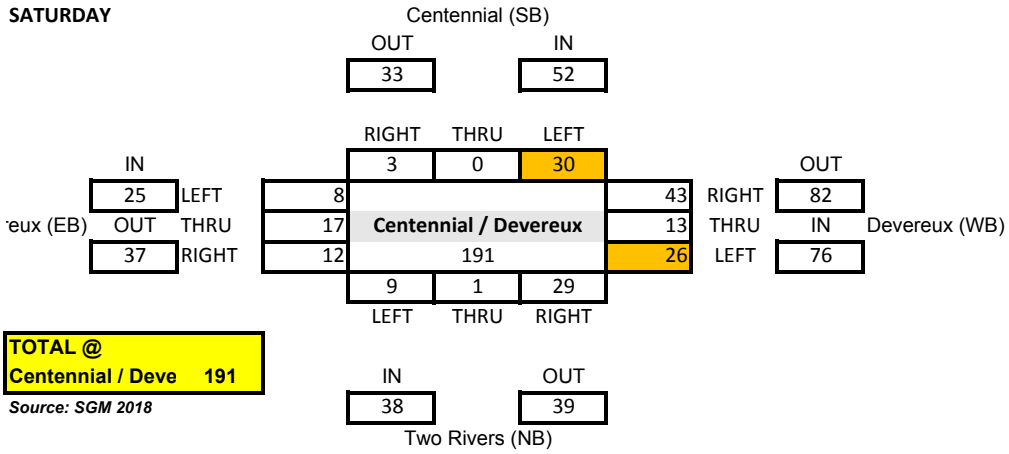
Weekday PM



CENTENNIAL & DEVEREUX

Existing - 9/29/18

SATURDAY



TOTAL @ Centennial / Deve 191

Source: SGM 2018

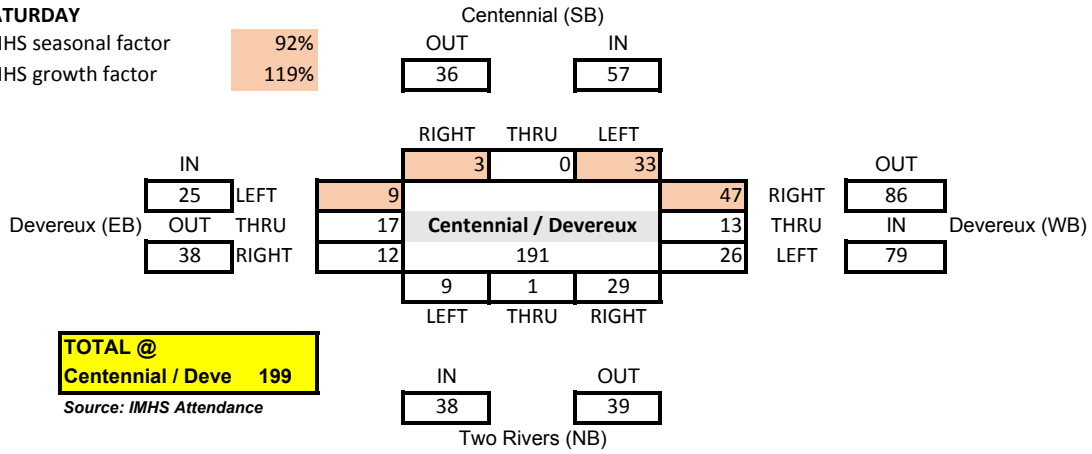
Left "waiver" for conflicting volume < 100 vph (PM)	
~~EB left --> WB conflicting~~	~~82~~
SB left --> EB/WB/NB conflicting	85
WB left --> EB conflicting	37

CENTENNIAL & DEVEREUX

Background Traffic - Seasonal / Growth Factor Adjustment

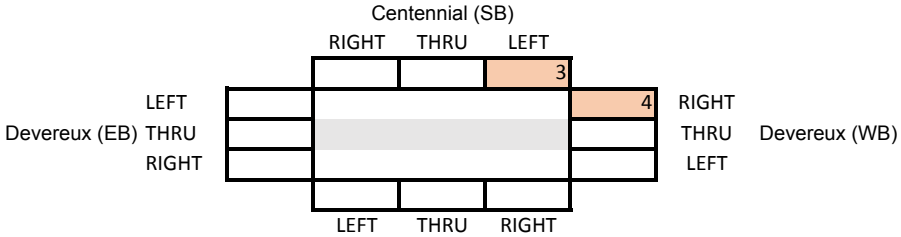
SATURDAY

IMHS seasonal factor	92%
IMHS growth factor	119%



TOTAL @ Centennial / Deve 199

Source: IMHS Attendance

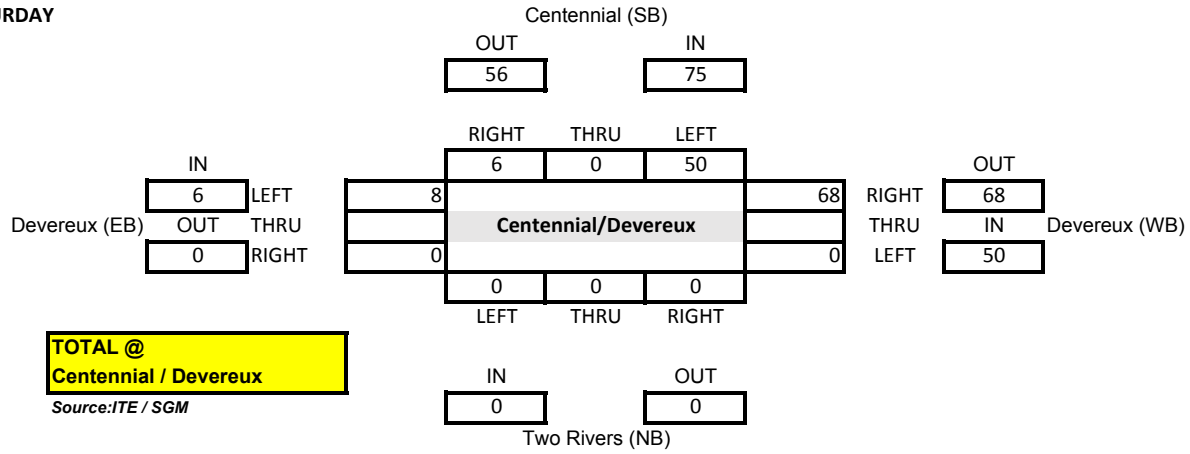


Added volume to be applied to East-oriented Devereux/US 6 interesection

CENTENNIAL & DEVEREUX

Project Generated Traffic

SATURDAY



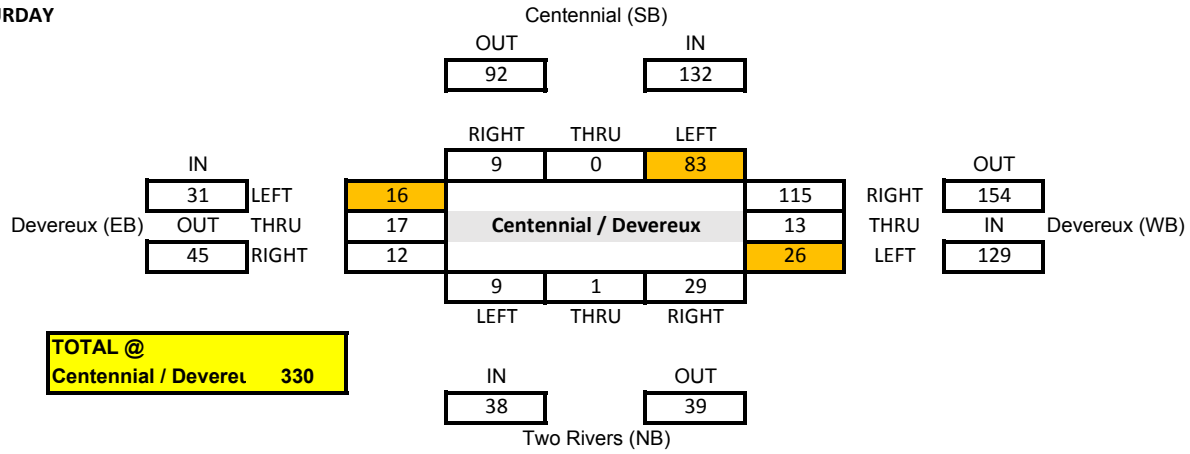
TOTAL @ Centennial / Devereux

Source:ITE / SGM

CENTENNIAL & DEVEREUX

20 yr Traffic Volume

SATURDAY



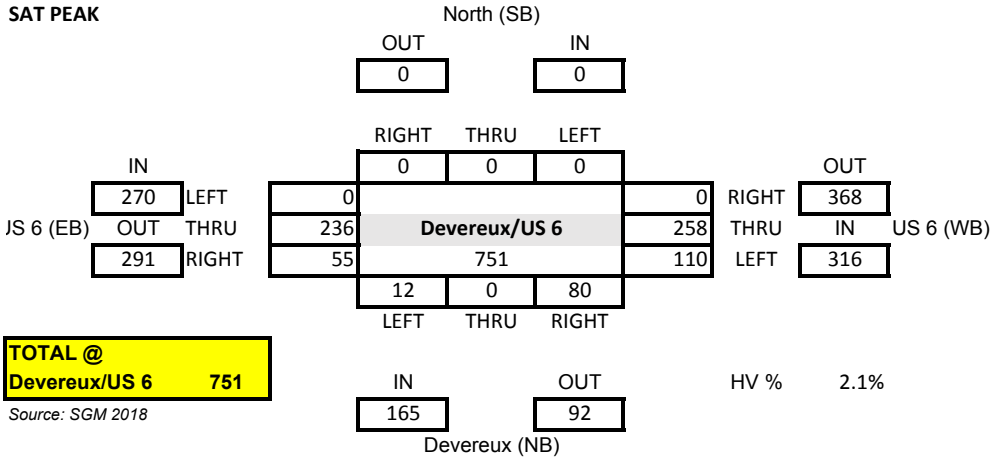
TOTAL @ Centennial / Devereu	330

Left "waiver" for conflicting volume < 100 vph (PM)	
EB left --> WB conflicting	154
SB left --> EB/WB/NB conflicting	85
WB left --> EB conflicting	45

DEVEREUX RD & HWY 6

Existing - 9/29/18

SAT PEAK



TOTAL @ Devereux/US 6	**751**

Source: SGM 2018

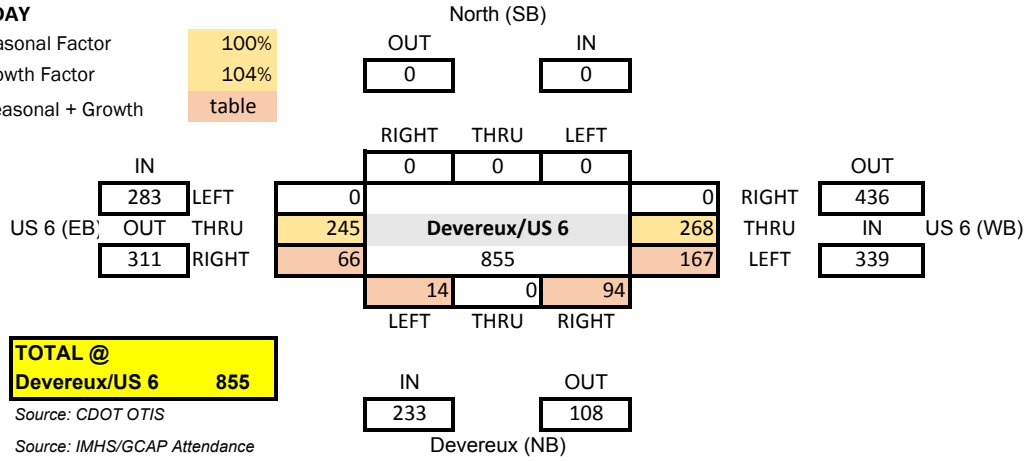
HV % 2.1%

DEVEREUX RD & HWY 6

20 yr Background Traffic - Seasonal / Growth Factor Adjustment

SATURDAY

US 6 seasonal Factor	100%
US 6 Growth Factor	104%
GCAP Seasonal + Growth Factor	table



TOTAL @ Devereux/US 6 855

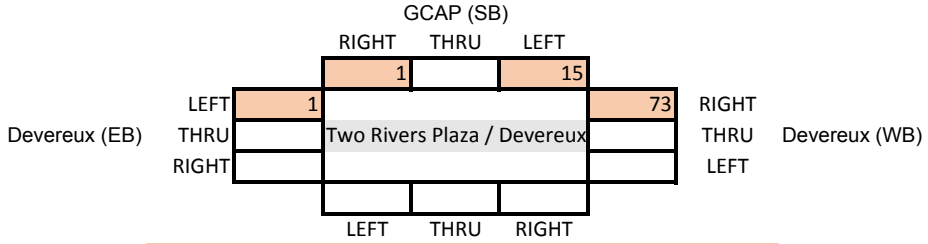
Source: CDOT OTIS

Source: IMHS/GCAP Attendance

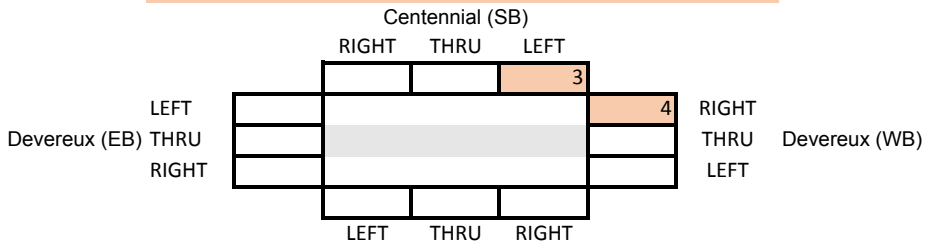
Weekend - GCAP Rate & Seasonal/Growth Factor

Devereux at US 6	165	92	Existing Sat volume at US 6
Devereux at Centennial	82	76	Existing Sat volume at Centennial
Apply to exist GCAP	83	16	9/29/18 From GCAP (Δ Intersections)
		128%	GCAP Seasonal Factor
		146%	GCAP Growth Factor

Background (Future - Existing) GCAP intersection



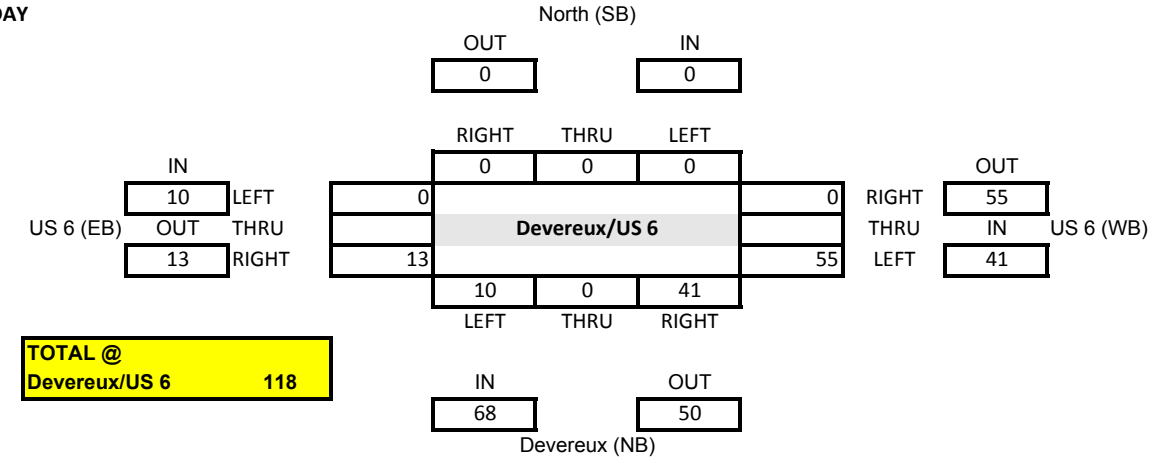
IMHS volume from Cent/Dev applied to Dev/US 6 intersection



DEVEREUX RD & HWY 6

Project Generated Traffic

SATURDAY

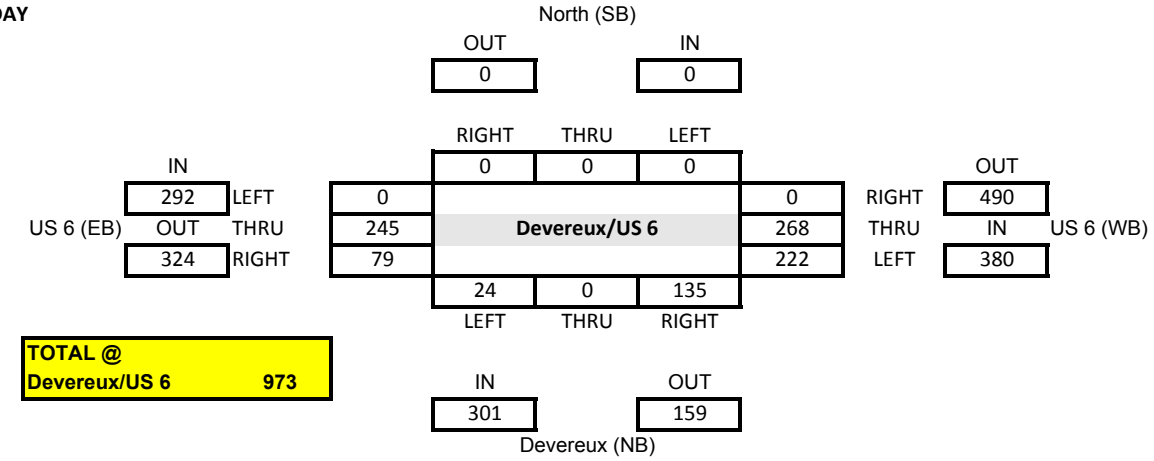


TOTAL @ Devereux/US 6	118

DEVEREUX RD & HWY 6

20 yr Traffic Volume

SATURDAY



TOTAL @ Devereux/US 6	973

Appendix C

Seasonal and Growth Factor, Parking Diversion

DHV / Attendance Data - IMHS / GCAP Traffic	Attendance			Growth Factor (131%)	Attendance-based Factors		Seasonal	2018/19 Intersection Volumes						CDOT	
	IMHS	GCAP	Combined	*20 yr Att*	IMHS	GCAP	Overall	IMHS	Cent/Dev AM	Cent/Dev PM	Dev/US6 AM	Dev/US6 PM	Traver/US6	000214	
Weekend/Holiday (31st highest, 2/17/18)	1804	721	2525	*3308*										19961	0.742873
Weekday *(30th highest, 3/30/18, PM only)*	1448	1087	2535	*3321*										26870	
Saturday SGM Traffic Count 9/29/18	1342	998	2340		134%	72%	141%	73		191		751		21884	0.742813
Wednesday ADT Traffic Count 6/13/18	503	752	1255		288%	145%	265%				560	846	651	29461	
Thursday SGM Traffic Count 2/7/19	370	0	370						115	186	690	722		23258	
															27013

	Attendance Data - IMHS / GCAP		Attendance			Count Day		Seasonal Factors			
			IMHS	GCAP	Combined	*IMHS*	*GCAP*	IMHS	GCAP	Combined	Count Day
2018	**WEEKEND/HOLIDAY'**	**30th HIGHEST at 1 PH/Day**	**1237**	**1277**	**2514**	*1342*	*998*	92%	128%	107%	9/29/2018
	WEEKDAY	**30th HIGHEST**	**772**	**1032**	**1804**	*503*	*752*	153%	137%	144%	6/13/2018
20 yr Growth	***WEEKEND/HOLIDAY'***	***30th HIGHEST at 1 PH/Day***	1468	1867	3335			109%	187%	143%	9/29/2018
	WEEKDAY	***30th HIGHEST***	916	1509	2425			182%	201%	193%	6/13/2018

IMHS Pool Rate & Seasonal Factor Calculation

	Saturday 9/29/18						Weekend (or Holiday)			Weekday					6/13/18 Weekday Data					Seasonal/Growth Adjust (ADT->30th)			
	Peak Hour Traffic				Per Pool Rate		30th Highest Attend	30th Highest Attend Per Pool Rate		30th Highest Attend	30th Highest Attend Per Pool Rate		PM	DHV PM	IMHS	Per Pool Rate		PM	PM	PM	PM		
	IN	OUT	Attend.	# Pools	IN	OUT	Attend.*	IN	OUT	Attend.*	IN	OUT	IN	OUT	Attendance	IN	OUT	IN	OUT	IN	OUT		
EXIST.	45	28	1342	16	2.81	1.75	1237	2.59	1.61	772	1.62	1.01	26	16	503	1.05	0.66	17	10	9	6	Seasonal	153%
20 YEAR (119%)	119%	Growth	1597	16	3.34	2.08	1468	3.07	1.91	916	1.92	1.19	31	19	503	1.05	0.65	17	10	14	9	Seasonal+Growth	182%

*Based on IMHS attendance

ON-SITE PARKING ANALYSIS

Location	Existing	Proposed	Change
GCAP	345	251	-94
"CDOT"		186	186
IMHS	144	171	27
Hotel		100	100
Housing		40	40
Office		32	32
Total	**489**	**780**	**291**

Pkg Need (veh)		Pkg Diversion (veh)		Design
Weekday	Weekend	Weekday	Weekend	Year
297	367	46	116	2018
434	**537**	**183**	**286**	**20-year**

*GCAP arrival rate 3.5 visitors per vehicle

*Based on operations observations at full parking ---> attendance

Walking Distance "CDOT" parking to GCAP = 0.27 miles

WALKING DISTANCE walking distance

GCAP Rate & Seasonal/Growth Factor

	Weekday	Attend	Δ Attend	Vehicles*	
Count	6/13/18	752			
Seasonal	30th GCAP	1032	280	12	137%
Growth	146%	1509	757	33	201%

*GCAP arrival rate 3.48 visitors per vehicle

Additional to Devereux / US 6 intersection

Seasonal Adjust ADT-->30th	
PM IN	PM OUT
16	16

Directional Distribution

GCAP Seasonal + Growth Factor

Weekday Traffic		PM Design Hour In	PM Design Hour Out
Cent at Devereux			
East (Devereux)	0.10	2	2
Devereux at US 6			
East (US 6)	0.73	12	12
West (US 6)	0.15	2	2
Traver Trail	0.02	0	0
		16	16

Directional Distribution

IMHS Seasonal + Growth Factor

Weekday Traffic		PM Design Hour In	PM Design Hour Out
Cent at Devereux			
East	0.9	13	8
West	0.1	1	1
Devereux at US 6			
East	0.73	10	7
West	0.15	2	1
Traver Trail	0.02	0	0
		14	9

Weekend-GCAP Rate & Seasonal/Growth Factor

Devereux at US 6	165	92	Existing Sat volume at US 6
Devereux at Centennial	82	76	Existing Sat volume at Centennial
Apply to exist GCAP	83	16	9/29/18 From GCAP (Δ Intersections)
		128%	GCAP Seasonal Factor
		146%	GCAP Growth Factor

Weekend-GCAP Rate & Seasonal/Growth Factor

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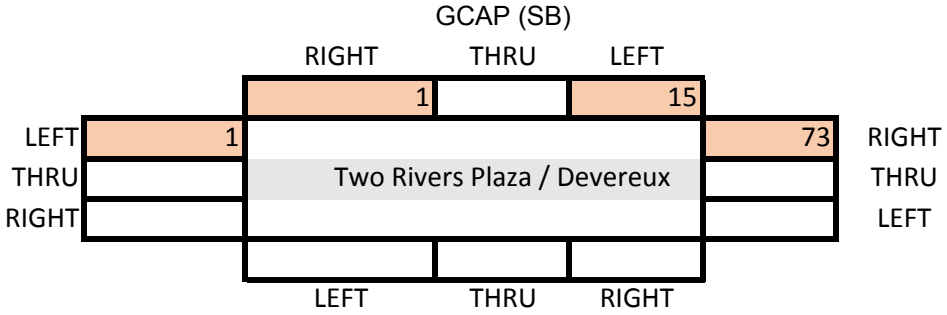
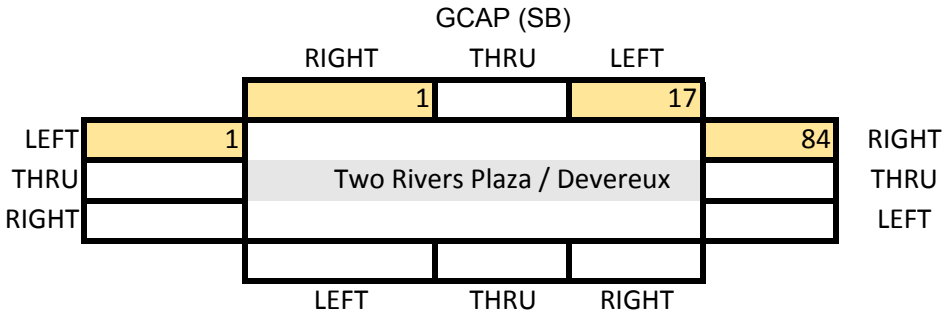
Apply to exist GCAP	83	16	9/29/18 From GCAP (Δ Intersections)
		128%	GCAP Seasonal Factor
		146%	GCAP Growth Factor

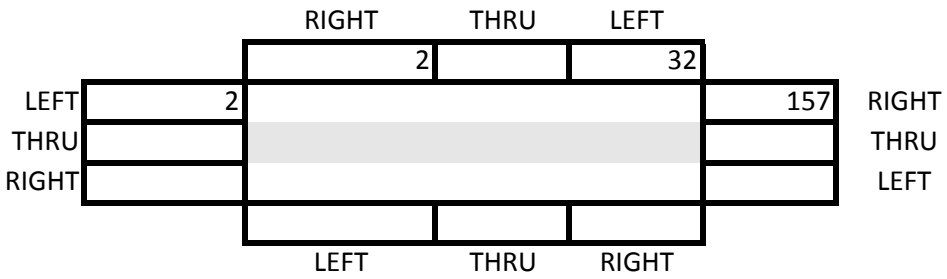
Background (Future-Existing) GCAP intersection



Existing GCAP intersection



Future GCAP intersection



Appendix D

Trip Generation

Appendix #4

Iron Mountain Hot Springs (Phase 2) - TRIP GENERATION TABLE

					212					Weekday Design Hour Traffic				
Land Use	Number of Units	ITE Code	Weekday Rate	AM Rate	AM Entering	AM Exiting	PM Rate	PM Entering	PM Exiting	Weekday Traffic	AM IN	AM OUT	PM IN	PM OUT
IMHS pool	3	n/a					2.62	1.62	1.01	0	0	0	5	3
Employee Housing	20	220	5.5	0.50	0.12	0.39	0.70	0.44	0.26	110	2	8	9	5
Hotel	100	310	7.02	0.45	0.27	0.18	0.49	0.25	0.24	702	27	18	25	24
Office	9	710	11.5	1.16	1.00	0.16	1.16	0.19	0.97	104	9	1	2	9
GCAP OF Parking	186	n/a	1.97	0.00	0.00	0.00	0.15	0.08	0.08	366	0	0	14	14
									TOTAL TRIPS:	**1,282**	**38**	**27**	**55**	**55**

	Weekday Design Hour Distribution			
ITE Ttrip Generation Manual, 10th Edition	AM IN	AM OUT	PM IN	PM OUT
IMHS Pool - based upon 2018 Sat. Count (factored)			62%	38%
ITE Code 220 - Multi-Family Housing (Low-Rise) (20 apartments)	23%	77%	63%	37%
ITE Code 310 - Hotel (100 rooms)	59%	41%	51%	49%
ITE Code 710 - General Office (8900 sf)	86%	14%	16%	84%
GCAP Overflow Parking (occurs at 1200 visitors)			50%	50%

Iron Mountain Hot Springs (Phase 2) - TRIP GENERATION TABLE

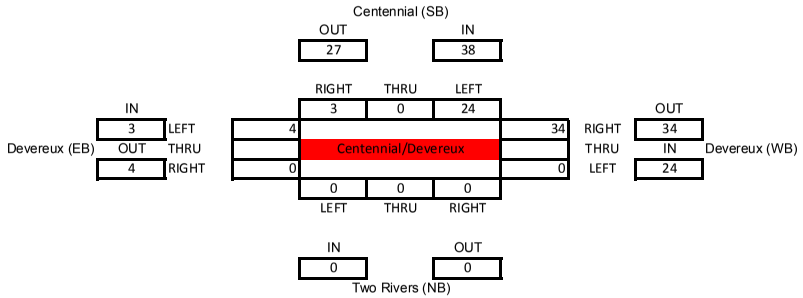
				Saturday Design Hour Rates			Saturday Design Hour Traffic	
Land Use	Number of Units	ITE Code	Sat. Peak Rate	Entering	Exiting	Saturday Traffic	IN	OUT
IMHS pool	3	n/a	4.21	2.59	1.61		8	5
Employee Housing	20	220	0.70	0.35	0.35		7	7
Hotel	100	310	0.72	0.40	0.32		40	32
Office	8	710	0.53	0.29	0.24		2	2
GCAP OF Parking	186	n/a	1.00	0.10	0.05	372	18	10
				TOTAL TRIPS:			**75**	**56**

	Saturday Design Hour Distribution	
ITE Ttrip Generation Manual, 10th Edition	IN	OUT
IMHS Pool - based upon 2018 Saturday Count	62%	38%
ITE Code 220 - MF Housing (20 apartments)	50%	50%
ITE Code 310 - Hotel (100 rooms)	56%	44%
ITE Code 710 - General Office (8000 sf)	54%	46%
GCAP Overflow Parking (occurs at 1200 visitors)	65%	35%

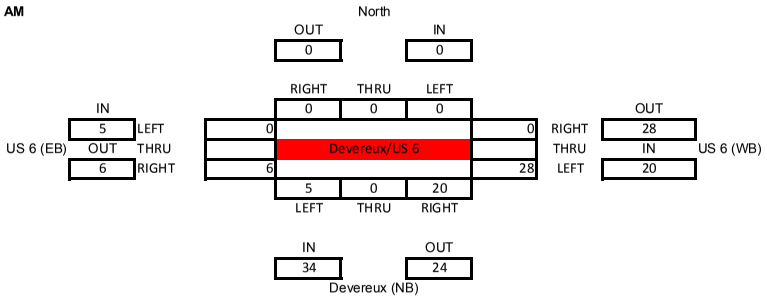
Directional Distribution		Weekday Traffic				Saturday Traffic	
		AM Design Hour		PM Design Hour		Design Hour	
Centennial at Devereux		In	Out	In	Out	In	Out
East	0.9	34	24	50	50	68	50
West	0.1	4	3	6	6	8	6
Devereux at US 6							
East	0.73	28	20	40	40	55	41
West	0.15	6	4	8	8	11	8
Traver Trail	0.02	1	1	1	1	2	1
	TOTAL	38	27	55	55	75	56

Project Trip Distribution

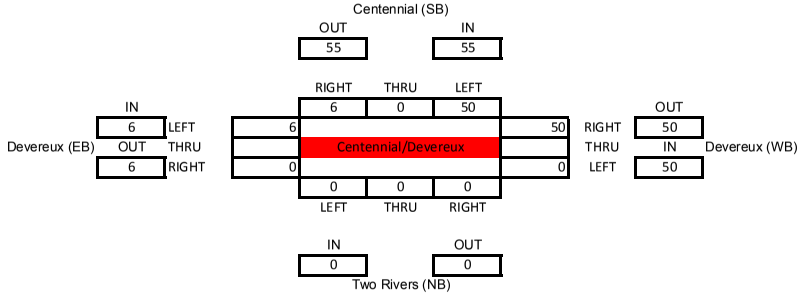
Weekday AM



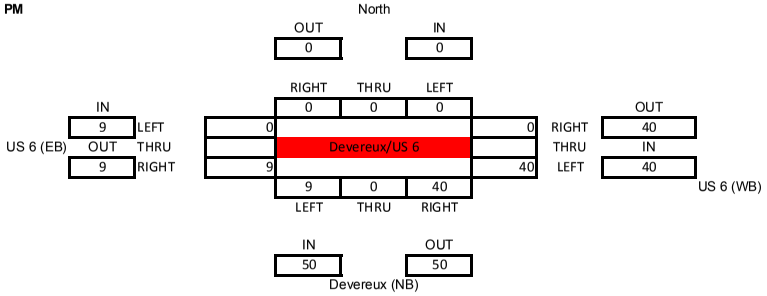
Weekday AM



Weekday PM



Weekday PM



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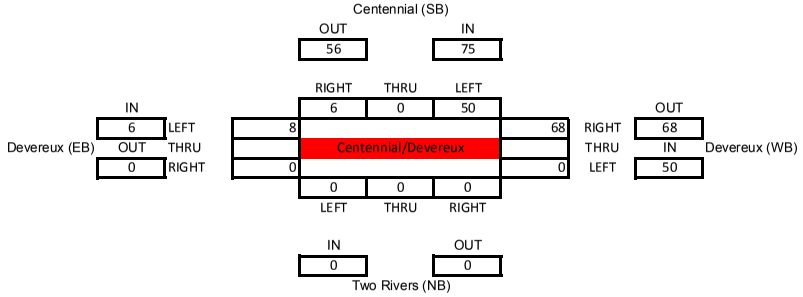
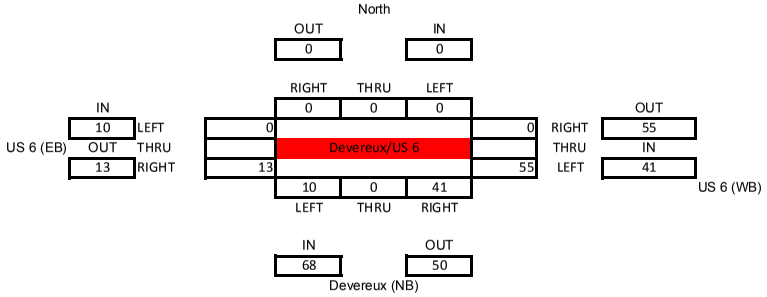


Saturday



Appendix E

Synchro /SimTraffic output

HCM 2010 TWSC

10: Devereux Rd & Centennial Dr

04/02/2019

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	8	3	11	15	31	1	0	8	66	1	29
Future Vol, veh/h	13	8	3	11	15	31	1	0	8	66	1	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	9	3	12	16	34	1	0	9	72	1	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	50	0	0	12	0	0	97	113	11	100	97	33
Stage 1	-	-	-	-	-	-	39	39	-	57	57	-
Stage 2	-	-	-	-	-	-	58	74	-	43	40	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1557	-	-	1607	-	-	885	777	1070	881	793	1041
Stage 1	-	-	-	-	-	-	976	862	-	955	847	-
Stage 2	-	-	-	-	-	-	954	833	-	971	862	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1557	-	-	1607	-	-	846	764	1070	862	780	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	846	764	-	862	780	-
Stage 1	-	-	-	-	-	-	967	854	-	946	840	-
Stage 2	-	-	-	-	-	-	917	826	-	954	854	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4	1.4	8.5	8.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1039	1557	-	-	1607	-	-	1233
HCM Lane V/C Ratio	0.009	0.009	-	-	0.007	-	-	0.085
HCM Control Delay (s)	8.5	7.3	0	-	7.3	0	-	8.2
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

HCM 2010 TWSC
6: Devereux & US 6/6th St 04/02/2019

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	216	47	68	325	37	153
Future Vol, veh/h	216	47	68	325	37	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	237	60	80	342	48	174

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	739	237
Stage 1	-	-	-	-	237	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1264	-	380	800
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	602	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	356	800
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	745	-
Stage 2	-	-	-	-	602	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1.5	12
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	356	800	-	-	1264	-
HCM Lane V/C Ratio	0.135	0.217	-	-	0.063	-
HCM Control Delay (s)	16.7	10.7	-	-	8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.8	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	232	330	29	29	16
Future Vol, veh/h	15	232	330	29	29	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	252	359	32	32	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	391	0	-	0	643	359
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	284	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1168	-	-	-	438	685
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	764	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1168	-	-	-	431	685
Mov Cap-2 Maneuver	-	-	-	-	431	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	764	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1168	-	-	-	496
HCM Lane V/C Ratio	0.014	-	-	-	0.099
HCM Control Delay (s)	8.1	0	-	-	13.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection: 6: Devereux & US 6/6th St

Movement	EB	WB	NE	NE
Directions Served	R	L	L	R
Maximum Queue (ft)	9	40	35	61
Average Queue (ft)	0	16	9	5
95th Queue (ft)	4	43	24	28
Link Distance (ft)			282	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250	200		60
Storage Blk Time (%)			0	0
Queuing Penalty (veh)			0	0

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	10	8	26	59
Average Queue (ft)	0	0	6	30
95th Queue (ft)	5	6	24	52
Link Distance (ft)	268	240	217	249
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

HCM 2010 TWSC
10: Devereux Rd & Centennial Dr 04/03/2019

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	17	12	26	13	43	9	1	29	30	0	3
Future Vol, veh/h	8	17	12	26	13	43	9	1	29	30	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	18	13	28	14	47	10	1	32	33	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	61	0	0	31	0	0	137	160	25	153	143	38
Stage 1	-	-	-	-	-	-	43	43	-	94	94	-
Stage 2	-	-	-	-	-	-	94	117	-	59	49	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1542	-	-	1582	-	-	834	732	1051	814	748	1034
Stage 1	-	-	-	-	-	-	971	859	-	913	817	-
Stage 2	-	-	-	-	-	-	913	799	-	953	854	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1542	-	-	1582	-	-	816	714	1051	774	730	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	816	714	-	774	730	-
Stage 1	-	-	-	-	-	-	965	854	-	908	802	-
Stage 2	-	-	-	-	-	-	894	785	-	918	849	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	2.3	8.9	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	974	1542	-	-	1582	-	-	851
HCM Lane V/C Ratio	0.044	0.006	-	-	0.018	-	-	0.042
HCM Control Delay (s)	8.9	7.3	0	-	7.3	0	-	9.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

HCM 2010 TWSC
6: Devereux & US 6/6th St 04/03/2019

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	236	55	110	258	12	80
Future Vol, veh/h	236	55	110	258	12	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	259	71	129	272	16	91

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	330	0	789	259
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	530	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1229	-	355	777
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	584	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1229	-	318	777
Mov Cap-2 Maneuver	-	-	-	-	318	-
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	NE
HCM Control Delay, s	0	2.7	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	318	777	-	-	1229	-
HCM Lane V/C Ratio	0.049	0.117	-	-	0.105	-
HCM Control Delay (s)	16.9	10.2	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0.4	-

Intersection: 6: Devereux & US 6/6th St

Movement	EB	WB	NE	NE
Directions Served	R	L	L	R
Maximum Queue (ft)	4	62	23	15
Average Queue (ft)	0	25	4	1
95th Queue (ft)	3	55	14	7
Link Distance (ft)			282	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250	200		60
Storage Blk Time (%)			0	
Queuing Penalty (veh)			0	

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	20	3	53	58
Average Queue (ft)	1	0	21	20
95th Queue (ft)	8	3	45	47
Link Distance (ft)	268	240	217	249
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

HCM 2010 TWSC
10: Devereux Rd & Centennial Dr 04/05/2019

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	11	3	11	18	44	1	0	8	74	0	30
Future Vol, veh/h	14	11	3	11	18	44	1	0	8	74	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	12	3	12	20	48	1	0	9	80	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	68	0	0	15	0	0	112	136	14	116	113	44
Stage 1	-	-	-	-	-	-	44	44	-	68	68	-
Stage 2	-	-	-	-	-	-	68	92	-	48	45	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1533	-	-	1603	-	-	866	755	1066	861	777	1026
Stage 1	-	-	-	-	-	-	970	858	-	942	838	-
Stage 2	-	-	-	-	-	-	942	819	-	965	857	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1533	-	-	1603	-	-	827	741	1066	842	763	1026
Mov Cap-2 Maneuver	-	-	-	-	-	-	827	741	-	842	763	-
Stage 1	-	-	-	-	-	-	960	849	-	933	831	-
Stage 2	-	-	-	-	-	-	905	812	-	948	848	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.7	1.1	8.5	8.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1033	1533	-	-	1603	-	-	1183
HCM Lane V/C Ratio	0.009	0.01	-	-	0.007	-	-	0.096
HCM Control Delay (s)	8.5	7.4	0	-	7.3	0	-	8.4
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.3

HCM 2010 TWSC
6: Devereux & US 6/6th St

04/05/2019

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	225	52	90	338	41	172
Future Vol, veh/h	225	52	90	338	41	172
Conflicting Peds, #/hr	0	20	0	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	247	67	106	356	53	195

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	334	0	837	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1225	-	333	769
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	298	756
Mov Cap-2 Maneuver	-	-	-	-	298	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NE
HCM Control Delay, s	0	1.9	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	298	756	-	-	1205	-
HCM Lane V/C Ratio	0.179	0.259	-	-	0.088	-
HCM Control Delay (s)	19.7	11.4	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	1	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	245	346	29	29	16
Future Vol, veh/h	15	245	346	29	29	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	266	376	32	32	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	408	0	-	0	674	376
Stage 1	-	-	-	-	376	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1151	-	-	-	420	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	753	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1151	-	-	-	413	670
Mov Cap-2 Maneuver	-	-	-	-	413	-
Stage 1	-	-	-	-	683	-
Stage 2	-	-	-	-	753	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1151	-	-	-	478
HCM Lane V/C Ratio	0.014	-	-	-	0.102
HCM Control Delay (s)	8.2	0	-	-	13.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection: 6: Devereux & US 6/6th St

Movement	EB	EB	WB	WB	NE	NE
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	15	17	58	11	77	72
Average Queue (ft)	1	1	19	0	12	10
95th Queue (ft)	8	9	48	8	38	40
Link Distance (ft)	296			267	282	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250	200			60
Storage Blk Time (%)					0	0
Queuing Penalty (veh)					1	0

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	10	26	62
Average Queue (ft)	1	7	29
95th Queue (ft)	6	26	51
Link Distance (ft)	268	217	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1

HCM 2010 TWSC
10: Devereux Rd & Centennial Dr 04/05/2019

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	17	12	26	13	47	9	1	29	33	0	3
Future Vol, veh/h	9	17	12	26	13	47	9	1	29	33	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	18	13	28	14	51	10	1	32	36	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	31	0	0	141	166	25	157	147	40
Stage 1	-	-	-	-	-	-	45	45	-	96	96	-
Stage 2	-	-	-	-	-	-	96	121	-	61	51	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1582	-	-	829	727	1051	809	744	1031
Stage 1	-	-	-	-	-	-	969	857	-	911	815	-
Stage 2	-	-	-	-	-	-	911	796	-	950	852	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1537	-	-	1582	-	-	811	709	1051	769	725	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-	811	709	-	769	725	-
Stage 1	-	-	-	-	-	-	962	851	-	905	800	-
Stage 2	-	-	-	-	-	-	892	782	-	914	846	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	2.2	8.9	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	973	1537	-	-	1582	-	-	839
HCM Lane V/C Ratio	0.044	0.006	-	-	0.018	-	-	0.047
HCM Control Delay (s)	8.9	7.4	0	-	7.3	0	-	9.5
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1

HCM 2010 TWSC
6: Devereux & US 6/6th St

04/05/2019

Intersection	
Int Delay, s/veh	3.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	245	66	167	268	14	94
Future Vol, veh/h	245	66	167	268	14	94
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	269	85	196	282	18	107

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	354	0	943	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	674	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1205	-	288	767
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1205	-	241	767
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	501	-

Approach	EB	WB	NE
HCM Control Delay, s	0	3.5	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	241	767	-	-	1205	-
HCM Lane V/C Ratio	0.075	0.139	-	-	0.163	-
HCM Control Delay (s)	21.2	10.5	-	-	8.6	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.6	-

Intersection: 6: Devereux & US 6/6th St

Movement	EB	WB	NE	NE
Directions Served	R	L	L	R
Maximum Queue (ft)	9	82	21	12
Average Queue (ft)	0	34	3	1
95th Queue (ft)	6	66	14	7
Link Distance (ft)			282	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250	200		60
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	20	10	54	50
Average Queue (ft)	1	0	21	21
95th Queue (ft)	10	4	44	45
Link Distance (ft)	268	240	217	249
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

HCM 2010 TWSC
10: Devereux Rd & Centennial Dr 04/02/2019

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	11	3	11	18	93	1	0	8	124	0	35
Future Vol, veh/h	20	11	3	11	18	93	1	0	8	124	0	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	12	3	12	20	101	1	0	9	135	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	121	0	0	15	0	0	153	203	14	157	154	71
Stage 1	-	-	-	-	-	-	58	58	-	95	95	-
Stage 2	-	-	-	-	-	-	95	145	-	62	59	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1467	-	-	1603	-	-	814	693	1066	809	738	991
Stage 1	-	-	-	-	-	-	954	847	-	912	816	-
Stage 2	-	-	-	-	-	-	912	777	-	949	846	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1467	-	-	1603	-	-	769	677	1066	789	721	991
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	677	-	789	721	-
Stage 1	-	-	-	-	-	-	940	834	-	898	809	-
Stage 2	-	-	-	-	-	-	870	771	-	927	833	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.4	0.7	8.6	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1022	1467	-	-	1603	-	-	1012
HCM Lane V/C Ratio	0.01	0.015	-	-	0.007	-	-	0.171
HCM Control Delay (s)	8.6	7.5	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	5

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	225	61	130	338	50	212
Future Vol, veh/h	225	61	130	338	50	212
Conflicting Peds, #/hr	0	20	0	0	2	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	247	78	153	356	65	241

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	345	0	931	267
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	664	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1214	-	293	769
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	506	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1194	-	251	756
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NE
HCM Control Delay, s	0	2.5	14.6
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	251	756	-	-	1194	-
HCM Lane V/C Ratio	0.259	0.319	-	-	0.128	-
HCM Control Delay (s)	24.3	12	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1	1.4	-	-	0.4	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	253	354	30	30	16
Future Vol, veh/h	15	253	354	30	30	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	1	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	275	385	33	33	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	418	0	-	0	692	385
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1141	-	-	-	410	663
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	746	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1141	-	-	-	403	663
Mov Cap-2 Maneuver	-	-	-	-	403	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	746	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1141	-	-	-	467
HCM Lane V/C Ratio	0.014	-	-	-	0.107
HCM Control Delay (s)	8.2	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection: 6: Devereux & US 6/6th St

Movement	EB	EB	WB	WB	NE	NE
Directions Served	T	R	L	T	L	R
Maximum Queue (ft)	11	20	70	25	94	82
Average Queue (ft)	1	1	29	1	17	13
95th Queue (ft)	10	11	59	14	53	48
Link Distance (ft)	296			267	282	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250	200			60
Storage Blk Time (%)					1	1
Queuing Penalty (veh)					1	0

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	NB	SB
Directions Served	LTR	LTR	LTR
Maximum Queue (ft)	20	26	70
Average Queue (ft)	2	6	36
95th Queue (ft)	13	24	57
Link Distance (ft)	268	217	249
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 2

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	17	12	26	13	115	9	1	29	83	0	9
Future Vol, veh/h	16	17	12	26	13	115	9	1	29	83	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	18	13	28	14	125	10	1	32	90	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	31	0	0	192	254	25	208	198	77
Stage 1	-	-	-	-	-	-	59	59	-	133	133	-
Stage 2	-	-	-	-	-	-	133	195	-	75	65	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1445	-	-	1582	-	-	768	650	1051	749	698	984
Stage 1	-	-	-	-	-	-	953	846	-	870	786	-
Stage 2	-	-	-	-	-	-	870	739	-	934	841	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1582	-	-	743	630	1051	709	676	984
Mov Cap-2 Maneuver	-	-	-	-	-	-	743	630	-	709	676	-
Stage 1	-	-	-	-	-	-	942	836	-	860	771	-
Stage 2	-	-	-	-	-	-	845	725	-	894	831	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	1.2	9	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	944	1445	-	-	1582	-	-	786
HCM Lane V/C Ratio	0.045	0.012	-	-	0.018	-	-	0.127
HCM Control Delay (s)	9	7.5	0	-	7.3	0	-	10.2
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	245	79	222	268	24	135
Future Vol, veh/h	245	79	222	268	24	135
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	250	200	-	0	60
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	78	85	95	77	88
Heavy Vehicles, %	2	2	2	3	5	3
Mvmt Flow	269	101	261	282	31	153

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	370	0	1073	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	804	-
Critical Hdwy	-	-	4.12	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.218	-	3.545	3.327
Pot Cap-1 Maneuver	-	-	1189	-	241	767
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	435	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1189	-	188	767
Mov Cap-2 Maneuver	-	-	-	-	188	-
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	435	-

Approach	EB	WB	NE
HCM Control Delay, s	0	4.3	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NELn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	188	767	-	-	1189	-
HCM Lane V/C Ratio	0.166	0.2	-	-	0.22	-
HCM Control Delay (s)	27.9	10.9	-	-	8.9	-
HCM Lane LOS	D	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.7	-	-	0.8	-

Intersection: 6: Devereux & US 6/6th St

Movement	EB	EB	WB	NE	NE
Directions Served	T	R	L	L	R
Maximum Queue (ft)	11	22	96	21	66
Average Queue (ft)	0	1	41	7	5
95th Queue (ft)	5	9	78	19	29
Link Distance (ft)	296			282	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250	200		60
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				0	0

Intersection: 10: Devereux Rd & Centennial Dr

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	25	8	55	58
Average Queue (ft)	2	0	19	33
95th Queue (ft)	13	5	43	51
Link Distance (ft)	268	240	217	249
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 0

Appendix F

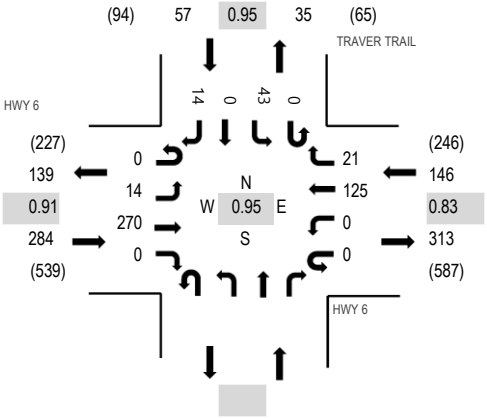
2018 Traffic Counts

Appendix #6

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

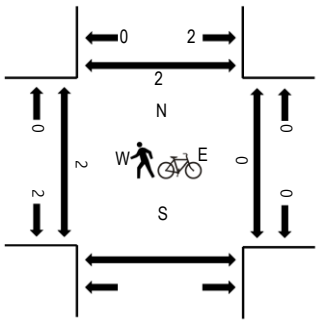
Location: 1 TRAVER TRAIL & HWY 6 AM
Date and Start Time: Wednesday, June 13, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	HWY 6 Eastbound				HWY 6 Westbound				Northbound				TRAVER TRAIL Southbound					Rolling Hour	Pedestrain Crossings		
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South North
7:00 AM	0	2	57	0	0	0	17	2					0	5	0	2	85	394	0	0	0
7:15 AM	0	1	71	0	0	0	22	3					0	7	0	0	104	437	0	0	2
7:30 AM	0	3	53	0	0	0	16	4					0	10	0	1	87	460	0	0	0
7:45 AM	0	2	76	0	0	0	25	1					0	7	0	7	118	487	0	0	0
8:00 AM	0	2	64	0	0	0	40	7					0	13	0	2	128	485	1	0	0
8:15 AM	0	4	74	0	0	0	29	5					0	11	0	4	127		0	0	0
8:30 AM	0	6	56	0	0	0	31	8					0	12	0	1	114		0	0	1
8:45 AM	0	6	62	0	0	0	27	9					0	9	0	3	116		0	0	0
Count Total	0	26	513	0	0	0	207	39					0	74	0	20	879		1	0	3
Peak Hour	0	14	270	0	0	0	125	21					0	43	0	14	487		1	0	1

All Traffic Data Services Inc.
(303) 216-2439
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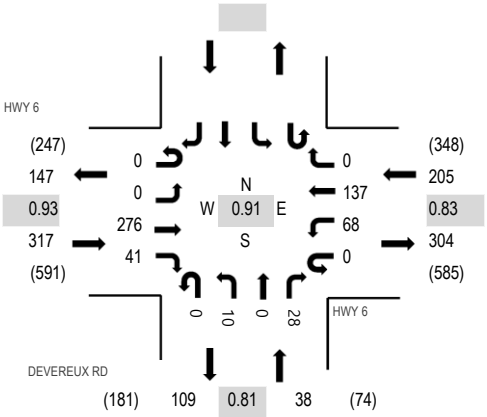
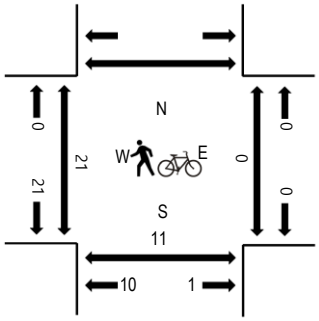
Location: 2 DEVEREUX RD & HWY 6 AM
Date and Start Time: Wednesday, June 13, 2018
Peak Hour: 07:45 AM - 08:45 AM
Peak 15-Minutes: 08:00 AM - 08:15 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	HWY 6 Eastbound				HWY 6 Westbound				DEVEREUX RD Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	61	2	0	9	18	0	0	1	0	7					98	469	0	0	4	
7:15 AM	0	0	72	3	0	6	24	0	0	1	0	8					114	525	3	0	4	
7:30 AM	0	0	57	8	0	15	19	0	0	1	0	9					109	545	0	0	3	
7:45 AM	0	0	70	14	0	30	26	0	0	0	0	8					148	560	6	0	0	
8:00 AM	0	0	71	9	0	17	45	0	0	5	0	7					154	544	2	0	1	
8:15 AM	0	0	78	7	0	12	31	0	0	1	0	5					134		0	0	0	
8:30 AM	0	0	57	11	0	9	35	0	0	4	0	8					124		11	0	9	
8:45 AM	0	0	61	10	0	19	33	0	0	3	0	6					132		8	0	3	
Count Total	0	0	527	64	0	117	231	0	0	16	0	58					1,013		30	0	24	
Peak Hour	0	0	276	41	0	68	137	0	0	10	0	28					560		19	0	10	

All Traffic Data Services Inc.
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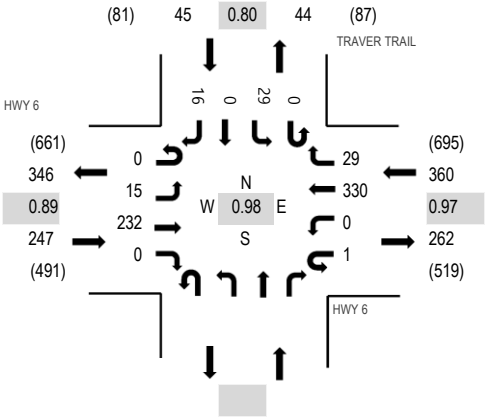
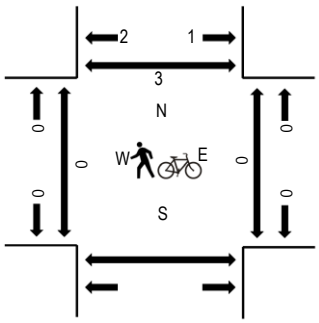
Location: 1 TRAVER TRAIL & HWY 6 PM
Date and Start Time: Wednesday, June 13, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



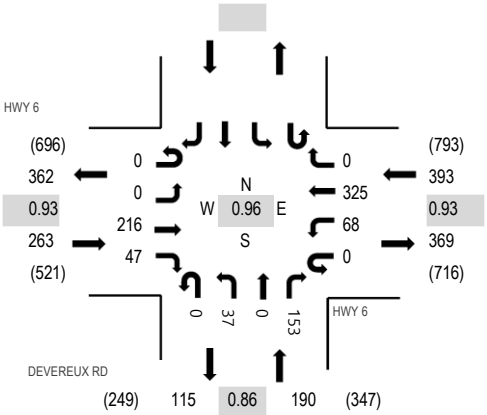
Traffic Counts

Interval Start Time	HWY 6 Eastbound				HWY 6 Westbound				Northbound				TRAVER TRAIL Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	4	66	0	1	0	74	9					0	5	0	3	162	619	0	0		0
4:15 PM	0	3	64	0	1	0	67	8					0	2	0	4	149	617	0	0		1
4:30 PM	0	3	45	0	0	0	78	5					0	8	0	3	142	633	2	0		0
4:45 PM	0	4	61	0	0	0	81	5					0	11	0	4	166	652	0	0		0
5:00 PM	0	6	52	0	1	0	87	6					0	5	0	3	160	648	0	0		0
5:15 PM	0	2	60	0	0	0	81	8					0	9	0	5	165		0	0		3
5:30 PM	0	3	59	0	0	0	81	10					0	4	0	4	161		0	0		0
5:45 PM	0	2	57	0	0	0	83	9					0	8	0	3	162		0	0		1
Count Total	0	27	464	0	3	0	632	60					0	52	0	29	1,267		2	0		5
Peak Hour	0	15	232	0	1	0	330	29					0	29	0	16	652		0	0		3

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

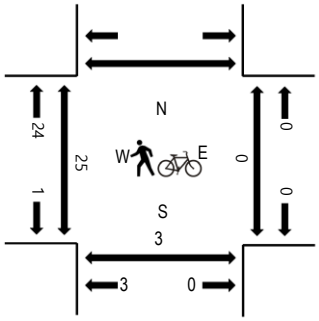
Location: 2 DEVEREUX RD & HWY 6 PM
Date and Start Time: Wednesday, June 13, 2018
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	HWY 6 Eastbound				HWY 6 Westbound				DEVEREUX RD Northbound				Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	60	11	0	23	77	0	0	7	0	28					206	819	0	0	5	
4:15 PM	0	0	55	12	0	27	68	0	0	8	0	29					199	814	8	0	0	
4:30 PM	0	0	45	10	0	22	76	0	0	7	0	38					198	835	9	0	3	
4:45 PM	0	0	59	12	0	20	83	0	0	5	0	37					216	846	16	0	0	
5:00 PM	0	0	43	16	0	11	81	0	0	12	0	38					201	842	0	0	2	
5:15 PM	0	0	60	9	0	18	77	0	0	11	0	45					220		1	0	0	
5:30 PM	0	0	54	10	0	19	84	0	0	9	0	33					209		4	0	0	
5:45 PM	0	0	57	8	0	21	86	0	0	5	0	35					212		1	0	0	
Count Total	0	0	433	88	0	161	632	0	0	64	0	283					1,661		39	0	10	
Peak Hour	0	0	216	47	0	68	325	0	0	37	0	153					846		21	0	2	

Study Name **Iron Mountain Hot Spring**
Start Date **09/29/2018**
Start Time **10:00 AM**
Site Code **2014-339.001**
Location **IMHS Entrance**

Channel	Direction Outbound	Direction Inbound		
Direction	Southbound	Northbound	15-min Totals	60-min Totals
10:00 AM	3	13	16	62
10:15 AM	1	12	13	58
10:30 AM	5	12	17	69
10:45 AM	7	9	16	73
11:00 AM	1	11	12	69
11:15 AM	13	11	24	
11:30 AM	7	14	21	
11:45 AM	3	9	12	
Peak Hour	28	45	73	
2-hour Total	40	91		

Study Name Iron Mountain Hot Springs
Start Date 09/29/2018
Start Time 10:00 AM
Site Code 2014-339.001
Project
Type Road
Classification Totals

	Centennial Dr Southbound				Devereux - Westbound Westbound				Two Rivers Park Entrance Northbound				Devereux - Eastbound Eastbound						
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	15-min Totals	60-min Totals	Truck/Bus %
10:00 AM	1	0	2	0	9	2	8	0	5	0	2	0	0	3	6	0	38	150	1.3%
10:15 AM	0	0	1	0	12	0	6	0	1	0	0	0	0	4	2	0	26	147	1.4%
10:30 AM	2	0	5	0	4	6	6	1	3	0	1	0	1	5	5	0	39	180	1.7%
10:45 AM	1	0	8	0	12	5	6	0	6	0	2	0	1	4	2	0	47	192	1.6%
11:00 AM	0	0	4	0	12	3	4	0	5	0	2	0	1	3	1	0	35	186	0.5%
11:15 AM	0	0	14	0	10	0	11	1	8	1	2	0	6	4	2	0	59		
11:30 AM	2	0	4	0	9	5	5	0	10	0	3	0	4	6	3	0	51		
11:45 AM	0	0	4	0	9	5	9	1	6	0	1	0	1	2	3	0	41		
12:00 PM																			
Peak Hour	3	0	30	0	43	13	26	1	29	1	9	0	12	17	8	0	192		

Study Name Iron Mountain Hot Springs
Start Date 09/29/2018
Start Time 10:00 AM
Site Code 2014-339.001
Project
Type Road
Classification Totals

	HWY-6- Northwest Bound Westbound				Devereux Rd Northbound				HWY-6-Southeast Bound Eastbound						
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	15-min Totals	60-min Totals	Truck/Bus %
10:00 AM		47	25	0	10		3	0	12	40		0	137	626	2.1%
10:15 AM		61	22	0	9		1	0	9	50		0	152	674	2.2%
10:30 AM		61	24	0	14		1	0	9	61		0	170	732	2.0%
10:45 AM		42	27	0	15		12	0	15	56		0	167	736	1.9%
11:00 AM		67	25	0	17		1	0	13	62		0	185	752	2.3%
11:15 AM		69	30	0	29		2	0	16	64		0	210		
11:30 AM		58	23	0	15		5	0	15	58		0	174		
11:45 AM		64	32	0	19		4	1	11	52		0	183		
12:00 PM															
Peak Hour		258	110	0	80	0	12	1	55	236	0	0	752		

Study Name Iron Mtn Hot Springs
Start Date 02/06/2019
Start Time 4:00 PM
Site Code Devereux/US6
Project
Type Road
Classification Totals

	6th St (SB) Southbound				6th St (NB) Northbound				Devereux Rd Eastbound						
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	15-min Totals	60-min Totals	Truck/Bus %
7:00 AM	1	45		0		18	5	0	4		4	0	77	595	5.2%
7:15 AM	12	74		0		33	5	0	6		1	0	131	673	3.7%
7:30 AM	5	101		0		42	13	0	9		1	0	171	690	3.0%
7:45 AM	14	126		0		47	16	0	9		4	0	216	632	3.3%
8:00 AM	10	82		0		38	12	0	12		1	0	155	544	4.8%
8:15 AM	6	89		0		34	12	0	5		2	0	148		
8:30 AM	6	67		0		29	6	0	4		1	0	113		
8:45 AM	4	67		0		34	15	0	6		2	0	128		4.0%
9:00 AM	0	0		0		0	0	0	0		0	0			
AM Peak Hour	35	398	0	0	0	161	53	0	35	0	8	0	690		
4:00 PM	0	49		0		61	13	0	13		6	0	142	658	3.2%
4:15 PM	5	33		0		91	10	0	20		4	0	163	722	2.6%
4:30 PM	3	56		0		88	12	0	17		5	0	181	715	2.0%
4:45 PM	5	45		0		82	17	0	20		3	0	172	702	2.6%
5:00 PM	4	54		0		92	17	0	34		5	0	206	701	2.7%
5:15 PM	3	48		0		70	9	0	25		1	0	156		
5:30 PM	1	41		0		91	16	0	14		5	0	168		
5:45 PM	4	59		0		72	13	0	18		5	0	171		2.6%
6:00 PM	0	0		0		0	0	0	0		0	0			
PM Peak Hour	17	188	0	0	0	353	56	0	91	0	17	0	722		

Study Name Iron Mtn Hot Springs
Start Date 02/06/2019
Start Time 4:00 PM
Site Code Centennial/Devereux
Project
Type Road
Classification Totals

	Centennial St Southbound				Devereux (WB) Westbound				Two Rivers Access Northbound				Devereux (EB) Eastbound						
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	15-min Totals	60-min Totals	Truck/Bus %
7:00 AM	1	0	3	0	5	0	1	0	0	0	0	0	0	1	3	0	14	93	11.8%
7:15 AM	1	0	1	0	5	2	0	1	1	0	0	0	0	5	6	0	22	114	9.6%
7:30 AM	0	0	2	0	4	3	1	0	1	0	0	0	0	4	7	0	22	115	7.8%
7:45 AM	0	0	5	0	13	4	1	0	0	0	0	0	0	5	7	0	35	112	7.1%
8:00 AM	1	0	3	0	16	2	1	0	0	0	0	0	0	7	5	0	35	101	11.9%
8:15 AM	2	0	2	0	9	3	0	0	0	0	0	0	0	1	6	0	23		
8:30 AM	2	0	1	0	8	2	0	0	0	0	0	0	1	2	3	0	19		
8:45 AM	0	0	5	0	14	0	0	0	0	0	1	0	0	0	4	0	24		9.7%
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
AM Peak Hour	3	0	12	0	42	12	3	0	1	0	0	0	0	17	25	0	115		
4:00 PM	2	0	9	0	8	5	2	0	4	0	0	0	1	0	4	0	35	151	8.6%
4:15 PM	2	0	14	0	6	3	1	0	1	0	0	0	1	3	2	0	33	186	5.4%
4:30 PM	6	0	12	0	7	2	3	0	3	0	0	0	0	2	2	0	37	184	4.9%
4:45 PM	6	0	13	0	7	6	3	0	4	0	1	0	1	1	4	0	46	185	4.9%
5:00 PM	15	1	27	0	11	4	4	0	0	0	0	0	1	2	5	0	70	164	3.7%
5:15 PM	6	0	14	0	3	1	1	0	3	0	1	0	0	1	1	0	31		
5:30 PM	3	0	7	0	5	8	1	0	3	0	1	0	0	6	4	0	38		
5:45 PM	0	0	11	0	5	5	0	0	2	0	0	0	0	2	0	0	25		5.5%
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PM Peak Hour	29	1	66	0	31	15	11	0	8	0	1	0	3	8	13	0	186		

Appendix G

CDOT Access Permit 314157

COLORADO
Department of Transportation
Transportation Systems
Management & Operations

Region 3 Traffic Section
222 S. Sixth St., Room 100
Grand Junction, Colorado 81501
(970) 683-6284 Fax:(970) 683-6290

February 10, 2015

Lee Barger
SGM, Inc.
118 West 6th, Suite 200
Glenwood Springs, CO 81601

RE: State Highway Access Permit No. 314157, Located on Highway 006, Milepost 0.0, in Garfield County.

Dear Permittee or Applicant:

The Colorado Department of Transportation (CDOT) has received your signed permit and application fee. A copy of the issued permit is enclosed. The next step in the CDOT access permitting process is for you (Applicant) to obtain a Notice to Proceed (NTP). ***Failure to obtain an approved Notice to Proceed prior to any construction will be a violation of the State Highway Access Code*** (2 CCR 601-1,"the Code") § 2.4.

Notice to Proceed Information

Well in advance of construction, the Applicant shall request a NTP in writing along with submitting other items, such as construction drawings, specifications, and other required documents to CDOT. The Applicant must submit a complete packet of this information to CDOT with their written request. If the Applicant chooses not to request the NTP, the permit expires pursuant to subsection 2.3(11)(d).

CDOT has seven days to determine if the NTP submittal is complete for review and then notify the applicant of any deficiencies. If complete, CDOT will review and comment on the submitted information within 30-days. If CDOT determines the information is unacceptable, missing, or in need of correction, the Applicant shall correct their submittal and resubmit the complete request for NTP.

Once resubmitted, CDOT will review the revised NTP documents within 10-days. If the revised documents are satisfactory, CDOT will issue a NTP. If further corrections are necessary, the cycle of submittal, review and comments will repeat itself until approval is granted and the NTP is issued.

The request for NTP shall include the following documents, along with any other items specified in the Terms and Conditions of your permit:

1) **Cover Letter Requesting a NTP** (include firm name, PE name and contact number)

2) **Traffic Control Plan (2 copies)**

The traffic control plan must be:

A. Consistent with CDOT Standard Plans Manual for Maintenance and Signing

B. Consistent with the MUTCD

C. Prepared by individual with American Traffic Safety Services Association (ATSSA) or Colorado Contractors Association certification – or sealed (stamped) by a Colorado registered professional engineer

D. Acceptable to CDOT prior to any construction within the right-of-way

E. Presented in a manner that provides a method of handling traffic (MHT) for each different phase of construction. The MHT will describe proposed construction phasing and will include dimensioned diagrams of work zone elements.

The final traffic control plan must be submitted a minimum of three working days in advance of construction. Such plans may be revised as necessary with CDOT concurrence.

3) Insurance Liability Certification

The Applicant or contractor shall be required to provide a comprehensive general liability and property damage insurance naming CDOT as an additional insured party, in the amounts of not less than $1,000,000 per occurrence and automobile liability insurance of $1,000,000 combined single limit bodily injury and property damage for each accident, during the period of access construction.

4) Complete Construction Plans

The Applicant shall provide two copies of 11" x 17" construction plans and specifications for the proposed improvements. The plans shall:

A. Address, as applicable, geometry, drainage, striping, signing, and signalization

B. Include, but not limited to, layout of the access, highway improvements, utility locations, present and proposed drainage, present and proposed right-of-way lines, present and proposed traffic control devices, and clear zone analysis

C. Sealed by a Colorado Professional Engineer in accordance with CRS 12-25-117

D. Conform to the requirement of the permit terms and conditions

E. If applicable, include the following statement on the cover page of the plans: "This design is in full compliance with Section 4 of the State Highway Access Code, 2 CCR 601-1 except for the following approved design waivers:"

Feel free to contact me with any questions you might have.

Respectfully,

Dan Roussin
Region 3 Access Manager

CC:Alex Karami, Staff Access Mgr. HQ
File

COLORADO DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ACCESS PERMIT

ck # 1076

CDOT Permit No.	State Highway No/Mp/Side	Local Jurisdiction
314157	006 K / .000 / R	Glenwood Springs

Permit fee	Date of transmittal	Region/Section/Patrol
2101 CA $100.00	1/27/2015	3 / / 12-2 Alan Hayes

The Permittee(s);

Iron Mountain Hot Springs, LLC
Steve Beckley
51000 Two Rivers Plaza Road
Glenwood Springs, CO 81601
970-618-7127

Applicant:
SGM, Inc.
Lee Barger
118 West 6th, Suite 200
Glenwood Springs, CO 81601
970-945-1004

Ref No.: I

is hereby granted permission to have an access to the state highway at the location noted below. The access shall be constructed, maintained and used in accordance with this permit, including the State Highway Access Code and any attachments, terms, conditions and exhibits. This permit may be revoked by the issuing authority if at any time the permitted access and its use violate any parts of this permit. The issuing authority, the Department and their duly appointed agents and employees shall be held harmless against any action for personal injury or property damage sustained by reason of the exercise of the permit.

Location: It is the start of SH 006K also known as Devereux Road.

Access to Provide Service to: (Land Use Code:) (Size or Count) (Units)
999 - City Street - Devereux Road

Additional Information:

MUNICIPALITY OR COUNTY APPROVAL
Required only when the appropriate local authority retains issuing authority.

Signature	Print Name	Title	Date

Upon the signing of this permit the permittee agrees to the terms and conditions and referenced attachments contained herein. All construction shall be completed in an expeditious and safe manner and shall be finished within 45 days from Initiation. The permitted access shall be completed in accordance with the terms and conditions of the permit prior to being used.

The permittee shall notify Les Stanton 2K2 with the Colorado Department of Transportation in Grand Junction, Colorado at (970) 384-3357, at least 48 hours prior to commencing construction within the State Highway right-of-way.

The person signing as the permittee must be the owner or legal representative of the property served by the permitted access and have full authority to accept the permit and its terms and conditions.

Permittee Signature	Print Name	Date
Kat Cooper, Manager	Madi Cooper	2/6/15
Iron Mountain Hot Springs LLC		

This permit is not valid until signed by a duly authorized representative of the Department.
COLORADO DEPARTMENT OF TRANSPORTATION

Signature	Print Name	Title	Date (of issue)
	Daniel Robertson	Permit Manager	2-10-15

Copy Distribution: Required: 1.Region 2.Applicant 3.Staff Access Section 4.Central Files
Make copies as necessary for: Local Authority MTCE Patrol Inspector Traffic Engineer

Previous editions are obsolete and may not be used

The following paragraphs are excerpts of the State Highway Access Code. These are provided for your convenience but do not alleviate compliance with all sections of the Access Code. A copy of the State Highway Access Code is available from your local issuing authority (local government) or the Colorado Department of Transportation (Department). When this permit was issued, the issuing authority made its decision based in part on information submitted by the applicant, on the access category which is assigned to the highway, what alternative access to other public roads and streets is available, and safety and design standards. Changes in use or design not approved by the permit or the issuing authority may cause the revocation or suspension of the permit.

APPEALS

1. Should the permittee or applicant object to the denial of a permit application by the Department or object to any of the terms or conditions of a permit placed there by the Department, the applicant and permittee (appellant) have a right to appeal the decision to the [Transportation] Commission [of Colorado]. To appeal a decision, submit a request for administrative hearing to the Transportation Commission of Colorado within 60 days of transmittal of notice of denial or transmittal of the permit for signature. Submit the request to the Transportation Commission of Colorado, 4201 East Arkansas Avenue, Denver, Colorado 80222-3400. The request shall include reasons for the appeal and may include changes, revisions, or conditions that would be acceptable to the permittee or applicant.

2. Any appeal by the applicant or permittee of action by a local issuing authority shall be filed with the local authority and be consistent with the appeal procedures of the local authority.

3. In submitting the request for administrative hearing, the appellant has the option of including within the appeal a request for a review by the Department's internal administrative review committee pursuant to [Code] subsection 2.10. When such committee review is requested, processing of the appeal for formal administrative hearing, 2.9(5) and (6), shall be suspended until the appellant notifies the Commission to proceed with the administrative hearing, or the appellant submits a request to the Commission or the administrative law judge to withdraw the appeal. The two administrative processes, the internal administrative review committee, and the administrative hearing, may not run concurrently.

4. Regardless of any communications, meetings, administrative reviews or negotiations with the Department or the internal administrative review Committee regarding revisions or objections to the permit or a denial, if the permittee or applicant wishes to appeal the Department's decision to the Commission for a hearing, the appeal must be brought to the Commission within 60 days of transmittal of notice of denial or transmittal of the permit.

PERMIT EXPIRATION

1. A permit shall be considered expired if the access is not under construction within one year of the permit issue date or before the expiration of any authorized extension. When the permittee is unable to commence construction within one year after the permit issue date, the permittee may request a one year extension from the issuing authority. No more than two one-year extensions may be granted under any circumstances. If the access is not under construction within three years from date of issue the permit will be considered expired. Any request for an extension must be in writing and submitted to the issuing authority before the permit expires. The request should state the reasons why the extension is necessary, when construction is anticipated, and include a copy of page 1 (face of permit) of the access permit. Extension approvals shall be in writing. The local issuing authority shall obtain the concurrence of the Department prior to the approval of an extension, and shall notify the Department of all denied extensions within ten days. Any person wishing to reestablish an access permit that has expired may begin again with the application procedures. An approved Notice to Proceed, automatically renews the access permit for the period of the Notice to Proceed.

CONSTRUCTION

1. Construction may not begin until a Notice to Proceed is approved. (Code subsection 2.4]

2. The construction of the access and its appurtenances as required by the terms and conditions of the permit shall be completed at the expense of the permittee except as provided in subsection 2.14. All materials used in the construction of the access within the highway right-of-way or on permanent easements, become public property. Any materials removed from the highway right-of-way will be disposed of only as directed by the Department. All fencing, guard rail, traffic control devices and other equipment and materials removed in the course of access construction shall be given to the Department unless otherwise instructed by the permit or the Department inspector.

3. The permittee shall notify the individual or the office specified on the permit or Notice to Proceed at least two working days prior to any construction within state highway right-of-way. Construction of the access shall not proceed until both the access permit and the Notice to Proceed are issued. The access shall be completed in an expeditious and safe manner and shall be finished within 45 days from initiation of construction within the highway right-of-way. A construction time extension not to exceed 30 working days may be requested from the individual or office specified on the permit.

4. The issuing authority and the Department may inspect the access during construction and upon completion of the access to ensure that all terms and conditions of the permit are met. Inspectors are authorized to enforce the conditions of the permit during construction and to halt any activities within state right-of-way that do not comply with the provisions of the permit, that conflict with concurrent highway construction or maintenance work, that endanger

highway property, natural or cultural resources protected by law, or the health and safety of workers or the public.

5. Prior to using the access, the permittee is required to complete the construction according to the terms and conditions of the permit. Failure by the permittee to abide by all permit terms and conditions shall be sufficient cause for the Department or issuing authority to initiate action to suspend or revoke the permit and close the access. If in the determination of the Department or issuing authority the failure to comply with or complete the construction requirements of the permit create a highway safety hazard, such shall be sufficient cause for the summary suspension of the permit. If the permittee wishes to use the access prior to completion, arrangements must be approved by the issuing authority and Department and included in the permit. The Department or issuing authority may order a halt to any unauthorized use of the access pursuant to statutory and regulatory powers. Reconstruction or improvement of the access may be required when the permittee has failed to meet required specifications of design or materials. If any construction element fails within two years due to improper construction or material specifications, the permittee shall be responsible for all repairs. Failure to make such repairs may result in suspension of the permit and closure of the access.

6. The permittee shall provide construction traffic control devices at all times during access construction, in conformance with the M.U.T.C.D. as required by section 42-4-104, C.R.S., as amended.

7. A utility permit shall be obtained for any utility work within highway right-of-way. Where necessary to remove, relocate, or repair a traffic control device or public or private utilities for the construction of a permitted access, the relocation, removal or repair shall be accomplished by the permittee without cost to the Department or issuing authority, and at the direction of the Department or utility company. Any damage to the state highway or other public right-of-way beyond that which is allowed in the permit shall be repaired immediately. The permittee is responsible for the repair of any utility damaged in the course of access construction, reconstruction or repair.

8. In the event it becomes necessary to remove any right-of-way fence, the posts on either side of the access shall be securely braced with an approved end post before the fence is cut to prevent any slacking of the remaining fence. All posts and wire removed are Department property and shall be turned over to a representative of the Department.

9. The permittee shall ensure that a copy of the permit is available for review at the construction site at all times. The permit may require the contractor to notify the individual or office specified on the permit at any specified phases in construction to allow the field inspector to inspect various aspects of construction such as concrete forms, subbase, base course compaction, and materials specifications. Minor changes and additions may be ordered by the Department or local authority field inspector to meet unanticipated site conditions.

10. Each access shall be constructed in a manner that shall not cause water to enter onto the roadway or shoulder, and shall not interfere with the existing drainage system on the right-of-way or any adopted municipal system and drainage plan.

11. The Permittee is responsible for obtaining any necessary additional Federal, State and/or City/County permits or clearances required for construction of the access. Issuance of this access permit does not constitute verification of the above required actions by the Permittee.

By accepting the permit, the permittee stipulates and agrees to fully protect, save, defend, indemnify, and hold harmless, to the extent allowed by law, the issuing Authority, and each of the Authority's directors, officers, employees, agents and representatives, from and against any and all claims, costs (including but not limited to all reasonable fees and charges of engineers, architects, attorneys, and other professionals or expert witnesses and all court or other dispute resolution costs directly incurred by reason of claims directly brought against the Authority), losses, damages, pre- or post-judgment interest, causes of action, suits, or liability of any nature whatsoever by reason of liability imposed due to Permittee's failure to obtain, or disregard of, any applicable federal, state or local environmental permits, approvals, authorizations, or clearances, or in meeting or complying with any applicable federal, state or local environmental law, regulation, condition or requirements in connection with any activities authorized by this Access Permit.

CHANGES IN ACCESS USE AND PERMIT VIOLATIONS

1. It is the responsibility of the property owner and permittee to ensure that the use of the access to the property is not in violation of the Code, permit terms and conditions or the Act. The terms and conditions of any permit are binding upon all assigns, successors-in-interest, heirs and occupants. If any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume and or vehicle type, the permittee or property owner shall contact the local issuing authority or the Department to determine if a new access permit and modifications to the access are required.

2. When an access is constructed or used in violation of the Code, section 43-2-147(5)(c), C.R.S., of the Act applies. The Department or issuing authority may summarily suspend an access permit and immediately order closure of the access when its continued use presents an immediate threat to public health, welfare or safety. Summary suspension shall comply with article 4 of title 24, C.R.S.

MAINTENANCE

1. The permittee, his or her heirs, successors-in-interest, assigns, and occupants of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit, the repair and maintenance of the access beyond the edge of the roadway including any cattle guard and gate, and the removal or clearance of snow or ice upon the access even though deposited on the access in the course of Department snow removal operations. Within unincorporated areas the Department will keep access culverts clean as part of maintenance of the highway drainage system. However, the permittee is responsible for the repair and replacement of any access-related culverts within the right-of-way. Within incorporated areas, drainage responsibilities for municipalities are determined by statute and local ordinance. The Department will maintain the roadway including auxiliary lanes and shoulders, except in those cases where the access installation has failed due to improper access construction and/or failure to follow permit requirements and specifications in which case the permittee shall be responsible for such repair. Any significant repairs such as culvert replacement, resurfacing, or changes in design or specifications, requires authorization from the Department.

TERMS AND CONDITIONS

1. This access is approved as constructed in accordance with Section 2.6(3) of the Access Code.
2. This permit replaces #300025 and all additional access permits that may be in existence for this intersection.
3. This permitted access is only for the use and purpose stated in the Application and Permit. This Permit is issued in accordance with the State Highway Access Code (2 CCR 601-1), and is based in part upon the information submitted by the Permittee. Any subsequent relocation, reconstruction, or modifications to the access or changes in the traffic volume or traffic nature using the access shall be requested for by means of a new application. Any changes causing non-compliance with the Access Code may render this permit void, requiring a new permit.
4. The traffic limitations listed on the face of this permit shall be adhered to. The traffic volumes are listed in Design Hourly Volume (DHV) trips or Average Daily Trips (ADT) where entering the site and returning counts as two trips.
5. The traffic volume for driveway is 205 DHV. This does include passenger car equivalents. The access is for Devereux Road and US 6K.
6. When signalization of the intersection becomes justified as per the Manual on Uniform Traffic Control Devices (MUTCD), the Permittee shall apply for a new access permit. Signal design, construction, installation, and operation shall be conducted in accordance with the State Highway Access Code (2 CCR 601-1) and the MUTCD. All cost associated with the installation of traffic signal for this access are the responsibility of the owner of the public road (Devereux Road). This includes but is not limited to the design, construction, utility relocation, testing of materials, and inspection.
7. The Permittee is responsible for obtaining any necessary additional Federal, State and/or City/County permits or clearances required for construction of the access. Approval of this access permit does not constitute verification of this action by the Permittee. Permittee is also responsible for obtaining all necessary utility permits in addition to this access permit.
8. The permittee, his or her heirs, successors-in-interest, assigns, and occupants of the property serviced by the access shall be responsible for meeting the terms and conditions of the permit, the repair and maintenance of the access beyond the edge of the roadway including any cattle guard and gate, and the removal or clearance of snow or ice upon the access even though deposited on the access in the course of Department snow removal operations. Within unincorporated areas the Department will keep access culverts clean as part of maintenance of the highway drainage system. However, the permittee is responsible for the repair and replacement of any access-related culverts within the right-of-way. Within incorporated areas, drainage responsibilities for municipalities are determined by statute and local ordinance. The Department will maintain the roadway including auxiliary lanes and shoulders, except in those cases where the access installation has failed due to improper access construction and/or failure to follow permit requirements and specifications in which case the permittee shall be responsible for such repair. Any significant repair such as culvert replacement, resurfacing, or changes in design or specifications, requires authorization from the Department.

Appendix H

Turnkey Traffic Memo

TurnKey Consulting, LLC

2478 Patterson Road, Suite 18
Grand Junction, CO 81505
970-985-4001

MEMORANDUM

TO: Steve Beckley, Glenwood Caverns Adventure Park
FROM: Mark Bunnell, PE, PTOE
DATE: 12 April 2013
RE: Iron Mountain PUD – Initial Traffic Evaluation

This memo documents the initial traffic evaluation conducted for the Iron Mountain PUD (Project). The purpose of the initial traffic evaluation was to determine the highway/intersection improvements needed for the full Project build-out. A traffic impact study will be prepared at a later date. The sections below discuss the initial traffic evaluation.

Year 2035 Background Traffic Volumes

- Used CDOT traffic data to develop year 2035 background thru traffic volumes on SH-6.
- Refer to the Attachments to see the CDOT traffic data for SH-6.

Direction	Year 2011 *[from July 13, 2011 traffic count conducted by CDOT]*		Year 2035 *[forecasted using the CDOT 20 year factor of 1.27 (1.20% AGR)]*	
	AM	PM	AM	PM
Eastbound	387 vph	442 vph	516 vph	589 vph
Westbound	677 vph	754 vph	902 vph	1,004 vph

AGR – annual growth rate (based on annual compound growth formula)

- Used the CDOT 20 year factor of 1.27 (1.20% AGR) to forecast year 2035 traffic volumes on Devereux Rd and Traver Trail.

Year 2035 Project Traffic

The Project traffic was estimated using the following methodology:

- With the addition of the proposed Project, the maximum attendance capacity for the Glenwood Caverns Adventure Park (GCAP) is 300,000 people per year.
- Used year 2012 attendance numbers to forecast the peak day attendance in year 2035.
- Refer to the Attachments for more Project traffic details and calculations.

Year	GCAP Attendance (# of people)			Growth Factor *(Year 2012 to 2035)*
	Daily Average *(whole year)*	Peak Day *(single highest day)*	Yearly *(total)*	
2012	1,209	1,770 [1]	165,000	1.82
2035	2,199	3,218	300,000	

1 – August 4 (Saturday) was the highest attendance day in year 2012

Year 2035 Total Traffic (Background plus Project)

- Year 2035 total traffic consists of background traffic plus Project traffic.
- Refer to the Attachments for details and calculations for Year 2035 Total Traffic Volumes.

Year 2035 Total Traffic (Background Plus Project) **SH-6 & Devereux/Traver Trail**												
Peak Hour	Eastbound			Westbound			Northbound			Southbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
AM	29	516	38	105	902	96	16	4	71	42	5	12
PM	23	589	19	58	1004	58	30	9	128	62	9	17

Turn Lane Warrants (per CDOT SHAC)

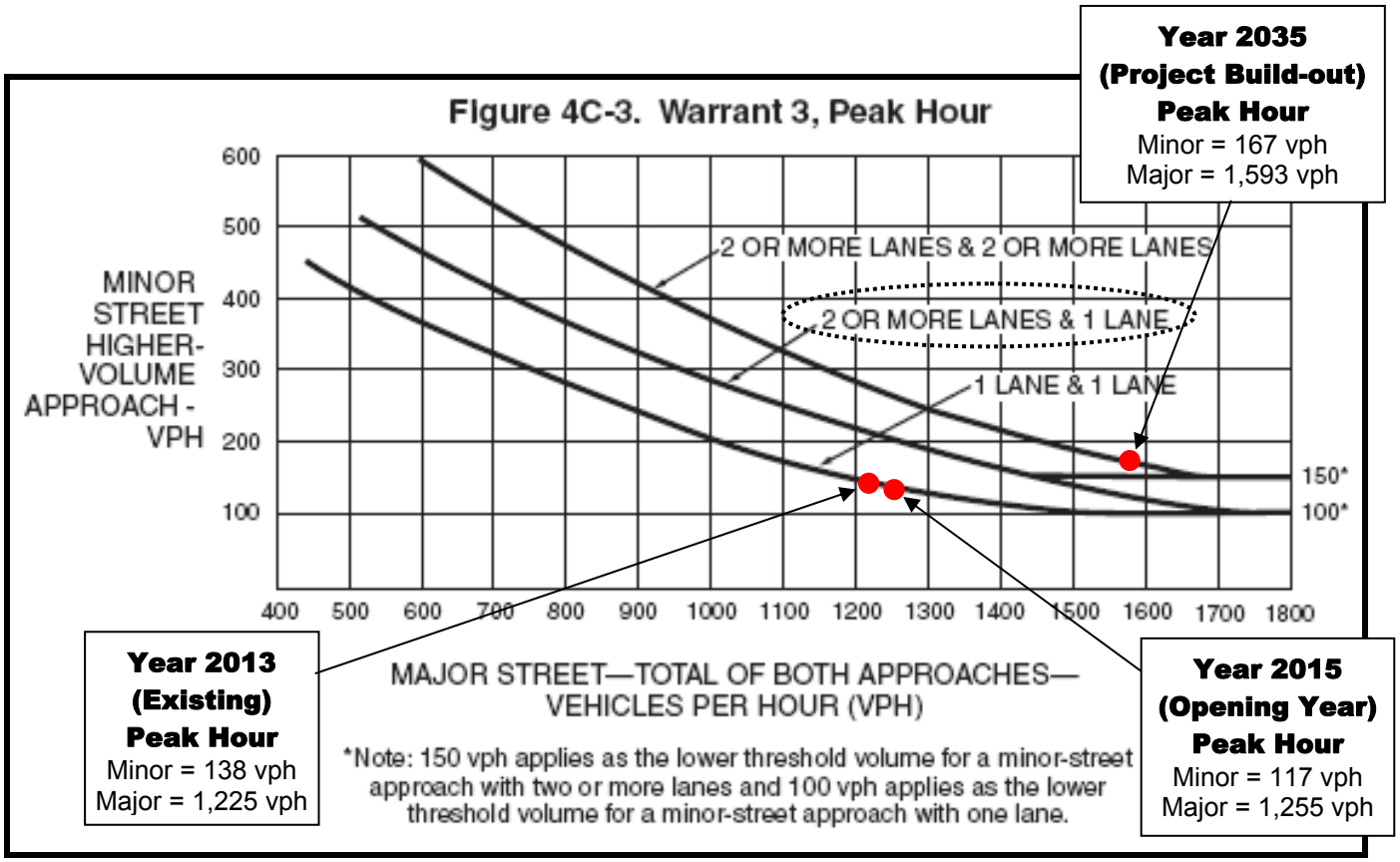
- Used the CDOT State Highway Access Code (SHAC) to determine which turn lanes are warranted based on traffic volumes.
- Speed limit on SH-6 changes just west of Traver Trail; used the following:
  - Eastbound direction – 40 mph
  - Westbound direction – 25 mph

CDOT Turn Lane Warrants *(NR-B Access Class, Speed Limit: EB = 40 mph, WB = 25 mph)*								
Turn Lane	Turn Lane Required IF DHV is greater than:	Year 2013 *(Existing)*		Year 2015 *(Opening Year)*		Year 2035 *(Project Build-out)*		Turn Lane Already Exists?
		DHV (vph)	Turn Lane Warranted	DHV (vph)	Turn Lane Warranted	DHV (vph)	Turn Lane Warranted	
Deceleration Lanes								
EB Left-turn	25	11	**NO**	19	**NO**	29	**YES**	**NO**
EB Right-turn	50	36	**NO**	26	**NO**	38	**NO**	**YES**
WB Left-turn	25	101	**YES**	74	**YES**	105	**YES**	**YES** [1]
WB Right-turn	50	27	**NO**	67	**YES**	96	**YES**	**YES** [1]
Acceleration Lanes								
NB to WB Left-turn	***Acceleration lanes are generally not required*** *for this access classification, unless it would provide a safety and/or operational benefit.*							**NO**
NB to EB Right-turn								**NO**
SB to EB Left-turn								**NO**
SB to WB Right-turn								**NO**

Note
DHV – Design Hour Volume (highest AM or PM peak hour volume)
1 – The existing turn lanes may need to be reconstructed to meet current CDOT standards

Signal Warrants (per MUTCD)

- Peak Hour signal warrant chart below from the Manual on Uniform Traffic Control Devices (MUTCD) shows the peak hour traffic volumes at the SH-6 & Devereux/Traver Trail intersection. Based on the three plotted points it is anticipated that a traffic signal would NOT be warranted (based on the Peak Hour signal warrant) until sometime around year 2025.



Year 2035 Traffic Analysis

- Used Synchro and SimTraffic traffic analysis software to analyze year 2035 traffic volumes for the intersection options listed in the table.
- Refer to the Attachments to see the Synchro and SimTraffic analysis output.

Year 2035 Traffic Analysis Results

(Year 2035 Total Traffic – Background Plus Project Traffic)

Option & Description	**LOS – Delay (sec)** AM Peak / PM Peak		
	Overall Intersection	Worst Movement *(All Mvmts)*	SH-6 Thru Mvmt *(worst case of EB or WB)*
<u># 1 – Existing Location</u> • Traver Trail & Devereux Rd remain in existing location • RT & LT deceleration lanes on SH-6 as required per CDOT requirements • Install traffic signals (2) at both intersections	B–14 / B–15	C–29 / C–34	B–19 / C–22
<u>#2 – Relocate Traver Trail</u> • Relocate Traver Trail to align with Devereux Rd • RT & LT deceleration lanes on SH-6 as required per CDOT requirements • Install traffic signal (1), which operates with Split Phasing on the side roads • No change to Devereux Rd or Traver Trail	C–26 / C–34	D–43 / D–47	C–31 / D–47
<u>#3 – Relocate & Widen Traver Trail and Restripe Devereux Rd</u> • Relocate Traver Trail to align with Devereux Rd • Widen Traver Trail for a left-turn lane and shared thru/right-turn lane (eliminates the signal Split Phasing) • Restripe Devereux Rd for a left-turn lane and shared thru/right-turn lane (eliminates the signal Split Phasing) • RT & LT deceleration lanes on SH-6 as required per CDOT requirements • Install traffic signal (1), which operates with standard phasing	B–15 / C–23	C–24 / C–31	B–17 / C–31

Conclusions & Recommendations

Turn Lanes on SH-6

- Per the CDOT SHAC, the turn lanes listed below are warranted on SH-6. Two of these lanes currently exist, but may need to be reconstructed to meet current CDOT standards.

    - EB left-turn deceleration lane [reaches warrant threshold sometime around yr 2025]
    - WB left-turn deceleration lane [exceeds warrant threshold now]
    - WB right-turn deceleration lane [exceeds warrant threshold opening year]

Signalization

- It is anticipated that a traffic signal would not be warranted and justified by CDOT until sometime around year 2025.

Intersection Alignment & Traffic Operations

- All three options shown in the previous table provide LOS D or better for all movements.
- Option 1 (Existing Location) operates better than the two relocation options (#2 & #3) because it operates as a three-phase signal instead of a standard four-phase signal.
- Offset intersections allow the northbound (Devereux Rd) and southbound (Traver Trail) traffic to utilize the same signal phase, rather than two phases (NB & SB left-turns followed by NB & SB thru movements) for a standard four-leg intersection.

Recommendations

- Discuss the three options with the City to determine the City's preference.
- Develop construction cost estimates for the three options.

Attachments

CDOT Traffic Data for SH-6

COLORADO DOT DEPARTMENT OF TRANSPORTATION **OTIS** Online Transportation Information System

Highway Data | Traffic Data | Data Catalog | Reports | Map View | Help

Traffic Data Explorer

Search by city / county

Search by highway segment

Select a route and begin and end ref points. You can select a route from the drop down list or click the pencil icon then click the map. You can enter the ref points into the text boxes or click the pencil icon then click the map.

Zoom to County (optional): select a county

CDOT Route Number: 006K | Find by Name

Begin Reference: 0

End Reference: 0.338

Count type: All

Search by traffic station

Stations | AADT | Future Traffic | ESAL

Found 1 stations. Click the magnifying glass icon in in front of a station to see count data below.

Export to Excel

	Route	Start	End	AADT	Year	Derivation	Single Unit	Combination Trucks	% Trucks	20 Year Factor	DHV	DVMT	DD
	006K	0	0.338	12,000	2011	Current Yr	620	140	6.4	1.27	9	3,900	62

ON SH 6, WEST ST W/O SH 82, GLENWOOD SPRINGS (Station Id: 100391)

Daily | Monthly Summaries

07/13/2011

View Entire Month

Export to Excel

Dir	0h	1h	2h	3h	4h	5h	6h	7h	8h	9h	10h	11h	12h	13h	14h	15h	16h	17h	18h	19h	20h	21h	22h	23h
P	28	7	7	14	17	80	231	279	373	298	285	329	387	325	320	318	372	442	365	309	312	422	196	52
S	42	14	13	15	12	81	219	369	490	456	482	588	677	620	581	597	628	754	751	618	476	467	254	84
C	70	21	20	29	29	161	450	648	863	754	767	917	1,064	945	901	915	1,000	1,196	1,116	927	788	889	450	136

P = Primary direction S = Secondary direction C = Combined traffic counts

- System Classification

Export to Excel

Route	Begin Ref	End Ref	Length	Access Control	Admin Class	Functional Class	NHS Designation	Special System
006K	0	0.338	0.325	NR-B: Non Rural Arterial	CDOT Highway	5 Major Collector	0 Not on NHS	NON-STRAHNET

Year 2035 Project Traffic – Calculations & Assumptions

- Used the traffic data collected on August 4, 2012 to forecast year 2035 traffic volumes. The August 4th data was collected or estimated hourly and included the items listed below.

    - Tram ridership
    - Available and occupied parking spaces
    - People arriving and leaving via vehicles or walking
    - Vehicles to the GCAP and hotel

Saturday, August 4, 2012 Trip Data *(Year 2012 Peak Day)*							
Trips		AM Peak Hour *(11 am to 12 pm)*			PM Peak Hour *(5 pm to 6 pm)*		
		GCAP	Hotel	Total	GCAP	Hotel	Total
In	Vehicles	95	0	95	39	12	51
	Pedestrians	86		86	35		35
Out	Vehicles	9	24	33	66	0	66
	Pedestrians	6		6	45		45

- Forecasted year 2035 trips In & Out using the 1.82 growth factor.
- Assumed that patrons arriving by vehicle would split 50/50 between:
    - Existing parking lot (275 parking spaces) & Tram at the Base, and
    - Proposed parking lot (260 parking spaces) & Funicular up at the Quarry.

Year 2035 Peak Day – Vehicles IN & OUT *(factor year 2012 peak day to year 2035 using 1.82 growth factor)*							
Vehicles	Total		Base / Quarry Split	Tram – Base		Funicular – Quarry	
	AM	PM		AM	PM	AM	PM
IN	173	93	50% / 50%	87	47	86	46
OUT	60	121		30	61	30	60

- Trip distribution percentages for year 2035 Project trips based on traffic counts collected during Spring break on March 26, 2013.

Trip Distribution Percentages *(Based on March 26, 2013 traffic counts)*						
Period	Inbound			Outbound		
	SH-6		Devereux	SH-6		Devereux
	EB	WB	NB	EB	WB	SB
AM	25%	70%	5%	70%	15%	15%
PM	20%	60%	20%	70%	15%	15%

Iron Mtn PUD

Traffic Volumes - Existing (2013), Opening Year (2015), and Project Build-out (2035)

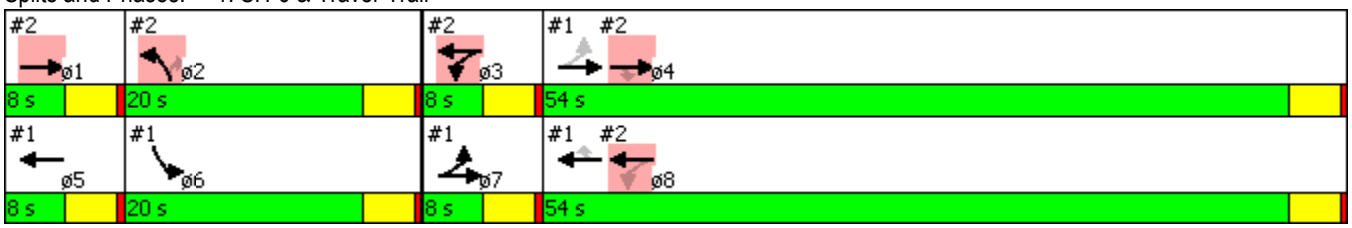
Condition			SH-6 & Devereux/Transfer Trail												Devereux & Two Rivers Plaza					
			Eastbound			Westbound			Northbound			Southbound			Eastbound		Northbound		Southbound	
			LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	RT	LT	Thru	Thru	RT
AM	Dist %	IN			25.0%	70.0%											5.0%			95.0%
		OUT							15.0%		70.0%				85.0%	15.0%				
	Project Trips				24	67			5		23				28	5	5			91
	Year 2013	Background	5	396	12	34	693	27	8		39	16		5				47	46	
		Total	5	396	36	101	693	27	13		62	16		5	28	5	5	47	46	91
PM	Dist %	IN			20.0%	60.0%											20.0%			80.0%
		OUT							15.0%		70.0%				85.0%	15.0%				
	Trips				10	31			10		46				56	10	10			41
	Year 2013	Background	11	453	7	24	772	23	16		66	15		6				82	31	
		Total	11	453	17	55	772	23	26		112	15		6	56	10	10	82	31	41
AM	Dist %	IN	12.5%		12.5%	35.0%		35.0%		2.5%							2.5%	2.5%		47.5%
		OUT							7.5%		35.0%	35.0%	7.5%	7.5%	42.5%	7.5%			7.5%	
	Project Trips		14		14	39		39	3	3	14	14	3	3	17	3	3	3	3	52
	Year 2015	Background	5	406	12	35	710	28	9		39	16		5				48	47	
		Total	19	406	26	74	710	67	12		53	30		8	17	3	3	51	50	52
PM	Dist %	IN	10.0%		10.0%	30.0%		30.0%		10.0%							10.0%	10.0%		40.0%
		OUT							7.5%		35.0%	35.0%	7.5%	7.5%	42.5%	7.5%			7.5%	
	Trips		6		6	18		18	6	6	27	27	6	6	33	6	6	6	6	24
	Year 2015	Background	11	464	8	24	791	24	16		68	15		6				84	32	
		Total	17	464	14	42	791	42	22		95	42		12	33	6	6	90	38	24
AM	Dist %	IN	12.5%		12.5%	35.0%		35.0%		2.5%							2.5%	2.5%		47.5%
		OUT							7.5%		35.0%	35.0%	7.5%	7.5%	42.5%	7.5%			7.5%	
	Project Trips		22		22	61		61	5	4	21	21	5	5	26	5	4	4	5	82
	Year 2035	Background	7	516	16	44	902	35	11		50	21		7				61	60	
		Total	29	516	38	105	902	96	16	4	71	42	5	12	26	5	4	65	65	82
PM	Dist %	IN	10.0%		10.0%	30.0%		30.0%		10.0%							10.0%	10.0%		40.0%
		OUT							7.5%		35.0%	35.0%	7.5%	7.5%	42.5%	7.5%			7.5%	
	Trips		9		9	28		28	9	9	42	42	9	9	51	9	9	9	9	37
	Year 2035	Background	14	589	10	30	1,004	30	21		86	20		8				107	40	
		Total	23	589	19	58	1004	58	30	9	128	62	9	17	51	9	9	116	49	37

Option #1
Existing Location

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø1	ø2	ø3	ø4	ø5
Lane Configurations											
Volume (vph)	29	554	918	100	47	12					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Storage Length (ft)	150			100	0	0					
Storage Lanes	1			1	1	0					
Taper Length (ft)	25				25						
Right Turn on Red				Yes		Yes					
Link Speed (mph)		25	25		25						
Link Distance (ft)		1000	220		1000						
Travel Time (s)		27.3	6.0		27.3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Shared Lane Traffic (%)											
Turn Type	custom	NA	NA	custom	NA						
Protected Phases	7	4 7	8 5		6		1	2	3	4	5
Permitted Phases	4			8							
Detector Phase	7	4 7	8 5	8	6						
Switch Phase											
Minimum Initial (s)	4.0			4.0	4.0		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0			20.0	20.0		8.0	20.0	8.0	20.0	8.0
Total Split (s)	8.0			54.0	20.0		8.0	20.0	8.0	54.0	8.0
Total Split (%)	8.9%			60.0%	22.2%		9%	22%	9%	60%	9%
Yellow Time (s)	3.5			3.5	3.5		3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5			0.5	0.5		0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0			0.0	0.0						
Total Lost Time (s)	4.0			4.0	4.0						
Lead/Lag	Lead			Lag	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None			None	Max		None	Max	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

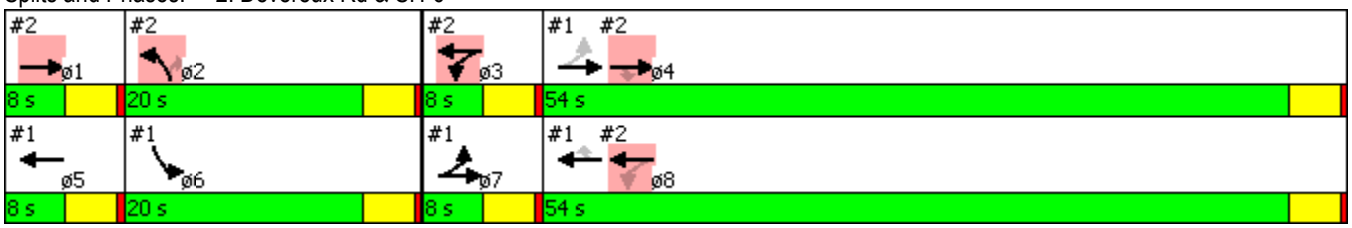
Splits and Phases: 1: SH-6 & Traver Trail

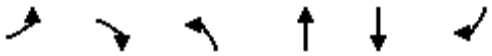


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø1	ø5	ø6	ø7	ø8
Lane Configurations											
Volume (vph)	558	43	105	998	20	71					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Storage Length (ft)		0	165		0	25					
Storage Lanes		1	1		1	1					
Taper Length (ft)			85		75						
Right Turn on Red		Yes				Yes					
Link Speed (mph)	25			25	25						
Link Distance (ft)	220			1000	375						
Travel Time (s)	6.0			27.3	10.2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Shared Lane Traffic (%)											
Turn Type	NA	custom	custom	NA	NA	Perm					
Protected Phases	4 1		3	8 3	2		1	5	6	7	8
Permitted Phases		4	8			2					
Detector Phase	4 1	4	3	8 3	2	2					
Switch Phase											
Minimum Initial (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		20.0	8.0		20.0	20.0	8.0	8.0	20.0	8.0	20.0
Total Split (s)		54.0	8.0		20.0	20.0	8.0	8.0	20.0	8.0	54.0
Total Split (%)		60.0%	8.9%		22.2%	22.2%	9%	9%	22%	9%	60%
Yellow Time (s)		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0					
Total Lost Time (s)		4.0	4.0		4.0	4.0					
Lead/Lag		Lag	Lead		Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None		Max	Max	None	None	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Devereux Rd & SH-6





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	26	5	4	65	65	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

1: Sh-6 & Traver Trail Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	28.7	9.3	3.5	1.9	27.5	19.3	6.6

2: Devereux Rd & Sh-6 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.2	1.7	19.4	18.6	26.7	0.6	2.2	13.6

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.4	2.6	2.7	0.2	1.2	1.5	1.4

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	22.9

Intersection: 1: Sh-6 & Traver Trail

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	R	LR
Maximum Queue (ft)	132	323	112	161	90	86
Average Queue (ft)	27	127	14	49	12	31
95th Queue (ft)	79	240	62	129	50	68
Link Distance (ft)		950		152		924
Upstream Blk Time (%)				0	0	
Queuing Penalty (veh)				3	0	
Storage Bay Dist (ft)	150		100		100	
Storage Blk Time (%)		11		2	0	
Queuing Penalty (veh)		32		2	0	

Intersection: 2: Devereux Rd & Sh-6

Movement	EB	WB	WB	NB	NB
Directions Served	T	L	T	L	R
Maximum Queue (ft)	166	250	657	55	64
Average Queue (ft)	66	92	319	16	9
95th Queue (ft)	147	241	561	45	40
Link Distance (ft)	152		950	307	
Upstream Blk Time (%)	1				
Queuing Penalty (veh)	2				
Storage Bay Dist (ft)		165			25
Storage Blk Time (%)			20	13	1
Queuing Penalty (veh)			21	9	0

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

Movement	EB	NB	SB
Directions Served	LR	LT	R
Maximum Queue (ft)	46	26	4
Average Queue (ft)	16	2	0
95th Queue (ft)	37	14	3
Link Distance (ft)	430	950	307
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

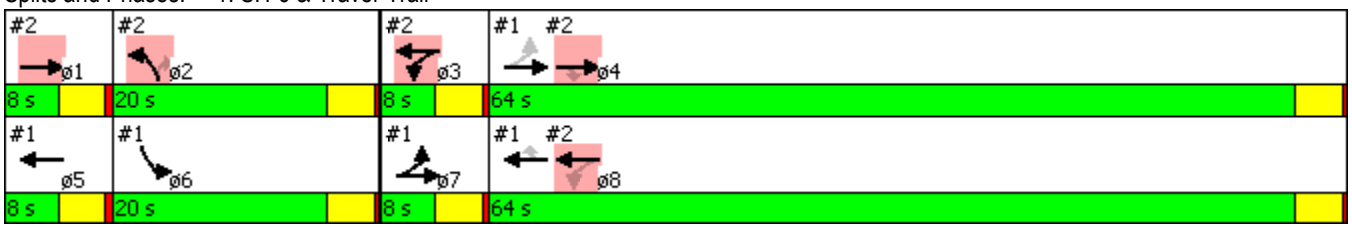
Network Summary

Network wide Queuing Penalty: 69

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	ø1	ø2	ø3	ø4	ø5
Lane Configurations											
Volume (vph)	23	608	1034	67	71	17					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Storage Length (ft)	150			100	0	0					
Storage Lanes	1			1	1	0					
Taper Length (ft)	25				25						
Right Turn on Red				Yes		Yes					
Link Speed (mph)		25	25		25						
Link Distance (ft)		1000	220		1000						
Travel Time (s)		27.3	6.0		27.3						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Shared Lane Traffic (%)											
Turn Type	custom	NA	NA	custom	NA						
Protected Phases	7	4 7	8 5		6		1	2	3	4	5
Permitted Phases	4			8							
Detector Phase	7	4 7	8 5	8	6						
Switch Phase											
Minimum Initial (s)	4.0			4.0	4.0		4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0			20.0	20.0		8.0	20.0	8.0	20.0	8.0
Total Split (s)	8.0			64.0	20.0		8.0	20.0	8.0	64.0	8.0
Total Split (%)	8.0%			64.0%	20.0%		8%	20%	8%	64%	8%
Yellow Time (s)	3.5			3.5	3.5		3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5			0.5	0.5		0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0			0.0	0.0						
Total Lost Time (s)	4.0			4.0	4.0						
Lead/Lag	Lead			Lag	Lag		Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None			None	Max		None	Max	None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

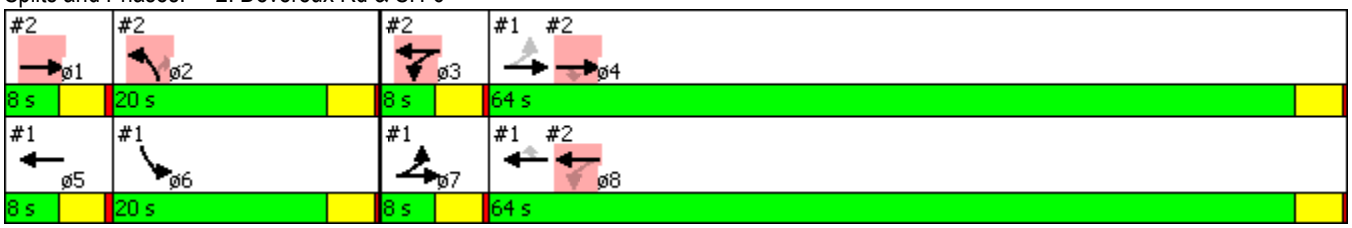
Splits and Phases: 1: SH-6 & Traver Trail

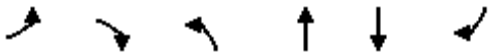


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	ø1	ø5	ø6	ø7	ø8
Lane Configurations											
Volume (vph)	651	28	58	1062	39	128					
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900					
Storage Length (ft)		0	165		0	25					
Storage Lanes		1	1		1	1					
Taper Length (ft)			85		75						
Right Turn on Red		Yes				Yes					
Link Speed (mph)	25			25	25						
Link Distance (ft)	220			1000	375						
Travel Time (s)	6.0			27.3	10.2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92					
Shared Lane Traffic (%)											
Turn Type	NA	custom	custom	NA	NA	Perm					
Protected Phases	4 1		3	8 3	2		1	5	6	7	8
Permitted Phases		4	8			2					
Detector Phase	4 1	4	3	8 3	2	2					
Switch Phase											
Minimum Initial (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)		20.0	8.0		20.0	20.0	8.0	8.0	20.0	8.0	20.0
Total Split (s)		64.0	8.0		20.0	20.0	8.0	8.0	20.0	8.0	64.0
Total Split (%)		64.0%	8.0%		20.0%	20.0%	8%	8%	20%	8%	64%
Yellow Time (s)		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)		0.0	0.0		0.0	0.0					
Total Lost Time (s)		4.0	4.0		4.0	4.0					
Lead/Lag		Lag	Lead		Lag	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode		None	None		Max	Max	None	None	Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Devereux Rd & SH-6





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	9	6	116	49	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

1: SH-6 & Traver Trail Performance by movement

Movement	EBL	EBT	WBT	WBR	SBL	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	31.0	9.6	3.9	1.8	34.3	27.9	7.5

2: Devereux Rd & SH-6 Performance by movement

Movement	EBT	EBR	WBL	WBT	NBL	NBT	NBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	5.8	1.6	23.5	21.7	32.8	0.2	4.4	15.3

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.7	2.4	2.1	0.3	1.3	1.5	1.6

Total Network Performance

Denied Del/Veh (s)	1.1
Total Del/Veh (s)	26.1

Intersection: 1: SH-6 & Traver Trail

Movement	EB	EB	EB	WB	WB	SB
Directions Served	L	T	T	T	R	LR
Maximum Queue (ft)	95	332	127	166	97	124
Average Queue (ft)	21	140	12	67	10	49
95th Queue (ft)	68	254	65	156	51	98
Link Distance (ft)		950		152		924
Upstream Blk Time (%)				1	0	
Queuing Penalty (veh)				9	0	
Storage Bay Dist (ft)	150		100		100	
Storage Blk Time (%)		12		4		
Queuing Penalty (veh)		41		2		

Intersection: 2: Devereux Rd & SH-6

Movement	EB	WB	WB	B203	NB	NB
Directions Served	T	L	T	T	L	R
Maximum Queue (ft)	167	249	794	30	103	98
Average Queue (ft)	96	57	386	2	30	36
95th Queue (ft)	183	185	701	26	76	87
Link Distance (ft)	152		950	72	307	
Upstream Blk Time (%)	2		1	1		
Queuing Penalty (veh)	5		0	0		
Storage Bay Dist (ft)		165				25
Storage Blk Time (%)			22		22	4
Queuing Penalty (veh)			13		28	2

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

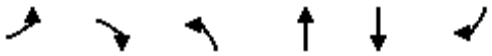
Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	57	12
Average Queue (ft)	22	1
95th Queue (ft)	43	10
Link Distance (ft)	430	950
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Option #2
Relocate Traver Trail

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	516	38	105	902	96	16	4	71	42	5	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		300	165		150	0		25	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	25			85			75			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1220			1000			375			1000	
Travel Time (s)		33.3			27.3			10.2			27.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	8.0	70.0	70.0	10.0	72.0	72.0	20.0	20.0	20.0	20.0	20.0	
Total Split (%)	6.7%	58.3%	58.3%	8.3%	60.0%	60.0%	16.7%	16.7%	16.7%	16.7%	16.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 110.8	
Natural Cycle: 100	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Devereux Rd/Traver Trail & SH-6



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	26	5	4	65	65	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	30.6	17.9	3.1	31.7	31.0	22.7	42.7	26.1	2.9	38.7	31.4	29.7

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	25.6

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	2.6	2.5	0.2	1.5	1.8	1.6

Total Network Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	29.8

Intersection: 2: Devereux Rd/Traver Trail & SH-6

Movement	EB	EB	EB	WB	WB	WB	B203	NB	NB	SB
Directions Served	L	T	R	L	T	R	T	LT	R	LTR
Maximum Queue (ft)	162	395	96	250	927	175	35	72	66	96
Average Queue (ft)	31	192	4	107	505	72	3	19	12	37
95th Queue (ft)	101	316	64	268	862	194	31	54	45	79
Link Distance (ft)		1164			944		72	307		924
Upstream Blk Time (%)					1		1			
Queuing Penalty (veh)					0		0			
Storage Bay Dist (ft)	150		300	165		150			25	
Storage Blk Time (%)		13	0	0	31	0		18	1	
Queuing Penalty (veh)		9	0	0	61	0		13	0	

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	40	15
Average Queue (ft)	15	1
95th Queue (ft)	35	8
Link Distance (ft)	431	950
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

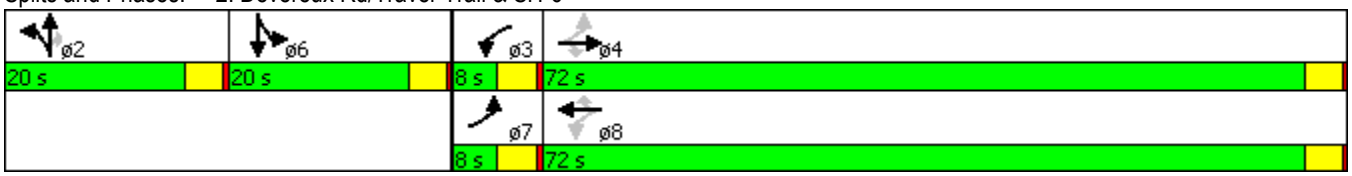
Network wide Queuing Penalty: 84

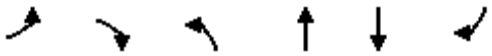
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	589	19	58	1004	58	30	9	128	62	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		300	165		150	0		25	0		0
Storage Lanes	1		1	1		1	0		1	0		0
Taper Length (ft)	25			85			75			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1220			1000			375			1000	
Travel Time (s)		33.3			27.3			10.2			27.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Split	NA	Perm	Split	NA	
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	
Total Split (s)	8.0	72.0	72.0	8.0	72.0	72.0	20.0	20.0	20.0	20.0	20.0	
Total Split (%)	6.7%	60.0%	60.0%	6.7%	60.0%	60.0%	16.7%	16.7%	16.7%	16.7%	16.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	None	None	None	None	None	Max	Max	Max	Max	Max	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 116.8
Natural Cycle: 120
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Devereux Rd/Traver Trail & SH-6





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	9	9	116	49	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	36.3	16.8	3.0	46.5	46.5	37.8	40.7	38.6	8.1	40.1	36.2	28.6

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	33.9

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.9	2.7	1.9	0.4	1.6	1.5	1.7

Total Network Performance

Denied Del/Veh (s)	7.6
Total Del/Veh (s)	39.2

Intersection: 2: Devereux Rd/Traver Trail & SH-6

Movement	EB	EB	EB	WB	WB	WB	B203	NB	NB	SB
Directions Served	L	T	R	L	T	R	T	LT	R	LTR
Maximum Queue (ft)	164	379	64	250	978	175	65	136	97	133
Average Queue (ft)	31	212	2	73	692	52	29	39	40	53
95th Queue (ft)	105	343	45	222	1146	169	102	104	94	105
Link Distance (ft)		1164			944		72	307		924
Upstream Blk Time (%)					14		13	0		
Queuing Penalty (veh)					0		0	0		
Storage Bay Dist (ft)	150		300	165		150			25	
Storage Blk Time (%)		16	0		34	0		32	8	
Queuing Penalty (veh)		7	0		39	0		41	3	

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	20
Average Queue (ft)	22	1
95th Queue (ft)	42	10
Link Distance (ft)	431	950
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

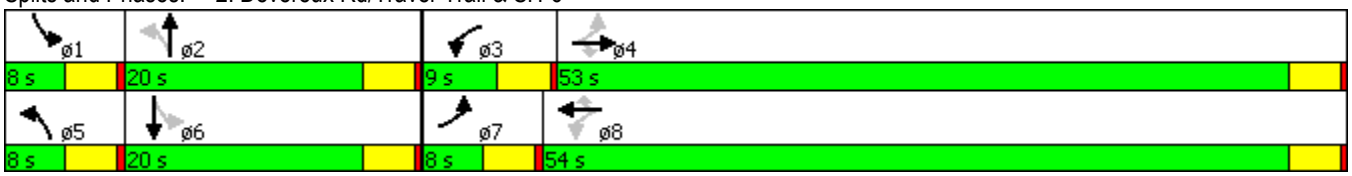
Network wide Queuing Penalty: 91

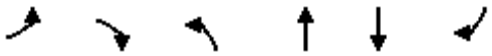
Option #3
Relocate & Widen Traver Trail and Restripe Devereux Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	516	38	105	902	96	16	4	71	42	5	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		300	165		150	100		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			85			75			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1220			1000			375			1000	
Travel Time (s)		33.3			27.3			10.2			27.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	8.0	53.0	53.0	9.0	54.0	54.0	8.0	20.0		8.0	20.0	
Total Split (%)	8.9%	58.9%	58.9%	10.0%	60.0%	60.0%	8.9%	22.2%		8.9%	22.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 78.8	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Devereux Rd/Traver Trail & SH-6





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	26	5	4	65	65	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	23.4	13.1	2.6	18.0	17.3	11.2	20.1	17.0	7.9	23.8	19.7	13.1

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	15.4

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	4.2	2.6	2.6	0.2	2.0	2.4	1.9

Total Network Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	19.4

Intersection: 2: Devereux Rd/Traver Trail & SH-6

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	108	327	105	250	610	175	39	74	59	44
Average Queue (ft)	25	151	4	75	297	66	12	33	23	10
95th Queue (ft)	74	265	56	204	520	183	37	62	53	33
Link Distance (ft)		1158			938			307		925
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150		300	165		150	100		50	
Storage Blk Time (%)		7	0		18	0		0	5	0
Queuing Penalty (veh)		5	0		37	0		0	1	0

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

Movement	EB	NB	SB
Directions Served	LR	LT	R
Maximum Queue (ft)	37	18	2
Average Queue (ft)	15	1	0
95th Queue (ft)	34	9	2
Link Distance (ft)	425	950	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

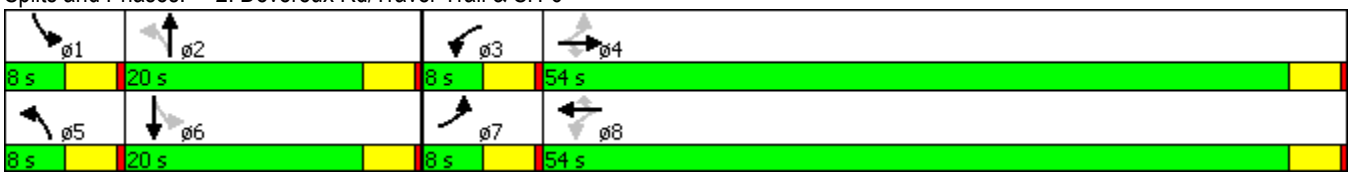
Network Summary

Network wide Queuing Penalty: 43

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	589	19	58	1004	58	30	9	128	62	9	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		300	165		150	100		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			85			75			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1220			1000			375			1000	
Travel Time (s)		33.3			27.3			10.2			27.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0		8.0	20.0	
Total Split (s)	8.0	54.0	54.0	8.0	54.0	54.0	8.0	20.0		8.0	20.0	
Total Split (%)	8.9%	60.0%	60.0%	8.9%	60.0%	60.0%	8.9%	22.2%		8.9%	22.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	Max		None	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 83.6	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	

Splits and Phases: 2: Devereux Rd/Traver Trail & SH-6



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	9	9	116	49	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	0			100
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			25	25	
Link Distance (ft)	500			1000	375	
Travel Time (s)	13.6			27.3	10.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	25.1	13.0	2.6	29.8	30.5	22.2	22.7	24.3	10.9	24.9	20.7	14.9

2: Devereux Rd/Traver Trail & SH-6 Performance by movement

Movement	All
Denied Del/Veh (s)	0.0
Total Del/Veh (s)	23.0

3: Devereux Rd & Two Rivers Plaza Rd Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	4.9	2.6	2.0	0.3	1.9	1.8	1.8

Total Network Performance

Denied Del/Veh (s)	1.7
Total Del/Veh (s)	27.3

Intersection: 2: Devereux Rd/Traver Trail & SH-6

Movement	EB	EB	EB	WB	WB	WB	B203	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	T	L	TR	L	TR
Maximum Queue (ft)	159	360	32	250	876	175	37	88	126	68	82
Average Queue (ft)	24	173	1	72	473	49	10	23	55	31	16
95th Queue (ft)	81	290	32	219	912	160	59	62	100	61	51
Link Distance (ft)		1158			938		72		307		925
Upstream Blk Time (%)					4		4				
Queuing Penalty (veh)					0		0				
Storage Bay Dist (ft)	150		300	165		150		100		50	
Storage Blk Time (%)		9			27	0		0	1	8	0
Queuing Penalty (veh)		4			31	0		0	0	2	0

Intersection: 3: Devereux Rd & Two Rivers Plaza Rd

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	20
Average Queue (ft)	22	1
95th Queue (ft)	42	10
Link Distance (ft)	425	950
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 38

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

December 22, 2017

Regulatory Division (SPK-2017-00468)

Recreation Engineering & Planning
Attn: Mr. Gary Lacy
485 Arapahoe Avenue
Boulder, Colorado 80302

Dear Mr. Lacy:

We are responding to your request, on behalf of Iron Mountain Hot Springs, LLC, for a Department of the Army permit for the Iron Mountain Hot Springs Riverbank Improvements project. This project involves activities, including discharges of fill material, in waters of the United States to stabilize 1,000 linear-feet of streambank. The project site is located along the north bank (river right) of the Colorado River, within Government Lot 7 of Section 9 and Government Lot 8 of Section 4, Township 6 South, Range 89 West, 6th Principal Meridian, between Latitude 39.552808°, Longitude -107.336577° and Latitude 39.556465°, Longitude -107.337230°, in the City of Glenwood Springs, Garfield County, Colorado.

Based on the information you provided to this office, the proposed activity, including discharges of dredge and fill material in waters of the United States, involves the removal of 4,760 cubic-yards of river cobble and installation of 1,850 cubic-yards of triangular current deflectors and vegetated stone terracing to stabilize approximately 1,000 linear-feet of streambank, in accordance with the Permit Set drawings, dated May 25, 2017. These activities will result in permanent impacts to approximately 0.1 acre of perennial non-wetland waters.

We have determined activities associated with this project are authorized by Regional General Permit (RGP) 37 - Stream Stabilization Projects in Colorado. Your work must comply with the general terms and conditions listed on the enclosed RGP information sheets. Additionally, it is your responsibility to ensure that all contract personnel are familiar with permit requirements. Please note that you are required to sign the enclosed Compliance Certification and return it to this office within 30 days after completion of the remaining authorized work.

This verification is valid until October 22, 2022. Failure to comply with the General Conditions of this Regional General Permit may result in the suspension or revocation of your authorization.

Please refer to identification number SPK-2017-00468 in any correspondence concerning this project. If you have any questions, please contact me at the Colorado West Regulatory Branch, 400 Rood Avenue, Room 224, Grand Junction, Colorado 81501, by email at *w.travis.morse@usace.army.mil*, or telephone at (970) 243-1199 ext. 1014.

For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx. We would appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey from the link on our website, listed above.

Sincerely,

Travis Morse
Senior Project Manager
Colorado West Section
Regulatory Division

Enclosures
1. RGP 37
2. Compliance Certification

cc:
Mr. Gary Lacy, Recreation Engineering & Planning, gary@boaterparks.com
Mr. Steve Beckley, Iron Mountain Hot Springs, LLC, sbeckley@glenwoodcaverns.com
Mr. Tom Barnes, City of Glenwood Springs, tom.barnes@cogs.us
Ms. Sheryl Bower, Garfield County Building & Planning Department, sbower@garfield-county.com
Ms. Kendall Backich, Colorado Parks and Wildlife, kendall.backich@state.co.us

Regional General Permit 37

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG®

STREAM STABILIZATION PROJECTS IN COLORADO

EFFECTIVE DATE: October 20, 2017 EXPIRATION DATE: October 20, 2022

In accordance with Section 404 of the Clean Water Act (33U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), the U.S. Army Corps of Engineers (Corps) hereby authorizes certain limited discharges of dredged and fill material associated with stream stabilization in the State of Colorado. The purpose of this Regional General Permit (RGP) is to authorize stream bed and bank stabilization activities.

LOCATION: This RGP is applicable to waters of the United States within the State of Colorado, including Tribal Lands.

SCOPE OF WORK: This RGP authorizes stream stabilization activities necessary for erosion control or prevention, such as vegetative stabilization, bioengineering, sills, rip rap, revetment, barbs, jetties, weirs, or combinations of bank stabilization techniques, provided the activity meets all of the following criteria:

1. No material is placed in excess of the minimum needed for erosion protection;

2. The activity is no more than 1,000 feet in length along the bank;

3. The activity will not exceed an average of two cubic yard per running foot, as measured along the length of the treated bank, below the plane of the ordinary high water mark (OHWM), unless the district engineer waives this criterion by making a written determination concluding that the discharge will result in no more than minimal adverse environmental effects;

4. The average stream width measured at the OHWM is no less than 20 feet; and

5. The activity will not exceed 0.5 acre of permanent impacts to wetlands.

NOTIFICATION AND APPROVAL PROCEDURES:

Written notification requesting approval and concurrence with the requirements of the RGP must be sent to the Corps office that services the area of the project location. For assistance in determining the appropriate regulatory office, please contact one of the Regulatory offices below or visit the Colorado Regulatory website at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Colorado/GeographicResponsibility.aspx.

Denver Regulatory Office
(Omaha District)
9307 South Wadsworth Blvd.

Grand Junction Regulatory Office
(Sacramento District)
400 Rood Ave., Room 224

Littleton, CO 80128-6901
Phone: (303) 979-4120

Grand Junction, CO 81501-2563
Phone: (970) 243-1199

Southern Colorado Regulatory Office
(Albuquerque District)
200 S. Santa Fe Ave., Suite 301
Pueblo, CO 81003
Phone: (719) 543-9459

Durango Regulatory Office
(Albuquerque & Sacramento Districts)
1970 E 3rd Ave., Suite 109
Durango, CO 81301
Phone: (970) 259-1764

This RGP does not authorize activities that would adversely affect important spawning areas, including Gold Medal Waters, or that would be conducted in these waters during designated spawning seasons. In order to determine if projects would result in adverse effects to important spawning areas, the Corps will consult with Colorado Parks and Wildlife (CPW) for all projects proposed in Gold Medal Waters and other fisheries of concern identified by CPW on a case-by-case basis. Pre-application consultation with CPW, preferably on-site, is highly recommended. Providing documentation of pre-application consultation with CPW and their response(s) will satisfy the coordination requirements of this permit resulting in quicker processing times. For assistance in determining the appropriate CPW office and point-of-contact, please visit the following state website to determine the appropriate office for coordination: http://wildlife.state.co.us, or call one of the following:

Northeast Region Manager
6060 Broadway
Denver, CO 80216
(303) 291-7227

Northwest Region Manager
711 Independent Ave.
Grand Junction, CO 81505
(970) 255-6100

Southeast Region Manager
4255 Sinton Rd.
Colorado Springs, CO 80907
(719) 227-5200

Southwest Region Manager
415 Turner Dr.
Durango, CO 81303
(970) 375-6702

The applicant must first notify the Corps in writing according to the Notification procedures of the RGP as described below. Work cannot proceed until the Corps has provided written approval to the applicant. The applicant must provide the following information:

1. Name, address and telephone number of the applicant responsible for the work, the owner of the affected lands (if different than the applicant), and the contractor(s) that will be performing the work, if applicable. The applicant must provide written permission allowing the Corps, CPW, and/or tribal representative to enter upon and perform work on property not belonging to the applicant. The applicant should be the entity retaining long-term maintenance responsibility for constructed features. The notification must include a letter, signed and dated by the applicant, stating that they certify that the information in the notification is complete and accurate and that they will abide by the terms and conditions of this permit;

2. A description of the project location including section, township, range, and coordinates (latitude/longitude, UTM, etc.) at both ends of the work area;

3. A written well-defined purpose and need for the work, including a description/assessment of the existing stream conditions (i.e., baseline information) and an explanation for why the project is needed, including a description of how the project will result in bank stabilization;

4. Quantity of waters of the U.S to be impacted by the proposed activity in terms of wetlands and other aquatic resources. Units of measure should be provided in acres or square feet, and also linear feet, if appropriate;

5. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands, the prospective permittee must submit a proposal describing how the wetland loss will be mitigated, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan;

6. Pre-construction photos depicting the physical setting (to be compared to post-construction site conditions from the same photo points). Photos should contain figure labels with time, date, bearing, and a general description of the site;

7. A set of drawings per established standards and guidelines for maps and drawings (refer to the map standards located at http://www.spd.usace.army.mil/Portals/13/docs/regulatory/standards/MapStand020816.pdf). Additionally, the drawings must include the following elements:

    a. Location map, including name of the waterway, nearest town, county, and coordinates (NAD83) of each structure and at both ends of the work area;

    b. Plan view of all work, including staging area(s) and access point(s), clearly identifying types and locations of structures/impacts, along with dimensions, a scale bar, a north arrow, and approximate extent of aquatic resources within the project area. To aid in visual understanding, this plan can be overlaid on a recent aerial image of the project site;

    c. Cross-sectional and profile views to scale of the existing stream channel and the proposed structures, including dimensions (length, width and height of the structures or work), and clear delineation of the limits of the OHWM; and

    d. A delineation of the OHWM and all special aquatic sites at the project site, including wetlands and riffle and pool complexes. The aquatic resource delineation report must be submitted in accordance with the wetland delineations protocols for the individual Corps District that covers the project area;

8. A complete description of the work, including the composition, source, and volume in cubic yards of all material to be placed or redistributed in waters of the U.S. The description should contain a proposed procedure to be taken to reduce sedimentation and the basis used in determining the volume of fill to be placed or redistributed in waters of the U.S.:

    a. For projects involving grade control, the project description must also include a detailed explanation and criteria for the following design features:

        (1) Number and spacing of structures;

(2) Any changes in base flow elevations; and

(3) For projects located in perennial streams, a justification for any structure heights that exceed 18 inches and/or do not include a fish passage element with a maximum drop of 12 inches;

b. For projects that involve deflectors, such as jetties and weirs, the project description must also include a detailed explanation and criteria for the following design features:

(1) Height: Deflectors are generally designed to be exposed during low flows and submerged during high flows. Depending on the site and the project goals, deflectors may be constructed with the height of the structure at the stream bank equal to the bankfull elevation sloping down to the low flow elevation at the toe or end of the structure;

(2) Length: The maximum extension of any deflector into a waterway generally should not exceed ⅓ of the channel width as measured at bankfull elevation (approximately 1-2 year event);

(3) Angle: Deflectors are designed to redirect flows away from the stream bank and back toward the center of the channel. In order to best accomplish this goal, the angle of deflectors is generally perpendicular to the desired direction of flow downstream of the deflector. Incorrect deflector angles can result in scouring behind the structure, particularly during low flow conditions, or erosion of the opposite stream bank. In most cases, the angle of the deflector should be between 0 and 30 degrees upstream from perpendicular to the stream bank; and

(4) Spacing: In many cases, a series of deflectors are designed to work together as a single unit. In such applications, deflectors should be spaced appropriately along the bank in order to prevent scouring or scalloping of the bank between the structures;

c. For projects involving work on multiple reaches or sections of stream, the project description must also include detailed explanation of the independent utility of each section of work; and

d. If the proposal does not incorporate bioengineering techniques, the project description must also include a discussion on the alternative techniques that were considered and why they were found not to be practicable. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the District Engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures;

9. If the project is located on the following Indian Lands, the applicant must obtain an individual water quality certification (WQC) under Section 401 of the Clean Water Act and provide a copy of the WQC to the Corps (see also General Condition 20):

a. Southern Ute Indian Lands. WQCs for projects located on Southern Ute Indian Lands must be obtained from the U.S. Environmental Protection Agency (EPA). For assistance, contact the EPA at: EPA, EPR-EP, Aquatic Resources Protection and Accountability

Unit, 1595 Wynkoop Street, Denver, Colorado 80202-1129, 303-312-6909, or visit the webpage: http://www.epa.gov/region8/water/wqc.html; or

b. Ute Mountain Ute Indian Lands. WQCs for projects located on Ute Mountain Ute Indian Lands must be obtained from the Ute Mountain Ute Tribe. For assistance, contact the Ute Mountain Ute Environmental Programs Department, 520 Sunset Blvd. or P.O. Box 448, Towoac, Colorado 81334, 970-564-5430 (fax 970-565-2651), or visit the webpage: http://www.utemountainuteenvironmental.org;

10. For non-federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the notification package must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act (see General Condition 16);

11. For non-federal permittees, if the RGP activity may have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the notification package must state which historic property may have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. Federal permittees must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act (see General Condition 18); and

12. Applicants are encouraged to provide the Corps with electronic files to expedite agency coordination and permit review. Such submittals may be limited by size so the applicant should request confirmation of delivery receipt.

The information should reference “Regional General Permit No. 37” and be sent to the appropriate Corps office. The Corps will review the applicant's request for authorization under this RGP and will inform the applicant in writing that the work may proceed. The applicant may not start work until notified by the Corps. If the work is not authorized under this RGP, the applicant must apply to the Corps for a Standard Individual Permit or other appropriate Department of the Army permit(s).

For projects located within tribal trust lands, coordination is required with the appropriate tribal entity. Pre-application consultation with the tribe, preferably on-site, is highly recommended.

For projects that have the potential to impact vested water rights, it is recommended that the applicant provide evidence or coordination with the local Water Commissioner. For assistance, contact the Colorado Division of Water Resources (DWR), 1313 Sherman St., Suite 821, Denver, CO 80203, (303) 866-3581, or you may contact the appropriate Water Commissioner using the directory found at: http://water.state.co.us/DivisionsOffices/Pages/default.aspx.

GENERAL CONDITIONS: To qualify for this RGP authorization, the prospective permittee must comply with the following general conditions (GC), in addition to any regional or case-specific conditions imposed by the Division Engineer or District Engineer:

1. Upon receiving approval to perform work under this RGP, the permittee will have three years to complete the work or until the permit expires or is revoked, unless specified otherwise in a Corps verification letter. If the permittee commenced work on the authorized activity or is under contract to commence work when the permit expires or is revoked, the permittee will have one more year or until the original expiration, whichever is less, to complete the construction. Upon completion of the work, the permittee shall submit a signed Certification of Compliance form to the Corps;

2. For all projects that include a design-build component, the permittee shall submit a complete set of as-built drawings to the Corps within 90 days following the completion of work;

3. Structures or fill authorized by this permit shall not impede waterborne navigation, including rafting and canoeing, or create a hazard to navigation in waterways. Any interference with navigation may require removal or modification of the structure at the permittee's expense;

4. Activities authorized by this permit shall be designed to withstand expected high flows and maintain preconstruction surface flow rates from the site to the maximum extent practicable;

5. This RGP does not authorize stream stabilization projects that are a necessary component of residential, commercial, and institutional developments;

6. The construction of recreational features (e.g., water parks, kayak courses) and flood control projects are not authorized by this permit;

7. Material may not be placed in any location or manner that will impair surface water flows into or out of any special aquatic sites. The permittee must take precautions to avoid and minimize temporary impacts and protect wetlands and riffle-pool complexes from damage during access and construction. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction conditions, including the revegetation of affected areas, as appropriate. This permit does not authorize the loss of greater than 0.5 acre of wetland;

8. The activity must comply with applicable FEMA-approved state or local floodplain management requirements;

9. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance;

10. The District Engineer may designate, after notice and opportunity for public comment, additional waters officially designated by the State of Colorado as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The District Engineer may also designate additional critical resource waters after notice and opportunity for public comment;

11. The District Engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in no more than minimal adverse environmental effects. The District Engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

a. The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site);

b. Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal;

c. Compensatory mitigation plans for RGP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the District Engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the District Engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the District Engineer may waive or reduce any requirement to provide wetland compensatory mitigation for wetland losses;

d. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332;

   (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects;

   (2) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the District Engineer to make the decision on the RGP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR parts 332.4(c)(2) – (14) must be approved by the District Engineer before the permittee begins work in waters of the United States, unless the District Engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR part 332.3(k)(3));

   (3) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided; and

   (4) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be added through special conditions added to the RGP authorization;

e. Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of this RGP. For example, RGP 37 cannot be used to authorize any activity resulting in permanent impacts to greater than 0.5 acre of wetlands, even if compensatory mitigation is provided to replace or restore some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for this RGP; and

f. Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. For permittee-responsible mitigation, the special conditions of the RGP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

   When mitigation is required, no work in waters of the United States may occur until the District Engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. For projects requiring compensatory mitigation, please refer to the Mitigation and Monitoring Guidelines located at: http://www.spd.usace.army.mil/Portals/13/docs/regulatory/mitigation/MitMon.pdf;

12. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area;

13. Destruction of riparian or riverine vegetation, especially mature cottonwoods, shall be avoided to the maximum extent practicable. The permittee is cautioned that cottonwoods may be locally very important for several protected species, including the yellow-billed cuckoo, and bald eagles, which are protected under the Bald and Golden Eagle Act. If the authorized work causes damage to riparian vegetation that is not directly covered by a permanent feature, these scarred areas shall be replanted with a mixture of native trees, shrubs, forbs and grasses. Seeding, sprigging, or other means of planting native woody and herbaceous plants is highly recommended and advantageous to further stabilize stream banks. For further information on planting, please contact the local Natural Resources Conservation Service or Corps office;

14. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the OHWM, must be permanently stabilized at the earliest practicable date. Erosion control fabrics/blankets may be required on a case-by-case basis. All disturbed areas, including the riparian and upland buffer zones, shall be revegetated with native species to prevent erosion. These areas shall be monitored and maintained to ensure vegetative success;

15. Activities in breeding areas for migratory waterfowl must be avoided to the maximum extent practicable. On a case-by-case basis, the Corps may restrict the timing of construction in order to avoid and minimize impacts to migratory waterfowl during the breeding season;

16. Endangered Species:

a. No activity is authorized under any RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any RGP which ‘‘may affect’’ a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the RGP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the RGP activity and are later in time, but still are reasonably certain to occur;

b. Federal agencies should follow their own procedures for complying with the requirements of the ESA. The federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA;

c. For activities that might affect federally-listed endangered or threatened species or designated critical habitat, the non-federal applicant’s notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity ‘‘may affect’’ or will have ‘‘no effect’’ to listed species and designated critical habitat and will notify the non-federal applicant of the Corps’ determination within 45 days of receipt of a complete notification. In cases where the non-federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have ‘‘no effect’’ on listed species or critical habitat, or until ESA section 7 consultation has been completed;

d. As a result of formal or informal consultation with the FWS the district engineer may add species specific permit conditions to the RGP;

e. Authorization of an activity by the RGP does not authorize the ‘‘take’’ of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with ‘‘incidental take’’ provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where ‘‘take’’ means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word ‘‘harm’’ in the definition of ‘‘take’’ means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering;

f. If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed RGP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the notification required by paragraph (c) of this

general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed RGP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed RGP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed RGP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed RGP activity or whether additional ESA section 7 consultation is required; and

g. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS or their World Wide Web pages at http://www.fws.gov/ or http://www.fws.gov/ipac;

17. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the USFWS to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity;

18. Historic Properties:

a. In cases where the District Engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied;

b. Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under Section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with Section 106;

c. Non-federal permittees must identify in their notification which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties.

Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR part 330.4(g)). When reviewing notification packages, District Engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The District Engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include

background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the District Engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-federal applicant shall not begin the activity until notified by the District Engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed;

d. The District Engineer will notify the prospective permittee within 45 days of receipt of a complete notification package whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR part 800.3(a)). If NHPA Section 106 consultation is required and will occur, the District Engineer will notify the non-federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps; and

e. Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

   If any previously unknown historic, cultural or archeological remains and artifacts are discovered while accomplishing the activity authorized by this permit, the permittee must immediately notify the District Engineer of what was found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The District Engineer will initiate the federal, tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places;

19. To ensure that all structures are safely designed, the District Engineer may require non-federal applicants to demonstrate that the structures have been designed by qualified persons. The District Engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety;

20. If a conditioned water quality certification is issued for the project, (i.e., for projects located on Southern Ute or Ute Mountain Ute Tribal Lands) the permittee must comply with the conditions specified in the certification as special conditions to this permit. In Colorado, excluding Indian lands, regional general permits are unconditionally certified by statute;

21. This permit does not authorize discharges of dredged or fill material associated with channelization, ditching, mechanized land clearing, cutting off meanders, or blocking off channels;

22. All construction debris (including excess dredged or fill materials, wood, cleared vegetation, concrete, and all other materials not specifically authorized by the permit) shall be disposed of in an upland area in such a manner that it cannot enter a waterway or wetland;

23. Dredged or fill material shall not consist of unsuitable material (e.g., trash, debris, waste metal products, asphalt, car bodies, tires, etc.) and must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act);

24. The use of grout is not allowed by this permit unless, after a case-by-case review, the Corps makes a written determination that the use of grout would not cause more than minor impacts to the aquatic resource;

25. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized by this RGP;

26. Discharges of dredged or fill material shall not occur in the proximity of a water supply intake, shall not limit the ability of any existing diversion structure to appropriate water, shall not impair the ability to deliver vested water rights, and shall not adversely impact a stream gauging station;

27. Activities shall not impair reserved tribal rights including, but not limited to, reserved water rights and treaty fishing and hunting rights;

28. National Wild and Scenic River System:

    a. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status;

    b. If a proposed RGP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the District Engineer will coordinate with the federal agency with direct management responsibility for that river. The permittee shall not begin the RGP activity until notified by the District Engineer that the federal agency with direct management responsibility for that river has determined in writing that the proposed RGP activity will not adversely affect the Wild and Scenic River designation or study status; and

c. Information on Wild and Scenic Rivers may be obtained from the appropriate federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/;

29. The permittee must allow representatives from the Corps to inspect the authorized work at any time deemed necessary to ensure that it is being or has been accomplished in compliance with the terms and conditions of the permit;

30. The permittee shall maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit, including maintenance to ensure public safety and compliance with applicable RGP general conditions, as well as any activity-specific conditions added by the District Engineer to an RGP authorization. The permittee is not relieved of this requirement if construction of the permitted activity is abandoned, although the permittee may make a good faith transfer to a third party in compliance with General Condition 31 below. Should the permittee wish to cease maintenance of the authorized activity, or should the permittee desire to abandon it without a good faith transfer, the permittee shall obtain a modification of the permit from the Corps, which may require restoration of the area; and

31. If the permittee sells the property associated with the permit verification, the permittee may transfer the permit verification to the new owner by submitting a letter to the Corps to validate the transfer. A copy of the permit verification must be attached to the letter, and the letter must contain the following statement and signature: *"When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit, including any special conditions, shall continue to be binding on the new property owner(s). To validate the transfer of this permit and the liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."*

BEST MANAGEMENT PRACTICES:

1. In order to prevent the spread of invasive and/or nuisance species (e.g., Asian Clam, Grand Valley Asian Tapeworm, Green River Mud Snail, New Zealand Mud Snail), the permittee is strongly encouraged to clean heavy equipment prior to and after construction if the equipment was previously used in another stream, river, lake, pond, or wetland within 10 days of initiating work. The following are recommended methods for preventing the spread of invasive aquatic organisms:

   a. Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with a 1:15 solution of disinfection solution containing the following ingredients:

      (1) Dialkyl dimethyl ammonium chloride (5-10% by weight);

      (2) Alkyl dimethyl benzyl ammonium chloride (5-10% by weight);

      (3) Nonyl phenol ethoxylate (5-10% by weight);

(4) Sodium sesquicarbonate (1-5%); and

(5) Tetrasodium ethylene diaminetetraacetate (1-15%); and

b. The equipment should be kept moist for at least 10 minutes, and rinsate should be managed as a solid waste in accordance with local, county, state, or federal regulations. Alternately, equipment, hand tools, boots and any other equipment that was previously used in a river, stream, lake, pond, or wetland prior to moving the equipment to another water body may be disinfected using either of the following methods:

(1) Spray/soak equipment with water greater than 140 degrees Fahrenheit for at least 10 minutes; or

(2) Sanitize water suction hoses and water transportation tanks (using methods described above) and discard rinse water at an appropriately permitted disposal facility; and

2. No petroleum products, chemicals, or other deleterious materials should be allowed to enter or be disposed of in such a manner in which they could enter the waterway or adjacent wetlands. Accordingly, it is recommended that oil absorbent “booms” be installed downstream of the project site during construction activities.

DEFINITIONS:

Bankfull: Bankfull, as defined by Dunne and Leopold (1978), is the stream stage corresponding to the discharge at which channel maintenance is most effective. That is, the discharge at which moving sediment, forming or removing bars, forming or changing bends and meanders, and generally doing work that result in the average morphological characteristics of channels.

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Bioengineering Techniques: The combination of biological, mechanical, and ecological concepts to control erosion and stabilize soil through the use of native vegetation or a combination of vegetative and traditional construction materials. Bioengineering techniques include both living and non-living plants. Non-living plants (trees, logs, etc.) are used as construction materials, similar to or in combination with engineered materials. Planted vegetation controls erosion, stabilizes soil, and serves as wildlife and fisheries habitat in riparian areas, between the stream channel and adjacent upland habitats.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material into waters of the United States.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in

the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for a general permit; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the United States.

Navigable waters: Waters subject to section 10 of the Rivers and Harbors Act of 1899. These waters are defined at 33 CFR part 329.

Open water: For purposes of this general permit, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an OHWM can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent,

sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An OHWM is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas.

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands next to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Single and complete project: For non-linear projects, such as those activities authorized by this RGP, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in this general permit.

Stream bed: The substrate of the stream channel between the OHWMs. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the OHWMs, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tribal lands: Any lands title to which is either: 1) held in trust by the United States for the benefit of any Indian tribe or individual; or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.

Tribal rights: Those rights legally accruing to a tribe or tribes by virtue of inherent sovereign authority, unextinguished aboriginal title, treaty, statute, judicial decisions, executive order or agreement, and that give rise to legally enforceable remedies.

Waterbody: For purposes of this general permit, a waterbody is a jurisdictional water of the United States. If a wetland is adjacent to a waterbody determined to be a water of the United States, that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

FURTHER INFORMATION:

1. District Engineers have authority to determine if an activity complies with the terms and conditions of a RGP;

2. Congressional Authorities. This permit authorizes work in accordance with:

    a. Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403); and

    b. Section 404 of the Clean Water Act (33 U.S.C. 1344);

3. Limits of this authorization:

    a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law;

    b. This permit does not grant any property rights or exclusive privileges; and

    c. This permit does not authorize interference with any existing or proposed federal projects;

4. Limits of Federal Liability. In issuing this permit, the federal government does not assume any liability for the following:

    a. Damages to the permitted project, or uses thereof, as a result of other permitted or unpermitted activities or from natural causes;

    b. Damages to the permitted project, or uses thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest;

c. Damages to persons, property, or other permitted or unpermitted activities or structures caused by the activity authorized by this permit;

d. Design or construction deficiencies associated with the permitted work; and

e. Damage claims associated with any future modification, suspension, or revocation of this permit;

5. Reliance on applicant's data. The determination by the Corps that a verification based upon this permit is not contrary to the public interest will be made in reliance on the information provided by the applicant;

6. Re-evaluation of permit decisions. The Corps may reevaluate its decision on this permit at any time the circumstances warrant (33 CFR 325.7(a)). Circumstances that could require a reevaluation include, but are not limited to, the following:

   a. Failure to comply with the terms and conditions of this permit;

   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate; or

   c. Significant new information surfaces that the Corps did not consider before verifying that the project is authorized by this permit.

   Such re-evaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring the permittee to comply with the terms and conditions of the permit and for the initiation of legal action where appropriate;

7. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of our decision, the Corps will normally give favorable consideration to a request for an extension of this time limit; and

8. Renewal of the RGP: This RGP may be reviewed for reissuance prior to its expiration date. Any reissuance will be processed in accordance with 33 CFR 325.2 including a public notice and environmental procedures and documentation required by the national Environmental Policy Act of 1969.

This permit becomes effective when the federal official, designated to act for the Sacramento, Albuquerque, and Omaha District Engineers, has signed below.

20 October 2017

Allan Steinle, Chief
Albuquerque District Regulatory Division

DATE

COMPLIANCE CERTIFICATION

Permit File Number: SPK-2017-00468

Regional General Permit Number: RGP 37 - Stream Stabilization Projects in Colorado

Permittee: Iron Mountain Hot Springs, LLC
Attn: Mr. Steve Beckley
281 Centennial Street
Glenwood Springs, Colorado 81601

County: Garfield

Date of Verification: December 22, 2017

Within 30 days after completion of the activity authorized by this permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Sacramento District
Colorado West Regulatory Branch
400 Rood Avenue, Room 224
Grand Junction, Colorado 81501
(970) 243-1199
Fax (970) 241-2358
DLL-CESPK-RD-Compliance@usace.army.mil

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of the permit your authorization may be suspended, modified, or revoked. If you have any questions about this certification, please contact the U.S. Army Corps of Engineers.

* * * * * * * * *

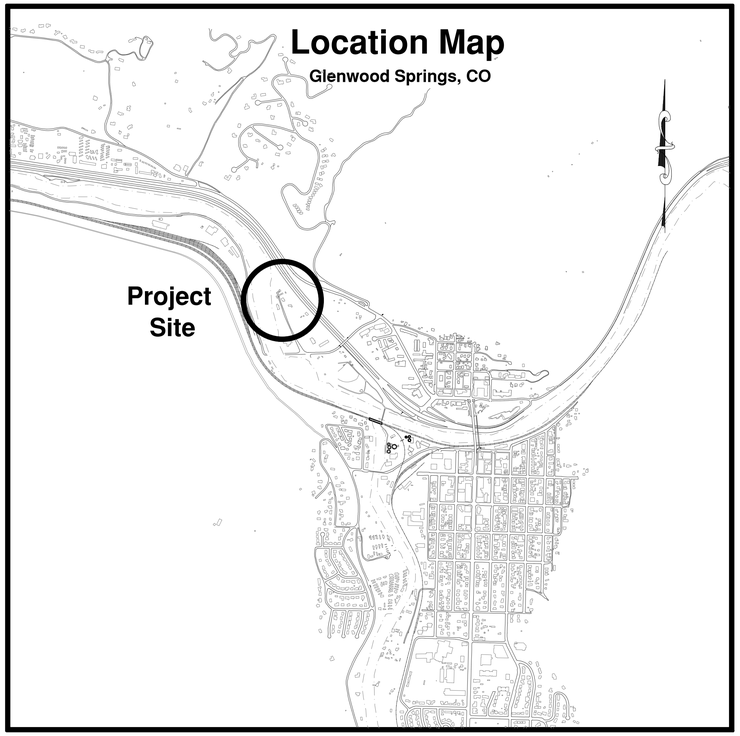
I hereby certify that the work authorized by the above-referenced permit, including all the required mitigation, was completed in accordance with the terms and conditions of the permit verification.

Signature of Permittee _____ Date _____

Iron Mountain Hot Springs

PREPARED BY:

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com



LEGEND & ABBREVIATIONS

- FOUND PROPERTY CORNER
- = TREE
- GAS = GAS LINE
- FO = FIBER OPTIC
- SS = SANITARY SEWER
- W = WATER LINE
- T = TELEPHONE LINE
- P = ELECTRIC LINE
- GAS = GAS
- (M) = MANHOLE
- = STORM INLET
- T = PHONE PEDESTAL
- CTV = CABLE TELEVISION PEDESTAL
- GM = GAS METER
- EM = ELECTRIC METER
- DS = DOWN SPOUT
- = STORM CLEAN-OUT
- = LIGHT POST
- = WATER VALVE
- = WATER CURB STOP VALVE
- = FIRE HYDRANT
- = ELEVATION SPOT

APROX	APROXIMATE
ARCH	ARCHITECT
BLDG	BUILDING
BM	BENCHMARK
BW	BOTTOM OF WALL
CF	CUBIC FEET
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CONTROL LINE
CLR	CLEAR
C/O	CLEAN-OUT
CONC	CONCRETE
CY	CUBIC YARD
DEG	DEGREES
DEMO	DEMOLISH
DIA	DIAMETER
DIM	DIMENSION
DS	DOWN SPOUT
DWG	DRAWING
ELEV	ELEVATION
ENG	ENGINEER
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FG	FINISHED GRADE
FL	FLOW LINE
GAL	GALLON
GALV	GALVANIZED
GB	GRADE BREAK
HORZ	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER
INV	INVERT
IRR	IRRIGATION
JT	JOINT
MAX	MAXIMUM
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PERF	PERFORATED
PED	PEDESTRIAN
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
R	RADIUS
REINF	REINFORCED
REQ'D	REQUIRED
REV	REVISION
ROW	RIGHT-OF-WAY
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SPECS	SPECIFICATIONS
STA	STATION
STD	STANDARD
STRUCT	STRUCTURAL
TBC	TOP BACK OF CURB
TF	TOP OF FOOTING
TOPO	TOPOGRAPHY
TW	TOP OF WALL
TYP	TYPICAL
VERT	VERTICAL
VOL	VOLUME
W/	WITH
W/O	WITHOUT
WTF	YOU KNOW

GENERAL NOTES

1. Contractor responsible to coordinate locating all utilities, potholing if necessary. Call 811 72 hours prior to digging. Contractor responsible for any and all damage to utility lines.
2. Contractor responsible to obtain all necessary permits and/or approvals prior to beginning construction.
3. Contractor to coordinate with geotechnical engineer for recommendations concerning trench stability, safety, and shoring.
4. Maintain 18" separation between any utilities that may need to be crossed. If 18" can not be maintained notify engineer for alternatives.
5. The contractor shall verify all dimensions, elevations and site conditions before starting work and notify the architect and engineer immediately of any discrepancies.
6. All omissions and conflicts between the various elements of the working drawings and/or specifications shall be brought to the attention of the architect and engineer before proceeding with work.
7. The contractor shall review completely the soils report and follow all recommendations therein. Design assumes that all recommendations in the soils report will be implemented.
8. Finished excavation shall be neat and true to line with all loose material and standing water removed from excavations.
9. Due to corrosive soils, all concrete shall be Type S, sulfate resistive with Xypex crystalline additive.

UTILITY CONTACTS:

SEWER: CITY OF GLENWOOD SPRINGS
MATT LANGHORST #970.384.6438

WATER: CITY OF GLENWOOD SPRINGS
MATT LANGHORST #970.384.6438

PHONE/INTERNET: CENTURY LINK
JASON SHARPE #970.384.0238

FIBER: CITY BROADBAND
ERIC ARNETTE #970.384.6416

CABLE TV/INTERNET: COMCAST
MICHAEL JOHNSON #970.930.4713

GAS: BLACK HILLS ENERGY
RYAN POGUE #719.208.3577

POWER: CITY OF GLENWOOD SPRINGS
DOUG HAZZARD #970.384.6353

811 Know what's below. Call before you dig.

DRAWING LIST:

C1 Cover Sheet
C2 Demo, Site Layout, & Dimensions
C3 Utility Plan
C4 Grading and Drainage Plan
C5 Stormwater Management Plan
C6 Parking Lot B - Plan & Profile
C7 Parking Lot C - Plan & Profile
C8 Parking Lot D & E - Plan & Profile
C9 Details
C10 Details

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com

Iron Mountain Hot Springs
Cover

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 07/22/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET C1

GENERAL NOTES

1. Contractor responsible to coordinate locating all utilities, potholing if necessary. Call 811 72 hours prior to digging. Contractor responsible for any and all damage to utility lines.
2. Contractor responsible to obtain all necessary permits and/or approvals prior to beginning construction.
3. Contractor to coordinate with geotechnical engineer for recommendations concerning trench stability, safety, and shoring.
4. Maintain 18" separation between any utilities that may need to be crossed. If 18" can not be maintained notify engineer for alternatives.
5. The following codes and editions were used:
   - ACI Building Code (ACI 318-89)
   - Manual of Steel Construction (9th Edition)
6. The contractor shall verify all dimensions, elevations and site conditions before starting work and notify the architect and engineer immediately of any discrepancies.
7. All omissions and conflicts between the various elements of the working drawings and/or specifications shall be brought to the attention of the architect and engineer before proceeding with work.
8. The contractor shall review completely the soils report and follow all recommendations therein. Design assumes that all recommendations in the soils report will be implemented.
9. Finished excavation shall be neat and true to line with all loose material and standing water removed from excavations.
10. Concrete work shall conform to the requirements of ACI 301, specifications for structural concrete for buildings.
    - Minimum strength: f'c = 3500 psi at 28 days.
    - Slump: 4" ± 1"
    - Maximum water/cement ratio:w/c =0.45.
    - Air = 4.0% – 7.0%
    - Aggregate: per ASTM C33, maximum 1"
11. No water shall be added on site which will increase slump to above 5". Concrete to be mixed per ASTM C94 maximum temperature in mixer: 90° f. Due to corrosive soils, all concrete shall be Type S, sulfate resistive with Xypex crystalline additive.
12. Curing shall immediately follow the finish operation. Keep concrete continuously moist for at least 7 days using a polyethylene film securely held in place or an alternate approved method.
13. Place per ACI standard 614.
14. Cement shall be per ASTM C150, Typell, low alkali.
15. Submit mix design to architect for review by engineer a minimum of one week prior to first concrete delivery. No admixtures containing chloride salts are permitted.
16. Concrete shall not be in contact with aluminum.
17. Rebars: deformed steel, fy = 60 ksi. ASTM spec. A615 grade 60. All rebar bends to be made cold.
18. Reinforcing in concrete placed against earth without forms is to be supported with approved nonmetallic chairs, or another method approved by the engineer.
19. Minimum cover on rebar where concrete is cast against earth is 3" and 2" in other locations.

HATCHING LEGEND

HATCHING DESIGNATES THE APPROVED PARKING LOT EXTENTS AS SHOWN ON THE "RECENTLY CONSTRUCTED SITE FEATURES" PLAN SHEET PREPARED BY SGM, DATED 06/30/2015. HATCHED AREA WAS TO CONTAIN 94 PARKING STALLS.

HATCHING DESIGNATES THE FUTURE HOTEL SITE. DESIGNED BY OTHERS. NO PARKING SHOWN IN THIS AREA HAS BEEN INCLUDED.

Property Line
Approx. Edge of River
High Water Line
30' Setback from High Water Line
CENTENNIAL LIFT STATION , SEE PLANS BY BU
FUTURE HOTEL SITE, SEE PLANS BY BU
CDOT SITE, SEE PLANS BY BU
ACCESS ROAD, SEE PLANS BY BU
IMHS PARKING D
IMHS PARKING E
IMHS PARKING B
IMHS PARKING C
NEW ENTRANCE BUILDING
MAIN LEVEL FINISH FLOOR 5730
LOWER LEVEL FINISH FLOOR 5719
VAN ADA SIGN
VAN ADA SIGN
ADA PARKING SIGN
SIDEWALK
CURB & GUTTER
SAND BAR
EXISTING BATH BUILDING
MAIN LEVEL FF 5735
Bathhouse (20'x60')
Hot pools
SIDEWALK RAMP W/ FLARED RETURNS
SIDEWALK RAMP W/ FLARED RETURNS
PROVIDE LAMP
REMOVE CULVERT
PROVIDE LAMP
PROVIDE LAMP
REMOVE INLET AND SALVAGE DOMED GRATE
PROVIDE LAMP
REMOVE CULVERT
REMOVE AND SALVAGE DECORATIVE BOULDERS
REMOVE CULVERT
REMOVE AND SALVAGE DECORATIVE BOULDERS
REMOVE AND SALVAGE DECORATIVE BOULDERS
10' WIDE X 30' LONG GRAVEL ACCESS DRIVE
STACKED ROCK WALL 4' MAX HEIGHT
4" ASPHALT PAINTING FOR PARKING (TYP)
4" ASPHALT & 8" BASE COURSE ON PROPERLY PREPARED SUBGRADE
4" ASPHALT PAINTING FOR PARKING (TYP)
4" ASPHALT & 8" BASE COURSE ON PROPERLY PREPARED SUBGRADE
4" ASPHALT PAINTING FOR PARKING (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
12"ø TO 18"ø DECORATIVE BOULDER BORDER (TYP)
EX. LAMP TO REMAIN
EX. LAMP TO REMAIN
EX. LAMP TO REMAIN
EX. LAMP TO REMAIN
EX. LAMP TO REMAIN
EX. LAMP TO REMAIN
MATCH EXISTING
MATCH EXISTING
EP: 25+03.33
PC: 20+52.91
PT: 21+27.44
PCC: 22+87.18
PRC: 22+96.28
PTT: 23+24.35
PCC: 23+87.48
PRC: 23+94.10
PROPERTY LINE
CONCRETE SIDEWALK
Curb/gutter (typ)
SCALE
20 10 0 20

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
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Iron Mountain Hot Springs
Demo, Site Layout, & Dimensions

PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 08/04/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET C2

Know what's below. Call before you dig.

GENERAL NOTES

1. Sewer and water to be constructed per specifications of Glenwood Springs.
2. Traffic control to be per M.U.T.C.D. and applicable specifications.
3. Existing utility locations have been estimated. Contractor responsible to coordinate locating all utilities, potholing if necessary. Coordinate with engineer for design alternatives if conflicts are encountered. Contractor responsible for any and all damage to utility lines. Call 811 72 hours prior to digging.
4. Contractor to coordinate with geotechnical engineer for recommendations concerning trench stability, safety, and shoring.
5. Elevations based on building finished floor elevations. Contractor to verify pipe elevations and slopes as shown prior to construction. Coordinate with engineer for design alternatives if necessary.
6. Gravity flow sewer pipe to be PVC SDR26 unless specifically noted otherwise.
7. Water pipe to be Ductile Iron Pressure Class 52 unless specifically noted otherwise.
8. Contractor responsible to obtain all necessary permits and/or approvals prior to beginning construction.
9. Maintain 18" separation between any utilities that may need to be crossed. If 18" can not be maintained notify engineer for alternatives.
10. The contractor shall verify all dimensions, elevations and site conditions before starting work and notify the architect and engineer immediately of any discrepancies.
11. All omissions and conflicts between the various elements of the working drawings and/or specifications shall be brought to the attention of the architect and engineer before proceeding with work.
12. The contractor shall review completely the soils report and follow all recommendations therein. Design assumes that all recommendations in the soils report will be implemented.
13. Finished excavation shall be neat and true to line with all loose material and standing water removed from excavations.
14. Pipe to be installed per manufacturers recommendations and soils compacted per geotechnical engineers specifications.

Property Line
Approx. Edge of River
High Water Line
30' Setback from High Water Line

4" PVC SEWER PIPE AND 4" DOUBLE CLEANOUT INV = 5725.60 BOTTOM LEVEL(S) BELOW WILL REQUIRE A LIFT STATION. SEE BLDG MECH DWGS FOR CONTINUATION

FIRE DEPARTMENT CONNECTION. COORDINATE WITH FIRE SPRINKLER DESIGNER AND PLUMBER FOR CONTINUATION.

INTERIOR FIRE SPRINKLER SYSTEM TO BE DESIGN BUILD. PROVIDE 1" WATER SERVICE W/ METER PER CITY OF GLENWOOD SPRINGS AFTER DOUBLE CHECK BACKFLOW PREVENTION. COORDINATE WITH SPRINKLER DESIGNER AND PLUMBER FOR CONTINUATION.

THREE PHASE POWER TRANSFORMER. CONTRACTOR TO COORDINATE WITH DOUG HAZZARD, CITY OF GLENWOOD SPRINGS, #970.384.6353 TWO WEEKS PRIOR TO NEED.

CONTRACTOR TO EXCAVATE, PULL WIRE, INSTALL CONDUIT, AND CONCRETE TRANSFORMER PAD. CITY OF GLENWOOD SPRINGS TO PROVIDE MATERIALS AND PERFORM CONNECTIONS.

POWER SERVICE LINE. SEE MECH ENG DWGS

FIBER OPTIC LINE. SEE MECH ENG DWGS

CLEAN-OUT (2) ONE EACH WAY

PROPOSED GAS METER. CONTRACTOR TO COORDINATE WITH BLACK HILLS, TWO WEEKS PRIOR TO NEED.

INSTALL PROPOSED SEWER LATERAL PER SPECIFICATIONS OF GLENWOOD SPRINGS. COORDINATE WITH MATT LANGHORST, #384-6438 TWO WEEKS PRIOR TO NEW TAP TO COORDINATE INSPECTION PRIOR TO BACKFILLING. EX MAIN INV APPROXIMATED @ 5723.8± SS LAT INV = EX INV + 1' = 5724.8± CONTRACTOR TO POTHOLE AND VERIFY INVERT PRIOR TO CONSTRUCTION. NOTIFY ENGINEER FOR DESIGN ALTERNATIVES IF NECESSARY.

65 LF 4" DIP WATER SERVICE, 5.5' MIN BURY

40 LF OF 4" PVC DR26 @ 22% MIN

55 LF 1" GAS SERVICE, 4' MIN. BURY

CENTENNIAL LIFT STATION ,SEE PLANS BY BU

NEW HOTEL

FUTURE HOTEL SITE, SEE PLANS BY BU

RAISE SEWER MANHOLE TO FINISHED GRADE

Ex. SS MH
Inv Out=5721.56
Inv In=5721.76

Ex. 8" PVC SS @ 2.6%(±)

PVC 21+27.44

PVT: 20+52.91

PROVIDE LAMP

2-2" PVC SCH40 CONDUIT

Ex. Gas
Ex. Buried Electric

IMHS PARKING D

IMHS PARKING E

4" GATE VALVE

11.25° BEND & THRUST BLOCK

THRUST BLOCK

Ex. 8" D.I.P. Water Line, Bury Depth @ 5.5'±

DROP WATER BELOW SEWER AND ENCASE IN CONCRETE FOR 20', 10' EACH SIDE OF SEWER LINE. MAINTAIN 18" SEPARATION BETWEEN SEWER AND WATER. BOTTOM SS = 5724.1± TOP OF WATER < 5722.6±

ELEC. J. BOX

CONTRACTOR TO POTHOLE EXISTING UTILITY LINES PRIOR TO CONSTRUCTION TO VERIFY DEPTH AND ROUTING OF PROPOSED WATER LINE. CONTACT ENGINEER FOR DESIGN ALTERNATIVES IF NECESSARY.

CONNECT TO EXISTING MAIN WITH 1" GAS SERVICE TAP. CONTRACTOR TO CALL MR. RYAN POGUE OF BLACK HILLS ENERGY #1.719.208.3577 TWO WEEKS PRIOR TO NEED TO COORDINATE CONNECTION.

PROPOSED CONNECTION TO PHONE AND/OR INTERNET. CALL CENTURYLINK #1.800.475.7526 TWO WEEKS PRIOR TO NEED TO COORDINATE CONSTRUCTION.

Ex. Phone

PVT: 23+91.19

PCC: 23+96.26

PCC: 23+84.10

PVT: 23+81.49

24+00

EXISTING BATH BUILDING

MAIN LEVEL FF 5735

Ex. SS MH

Ex. LAMP TO REMAIN

HOT TAP 4" SERVICE LINE INTO EX. 8" WATER MAIN. BURY DEPTH GENERALLY AT 5.5' DEPTH. COORDINATE WITH GLENWOOD SPRINGS, MR. MATT LANGHORST, #384-6438, TWO WEEKS PRIOR. COORDINATE FOR INSPECTION PRIOR TO BACKFILLING.

IMHS PARKING B

IMHS PARKING C

RAISE MANHOLE TO FINISHED GRADE

EP: 25+03.33

PROPOSED 8" U.F. POWER CONDUIT
PROPOSED 20' U.F. FIBER OPTIC CONDUIT

LAMP (BY OTHERS)

CDOT SITE, SEE PLANS BY BU

ACCESS ROAD, SEE PLANS BY BU

PROPERTY LINE

CONCRETE SIDEWALK

FUTURE PULL VAULT BY OTHERS.

CONTRACTOR TO COORDINATE WITH DOUG HAZZARD, CITY OF GLENWOOD SPRINGS, #970.384.6353 TWO WEEKS PRIOR TO NEED.

CONTRACTOR TO EXCAVATE, PULL WIRE, INSTALL CONDUIT, AND CONCRETE TRANSFORMER PAD. CITY OF GLENWOOD SPRINGS TO PROVIDE MATERIALS AND PERFORM CONNECTIONS.

SCALE
20 10 0 20

Know what's below. Call before you dig.

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com

Iron Mountain Hot Springs
Utility Plan

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 08/04/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET C3

GENERAL NOTES

1. Contractor responsible to coordinate locating all utilities, potholing if necessary. Call 811 72 hours prior to digging. Contractor responsible for any and all damage to utility lines.
2. Contractor responsible to obtain all necessary permits and/or approvals prior to beginning construction.
3. Contractor to coordinate with geotechnical engineer for recommendations concerning trench stability, safety, and shoring.
4. Maintain 18" separation between any utilities that may need to be crossed. If 18" can not be maintained notify engineer for alternatives.
5. The following codes and editions were used:
   - ACI Building Code (ACI 318–89)
   - Manual of Steel Construction (9th Edition)
6. The contractor shall verify all dimensions, elevations and site conditions before starting work and notify the architect and engineer immediately of any discrepancies.
7. All omissions and conflicts between the various elements of the working drawings and/or specifications shall be brought to the attention of the architect and engineer before proceeding with work.
8. The contractor shall review completely the soils report and follow all recommendations therein. Design assumes that all recommendations in the soils report will be implemented.
9. Finished excavation shall be neat and true to line with all loose material and standing water removed from excavations.
10. Concrete work shall conform to the requirements of ACI 301, specifications for structural concrete for buildings.
    - Minimum strength: f'c = 3500 psi at 28 days.
    - Slump: 4" ± 1"
    - Maximum water/cement ratio:w/c =0.45.
    - Air = 4.0% – 7.0%
    - Aggregate: per ASTM C33, maximum 1"

No water shall be added on site which will increase slump to above 5". Concrete to be mixed per ASTM C94 maximum temperature in mixer: 90° f.

11. Curing shall immediately follow the finish operation. Keep concrete continuously moist for at least 7 days using a polyethylene film securely held in place or an alternate approved method.
12. Place per ACI standard 614.
13. Cement shall be per ASTM C150, TypeII, low alkali.
14. Submit mix design to architect for review by engineer a minimum of one week prior to first concrete delivery. No admixtures containing chloride salts are permitted.
15. Concrete shall not be in contact with aluminum.
16. Rebars: deformed steel, fy = 60 ksi. ASTM spec. A615 grade 60. All rebar bends to be made cold.
17. Reinforcing in concrete placed against earth without forms is to be supported with approved nonmetallic chairs, or another method approved by the engineer.
18. Minimum cover on rebar where concrete is cast against earth is 3" and 2" in other locations.
19. Under no circumstances shall any surface drainage system be tied and/or connected to the subsurface, foundation, and/or under slab drainage system.
20. Perforated and solid pipe and fittings to be PVC schedule 40 or SDR–35 unless noted otherwise.
21. Pipe to be installed per manufacturers recommendations and soils compacted per geotechnical engineers specifications.
22. minimum pipe slope shall be 2.0% for 4" and 1.0% for larger.

Property Line
Approx. Edge of River
High Water Line
30' Setback from High Water Line
CENTENNIAL LIFT STATION , SEE PLANS BY BU
CDOT TYPE R INLET BOX
CURB FL=RIM=5725.35
INV IN=5721.03
INV OUT=5720.53
NEW ENTRANCE BUILDING
MAIN LEVEL FINISH FLOOR 5733
LOWER LEVEL FINISH FLOOR 579
EXISTING BATH BUILDING
MAIN LEVEL FF 5735
Bathhouse (not open)
SAND BAR
PROPERTY LINE
NEW HOTEL
SEE CENTENNIAL LIFT STATION PLANS BY BU FOR CONTINUATION
FUTURE HOTEL SITE, SEE PLANS BY BU
IMHS PARKING D
IMHS PARKING E
IMHS PARKING B
IMHS PARKING C
DRAINAGE SWALE
AREA INLET BOX
W/ DOMED GRATE
RIM EL=5725.10
INV OUT=5721.75
GRADE AREA TO DRAIN TO INLET
RIP–RAP APRON
INV = 5725.9
20 LF 12" PVC SDR35
PIPE CULVERT @ 1.0%
EP: 25+03.33
PC: 23+91.19
PC: 24+24.55
PC: 24+86.26
PC: 25+81.93
PC: 25+94.10
CONCRETE SIDEWALK
CDOT SITE, SEE PLANS BY BU
SEE ACCESS ROAD PLANS BY BU FOR CONTINUATION
ACCESS ROAD, SEE PLANS BY BU
09

SCALE
20 10 0 20

811 Know what's below. Call before you dig.

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Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com

Iron Mountain Hot Springs
Grading and Drainage

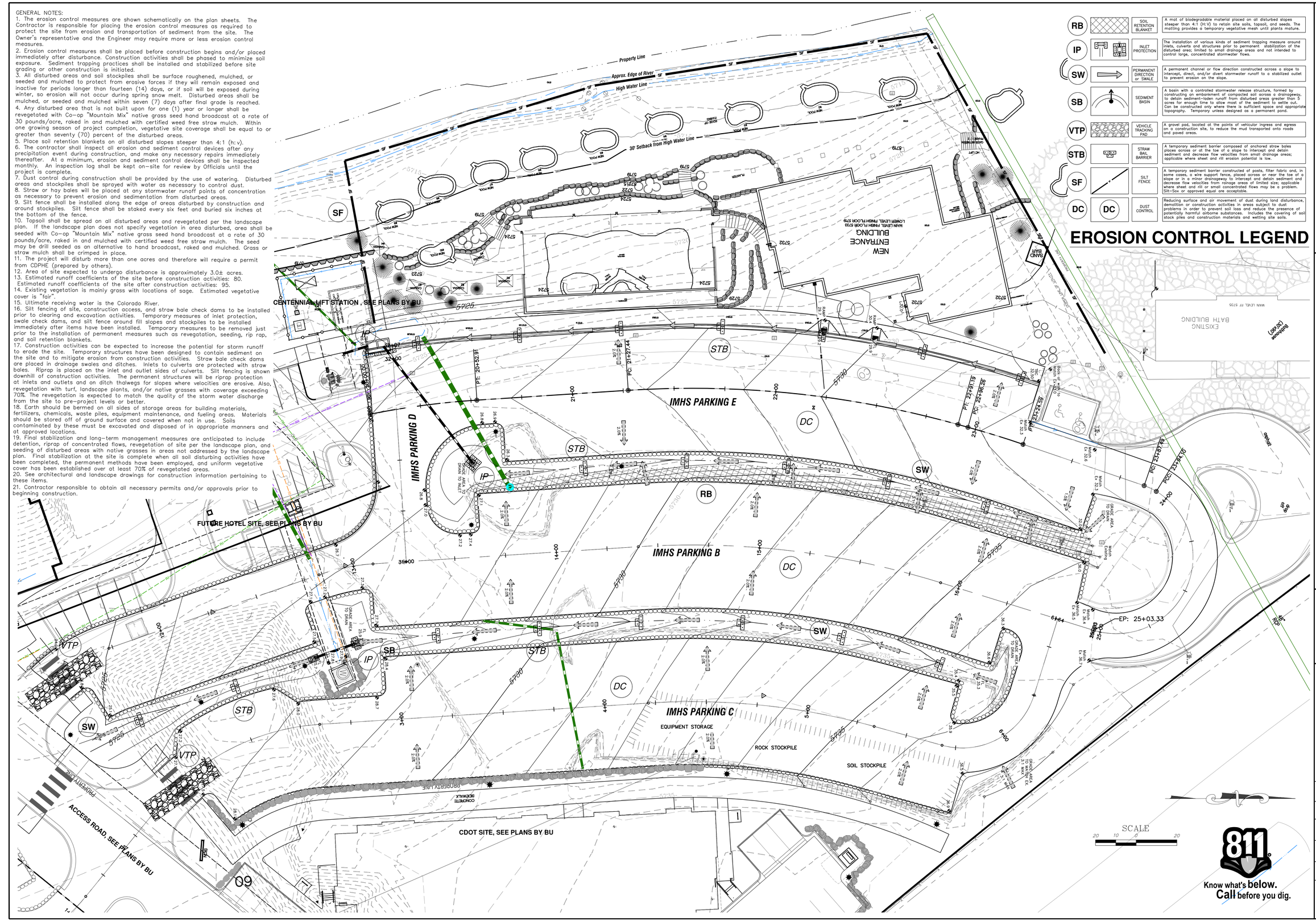
PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 08/04/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564–005
SHEET **C4**

GENERAL NOTES:

1. The erosion control measures are shown schematically on the plan sheets. The Contractor is responsible for placing the erosion control measures as required to protect the site from erosion and transportation of sediment from the site. The Owner's representative and the Engineer may require more or less erosion control measures.
2. Erosion control measures shall be placed before construction begins and/or placed immediately after disturbance. Construction activities shall be phased to minimize soil exposure. Sediment trapping practices shall be installed and stabilized before site grading or other construction is initiated.
3. All disturbed areas and soil stockpiles shall be surface roughened, mulched, or seeded and mulched to protect from erosive forces if they will remain exposed and inactive for periods longer than fourteen (14) days, or if soil will be exposed during winter, so erosion will not occur during spring snow melt. Disturbed areas shall be mulched, or seeded and mulched within seven (7) days after final grade is reached.
4. Any disturbed area that is not built upon for one (1) year or longer shall be revegetated with Co-op "Mountain Mix" native grass seed hand broadcast at a rate of 30 pounds/acre, raked in and mulched with certified weed free straw mulch. Within one growing season of project completion, vegetative site coverage shall be equal to or greater than seventy (70) percent of the disturbed areas.
5. Place soil retention blankets on all disturbed slopes steeper than 4:1 (h:v).
6. The contractor shall inspect all erosion and sediment control devices after any precipitation event during construction, and make any necessary repairs immediately thereafter. At a minimum, erosion and sediment control devices shall be inspected monthly. An inspection log shall be kept on-site for review by Officials until the project is complete.
7. Dust control during construction shall be provided by the use of watering. Disturbed areas and stockpiles shall be sprayed with water as necessary to control dust.
8. Straw or hay bales will be placed at any stormwater runoff points of concentration as necessary to prevent erosion and sedimentation from disturbed areas.
9. Silt fence shall be installed along the edge of areas disturbed by construction and around stockpiles. Silt fence shall be staked every six feet and buried six inches at the bottom of the fence.
10. Topsoil shall be spread on all disturbed areas and revegetated per the landscape plan. If the landscape plan does not specify vegetation in area disturbed, area shall be seeded with Co-op "Mountain Mix" native grass seed hand broadcast at a rate of 30 pounds/acre, raked in and mulched with certified weed free straw mulch. The seed may be drill seeded as an alternative to hand broadcast, raked and mulched. Grass or straw mulch shall be crimped in place.
11. The project will disturb more than one acres and therefore will require a permit from CDPHE (prepared by others).
12. Area of site expected to undergo disturbance is approximately 3.0± acres.
13. Estimated runoff coefficients of the site before construction activities: 80.
Estimated runoff coefficients of the site after construction activities: 95.
14. Existing vegetation is mainly grass with locations of sage. Estimated vegetative cover is "fair".
15. Ultimate receiving water is the Colorado River.
16. Silt fencing of site, construction access, and straw bale check dams to be installed prior to clearing and excavation activities. Temporary measures of inlet protection, swale check dams, and silt fence around fill slopes and stockpiles to be installed immediately after items have been installed. Temporary measures to be removed just prior to the installation of permanent measures such as revegetation, seeding, rip rap, and soil retention blankets.
17. Construction activities can be expected to increase the potential for storm runoff to erode the site. Temporary structures have been designed to contain sediment on the site and to mitigate erosion from construction activities. Straw bale check dams are placed in drainage swales and ditches. Inlets to culverts are protected with straw bales. Riprap is placed on the inlet and outlet sides of culverts. Silt fencing is shown downhill of construction activities. The permanent structures will be riprap protection at inlets and outlets and on ditch thalwegs for slopes where velocities are erosive. Also, revegetation with turf, landscape plants, and/or native grasses with coverage exceeding 70%. The revegetation is expected to match the quality of the storm water discharge from the site to pre-project levels or better.
18. Earth should be bermed on all sides of storage areas for building materials, fertilizers, chemicals, waste piles, equipment maintenance, and fueling areas. Materials should be stored off of ground surface and covered when not in use. Soils contaminated by these must be excavated and disposed of in appropriate manners and at approved locations.
19. Final stabilization and long-term management measures are anticipated to include detention, riprap of concentrated flows, revegetation of site per the landscape plan, and seeding of disturbed areas with native grasses in areas not addressed by the landscape plan. Final stabilization at the site is complete when all soil disturbing activities have been completed, the permanent methods have been employed, and uniform vegetative cover has been established over at least 70% of revegetated areas.
20. See architectural and landscape drawings for construction information pertaining to these items.
21. Contractor responsible to obtain all necessary permits and/or approvals prior to beginning construction.



EROSION CONTROL LEGEND

RB		SOIL RETENTION BLANKET	A mat of biodegradable material placed on all disturbed slopes steeper than 4:1 (H:V) to retain site soils, topsoil, and seeds. The matting provides a temporary vegetative mesh until plants mature.
IP		INLET PROTECTION	The installation of various kinds of sediment trapping measure around inlets, culverts and structures prior to permanent stabilization of the disturbed area; limited to small drainage areas and not intended to control large, concentrated stormwater flows.
SW		PERMANENT DIRECTION OF SWALE	A permanent channel or flow direction constructed across a slope to intercept, direct, and/or divert stormwater runoff to a stabilized outlet to prevent erosion on the slope.
SB		SEDIMENT BASIN	A basin with a controlled stormwater release structure, formed by constructing an embankment of compacted soil across a drainageway, to detain sediment-laden runoff from disturbed areas greater than 5 acres for enough time to allow most of the sediment to settle out. Can be constructed only where there is sufficient space and appropriate topography. Temporary unless designed as a permanent pond.
VTP		VEHICLE TRACKING PAD	A gravel pad, located at the points of vehicular ingress and egress on a construction site, to reduce the mud transported onto roads and paved areas.
STB		STRAW BAIL BARRIER	A temporary sediment barrier composed of anchored straw bales places across or at the toe of a slope to intercept and detain sediment and decrease flow velocities from small drainage areas; applicable where sheet and rill erosion potential is low.
SF		SILT FENCE	A temporary sediment barrier constructed of posts, filter fabric and, in some cases, a wire support fence, placed across or near the toe of a slope or in a minor drainageway to intercept and detain sediment and decrease flow velocities from ranoge areas of limited size; applicable where sheet and rill or small concentrated flows may be a problem. Silt-Sox or approved equal are acceptable.
DC	DC	DUST CONTROL	Reducing surface and air movement of dust during land disturbance, demolition or construction activities in areas subject to dust problems in order to prevent soil loss and reduce the presence of potentially harmful airborne substances. Includes the covering of soil stock piles and construction materials and wetting site soils.

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826 1/2 Grand Avenue Glenwood Springs, CO 81601
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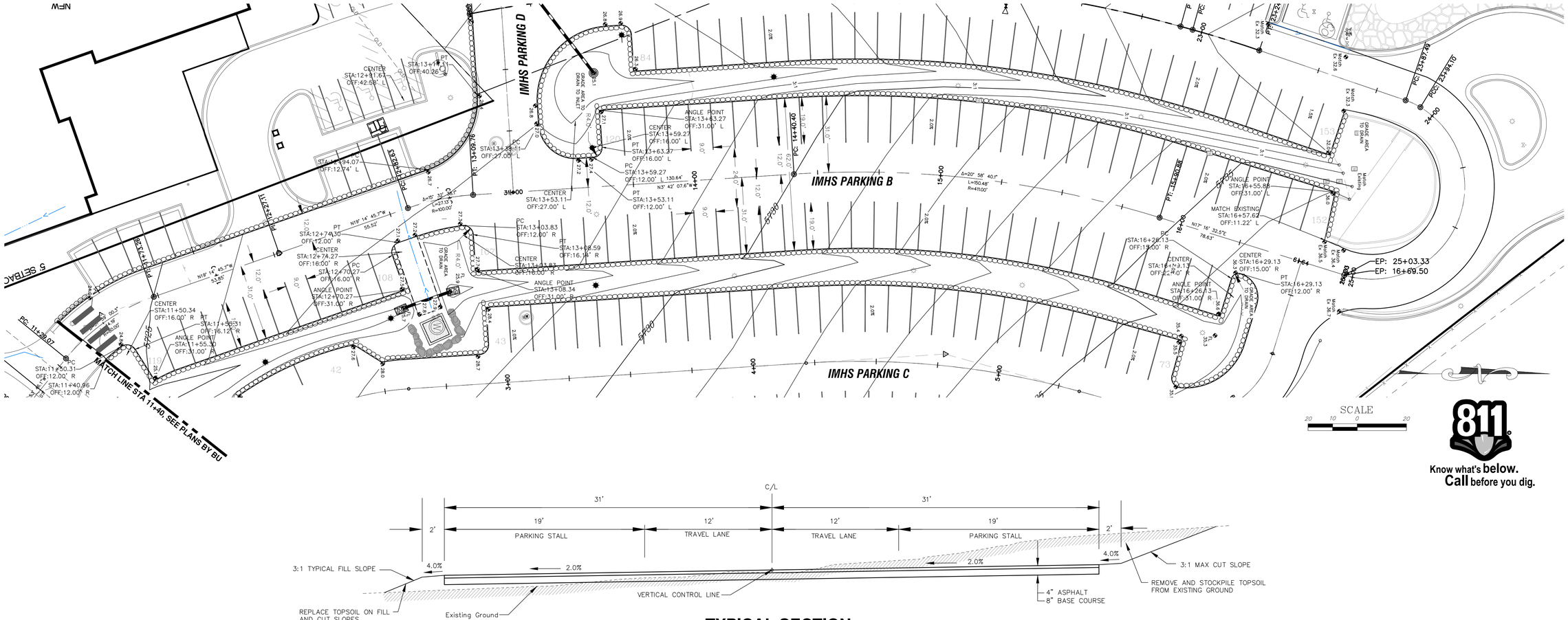
Iron Mountain Hot Springs
Stormwater Management Plan

PRELIMINARY
NOT FOR CONSTRUCTION

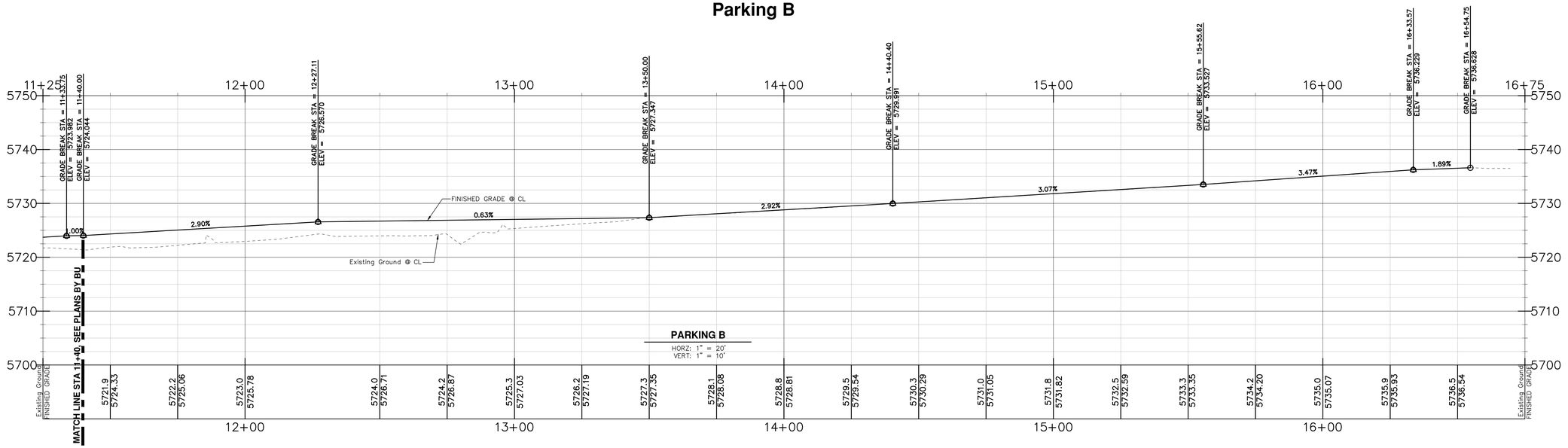
REVISIONS	DATE	BY	COMMENTS

DATE 08/04/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET **C5**

Know what's below. Call before you dig.



TYPICAL SECTION
Parking B



PARKING B
HORZ: 1" = 20'
VERT: 1" = 10'

811 Know what's **below.** **Call** before you dig.

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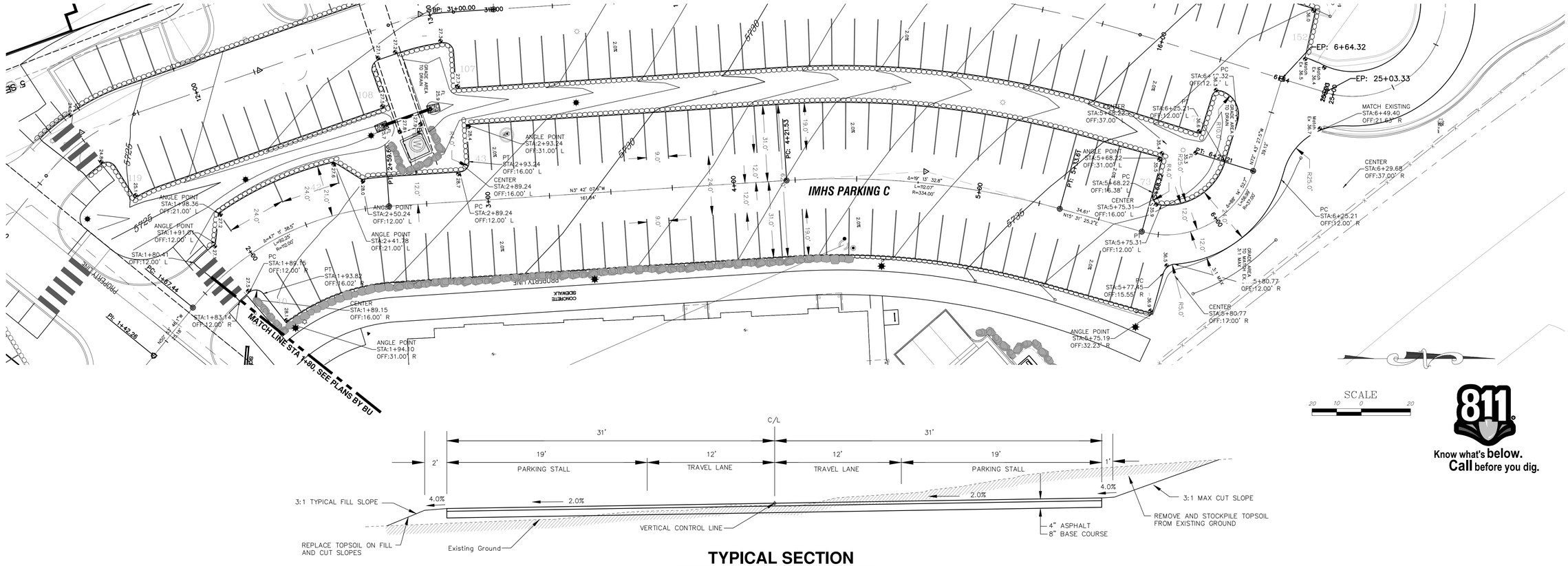
Iron Mountain Hot Springs
Parking Lot B
Plan and Profile

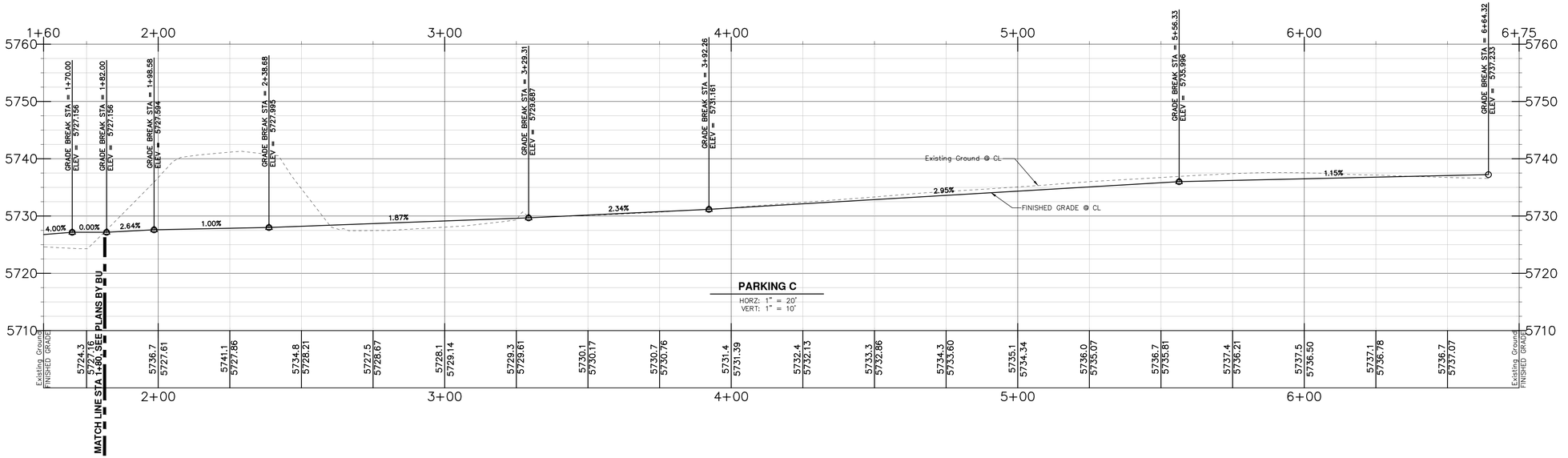
PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 07/22/20
SCALE Horz:1"=20' Vert:1"=10'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET **C6**



TYPICAL SECTION
Parking C



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SCALE
20 10 0 20

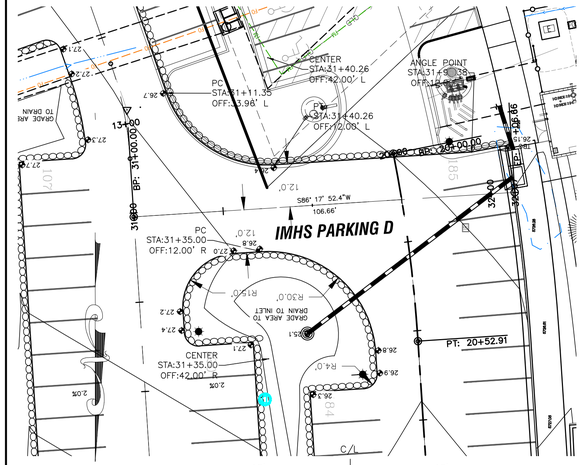
811 Know what's below. Call before you dig.

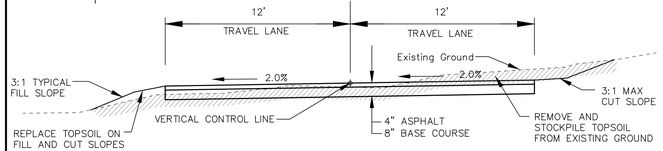
Iron Mountain Hot Springs
Parking Lot C
Plan and Profile

PRELIMINARY
NOT FOR CONSTRUCTION

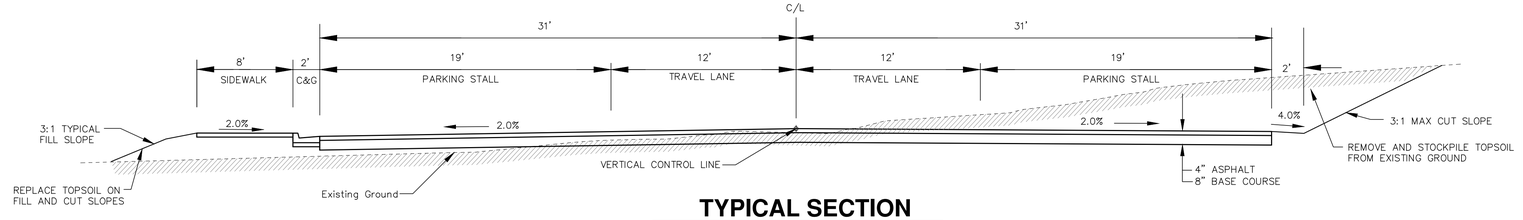
REVISIONS	DATE	BY	COMMENTS

DATE 07/22/20
SCALE Horz:1"=20' Vert:1"=10'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET C7

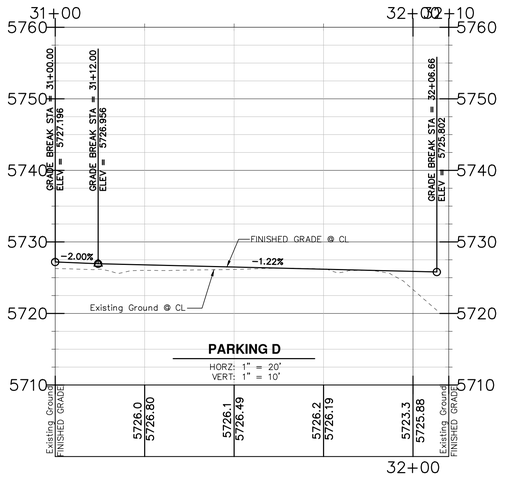


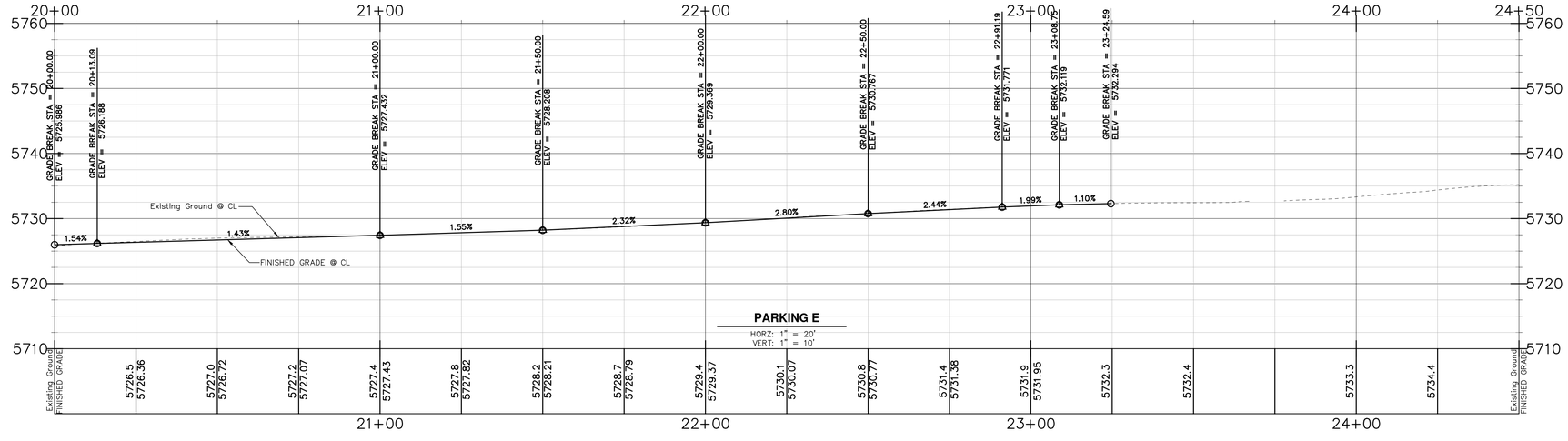


TYPICAL SECTION
Parking D



TYPICAL SECTION
Parking E





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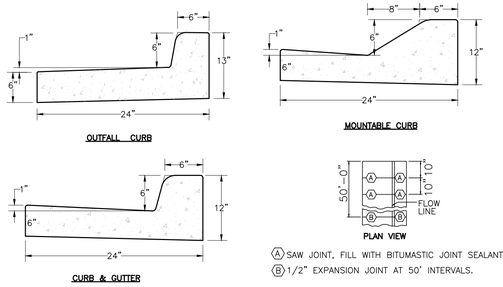
Iron Mountain Hot Springs
Parking Lot D & E
Plan and Profile

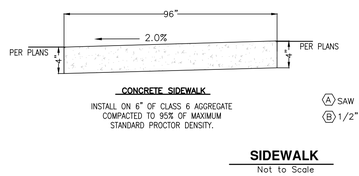
PRELIMINARY
NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

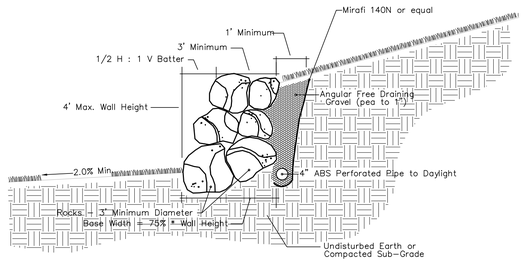
DATE 07/22/20
SCALE Horz:1"=20' Vert:1"=10'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET **C8**



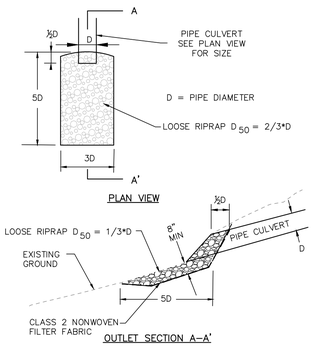
CURB AND GUTTER
Not to Scale



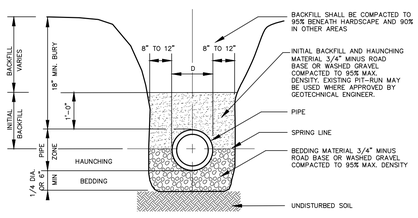
SIDEWALK
Not to Scale



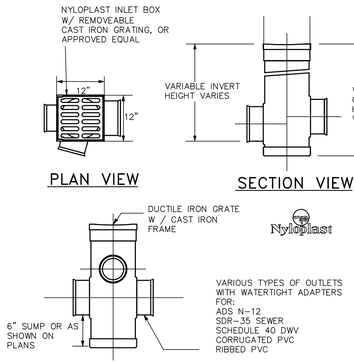
STACKED ROCK WALL DETAIL
NOT TO SCALE



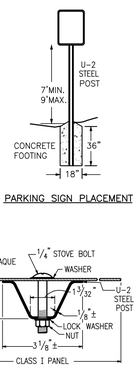
RIPRAP APRON
NOT TO SCALE



CULVERT TRENCH
Not to Scale

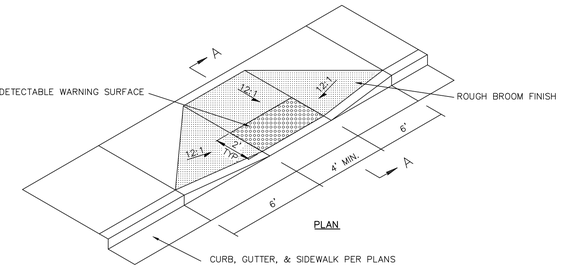


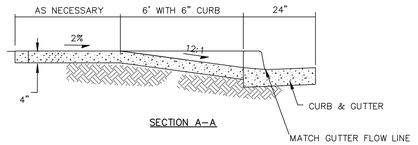
AREA INLET
Not to Scale



NOTES:
1. ALL CLASS I SIGN PANELS SHALL BE SINGLE SHEET ALUMINUM, 0.100" MINIMUM THICKNESS AND SHALL BE FASTENED DIRECTLY TO THE POST.
2. BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED OR CADMIUM PLATED.
3. ALL SIGNS SHALL BE FABRICATED USING RETROREFLECTIVE SHEETING CONFORMING TO ASTM D4956.
4. U-SHAPE STEEL POSTS SHALL BE A UNIFORM FLANGED CHANNEL SECTION MADE FROM HOT ROLLED STRUCTURAL STEEL, RE-ROLLED RAIL STEEL, OR NEW BILLET STEEL HAVING A MINIMUM YIELD STRENGTH OF AT LEAST 30,000 PSI, AND A MINIMUM TENSILE STRENGTH OF AT LEAST 50,000 PSI. U SHAPE POSTS SHALL WEIGH 2 LBS/FT.
4. U-SHAPE POSTS SHALL HAVE $\frac{3}{8}$" HOLES DRILLED OR PUNCHED ON 1" OR 2" CENTERS FOR THE TOP 4 FEET OF THE POST AS A MINIMUM, WITH THE FIRST HOLE 1-$\frac{1}{2}$" FROM THE TOP OF THE POST.
5. VERTICAL SPACING BETWEEN SIGN PANELS ON THE SAME POST SHALL BE 1" MIN. TO 2" MAX.

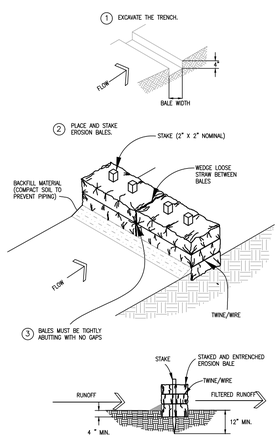
STREET SIGNS
NOT TO SCALE



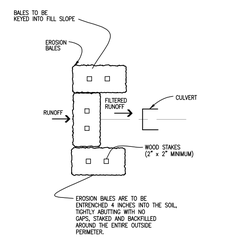


INSTALL ON 6" OF CLASS 6 AGGREGATE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY

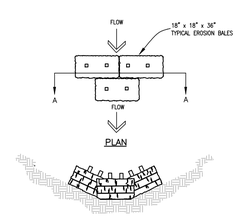
SIDEWALK RAMP DETAIL
NOT TO SCALE



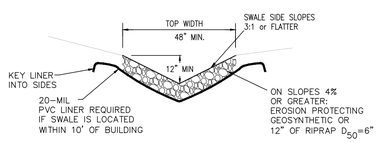
STRAW BALE STAKING
NOT TO SCALE



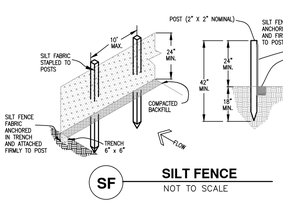
IP **INLET PROTECTION**
NOT TO SCALE



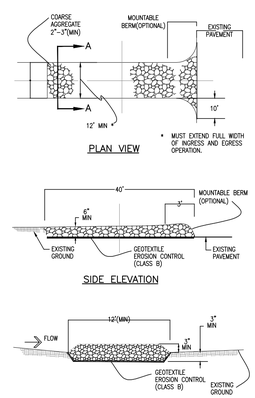
STB **STRAW BALE BARRIER**
NOT TO SCALE



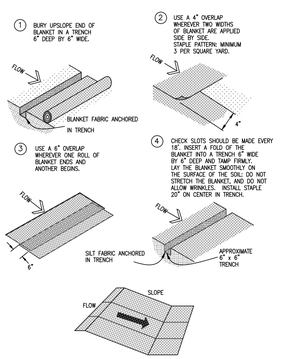
SW **DRAINAGE SWALE**
NOT TO SCALE



SF **SILT FENCE**
NOT TO SCALE



VTP **VEHICLE TRACKING PAD**
NOT TO SCALE



PLACE BLANKET PARALLEL TO THE DIRECTION OF FLOW AND ANCHOR SECURELY. BRING BLANKET TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.

RB **SOIL RETENTION BLANKETS**
NOT TO SCALE

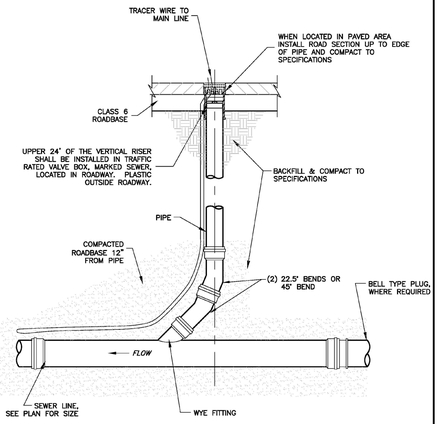
MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com

Iron Mountain Hot Springs
Details

PRELIMINARY NOT FOR CONSTRUCTION

REVISIONS	DATE	BY	COMMENTS

DATE 07/22/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564-005
SHEET **C9**



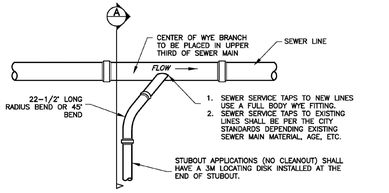
NOTES:

1. MUST BE TRAFFIC RATED IF INSTALLED IN TRAFFIC AREAS.

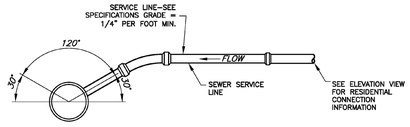
SEWER CLEAN–OUT

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Sewer Clean-Out	Approved: XX Date: 3/22/16 Modified: 3/22/16 File: SewerCleanOutDetail	Drawing # S05
Division:	Sewer Standard Details		



PLAN



SECTION A

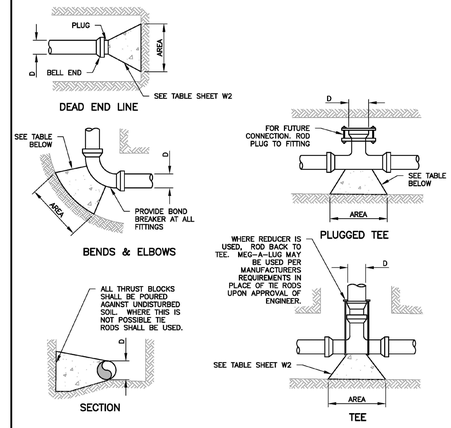
NOTES:

1. MINIMUM SEPARATION BETWEEN TAPS SHALL BE 5' PER STANDARDS.
2. BACKFILL UNDER WYE TO BE ROADBASE AGGREGATE BASE COURSE. 95% COMPACTION DENSITY PER ASTM D–698.

SEWER SERVICE CONNECTION

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Sewer Service Connection Detail	Approved: XX Date: 3/22/16 Modified: 3/22/16 File: SewerServiceDetail	Drawing # S06
Division:	Sewer Standard Details		



City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/15 Modified: File: WaterThrustBlock	Drawing # W01
Division:	Water Standard Details		

SIZE	BEARING AREAS (IN SQ. FT.)				
	BENDS				TEES, DEAD ENDS, AND CROSS w DEAD END BRANCHES
	90°	45°	22 1/2°	11 1/2°	
3	1.0	0.6	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	2.2	1.1	0	2.8
8	7.1	3.8	2.0	1.0	5.0
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.6	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.6
16	28.4	15.3	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.2	6.1	31.4
21	49.0	26.5	13.5	6.8	34.6
22	54.0	29.0	14.8	7.4	38.0
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.6	13.8	71.0
36	144.0	78.0	40.0	20.0	102.0

NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 lbs. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

F= ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF lbs. / ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF lbs.

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER

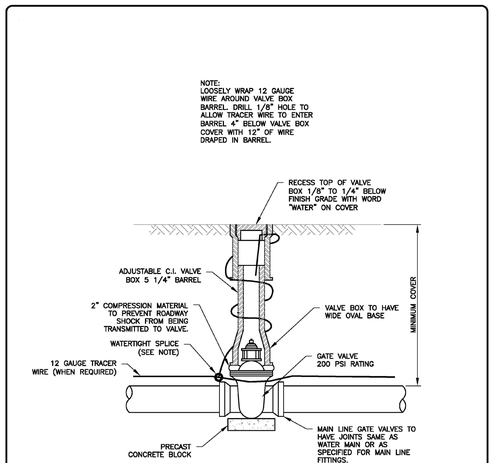
ALL WATER LINE PLANS SHALL CONTAIN THE FOLLOWING TABLE, WITH THE VALUES FILLED IN BY THE ENGINEER:

SOIL BEARING CAPACITY – _____LBS/SQ. FT.
TEST PRESSURE – _____P.S.I.
BEARING AREA MULTIPLIER (F) – _____

CONCRETE THRUST BLOCK DETAILS

N.T.S.

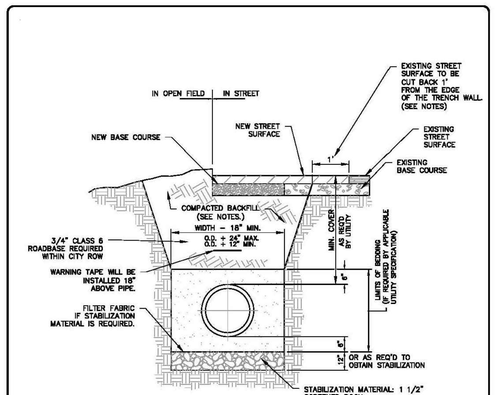
City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/15 Modified: File: WaterThrustBlock	Drawing # W02
Division:	Water Standard Details		



GATE VALVE DETAIL

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Gate Valve Detail	Approved: XX Date: 2/23/15 Modified: 2/23/15 File: WaterGateValveDetail	Drawing # W04
Division:	Water Standard Details		



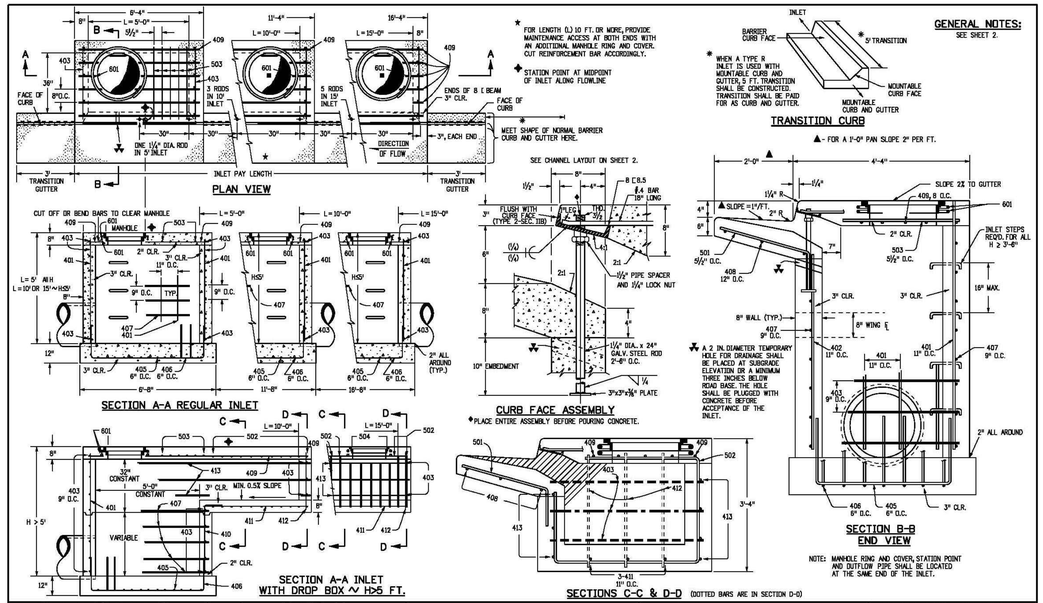
NOTES:

1. RIGHT OF WAY & EASEMENT AREAS SHALL BE GRADED (CUT & FILL) TO SUBGRADE (+/–0.5) AT UTILITY LOCATIONS INCLUDING SERVICES, PRIOR TO UTILITY INSTALLATION.
2. BACKFILL TO BE COMPACTED TO 95% AND WITHIN TWO (2)% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY A.S.T.M. D–698 DENSITY IN ALL AREAS UNLESS OTHERWISE NOTED.
3. TRENCH EXCAVATION SHALL COMPLY WITH ALL OSHA STANDARDS.
4. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
5. A ONE FOOT CUT BACK IS NOT REQUIRED IF FLOW FILL IS USED FOR BACKFILL.

TRENCH EXCAVATION & BACKFILL DETAIL

N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Trench Excavation & Backfill Detail	Approved: XX Date: 2/23/15 Modified: 2/23/15 File: Trench Excavation & Backfill Detail	Drawing # W13
Division:	Water Standard Details		



Computer File Information		Sheet Revisions	
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Designer Initials: JBK			
Last Modification Date: 07/31/19			
Detailer Initials: LTA			
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

CURB INLET TYPE R

Issued by the Project Development Branch: July 31, 2019

STANDARD PLAN NO.
M-604-12
Standard Sheet No. 1 of 2
Project Sheet Number:

MOUNTAIN CROSS ENGINEERING, INC.
Civil and Environmental Consulting and Design
826 1/2 Grand Avenue Glenwood Springs, CO 81601
ph 970.945.5544 fx 970.945.5558 www.mountaincross-eng.com

Iron Mountain Hot Springs
Details

PRELIMINARY
NOT FOR CONSTRUCTION

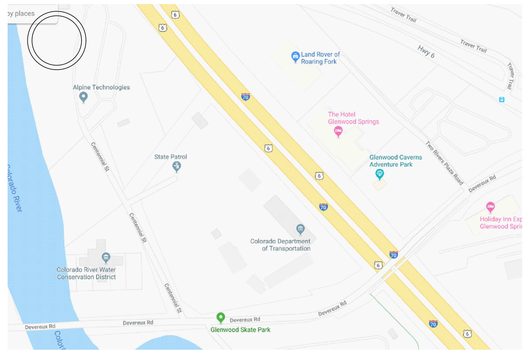
REVISIONS			
DATE	BY	COMMENTS	

DATE 07/22/20
SCALE 1"=20'
ENGINEER C. HALE
DWG FILE IronMtn
JOB 564–005
SHEET C10

IRON MOUNTAIN HOT SPRINGS

ENTRANCE BUILDING
- CHECK IN
- RETAIL
- RESTAURANT
- MEN'S AND WOMENS' LOCKER ROOMS
  - one accessible unit
  - all others adaptable

GLENWOOD SPRINGS
GARFIELD COUNTY, COLORADO



VACINITY MAP

LIST OF SHEETS

ARCHITECTURAL

A0 COVER SHEET, LIST OF SHEETS, PROJECT DATA
A1 SITE PLAN
A1.1 BLOW UP SITE PLAN

AA2.0 LOWER ENTRANCE BUILDING FLOOR PLAN
AA2.1 MAIN ENTRANCE BUILDING FLOOR PLAN
AA2.2 UPPER ENTRANCE BUILDING FLOOR PLAN

AA3.0 ROOF PLAN

AA4.0 ENTRANCE BUILDING ELEVATIONS
AA4.1 ENTRANCE BUILDING ELEVATIONS
AA4.2 ENTRANCE BUILDING COLOR ELEVATIONS
AA4.3 ENTRANCE BUILDING COLOR ELEVATIONS
AA4.4 ENTRANCE BUILDING VIEWS
AA4.5 ENTRANCE BUILDING RENDERING

AB2.0 POOL BUILDING FLOOR PLAN

AB4.0 BUILDING ELEVATIONS
AB4.1 POOL BUILDING COLORED ELEVATIONS
AB4.2 POOL BUILDING RENDERING

AB5.0 POOL BUILDING SECTIONS

CIVIL

LANDSCAPE:

STRUCTURAL

MECHANICAL, ELECTRICAL, PLUMBING (MEP)

PROJECT DATA

OWNER: IRON MOUNTAIN HOT SPRINGS, LLC (970)945-4766

ARCHITECT: TRIUMPH CUSTOM HOMES (303-475-4413)

STRUCTURAL ENGINEERING: MONROE NEWELL STRUCTURAL ENGINEERS
GRAIG CARROLL (303) 807-8403

MEP ENGINEERING: BURGGRAAF AND ASSOCIATES
MARK BURGGRAAF (970) 240-5990

CONTRACTOR: TBD

SITE: PARCEL #:
MAILING ADDRESS: 281 CENTENINIAL STREET
GLENWOOD SPRINGS, CO 81601
PHYSICAL ADDRESS:

LEGAL: SECTION 9 TOWNSHIP: 6 RANGE 89 SUBDIVISION
TWO RIVERS PLAZA REPLAT OF 1A & 1B
BLOCK 2 / LOT 1

ZONING: RE-RESORT DISTRICT

BLDG. HT: 46'-0" AT HIGHEST RIDGE, WEST SIDE OF SECOND FLOOR TO NEW GRADE

DESCRIPTION: NEW ENTRANCE BUILDING FOR RESORT EXPANSION

NOTES:

1. BUILDING CODES:
ALL WORK SHALL COMPLY WITH THE CURRENT CODES, THE INTERNATIONAL BUILDING CODE 2015. INCLUDING THE INTERNATIONAL ENERGY CODE 2009, THE INTERNATIONAL PLUMBING AND MECHANICAL CODES, THE CURRENT NEC AND A LOCAL CODES HAVING JURISDICTION.

2. PROPOSED BUILDING TYPE:
TYPE V-A, NFPA 13R SPRINKLED BUILDING
OCCUPANT GROUP:
R-2 - 200 SF / OCCUPANT
BUSINESS - 100 SF / OCCUPANT
MINIMUM FIRE RESISTIVE REQUIREMENTS:
STRUCTURAL FRAME 1 HR
BEARING WALLS 1 HR
FLOOR CONSTRUCTION 1 HR
ROOF CONSTRUCTION 1 HR

OCCUPANCY SEPARATION:

FIRE PROTECTION SYSTEM SUBMITTED SEPRATELY (SECTION 903.3)

SMOKE DETECTION SHALL BE PROVIDED THROUGHOUT.

FIRE ALARM SYSTEM (SECTION 907) PROVIDED THROUGHOUT

3. PROPOSED ENERGY COMPLIANCE:
WINDOW AND DOORS, U-0.35 OR LESS.
MINIMUM R-VALUES,
CEILINGS AND ROOFS, R-38
WALLS, R-23
FLOORS, R-11
SLAB PERIMETER AND DEPTH, R10/24-IN
CRAWL SPACE, R-10/13

TRIUMPH
Vail Office
12 Vail Road.
PO Box 4700
Vail, CO 81657
Tel: 970.479.9980
www.triumphdev.com

IRON MOUNTAIN HOT SPRINGS
NEW ENTRANCE BUILDING
281 CENTENNIAL STREET
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Revisions:

Sheet title: COVER SHEET

Stamp

Date: 7/23/2020
Project No:
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Sheet: A0.0

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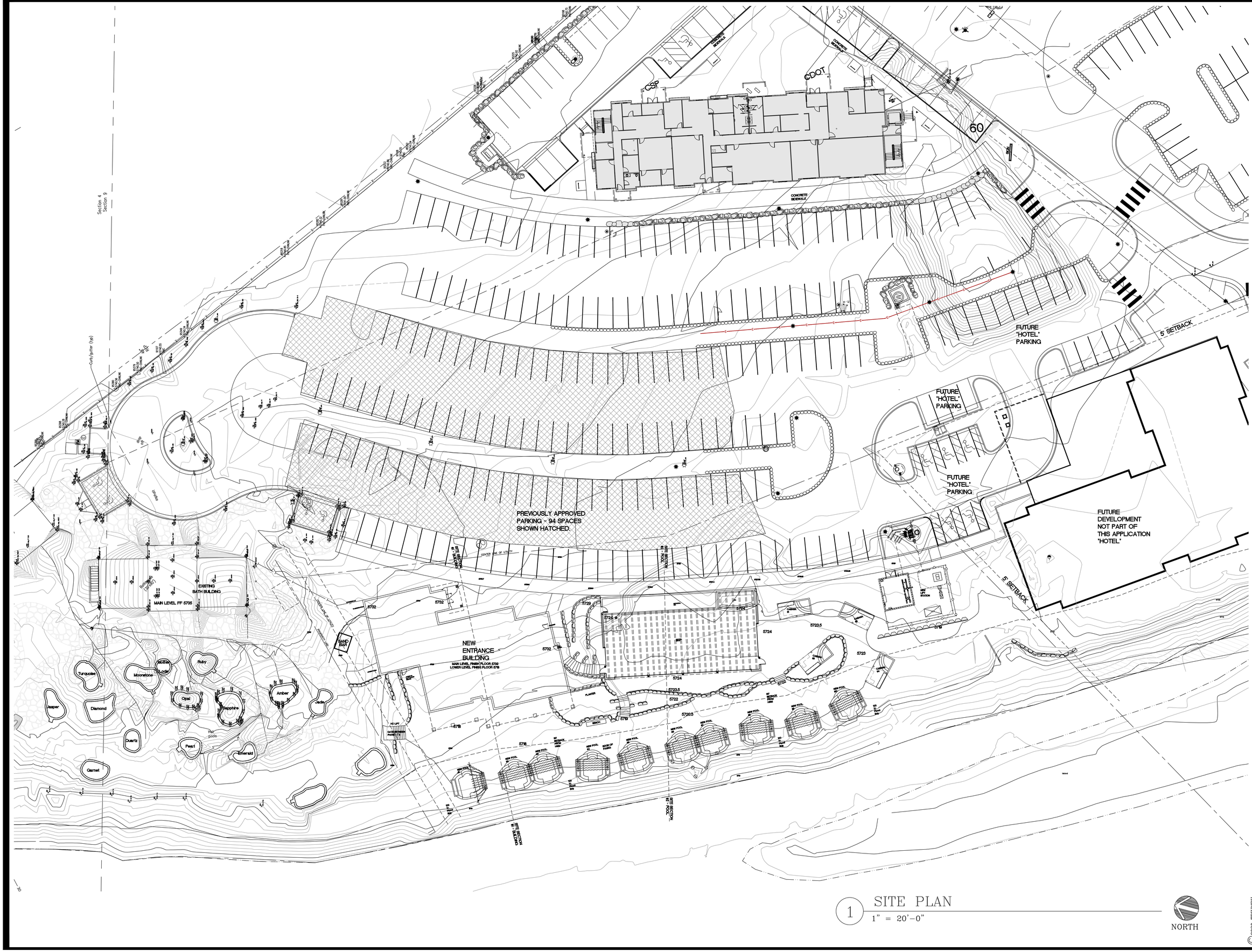

1 SITE PLAN
1" = 20'-0"

NORTH

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IRONTON MOUNTAIN HOT SPRINGS
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Revisions:

Sheet title: SITE PLAN

Stamp

Date: 8-6-20
Project No:
Drawn by: MEF
Checked by: MEF

Sheet: A1.0

1 SITE PLAN
1" = 20'-0"

NORTH

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Sheet A1.0B	Date: 8-04-20 Project No: Drawn by: MEF Checked by: MEF	Stamp	Sheet title EXISTING SITE PLAN	Revisions:	IRON MOUNTAIN HOT SPRINGS NEW ENTRANCE BUILDING 281 CENTENNIAL STREET GLENWOOD SPRINGS, CO 81601	TRIUMPH Vail Office 12 Vail Road, suite 700 Vail, CO 81657 Tel: 970.479.9990 www.triumphdev.com

Packet Page 641

PREVIOUSLY APPROVED
PARKING - 94 SPACES
SHOWN HATCHED.

SITE SECTION #1 - BUILDING

SITE SECTION #2 - POOL

CENTER LINE OF UTILITY

PROPERTY LINE

NEW ENTRANCE BUILDING

MAIN LEVEL FINISH FLOOR 5732
LOWER LEVEL FINISH FLOOR 5718

SAND BAR

Jade

HC LIFT

GATE BETWEEN PHASE 1 / 2

PLANTER

BENCH

30' SETBACK FROM HWM

EDGE OF PAVING

NEW POOL #1

NEW POOL #2

NEW POOL #3

NEW POOL #4

NEW POOL #5

NEW POOL #6

NEW POOL #7

NEW POOL #8

NEW POOL #9

NEW POOL #10

CABANA #1

CABANA #2

CABANA #3

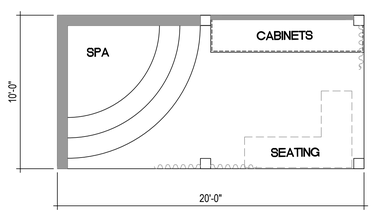
CABANA #4

100 Yr. Flood Bdy

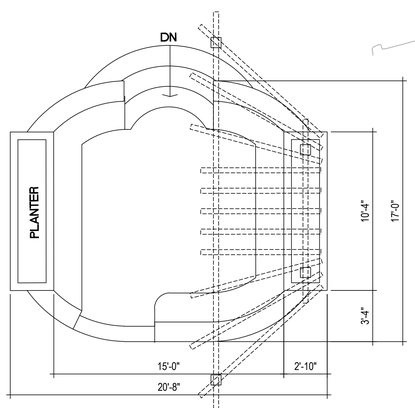
5732 5729 5724 5723.5 5723 5722 5720.5 5719 5718

1 PARTIAL SITE PLAN
1" = 10'-0"

NORTH



2 CABANA PLAN
1/4" = 1'-0"



3 SPA PLAN(S)
1/4" = 1'-0"

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Sheet title
PARTIAL SITE PLAN

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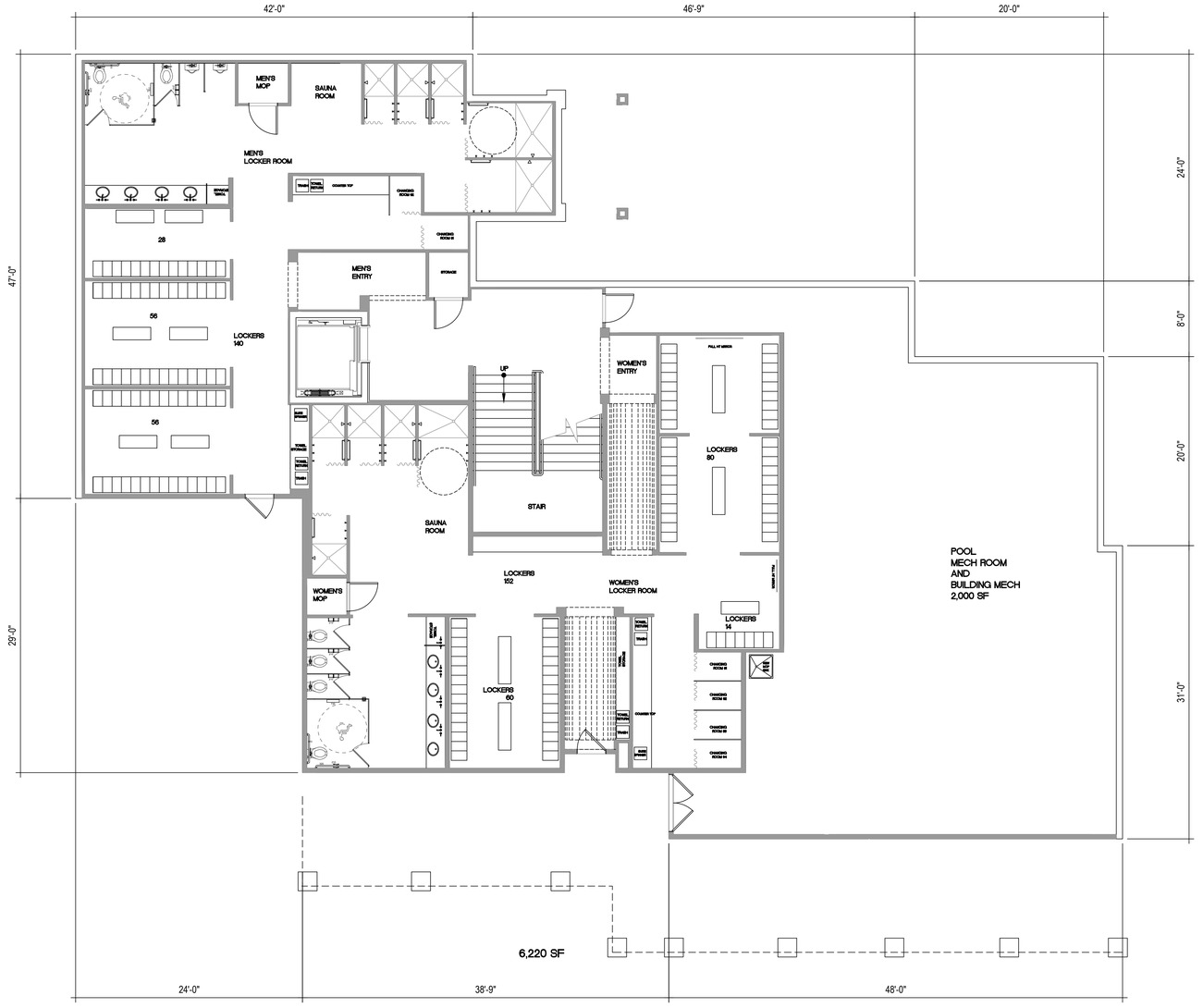

1 ENTRANCE BUILDING LOWER LEVEL

$\frac{3}{16}$" = 1'-0"

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BUILDING PLANS

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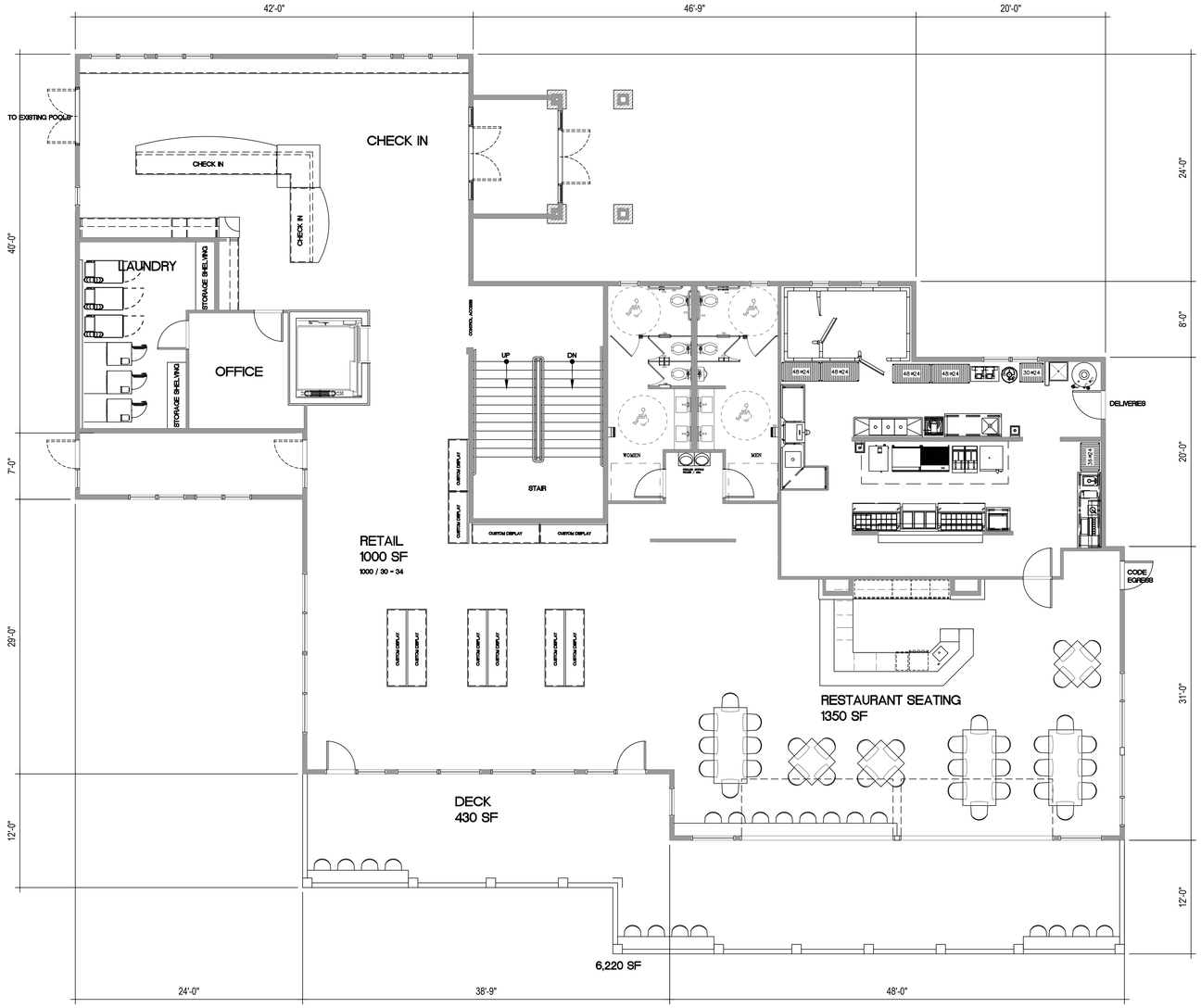

1 ENTRANCE BUILDING MAIN LEVEL

3/16" = 1'-0"

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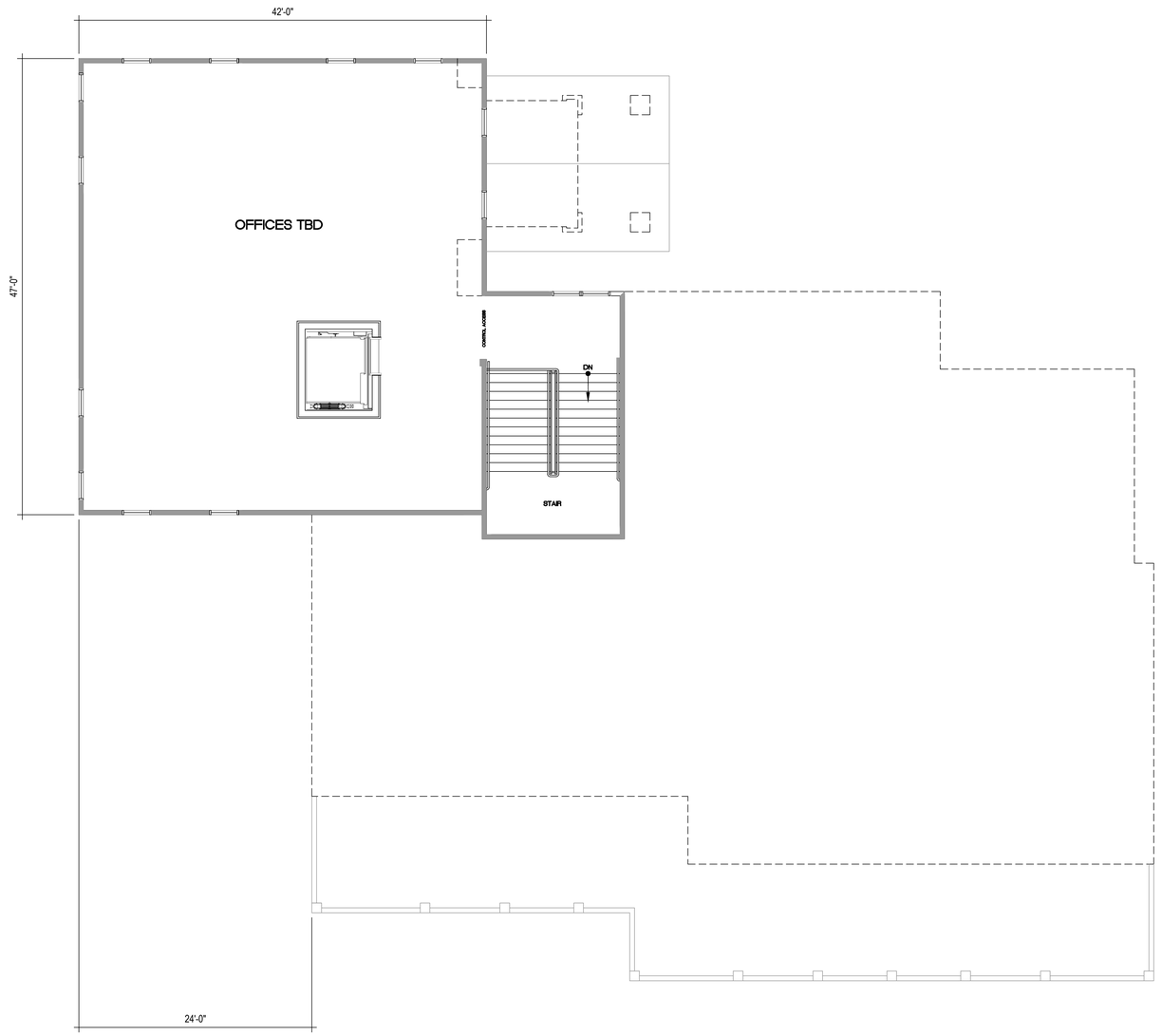

1 ROOF PLAN

3/16" = 1'-0"

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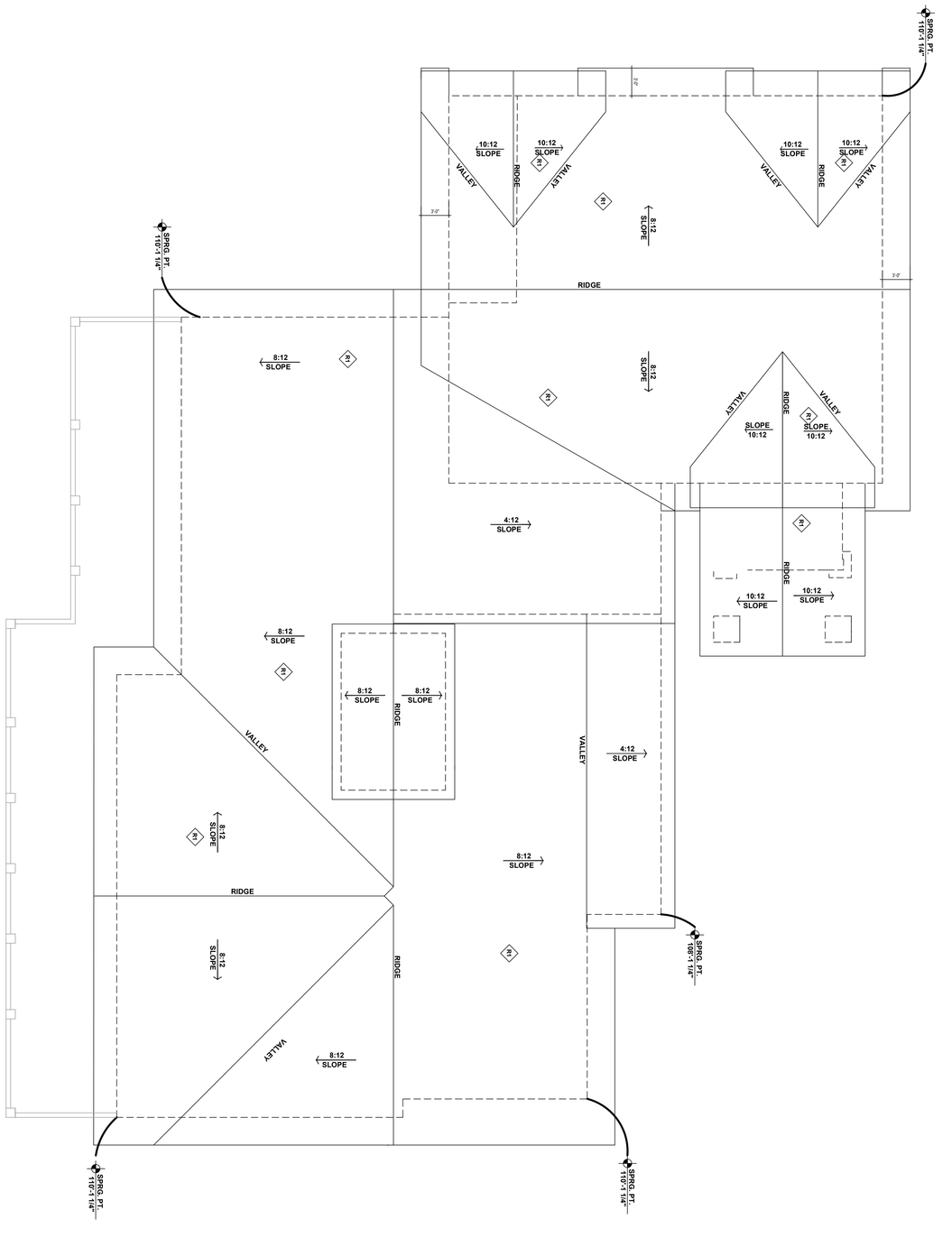

1 ROOF PLAN

3/16" = 1'-0"

NORTH

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A3.0	Project No:		FLOOR PLAN		281 CENTENNIAL STREET GLENWOOD SPRINGS, CO 81601	Vail Office 12 Vail Road, suite 700 Vail, CO 81657 Tel: 970.479.9990
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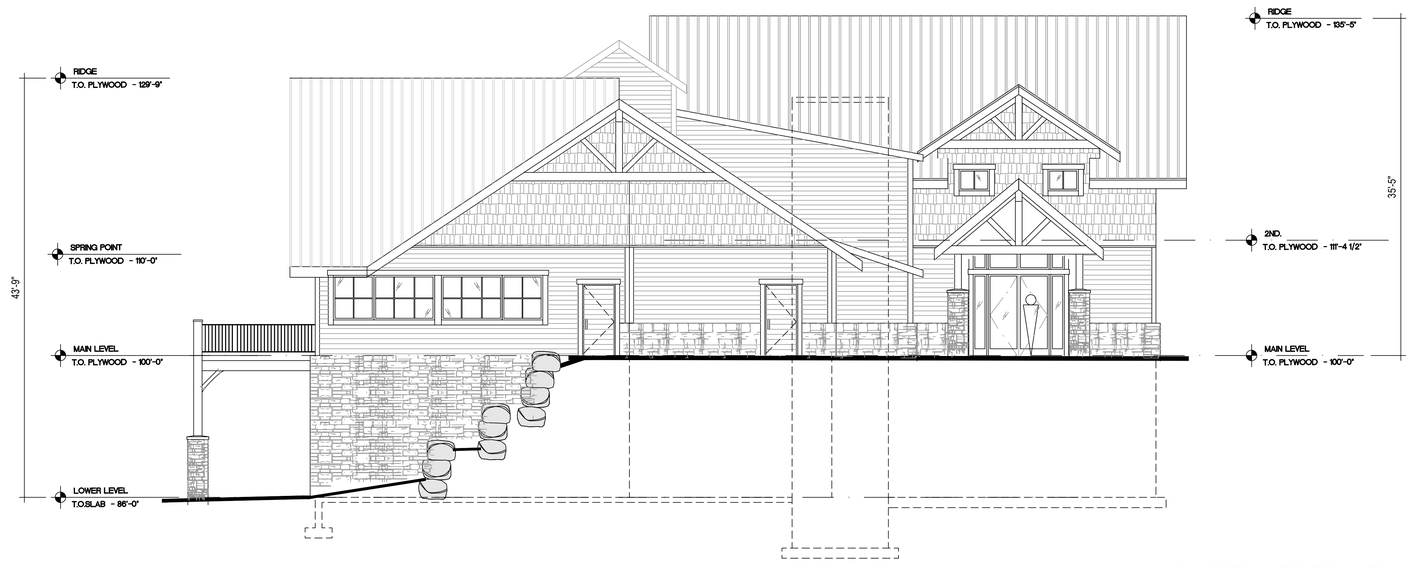
1 EAST ELEVATION

3/16" = 1'-0"



2 SOUTH ELEVATION

3/16" = 1'-0"

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Sheet title
BUILDING ELEVATIONS

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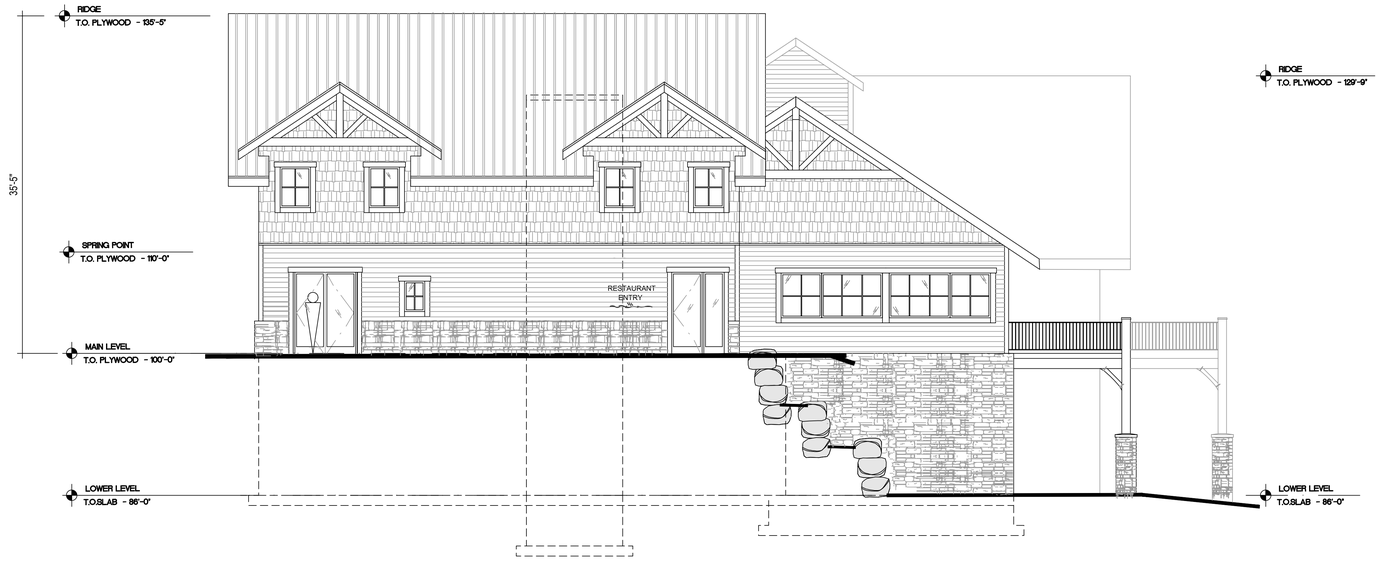
1 WEST ELEVATION

3/16" = 1'-0"



2 NORTH ELEVATION

3/16" = 1'-0"

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IRON MOUNTAIN HOT SPRINGS
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Revisions:

Sheet title
BUILDING ELEVATIONS

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Date: 6-8-20
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A4.1

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1 EAST ELEVATION

2 SOUTH ELEVATION

EXTERIOR MATERIALS AND COLORS TO MATCH EXISTING BATH HOUSE.

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1 WEST ELEVATION

2 NORTH ELEVATION

EXTERIOR MATERIALS AND COLORS TO MATCH EXISTING BATH HOUSE.

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Revisions:

Sheet title: BUILDING ELEVATIONS

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Sheet: A4.3

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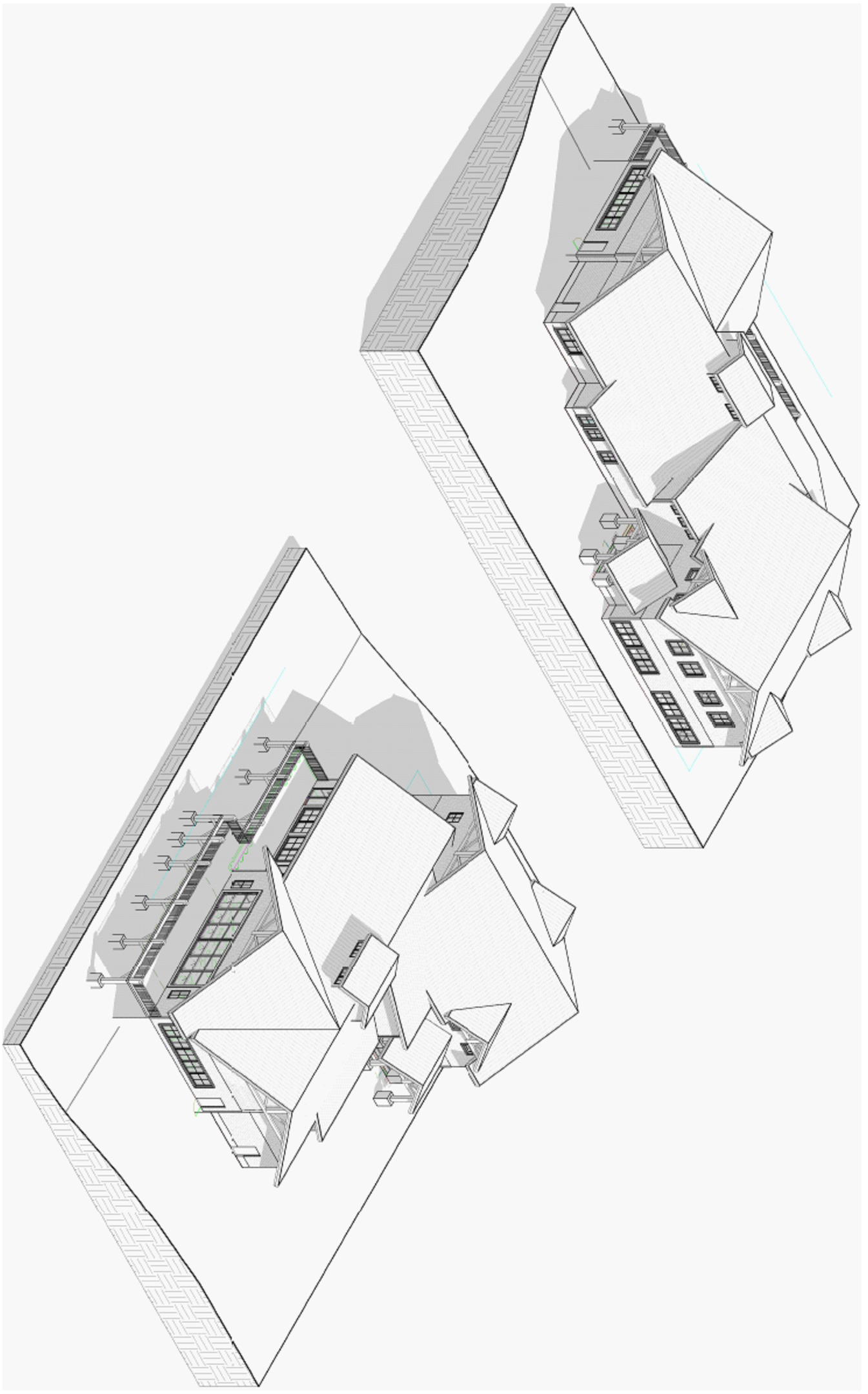

ENTRANCE BUILDING

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Sheet A4.4	Date: 6-8-20 Project No: Drawn by: MEF Checked by: MEF	Stamp	Sheet title BUILDING ELEVATIONS	Revisions:	IRON MOUNTAIN HOT SPRINGS NEW ENTRANCE BUILDING 281 CENTENNIAL STREET GLENWOOD SPRINGS, CO 81601	TRIUMPH Vail Office 12 Vail Road, suite 700 Vail, CO 81657 Tel: 970.479.9990 www.triumphdev.com

ENTRANCE BUILDING

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Vail, CO 81657
Tel: 970.479.9980
www.triumphdev.com

IRON MOUNTAIN HOT SPRINGS
NEW ENTRANCE BUILDING
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601

Revisions:

Sheet title
BUILDING ELEVATIONS

Stamp

Date: 6-8-20
Project No:
Drawn by: MEF
Checked by: MEF

Sheet
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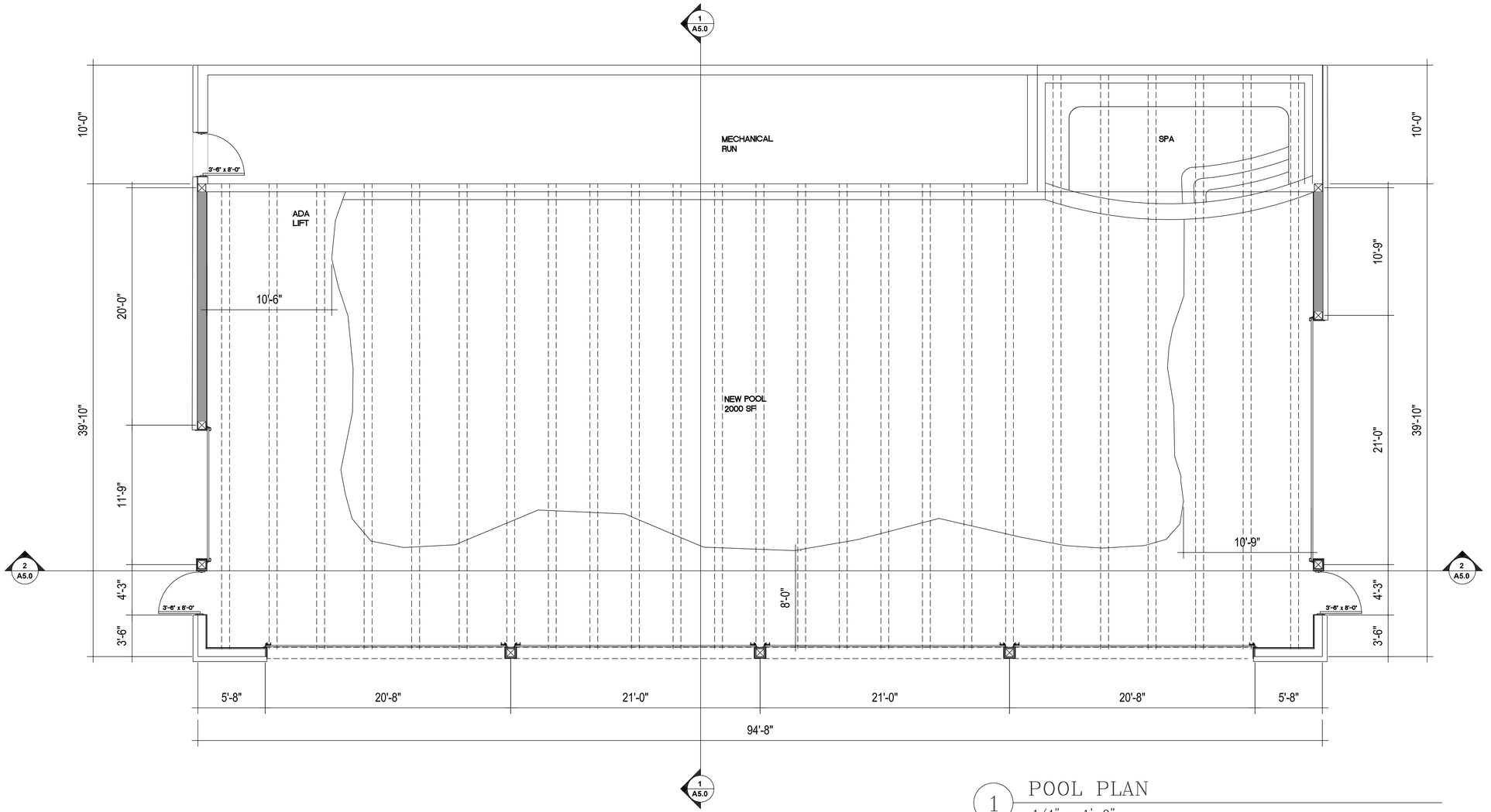

1 POOL PLAN
1/4" = 1'-0"

POOL BUILDING

NORTH

TRIUMPH
Vail Office
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Vail, CO 81657
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IRON MOUNTAIN HOT SPRINGS
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Revisions:

Sheet title
POOL BUILDING PLAN

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Date: 7-23-20
Project No:
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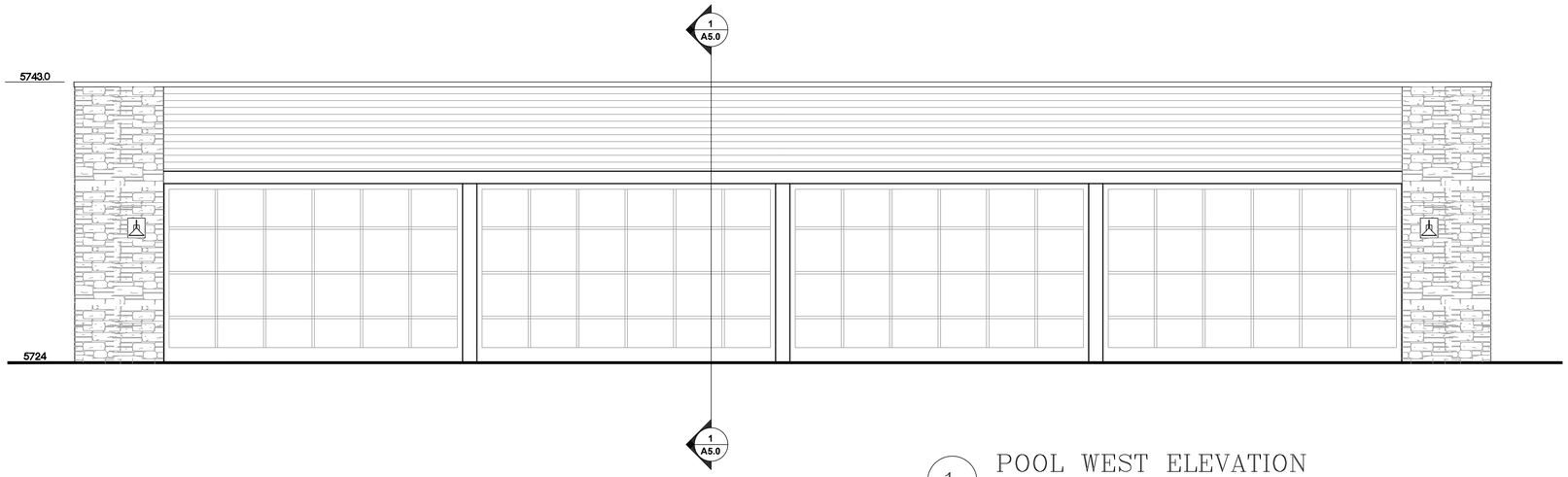

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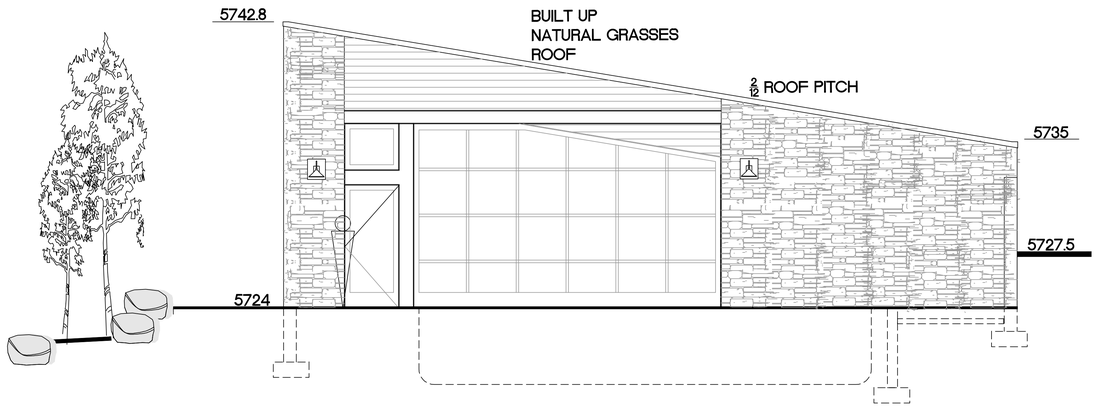
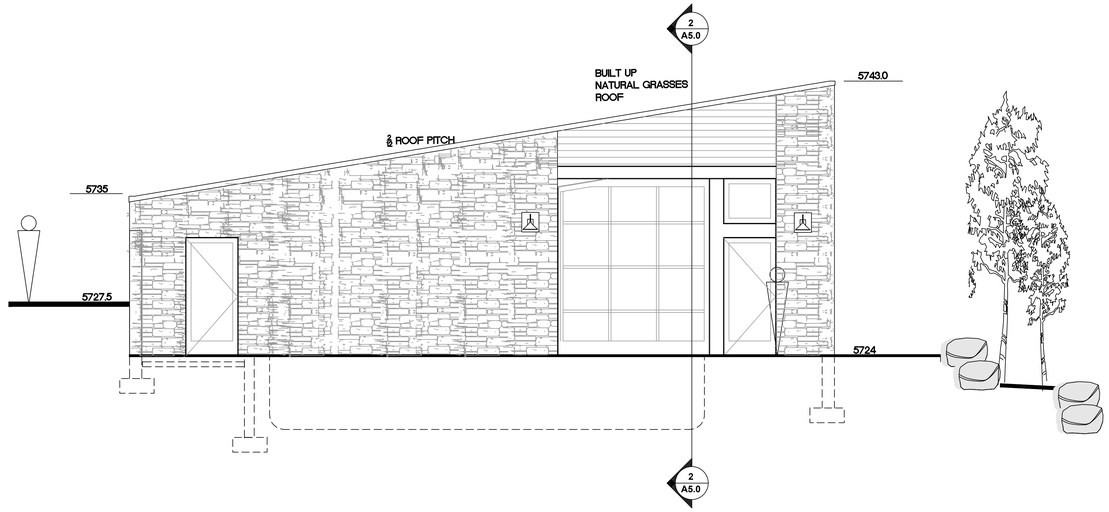
1/4" = 1'-0"



3 POOL SOUTH ELEVATION
1/4" = 1'-0"



2 POOL NORTH ELEVATION
1/4" = 1'-0"

POOL BUILDING

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GLENWOOD SPRINGS, CO 81601

Revisions:

Sheet title
POOL BUILDING ELEVATIONS

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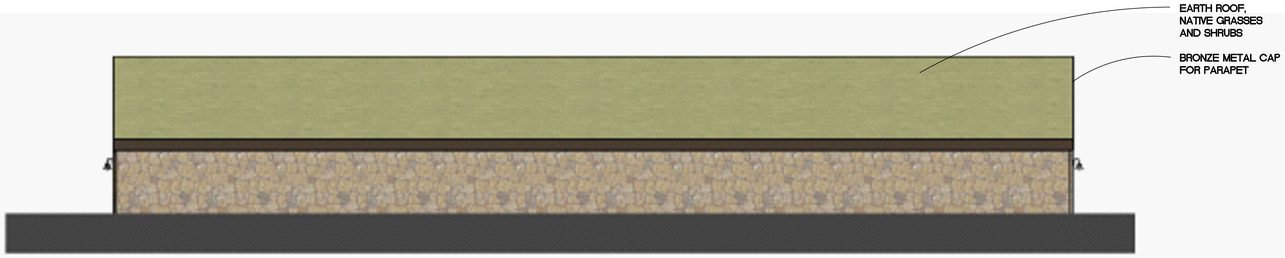
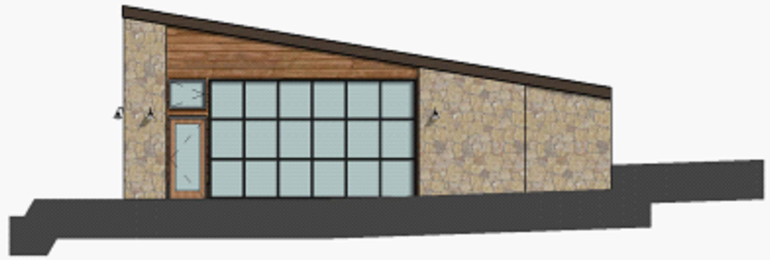


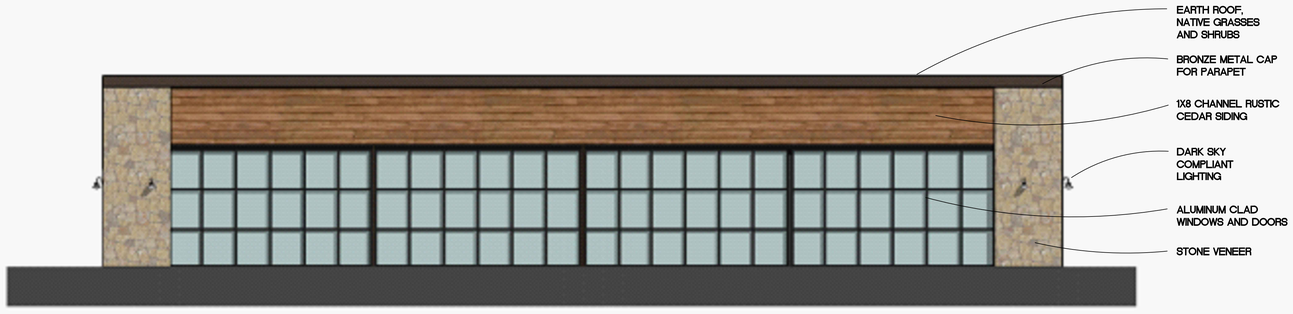
4 EAST ELEVATION

1/16" = 1'-0"



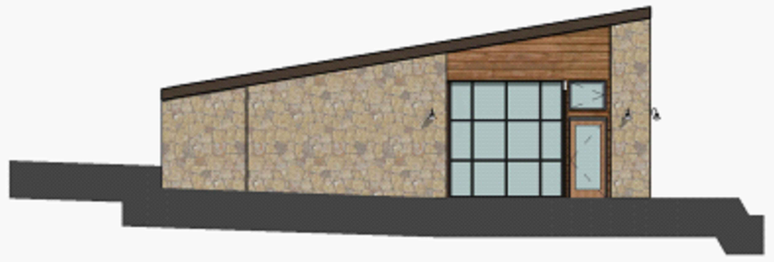
2 SOUTH ELEVATION

1/16" = 1'-0"



3 WEST ELEVATION

1/16" = 1'-0"



1 NORTH ELEVATION

1/16" = 1'-0"

POOL BUILDING

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POOL BUILDING

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Revisions:

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POOL BUILDING ELEVATIONS

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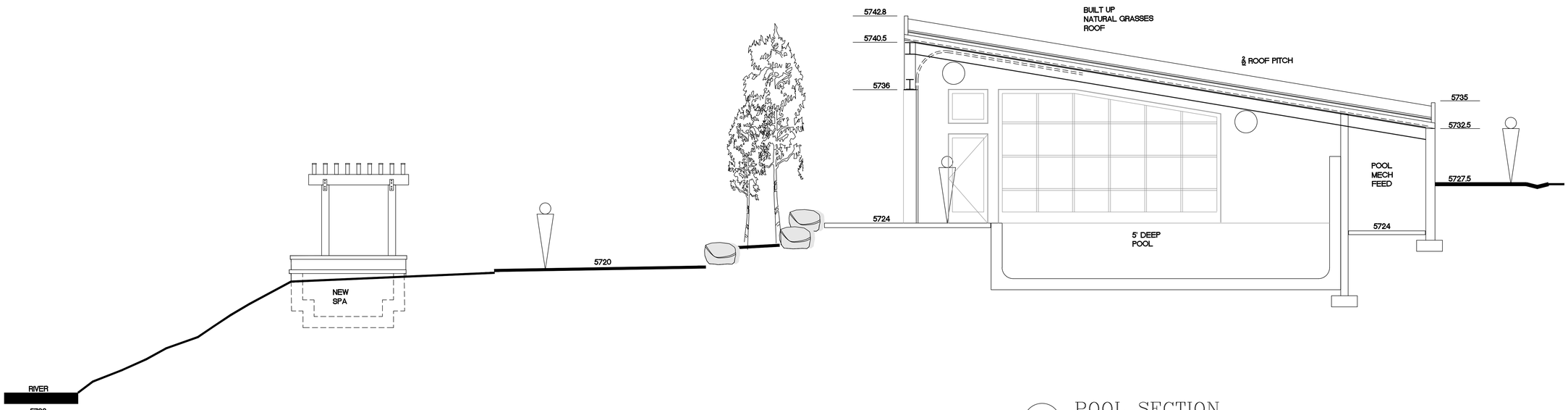
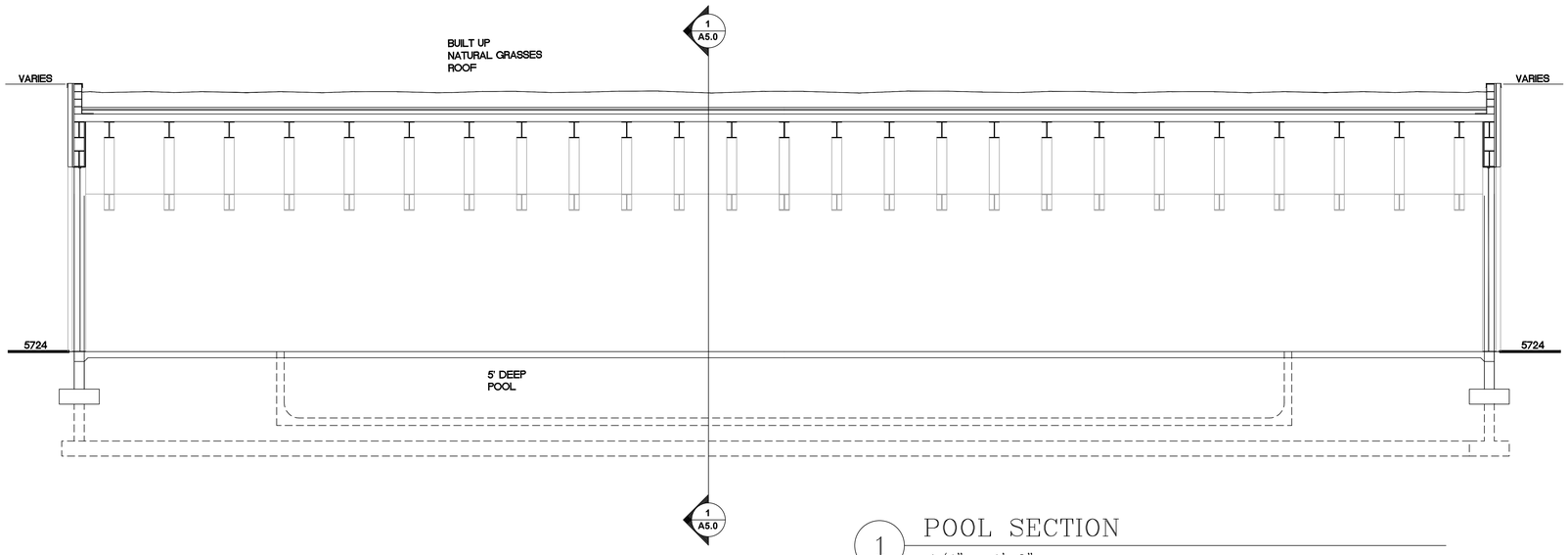


1 POOL SECTION

1/4" = 1'-0"



1 POOL SECTION

1/4" = 1'-0"

POOL BUILDING

NORTH

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12 Vail Road.
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Vail, CO 81657
Tel: 970.479.9980
www.triumphdev.com

IRON MOUNTAIN HOT SPRINGS
NEW ENTRANCE BUILDING
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601

Revisions:

Sheet title
POOL
BUILDING
SECTIONS

Stamp

Date: 7-23-20
Project No:
Drawn by: MEF
Checked by: MEF

Sheet
AB5.0

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Site Use Calculations
Hatched area #1 (parking area) = 91,379 sq. ft.
Hatched area #2 (building and pool area) = 55,561 sq. ft
Total site area = 146,940 sq. ft.

Common Open Space Area (10% of total site area)

Total site area = 146,940 sq. ft.
129,946 sq. ft x 10% = 14,694 sq. ft required Common Open Space
Actual Common Open Space = 44,927 sq. ft. (Area #2 less buildings and pool)

Minimum Landscaped Site Area (10% of total site area)

Total site area = 146,940 sq. ft
146,940 sq. ft x 10% = 14,694 sq. ft required landscaped site area
Actual Landscaped Site Area = 25,821 sq. ft. (not including parking landscape)

Parking Landscaped Area

Parking surface area = 70,984 sq. ft
70,984 sq. ft x 20% = 14,197 sq. ft required landscaped parking area
Actual Parking Landscaped Area = 19,151 sq. ft.

Landscape Requirements

Perennials: 1 per 50 s.f. of required landscape = 284
Shrubs: 1 per 100 s.f. of required landscape area = 142
Trees: 1 per 400 s.f. of required landscape area = 36

Coniferous Trees			
CS	6' Colorado Spruce 'Bacheri'	Picea pungens	6
Deciduous Trees			
All trees to be 2.5" cal. when available			
RB	River Birch	Betula nigra	5
O	Swamp White Oak	Quercus Bicolor	4
RH	Russian Hawthorn	Crataegus ambigua	5
GM	Ginnala Flame Maple	Acer ginnala	5
PC	Autumn Blaze Pear	Pyrus calleryana	2
H	Imperial Honeylocust	Gleditsia triacanthos inermis imperial	6
	Existing Trees		7
		Total Trees	40
Shrubs,			
All shrubs #5 container			
P	Pink Beauty Potentilla	Potentilla Fruticosa 'Pink Beauty'	14
N	Little Devil Ninebark	Physocarpus opulifolius 'Donna May'	12
S	Spirea, Snowmound	Spirea Nipponica 'Snowmound'	16
BS	Blue Mist Spirea	Caryopteris x clandonensis 'Blue Mist'	12
RB	Red Leaf Barberry	Berberis thunbergii 'Atropurpurea'	12
BT	Big Tuna Pine	Pinus Mugo 'Big Tuna'	16
W	Bailey's Redtwig Dogwood	Cornus sericea 'Baileyi'	25
MS	3' Montgomery Spruce	Picea pungens	12
R	Roses	Assorted Hardy Shrub Roses	17
PA	Pink Flowering Almond	Prunus Glandulosa 'Rosea Plena'	6
		Total Shrubs	142
Perennials & Grasses			
#1 container			
	Blue Avena Grass	Helictotrichon sempervirens	20
	Heavy Metal Switch Grass	Panicum Virgatum 'Heavy Metal'	20
	Karl Foerster Grass	Calamagrostis acutiflora 'Karl Foerster'	25
	Black-Eyed Susan	Rudbeckia fulgida 'Goldstrum'	20
	Firecracker Penstemon	Penstemon Eatonii	20
	May Night Salvia	Salvia nemorosa 'May Night'	20
	Moonshine Yarrow	Achillea 'Moonshine'	20
	Walker's Low Catmint	Nepeta x faassenii	20
	Creeping Mahonia	Mahonia Repens	20
	Dwarf Shasta Daisy	Leucanthemum x superbum 'Snow Lady'	20
	Delphinium x Pacific Giant	Larkspur	12
	Dayiily	Hemerocallis varity	12
	Autumn Joy Sedum	Autumn Joy Stonecrop	20
	Sedum vairety	Assorted Sedum ground cover plants	35
		Total Perennials	284

Notes:
1. Wood mulch to be spread under and around all plant material in a uniform surface. Provide a sample of material for review and approval.

2. Warranty plants and trees for one year after final acceptance. Replace dead or dying materials not in vigorous, thriving condition as soon as weather permits.

3. Determine locations of underground utilities and perform work in a manner which will avoid possible damage.

4. Plants shall be specimen quality, typical of their species or variety.

5. Plant trees and shrubs in pits 12' larger than tree ball, backfill with a mix of 2 parts topsoil, 1 part Nutri-Mulch .

0 20' 40' 80' 120'

Scale: 1" = 16'-0"

Landscape Plan

Iron Mountain Hot Springs Expansion

Parcel ID #218509200031

Glenwood Springs, Colorado

Updated August 6, 2020 by The Land Studio, Inc.

The **LAND** Studio
365 River Bend Way
Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net

Site Use Calculations
Hatched area #1 (parking area) = 91,379 sq. ft.
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Shrubs: 1 per 100 s.f. of required landscape area = 142
Trees: 1 per 400 s.f. of required landscape area = 36

Hatched area #3 designates the approved parking and accces extents as shown on the "Recently Constructed Site Features" plan sheet prepared by SGM, dated 06/30/2015. Hatched area contains 94 parking stalls.

0 30' 60' 120' 180'

Scale 1" = 30'-0"

Landscape Plan

Iron Mountain Hot Springs Expansion

Parcel ID #218509200031

Glenwood Springs, Colorado

Updated August 6, 2020 by The Land Studio, Inc.

The **LAND** Studio
365 River Bend Way
Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net

Sheet 2 of 2

LIST OF NEIGHBORHOOD MEETING NOTICES SENT:

CITY OF GLENWOOD SPRINGS
101 W. 8TH STREET
GLENWOOD SPRINGS, CO
81601

COLO RIVER WATER CON DIST
PO BOX 1120
GLENWOOD SPRINGS, CO
81602

TRPP AT 300, LLC
PO BOX 2021
GLENWOOD SPRINGS, CO
81602

1303 GRAND, LLC
PO BOX 1576
GLENWOOD SPRINGS, CO
81602

TWO RIVERS PP OFFICE
CONDO ASSOC
PO BOX 1576
GLENWOOD SPRINGS, CO
81602

COLO ENERGY SYSTEMS LLC
274 MOUNTAIN SHADOWS DR
GLENWOOD SPRINGS, CO
81601

D&S FAMILY HOLDINGS LLC &
HALVERSON TRUST
PO BOX 3780
EAGLE, CO 81631

SRE COLORADO 4 RF LLC
4401 COLWICK ROAD
CHARLOTTE, NC 28211

CDOT
4201 E. ARKANSAS AVE
DENVER, CO 80222

LIST OF ATTENDEES AT MEETING:

GREG KELLER
JOHN NEIL
DAVID MCCONAUGHY
LYNN KLEAGER
AUDREY TURNER
STEVE BECKLEY
DOUG PRATTE
JULIE PRATTE

July 8, 2020

RE: PUBLIC NOTICE of a NEIGHBORHOOD MEETING to discuss the upcoming Major Site Plan Application for Iron Mountain Hot Springs.

Iron Mountain Hot Springs is submitting a request for Major Site/Architectural Plan Review to the City of Glenwood Springs for expansion of Iron Mountain Hot Springs.

Iron Mountain Hot Springs LLC wishes to expand the existing spa facility to include a new entry building with retail space and food service, including additional men's & women's locker rooms with sauna facilities. The expanded facility will have access control and be a separate experience from the existing pools. The expansion will provide a limited number of entries to keep the environment tranquil and restorative. The new expanded area includes 10 outdoor mineral pools, an enclosed heated fresh water pool w/ attached hot tub. There will also be a set of private cabanas that have small mineral pools within. The expansion project will also include a comprehensive riverbank restoration plan along the entire Iron Mountain Hot Springs property which will be incorporated into the new landscape features of the expanded facility. Lastly the parking area will be reconfigured to improve traffic flow, capacity and accessibility and the lot will be paved with asphalt.

A future hotel and the approved Caverns Village are also illustrated for context on the Master Plan concept drawing attached.

For more information about the project, please attend the outdoor meeting:

LOCATION: 281 CENTENNIAL, OUTSIDE OF EXISTING BUILDING

MEETING DATE: FRIDAY JULY 24, 2020

MEETING TIME: 1:00 PM (MST)

If you are unable to attend the meeting, please forward your questions to: Landstudio2@comcast.net

Iron Mountain Hot Springs Master Plan

Glenwood Springs, Colorado

Updated July 23, 2020 by The Land Studio, Inc.

for City of Glenwood Springs Pre-Application Conference

north

0 60 120 180 300

cafe
food service

mechanical

locker rooms
retail
offices

river bank restoration

Iron Mountain
Hot Springs

Entry Building
locker rooms
food service
retail
mechanical

Iron Mountain
Hot Springs
Expansion

Enclosed
Pool

cabanas

new lift station

river bank restoration

future path connection to the LoVa trail

INTERSTATE 70

Reconfigured
Iron Mountain Hot Springs Parking

Caverns Village parking

Caverns
Village
CDOT offices
(19) apartments

Caverns Village parking

CDOT
maintenance
facility

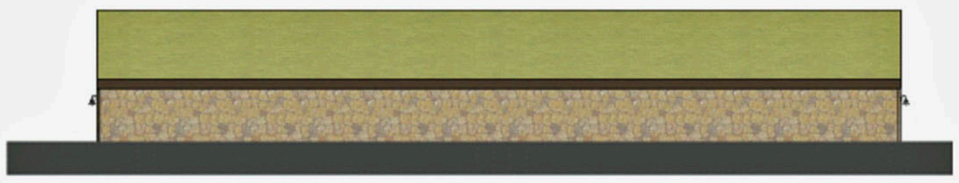
entry
monument

Glenwood Caverns Adventure Park
additional parking

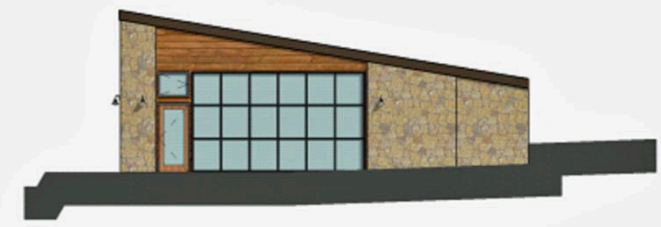
1 EAST ELEVATION

1 WEST ELEVATION

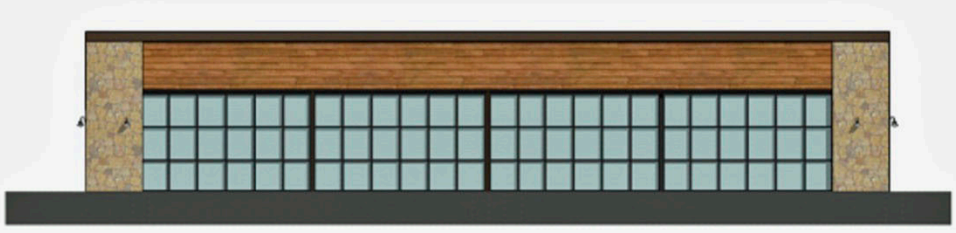
ENTRANCE BUILDING



4 EAST ELEVATION
1/16" = 1'-0"



2 SOUTH ELEVATION
1/16" = 1'-0"



3 WEST ELEVATION
1/16" = 1'-0"

1 NORTH ELEVATION
1/16" = 1'-0"

POOL BUILDING

Iron Mountain Hot Springs

Architectural/Site Plan Review

Glenwood Springs, Colorado

Prepared July 24, 2020 by The Land Studio, Inc.

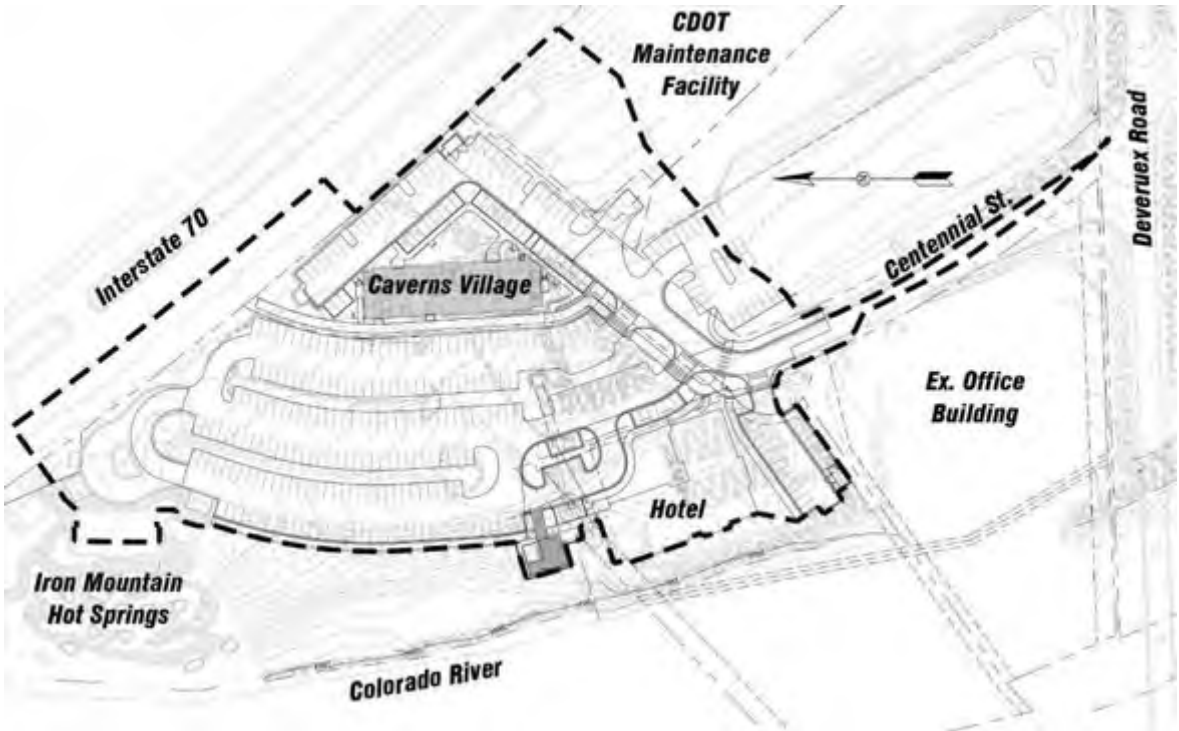
Boundaries Unlimited Inc.

Civil Engineering
Surveying
& Beyond

Major Drainage Report

Iron Mountain Hot Springs Master Plan

July 6, 2020
BUI Project #17015



"I hereby affirm that this report and the accompanying plans for the Iron Mountain Hot Springs-Master Plan was prepared by me (or under my supervision) for the owners thereof in accordance with the provisions of the City of Glenwood Springs Stormwater, Drainage, Water Quality and Erosion Control Chapter and approved variances and exceptions listed thereto. I understand that it is the policy of the City of Glenwood Springs that the City of Glenwood Springs does not and will not assume liability for drainage facilities designed by others."

Deric Walter
I am the author of this document
970.945.5252
2020.07.21 11:11:36-06'00'

License No. 37110
Licensed Professional Engineer, State of Colorado

COLORADO LICENSED
DERIC J ON WALTER
37110
PROFESSIONAL ENGINEER

(Seal)

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B. Previous Studies 1
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Appendix

Drainage Basin Summary Spreadsheet
Autodesk Storm and Sanitary Sewer Analysis (SSA) datasheets
NRCS Websoil Survey
NOAA Atlas 14-IDF Data
Letter-Dept. of the Army, U.S. Army Corps of Engineers (USACE)
USACE Regional General Permit #37 Application
BioClean/Forterra Deflective Screening Device Details
Design Plan & Details - Caverns Village (24"x36")

A. Introduction

The purpose of this report is to provide an outline and basis of design for the drainage improvements proposed for the Iron Mountain Hot Springs-Master Plan in Glenwood Springs, Colorado. Master Plan improvements include additional pools/buildings at Iron Mountain Hot Springs (IMHS), a lift station, a hotel, the Caverns Village multi-family/office complex and parking improvements.

B. Previous Studies

The property was previously analyzed by SGM, Inc. (Project #2014-339.001 dated July 29, 2014) for the construction of the existing Iron Mountain Hot Springs. The intent of that study was also to focus on stormwater quality improvements "to ensure that the quality of the Colorado River is not compromised due to stormwater runoff from this site (SGM-Inc, 2014)." The study considered six (6) drainage basins, A-F, across the property.

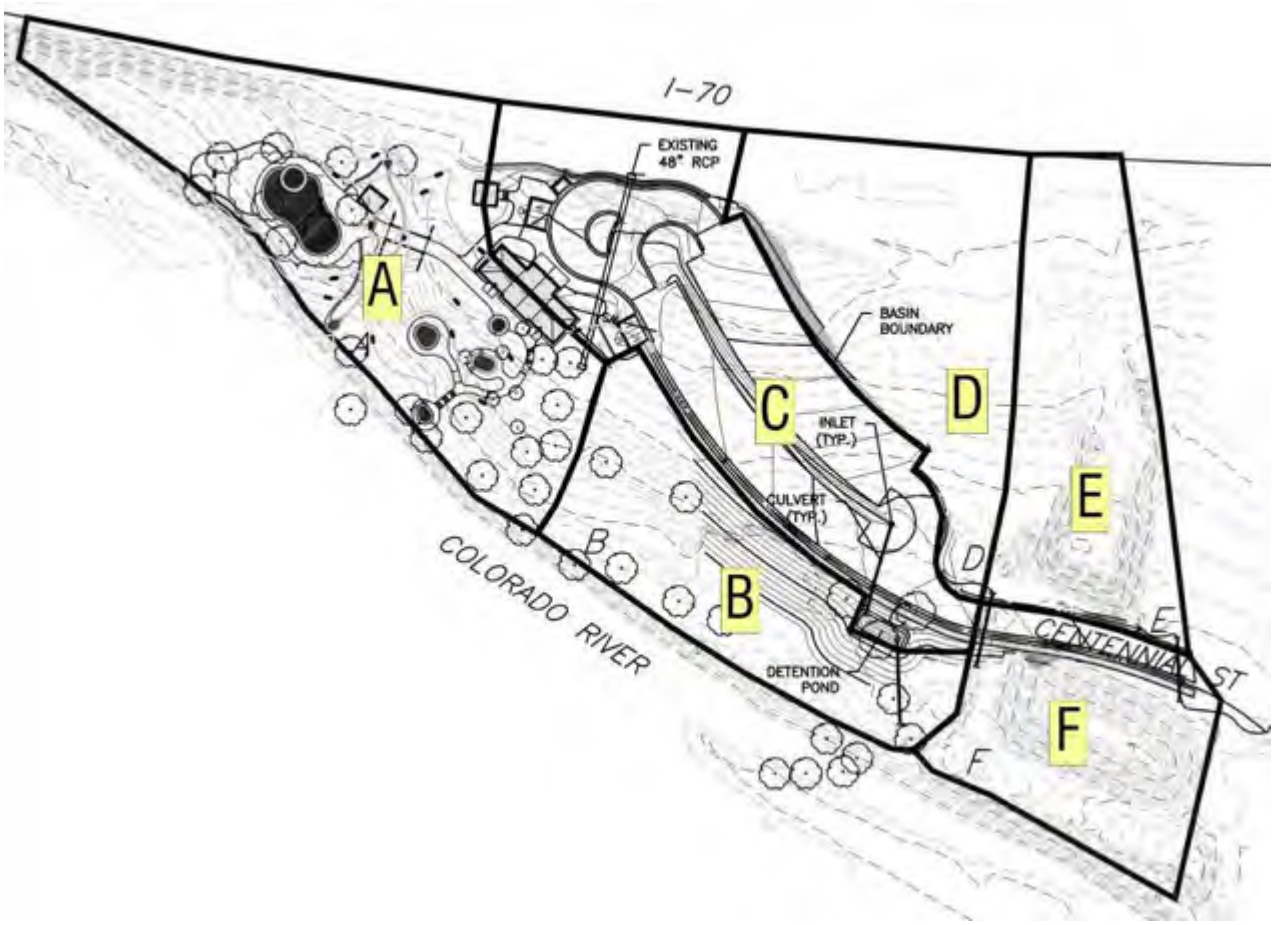

Figure 1: SGM-Inc. Drainage Basins

SGM, Inc. study Section 6 - *Stormwater Quality Plan* defined the parameters for stormwater improvements in the developed area as "*The main goal of the site design is to provide detention and sedimentation for the project. Basin C, where the development of the access road, parking and drop off areas occurs is the only basin with a significant increase in runoff coefficient and possible sedimentation. In order to treat that increased flow, the design provides a detention pond that will provide a location for sedimentation and release of the historic 25-year flowrate.*

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Basin A contains the only other significant development, consisting of the pool area. This will be heavily landscaped throughout the basin, serving to provide improved vegetative cover and improved water quality from the basin area."

The improvements proposed for this Master Study expand the IMHS pools and support buildings into Basin-B. This area will also be heavily landscaped throughout the basin, serving to provide improved vegetative cover and improve water quality from the basin area. The banks of the Colorado River will also be restored as permitted with the U.S. Army Corps of Engineers (see the Appendix). Therefore, no additional stormwater systems are anticipated for this area.

The previously constructed detention and sediment structures constructed for Basin-C will be replaced with a new storm sewer and water quality (WQ) best management plan (BMP) structure to screen trash/debris and promote sediment dropout. The new system is further defined in this report.

C. Existing Conditions

The construction of I-70 and and storm sewer extending from I-70 to the west side of Centennial Street effectively protect the parcel from the majority of potential offsite runoff that might have existed historically. A second culvert also exists under Centennial Street for the conveyance of runoff from the adjacent CDOT Maintenance Facility and parking lot under the roadway and through a swale south of the proposed hotel parking lot. Therefore, the subject area consists primarily of what was previously referred to as Basins B thru F in the SGM-Inc. study and minor surrounding areas which flow into the site. These minor areas include the vegetated buffer between the site and Interstate 70, a portion of Centennial Street and a portion of the existing CDOT Maintenance Facility property. In general, the topography slopes from northeast to southwest at approximately 3%-7% towards the Colorado River. Site vegetation consists of native grasses, weeds and a few deciduous trees in poor to very poor condition. The USDA NRCS Websoil Survey indicates that soils are hydrologic Group B which typically have a moderate infiltration rate when thoroughly wetted. Stormwater runoff is primarily sheet flow in the upper reaches and shallow flow thereafter. A geotechnical investigation was performed by CTL-Thompson (Job No. GS05875-145, dated June 29, 2014). In general, the borings on or near the project site consist of 12"-18" of organic clays over clayey to silty gravel with cobbles over a layer of travertine cemented sandy gravels encountered at a depth range of 4'-6' below the native finish grade. There are two large mounds of imported soil that will be removed with the construction of Caverns Village and the hotel.

The property is bordered by the regional CDOT Offices/Maintenance Facility to the southeast, I-70 to the northeast, the Colorado River to the west and a multistory office building to the southwest. Existing runoff is captured by poorly shaped swales and storm inlets/culverts traversing under the IMHS access/Centennial Street leading to the Colorado River. No stormwater treatment systems exist.

D. Floodplain

Areas along the banks of the Colorado River are located in the floodplain per the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA) for Garfield County, Colorado, Community Panel Number 080071 1432 C, effective date: October 15, 1985. The construction of specific structures area not included in this study and will need to be addressed at the time of building permit application.

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Figure 2: FEMA FIRM Map

E. Proposed Conditions

As discussed, the proposed completed development will include additional pools/buildings at Iron Mountain Hot Springs (IMHS), a lift station, a hotel, the Caverns Village multi-family/office complex and parking improvements.

Figure 3: Master Plan

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Based on pre-design conversations with the City Engineer, the focus of design is to improve stormwater quality for the minor (25-year, 1-hour storm) event and to convey the major (100-year, 1-hour storm) event as the property is located directly adjacent to the Colorado River. In planning out the design, several stormwater management alternatives were considered, including: bioretention; WQCV Drywells; Extended Detention Basins (EDB); engineered treatment devices; vegetated swales and storm sewers. It was determined that the underlying travertine cemented layer was not suitable for infiltrative or underground BMPs (drywells, bioretention or underground detention). The proposed uses require a significant number of vehicle parking spaces reducing the availability for EDBs. Thus, the remaining available BMP solutions for stormwater quality improvements became engineered treatment devices.

In general, runoff from Caverns Village, the hotel and parking areas/drives will be captured by surface swales and storm sewers leading to two (2) hydrodynamic separators located just above the Colorado River. The buildings will also need to be equipped with roof gutters and downspouts connected to the storm sewer systems. Runoff from landscaped areas around the buildings should be captured by area inlets also connected to the storm sewer.

The configuration of the buildings and the relatively flat nature of the site required attention to detail and the use of a significant number of area inlets. Downspouts on the shadowed sides of the buildings will need to be equipped with heat tape. The vegetated base of the swales will function as an *impervious disconnect* between most of the parking areas and the storm sewers. A detailed storm sewer analysis of this system has been performed using Autodesk Storm and Sanitary Sewer Analysis v2020 software for capture and conveyance of the major event (see the Appendix). The hydrodynamic separators are sized to treat the minor event runoff while safely bypassing the major event runoff (also in the Appendix).

F. Proposed Drainage Basins

The proposed development divides the treatment areas (2) primary basins, Basin-North (similar to SGM, Inc. Basin-C) and Basin-South (similar to SGM-Inc. Basins D-F plus additional outlying areas). This analysis further divides Basin-North into three (3) minor basins and Basin-South into eight (8) minor basins for hydraulic sizing of storm sewer structures. Please see Figure 4 for basin boundaries and Table 1 for basin hydrology (areas, runoff coefficients, times of concentration, runoff rates, etc).

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Figure 4: Proposed Drainage Basins

Drainage Basin Summary										
Basin	Area (sf)	Area (Ac)	Impervious		Soil Type B Open Space/LS		Runoff C	Tc (min.)	Q_{25} (cfs)	Q_{100} (cfs)
			Area (sf)	%	Area (sf)	%				
N1	50460	1.158	32970	65.3%	17490	34.7%	0.69	23.66	1.76	2.26
N2	30450	0.699	24750	81.3%	5700	18.7%	0.82	17.66	1.54	2.00
N3	29890	0.686	26840	89.8%	3050	10.2%	0.88	5.00	3.05	3.96
								Design Point "N":	*3.39*	*4.44*
S1	24660	0.566	12410	50.3%	12250	49.7%	0.58	15.28	0.98	1.27
S2	5800	0.133	5080	87.6%	720	12.4%	0.86	5.00	0.58	0.75
S3	16390	0.376	12140	74.1%	4250	25.9%	0.76	5.00	1.44	1.88
S4	5970	0.137	4620	77.4%	1350	22.6%	0.79	5.00	0.55	0.71
S5	41450	0.952	27290	65.8%	14160	34.2%	0.70	20.83	1.60	2.06
S6	14610	0.335	12560	86.0%	2050	14.0%	0.85	5.00	1.44	1.87
S7	19570	0.449	17000	86.9%	2570	13.1%	0.86	5.00	1.95	2.54
S8	52210	1.199	38860	74.4%	13350	25.6%	0.76	7.24	3.90	5.06
								Design Point "S":	*8.64*	*11.29*

Table 1: Proposed Drainage Basin Summary

1. Basin N1

Basin N1 (1.158 acres; C=0.69; Tc=23.66 min.; Q_{25}=1.76 cfs; Q_{100}=2.26 cfs) consists of the central portion of the existing IMHS parking lot, median landscaping and a portion of vegetated buffer between the site and Interstate 70. Impervious areas include the parking and pervious areas include the median, buffer and landscape islands. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed

percent effective imperviousness is 65.3%. In general, runoff will sheet flow across the I-70 vegetated buffer (and upper asphalt), shallow flow through the swale in the median landscaping, be collected by a 24"Ø dome grate area inlet, piped to the north hydrodynamic separator for treatment, and released to a short swale leading to the Colorado River.

2. Basin N2

Basin N2 (0.699 acres; C=0.82; Tc=17.66 min.; Q_{25}=1.54 cfs; Q_{100}=2.00 cfs) consists of the lower reaches of the existing IMHS parking lot, a portion of the existing entry building, walkways, and a portion of the vegetated buffer between the site and Interstate 70. Impervious areas include the parking/walks and pervious areas include the buffer and landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 81.3%. In general, runoff will sheet flow across the I-70 vegetated buffer (and upper asphalt), shallow flow through the proposed curb, be collected by a double Type-16 combination curb inlet, and be piped to the same north hydrodynamic separator previously discussed

3. Basin N3

Basin N3 (0.686 acres; C=0.88; Tc=5.0 min.; Q_{25}=3.05 cfs; Q_{100}=3.96 cfs) consists of the north wing of the hotel, the lift station site, a portion of the IMHS access drive and adjacent parking north of the hotel. Impervious areas include the building/parking/walks and pervious areas include the landscape islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 89.8%. In general, runoff will sheet flow across the building roof (and upper asphalt), shallow flow through the proposed curb, be collected by a Type-13 valley pan inlet, and be piped to the same north hydrodynamic separator previously discussed.

4. Basin S1

Basin S1 (0.566 acres; C=0.58; Tc=15.28 min.; Q_{25}=0.98 cfs; Q_{100}=1.27 cfs) consists of the north portion of the proposed Caverns Village parking lot, landscaping and a portion of vegetated buffer between the site and Interstate 70. Impervious areas include the parking/walks and pervious areas include the buffer, parking islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 50.3%. In general, runoff will sheet flow across the I-70 vegetated buffer (and upper asphalt), shallow flow through the curb/valley pan, be collected by Type-13 valley pan inlet, be piped to the south hydrodynamic separator for treatment, and released to a short swale leading to the Colorado River.

5. Basin S2

Basin S2 (0.133 acres; C=0.86; Tc=5 min.; Q_{25}=0.58 cfs; Q_{100}=0.75 cfs) consists of the west half of the proposed Caverns Village building and adjacent landscaping . Impervious areas include the building and pervious areas include the adjacent landscaping. Site vegetation consists of landscape shrubs and vegetative ground cover. The net watershed percent effective imperviousness is 87.6%. In general, runoff will sheet flow across the building roof (and adjacent landscaping) be collected by roof drains or several 12"Ø area inlets, and be piped to the same south hydrodynamic separator previously discussed.

6. Basin S3

Basin S3 (0.376 acres; C=0.76; Tc=5 min.; Q_{25}=1.44 cfs; Q_{100}=1.88 cfs) consists of the east half of the proposed Caverns Village building, the adjacent southwest parking lot, and adjacent landscaping. Impervious areas include the building/parking/walks and pervious areas include parking islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent

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effective imperviousness is 74.1%. In general, runoff will sheet flow across the building roof (and upper asphalt), shallow flow through the proposed curb or landscape areas, be collected by several 12"Ø area inlets or a Type-13 valley pan inlet, and be piped to the same south hydrodynamic separator previously discussed.

7. Basin S4

Basin S4 (0.137 acres; $C_=$0.79; Tc=5.0 min.; Q_{25}=0.55 cfs; Q_{100}=0.71 cfs) consists of a portion of the parking on the south side of the Caverns Village building and adjacent walks/landscaping. Impervious areas include the parking/walks and pervious areas include the landscape islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 77.4%. In general, runoff will sheet flow across the asphalt (and adjacent landscaping), shallow flow through the proposed valley pan, be collected by a Type-13 valley pan inlet, and be piped to the same south hydrodynamic separator previously discussed.

8. Basin S5

Basin S5 (0.952 acres; $C_=$0.70, Tc=20.83 min.; Q_{25}=1.60 cfs; Q_{100}=2.06 cfs) consists of the upper portion of the existing IMHS parking lot, a proposed expansion of that parking lot to the south, a portion of a proposed regional public trail, median landscaping and a portion of vegetated buffer between the site and Interstate 70. Impervious areas include the parking/trail and pervious areas include the buffer, median and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 65.8%. In general, runoff will sheet flow across the Interstate 70 vegetated buffer (and upper asphalt), shallow flow through the swale in the median landscaping, be collected by a 24"Ø dome grate area inlet, and be piped to the same south hydrodynamic separator previously discussed.

9. Basin S6

Basin S6 (0.335 acres; $C_=$0.85; Tc=5.0 min.; Q_{25}=1.44 cfs; Q_{100}=1.87 cfs) consists of the north half of the proposed extension of Centennial Street, a portion of the proposed regional public trail, the beginning of the IMHS access drive, adjacent parking and adjacent landscaping. Impervious areas include the street/parking/walks/trail and pervious areas include the landscape islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 86.0%. In general, runoff will sheet flow across the asphalt (and adjacent landscaping), shallow flow through the proposed curb/pans, be collected by two (2) Type-13 valley pan inlets, and be piped to the same south hydrodynamic separator previously discussed.

10. Basin S7

Basin S7 (0.449 acres; $C_=$0.86; Tc=5.0 min.; Q_{25}=1.95 cfs; Q_{100}=2.54 cfs) consists of the south wing of the hotel, the hotel parking lot, and adjacent landscaping. Impervious areas include the building/walks/parking and pervious areas include the landscape islands and adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 86.9%. In general, runoff will sheet flow across the building roof (and upper asphalt), shallow flow through the proposed curb, be collected by a Type-16 combination curb inlet, and be piped to the same south hydrodynamic separator previously discussed.

11. Basin S8

Basin S8 (1.199 acres; $C_=$0.76, Tc=7.24 min.; Q_{25}=3.90 cfs; Q_{100}=5.06 cfs) consists of a portion of the existing CDOT Maintenance Facility, existing parking, the south half of the proposed extension of Centennial Street, portions of the proposed regional public trail,

walks, and adjacent landscaping. Impervious areas include the street/parking/walks/trail and pervious areas include the adjacent landscaping. Site vegetation consists of landscape trees, shrubs, vegetative ground cover, and lawn. The net watershed percent effective imperviousness is 74.4%. In general, runoff will sheet flow across the upper reaches of the Maintenance Facility, shallow flow through swales in the landscaping, be collected by a Type-C area inlet, and be piped to the same south hydrodynamic separator previously discussed.

G. Low Impact Site Design

The landscaping strategy is to reduce impervious areas where possible, locally reduce slopes and vegetate swale for initial pollutant screening. Low Impact Site Design (LID) principals have been considered for implementation as follows:

Principle 1: Consider stormwater quality needs early in the design process

The need to manage and treat stormwater runoff was discussed during the design process affording the design team and owner an opportunity to discuss the options and evaluate their feasibility. Recognizing that the building footprints and parking would utilize the majority of this property and that the travertine layer prevented adequate infiltration, it was decided that engineered treatment devises were the best solution. Plans were made to install vegetative planting areas in parking islands and between the buildings and the parking. The use of grated inlets will skim larger floating trash and debris. The vegetated swales and hydrodynamic separators will allow for sediment dropout and hydrocarbon reduction.

Principle 2: Use the entire site when planning for stormwater quality treatment

The landscape and grading designs were prepared with the intent of providing an impervious disconnect, initial hydrocarbon removal through vegetation, removing floating trash (grated inlets) and increasing sediment dropout.

Principle 3: Avoid unnecessary impervious area

The access drives parking areas were all reworked during the design process to maximize the length of the landscape medians and extend impervious disconnects.

Principle 4: Reduce runoff rates and volumes to more closely match natural conditions

Based on pre-design conversations with the City Engineer, the focus of design is to improve stormwater quality for the minor (25-year, 1-hour storm) event and to convey the major (100-year, 1-hour storm) event as the property is located directly adjacent to the Colorado River. This will enable the local site runoff to exit the region before additional peak flows from upstream areas enter this reach of the Colorado River.

Principle 5: Integrate stormwater quality management and flood control

The purposed use of vegetated planting areas around the buildings and vegetated medians between the parking lots provides for minor pretreatment while the hydrodynamic separators will provide more extensive treatment. The proposed inlets and storm sewers are located for rapid removal of runoff and sized to convey the major storm event

Principle 6: Develop stormwater quality facilities that enhance the site, the community and the environment

Grading and area inlet placement have been designed to protect the building structures/parking and capture large quantities of runoff. Treating the runoff will bolster the community and environment.

Principle 7: Use a treatment train approach

A train approach has been applied by flowing parking areas over landscaped medians before it enters the inlets. The hydrodynamic separators will also provide a treatment train before discharged runoff enters the swales leading to the Colorado River.

Principle 8: Design sustainable facilities that can be safely maintained

The surface has been designed with relatively flat or gently sloping landscape areas and stepped as needed with curbs or walls.

Principle 9: Design and maintain facilities with public safety in mind

All inlets are grated and the hydrodynamic separators will be equipped with heavy iron access lids similar to what is used on sanitary sewer manholes. These will deter and protect the public.

H. Hydrologic Criteria

The stormwater management system has been designed to capture and convey runoff from the 25-year and 100-year, 1-hour storm events and reduce pollutant discharge from the site. Rainfall intensities are based on rainfall data obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 point precipitation database. Runoff rates and volumes were estimated using Autodesk Storm and Sanitary Sewer Analysis v2020 software. Hydrodynamic separators were sized by Forterra. Copies of this information and data sheets have been included in the Appendix.

I. Hydraulic Criteria

Storm sewer inlets and pipes were sized using Autodesk Storm and Sanitary Sewer Analysis v2020 software. Copies of these data sheets have been included in the Appendix.

J. Proposed Facilities

Erosion control measures and Best Management Practices (BMPs) should be followed during construction to ensure that the property and the adjacent streets are not impacted from sedimentation. Temporary BMPs should include a combination of temporary sediment control fence, erosion control logs, rock socks, certified weed free hay bales, inlet silt sacks and erosion fabrics to minimize erosion and control runoff. A detailed Stormwater Management and Erosion Control Plan may need to be designed and approved by the City of Glenwood Springs Engineering Department prior to construction. Preparation of stormwater management plans, permitting and compliance are the responsibility of the Contractor. This project will also require a permit for stormwater discharge associated with construction activity from the State of Colorado.

Runoff from the 25-year storm event will be captured and treated as discussed. Excess runoff beyond the 25-year storm event will be conveyed through the storm sewer system and bypassed through the hydrodynamic separators to the Colorado River.

As required by Code, the vegetated swales and hydrodynamic separators will reduce the pollutant rates to acceptable levels. Therefore, the proposed improvements should improve the water quality for downstream properties and the environment.

K. Operation and Maintenance

During construction activities and until vegetation can be established, temporary rock socks should be installed in the roadside curb and gutter and around curb inlets. Temporary silt sacks should be installed in roadway drop inlets. Temporary certified weed free hay bales, check dams, silt dikes or erosion control logs should be installed around area drains and culverts in accordance with Colorado Department of Transportation M-Standards. The Contractor shall be responsible for removing debris from the sediment structures after each storm event. The

Contractor shall also repair any damaged erosion controls, remove accumulated sediment from the hydrodynamic separators and from behind hay bales/check dams/silt dikes/erosion control logs after each storm event. After construction, the property owner shall be responsible for removing debris and sediment on an as-needed basis.

The hydrodynamic separators must be inspected and maintained annually to remove sediment and debris that has collected. Removed waters, sediment and debris must be hauled to the landfill for lawful disposal.

The Contractor shall be responsible for complying with all local and state guidelines and permitting issues. Sediment and mud should be prevented from leaving the construction site by the immediate placement of a stabilized construction entrance. The Contractor should be responsible for cleaning and general upkeep of the site and adjacent roadways. As an effective dust control measure, water and weed-free straw may be utilized to minimize uprising of dust.

Good housekeeping BMPs should be followed throughout the entire life of the project. These include but are not limited to:

- refuge receptacles should be regularly emptied and equipped with lids;
- keeping machinery in good operating condition to prevent leakage;
- apply appropriate (not excessive) amounts of fertilizer to the landscaping;
- scheduled maintenance cleaning of any downstream curb and gutter, storm sewer inlets, culverts and ditches;
- general site cleanliness and proper training of employees;
- Grading must be performed (but not in excess) to ensure that drainage is directed away from all structures in all directions.

Once construction activities are completed, final stabilization of the disturbed areas should begin. Within one growing season of the project completion, uniform vegetative site coverage should be equal to or greater than 70% of the pre-disturbance levels, or equivalent permanent, physical erosion reduction methods should be employed. When the site is determined to have reached the final stabilization stage, erosion control structures can be removed.

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L. Works Cited

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Appendix

- *Drainage Basin Summary Spreadsheet*
- *Autodesk Storm and Sanitary Sewer Analysis (SSA) datasheets*
- *NRCS Websoil Survey*
- *NOAA Atlas 14-IDF Data*
- *Letter-Dept. of the Army, U.S. Army Corps of Engineers (USACE)*
- *USACE Regional General Permit #37 Application*
- *BioClean/Forterra Deflective Screening Device Details*
- *Design Plan & Details (24"x36")*

Drainage Basin Summary
Iron Mountain Hot Springs-Master Plan

Basin	Area (sf)	Area (Ac)	Impervious		Soil Type B		Runoff C	Tc (min.)	Q_{25} (cfs)	Q_{100} (cfs)
					Open Space/LS					
			Area (sf)	%	Area (sf)	%				
N1	50460	1.158	32970	65.3%	17490	34.7%	0.69	23.66	1.76	2.26
N2	30450	0.699	24750	81.3%	5700	18.7%	0.82	17.66	1.54	2.00
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								Design Point "N":	*3.39*	*4.44*
S1	24660	0.566	12410	50.3%	12250	49.7%	0.58	15.28	0.98	1.27
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S3	16390	0.376	12140	74.1%	4250	25.9%	0.76	5.00	1.44	1.88
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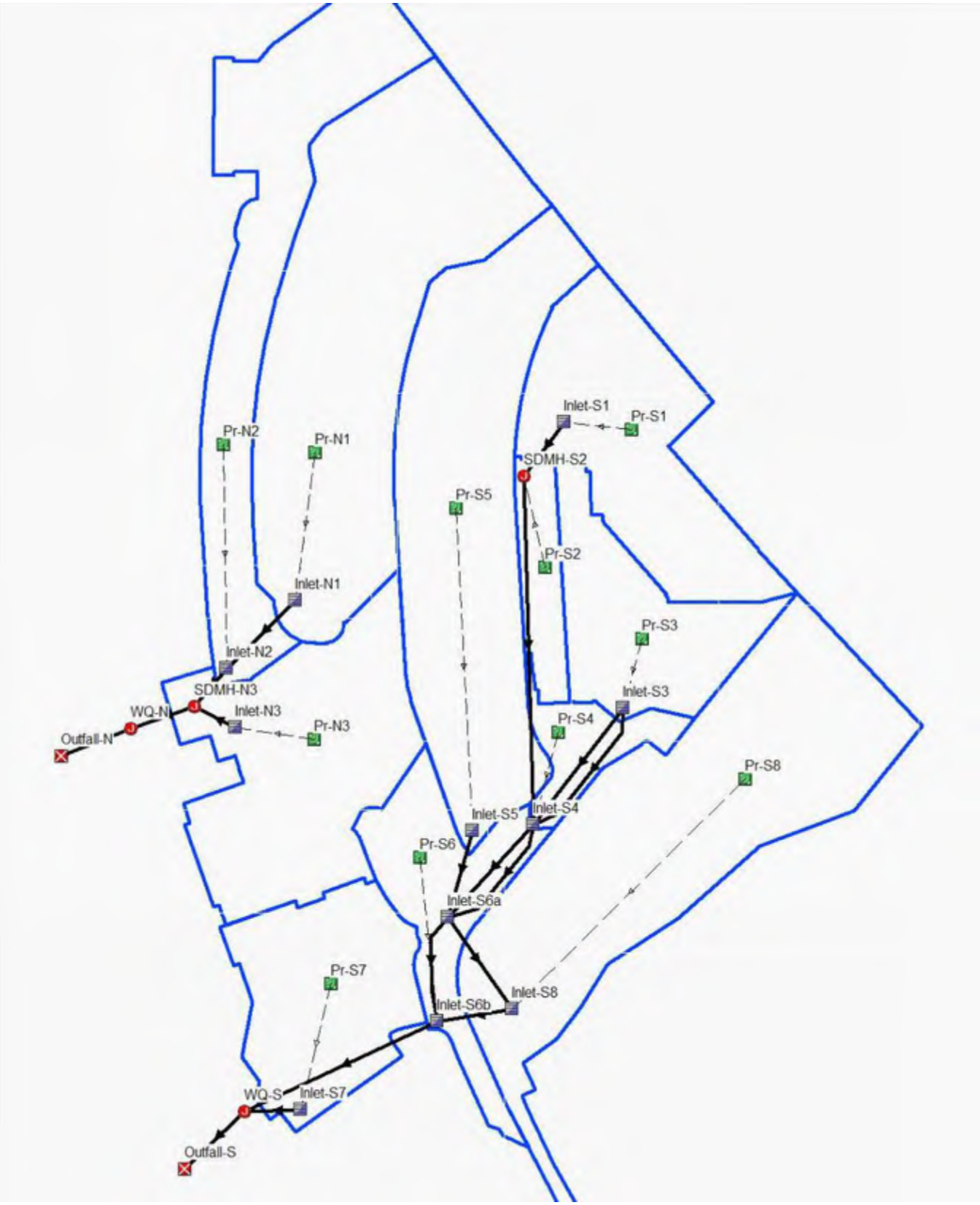
S7	19570	0.449	17000	86.9%	2570	13.1%	0.86	5.00	1.95	2.54
S8	52210	1.199	38860	74.4%	13350	25.6%	0.76	7.24	3.90	5.06
								Design Point "S":	*8.64*	*11.29*


Inlet-S1
Pr-S1
Pr-N2
Pr-N1
SDMH-S2
Pr-S5
Pr-S2
Inlet-N1
Pr-S3
Inlet-N2
SDMH-N3
Inlet-S3
WQ-N
Inlet-N3
Pr-S4
Outfall-N
Pr-N3
Pr-S8
Inlet-S5
Inlet-S4
Pr-S6
Inlet-S6a
Pr-S7
Inlet-S8
Inlet-S6b
WQ-S
Inlet-S7
Outfall-S

Project Description

File Name 17015-SSA.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method ..... Rational
Time of Concentration (TOC) Method ..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ..... YES

Rainfall Details

Return Period..... 25 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ft³)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Pr-N1	1	0.690	0.87	0.60	2518.8	1.76	0 00:23:39
2	Pr-N2	1	0.820	0.79	0.65	1649.4	1.54	0 00:17:39
3	Pr-N3	1	0.880	0.42	0.37	921.6	3.05	0 00:05:00
4	Pr-S1	1	0.580	0.76	0.44	906.3	0.98	0 00:15:16
5	Pr-S2	0	0.860	0.42	0.36	175.0	0.58	0 00:05:00
6	Pr-S3	0	0.760	0.42	0.32	437.1	1.44	0 00:05:00
7	Pr-S4	0	0.790	0.42	0.33	165.2	0.55	0 00:05:00
8	Pr-S5	1	0.700	0.83	0.58	2017.2	1.60	0 00:20:49
9	Pr-S6	0	0.850	0.42	0.36	435.9	1.44	0 00:05:00
10	Pr-S7	0	0.860	0.42	0.36	590.4	1.95	0 00:05:00
11	Pr-S8	1	0.760	0.51	0.39	1688.1	3.90	0 00:07:14

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ft³)	Total Time Flooded (min)
1	SDMH-N3	Junction	5719.86	5725.45	5719.86	5721.00	0.00	3.390	5720.66	0.00	4.79	0 00:00	0.00	0.00
2	SDMH-S2	Junction	5729.50	5731.40	5729.50	0.00	0.00	0.860	5730.03	0.00	1.37	0 00:00	0.00	0.00
3	WQ-N	Junction	5719.73	5725.57	5719.73	5721.00	0.00	3.390	5720.34	0.00	5.23	0 00:00	0.00	0.00
4	WQ-S	Junction	5716.00	5721.50	5716.00	0.00	0.00	8.640	5718.48	0.00	3.02	0 00:00	0.00	0.00
5	Outfall-N	Outfall	5717.50					3.390	5717.86					
6	Outfall-S	Outfall	5715.76					8.640	5716.69					

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)
1	Link-47	Pipe	Inlet-S7	WQ-S	32.09	5718.50	5718.00	1.5600	12.000	0.0150	1.770	3.85	0.46	4.80	0.48
2	Link-57	Pipe	SDMH-N3	WQ-N	8.00	5719.86	5719.73	1.6300	15.000	0.0150	3.390	7.14	0.47	5.74	0.61
3	Pipe-6b	Pipe	Inlet-S6b	WQ-S	163.00	5717.80	5716.50	0.8000	24.000	0.0150	7.150	17.51	0.41	5.34	0.89
4	Pipe-N1	Pipe	Inlet-N1	Inlet-N2	73.00	5721.75	5721.03	0.9900	12.000	0.0150	1.710	3.07	0.56	4.02	0.53
5	Pipe-N2	Pipe	Inlet-N2	SDMH-N3	41.00	5720.53	5720.06	1.1500	15.000	0.0150	2.790	5.99	0.47	4.80	0.60
6	Pipe-N3	Pipe	Inlet-N3	SDMH-N3	21.00	5720.90	5720.06	4.0000	12.000	0.0150	2.800	6.18	0.45	7.67	0.47
7	Pipe-Out-N	Pipe	WQ-N	Outfall-N	20.00	5719.73	5717.50	11.1500	15.000	0.0150	3.390	18.69	0.18	11.54	0.36
8	Pipe-Out-S	Pipe	WQ-S	Outfall-S	24.00	5716.00	5715.00	4.1700	24.000	0.0150	8.640	19.61	0.44	6.04	0.93
9	Pipe-S1	Pipe	Inlet-S1	SDMH-S2	50.00	5730.70	5729.70	2.0000	10.000	0.0150	0.860	2.69	0.32	4.39	0.33
10	Pipe-S2	Pipe	SDMH-S2	Inlet-S4	290.00	5729.50	5723.75	1.9800	10.000	0.0150	0.860	2.67	0.32	4.39	0.33
11	Pipe-S3	Pipe	Inlet-S3	Inlet-S4	106.00	5729.59	5723.95	5.3200	10.000	0.0150	0.970	4.38	0.22	9.37	0.27
12	Pipe-S4	Pipe	Inlet-S4	Inlet-S6a	67.00	5723.75	5720.58	4.7300	12.000	0.0150	2.480	6.72	0.37	7.91	0.42
13	Pipe-S5	Pipe	Inlet-S5	Inlet-S6a	41.00	5721.56	5720.58	2.3900	10.000	0.0150	1.590	3.14	0.51	5.77	0.42
14	Pipe-S6a	Pipe	Inlet-S6a	Inlet-S8	65.00	5720.08	5718.80	1.9700	15.000	0.0150	2.900	7.86	0.37	5.93	0.53
15	Pipe-S8	Pipe	Inlet-S8	Inlet-S6b	43.00	5718.60	5718.20	0.9300	19.000	0.0130	6.170	10.17	0.61	5.96	0.65
16	Road-S3	Channel	Inlet-S3	Inlet-S4	109.00	5732.10	5726.40	5.2300	7.200	0.0320	0.440	114.31	0.00	4.38	0.10
17	Road-S4	Channel	Inlet-S4	Inlet-S6a	69.00	5726.40	5723.50	4.2000	7.200	0.0320	0.060	100.69	0.00	2.94	0.05
18	Road-S6a	Channel	Inlet-S6a	Inlet-S6b	84.00	5723.50	5721.50	2.3800	7.200	0.0320	0.000	79.17	0.00	0.00	0.00

Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)
0.48	0.00
0.49	0.00
0.44	0.00
0.53	0.00
0.48	0.00
0.47	0.00
0.29	0.00
0.46	0.00
0.39	0.00
0.39	0.00
0.32	0.00
0.42	0.00
0.50	0.00
0.42	0.00
0.55	0.00
0.16	0.00
0.08	0.00
0.01	0.00

Inlet Summary

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Ponded Area (ft²)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)
1	Inlet-N1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.75	5724.50	5721.75	400.00	1.760	N/A	N/A	N/A	7.00
2	Inlet-N2	FHWA HEC-22 GENERIC	N/A	On Sag	2	5720.53	5725.35	5722.30	400.00	1.540	N/A	N/A	N/A	7.00
3	Inlet-N3	FHWA HEC-22 GENERIC	N/A	On Sag	1	5720.90	5724.90	5722.00	400.00	3.050	N/A	N/A	N/A	7.00
4	Inlet-S1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5730.70	5733.20	5730.70	400.00	0.980	N/A	N/A	N/A	7.00
5	Inlet-S3	FHWA HEC-22 GENERIC	N/A	On Grade	1	5729.59	5732.09	5729.59	N/A	1.440	0.98	0.46	68.05	7.00
6	Inlet-S4	FHWA HEC-22 GENERIC	N/A	On Grade	1	5723.75	5726.41	5723.42	N/A	0.950	0.89	0.07	93.06	7.00
7	Inlet-S5	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.70	5724.70	5721.70	100.00	1.600	N/A	N/A	N/A	7.00
8	Inlet-S6a	FHWA HEC-22 GENERIC	N/A	On Grade	1	5720.08	5723.62	5720.08	N/A	0.060	0.06	0.00	99.66	7.00
9	Inlet-S6b	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.57	5721.52	5717.50	400.00	1.440	N/A	N/A	N/A	7.00
10	Inlet-S7	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.50	5721.00	5717.50	400.00	1.950	N/A	N/A	N/A	7.00
11	Inlet-S8	FHWA HEC-22 GENERIC	N/A	On Sag	1	5718.30	5721.38	5718.30	400.00	3.900	N/A	N/A	N/A	7.00

Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
4.24	5724.92
7.34	5725.58
15.14	5725.43
6.37	5733.53
7.38	5732.32
3.68	5726.57
4.03	5725.10
0.29	5723.64
8.54	5721.76
10.89	5721.28
5.21	5721.81

Subbasin Hydrology

Subbasin : Pr-N1

Input Data

Area (ft²) 50460.00
Weighted Runoff Coefficient 0.6900

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	32950.40	B (2-6%)	0.96
Open Space, 25 years or greater	17509.64	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	50460.04		0.69

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
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 (hr)
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 (hr)
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

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	80	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	21.36	0.00	0.00

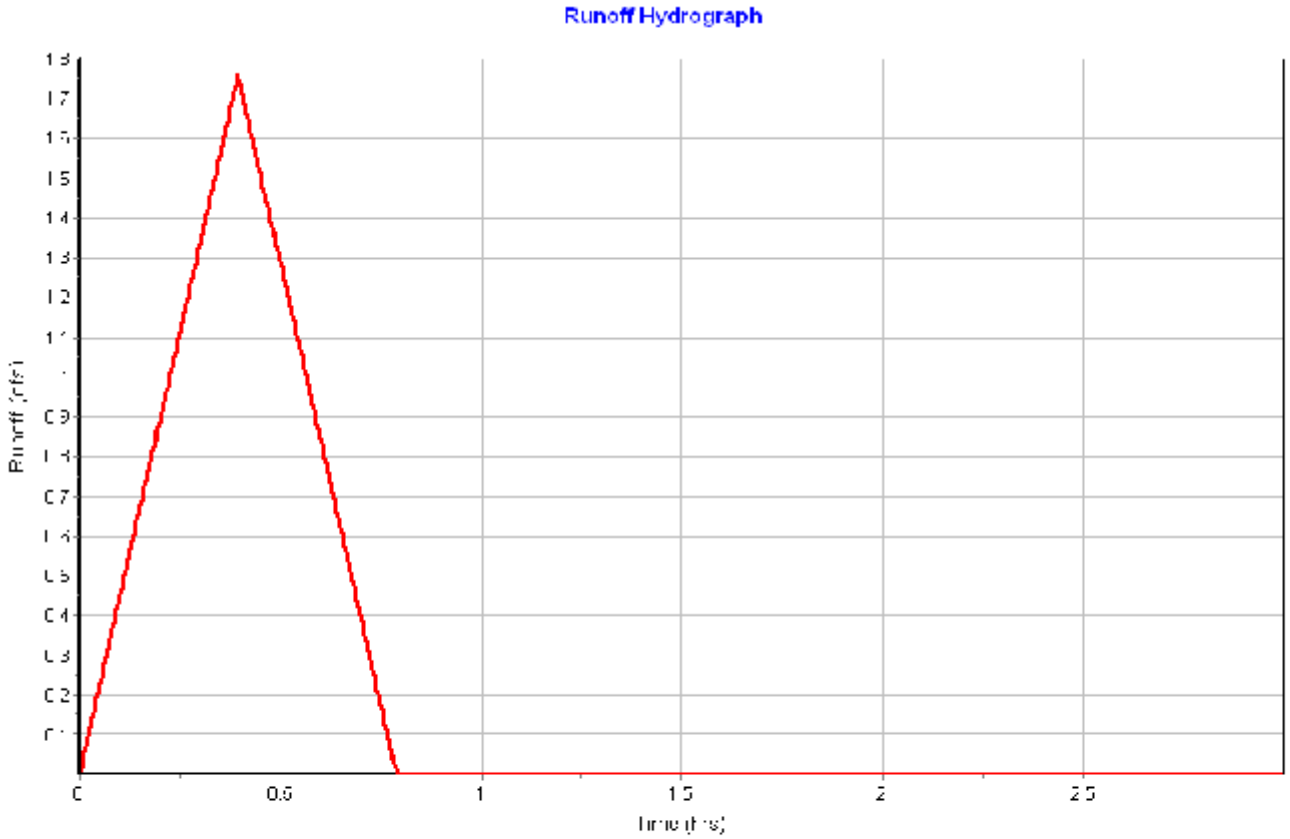
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	70	280	0.00
Slope (%) :	3	2.5	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.52	2.37	0.00
Computed Flow Time (min) :	0.33	1.97	0.00

Total TOC (min) 23.66

Subbasin Runoff Results

Total Rainfall (in)	0.87
Total Runoff (in)	0.60
Peak Runoff (cfs)	1.76
Rainfall Intensity	2.201
Weighted Runoff Coefficient	0.6900
Time of Concentration (days hh:mm:ss)	0 00:23:40

Subbasin : Pr-N1



Input Data

Area (ft²) 30450.00
Weighted Runoff Coefficient 0.8200

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	24755.84	B (2-6%)	0.96
Open Space, 25 years or greater	5694.16	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	30450.00		0.82

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	50	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	14.66	0.00	0.00

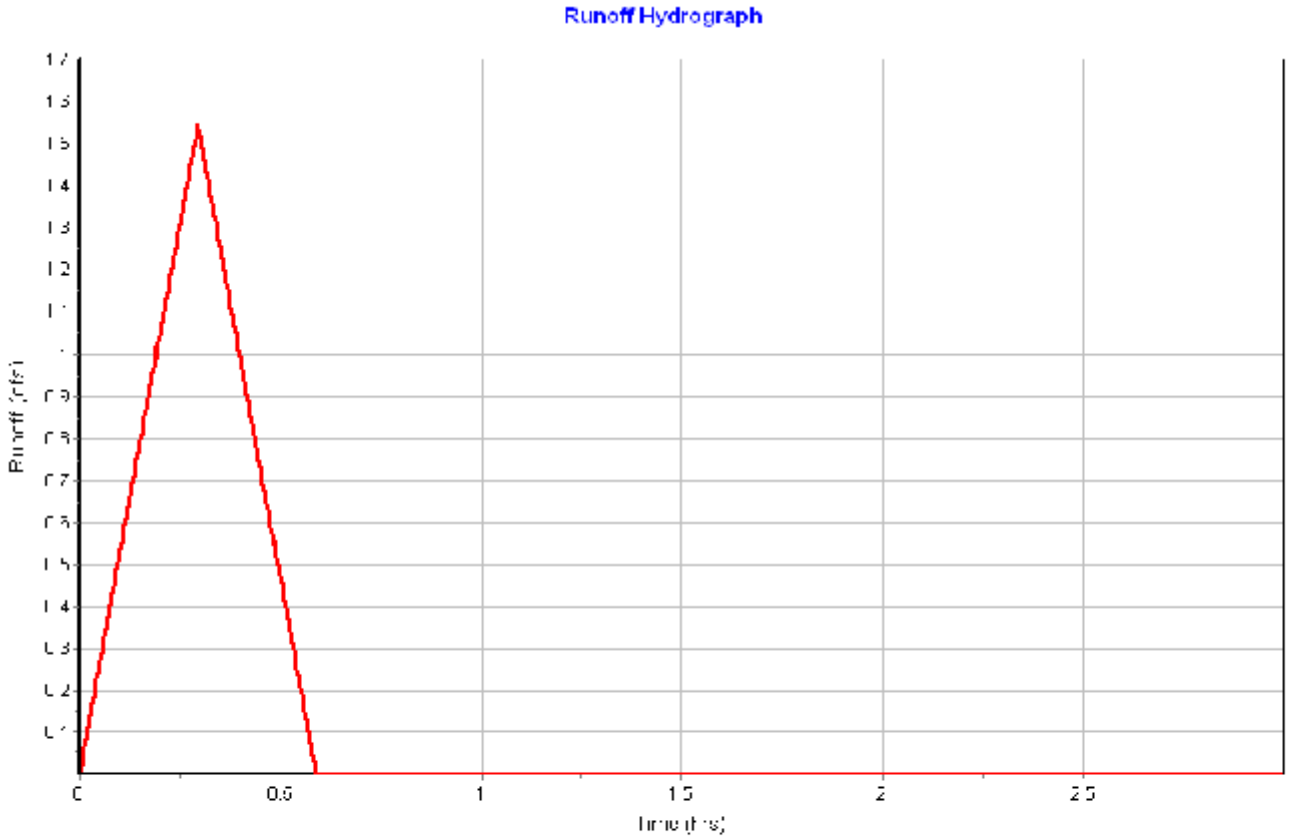
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	170	350	0.00
Slope (%) :	2.1	2	0.00
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.95	2.87	0.00
Computed Flow Time (min) :	0.96	2.03	0.00

Total TOC (min) 17.66

Subbasin Runoff Results

Total Rainfall (in) 0.79
Total Runoff (in) 0.65
Peak Runoff (cfs) 1.54
Rainfall Intensity 2.691
Weighted Runoff Coefficient 0.8200
Time of Concentration (days hh:mm:ss) 0 00:17:40

Subbasin : Pr-N2



Input Data

Area (ft²) 29890.00
Weighted Runoff Coefficient 0.8800

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	26841.24	B (2-6%)	0.96
Open Space, 25 years or greater	3048.76	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	29890.00		0.88

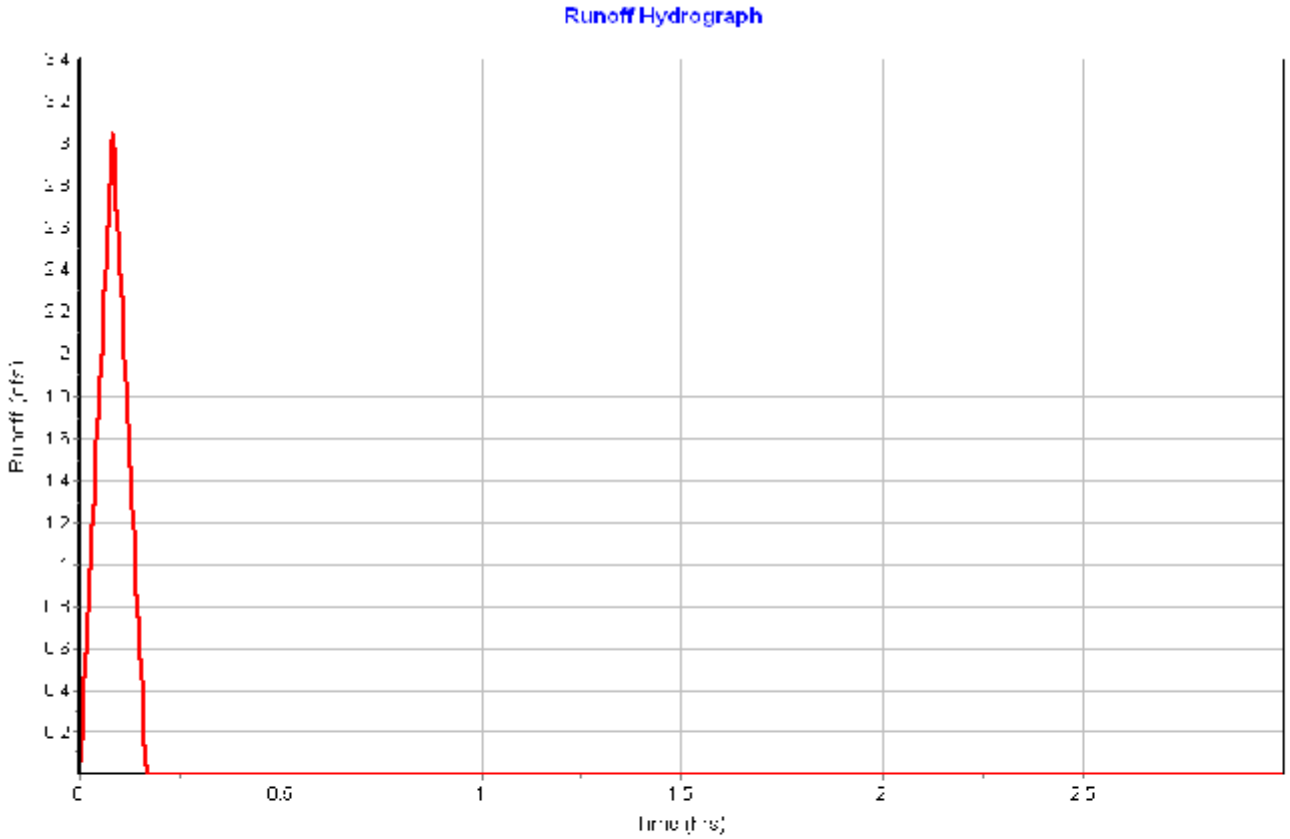
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.37
Peak Runoff (cfs) 3.05
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.8800
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-N3



Input Data

Area (ft²) 24660.00
Weighted Runoff Coefficient 0.5800

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12403.97	B (2-6%)	0.96
Open Space, 25 years or greater	12256.04	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	24660.01		0.58

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	50	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	14.66	0.00	0.00

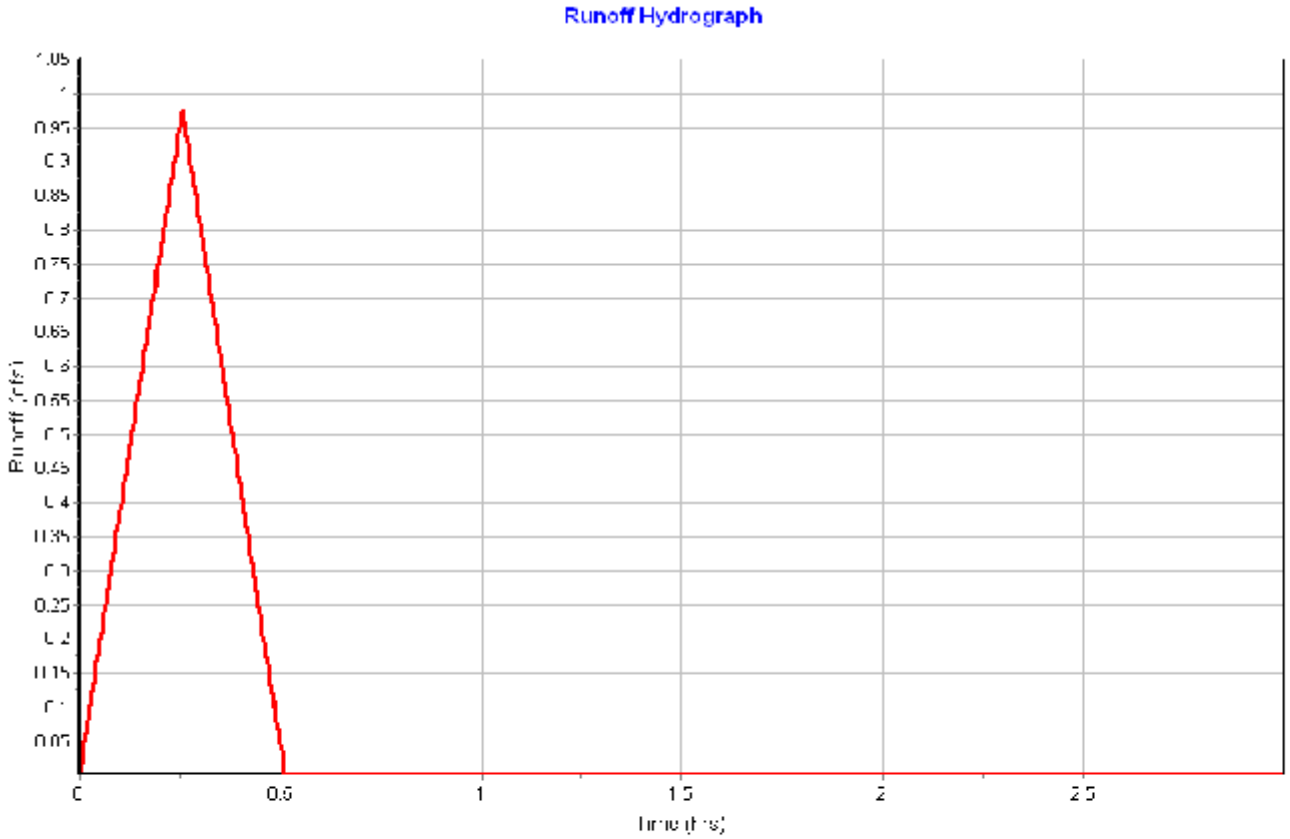
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	50	40	0.00
Slope (%) :	2	1	0.00
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.87	2.03	0.00
Computed Flow Time (min) :	0.29	0.33	0.00

Total TOC (min) 15.28

Subbasin Runoff Results

Total Rainfall (in) 0.76
Total Runoff (in) 0.44
Peak Runoff (cfs) 0.98
Rainfall Intensity 2.972
Weighted Runoff Coefficient 0.5800
Time of Concentration (days hh:mm:ss) 0 00:15:17

Subbasin : Pr-S1



Input Data

Area (ft²) 5800.00
Weighted Runoff Coefficient 0.8600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	5080.79	B (2-6%)	0.96
Open Space, 25 years or greater	719.22	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	5800.01		0.86

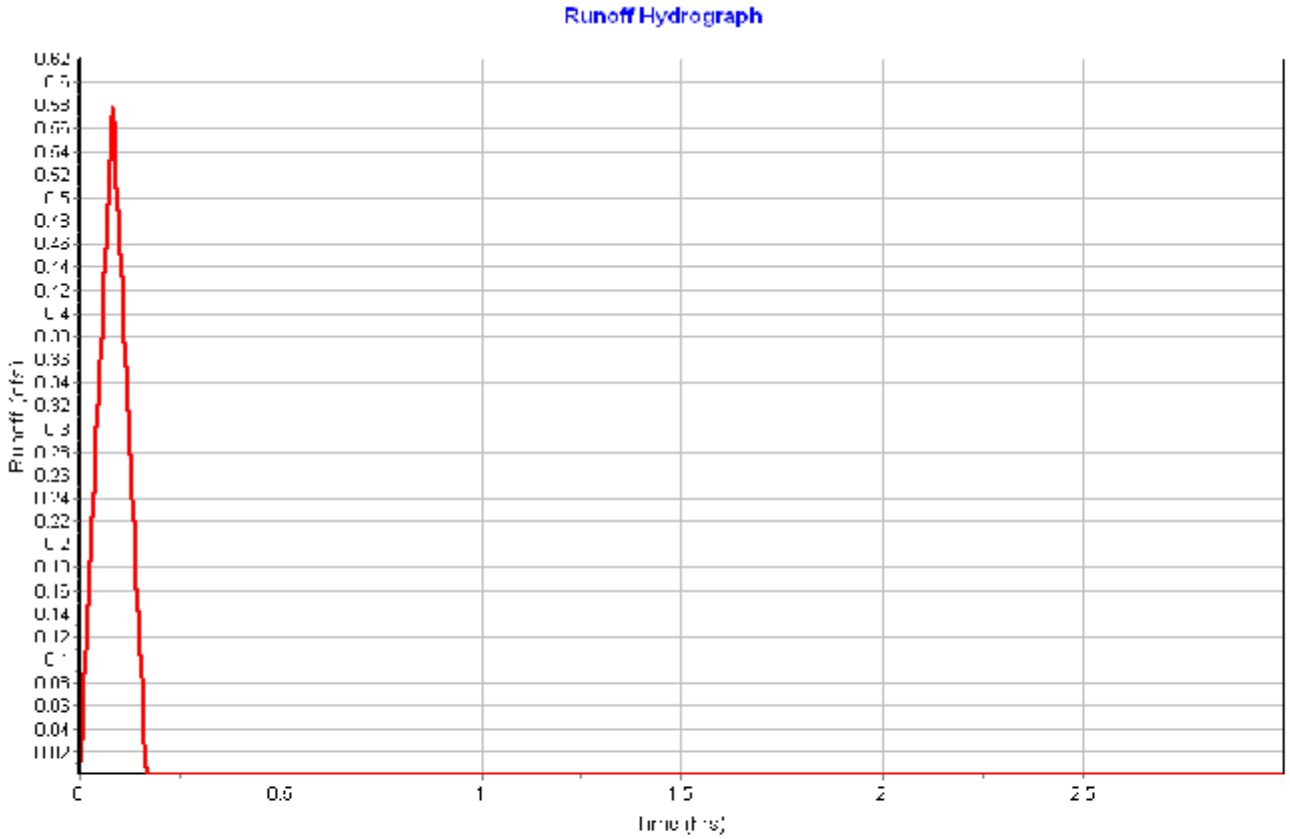
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.36
Peak Runoff (cfs) 0.58
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.8600
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S2



Input Data

Area (ft²) 16390.00
Weighted Runoff Coefficient 0.7600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12145.01	B (2-6%)	0.96
Open Space, 25 years or greater	4245.01	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	16390.02		0.76

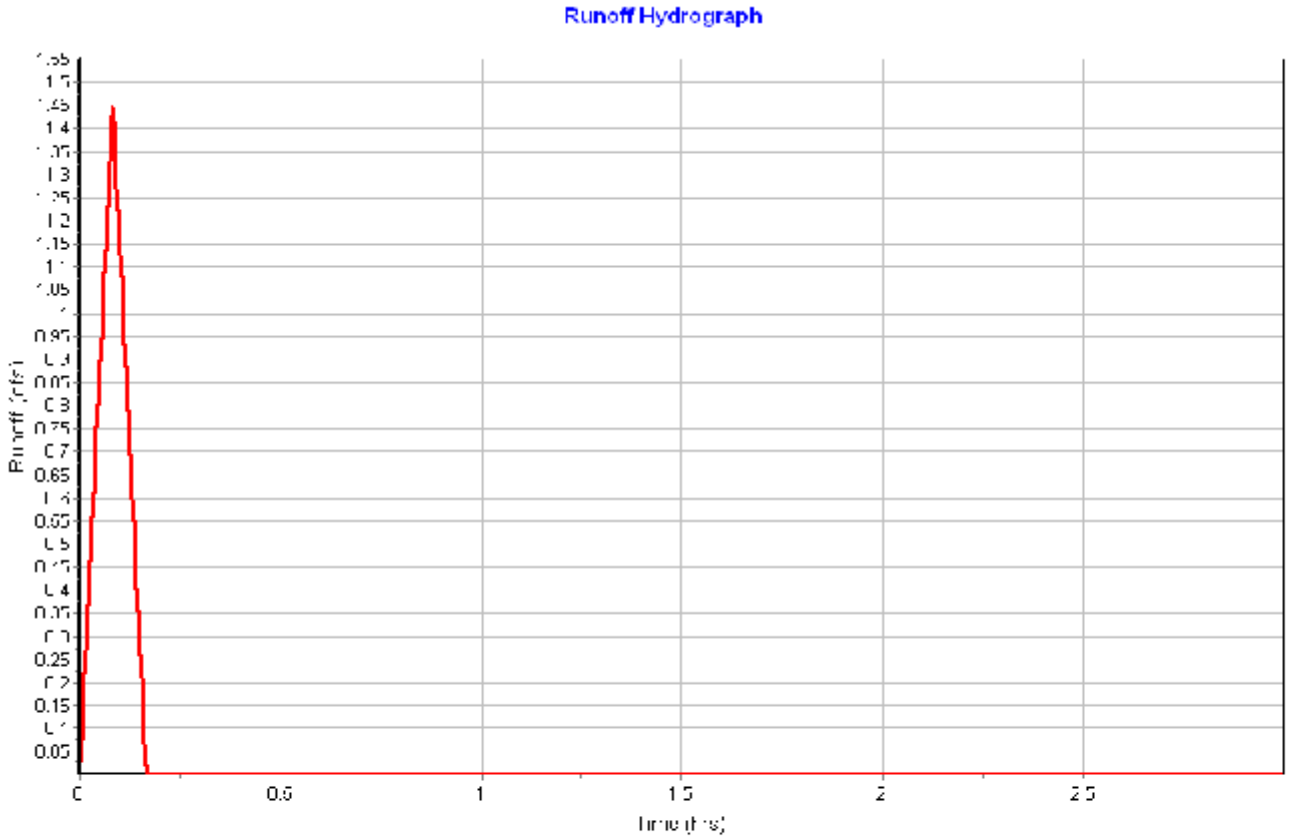
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.32
Peak Runoff (cfs) 1.44
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.7600
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S3



Input Data

Area (ft²) 5969.99
Weighted Runoff Coefficient 0.7900

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	4620.80	B (2-6%)	0.96
Open Space, 25 years or greater	1349.23	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	5970.03		0.79

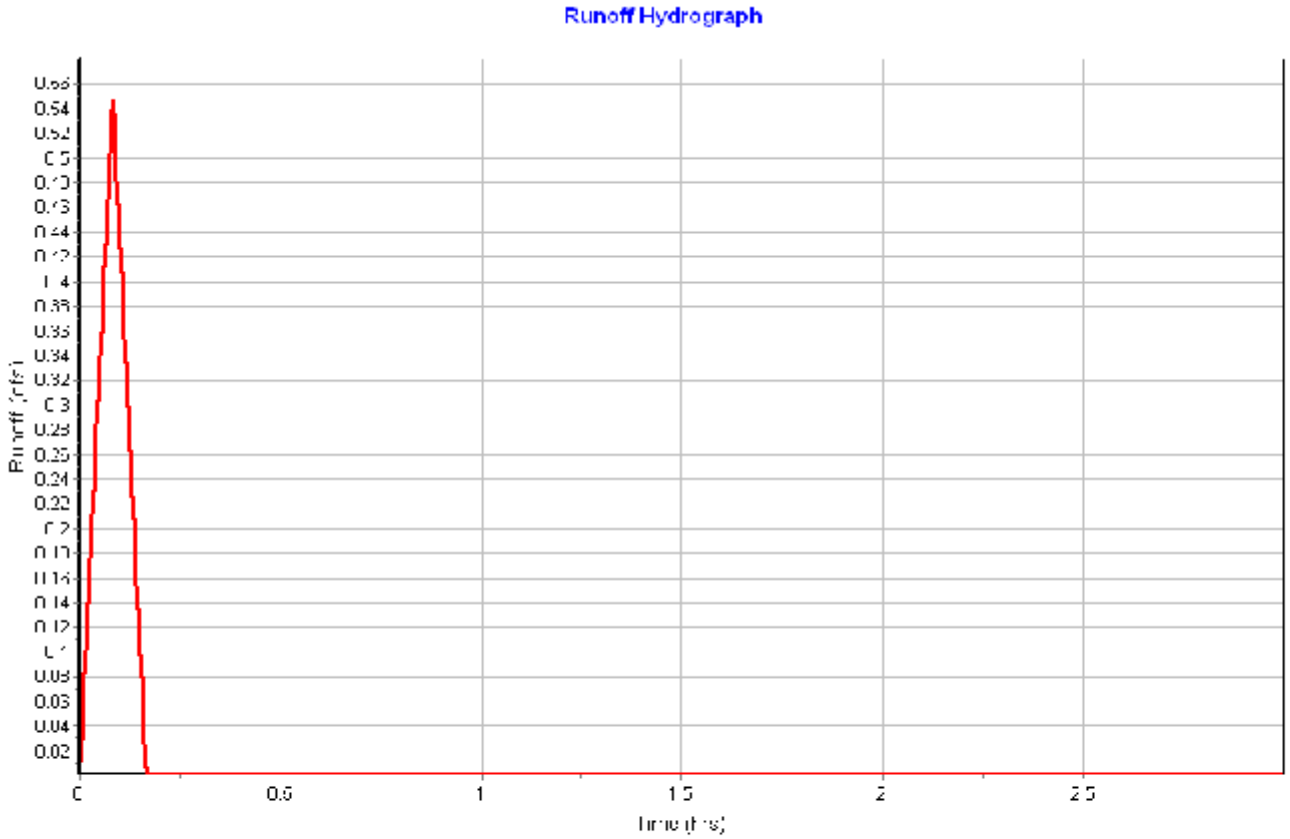
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.33
Peak Runoff (cfs) 0.55
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.7900
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S4



Input Data

Area (ft²) 41450.00
Weighted Runoff Coefficient 0.7000

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	27274.09	B (2-6%)	0.96
Open Space, 25 years or greater	14175.91	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	41450.00		0.70

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	65	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	18.09	0.00	0.00

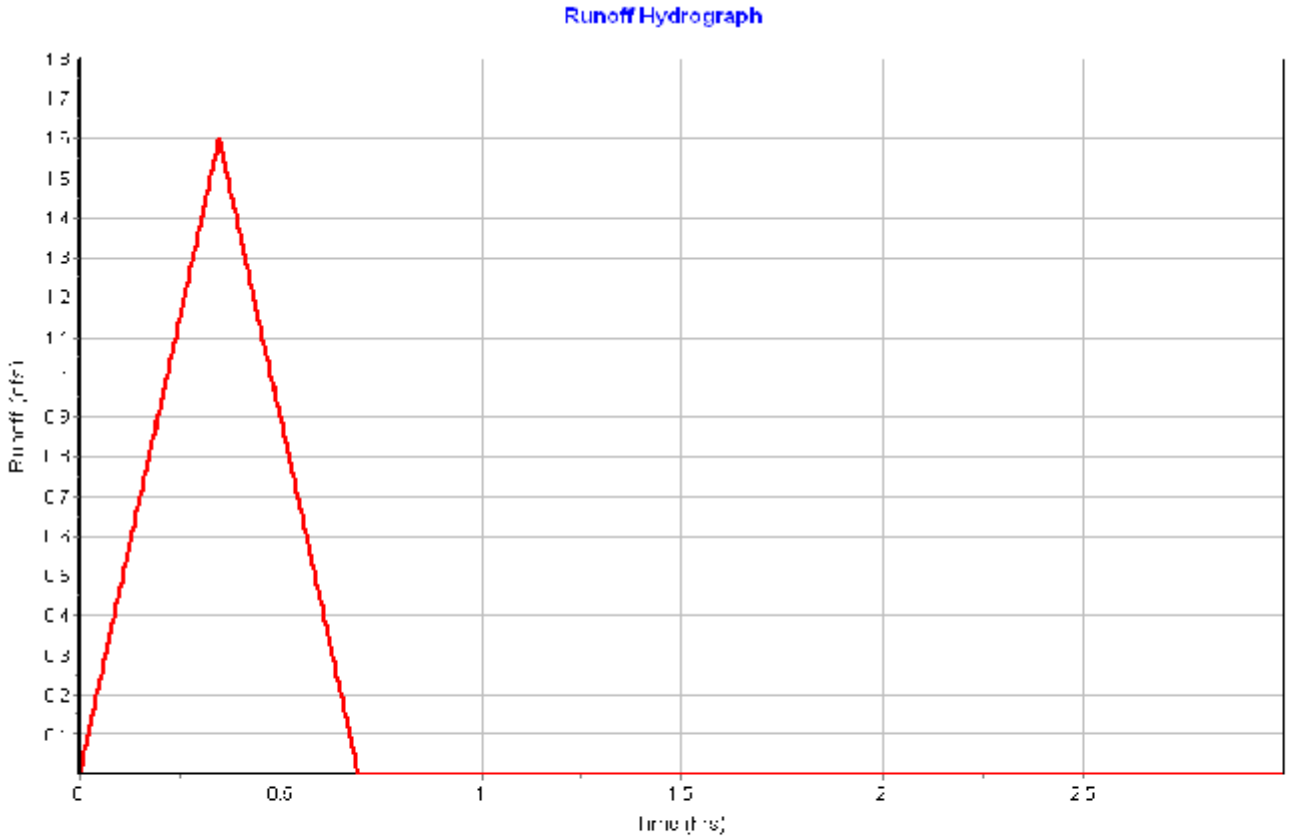
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	80	390	0.00
Slope (%) :	3.5	3.3	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.80	2.72	0.00
Computed Flow Time (min) :	0.35	2.39	0.00

Total TOC (min) 20.83

Subbasin Runoff Results

Total Rainfall (in) 0.83
Total Runoff (in) 0.58
Peak Runoff (cfs) 1.60
Rainfall Intensity 2.402
Weighted Runoff Coefficient 0.7000
Time of Concentration (days hh:mm:ss) 0 00:20:50

Subbasin : Pr-S5



Input Data

Area (ft²) 14609.98
Weighted Runoff Coefficient 0.8500

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12564.62	B (2-6%)	0.96
Open Space, 25 years or greater	2045.40	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	14610.02		0.85

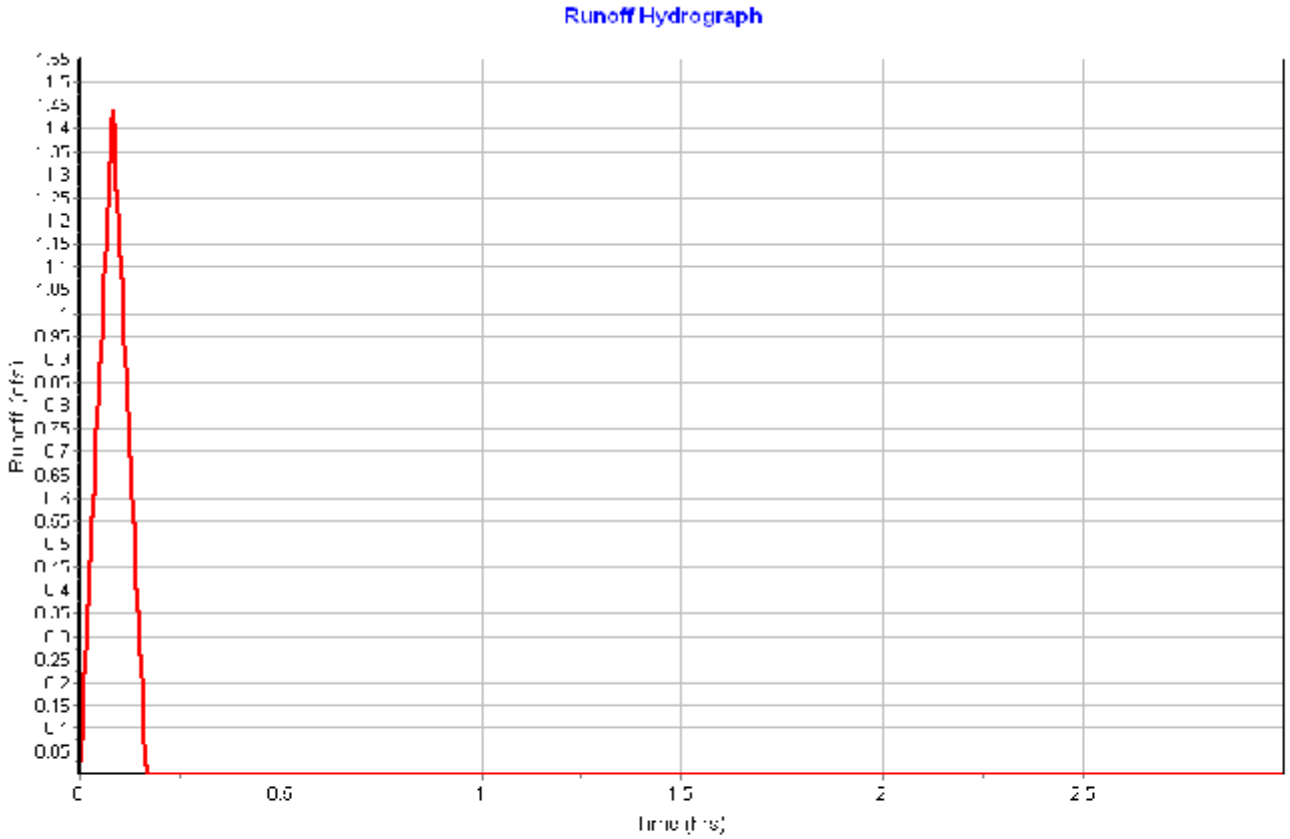
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.36
Peak Runoff (cfs) 1.44
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.8500
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S6



Input Data

Area (ft²) 19569.98
Weighted Runoff Coefficient 0.8600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	17006.35	B (2-6%)	0.96
Open Space, 25 years or greater	2563.68	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	19570.03		0.86

Time of Concentration

User-Defined TOC override (minutes): 5

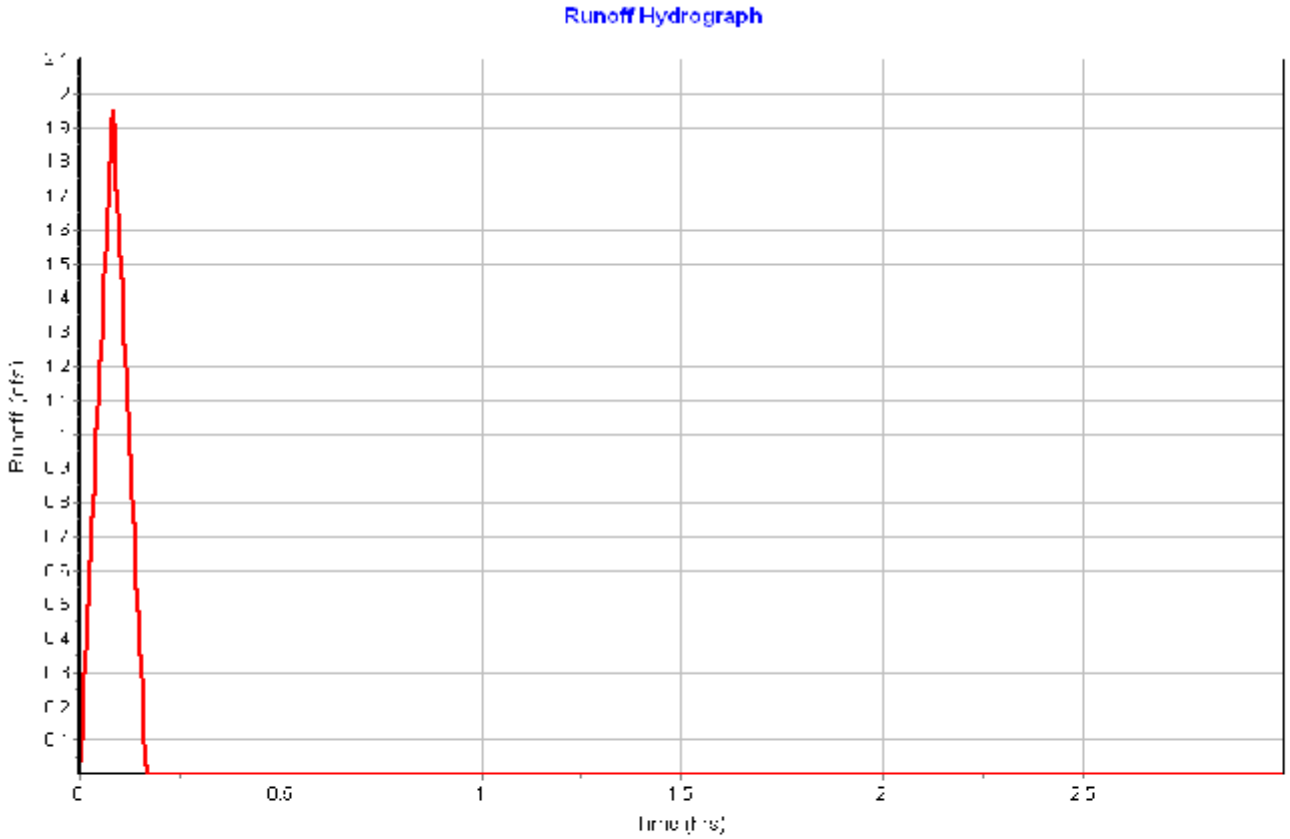
Subbasin Runoff Results

Total Rainfall (in) 0.42
Total Runoff (in) 0.36
Peak Runoff (cfs) 1.95
Rainfall Intensity 5.050
Weighted Runoff Coefficient 0.8600
Time of Concentration (days hh:mm:ss) 0 00:05:00

923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601

Deric Walter, PE
970.945.5252

Subbasin : Pr-S7



923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601

Deric Walter, PE
970.945.5252

Input Data

Area (ft²) 52210.01
Weighted Runoff Coefficient 0.7600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	38844.24	B (2-6%)	0.96
Open Space, 25 years or greater	13365.78	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	52210.02		0.76

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.40	0.00	0.00
Flow Length (ft) :	20	0.00	0.00
Slope (%) :	10	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	5.43	0.00	0.00

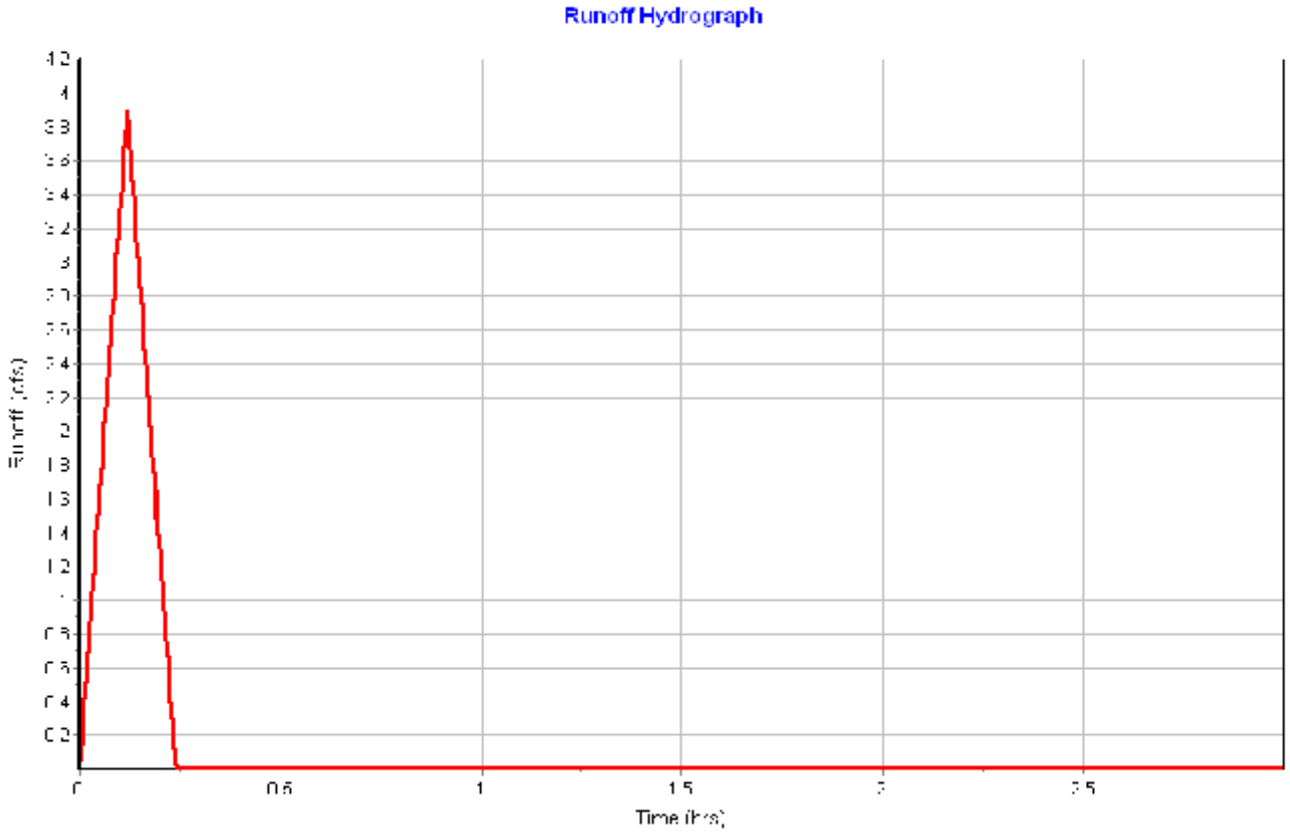
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	210	150	0.00
Slope (%) :	3.5	3.5	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.80	2.81	0.00
Computed Flow Time (min) :	0.92	0.89	0.00

Total TOC (min) 7.24

Subbasin Runoff Results

Total Rainfall (in) 0.51
Total Runoff (in) 0.39
Peak Runoff (cfs) 3.90
Rainfall Intensity 4.277
Weighted Runoff Coefficient 0.7600
Time of Concentration (days hh:mm:ss) 0 00:07:14

Subbasin : Pr-S8



Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)
1	SDMH-N3	5719.86	5725.45	5.59	5719.86	0.00
2	SDMH-S2	5729.50	5731.40	1.90	5729.50	0.00
3	WQ-N	5719.73	5725.57	5.84	5719.73	0.00
4	WQ-S	5716.00	5721.50	5.50	5716.00	0.00

Junction Results

SN	Element ID	Peak Inflow	Max HGL Elevation Attained	Max HGL Depth Attained	Min Freeboard Attained	Average HGL Elevation Attained	Average HGL Depth Attained	Time of Max HGL Occurrence	Total Flooded Volume	Total Time Flooded
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(days hh:mm)	(ft³)	(min)
1	SDMH-N3	3.390	5720.66	0.80	4.79	5720.17	0.31	0 00:19	0.00	0.00
2	SDMH-S2	0.860	5730.03	0.53	1.37	5729.74	0.24	0 00:17	0.00	0.00
3	WQ-N	3.390	5720.34	0.61	5.23	5719.84	0.11	0 00:05	0.00	0.00
4	WQ-S	8.640	5718.48	2.48	3.02	5718.02	2.02	0 00:05	0.00	0.00

Channel Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Shape	Height (ft)	Width (ft)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)
1	Road-S3	109.00	5732.10	2.51	5726.40	2.65	5.70	5.2300	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000
2	Road-S4	69.00	5726.40	2.65	5723.50	3.42	2.90	4.2000	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000
3	Road-S6a	84.00	5723.50	3.42	5721.50	3.93	2.00	2.3800	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000

Channel Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	Road-S3	0.440	0 00:05	114.310	0.00	4.38	0.41	0.10	0.16	0.00	
2	Road-S4	0.060	0 00:05	100.690	0.00	2.94	0.39	0.05	0.08	0.00	
3	Road-S6a	0.000	0 00:07	79.170	0.00	0.00		0.00	0.01	0.00	

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	Link-47	32.09	5718.50	1.00	5718.00	2.00	0.50	1.5600	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
2	Link-57	8.00	5719.86	0.00	5719.73	0.00	0.13	1.6300	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
3	Pipe-6b	163.00	5717.80	0.23	5716.50	0.50	1.30	0.8000	CIRCULAR	24.000	24.000	0.0150	0.5000	0.5000	0.000	No	1
4	Pipe-N1	73.00	5721.75	0.00	5721.03	0.50	0.72	0.9900	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
5	Pipe-N2	41.00	5720.53	0.00	5720.06	0.20	0.47	1.1500	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
6	Pipe-N3	21.00	5720.90	0.00	5720.06	0.20	0.84	4.0000	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
7	Pipe-Out-N	20.00	5719.73	0.00	5717.50	0.00	2.23	11.1500	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
8	Pipe-Out-S	24.00	5716.00	0.00	5715.00	-0.76	1.00	4.1700	CIRCULAR	24.000	24.000	0.0150	0.5000	0.5000	0.000	No	1
9	Pipe-S1	50.00	5730.70	0.00	5729.70	0.20	1.00	2.0000	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
10	Pipe-S2	290.00	5729.50	0.00	5723.75	0.00	5.75	1.9800	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
11	Pipe-S3	106.00	5729.59	0.00	5723.95	0.20	5.64	5.3200	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
12	Pipe-S4	67.00	5723.75	0.00	5720.58	0.50	3.17	4.7300	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
13	Pipe-S5	41.00	5721.56	-0.14	5720.58	0.50	0.98	2.3900	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
14	Pipe-S6a	65.00	5720.08	0.00	5718.80	0.50	1.28	1.9700	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
15	Pipe-S8	43.00	5718.60	0.30	5718.20	0.63	0.40	0.9300	Horizontal Ellipse	14.040	23.040	0.0130	0.5000	0.5000	0.000	No	1

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)
1	Link-47	1.770	0 00:05	3.85	0.46	4.80	0.11	0.48	0.48	0.00
2	Link-57	3.390	0 00:05	7.14	0.47	5.74	0.02	0.61	0.49	0.00
3	Pipe-6b	7.150	0 00:07	17.51	0.41	5.34	0.51	0.89	0.44	0.00
4	Pipe-N1	1.710	0 00:24	3.07	0.56	4.02	0.30	0.53	0.53	0.00
5	Pipe-N2	2.790	0 00:19	5.99	0.47	4.80	0.14	0.60	0.48	0.00
6	Pipe-N3	2.800	0 00:05	6.18	0.45	7.67	0.05	0.47	0.47	0.00
7	Pipe-Out-N	3.390	0 00:05	18.69	0.18	11.54	0.03	0.36	0.29	0.00
8	Pipe-Out-S	8.640	0 00:06	19.61	0.44	6.04	0.07	0.93	0.46	0.00
9	Pipe-S1	0.860	0 00:17	2.69	0.32	4.39	0.19	0.33	0.39	0.00
10	Pipe-S2	0.860	0 00:18	2.67	0.32	4.39	1.10	0.33	0.39	0.00
11	Pipe-S3	0.970	0 00:05	4.38	0.22	9.37	0.19	0.27	0.32	0.00
12	Pipe-S4	2.480	0 00:05	6.72	0.37	7.91	0.14	0.42	0.42	0.00
13	Pipe-S5	1.590	0 00:21	3.14	0.51	5.77	0.12	0.42	0.50	0.00
14	Pipe-S6a	2.900	0 00:05	7.86	0.37	5.93	0.18	0.53	0.42	0.00
15	Pipe-S8	6.170	0 00:07	10.17	0.61	5.96	0.12	0.65	0.55	0.00

Inlet Input

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)
1	Inlet-N1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.75	5724.50	2.75	5721.75	0.00	400.00	50.00
2	Inlet-N2	FHWA HEC-22 GENERIC	N/A	On Sag	2	5720.53	5725.35	4.82	5722.30	1.77	400.00	50.00
3	Inlet-N3	FHWA HEC-22 GENERIC	N/A	On Sag	1	5720.90	5724.90	4.00	5722.00	1.10	400.00	50.00
4	Inlet-S1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5730.70	5733.20	2.50	5730.70	0.00	400.00	50.00
5	Inlet-S3	FHWA HEC-22 GENERIC	N/A	On Grade	1	5729.59	5732.09	2.50	5729.59	0.00	N/A	50.00
6	Inlet-S4	FHWA HEC-22 GENERIC	N/A	On Grade	1	5723.75	5726.41	2.66	5723.42	-0.33	N/A	50.00
7	Inlet-S5	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.70	5724.70	3.00	5721.70	0.00	100.00	50.00
8	Inlet-S6a	FHWA HEC-22 GENERIC	N/A	On Grade	1	5720.08	5723.62	3.54	5720.08	0.00	N/A	50.00
9	Inlet-S6b	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.57	5721.52	3.95	5717.50	-0.07	400.00	50.00
10	Inlet-S7	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.50	5721.00	3.50	5717.50	0.00	400.00	50.00
11	Inlet-S8	FHWA HEC-22 GENERIC	N/A	On Sag	1	5718.30	5721.38	3.08	5718.30	0.00	400.00	50.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	Inlet-N1	N/A	0.1000	0.0220	0.1000	2.00	0.0000	7.00
2	Inlet-N2	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
3	Inlet-N3	N/A	0.0200	0.0160	0.0620	2.00	0.0656	7.00
4	Inlet-S1	N/A	0.0200	0.0160	0.0620	2.00	0.0656	7.00
5	Inlet-S3	0.0100	0.0200	0.0160	0.0620	2.00	0.0656	7.00
6	Inlet-S4	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	7.00
7	Inlet-S5	N/A	0.1000	0.0220	0.1000	2.00	0.0000	7.00
8	Inlet-S6a	0.0400	0.0200	0.0160	0.0620	2.00	0.0656	7.00
9	Inlet-S6b	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
10	Inlet-S7	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
11	Inlet-S8	N/A	0.1000	0.0160	0.0620	2.00	0.0000	7.00

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	Total Flooded Volume (ft³)	Total Time Flooded (hr)
1	Inlet-N1	1.760	1.76	N/A	N/A	N/A	4.24	5724.92	0.42	0 00:24	0.00	0.00
2	Inlet-N2	1.540	1.54	N/A	N/A	N/A	7.34	5725.58	0.23	0 00:00	0.00	0.00
3	Inlet-N3	3.050	3.05	N/A	N/A	N/A	15.14	5725.43	0.53	0 00:00	0.00	0.00
4	Inlet-S1	0.980	0.98	N/A	N/A	N/A	6.37	5733.53	0.33	0 00:17	0.00	0.00
5	Inlet-S3	1.440	1.44	0.98	0.46	68.05	7.38	5732.32	0.23	0 00:05	0.00	0.00
6	Inlet-S4	0.950	0.55	0.89	0.07	93.06	3.68	5726.57	0.16	0 00:05	0.00	0.00
7	Inlet-S5	1.600	1.60	N/A	N/A	N/A	4.03	5725.10	0.40	0 00:21	0.00	0.00
8	Inlet-S6a	0.060	0.00	0.06	0.00	99.66	0.29	5723.64	0.02	0 00:05	0.00	0.00
9	Inlet-S6b	1.440	1.44	N/A	N/A	N/A	8.54	5721.76	0.24	0 00:07	0.00	0.00
10	Inlet-S7	1.950	1.95	N/A	N/A	N/A	10.89	5721.28	0.28	0 00:05	0.00	0.00
11	Inlet-S8	3.900	3.90	N/A	N/A	N/A	5.21	5721.81	0.43	0 00:05	0.00	0.00

Project Description

File Name 17015-SSA.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method ..... Rational
Time of Concentration (TOC) Method ..... SCS TR-55
Link Routing Method ..... Kinematic Wave
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ..... YES

Rainfall Details

Return Period..... 100 year(s)

Subbasin Summary

SN	Subbasin ID	Area (ac)	Weighted Runoff Coefficient	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ft³)	Peak Runoff (cfs)	Time of Concentration (days hh:mm:ss)
1	Pr-N1	1	0.690	1.12	0.77	3237.9	2.26	0 00:23:39
2	Pr-N2	1	0.820	1.03	0.84	2134.0	2.00	0 00:17:39
3	Pr-N3	1	0.880	0.55	0.48	1198.1	3.96	0 00:05:00
4	Pr-S1	1	0.580	0.99	0.57	1175.5	1.27	0 00:15:16
5	Pr-S2	0	0.860	0.55	0.47	227.2	0.75	0 00:05:00
6	Pr-S3	0	0.760	0.55	0.42	566.8	1.88	0 00:05:00
7	Pr-S4	0	0.790	0.55	0.43	214.9	0.71	0 00:05:00
8	Pr-S5	1	0.700	1.08	0.75	2601.0	2.06	0 00:20:49
9	Pr-S6	0	0.850	0.55	0.47	566.1	1.87	0 00:05:00
10	Pr-S7	0	0.860	0.55	0.47	766.5	2.54	0 00:05:00
11	Pr-S8	1	0.760	0.66	0.51	2197.2	5.06	0 00:07:14

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ft³)	Total Time Flooded (min)
1	SDMH-N3	Junction	5719.86	5725.45	5719.86	5721.00	0.00	4.440	5720.76	0.00	4.69	0 00:00	0.00	0.00
2	SDMH-S2	Junction	5729.50	5731.40	5729.50	0.00	0.00	1.210	5730.09	0.00	1.31	0 00:00	0.00	0.00
3	WQ-N	Junction	5719.73	5725.57	5719.73	5721.00	0.00	4.440	5720.44	0.00	5.13	0 00:00	0.00	0.00
4	WQ-S	Junction	5716.00	5721.50	5716.00	0.00	0.00	11.290	5718.56	0.00	2.94	0 00:00	0.00	0.00
5	Outfall-N	Outfall	5717.50					4.440	5717.91					
6	Outfall-S	Outfall	5715.76					11.290	5716.85					

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length	Inlet Invert Elevation	Outlet Invert Elevation	Average Slope	Diameter or Height	Manning's Roughness	Peak Flow	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Peak Flow Depth
					(ft)	(ft)	(ft)	(%)	(in)		(cfs)	(cfs)		(ft/sec)	(ft)
1	Link-47	Pipe	Inlet-S7	WQ-S	32.09	5718.50	5718.00	1.5600	12.000	0.0150	2.340	3.85	0.61	5.14	0.56
2	Link-57	Pipe	SDMH-N3	WQ-N	8.00	5719.86	5719.73	1.6300	15.000	0.0150	4.440	7.14	0.62	6.13	0.71
3	Pipe-6b	Pipe	Inlet-S6b	WQ-S	163.00	5717.80	5716.50	0.8000	24.000	0.0150	9.320	17.51	0.53	5.71	1.04
4	Pipe-N1	Pipe	Inlet-N1	Inlet-N2	73.00	5721.75	5721.03	0.9900	12.000	0.0150	2.210	3.07	0.72	4.26	0.63
5	Pipe-N2	Pipe	Inlet-N2	SDMH-N3	41.00	5720.53	5720.06	1.1500	15.000	0.0150	3.610	5.99	0.60	5.10	0.70
6	Pipe-N3	Pipe	Inlet-N3	SDMH-N3	21.00	5720.90	5720.06	4.0000	12.000	0.0150	3.700	6.18	0.60	8.21	0.56
7	Pipe-Out-N	Pipe	WQ-N	Outfall-N	20.00	5719.73	5717.50	11.1500	15.000	0.0150	4.440	18.69	0.24	12.48	0.41
8	Pipe-Out-S	Pipe	WQ-S	Outfall-S	24.00	5716.00	5715.00	4.1700	24.000	0.0150	11.290	19.61	0.58	6.46	1.09
9	Pipe-S1	Pipe	Inlet-S1	SDMH-S2	50.00	5730.70	5729.70	2.0000	10.000	0.0150	1.210	2.69	0.45	4.80	0.39
10	Pipe-S2	Pipe	SDMH-S2	Inlet-S4	290.00	5729.50	5723.75	1.9800	10.000	0.0150	1.200	2.67	0.45	4.82	0.39
11	Pipe-S3	Pipe	Inlet-S3	Inlet-S4	106.00	5729.59	5723.95	5.3200	10.000	0.0150	1.160	4.38	0.27	10.07	0.29
12	Pipe-S4	Pipe	Inlet-S4	Inlet-S6a	67.00	5723.75	5720.58	4.7300	12.000	0.0150	3.150	6.72	0.47	8.42	0.48
13	Pipe-S5	Pipe	Inlet-S5	Inlet-S6a	41.00	5721.56	5720.58	2.3900	10.000	0.0150	2.050	3.14	0.65	6.13	0.49
14	Pipe-S6a	Pipe	Inlet-S6a	Inlet-S8	65.00	5720.08	5718.80	1.9700	15.000	0.0150	3.800	7.86	0.48	6.36	0.61
15	Pipe-S8	Pipe	Inlet-S8	Inlet-S6b	43.00	5718.60	5718.20	0.9300	19.000	0.0130	8.020	10.17	0.79	6.37	0.75
16	Road-S3	Channel	Inlet-S3	Inlet-S4	109.00	5732.10	5726.40	5.2300	7.200	0.0320	0.670	114.31	0.01	6.07	0.12
17	Road-S4	Channel	Inlet-S4	Inlet-S6a	69.00	5726.40	5723.50	4.2000	7.200	0.0320	0.180	100.69	0.00	3.94	0.07
18	Road-S6a	Channel	Inlet-S6a	Inlet-S6b	84.00	5723.50	5721.50	2.3800	7.200	0.0320	0.000	79.17	0.00	0.00	0.01

Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)
0.56	0.00
0.57	0.00
0.52	0.00
0.63	0.00
0.56	0.00
0.56	0.00
0.33	0.00
0.54	0.00
0.47	0.00
0.47	0.00
0.35	0.00
0.48	0.00
0.59	0.00
0.49	0.00
0.64	0.00
0.19	0.00
0.12	0.00
0.01	0.00

Inlet Summary

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Initial Water Elevation (ft)	Ponded Area (ft²)	Peak Flow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Allowable Spread (ft)
1	Inlet-N1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.75	5724.50	5721.75	400.00	2.260	N/A	N/A	N/A	7.00
2	Inlet-N2	FHWA HEC-22 GENERIC	N/A	On Sag	2	5720.53	5725.35	5722.30	400.00	2.000	N/A	N/A	N/A	7.00
3	Inlet-N3	FHWA HEC-22 GENERIC	N/A	On Sag	1	5720.90	5724.90	5722.00	400.00	3.960	N/A	N/A	N/A	7.00
4	Inlet-S1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5730.70	5733.20	5730.70	400.00	1.270	N/A	N/A	N/A	7.00
5	Inlet-S3	FHWA HEC-22 GENERIC	N/A	On Grade	1	5729.59	5732.09	5729.59	N/A	1.880	1.17	0.70	62.48	7.00
6	Inlet-S4	FHWA HEC-22 GENERIC	N/A	On Grade	1	5723.75	5726.41	5723.42	N/A	1.340	1.16	0.19	86.09	7.00
7	Inlet-S5	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.70	5724.70	5721.70	100.00	2.060	N/A	N/A	N/A	7.00
8	Inlet-S6a	FHWA HEC-22 GENERIC	N/A	On Grade	1	5720.08	5723.62	5720.08	N/A	0.180	0.18	0.00	99.66	7.00
9	Inlet-S6b	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.57	5721.52	5717.50	400.00	1.870	N/A	N/A	N/A	7.00
10	Inlet-S7	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.50	5721.00	5717.50	400.00	2.530	N/A	N/A	N/A	7.00
11	Inlet-S8	FHWA HEC-22 GENERIC	N/A	On Sag	1	5718.30	5721.38	5718.30	400.00	5.060	N/A	N/A	N/A	7.00

Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)
4.84	5724.98
9.09	5725.61
18.28	5725.50
7.75	5733.60
8.33	5732.34
4.62	5726.59
4.63	5725.16
0.86	5723.67
10.52	5721.80
13.18	5721.33
5.95	5721.89

Subbasin Hydrology

Subbasin : Pr-N1

Input Data

Area (ft²) 50460.00
Weighted Runoff Coefficient 0.6900

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	32950.40	B (2-6%)	0.96
Open Space, 25 years or greater	17509.64	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	50460.04		0.69

Time of Concentration

TOC Method : SCS TR-55

Sheet Flow Equation :

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

Where :

Tc = Time of Concentration (hr)
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 (hr)
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 (hr)
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

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	80	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	21.36	0.00	0.00

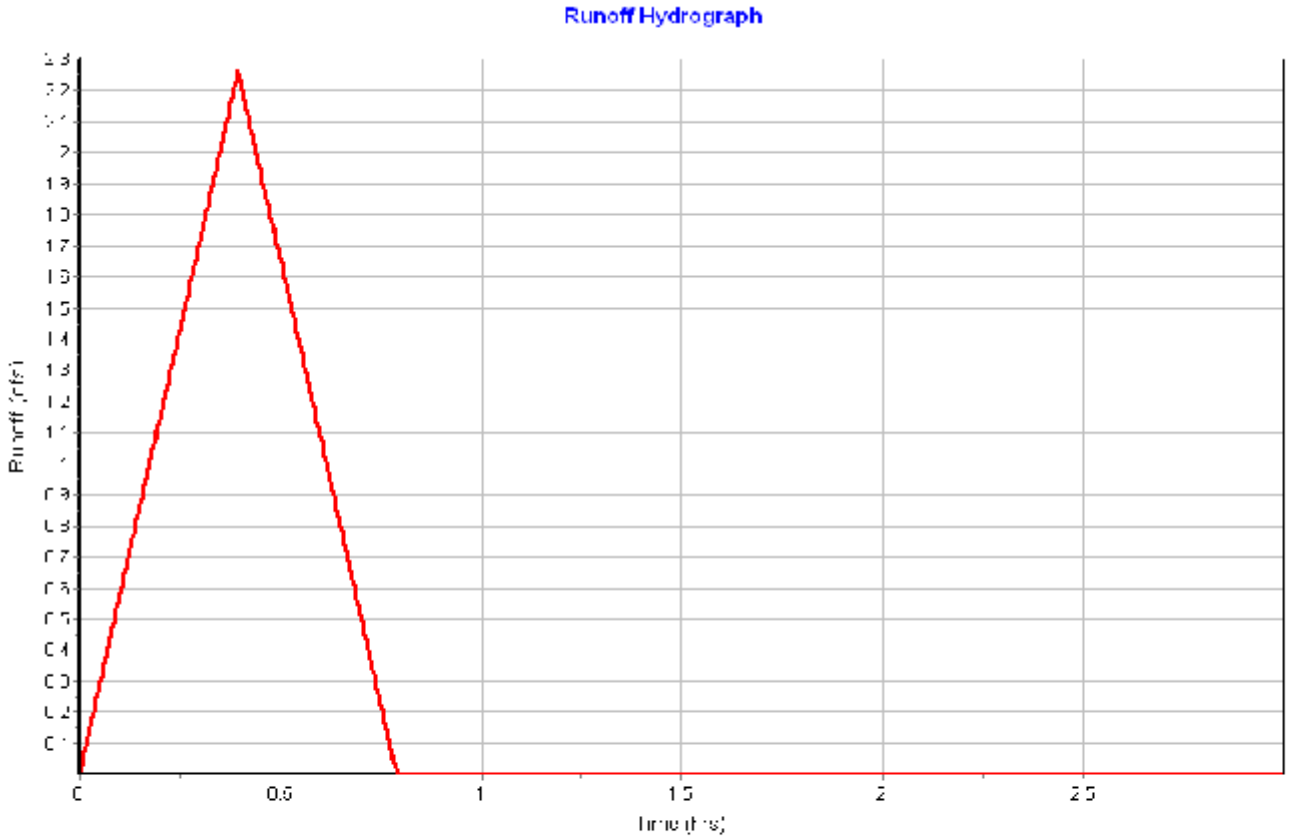
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	70	280	0.00
Slope (%) :	3	2.5	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.52	2.37	0.00
Computed Flow Time (min) :	0.33	1.97	0.00

Total TOC (min) 23.66

Subbasin Runoff Results

Total Rainfall (in)	1.12
Total Runoff (in)	0.77
Peak Runoff (cfs)	2.26
Rainfall Intensity	2.829
Weighted Runoff Coefficient	0.6900
Time of Concentration (days hh:mm:ss)	0 00:23:40

Subbasin : Pr-N1



Input Data

Area (ft²) 30450.00
Weighted Runoff Coefficient 0.8200

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	24755.84	B (2-6%)	0.96
Open Space, 25 years or greater	5694.16	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	30450.00		0.82

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	50	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	14.66	0.00	0.00

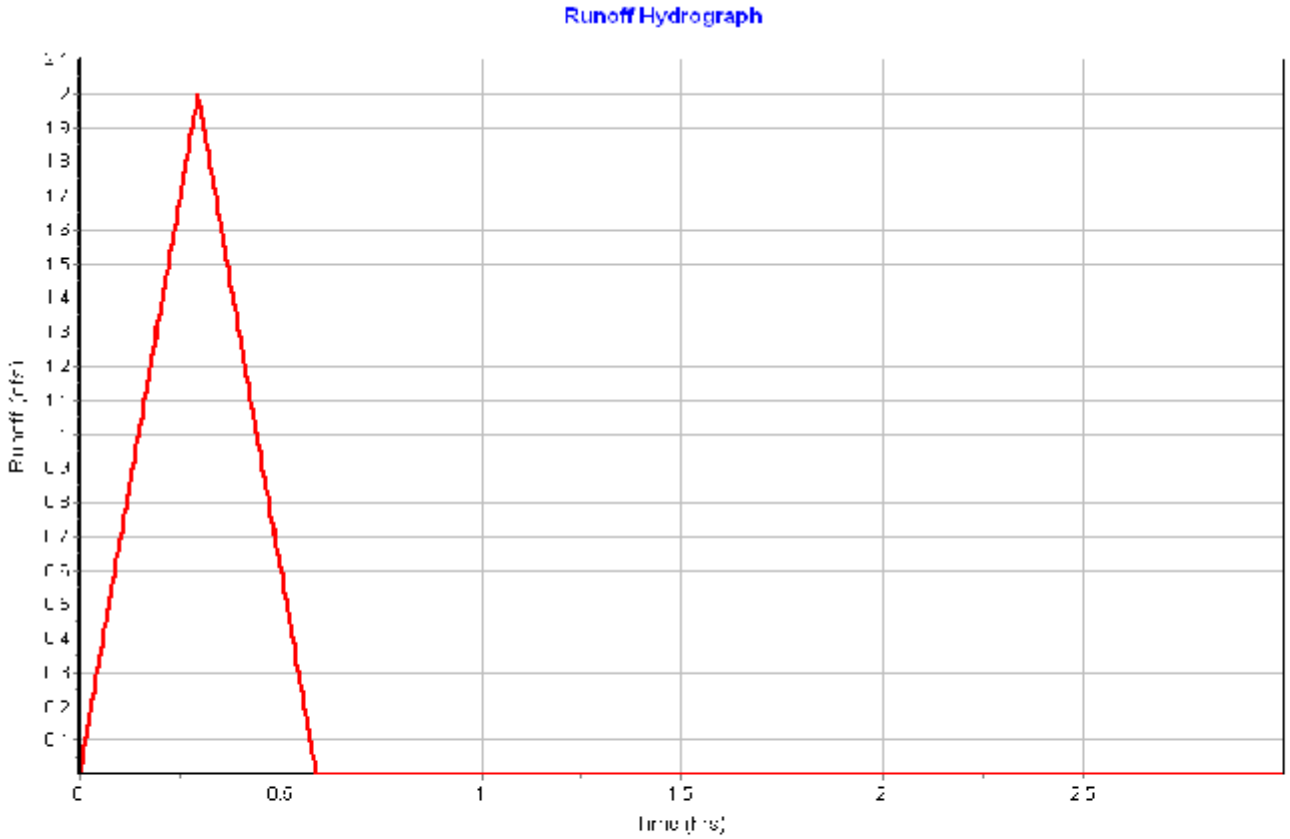
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	170	350	0.00
Slope (%) :	2.1	2	0.00
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.95	2.87	0.00
Computed Flow Time (min) :	0.96	2.03	0.00

Total TOC (min) 17.66

Subbasin Runoff Results

Total Rainfall (in) 1.03
Total Runoff (in) 0.84
Peak Runoff (cfs) 2.00
Rainfall Intensity 3.482
Weighted Runoff Coefficient 0.8200
Time of Concentration (days hh:mm:ss) 0 00:17:40

Subbasin : Pr-N2



Input Data

Area (ft²) 29890.00
Weighted Runoff Coefficient 0.8800

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	26841.24	B (2-6%)	0.96
Open Space, 25 years or greater	3048.76	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	29890.00		0.88

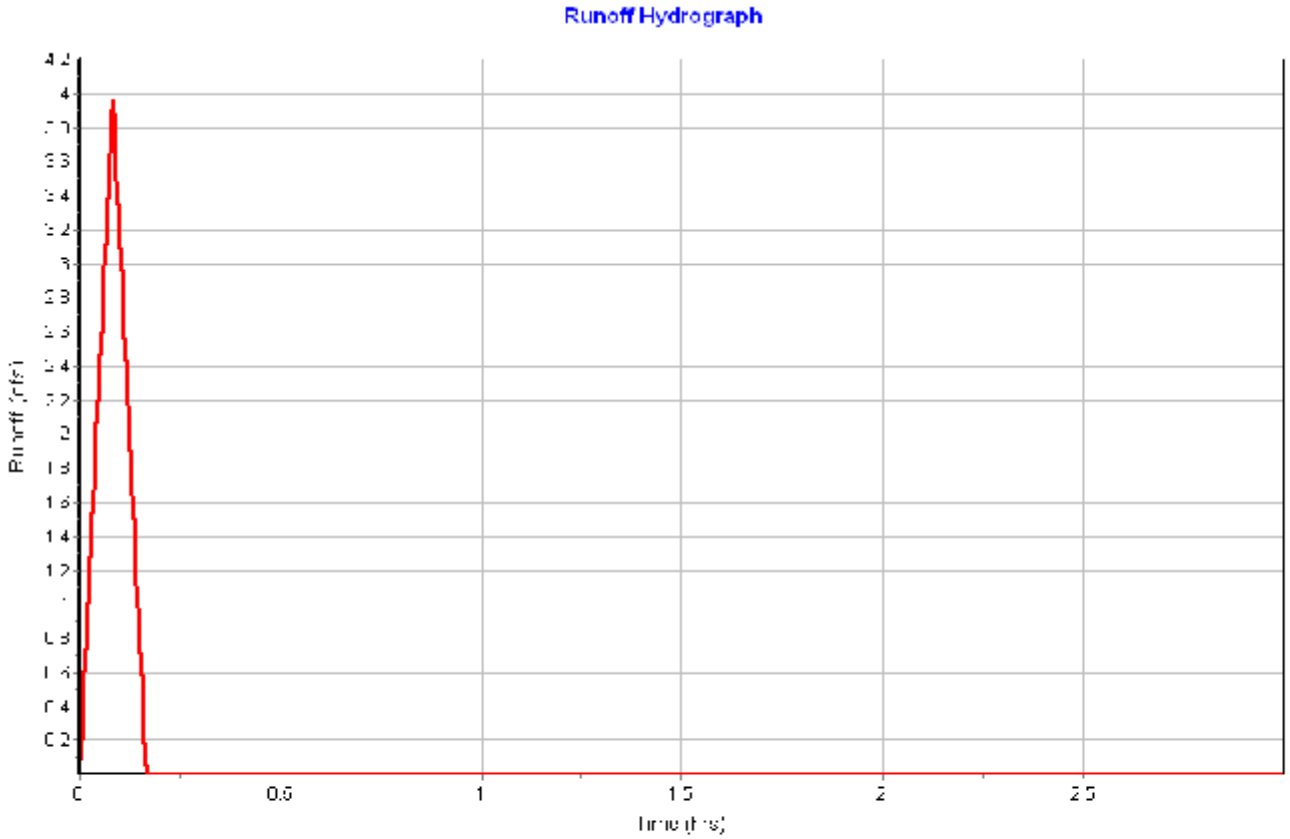
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.48
Peak Runoff (cfs) 3.96
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.8800
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-N3



Input Data

Area (ft²) 24660.00
Weighted Runoff Coefficient 0.5800

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12403.97	B (2-6%)	0.96
Open Space, 25 years or greater	12256.04	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	24660.01		0.58

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	50	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	14.66	0.00	0.00

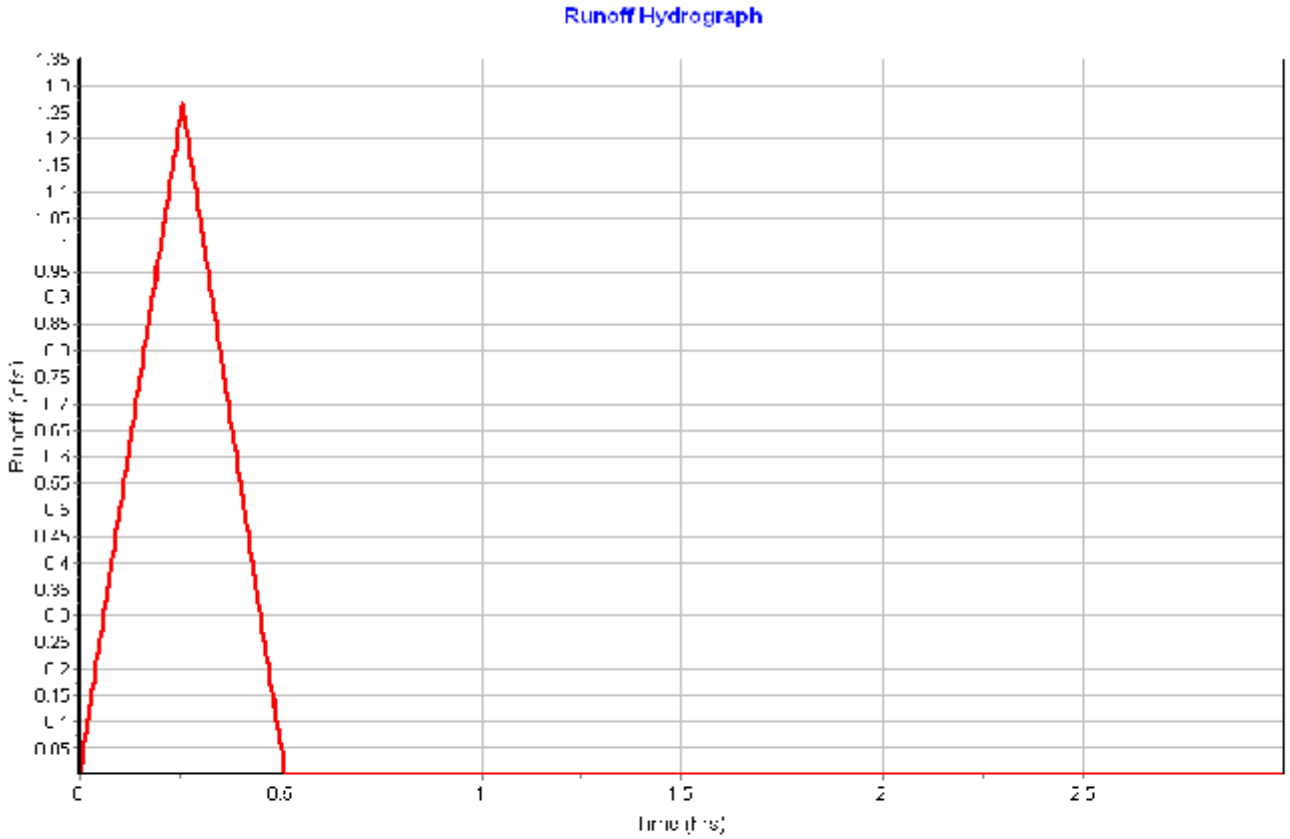
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	50	40	0.00
Slope (%) :	2	1	0.00
Surface Type :	Paved	Paved	Paved
Velocity (ft/sec) :	2.87	2.03	0.00
Computed Flow Time (min) :	0.29	0.33	0.00

Total TOC (min) 15.28

Subbasin Runoff Results

Total Rainfall (in) 0.99
Total Runoff (in) 0.57
Peak Runoff (cfs) 1.27
Rainfall Intensity 3.859
Weighted Runoff Coefficient 0.5800
Time of Concentration (days hh:mm:ss) 0 00:15:17

Subbasin : Pr-S1



Input Data

Area (ft²) 5800.00
Weighted Runoff Coefficient 0.8600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	5080.79	B (2-6%)	0.96
Open Space, 25 years or greater	719.22	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	5800.01		0.86

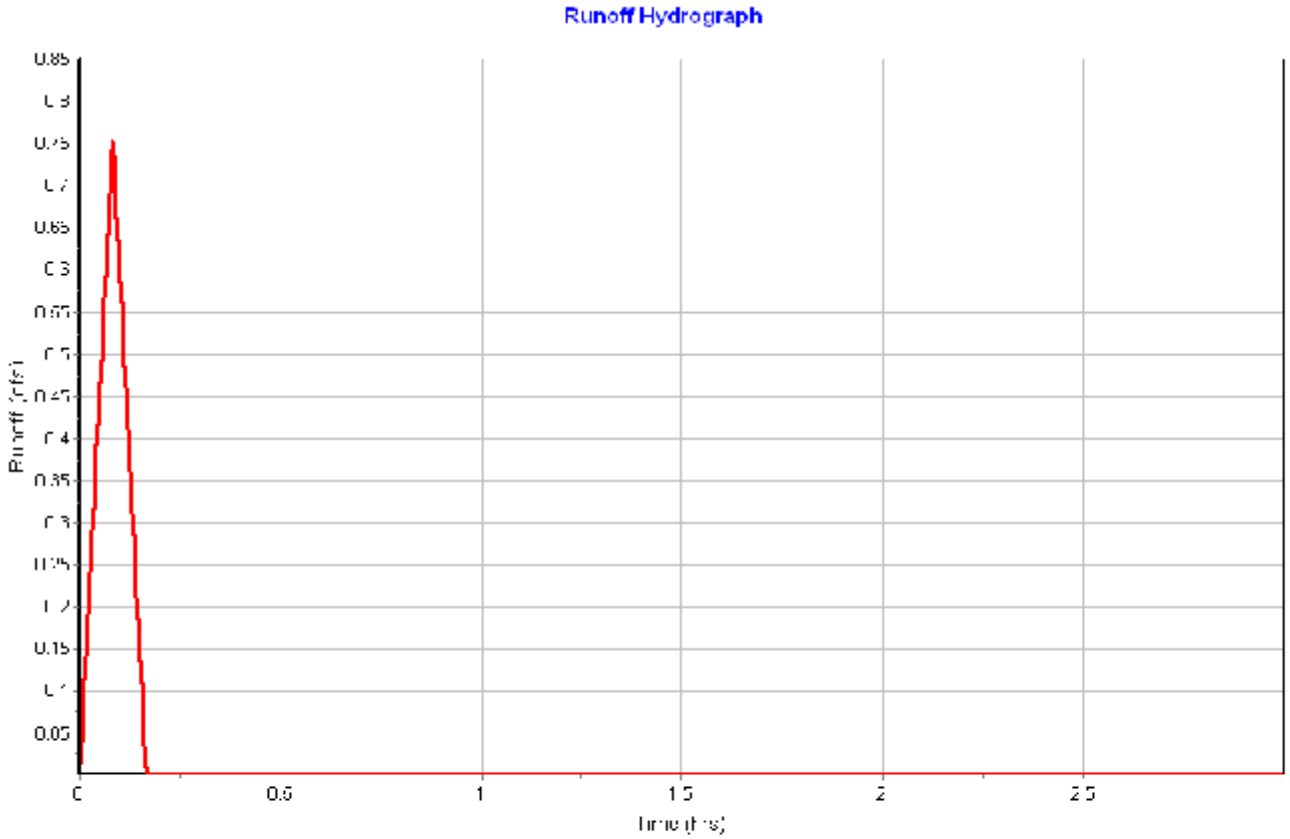
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.47
Peak Runoff (cfs) 0.75
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.8600
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S2



Input Data

Area (ft²) 16390.00
Weighted Runoff Coefficient 0.7600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12145.01	B (2-6%)	0.96
Open Space, 25 years or greater	4245.01	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	16390.02		0.76

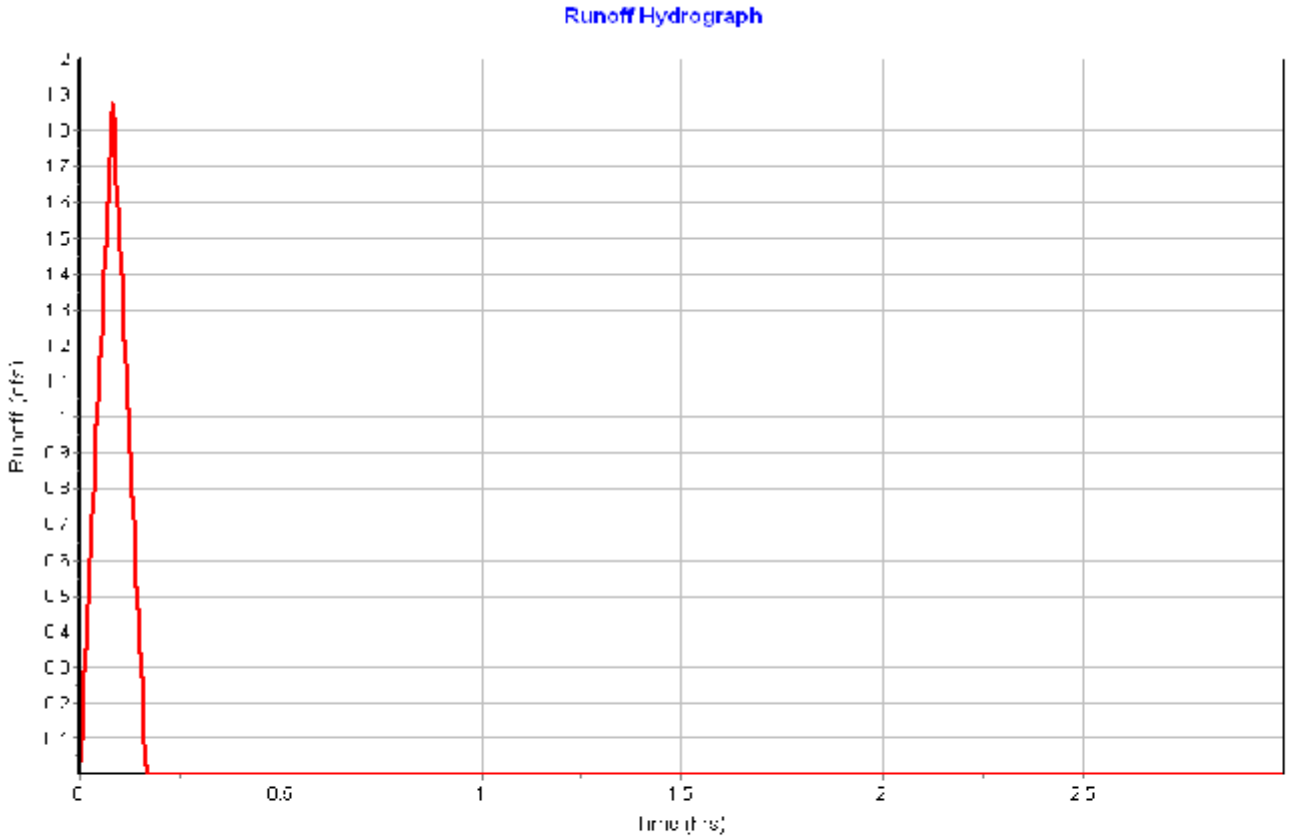
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.42
Peak Runoff (cfs) 1.88
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.7600
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S3



Input Data

Area (ft²) 5969.99
Weighted Runoff Coefficient 0.7900

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	4620.80	B (2-6%)	0.96
Open Space, 25 years or greater	1349.23	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	5970.03		0.79

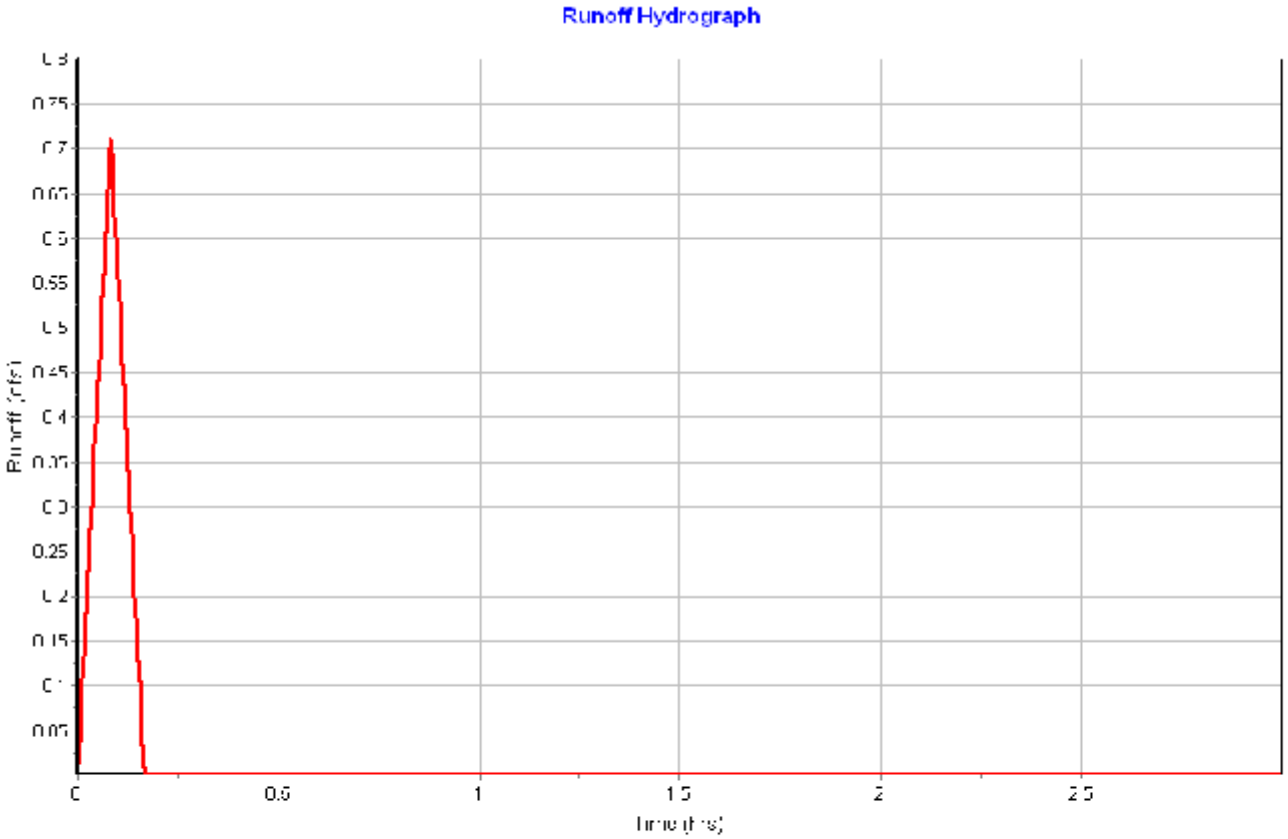
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.43
Peak Runoff (cfs) 0.71
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.7900
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S4



Input Data

Area (ft²) 41450.00
Weighted Runoff Coefficient 0.7000

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	27274.09	B (2-6%)	0.96
Open Space, 25 years or greater	14175.91	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	41450.00		0.70

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.35	0.00	0.00
Flow Length (ft) :	65	0.00	0.00
Slope (%) :	4	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	18.09	0.00	0.00

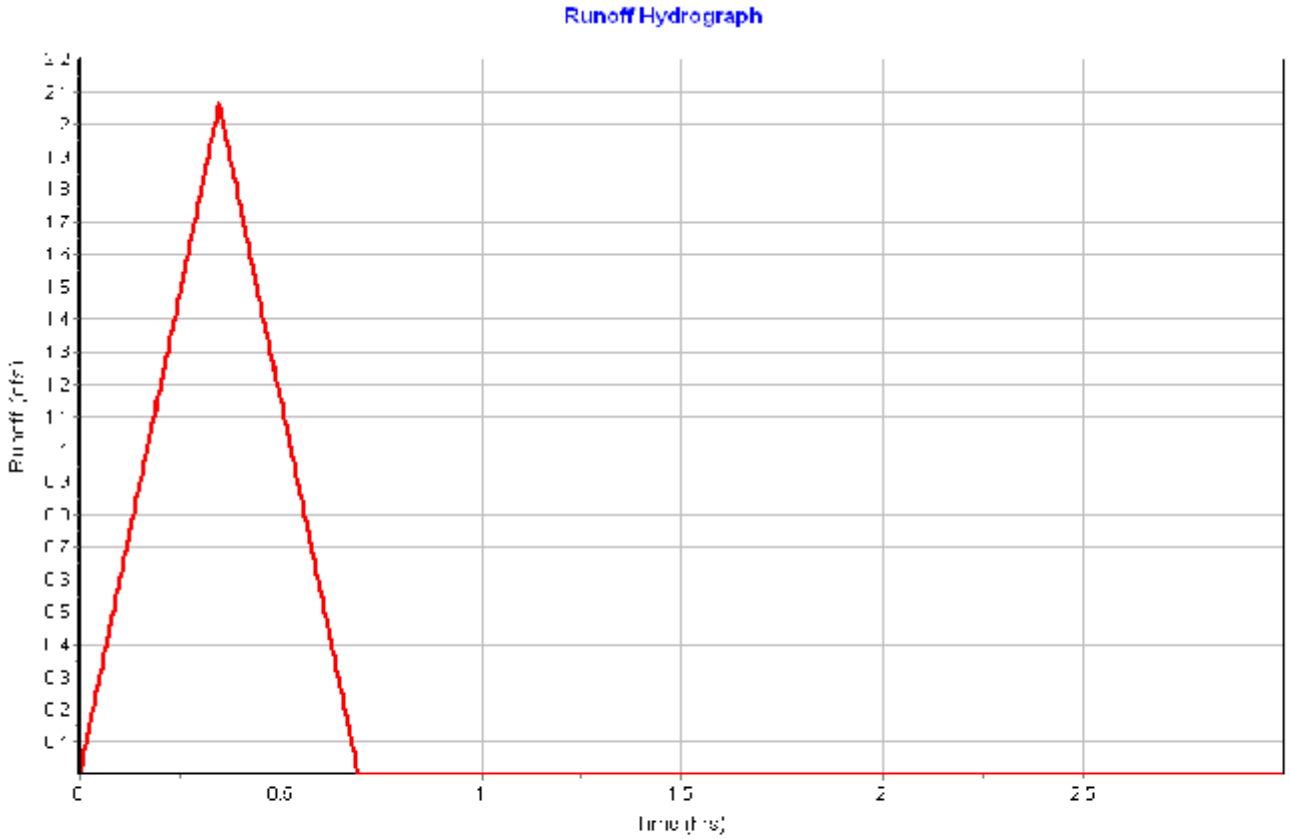
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	80	390	0.00
Slope (%) :	3.5	3.3	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.80	2.72	0.00
Computed Flow Time (min) :	0.35	2.39	0.00

Total TOC (min) 20.83

Subbasin Runoff Results

Total Rainfall (in) 1.08
Total Runoff (in) 0.75
Peak Runoff (cfs) 2.06
Rainfall Intensity 3.097
Weighted Runoff Coefficient 0.7000
Time of Concentration (days hh:mm:ss) 0 00:20:50

Subbasin : Pr-S5



Input Data

Area (ft²) 14609.98
Weighted Runoff Coefficient 0.8500

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	12564.62	B (2-6%)	0.96
Open Space, 25 years or greater	2045.40	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	14610.02		0.85

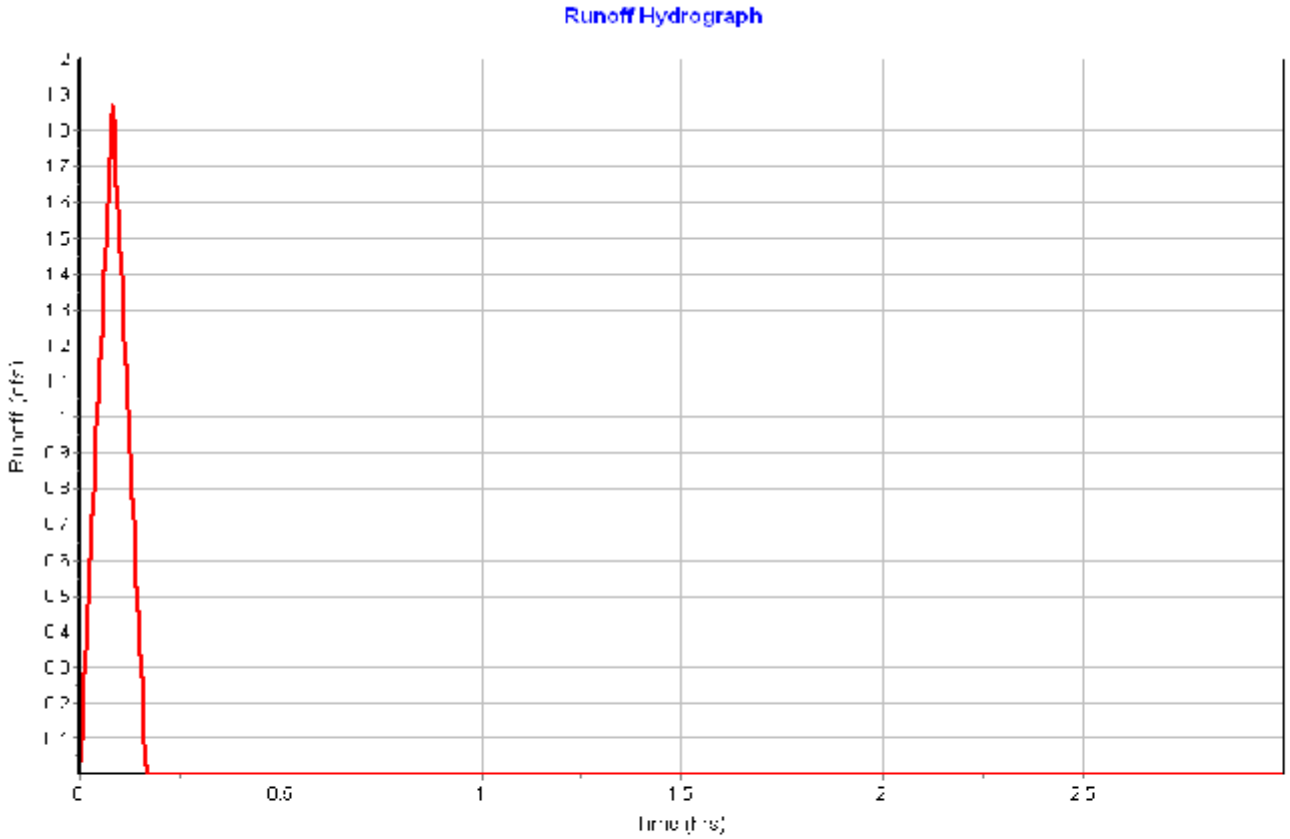
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.47
Peak Runoff (cfs) 1.87
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.8500
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S6



Input Data

Area (ft²) 19569.98
Weighted Runoff Coefficient 0.8600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	17006.35	B (2-6%)	0.96
Open Space, 25 years or greater	2563.68	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	19570.03		0.86

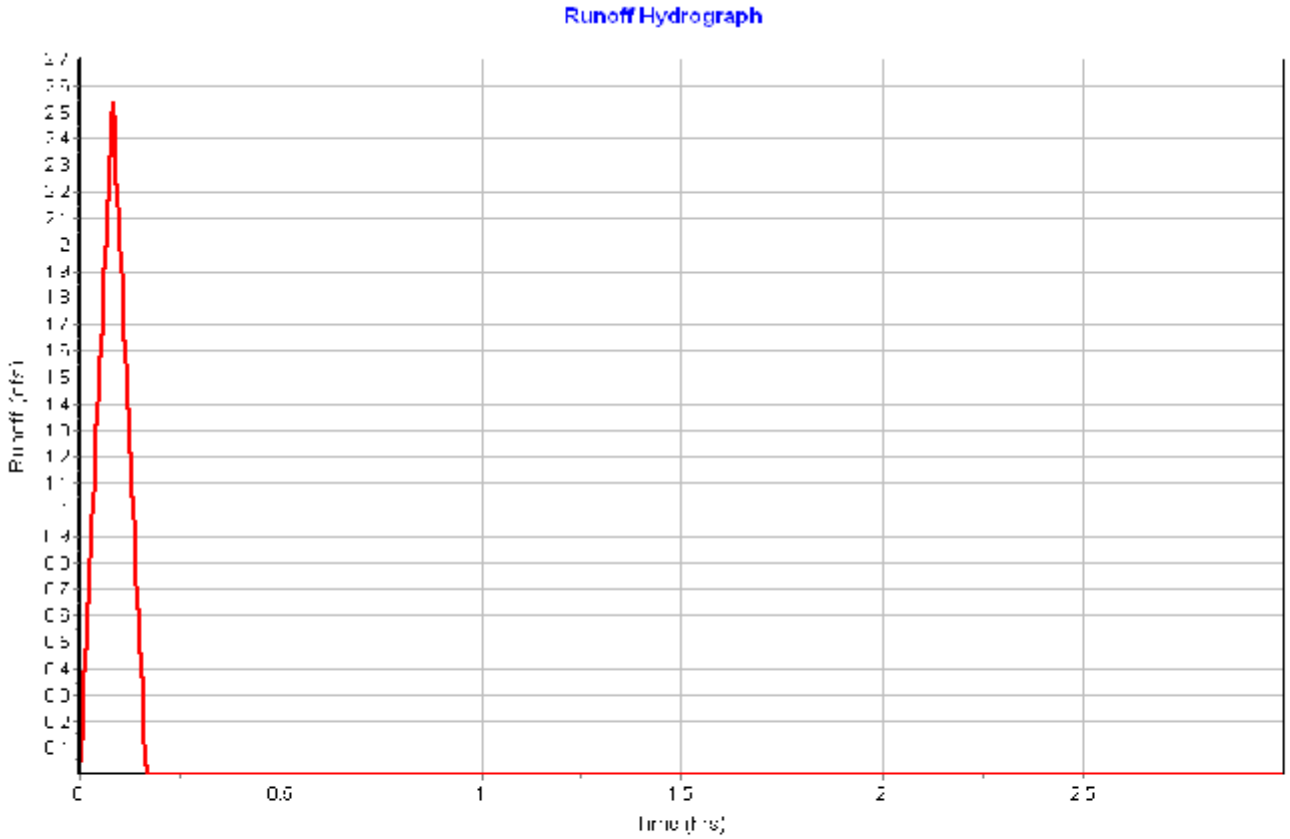
Time of Concentration

User-Defined TOC override (minutes): 5

Subbasin Runoff Results

Total Rainfall (in) 0.55
Total Runoff (in) 0.47
Peak Runoff (cfs) 2.54
Rainfall Intensity 6.560
Weighted Runoff Coefficient 0.8600
Time of Concentration (days hh:mm:ss) 0 00:05:00

Subbasin : Pr-S7



Input Data

Area (ft²) 52210.01
Weighted Runoff Coefficient 0.7600

Runoff Coefficient

Soil/Surface Description	Area (ft²)	Soil Group	Runoff Coeff.
Parking, 25 years or greater	38844.24	B (2-6%)	0.96
Open Space, 25 years or greater	13365.78	B (2-6%)	0.19
Composite Area & Weighted Runoff Coeff.	52210.02		0.76

Time of Concentration

Sheet Flow Computations	Subarea A	Subarea B	Subarea C
Manning's Roughness :	0.40	0.00	0.00
Flow Length (ft) :	20	0.00	0.00
Slope (%) :	10	0.00	0.00
2 yr, 24 hr Rainfall (in) :	1.05	0.00	0.00
Velocity (ft/sec) :	0.06	0.00	0.00
Computed Flow Time (min) :	5.43	0.00	0.00

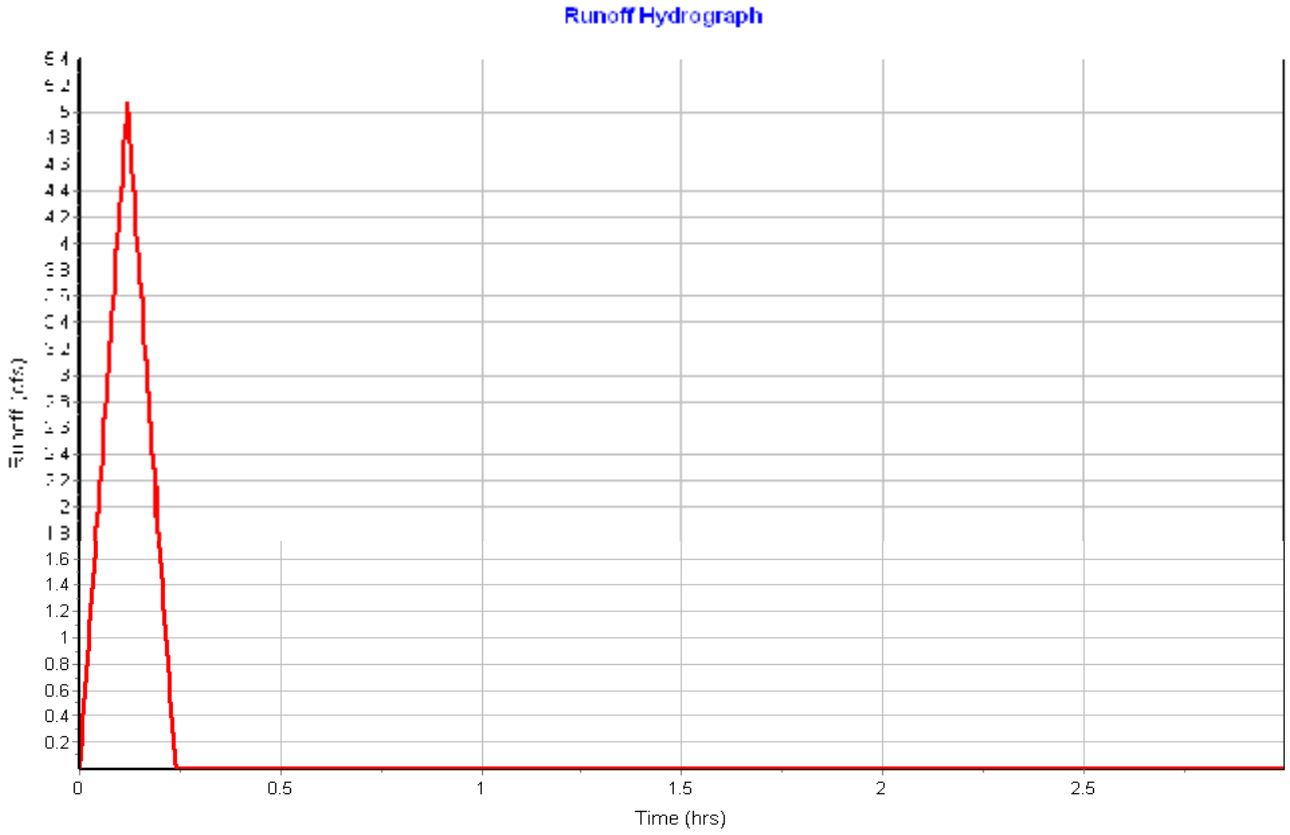
Shallow Concentrated Flow Computations	Subarea A	Subarea B	Subarea C
Flow Length (ft) :	210	150	0.00
Slope (%) :	3.5	3.5	0.00
Surface Type :	Paved	Grassed waterway	Paved
Velocity (ft/sec) :	3.80	2.81	0.00
Computed Flow Time (min) :	0.92	0.89	0.00

Total TOC (min) 7.24

Subbasin Runoff Results

Total Rainfall (in) 0.66
Total Runoff (in) 0.51
Peak Runoff (cfs) 5.06
Rainfall Intensity 5.558
Weighted Runoff Coefficient 0.7600
Time of Concentration (days hh:mm:ss) 0 00:07:14

Subbasin : Pr-S8



Junction Input

SN	Element ID	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Ground/Rim (Max) Offset (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)
1	SDMH-N3	5719.86	5725.45	5.59	5719.86	0.00
2	SDMH-S2	5729.50	5731.40	1.90	5729.50	0.00
3	WQ-N	5719.73	5725.57	5.84	5719.73	0.00
4	WQ-S	5716.00	5721.50	5.50	5716.00	0.00

Junction Results

SN	Element ID	Peak Inflow	Max HGL Elevation Attained	Max HGL Depth Attained	Min Freeboard Attained	Average HGL Elevation Attained	Average HGL Depth Attained	Time of Max HGL Occurrence	Total Flooded Volume	Total Time Flooded
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(days hh:mm)	(ft³)	(min)
1	SDMH-N3	4.440	5720.76	0.90	4.69	5720.19	0.33	0 00:19	0.00	0.00
2	SDMH-S2	1.210	5730.09	0.59	1.31	5729.75	0.25	0 00:16	0.00	0.00
3	WQ-N	4.440	5720.44	0.71	5.13	5719.86	0.13	0 00:05	0.00	0.00
4	WQ-S	11.290	5718.56	2.56	2.94	5718.02	2.02	0 00:05	0.00	0.00

Channel Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Shape	Height (ft)	Width (ft)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Additional Losses	Initial Flow (cfs)
1	Road-S3	109.00	5732.10	2.51	5726.40	2.65	5.70	5.2300	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000
2	Road-S4	69.00	5726.40	2.65	5723.50	3.42	2.90	4.2000	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000
3	Road-S6a	84.00	5723.50	3.42	5721.50	3.93	2.00	2.3800	User-Defined	0.600	33.000	0.0320	0.5000	0.5000	0.0000	0.000

Channel Results

SN	Element ID	Peak Flow	Time of Peak Flow Occurrence	Design Flow Capacity	Peak Flow/ Design Flow Ratio	Peak Flow Velocity	Travel Time	Peak Flow Depth	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged	Reported Condition
		(cfs)	(days hh:mm)	(cfs)		(ft/sec)	(min)	(ft)		(min)	
1	Road-S3	0.670	0 00:05	114.310	0.01	6.07	0.30	0.12	0.19	0.00	
2	Road-S4	0.180	0 00:05	100.690	0.00	3.94	0.29	0.07	0.12	0.00	
3	Road-S6a	0.000	0 00:07	79.170	0.00	0.00		0.01	0.01	0.00	

Pipe Input

SN	Element ID	Length (ft)	Inlet Invert Elevation (ft)	Inlet Invert Offset (ft)	Outlet Invert Elevation (ft)	Outlet Invert Offset (ft)	Total Drop (ft)	Average Slope (%)	Pipe Shape	Pipe Diameter or Height (in)	Pipe Width (in)	Manning's Roughness	Entrance Losses	Exit/Bend Losses	Initial Flow (cfs)	Flap Gate	No. of Barrels
1	Link-47	32.09	5718.50	1.00	5718.00	2.00	0.50	1.5600	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
2	Link-57	8.00	5719.86	0.00	5719.73	0.00	0.13	1.6300	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
3	Pipe-6b	163.00	5717.80	0.23	5716.50	0.50	1.30	0.8000	CIRCULAR	24.000	24.000	0.0150	0.5000	0.5000	0.000	No	1
4	Pipe-N1	73.00	5721.75	0.00	5721.03	0.50	0.72	0.9900	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
5	Pipe-N2	41.00	5720.53	0.00	5720.06	0.20	0.47	1.1500	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
6	Pipe-N3	21.00	5720.90	0.00	5720.06	0.20	0.84	4.0000	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
7	Pipe-Out-N	20.00	5719.73	0.00	5717.50	0.00	2.23	11.1500	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
8	Pipe-Out-S	24.00	5716.00	0.00	5715.00	-0.76	1.00	4.1700	CIRCULAR	24.000	24.000	0.0150	0.5000	0.5000	0.000	No	1
9	Pipe-S1	50.00	5730.70	0.00	5729.70	0.20	1.00	2.0000	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
10	Pipe-S2	290.00	5729.50	0.00	5723.75	0.00	5.75	1.9800	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
11	Pipe-S3	106.00	5729.59	0.00	5723.95	0.20	5.64	5.3200	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
12	Pipe-S4	67.00	5723.75	0.00	5720.58	0.50	3.17	4.7300	CIRCULAR	12.000	12.000	0.0150	0.5000	0.5000	0.000	No	1
13	Pipe-S5	41.00	5721.56	-0.14	5720.58	0.50	0.98	2.3900	CIRCULAR	9.960	9.960	0.0150	0.5000	0.5000	0.000	No	1
14	Pipe-S6a	65.00	5720.08	0.00	5718.80	0.50	1.28	1.9700	CIRCULAR	15.000	15.000	0.0150	0.5000	0.5000	0.000	No	1
15	Pipe-S8	43.00	5718.60	0.30	5718.20	0.63	0.40	0.9300	Horizontal Ellipse	14.040	23.040	0.0130	0.5000	0.5000	0.000	No	1

Pipe Results

SN	Element ID	Peak Flow (cfs)	Time of Peak Flow Occurrence (days hh:mm)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Travel Time (min)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)
1	Link-47	2.340	0 00:05	3.85	0.61	5.14	0.10	0.56	0.56	0.00
2	Link-57	4.440	0 00:05	7.14	0.62	6.13	0.02	0.71	0.57	0.00
3	Pipe-6b	9.320	0 00:07	17.51	0.53	5.71	0.48	1.04	0.52	0.00
4	Pipe-N1	2.210	0 00:24	3.07	0.72	4.26	0.29	0.63	0.63	0.00
5	Pipe-N2	3.610	0 00:19	5.99	0.60	5.10	0.13	0.70	0.56	0.00
6	Pipe-N3	3.700	0 00:05	6.18	0.60	8.21	0.04	0.56	0.56	0.00
7	Pipe-Out-N	4.440	0 00:05	18.69	0.24	12.48	0.03	0.41	0.33	0.00
8	Pipe-Out-S	11.290	0 00:06	19.61	0.58	6.46	0.06	1.09	0.54	0.00
9	Pipe-S1	1.210	0 00:16	2.69	0.45	4.80	0.17	0.39	0.47	0.00
10	Pipe-S2	1.200	0 00:17	2.67	0.45	4.82	1.00	0.39	0.47	0.00
11	Pipe-S3	1.160	0 00:05	4.38	0.27	10.07	0.18	0.29	0.35	0.00
12	Pipe-S4	3.150	0 00:05	6.72	0.47	8.42	0.13	0.48	0.48	0.00
13	Pipe-S5	2.050	0 00:21	3.14	0.65	6.13	0.11	0.49	0.59	0.00
14	Pipe-S6a	3.800	0 00:05	7.86	0.48	6.36	0.17	0.61	0.49	0.00
15	Pipe-S8	8.020	0 00:07	10.17	0.79	6.37	0.11	0.75	0.64	0.00

Inlet Input

SN	Element ID	Inlet Manufacturer	Manufacturer Part Number	Inlet Location	Number of Inlets	Catchbasin Invert Elevation (ft)	Max (Rim) Elevation (ft)	Inlet Depth (ft)	Initial Water Elevation (ft)	Initial Water Depth (ft)	Ponded Area (ft²)	Grate Clogging Factor (%)
1	Inlet-N1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.75	5724.50	2.75	5721.75	0.00	400.00	50.00
2	Inlet-N2	FHWA HEC-22 GENERIC	N/A	On Sag	2	5720.53	5725.35	4.82	5722.30	1.77	400.00	50.00
3	Inlet-N3	FHWA HEC-22 GENERIC	N/A	On Sag	1	5720.90	5724.90	4.00	5722.00	1.10	400.00	50.00
4	Inlet-S1	FHWA HEC-22 GENERIC	N/A	On Sag	1	5730.70	5733.20	2.50	5730.70	0.00	400.00	50.00
5	Inlet-S3	FHWA HEC-22 GENERIC	N/A	On Grade	1	5729.59	5732.09	2.50	5729.59	0.00	N/A	50.00
6	Inlet-S4	FHWA HEC-22 GENERIC	N/A	On Grade	1	5723.75	5726.41	2.66	5723.42	-0.33	N/A	50.00
7	Inlet-S5	FHWA HEC-22 GENERIC	N/A	On Sag	1	5721.70	5724.70	3.00	5721.70	0.00	100.00	50.00
8	Inlet-S6a	FHWA HEC-22 GENERIC	N/A	On Grade	1	5720.08	5723.62	3.54	5720.08	0.00	N/A	50.00
9	Inlet-S6b	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.57	5721.52	3.95	5717.50	-0.07	400.00	50.00
10	Inlet-S7	FHWA HEC-22 GENERIC	N/A	On Sag	1	5717.50	5721.00	3.50	5717.50	0.00	400.00	50.00
11	Inlet-S8	FHWA HEC-22 GENERIC	N/A	On Sag	1	5718.30	5721.38	3.08	5718.30	0.00	400.00	50.00

Roadway & Gutter Input

SN	Element ID	Roadway Longitudinal Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Roadway Manning's Roughness	Gutter Cross Slope (ft/ft)	Gutter Width (ft)	Gutter Depression (in)	Allowable Spread (ft)
1	Inlet-N1	N/A	0.1000	0.0220	0.1000	2.00	0.0000	7.00
2	Inlet-N2	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
3	Inlet-N3	N/A	0.0200	0.0160	0.0620	2.00	0.0656	7.00
4	Inlet-S1	N/A	0.0200	0.0160	0.0620	2.00	0.0656	7.00
5	Inlet-S3	0.0100	0.0200	0.0160	0.0620	2.00	0.0656	7.00
6	Inlet-S4	0.0500	0.0200	0.0160	0.0620	2.00	0.0656	7.00
7	Inlet-S5	N/A	0.1000	0.0220	0.1000	2.00	0.0000	7.00
8	Inlet-S6a	0.0400	0.0200	0.0160	0.0620	2.00	0.0656	7.00
9	Inlet-S6b	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
10	Inlet-S7	N/A	0.0200	0.0160	0.0620	2.00	0.0000	7.00
11	Inlet-S8	N/A	0.1000	0.0160	0.0620	2.00	0.0000	7.00

Inlet Results

SN	Element ID	Peak Flow (cfs)	Peak Lateral Inflow (cfs)	Peak Flow Intercepted by Inlet (cfs)	Peak Flow Bypassing Inlet (cfs)	Inlet Efficiency during Peak Flow (%)	Max Gutter Spread during Peak Flow (ft)	Max Gutter Water Elev. during Peak Flow (ft)	Max Gutter Water Depth during Peak Flow (ft)	Time of Max Depth Occurrence (days hh:mm)	Total Flooded Volume (ft^3)	Total Time Flooded (hr)
1	Inlet-N1	2.260	2.26	N/A	N/A	N/A	4.84	5724.98	0.48	0 00:24	0.00	0.00
2	Inlet-N2	2.000	2.00	N/A	N/A	N/A	9.09	5725.61	0.26	0 00:00	0.00	0.00
3	Inlet-N3	3.960	3.96	N/A	N/A	N/A	18.28	5725.50	0.60	0 00:00	0.00	0.00
4	Inlet-S1	1.270	1.27	N/A	N/A	N/A	7.75	5733.60	0.40	0 00:16	0.00	0.00
5	Inlet-S3	1.880	1.88	1.17	0.70	62.48	8.33	5732.34	0.25	0 00:05	0.00	0.00
6	Inlet-S4	1.340	0.71	1.16	0.19	86.09	4.62	5726.59	0.18	0 00:05	0.00	0.00
7	Inlet-S5	2.060	2.06	N/A	N/A	N/A	4.63	5725.16	0.46	0 00:21	0.00	0.00
8	Inlet-S6a	0.180	0.00	0.18	0.00	99.66	0.86	5723.67	0.05	0 00:21	0.00	0.00
9	Inlet-S6b	1.870	1.87	N/A	N/A	N/A	10.52	5721.80	0.28	0 00:07	0.00	0.00
10	Inlet-S7	2.530	2.53	N/A	N/A	N/A	13.18	5721.33	0.33	0 00:05	0.00	0.00
11	Inlet-S8	5.060	5.06	N/A	N/A	N/A	5.95	5721.89	0.51	0 00:05	0.00	0.00

Hydrologic Soil Group—Rifle Area, Colorado, Parts of Garfield and Mesa Counties
(17015-Web Soils)

Map Scale: 1:2,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

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 11, Sep 10, 2018

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

Date(s) aerial images were photographed: Sep 24, 2015—Nov 2, 2015

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
8	Atencio-Azeltine complex, 1 to 3 percent slopes	B	16.2	86.9%
73	Water		2.4	13.1%
Totals for Area of Interest			**18.6**	**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: Glenwood Springs, Colorado, USA*
Latitude: 39.546°, Longitude: -107.3237°
Elevation: 5795.68 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)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.121 (0.096-0.157)	0.177 (0.140-0.229)	0.264 (0.207-0.343)	0.332 (0.260-0.434)	0.421 (0.313-0.565)	0.486 (0.354-0.664)	0.547 (0.385-0.769)	0.605 (0.407-0.878)	0.677 (0.437-1.01)	0.726 (0.460-1.12)
10-min	0.178 (0.140-0.230)	0.259 (0.204-0.335)	0.386 (0.304-0.502)	0.486 (0.380-0.635)	0.617 (0.459-0.827)	0.712 (0.518-0.972)	0.801 (0.563-1.13)	0.886 (0.596-1.29)	0.991 (0.640-1.49)	1.06 (0.673-1.64)
15-min	0.217 (0.171-0.280)	0.316 (0.249-0.409)	0.471 (0.370-0.612)	0.593 (0.464-0.775)	0.752 (0.560-1.01)	0.868 (0.632-1.19)	0.977 (0.687-1.37)	1.08 (0.727-1.57)	1.21 (0.781-1.81)	1.30 (0.821-2.00)
30-min	0.291 (0.230-0.376)	0.412 (0.325-0.534)	0.601 (0.472-0.780)	0.748 (0.585-0.977)	0.937 (0.696-1.25)	1.07 (0.780-1.46)	1.20 (0.841-1.68)	1.32 (0.884-1.90)	1.46 (0.940-2.18)	1.55 (0.982-2.39)
60-min	0.387 (0.305-0.500)	0.512 (0.404-0.663)	0.707 (0.556-0.918)	0.860 (0.672-1.12)	1.06 (0.786-1.41)	1.20 (0.873-1.63)	1.33 (0.935-1.87)	1.45 (0.978-2.11)	1.60 (1.04-2.40)	1.71 (1.08-2.62)
2-hr	0.482 (0.386-0.615)	0.611 (0.488-0.781)	0.813 (0.647-1.04)	0.971 (0.768-1.25)	1.18 (0.887-1.55)	1.32 (0.977-1.78)	1.46 (1.04-2.02)	1.59 (1.08-2.28)	1.75 (1.14-2.59)	1.86 (1.19-2.82)
3-hr	0.565 (0.456-0.715)	0.683 (0.550-0.865)	0.870 (0.697-1.11)	1.02 (0.811-1.30)	1.21 (0.924-1.59)	1.36 (1.01-1.81)	1.49 (1.07-2.05)	1.62 (1.11-2.30)	1.79 (1.18-2.62)	1.90 (1.22-2.86)
6-hr	0.738 (0.602-0.920)	0.840 (0.684-1.05)	1.01 (0.818-1.26)	1.15 (0.927-1.45)	1.35 (1.05-1.76)	1.50 (1.14-1.99)	1.66 (1.21-2.26)	1.82 (1.27-2.56)	2.04 (1.36-2.96)	2.20 (1.43-3.26)
12-hr	0.917 (0.757-1.13)	1.05 (0.862-1.29)	1.26 (1.04-1.56)	1.45 (1.18-1.79)	1.71 (1.35-2.20)	1.92 (1.47-2.51)	2.13 (1.57-2.87)	2.35 (1.66-3.27)	2.65 (1.80-3.80)	2.89 (1.90-4.21)
24-hr	1.11 (0.930-1.35)	1.28 (1.07-1.55)	1.56 (1.30-1.89)	1.80 (1.49-2.20)	2.15 (1.71-2.73)	2.42 (1.88-3.13)	2.71 (2.03-3.59)	3.01 (2.15-4.12)	3.41 (2.34-4.82)	3.73 (2.48-5.36)
2-day	1.34 (1.14-1.60)	1.53 (1.30-1.83)	1.86 (1.56-2.22)	2.14 (1.79-2.57)	2.55 (2.07-3.20)	2.88 (2.27-3.67)	3.23 (2.45-4.23)	3.60 (2.60-4.86)	4.11 (2.85-5.72)	4.51 (3.03-6.38)
3-day	1.50 (1.28-1.77)	1.72 (1.46-2.03)	2.08 (1.77-2.47)	2.40 (2.03-2.86)	2.86 (2.33-3.54)	3.22 (2.55-4.06)	3.60 (2.74-4.66)	3.99 (2.91-5.34)	4.54 (3.16-6.26)	4.97 (3.35-6.95)
4-day	1.64 (1.41-1.92)	1.87 (1.60-2.20)	2.27 (1.93-2.67)	2.60 (2.21-3.08)	3.08 (2.52-3.79)	3.46 (2.76-4.33)	3.86 (2.95-4.96)	4.27 (3.12-5.66)	4.82 (3.37-6.60)	5.26 (3.57-7.31)
7-day	1.98 (1.72-2.29)	2.23 (1.93-2.59)	2.65 (2.29-3.09)	3.01 (2.58-3.52)	3.52 (2.91-4.26)	3.92 (3.15-4.83)	4.33 (3.35-5.48)	4.75 (3.50-6.21)	5.33 (3.76-7.18)	5.77 (3.95-7.92)
10-day	2.28 (1.99-2.62)	2.54 (2.22-2.92)	2.98 (2.59-3.44)	3.36 (2.90-3.89)	3.88 (3.23-4.66)	4.30 (3.48-5.25)	4.72 (3.68-5.93)	5.16 (3.83-6.69)	5.76 (4.09-7.70)	6.22 (4.28-8.46)
20-day	3.11 (2.75-3.52)	3.44 (3.04-3.89)	3.99 (3.51-4.53)	4.44 (3.89-5.07)	5.08 (4.27-5.99)	5.57 (4.57-6.68)	6.07 (4.78-7.49)	6.58 (4.94-8.38)	7.27 (5.21-9.54)	7.79 (5.42-10.4)
30-day	3.81 (3.40-4.27)	4.22 (3.76-4.73)	4.89 (4.34-5.50)	5.44 (4.79-6.15)	6.19 (5.24-7.21)	6.76 (5.58-8.01)	7.33 (5.81-8.93)	7.90 (5.96-9.94)	8.65 (6.24-11.2)	9.21 (6.45-12.2)
45-day	4.71 (4.24-5.23)	5.25 (4.71-5.82)	6.10 (5.45-6.79)	6.78 (6.02-7.59)	7.69 (6.55-8.84)	8.36 (6.94-9.79)	9.02 (7.19-10.9)	9.66 (7.33-12.0)	10.5 (7.59-13.4)	11.1 (7.80-14.5)
60-day	5.49 (4.97-6.05)	6.15 (5.55-6.77)	7.17 (6.44-7.92)	7.97 (7.12-8.86)	9.02 (7.71-10.3)	9.79 (8.16-11.4)	10.5 (8.41-12.5)	11.2 (8.53-13.8)	12.0 (8.77-15.3)	12.6 (8.95-16.5)

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

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

Please refer to NOAA Atlas 14 document for more information.

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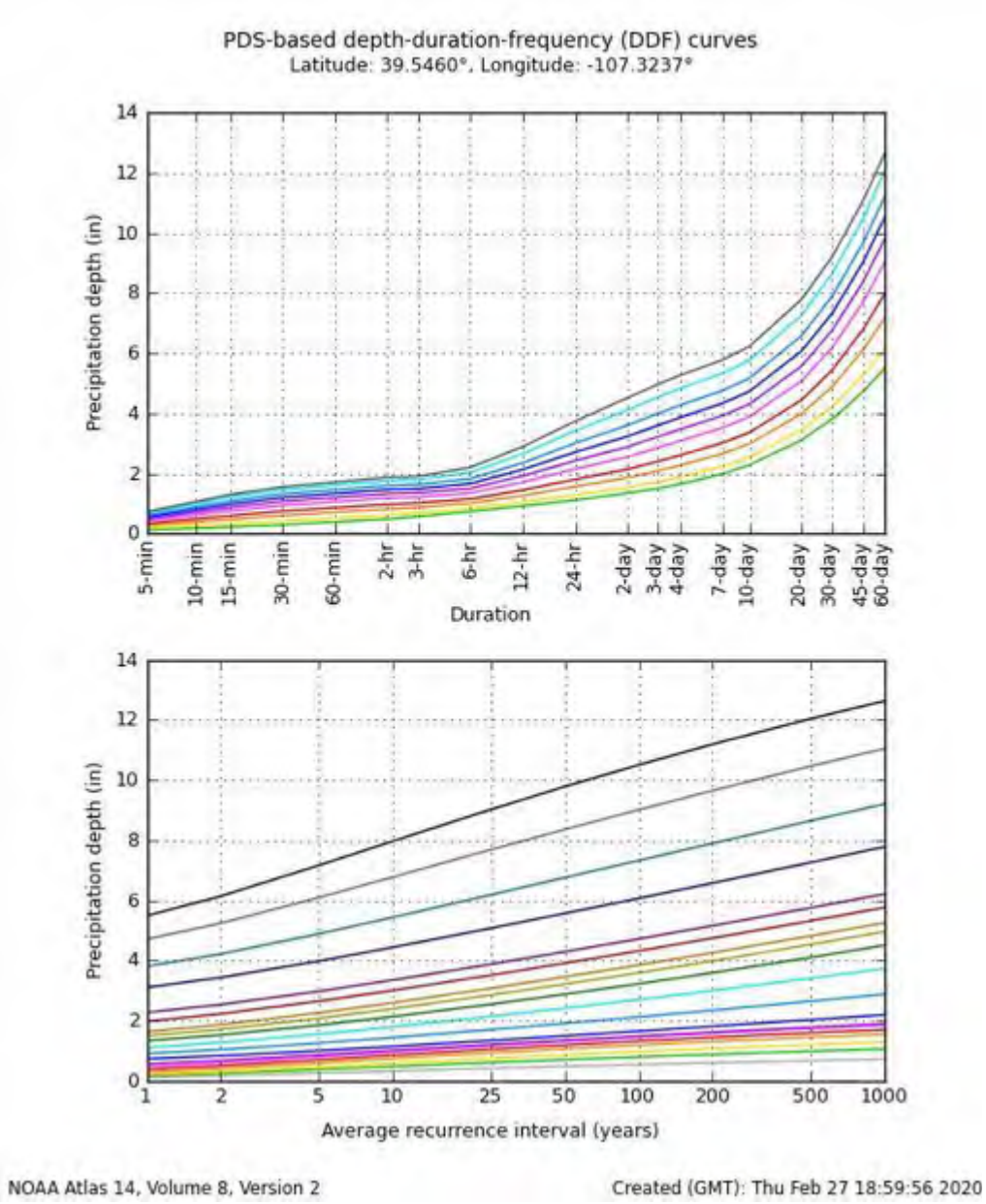
PF graphical



NOAA Atlas 14, Volume 8, Version 2

Created (GMT): Thu Feb 27 18:59:56 2020

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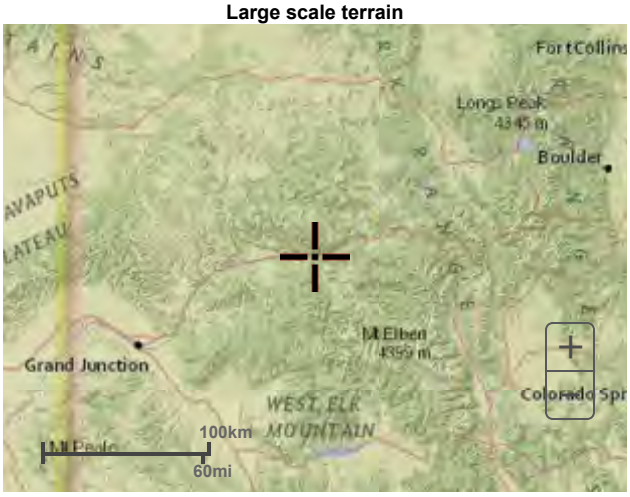
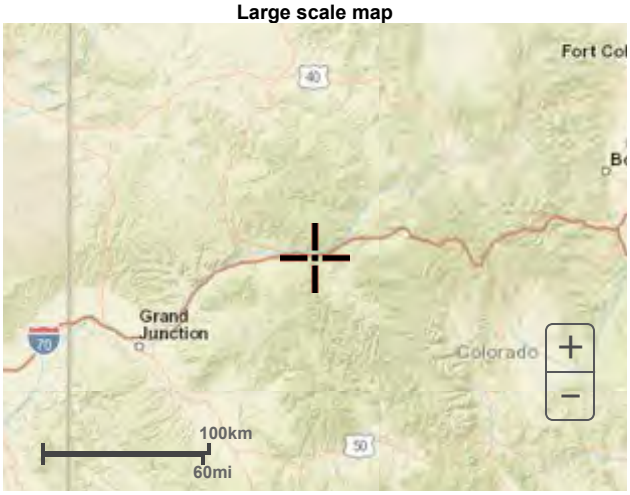
Maps & aerials

Small scale terrain

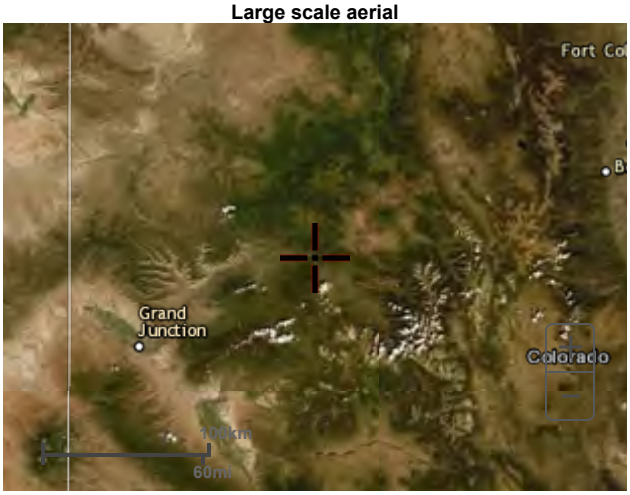
Large scale terrain



Large scale map



Large scale aerial



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

Disclaimer

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT
1325 J STREET
SACRAMENTO CA 95814-2922

December 22, 2017

Regulatory Division (SPK-2017-00468)

Recreation Engineering & Planning
Attn: Mr. Gary Lacy
485 Arapahoe Avenue
Boulder, Colorado 80302

Dear Mr. Lacy:

We are responding to your request, on behalf of Iron Mountain Hot Springs, LLC, for a Department of the Army permit for the Iron Mountain Hot Springs Riverbank Improvements project. This project involves activities, including discharges of fill material, in waters of the United States to stabilize 1,000 linear-feet of streambank. The project site is located along the north bank (river right) of the Colorado River, within Government Lot 7 of Section 9 and Government Lot 8 of Section 4, Township 6 South, Range 89 West, 6th Principal Meridian, between Latitude 39.552808°, Longitude -107.336577° and Latitude 39.556465°, Longitude -107.337230°, in the City of Glenwood Springs, Garfield County, Colorado.

Based on the information you provided to this office, the proposed activity, including discharges of dredge and fill material in waters of the United States, involves the removal of 4,760 cubic-yards of river cobble and installation of 1,850 cubic-yards of triangular current deflectors and vegetated stone terracing to stabilize approximately 1,000 linear-feet of streambank, in accordance with the Permit Set drawings, dated May 25, 2017. These activities will result in permanent impacts to approximately 0.1 acre of perennial non-wetland waters.

We have determined activities associated with this project are authorized by Regional General Permit (RGP) 37 - Stream Stabilization Projects in Colorado. Your work must comply with the general terms and conditions listed on the enclosed RGP information sheets. Additionally, it is your responsibility to ensure that all contract personnel are familiar with permit requirements. Please note that you are required to sign the enclosed Compliance Certification and return it to this office within 30 days after completion of the remaining authorized work.

This verification is valid until October 22, 2022. Failure to comply with the General Conditions of this Regional General Permit may result in the suspension or revocation of your authorization.

Please refer to identification number SPK-2017-00468 in any correspondence concerning this project. If you have any questions, please contact me at the Colorado West Regulatory Branch, 400 Rood Avenue, Room 224, Grand Junction, Colorado 81501, by email at *w.travis.morse@usace.army.mil*, or telephone at (970) 243-1199 ext. 1014.

For more information regarding our program, please visit our website at www.spk.usace.army.mil/Missions/Regulatory.aspx. We would appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey from the link on our website, listed above.

Sincerely,

Travis Morse
Senior Project Manager
Colorado West Section
Regulatory Division

Enclosures
1. RGP 37
2. Compliance Certification

cc:
Mr. Gary Lacy, Recreation Engineering & Planning, gary@boaterparks.com
Mr. Steve Beckley, Iron Mountain Hot Springs, LLC, sbeckley@glenwoodcaverns.com
Mr. Tom Barnes, City of Glenwood Springs, tom.barnes@cogs.us
Ms. Sheryl Bower, Garfield County Building & Planning Department, sbower@garfield-county.com
Ms. Kendall Backich, Colorado Parks and Wildlife, kendall.backich@state.co.us

SITE SPECIFIC DATA*

PROJECT NUMBER	11276		
PROJECT NAME	IRON MOUNTAIN HOT SPRINGS		
PROJECT LOCATION	GLENWOOD SPRINGS, CO		
STRUCTURE ID	WQ-BMP-N		
WATER QUALITY FLOW RATE (CFS)	5.05		
PEAK FLOW RATE (CFS)	4.5		
PEAK STORM DURATION (YEARS)	100		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	5719.73	ADS	24"
OUTLET PIPE 1	5719.73	ADS	24"
RIM ELEVATION	5725.57		
SUMP ELEVATION	5710.73		
SURFACE LOADING REQUIREMENT	HS-20		
FRAME AND COVER	2 EA ø30"		
PRECAST CONCRETE SKIMMER WALL HEIGHT	60"		
KNOWN GROUNDWATER ELEVATION			
NOTES:			
*PER ENGINEER OF RECORD			

PERFORMANCE DATA

TREATMENT FLOW RATE (CFS)	5.05
TSS REMOVAL EFFICIENCY	80%

SUMP CHAMBER CAPACITY

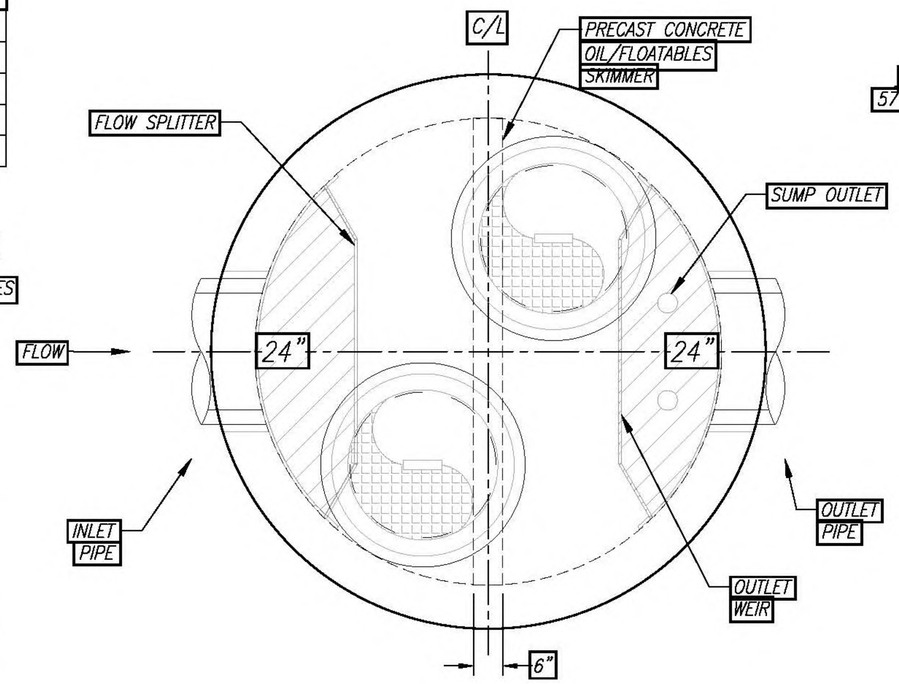
	DIAMETER (FT)	AREA (SF)	HEIGHT (FT)	TOTAL (CF)
SUMP	8.00	50.24	9.00	452.16

GENERAL NOTES

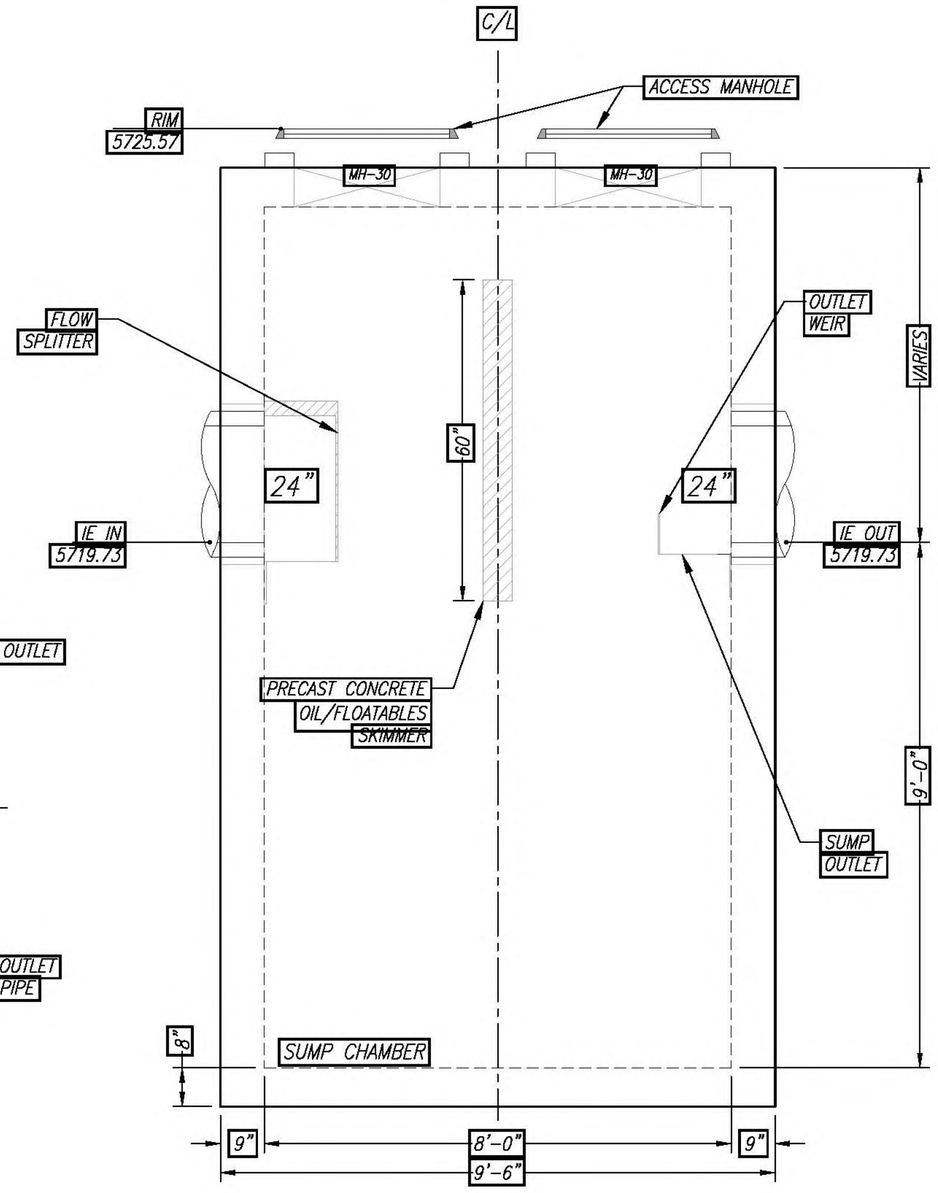
1. BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.
3. ALTERNATIVE HATCHES OR MANHOLES AVAILABLE UPON REQUEST.

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE UNIT AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. MANUFACTURER RECOMMENDS A 6"-12" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH).
4. ALL GAPS AROUND PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT PER MANUFACTURER'S STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. ALL COVERS SHALL BE SHIPPED LOOSE. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.



PLAN VIEW
NTS



ELEVATION VIEW
NTS

7/21/2020WALTER

THE PRODUCT DESCRIBED MAY BE PROTECTED BY ONE OR MORE US PATENTS, RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING

PROPRIETARY AND CONFIDENTIAL:
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO CLEAN ENVIRONMENTAL SERVICES, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO CLEAN ENVIRONMENTAL SERVICES, INC. IS PROHIBITED.

Bio Clean
A Forterra Company

SC-8-V
HYDRODYNAMIC SEPARATOR
STANDARD DETAIL

SITE SPECIFIC DATA*

PROJECT NUMBER	11276		
PROJECT NAME	IRON MOUNTAIN HOT SPRINGS		
PROJECT LOCATION	GLENWOOD SPRINGS, CO		
STRUCTURE ID	WQ-BMP-S		
WATER QUALITY FLOW RATE (CFS)	9.65		
PEAK FLOW RATE (CFS)	11.3		
PEAK STORM DURATION (YEARS)	100		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	5716.5	ADS	24"
OUTLET PIPE 1	5716.5	ADS	24"
RIM ELEVATION	5721.5		
SUMP ELEVATION	5705.50		
SURFACE LOADING REQUIREMENT	HS-20		
FRAME AND COVER	3 EA ø30"		
PRECAST CONCRETE SKIMMER WALL HEIGHT	56"		
KNOWN GROUNDWATER ELEVATION			
NOTES:			
*PER ENGINEER OF RECORD			

PERFORMANCE DATA

TREATMENT FLOW RATE (CFS)	9.65
TSS REMOVAL EFFICIENCY	80%

SUMP CHAMBER CAPACITY

	DIAMETER (FT)	AREA (SF)	HEIGHT (FT)	TOTAL (CF)
SUMP	10.00	78.50	11.00	863.50

GENERAL NOTES

1. BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.
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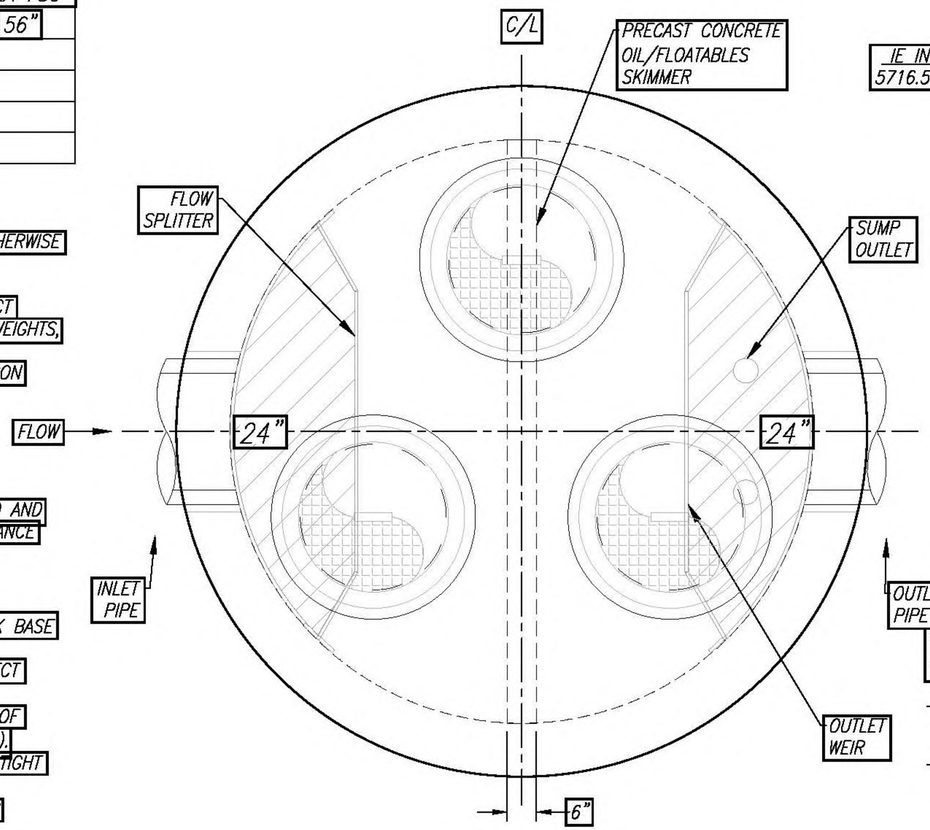
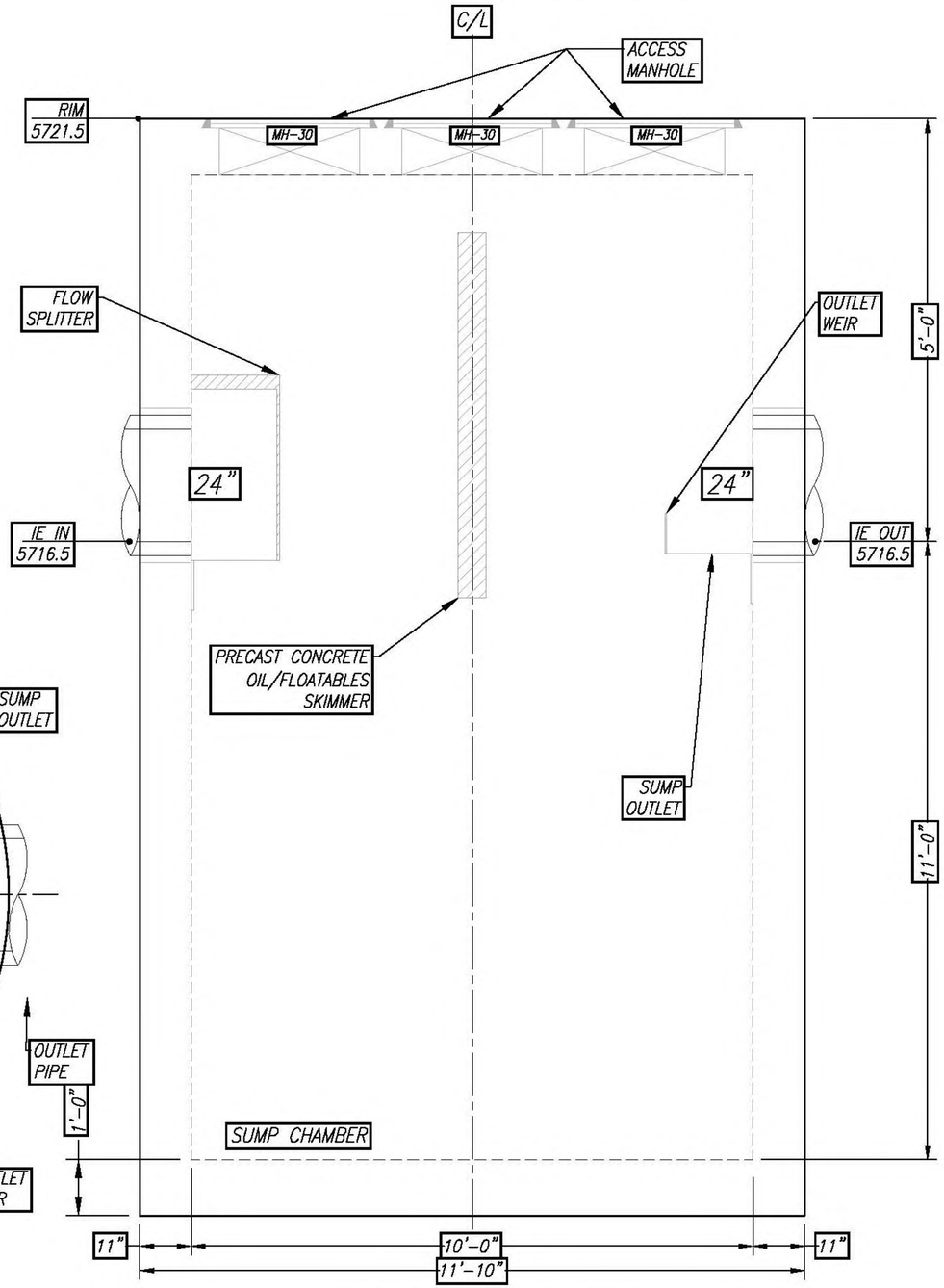


PLAN VIEW
NTS



ELEVATION VIEW
NTS

7/21/20DWALTER

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A Forterra Company

SC-10-V
HYDRODYNAMIC SEPARATOR
STANDARD DETAIL

ABBREVIATIONS

APROX	APPROXIMATE	GA	GAUGE	QTY	QUANTITY
ARCH	ARCHITECT	GAL	GALLON		
AVG	AVERAGE	GALV	GALVANIZED	R	RADIUS
		GB	GRADE BREAK	RE	REFERENCE
B&B	BALLED AND BURLAPPED	GC	GENERAL CONTRACT(OR)	REINF	REINFORCE(D), (ING)
BLDG	BUILDING	GPM	GALLON PER MINUTE	REQ'D	REQUIRED
BM	BENCHMARK			REV	REVISION(S), REVISED
BOC	BACK OF CURB	HORIZ	HORIZONTAL	RIM	RIM ELEVATION
BOV	BLOW OFF VALVE	HP	HIGH POINT	ROW	RIGHT-OF-WAY
BOW	BACK OF WALK	HT	HEIGHT	RP	RADIUS POINT
BR	BOTTOM OF RAMP				
BS	BOTTOM OF STEP	ID	INSIDE DIAMETER	SAN	SANITARY
BW	BOTTOM OF WALL	INV	INVERT ELEVATION	SCH	SCHEDULE
		IN	INCHES	SD	STORM DRAIN
CAL	CALIPER	INCL	INCLUDE(D)	SEC	SECTION
CF	CUBIC FEET	IRR	IRRIGATION	SF	SQUARE FOOT (FEET)
CIP	CAST-IN-PLACE			SHT	SHEET
CJ	CONTROL JOINT	JT	JOINT(S)	SIM	SIMILAR
CL	CENTERLINE			SPECS	SPECIFICATIONS
CLR	CLEAR(ANCE)	LIN	LINEAR	SQ	SQUARE
C/O	CLEANOUT	LP	LOW POINT	STA	STATION
COMP	COMPACTED	LT	LIGHT	STD	STANDARD
CONC	CONCRETE			STL	STEEL
CONT	CONTINUOUS	MATL	MATERIAL	STRUCT	STRUCTURAL
CONTR	CONTRACTOR	MAX	MAXIMUM	SYM	SYMMETRICAL
CU	CUBIC	MECH	MECHANICAL		
		MH	MANHOLE	TBC	TOP OF BACK OF CURB
DBL	DOUBLE	MIN	MINIMUM	TC	TOP OF CURB
DEG	DEGREE	MISC	MISCELLANEOUS	THK	THICK
DEMO	DEMOLISH, DEMOLITION			T LF	TOP OF LIGHT FOOTING
DIA	DIAMETER	NIC	NOT IN CONTRACT	TO	TOP OF
DIM	DIMENSION	NOM	NOMINAL	TOPO	TOPOGRAPHY
DN	DOWN	NTS	NOT TO SCALE	TR	TOP OF RAMP
DTL	DETAIL			TRANS	TRANSFORMER
DWG	DRAWING	OC	ON CENTER(S)	TS	TOP OF STEP
		OD	OUTSIDE DIAMETER	TW	TOP OF WALL
EA	EACH	OPP	OPPOSITE	TYP	TYPICAL
EF	EACH FACE				
EJ	EXPANSION JOINT	PA	PLANTING AREA	UNFIN	UNFINISHED
ELEV	ELEVATION	PC	POINT OF CURVATURE		
ELECT	ELECTRICAL	PERF	PERFORATE(D)	VAR	VARIES
ENG	ENGINEER	PED	PEDESTRIAN	VERT	VERTICAL
EOP	CURB LIP	PERM	PERIMETER	VEH	VEHICLE
EQ	EQUAL	PI	POINT OF INTERSECTION	VOL	VOLUME
EST	ESTIMATE	PL	PROPERTY LINE		
EW	EACH WAY	POB	POINT OF BEGINNING	W/	WITH
EXIST	EXISTING	PSF	POUNDS PER SQUARE FOOT	W/O	WITHOUT
		PSI	POUNDS PER SQUARE INCH	WT	WEIGHT
FG	FINISHED GRADE	PT	POINT, POINT OF TANGENCY	WWF	WELDED WIRE FABRIC
FIN	FINISH	PVC	POLYVINYL CHLORIDE		
FL	FLOW LINE	PVMT	PAVEMENT	YD	YARD
FOB	FACE OF BUILDING	PVR	PAVER(S)		
FOW	FACE OF WALL				
FT	FOOT (FEET)				
FTG	FOOTING				

CONSTRUCTION PLAN SET DOCUMENTS FOR THE

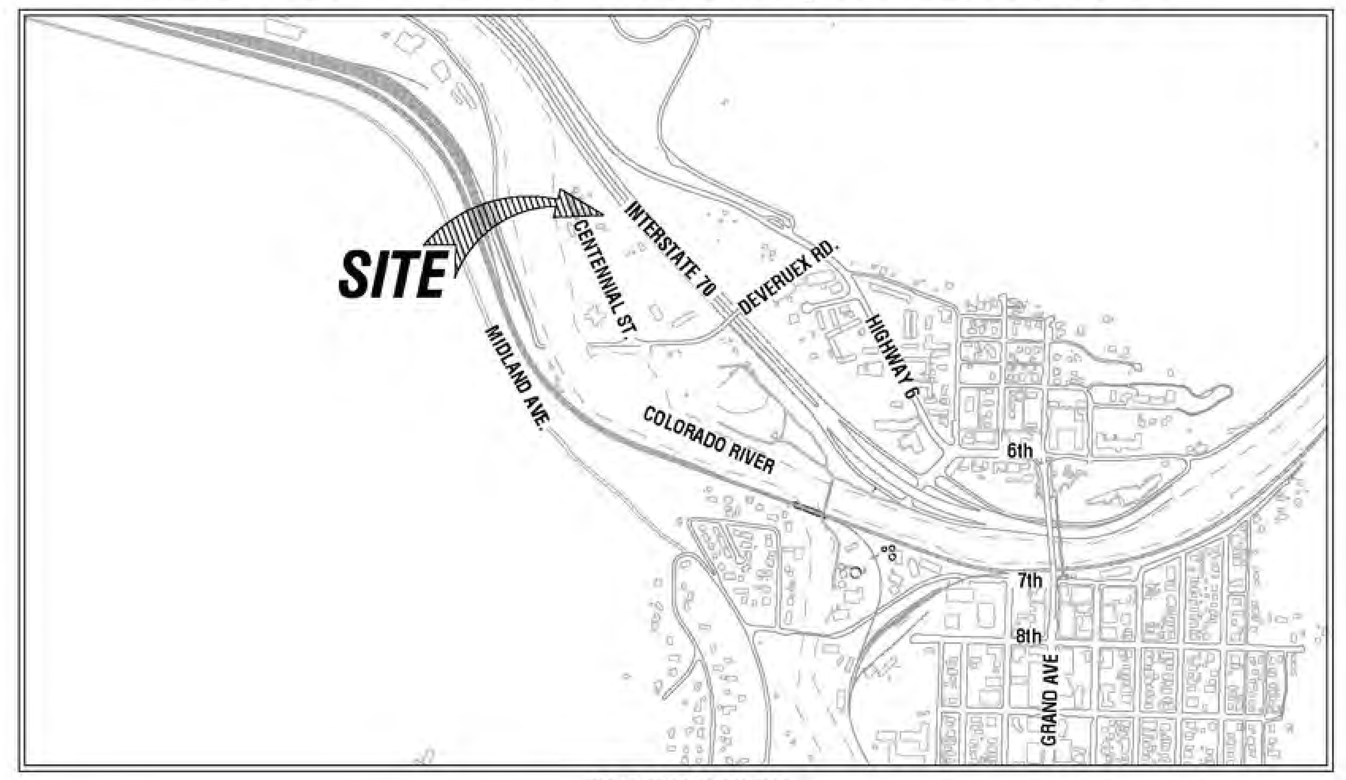
Caverns Village

GLENWOOD SPRINGS, COLORADO

NOTES:

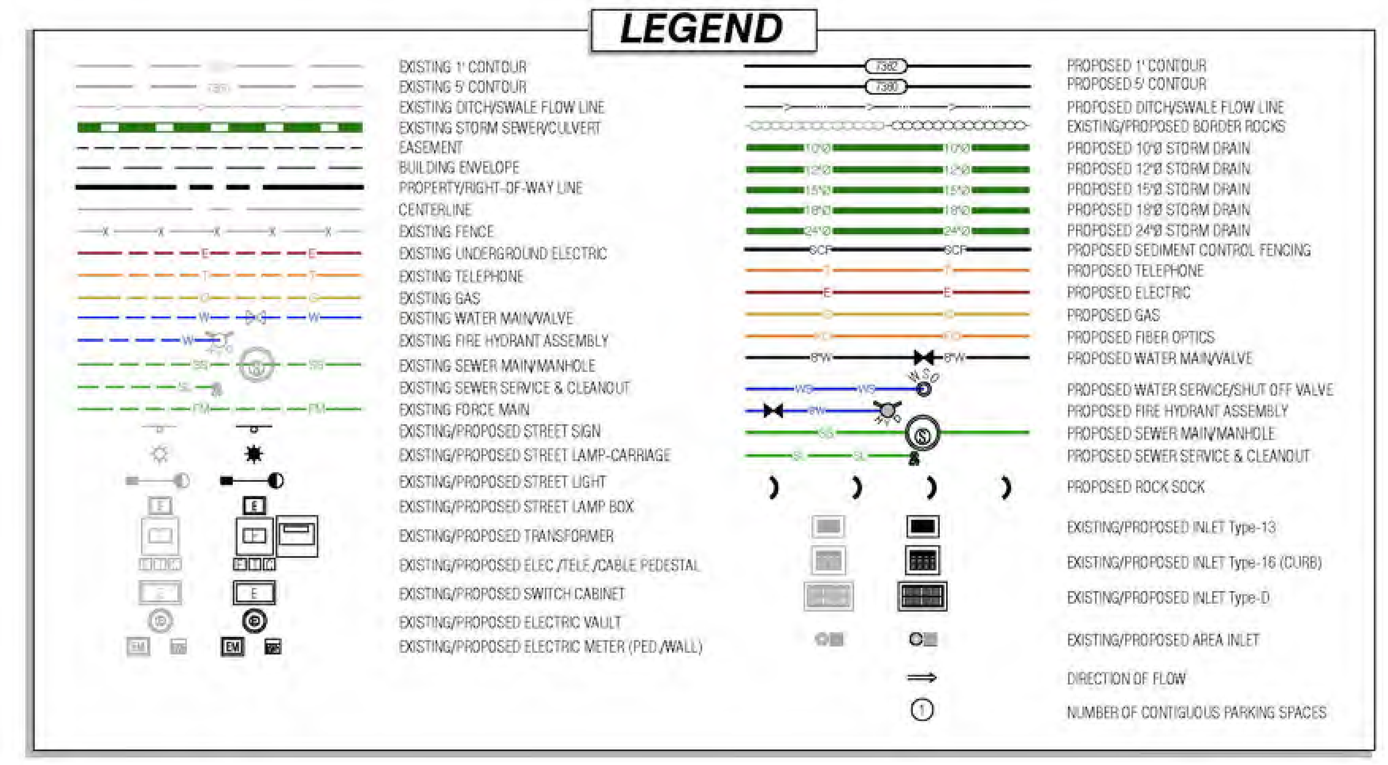
THIS PLAN SET IS INTENDED TO BE PLOTTED IN COLOR. FAILURE TO DO SO MAY RESULT IN MISSING DATA & INFORMATION CRITICAL TO THE PROJECT.

Sheet No.	Index of Sheets
C.1	Cover Sheet
C.2	Demolition Plan
C.3	Overall Site Plan
C.4	Sanitary Sewer Plan
C.5	Potable Water Plan
C.6	Storm Sewer & Shallow Utility Plan
C.7	Details-Sanitary Sewer
C.8	Details-Potable Water
C.9	Details-Site Electric
C.10	Details-Storm Sewer
C.11	Grading - Centennial Street
C.12	Grading - Access Drive & Site
C.13	Grading - Access Drive & Site
C.14	Enlarged Grading-ADA Ramps
C.15	Enlarged Grading-ADA Ramps
C.16	Driveway Point Table
C.17	Details-Civil Site
1-5	Subsurface Utility Engineering Maps (SGM, Inc.)



SITE OVERVIEW
Scale: 1"=400'

LEGEND



Boundaries Unlimited Inc. — Civil Engineering, Surveying & Beyond

923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER — DERIC JON WALTER — 37110 — 7/21/20

Client Information:

IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH

0 400' 800'
Scale: 1" = 400'

Know what's **below.** **Call** before you dig.

GENERAL NOTES

1. THE WARRANTY PERIOD SHALL BE TWO (2) YEARS FROM THE DATE OF ACCEPTANCE.
2. CONSTRUCTION WORK. ANY NOISE CREATED BY OPERATING OR CAUSING TO BE OPERATED ANY EQUIPMENT (MECHANICAL OR NON-MECHANICAL, SELF-PROPELLED OR MANUALLY MANIPULATED) USED IN CONSTRUCTION, REPAIR, ALTERATION OR DEMOLITION WORK ON BUILDINGS, STRUCTURES, STREETS, ALLEYS OR APPURTENANCES AT ANY TIME OTHER THAN BETWEEN THE HOURS OF 7:00 A.M. AND 8:00 P.M. ON MONDAY THROUGH FRIDAY, AND 8:00 A.M. AND 6:00 P.M. ON SATURDAY AND SUNDAY. THE CITY MANAGER IS HEREBY AUTHORIZED TO ISSUE A CONSTRUCTION WORK NOISE PERMIT ALLOWING CONSTRUCTION WORK NOISE TO OCCUR AT A TIME OTHER THAN THE TIME SET FORTH HEREIN BASED ON CIRCUMSTANCES WHICH NECESSITATE SUCH CONSTRUCTION WORK. IN THE EVENT THE CITY MANAGER ISSUES SUCH A PERMIT, THE CITY COUNCIL SHALL BE ADVISED OF SUCH ISSUANCE AT THE NEXT REGULAR CITY COUNCIL MEETING.
3. IN ORDER OF PRECEDENCE, ALL CONSTRUCTION SHALL MEET OR EXCEED THE PROJECT PLANS AND TECHNICAL SPECIFICATIONS; STANDARDS ESTABLISHED IN THE LATEST EDITIONS OF THE CITY PUBLIC WORKS MANUAL AND/OR ENGINEERING STANDARDS; AND CDOT SPECIFICATIONS, AS REFERENCED HEREIN, AND BE SUBJECT TO OBSERVATION BY THE PROJECT ENGINEER, TOWN/CITY AND CDOT, AS APPLICABLE.
4. IN CASE OF A CONFLICT BETWEEN VARYING SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
5. THE CONTRACTOR SHALL OBTAIN A COPY OF THE LATEST STANDARD SPECIFICATIONS AND DETAILS OF ALL AGENCIES EXERCISING JURISDICTION OVER THIS PROJECT. A COPY OF THESE SPECIFICATIONS AND DETAILS SHALL BE MAINTAINED ON THE JOBSITE AT ALL TIMES.
6. THE CONTRACTOR SHALL HAVE IN HIS POSSESSION AT ALL TIMES TWO (2) SIGNED COPY OF THE PLANS, STANDARDS, AND SPECIFICATIONS AS APPROVED BY THE APPROPRIATE GOVERNING AGENCY AND PROJECT ENGINEER. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THESE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER, PROJECT ENGINEER, AND GOVERNING AGENCY.
7. THE CONTRACTOR SHALL AT ALL TIMES KEEP TWO (2) FULL SETS OF CONTRACT DRAWINGS MARKED UP TO INDICATE THE AS-BUILT LOCATION OF SUBSURFACE UTILITIES INSTALLED AND ENCOUNTERED. ALL INSTALLED AND ENCOUNTERED UTILITIES SHALL BE TOPOGRAPHICALLY SURVEYED BY A PROFESSIONAL LAND SURVEYOR AND ASBUILT DRAWINGS SHALL BE PROVIDED IN ELECTRONIC .DWG AND .PDF FORM TO THE TOWN/CITY AND THE PROJECT ENGINEER UPON COMPLETION OF THE WORK. ALL SURVEY DATA SHALL BE ON TOWN/CITY COORDINATES AND DATUM.
8. ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND FEDERAL APPLICABLE LAWS AND REGULATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOB SITE SAFETY ON THE PROJECT. THIS SHALL INCLUDE THE SAFETY OF HIS OWN PERSONNEL, SUBCONTRACTORS, ALL VISITORS TO THE SITE, AND THE GENERAL PUBLIC. ALL JOB SITE SAFETY SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND CODES, AND ENSURE COMPLIANCE INCLUDING, BUT NOT LIMITED TO, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
10. THE CONTRACTOR SHALL CONTACT ONE CALL OF COLORADO AT #811 (1-800-922-1987, FOR THE MARKING OF MEMBER UNDERGROUND UTILITIES. (www.uncc2.org)) A MINIMUM OF SEVENTY TWO (72) HOURS (EXCLUDING WEEKENDS AND HOLIDAYS) IN ADVANCE OF ANY EXCAVATION.
11. EXISTING TOPOGRAPHY,STRUCTURES AND SUBSURFACE UTILITY ENGINEERING (SUE) MAPPING SHOWN ON THESE PLANS WERE PROVIDED BY SGM, INC. (PROVIDED IN CAD FORMAT IN SEPTEMBER 2019 AND JUNE/JULY 2020, PROJECT NO. 2018-208.004) AND WERE NOT VERIFIED BY BOUNDARIES UNLIMITED INC. BOUNDARIES UNLIMITED, INC. ASSUMES NO RESPONSIBILITY FOR EXISTING TOPOGRAPHY, STRUCTURES OR UTILITIES.
12. EXISTING UTILITIES SHOWN ON THESE PLANS ARE AS PROVIDED BY OTHERS (SEE PAGE BORDER). BOUNDARIES UNLIMITED, INC. ASSUMES NO RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS.
13. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE INDICATED IN THE PLANS, AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER, PROJECT ENGINEER, TOWN/CITY AND CDOT, AS APPLICABLE.
14. LOCATIONS AND ELEVATIONS OF EXISTING IMPROVEMENTS TO BE MET (OR AVOIDED) BY THE PROPOSED WORK SHALL BE CONFIRMED BY THE CONTRACTOR THROUGH FIELD EXPLORATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT TO THE PROJECT ENGINEER ANY DISCREPANCIES BETWEEN HIS MEASUREMENTS AND THESE PLANS.
15. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES SHOWN IN THE PLANS AND/OR SPECIFICATIONS. THE CONTRACTOR SHALL NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES. ANY MISSING DIMENSIONS OR DISCREPANCIES IN PLANS, FIELD STAKING, OR PHYSICAL FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER. IF THE CONTRACTOR PROCEEDS WITH THE WORK WITHOUT NOTIFYING THE PROJECT ENGINEER, HE DOES SO AT HIS OWN RISK.
16. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES, AND SHALL PROVIDE ALL WORK AND MATERIALS NECESSARY TO CONSTRUCT THE PROJECT IN ITS ENTIRETY.
17. THE CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT DESIGNATED FOR REMOVAL AND THOSE IMPROVEMENTS THAT ARE OUTSIDE THE LIMITS OF THE PROPOSED CONSTRUCTION. CONTRACTOR SHALL TAKE CARE TO AVOID DAMAGE THERETO AND SHALL PROVIDE TEMPORARY FENCING, BARRICADES, SUPPORTS, RESTRAINTS, AND/OR BRACING WHERE REQUIRED TO PROTECT EXISTING IMPROVEMENTS. DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPAIRED AND/OR REPLACED TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
18. ALL GRADING AND CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE OWNER'S PROPERTY, PUBLIC RIGHT-OF-WAY, PERMANENT EASEMENTS, AND TEMPORARY CONSTRUCTION EASEMENTS. THE CONTRACTOR SHALL NOT OPERATE OUTSIDE THIS AREA WITHOUT THE PRIOR CONSENT OF THE PROPERTY OWNER INVOLVED. ANY DAMAGE TO PRIVATE PROPERTY BY THE CONTRACTOR OUTSIDE THESE LIMITS WITHOUT THE PERMISSION OF THE PRIVATE PROPERTY OWNER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS NOT OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES, AND PAY ALL FEES AS REQUIRED BY THE CONSTRUCTION COVERED IN THESE PLANS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE GOVERNING AGENCIES AND LOCAL FIRE DEPARTMENT OF ALL STREET CLOSURES AND EXISTING FIRE HYDRANTS/FIRE SUPPRESSION TAKEN OUT OF SERVICE AT LEAST SEVENTY TWO (72) HOURS PRIOR TO CONSTRUCTION.
21. THE CONTRACTOR IS RESPONSIBLE FOR ALL SITE SECURITY AND SHALL PROPERLY PROTECT AND BARRICADE THE CONSTRUCTION SITE UNTIL CONSTRUCTION IS COMPLETE. STORAGE, LOSS DUE TO THEFT, OR VANDALISM OF MATERIALS AND EQUIPMENT (SECURED OR UNSECURED) WILL BE SOLELY AT THE CONTRACTOR'S EXPENSE.
22. PRIOR TO BEGINNING THE WORK, THE CONTRACTOR SHALL OBTAIN ANY WRITTEN AGREEMENTS FOR INGRESS AND EGRESS TO THE WORK FROM ADJACENT PRIVATE PROPERTY OWNERS. ACCESS TO ANY ADJACENT PRIVATE PROPERTY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD, DURING ALL HOURS OF OPERATION FOR THE BUSINESS LOCATED ON THOSE PARCELS.
23. FOR ANY CHANGES OR DEVIATIONS FROM THESE PLANS PROPOSED BY THE CONTRACTOR, SHOP DRAWINGS AND MATERIAL SPECIFICATIONS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF MATERIAL.
24. CONTRACTOR MUST COORDINATE ALL CONSTRUCTION WITH THE OWNER'S DEDICATED CONSTRUCTION PROJECT MANAGER OR THE PROJECT ENGINEER.
25. CONTRACTOR SHALL PROTECT AND PRESERVE ALL SURVEY CONTROL AND PROPERTY MONUMENTATION. ANY DAMAGED MONUMENTS SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE PROJECT'S STATE AT THE CONTRACTOR'S EXPENSE.
26. PRIOR TO MOVING OFF THE JOB SITE THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR THE OWNER'S CONSTRUCTION PROJECT MANAGER TO PERFORM THE FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.
27. TEMPORARY POWER, TELEPHONE, WATER, SANITARY SEWER AND WASTE DISPOSAL SERVICE FOR THE SITE IS THE CONTRACTOR'S RESPONSIBILITY UNLESS OTHERWISE SPECIFIED.
28. CONTRACTOR SHALL REFER TO OTHER DRAWINGS ISSUED BY ARCHITECT, STRUCTURAL, ELECTRICAL, AND MECHANICAL ENGINEERS. ENSURE COORDINATION OF EXACT LOCATION AND DIMENSIONS OF BUILDINGS, EXITS, RAMPS, UTILITY ENTRANCE LOCATIONS AND GRADES AROUND THE BUILDING. IMMEDIATELY NOTIFY THE PROJECT ENGINEER IF THERE ARE ANY DISCREPANCIES.
29. NO BELOW GRADE WORK SHALL BE BACKFILLED (INCLUDING BEDDING MATERIAL ABOVE THE SPRING LINE OF THE PIPE) UNTIL THE CONSTRUCTION HAS BEEN INSPECTED AND APPROVED FOR BACKFILLING BY THE APPROPRIATE GOVERNING AGENCY, PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER. INSPECTIONS SHALL BE SCHEDULED AT LEAST FORTY EIGHT (48) HOURS PRIOR.
30. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK. ALL TRAFFIC CONTROL DEVICES AND METHODS OF CONTROLLING TRAFFIC THROUGH CONSTRUCTION ZONES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND ALL REVISIONS THERETO INCLUDING LOCAL AND STATE SUPPLEMENTS. ADDITIONAL WORK IN THE RIGHT-OF-WAY OR TRAFFIC CONTROL PERMITS MAY BE NECESSARY AND SHALL BE THE CONTRACTORS RESPONSIBILITY.
31. FOR ANY CONSTRUCTION ACTIVITY WITHIN A ROAD RIGHT-OF-WAY, CONTRACTOR SHALL PROVIDE ALL WARNING LIGHTS, SIGNS, BARRICADES, FLAG MEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE LASTED EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ZONE TRAFFIC CONTROL. A CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED FOR REVIEW AND APPROVAL TO THE TOWN/CITY AND PROJECT ENGINEER, 7 DAYS PRIOR TO COMMENCING CONSTRUCTION WITHIN A PUBLIC RIGHT-OF-WAY.
32. IF UNANTICIPATED HAZARDOUS MATERIALS OF ANY KIND ARE ENCOUNTERED IN THE WORK, THE CONTRACTOR SHALL IMMEDIATELY CEASE ALL CONSTRUCTION OPERATIONS AND NOTIFY THE PROJECT ENGINEER AND/OR OWNER'S CONSTRUCTION PROJECT MANAGER FOR FURTHER DIRECTION.
33. ALL DEBRIS RESULTING FROM CONSTRUCTION AND DEMOLITION SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY AND LEGALLY AND SHALL BE CONSIDERED PART OF THE WORK.
34. THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES IN ALL DIRECTIONS. DRAINAGE FACILITIES MAY NEED TO BE CONSTRUCTED & MAINTAINED AS NECESSARY TO PROTECT PUBLIC & PRIVATE PROPERTY.
35. ALL CONSTRUCTION SHALL BE SUBJECT TO OBSERVATION AND REVIEW BY THE TOWN/CITY AND THE PROJECT ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF OBSERVATIONS AND REVIEW OF ALL INSTALLATIONS. OBSERVATIONS AND REVIEW OF CONSTRUCTION WORK IN PROGRESS ARE NOT TO BE CONSTRUED AS A GUARANTEE OR WARRANTY BY THE OBSERVER OF THE COMPLETED WORK. ALL GUARANTEES OR WARRANTIES REMAIN WITH THE CONTRACTOR.
36. ALL DISTURBED AREAS MUST BE RECLAIMED WITH VEGETATION AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT OR OWNER'S CONSTRUCTION PROJECT MANAGER.
37. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE POTENTIAL POLLUTION FROM CONSTRUCTION ACTIVITIES, INCLUDING VEHICLE FUELING & MAINTENANCE, AND STORAGE AND USE OF CHEMICALS & FERTILIZERS. THE CONTRACTOR SHALL IDENTIFY BEST MANAGEMENT PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND SUBMIT SPILL PREVENTION AND RESPONSE PROCEDURES TO THE TOWN/CITY AND PROJECT ENGINEER PRIOR TO ANY ACTIVITY AT THE PROJECT SITE.
38. THE CONTRACTOR SHALL VERIFY EXISTING PIPE OR MANHOLE INVERTS/DEPTHS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
39. THE CITY WILL PROVIDE THE CONTRACTOR WITH A TAX EXEMPT FORM FOR USE IN PURCHASING OF MATERIALS AND SUPPLIES.
40. ALL PRODUCT INFORMATION SHOWN IS AS PROVIDED BY THE MANUFACTURER. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND COMPLYING WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS FOR THE INSTALLATION OF ALL MATERIALS WITH SPECIAL ATTENTION TO PROPER SEALING OF MATING SURFACES. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE DELIVERED PRODUCTS AND THOSE SHOWN ON THIS PLAN.
41. ALL SIGNS REMOVED FROM THE RIGHT-A-WAY WILL BE RETURNED TO THE CITY OR STORED ONSITE. CONTRACTOR TO RECORD PHOTOS OF THE AREA AND REINSTALL SIGNS THAT ARE REMOVED DURING CONSTRUCTION.
42. ANY MUD OR OTHER MATERIAL TRACKED OR OTHERWISE DEPOSITED ON THE ROADWAY SHALL BE REMOVED DAILY OR AS ORDERED BY THE DEPARTMENT INSPECTOR.
43. THE CONTRACTOR SHALL PROVIDE ON-SITE SANITARY FACILITIES UNLESS FACILITIES ARE ALREADY PROVIDED THAT ARE REASONABLY CLOSE TO THE CONSTRUCTION SITE.
44. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AFFECTED PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION AT NO ADDITIONAL COST.
45. PERMITTEE SHALL DESIGNATE A CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS) TO MANAGE CONSTRUCTION SIGNAGE AND SAFETY OF OPERATIONS DURING ACTIVITIES WITHIN THE RIGHT OF WAY. A TRAFFIC CONTROL SUPERVISOR SHALL BE AVAILABLE WHENEVER WORK IS IN PROGRESS.
46. ADDITIONAL NOTES ARE LOCATED THROUGHOUT THE CONSTRUCTION DOCUMENTS.

DEMOLITION NOTES

1. PRIOR TO BIDDING, CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA AND ANTICIPATED DEMOLITION REQUIREMENTS.
2. CONTRACTOR TO PROTECT ALL UTILITY, PAVING, BUILDINGS, ETC. OUTSIDE OF LIMITS OF PROPOSED CONSTRUCTION DURING DEMOLITION OPERATIONS.
3. ALL EXISTING PAVEMENT AND CONCRETE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
4. ALL EXISTING HERBACEOUS VEGETATION AND TOPSOIL SHALL BE STRIPPED TO A MINIMUM DEPTH OF 12" AND REMOVED FROM SITE OR STOCKPILED FOR LATER USE IN LANDSCAPED AREAS. TREES DESIGNATED FOR REMOVAL SHALL BE COMPLETELY REMOVED, INCLUDING STUMPS AND ROOT SYSTEMS.
5. CONTRACTOR SHALL REFER TO DEMOLITION PLANS PLANS FOR DETAILS ON LIMITS OF DEMOLITION AND THE SITE AND/OR GRADING PLAN(S) FOR PERIMETER EROSION CONTROLS.
6. PRIOR TO DEMOLITION WORK, EROSION CONTROL DEVICES ARE TO BE INSTALLED. EROSION CONTROL MEASURES SHALL BE ADJUSTED AS DEMOLITION AND CONSTRUCTION SEQUENCING WARRANTS.
7. ALL DEMOLITION WORK ON THIS CONSTRUCTION SITE SHALL BE IN CONFORMANCE WITH LOCAL STANDARDS AND GUIDELINES.
8. THE DEMOLITION PLAN DEPICTS THE ANTICIPATED REMOVALS NECESSARY FOR CONSTRUCTION OF THE PROJECT. MISCELLANEOUS AND MINOR REMOVALS MAY NOT BE SHOWN IN DETAIL BUT ARE CONSIDERED OBLIGATORY TO THE PROJECT. ADDITIONAL REMOVALS MAY BE NECESSARY AND THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL EXISTING IMPROVEMENTS THAT ARE IN CONFLICT WITH THE PROPOSED CONSTRUCTION AND AS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR OWNER'S CONSTRUCTION PROJECT MANAGER.
9. CONTRACTOR SHALL COORDINATE DEMOLITION AND/OR RELOCATION OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNER AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. INTERRUPTIONS IN SERVICE SHALL BE COORDINATED WITH THE UTILITY OWNER AND PROPERTY OWNER(S) IMPACTED. CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY COMPANY FOR PORTIONS OF THE WORK TO BE PERFORMED BY UTILITY COMPANY'S FORCES, AND PROVIDE ADEQUATE NOTICE FOR SCHEDULING. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES, UNLESS OTHERWISE PAID BY THE OWNER PRIOR TO CONSTRUCTION. UTILITY REMOVAL TRENCHES SHALL BE BACKFILLED WITH APPROVED MATERIAL AND MEET COMPACTION REQUIREMENTS PER THE GEOTECHNICAL REPORT.
10. THE SITE MAY CONTAIN EXISTING FOOTINGS OR OTHER UNDERGROUND STRUCTURES THAT ARE NOT DEPICTED ON THIS PLAN. CONTRACTOR SHALL TAKE CARE TO REMOVE ALL NECESSARY STRUCTURES AND BACKFILL IN CONFORMANCE WITH THE GEOTECHNICAL REPORT. BOTTOM OF EXCAVATION SUBGRADE SHALL BE INSPECTED BY THE GEOTECHNICAL TESTING ENGINEER AND APPROVED PRIOR TO ANY BACKFILL.
11. ALL EXISTING PAVEMENT, UTILITIES, BURIED DEBRIS, RUBBLE, AND/OR STRUCTURES/FOUNDATIONS ENCOUNTERED WITHIN AREAS OF DISTURBANCE SHALL BE COMPLETELY REMOVED PRIOR TO OR DURING EARTHWORK OPERATIONS. WASTED MATERIAL SHALL NOT BE BURIED ONSITE WITHOUT THE PRIOR APPROVAL OF THE ENGINEER OR OWNER'S REPRESENTATIVE.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOADING AND HAULING SUPPLIED MATERIALS FROM THE CITY MATERIALS STORAGE YARD LOCATED NEAR THE AIRPORT (AKA "BONEYARD").
13. ALL EXISTING UNUSED SERVICE LINES FOR WATER AND WASTEWATER SHALL BE REMOVED PER LOCAL UTILITY COMPANY STANDARDS. ALL EXISTING UNUSED GAS, TELEPHONE, FIBER OR ELECTRIC LINE/SERVICE SHALL BE COORDINATED FOR REMOVAL WITH THE UTILITY PROVIDER.
14. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL, AND DISPOSING IN A MANNER APPROVED BY ALL GOVERNING AUTHORITIES FOR ALL STRUCTURES, PADS, WALLS, PANS, FOUNDATIONS, PAVEMENT, UTILITIES, ETC. TO BE DEMOLISHED, SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. DEMOLITION AND DISPOSAL PERMITS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO APPROVED GRADE AND BROUGHT UP TO PROPOSED GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT.
15. DURING DEMOLITION OPERATIONS, THE CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES USING MEANS OF THEIR CHOICE.
16. CONTRACTOR SHALL PRESERVE ALL LANDSCAPING NOT TO BE REMOVED FOR CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS DISTURBED BY CONSTRUCTION.
17. SAWCUT ALL ASPHALT AND CONCRETE TO BE REMOVED. ASPHALT LOCATED WITHIN THE GLENWOOD SPRINGS RIGHT-OF-WAY OR PRIVATE PROPERTIES SHALL BE REPLACED WITH 5" THICK ASPHALTIC PAVEMENT OVER 8" CLASS 6 AGGREGATE BASE COURSE. ALL CONCRETE SHALL BE REPLACED PER THE DETAILS. WHEN REPLACING CONCRETE, MATCH EDGES OF SAWCUT CONCRETE AND MAINTAIN INTEGRITY OF DRAINAGE PATTERNS. SAWCUTS SHALL BE TO FULL DEPTH OF EXISTING PAVEMENT. CONCRETE PAVEMENT SHALL BE REMOVED TO THE NEAREST EXISTING JOINT WHEN LESS THAN 5' FROM A PROPOSED SAWCUT.
18. A GRADING PERMIT AND A SIDEWALK/CURB/GUTTER PERMIT ARE NOT REQUIRED FOR THIS PROJECT.

STORMWATER MANAGEMENT AND EROSION/SEDIMENT CONTROL NOTES

1. THE PREPARATION OF STORMWATER MANAGEMENT PLANS, PERMITTING AND COMPLIANCE ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS PROJECT MAY ALSO REQUIRE A PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY FROM THE STATE OF COLORADO. THE CONTRACTOR IS TO COMMENCE WORK ON THIS SITE ONLY AFTER AN ACTIVE PERMIT NUMBER HAS BEEN OBTAINED FROM THE STATE OF COLORADO. THE STORMWATER MANAGEMENT PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO APPLYING FOR THE PERMIT. THE CONTRACTOR IS TO PROVIDE EROSION CONTROL IN ACCORDANCE WITH STATE OF COLORADO GUIDELINES.
2. THE CONTRACTOR SHALL CONTINUOUSLY PROVIDE ADEQUATE STORMWATER MANAGEMENT IN ACCORDANCE WITH AN APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE PUBLIC STREETS, ACCESS ROUTES, AND WATERWAYS IN THE VICINITY OF THE JOB SITE CLEAN AND FREE OF ROCKS, SOIL AND DEBRIS.
4. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROL "BEST MANAGEMENT PRACTICES" (BMPS) PRIOR TO ANY SITE PREPARATION WORK (E.G., CLEARING, GRUBBING, DEMOLITION, OR EXCAVATION).
5. THE PLACEMENT OF EROSION AND SEDIMENT BMPS SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN IF IT WAS PREPARED FOR THE PROJECT. CONTRACTOR TO ADJUST QUANTITY, LOCATION, AND TYPE OF EROSION AND SEDIMENT CONTROL BMPS AS NECESSARY FOR THE VARIOUS PHASES OF THE WORK AND AS ACTUAL CONDITIONS WARRANT. CONTRACTOR SHALL CONTINUOUSLY MODIFY THE EROSION AND SEDIMENT CONTROL PLAN WITH CURRENT BMPS IN ACCORDANCE WITH THE CONSTRUCTION STORMWATER PERMIT REQUIREMENTS. ADDITIONAL EROSION AND SEDIMENT CONTROL BMPS EMPLOYED BY THE CONTRACTOR AT HIS DISCRETION WILL NOT BE MEASURED OR PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.
6. A GROUNDWATER DISCHARGE PERMIT MAY BE REQUIRED FROM THE STATE GOVERNING AUTHORITY PRIOR TO DISCHARGE.
7. GROUNDWATER SHALL BE SAMPLED AND SENT TO AN APPROVED LABORATORY FOR TESTING PRIOR TO BEING DISCHARGED. TESTING SHALL BE IN ACCORDANCE WITH THE PERMIT FOR STORMWATER DISCHARGE.
8. APPROVED EROSION AND SEDIMENT CONTROL BMPS SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. UNLESS OTHERWISE REQUIRED BY THE STATE'S CONSTRUCTION STORMWATER PERMIT, AT A MINIMUM THE CONTRACTOR SHALL INSPECT ALL BMPS EVERY 14 DAYS, AND AFTER ALL SIGNIFICANT PRECIPITATION EVENTS I.E. RAINFALL, SNOWMELT. ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED WITHIN TWENTY-FOUR (24) HOURS AFTER DIRECTION BY THE INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED WEEKLY FROM ALL BMPS, OR AT ANY TIME THAT SEDIMENT OR CONSTRUCTION DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMPS.
9. TOPSOIL AND SUITABLE EARTHEN MATERIALS SHALL BE SEGREGATED AND STOCKPILED WITHIN THE LIMITS OF CONSTRUCTION FOR USE ON AREAS TO BE FILLED AND RE-VEGETATED. ANY AND ALL STOCKPILES SHALL BE PLACED IN AN APPROVED LOCATION AND PROTECTED FROM EROSIVE ELEMENTS USING MEASURES SPECIFIED IN THE EROSION/SEDIMENT CONTROL PLAN AND APPROVED STORMWATER MANAGEMENT PLAN (SWMP) FROM THE STATE OF COLORADO.
10. SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE MULCHED AND SEEDED WITH A TEMPORARY OR PERMANENT GRASS COVER WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION.
11. ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
12. A WATER SOURCE MUST BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
13. THE CONTRACTOR MUST KEEP ALL POLLUTANTS, INCLUDING SEDIMENT, CONSTRUCTION DEBRIS, AND TRENCH BACKFILL MATERIALS FROM ENTERING THE STORM SEWER SYSTEM.
14. ALL SPILLS INCLUDING, BUT NOT LIMITED TO, PETROLEUM PRODUCTS, SOLVENTS, AND CEMENT SHALL BE CLEANED UP IMMEDIATELY. THE LOCAL TOWN/CITY/COUNTY AND STATE'S GOVERNING AUTHORITY SHALL BE NOTIFIED IMMEDIATELY.
15. THE CONTRACTOR SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THE SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHT-OF-WAY. ALL MATERIAL EXPORTED FROM THE SITE SHALL BE DISPOSED OF AT A SITE PERMITTED TO ACCEPT SUCH MATERIAL.
16. THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING DOWN STRAW OR HAY BALES, OR TO SUPPORT SILT FENCING USED AS AN EROSION CONTROL MEASURE, IS PROHIBITED.
17. THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CEMENT TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED OF AT AN APPROPRIATE LOCATION.
18. CONTRACTOR SHALL PROVIDE A COMPLETED "NOTICE OF TERMINATION" TO OWNER, FOR OWNERS SUBMITTAL TO THE STATE'S GOVERNING AUTHORITY ONCE THE PROJECT IS COMPLETE, ALL DISTURBED AREAS HAVE BEEN STABILIZED AND TEMPORARY BMPS HAVE BEEN REMOVED.
19. THE CONTRACTOR SHALL CLEAN OUT ALL EXISTING AND PROPOSED INLETS, PIPES AND MANHOLES OF DEBRIS AND SEDIMENTATION AT COMPLETION OF SITEWORK. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER AND LOCAL AUTHORITIES. ANY CONSTRUCTION DEBRIS OR MUD DROPPED INTO MANHOLES, INLETS, PIPES OR TRACKED ONTO EXISTING ROADWAYS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY EXCAVATIONS OR PAVEMENT FAILURES CAUSED BY HIS CONSTRUCTION.
20. ALL DITCHES & EROSION CONTROL SHOULD BE COMPLETED TO THE RECEIVING STREAM.
21. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO SIGNIFICANTLY REDUCE ANY POTENTIAL POLLUTION CAUSED BY HIS ACTIVITIES, INCLUDING VEHICLE FUELING, STORAGE OF FERTILIZERS OR CHEMICALS, ETC. THE CONTRACTOR SHALL HAVE IDENTIFIED PROCEDURES FOR HANDLING POTENTIAL POLLUTANTS AND HAVE IDENTIFIED SPILL PREVENTION AND RESPONSE PROCEDURES PRIOR TO ANY ACTIVITIES AT THE PROJECT SITE.
22. ALL EROSION CONTROL FABRIC SHALL BE NORTH AMERICAN GREEN SC250 OR ENGINEER APPROVED EQUAL UNLESS SPECIFIED DIRECTLY.

SITE PLAN NOTES

1. DIMENSIONS SHOWN ON THE SITE PLAN ARE TO FACE OF CURB LINE (FLOWLINE) IN CURBED AREAS, EDGE OF ASPHALT, AND EXTERIOR FACE OF BUILDING, UNLESS OTHERWISE SPECIFIED.
2. ALL SIGNAGE SHALL BE INSTALLED PER MUTCD STANDARDS. A SEPARATE SIGN APPLICATION TO THE TOWN/CITY MAY BE REQUIRED FOR ALL SIGNS.

GRADING PLAN NOTES

1. PRIOR TO ANY GRADING OPERATIONS, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE ADEQUATELY IN PLACE. REFER TO THE EROSION AND SEDIMENT CONTROL PLAN, IF PROVIDED, FOR REQUIREMENTS.
2. THE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE OF PAVEMENT, TOP OF SIDEWALKS AND CURBS, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR MULCH, SOD, PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR SUBGRADE ELEVATIONS.
3. IF APPLICABLE, ALL TOP OF CURB AND SIDEWALK ELEVATIONS SHALL BE 0.5' ABOVE GUTTER ELEVATIONS UNLESS OTHERWISE NOTED. IN AREAS WITH SIDEWALK ABUTTING BACK OF CURB, TOP OF CURB ELEVATIONS SHALL BE EQUAL TO SIDEWALK ELEVATIONS.
4. THE CONTRACTOR SHALL CONSTRUCT FINISH GRADE SLOPES NO STEEPER THAN AS SHOWN ON THESE PLANS.
5. SITE AND BUILDING PAD PREPARATION, GRADING AND EXCAVATION PROCEDURES SHALL CONFORM TO THE RECOMMENDATIONS OUTLINED IN THE PROJECT GEOTECHNICAL REPORT.
6. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND SIDEWALKS IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL REPORT.
7. IN CASE OF ANY DISCREPANCIES REGARDING EARTHWORK BETWEEN THE GEOTECHNICAL REPORT AND THE SPECIFICATIONS SHOWN IN THESE PLANS, NOTIFY THE PROJECT ENGINEER AND OWNER'S CONSTRUCTION PROJECT MANAGER IMMEDIATELY.
8. THE UPPER 24" OF ALL UTILITY TRENCHES IN UNPAVED AREAS SHALL BE BACKFILLED WITH COMPACTED COHESIVE SOILS. SEE GEOTECHNICAL REPORT FOR COMPACTION AND MOISTURE RECOMMENDATIONS.
9. FINAL PAVEMENT SUBGRADES SHALL BE PROOF-ROLLED WITHIN TWENTY FOUR (24) HOURS PRIOR TO THE PLACEMENT OF THE PAVEMENT TO DETECT LOCALIZED AREAS OF INSTABILITY.
10. SUITABLE FILL MATERIALS SHALL BE PLACED IN THIN LIFTS OF 4 TO 8 INCHES LOOSE MEASUREMENT, UNLESS OTHERWISE ALLOWED IN THE GEOTECHNICAL REPORT.
11. IF REQUIRED, THE CONTRACTOR SHALL OBTAIN ALL LOCAL AND STATE PERMITS AND AUTHORIZATION TO DISCHARGE FROM DEWATERING ACTIVITIES.
12. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS AND TRENCHES AS NEEDED FOR THE CONSTRUCTION OF THE PROJECT USING MEANS/METHODS OF HIS CHOICE. REFER TO THE GEOTECHNICAL REPORT FOR ANTICIPATED LEVELS OF GROUNDWATER AND DEWATERING RECOMMENDATIONS.
13. ALL EXCAVATIONS, RETAINING WALLS, ROADWAYS, DRAINAGE FACILITIES, BUILDING STRUCTURES AND TRENCHES SHALL BE SLOPED/SHORED/BRACED FOR PROTECTION OF PERSONNEL IN ACCORDANCE WITH OSHA AND/OR CDOT REGULATIONS AND AT THE CONTRACTOR'S FULL DISCRETION BASED ON THE SITE CONDITIONS. OPEN EXCAVATIONS SHALL BE ADEQUATELY PROTECTED AND/OR FENCED AS NECESSARY AND FOR THE SAFETY OF THE PUBLIC.

PAVING NOTES

1. ALL PAVING WORK AND SUBGRADE PREPARATION/STABILIZATION SHALL CONFORM TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT, PREPARED BY CTL-THOMPSON, INC. DATED 6/29/14, PROJECT NO. GS05875-145. IN CASE OF ANY CONFLICT WITH THESE PLANS, NOTIFY ENGINEER IMMEDIATELY.
2. IF REQUIRED, UNLESS PROVIDED FOR IN THE PLANS, CONTRACTOR SHALL DEVELOP A CONCRETE PAVEMENT JOINTING PLAN USING THE PROPOSED PAVING PLAN AND SITE CONDITIONS. JOINT LAYOUT SHALL BE IN ACCORDANCE WITH ACI 325.9R-15 "GUIDE FOR CONSTRUCTION OF CONCRETE PAVEMENTS", ACI 325.12R-02: "GUIDE FOR DESIGN OF JOINTED CONCRETE PAVEMENTS FOR STREETS AND LOCAL ROADS " AND STANDARD CONSTRUCTION PRACTICES. JOINT DETAILS SHALL BE IN ACCORDANCE WITH CDOT STANDARD DETAILS. CONTRACTOR SHALL PROVIDE A PAVEMENT JOINTING PLAN FOR OWNER APPROVAL.
3. IF REQUIRED, ALL CONCRETE PAVEMENT AND CONSTRUCTION SHALL MEET SPECIFICATIONS OUTLINED IN THE GEOTECHNICAL REPORT. CONCRETE PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, TYPE I/II PORTLAND CEMENT (UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT FOR HIGHER SULFATE RESISTANCE), A SLUMP OF 4 INCHES +/- 1 INCH, AND AN AIR CONTENT OF 6% +/- 1%.
4. PAVEMENT MUST HAVE A SOLAR REFLECTANCE INDEX (SRI) OF 29 OR HIGHER.
5. ALL RADIUS DIMENSIONS SHOWN ON THE PAVING PLAN ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
6. 95% STANDARD PROCTOR IS REQUIRED FOR ALL ROADWAY & DRIVEWAY CONSTRUCTION AND TRENCH BACKFILL UNDER THE ROADWAYS, PARKING AREAS, TRAILS, SIDEWALKS, PUBLIC ROW, ACCESS EASEMENTS UNLESS NOTED OTHERWISE. COMPACTION IN REQUIRED AREAS MUST BE ATTAINED AND COMPACTION RESULTS SUBMITTED TO THE TOWN/CITY AND THE PROJECT ENGINEER PRIOR TO ACCEPTANCE. TEST RESULTS SHOULD BE FURNISHED TO THE ENGINEER BEFORE ACCEPTANCE BY THE OWNER. FAILING TESTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR & THE ENGINEER, & ANY NECESSARY RETEST SHALL BE PERFORMED UNTIL A PASSING RESULT IS OBTAINED. ALL UTILITY MAINS & SERVICE LINES WITHIN PUBLIC RIGHT OF WAY OR EASEMENT SHALL BE TESTED. ALL COMPACTION SHALL MEET OR EXCEED 95% STANDARD PROCTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL ACCESSIBLE AREAS AND ROUTES ARE BUILT IN ACCORDANCE WITH THE PLANS AND THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN". THE SITE MAY BE INSPECTED BY TOWN/CITY PERSONNEL FOR COMPLIANCE WITH THE STANDARDS.
8. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
9. CONCRETE SIDEWALK THICKNESS SHALL BE 4" MIN. AND INCREASED TO 6" MIN. AT RAMPS, DRIVEWAY CROSSINGS, OR AS INDICATED ON THE DETAILS. CONCRETE PAVEMENT THICKNESS IN ROADWAYS SHALL BE PER THE DETAILS. COLOR ADMIXTURES: COLOR SAMPLES SHALL BE PROVIDED TO THE PROJECT ENGINEER FOR SELECTION PRIOR TO CONSTRUCTION.
10. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS OR THIOCYANATES ARE NOT PERMITTED.
11. ALL REINFORCING STEEL SHALL BE EPOXY COATED GRADE 40 FOR #4 AND SMALLER AND GRADE 60 FOR #5 AND LARGER. ALL REINFORCING STEEL IN SLABS AND WALLS SHALL BE HELD AT CORRECT DISTANCE FROM FORMS BY ADEQUATE CONCRETE BLOCKS, STEEL CHAIRS, OR TIES IN ACCORDANCE WITH LATEST ACI DETAILING PRACTICES.
12. DOWELS SHALL BE 12" EPOXY COATED #4 REBAR OR LARGER, CENTERED ON THE JOINT, AND GROUTED INTO PLACE.
13. USE 1/4" RADIUS ON ALL EDGES UNLESS NOTED OTHERWISE.
14. EXPANSION JOINTS SHALL BE INSTALLED EVERY 90 LF IN SIDEWALK AND/OR WHEN ABUTTING EXISTING CONCRETE OR A FIXED STRUCTURE. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH THICK AND SHALL EXTEND THE FULL DEPTH OF THE CONTACT SURFACE AND SEALED OVER THE JOINT.
15. THE CONTRACTOR SHALL, UNLESS OTHERWISE SHOWN ON THE PLANS, SELECT AND USE A BOND BREAKER AT INLETS, MANHOLES AND SIMILAR SIZE STRUCTURES. SMALLER STRUCTURES SUCH AS VALVE AND MONUMENT BOXES SHALL NOT REQUIRE A BOND BREAKER.
16. CURE FOR 72 HOURS USING CURING COMPOUND, PLASTIC COVERING OR CONTROLLED MOISTURE.

UTILITY NOTES

1. THE CONTRACTOR SHALL AT ALL TIMES KEEP TWO FULL SETS OF CONTRACT DRAWINGS MARKED UP TO INDICATE THE AS-BUILT LOCATION OF SUBSURFACE UTILITIES INSTALLED AND ENCOUNTERED. ALL INSTALLED AND ENCOUNTERED UTILITIES SHALL BE TOPOGRAPHICALLY SURVEYED BY A PROFESSIONAL ENGINEER AND ASBUILT DRAWINGS IN COMPLIANCE WITH SENATE BILL 18-167 SHALL BE PROVIDED IN ELECTRONIC .DWG AND .PDF FORM TO THE CITY AND THE PROJECT ENGINEER UPON COMPLETION OF THE WORK. ALL SURVEY DATA SHALL BE ON CITY COORDINATES AND DATUM.
2. ALL UTILITIES, BOTH UNDERGROUND OR OVERHEAD, SHALL BE MAINTAINED IN CONTINUOUS SERVICE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD, EXCEPT AS NOTED IN THE SPECIAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE AND LIABLE FOR ANY DAMAGES TO, OR INTERRUPTION OF, SERVICES CAUSED BY THE CONSTRUCTION.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES AT PROPOSED POINTS OF CONNECTION AND CONFIRM EXACT LOCATIONS/SIZES OF ALL UTILITY SERVICE LINE HOOKUPS TO THE BUILDING PRIOR TO UTILITIES CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ARRANGING ONSITE MEETINGS WITH THE TOWN/CITY, GOVERNING AGENCIES, AND UTILITY OWNERS PRIOR TO THE START OF ANY CONSTRUCTION OR INSTALLATION OF UTILITIES.
5. THE CONTRACTOR SHALL CONSTRUCT ALL POTABLE WATER, SANITARY SEWER, ELECTRIC, GAS, TELECOMMUNICATION MAINS/SERVICE LINES/CONNECTIONS IN ACCORDANCE WITH THE APPLICABLE STANDARDS AND SPECIFICATIONS OF THE TOWN/CITY AND/OR UTILITY PROVIDER. ALL WORK AND MATERIALS WILL BE SUBJECT TO INSPECTION AND APPROVAL PRIOR TO BACKFILL.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY SERVICE CONNECTIONS WITH THE APPROPRIATE UTILITY COMPANY/OWNER, AND TO OBTAIN ALL PERMITS AND PAY ALL FEES AS REQUIRED FOR SERVICE CONNECTIONS TO UTILITY MAINS.
7. UTILITY TRENCHES AND STRUCTURE EXCAVATIONS ARE TO BE SLOPED OR BRACED AND SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND THE PROTECTION OF OTHER UTILITIES IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
8. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL PROVIDE TRENCHING FOR ALL UTILITY SERVICE LINES.
9. CONTRACTOR TO SET AND ADJUST ALL PROPOSED UTILITY STRUCTURES, CLEANOUTS, VALVES, METER PITS, ETC. TO FINISH GRADE. EXISTING ITEMS AFFECTED BY THE WORK SHALL BE ADJUSTED AS REQUIRED TO MATCH FINISH GRADE.
10. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPARTMENT TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE AND ADJACENT PROPERTIES. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE TOWN/CITY DURING CONSTRUCTION. ANY COSTS ASSOCIATED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
11. POTABLE WATER LINES AND SERVICES SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER. MINIMUM SANITARY SEWER LINES AND SERVICES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
12. PROVIDE 10 FEET MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY/STORM SEWER LINES WHERE POSSIBLE. WHERE THIS SEPARATION CANNOT BE MAINTAINED ENCASE PER COLORADO DEPARTMENT OF HEALTH REQUIREMENTS. ALL PIPE JOINTS LOCATED WITHIN 10 FEET OF A WATER AND SANITARY/STORM CROSSING SHALL BE ENCASED IF THE WATER MAIN IS EXISTS BELOW OR IS LESS THAN 18 INCHES ABOVE THE CROSSING SANITARY SEWER/STORM LINE.
13. WATER LINE BEND ANGLES ARE SHOWN AS A GUIDELINE, ADDITIONAL HORIZONTAL AND VERTICAL BENDS MAY BE REQUIRED TO MAINTAIN ALIGNMENT AND MINIMUM COVER.
14. AT THE END OF ALL WATER AND SANITARY STUB OUTS AND SERVICE LINES, INSTALL A 6 FT. STEEL POST INTO THE GROUND AT LEAST 2 FEET AND PAINTED THE APPROPRIATE UTILITY COLOR. BLUE FOR WATER AND GREEN FOR SANITARY SEWER.
15. ALL CONDUITS SHALL BE ELECTRIC GRADE SCH.80 PVC. CONDUITS FOR PRIMARY ELECTRIC SHALL BE INSTALLED AT LOCATIONS SHOWN WITH 48" MINIMUM COVER. CONDUITS FOR SECONDARY ELECTRIC AND TELECOMMUNICATIONS SHALL BE INSTALLED AT LOCATIONS SHOWN WITH 24" MINIMUM COVER UNDER SIDEWALKS AND 30" MINIMUM COVER UNDER ROADWAYS. INSTALL DETECTABLE WARNING TAPE 12" ABOVE ALL CONDUITS.
16. THE CONTRACTOR SHALL USE CAUTION IN VICINITY OF WATER MAINS, WATER SERVICES, SEWER MAINS, SEWER SERVICES, IRRIGATION MAINS, IRRIGATION SERVICES, GAS LINES, FIBER OPTICS, OVERHEAD OR UNDERGROUND ELECTRIC/TELEPHONE/CATV CONDUITS AND BUILDING STRUCTURES.
17. CONTRACTOR TO NOTIFY UTILITY USERS AT LEAST SEVENTY TWO (72) HOURS IN ADVANCE OF ANY UTILITY SHUT DOWN. MORE NOTICE MAY BE REQUIRED FOR MAJOR CONNECTIONS.
18. CONTRACTOR SHALL ADJUST ALL MANHOLE RIMS, GRATES, VALVE/CURB/IRRIGATION BOXES, METER PIT RIMS, ETC. TO 1/4" BELOW FINISH GRADE ELEVATION. FIRE HYDRANTS SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF FLANGE IS 3"-6" ABOVE THE FINISH GRADE WHILE MAINTAINING MINIMUM COVER REQUIREMENTS.

STORM SEWER NOTES

1. STORM SEWER PIPE MATERIALS SHALL BE WATER TIGHT HDPE DOUBLE-WALL, SMOOTH INTERIOR PIPE (ADS N-12-WT OR ENGINEER APPROVED EQUAL) OR RUBBER GASKET REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE SPECIFIED IN THE PLANS.
2. STORM SEWER PIPE SHALL BE BEDDED, INSTALLED, AND BACKFILLED IN ACCORDANCE WITH THE DETAILS INCLUDED IN THE PLANS, MANUFACTURER'S INSTALLATION REQUIREMENTS, AND/OR STANDARD DETAILS INCLUDED BY REFERENCE.
3. ALL CAST-IN-PLACE CONCRETE DRAINAGE STRUCTURES SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI, TYPE V (OR EQUIVALENT) SULFATE RESISTANT CONCRETE CEMENT (UNLESS OTHERWISE SPECIFIED) WITH XYPEX CRYSTALLINE ADDITIVE AND SHALL CONFORM TO THE LOCAL TOWN/CITY'S SPECIFICATIONS.

SITE BENCHMARK:

CONTOURS ARE SHOWN AT ONE FOOT INTERVALS. HORIZONTAL AND VERTICAL CONTROL IS BASED CITY DATUM.

THE THREE (3) UTILIZED CONTROL POINTS ARE :

- #4 N:42917.890 E:15895.479 EL:5737.962 1.5" AC-ILLEG
- #10 N:42413.553 E:15760.363 EL:5721.810 1.25" YPC-LS#15710
- #14 N:42813.534 E:15985.320 EL:5737.950 1.5" AC-ILLEG

REQUIRED SHOP DRAWINGS:

- AGGREGATES
- CONCRETE
- STEEL
- ASPHALT MIX DESIGN
- FLOWABLE FILL
- ALL UTILITY STRUCTURES, PIPE & FITTINGS
- ANY OTHERS INDICATED WITHIN THE PLANS OR AS REQUIRED BY THE TOWN/CITY OR THE ENGINEER.

UTILITY PROVIDERS/OWNERS:

ELECTRIC:	DOUG HAZZARD	CITY ELECTRIC SYSTEM	970.384.6353
FIBER OPTIC:	ERIC ARNETTE	CITY BROADBAND	970.384.6416
WATER/SAN. SEWER:	MIKE HOFFMAN	CITY W/WW	970.384.6388
STORM/IRRIGATION:	TERRI PARTCH	CITY ENGINEERING	970.384.6435
STREETS:	JAKE VELASQUEZ	CITY STREETS	970.384.6379
NATURAL GAS:	JASON COX	BLACK HILLS ENERGY	970.456.3117
TELECOMMUNICATIONS:	MICHAEL JOHNSON	COMCAST	970.930.4713
TELECOMMUNICATIONS:	JASON SHARPE	CENTURYLINK	970.384.0238

MATERIAL TESTING/QUALITY ASSURANCE NOTES:

1. ALL TESTS AND INSPECTIONS AS REQUIRED BY CODES, ORDINANCES OR FOR MATERIAL CERTIFICATION AND CONSTRUCTION AS NOTED IN THE PLANS AND SPECIFICATIONS SHALL BE PAID BY THE CONTRACTOR. WHEN NOT SPECIFIED AS AN INDIVIDUAL LINE ITEM IN THE BID SCHEDULE, THE COSTS OF TESTING PAID BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED ITEM OF WORK.
2. TESTS SHALL BE MADE BY AN INDEPENDENT TESTING LABORATORY AND BE ACCEPTABLE TO THE CITY, PROJECT MANAGER AND PROJECT ENGINEER. EXCEPT AS OTHERWISE PROVIDED, SAMPLING OF MATERIALS, TESTING METHODS AND TESTING EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS OR TENTATIVE METHOD OF THE REFERENCED SPECIFICATIONS.
3. CONTRACTOR TO NOTIFY ENGINEER OF RECORD WHEN TOPSOIL/ORGANICS HAVE BEEN STRIPPED TO CONFIRM REMOVAL IS ADEQUATE.
4. ENGINEER OF RECORD AND TESTING AGENT TO FIELD VERIFY SUBGRADE BY WITNESSING A LOADED TANDEM WHEEL ROLL TEST OF SUBGRADE FOR CURB/ASPHALT.
5. TESTING FREQUENCY SHALL CONFORM TO THE CDOT FIELD MATERIALS MANUAL, LATEST EDITION, OR THE FOLLOWING, WHICHEVER IS MORE FREQUENT. AT A MINIMUM, TESTING AGENT TO PERFORM NUCLEAR DENSITY TESTING OF THE FOLLOWING:
   - 5.a. TRENCHES: EVERY 100-FEET FOR THE LOWER 12-INCHES OF FILL AND EACH 24-INCHES OF FILL THEREAFTER.
   - 5.b. STRUCTURAL FILL: EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN., FOR EACH 2-FEET OF FILL.
   - 5.c. SUBGRADE: EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.
   - 5.d. BASE COURSE: EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.
   - 5.e. ASPHALT: EVERY 100-FEET, OR 3 TESTS PER BLOCK MIN.
6. TESTING AGENT SHALL OBTAIN CONCRETE CYLINDERS FOR TESTING EACH DAY CONCRETE IS POURED.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MATERIAL AND COMPACTION TESTING WITH THE PROJECT ENGINEER AND TESTING AGENT AND ADHERING TO THE TESTING SCHEDULE DEFINED.
8. CONTRACTOR SHALL PROVIDE THE CITY AND ENGINEER OF RECORD WITH COPIES OF ALL TEST RESULTS AND REPORTS CONFIRMING COMPLIANCE.

CONTACT INFORMATION:

- 3.a. QUALITY ASSURANCE - PROJECT ENGINEER/ENGINEER OF RECORD:
  DERIC J. WALTER, PE
  BOUNDARIES UNLIMITED INC.
  970.945.5252
- 3.b. MATERIALS TESTING - TESTING AGENT:
  BY THE CONTRACTOR AND AS APPROVED BY THE TOWN/CITY.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Cover Sheet

Construction Plan Set

No.	Date	Revision	By
1.			
2.			
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PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet **C.1**

File Name: **17015-c-civil3d-cdot.dwg**

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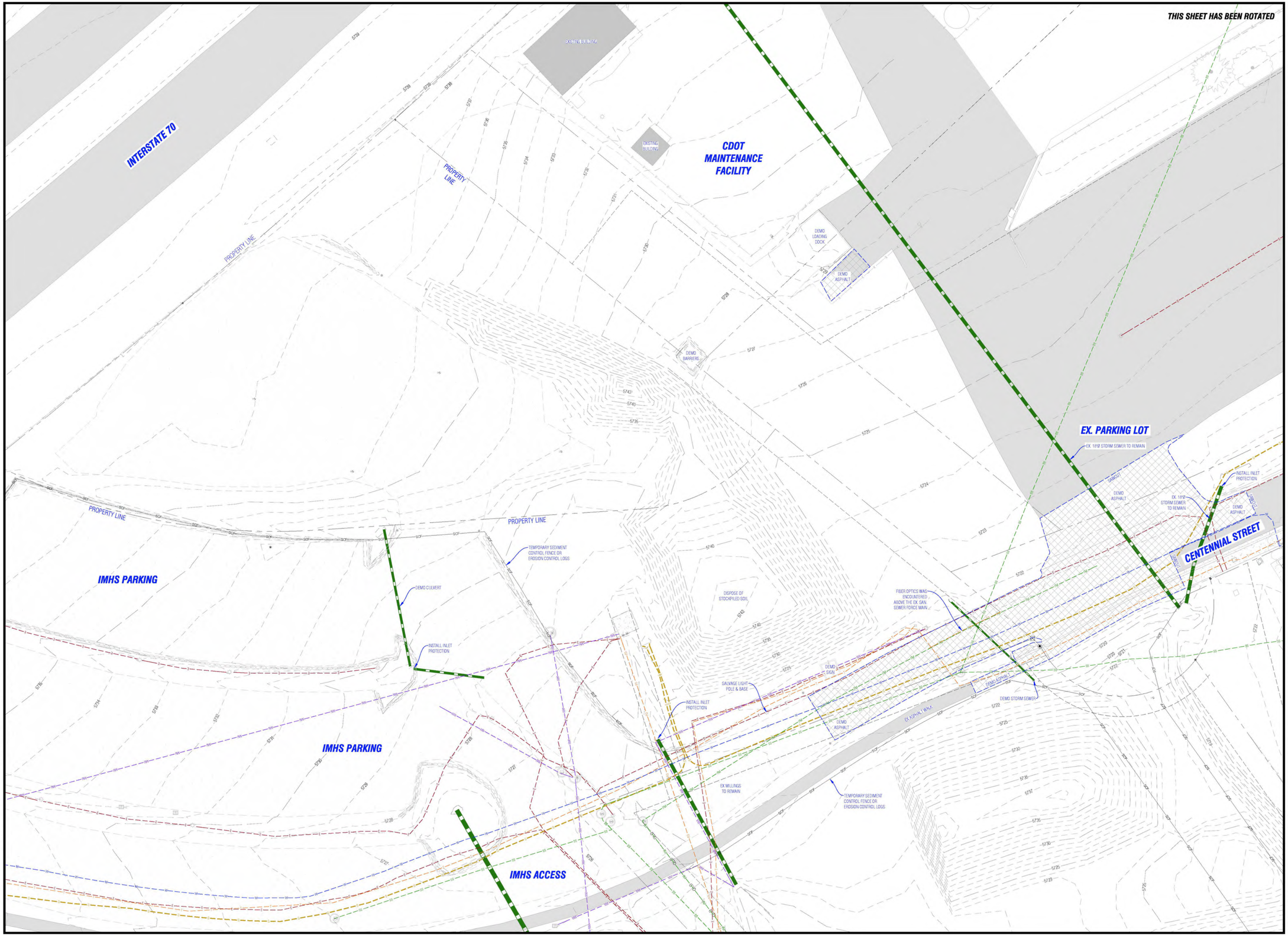

Civil Engineering
Surveying
& Beyond

Boundaries Unlimited Inc.

923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE)
Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED
DERIC JON WALTERS
7/21/20
37110
PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH

0 20' 40'
Scale: 1" = 20'

811
Know what's **below.**
Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Demolition Plan
Construction Plan Set

No.	Date	Revision	By
1.			
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PROJECT NO.: **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet
C.2

File Name: **17015-c-civil3d-cdot.dwg**

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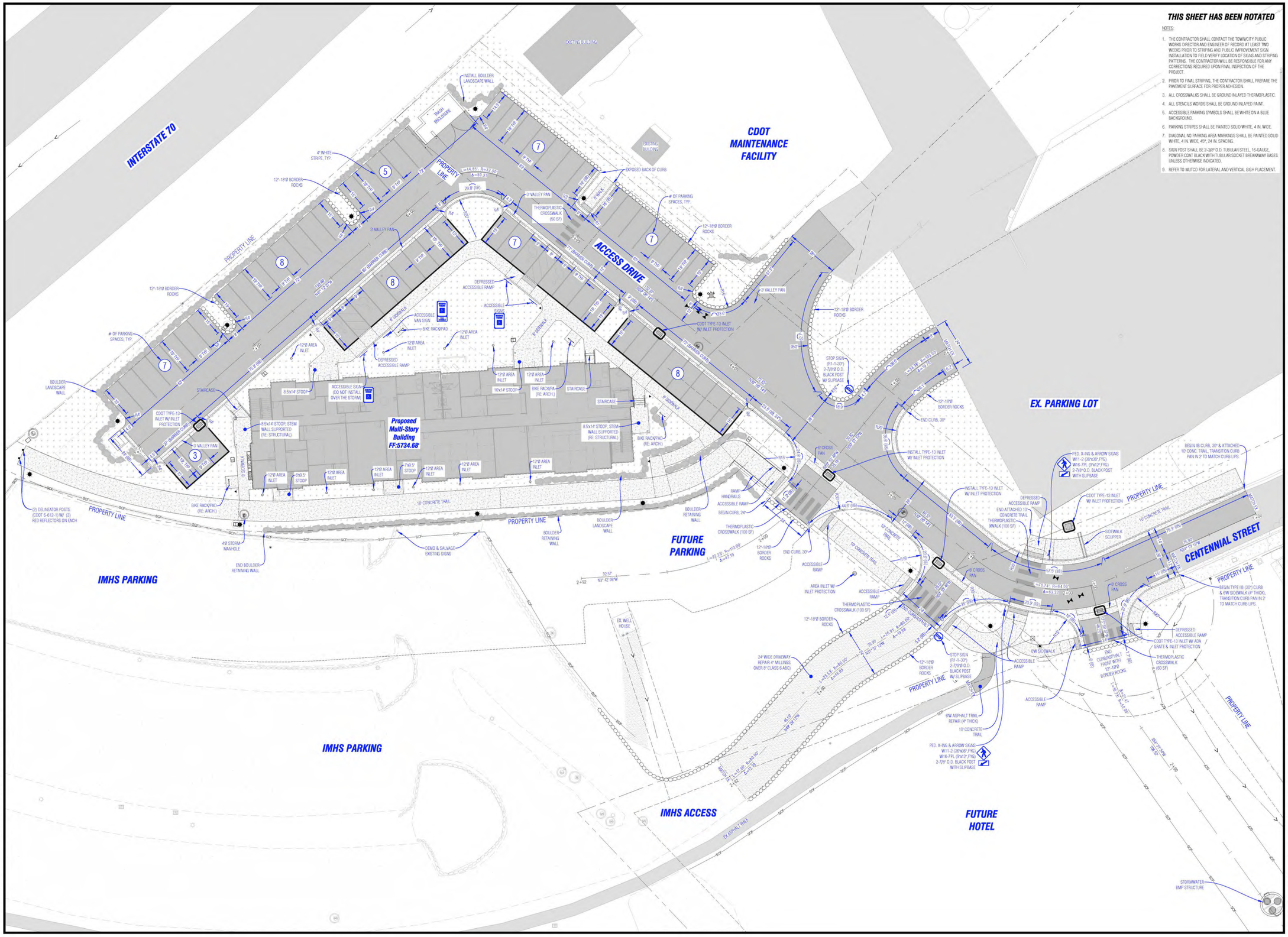

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NOTES:

1. THE CONTRACTOR SHALL CONTACT THE TOWN/CITY PUBLIC WORKS DIRECTOR AND ENGINEER OF RECORD AT LEAST TWO WEEKS PRIOR TO STRIPING AND PUBLIC IMPROVEMENT SIGN INSTALLATION TO FIELD VERIFY LOCATION OF SIGNS AND STRIPING PATTERNS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY CORRECTIONS REQUIRED UPON FINAL INSPECTION OF THE PROJECT.
2. PRIOR TO FINAL STRIPING, THE CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR PROPER ADHESION.
3. ALL CROSSWALKS SHALL BE GROUND INLAYED THERMOPLASTIC.
4. ALL STENCILS WORDS SHALL BE GROUND INLAYED PAINT.
5. ACCESSIBLE PARKING SYMBOLS SHALL BE WHITE ON A BLUE BACKGROUND.
6. PARKING STRIPES SHALL BE PAINTED SOLID WHITE, 4 IN. WIDE.
7. DIAGONAL NO PARKING AREA MARKINGS SHALL BE PAINTED SOLID WHITE, 4 IN. WIDE, 45°, 24 IN. SPACING.
8. SIGN POST SHALL BE 2-3/8" O.D. TUBULAR STEEL, 16-GAUGE, POWDER COAT BLACK WITH TUBULAR SOCKET BREAKAWAY BASES UNLESS OTHERWISE INDICATED.
9. REFER TO MUTCD FOR LATERAL AND VERTICAL SIGN PLACEMENT.

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER
7/21/20
37110
Jeffrey M. Simpson

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 20' 40'
Scale: 1" = 20'

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LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Overall Site Plan
Construction Plan Set

No.	Date	Revision	By
1.			
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PROJECT NO.: **17015.04**
Designer: **DJW**
Drafter: **BDI**
Date: **7/21/20**

Sheet: **C.3**

File Name: **17015-c-chl02d-cdot.dwg**

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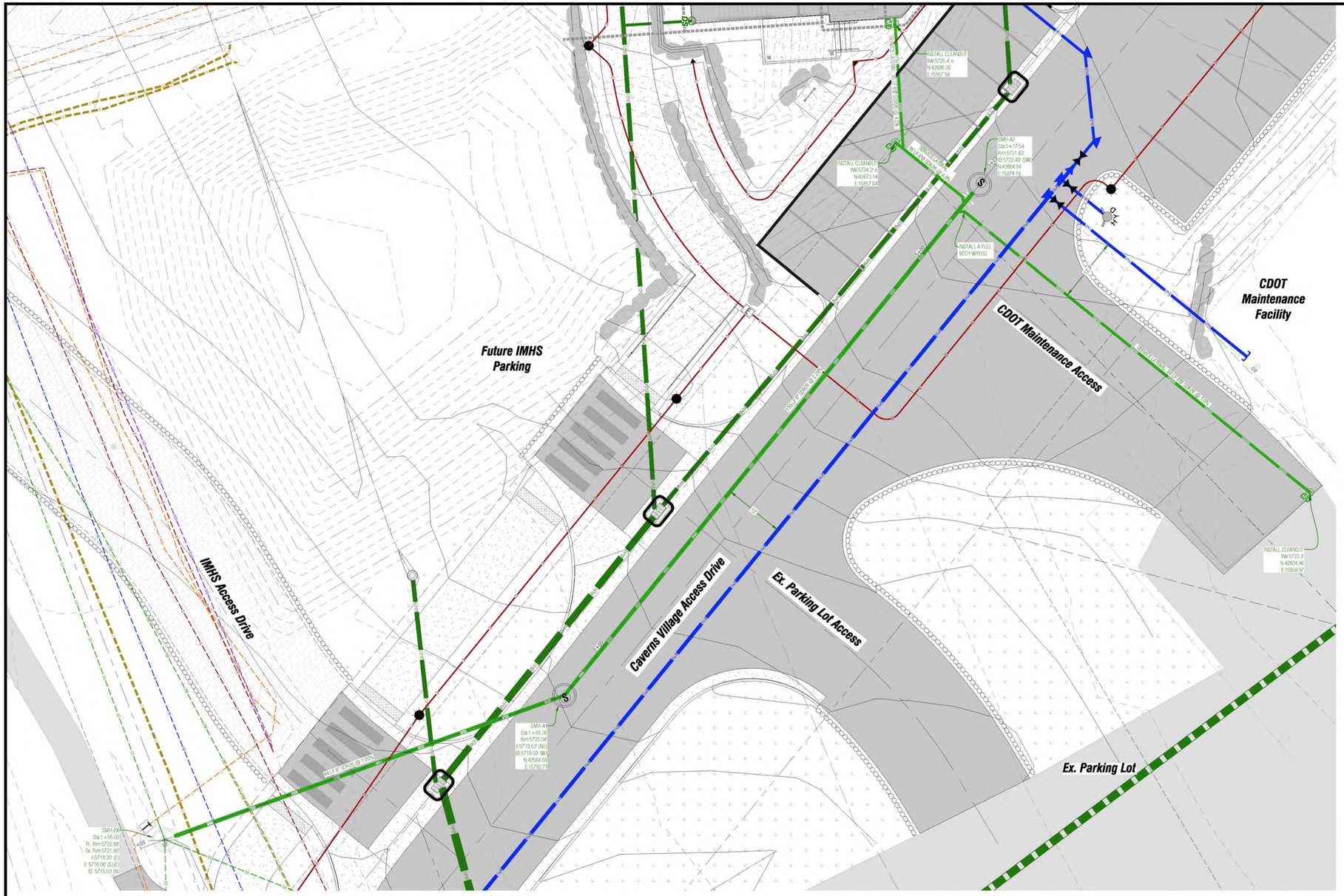

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Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED JUSTIN WILT 7/21/20 37110 PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 10' 20'
Scale: 1" = 10'

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LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Sanitary Sewer Plan
Construction Plan Set

No.	Date	Revision	By
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PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet **C.4**

File Name: **17015-c-sewer-cdot.dwg**

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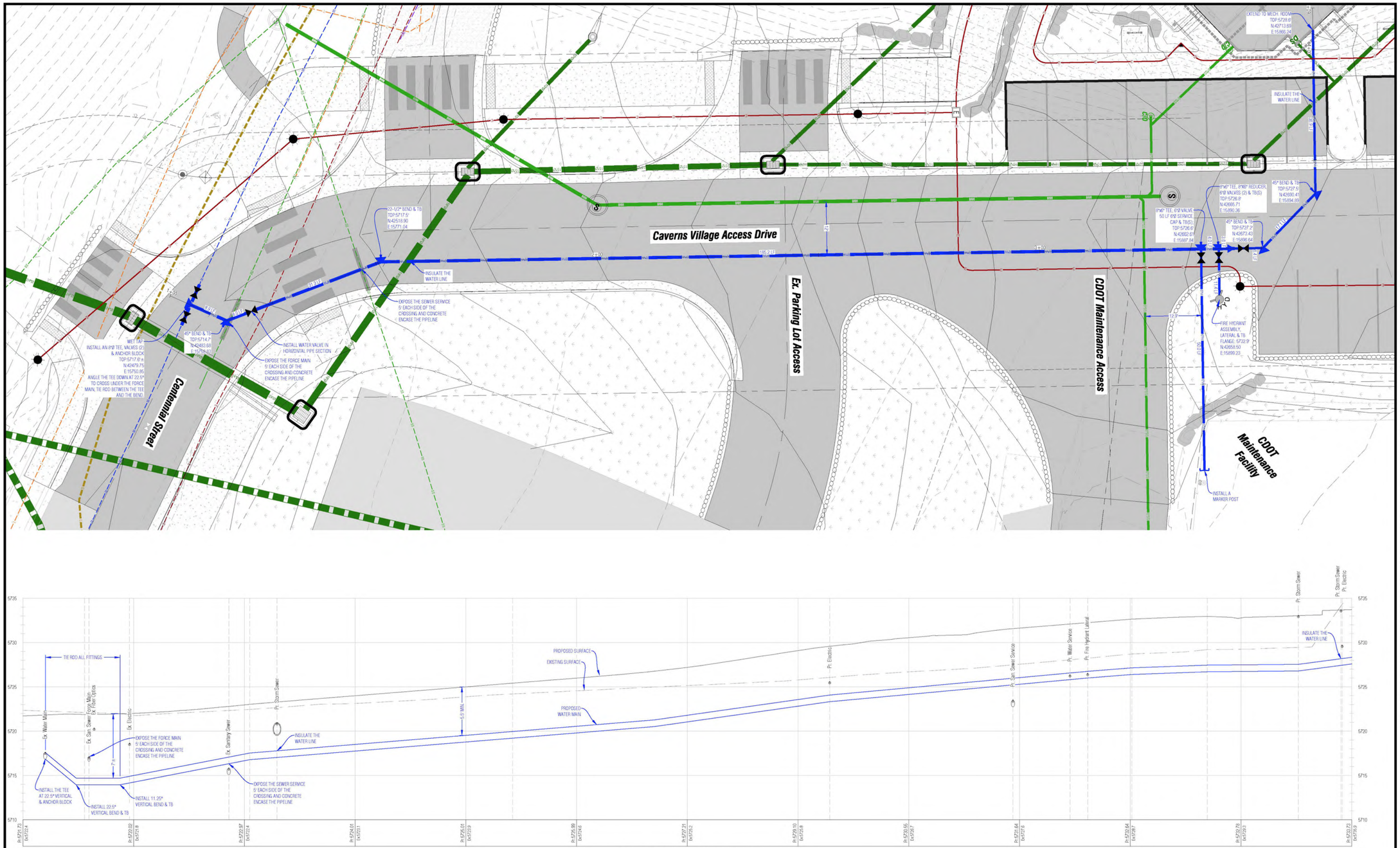

Profile: Water Main, Sta:1+00 to Sta:4+00
Scale: Vert.=5', Horiz.=10'

Civil Engineering Surveying & Beyond
Boundaries Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
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Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER
DERIC JON WALTERS
7/21/20
37110

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 10' 20'
Scale: 1" = 10'

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Know what's **below.**
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LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village
Potable Water Plan
Construction Plan Set

No.	Date	Revision	By
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PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet **C.5**

File Name: **17015-c-sewer-cdot.dwg**

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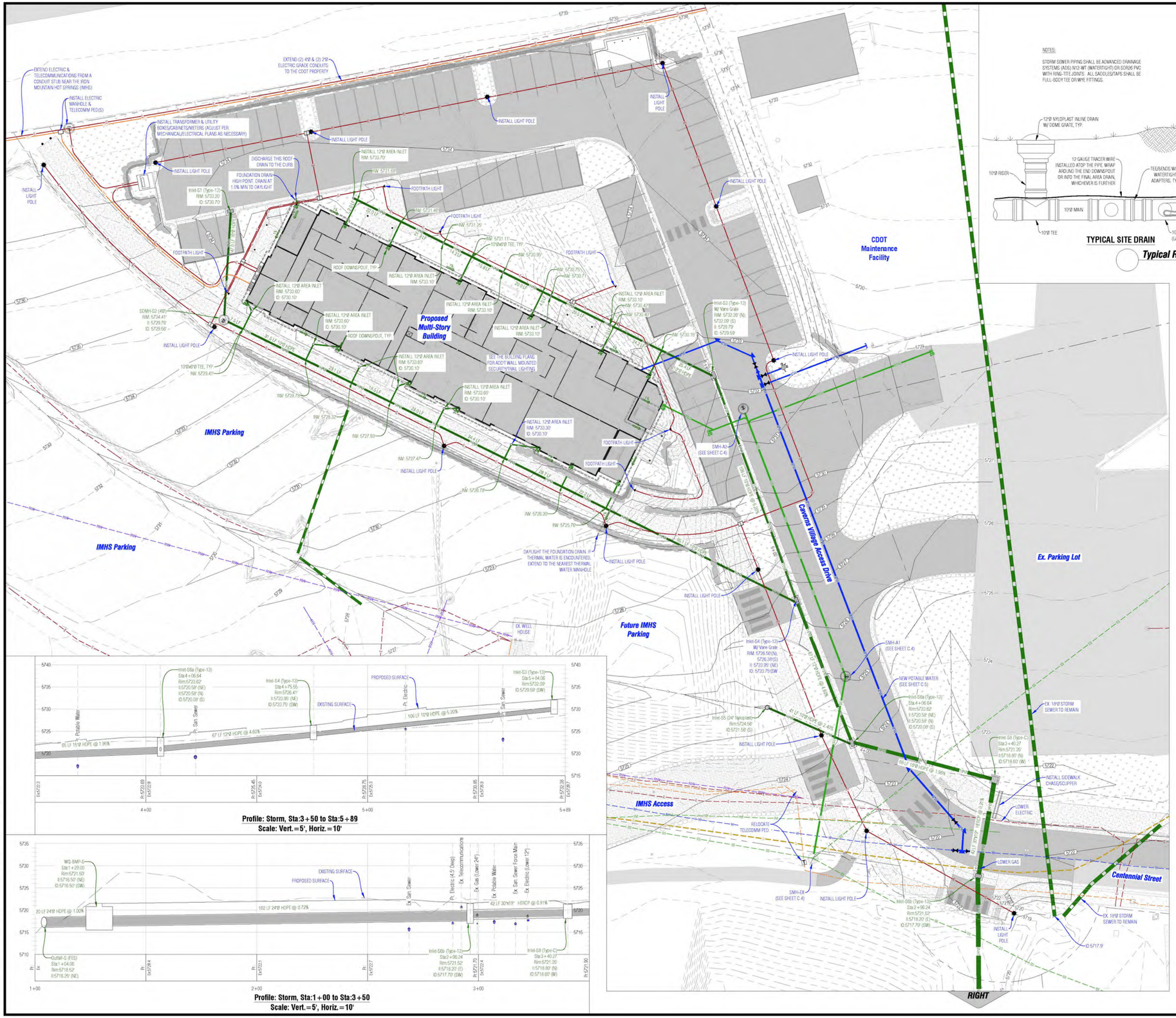
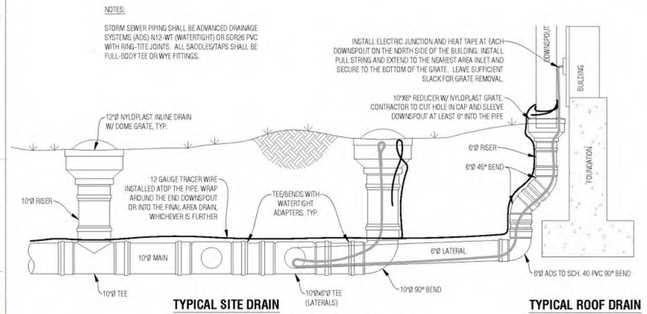


NOTES:

STORM SEWER PIPING SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) N12-WT (WATERTIGHT) OR SDR26 PVC WITH RING-TITE JOINTS. ALL SADDLES/TAPS SHALL BE FULL-BODY TEE OR WYE FITTINGS.

INSTALL ELECTRIC JUNCTION AND HEAT TAPE AT EACH DOWNSPOUT ON THE NORTH SIDE OF THE BUILDING. INSTALL PULL STRING AND EXTEND TO THE NEAREST AREA INLET AND SECURE TO THE BOTTOM OF THE GRATE. LEAVE SUFFICIENT SLACK FOR GRATE REMOVAL.



TYPICAL SITE DRAIN **TYPICAL ROOF DRAIN**

Typical Roof & Site Drain(s)

Scale: N.T.S.

UTILITY AND STORM MATERIAL NOTES:

1. WATER MAIN AND LATERALS SHALL BE PVC C909 CLASS 305. MAINS SIZES SHALL BE 8"Ø AND LATERALS SHALL BE 6"Ø UNLESS OTHERWISE APPROVED BY THE PROJECT MECHANICAL ENGINEER AND CITY. SEE THE MECHANICAL PLANS FOR ADDITIONAL REQUIREMENTS.
2. SANITARY SEWER PIPING SHALL BE SDR26 PVC WITH RING-TITE JOINTS. ALL SADDLES/TAPS SHALL BE FULL-BODY WYE FITTINGS.
3. STORM SEWER PIPING SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) N12-WT (WATERTIGHT), RCP OR SDR26 PVC. ALL SADDLES/TAPS SHALL BE FULL-BODY TEE OR WYE FITTINGS.
4. ELECTRIC CONDUIT SHALL BE ELECTRIC GRADE 6"Ø SCH. 80 PVC; TELECOMMUNICATION CONDUIT SHALL BE ELECTRIC GRADE 4"Ø (TELEPHONE/FIBER) AND 3"Ø (CABLE) SCH.80 PVC.
5. NATURAL GAS MATERIALS SHALL BE AS REQUIRED BY BLACK HILLS ENERGY.
6. SOILS ARE HIGHLY CORROSIVE. THEREFORE, ALL METAL FITTINGS AND COMPONENTS SHALL BE DOUBLE WRAPPED IN POLYWRAP. ALL FITTINGS AND COMPONENTS SHALL BE INSPECTED BY THE CITY PRIOR TO WRAPPING/BACKFILL AND ANY DAMAGED COATINGS SHALL BE RECOATED WITH A MANUFACTURER APPROVED SPRAY COATING DESIGNED FOR UNDERGROUND INSTALLATIONS. ALL NUTS AND BOLTS SHALL BE COR BLUE OR STAINLESS STEEL.
7. CONCRETE MANHOLES, INLETS AND OTHER STRUCTURES SHALL BE PRE-CAST USING TYPE V (OR EQUIVALENT) SULFATE RESISTANCE CONCRETE CEMENT WITH XYPEX CRYSTALLINE ADDITIVE.
8. SANITARY SEWER MANHOLE/STRUCTURE BOTTOM SURFACE, EXTERIOR WALLS AND INTERIOR WALLS AND FLOOR SHALL BE LINED WITH REINFORCED FLEXIBLE PVC MEMBRANE LINER THAT OFFERS H_2S GAS AND CHEMICAL RESISTANCE FOR PRECAST CONCRETE PRODUCTS.
9. SEE CDOT M-STANDARDS DETAILS AND SPECIFICATIONS (M-604-11, M-604-12, M-604-13, DOUBLE NO. 16 AND M-604-20) FOR TYPICAL INLET AND MANHOLE STRUCTURE AND INSTALLATION REQUIREMENTS.
10. INLETS ON A GRADE SHALL BE EQUIPPED WITH DIRECTIONAL CAPTURE VANE GRATES.

Profile: Storm, Sta:3+50 to Sta:5+89
Scale: Vert.=5', Horiz.=10'

Profile: Storm, Sta:1+00 to Sta:3+50
Scale: Vert.=5', Horiz.=10'

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Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: ***2018-208.004***
Job #: ***SGM, Inc.***
Date: ***July 2020***

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER — 7/21/20 — 37110 — JEFFREY D. WHITE

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH

0 20' 40'
Scale: 1" = 20'

811 Know what's below. Call before you dig.

NONSUBDIVISION

Caverns Village

Storm Sewer & Shallow Utility Plan
Construction Plan Set

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

No.	Date	Revision	By
1.			
2.			
3.			
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PROJECT NO. **17015.04**
Designed: **DJW**
Drafted: **BUI**
Date: **7/21/20**

Sheet **C.6**

File Name: **17015-c-storm-cdot.dwg**

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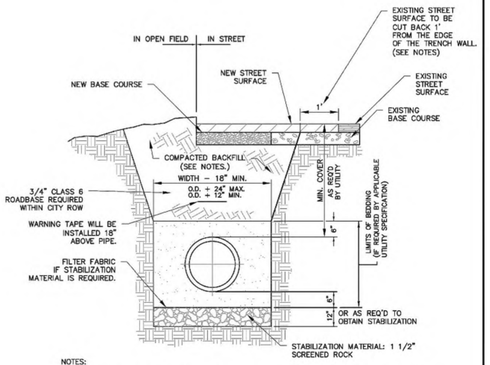


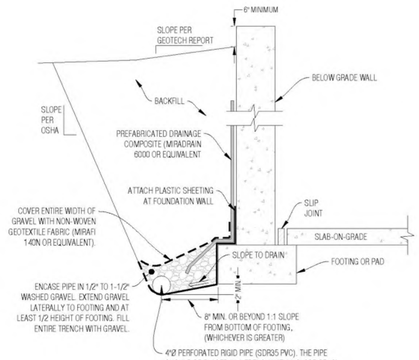
NOTES:

1. RIGHT OF WAY & EASEMENT AREAS SHALL BE GRADED (CUT & FILL) TO SUBGRADE (+/–0.5) AT UTILITY LOCATIONS INCLUDING SERVICES, PRIOR TO UTILITY INSTALLATION.
2. BACKFILL TO BE COMPACTED TO 95% AND WITHIN TWO (2)% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY A.S.T.M. D–698 DENSITY IN ALL AREAS UNLESS OTHERWISE NOTED.
3. TRENCH EXCAVATION SHALL COMPLY WITH ALL OSHA STANDARDS.
4. FILTER FABRIC IS REQUIRED IF STABILIZATION MATERIAL IS USED. THE FABRIC SHALL BE INSTALLED AS SHOWN IN THE DETAIL.
5. A ONE FOOT CUT BACK IS NOT REQUIRED IF FLOW FILL IS USED FOR BACKFILL.

TRENCH EXCAVATION & BACKFILL DETAIL

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Trench Excavation & Backfill Detail	Approved: XX; Date: 2/23/16; Modified: 2/23/16; File: Trench Excavation & Backfill Detail	Drawing # W13
	Division: Water Standard Details		

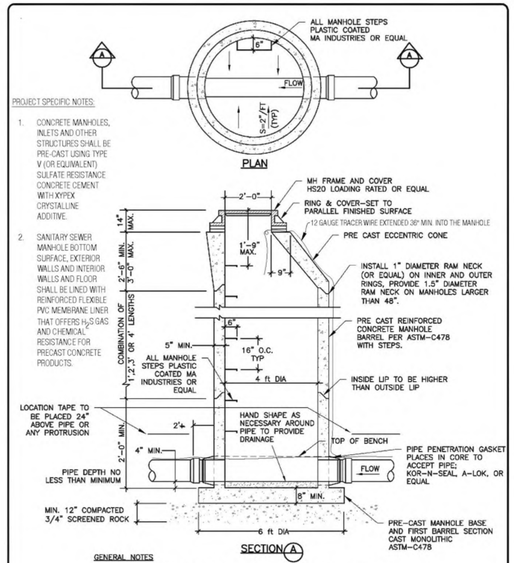


NOTES:

1. THE BOTTOM OF THE DRAIN SHOULD BE AT LEAST 2 INCHES BELOW BOTTOM OF FOOTING AT THE HIGHEST POINT AND SLOPE DOWNWARD TO A POSITIVE GRAVITY OUTLET OR TO A SUMP WHERE WATER CAN BE REMOVED BY PUMPING.
2. CONTRACTOR TO FOLLOW ANY ADDITIONAL RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER

Typ. Foundation Drain

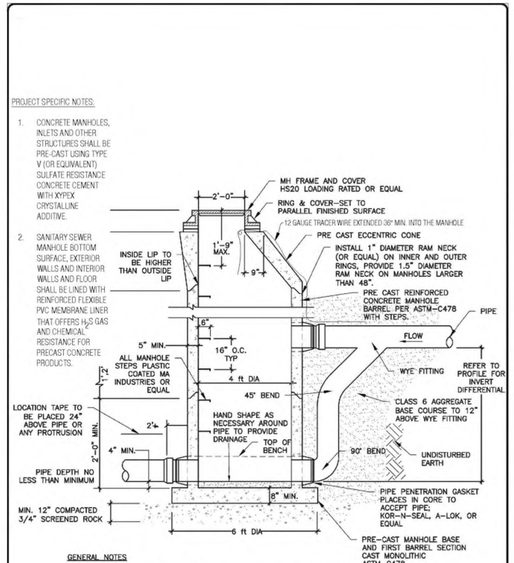
(Verify with the Geotechnical Engineer) Scale: N.T.S.



STANDARD MANHOLE

N.T.S.

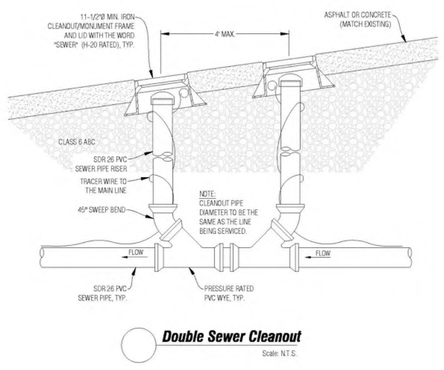
City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Standard Manhole Detail	Approved: XX; Date: 3/22/16; Modified: 3/22/16; File: StandardManhole	Drawing # S01
	Division: Sewer Standard Details		



DROP MANHOLE

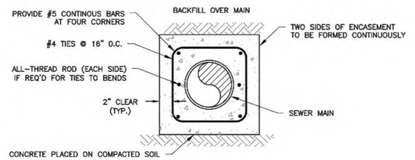
N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Drop Manhole Detail	Approved: XX; Date: 3/22/16; Modified: 3/22/16; File: StandardManhole	Drawing # S02
	Division: Sewer Standard Details		



Double Sewer Cleanout

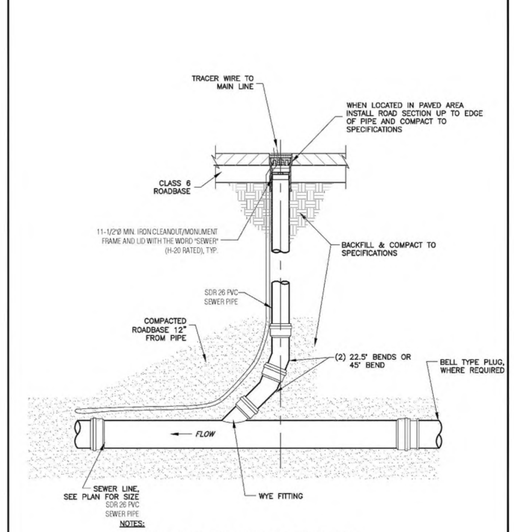
Scale: N.T.S.



CONCRETE ENCASEMENT FOR SEWER MAIN

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Concrete Encasement Detail	Approved: XX; Date: 3/22/16; Modified: 3/22/16; File: ConcreteEncasement	Drawing # S03
	Division: Sewer Standard Details		



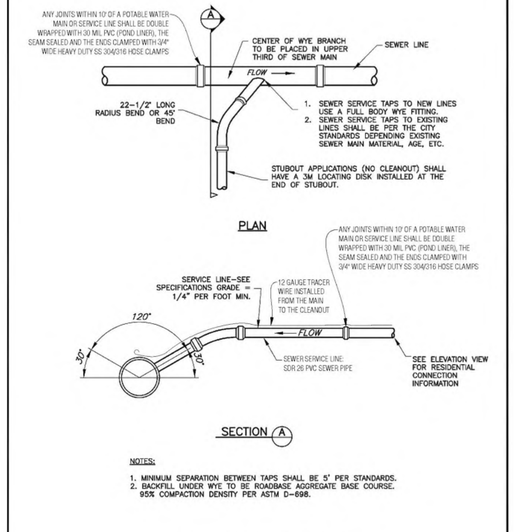
NOTES:

1. MUST BE TRAFFIC RATED IF INSTALLED IN TRAFFIC AREAS.

SEWER CLEAN–OUT

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Sewer Clean-Out	Approved: XX; Date: 3/22/16; Modified: 3/22/16; File: SewerCleanOutdoor	Drawing # S05
	Division: Sewer Standard Details		



SECTION A

NOTES:

1. MINIMUM SEPARATION BETWEEN TAPS SHALL BE 5' PER STANDARDS.
2. BACKFILL UNDER WYE TO BE ROADBASE AGGREGATE BASE COURSE. 95% COMPACTION DENSITY PER ASTM D–698.

SEWER SERVICE CONNECTION

N.T.S.

City of Glenwood Springs, 101 West 8th Street, Glenwood Springs, CO 81601, 970.384.6435, www.ci.glenwood-springs.co.us	Sewer Service Connection Detail	Approved: XX; Date: 3/22/16; Modified: 3/22/16; File: SewerServiceHook	Drawing # S06
	Division: Sewer Standard Details		

Boundaries Unlimited Inc. Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED — JUSTIN W. [illegible] — 7/21/20 — 37110 — PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

811 Know what's below. Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Details - Sanitary Sewer Construction Plan Set

No.	Date	Revision	By
1.			
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PROJECT NO. **17015.04**
Designer: **DJW**
Drawn: **BUI**
Date: **7/21/20**

Sheet **C.7**

File Name: **17015-c-storm-cdot.dwg**

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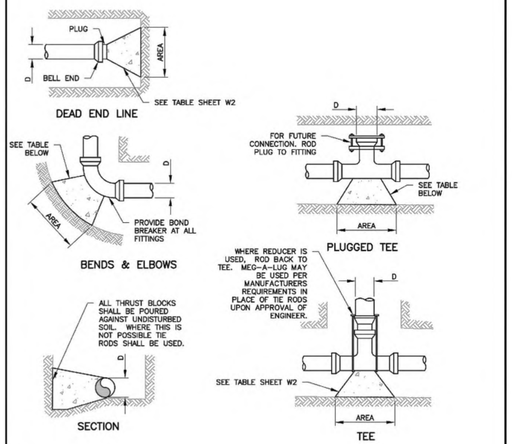


City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterThrustBlock.dwg	Drawing # W01
	Division: Water Standard Details		

BEARING AREAS (IN SQ. FT.)					THE MINIMUM INSTALLED THRUST BEARING AREA SHALL BE 2.0 S.F.
SIZE	BENDS				TEES, DEAD ENDS, AND CROSS w DEAD END BRANCHES
	90°	45°	22 1/2°	11 1/2°	
3	1.0	0.6	0.3	0	0.7
4	1.8	1.0	0.5	0	1.3
6	4.0	2.2	1.1	0	2.8
8	7.1	3.8	2.0	1.0	5.0
10	11.1	6.0	3.0	1.5	7.8
12	16.0	8.6	4.4	2.2	11.3
14	21.7	11.8	6.0	3.0	15.4
15	25.0	13.5	7.0	3.5	17.6
16	28.4	15.3	8.0	4.0	20.0
18	36.0	19.4	10.0	5.0	25.4
20	44.2	24.0	12.2	6.1	31.4
21	49.0	26.5	13.5	6.8	34.6
22	54.0	29.0	14.8	7.4	38.0
24	64.0	34.5	17.7	8.8	45.0
30	100.0	54.0	27.6	13.8	71.0
36	144.0	78.0	40.0	20.0	102.0

NOTE: TEE SIZE IS BRANCH SIZE.

AREAS GIVEN IN TABLE ARE BASED UPON INTERNAL STATIC PRESSURE OF 100 P.S.I. AND SOIL BEARING CAPACITY OF 1,000 lbs. PER SQ. FT.

BEARING AREAS FOR ANY PRESSURE AND SOIL BEARING CAPACITY MAY BE OBTAINED BY MULTIPLYING TABULATED VALUES BY A CORRECTION FACTOR "F"

F= ACTUAL SPECIFIED TEST PRESSURE IN HUNDREDS OF lbs. / ACTUAL SOIL BEARING CAPACITY IN THOUSANDS OF lbs.

SOIL BEARING CAPACITIES SHALL BE DETERMINED BY THE ENGINEER

ALL WATER LINE PLANS SHALL CONTAIN THE FOLLOWING TABLE, WITH THE VALUES FILLED IN BY THE ENGINEER:

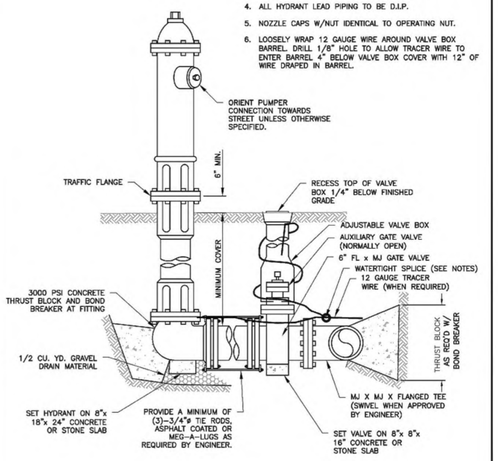
SOIL BEARING CAPACITY – 2000 LBS/SQ. FT.
TEST PRESSURE – 195 P.S.I. (1.5* 130 PSI)
BEARING AREA MULTIPLIER (F) – 1.0

CONCRETE THRUST BLOCK DETAILS
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Concrete Thrust Block Details	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterThrustBlock.dwg	Drawing # W02
	Division: Water Standard Details		

NOTES:

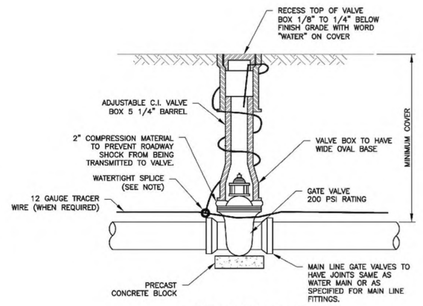
1. ALL JOINTS FROM MAIN TO HYDRANT SHALL BE HARNESSED MECHANICAL JOINTS OR FLANGED JOINTS.
2. HYDRANT, VALVE & FITTINGS TO BE 250 PSI RATED.
3. POLYETHYLENE WRAP (WHEN REQUIRED) SHALL COVER ASSEMBLY FROM HYDRANT BASE TO WATER MAIN.
4. ALL HYDRANT LEAD PIPING TO BE D.I.P.
5. NOZZLE CAPS W/NUT IDENTICAL TO OPERATING NUT.
6. LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



FIRE HYDRANT ASSEMBLY DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Fire Hydrant Assembly Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterPumperAssembly.dwg	Drawing # W03
	Division: Water Standard Details		

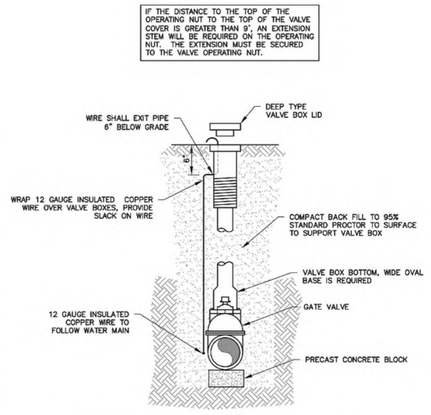
NOTE:
LOOSELY WRAP 12 GAUGE WIRE AROUND VALVE BOX BARREL. DRILL 1/8" HOLE TO ALLOW TRACER WIRE TO ENTER BARREL 4" BELOW VALVE BOX COVER WITH 12" OF WIRE DRAPED IN BARREL.



GATE VALVE DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Gate Valve Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: InstallGateValve.dwg	Drawing # W04
	Division: Water Standard Details		

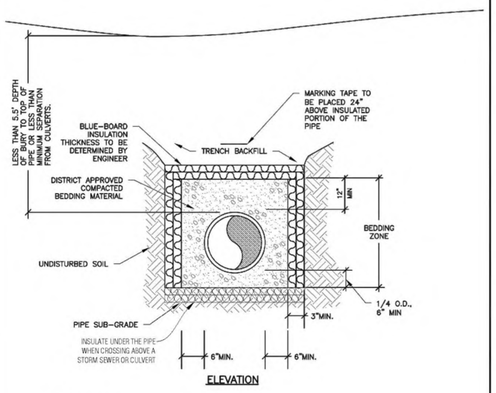
IF THE DISTANCE TO THE TOP OF THE OPERATING NUT TO THE TOP OF THE VALVE COVER IS GREATER THAN 9', AN EXTENSION STEM WILL BE REQUIRED ON THE OPERATING NUT. THE EXTENSION MUST BE SECURED TO THE VALVE OPERATING NUT.



GENERAL NOTE
1. VALVE BOX IS TO BE INSTALLED PLUMB, LEVEL, AND CENTERED ON 2" NUT

GATE VALVE & BOX ASSEMBLY DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Gate Valve And Box Assembly	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: InstallAndBoxAssembly.dwg	Drawing # W05
	Division: Water Standard Details		



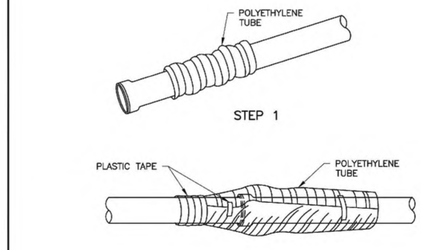
ELEVATION

GENERAL NOTES

1. CONDITION OF LESS THAN MINIMUM BURY DEPTH ALLOWED ONLY WITH WRITTEN APPROVAL FROM THE CITY PRIOR TO CONSTRUCTION. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT DOES NOT MEET MINIMUM BURY REQUIREMENTS.
2. SEE SEWER AND WATER PIPE BEDDING DETAIL FOR BACKFILL MATERIAL AND COMPACTION SPECS.
3. INSULATION SHALL BE INSTALLED ON ALL PIPE THAT IS WITHIN TWO FEET OF ANY DRAINAGE CULVERT. THIS APPLIES TO THE BOTTOM OF THE PIPE IF IT CROSSES OVER TOP OF THE CULVERT.

WATER PIPE INSULATION DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Water Pipe Insulation Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterPipeInsulationDetail.dwg	Drawing # W06
	Division: Water Standard Details		



FIELD INSTALLATION – POLYETHYLENE WRAP

WHERE SPECIFICALLY REQUIRED FOR SOIL APPLICATIONS

STEP 1 – PLACE TUBE OF POLYETHYENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE

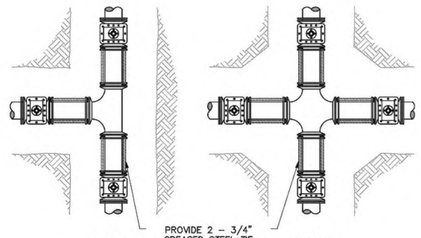
STEP 2 – PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

STEP 3 – OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

POLYWRAP DETAIL
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Polywrap Detail	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: WaterPolywrapDetail.dwg	Drawing # W07
	Division: Water Standard Details		

NOTE: USE OF FOSTER ADAPTERS OR SWIVEL TEES SHALL BE ALLOWED, IF APPROVED BY THE CITY.



PROVIDE 2 – 3/4" GREASED STEEL TIE RODS WITH "STAR" TIE BOLTS ENCAPSULATED IN POLYETHYLENE SHEETING, OR "PROTECTO WRAP". BOLT VALVE TO TEE OR CROSS.

LINE VALVES AT TEES AND CROSSES
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Line Valves at Tees and Crosses	Approved: XX Date: 2/23/16 Modified: 2/23/16 File: InstallLineValveDetail.dwg	Drawing # W10
	Division: Water Standard Details		

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED
JUSTIN WAYNE
7/21/20
37110
PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

Know what's **below.** **Call** before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Details - Potable Water

Construction Plan Set

No.	Date	Revision	By
1.			
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PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet **C.8**

File Name: **17015-c-storm-cdot.dwg**

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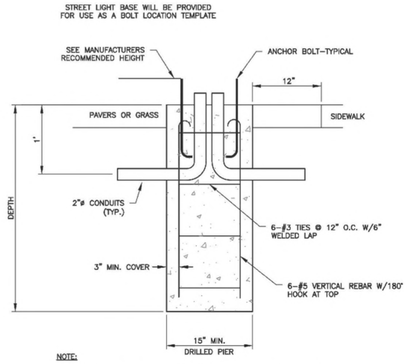


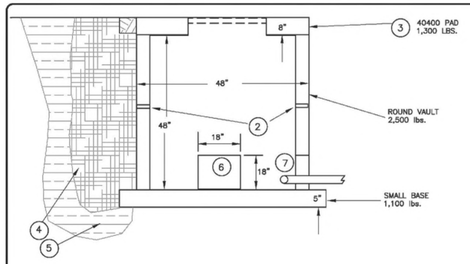
NOTE:

CONTRACTOR TO CUT EXISTING CONDUIT, INSTALL NEW CONDUIT TO AND THROUGH BASE OF LIGHT AT EACH FIXTURE USING LONG RADIUS SWEEPS AS NECESSARY. EXCAVATE FOR AND POUR FOUNDATION WITH REINFORCING AS SHOWN, AND REQUIRED ANCHOR BOLTS.

LIGHT FOUNDATION SCHEDULE		
POLE HEIGHT	10'	30'
DEPTH	3'	5'
DIAMETER	15"	24"
# OF ANCHOR BOLTS	3	4

STANDARD STREET LIGHT FOUNDATION
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Street Light Foundation Detail	Approved: XX Date: 03/28/2016 Modified: 03/28/2016 File: StreetLightFoundation.dgn	Drawing # E02
	Division: Electrical Standard Details		



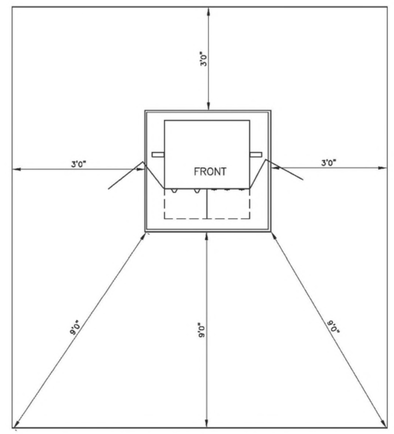
VAULT CENTERED ON BASE — PAD CENTERED ON VAULT

NOTES:

1. 28" MANHOLE
2. 3/4" HOLE (TOTAL OF FOUR)
3. GROUND LEVEL
4. BACKFILL TO BE WELL COMPACTED
5. SOIL UNDER BASE TO BE UNDISTURBED OR WELL COMPACTED
6. FOUR KNOCKOUTS (16" X 18")
7. CONDUIT(S) INSTALLED THROUGH KNOCKOUTS SHALL BE GROUTED
8. LIFTING HOLES

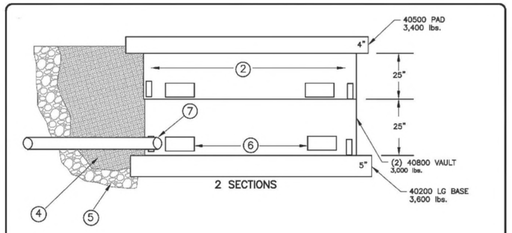
ROUND SPLICE VAULT SPECIFICATIONS
N.T.S.

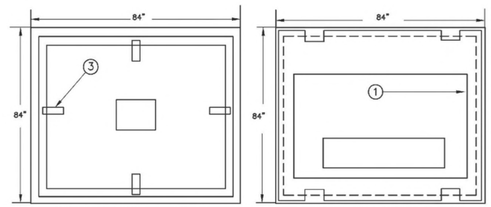
City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Round Splice Vault Detail	Approved: XX Date: 03/28/2016 Modified: 03/28/2016 File: RoundSpliceVault.dgn	Drawing # E06
	Division: Electrical Standard Details		



TRANSFORMER AND EQUIPMENT CLEARANCES
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Transformer and Equipment Clearance	Approved: XX Date: 03/28/2016 Modified: 03/28/2016 File: TransClearance.dgn	Drawing # E07
	Division: Electrical Standard Details		





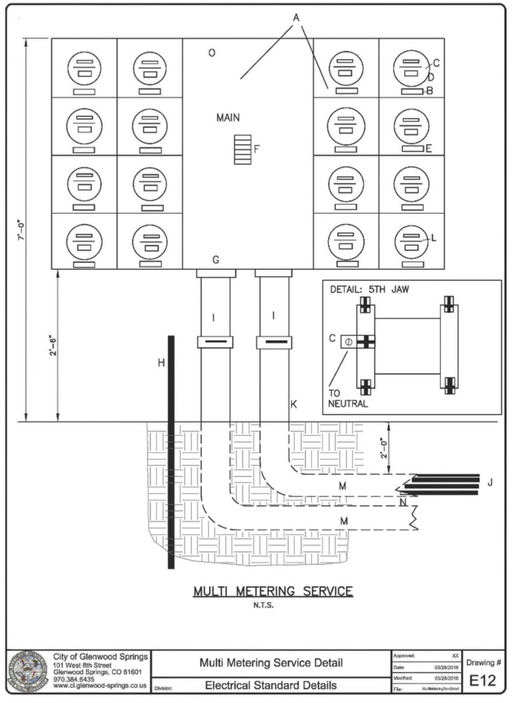
VAULT CENTERED ON BASE — PAD CENTERED ON VAULT

NOTES:

1. TYPICAL TRANSFORMER OUTLINE
2. LIFTING HANDLES (2) PER VAULT SECTION
3. LIFTING HOLES
4. BACKFILL TO BE WELL COMPACTED
5. SOIL UNDER BASE TO BE UNDISTURBED OR WELL COMPACTED
6. (8) KNOCKOUTS 8" X 12" PER VAULT SECTION
7. CONDUIT(S) INSTALLED THROUGH KNOCKOUTS SHALL BE GROUTED

3 PHASE (500 KVA or LARGER) TRANS. VAULT SPEC.
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	3 Phase Transformer Vault Detail (Large)	Approved: XX Date: 03/28/2016 Modified: 03/28/2016 File: 3PhaseTransVault.dgn	Drawing # E09
	Division: Electrical Standard Details		

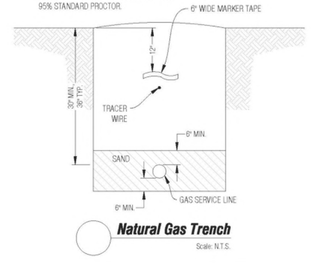


MULTI METERING SERVICE
N.T.S.

City of Glenwood Springs 101 West 8th Street Glenwood Springs, CO 81601 970.384.6435 www.ci.glenwood-springs.co.us	Multi Metering Service Detail	Approved: XX Date: 03/28/2016 Modified: 03/28/2016 File: MultiMeteringSvc-Elmt.dgn	Drawing # E12
	Division: Electrical Standard Details		

NOTES:

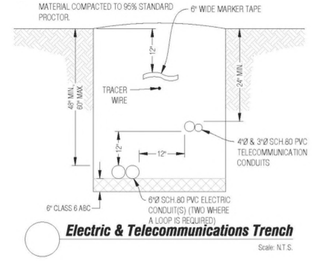
1. GAS SHALL BE INSTALLED WITH AT LEAST 4' OF SEPARATION BETWEEN OTHER UTILITIES.
2. BACKFILL THE TRENCH WITH 4" MINUS ONSITE SELECT MATERIAL COMPACTED TO 95% STANDARD PROCTOR.



Natural Gas Trench
Scale: N.T.S.

NOTES:

1. ELECTRIC & TELEPHONE SHALL BE INSTALLED WITH AT LEAST 4' OF SEPARATION BETWEEN OTHER UTILITIES.
2. BACKFILL THE TRENCH WITH CLASS 6 ABC MATERIAL COMPACTED TO 95% STANDARD PROCTOR.



Electric & Telecommunications Trench
Scale: N.T.S.

Boundaries Unlimited Inc. Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: ***2018-208.004***
Job #: ***SGM, Inc.***
Date: ***July 2020***

Engineer or Surveyor Seal

COLORADO LICENSED 37110 PROFESSIONAL ENGINEER 7/21/20

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

811 Know what's below. Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Details - Site Electric
Construction Plan Set

No.	Date	Revision	By
1.			
2.			
3.			
4.			
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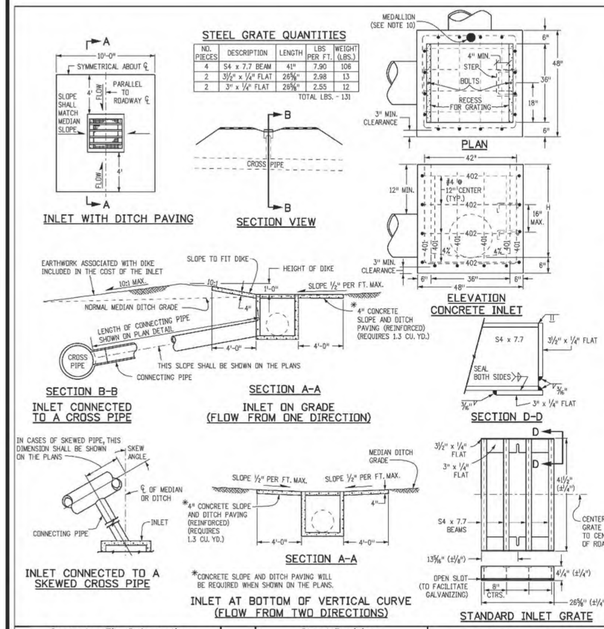
PROJECT NO.
17015.04
Designer:
DJW
Drawn:
BDI
Date:
7/21/20

Sheet
C.9

File Name: ***17015-c-storm-cdot.dwg***

IN:\PROJECTS\2017\17015 Iron Mountain PUD.dwg\Caverns Village\17015 C-Storm-CDOT.dwg 7/21/2020 10:33 AM



STEEL GRATE QUANTITIES

NO. PIECES	DESCRIPTION	LENGTH	LBS PER FT.	WEIGHT (LBS.)
4	S4 x 7.7 BEAM	41"	7.90	106
2	3½" x ¼" FLAT	25⅝"	2.98	13
2	3" x ¼" FLAT	25⅝"	2.55	12

TOTAL LBS. - 131

GENERAL NOTES

1. INLET TYPE C IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
2. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
3. REINFORCING BARS SHALL BE GRADE 60, EPOXY COATED, AND DEFORMED #4, AND SHALL HAVE A MIN. 2 INCH CLEARANCE. CUT OR BEND AROUND PIPES AS REQUIRED.
4. CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 507. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W1.4 X W1.4 OR 6 X 6 - W2.1 X W2.1.
5. STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED, AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
6. THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH INLET GRATES ARE SPECIFIED ON THE PLANS.
7. CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWALKS, CROSSWALKS OR BIKE PATHS.
8. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET - 6 INCHES AND SHALL CONFORM TO AASHTO M 199.
9. SEE STANDARD PLAN M-604-11, FOR REINFORCEMENT AROUND THE PIPE OPENING.
10. ALL INLETS SHALL HAVE A 4 INCH DIA METAL MEDALLION WITH A "NO DUMPING DRAINS TO STREAM" MESSAGE ON IT. THE MEDALLION SHALL HAVE A FISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.

QUANTITIES FOR ONE INLET

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	NO. STEPS REQD.
2'-6"	1.0	76	0
3'-0"	1.1	81	0
3'-6"	1.2	97	0
4'-0"	1.3	102	1
4'-6"	1.5	117	2
5'-0"	1.6	123	2
5'-6"	1.7	138	2
6'-0"	1.9	143	3
6'-6"	2.0	159	3
7'-0"	2.1	164	3
7'-6"	2.2	180	4
8'-0"	2.4	185	4
8'-6"	2.5	200	4
9'-0"	2.8	206	5
9'-6"	2.8	221	5
10'-0"	2.9	236	6
11'-6"	3.3	252	6

▼ PIPE INSIDE DIAMETER SHALL BE 30 IN. OR LESS. CONCRETE AND STEEL QUANTITIES ARE FOR ONE ENTIRE INLET BEFORE DEDUCTION FOR VOLUME OCCUPIED BY PIPE. WEIGHT OF STEEL INCLUDES A RING FOR THE MAXIMUM PIPE DIAMETER.

BAR LIST FOR H = 2 FT.-6 IN. AND BENDING DIAGRAM

MARK	NO. REQ'D.	HEIGHT	LENGTH
401	2	2'-2½"	8'-0"
401	6	2'-7"	8'-8"
402	4	*U*	15'-4"

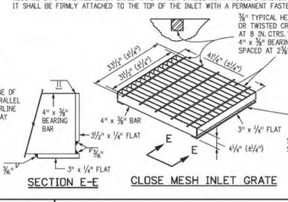
NO. 401 — 3'-0"

U INCREASE DIMENSION 6 IN. FOR EACH 6 IN. INCREASE OF "H" ABOVE 2 FT.-6 IN.

NO. 402 — 3'-7" — 8" MIN. — 12" MIN.

ADD ONE BAR FOR EACH FT. INCREASE OF "H" ABOVE 2 FT.- 6 IN.

402 BARS SHALL BE EQUALLY SPACED FROM EACH OTHER.

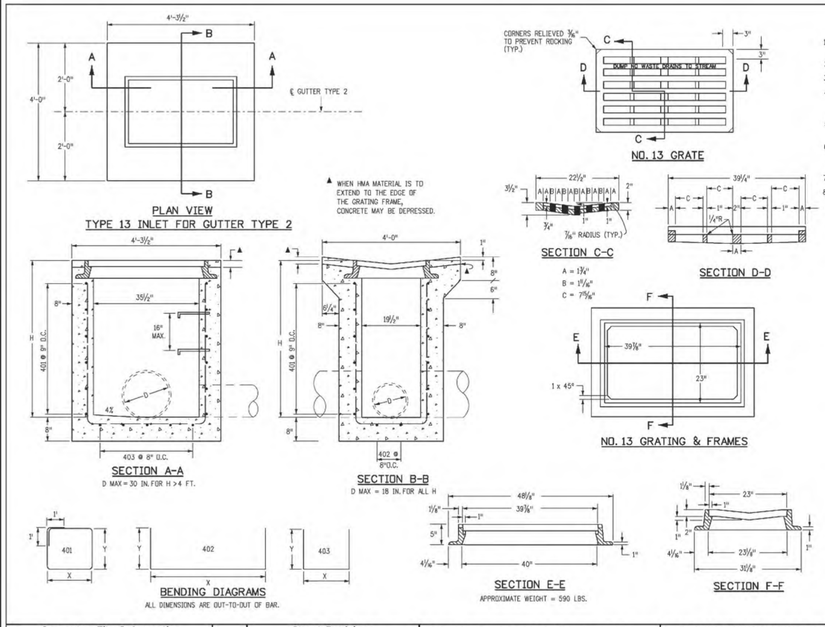


Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK			
Last Modification Date: 07/31/19			
Detailer Initials: LTA			
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

INLET, TYPE C

STANDARD PLAN NO. M-604-10
Standard Sheet No. 1 of 1
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:



GENERAL NOTES

1. CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
2. CAST-IN-PLACE CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES.
3. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED ¾ OF A INCH.
4. REINFORCING BARS SHALL BE DEFORMED #4 AND SHALL HAVE A 2 INCH MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE GRADE 60 AND EPOXY COATED.
5. STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FEET-6 INCHES AND SHALL CONFORM TO AASHTO M 199.
6. ALL GRATES AND FRAMES SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.06. GRATES AND FRAMES SHALL BE DESIGNED TO WITHSTAND HS 20 LOADING.
7. STATION POINT IS AT THE CENTER OF THE INLET.
8. GRATE SHALL HAVE "DUMP NO WASTE DRAINS TO STREAM" MESSAGE CAST ON SURFACE.

H	CONCRETE CU. YDS.	REINFORCING STEEL LB.	NO. OF 402 BARS REQD.	MAXIMUM PIPE I.D. SEC. A-A IN.	SEC. B-B IN.
3'-0"	1.3	72	4	18	18
3'-6"	1.5	76	4	24	18
4'-0"	1.6	90	5	30	18
4'-6"	1.8	104	6	30	18
5'-0"	1.9	109	6	30	18
5'-6"	2.1	122	7	30	18
6'-0"	2.2	136	8	30	18
6'-6"	2.4	141	8	30	18
7'-0"	2.5	154	9	30	18
7'-6"	2.7	168	10	30	18
8'-0"	2.8	173	10	30	18
8'-6"	3.0	187	11	30	18
9'-0"	3.1	200	12	30	18
9'-6"	3.3	205	12	30	18
10'-0"	3.4	219	13	30	18

B INCLUDES 1% FOR OVERRUN.
NOTE: CONCRETE QUANTITIES INCLUDE VOLUME OCCUPIED BY PIPE.

QUANTITIES FOR ONE INLET

MARK	NO. REQ'D.	DIMENSIONS X	Y	LENGTH
401	4	3'-4"	2'-2"	13'-4"
402	2	3'-4½"	* 2'-6½"	8'-5½"
403	5	2'-1½"	* 2'-7"	7'-2½"

* ADD 6 IN. TO THIS DIMENSION FOR EACH 3 IN. INCREASE OF "H" OVER 3 FT.-0 IN.

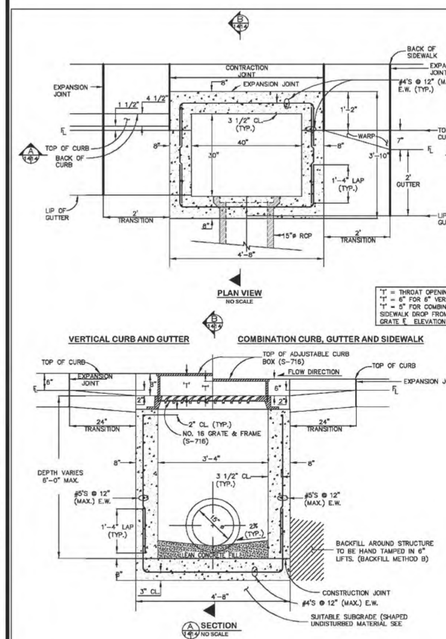
BAR LIST FOR H = 3 FT.-0 IN.

Computer File Information		Sheet Revisions	
Creation Date: 07/31/19		Date:	Comments
Designer Initials: JBK			
Last Modification Date: 07/31/19			
Detailer Initials: LTA			
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

Colorado Department of Transportation
2829 West Howard Place
CDOT HQ, 3rd Floor
Denver, CO 80204
Phone: 303-757-9021 FAX: 303-757-9868
Project Development Branch JBK

CONCRETE INLET TYPE 13

STANDARD PLAN NO. M-604-13
Standard Sheet No. 1 of 1
Issued by the Project Development Branch: July 31, 2019
Project Sheet Number:



NOTES:

1. FOR PAYMENT PURPOSES, INLET STRUCTURES SHALL ALSO INCLUDE 2'-0" CURB & GUTTER TRANSITION SECTION AT EACH END OF INLET PLUS SIDEWALK SECTIONS WHERE REQUIRED BEHIND INLET STRUCTURE AND TRANSITION SECTIONS.
2. SUB-GRADE SHALL BE A GRADATION EQUAL TO CLASS B BEDDING COMPACTED TO 95% MAXIMUM DRY DENSITY. AASHTO DESIGNATION T-180.
3. SUB-GRADE SHALL BE SHAPED UNDISTURBED MATERIAL OR OVEREXCAVATED AND BACKFILLED WITH CLASS B BEDDING MATERIAL, COMPACTED PER MMD SPECIFICATIONS.
4. FLOOR SLOPE MAY BE POURED MONOLITHIC WITH BASE.
5. Sc = SLOPE OF CONNECTOR = 2% MIN.
6. UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS OR OTHERWISE APPROVED, ALL #16 INLETS SHALL BE CONSTRUCTED WITH AN ADJUSTABLE C.I. CURB BOX (S-716).
7. DESIGN CONDITIONS FOR INLET ALLOWS DEPTHS OF 6" (MAX.), FOR INLETS MORE THAN 8 FEET IN DEPTH, SHOP DRAWINGS AND DESIGN ANALYSIS SHALL BE SUBMITTED FOR APPROVAL.

NOTES (CONT.):

8. ALL REINFORCING STEEL SHALL BE ASTM, A-615, GRADE 60 DEFORMED BARS. DIAMETER OF BEND MEASURED ON THE INSIDE OF THE BAR SHALL BE A MINIMUM OF 8 BAR DIAMETER.
9. ALL WORK SHALL CONFORM TO AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES", FIFTEENTH EDITION, 1992.
10. NO FORMWORK SHALL REMAIN INSIDE STRUCTURE WHEN COMPLETE.
11. CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI.
12. SPLICING OF REINFORCING STEEL SHALL BE PERMITTED ONLY WHERE DETAILED IN DRAWINGS.
13. INLET WALLS SHALL BE FORMED BOTH INSIDE AND OUTSIDE. CASTING OF SIDEWALLS AGAINST EARTH IS NOT PERMITTED.
14. LEAN CONCRETE FILL TO BE f'c = 2000 PSI.
15. FOR THROUGH STRUCTURES, BENCHES MUST COME TO TOP OF PIPE.
16. NO CORNER PENETRATIONS ON STRUCTURE.

CITY AND COUNTY OF DENVER
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
CAPITAL PROJECTS MANAGEMENT
201 W. COLFAX AVE., DEPT. 507
DENVER, CO 80202
TEL: (303) 446-3617 FAX: (303) 446-3647

STANDARD DETAILS
SINGLE NUMBER 16 INLET
S-616.1

DATE	BY	DESCRIPTION OF REVISIONS	NO.
####	###	###	###
####	###	###	###
####	###	###	###
####	###	###	###
####	###	###	###
####	###	###	###
####	###	###	###
####	###	###	###

14

SITE SPECIFIC DATA*			
PROJECT NUMBER	11276		
PROJECT NAME	IRON MOUNTAIN HOT SPRINGS		
PROJECT LOCATION	GLENWOOD SPRINGS, CO		
STRUCTURE ID	WQ-BMP-S		
WATER QUALITY FLOW RATE (CFS)	9.65		
PEAK FLOW RATE (CFS)	11.3		
PEAK STORM DURATION (YEARS)	100		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	5716.5	ADS	24"
OUTLET PIPE 1	5716.5	ADS	24"
RIM ELEVATION	5721.5		
SUMP ELEVATION	5705.50		
SURFACE LOADING REQUIREMENT			HS-20
FRAME AND COVER			3 EA. ø30"
PRECAST CONCRETE SKIMMER WALL HEIGHT			56"
KNOWN GROUNDWATER ELEVATION			
NOTES:			
*PER ENGINEER OF RECORD			

PERFORMANCE DATA	
TREATMENT FLOW RATE (CFS)	9.65
TSS REMOVAL EFFICIENCY	80%

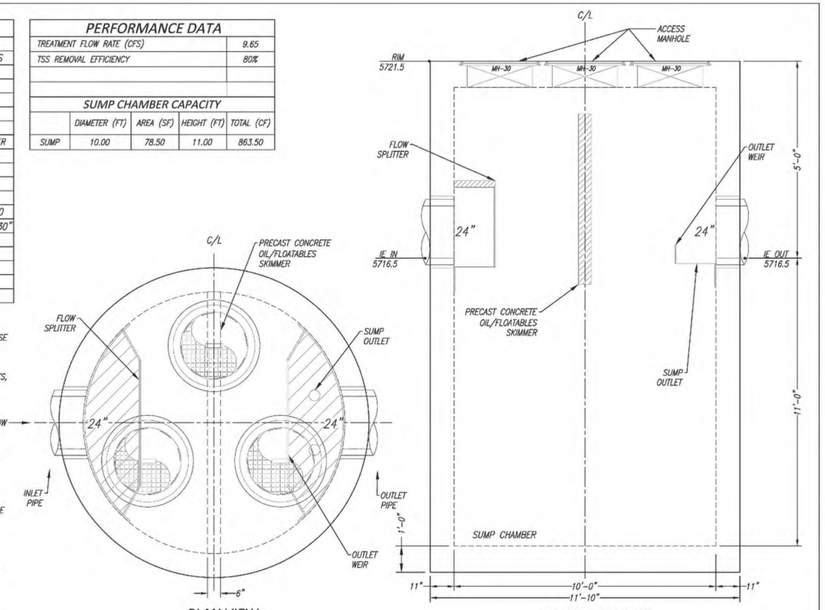
SUMP CHAMBER CAPACITY	DIAMETER (FT)	AREA (SF)	HEIGHT (FT)	TOTAL (CF)
SUMP	10.00	78.50	11.00	863.50

GENERAL NOTES

1. BIO CLEAN TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS, AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS, AND ACCESSORIES PLEASE CONTACT BIO CLEAN.
3. ALTERNATIVE HATCHES OR MANHOLES AVAILABLE UPON REQUEST.

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE UNIT AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. MANUFACTURER RECOMMENDS A 6"-12" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH).
4. ALL GAPS AROUND PIPES SHALL BE SEALED WATERTIGHT WITH A NON-SHRINK GROUT PER MANUFACTURER'S STANDARD CONNECTION DETAIL AND SHALL MEET OR EXCEED REGIONAL PIPE CONNECTION STANDARDS.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. ALL COVERS SHALL BE SHIPPED LOOSE. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.



THE PRODUCT DESCRIBED MAY BE PROTECTED BY ONE OR MORE US PATENTS, RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING

PROPRIETARY AND CONFIDENTIAL: THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BIO CLEAN ENVIRONMENTAL SERVICES, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BIO CLEAN ENVIRONMENTAL SERVICES, INC. IS PROHIBITED.

Bio Clean
A Forterra Company

SC-10-V
HYDRODYNAMIC SEPARATOR
STANDARD DETAIL

Stormwater BMP: WQ-BMP-S
Scale: N.T.S.

Civil Engineering Surveying & Beyond
Boundaries Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER
JOHN WILLIAM BOYD
37110
7/21/20

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

811 Know what's below. Call before you dig.

Caverns Village
Details - Storm Sewer #1
Construction Plan Set
LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

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

PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BDI**
Date: **7/21/20**
Sheet **C.10**
File Name: **17015-c-storm-cdot.dwg**

N:\PROJECTS\2017\17015-Iron Mountain PUD\dwg\Caverns Village\17015-C-Storm-CDOT.dwg 7/21/2020 10:33 AM

THIS SHEET HAS BEEN ROTATED

Caverns Village Access Drive

Future IMHS Parking

SEE POINT TABLE SHEET

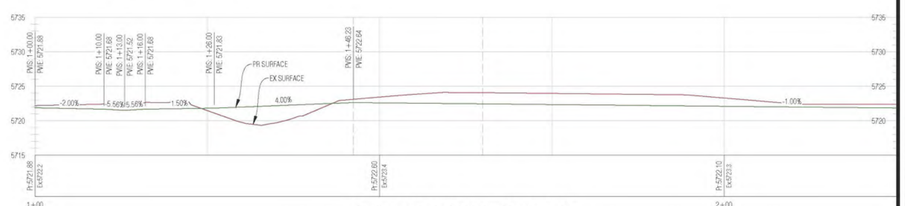
IMHS Access Drive

Centennial Street

Parking-A-CV (To Future Hotel)

Profile: Centennial St & Caverns Village Driveway, Sta:1+00 to Sta:3+00
Scale: Vert.=5', Horiz.=5'

Profile: IMHS Access Drive, Sta:1+00 to Sta:2+62
Scale: Vert.=5', Horiz.=5'



Profile: Parking-A-CV, Sta:1+00 to Sta:2+25
Scale: Vert.=5', Horiz.=5'

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED
JUSTIN W. BUI
7/21/20
37110
PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 10' 20'
Scale: 1" = 10'

811 Know what's **below.** **Call** before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Grading - Centennial Street Construction Plan Set

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

PROJECT NO.
17015.04
Designer:
DJW
Drafter:
BUI
Date:
7/21/20

Sheet
C.11

File Name: **17015-c-civil03-cdot.dwg**

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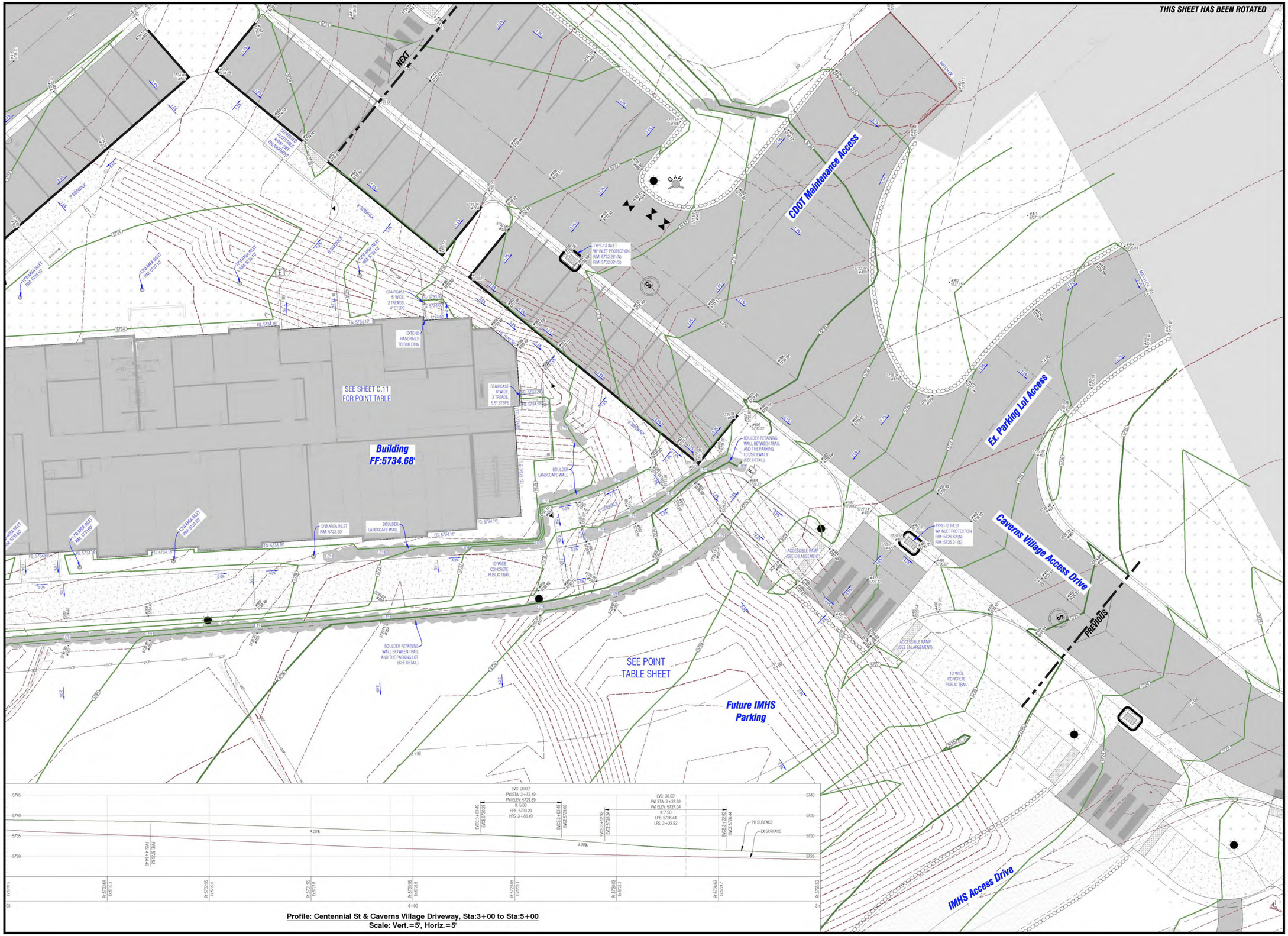

Profile: Centennial St & Caverns Village Driveway, Sta:3+00 to Sta:5+00
Scale: Vert.=5', Horiz.=5'

Civil Engineering Surveying & Beyond
Boundaries Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal
COLORADO LICENSED PROFESSIONAL ENGINEER
DENIS JON WALTERS
7/21/20
37110

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 10' 20'
Scale: 1" = 10'

811
Know what's **below.**
Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village
Grading - Access Drive & Site Construction Plan Set

No.	Date	Revision	By
1.			
2.			
3.			
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9.			

PROJECT NO. **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet **C.12**

File Name: **17015-c-civil3d-cdot.dwg**

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THIS SHEET HAS BEEN ROTATED

Profile: Centennial St & Caverns Village Driveway, Sta:5+00 to Sta:7+77
Scale: Vert.=5', Horiz.=5'

Civil Engineering Surveying & Beyond
Boundaries Unlimited Inc.
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
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Subsurface Utility Engineering (SUE) Required Project: Yes

If "Yes", SUE Certification by:
Firm: 2018-208.004
Job #: SGM, Inc.
Date: July 2020

Engineer or Surveyor Seal

COLORADO LICENSED PROFESSIONAL ENGINEER
DENIS JON WALTERS
7/21/20
37110

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 10' 20'
Scale: 1" = 10'

811 Know what's below. Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Grading-Access Drive & Site Construction Plan Set

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

PROJECT NO. 17015.04
Designer: DJW
Drafter: BUI
Date: 7/21/20

Sheet C.13

File Name: 17015-c-civil3d-cdot.dwg

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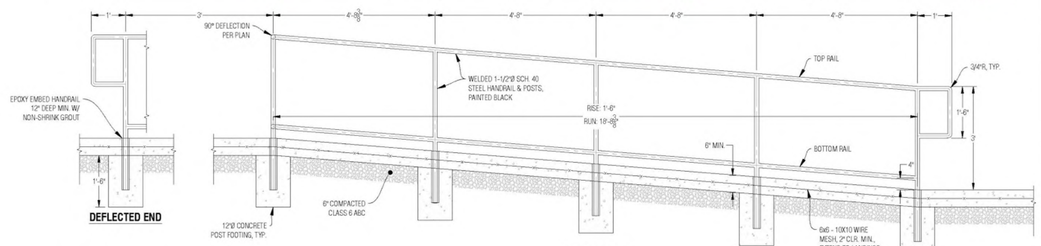
@ North Accessible Parking
Scale: 1"=5'

ACCESSIBLE RAMP NOTES:

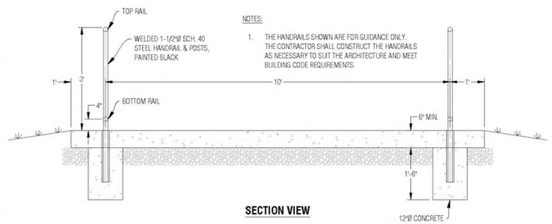
1. ALL ACCESSIBLE CURB RAMPS SHALL CONFORM TO COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) M-STANDARD M-608-1 "CURB RAMPS". THIS PLAN PROVIDES DETAILED SPOT ELEVATIONS AND ACCOMPANYING SLOPES TO INDICATE THAT MAXIMUM ALLOWABLE SLOPES HAVE NOT BEEN EXCEEDED. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL OTHER CONSTRUCTION REQUIREMENTS OF M-STANDARD M-608-1 (LATEST EDITION) ARE ADHERED TO UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY ENGINEER.
2. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
3. CONCRETE RAMP AND LANDING SURFACES SHALL BE TEXTURED WITH A NON-SLIP COARSE HORIZONTAL BROOMED SURFACE AND SHALL HAVE 3/8" TROWELED SCORE LINES (AKA GROOVES) TOOLED PERPENDICULAR TO THE RAMP AT 6" O.C.

@ East Accessible Parking
Scale: 1"=5'

@ IMHS Future Parking/ Caverns Village Access Drive
Scale: 1"=5'



PROFILE VIEW



NOTES:
1. THE HANDRAILS SHOWN ARE FOR GUIDANCE ONLY. THE CONTRACTOR SHALL CONSTRUCT THE HANDRAILS AS NECESSARY TO SUIT THE ARCHITECTURE AND MEET BUILDING CODE REQUIREMENTS.

SECTION VIEW

ADA Accessible Ramp with Handrail
Scale: N.T.S.

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED — 7/21/20 — 37110 — PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 5' 10'
Scale: 1" = 5'

811 Know what's **below.** **Call** before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village
Enlarged Grading-ADA Ramps
Construction Plan Set

No.	Date	Revision	By
1.			
2.			
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PROJECT NO.: **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

Sheet: **C.14**

File Name: **17015-c-chrl3d-cdot.dwg**

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@ IMHS Access/Centennial Street
Scale: 1"=5'

@ Future Hotel Access/Centennial Street
Scale: 1"=5'

Boundaries Unlimited Inc.
Civil Engineering
Surveying
& Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED
JUSTIN WAYNE
7/21/20
37110
PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 5' 10'
Scale: 1" = 5'

811
Know what's **below.**
Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Enlarged Grading-ADA Ramps (Cont')

Construction Plan Set

No.	Date	Revision	By
1.			
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6.			
7.			
8.			
9.			

PROJECT NO.
17015.04
Designed:
DJW
Drawn:
BUI
Date:
7/21/20

Sheet
C.15

File Name: **17015-c-civil3d-cdot.dwg**

I:_PROJECTS\2017\1\17015 Iron Mountain PUD\dwg\Caverns Village\17015-C-Civil3d_CDOT.dwg 7/21/2020 10:34 AM

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
200	CL-FG-Match	5722.30'	42391.25'	15792.27'
201	CL-FG	5722.18'	42414.05'	15782.01'
202	CL-FG	5722.07'	42433.78'	15773.13'
203	CL-FG	5721.92'	42461.38'	15760.72'
204	CL-FG	5721.88'	42472.15'	15756.99'
205	CL-FG	5721.94'	42481.06'	15755.42'
206	CL-FG	5722.55'	42508.30'	15758.51'
207	CL-FG	5723.43'	42528.00'	15769.42'
208	CL-FG	5723.65'	42532.17'	15772.80'
209	CL-FG	5724.73'	42553.12'	15789.83'
210	CL-FG	5721.68'	42469.73'	15747.28'
211	CL-FG	5721.68'	42468.28'	15741.46'
212	CL-FG	5721.95'	42465.15'	15726.94'
220	Curb-FL-Match	5721.70'	42428.85'	15762.19'
221	Curb-FL	5721.62'	42442.58'	15756.02'
222	Curb-FL	5721.60'	42452.47'	15746.29'
223	Curb-FL	5721.69'	42454.36'	15738.51'
224	Curb-FL	5721.78'	42453.51'	15731.85'
225	Curb-FL	5722.23'	42476.80'	15726.04'
226	Curb-FL	5722.07'	42478.25'	15731.86'
227	Curb-FL	5721.69'	42483.24'	15739.78'
228	Curb-FL	5721.71'	42491.95'	15743.20'
230	Curb-FL	5721.91'	42502.71'	15744.59'
231	Inlet-X Pan-FL	5721.53'	42459.46'	15747.42'
232	X Pan-FL	5721.52'	42469.00'	15744.37'
233	X Pan-FL	5721.57'	42478.85'	15742.58'
234	Inlet-Curb-FL	5722.18'	42512.36'	15747.22'
235	Inlet-Curb-FL	5722.84'	42529.60'	15747.90'
236	Curb-FL	5723.24'	42539.19'	15743.52'
237	Curb-FL	5723.34'	42546.57'	15736.63'
238	Curb-FL	5723.38'	42547.97'	15735.21'
239	CL-FG	5723.45'	42538.48'	15765.04'
240	CL-FG	5723.45'	42542.26'	15760.39'
241	CL-FG	5723.78'	42549.20'	15751.85'
242	CL-FG	5723.88'	42557.39'	15742.81'
243	Curb-FL	5724.36'	42565.29'	15751.85'
244	Curb-FL	5724.24'	42558.61'	15759.30'
245	Curb-FL	5724.01'	42555.23'	15770.42'
246	Curb-FL	5724.36'	42560.69'	15780.52'
247	Inlet-X Pan-FL	5723.68'	42548.13'	15769.02'
248	Inlet-X Pan-FL	5723.56'	42545.80'	15767.13'
249	X Pan-FL	5723.28'	42540.37'	15762.71'
250	X Pan-FL	5722.91'	42532.52'	15756.52'
251	FG-Millings	5724.21'	42576.93'	15742.80'
252	FG-Millings	5724.31'	42593.96'	15732.31'
253	FG-Millings	5724.43'	42614.60'	15714.97'
254	FG-Millings	5724.63'	42641.45'	15684.66'
255	FG-Millings	5724.74'	42655.40'	15671.30'
256	FG-Millings	5724.29'	42641.26'	15651.90'
257	FG-Millings	5724.15'	42623.48'	15668.74'
258	FG-Millings	5723.95'	42596.63'	15699.06'
259	FG-Millings	5723.63'	42581.38'	15711.88'
260	FG-Millings	5723.73'	42564.35'	15722.36'
270	Curb-FL-Match	5722.39'	42397.01'	15805.07'
271	Curb-FL	5721.77'	42419.79'	15794.78'
272	Curb-FL	5721.66'	42439.53'	15785.90'
273	Curb-FL	5721.51'	42467.12'	15773.48'
275	Inlet-Curb-FL	5721.48'	42474.73'	15770.78'
276	Curb-FL	5721.60'	42486.98'	15769.09'
277	Curb-FL	5721.82'	42495.81'	15769.75'

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
278	Curb-FL	5722.23'	42505.57'	15772.41'
279	Curb-FL	5723.03'	42519.17'	15780.26'
280	Curb-FL	5723.64'	42531.10'	15789.97'
281	Curb-FL	5724.32'	42544.29'	15800.69'
290	BOW	5722.54'	42401.30'	15814.61'
291	BOW	5722.42'	42424.10'	15804.35'
292	BOW	5722.31'	42443.83'	15795.48'
293	BOW	5722.16'	42471.43'	15783.06'
294	BOW-Ramp	5722.25'	42487.12'	15779.59'
300	Curb-FL	5726.73'	42616.21'	15780.33'
301	FG	5726.81'	42618.33'	15777.26'
302	FG	5727.11'	42619.66'	15764.97'
303	FG	5727.34'	42642.58'	15751.93'
304	FG	5727.59'	42667.61'	15743.64'
305	FG	5727.90'	42678.25'	15750.32'
306	Swale-FL	5727.00'	42682.92'	15726.48'
307	Swale-FL	5726.88'	42664.28'	15734.99'
308	Swale-FL	5726.49'	42639.54'	15743.63'
309	Swale-FL	5725.67'	42612.65'	15753.02'
310	Swale-FL	5725.21'	42597.75'	15758.22'
311	Inlet-Rim	5724.76'	42588.16'	15762.91'
400	CL-FG	5725.21'	42562.37'	15797.35'
401	CL-FG	5725.53'	42568.64'	15802.44'
402	CL-FG	5726.42'	42586.00'	15816.54'
403	CL-FG	5726.92'	42594.25'	15823.26'
404	CL-FG	5728.81'	42615.22'	15840.30'
405	CL-FG	5730.29'	42633.43'	15855.11'
406	CL-FG	5731.17'	42650.52'	15869.00'
407	CL-FG	5732.53'	42676.89'	15890.43'
408	CL-FG	5733.17'	42689.30'	15900.52'
410	CL-FG	5733.82'	42716.79'	15924.49'
411	CL-FG	5734.06'	42737.74'	15939.89'
412	CL-FG	5734.27'	42753.71'	15952.87'
413	CL-FG	5734.49'	42774.48'	15960.03'
414	CL-FG	5734.38'	42794.98'	15952.11'
415	CL-FG	5734.21'	42820.98'	15929.34'
416	CL-FG	5734.08'	42839.79'	15912.87'
417	CL-FG	5733.94'	42861.93'	15893.46'
418	CL-FG	5733.76'	42888.98'	15869.80'
419	CL-FG	5733.57'	42916.53'	15845.67'
420	CL-FG	5734.81'	42939.70'	15825.38'
421	CL-FG	5726.71'	42600.87'	15815.11'
422	CL-FG	5726.71'	42604.66'	15810.46'
423	CL-FG	5727.13'	42611.39'	15802.20'
424	CL-FG	5727.16'	42619.77'	15793.29'
460	Curb-FL	5724.80'	42553.54'	15808.22'
461	Curb-FL	5725.18'	42561.09'	15814.37'
462	Curb-FL	5725.48'	42565.79'	15820.45'
463	Curb-FL	5725.81'	42567.55'	15833.21'
464	Curb-FL	5725.98'	42562.80'	15842.76'
465	EOA	5725.78'	42556.37'	15849.23'
466	EOA	5725.41'	42542.82'	15859.32'
467	EOA-Match	5725.43'	42537.52'	15862.52'
471	EOA	5727.15'	42572.13'	15891.53'
472	EOA	5727.15'	42591.35'	15875.19'
474	EOA-Match	5725.93'	42548.36'	15884.02'
475	EOA	5725.89'	42555.24'	15879.86'
476	EOA	5726.22'	42570.80'	15868.51'
477	EOA	5727.15'	42587.16'	15851.00'

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
478	EOA	5727.75'	42595.48'	15847.33'
479	EOA	5728.34'	42603.34'	15851.91'
480	EOA	5730.28'	42611.26'	15878.11'
481	EOA	5728.88'	42600.07'	15910.47'
482	EOA-Match	5728.12'	42588.36'	15922.05'
483	EOA-Match	5728.57'	42605.78'	15941.41'
490	Pan-FL	5727.14'	42610.52'	15819.09'
491	Inlet-Rim	5726.52'	42602.44'	15812.52'
492	Inlet-Rim	5726.31'	42599.15'	15809.85'
493	Pan-FL	5726.07'	42595.00'	15806.48'
494	Curb-FL	5724.84'	42569.94'	15788.04'
495	Curb-FL	5725.55'	42581.65'	15793.88'
496	Curb-FL	5726.23'	42594.15'	15794.29'
497	Curb-FL	5726.54'	42599.73'	15792.72'
498	Curb-FL	5726.62'	42608.78'	15787.19'
499	Curb-FL	5726.75'	42610.45'	15785.59'
500	EOA	5729.00'	42619.91'	15927.26'
501	EOA	5730.12'	42631.75'	15912.71'
502	EOA	5731.24'	42643.58'	15898.15'
503	EOA	5731.94'	42653.68'	15892.69'
504	EOA	5732.61'	42666.21'	15897.22'
505	EOA	5732.85'	42666.79'	15902.84'
506	EOA	5733.15'	42657.33'	15914.48'
507	EOA	5734.17'	42678.29'	15931.51'
508	Curb-FL	5734.56'	42706.22'	15954.22'
509	Curb-FL	5734.17'	42717.58'	15940.25'
510	Curb-FL	5734.21'	42722.86'	15943.26'
511	Curb-FL	5734.23'	42723.30'	15947.48'
512	Curb-FL	5734.55'	42713.21'	15959.90'
513	EOA	5734.89'	42734.16'	15976.93'
514	EOA	5735.25'	42762.09'	15999.63'
515	EOA	5735.04'	42771.21'	15988.42'
516	EOA	5735.09'	42777.32'	15988.31'
517	EOA	5735.10'	42779.12'	15990.36'
518	FG	5734.84'	42798.66'	15973.25'
519	EOA	5735.29'	42787.47'	15999.89'
520	EOA	5735.13'	42807.00'	15982.78'
521	EOA	5734.83'	42841.64'	15952.46'
522	EOA	5734.53'	42831.75'	15941.17'
523	EOA	5734.43'	42832.50'	15935.20'
524	EOA	5734.47'	42838.21'	15934.92'
525	EOA	5734.78'	42848.41'	15946.53'
526	EOA	5734.60'	42875.49'	15922.81'
527	EOA	5734.42'	42902.57'	15899.10'
528	EOA	5734.12'	42892.69'	15887.81'
529	EOA	5734.02'	42893.44'	15881.84'
530	EOA	5734.07'	42899.16'	15881.48'
531	EOA	5734.38'	42909.35'	15893.17'
532	EOA	5734.81'	42933.04'	15872.42'
533	EOA	5735.25'	42956.74'	15851.66'
534	EOA	5734.95'	42946.86'	15840.38'
535	EOA	5735.03'	42947.23'	15834.74'
536	Curb-FL	5735.11'	42948.74'	15833.42'
537	Curb-FL	5734.49'	42932.93'	15815.36'
538	Curb-FL	5734.41'	42931.42'	15816.68'
539	Curb-EOA	5734.49'	42925.78'	15816.31'
540	Curb-EOA	5734.70'	42915.90'	15805.02'
541	Curb-EOA	5733.62'	42895.58'	15822.81'
542	Curb-EOA	5733.41'	42905.47'	15834.09'
543	Curb-FL	5733.23'	42905.09'	15839.74'

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
544	Curb-FL	5733.38'	42881.07'	15860.77'
545	Curb-FL	5733.56'	42854.03'	15884.45'
546	Curb-EOA	5733.77'	42848.38'	15884.08'
547	Curb-EOA	5734.00'	42838.50'	15872.79'
548	Curb-EOA	5734.04'	42831.73'	15878.72'
549	Curb-EOA	5734.08'	42825.71'	15883.99'
550	Curb-EOA	5734.62'	42820.11'	15888.22'
551	Curb-EOA	5734.26'	42798.63'	15907.71'
552	Curb-EOA	5734.40'	42778.31'	15925.50'
553	Curb-EOA	5734.17'	42788.20'	15936.78'
554	Curb-FL	5734.00'	42787.82'	15942.43'
555	Curb-FL	5734.12'	42774.26'	15948.03'
556	Curb-FL	5734.04'	42761.99'	15944.11'
557	Curb-EOA	5734.05'	42761.49'	15938.54'
558	Curb-EOA	5734.28'	42770.94'	15926.92'
559	Curb-EOA	5734.10'	42756.97'	15915.57'
560	Curb-EOA	5734.01'	42749.98'	15909.89'
561	Curb-EOA	5733.93'	42743.78'	15904.85'
562	Curb-EOA	5733.86'	42738.34'	15900.43'
563	Curb-EOA	5733.57'	42715.84'	15882.14'
564	Curb-EOA	5733.34'	42706.36'	15893.78'
565	Curb-FL	5733.02'	42700.36'	15894.05'
566	FG	5732.98'	42699.39'	15888.10'
567	FG	5733.21'	42708.85'	15876.46'
568	Curb-EOA	5732.85'	42699.72'	15869.04'
569	Curb-EOA	5732.85'	42693.49'	15863.98'
570	Curb-EOA	5732.73'	42687.16'	15858.84'
571	Curb-EOA	5731.39'	42658.20'	15835.29'
579	Curb-EOA	5731.28'	42652.96'	15831.05'
580	Curb-EOA	5730.33'	42643.52'	15842.69'
581	Curb-FL	5729.74'	42637.89'	15843.27'
582	Curb-FL	5728.44'	42622.79'	15830.99'
583	Curb-FL	5728.02'	42617.31'	15820.73'
584	Curb-FL	5727.62'	42620.70'	15809.77'
585	Curb-FL	5727.64'	42627.55'	15802.45'
586	Curb-FL	5727.67'	42629.02'	15801.07'
587	FG	5733.86'	42715.84'	15784.58'
588	FG	5733.45'	42703.82'	15863.99'
589	FG	5733.46'	42697.59'	15858.93'
590	FG	5733.32'	42691.28'	15853.80'
591	FG	5732.02'	42664.71'	15632.20'
592	FG	5732.03'	42664.74'	15829.77'
593	FG	5731.11'	42683.00'	15821.19'
594	FG	5731.11'	42688.87'	15819.97'
595	TOW/FG	5731.02'	42681.47'	15815.39'
596	FG	5730.81'	42680.45'	15811.52'
597	FG	5730.21'	42668.40'	15816.01'
598	TOW/FG	5731.52'	42670.16'	15819.61'
599	TOW/FG	5731.94'	42661.45'	15824.75'
600	FG	5729.64'	42658.03'	15822.37'
601	Pan-FL	5733.20'	42908.10'	15837.10'
602	TOW/FG	5731.78'	42652.91'	15830.35'
603	FG	5729.38'	42653.79'	15825.84'
604	FG	5729.23'	42640.83'	15826.13'
605	TOW/FG	5731.36'	42647.37'	15833.71'
606	FG	5730.33'	42640.17'	15839.79'
607	TOW/FG	5730.83'	42640.89'	15840.48'
620	Pan-FL	5734.29'	42928.41'	15819.31'
622	Pan-FL	5733.62'	42851.02'	15887.09'
623	Pan-FL	5733.75'	42831.46'	15904.22'

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
624	Pan-FL	5733.89'	42811.14'	15922.00'
625	Pan-FL	5734.02'	42790.83'	15939.79'
626	Pan-FL	5733.91'	42758.95'	15941.67'
627	Pan-FL	5733.56'	42731.79'	15919.59'
628	Pan-FL	5733.20'	42703.86'	15896.89'
629	Pan-FL	5732.84'	42696.87'	15891.21'
630	Pan-FL	5732.29'	42685.68'	15882.12'
631	Pan-FL	5732.09'	42682.35'	15879.42'
632	Pan-FL	5731.40'	42668.93'	15868.50'
633	Pan-FL	5729.96'	42641.00'	15845.79'
900	Trail-FG	5727.74'	42632.60'	15806.56'
901	Trail-FG	5729.23'	42647.14'	15818.37'
902	Trail-FG	5730.09'	42664.00'	15807.04'
903	Trail-FG	5730.69'	42677.89'	15801.85'
904	Trail-FG	5730.71'	42685.90'	15800.20'
905	Trail-FG	5730.98'	42692.20'	15799.52'
906	Trail-FG	5732.82'	42729.61'	15797.10'
907	Trail-FG	5734.40'	42761.69'	15795.03'
908	Trail-FG	5734.40'	42787.93'	15793.33'
909	Trail-FG	5734.40'	42808.13'	15792.02'
910	Trail-FG	5734.40'	42830.92'	15790.55'
911	Trail-FG	5734.40'	42853.70'	15789.07'
912	Trail-FG	5734.40'	42871.63'	15788.45'
913	Trail-FG	5734.40'	42889.92'	15788.94'
914	Trail-FG	5735.15'	42912.66'	15791.13'
915	Trail-FG	5735.98'	42935.92'	15795.22'
916	Trail-FG	5736.79'	42959.16'	15801.26'
917	Trail-FG	5737.43'	42985.25'	15810.94'
918	Trail-FG	5737.74'	42999.07'	15816.59'
921	FG	5728.14'	42648.02'	15809.86'
922	FG	5728.60'	42673.20'	15796.95'
923	FG	5729.01'	42691.81'	15793.53'
924	FG	5729.71'	42729.33'	15791.11'
925	FG	5730.32'	42761.26'	15789.04'
926	FG	5730.92'	42787.54'	15787.34'
927	FG	5731.39'	42807.54'	15786.05'
928	FG	5731.99'	42829.84'	15784.58'
929	FG	5732.63'	42852.90'	15783.11'
930	FG	5733.58'	42871.53'	15782.45'
1000	FG	5734.60'	42632.71'	15869.21'
1001	FG	5734.13'	42627.45'	15873.83'
1002	FG	5734.17'	42621.43'	15879.10'
1003	FG	5734.71'	42616.16'	15883.71'
1004	FG	5734.51'	42636.66'	15873.73'
1005	FG	5734.04'	42831.40'	15878.35'
1006	FG	5734.08'	42625.38'	15883.62'
1007	FG	5734.62'	42620.11'	15888.22'
1008	FG	5734.67'	42759.52'	15909.26'
1009	FG	5734.10'	42754.08'	15904.85'
1010	FG	5734.02'	42747.87'	15899.80'
1011	FG	5734.45'	42742.44'	15895.39'
1012	FG	5734.50'	42755.74'	15913.91'
1013	FG	5734.01'	42750.30'	15909.50'
1014	FG	5733.93'	42744.09'	15904.46'
1015	FG	5734.38'	42738.66'	15900.04'
1016	FG	5734.16'	42718.51'	15939.89'
1017	FG	5734.21'	42722.47'	15942.94'
1018	FG	5734.59'	42710.49'	15957.69'
1019	FG	5734.54'	42706.61'	15954.54'
1020	FG	5734.56'	42706.22'	15954.22'

Point Table				
Point #	Raw Description	Elevation	Northing	Easting
1021	FG	5734.21'	42716.61'	15941.44'
1022	FG	5734.17'	42717.58'	15940.25'
1023	FG	5734.23'	42723.30'	15947.48'
1024	FG	5734.55'	42713.21'	15959.90'
1030	FG	5727.74'	42632.60'	15806.56'
1031	FG	5727.64'	42627.55'	15802.45'
1032	FG	5727.62'	42620.70'	15809.77'
1033	FG	5727.73'	42626.29'	15814.32'
1034	FG	5729.23'	42641.66'	15825.29'
1035	FG	5729.23'	42647.14'	15818.37'
1036	FG	5726.64'	42608.74'	15787.17'
1037	FG	5726.54'	42599.73'	15792.72'
1038	FG	5726.84'	42595.79'	15789.52'
1039	FG	5726.76'	42591.91'	15786.37'
1040	FG	5726.91'	42598.21'	15778.61'
1041	FG	5726.99'	42602.09'	15781.76'
1044	FG	5721.78'	42453.51'	15731.85'
1045	FG	5721.88'	42447.20'	15733.42'
1046	FG	5721.81'	42447.87'	15738.27'
1047	FG	5722.21'	42446.59'	15743.52'
1048	FG	5721.68'	42452.47'	15746.29'
1049	FG	5721.71'	42454.36'	15738.51'
1054	FG	5722.23'	42505.57'	15772.41'
1055	FG	5721.82'	42495.81'	15769.75'
1056	FG	5722.18'	42490.81'	15769.68'
1059	FG	5722.33'	42490.17'	15779.66'
1060	FG	5722.25'	42494.10'	15780.11'
1061	FG	5722.37'	42501.81'	15782.21'
1062	FG	5722.29'	42503.96'	15776.61'
1063	FG	5722.10'	42495.08'	15774.19'
1064	FG	5724.74'	42569.94'	15755.63'
1065	FG	5724.82'	42573.82'	15758.78'
1066	FG	5724.67'	42567.52'	15766.54'
1067	FG	5724.59'	42563.64'	15763.39'
1068	FG	5724.24'	42558.61'	15759.30'
1069	FG	5724.36'	42565.20'	15751.93'
1070	FG	5723.34'	42546.57'	15736.63'
1071	FG	5723.24'	42539.19'	15743.52'
1072	FG	5723.55'	42535.29'	15740.35'
1073	FG	5723.47'	42531.41'	15737.20'
1074	FG	5723.57'	42537.72'	15729.44'
1075	FG	5723.65'	42541.60'	15732.59'
1076	FG	5722.18'	42512.36'	15747.22'
1077	FG	5721.91'	42502.71'	15744.59'
1078	FG	5722.32'	42504.36'	15738.54'
1079	FG	5722.39'	42505.14'	15734.14'
1080	FG	5722.55'	42513.53'	15726.54'
1081	FG	5722.45'	42518.60'	15735.16'
1082	FG	5722.42'	42514.01'	15741.16'
1083	FG	5722.07'	42478.25'	15731.86'
1084	FG	5722.23'	42476.80'	15726.04'
1085	FG	5722.48'	42481.65'	15724.83'
1086	FG	5722.58'	42486.50'	15723.62'
1087	FG	5722.50'	42487.95'	15729.44'
1088	FG	5722.42'	42483.10'	15730.65'

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED 37110 PROFESSIONAL ENGINEER 7/21/20

Client Information:
IRON MOUNTAIN HOT SPRINGS
281 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

811 Know what's below. Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Grading Point Table
Construction Plan Set

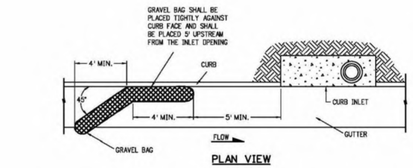
No.	Date	Revision	By
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

PROJECT NO. **17015.04**
Designer: **DJW**
Drawn: **BUI**
Date: **7/21/20**

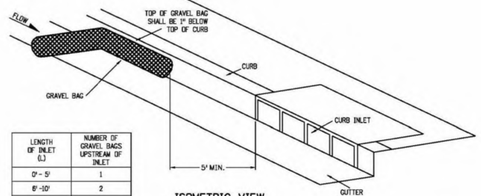
Sheet **C.16**

File Name: **17015-c-chrt36-cdot.dwg**

IN:\PROJECTS\2017\17015 Iron Mountain PUD\dwg\Caverns Village\17015-C-Civil36-CDOT.dwg 7/21/2020 10:34 AM

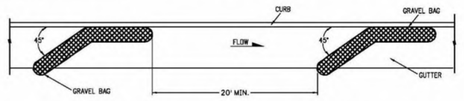


PLAN VIEW



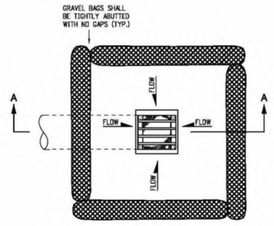
LENGTH OF INLET (L)	NUMBER OF GRAVEL BAGS UPSTREAM OF INLET
0' - 5'	1
6' -10'	2
L > 10'	3

ISOMETRIC VIEW

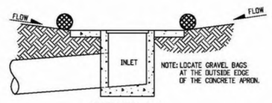


PLAN VIEW FOR MULTIPLE GRAVEL BAGS

GRAVEL BAG CURB CHECK



PLAN VIEW



SECTION A-A

GRAVEL BAG FILTER AT DROP INLET

GRAVEL BAG APPLICATIONS

Computer File Information	
Creation Date: 07/04/12	Initials: DD
Last Modification Date: 07/04/12	Initials: LTA
Full Path: www.coloradodot.info/business/designsupport	
Drawing File Name: 2080105012.dgn	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

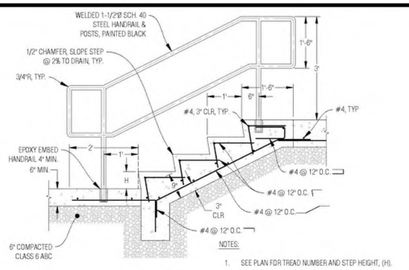
Sheet Revisions	
Date	Comments

Colorado Department of Transportation
4201 East Arkansas Avenue
Denver, Colorado 80222
Phone: (303) 757-9083
Fax: (303) 757-9820
Project Development Branch DD/LTA

TEMPORARY EROSION CONTROL

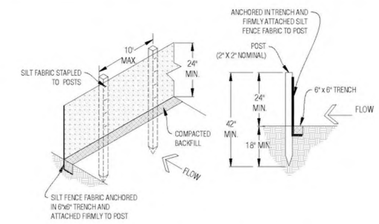
Issued By: Project Development Branch on July 4, 2012

STANDARD PLAN NO.
M-208-1
Sheet No. 6 of 12

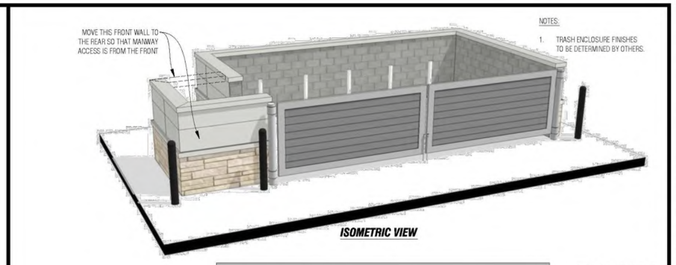


NOTES:
1. SEE PLAN FOR TREAD NUMBER AND STEP HEIGHT, (H).
2. THE HANDRAILS SHOWN ARE FOR GUIDANCE ONLY. THE CONTRACTOR SHALL CONSTRUCT THE HANDRAILS AS NECESSARY TO SUIT THE ARCHITECTURE AND MEET BUILDING CODE REQUIREMENTS.

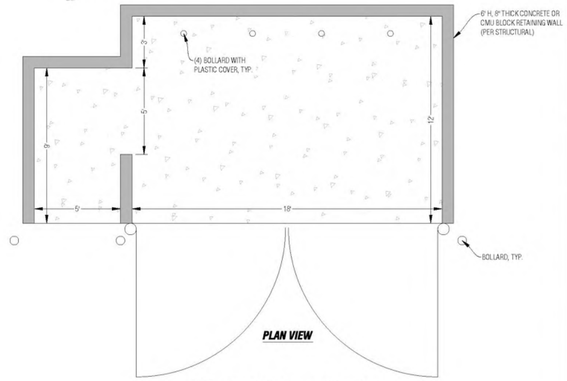
Staircase & Handrail
Scale: N.T.S.



Temporary Sediment Control Fence
Scale: N.T.S.



ISOMETRIC VIEW



PLAN VIEW

Trash Enclosure Elevations
Scale: N.T.S.

Boundaries Unlimited Inc.
Civil Engineering Surveying & Beyond
923 Cooper Ave., Ste. 201
Glenwood Springs, CO 81601
(T) 970.945.5252
www.bu-inc.com

Subsurface Utility Engineering (SUE) Required Project: **Yes**

If "Yes", SUE Certification by:
Firm: **2018-208.004**
Job #: **SGM, Inc.**
Date: **July 2020**

Engineer or Surveyor Seal

COLORADO LICENSED 7/21/20 37110 PROFESSIONAL ENGINEER

Client Information:
IRON MOUNTAIN HOT SPRINGS
201 CENTENNIAL STREET
GLENWOOD SPRINGS, CO 81601
970.945.4766

NORTH
0 1' 2'
Scale: 1" = 1'

811 Know what's below. Call before you dig.

LOT 1, BLOCK 2 OF THE NORTH GLENWOOD CENTER SUBDIVISION

Caverns Village

Details - Civil Site Construction Plan Set

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

PROJECT NO.: **17015.04**
Designer: **DJW**
Drafter: **BUI**
Date: **7/21/20**

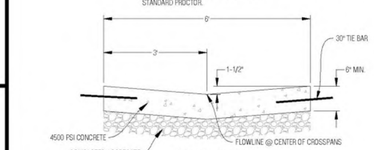
Sheet **C.17**

File Name: **17015-c-chl03d-cdot.dwg**

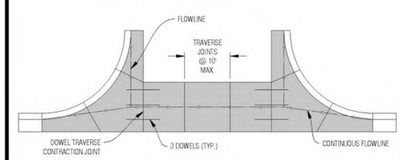
Accessible Parking Signage
Scale: N.T.S.

Stationary Bollard
Scale: N.T.S.

NOTES:
1. ALL WORK TO MEET CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE SECTION 412 AND 602.
2. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
3. ANY SIDEWALK CROSSING AREA WITHIN THE ACCESS SHALL HAVE NO MORE THAN A 2% CROSS SLOPE PER ADA., LONGITUDINAL MAX SLOPE IS 1:12 (8.3%).
4. STRIP ALL TOPSOIL, SCARIFY AND RECOMPACT SUBGRADE A MINIMUM OF 8" DEPTH TO 98% STANDARD PROCTOR.

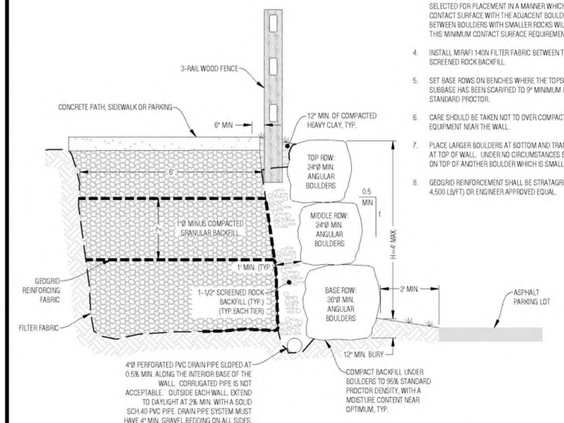


SECTION VIEW



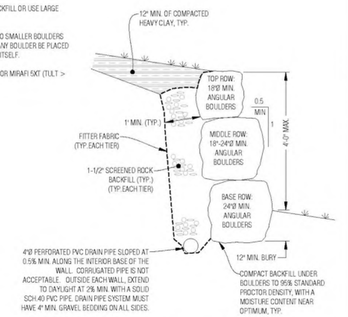
PLAN VIEW

Cross Pan
Scale: N.T.S.



RETAINING WALL

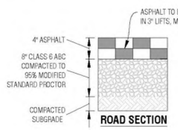
BOULDER WALL NOTES:
1. THESE DETAILS ARE TO BE USED ONLY FOR RETAINING AREAS WITH A MAXIMUM WALL HEIGHTS AS INDICATED. ANY WALL CONSTRUCTED HIGHER THAN SPECIFIED IN THESE DETAILS WILL NOT BE ACCEPTED BY THE PROJECT ENGINEER.
2. FREE DRAINING WALL BACKFILL SHOULD BE CAPPED WITH AT LEAST 12 INCHES OF COMPACTED HEAVY CLAYS TO REDUCE SURFACE WATER INFILTRATION.
3. BOULDERS SHALL BE ANGULAR AND SQUARE/RECTANGULAR IN SHAPE. ROUND RIVER BOULDERS ARE NOT ACCEPTABLE. BOULDERS SHALL BE PURPOSEFULLY SELECTED FOR PLACEMENT IN A MANNER WHICH PERMITS AT LEAST 30% CONTACT SURFACE WITH THE ADJACENT BOULDERS. THE FILLING OF VOID AREAS BETWEEN BOULDERS WITH SMALLER ROCKS WILL NOT COUNT TOWARD MEETING THIS MINIMUM CONTACT SURFACE REQUIREMENT.
4. INSTALL MIRAFI 140N FILTER FABRIC BETWEEN THE NATIVE EXCAVATION AND THE SCREENED ROCK BACKFILL.
5. SET BASE ROWS ON BENCHES WHERE THE TOPSOIL HAS BEEN REMOVED AND THE SUBBASE HAS BEEN SCARIFIED TO 9" MINIMUM DEPTH & RECOMPACTED TO 95% STANDARD PROCTOR.
6. CARE SHOULD BE TAKEN NOT TO OVER COMPACT THE BACKFILL OR USE LARGE EQUIPMENT NEAR THE WALL.
7. PLACE LARGER BOULDERS AT BOTTOM AND TRANSITION TO SMALLER BOULDERS AT TOP OF WALL. UNDER NO CIRCUMSTANCES SHOULD ANY BOULDER BE PLACED ON TOP OF ANOTHER BOULDER WHICH IS SMALLER THAN ITSELF.
8. GEOGRID REINFORCEMENT SHALL BE STRATAGRID SG350 OR MIRAFI 5XT (TULT > 4,500 LB/FT) OR ENGINEER APPROVED EQUAL.



LANDSCAPE WALL

Boulder Walls
Scale: N.T.S.

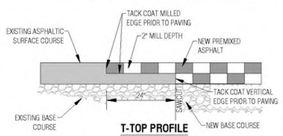
NOTES:
1. SECTION IS BASED ON RECOMMENDATIONS PROVIDED BY CTL THOMPSON, INC.
2. ASPHALT SHALL BE HMA SX75 PG 58-28. THE MIX DESIGN MUST BE SUBMITTED TO THE CITY FOR APPROVAL AT LEAST 30 DAY BEFORE THE ANTICIPATED INSTALLATION DATE.
3. ASPHALT TO BE PLACED IN 3" LIFTS, MAXIMUM, AND COMPACTED TO A DENSITY OF 95% OPTIMUM DENSITY.



ROAD SECTION

HMA Pavement Section
Scale: N.T.S.

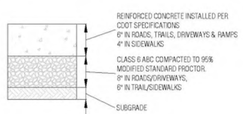
NOTES:
1. A HMA PAVEMENT T-TOP IS REQUIRED WHENEVER THE MATCHING ASPHALT EDGE GREATER THAN OR EQUAL TO 2.5-INCHES. A CLEAN SAWCUT AND TACK COAT ALONG THE VERTICAL EDGE IS ACCEPTABLE ONLY WHEN THE MATCHING ASPHALT EDGE IS CONFIRMED BY THE PROJECT ENGINEER TO BE LESS THAN 2.5-INCHES.
2. THE LONGITUDINAL PAVEMENT SEAM CREATED BETWEEN THE EXISTING ASPHALT AND THE NEW ASPHALT SHALL NOT BE LOCATED IN THE WHEEL PATH.
3. AT THE LOCATIONS WHERE NEW ASPHALT IS TO ABUT EXISTING ASPHALT, SAW CUT THE EXISTING PAVEMENT 24-INCHES BACK FROM THE EXISTING EDGE AND REMOVE PAVEMENT. FROM THE SAW CUT LINE, MILL EXISTING PAVEMENT BACK 24-INCHES TO A DEPTH OF 2-INCHES. TACK EXPOSED VERTICAL ASPHALT EDGE PRIOR TO PAVING. THE SAW CUTTING WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE REMOVAL OF THE ASPHALT ITEM.
4. TEMPORARY REPAIR TO BE PLACED THE SAME DAY AS COMPLETION OF BACKFILL. CONTRACTOR WILL MAINTAIN THE TEMPORARY REPAIR UNTIL THE PERMANENT REPAIR HAS BEEN COMPLETED.



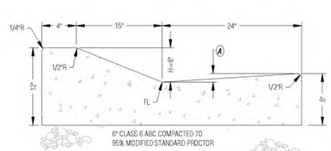
T-TOP PROFILE

HMA Pavement Replacement
Scale: N.T.S.

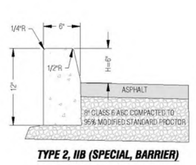
NOTE:
1. THIS SECTION AND MATERIALS SHALL BE CONSTRUCTED IN CONFORMANCE WITH RECOMMENDATIONS PROVIDED BY CTL THOMPSON, INC.
2. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.
3. SEE CONCRETE NOTES AND CDOT M-STANDARD M-412 FOR COMPLETE DETAILS AND REQUIREMENTS FOR CONCRETE PAVEMENT & JOINTS.



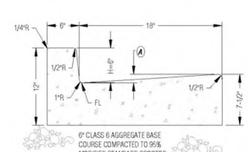
Concrete Pavement & Walks
Scale: N.T.S.



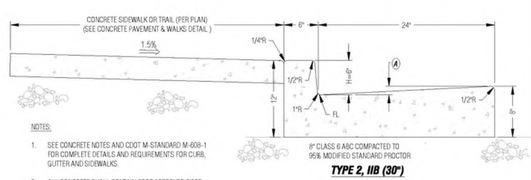
TYPE 2, IM (SPECIAL)



TYPE 2, IIB (SPECIAL, BARRIER)



TYPE 2, IIB (24")



TYPE 2, IIB (30")

NOTES:
1. SEE CONCRETE NOTES AND CDOT M-STANDARD M-608-1 FOR COMPLETE DETAILS AND REQUIREMENTS FOR CURB, GUTTER AND SIDEWALKS.
2. ALL CONCRETE SHALL CONTAIN CDOT APPROVED FIBER MESH REINFORCEMENT AT 3.5 LBS PER CUBIC YARD.

(A) GUTTER CROSS SLOPES SHALL BE 1/2 INCH PER FOOT WHEN DRAINING AWAY FROM THE CURB, AND 1 INCH PER FOOT WHEN DRAINING TO THE CURB, EXCEPT AT ACCESSIBLE RAMPS WHERE SLOPE SHALL BE 1/2 INCH PER FOOT, MAX.

Curb and Gutter
Scale: N.T.S.

H:\PROJECTS\2017\17015-Iron Mountain PUD\dwg\Caverns Village\17015 C-CHI30d CDOT.dwg 7/21/2020 10:35 AM

Site Use Calculations
Hatched area #1 (parking area) = 91,379 sq. ft.
Hatched area #2 (building and pool area) = 55,561 sq. ft
Total site area = 146,940 sq. ft.

Common Open Space Area (10% of total site area)

Total site area = 146,940 sq. ft.
129,946 sq. ft x 10% = 14,694 sq. ft required Common Open Space
Actual Common Open Space = 44,927 sq. ft. (Area #2 less buildings and pool)

Minimum Landscaped Site Area (10% of total site area)

Total site area = 146,940 sq. ft
146,940 sq. ft x 10% = 14,694 sq. ft required landscaped site area
Actual Landscaped Site Area = 25,821 sq. ft. (not including parking landscape)

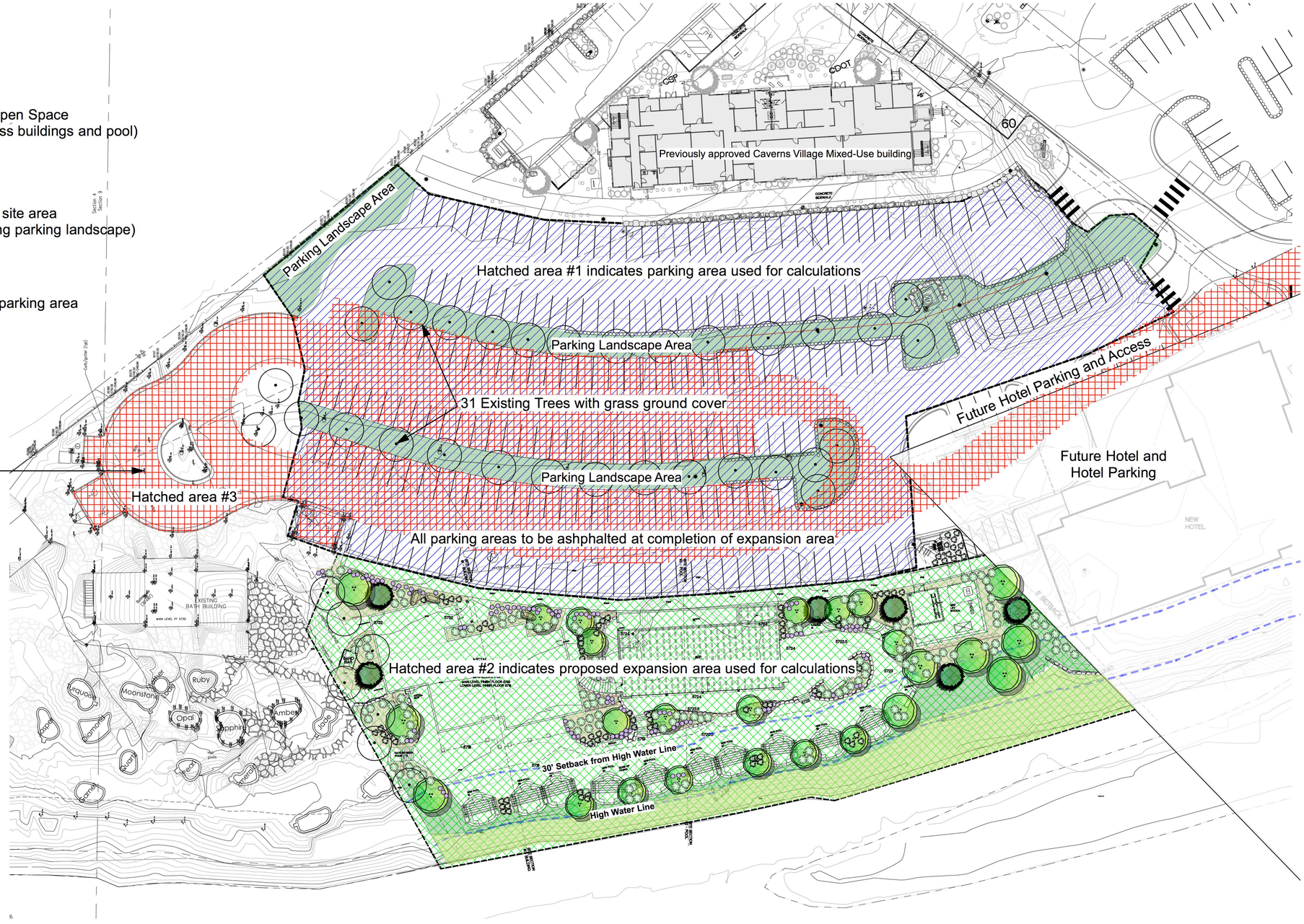
Parking Landscaped Area

Parking surface area = 74,479 sq. ft
74,479 sq. ft x 20% = 14,895 sq. ft required landscaped parking area
Actual Parking Landscaped Area = 16,900 sq. ft.

Landscape Requirements

Perennials: 1 per 50 s.f. of required landscape = 284
Shrubs: 1 per 100 s.f. of required landscape area = 142
Trees: 1 per 400 s.f. of required landscape area = 36

Hatched area #3 designates the approved parking and accces extents as shown on the "Recently Constructed Site Features" plan sheet prepared by SGM, dated 06/30/2015. Hatched area contains 94 parking stalls.



0 30' 60' 120' 180'

Scale 1" = 30'-0"

Landscape Plan

Iron Mountain Hot Springs Expansion

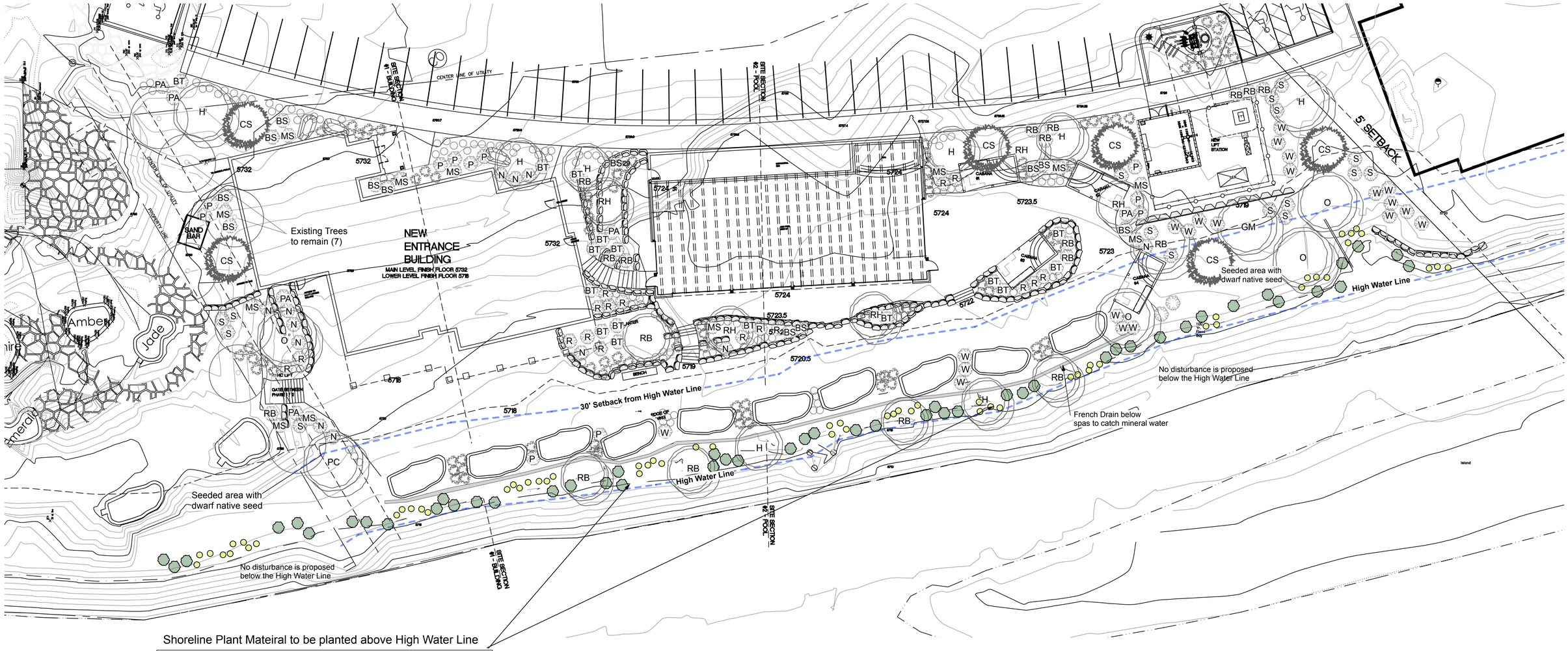
Parcel ID #218509200031

Glenwood Springs, Colorado

Updated August 31, 2020 by The Land Studio, Inc.

The **LAND** Studio
365 River Bend Way
Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net

Sheet 2 of 2



Shoreline Plant Mateiral to be planted above High Water Line

Shrubs,			
All shrubs #5 container			
	Red-Osier Dogwood	Cornus sericea 'Coloradensis'	8
	Thinleaf Alder	Alnus incana ssp. Tenuifolia	8
	Rocky Mountain Maple	Acer glabrum	8
	Sandbar Willow	Salix exigua	10
	Three-Leaf Sumac	Rhus trilobata	10
	Rabbit Brush	Chrysothamnus nauseosus	6
		Total shrubs	50
Perennials & Grasses			
#1 container			
	Virginia Creeper	Parthenocissus quinquefolia	20
	Blonde Ambition Blue Grama Grass	Bouteloua gracilis 'Blonde Ambition'	10
	Heavy Metal Switch Grass	Panicum Virgatum 'Heavy Metal'	10
	Moonshine Yarrow	Achillea 'Moonshine'	20
		Total Perennials & Grasses	60

0 20' 40' 80' 120'

Shoreline Enhancement Plan

Iron Mountain Hot Springs Expansion

Parcel ID #218509200031

Glenwood Springs, Colorado

October 7, 2020 by The Land Studio, Inc.

The **LAND** Studio
365 River Bend Way
Glenwood Springs, CO 81601
970.927.3690
landstudio2@comcast.net

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item:	Ordinance No 28, Series of 2020; An Ordinance of the City Council of the City of Glenwood Springs, Colorado, Appropriating Funds for Fiscal Year 2021 (ONE READING)
Action Requested:	Approval of 2021 Appropriations Ordinance
Department:	City Administration
Presented By:	Steve Boyd, COO Debra Figueroa, City Manager
Background Info:	Council passed the 2021 Budget on November 5th. This Ordinance authorizes the City Manager to spend these funds in compliance with that budget.
Issues:	None
Staff Recommendation:	Staff recommends approval.

ORDINANCE NO. 28

Series of 2020

AN ORDINANCE OF THE CITY OF GLENWOOD SPRINGS, COLORADO, APPROPRIATING FUNDS FOR FISCAL YEAR 2021.

WHEREAS, Section 9.6 of the Glenwood Springs Municipal Charter requires City Council to pass an annual appropriation ordinance describing such sums of money as the City Council deems necessary to defray all expenses and liabilities of the City during the ensuing year; and

WHEREAS, the City Council of the City of Glenwood Springs has adopted, by Resolution 2020-38, the budget for fiscal year 2021 commencing January 1, 2020 and ending December 31, 2021; and

WHEREAS, the City Council desires to adopt the 2021 appropriation ordinance; and

WHEREAS, pursuant to Section 4.4(j) of the Municipal Charter of the City of Glenwood Springs, an appropriation ordinance is not required to have introductory and second readings.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF GLENWOOD SPRINGS, COLORADO, ORDAINS THAT:

The monies, as set forth on **Exhibit A** attached hereto and incorporated herein, are hereby appropriated for fiscal year 2021, which monies are necessary to defray all expenses and liabilities of the City of Glenwood Springs.

INTRODUCED, READ, PASSED, AND ORDERED PUBLISHED BY TITLE ONLY THIS 5TH DAY OF DECEMBER 2020.

CITY OF GLENWOOD SPRINGS, COLORADO

ATTEST:

_____
Jonathan Godes, Mayor

_____
Catherine Mythen Fletcher, City Clerk

CITY OF GLENWOOD SPRINGS - 2021 BUDGET APPROPRIATION

Preliminary Summary of All Funds (000's)

SUMMARY OF ALL FUNDS	REVENUES	OPERATING EXPENDITURES	Excess Revenues Over (Under) Expenditures	Transfers In	Transfers Out	Excess Revenues Over (Under) Expenditures and Transfers	Principal Debt Payments	Capital Purchases	Net Budget Appropriation
GOVERNMENT AND INTERNAL SERVICE FUNDS									
GOVERNMENTAL FUND TYPES									
General Fund	**15,772,301**	**16,216,613**	**(444,312)**	**3,730,800**	**(3,311,066)**	**(24,578)**	**0**	**0**	**19,527,679**
Internal Service Funds	1,031,550	1,488,497	(456,947)	1,028,900	0	571,953		(618,900)	2,107,397
Fleet Service Fund	**1,031,550**	**1,488,497**	**(456,947)**	**1,028,900**	**0**	**571,953**		**(618,900)**	**2,107,397**
Special Revenue Funds									
Tourism Promotion Fund	952,926	1,034,743	(81,817)			(81,817)			1,034,743
V.A.L.E. Fund	26,000	25,000	1,000			1,000			25,000
Conservation Trust Fund	113,200	0	113,200			113,200		(218,500)	218,500
Street Tax Fund	2,409,145	1,199,528	1,209,617			1,209,617	(275,000)	(950,000)	2,424,528
Bus Tax Fund	2,126,849	1,808,314	318,535			318,535			1,808,314
Marijuana Tax Fund	295,000	0	295,000		(285,000)	10,000			285,000
Tobacco Tax Fund	901,000	1,500	899,500		(750,000)	149,500			751,500
Fire and EMS Fund	1,448,239	4,235,599	(2,787,360)	2,787,360		0			4,235,599
Total Special Revenue Funds	**8,272,359**	**8,304,684**	**(32,325)**	**2,787,360**	**(1,035,000)**	**1,720,035**	**(275,000)**	**(1,168,500)**	**10,783,184**
Capital Projects Funds									
Capital Projects Fund	2,659,145	630,820	2,028,325	100,000	(617,000)	1,511,325		(1,916,864)	3,164,684
Acquisition & Improvement Fund	13,732,394	4,137,837	9,594,557		(1,420,000)	8,174,557	(1,335,000)	(14,434,578)	19,992,415
Fire Equipment Replacement Fund	312,634	0	312,634	623,706		936,340		(326,000)	326,000
Total Capital Projects Funds	**16,704,173**	**4,768,657**	**11,935,516**	**723,706**	**(2,037,000)**	**10,622,222**	**(1,335,000)**	**(16,677,442)**	**23,483,099**
ENTERPRISE FUNDS									
Enterprise Funds									
Utility Enterprise Funds									
Water & Sewer System	6,473,500	6,621,007	(147,507)		(586,000)	(733,507)		(4,586,000)	11,793,007
Broadband	1,173,682	1,714,214	(540,532)			(540,532)		(3,884,544)	5,598,758
Electric System	15,530,596	13,778,663	1,751,933		(1,276,700)	475,233		(3,975,000)	19,030,363
Airport Enterprise Fund	191,900	202,432	(10,532)			(10,532)		(25,000)	227,432
Landfill Enterprise Fund	2,812,500	2,657,024	155,476		(25,000)	130,476		(340,000)	3,022,024
Total Enterprise Funds	**26,182,178**	**24,973,340**	**1,208,838**	**0**	**(1,887,700)**	**(678,862)**	**0**	**(12,810,544)**	**39,671,584**
FIDUCIARY FUND TYPES									
FIDUCIARY FUND TYPES									
Trust Funds									
Cemetery Reserve Fund	1,050	0	1,050			1,050			0
Total Trust Funds	**1,050**	**0**	**1,050**	**0**	**0**	**1,050**	**0**	**0**	**0**
COMPONENT UNITS									
COMPONENT UNITS									
General Improvement District 1980	42,900	13,314	29,586			29,586			13,314
Downtown Development Authority	228,000	160,143	67,857			67,857		(155,000)	315,143
Total Component Units	**270,900**	**173,457**	**97,443**	**0**	**0**	**97,443**	**0**	**(155,000)**	**328,457**
TOTAL OF ALL FUND TYPES									
TOTAL ALL FUND TYPES	**68,234,511**	**55,925,248**	**12,309,263**	**8,270,766**	**(8,270,766)**	**12,309,263**	**(1,610,000)**	**(31,430,386)**	**95,901,400**

2021 General Fund Department Appropriations

City Council	$	132,548
Administration	$	661,217
Recreation	$	2,433,148
City Clerk	$	428,950
Human Resource	$	326,504
Finance	$	1,039,783
Information Technology	$	799,961
Municipal Court	$	220,652
Legal	$	400,000
Non-Departmental	$	689,817
Facilities	$	187,616
Arts Programs	$	348,013
Police	$	4,313,080
Community Development	$	617,498
Engineering	$	687,940
Building Inspection	$	282,124
Streets and Alleys	$	1,052,403
Culture and Recreation (Parks & Rec)	$	1,595,359
Transfers out	$	3,311,066
Total General Fund 2021 Appropriation=>	**$**	**19,527,679**

City Council
STAFF REPORT
City of Glenwood Springs
December 3, 2020

Agenda Item: COVID-19 Update
-Information Campaign
-Current State Regulations regarding Garfield County

Action Requested:

Department: City Administration

Presented By:

Background Info:

Issues:

Staff Recommendation:

Debra Figueroa

From: Brosy-Wiwchar - CDPHE, Mara <mara.brosy-wiwchar@state.co.us>
Sent: Wednesday, December 2, 2020 12:22 PM
Subject: Garfield County Variances

Hello-

Under level orange site specific variances are permitted to continue. Those variances for Garfield county include Iron Mountain Hot Springs, Glenwood Hot Springs, and Hanging Lake.

The sector-wide variances previously allowed in Level yellow are no longer valid due to Garfield County's movement to Level Orange.

Thank you!

--
Mara Brosy-Wiwchar
Chief of Staff

COLORADO
Department of Public Health & Environment

P 303.692.3471 | C 775.338.6086
Mara.Brosy-Wiwchar@state.co.us

METRO MAYORS CAUCUS

WORKING TOGETHER FOR A BETTER REGION

Arvada
Aurora
Bennett
Boulder
Bow Mar
Brighton
Broomfield
Castle Pines
Castle Rock
Centennial
Cherry Hills Village
Columbine Valley
Commerce City
Denver
Edgewater
Englewood
Erie
Federal Heights
Foxfield
Glendale
Golden
Greenwood Village
Lafayette
Lakewood
Littleton
Lone Tree
Longmont
Louisville
Lyons
Morrison
Nederland
Northglenn
Parker
Sheridan
Superior
Thornton
Westminster
Wheat Ridge

November 23, 2020

Honorable Jared Polis
Governor of Colorado

Dear Governor Polis,

With our counties and more than half of Colorado's population at Level Red we are extremely concerned about the looming potential loss of life and the economic effects of another shutdown. We agree that we must do better and do our part to flatten the curve to avoid exceeding our hospital capacity which would lead to a reduction in quality of care, rationing of care, and increasing mortality rates. However, to be a good partner to the state, we need a clearer understanding of the data that is driving decision making to ensure effective messaging. There is also broad agreement that the state must evenly apply and consistently enforce public health orders, or our messaging and enforcement will lack credibility. To this end, we would like to engage in a dialogue with your team and our public health directors as soon as possible to discuss our path forward.

On our November 19 call, Weld County was raised repeatedly as an example of how inconsistent enforcement of public health orders and application of Dial level criteria creates serious challenges for metro area elected officials and public health departments. There is broad agreement that the state must evenly apply and consistently enforce public health orders. For example, restaurants that refuse to close should face suspension and/or revocation of state licenses. Additionally, local governments that refuse to enforce public health orders should not receive state aid or any share of state funding normally allocated. Willful non-compliance jeopardizes the lives of their residents and those in neighboring counties. Given that capacity in our regional hospital network is the critical indicator for shutdown at Level Purple, consistent, regional enforcement is more critical now than ever before.

Data suggests that Coloradans want to and are willing to do the right thing if they understand what is being asked of them and why. According to the latest Oct. 19-Nov. 1 Gallup poll, 61% of Americans recognized that the situation was getting worse and 64% believed that the best way to reduce transmission was for healthy people to stay home as much as possible. The recent changes in the Dial, and the perception that it is an indicator rather than a public health order, have created suspicion and confusion. Messaging from the state should be clear that this is the "last chance" to do the right thing before we breach our hospital capacity and force another lockdown. It was suggested during the call that the state look at using alternate methods to communicate the new restrictions and urgency directly; Utah recently used its Wireless Emergency Alert system for this purpose.

We understand that we are all learning as we go, but nine months into this crisis, there is widespread agreement that we must improve communication and coordination. Like our healthcare network, our counties and cities are interdependent and our actions — or inaction — have ramifications beyond our boundaries. This is underscored in the frustration expressed by the mayor of a statutory town that is split between two counties – one that chose to enforce public health orders and the other that did not. Working together is essential to saving lives and local businesses.

We sincerely appreciate the time and efforts of your team, and Kacey Wulff in particular. We would like to have a meeting with you and your team to discuss our concerns and how we as a region and state can move forward together.

Metro Mayors Caucus
P. O. Box 200276
Denver, CO 80220

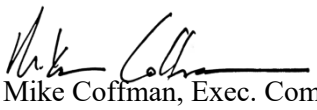
Sincerely,

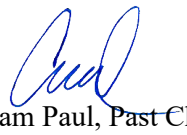
THE METRO MAYORS CAUCUS

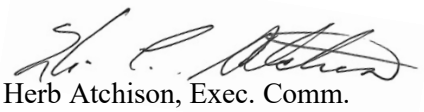
Marc Williams, Chair
Mayor of Arvada

Jackie Millet, Vice Chair
Mayor of Lone Tree

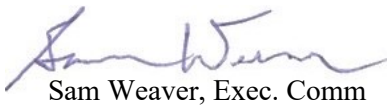
Michael Hancock, Exec. Comm.
Mayor of Denver


Mike Coffman, Exec. Comm
Mayor of Aurora


Adam Paul, Past Chair
Mayor of Lakewood

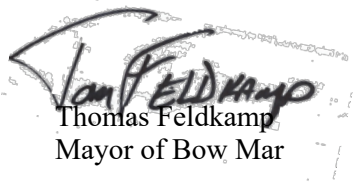

Herb Atchison, Exec. Comm.
Mayor of Westminster

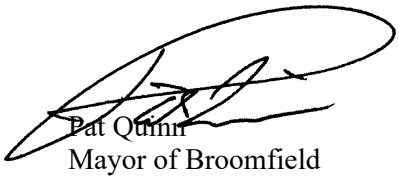
Tera Radloff, Exec. Comm
Mayor of Castle Pines


Sam Weaver, Exec. Comm
Mayor of Boulder

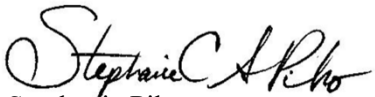
Linda Olson, Exec. Comm
Mayor of Englewood

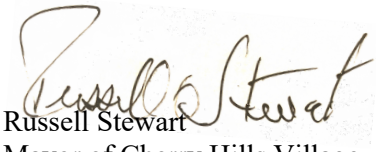
Bud Starker, Exec. Comm
Mayor of Wheat Ridge

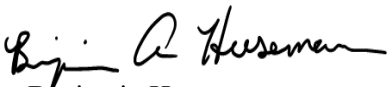

Thomas Feldkamp
Mayor of Bow Mar

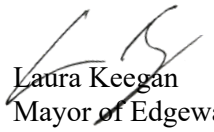

Pat Quinn
Mayor of Broomfield

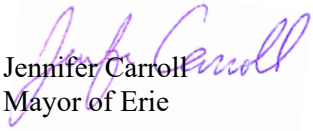
Jason Gray
Mayor of Castle Rock

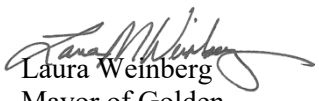

Stephanie Piko
Mayor of Centennial


Russell Stewart
Mayor of Cherry Hills Village


Benjamin Huseman
Mayor of Commerce City


Laura Keegan
Mayor of Edgewater


Jennifer Carroll
Mayor of Erie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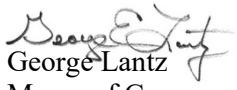
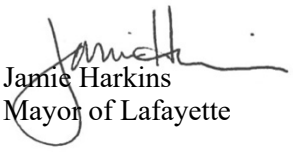
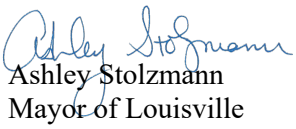
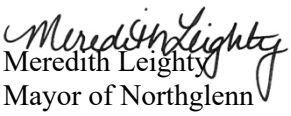
Mayor of Golden


George Lantz
Mayor of Greenwood Village


Jamie Harkins
Mayor of Lafayette


Ashley Stolzmann
Mayor of Louisville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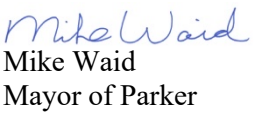
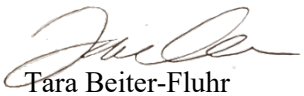
Mayor of Northglenn


Mike Waid
Mayor of Parker


Tara Beiter-Fluhr
Mayor of Sheridan

Clint Folsom
Mayor of Superior

NOTICE

ACCEPTANCE OF OATH OF OFFICE AND BOND, THE CITY OF GLENWOOD SPRINGS CITY COUNCIL, STATE OF COLORADO, COUNTY OF GARFIELD, CITY OF GLENWOOD SPRINGS

To: **Jonathan Godes – Mayor**
Shelley Kaup – Mayor Pro Tem
Steve Davis – City Councilor
Ingrid Wussow - City Councilor
Charlie Willman – City Councilor
Paula Stepp – City Councilor
Tony Hershey – City Councilor
Rick Vorhees – Former City Councilor

Comes now this Notice by We the People, on the 20th day of November 2020, so that all public officials and private contractors may provide due care:

You took an Oath of Office and pledged a bond to indemnify we the People of Colorado, against any and all trespass, injury to our property, or other ultra vires acts that would abrogate our rights secured by both the State and Federal Constitutions. See the annexed Oath of Office and autographed acceptances attached hereto.

Your Oath of Office and bond is a legally binding contract with "We the People" of Colorado as the fourth branch of government, the clearly intended, expressly designated beneficiary of the State and Federal Constitutions that constitute an indisputable contract in writing, enforceable in a court of law. **The constitution is a contract designed to limit government.**

NOTICE: Under the Constitution of Colorado of 1876, the governor has no authority to make law or impose any regulation(s) or administer the property of "We the People" as it is completely outside of the clear distinction of the Distribution of Powers set forth in Article III of the constitution:

> **"The powers of the government of this state are divided into three distinct departments,--the legislative, executive and judicial; and *no person or collection of persons charged with the exercise of powers properly belonging to one of these departments shall exercise any power properly belonging to either of the others (emphasis added)*, except as in this constitution expressly directed or permitted."**

The Constitution of the State of Colorado clearly states in Article II, Section 1, Vestment of Political Power that all political power is inherent in the People, and rights secured cannot be abrogated by mere "guidelines". All men are by nature free and independent, and have certain inalienable rights, which you took an oath to uphold.

> **Article II, Bill of Rights - Section 1: Vestment of Political Power**
>
> **"All political power is vested in and derived from the people; all government, of right, originates from the people, is founded upon their will only, and is instituted solely for the good of the whole."**
>
> **Article II, Bill of Rights - Section 3: Inalienable Rights**
>
> **"All persons have certain natural, essential and inalienable rights, among which may be reckoned the right of enjoying and defending their lives and liberties; of acquiring, possessing and protecting property; and of seeking and obtaining their safety and happiness."**

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Take notice of the Fact that all men are by nature free and independent, independent from force of other men or government who may decide that any man will be forced to follow another's edicts. The legislature derives its just powers from the people and is only created to protect the rights of the people. All public officials are only placed in their seats to protect the people's rights and to provide benefits if the people should wish to use them. Being that all political power is inherent in the people, any government official who forces their will upon the people, or makes statutes to force the people, against their will, to follow such edicts are in violation of the Constitution which grants the public officer his or her seat.

The United States Supreme Court has addressed this issue as set forth in the following cite:

> **Norton v Shelby County, 118 US 425: "An unconstitutional act is not law. It confers no rights, it imposes no duties, it affords no protections, it creates no office, it is in legal contemplation as inoperative as though it had never been passed." That means the law enforcement agents in the county have no obligation or duty to enforce an unconstitutional act.**
>
> **Davis v. Wechsler , 263 US 22, 24. "Where rights secured by the Constitution are involved, there can be no rule making or legislation which would abrogate them."**
>
> **Cooper v. Aaron, 358 U.S. 1, 78 S. Ct. 1401 (1958) Note: Any judge who does not comply with his oath to the Constitution of the United States wars against that Constitution and engages in acts in violation of the supreme law of the land. The judge is engaged in acts of treason. The U.S. Supreme Court has stated that "no state legislator or executive or judicial officer can war against the Constitution without violating his undertaking to support it". See also In Re Sawyer, 124 U.S. 200 (188); U.S. v. Will, 449 U.S. 200, 216, 101 S. Ct. 471, 66 L. Ed. 2d 392, 406 (1980); Cohens v. Virginia, 19 U.S. (6 Wheat) 264, 404, 5 L. Ed 257 (1821).**
>
> **Scheuer v. Rhodes, 416 U.S. 232, 94 S. Ct. 1683, 1687 (1974) Note: By law, a judge is a state officer. The judge then acts not as a judge, but as a private individual (in his person). When a judge acts as a trespasser of the law, when a judge does not follow the law, the Judge loses subject-matter jurisdiction and the judges' orders are not voidable, but VOID, and of no legal force or effect. The U.S. Supreme Court stated that "when a state officer acts under a state law in a manner violative of the Federal Constitution, he comes into conflict with the superior authority of that Constitution, and he is in that case stripped of his official or representative character and is subjected in his person to the consequences of his individual conduct. The State has no power to impart to him any immunity from responsibility to the supreme authority of the United States."**

By what law or theory of law do you think you can violate our rights, and your oath of office without legal consequences or equitable indemnification for any breach or ultra vires act? Where in your trust indenture called the Constitution of the United States and the Constitution of the State of Colorado, have you have been granted authority to command the people against their will to cover their nose and mouth, restrict their breathing, or to restrict their movement and right to peacefully assemble, or restrict access to public services and places of public accommodation?

Only licensed doctors are permitted to give medical advice and recommendations, any attempt to legislate otherwise will subject you to medical malpractice liabilities from every citizen, resident and business owner.

Therefore: We the People, demand that you immediately revoke and rescind all mask requirements including the "mandatory face covering zone" and "social distancing" mandates as an ultra vires trespass and terrorist act on the rights of the people. And we require indemnification of all injured

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parties and businesses and require you to immediately issue a Cease and Desist Order to Yvonne Long, Garfield County Public Health director, to cease and desist any and all harassment of local businesses.

This lawful notification letter requires your specific written response within 10 days of receipt of service to the above-titled subject matter, to the following address: (P.O. Box 1484, Carbondale, CO 81623).

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: ARTHUR FRANKLIN

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: _____

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: Jonathan Maxwell

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: BRANDEN L COATS.

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: Blanca Arcos

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: Monica McAnally

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: Sandro Torres

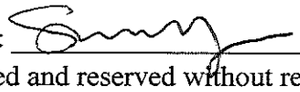
Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: Audrey Burgio

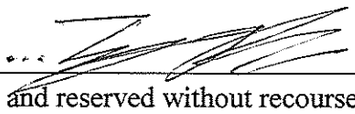
Packet Page 800

Autographed by:
All rights invoked and reserved without recourse.

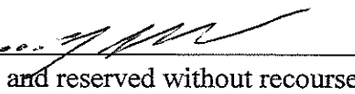
Print Name: Nikola Gradinski

Autographed by: 
All rights invoked and reserved without recourse.

Print Name: Kaitlyn Cranor

Autographed by: 
All rights invoked and reserved without recourse.

Print Name: Tyler Bell

Autographed by: 
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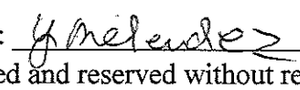
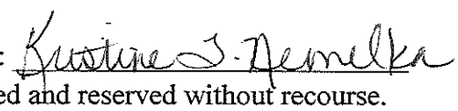
Print Name: Nicole Wallace

Autographed by: 
All rights invoked and reserved without recourse.

Print Name: Yolanda Melendez

Autographed by: 
All rights invoked and reserved without recourse.

Print Name: Kristine T. Nemelka

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: _____

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: _____

Autographed by: _____
All rights invoked and reserved without recourse.

Print Name: _____

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On this 19th day of November 2020, personally appeared, subscribed and affirmed before me in the county of Garfield, State of Colorado,

[signature]

Brandon J Coats

Blanca Aviles

Monica McAnally

Notary Public:

[signature]

My Commission Expires: November 13, 2022.

Seal:

ABEL ESTEBAN GOMEZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20144043959
MY COMMISSION EXPIRES NOVEMBER 13, 2022

On this 17th day of November., 2020, personally appeared, subscribed and affirmed before me in the county of Garfield, State of Colorado,

...ARTHUR FRANKLIN

...LORI SPENCER

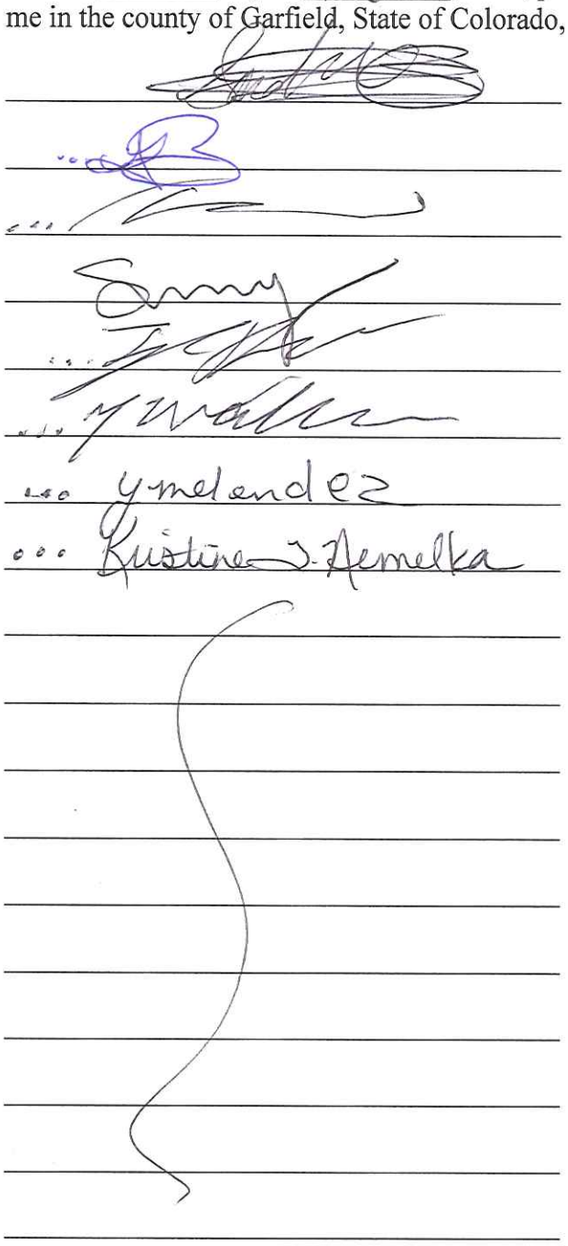
by Arthur Franklin and
Lori Lynn Spencer only.

Notary Public:

Seal:

TABITHA FAIRCLOTH
NOTARY PUBLIC - STATE OF COLORADO
NOTARY ID 20194043418
MY COMMISSION EXPIRES NOV 15, 2023

On this 19th day of November, 2020, personally appeared, subscribed and affirmed before me in the county of Garfield, State of Colorado,



Notary Public:

Erika Niebla
Commission Expires Nov. 25, 2021.

Seal:

ERIKA JACQUELINNE NIEBLA MARTINEZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20134074934
EXPIRES NOVEMBER 25, 2021

Annex: U.S. Codes

18 U.S. Code § 241. Conspiracy against rights

If two or more persons conspire to injure, oppress, threaten, or intimidate any person in any State, Territory, Commonwealth, Possession, or District in the free exercise or enjoyment of any right or privilege secured to him by the Constitution or laws of the United States, or because of his having so exercised the same; or

If two or more persons go in disguise on the highway, or on the premises of another, with intent to prevent or hinder his free exercise or enjoyment of any right or privilege so secured—

They shall be fined under this title or imprisoned not more than ten years, or both; and if death results from the acts committed in violation of this section or if such acts include kidnapping or an attempt to kidnap, aggravated sexual abuse or an attempt to commit aggravated sexual abuse, or an attempt to kill, they shall be fined under this title or imprisoned for any term of years or for life, or both, or may be sentenced to death.

(June 25, 1948, ch. 645, 62 Stat. 696; Pub. L. 90–284, title I, § 103(a), Apr. 11, 1968, 82 Stat. 75; Pub. L. 100–690, title VII, § 7018(a), (b)(1), Nov. 18, 1988, 102 Stat. 4396; Pub. L. 103–322, title VI, § 60006(a), title XXXII, §§ 320103(a), 320201(a), title XXXIII, § 330016(1)(L), Sept. 13, 1994, 108 Stat. 1970, 2109, 2113, 2147; Pub. L. 104–294, title VI, §§ 604(b)(14)(A), 607(a), Oct. 11, 1996, 110 Stat. 3507, 3511.)

18 U.S. Code § 242.Deprivation of rights under color of law

Whoever, under color of any law, statute, ordinance, regulation, or custom, willfully subjects any person in any State, Territory, Commonwealth, Possession, or District to the deprivation of any rights, privileges, or immunities secured or protected by the Constitution or laws of the United States, or to different punishments, pains, or penalties, on account of such person being an alien, or by reason of his color, or race, than are prescribed for the punishment of citizens, shall be fined under this title or imprisoned not more than one year, or both; and if bodily injury results from the acts committed in violation of this section or if such acts include the use, attempted use, or threatened use of a dangerous weapon, explosives, or fire, shall be fined under this title or imprisoned not more than ten years, or both; and if death results from the acts committed in violation of this section or if such acts include kidnapping or an attempt to kidnap, aggravated sexual abuse, or an attempt to commit aggravated sexual abuse, or an attempt to kill, shall be fined under this title, or imprisoned for any term of years or for life, or both, or may be sentenced to death.

18 U.S. Code § 245. Federally protected activities

"(b) Whoever, whether or not acting under color of law, by force or threat of force willfully injures, intimidates or interferes with, or attempts to injure, intimidate or interfere with—"...

"1(B) participating in or enjoying any benefit, service, privilege, program, facility, or activity provided or administered by the United States;"...

"2(F)

enjoying the goods, services, facilities, privileges, advantages, or accommodations of any inn, hotel, motel, or other establishment which provides lodging to transient guests, or of any restaurant, cafeteria, lunchroom, lunch counter, soda fountain, or other facility which serves the public and which is principally engaged in selling food or beverages for consumption on the premises, or of any gasoline station, or of any motion picture house, theater, concert hall, sports arena, stadium, or any other place of exhibition or entertainment which serves the public, or of any other establishment which serves the public and (i) which is located within the premises of any of the aforesaid establishments or within the premises of which is physically located any of the aforesaid establishments, and (ii) which holds itself out as serving patrons of such establishments; or"...

"(5)

any citizen because he is or has been, or in order to intimidate such citizen or any other citizen from lawfully aiding or encouraging other persons to participate, without discrimination on account of race, color, religion or national origin, in any of the benefits or activities described in subparagraphs (1)(A) through (1)(E) or subparagraphs (2)(A) through (2)(F), or participating lawfully in speech or peaceful assembly opposing any denial of the opportunity to so participate—

shall be fined under this title, or imprisoned not more than one year, or both; and if bodily injury results from the acts committed in violation of this section or if such acts include the use, attempted use, or threatened use of a dangerous weapon, explosives, or fire shall be fined under this title, or imprisoned not more than ten years, or both; and if death results from the acts committed in violation of this section or if such acts include kidnapping or an attempt to kidnap, aggravated sexual abuse or an attempt to commit aggravated sexual abuse, or an attempt to kill, shall be fined under this title or imprisoned for any term of years or for life, or both, or may be sentenced to death."...

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42 U.S. Code § 1985. Conspiracy to interfere with civil rights

(3) Depriving persons of rights or privileges

If two or more persons in any State or Territory conspire or go in disguise on the highway or on the premises of another, for the purpose of depriving, either directly or indirectly, any person or class of persons of the equal protection of the laws, or of equal privileges and immunities under the laws; or for the purpose of preventing or hindering the constituted authorities of any State or Territory from giving or securing to all persons within such State or Territory the equal protection of the laws; or if two or more persons conspire to prevent by force, intimidation, or threat, any citizen who is lawfully entitled to vote, from giving his support or advocacy in a legal manner, toward or in favor of the election of any lawfully qualified person as an elector for President or Vice President, or as a Member of Congress of the United States; or to injure any citizen in person or property on account of such support or advocacy; in any case of conspiracy set forth in this section, if one or more persons engaged therein do, or cause to be done, any act in furtherance of the object of such conspiracy, whereby another is injured in his person or property, or deprived of having and exercising any right or privilege of a citizen of the United States, the party so injured or deprived may have an action for the recovery of damages occasioned by such injury or deprivation, against any one or more of the conspirators.

42 U.S. Code § 1983. Civil action for deprivation of rights
Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State or Territory or the District of Columbia, subjects, or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress, except that in any action brought against a judicial officer for an act or omission taken in such officer's judicial capacity, injunctive relief shall not be granted unless a declaratory decree was violated or declaratory relief was unavailable. For the purposes of this section, any Act of Congress applicable exclusively to the District of Columbia shall be considered to be a statute of the District of Columbia.
(R.S. § 1979; Pub. L. 96–170, § 1, Dec. 29, 1979, 93 Stat. 1284; Pub. L. 104–317, title III, § 309(c), Oct. 19, 1996, 110 Stat. 3853.)

42 U.S. Code § 1986. Action for neglect to prevent
Every person who, having knowledge that any of the wrongs conspired to be done, and mentioned in section 1985 of this title, are about to be committed, and having power to prevent or aid in preventing the commission of the same, neglects or refuses so to do, if such wrongful act be committed, shall be liable to the party injured, or his legal representatives, for all damages caused by such wrongful act, which such person by reasonable diligence could have prevented; and such damages may be recovered in an action on the case; and any number of persons guilty of such wrongful neglect or refusal may be joined as defendants in the action; and if the death of any party be caused by any such wrongful act and neglect, the legal representatives of the deceased shall have such action therefor, and may recover not exceeding $5,000 damages therein, for the benefit of the widow of the deceased, if there be one, and if there be no widow, then for the benefit of the next of kin of the deceased. But no action under the provisions of this section shall be sustained which is not commenced within one year after the cause of action has accrued.

18 U.S. Code § 1621. Perjury generally

Whoever—
(1) having taken an oath before a competent tribunal, officer, or person, in any case in which a law of the United States authorizes an oath to be administered, that he will testify, declare, depose, or certify truly, or that any written testimony, declaration, deposition, or certificate by him subscribed, is true, willfully and contrary to such oath states or subscribes any material matter which he does not believe to be true; or<
(2) in any declaration, certificate, verification, or statement under penalty of perjury as permitted under section 1746 of title 28, United States Code, willfully subscribes as true any material matter which he does not believe to be true;
is guilty of perjury and shall, except as otherwise expressly provided by law, be fined under this title or imprisoned not more than five years, or both. This section is applicable whether the statement or subscription is made within or without the United States.
(June 25, 1948, ch. 645, 62 Stat. 773; Pub. L. 88–619, § 1, Oct. 3, 1964, 78 Stat. 995; Pub. L. 94–550, § 2, Oct. 18, 1976, 90 Stat. 2534; Pub. L. 103–322, title XXXIII, § 330016(1)(I), Sept. 13, 1994, 108 Stat. 214

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STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, WARD 5

I, **Jonathan Godes**, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the Ward 5 upon which I am about to enter.

Jonathan Godes, Councilor Representing Ward 5

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 20th day of April, 2017, by Jonathan Godes City Councilor representing Ward 5.

Witness my hand and the official seal of the City of Glenwood Springs.

CITY OF GLENWOOD SPRINGS SEAL COLORADO

Jill N. Peterson, Deputy City Clerk

STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, AT-LARGE

I, **Shelley K. Kaup**, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the City At-Large upon which I am about to enter.

Shelley K. Kaup, Councilor Representing the City At-Large

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 20th day of April, 2017, by Shelley K. Kaup City Councilor representing the City At-Large.

Witness my hand and the official seal of the City of Glenwood Springs.

THE CITY OF GLENWOOD SPRINGS SEAL COLORADO

Jill N. Peterson, Deputy City Clerk

STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, WARD 1

I, **Steve Davis**, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the Ward 1 upon which I am about to enter.

Steve Davis, Councilor Representing Ward 1

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 18th day of April, 2019, by Steve Davis City Councilor representing Ward 1.

Witness my hand and the official seal of the City of Glenwood Springs.

Catherine Fletcher, City Clerk

STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, WARD 4

I, **Paula Stepp**, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the Ward 4 upon which I am about to enter.

Paula Stepp, Councilor Representing Ward 4

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 18th day of April, 2019, by Paula Stepp is City Councilor representing Ward 4.

Witness my hand and the official seal of the City of Glenwood Springs.

Catherine Fletcher, City Clerk

STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, AT LARGE

I, Tony Hershey, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the At Large Seat upon which I am about to enter.

Tony Hershey, Councilor Representing At Large

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 18th day of April, 2019, by Tony Hershey is City Councilor representing At Large.

Witness my hand and the official seal of the City of Glenwood Springs.

Catherine Fletcher

Catherine Fletcher, City Clerk

STATE OF COLORADO)
)ss.
COUNTY OF GARFIELD)

OATH OF OFFICE
CITY OF GLENWOOD SPRINGS,
CITY COUNCILOR, WARD 2

I, **Rick Voorhees**, upon my oath, do solemnly swear that I will support the Constitutions of the United States of America, the State of Colorado, and the Charter and Ordinances of the City of Glenwood Springs, and will faithfully perform the duties of the Office of City Councilor representing the Ward 2 upon which I am about to enter.

Rick Voorhees, Councilor Representing Ward 2

By virtue of the powers vested in me by the Glenwood Springs Municipal Charter, I hereby certify that the foregoing Oath of Office was subscribed and sworn to before me this 20th day of April, 2017, by Rick Voorhees City Councilor representing Ward 2.

Witness my hand and the official seal of the City of Glenwood Springs.

CITY OF GLENWOOD SPRINGS SEAL COLORADO

Jill N. Peterson, Deputy City Clerk