

#### Town Council Agenda - Final

Mayor Jason Gray Mayor Pro Tem Kevin Bracken Councilmember Ryan Hollingshead Councilmember Laura Cavey Councilmember Desiree Lefleur Councilmember Max Brooks Councilmember Tim Dietz

Tuesday, January 17, 2023

6:00 PM

Town Hall Council Chambers 100 North Wilcox Street Castle Rock, CO 80104 Phone in: 720-650-7664 Meeting code: 2497 923 6029 www.CRgov.com/CouncilMeeting

This meeting is open to the public and will be held in a virtual format in accordance with the Town Council Electronic Participation, Connected, and Hybrid Meeting Policy. Public may choose to attend in person at Town Hall, or electronically or by phone if preferred. This meeting will be hosted online and can be accessed at www.CRgov.com/CouncilMeeting, or phone in by calling 720-650-7664, meeting code 2497 923 6029 (if prompted for a password enter "Jan17Council"). All Town Council Meetings are also streamed online in real time at www.CRgov.com/WatchCouncil, and are broadcast for Comcast Cable subscribers on Channel 22 (please note there is a delay to the broadcast).

All times indicated on the agenda are approximate. Remote participants please visit www.CRgov.com/CouncilComments to sign up to speak to an item, and for related instructions. Public Comments may also be submitted in writing online by 1:00 p.m. January 17, 2023, to be included in the public record.

5:00 pm COUNCIL DINNER & INFORMAL DISCUSSION

6:00 pm INVOCATION - Pastor David Love, Calvary Castle Rock

6:05 pm CALL TO ORDER / ROLL CALL

- PLEDGE OF ALLEGIANCE
- COUNCIL COMMENTS
- UNSCHEDULED PUBLIC APPEARANCES

Reserved for members of the public to make a presentation to Council on items or issues that are not scheduled on the agenda. As a general practice, the Council will not discuss/debate these items, nor will Council make any decisions on items presented during this time, rather will refer the items to staff for follow up. Comments are limited to three (3) minutes per speaker. Time will be limited to 30 minutes. Residents will be given priority (in the order they signed up) to address Council, followed by non-residents representing Castle Rock businesses, then non-residents and businesses outside the Town of Castle Rock, as time permits.

- TOWN MANAGER'S REPORT
- 1. ID 2023-007 Overview of Snow and Ice Management

- 2. ID 2023-008 Update: Calendar Reminders
- 3. ID 2023-009 Update: Monthly Department Reports
- 4. ID 2023-010 Update: Quasi-Judicial Projects
- 5. <u>ID 2023-011</u> Development Services Project Updates

#### TOWN ATTORNEY'S REPORT

#### ACCEPTANCE OF AGENDA

If there are no changes, additions or deletions to the agenda, a motion to accept the agenda as presented will be accepted.

#### CONSENT CALENDAR

These items are generally routine in nature or have been previously reviewed by Town Council and will be voted on in a single motion without discussion. Any member of Town Council may remove an item from the Consent Calendar.

- 6. RES
  Resolution Waiving the Formal Written Sealed Bid Requirement on the Basis of Sole Source and Approving an Equipment and Services Acquisition Agreement with Academy Sports Turf, Inc., for the Matney Park Athletic Field Synthetic Turf Replacement Project [Location: 5790 Lantern Circle, Castle Rock, CO 80104]
- 7. RES
  2023-003

  Resolution Waiving the Formal Written Bidding Requirement on the
  Basis of Sole Source and Approving an Equipment and Services
  Acquisition Agreement with Pall Corporation for the Plum Creek
  Water Purification Facility Pall Membrane Filter Module Replacement
  Project [Entire Castle Rock Water Service Area]
- 8. Resolution Waiving the Formal Written Sealed Bid Requirement on the Basis of Sole Source and Approving an Equipment and Services Acquisition Agreement with PSI Water Technologies, Inc., for the Tank 17A and Tank 17B Monoclor Residual Control System Project [Tanks 17A and 17B in Castle Rock, CO]
- 9. Resolution Approving a Construction Contract with 53 Corporation,
  2023-005 LLC, for the East Plum Creek Reach 6 Stabilization Project [Adjacent to Plum Creek Water Reclamation Facility]
- 10. MIN 2023-003 Minutes: January 3, 2023 Town Council Meeting

#### QUASI JUDICIAL HEARINGS

This is the due process hearing as required under Colorado law. Public comments will be taken on all items and will be limited to four (4) minutes per speaker. Remote participants please visit www.CRgov.com/CouncilComments to sign up to speak to an item, and for related instructions. Public Comments may also be submitted in writing online by 1:00 p.m. January 17, 2023, to be included in the public record.

**11.** RES 2023-006

Resolution Approving a Site Development Plan for a Mixed-Use, Multi-Family Development in the Meadows Town Center [3.93 Acres Mixed Use/Multifamily - Located Northeast, Southeast and Southwest of the Intersection of Mercantile and Future Streets in the Meadows Town Center]

#### ADVERTISED PUBLIC HEARINGS & DISCUSSION ACTION ITEMS

Public comment will be taken on items and limited to four (4) minutes per speaker. Remote participants please visit www.CRgov.com/CouncilComments to sign up to speak to an item, and for related instructions. Public Comments may also be submitted in writing online by 1:00 p.m. January 17, 2023, to be included in the public record.

12.	RES 2023-007	Resolution Approving the Agreement Between ACM Dawson Trails VIII JV LLC and the Town of Castle Rock Regarding the Marketability of Title to Certain Water Rights [Dawson Trails]
13.	RES 2023-008	Resolution Approving a Service Agreement with Anderson Consulting Engineers, Inc., for the Mitchell Gulch Retention Pond Improvements Project [Mitchell Gulch just north of Mikelson Boulevard]

14. Resolution Approving a Service Agreement with Olsson, Inc., for the 2023-009 East Plum Creek/Sellers Gulch Confluence Project

#### ADDITIONAL UNSCHEDULED PUBLIC APPEARANCES

The Council has reserved this time only if the original 30 minutes allocated for Unscheduled Public Appearances as an earlier part of this agenda has been fully exhausted and speakers who signed up to speak were unable to be heard during the original 30 minutes allocated this topic. Residents will be given priority (in the order they signed up) to address Council, followed by non-residents representing Castle Rock businesses, then non-residents and businesses outside the Town of Castle Rock, as time permits.

#### ADJOURN



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 1. File #: ID 2023-007

**To:** Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Daniel Sailer, P.E., Director of Public Works

**Overview of Snow and Ice Management** 

#### **Executive Summary**

Public Works Director Dan Sailer will provide an overview of how the Town manages snow and ice on Town-owned roadways.



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 2. File #: ID 2023-008

To: Honorable Mayor and Members of Town Council

From: David L. Corliss, Town Manager

**Update: Calendar Reminders** 

#### **Executive Summary**

Attached is an outline of upcoming items of general interest.

TOWN COUNCIL MEETING

# TOWN MANAGER'S REPORT

DAVID L. CORLISS, TOWN MANAGER JANUARY 17, 2023



>

# **UPCOMING CALENDAR ITEMS**

- JAN Development Services Boards & Commissions Appreciation Dinner 6 p.m. Red Hawk Ridge Golf Course, 2156 Red Hawk Ridge Drive
- 7 Town Council Meeting 6 p.m., hybrid format (dinner at 5 p.m.)
  Council Chambers, online or phone-in
- 11 Fire and Rescue Department Awards Ceremony and Banquet 6 p.m.
- The Oaks at Plum Creek, 321 Players Club Drive
- Town Offices Closed for Presidents' Day
  MAC and Recreation Center modified hours
- Town Council Meeting 6 p.m., hybrid format (dinner at 5 p.m.)
  Council Chambers, online or phone-in
- 7 Town Council Meeting 6 p.m., hybrid format (dinner at 5 p.m.)
  MAR Council Chambers, online or phone-in
- 21 Town Council Meeting 6 p.m., hybrid format (dinner at 5 p.m.)
  MAR Council Chambers, online or phone-in

# **NEIGHBORHOOD MEETINGS**

Scheduled on Town Calendar



City Hotel Redevelopment, 6:00 p.m., Philip S. Miller Library, Hybrid, 1st Meeting

Proposing the restoration of the historic City Hotel building and development of a new 22,000-square-foot boutique hotel at 415 Perry St.

\*These items are tentative



\*Crystal Valley Shops SDP, 6:00 p.m., Philip S. Miller Library, Hybrid, 1st Meeting

Proposing to build a new retail center with 4 buildings (total of 25,823 square feet) on a 5.169-acre lot at the southwest corner of Crystal Valley Pkwy. and Plum Creek Blvd.



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 3. File #: ID 2023-009

**To:** Honorable Mayor and Members of Town Council

From: David L. Corliss, Town Manager

**Update: Monthly Department Reports** 

#### **Executive Summary**

Attached are the monthly department reports for December 2022.



Development Services
December 2022 Monthly Report



# **DEVELOPMENT SERVICES**

**December 2022 Monthly Report** 



#### **INSIDE THIS ISSUE**

Page 3: Employee Recognition

Page 5: New Land Use Submittals

Page 6: Boards and Commissions

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Page 8: Development Snapshot

Find more information on our **Development Activity** page.



Rendering of Keystone Hotel (Next Door Bar) Patio SDP

# Distinct Town Identity

Responsible Growth

TOWN OF CASTLE ROCK

FOUR

CORNERSTONES

**Community Services** 

Thriving Economy



100 N. Wilcox Street Castle Rock, CO 80104 720-733-2200



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We'd like to hear from you! You could win a **\$25** gift card for completing our <u>Customer Service</u> <u>Survey</u>.

#### **News from the Director**

Happy New Year! The Town continued to see a slowing of new applications in the last month of 2022, a trend seen throughout the

state of Colorado. In Castle Rock, December 2022 closed out the year with 29 single-family home permits, bringing us to a total of 686 for the year. Forecasters expect the state-wide growth rate to stay low, less than 1% range at the start of the 2023. This is a downward shift from the average 3.26% growth rate seen in 2017-2021 due to elevated interest rates and a slow economy. Housing market declines are expected to moderate later in 2023.

Want to know more about proposed development projects in town? Attend a neighborhood meeting! Many development projects and annexations require a series of public neighborhood meetings per Town regulations. You'll hear a presentation from an applicant and have an opportunity to ask questions. Your participation helps provide



Tara Vargish, PE Director Development Services

the applicant with information that may potentially shape the plans of a project. Your voice matters! Here are a couple of ways to find a meeting to attend:

Look for the yellow Town of Castle Rock Public Hearing signs around the community. Signs identify properties that require public meetings and offer information on how to attend the event.

Join the Town's Facebook page. Your Voice Your Town is a social media series posted about every two weeks, informing you of approaching neighborhood meeting dates. You can also view the Town's online Public Notices calendar at CRgov.com/Notices.

We look forward to seeing you at a neighborhood meeting in 2023!

# **Employee Recognition**

Anniversaries, Customer Service Survey





Congratulations to Sean Davin, Construction Project Manager on 23 years with the Town!



Congratulations to Kenneth Torres, Plan Review Engineer on 4 years with the Town!

# Win a \$25 Gift Card

Fill out our Customer Feedback Survey to let us know how we are doing! Your participation will automatically enter you into a drawing for

a \$25 gift card to a local Castle Rock business. Feedback Surveys can be found online and at the bottom of staff email signatures.

363 surveys distributed13 December responses

You may also receive an email request after we complete your services. Your feedback is valuable to us! All responses are anonymous unless you request to be contacted. Fill out a survey today!

Here are some keywords from our customers:



# **Employee Recognition**

Customer Service Feedback, Staff Kudos



# **Staff Spotlight**

#### **Carissa Ahlstrom**



Carissa started with the Town in June of 2022 as an Administrative Assistant to the Development Services Enterprise Team. She works daily to help maintain office functions and plan events, previously working as a Marketing Assistant and Event Planner at Well States Healthcare. She attended Arapahoe Community College and earned an Associate of Applied Sciences in Business Administration.

Fourteen years ago, Carissa moved to Larkspur

from Rancho

Cucamonga, California, and has been loving Colorado. She enjoys karaoke, snowboarding, spending time with her family (pictured above), telling dad jokes, and playing the ukulele. She also has an identical twin sister (pictured right), who is her built in best friend.

Carissa said the best thing about the Town of Castle Rock is the people she works with. "Everyone here is so amazing. I love being a part of such a supportive and collaborative team that I can learn from and have fun with every day!"



## **Staff Kudos**

"You were a wonderful help to me, **Chelsia Oborny** — thank you so much not only for this link but the other crucial information you offered. I really appreciate you! Best wishes"

- Rowena G.
- "Pam Hall is AMAZING! Thank you!"
- Mark G.
- "Thank you Darcie Hartman! You are the best!"
- Jason F.

# **New Land Use Submittals**



#### **Administrative reviews**

Administrative land use submittals are reviewed and processed by staff, according to Municipal Town Code, and do not require public hearings. All land use submittals go through a rigorous review by Development Services, Castle Rock Water, Public Works, Fire, and Parks and Recreation.

#### 200 Wolfensberger Road

Replat to subdivide one lot into two lots.

#### **Dawson Trails**

Construction documents and erosion control plans for demolition of previously installed infrastructure on about 51.3 acres, located on west side of State Highway I-25, south of Plum Creek Boulevard and north of Tomah Road.

#### Lanterns, Montaine

Drainage and landscaping design revisions, located on Shadescale Way.

#### Meadows, Filing 17, Affinity at Castle Rock

Construction documents and erosion control documents for age-restricted, active adult senior living project, located south of Meadows Parkway and Lombard Street.

#### Philip S. Miller Library

Stormwater drainage easement for new library, located at 100 S. Wilcox Street.

#### **Promenade**

Retaining walls/landscape plans revision to add irrigation/tap meter adjacent to Castlegate Drive.

#### **Town Project, Parks and Recreation**

Design revision for Colorado Front Range Trail Connections.

#### **Town Project, Parks and Recreation**

Design revision for Mitchell Gulch Park renovations, located at 200 Mikelson Boulevard.

# Promenade, The Brinkerhoff & Bar Hummingbird

Construction documents and erosion control plans for The Brinkerhoff and Bar Hummingbird restaurant buildings, located on southwest corner of Castle Rock Parkway and Promenade Parkway.



#### **Promenade, Lazy Dog Restaurant**

Construction documents and erosion control plans for new 8,000 square-foot Lazy Dog Restaurant, located on northeast corner of Promenade Parkway and Castlegate Drive West.



# **Boards and Commissions**

### Actions and Updates



Development Services supports five boards and commissions that serve specific purposes for building appeals, variance hearings, land use case recommendations and determinations. These boards and commissions consists of residents, and in some cases, business owners as appointed by Town Council.



#### **Board of Adjustment**

Dec. 1, 2022 Meeting canceled.



#### Board of Building Appeals

Dec. 5, 2022

The Board of Building Appeals held their regularly scheduled meeting and heard updates from the Chief Building Official and Councilmember Hollingshead.



#### **Design Review Board**

Dec. 14, 2022

The Design Review Board held its regularly scheduled meeting and discussed the site development plan for the Keystone Hotel (Next Door Bar) Patio. The request was reviewed and approved by a vote of 6 to 0. See Page 2 for a rendering of the project.

Dec. 28, 2022 Meeting canceled.



#### **Historic Preservation Board**

Dec. 7, 2022

The Historic Preservation Board held its regularly scheduled meeting and discussed a public hearing item and a discussion action item. The public hearing item was for an accessory dwelling unit addition at 7 North Lewis Street. The request was reviewed and approved by a vote of 4 to 3. The discussion action item was for a local restoration grant application for 203 Cantril Street. The request was reviewed and approval was recommended to Town Council by a vote of 6 to 0.



#### Planning Commission

Dec. 8, 2022

The Planning Commission held its regularly scheduled meeting and discussed two public hearing items. The first item was a request to construct an Accessory Dwelling Unit at 544 Senter Drive. This request was reviewed and approval was recommended to Town Council by a vote of 7 to 0. The second item was for the Canyons Far South Annexation and Planned Development Plan. The Planning Commission reviewed the Annexation and Planned Development Plan and approval was recommended to Town Council by a vote of 7 to 0.



Canyons Far South PDP Vicinity Map

Dec. 22, 2022

The Planning Commission held its regularly scheduled meeting and discussed the public hearing item: Meadows Filing 20 Site Development Plan. The request was reviewed and approval was recommended to Town Council with a vote of 4 to 0.

# **Town Council Actions**

### **Actions and Updates**



#### **Town Council considered the following:**

#### Dec. 6, 2022

Town Council held their regularly scheduled meeting and discussed a resolution for the Consolidated Annual Performance and Evaluation Report for the Community Development Block Grant (CDBG) Program.

The CDBG entitlement program provides annual grants on a formula basis to states, cities and counties to develop viable urban communities. The overall CDBG program goals are to provide decent housing, a suitable living environment and expand economic opportunities, primarily for the benefit of low-to-moderate-income residents of Castle Rock.

The Town met the necessary requirements to be entitled to an allocation of funding provided through the <u>U.S. Department of Housing and Urban Development (HUD)</u> in 2021. HUD approved the Town's 2021-2025 Consolidated Plan, which is a detailed plan designed to help the Town assess its affordable housing and community development needs and make data-driven, place-based investment decisions for the CDBG.

A summary of this year's CDBG projects and expenditures were provided and shown to be in compliance. The Town was able to make improvements to Butterfield Park and enhance services at the Senior Center. The resolution to approve the Consolidated Annual Performance and Evaluation Report for the 2021 program year was approved with a vote of 6 to 0.





Visit our <u>webpage</u> to find more information on upcoming public hearings and Board, Commissions, or Town Council meetings

# **CASTLE ROCK DEVELOPMENT SNAPSHOT: December 2022**





estimated population as of December 2022

Sign Permits Reviewed – 8

All on time

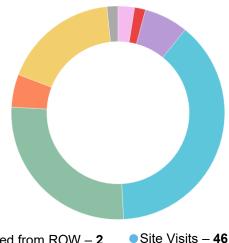
Sign Complaint Responses – 3

Population based on the total number of occupiable residential units

# **Zoning Division**

#### **Core Service Levels**

Zoning staff process numerous code enforcement actions each month, from rubbish, abandoned vehicles and setback encroachments to illegal uses. They respond to complaints from the community, visit sites to determine compliance and issue Notices of Violation as necessary. Our inspection team removes hundreds of illegal signs encroaching into Town rights-of-ways. Staff reviews all business licenses, temporary use permits and sign permits for zoning compliance in a timely manner.



- Signs Removed from ROW − 2
- Notices of Violation Sent 6
- Business Licenses Reviewed 21
- Code Complaint Responses 32
- ■Temporary Use Permits Issued 2

#### **Core Service Levels**

The Planning and Development Review teams process numerous submittals each month. These core service levels are reported for all land use projects, including projects that go through public hearings and projects that are under administrative review.

#### **New Development Projects**

# New Development Project Applications this

Month

#### **Development Reviews**

#### **Monthly Reviews Completed\***

first review

second review

third review or greater

\*On time with the exception of 1 late first review, 4 late second reviews, and 2 late third reviews due to high volume and being short staffed.

#### **Pre-Applications**

Planning/Development Review

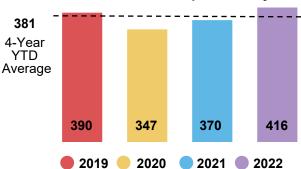
**Pre-Applications** this month

year-to-date Pre-Applications

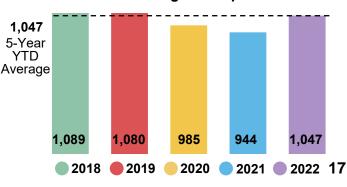
> percent of Pre-Applications over the previous 12 months advanced as new projects

A preapplication meeting is required prior to any land-use submittal. Meetings may review conceptual ideas that never lead to a formal submittal. Preapplications expire and must be resubmitted after 12 months.

#### **Year-to-Date Development Projects**



#### Year-to-Date Planning/Development Reviews



# **CASTLE ROCK DEVELOPMENT SNAPSHOT:**



# **Building Division**

#### **Core Service Levels**

Building Division staff process hundreds of building permits a month, from a new hot water heater or deck, to constructing an entire new home or commercial building. Our inspection team conducts thousands of inspections each month to determine code compliance. We report on the following levels of service monthly, although they are just a snapshot of some of the work we do.

Development Services staff process permits, conduct inspections, respond to code violations and review plan submittals each month. This snapshot highlights staff activity during the previous month for the Zoning Division, Building Division and Planning/Development Review. Information on previous months can be found in the <u>Development Services' Monthly Report Archive</u>.



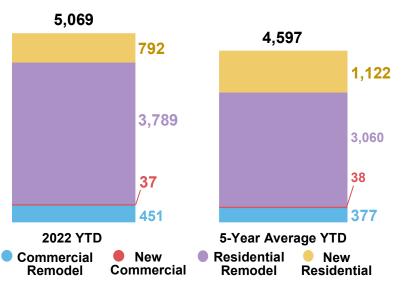
#### **Building Permits Reviewed**

Monthly Building Permit Reviews by Type



#### **Building Permit Applications Received**

**Year-to-Date Building Permit Applications Received** 





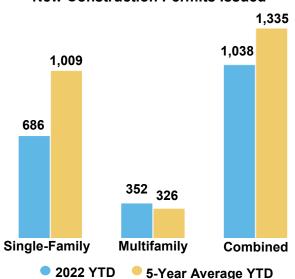
Residential Permits Issued this Month





Average

#### Year-to-Date Residential New Construction Permits Issued



# DECEMBER 2022 | FINANCE DEPARTMENT



Town of Castle Rock <a href="CRgov.com/Finance">CRgov.com/Finance</a>

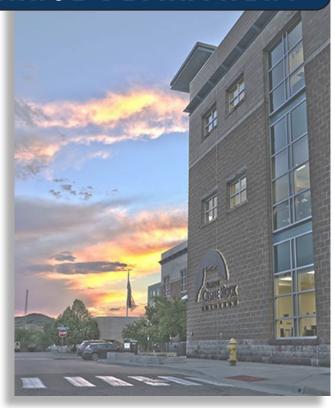
Trish Muller, CPA Finance Director

#### Mission

Through exceptional customer service and effective partnerships, we deliver accurate and timely financial services.

#### **Vision**

The Finance Department will provide financial solutions and services in support of the Town's vision and community objectives through: proactive education, purposeful planning, excellent communication and fiscal accountability.



### How does Finance support the Town's vision and priorities?

### **Accounting**

The Accounting Team provides financial services such as accounts payable and receivable, investments, and capital asset reporting to internal and external customers. The team ensures financial transactions are recorded in accordance with the Town's Municipal Code, Governmental Accounting Standards and in compliance with governing laws and regulations.

#### **Budget**

The Budget Team supports departments
Town wide with future budgeting and financial
planning to attain strategic priorities in the
short and long term. The team actively
monitors, analyzes and reports on Town
financial activity throughout the year.

#### **Payroll**

The Payroll Team fulfills and maintains the critical role of employee compensation. Technicians responsibly process and calculate appropriate benefit and other deductions and maintain all aspects of pay. They continually learn and navigate complex federal and state payroll and tax regulations while adhering to the highest standards of confidentiality and customer service.

#### Revenue

The Revenue Team provides education and outstanding customer service while licensing businesses and collecting sales tax with a "home town" feel and understanding. The team works with economic development, the Downtown Development Authority and the Urban Renewal Authority to align with the Town's vision.

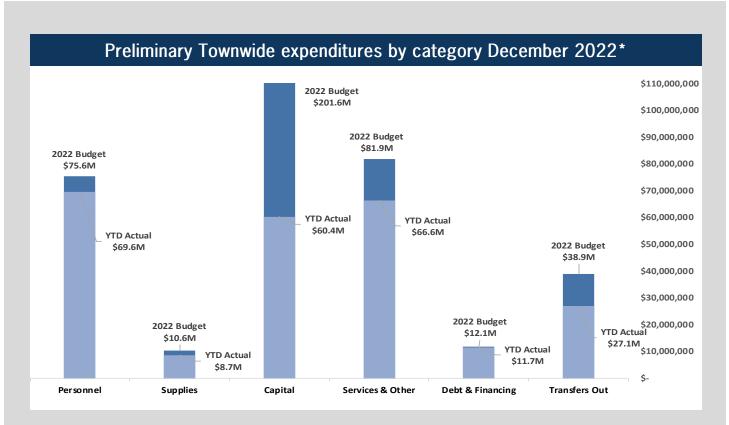
#### **Council Community Grant Program**

The Council Community Grant Program awards funding to non-profit organizations that contribute to Castle Rock's quality of life, with special emphasis on programs and activities for youth, seniors, community-based environmental and sustainability and performing and visual arts.

Congratulations to the following non-profit organization who applied and was awarded funds for the 2022 4th Quarter Council Community Grant Program:

American Legion Post 1187: the nation's largest wartime veteran's service organization devoted to serving fellow active duty military and their families, mentoring youth, promoting strong national security, and advocating patriotism across the U.S. requested funds to support Castle Rock students by covering participation fees, travel and room and board for the American Legion Boys State program.

For more information on the Town's grant programs please visit <a href="CRgov.com/Grants">CRgov.com/Grants</a>.



\*Latest full month numbers available



For more information on new Castle Rock businesses, please visit www.CRgov.com

#### **Business licenses issued December 2022**



58

Total businesses licensed in December



21

**Businesses licensed in Castle Rock** 



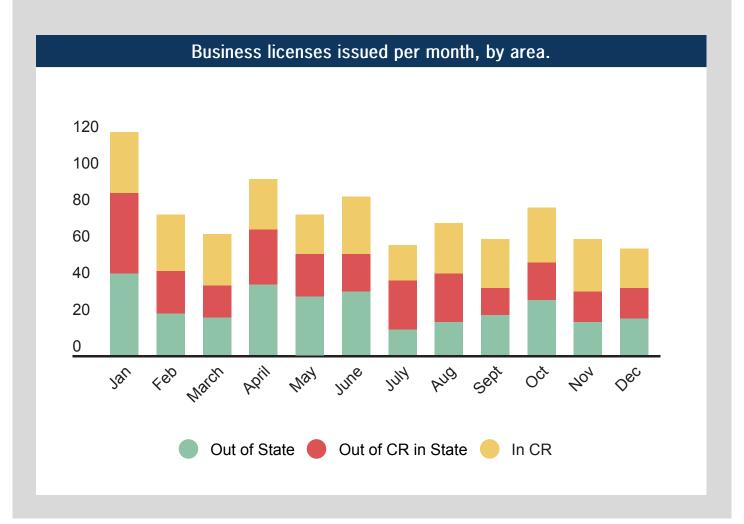
20

**Businesses licensed out-of-state** 



17

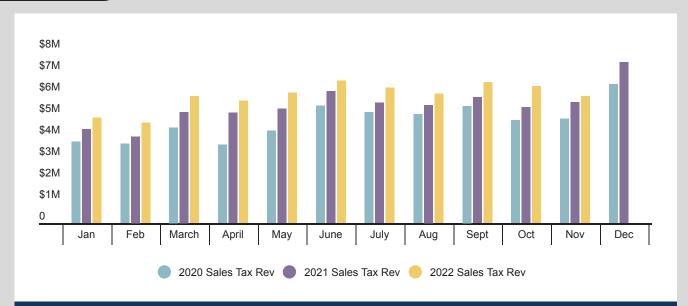
Businesses licensed in CO but outside of Castle Rock



# Businesses licensed in Castle Rock, December 2022 - Check them out!

1776 Landscape and Maintenance LLC	Landscaping Services			
Aveca Holdings II LLC	Short Term Rental			
Blazy Daze Smokeshop & Hookah Lounge	Vape, CBD Glass Smoking Products & Hookah Lounge			
Castle Rock Carpet Care LLC	Carpet Cleaning			
Castle Rock Pest Control	Pest Control			
Cup of Snark LLC	Crafts			
D and A Enterprises LLC	Retail Merchandise			
E10 Originals and OEMs	BMW Vintage Car Parts			
Fix It Therapies LLC	Wellness Clinic			
Gracie Barra Castle Rock	Uniforms Sold, Martial Arts Lessons Taught			
Hallmark Properties	Short Term Rental			
Ivory & Oak Co. LLC	Handmade Wood Gifts & Home Decor			
Kriseyd Originals	Food Prep			
Lela Marcin	Ref Gear			
Omnama Fashions LLC	Indian Outfits			
Snow Maids LLC	Residential & Commercial Cleaning Services			
<u>Stance</u>	Socks & Other Apparel			
Synergy One Lending, Inc.	Mortgage Lending			
Unlimited Sports Apparel LLC	Sports Goods Equipment and Apparel			
Westside Towing	Truck Repair			

#### REVENUE



As sales tax returns are due 20 days after the end of the month, this report shows the prior month's revenue.

#### Communicating results

Sales tax collections for November were up 4.2 percent from the previous year's month, or up \$236,151 compared to November 2021. Year-to-date (YTD) collections are up 11.7 percent compared to the same time frame in 2021. Staff will continue to monitor this very important revenue stream for the Town and inform as needed.

NOV	Gross Sales Tax Collections	Town Audit Revenue and Amounts Collected on Behalf of Others	Net Collections	
2021	<b>2021</b> \$5,643,498		\$5,378,308	
2022	\$5,879,649	\$369,680	\$5,509,969	
Dollar +/-	\$236,151	\$104,490	\$131,661	
Percent Change	4.2%	39.4%	2.4%	
YTD	Gross Sales Tax Collections	Town Audit Revenue and Amounts Collected on Behalf of Others	Net Collections	
YTD 2021 YTD		Revenue and Amounts Collected		
	Tax Collections	Revenue and Amounts Collected on Behalf of Others	Collections	
2021 YTD	<b>Tax Collections</b> \$58,185,318	Revenue and Amounts Collected on Behalf of Others \$3,525,451	<b>Collections</b> \$54,659,867	



#### Supporting fiscal accountability



#### \$50,303

Collected from delinquent accounts in December for the month of October.



#### \$584,670

Year-to-date delinquent account collections



#### 103

Audits in process



#### \$36,047

Audit revenue collected for the month of November

# Castle Rock Fire and Rescue Department



An Internationally Accredited Fire Rescue Agency Since 2012

# **December 2022 Monthly Report**

**Department News:** The Annual Fire Safety Coloring Contest is hosted every fall by the Castle Rock Fire and Rescue Department. This fun and educational coloring contest is a safety message turned into creatively colored pictures by any of the 3rd – 6th graders in the Castle Rock area that wish to participate. Winning entries are made into decals that are placed on the side of a fire truck where it will reside the entire year. Crews went to each of these schools for presentations to recognize winners and to give each of their classes ice cream treats to share.



Josie from Clear Sky

Penelope from Academy Charter



Owen from Rock Ridge





Leona from South Ridge



Teegan from Academy Charter

#### **Operations Division:**

#### **Deputy Chief Rich Martin**

#### **Customer Service:**

Measurable Outcomes - Rating of 4 or better on customer survey cards 100% of the time **December 2022 ...100%** 

Of the 36 customer survey cards we received in December, 35 had highest overall rating of 5, and 1 had a rating of 4. Some of the comments we received read; "The EMT & Fire staff realized the severity of my situation & responded to my needs quickly. Thank you." Another read; "The ambulance team, Cody & Josh, were prompt, courteous and professional. The other responders were fantastic as well. Thank you so much for your help!" Another read; "Very professional. Felt safe & secure at all times. Thank you for helping me through my situation."

#### **Call Statistics:**

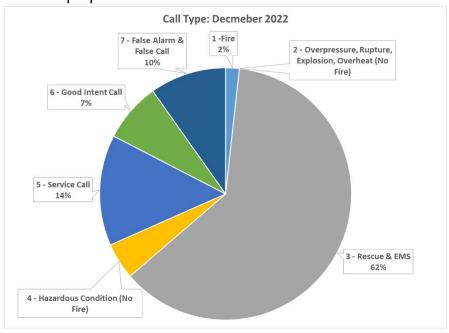
For the month of December, we responded to 686 calls for service. Last year at this time, we responded to 519 calls. This places our year to date calls at 7,109, which is 959 more calls or 13.5% higher than last year. Average calls per day for the month were 19.

Of the 686 calls for service in December, 422 of the calls were for EMS. We had 385 patient contacts and transported 301 patients. This time last year, we had 258 transports.

#### Fire Calls:

During the month of December, we ran 14 fire calls compared to 14 in December 2022. We had 60 alarm calls, which is 6 more than last year.

The chart below indicates call proportions for the month of December:



2

#### **Emergency Medical Service Calls:**

For the month of December, there were 301 total patients transported. 232 patients were transported to Castle Rock Adventist, which is 77% of all patients transported. 39 patients were transported to Sky Ridge, which is 13% of all patients transported.

#### **Measurable Outcomes:**

CRFD Paramedic on scene of all EMS calls 100% of the time

November 2022...100% December 2022...100%

Monthly alerts called by crews and follow-up

Trauma Alerts 1 Transported to appropriate facility 100% Stroke Alerts 2 Transported to appropriate facility 100% STEMI Alerts 1 Transported to appropriate facility 100% Sepsis Alerts 7 Transported to appropriate facility 100%

Correct treatment, destination, and procedures done 100%

#### Significant Incidents:

• On December 5<sup>th</sup>, Quint 151, Medic 151, Engine 152, Engine 154, Chief 151, Bureau 152,

Bureau 153, Hazmat 153, Training 151, Medic 161, and Battalion 151 responded to Interstate 25 and mile marker 181.5 for a reported motor vehicle crash. Crews found one semi-truck and trailer over the embankment over Plum Creek and six additional passenger vehicles crashed on the Interstate. One driver from the semi-truck was treated and transported to a local hospital. All occupants of the additional involved vehicles denied injury. Colorado State Patrol Hazmat arrived and CRFD crews worked with several agencies to control a hazardous materials incident created by diesel fuel from the semi-truck.



On December 16<sup>th</sup>, Engine 154 and Quint 151 responded to an initially reported fire alarm that changed to a smoke investigation, and was then upgraded to a residential structure fire on Robin Song Court. The following units were added to the response: Medic 36, Medic 151, Engine 152, Engine 39, Chief 154, Division Chief 151, Battalion Chief 151, and Bureau 153. Crews arrived and found the residence charged with black smoke and a fire in the main living area of the residence.

Crews quickly extinguished the fire and searched the residence finding one live cat and nobody else in the residence. The cause of the fire is under investigation.

#### **Life Safety Educators:**

In December, we continued to have numerous scheduled events throughout the month, contacted 736 citizens through 10 scheduled public education events, and had numerous other contacts through unscheduled visits at the stations.

A synopsis of events that occurred this month include:

- CPR was taught to 60 Castle Rock Police Officers.
- Hands Only CPR was taught to 38 6<sup>th</sup>-8<sup>th</sup> graders at World Compass Academy.
- The team delivered Santa to Story Tellers and S'mores at Festival Park.
- 16 car seat checks.
- Station and school visits continued throughout the month.
- Coloring Contest presentations were made to all of the winners at their schools. We are proud to report a 22% increase in student participation this year!

The Public Education Team continues to regularly meet. At this month's meeting, the team discussed; coloring contest success, Pulse Point/CRFD coffee sleeve distribution, car seats and the upcoming data collection project, car seat proxy dates for 2023, and the status of the binders for education.

<b>Public Education</b>	Statistics:
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For the month of December, we made contact with 763 citizens through 10 different events, totaling 13 hours of education. Of the 763 citizens we made contact with, 645 were children (18 years of age or younger) and 118 were adults.

CRFD Facebook November 2022				
121	3,230 Followers			
₩00	899 Likes and Reactions			
	2,175 Page Views			
	2,945 Post Engagements			

#### **PulsePoint Monthly Active Users (MAUs):**

During November (reporting is one month in arrears), 957 users following CRFD on the PulsePoint app enabled CPR alerts and 4,315 Monthly Active Users (MAU). MAUs represent individuals actively following CRFD on the app during the reported month. When citizens are more aware and engaged with the health of their community, they become better partners with CRFD and can help save a life.

#### **Deputy Chief Commentary:**

Our call volume finished well above last year. Through the month of December, we have responded to 13.5% more calls for service than last year at this time.

Wildland fire conditions did improve somewhat this past month. We continue to work in conjunction with our county partners.

4

We had two firefighter paramedics resign in December to pursue other career paths. We wish them both the best as they start the next chapters of their careers.

We continue to focus on Cardiac, Sepsis, Stroke and Trauma alerts from initial contact, through transport to the appropriate facility, hospitalization, and ultimately, discharge from a health care facility. We continue to work with our medical director to show these outcomes by utilizing The Modified Rankin Score. We believe this data is the most comprehensive at this time for us to get the best information and continue to look at ways to improve patient care and outcome.

We remain current and are complying with any remaining orders and guidance regarding the pandemic at local, state, regional, and national levels as they are updated and revised. We have noticed an increase in patients with respiratory illnesses.

The ER divert status increased significantly this past month in part to the current increase in influenza and other respiratory illnesses, along with other serious medical and trauma calls in our region.

We continue to ensure our EMS data is reported to the state on time, as per new state statutes. With our new reporting system, this information is automatically being uploaded to the state.

Annual physicals were completed by the end of December.

In December, members were involved in physical fitness for a total of 247.5 hours.



A drop-in station visit

#### **Administration Division:**

#### **Fire Chief Norris Croom**

#### **Key Admin Issues:**

December ended with the department running the most calls for service ever. With 7,109 total calls and 6,826 calls in our jurisdiction, this represented 13.5% (from 6,150) and 14% (from 5,844) respective increases. We averaged 19 calls per day and 592 calls per month districtwide. Increases in calls were seen across all areas including fires (+40), EMS (+641), alarms (+58), and other miscellaneous (+220). If we continue on this trajectory, we could potentially respond to over 8,200 calls in 2023.

The Town converted over to a new financial, HR, and payroll system called UKG effective December 24. This system will consolidate a number of different software applications previously being used into one system that will allow for greater ease of use for our employees and the Town. As with any new software system, there have been some minor issues, so please be patient as we bring this system completely up to speed.

Due to the construction of the Macanta subdivision off of Crowfoot Valley Road, the fire management zone for that area had to be modified to reflect hydranted versus unhydranted areas. Macanta is now in the original zone, FMZ 15502, and the rest of the zone is now FMZ 155021, indicating unhydranted. This required CAD and GIS changes to the base maps as well as writing new response plans for zone 155021. Station orders were also reviewed, and no changes were made for either zone with Station 155 being first due, followed by Stations 154 and 184 (Franktown Fire) as the next two.

The Board of County Commissioners New Year's Eve fireworks show was successfully held at the Douglas County Fairgrounds. Turnout at the fairgrounds was good, we were fortunate to have snow on the ground to prevent any fires from the fallout, and there were no significant incidents as a result of the show.

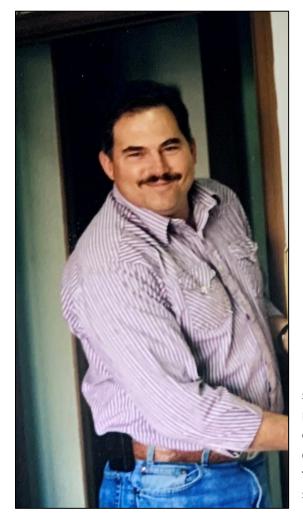
#### **Fire Chief Commentary:**

GIS finalized the changes to the town evacuation maps, and created version 2.0. These updated maps have been sent to representatives from Public Works and CRPD for an additional review, any additional changes, and then potentially adopted. Once adopted, we will present these maps and plan to department members as well as key staff in other Town departments. These will be for internal use only in the event of a significant event requiring an evacuation of any area in town.

We had two members resign from the department in December. With the upcoming hiring process and recruit academy for 2023, we are working to fill these two vacancies as part of that process.

The Department presented the awards for the annual Poster Contest last month, with five winners selected from four schools. There were over 220 entries this year, and this program continues to be successful in engaging our local elementary students in fire safety education.





Finally, retired Fire Chief Joseph M. Schum III died on December 12 after a 25 year battle with MS. Chief Schum served as the fire chief from 1985 until 1997 when he medically retired from the department. He was instrumental in moving the department from an all-volunteer force to a combination department during his tenure with the hiring of the first career firefighter in 1993, and then additional career firefighters in subsequent years. Rest in peace, Chief!

#### **Life Safety Division:**

During the month of December, the Division continued to meet the expectations of our customers as can be seen in the following summary.

#### **Statistics:**

Inspection Type	Number	Hours		
Complaint	0	0		
Customer Inquiries	26	9.5		
Construction	84	75.25		
Business Insp	82	60.50		
Special or Special Event	1	5.0		
Other Inspections	10	11.75		
Total Inspections	203	162		

#### Plan reviews:

A total of 111 plan reviews (87 hours) were completed during the month of December.

#### **Investigations/Response Assist:**

Response Assist – 29 responses taking 33 hours to complete Investigation – 4 entries requiring 8 hours of time to complete

#### Training:

The division as a whole entered 7 hours of training during the month of December.

#### UAV's:

Total Flights – 7 Total Flight Feet – 18,967

#### **Training Division:**

#### **Division Chief Oren Bersagel-Briese**

#### **Division Chief Commentary**

We really enjoyed spending time with each crew at this month's 20s Drills! Following a recent safety team internal investigation, we identified a gap in our formal training on usage of the battery-powered cot. To close that gap, we designed an obstacle course at Station 152 that highlighted the different functions of the cot, the need for team communication, and how to maneuver the cot over different surface



transitions. While we had a lot of fun doing the course, this is a fundamental skill set that we were thankful to revisit.

December's department-wide training is our annual CIRSA required review of injury prevention. Thanks to everyone for understanding the need and pushing through. Throughout the month, we were also able to complete this year's safety and survival training including the bailout skills at the FTC.

Following discussions at the Executive Staff level, the Training Division will take full responsibility for the department's technical rescue training. We are hopeful that we'll be able to streamline the planning side of the trainings and provide continued excellent support of our subject matter leads. We look forward to supporting operations in this capacity!

SimsUShare: The latest evolution of this program includes the involvement of our dispatchers into the simulations. With each shift having completed a round of training with dispatch, we think that we've found a good way to ensure their appropriate participation levels, and we are looking forward to having them involved moving forward. Conversations with dispatch have proven that they are finding a ton of value with the trainings, are enjoying seeing what you are talking about, and they are wanting to be involved as much as possible.

CMCB: We were able to host several FO1 written exams and a FO1 skillsheet completion session for four of our members. This showed another wonderful benefit of the CMCB process and allowed our members to successfully complete their FO1 skillsheets in about four hours – filled with CRFD centered discussions focused on what we would want our Lieutenants to know and understand. Earlier in the month, we also participated in the first part of a strategic planning session for CMCB, and we expect that plan to be formalized by the second quarter of 2023.

Hiring Processes: We are continuing to work through the 3Ps and background processes for several new members. As it stands today, we are now looking at sending three people to the WMFR academy and having three people go through our lateral academy. That would leave us with one position to try to potentially fill later this year.

In December, crews trained for more than 1,562 hours on a wide range of topics to stay operationally prepared including safety, leadership, extrication, airway skills, driver/operator, engine and truck company operations, forcible entry, incident command, ground ladders, professional development, physical fitness, search and rescue, and much more.

We are currently working on the following projects:

- FTC projects
- EMS training
- ImageTrend implementation
- CMCB
- STO program



Annual CRFD training hours for the last three years



Working through difficult intubation situations



Obstacle course cot training



Obstacle course cot training

#### **Logistics Division:**

#### **Division Chief Jim Gile**

#### **Division Chief Commentary:**

December is always full of activity as projects are completed and closed out for the year, or extended into next year. We also begin gearing up for the new year and new budget to start in January. This year has been no exception.

Work continues on the door raise project at Stations 154 and 155; due to various delays from the contractor and weather, this project will continue into next year. The rear doors have been completed and work has moved to the front of each station.



We had issues with the new Bauer breathing air compressor that was to be delivered. After driving to the freight terminal due to multiple missed deliveries, I inspected and had to refuse the delivery due to shipping damage. Bauer has been in the communication loop and is working to expedite a new compressor.

Station 153 and 154 landscape design work is progressing. Working with Lime Green Design, Facilities and Parks we are honing in on completing the plans for these two stations. Once complete, we will have the design and plans for a RFP for the work to be done.

Further projects extending into 2023 include the air/light trailer replacement. In 2022 we made the switch to MSA SCBA, and made a vendor change for our medical oxygen allowing us to move into tote head portable bottles. We had a Plymovent exhaust drop installed at Station 153 in preparation for the new air/light trailer.

The R&D team completed some large projects, such as Class B foam and thermal imagers. The apparatus team was revamped, a new engine specification was made and an engine was approved and ordered for Station 156 to open in 2025. Additionally, in December, Logistics created an electronic fuel log for crews to log fuel filled into vehicles through the PSTrax platform, and the SCBA module came on-line with a full go live date of January 1, 2023. This required the updating of multiple SOG's and an Administrative Directive to bring us in-line with NFPA 1852. We also stood up the assets module in PSTrax to fulfill the intent of CFAI Peer Team recommendation report. Recommendation 6 states: It is recommended that CRFD develop a plan to ensure that all types of equipment tested by third party vendors have been tested, including loose equipment stored at facilities. (6E.3)

We have already begun work on projects scheduled and budgeted for 2023. This includes the thermal imager camera (TIC) replacement. The R&D team had completed evaluations last year and made a recommendation for the FLIR K55 camera. We are currently getting quotes for those cameras, lanyards and chargers.

Annual equipment testing has been scheduled and starts in the month of January for Hurst Rescue Tools and SCBA annual flow and testing, with hose and ladder testing to follow later in the year.

LEST Keegan continues to handle the day to day logistics needs of the department. This includes tools, equipment, uniforms and PPE. He is also the primary approver of the Home Depot / Supply Works station supplies orders. LEST Keegan has been proactively working on next year's testing schedule for equipment needing third party testing. He has also been working on annual required testing, such as our annual SCBA fit testing. Tad has also been working with MES to get the replacement bunker gear order completed for those on the replacement schedule this year and has also been working with the prospective new recruits for all their gear and uniform needs.

Sr. EVT Jennings continues to handle the repair and maintenance needs of the department fleet. He continues to handle all repairs and maintenance on the heavy fleet and, as needed, on the light fleet. In 2022, Ben spent a total of 1,847 hours on 45 pieces of equipment and 91 equipment work orders. This equates to an 89% productivity rate. For some perspective, if we were to sub this labor out to Front Range Fire Apparatus, it would cost the department \$304,755.00. In addition, the government fleet standard for productivity is 70% of available hours or 1,456 hours. At last check, South Metro Fleet was at 76% or 1,580 hours. Sr. EVT Jennings is exceeding these comparable hours. On one hand, this is strong work and a great job by Ben! On the other, it shows that he is closing in on maximum effort and availability. As we continue to grow and get busier, this highlights the ongoing need for additional help in the Logistics Division.

HAAS alerting system (the system that alerts drivers of emergency vehicles in the area) totals for December are 7,969. Year to date is 66,414, and the total since we began the program is 193,077. Castle Rock Fire and Rescue was the first agency in Colorado to implement the system.

#### **Division Project Report**

Facilities Projects
R&D Team Projects
Station 154 / 155 Door Raise Project
Station 156 Apparatus
New STO Up-fitting
MDC GPS issues

New STO up-fitting Station 153/154 Landscaping Planning Hazmat Team Projects General Air Medical Oxygen Project Facilities Station Tours



Station 155 door project

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#### **Accreditation and Emergency Management:**

#### **Assistant Chief Craig Rollins**

In December the State, County, and Tri-County health departments, in conjunction with the North Central Region's Healthcare Coalition, suspended the bi-weekly status calls monitoring the RSV and MPX issues due to declining infection rates and the healthcare systems ability to manage resources internally.

In December, the department conducted its 2022 Program Appraisal and Program Review. Generally speaking, all programs are moving forward and in-line with staff expectations. Last year (2021), a second suppression company was added to all MVC incidents. This year there was discussion about adding a second suppression company to all calls on I-25 and other high-speed or high-traffic areas. The decision was made to add a second suppression company to all calls, regardless of incident type, on I-25. The executive staff will review system impacts and decide if it is appropriate to add an additional company on other roadway incidents. This would also require the creation of numerous fire management zones (FMZ) to ensure the proper response plans are dispatched.

The department sent three members (Chief Martin, Chief Gile, and Lieutenant Moore) out as CFAI peer assessors in December. All agencies visited will be recommended for accredited status. One of the benefits we see from providing peer assessors is understanding how other agencies are addressing challenges that may be similar to our own and potentially exposure to challenges that we may see in the future.

The Center for Public Safety Excellence has announced the dates for 2023 Excellence Conference in Orlando FL (Feb 28 – Mar 3), and registration has begun. This conference is a great opportunity to learn more of the CFAI continuous improvement methodology, the Commission on Professional Credentialing (CPC) process, and general professional networking <a href="https://www.cpse.org/conference/">https://www.cpse.org/conference/</a>. This year, there will be five educational tracks (Accreditation, Credentialing, Leadership, Challenges to Opportunities, and Changing for Improvement), or you can attend sessions a la carte. If you have an interest, please contact me.

#### **November 2022 Summary:**

Calls for Service:

	All Incidents				Emergent Incidents			
	Incidents		Apparatus Response		Incidents		Apparatus Response	
	548		1179		362		838	
Urban	383	70%	787	67%	238	66%	524	63%
Rural	116	21%	252	21%	84	23%	189	23%
Interstate	4	1%	91	8%	3	1%	86	10%
Blank	45	8%	49	4%	37	10%	39	5%
Mutual Aid Calls	49	9%	147	12%	41	11%	123	15%
Aid Received	31	6%	108	9%	25	7%	92	11%
Aid Given	18	3%	39	3%	16	4%	31	4%



Castle Rock
PARKS &
RECREATION
December 2022
Monthly Report



























# UPCOMING Events

View up-to-date information at CRgov.com/Events.



# **HOLIDAY TREE RECYCLING** Visit CRgov.com/TreeRecycle

Visit CRgov.com/TreeRecycle for locations and instructions



## **WINTER BALL**

5 - 8 p.m. Douglas County Fairgrounds



# COLORADO BLUEBIRD PROJECT OPEN HOUSE

7 - 8 p.m. The Millhouse at Philip S. Miller Park



## COLORADO BLUEBIRD PROJECT NEST BOX MONITOR TRAINING

6:30 - 8 p.m.

The Millhouse at Philip S. Miller Park

# CAPITAL PROJECT UPDATES

# Parks, Open Space & Trails

The following updates summarize general progress that occurred throughout the month on capital projects managed through the Parks and Recreation Department; for background information and additional details visit CRgov.com/ProjectUpdates.



# PAINTBRUSH PARK ATHLETIC FIELD TURF CONVERSION

- The soccer field at Paintbrush Park is complete and contractor Academy Sports Turf has commenced work on both softball fields.
- In preparation to replace the softball field dugouts in 2023, boring samples were obtained. Once the engineer's report is received, staff will obtain project bids. The softball field fencing will also be replaced this year.



### **BUTTERFIELD PARK RENOVATION**

- Construction of the playground area continued as all the concrete was placed and some elements installed; the remaining playground amenities will be added in February.
- The footings for the park shelters were also installed, and the shelters should arrive in February.



# DOUGLAS COUNTY OPEN SPACE ADVISORY COMMITTEE

In December, Town Council unanimously approved a motion supporting the nomination of Patti Hostetler to serve as the Castle Rock representative on the Douglas County Open Space Advisory Committee. The Parks and Recreation Department has historically researched and offered appointment recommendations to help fill this role. Next, the Douglas County **Board of County Commissioners** will consider formally approving the appointment to help COSAC's purpose of providing recommendations on the disbursement of funds from the County's Open Space, Trails and Parks Fund. Patti recently retired as the Executive Director of the Douglas Land Conservancy, served as the Treasurer of the Board of Directors of the Castle Rock Parks and Trails Foundation and was honored with a Lifetime Achievement Award from Keep it Colorado, the statewide coalition for Colorado land trusts.

# CAPITAL PROJECT UPDATES

# Parks, Open Space & Trails



# SPORTS DEVELOPMENT CENTER AT THE BRICKYARD

 Barker Rinker Seacat Architecture is nearing completion on the schematic design process for the proposed sports development center as part of the Brickyard. The designs will set various drawings to map out the facility's interior and exterior, including plans, elevations and systems. Staff will present the designs to Town Council in first quarter 2023 to obtain feedback on the general direction outlined to date.



# COLORADO FRONT RANGE TRAIL AT CASTLE ROCK

- Clearing and grading is continuing along McMurdo Gulch between Castle Oaks North and Castle Oaks South.
- Boring sampling was completed in December to design the future trail walls, and staff are now waiting on the engineer's report to proceed
- Grading and wall construction will continue throughout the colder months; the concrete path will be placed throughout the spring and summer to minimize winter weather costs.

# **COMMUNITY EVENTS**

& Facility Rental Summary





# 12.02- FESTIVAL PARK 12.03 STARLIGHT MARKET Festival Park transformed into a

- Festival Park transformed into a premier craft and food market, serving as the perfect place for residents to kick off their holiday shopping
- Over 40 vendors featured items including unique crafts, art, and specialty foods such as roasted chestnuts, tamales and salsa
- More than 6,000 visitors enjoyed the market over two days

# REINDEER GAMES 12.03

- 3,000 event-goers enjoyed kid-friendly activities in a winter-themed wonderland in the Millhouse and Amphitheater area at Philip S. Miller Park
- Santa welcomed guests indoors, while s'more roasting, sleigh rides, an obstacle course, outdoor yard games and train rides kept the outdoor space lively











# **12.10** STORYTELLERS AND S'MORES

- Guests enjoyed watching Buddy the Elf enthusiastically greet Santa as he arrived at Festival Park
- Anna and Elsa, Santa, the Grinch and Buddy the Elf read their holiday favorites from the giant Storytellers Chair
- Over 2,000 guests joined in the holiday fun listening to stories, roasting marshmallows and sipping hot chocolate

# SPECIAL EVENT 10 **FACILITY OR VENUE RENTALS**

- Including 7 holiday parties, 2 celebrations of life, 1 internal event and 5 site visits
- 17 trolley rentals



# PROGRAM PARTICIPATION

Summary

attendees at the Wednesday Wellness Walk at East Plum Creek





6 Camp Christmas attendees



**70** adults enrolled in pottery or dance



youth enrolled in dance, KidzArt or fencing

157 enrolled in Adventure Club Preschool





waitlisted for Adventure Club Preschool



Middle School Madness participants





Learn to Swim program offerings



**260** Learn to Swim program participants



FITNESS & WELLNESS T& RECREA

1,709 group fitness program attendees

66 personal training sessions



**546** rounds of golf





# **POST PARTNERS**

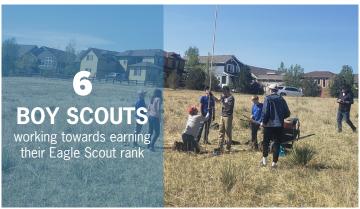
# Volunteer Program Impact











# VEHICLE COUNTER Summary

# **GATEWAY MESA OPEN SPACE**

The data below is collected through TRAFx, a state-of-the-art vehicle counter collection software.

# **GATEWAY MESA OPEN SPACE**

TOTAL MONTHLY VEHICLE TRAFFIC



**Sub-zero** 

temps on Dec. 22 and 23 led to low visitation numbers 138

of vehicles per day in 2022 208

vehicles on peak visitation day, Dec. 11

# RECREATION Updates

# **Upcoming Fitness & Nutrition Programs**

## **GROUP FITNESS & NUTRITION OFFERINGS HELP RESIDENTS START THE YEAR OFF RIGHT**

Beginning in January, the Group Fitness schedule will reflect the highest number of weekly classes since before COVID. Based on demand, the schedule will feature an increase in evening offerings, and more dance classes. View the Group Fitness schedule at CRgov.com/Fitness.

An upcoming Nutrition offering will help busy families kick the year off with tools for addressing the chaos of mealtime. Creating meals for the family can be stressful, and picky eating brings its own challenges. Based in Intuitive Eating principles, this class will help you understand your role as the parent and learn new tools to overcome many common challenges surrounding mealtime with children. Mealtime Madness will be held on Monday, Feb. 6 from 2 - 3 p.m. at the Rec Center. Learn more and register at CRgov.com/Nutrition.

# **One Day Sale at Recreation Facilities**

### **FACILITY FLASH SALE EXCEEDS EXPECTATIONS**

On Tuesday, Dec. 20 a 20% discount code was available for use on new personal training packages, pre-paid annual memberships and multi-visit passes at the Recreation Center and Miller Activity Complex.

The coupon code was used 310 times, an increase of 31% over 2021. The sale was advertised on the internal facility television screens as well as the online registration portal.





To serve people one-by-one so together, we can create environments that are safe and secure, and where people can thrive.

# **MISSION**

The Castle Rock Police Department is dedicated to excellence through community safety, innovation, and public trust. Our goal is to provide for the safety and welfare of both the citizens and visitors of the Town of Castle Rock utilizing effective community-policing philosophies, including crime prevention, traffic enforcement, criminal investigation, crime analysis and community involvement.

Follow us on Facebook, Instagram or Twitter: CRpoliceCO

# One-By-One Policing

To serve people one-by-one so together, we can create environments that are safe and secure, and where people can thrive.

One-By-One Policing is Castle Rock Police Department's vision and is a unique way of leading and serving people, which is central to our pursuit of providing a safe and secure community. This is our purpose, our cause, our belief, and it all starts within our organization. This page is dedicated to the ways in which we as a department reach out to our community one by one and where the community reaches back.

"The people of Castle Rock, are indeed fortunate to have Officer Houser represent them in matters of law enforcement in their community. In my contact with him it was obvious he is a person of honor and integrity. His motivation is to be a person of service while maintaining order. Salutes to a man in blue!"

Jim W. (12/2/22)

Thanks were expressed for all of the officers who responded to his home and, especially thank **Dispatcher Michelle S.**, for their professionalism and guidance, during the recent incidents.

C.W. (12/5/22)

"Officer Thompson is THE BEST! He's been such an inspiration and a great mentor to both of my kids whom are now LEO. Watching his dedication to these kids & the community is heart warming.

M. O. (12/5/22)

POLICE PROBLET SELECTION OF THE PROBLET SELECT

"On behalf of the Mesa Middle School bus drivers, I wanted to take the time and recognize one of your officers, School Resource Officer L. Godffey from Mesa Middle School. He is a force multiplier, dedicated to improving the school's environment. He is committed to helping both students and administrators and does so with ease and a smile. Officer Godfrey is a true leader whose presence and actions have made a positive impact on the institution he represents. We all enjoy working and interacting with him. You are a valued member of our community. Thank you for all you do."

Leon S. (12/11/22)

A woman from [a local home school program] called to express her thanks to Officer L. Godfrey for de-escalating a situation...She stated they "absolutely loved and appreciated Luke," that he was "very professional, loving, and considerate," and he "did a wonderful job talking to the [child] and did a great job talking to his mom, he was incredible."
"Total kudos to him." She also expressed thanks to Officers Mayers & Milord as well, and they "were very professional and just very kind" in their response to the situation as well.

K. E. (12/13/22)

# Message from the Chief



The format of the department's monthly report is purposely designed to mirror our department's five-year strategic plan. This will allow members of the community as well as members of our organization to gauge how we are progressing in key areas of our strategic plan.

The Police Department's strategic priorities will anchor and update the main sections of this report. By doing so, this will facilitate our continued focus on implementing our strategic plan and providing outstanding service to the Castle Rock community. There are six strategic priorities included in the Police Department's Five-Year Strategic Plan:

**Priority 1:** Crime

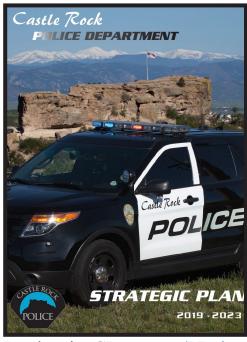
**Priority 2:** Traffic Safety

**Priority 3:** Employees

**Priority 4:** Prepare for Future Growth

**Priority 5:** Community Policing and Partnerships

**Priority 6:** Technology, Equipment and Training



Read entire <u>CRgov.com/PDplan</u>

# Leading with Success

## Lost Necklace Reunited with its Owner!

In December, the necklace at right was found at one of our local parks and turned in to our department. The information was placed on social media in hopes of finding the owner – and we did!

However, the person who lost the necklace did not have transportation to the property and evidence location, so officers from the Community Partnership Unit offered to pick it up, and then delivered it. It certainly was a happy reunion for all!



# Priority 1: Crime

Goal 1: Maintain or reduce the crime rate and provide a sense of safety and security Goal 2: Maintain an investigative capability to identify, apprehend, and assist with the prosecution of criminal offenders

Person Crime Offense	2022 NOV Crime	2021 NOV Crime	3-YR MO. AVG	2022 YTD Crime	2021 YTD Crime	YTD % change 2021-2022	2022 YTD Clearance
Homicide	0	0	0.0	2	0	200%*	2 (100%)
Sex Offenses - Forcible	0	3	2.8	15	35	-57%	1 (7%)
Domestic Violence	11	12	16.1	165	160	3%	149 (90%)
Aggravated Assault	2	2	1.5	12	17	-29%	8(67%)
Total Persons Crimes	13	17	20.4	194	212	-8%	160 (82%)

Property Crime Offense	2022 NOV Crime	2021 NOV Crime	3-YR MO. AVG	2022 YTD Crime	2021 YTD Crime	YTD % change 2021-2022	2022 YTD Clearance
Burglary	2	12	7.6	53	92	-42%	8 (15%)
Fraud/Forgery	12	17	40.9	172	655	-74%	24 (14%)
Motor Vehicle Theft	1	5	7.0	55	69	-20%	3 (5%)
Robbery	0	1	0.4	1	9	-89%	0 (0%)
Theft from Motor Vehicle	6	11	18.5	117	215	-46%	0 (0%)
Theft	31	50	61.6	578	728	-21%	112 (19%)
Vandalism	19	42	32.0	272	398	-32%	53 (19%)
Total Property Crimes	71	138	168.0	1,248	2,166	-42%	200 (16%)

Total Crime Offense	2022 NOV Crime	2021 NOV Crime	3-YR MO. AVG	2022 YTD Crime	2021 YTD Crime	YTD % change 2021-2022	2022 YTD Clearance
Total Persons Crimes	13	17	20.4	194	212	-8%	160 (82%)
Total Property Crimes	71	138	168.0	1,248	2,166	-42%	200 (16%)
Total Crimes	84	155	188.4	1442	2378	-39%	360 (25%)

<sup>\*</sup>Increase from "0" is an estimate as it can not be calculated.

<sup>1.</sup> Persons and Property crimes are reported for the **previous** month due to the transition to NIBRS reporting.

<sup>2.</sup> Offenses shown with N/A data reflect zero incidents for that specific offense. Any offenses displaying 0% reflect incidents had occurred during the year; however, they had not yet been cleared.

# Priority 1: Crime (continued)



Goal 3: Maintain the capability of effective emergency management as well as the response to, and recovery from, a critical incident

Response Times							
PRIORITY 1 CALLS FOR SERVICE	# of Calls	Average Dispatch Time	Average Wait to Enroute	Average Drive Time	Average Time Officers on Scene		
DEC	102	1.44	0.31	5.70	61.62		
NOV	70	2.01	0.40	5.91	85.30		
OCT	78	1.54	0.26	5.39	73.45		
2022 YTD	986	1.50	0.32	5.96	65.25		
2021 MON. AVG	79.3	1.50	0.30	5.48	66.17		

Note: The above time references are fractions of minutes.

Victims Assistance Unit (VAU)								
Activity	2022 DEC	2021 DEC	3-YR MO. AVG	2022 YTD	2021 YTD	% Change 2021-2022		
Cases assigned - Staff Advocates	30	18	21.5	294	252	17%		
Cases assigned - Volunteer Advocates	24	10	10.7	165	144	15%		
Total cases assigned	54	28	32.2	459	396	16%		
Total victims served	89	56	59.4	834	767	9%		
Volunteer office hours	10	0	2.4	55	25	120%		
Total call out hours	36	26	15.4	328	201	63%		

## Victims Assistance Unit Spotlight

"I am so very grateful to the VAU's volunteer team. They contributed just over 5,800 hours of service in 2022, which includes overnight on-calls, monthly trainings, and representing the VAU at events like National Night Out and Heroes and Helpers (shown at right). They are tireless, selfless and have remarkable hearts for service providing some comfort during traumatic events," VA Coordinator Binks.

"Unless someone like you cares a whole awful lot, nothing is going to get better. It's not." Dr. Seuss.



Pictured: Volunteers Michelle Weldon, Kayleigh Gustafson, Crystal Porras, and VAC Binks

# Priority 2: Traffic Safety

Goal 1: Increase traffic safety on the roadways in the Town of Castle Rock

Traffic Crashes							
Crash Type	2022 DEC	2021 DEC	3-YR MO. AVG	2022 YTD	2021 YTD	% Change 2021-2022	
Fatality	0	0	0.0	0	0	0%	
Injury	14	6	2.6	54	30	80%	
Non-Injury	95	72	64.1	663	819	-19%	
Traffic Crash Total	101	78	66.7	717	849	-16%	
Note: As of December 2022, traffic crash statistics are reported through CARFAX.							
		Traffi	c Enforcer	nent			
Traffic Type	2022 DEC	2021 DEC	3-YR MO. AVG	2022 YTD	2021 YTD	% Change 2021-2022	
Driving Under the Influence (DUI)	7	8	8.3	102	103	-1%	
Traffic Citations (Municipal and State)							
Call Type	2022 DEC	2021 DEC	3-YR MO. AVG	2022 YTD	2021 YTD	% Change 2021-2022	
Traffic Tickets Issued	57	64	122.7	1,415	1,471	-4%	
Written Warnings	58	47	181.6	928	1,948	-52%	



# Priority 3: Employees

Recognition / Awards



Goal 1: Attract and retain the highest quality employees

Goal 2: Train and develop employees

Goal 3: Recognize employee accomplishments

Staffing Levels								
Year	Sworn Officer Turnover	Total Sworn FTE	Total Turnover Rate	% Change from prior year				
2022	8	87	9.2%	83.9%				
2021	4	80	5.0%	-50.0%				
2020	8	80	10.0%	-12.2%				
2019	9	79	11.4%	113.6%				
2018	4	75	5.3%	29.8%				

Current Staff	Sworn Officers	Officers in Training	Civilian Staff	Total Staff	Volunteers	Explorers	Total Staff (incl. Vol.)
DEC	84	4	32	120	23	11	154
Authorized FTE positions	87		32	119			

Training Hours								
Total Hours	Total Hours 2022 2021 3-YR 2022 2021 DEC MO. AVG YTD YTD							
Internal/External	720.0	388.5	715.8	9,898.3	9,030.3	9.6%		
	1	Hours per Type						
Internal/In-service (CPI Involved Shootings)	cer	542						
<b>External Training</b> (Active shooter response, explorer leadership, LE response to suicidal subjects, rifle armorer, arrest control, emergency vehicle operations, search and seizure, Standardized Field Sobriety Test (SFST) certification)								
Accomplishments / Recognition								
Туре	202 DE0			2022 YTD	2021 YTD	% Change 2021-2022		
Compliments/Commenda	tions	10	9 10.5	5 99	) 11	3 -12%		

5.8

15%

# Priority 4: Prepare for Future Growth

Goal 1: Monitor Townwide population growth estimates

Goal 2: Monitor Police Department workload

Goal 3: Evaluate an efficient method of delivering service to newly developed areas

Calls for Service (CFS)								
Calls for Service (CFS) Per Officer / Per 1st Responder	2022 DEC 87 OFC /58	2021 DEC 80 OFC /55	3-YR MO. AVG	2022 YTD 87 OFC /58	2021 YTD 80 OFC/ 55	% Change 2021-2022		
CFS TOTAL, includes self-initiated (SI)	4,215	4,225	5,307.0	4,215.0	4,225.0	-0.2%		
CFS, excludes self-initiated (SI)	2,249	2,079	2,082.6	2,249.0	2,079.0	8.2%		
Year-to-Date (Per 1,000 citizens)	27.7	26.2		27.7	26.2	5.7%		
CFS per Officer, excludes self-initiated	25.9	26.0		25.9	26.0	-0.4%		
CFS per 1st Responder, excl. self-initiated	38.8	37.8		38.8	37.8	2.6%		

Note: Year-to-date and 3-Year monthly averages reflect periodic adjustments due to population and CFS fluctuation.

Communication Incoming Phone Calls							
911 Calls	# of Calls	Avg per Day	AVG Answer Time (sec)	Answer Time ≤10 secs.	Answer Time ≤15 secs.	AVG Call Length (sec)	
DEC	594	19	3.63	98.8%	99.8%	186.4	
NOV	546	18	3.25	98.7%	99.8%	163.8	
OCT	558	18	3.36	98.8%	99.8%	162.6	
2022 YTD	6,706	18	3.36	99.0%	99.9%	171.9	
2021 Monthly AVG	546.0	16.3		98.7%	99.9%	179.8	
		APCO and I	NENA Standard:*	90.0%	95.0%	N/A	

Mon. Administration Calls	4,164	134
Mon. Outbound Calls	1,114	36
YTD-Administration Calls	52,019	143
YTD-Outbound Calls	13,450	37

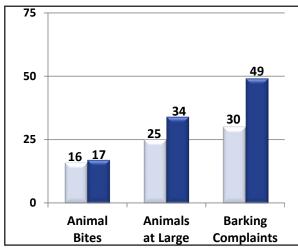
<sup>\*</sup>Association of Public-Safety Communications Officials (APCO) and National Emergency Number Association (NENA).

Downtown Liaison Officer (DLO)								
Type 2022 2021 3-YR 2022 2021 % Change DEC DEC MO. AVG YTD YTD 2021-2022								
Parking Enforcement/CFS	94	48	167	1298	2073	-37.4%		
Parking Warnings	3	5	61.7	99	766	-87.1%		
Parking Tickets	67	4	39.9	733	265	176.6%		

# Priority 4: Future Growth (continued)



# **Animal Control Monthly Response Comparison**

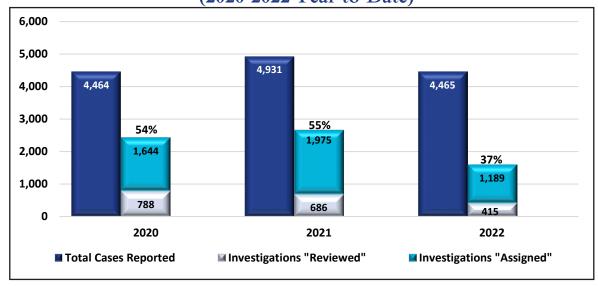


The ACU handled:

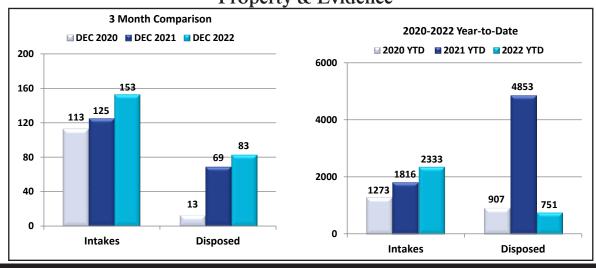
- 94 Percent of animal bites
- 74 Percent of animals at large
- 61 Percent of barking complaints

Note: The remainder of animal calls for service are handled by on-duty officers.

# Investigations Case Reports (2020-2022 Year-to-Date)



# Property & Evidence



# Priority 4: Future Growth (continued)

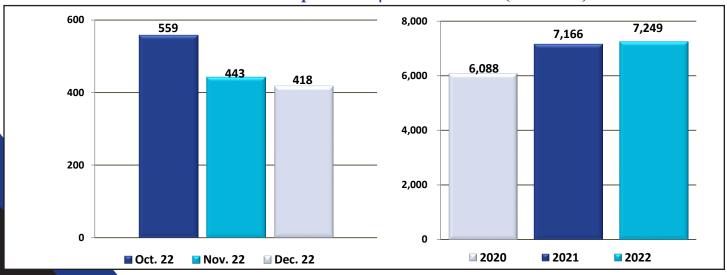
# Records Unit

Workload	Backgrounds	Reports requested	Reports reviewed	eDiscovery	Synology*	Recordings	Reports to D.A.	Reports released
DEC 2022	129	418	417	34	1	4,753	3	412
DEC 2021	73	443	423	44	5	1,068	3	398
% Change 2021-2022	76.7%	-5.6%	-1.4%	-22.7%	-80.0%	345.0%	0.0%	3.5%
3-YR MO. AVG.	103	502	505	60	4	713	6	480

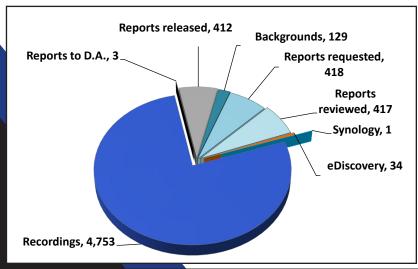
<sup>\*</sup> Felony drug cases

# Total Reports Requested

Three-Month Comparison | Year-to-Date (2020-2022)



# Records Unit Monthly Workload



# Priority 5: Community Policing & Partnerships



Goal 1: Community engagement through outreach and education

Crime Prevention and Community Partnership Programs									
Running Program Types	2022 DEC	2021 DEC	3-YR MO. AVG	2022 YTD	2021 Year-End	% Change 2021-2022			
Crime Free Multi-Housing	0	0	1.9	25	25	0.0%			
Crime Free Self-Storage	0	0	0.7	8	9	-11.1%			
Rock Watch	5	4	56.8	886	830	6.7%			
CPTED (Crime Prevention)	0	1	1.3	34	22	54.5%			
R-U-OK	0	1	1.0	33	17	94.1%			
Total Activity	5	6	61.3	986	903	9.2%			

Notes: Rock Watch 2021-2022 YTD statistics were revised for accuracy. R-U-OK totals periodically fluctuate as members enter or leave the program.

Volunteer Hours									
Unit Hours 2022 2021 3-YR 2022 2021 % Change MO. AVG YTD YTD 2021-2022									
Explorer Unit	114.0	114.0	167.0	2,063.0	2,313.3	-10.8%			
Victim Advocates	573	484	456.4	5,807.0	5,473.0	6.1%			
VIPS-Community Safety Vol.	42.0	41.0	160.3	803.0	1,272.0	-36.9%			
Total	729.0	639.0	825.0	8,673.0	9,058.3	-4.3%			

Goal 2: Optimize communication and marketing programs

Public Information Officer (PIO)									
DEC 2022	Facebook	Twitter	Nextdoor	Instagram					
Followers	18,429	4,270	37,787	3,610					
Number of Posts	25	13	3	17					
Total Viewer Engagement	34,368	57	6,482	3,840					
	Poli	ce	То	wn					
Total Call Outs or Incident Response	2 0								
	TOTAL								
Media Inquiries	3								

# Priority 6: Technology, Equipment

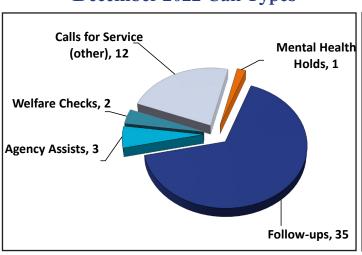
# & Practices

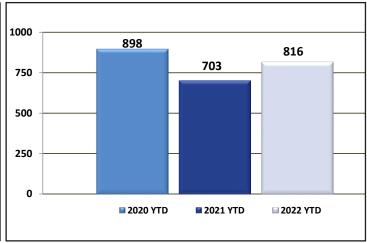
Goal 1: Maintain and utilize the most effective technology, equipment and best practices

Community Response Team (CRT) Dashboard

# December 2022 Call Types

# CRT Total Calls for Service (YTD)





Domestic Violence Lethality Assessment Program (LAP)									
Call Type 2022 2021 3-YR 2022 2021 % Change MO. AVG YTD YTD 2021-2022									
Total LAP reports completed	16	6	10.1	131	114	15%			
High-risk reports	5	3	5.0	52	48	8%			

The Lethality Assessment Program (LAP) tool is designed to reduce risks, save lives, and involves an assessment by law enforcement personnel to determine risks in collaboration with community-based victim service providers. More information is found at <u>LethalityAssessmentProgram.org</u>

ePoliceReporting								
Online Reports         2022 DEC         2021 DEC         3-YR MO. AVG         2022 YTD         2021 YTD         % Change 2021-202								
Reports received	25	33	41	356	798	-55.4%		

# **CueHit (Customer Service Measurement Tool)**

CRPD utilizes a survey tool, which measures customer service on select non-violent or property crime calls for service. Citizens receive a short text survey with an option to rate the service provided between one and five with five being our goal. Citizens may also leave comments. The CueHit results are listed in the table below.

Custon	ner Service S	urveys	Rating Results (1 - 5 with 5 as our goal)				
MON/YTD	Sent	Received	5	4	3	2	1
DEC	88	47	39	6	1	0	1
NOV	104	55	47	4	1	1	2
YTD*	1,082	561	492	35	16	8	13

<sup>\*</sup>YTD - Slight discrepancy in total received due to the inclusion of previous test data.

# Department Highlights





# PIO Temby's Corner Top Social Media Post

December 5, 2022 (11:26 am)

UPDATE 4:13PM - The Plum Creek trail is back open at I-25, and the



barriers in the area have been removed. Thank you for keeping clear of the area while our teams were on scene.

TRAIL CLOSURE: Castle Rock Police Department and Castle Rock Fire And Rescue Department are assisting with a semi-truck crash that has closed the Plum Creek Trail at the I-25 overpass.

Barricades and caution tape are blocking the trail access between Santiago's and the Great Divide Brewery and Roadhouse. Please DO NOT go around these barriers. Avoid the area

while emergency crews are on scene.

Updates will be provided on this post as they become available. We appreciate your patience while we work to get this cleared.



# K9 Unit Shogun & Maverick

# Patrol Deployments: 4

Officer Fellows and Shogun were deployed four times with three high-risk arrests and one article search. Officer Gondeck and Maverick were not deployed during the month of December.

# Narcotics Deployments: 3

Officer Gondeck and Maverick conducted one narcotics deployment assisting another agency with drugs located; Officer Fellows and Shogun deployed twice.

# **Training: 60 hours**

The K9 units trained a total of 30 hours each during the month.

### Arrests: 3

Officer Fellows and Shogun assisted in three arrests.





Maverick Shogun

\*K9 Protect is a term the department uses when a K9 is on the scene of a high-risk call. The K9 is on standby to protect officers or assist in apprehension. The presence of the K9 gains compliance. Examples of patrol deployments include high-risk traffic stops, higher risk attempt to contact, etc.





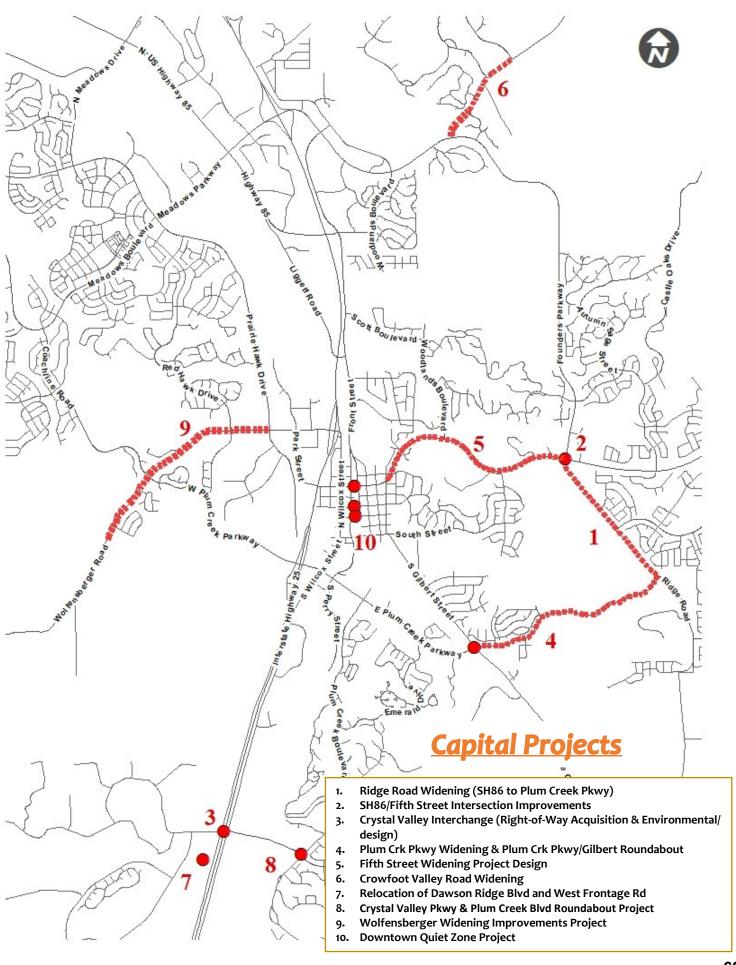
# **Monthly Report**

# December 2022

The Public Works Department operates under the **CAN DO** philosophy – We are committed to doing the job right with a positive attitude while staying dedicated to meeting the needs of our Town values and continually searching for opportunities to improve.

**PW Mission:** To provide outstanding service, safety and support for transportation infrastructure and maintenance.





 Ridge Road Widening – Ridge Road will be widened from two to four lanes between the Founders Parkway (SH86)/ Fifth Street/Ridge Road intersection and Plum Creek Parkway. The goal is to reduce traffic congestion on the Ridge Road corridor.

Phase: Construction

- Continue to maintain temporary erosion control
- Continue the relocating of existing utilities
- Continued curb and gutter
- Asphalt patch back
- Project clean up
- Worked on placing project into winter shutdown

**Budget:** \$5,225,000 **ROW Acquisition:** 

A valuation hearing for the Bertelsen property is scheduled for March 2023

**Targeted Construction Completion: Spring 2023** 

- 2. Founders Parkway (SH86)/Fifth Street Intersection "Four Corners" Improvements With new traffic studies submitted, the consultant will investigate multiple alternatives to address safety concerns and capacity issues at the intersection. Improvements under evaluation include:
  - Intersection will remain a full movement four-way intersection. Additional turn lanes and acceleration lanes will be added.
  - Traffic signal improvements will be made to incorporate the larger intersection.
  - Pedestrian and bicycle improvements will be constructed on all four sides of the project.
  - Stormwater detention and water quality improvements will be constructed to capture the additional surface 4. volume from the new intersection.

**Phase:** Design — David Evans & Associates (DEA) is the design consultant for this project. The following is a summary of the activities performed this month:

- DEA working to provide updated electrical design
- DEA submitted final plans, specs, reports for in house review. Reviews will be completed by week of Dec 27; Final package to be delivered to CDOT week of Jan 9
- Awaiting lien release on Haddad property to complete ROW acquisitions
- All utility relocates have been completed, protect in place is all that remains for dry utilities
- Consultant for Construction Management Services was approved by Town Council, RockSol consulting will provide services
- Working on long lead item submittal for signal poles due to 9-month lead time

**Budget:** \$1,275,676, with DRCOG Grant Reimbursement **Targeted Construction Completion:** Winter 2023-2024

3. <u>Crystal Valley Interchange – Pre-construction Activities</u> – The purpose of this project is to achieve acquisition of remaining right-of-way, complete design, and set aside future project funding allowing potential funding partnerships to assist with advancing construction.

Phase: Right-of Way Acquisition

- West Side of I-25 The Town will begin the Notice of Intent (NOI) process and make offer to the new owners of all remaining parcels to be acquired; Westside Investments has purchased all remaining parcels to be acquired from Douglas County Development Company and the MSP Corporation
- East Side of I-25 NOI has been sent to the Hyperion Property owner; the Town has completed the full take appraisal of the Hyperion property; Hyperion property owner is electing to have an appraisal done; ownership of the Dawson Ridge Metro District parcel has been transferred to the Douglas County Development Company; Town is in the process of preparing a NOI and offer

**Phase:** Design— Interchange Access Request and Environmental Assessment Reevaluation, and Design

- Transportation demand managements letter to be sent to CDOT Director for signature/approval
- System Level Study was sent to CDOT for review
- Design firm continues working on 90% design
- Environmental/NEPA EA Reevaluation was sent to CDOT for review along with all Tech memos
- Construction management services contract to be entered into in February
- Maintenance agreement with CDOT draft submitted for Town review – still pending drainage/water quality items. Town is developing comments.

**Budget:** \$6,500,000, and Development Escrow

**Design Completion:** Summer 2023

**Targeted Construction Completion:** Summer 2025

Plum Creek Parkway Widening and Plum Creek Parkway/ <u>Gilbert Street Roundabout Project</u> – This project will implement the Transportation Master Plan's identified improvements for this corridor. The addition of the remaining two lanes of the master planned four-lane roadway on Plum Creek Parkway between Eaton Street and Ridge Road. Not only will it include the addition of two lanes, but also bicycle and pedestrian multi use lanes. It will also include roundabout modifications at Ridge Road. The improvement has been broken out into three phases in order to meet the department's objectives. Phase 1A included portions of storm sewer improvements between Gilbert and Eaton. Phase 1B includes all roadway/utility/ pedestrian access improvements between Gilbert and Eaton, including the implementation of roundabouts at the intersections of Gilbert and Eaton. Phase 2 includes all roadway/utility/ pedestrian access improvements between Eaton and Ridge

Phase 1B: Plum Creek Pkwy Widening and Roundabouts Gilbert to Eaton):

Construction Budget: \$7,507,723

Completion: Complete

<u>Plum Creek Parkway Widening Phase 2</u> – This project will implement the Transportation Master Plan's identified improvements for this corridor. The addition of the remaining two lanes of the master planned four-lane roadway on Plum Creek Parkway between Eaton Street and Ridge Road. Not only will it include the addition of 2 lanes, but also bicycle

and pedestrian multi use lanes. It will also include roundabout modifications at Ridge Road.

Phase 2: Plum Creek Pkwy Widening (Eaton to Ridge): Construction – The following is a summary of design activities performed this month:

- Begin installation of the block retaining wall
- Continued earthwork for new roadway and sidewalk construction
- Continue the maintenance of erosion control
- Continued the installation of headwall for storm drain
- Completed the relocation of utilities
- Continued the placement of base course
- Continue Installation of conduit for street lighting
- Continued installation of curb and gutter for new eastbound lanes from Eaton roundabout to halfway up road
- Began asphalt placement

Project clean upBudget: \$7,530,000

**Targeted Construction Completion:** Fall 2023

5. Fifth Street Widening Project Design – Fifth Street is a major arterial connecting local and regional travel between the easterly portions of Town and I-25. Roadway and pedestrian improvements for Fifth Street have been identified within the 2017 Transportation Master Plan (TMP) that will maintain adequate capacity and ensure efficient road network connections for future development.

The Fifth Street Widening project will complete all design elements for implementation of the full build-out transportation network from South Gilbert Street to Ridge Road as identified in the TMP. The improvements include:

- Widen to 4-lanes from Woodlands Boulevard to Ridge Road
- Add on-street bike lanes between Gilbert Street and Ridge Road
- Add sidewalks from Sixth Street to Ridge Road
- Roundabout and signal light construction at Woodlands Boulevard and Valley Drive respectively.

Phase: Design

- Continue stakeholder engagement
- Completed CORE electric utility design
- Continue to develop project utility design
- Stakeholder and agency review of 90% deliverables started
- Portions of the environmental clearance obtained from CDOT
- Initiated ROW acquisition delineation

Budget: \$1,500,000

Design Completion: February 2023

Right-of-way acquisition: Winter 2022-2023

Targeted Construction Completion: Spring 2024-2025

6. Crowfoot Valley Road Widening – Crowfoot Valley Road will be widened between the Knobcone Drive and Macanta Blvd. Currently, this section of Crowfoot Valley Road is a two lane transition section of asphalt roadway with portions in the Town of Castle Rock and in Douglas County. Recent

improvements have been completed at both ends of this project along Crowfoot Valley Road, and the intent of this project is to complete improvements to the "gap" between these improvements. The proposed roadway will be a fourlane section, including painted median/turn lanes, with bike lanes in both directions.

**Phase:** Design—Town submitted IGA comments to Douglas County for review; Douglas County submitted conceptual design elements for the Town to review;

Town staff will approach Town Council on discussion and direction on design on 1/3/23

**Budget:** \$2,500,000 (Town contribution to construction

funding; IGA to be executed with County) **ROW Acquisition:** Summer 2023

Design Completion: Summer 2023

**Targeted Construction Completion:** Summer 2024

### 7. Relocation of Dawson Ridge Blvd and West Frontage Rd -

The purpose of this project is to relocate the I-25 West Frontage Rd to the west of the BNSF Railroad tracks to provide access to the surrounding neighborhoods and residents after the Crystal Valley Interchange is complete.

**Phase:** Design – CORE Consultants is the design consultant for this project. The following is a summary of the activities performed this month:

Final design plans, specs and estimate was received from CORE Consultants, Town is reviewing

**Budget:** \$299,000

**Design Completion:** Fall 2022

Targeted Construction Completion: Summer of 2025 in

conjunction with Crystal Valley Interchange

### 8. Crystal Valley Pkwy & Plum Creek Blvd Roundabout Project

This intersection is a major arterial currently controlled by stop signs in two directions. As the traffic volumes increase and with ongoing residential development and future construction of the new Crystal Valley Interchange, this existing traffic control will not be the most efficient and could contribute toward increased accidents. This project will accomplish the design of a roundabout intersection in order to improve the traffic capacity of the intersection, help to manage speeds along Crystal Valley Parkway, and to accommodate the growth in traffic that is expected to increase once the Crystal Valley Interchange has been constructed. This project is scheduled to be designed by September mid-October 2022, bid in October 2022, and constructed by Summer 2023.

Phase: Design

- Staff presented to the Public Works Commission and Town Council for the award of contract
- Kraemer North America was awarded a construction contract on December 20, 2022 for the construction of the Crystal Valley Pkwy & Plum Creek Blvd Roundabout Project

**Budget:** \$3,500,000

**Targeted Construction Completion:** Summer 2023

Master Plan (TMP) that will maintain adequate capacity and ensure efficient road network connections for future development.

The Wolfensberger Widening Improvements Project will complete all design elements for the implementation of the full build out transportation network from the western Town limits to Prairie Hawk Drive.

- Widening roadway to a full 4-lane arterial section
- Addition of sidewalk along both sides of Wolfensberger
- Roundabout construction at Red Hawk/Auburn and Wolfensberger Intersection
- Removal of existing traffic signal
- Storm water drainage improvements
- Implementation of on street bike lanes West/East bound

Phase: Planning/Design

- Design survey complete and being compiled
- Ongoing design work with adjacent developers to accommodate and incorporate their ingress/egress into project design
- Design efforts/coordination is under way to possibly utilize developer stormwater infrastructure to avoid **ROW** acquisition
- Design efforts to utilize existing Town property for stormwater improvements underway
- Utility coordination meetings with CORE and CRW on-
- Subsurface Utility Engineering (SUE) investigation 99% complete, compiling into matrix and plan sheets
- 30% design submittal scheduled for end of February 2023

Budget: \$2,500,000

Design Completion: Fall 2023 Right of Way Acquisition: Fall 2023

Targeted Construction Completion: Fall 2024

10. Downtown Quiet Zone Project - This project is to implement a quiet zone through the downtown Castle Rock area. In order to implement the quiet zone, improvements must be constructed at three railway crossings: Second Street, Third Street and Fifth Street. The scope of the improvements to be constructed with this project include: additional crossing gates, pedestrian crossing improvements, ADA improvements, sign and marking improvements, curb and gutter additions and general railroad (Union Pacific or UP) coordination. The benefits of this project will be improved safety for vehicles and pedestrians and improved quality of life for downtown businesses, residents and patrons.

Phase: Construction - The following is a summary of activities performed this month:

Continued planning and coordination efforts with Union Pacific

Budget: \$1,800,000

**Targeted Construction Completion:** Spring 2023

9. Wolfensberger Widening Improvements Project- Wolfens- Traffic Signal System Upgrades – This project is a multi-year berger Road is a major arterial connection for local and re-signal system upgrade project that began in 2015 and is ongional travel between the westerly portions of Town and I- going as funds are available. The project has included proven 25. Roadway and pedestrian improvements for Wolfens- technology advances at signalized intersections, for our daily berger have been identified within the 2017 Transportation operations, and for communications between the center and each intersection.

- Staff is a part of the CDOT managed, adaptive signal system project that will implement adaptive signal timing on Founders Parkway, and Meadows Parkway, and Factory Shops Boulevard. Eight abutting Town signals will be included in the system. In December, coordinated signal plans were activated and Kimley-Horn troubleshot detection issues with CDOT. The system has been operating in a test phase and has shown to be functioning well. The signal system is anticipated to be activated after the holiday break in the start of 2023.
- Phase II of the Town's ATSPM project includes software development and signal timing. Traffic signal timing changes on regionally significant roadways were activated in mid-December. Kimley-Horn is currently checking the new software for bugs and will be updating the Town's software once the bugs are fixed. ATSPM Dashboard will be implemented by January 2023.
- Town Staff is awaiting delivery of three new traffic signal cabinets and four new detection systems as part of inventory and replacement maintenance.

**Budget:** \$868,700

Construction Completion: End of year 2023

2023 Safety Projects - This project includes concrete safety devices in conjunction with the Pavement Maintenance Program, installation of pedestrian crossing beacons at four locations, Intelligent Transportation System on Meadows Blvd to warn drivers of signal changes, intersection safety improvements, and missing sidewalk connections.

- Preliminary planning for the locations and specific improvement projects was completed in December. Staff provided a summary memo of the proposed safety projects.
- An RFP to complete the concrete safety projects was posted on bid-net with pre-con and bid opening in January.
- Finalization of the proposed safety projects will be made in January. Public feedback, as well as bid award will follow shortly after.

**Budget:** \$500,000

**Construction Completion:** Winter 2023

2022 Safety Projects - This project includes installing Rectangular Rapid Flash Beacon (RRFB) at five locations, roadway improvements, and safety improvements on Gilbert Street.

> The 2022 safety projects have finished walkthroughs and are all invoiced. Staff have identified 4 locations for RRFBs, curb extensions, raised crosswalks, and 3/4 medians for 2023.

2022 Budget: \$613,000

Construction Completion: Completed all of 2022

<u>Illuminated Street Name Signs</u> – Town staff are still working with CDOT to get Meadows Pkwy and Hwy 85 a power feed for two of the signs.

- 2022 illuminated street name signs have been purchased and staff are awaiting delivery for five locations across Town, including: Plum Creek Pkwy and Plum Creek Blvd, Plum Creek Pkwy and Perry St, Founders Pkwy and Front St, Wilcox St and I25 northbound, and Wolfensberger and I25 southbound.
- 2023 illuminated street name signs have begun the planning and purchase order process for four locations throughout the Town budget depending, including: Founders Pkwy and Copper Cloud, Founders Pkwy and Ridge Road (Four Corners), Wolfensberger and Park St, and Wolfensberger and Caprice.

**2022 Budget:** \$39,105

**Construction Completion:** Summer 2023

**2023 Budget:** \$60,000

**Construction Completion:** Winter 2023

# **Engineering**Division

### **2022 Pavement Maintenance Program (PMP)**

All scheduled 2022 PMP projects are complete and in the warranty period.

### **2022 Bridge Maintenance Program**

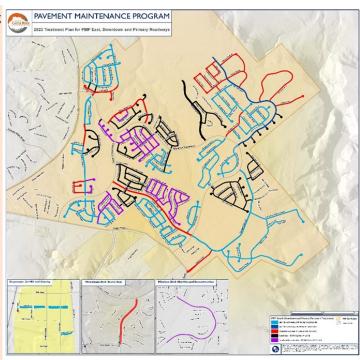
ABCO completed all planned repairs November 8. Contractor completed emergency repairs on S. Wilcox Bridge over Sellars Gulch December 20.



### 2023 PMP

The PMP team completed the bid packages for the 2023 PMP projects. Five (5) bid packages posted to Rocky Mountain E-Purchasing on December 16, 2022. The bid packages are for the Asphalt Overlay, Full Depth Reclamation, Curb, Gutter and Sidewalk Replacement, Slurry Seal, and Town Facilities Parking Lot Improvements. All five bid packages have pre-bid meeting set up for January 4 and 5, 2023 with the bid openings for all projects scheduled for January 18 and 19, 2023.

The PMP map (shown below) indicates the proposed scheduled treatments for street within the East PMP area and Primary Streets. This map may change based on maintenance treatments and resources available.



### **Police Department ADA Improvements**

53 Corp performed additional scope of work to the existing park-

ing lot by making extensive improvements to the Americans with Disabilities Act (ADA) ramps and parking stalls on the north side of the building. All improvements were completed on December 21.



### 2023 Bridge Maintenance Program (BMP)

Staff is working with a bridge consultant for 2023 Bridge Maintenance and support to the Engineering Division. The consultant will deliver a Bridge Program maintenance schedule for planning, design and maintenance activity recommendations for the Plum Creek Parkway over Sellars Gulch bridge (CAS PLMCKPW-1). This project is expected to go out for competitive bids in the Spring, with construction beginning late Summer/early Fall.

# **Development Division**

### **Review and Permitting**

**Development Review** - All 44 reviews were completed. No late reviews this month.

Permitting & Inspection – 14 right-of-way permits were issued.

# Transportation Planning & Traffic Engineering Division

### **Taxi Voucher Program**

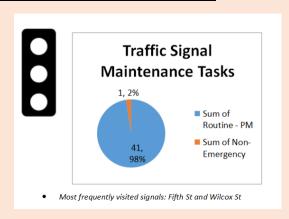
For the month of December, the Taxi Voucher Program funded 114 rides; which is a 40% decrease to last year's December total of 191 and a 13% increase from last month's total rides. Transportation services are provided for Castle Rock citizens who cannot drive, have a disability that prevents them from driving, or do not have access to a vehicle. In December, 20 individuals used the Taxi service. Of those individuals, 77% of the rides were for work, 16% for shopping trips, and 7% for medical appointments. Thirty rides were provided for people without access to a vehicle, 36 rides to seniors, and 48 rides to disabled riders.

The Castle Rock Senior Center provided a total of 781 rides in December.

The Castle Rock Senior Center provided 806 rides in November.

### **Traffic Engineering and Operations**

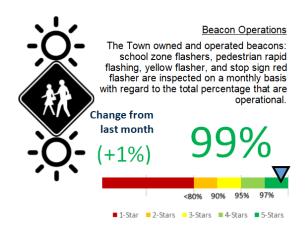
### Traffic Signal Operations and Maintenance



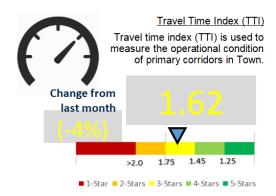
### **Street Light Operations**



### Beacon



### **Operations**



### **Street Signs and Pavement Marking Maintenance**

For the month of December, the team completed 2604 tasks. Of these tasks, 2147 of them were sign work activities related to fabrication, install, repairs, replacements, inspections and investigations. We had 386 beacon related tasks, including windshield inspections, and repairs. We did 10 tasks related to marking symbol replacement. Other tasks included 54 small projects, 1 special events, 1 traffic count, 1 liquor license postings, one core drilling task, and three locate tasks.

Pavement Maintenance Program East and Downtown Development Authority sign Inspections are still on going for 2023 and the repair work identified is still continuing.

### **Transportation Planning**

### Castle Rock Downtown Wayfinding Sign Plan:

The initial public survey was distributed to stakeholders and the public in December through the project webpage. The survey was intended to be closed the last week of December, however, the survey period has been extended to January 6. The public and stakeholders are asked to provide feedback on the sign design details, including colors and materials. Input on important destinations and if people have experienced any difficulty moving about Downtown is also being asked for.

## Neighborhood Traffic Calming Program (NTCP):

The NTCP exists to verify and address quality of life items associated with vehicular traffic on local neighborhood streets and certain residential collector roadways. No new inquiries were received In December. Public Works will be collecting data for Valley Drive, Black Pine Trail and N. Meadows as road conditions and weather permits.

### DRCOG Transportation Improvement Program (TIP):

Regional grant applications for Call #4 was released by DRCOG. Applications are due by the end of January 2023. Town staff will be submitting the Crystal Valley Pkwy Interchange project for potential funding. Staff will also determine if other projects will be submitted in Call #4. The Town was informed by the USDOT that the CVI RURAL grant application was not selected for funding. Only 12 projects were selected in the entire country and none in Colorado. The 2023 RAISE call for projects was announced in December. Town staff plans to submit the CVI project for potential funding. Applications are due in February 2023.

Keeping Castle Rock on the Move







As you drive around Castle Rock and see many different departments providing first-class service, you will notice how they rely on their Town-issued vehicles. The Fleet Division takes great pride in knowing that those vehicles are reliable and safe to operate.

Fleet Services Division continues to make sure that Town vehicles and equipment are ready for operation. This includes public safety vehicles like Police & Fire but also other department vehicles that need to be in use to provide great service for our residents.

The Fleet Division continued to keep Castle Rock on the move in December. The overall Fleet Availability was 96%. We completed 122 work orders with more than 200 repairs Our total cost were down significantly to \$60,580 from \$139,158.30 from November. Technician productivity was 71%. The Fleet consumed more our objective for the month despite some challenging repairs than 11,000 gallons of fuel in December at a cost of \$2.50 per and weather conditions. Our productivity for 2022 was excellent gallon of unleaded and \$4.16 a gallon for diesel. This cost is significantly lower than retail cost. The town continues to save on fuel cost with our IGA with Douglas County Schools.

Our technicians continued to perform great work throughout the month. Six plow trucks went down on Thursday before

Christmas and our awesome crew was able to get them all back in service the same day. The weather conditions this day was extremely cold making our equipment more prone to break down. Another three went down the following week. Two of the three were repaired and back in service same day. The third suffered a major failure of the dump body and requires welding. Thank you to our on-call technicians and Shop Supervisor that responded to support the snow removal operations during this holiday season. Their efforts are notable in providing snow removal assets for the Streets division and our citizens.

Fleet put four new vehicles in service for our departments in December. Three new police cars were received and we completed in service checks. One new snow plow was put in service for the Streets division. It's always a good feeling to add new equipment to the fleet to support our departments mission to provide customer service to our stakeholders.



Objective/Benchmark: Complete at least 75% of our Work orders within 48-hours of coming to shop.

Outcome: Fleet team completed 80.3% of the work orders within 48-hours of opening repair requests or service requests. This benchmark number shows how quickly vehicles and equipment get serviced and repaired and back on the job.

Objective/Benchmark: Town vehicles and equipment available for use 95% of time.

**Outcome:** Town vehicles and equipment were available 96% of the time. This high fleet availability rate means that Town vehicles and equipment are ready when they are called upon to perform.

**Objective/Benchmark:** Technician productivity percentage of 70% (APWA standard)

Outcome: Technician productivity was 71%. Productivity is the measure of available billable hours by our technicians. We met at 80%.

# **Street Operations & Maintenance Division**

During the month of December, the Street Operations & Maintenance Division (SO&MD) performed work in the following maintenance operations:

\*Snow and Ice Mitigation

\*Training

\*Street Sweeping

\*Asphalt Repair

\*Equipment Maintenance

### **Snow and Ice Mitigation**

December brought three snowstorms and a total of 12.7 inches of snow. The Street crews responded to these storms with 516 hours of plowing operations and 266 tons of salt being applied to combat icing. The Town works diligently to mitigate the effect of snowstorms on public infrastructure and return the roadways to normal usage as quickly as possible.

### **Street Sweeping**

In December, the Streets Division conducted streets sweeping operations throughout Town. 244 labor hours were dedicated to cleaning the Town roadways to finalize the Fall sweeping program as well as the Post storm sweeping program. In all 130.4 cubic yards of material were removed from the roadways as well as 56 bags of garbage.

### **Asphalt and Pothole Repair**

The Streets Division worked 410 hours to repair numerous asphalt patches and potholes all over Town. In total, 30 tons of hot mix asphalt and 2500 lbs. of cold mix asphalt were used in executing these repairs. The crews attempted to complete as many as possible before the asphalt plants shut down for the winter season.

### **Equipment Maintenance**

The crews devoted 387 hours to equipment maintenance during December. With winter storms bearing down on the Town, the need to maximize the availability of equipment such as snow plows, trucks, and heavy machinery cannot be overstated. The efforts of the crew and the Fleet Division works to ensure the tools needed to maintain Town infrastructure are available when needed.

### **Training**

The Streets Division has managed to fill its ranks and has brought onboard a number of new team members. These personnel are being trained to familiarize them with Town operations. These newer personnel as well as seasoned team members dedicated more than 100 hours to training.

### **Looking Ahead**

The Streets crews plan to maintain readiness to respond to snow storms, undertake Ice mitigation operations, and work to maintain road surfaces. In addition to this, the Division plans to continue training and developing training resources for division personnel.



# Town Manager's Office

DoIT

MC

COM

HR

Under the direction and guidance of the Town Manager, Assistant Town Manager and Special Projects Manager, each division within the Town Manager's Office has established performance objectives, generally linked to the Town's longterm Vision. This report highlights the divisions' performance relative to their objectives, as well as other key accomplishments.





FACILITIES

MAINTENANCE

Provides a safe, clean, positive environment at all municipal facilities, for both employees and the public



Division of Innovation And Technology

Partners with departments
Townwide to strategically
implement technology that is
secure and well-supported



Municipal Court Committed to the administration of justice with equality, fairness and integrity, in an expeditious and timely manner, for the people of Castle Rock

COM

COMMUNICATIONS

Facilitates community outreach and involvement for departments Townwide

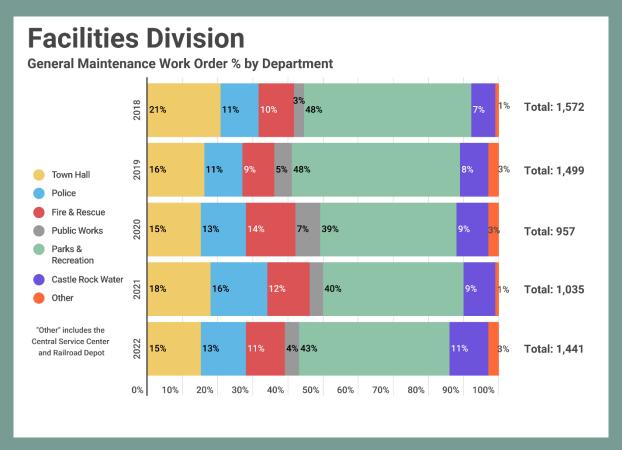
HR

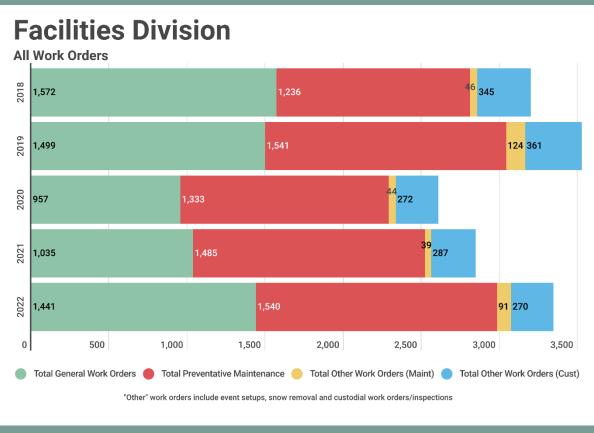
Human Resources Serves as an internal consulting resource, provides innovative programs in support of the Town's values and fosters positive work relationships

# FM Key Accomplishments

- In December, the Facilities team handled 236 work orders including 117 preventative maintenance activities and 15 custodial inspections
- For all of 2022, the Facilities Division completed 3,342 total work orders reflecting a 17% increase over 2021
- The Facilities Division performed 1,786 preventative maintenance and inspection activities in 2022, up 36 activities from 2021
- Completed Town Hall cubical remodel
- Reached substantial completion of ADA parking improvements at the Police Department
- Ongoing implementation of new Work Order Management Software
- Developed contract renewals for Facilities support vendors (roofing, HVAC, etc.)
- Continued work on Fire Apparatus Bay Door Raise, PD Interior Renovation and Town Hall Renovation projects









# DolT Key Accomplishments

- Implemented multi-factor authentication for all Town web applications
- Implemented Town-owned iPhone supervision for approved upgrades and security updates
- Conducted two Town-wide training classes
- Updated the Fire Department's evacuation map series to include new street intersections and updated GIS data



# DoIT Accomplishments 2022

- Major upgrades to applications: ArcGIS 10.8, Salesforce Sales Tax, Veeam Backup System, Milestone Video Management, Laserfiche Document Management
- New application implementations: CueHit Citizen Engagement, Constant Comment Email Marketing, Legal Files Management, iPhone Supervision, GovQA CORA Requests, Club Prophet Golf Management, Volunteer Management, Water Bank Management, Automox Endpoint Management, Fire Records Management System
- Implemented closed captioning for Town Council Meetings
- Infrastructure and technology provided to the Encore Parking Garage, Municipal Court Audio/Visual system and the security cameras at Town Parks
- Modernized CRgov.com public meeting calendar to provide for better access to public meeting information
- Mitigated major security vulnerabilities that were encountered world-wide and email impersonation attacks

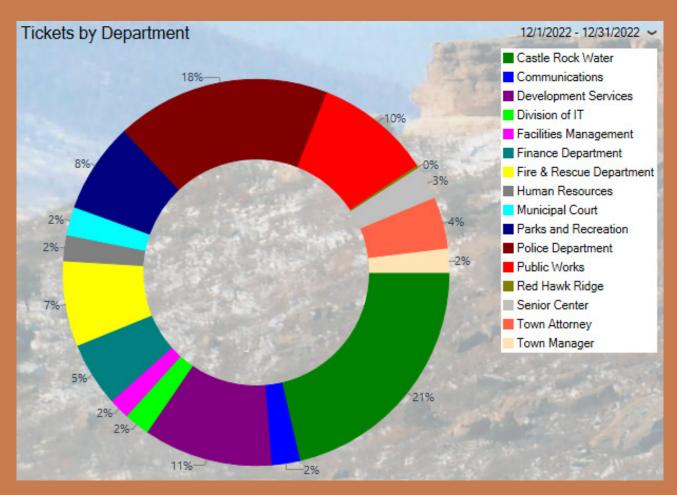


### Dolt

Help Desk	Addressed 438 total tickets, with an average time to resolve of 51 hours					
	There were <b>five</b> emergency tickets this month, <b>100%</b> of which were resolved within one calendar day (80% is goal)					
	There were 42 urgent priority tickets this month, 100% of which were resolved within two calendar days (85% is goal)					
	There were 352 medium priority tickets this month, 98.9% of which were resolved within 10 calendar days (90% is goal)					
Geographic Information Systems (GIS)	Addressed 18 total tickets, with an average open-to-resolve time of 122 hours  There were no annexations, parcel or zoning updates in December					



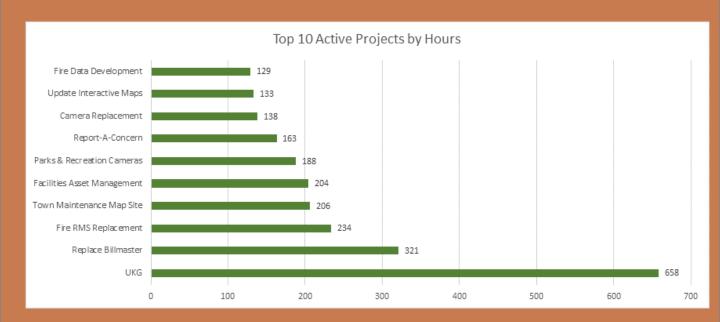
### Dolt

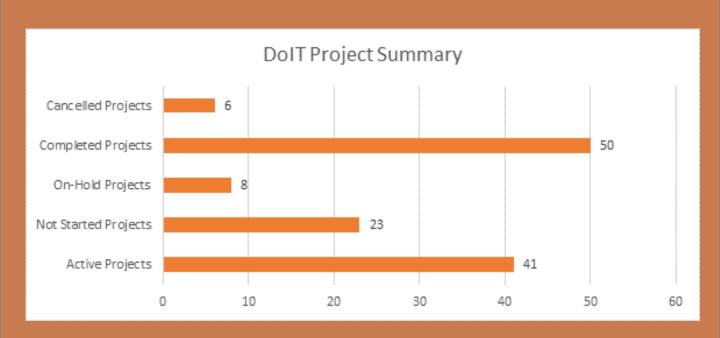






### DOIT









#### **TEEN COURT**

Teen Court has **six** upcoming court cases scheduled in January and February

#### MUNICIPAL COURT

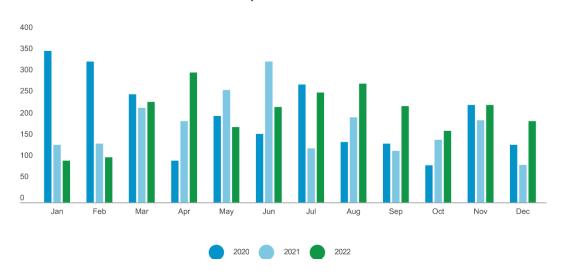
- In December the court helped the Police Department with some of the administrative needs for Heroes and Helpers
- The Court coordinated a Townwide Adopt a Child Program. Town employees provided gifts for 45 children in need in the Town of Castle Rock



### MUNICIPAL COURT

Castle Rock Municipal Court Monthly Report -December 2022

#### Total cases filed in Castle Rock Municipal Court: 2020-2022



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2020	356	331	254	98	203	161	277	142	138	87	229	135	2411
2021	135	138	222	191	264	331	127	200	121	147	193	88	2157
2022	98	106	236	305	177	224	258	279	226	168	229	191	2497

Total cases filed in CR Municipal Court by type YTD: December 2021 vs. December 2022 2021 YTD 2022 YTD







- In December, Communications held website accessibility training for the Town web team
- Staff also completed **three** publications: Your Town Talk newsletter, designated truck route letter and train horn quiet zone letter
  - Staff during December issued news releases about:
    - Help us improve wayfinding signage within Downtown Castle Rock
    - Town flips the switch on traffic light improvements across major roadway intersections
    - Town of Castle Rock supports preservation of historic Downtown buildings through grant program
    - Dec. 6 and 20 Council updates

Hyperlinked items were available as of Jan. 9



### COMMUNICATIONS



### Communications • December 2022 Report



TRADITIONAL OUTREACH





Distributed

ONLINE OUTREACH













Completed



Social Media Updates



SOCIAL MEDIA OUTREACH

on Social Media



23,842

A post highlighting the new snow route signs Downtown was the most popular, reaching 17,808 people with 1,081 engagements, 79 comments and 9 shares.

SOCIAL MEDIA REVIEW

8,549

Instagram



Top Post

A Reel highlighting the beginning of the holiday season was the most popular, reaching 5,038 people with 251 likes and 33 shares.



Nextdoor

Facebook

Top Post

The Dec. 22 snow-tification was the most popular post, reaching 8,046 people with 18 reactions and 9 comments. 9,616 Followers

Top Tweet

Twitter



A tweet encouraging the public to work with Town online when offices were closed due to frigid temps was the most popular with 2,122 impressions, 626 engagements and 5 retweets.



# COMMUNICATIONS 2022 OVERVIEW



### Communications • 2022 Report









**Plans** 

Videos Produced



Publications Completed

**News Releases** 

#### **ONLINE OUTREACH**





Approved



SOCIAL MEDIA OUTREACH









Growth in followers

3.2 million Total organic reach

> 43,100 Greatest reach: Traffic plan for In-N-Out Grand opening

SOCIAL MEDIA REVIEW

20,310

Greatest reach: Goats helping with wildfire mitigation at Metzler Family Open Space





15,760

Most impressions: Power outage effecting the Rec Center

37,868 Total Town residents

using Nextdoor

Percentage of residents on Nextdoor 3.5%

401,378

Total organic reach

Twitter



Greatest reach: Tweet about emergency 12,000 alert sent in error by El Paso County



# HR Key Accomplishments

- HR attended 11 interview panels:
  - Therapeutic Recreation Specialist
  - Plan Review Engineer
  - Aquatics Supervisor
  - Street Maintenance Technician
  - Office Assistant II
  - Water Efficiency Technician
  - Development Review Manager
  - Traffic Engineering Technician
  - HR Technician
  - SCADA Supervisor
  - Aquatics Specialist



### HUMAN RESOURCES

Welcome!

#### Employee Orientation

Nine new full-time employees came on board during December

### Congratulations!

#### Performance Evaluations

HR on Dec. 6 provided a report to departments regarding performance evaluation due dates, to help supervisors ensure timely completion of employees' performance evaluations

HR in December reviewed 73 performance evaluations prior to their filing to ensure comments are consistent with ratings and that the Town's performance management standards are being met

#### Thank you!

#### Employee Recognition

There were **four** recognitions in December

#### Well done!

#### Training

There was no training in December.





Our Vision: We will be a national leader among water utilities, focused on customer satisfaction and delivering outstanding quality and value.

#### **Woodlands Interceptor Manhole Rehabilitation Phase 2 Project**

The Woodlands Sewer Interceptor is a 2.5-mile gravity pipeline installed in 1987 that conveys wastewater flows from portions of the Town east of Founders Parkway/Ridge Road back to the Plum Creek Interceptor. A significant portion of the Town's wastewater flows through the interceptor pipeline making it a critical component of the wastewater collection system. The majority of flows in the interceptor are pumped from lift stations through long force mains east of Founders Parkway/Ridge Road and detained in the sanitary collection system for a number of hours. This

depletes oxygen levels creating sewer gasses that have severely corroded the concrete manholes along the interceptor.

An initial phase of the project successfully replaced 7 of the most corroded manholes with corrosion resistant fiberglass reinforced polymer (FRP) inserts in 2020. The second phase of the project identified rehabilitation needed for an additional 25 corroded manholes between Black Pine Drive and Woodlands Boulevard. C&L Water Solutions was awarded a contract in the amount of \$960,095 to complete the project in 2022. C&L replaced 12 of the manholes with FRP inserts and rehabilitated the other 13 manholes with corrosion resistant mortar and epoxy lining. Corrosion resistant composite manhole frames and lids were also installed on all of the rehabilitated manholes. The work was completed under live wastewater flows.



The Castle Rock Water Sanitary Sewer Collection Team managed lift station flows to reduce the amount of active bypass pumping needed. The contractor utilized flow-through pipe plugs and carefully managed dual pump active bypassing setups when required for the work. The team effort helped prevent any sanitary sewer overflows. This was a significant achievement given the length of time bypassing and the unpredictable lift station flow surges.

Construction started in July 2022 and was substantially completed in December within the original budget. Site reclamation and restoration will

be completed in spring 2023.

The rehabilitated manholes have renewed structural integrity as well as resistance to future corrosion from sewer gases. Many of the interceptor manholes are also located within the floodplain. Additional seals were installed and existing groundwater underdrains

were disconnected from the manholes during construction. These measures will help reduce the amount of groundwater and stormwater entering the sanitary sewer collection system and reduce Town costs related to wastewater collection system and treatment capacities.



### **Good job!**

#### **Look who got**

Promoted!

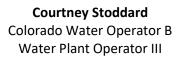


**Nic Van Kooten** SCADA Supervisor



### NEW CERTIFICATIONS







Michael Murphree CDOT/CDL License

In 2022, staff earned 44 new certifications.

### Water Star Award

The Water Star Award recognizes a coworker within Castle Rock Water for doing an excellent job in fulfilling the Department's Vision and Mission.

#### Safety

Demonstrated outstanding safety conscious behavior in performing a job or task.

#### Exceptional Service

Provided exceptional service to either an internal or an external customer

#### Quality

Delivered excellent quality service or product

#### Value

Provided remarkable value for our customers

#### Environmental:

Demonstrated extraordinary environmental responsibility

#### Fiscal

Demonstrated superb fiscal responsibility



2

Tina Close, Plan
Review Supervisor,
was given the Water
Star Award by
Nathan Hannick for
her help in changing
certain new
infrastructure
installation
details. These
changes have made
locates more efficient
while staying
compliant with state
and CO811 laws.

#### Sharing the holiday spirit with each other and the community

#### **Toy & Food Drive**

Castle Rock Water held a toy and food drive during the holiday season, in support of the local Help and Hope Center's Santa's Sharing Program. Staff delivered two SUV loads full of items to the center which included toys, gifts and clothing items for children in all age groups, as well as assorted pantry items.

On Dec. 29th we received the following thank you note from Jenny Follmer, Deputy Director of the Help and Hope Center, "As we reflect on the holiday, our hearts are warmed by the fact that children found toys under the tree thanks to your generosity. One parent said that "Christmas wouldn't have come this year if it hadn't been for the Santa's Sharing program". On behalf of Help & Hope Center and the many families we helped, please know how <u>truly grateful</u> we are for your support. This would not have happened without your donations..."





#### **Holiday Office Decorating Contest**

Castle Rock Water was full of holiday spirit and creativity in December! We decked the halls and our workspaces with an office decorating contest, sponsored by the EAT Team. Staff was invited to decorate their workspaces by Dec. 20. Staff, then, voted for their favorite. The top 3 winners were awarded gift cards to local businesses.

#### The winners were

- Matt Hayes (Project Manager-CIP)
- Nichol Bussey (Business Solutions Manager)
- John Grahn (Stormwater Inspector)











#### **Holiday Office Luncheon**

Staff shared a meal together and along with food and gabbing, there were games and craft. Staff was also encouraged to wear their 'ugly' sweaters.





#### Sharing the holiday spirit with each other and the community











































# Stormwater Compliance

As an integral part of the Town's vision of providing residents the highest quality services at the best value, the Stormwater Division manages stormwater runoff to minimize flooding hazards and to protect water quality in our watersheds.

Services the Stormwater Division provides include:

- Construction site inspections
- Spill reporting, enforcement and response
- Public education and outreach
- Pond maintenance oversight
- Floodplain management

#### **MS4 Stormwater Program Self-Audit**

The Stormwater Division, with the support of Jacobs Engineering, performed an internal audit for compliance with the Town's Municipal Separate Storm Sewer System (MS4) Permit.

Based on a review of select documents from each of the program areas listed in Figure 1, the overall program complies with the current permit. The Town continues to implement appropriate procedures for each program area and maintain documentation of compliance with the MS4 permit.

To enhance ongoing program compliance and be prepared for potential future regulatory agency audits and/or actions by interested third parties/environmental groups, fourteen items were recommended. Of these, three have been completed, six are in progress and five are open. The Stormwater Division continues to work both internally and with Jacobs Engineering to complete the recommendations.

### Required control measures/best management practices (BMPs):

- Public education and outreach.
- Public involvement and participation.
- Illicit discharge detection and elimination.
- Construction sites.
- Post-construction stormwater management in new development and redevelopment.
- Pollution prevention/good housekeeping for municipal operations.

Figure 1: MS4 Permit Program Areas

#### **Customer Service**

The Stormwater Division receives various customer concerns from nuisance groundwater and illicit discharges to dust to maintenance of infrastructure. Complaints often rise and fall with weather patterns.

Customer issues in 2022 were down 9% from 2021. 135 requests were received in 2022.



#### **Inspections**

The inspection team regulates permitted residential and commercial properties.

Total inspections tracked 9% higher than in 2021 with over 4800 inspections performed in 2022. In addition, the team completed 354 pond and outfall inspections.



### Plan Review

Castle Rock Water Plan Review team reviews planned development plans, site plans, construction drawings, water efficiency plans and technical reports for each project to ensure the public infrastructure built by the developer is following the criteria set by the Town, with respect to:

- Water
- Sanitary sewer
- Stormwater
- Drainage
- Flood Control
- Landscape and Irrigation
- Temporary erosion sedimentary control

#### **Project Reviews**

A project can be as large as a master planned development area or subdivision, or as small as a commercial building or building addition.

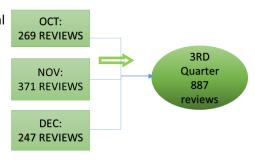
4th Quarter

- November had the highest number of distinct projects for the year
- The number of permits dropped this quarter
- November had record high number of project reviews
- 83% on time

#### **Plan Reviews**

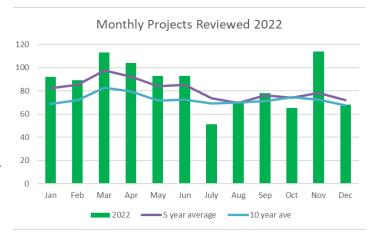
Each project may have several plans related to it.

This graph identifies the total number of different plan reviews for all projects and permits.



#### **2022 TOTALS**

- ➤ 4,324 Reviews of projects and permits
- ➤ 1,905 permits reviewed for single family, commercial new, commercial tenant improvements, irrigation, floodplain
- ➤ 2,419 project reviews for Utility (water/san), storm, floodplain, landscape, TESC, variances, field change orders and agreements
- > 1,031 projects total in 2022





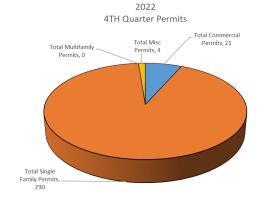
#### **Plan Permits**

The plan review team reviews building permits to verify proposed water demand to size meters and assess system development fees. The team reviews permits for

each single family home, multi-family building, commercial building, commercial tenant improvement, irrigation meter, and temporary trailers.

#### 4th quarter

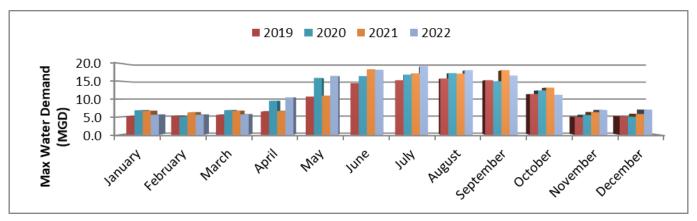
- 315 permits
- 572 project reviews
- 354 1<sup>st</sup> reviews



### Water Resources

#### **Water demand**

Maximum demands inform us of the size of the infrastructure necessary to provide water service over short periods of time and help us to plan future water resources needs.



#### **Max Daily Demand:**

- 7.0 million gallons/day (MGD)
- 5-year average: 5.7 MGD
- 23% higher than the 5-year average
- The max demand for the year was the July demand of 19.2

#### Renewable supplies

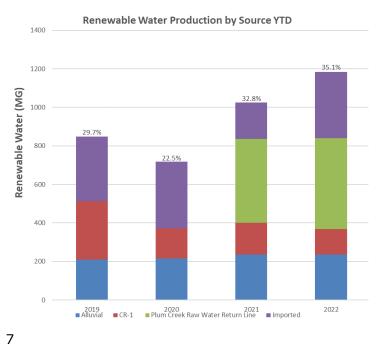
Renewable supplies are those water sources that are replenished by precipitation.

In total, renewable supplies accounted for 59.2% of the total water supply for the month (89.9 MG of 151.7 MG) and 35.1% of the annual water supply (1,184.6 MG of 3,374.7 MG).

- The CR-1 diversion produced an average of 0.33 MGD.
- The PC diversion produced an average of 0 MGD.
- The 14 alluvial wells produced an average of 0.73 MGD.
- The renewable water production average was 2.9 MGD.
- The renewable water total production was 89.9 MG (275.9 AF).

#### **Water Demand Total:**

- The water demand total for December was 160.4 million gallons (MG) [492.2 acre-feet (AF)]
- 2% higher from the November 2022 total of 157.1 MG
- 3.0% decrease from the previous year's December 2021 demand of 165.3 MG.
- The total water demand for 2022 was 3.423.2 MG [10,505.42 AF]



### Water Demand

#### **Reusable supplies**

Reusable supplies are waters that are either from the non-tributary Denver Basin (deep wells) or imported supplies (such as WISE) that can be used over and over, to extinction.

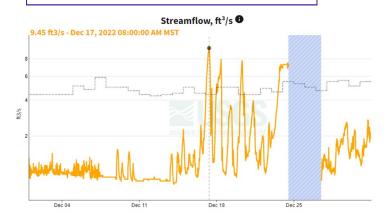
The average reusable supplies used by Castle Rock for 2022 is 57.8%.

#### **Storage**

#### **Current reservoir storage**

- Chatfield Reservoir: 656.51 AF
- Rueter-Hess Reservoir: Approximately 100 AF
- Castle Rock Reservoir No. 1 (CRR1): 158.91 AF

#### **Local Plum Creek supplies**



The hydrograph shows the estimated flows in the East Plum Creek basin.

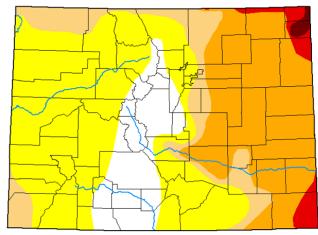
\*Blue area indicates equipment malfunction.

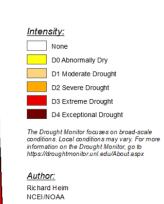
- Flows ranged from 0.51 9.72 cubic feet per second (cfs).
- The monthly average streamflow was 1.5 cfs.
- The 22-year median is 4.7 cfs.

#### **Drought**

According to the most recent U.S. Drought Monitor maintained by the United States Department of Agriculture (USDA), **Douglas County is** experiencing no conditions to Moderate Drought (D1) conditions. **U.S. Drought Monitor** Colorado

**December 27, 2022** (Released Thursday, Dec. 29, 2022) Valid 7 a.m. EST











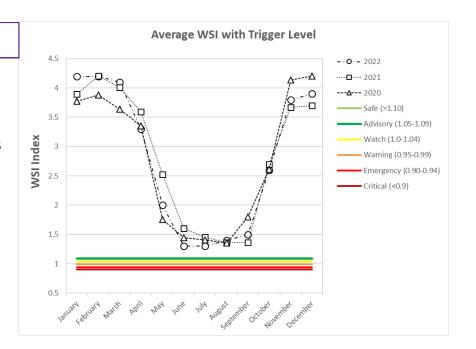
droughtmonitor.unl.edu

### Water Demand

#### **Water supply index**

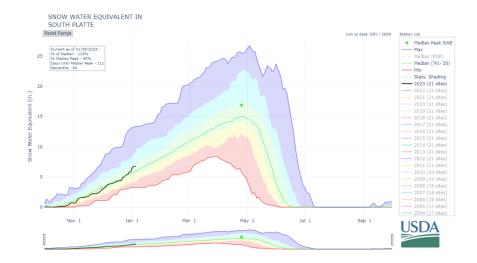
The Town of Castle Rock's Drought Management Plan uses a Water Supply Index (WSI) for the Town that accounts for local conditions relative to the Town's capability to address our water resources and daily water demands. Anything below a 1.1 will trigger a drought stage relative to its severity.

 The average WSI for December was 3.9.



#### **South Platte River Basin Snow Pack**

- Year-to-date precipitation at 101% of average.
- Snow Water Equivalent (SWE) at 115% of average.



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### Water Demand

#### **Conservation—Annual Summary**

#### Workshops

- 11 Water Wiser workshops
  - ♦ New participants: 309
  - ♦ Renewals: 112
  - ♦ Current total of active Water Wisers: 3,507
- 2 ColoradoScape workshops
- 1 Winterization workshop
- 5 Qualified Water Efficient Landscaper (QWEL) training (with SWMSA)
- 2 school presentations (~78 students)

#### **Rebates**

#### **Residential ColoradoScape Renovation rebates:**

- 82 completed applications
- Amount refunded: \$80,941.20
- Square feet renovated: 71,092
- Avg water consumption savings since 2013: 16%

#### Non-Residential ColoradoScape Renovation:

- Six (6) completed applications
- Amount refunded: \$60,664.70
- Square feet renovated: 110,544
- Average water consumption since 2018: 28%

#### **Smart Controller rebates:**

- 66 completed applications
- Amount refunded: \$5,607.97

#### **Rotary Nozzle rebates:**

- 12 completed applications
- Amount refunded: \$1,439.40

#### **Toilet rebate participants:**

- Five (5) completed applications (12 toilets)
- Amount refunded: \$1,200.00

#### **Whole-Home Water Monitoring System rebates:**

- Two (2) applications
- Amount refunded: \$337.47

2022 Residential Total: \$89,526.04 2022 Non-Residential Total: \$60,664.70

2022 Total: \$150,190.74

#### Inspections

#### Residential and non-residential: 1,884

- Pre-con: 22
- Point of connection inspection: 16
- Point of connection re-inspection: 9
- Soil inspection: 1,190
- Soil re-inspection: 328
- Sub-surface inspection: 6
- Sub-surface re-inspection: 0
- Site visits: 17
- Landscape final inspection: 97
- Irrigation final inspection: 34
- Landscape final re-inspection: 70
- Irrigation final re-inspection: 7
- Graywater inspection: 29
- Graywater re-inspection: 7
- Indoor WEP inspection: 28
- Indoor WEP re-inspection: 4

#### **Violations**

#### Residential violations: 2,443 violations, \$12,700

- 1st Residential Watering Violation: violations 2,053
- 2nd Residential Watering Violation: 309 violations, \$7,300.00
- 3rd Residential Watering Violation: 61 violations,
   53,000,00
- 4th Residential Watering Violation: 15 violations, \$1,400.00
- 5th Residential Watering Violation: 4 violations, \$800.00
- Subsequent Residential Watering Violation: 1 violations, \$200.00

#### Non-residential violations: 493 violations, \$88,900

- 1st Non-Residential Watering Violation: 210 violations
- 2nd Non-Residential Watering Violation: 98 violations, \$9,700.00
- 3rd Non-Residential Watering Violation: 73 violations, \$12,800.00
- 4th Non-Residential Watering Violation: 45 violations, \$16,800.00
- 5th Non-Residential Watering Violation: 25 violations, \$18,400.00
- Subsequent Non-Residential Watering Violation: 42 violations, \$31,200.00

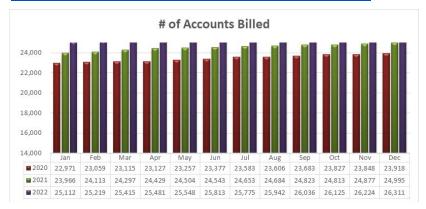
#### Total: 2,361 violations, \$101,600

#### **Exemptions**

Sod/seed/plant material exemptions: 589

### **Business Solutions**

#### **Customer Service & Billing**





#### 2022/Q4 statistics

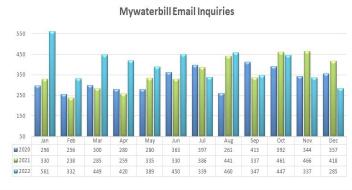
These percentages rose slightly this quarter!

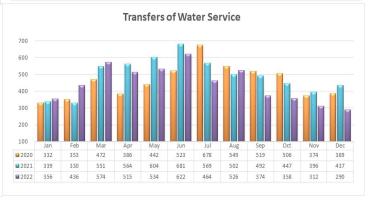
- 19,631 (75%) have an online account
- 12,723 (65%) are paperless

Customers benefit from having an online H20access account with 24/7 access to statement information, 12 months of statement history, helpful email account reminders and safe and secure online payment options. Customers are encouraged to use paperless billing to reduce clutter, be environmentally friendly and save mailing costs.









#### **Customer Outreach**

Water Outreach Social Media Stats	REACH			
Gift of water savings—Dec. 7	1,470 people			
Freezing pipes—Dec. 14	3,873 people			
Hank Poop Fairy—Dec. 15	3,654 people			
Keep hydrated—Dec. 21	1,450 people			
Cold weather safety (combined)—Dec. 21	5,011 people			
Toilet is not a trashcan—Dec. 28	2,341 people			

Email: Tips to prevent freezing pipes!	12,827 opened (70% open rate)
Email: Winter woes for your water	12,798 opened (70% open rate)
HOA email: What the no-turf regulation means for the HOA	114 opened (58% open rate)

End of year top ranking stats	REACH			
ColoradoScape winner—May 19	19,230 people			
Troubleshooting/Pressure—Feb. 16	7,848 people			
Poop Fairy Tailor—April 8	7,478 people			

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### Meters

#### **Meters Read**

Meters are read the first two days of every month. The number of meters read continues to increase month to month and is a significant increase over last year.

#### **Skipped Reads**

Dec. 2022: 0.85 %

Measuring skipped reads is a strong indication of the level of preventative maintenance being done by our team. A skipped read is indicative of a problem with the metering infrastructure (i.e. battery, wiring, etc.). Fewer skipped reads means more properly working meters, which is good for all our customers.

The AWWA standard is 2%, so we still continue to stay well below the industry average.



#### **Meter Set Inspections**

**Re-inspections:** 

26%

Meter set inspections are required on all new meters installed. This ensures that the meters are installed per specifications and according to Town code. At the time of the inspection, the curb stop is tested for operability and the MXU is installed which provides reading capability for our drive by technology. Re-inspections are needed to ensure installation meets code when original inspections are failed.

#### All Meter Set Inspections (includes all re-inspections)



■2019 ■ 2020 ■ 2021 ■ 2022

#### **Work Orders**

Meter services performs a variety of service work orders every month beyond meter reading. These include curb stop maintenance, meter replacement and repair, final reads for transfers of service, disconnection and reconnections, meter set inspections, and more.



# Operations & Maintenance

#### **LEVELS OF SERVICE**

#### **December 2022**

### Drinking Water Compliance

Castle Rock Water will deliver water that meets or surpasses the requirements of both Primary Drinking Water Regulations and Secondary Maximum Contaminant Levels 100% of the time.

One hundred routine samples were completed and no issues discovered.

#### Pressure Adequacy

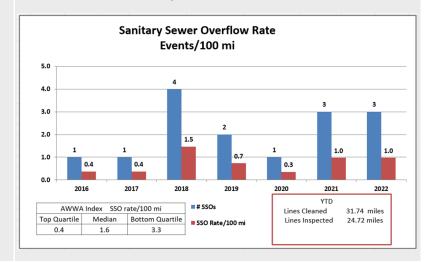
< 1% of our customers will experience less than 43 pounds per square inch (psi) of pressure at the meter during normal operations. There were no water pressure issues in December.

#### Sewer System Effectiveness

<1% of our customers will experience a sewer backup caused by the utility's sewer system per year.

There was a total of 3 Sewer System Overflows in 2022.

#### There were no sanitary sewer issues in December.



### Water Quality Complaints

Castle Rock Water remains in the Top Quartile for water quality complaints based on the AWWA benchmarking.

There were no water quality complaints for December. We conducted 7 educational visits.

For 2022, we conducted 27 educational visits for the year.

#### **Utility locates**



#### **Water locates conducted**

December: 1,3832022 total: 27,533

Locating public water, wastewater and stormwater lines



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## Operations & Maintenance

#### **LEVELS OF SERVICE**

### **Drinking Water Supply Outages**

<5% of our customers will experience water outages for one or more events totaling more than 30 hours/year.

Castle Rock Water remains in the Top Quartile for water system integrity based on the American Water Works Association benchmarking.

#### **December 2022**

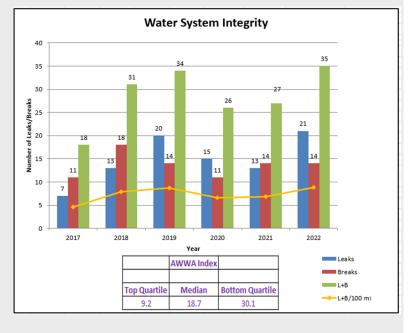
There was one water system integrity issues in December.

 There was a severe beam break on a 6" CIP main in a neighborhood off South St. During the repair 15 homes were affected with little to no pressure for less than four hours.





2022 total: 35 water system integrity issues



# Operations & Maintenance

#### **Stormwater**

The stormwater team completed a large project in the storm system areas at The Pines Apartments.







To improve holding capacity in the pond and channels, sediment was removed.





Additional rip rap was added in some areas to prevent erosion and future sediment buildup.





#### MONTHLY REPORT FOR THE

# OFFICE OF TOWN CLERK

Providing exceptional public service to our community and internal partners, with a commitment to integrity, honesty, and accountability, while conforming to the highest standards of conduct and ethics.







### **Elections**

www.CRgov.com/elections

**Guardians of Democracy** Designated Election Official FCPA Filing Officer

#### **November 8, 2022 Regular Council Election**

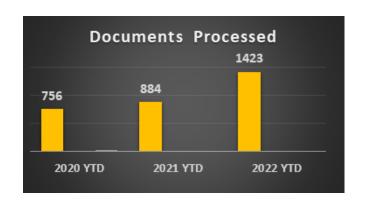
Mayor: 1 candidate District 3: 2 candidates District 5: 3 candidates 1 Issue Committee

### Records

www.CRgov.com/municipal code Historian, Archivist, Keeper of the Laws, Legal Notices

+61% 2021-2022

Route and execute Town documents **Codify Town laws** Archive Town records into Alchemy Publish and post legal notices Process recordings and agreements for Legal



### **CORA Requests**

www.CRgov.com/openrecords Provide Transparency to the Public

> Coordinate with departments to fill public records requests under Colorado Open Records Act

-3% 2021-2022



### No Knock Program

+28% 2021-2022

www.CRgov.com/noknock Program Created in 2008 8,285 Total





# Liquor Licensing Authority 2022 Summary

+27% 2021-2022

(NOTE: Hearings will now be posted on the website calendar for all New Licenses and Special Event Liquor Permits as well as the required posting at the location of the premise and the newspaper for New Licenses.)

#### **Modifications**

Permanent Modifications - Outdoor Patios

B&B Castle Café
Angies Z'Abbracci's
Union Provision
Guadalajara Scileppi's
Cork & Keg Crowfoot

#### **2022 Businesses that Changed Owners**

Vista Vino

Colorado Cork and Keg

Tasty House

Los Santos (to The Park)

Pending

South Garden

Plum Creek Golf

Scissors and Scotch

#### **Events**

16 Town-held and Parks & Trails Events

3 Chamber Events

7 Downtown Merchants Association Events

13 Douglas County Events

34 Other

#### **2022 Closed Businesses**

Carlos Miguel's Siena

#### **2022 Surrendered Licenses**

Tokyo Joe's Qdoba - Allen Street and New Memphis locations

#### **Liquor Revenues**

2017 2021	\$18,270 \$30,751	+9% 2021-2022
2022	\$33.441	

#### **New Licenses**

Bear'l Cellars - Vintner Restaurant 105 West - Changed to Brew Pub The Backyard - Change to Tavern Luxe Liquors - Retail Liquor Store Press Waffle - Beer and Wine Farmgirl - Retail Liquor Store Kum and Go - Fermented Malt Beverage M Vince Nail Spa - Entertainment and Lodging

#### Pending

Perry Street Social District - pending CO Scissors & Scotch - pending CO Dilly Dally DIY Workshop



	2017	2018	2019	2020	2021
New:	3	7	8	12	14
Transfers:	11	9	6	6	4
<b>Special Events:</b>	77	77	77	32	61
<b>Modifications</b> :	7	11	10	22	7
Other:	155	145	143	187	202



### **Year-End Summary**

#### **Statistics**

- CORA Requests 3% decrease in number of requests and 838% increase in revenue.
   \* Time spent over 1 hour is charged for CORA requests now tracked in software
   2022 118 billable hours = \$3,968 (747 total hours of staff time)
   2021 12 billable hours = \$423
- Documents processed 61% increase from 2021 to 2022
- Liquor Licenses 27% more applications processed, 9% increase in Revenue
- No Knock registrations 28% increase from 2021 to 2022

#### **Budget:**

Expenditures: 13% under budgetRevenues: 25% over budget

#### **Liquor Licensing**

- Worked with applicants to convert Summer Outdoor patios and Outdoor COVID modifications to permanent modifications.
- Implemented posting hearings for new liquor licenses and notice of special events on public notice website calendar to increase transparency.
- İmplemented legislative changes.

#### **Elections**

- Coordinated municipal election with Douglas County for three members of Town
  Council and managed six candidate committees and one issue committee. Participated
  in Logic and Accuracy Testing, Risk Limiting Audit and Canvass to certify election
  results. Election costs under budget.
- Met with Election Commission to determine the election district for newly annexed property.
- Began re-write of the Election Code.

#### **Accomplishments**

- Re-write of Boards and Commissions Code.
- Standardized and amended all Boards and Commissions Bylaws.
- Held annual Shred-It event for Town employees shredding over 4,600 pounds of paper.
- Attended Colorado Clerk Conference.
- Assistant Town Clerk obtained Certified Municipal Clerk designation.



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 4. File #: ID 2023-010

To: David L. Corliss, Town Manager

Through: Tara Vargish, Director Development Services

From: Kevin Wrede, Planning Manager

**Update: Quasi-Judicial Projects** 

#### **Executive Summary**

The purpose and intent of this report is to provide Town Council with a summary of quasi-judicial projects. In order to provide all parties with due process under law, decision makers must be fair and impartial when considering quasi-judicial applications such as those included in this memorandum. Many of these projects do not have public hearing dates yet, but Town Council could be asked to consider them in the future.

#### **New Applications**

Crowfoot Valley Road Right of Way Annexation Crystal Valley Mixed-Use Site Development Plan McDonald's (Founders Marketplace) Site Development Plan

#### On-going Quasi-Judicial Applications (currently under review)

The full list of on-going quasi-judicial projects along with vicinity maps can be found on the attached Staff Memorandum.

Meeting Date: January 17, 2023



#### AGENDA MEMORANDUM

**To:** David L. Corliss, Town Manager

Through: Tara Vargish, Director Development Services

From: Kevin Wrede, Planning Manager

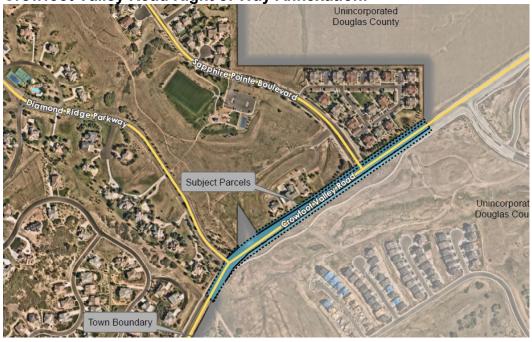
Title: Update: Quasi-Judicial Projects

#### **Executive Summary**

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#### **New Quasi-Judicial Applications:**

**Crowfoot Valley Road Right of Way Annexation:** 



The Town of Castle Rock proposes to annex four parcels of Town-owned land that comprise a portion of the Crowfoot Valley Road right-of-way (ROW). The parcels total 4.4

acres and generally extend from Tower Road to approximately 500 feet east of the intersection of Crowfoot Valley Road and Sapphire Point Boulevard. The property will be zoned for public use and will remain ROW. The proposed annexation is part of a larger effort to bring Town-owned property into the Town's boundaries, and under Town law enforcement and code enforcement jurisdiction. The project will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The ROW parcels are adjacent to Councilmember Cavey's district.

**Crystal Valley Mixed-Use Site Development Plan:** 



Henry Design Group on behalf of Dan Kauffman, Pinnacle View Development, LLC, has submitted an application for a Site Development Plan. The applicant is proposing a mixed use development on the 4-acre property located at the southeast corner of Crystal Valley Parkway and West Loop Road. The proposal includes 24 townhomes, with attached two car garages, and a single two story building with 7,376 square feet of commercial space on the 1<sup>st</sup> floor and seven condominium units on the 2<sup>nd</sup> floor. The Site Development Plan will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located in Councilmember Dietz's district.

McDonald's (Founders Marketplace) Site Development Plan:



Strategic Land Solutions on behalf of McDonald's Corporation, has submitted a Site Development Plan application. The applicant is proposing a 5,140 square foot restaurant with a double drive through on a 1.38-acre lot located at the northwest corner of highway 86 and Aloha Drive. The Site Development Plan will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located in Councilmember Cavey's district.

#### On-going Quasi-Judicial Applications (currently under review):

544 Senter Drive Accessory Dwelling Unit:



Property owners, Anthony and Irene Chin have submitted an application for a Use by Special Review for an Accessory Dwelling Unit. The accessory dwelling unit is a detached structure located in the south corner of the property. The proposed structure includes 2 stories with a garage and accessory dwelling totaling 1,112 square feet. The Use by Special Review will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located in Councilmember LaFleur's district.

**Alexander Way Annexation and Planned Development Plan:** 



The property owner has submitted an annexation petition to annex 73.76 acres north of the Alexander Place and Brewer Court intersection. The project is being referred to as Alexander Way. The property owner has submitted an application for a Planned Development Plan and Zoning Regulations for the annexation area and a 4.2-acre parcel that is already in the Town, for 77.96 acres total. The applicant is seeking zoning which would allow for 53 single family homes, 24 live/work units, and includes 30 acres of open space. This project will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The proposal is located adjacent to both Councilmember Cavey and Councilmember LaFleur's districts.

Auburn Heights Apartments Planned Development Plan Major Amendment and Site Development Plan Major Amendment:



The property owner has submitted an application to amend the zoning and the currently approved site development plan for lot 2 of Auburn Ridge, which is approximately 6 acres in size and generally located in the southwest quadrant of E. Wolfensberger Road and Auburn Drive, southwest of the Auburn Ridge Senior Apartments. Currently, the zoning permits 100 multi-family units for seniors. The zoning amendment seeks to permit 104 multi-family units for people of all ages and the SDP amendment seeks to rearrange the buildings on the site to reduce impacts to surrounding neighbors. The project is known as Auburn Heights Apartments and proposes a total of five apartment buildings containing a total of 104 units, a clubhouse, pool, dog run, playground, and 222 parking spaces. The proposed parking is a combination of attached garages, detached garages, and surface parking. Both the PDP Amendment and the SDP Amendment will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located within Mayor Pro Tem Bracken's district.

**Avilla at Founders Site Development Plan:** 



The property owner, NexMetro Communities, has submitted an application for a Site Development Plan (SDP) proposing a 105 unit for rent community on approximately 9 acres. The 105 units are composed of 71 single family detached homes and 17 paired homes (34 units). The property, which is within the Bella Mesa Planned Development (PD), is located at the northwest corner of Mikelson Blvd. and Mitchell St., south of Mesa Middle School. The SDP will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located in Councilmember Brooks' district.

**Brickyard Planned Development Plan:** 



Page 6

Confluence Companies has submitted a quasi-judicial application for The Brickyard Planned Development Plan and Zoning Regulations, a mixed use development with a maximum of 600 multi-family dwelling units, and office, retail, hotel, performance venue and recreational space. The site is approximately 31 acres and is located on Prairie Hawk Drive, north of Plum Creek Parkway and south of Topeka Way. The proposed rezoning will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located in Mayor Pro Tem Bracken's district.

**Canyons Far South Annexation and Planned Development Plan:** 



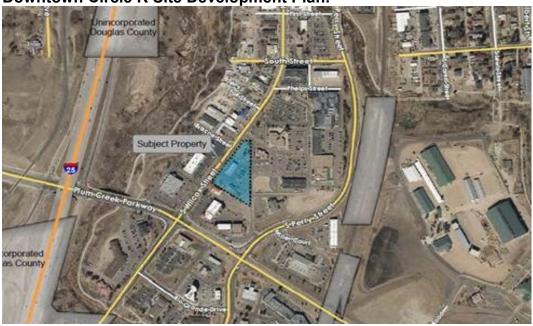
The property owner has submitted an annexation petition to annex a 409-acre site located south of Crowfoot Valley Road, east of Founders Parkway, north of Crimson Sky Drive and west of Castle Oaks Drive into the Town of Castle Rock. The owner has also submitted the Canyons Far South Planned Development Plan for zoning of the property for a new neighborhood consisting of 474 single-family homes and 60,000 sq. ft. of neighborhood commercial. The annexation and zoning will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is adjacent to Councilmember Cavey's district.

**Chateau Valley Site Development Plan:** 



Highline Engineering & Surveying has submitted an application for the Chateau Valley Site Development Plan (SDP) proposing a 423-unit residential subdivision on 113 acres. The 423 units is composed of 297 single family detached homes and 63 paired homes (126 units). The property, which is within the Young American Planned Development (PD), is generally located east of Memmen Park, north of the Baldwin Park subdivision, and south of the Southridge Townhome subdivision. The Site Development Plan includes a total of 42.2 acres of open space. The SDP will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located within Councilmember Brooks' district.





A new quasi-judicial application from Land Development Consultant, on behalf of Circle K, was submitted for a Site Development Plan for a new 3,700 sq. ft. convenience store building to replace the existing 1,838 sq. ft. building. No changes are proposed for the existing fueling station, which is to remain open during construction of the new convenience store building. The property is approximately 1.8 acres in size and located at 310 S. Wilcox St. in Downtown Castle Rock, south of the Castle Rock library. The SDP will require a public hearing before the Design Review Board (DRB) for review and final decision. The project is located within Councilmember LaFleur's district.

**Dunkin Donuts Site Development Plan:** 



Ethos Architecture Group, on behalf of property owner Linden Partners, has submitted a Site Development Plan for a 2,340 square foot Dunkin Donuts with drive through. The proposed location is a 1.13-acre lot at the north east corner of Founders Pkwy. and Aloha Ct. within the Founders Marketplace development. The proposal will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located within Councilmember Cavey's district.

**Eternal Rock Evangelical Lutheran Church Site Development Plan Amendment:** 



The property owner has submitted an application for a Site Development Plan known as Eternal Rock Evangelical Lutheran Church for approval of new landscaping, new signage, new storage facility, and to reconfigure the parking lot with the addition of a second entrance together with new curb/gutter/sidewalk along Phelps Street on the 0.63-acre property. The Downtown Site Development Plan will require a public hearing before the Design Review Board for review and final decision. The property is located in Councilmember LaFleur's district.

**Front Street Triplexes Site Development Plan:** 



Total Development Corporation, on behalf of Front & Center, LLC, has submitted an application for a Site Development Plan for approval of two triplex residential buildings on a 0.273-acre lot on Front Street between Fifth and Sixth Streets. Each unit will be two bedrooms and 2.5 bathrooms and a total of 14 parking spaces will be provided on the property. The property falls within the Front Street Overlay District and the Craig & Gould neighborhood. The Site Development Plan will require a public hearing before Planning Commission who will provide a recommendation to Town Council who will review and decide on the project at a public hearing. The applicant has also submitted an application for architectural review by the Historic Preservation Board as the property is within the Craig & Gould neighborhood. A public hearing will be held before the Historic Preservation Board for review and approval of the project's architecture. The property is located in Councilmember LaFleur's district.

Meadows - Affinity Senior Multi-Family Site Development Plan:



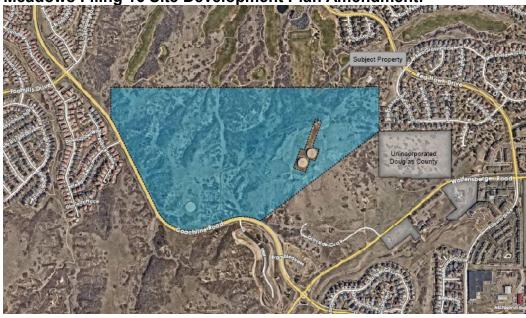
The property owner has submitted a Site Development Plan on a 7-acre site that is located south of Meadows Parkway, east of the movie theater and west of the Plum Creek Trailhead parking lot in the Meadows. The proposal is for an active adult, age-restricted development to include 174 units for lease at market rate. The 4-story building includes 1st floor parking. Amenities planned include a theater room, fitness center, game room, pub, golf simulator, indoor pool, workshop and community garden. The proposal requires public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located in Mayor Pro Tem Bracken's district.

**Meadows Town Center Site Development Plan:** 



The property owner has submitted a new quasi-judicial application for a Site Development Plan for a proposed mixed use development of 3 parcels in the Meadows Town Center, located on Future and Mercantile Streets. The Garrett Companies is proposing 85 residential units as a combination of townhomes and mixed use apartment buildings. Approximately 6,248 square feet of retail space will be available on the ground floor of one building. Amenities on the site include surface and garage parking, and outdoor pool and gathering area. The proposal requires public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision The property is located in Mayor Pro Tem Bracken's district.

Meadows Filing 16 Site Development Plan Amendment:



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A new quasi-judicial application was submitted from Castle Rock Development Co. for Meadows Filing 16, Parcel 6, for a residential Site Development Plan Amendment. The property is approximately 136 acres and is located east of Coachline Road, south of Red Hawk Ridge Golf Course, west and north of Town open space. The property has an approved site plan for 59 single family lots and proposed to dedicate 83 acres as public/private open space. The proposed Site Development Plan amendment proposes 77 lots for single family homes, 83 acres of Town owned open space, and an additional 30 acres of open space dedicated to the Meadows HOA. This SDP amendment also increases the buffer between the residential development and the adjacent golf course from the previously approved plan. The proposal requires public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. This property is located within Mayor Pro Tem Bracken's district.

Meadows Filing 19 Senior Multi-Family Site Development Plan:



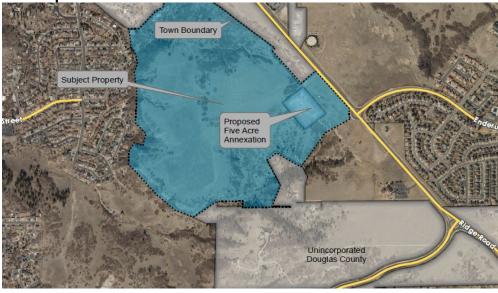
Ulysses Development has submitted a Site Development Plan for a 4-story 183,999 square foot senior housing apartment development that contains 200 units. The project is proposing an associated 271 parking spaces with the project and will contain a mixture of 1 and 2 bedroom units. The proposed location is a 5.5-acre site located west of Timber Mill Parkway and North Meadows Drive. The proposal requires public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision The project is located in Councilmember Hollingshead's district.

**Memmen Young Infill Annexation:** 



The property owner has submitted a Petition for Annexation for a five-acre parcel. The parcel is located south of Fifth Street, north of East Plum Creek Parkway, and west of Ridge Road. The 5-acre parcel is completely surrounded by the existing Memmen Young Infill Planned Development. A single family residence is currently on the property. The applicant will propose to incorporate the parcel into the Memmen Young Infill PD through the Major Amendment under review. The annexation of the parcel and the Memmen Young Infill PD Major Amendment would be considered concurrently during required public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is surrounded by Councilmember Brooks' district.

Memmen Young Infill Planned Development Plan and Founder's Vista Site Development Plan:



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The property owner has submitted a Planned Development Plan and a Site Development Plan (SDP) for a 561-unit residential development within the Memmen Young Planned Development, also known as Founder's Vista. The Site Development Plan proposes 333 single-family homes and 228 paired homes. The proposed development is 180.5 acres in size of which 86.7 acres is proposed to be open space. The proposed Site Development Plan is contingent on the approval of the Memmen Young Infill Planned Development Major Amendment and the annexation of a 5-acre parcel. The Planned Development Plan Amendment will require public hearings before the Planning Commission for review and recommendation and the Town Council for review and final decision. If the Planned Development Plan Amendment is approved, then the Site Development Plan would move forward to public hearings before the Planning Commission for review and recommendation and the Town Council for review and final decision. The project is located in Councilmember Brooks' district.

North Basin Village at Terrain (Phase 2) Site Development Plan:



The property owner has submitted a Site Development Plan (SDP) for 105 single family homes on approximately 1,180 acres within the Terrain North Basin Phase 2 development. The proposed development also includes approximately 150 acres of Open Space dedication. The project is located along Castle Oaks Drive. The SDP will require public hearings before the Planning Commission for review and recommendation, and Town Council for review and final decision. The project is located within Councilmember Cavey's district.

Oaks Filling 2A Site Development Plan:



Henry Design Group, Inc., on behalf of the property owner, Castleview LLC, has submitted an application for a site development plan (SDP) for a residential neighborhood known as the Oaks of Castle Rock Filing 2A. The Oaks of Castle Rock Filing 2A is approximately 165 acres in size and generally located south of Plum Creek Parkway, east of Lake Gulch Rd., and west of N. Ridge Road. The SDP proposes 114 single-family homes, open space and a public trail system. The SDP will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located in Councilmember Brooks' district.

**Pinon Manor Apartment Planned Development Plan:** 



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The property owner has submitted a rezoning application for 472, 481 and 498 S. Gilbert Street. The application proposes to consolidate three properties totally 3.25 acres into one zoning classification known as Pinon Manor Planned Development (PD). The rezoning would allow for the existing developed apartments to remain and to provide for the development of an adjacent parcel to contain 3 new apartment buildings with a total of 20 new dwellings. The PDP will require public hearings with the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located within Councilmember Dietz's district.

**Pioneer Ranch Annexation and Planned Development Plan:** 



The property owner has submitted an annexation petition to annex a 388-acre site located west of Founders Parkway and east of Front Street into the Town of Castle Rock. The applicant is proposing the Pioneer Ranch Planned Development Plan zoning to allow 1,123 dwelling units (a mix of single-family and multi-family), 78 acres of open space, and 39 acres dedicated for public uses, such as schools and parks. The annexation and planned development plan require public hearings before Planning Commission for review and recommendation and Town Council for review and final decision. The project is adjacent to Councilmember Cavey's district and Councilmember LaFleur's district.

**Plum Creek Planned Development Amendment:** 



The Douglas Group, Inc. has submitted an application to amend a planned development plan to create 3 single family lots from a tract in Plum Creek Planned Development. The general location of the tract is directly west of the intersection of West Prestwick Way and Mount Royal Drive, in the southwest portion of Plum Creek Planned Development. The parcel size of Tract B is 1.5 acres. The applicant is proposing to create three lots ranging in size from 20,271 to 22,581 square feet. The proposal will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The project is located in Councilman Dietz's district.



The property owner, Scileppi Properties, LLC, has submitted an application for a Downtown Site Development Plan for an expansion to the Scileppi's/Slice Works restaurant. The expansion located on the east side of the existing building, where the existing parking lot is located, is approximately 6,000 square feet in size with 4,000 square feet of the expansion at ground level and 2,000 square feet within the basement. Seven on-site parking spaces will be located off the rear alley of the 0.278-acre property. The Downtown Site Development Plan will require a public hearing before the Design Review Board for review and final decision. The property is located in Councilmember LaFleur's district.

**Sunset Point Site Development Plan:** 



The property owner, Fourth Investment USA, LLC, has submitted an application for a Site Development Plan (SDP) for a residential neighborhood known as Sunset Point, formally known as Bella Mesa North. Sunset Point is approximately 293 acres in size and generally located northeast of Mesa Middle School. The SDP proposes 525 single-family homes, dedicated open space and a trail system. The SDP will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The property is located within Councilmember Brooks' district.



**Wellspring and Castle Oaks Covenant Church Annexation:** 

The property owner has submitted a new quasi-judicial application for annexation of a parcel of land for Wellspring Community Center and Castle Oaks Covenant Church. The annexation petition is to annex approximately 2.07 acres located at 498 E. Wolfensberger Road, for future Wellspring and Castle Oaks Covenant Church facilities. After staff review, this annexation petition will be scheduled for Substantial Compliance and Eligibility hearings with Town Council. The annexation will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. This property is located adjacent to Mayor Pro Tem Bracken's district.

The Town's Development Activity map provides additional information on these quasi-judicial applications, as well as projects that are under administrative (non quasi-judicial) review. This map is available at: <a href="https://creativecom/creativity.">CRgov.com/developmentactivity.</a>



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 5. File #: ID 2023-011

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Tara Vargish, Director of Development Services

**Development Services Project Updates** 

The high-growth nature of Castle Rock results in numerous and diverse questions from individuals seeking information about existing conditions and future plans. Information on community development activity and formal land use applications are located on the Town website under the Development Activity Map link.

Development activity continues to be strong, with continued interest for a variety of project types in Castle Rock. Permit activity remains steady, and homebuilders and commercial builders remain active.

Please see the attached Staff Memorandum for project details.

Meeting Date: January 17, 2023



#### **AGENDA MEMORANDUM**

To: David L. Corliss, Town Manager

**From:** Tara Vargish, PE, Director of Development Services

Title: Town Manager Report – Development Project Updates

This report contains development updates and new submittals or requests that have been submitted to staff since the last update to Town Council. The high-growth nature of Castle Rock results in numerous and diverse questions from individuals seeking information about existing conditions and future plans and formal applications for development. More information on community development activity and formal land use applications are located on the Town website under the Development Activity Map link, which can be accessed at CRGov.com/DevelopmentActivityMap

#### New Quasi-Judicial Applications Requiring Public Hearings

**Crowfoot Valley Road Right of Way Annexation** 



The Town of Castle Rock proposes to annex four parcels of Town-owned land that comprise a portion of the Crowfoot Valley Road right-of-way (ROW). The parcels total 4.4 acres and generally extend from Tower Road to approximately 500 feet east of the intersection of Crowfoot Valley Road and Sapphire Point Boulevard. The property will be zoned for public use and will remain ROW. The proposed annexation is part of a larger effort to bring Town-owned property into the Town's boundaries, and under Town law enforcement and code enforcement jurisdiction. The project will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. The ROW parcels are adjacent to Councilmember Cavey's district.

**Crystal Valley Mixed-Use Site Development Plan** 



Henry Design Group on behalf of Dan Kauffman, Pinnacle View Development, LLC, has submitted an application for a Site Development Plan. The applicant is proposing a mixed-use development on the 4-acre property located at the southeast corner of Crystal Valley Parkway and West Loop Road. The proposal includes 24 townhomes, with attached two-car garages, and a single two-story building with 7,376 square feet of commercial space on the 1<sup>st</sup> floor and seven condominium units on the 2<sup>nd</sup> floor. The Site Development Plan will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. This project is in Councilmember Dietz's district.

McDonald's (Founders Marketplace) Site Development Plan



Strategic Land Solutions on behalf of McDonald's Corporation, has submitted a Site Development Plan application. The applicant is proposing a 5,140-square-foot restaurant with a double drive-thru on a 1.38-acre lot located at the northwest corner of Highway 86 and Aloha Drive. The Site Development Plan will require public hearings before the Planning Commission for review and recommendation and Town Council for review and final decision. This project is located in Councilmember Cavey's district.

#### **New Pre-Application Meeting Requests**

**Driveway Access for 3560 North Crowfoot Valley Road** 



A pre-application meeting request seeking information on application and submittal requirements to obtain access from Crowfoot Valley Road to their property located at 3560 N. Crowfoot Valley Road. This vacant, 10-acre property has been unable to obtain an access easement from the owner of Tower Road, located directly north of the property. The project is located adjacent to Councilmember Cavey's district.

**Limelight Center Retail** 



A pre-application meeting request was submitted seeking information on application and submittal requirements for a site development plan for two new commercial buildings on two vacant, adjacent parcels located southeast of Limelight Avenue and Meadows Parkway. The applicant is proposing to build a 5,900-square-foot building on each lot (total lot size is 2.3

acres) for retail/restaurant uses with a drive-thru for each building. This project is located in Mayor Pro Tem Bracken's district.

#### **Ongoing Development Activity:**

#### **Commercial Development Activity**

#### • Promenade:

- Alana at Promenade Apartments, building and site construction for 300 unit multi-family residential development, located on Alpine Vista Circle, west of Promenade Parkway.
- Buffalo Wild Wings, building and site construction, located on the southwest corner of Factory Shops Boulevard and New Memphis Court.
- Los Dos Portrillos, pad site construction, and restaurant site plan review for new 7,400 square foot restaurant, located west of TJ Maxx off Promenade Parkway. Grading only approved
- Chipotle pad site, site plan, plat and construction documents approved, and building site plan approved for building elevations for a future Chipotle, located off Promenade Parkway north of Sam's Club. Revised domestic water service building connection location submitted.
- Promenade Commons Park, site plan, plat and construction document approved for new half-acre park connecting the Alana multi-family and the proposed commercial area, located on the west side of Promenade Parkway and Alpine Vista Circle.
- Lazy Dog Restaurant site plan review for a new stand-alone restaurant, located on the northeast corner of Castlegate Drive West and Promenade Parkway.
- Whole Foods, site plan amendment to add EV charging stations in the existing parking lot, located at 6384 Promenade Parkway.

#### Meadows:

- Access road, construction documents approved for public street construction that will support future commercial/office developments, located northwesterly of the North Meadows Drive roundabout.
- Aspen View Academy, building and site construction for an addition, located at 2131 Low Meadow Boulevard.
- Bridge and access road, site construction, connection of the roundabout on North Meadows Parkway south, and then east crossing Plum Creek.
- Castle Rock Adventist Hospital Medical Office Building and site constriction for a new 70,000-square-foot medical office building, located at 2350 Meadows Boulevard.
- Castle Rock Industrial at the Meadows Lot 1, site and building construction for new 80,000+/- square foot warehouse space, located on the future Timber Mill Parkway north of North Meadows Drive.
- Castle Rock Industrial at the Meadows Lot 2, site and building construction for new 80,000+/- square foot warehouse space, located on the future Timber Mill Parkway north of North Meadows Drive.
- Kum and Go, building and site construction for a 5,620 square foot Convenience Store and Fuel Canopy, located at the northwest corner of Meadows Parkway and Lombard Street.
- Lot grading, retaining wall, and waterline construction plan and plat approved, located on vacant commercial lots north of the AMC theatre.
- The Learning Experience, revised site development plan and construction plan review for a 10,000-square-foot, single-story daycare center to be located on Meadows

- Boulevard between Springbriar Drive and Shane Valley Trail.
- Meadows Parkway Intersection improvements, construction document review for improvements to the intersections of Meadows Parkway at Regent Street and Lombard Street.
- Meadows Senior Multi-Family, site plan, plat and construction document review for a new 4- story senior housing apartment development with 200 units, located near North Meadows Drive and Timber Mill Parkway.
- Meadows Affinity Senior Multi-Family, site plan and plat review for a new 4- story senior housing apartment development with 174 units, located near Meadows Parkway and Regent Street.
- Meadows Town Center Townhomes/Mixed-use, site plan and construction document review for 85 residential units with approximately 6,248 square feet of retail, located on three lots off Future Street.
- Moore Lumber at the Meadows, building and site construction for a new 16,880 square foot retail, warehouse, and office building, located at the north end of Regent Street.
- Prairie Hawk Dental, site plan review for new 5,100 square foot dental office building, located at the northeast corner of Prairie Hawk Drive and Limelight Avenue.
- Sol Danza Auto Repair, site plan review for new 4,600 square foot automotive service center, located near the intersection of Prairie Hawk Drive and Sol Danza Drive.

#### Downtown:

- 221 Wilcox Street construction documents approved for infrastructure for future mixeduse building, with 28 residential units and 8,100 square foot retail space, located on the southwest corner of Wilcox Street and Third Street.
- Circle K, site plan review for new 3,700 square foot convenience store to replace the existing building on the site. Located at 310 South Wilcox Street.
- Douglas County Libraries, building and site construction for 62,000 square foot library building and demolition of the existing building, located at 100 South Wilcox Street.
- Eternal Rock Church, site plan review for new landscaping, signage, and storage, located at 2 Phelps Street.
- Keystone Hotel site plan approved for the addition of a new patio on the west side of the building, located at 217 Fourth Street.
- Perry Street Social, site development plan approved and construction document review to create a mini entertainment district, located at 404 North Perry Street.
- Pizza Hut Retail Center, building and site construction for a new commercial center located at 340 South Wilcox Street.
- Railroad Quiet Zone, Town project, construction documents approved for improvements at Second Street, Third Street, and Fifth Street.
- Scileppi properties, site plan review for a 6,000 square foot addition and the addition of seven parking spaces, located at 210 Third Street.
- The View, site and building construction for a 6-story building with mixed-uses including 218 residential units, located at Sixth Street and Jerry Street.

#### Dawson Trails Residential/Commercial:

 Dawson Trails, Planned Development Plan amendment approved for 2,064 acres with 5,850 residential dwelling units and a maximum of 3,200,000 square feet of commercial/non-residential uses, located to the west of I-25 and generally south and north of Territorial Road.  Dawson Trails Demo, construction plan review to demo infrastructure within the Dawson Trails development, located south of Territorial Road.

#### Other Commercial Projects throughout Town:

- 282 Malibu Commercial buildings, site development plan amendment review for a new patio and site construction for two 4,000 square foot commercial buildings, uses are unknown at this time, located at 282 Malibu Street.
- Castle Rock Auto Dealerships, site development plan approved for service center expansion, located at 1100 South Wilcox Street.
- o Founders Marketplace, Dunkin Donuts, site plan review for a new restaurant with drive-through, located at the northeast corner of Founders Parkway and Aloha Court.
- Founders Marketplace, Liberty Express Carwash, building TCO and site construction, located northeast of Fifth Street and Founders Parkway.
- Founders Marketplace, Retail building, site development plan approved for mixed-use retail building, located on Ridge Road between King Soopers Fueling Station and IREA substation.
- o Garage Condos, site and building construction, located on Liggett Road.
- Heckendorf Ranch Retail, building and site construction for a new 8,100 square foot retail building located on Crystal Valley Parkway west of Plum Creek Boulevard.
- Outlets at Castle Rock, site development plan review, two new pad sites on the west side of the mall on Factory Shops Boulevard.
- o Phillip S. Miller Regional Park, construction plan approved for Play Loop Trail.
- Plum Creek Golf Course, site plan amendment review and building and site construction for a new clubhouse, located at Plum Creek Boulevard and Players Club Drive.
- Sanders Business Park, site construction for 2.4-acre site, located south of The Plum Creek Community Church. The future use is a facility for distribution of heating and plumbing equipment.
- Sanders Business Park, site construction for approximately 51,000 square feet of industrial flex space, located south of The Plum Creek Community Church.
- StorQuest, building and site construction for new 98,000 square foot self-storage and RV parking, located off Liggett Road west of Kellogg Court.
- T-Mobile small cell sites, construction documents for 4 locations in the public right-of-way: 1) Park Street and Eighth Street, 2) Factory Shops Boulevard & New Memphis,
   3) Factory Shops and Outlet Entrance, 4) Limelight near Hospital ER Entrance.
- The Brickyard, erosion control and demolition plan approved for demolition of existing building on 4.5 acres, located on the south end of Prairie Hawk Drive.
- The Brickyard Planned Development Plan and Zoning Regulations, under review for a mixed-use development with a maximum of 600 multi-family dwelling units, located on the south end of Prairie Hawk Drive.
- The Famous Steak House, site development plan and interior building renovation, located in former Jarre Creek Brewery building south of Chili's.
- Verizon small cell sites, construction documents for multiple locations in public right-of-way: 1) Factory Shops Boulevard and New Beale Street, 2) Promenade Parkway and Castle Rock Parkway (approved plans), 3) Promenade Parkway (approved plans), 4) Castlegate Drive West (approved plans), 5) Castlegate Drive West and Castle Rock Parkway (approved plans), 6) Factory Shops Boulevard and Meadows Boulevard, 7) Mitchell Street near Mesa Middle School, 8) South Valley Drive north of Plum Creek

- Parkway, 9) Low Meadow Boulevard and Night Song Way, 10) South Gilbert Street between Gilbert and Sellers Drive at Birch Avenue, 11) Foothills Drive and Soaring Eagle Lane, 12) Foothills Drive and Morning View Drive.
- Walmart, site development plan approved for new drive-through ATM at the west end
  of the existing parking lot.
- Wellspring and Castle Oaks Covenant Church, annexation petition is to annex approximately 2.07 acres located at 498 East Wolfensberger Road, for future Wellspring and Castle Oaks Covenant Church facilities
- Woodlands Medical Office Building site plan review for a new 14,336 squarefoot medical office building located near Woodlands Boulevard and Barranca Drive.
- Zaika Indian Restaurant, site plan review to enclose the existing patio on the south side of the building, located at 78 Allen Street.

#### **Residential Development Activity:**

- 302 North Lewis Street Historic Preservation application, 830 square foot detached garage.
- o 306 North Lewis Street Historic Preservation application, 400 square foot addition.
- Alexander Way, annexation petition for 73.76 acres of land, located north of Alexander Place and Brewer Court.
- 544 Senter Drive, use by special review for a new two-story accessory dwelling unit with garage.
- Auburn Heights Apartments, rezoning application to amend the zoning and the currently approved site development plan for Lot 2 of Auburn Ridge.
- Avilla at Founders, site plan and construction document review, for 105 for-rent singlefamily dwellings, located on the northwest corner of Mikelson Boulevard and Mitchell Street.
- Bella Mesa, site plan, plat and construction documents approved for relocation of existing detention pond, located north of Mesa Middle School off Mitchell Street.
- Canvas at Castle Rock, site construction for 102 townhome units, located at Plum Creek Boulevard and Crystal Valley Parkway.
- Canyons South Longstory Avenue, under construction for water and sanitary mains for future development, located in Douglas County on the east side of Crowfoot Road.
- o Canyons South Filing No. 3, construction plan review for water and sanitary mains for future development, located in Douglas County on the east side of Crowfoot Road.
- Crystal Valley Ranch, site construction, single-family subdivisions, located southeast and southwest of Crystal Valley Parkway and West Loop Road. Also, in the southern interior portion of Loop Road, south of Loop Road, and between West Loop Road and the Lanterns property.
- Crystal Valley Ranch, construction plan approval for a recreation facility that will serve the new single-family home project, located at the southeast corner of West Loop Road and Crystal Valley Parkway.
- Echelon (formerly Caliber at Terrain), site and building construction for a
   238-unit multi-family development, located in the northeast quadrant of Founders Parkway and State Highway 86.
- Founders Village, site construction, detached single-family home neighborhood, located northeast of Mikelson Boulevard and Mitchell Street.
- o Founders Village the Enclave, site construction, 88 additional townhomes to complete

- the existing development located at Enderud Boulevard and Wagonwheel Trail.
- Front Street Triplexes, site plan review for two triplex buildings, located on Front Street between Fifth and Sixth Streets.
- Greystone Townhomes, construction plan and plat approved for one three-story building with 5 units, located northwest of Plum Creek Parkway and Gilbert Street.
- Hillside, site construction, single-family attached and detached age 55 and older, located at the northeast corner of Coachline Road and Wolfensberger Road.
- Lanterns/Montaine, home construction, 107 single-family lot subdivision, located in the northerly portion of the project.
- Lanterns/Montaine, home construction, 85 single-family lot subdivision, located in the south-central portion of the project.
- Lanterns/Montaine, grading and construction documents approved, 133 single-family lot subdivisions, located in the southeasterly portion of the project.
- Lanterns/Montaine, site construction for 165 single-family residential lots, located in the east interior of Montaine Circle and southeast portion of the property.
- Lanterns/Montaine, site construction for 82 single-family residential lots, located in the northerly interior of Montaine Circle.
- Lanterns/Montaine, site construction for 68 single-family residential lots, located in the northerly interior of Montaine Circle.
- Lanterns/Montaine, subdivision plat, construction documents, and erosion control plans approved for 183 single-family residential lots, located southwest of Montaine Circle.
- Lanterns/Montaine, construction documents approved for 117 single-family residential lots, located at the northeast corner of the Lanterns development.
- Lanterns/Montaine, site construction for family amenity center, located on the northeast corner of East Montaine Circle.
- Lanterns/Montaine, subdivision plat and construction documents for 182 single-family residential lots, located southwest of Montaine Circle.
- Liberty Village, site development plan review, for amended lot layout due to floodplain for 42 single-family lots, located on the south side of Castle Oaks Drive and Pleasant View Drive.
- Liberty Village, site construction for 19 lot single-family project at Missoula Trail and Castle Oaks Drive and completion of Castle Oaks Drive/bridge replacement within the Cobblestone Ranch property.
- Meadows, site construction, 209 single-family lot subdivision, located north of Red Hawk subdivision and west of Prairie Hawk Drive.
- Meadows, site construction for 57 single-family detached homes on the east and west sides of Coachline Road north of Wolfensberger Road.
- Meadows, site plan, plat and construction documents for 77 single-family detached homes on the west sides of Coachline Road north of Wolfensberger Road.
- Meadows, Paint Brush Park, Town Project, tributary improvements plans in review.
- Memmen Young Infill, rezoning, site development plan review, and associated 5acre annexation under review, located west of Ridge Road and north of Plum Creek Parkway.
- Plum Creek Residential Planned Development plan amendment for three single-family lots, located near the intersection of Mount Royal Drive and Prestwick Way.

- The Oaks Filing 2A, site development plan review for 114 single-family lots on 165+/acres, located south of Plum Creek Parkway and east of Eaton Circle.
- Oakwood Apartments, site construction and building permits, for senior housing project redevelopment, located on the northeast corner of Front Street and Oakwood Drive.
- Red Hawk, home construction, 29 single-family home project, located south of Melting Snow Way and east of Bent Wedge Point.
- Ridge at Crystal Valley, site construction for 142 single-family home project, located southwest of Loop Road in Crystal Valley Ranch. SIA amendment submitted to address modification to phasing plan for lots to be Temporary Green Zone.
- Sunset Point, site plan review for 525 single-family homes on 293 acres, located northeast of Mesa Middle School.
- Terrain North Basin, Phase 1, site construction for approximately 96 single-family home project, located along Castle Oaks Drive.
- Terrain North Basin, Phase 2, site development plan review for approximately 105 single-family home project, located along Castle Oaks Drive.
- Terrain Upper Sunstone, home construction, 261 single-family home project, located south of State Highway 86 and east of King Soopers/Ridge Road.



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 6. File #: RES 2023-002

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Jeff Brauer, Director of Parks and Recreation From:

> Resolution Waiving the Formal Written Sealed Bid Requirement on the Basis of Sole Source and Approving an Equipment and Services Acquisition Agreement with Academy Sports Turf, Inc., for the Matney Park Athletic Field Synthetic Turf

Replacement Project [Location: 5790 Lantern Circle. Castle Rock. CO 80104]

#### **Executive Summary**

Parks, open space and trails located within the Town of Castle Rock contribute to quality of life and enhance community character. The Council-approved Parks and Recreation Master Plan identifies the need to assess and plan lifecycle replacements at existing facilities to sustain current levels of service, ensure user safety and continue to meet resident expectations.

The purpose of this Resolution (**Attachment A**) is to seek Town Council approval of an Equipment and Services Acquisition Agreement (Exhibit 2) with Academy Sports Turf, Inc. (Academy) in the amount of \$331,000.00 to replace the synthetic turf athletic field at Matney Park. This project was identified as a priority in the department's 2019-2024 Capital Improvement Plan and will address an 180' by 300' athletic field originally installed in 2007 that has exceeded its projected lifespan of approximately 8-10 years.

Once approved, Academy will commence work and be completed by spring 2023 to accommodate athletic programs. Site work will include the removal of existing turf, adding crushed gravel, installing pile fiber turf and connecting turf seams. The new field will have a 10-year warranty on both the turf and the installation.

#### **Budget Impact**

Academy is a certified vendor through The Interlocal Purchasing System (TIPS) and meets the requirements outlined for a Sole Source purchase under the established criteria of the Town's Purchasing Policy as a Cooperative Purchasing Group. Further, review of the proposed cost from Academy has been assessed by staff and is competitive with pricing for similar projects.

This project has been budgeted and will be expensed to the General Long Term Planning Fund

#### Item #: 6. File #: RES 2023-002

account number 136-1830-418.78-47 in the amount of \$331,000.00.

#### **Staff Recommendation**

Staff recommends approving a sole source purchase and the equipment and services acquisition agreement between the Town of Castle Rock and Academy Sports Turf, Inc. to replace the synthetic turf athletic field at Matney Park.

#### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

#### **Alternate Motions**

"I move to approve the Resolution as introduced by title with the following changes

"I move to continue this item to a future Town Council agenda on date to allow additional time to (list information needed)."

#### **Attachments**

Resolution

Exhibit 1 - Sole Source Justification Form

Exhibit 2 - Agreement

#### **RESOLUTION NO. 2023-**

A RESOLUTION WAIVING THE FORMAL WRITTEN SEALED BID REQUIREMENT ON THE BASIS OF SOLE SOURCE AND APPROVING AN EQUIPMENT AND SERVICES ACQUISITION AGREEMENT WITH ACADEMY SPORTS TURF, INC., FOR THE MATNEY PARK ATHLETIC FIELD SYNTHETIC TURF REPLACEMENT PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has identified a contractor to replace the synthetic turf at the Matney Park Athletic Field (the "Project"); and

**WHEREAS**, the Town has determined Academy Sports Turf, Inc., (the "Contractor") is best suited to complete the Project; and

**WHEREAS**, under the Town Procurement Code, the requirement for formal written sealed bids may be waived where only one known source exists, only one single supplier can fulfill the requirements, the service is of a unique nature, the service allows for standardization with existing equipment, the item or service has been formally awarded to a vendor by the State of Colorado through cooperative purchasing, or the Town currently has a contract in place with a vendor for similar work ("sole source"); and

**WHEREAS**, according to Section 3.02.060.A.4 of the Town Procurement Code, Town Council has the authority to waive the requirement for formal written sealed bids on the basis of sole source for the procurement of work or services in excess of \$250,000; and

**WHEREAS**, Town Staff recommends Town Council waive the formal written sealed bid requirement on the basis of sole source for the Project in an amount of \$331,000.00, as the Contractor is certified through a State of Colorado cooperative purchasing group; and

**WHEREAS**, should Town Council approve the sole source with Contractor, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will complete the Project ("the Agreement").

### NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

**Section 1.** Sole Source Approval. The sole source justification form is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney.

**Section 2.** Agreement Approval. The Agreement between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 2*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.

**Section 3.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 136-1830-418.78-47 in an amount not to exceed \$331,000.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK	
Lisa Anderson, Town Clerk	Jason Gray, Mayor	
Approved as to form:	Approved as to content:	
Michael J. Hyman, Town Attorney	Jeff Brauer, Director of Parks & Recreation	



# SUBJECT: APPENDIX J – SOLE SOURCE JUSTIFICATION FORM DIVISION AND POLICY NUMBER PURCHASING Approval Date 1/1/2018 Revision Date 9/16/2022

COMMODITY OR SERVICE
VENDOR
AMOUNT OF PURCHASE \$
REQUESTORS NAME
DEPARTMENT
DEPARTMENT DIRECTOR's Approval
FINANCE DEPARTMENT's Approval
TOWN MANAGER's (or Designee) Approval
TOWN COUNCIL's Approval, when necessary

PURCHASING POLICY EXCEPTION ITEM		CHECK ONE
1.	Item(s) or service has been formally awarded to a vendor by the State of Colorado, MAPO, or other cooperative purchasing group and the product meets the needs of the Town of Castle Rock.	
2.	The product or service is of a unique nature, or allows for standardization with existing equipment and will provide exceptional value to the Town of Castle Rock.	
3.	Emergency purchases where the well-being of the citizens, employees or Town property may be endangered if the purchase is delayed.	
4.	Town of Castle Rock currently has a contract in place with a vendor for like products or services and the compatibility and/or continuity of those products or services are paramount to the success of the department or Town function.	

#### Per Municipal Code 3.02.060:

Purchases over one thousand dollars (\$1,000.00) and up to and including five thousand dollars (\$5,000.00) require three (3) verbal bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over five thousand dollars (\$5,000.00) and up to seventy-five thousand dollars (\$75,000.00) require three (3) informal written bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over seventy-five thousand dollars (\$75,000.00) require formal written sealed bids unless waived by the Town Manager for purchases up to and including two hundred fifty thousand dollars (\$250,000.00) or by Town Council for purchases over two hundred fifty thousand dollars (\$250,000.00) on the basis of sole source, emergency or unresponsive bidders.

The requesting department must provide written justification to the Finance Department for review and forward it to the Accounting Manager. **Attach additional sheets as necessary.** 



## TOWN OF CASTLE ROCK EQUIPMENT AND SERVICES ACQUISITION AGREEMENT (Matney Park Athletic Field Synthetic Turf Replacement)

DATE:

January 06, 2023

**PARTIES:** 

**TOWN OF CASTLE ROCK**, a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 ("Town").

**ACADEMY SPORTS TURF, INC.,** a Colorado corporation, 3740 S. Jason St., Englewood, Colorado 80110 ("Contractor").

#### **RECITALS:**

A. The Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

#### TERMS:

- **Section 1.** Scope of Services. Contractor shall perform all of the services and provide all materials as set forth on *Exhibit 1* ("Work"). Contractor shall complete the Work consistent with standards and practices of the profession.
- Section 2. <u>Total Obligation</u>. The Town's total obligation to Contractor under this Agreement for the Work shall not exceed \$331,000.00, unless authorized in writing by the Town.
- Section 3. Payment. Contractor shall invoice Town upon completion of the Work. Town may withhold payment in whole, or in part for the Work found by the Town to be defective, untimely, unsatisfactory, or otherwise not conforming to this Agreement, not in conformance with all applicable federal, state, and local laws, ordinances, rules and regulations, or if Contractor is in default of Section 6, below. Town shall remit payment, whether whole or in part within 15 days receipt of such invoice.
- Section 4. <u>Completion.</u> Contractor understands time is of the essence in this Agreement. Contractor shall commence the Work upon execution of this Agreement and complete the Work not later than July 31, 2023. Contractor shall devote adequate resources to assure timely completion of the Work in accordance with the standards specified in this Agreement. Contractor shall perform the Work under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 10 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.



- **Section 5.** <u>Subcontractors.</u> Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Work. Contractor will submit any proposed subcontractor and the description of subcontractor services to the Town for its prior approval.
- Section 6. <u>Inspection and Warranty</u>. Town reserves the right to inspect the Work provided under this Agreement at all reasonable times and places during the term of this Agreement. Alternatively, the Town may refuse the Work and cancel all or any part of this Agreement if Contractor fails to deliver all or any part of the Work in accordance with the terms and conditions of this Agreement. Failure by the Town to inspect and test the Work shall not relieve Contractor of such responsibility. Any acceptance by the Town shall not be deemed a waiver or settlement of any defect or nonconformity in such Work. If Town elects to accept nonconforming or defective Work, Town, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate Town for the nonconformity or defect.

Contractor expressly warrants that all materials and/or equipment furnished under this Agreement shall be free from defects in materials or workmanship, are installed properly and in accordance with the manufacturer recommendations or other industry standards, and will function in a failure-free manner for a period of one (1) year from the date of delivery or installation. Contractor, shall, at its option, repair or replace any material and/or equipment that fail to satisfy this warranty during the warranty period. Additionally, Contractor agrees to assign to the Town all written manufacturer warranties relating to the supplies and to deliver such written warranties to the Town.

- Section 7. Risk of Loss. With respect to any equipment provided under this Agreement, risk of loss shall not pass to the Town until such equipment has been received and accepted by the Town, pursuant to Section 6, above, at the destination specified by the Town. Contractor assumes full responsibility for packing, crating, marking, transporting, and liability for loss or damage in transit, notwithstanding any agreement by the Town to pay freight, express or other transportation charges.
- **Section 8.** Annual Appropriation. The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.
- **Section 9.** Assignment. This Agreement shall not be assigned by Contractor without the written consent of the Town.
- **Section 10.** Notice. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other



address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.

- **Section 11.** <u>Insurance.</u> Contractor agrees to procure and maintain, at its own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
- A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
  - 1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.
  - 2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.
  - 3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Contractor's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.
  - 4. Professional Liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000) per claim and ONE MILLION DOLLARS (\$1,000,000) aggregate.
- B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as an additional insured. Every policy required above, except Workers' Compensation and Professional Liability insurance, if applicable,



shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Consultant. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

- C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as *Exhibit 2* as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
- D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.
- **Section 12.** Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.
- Section 13. <u>Indemnification.</u> Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.
- **Section 14.** <u>Delays.</u> Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.



- **Section 15.** Additional Documents. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
- Section 16. Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.
- **Section 17.** <u>Time of the Essence.</u> Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.
- Section 18. <u>Default and Remedies</u>. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.
- **Section 19.** <u>Waiver.</u> A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.
- **Section 20.** Governing Law. This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.
- Section 21. <u>Independent Contractor.</u> Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.
- **Section 22.** No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained



in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**Section 23.** <u>Counterparts.</u> This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

ATTEST:	TOWN OF CASTLE ROCK		
Lisa Anderson, Town Clerk	Jason Gray, Mayor		
Approved as to form:	Approved as to content:		
Michael J. Hyman, Town Attorney	Jeff Brauer, Director of Parks & Recreation		
CONTRACTOR:			
ACADEMY SPORTS TURF, INC.			
Ву:			
Its: OFO			



#### **EXHIBIT 1**

#### SCOPE OF WORK AND FEE SCHEDULE

Contractor shall replace the existing approximately 61,000 square foot synthetic turf sports field at Matney Park, as follows:

#### Matney Park Sports Field - 61,000 s.f.

#### Inclusions / Intentions:

- > Provide shop drawings for organizational approval
- Order turf one month before project commences
- Cut and roll up existing turf into manageable rolls, label, and store in parking lot
- Add crushed gravel and regrade field base if necessary (\$4,000.00 provision included in price)
- Pile Fiber Turf System Greenfields Ironturf at 59 oz. and 2"
- Pile Fiber Turf System Shaw Sports Turf Legion NXT at 50 oz. and 2"
- Glue / seam rolls using polyurethane adhesive
- No permanent lines included in proposal
- Supply and install 30% silica sand and 70% crumb rubber infill at approximately 5.5# per square foot
- Final clean up
- > Provide remnants to organization for future repairs
- > Eight-year warranty on the turf and installation (10 Years on Ironturf)
- Remove turf from parking lot and transport off site if not donated to another organization
- TIPS Purchasing Agreement TIPS Number 210205

#### Exclusions:

- > Bonding
- Taxes

Proposal - Supply and install Greenfields Ironturf at Matney Park - \$331,000.00



#### **EXHIBIT 2**

# CONTRACTOR'S CERTIFICATE OF INSURANCE

#### ACORD.

#### CERTIFICATE OF LIABILITY INSURANCE

01/05/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Marsh & McLennan Agency LLC 11330 Lakefield Drive Suite 100	CONTACT Rachel Raham  PHONE (A/C, No, Ext): " (A/C, No):  E-MAIL ADDRESS: rachel.raham@marshmma.com	-
Johns Creek, GA 30097-1508	INSURER(S) AFFORDING COVERAGE INSURER A : Berkley Specialty Insurance Co	NAIC #
INSURED Academy Sports Turf, Inc. 3740 S Jason St Englewood, CO 80110	INSURER B: StarStone Specialty Insurance Company INSURER C: Hartford Underwriters Insurance Co. INSURER D: Evanston Insurance Company INSURER E: Hartford Fire Insurance Co. INSURER F:	44776 30104 35378 19682

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

	TABLESTONIA OF STATE					_ : ::::= ==	IIVIS.	
INSR LTR		ADDL INSR	SUBF	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	S
Α	X COMMERCIAL GENERAL LIABILITY	Υ	Υ	CGL011473122	03/26/2022	03/26/2023		\$1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$100,000
	X BI/PD Ded: \$1,000						MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$2,000,000
	POLICY X PRO-						PRODUCTS - COMP/OP AGG	\$2,000,000
	OTHER:							\$
E	AUTOMOBILE LIABILITY	Υ	Υ	37ABS79004	05/09/2022	05/09/2023	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
	X ANY AUTO OWNED SCHEDULED						BODILY INJURY (Per person)	\$
	AUTOS ONLY AUTOS						The same of the sa	\$
	X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$
_					ii .			\$
В	UMBRELLA LIAB OCCUR	Υ	Υ	79741D221ALI	03/26/2022	03/26/2023	EACH OCCURRENCE	\$5,000,000
	X EXCESS LIAB X CLAIMS-MADE						AGGREGATE	\$5,000,000
	DED   X   RETENTION \$0							\$
С	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N		Υ	37WNS79003	05/09/2022	05/09/2023	X PER OTH- STATUTE ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE	N/A					E.L. EACH ACCIDENT	\$1,000,000
	(Mandatory in NH) If yes, describe under						E.L. DISEASE - EA EMPLOYEE	\$1,000,000
	DÉSCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$1,000,000
	Pollution Liab			A CONTRACTOR OF THE CONTRACTOR			\$3,000,000 / \$3,000,000	
D	Professional Liab			MMAENV003259	07/17/2022	03/26/2024	\$3,000,000 / \$3,000,000	
							\$10,000 Retention	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Project: Paintbrush Park - Synthetic Turf Field Installation Full Certificate Holder: The Town of Castle

Rock, A Colorado Municipal Corporation (Town)

\*\*\*COVERAGES CONTINUED\*\*\*

INSURER LETTER: D; INSURER: Hartford Fire Insurance Co.; NAIC #: 19682; COVERAGE: Installation Floater;

(See Attached Descriptions)

CERTIFICATE	HOLDER

Town of Castle Rock 100 N Wilcox Street Castle Rock, CO 80104-0000

#### CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

**AUTHORIZED REPRESENTATIVE** 

Vinest A. Carelle



#### **EXHIBIT 3**

#### TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, Yau Kelley, an authorized representative of ACADEMY SPORTS TURF, INC., holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be employed as an independent contractor of the Town of Castle Rock (the "Town") for purposes of performing the work or services which are the subject of the Agreement. I understand and confirm that the Town reasonably relied on this intention in entering into the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may

  be supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.



- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.
- I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

CONTRACTOR/CONSULTANT/VENDOR
ACADEMY SPORTS TURF, INC.
By: ////
Name
STATE OF COLORADO )
county of <u>Arapa</u> hue)
The foregoing instrument as acknowledged before me this day of
Witness my official hand and seal.  My commission expires: Official hand and seal.  SYLVIA ZAPATA  Notary Public  Notary Public
State of Colorado Notary ID # 19994035209 My Commission Expires 02-04-2024



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 7. File #: RES 2023-003

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Mark Marlowe, P.E., Director of Castle Rock Water From:

Shawn Griffith, Assistant Director of Operations & EHS

Resolution Waiving the Formal Written Bidding Requirement on the Basis of Sole Source and Approving an Equipment and Services Acquisition Agreement with Pall Corporation for the Plum Creek Water Purification Facility Pall Membrane Filter

Module Replacement Project [Entire Castle Rock Water Service Area]

#### **Executive Summary**

Castle Rock Water (CRW) seeks Town Council approval of a Resolution (Attachment A) approving an agreement (Exhibit 1) with Pall Corporation, for the Plum Creek Water Purification Facility (PCWPF) Pall Membrane Filter Module Replacement Project, for the amount of \$365,899, plus a 5% contingency of \$18,295, for a total authorization amount of \$384,194, as well as a sole source justification (Attachment B).

Pall will provide the membranes and CRW staff will install the membranes. These modules will be ordered in January, but due to supply chain issues, the modules will not be installed until after the 2023 demand season.

#### **Notification and Outreach Efforts**

This project is security sensitive and no public outreach is planned. Work will be performed at remote CRW sites and will be done out of the public eye.

#### History of Past Town Council, Boards & Commissions, or Other Discussions

The engineering contract for PCWPF, which included the Pall Membrane system, with Burns and McDonnell was approved by Council on January 20, 2011 and constructed by Moltz Construction. The plant began operations in 2013 with three Pall Membrane filtration system racks. The expansion of the original Pall membrane system at PCWPF was approved by council on September 20, 2016, which added another rack and increased capacity by 2 million gallons (MG).

This item was presented to Castle Rock Water Commission on December 14, 2022 under upcoming

#### Item #: 7. File #: RES 2023-003

Town Council items. CRW Commission supported the project by general consensus.

#### **Discussion**

The Pall membranes at PCWPF have been in continuous operation since 2013 and are nearing the end of their operational lifespans. PCWPF operates four module racks and all will need to be replaced over the next several years. Staff requests the replacement of all the modules in Pall Filter Rack 1 in 2023, and plans to replace all the modules in the other racks over the next few years, by replacing Rack 2 in 2024, Rack 3 in 2025, and Rack 4 in 2026. The membranes have an operating lifespan of 10-15 years and over time, lose filter performance due to age and irreversible fouling.

The Pall Aria microfiltration system at PCWPF is designed to treat surface water to remove biological contaminants for drinking water treatment. The Pall filters provide an absolute barrier to disease causing organisms and particulate matter down to a pore size of one micron (0.0001 millimeter) in size. The system is highly effective at removing bacteria and parasites like giardia and cryptosporidium and receives removal credit to 99.9% (3 log) through the Colorado Department of Public Health and Environment. The membranes are also effective at removing coagulated organic carbon.

CRW operates and maintains four racks of Pall Aria pressure membranes at PCWPF, with each rack having the capacity to treat 2 million gallons/day (mgd), for a total treatment capacity of 6 mgd, with a redundant capacity of 2 mgd. Individual racks can house up to 78 modules, each containing hundreds of hollow fiber membranes; constructed of polyvinylidene difluoride, a specialty plastic. The racks were originally installed with only 64 modules. In addition to replacing the original 64 modules, another 14 modules will be supplied to completely fill Rack 1. Adding the extra 14 modules will reduce the pressure across the membranes, improve efficiency, and extend the lifespan of the modules.

The scope of work includes:

- Delivery of 78 new filter modules and associated ancillary installation hardware
- A Pall technician to provide onsite supervision of CRW plant maintenance personnel as modules are removed and replaced
- Technical support to perform startup and performance testing, certification, and documentation

#### **Budget Impact**

CRW has budgeted for these replacements. Funding for this purchase will come from the 2023 Water Resources Plant Operations Repair & Maintenance Equipment fund, after a budget transfer from the Water Resources CIP Operations & Maintenance account, as follows:

Fund Name	Account Number	Cost	Cost Budget		Account
			Transfer	Account	Balance
			Amount	Balance	after
					Transfer

#### Item #: 7. File #: RES 2023-003

CIP Operations & Maintenance	211-4375-443.40-90		-\$500,000	\$960,000	\$460,000
Plant Operations Repair & Maintenance	211-4360-443.40-32	\$384,194		\$3,279	\$119,085
Total Cost		\$384,194			

#### **Staff Recommendation**

Staff recommends Town Council approval of a Resolution approving a sole source justification and an agreement with Pall Corporation for the PCWPF Pall Membrane Module Replacement Project in the amount of \$365,899, plus a 5% contingency of \$18,295, for a total authorization amount of \$384,194.

#### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

#### Alternative Motions

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions).

"I move to continue this item to the Town Council meeting on \_\_\_\_\_ date to allow additional time to (list information needed)."

#### **Attachments**

Attachment A: Resolution

Exhibit 1: Agreement

Attachment B: Pall Corporation Sole Source Justification

#### **RESOLUTION NO. 2023-**

# A RESOLUTION WAIVING THE FORMAL WRITTEN BIDDING REQUIREMENT ON THE BASIS OF SOLE SOURCE AND APPROVING AN EQUIPMENT AND SERVICES ACQUISITION AGREEMENT WITH PALL CORPORATION FOR THE PLUM CREEK WATER PURIFICATION FACILITY PALL MEMBRANE FILTER MODULE REPLACEMENT PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has identified a contractor to provide membranes for Castle Rock Water's Pall Membrane Filter Module Replacement Project (the "Project"); and

**WHEREAS**, the Town has determined Pall Corporation. (the "Contractor") is best suited to complete the Project as the work is of a unique nature and will allow for standardization of Town infrastructure; and

**WHEREAS**, under the Town Procurement Code, the requirement for formal written sealed bids may be waived where only one known source exists, only one single supplier can fulfill the requirements, the service is of a unique nature, the service allows for standardization with existing equipment, or the Town currently has a contract in place with a contractor for similar work ("sole source"); and

**WHEREAS**, according to Section 3.02.060.A.4 of the Town Procurement Code, Town Council has the authority to waive the requirement for formal written sealed bids on the basis of sole source for the procurement of work or services in excess of \$250,000; and

**WHEREAS**, Town Staff recommends Town Council waive the formal written sealed bid requirement on the basis of sole source for the Project in an amount of \$365,899, plus a 5% contingency of \$18,295, for a total authorization amount of \$384,194; and

**WHEREAS**, should Town Council approve the sole source with Contractor, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will complete the Purchase.

### NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

- **Section 1.** <u>Sole Source Approval</u>. The sole source justification form is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney.
- **Section 2.** <u>Agreement Approval</u>. The Agreement between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 2*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon

consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.

**Section 3.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes (i) the transfer of \$500,000.00 in funds budgeted and appropriated for fiscal year 2023 from account no. 211-4375-443.40-90 to account no. 211-4360-443.40-32; and (ii) the expenditure and payment from account no. 211-4360-443.40-32 in an amount not to exceed \$365,899.00, plus a Town-managed contingency in the amount of \$18,295.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK			
Lisa Anderson, Town Clerk	Jason Gray, Mayor			
Approved as to form:	Approved as to content:			
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water			



# TOWN OF CASTLE ROCK EQUIPMENT AND SERVICES ACQUISITION AGREEMENT (PCWPF Pall Membrane Module Replacement)

**DATE:** December 20, 2022

PARTIES: TOWN OF CASTLE ROCK, a Colorado municipal corporation, 100 North

Wilcox Street, Castle Rock, Colorado 80104 ("Town").

PALL CORPORATION, a New York corporation, 839 State Route

13, Cortland, New York 13045 ("Contractor").

#### **RECITALS:**

A. Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

#### **TERMS:**

- **Section 1.** Scope of Services. Contractor shall perform all of the services and provide all materials as set forth on *Exhibit 1* ("Work"). Contractor shall complete the Work consistent with standards and practices of the profession.
- Section 2. <u>Total Obligation</u>. The Town's total obligation to Contractor under this Agreement for the Work shall not exceed \$365,899.00, unless authorized in writing by the Town.
- Section 3. Payment. Contractor shall invoice Town upon completion of the Work. Town may withhold payment in whole, or in part for the Work found by the Town to be defective, untimely, unsatisfactory, or otherwise not conforming to this Agreement, not in conformance with all applicable federal, state, and local laws, ordinances, rules and regulations, or if Contractor is in default of Section 6, below. Town shall remit payment, whether whole or in part within 15 days receipt of such invoice.
- Section 4. <u>Completion.</u> Contractor understands time is of the essence in this Agreement. The Term of the Contract shall start on January 1, 2023 and expires on December 31, 2023. Work shall commence on a date mutually agreed to by the parties. Contractor shall devote adequate resources to assure timely completion of the Work in accordance with the standards specified in this Agreement. Contractor shall perform the Work under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 10 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.



**Section 5.** <u>Subcontractors.</u> Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Work. Contractor will submit any proposed subcontractor and the description of subcontractor services to the Town for its prior approval.

**Section 6.** <u>Inspection and Warranty</u>. Town reserves the right to inspect the Work provided under this Agreement at all reasonable times and places during the term of this Agreement. Alternatively, the Town may refuse the Work and cancel all or any part of this Agreement if Contractor fails to deliver all or any part of the Work in accordance with the terms and conditions of this Agreement. Failure by the Town to inspect and test the Work shall not relieve Contractor of such responsibility. Any acceptance by the Town shall not be deemed a waiver or settlement of any defect or nonconformity in such Work.

Contractor expressly warrants that all materials and/or equipment furnished under this Agreement shall be free from defects in materials or workmanship, are installed properly and in accordance with the manufacturer recommendations or other industry standards, and will function in a failure-free manner for a period of one (1) year from the date of delivery or installation ("Warranty Period"). Town shall notify Contractor promptly in writing of any claims within the Warranty Period and provide Contractor with an opportunity to inspect and test the materials and/or equipment claimed to have failed to meet this warranty. All claims must be accompanied by full particulars, including system operating conditions, if applicable. If the defects are of such type and nature as to be covered by this warranty, Contractor, shall, at its option, and in its sole discretion, either: (a) accept return of the defective materials and/or equipment and furnish replacement materials and/or equipment; (b) furnish replacement parts for the defective materials and/or equipment; or (c) repair the defective materials, and/or equipment. If Contractor determines that any warranty claim is not, in fact, covered by this warranty, Town shall pay Contractor its then customary charges for any additionally required service or products. Additionally, Contractor agrees to assign to the Town all written manufacturer warranties relating to the supplies and to deliver such written warranties to the Town.

Contractor further warrants that all services performed hereunder, if any, will be performed in a workmanlike manner in accordance with applicable law and industry standards by qualified personnel ("Warranty for Services"); this Warranty for Services shall survive for 30 days following Contractor's completion of the services (the "Service Warranty Period"). In the event of a warranty claim under this Warranty for Services, Town shall inform Contractor promptly in writing of the details of the claim within the Service Warranty Period. Contractor's liability under any service warranty is limited, in Contractor's sole discretion, to repeating the service that during the Service Warranty Period does not meet this Warranty for Services or issuing credit for the nonconforming portions of the service. If Contractor determines that any warranty claim is not, in fact, covered by the foregoing Limited Warranty for Services, Town shall pay Contractor its then customary charges for all services performed by Contractor.

Contractor does not warrant against, and in no event shall Contractor be liable for, damages or defects arising out of improper or abnormal use, misuse, abuse, improper



installation (other than by Contractor), application, operation, maintenance or repair, alteration, accident, or for the negligence in use, storage, transportation or handling or other negligence of Town. In no event shall Contractor be liable for any material and/or equipment repaired or altered by someone other than Contractor other than pursuant to written authorization by Contractor. All product warranties and performance guarantees shall only be enforceable if (a) all equipment is properly installed, inspected regularly and is in good working order, (b) all operations are consistent with Contractor recommendations, (c) operating conditions at the job site have not materially changed and remain within anticipated specifications, and (d) no reasonably unforeseeable circumstances exist or arise.

- Section 7. Risk of Loss. With respect to any equipment provided under this Agreement, risk of loss shall not pass to the Town until such equipment has been received and accepted by the Town, pursuant to Section 6, above, at the destination specified by the Town. Contractor assumes full responsibility for packing, crating, marking, transporting, and liability for loss or damage in transit, notwithstanding any agreement by the Town to pay freight, express or other transportation charges.
- **Section 8. Annual Appropriation.** The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Town shall provide Contractor with immediate written notification, stating that the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.
- **Section 9.** <u>Assignment.</u> This Agreement shall not be assigned by Contractor without the written consent of the Town.
- **Section 10.** Notice. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.
- **Section 11.** <u>Insurance.</u> Contractor agrees to procure and maintain, at its own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
- A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of



services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.

- 1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.
- 2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.
- 3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Contractor's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.
- 4. Professional Liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000) per claim and ONE MILLION DOLLARS (\$1,000,000) aggregate.
- B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as an additional insured. Every policy required above, except Workers' Compensation and Professional Liability insurance, if applicable, shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Consultant. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.
- C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as *Exhibit 2* as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to



the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certificate of insurance of the listed policies and any endorsement thereto.

- D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.
- **Section 12.** Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.
- **Section 13.** <u>Indemnification.</u> Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.
- **Section 14.** <u>Delays.</u> Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.
- **Section 15.** Additional Documents. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
- **Section 16.** Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.
- **Section 17.** <u>Time of the Essence.</u> Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the



non-defaulting party, if the defaulting party does not commence to cure the default within thirty (30 days) of receiving a written notice of default from the non-defaulting party.

**Default and Remedies**. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default. IN NO EVENT SHALL CONTRACTOR BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, LOST PROFITS OR REVENUES OR DIMINUTION IN VALUE, INCLUDING WITHOUT LIMITATION, REMANUFACTURING COSTS AND REWORK COSTS, DE-INSTALLATION OR REINSTALLATION COSTS, WHETHER OR NOT THE POSSIBILITY OF SUCH DAMAGES HAS BEEN DISCLOSED IN ADVANCE BY TOWN OR COULD HAVE BEEN REASONABLY FORESEEN BY TOWN, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY (TORT, CONTRACT, OR OTHERWISE) UPON WHICH THE CLAIM IS BASED, AND WHATEVER THE FORUM, WHETHER ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, PACKAGING, DELIVERY, STORAGE, USE, MISUSE OR NON-USE OF ANY OF ITS WORK OR ANY OTHER CAUSE WHATSOEVER. IN NO EVENT SHALL CONTRACTOR'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED THE TOTAL OF THE AMOUNTS PAID TO CONTRACTOR FOR THE WORK SOLD HEREUNDER.

**Section 19.** <u>Waiver.</u> A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.

**Section 20.** Governing Law. This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.

**Section 21.** <u>Independent Contractor.</u> Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.



Section 22. No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**Section 23.** <u>Counterparts.</u> This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

Section 24. Intellectual Property; Information Technology; Privacy. Contractor retains all rights in and to any intellectual property and confidential information created or procured by it or its representatives at any time, and Contractor grants Town a non-exclusive, non-transferable license to use such intellectual property and information to the extent necessary and solely for Town's use of Work purchased hereunder. No Town information technology requirements apply, except the extent such requirements specifically apply to equipment being sold to Town. To help ensure mutual compliance with applicable privacy laws, Town will not provide to or share with Contractor any personal data or personally identifiable information.

ATTEST:	TOWN OF CASTLE ROCK				
Lisa Anderson, Town Clerk	Jason Gray, Mayor				
Approved as to form:	Approved as to content:				
Michael J. Hyman, Town Attorney	Mark Marlow, Director of Castle Rock Water				
CONTRACTOR:					
PALL CORPORATION					
By:					
Its:					



### Pall Water Pall Technology Services

Cortland New York 13045-5630
Tel: 866.475.0115 ▲ FAX: 607.758..4526
Email: pall\_technology\_csc@pall.com

Pall Proposal No.: OPP1821802R7 Date: December 12, 2022

Attn: Castle Rock

Re: Module Rack Fill

#### Scope of Services

Technical Scope of Supply - MF System Module Replacement

Pall Water is pleased to propose providing labor and materials described below for replacing 78 Microfiltration Modules on one filtration rack on the Castle Rock, CO water filtration system, for a total of 78 modules.

Item 1 - Modules and associated items: Pall will provide the following materials for module replacement:

- 78 ea Pall Water Microfiltration modules
- 2 Gal. Lubricant for module nuts
- 171 ea Module nuts
- 186 ea Module O-rings
- 130 ea XR Gaskets
- 130 ea XR Nuts
- 171 ea Lower End Caps
- 130 ea Piston Seal Adapters
- 130 ea Piston Seal O-rings
- 3 each module wrenches
- 2 each torque wrenches
- 130 ea XR Hoses
- 125 each 1.0-inch clamps
- 245 each 2.0-inch clamps
- 14 each Air Scrub Hose Assemblies

Item 2: Installation Supervision: Pall will provide a qualified Field Service Engineer (FSE) to supervise and assist with removing the old modules and installing the new modules. This module replacement project will require an additional crew of 3 people for 1 days in addition to the Pall FSE complete. Additional labor crew is by others.

Overall, Pall expects this work to take up to 3 days to complete, including set up and first rack CIP at the beginning and clean up at the end. As part of this work, Pall will also provide a new Operating Protocol, and update the system Process & Instrumentation Diagram (P&ID) drawing. The Operating Protocol is a document created by Pall's Process Engineers based on a review of your MF system together with incoming water quality\*, and includes recommended settings and protocols for Flux Maintenance (FM), Enhanced Flux Maintenance (EFM) and Clean-In-Place (CIP) operations. The OP is designed to give operators the information and guidance to achieve optimal system performance results. Potential benefits from following Pall's Operating Protocols include improved cleanings, increased up time, and extended service life.

Copies of both the P&ID and the Operating Protocol will be provided shortly after completion of the installation work.

\*Incoming water quality data is provided by the customer. Pall can provide the comprehensive water quality analysis needed for the Operating Protocol at additional cost.



The Pall Field Service Engineer will arrive at the site a full day before the start of the module removal process to meet with site personnel, review the site where the work will be performed, initiate and complete a CIP on the first rack to be changed, and make preparations for the module change-out process. For safety, a clean-in-place (CIP) procedure will be performed on each rack prior to commencing module removal. At the conclusion of the CIP process the rack will be shut down and drained. The CIP will require one full day per rack to complete.

Once full drainage of the cleaned rack has been verified the old modules will be removed and the new ones installed. The old modules will be set aside for disposal. The new modules will need to be drained of preservative prior to installation on the module rack. Pall will provide a Material Safety Data Sheet for the module preservative upon receipt of order. Disposal of old modules and module preservative is by others.

Disclaimer: This proposal is based on information and conditions known at the time of quotation. Pall Water reserves the right to revise this proposal through change order(s) should conditions vary significantly from those known at the time of quotation and require additional work or materials.

#### PROPOSAL SUMMARY

Modules and Ancillary Parts \$303,603.88
Installation Supervision \$33,950.00
Pre-Paid Freight \$28,344.76

#### Total amount for purchase order:

\* \$365,898.64

**Service Reports:** If service reports are required by your site to comply with your company or state regulations, please indicate on your order that service report documents are required. Service reports detailing the visit and recommendations will then be provided.

Materials: This proposal covers parts and services

**Validity:** This proposal is valid until December 22, 2022. If a purchase order is not agreed upon by Seller and Buyer within the price validity period, the pricing set forth in this proposal shall not apply. Modules are subject to availability at receipt of PO.

Terms of Sale: All Sales made by Pall are subject to the Standard Terms and Conditions of Sale Non-Systems - The Americas Pall Water (attached)

#### **Terms of Service:**

Regular minimum service charge is for a 10-hour day.

**Module Recycling:** Pall Water has invested in a process to recycle modules for short-term and/or less critical applications. If your modules qualify for recycling, Pall Water will take possession of them after removal saving the costs associated with module disposal. To determine if your modules qualify for recycling please complete the attached "Module History" questionnaire and return it to Pall Water for evaluation. Pall Water may request a module for further evaluation based to determine suitability for recycling following review of the information provided.

Service Order acceptance and payment terms: Pall Advanced Separations Systems requires all accounts outstanding beyond 30 days to be paid in full prior to order acceptance. Your account status will be verified at the time of order placement, and you will be notified if you have a balance due. To avoid order processing, goods shipment or service scheduling delays, please insure your account is up to date in advance of placing your order. Charges per the proposal will be billed automatically upon completion of the service, and sign-off of the service report, and become payable within 30 business days of receipt of the invoice.

<sup>\*</sup>Modules are subject to availability.





**Changes:** Pall shall not implement any changes in the scope of services described in Pall's proposal unless the Customer and Pall agree to the details of the change. Any resulting price, schedule or other contractual modifications, will require a verbal change called into Pall's Customer Service Department, with a follow up written confirmation. This includes any changes necessitated by a change in applicable law.

A Purchase Order or written authorization to accept the contract of work as described, along with a signed copy of the attached Customer authorization for service is required in advance of PASS providing the service defined in this proposal.

Please direct your purchase order to:

Pall Water
Pall System Services
P.O. Box 5630
839 State Route 13
Cortland, New York 13045-5630
Tel: 866-475-0115 / Fax: 607.758.4526
Email: Pall\_Technology\_csc@pall.com
Attn: Customer Service

#### Pall Systems Support

To obtain support for your Pall systems installation, our Customers can contact Pall via our toll free number at 866-475-0115 or by email to pall\_technology\_csc@pall.com. Through this channel, you gain access to warranty assistance, technical support as well as our service and spares team.

Pall Customers have access to this 24/7 Service Hotline. Pall System Engineers are on full-time rotation to provide around-the-clock availability of live technical support. This service is charged at \$275 for support time for the first 30 minutes, during normal workday hours between 9:00-AM and 4:00-PM EST, excluding weekends and holidays.

If your system is out of warranty or does not have a 24/7 service support contract, there will be a charge when technical support is to be provided for intervals longer than 30 minutes, or after-hours technical support to resolve the issue. Extensive off-site support will require a purchase order or credit card. Billing is based on a minimum 1-hour charge at Pall's off-site hourly service rate. You will be asked to provide your credit card number or service contract purchase order number that will be billed at Pall's Off-Site Service Rates, with a minimum 1-hour charge. If the problem cannot be resolved over the telephone, the Customer can request a Pall System Service Representative to visit the site location. You will be quoted an Emergency Service Rate and billed for last-minute travel expenses.

Please feel free to call me at your convenience with any questions or comments. We look forward to providing you with field services to assist you with system operation, and await your purchase order.

Sincerely, Alexander Braman Regional Sales Manager Cell: 720-202-6536

E-mail: alexander braman@pall.com



#### **EXHIBIT 2**

# CONTRACTOR'S CERTIFICATE OF INSURANCE



#### **CERTIFICATE OF LIABILITY INSURANCE**

DATE (MM/DD/YYYY) 09/08/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

lf	MPORTANT: If the certificate holder SUBROGATION IS WAIVED, subject his certificate does not confer rights to subject the confer rights to the conference of the	to t	ne tei	rms and conditions of th	e polic uch en	cy, certain po dorsement(s	olicies may			
PRO	DUCER MARSH USA INC. 1050 CONDENTICUT AVENUE, SUITE 700				CONTA NAME: PHONE (A/C, No E-MAIL			FAX (A/C, No):		
	WASHINGTON, DC 20036-5386				ADDRE	SS:				
		112				W- D- WWW - B		RDING COVERAGE		NAIC#
	02997607-PLE&O-7/1-22-23 PALL	NO					is Insurance Com	pany		26620
INSU	IRED PALL CORPORATION 839 NYS ROUTE 13				INSURE					
	CORTLAND, NY 13045				INSURE					
					INSURE	RE:				
	VED 4 0 5 0			- NUMBER	INSURE			DEVICION NUMBER		
T IN C	HIS IS TO CERTIFY THAT THE POLICIES IDICATED. NOTWITHSTANDING ANY RE ERTIFICATE MAY BE ISSUED OR MAY XCLUSIONS AND CONDITIONS OF SUCH	OF EQUIF PERT POLI	INSUF REMEI AIN,	NT, TERM OR CONDITION THE INSURANCE AFFORDI LIMITS SHOWN MAY HAVE	VE BEE OF AN' ED BY	Y CONTRACT THE POLICIE REDUCED BY	THE INSURE OR OTHER I S DESCRIBEI PAID CLAIMS.	DOCUMENT WITH RESPE D HEREIN IS SUBJECT TO	CT TO O ALL	WHICH THIS
LTR	TYPE OF INSURANCE		WVD	POLICY NUMBER		POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT		
	COMMERCIAL GENERAL LIABILITY						8	EACH OCCURRENCE DAMAGE TO RENTED	\$	
	CLAIMS-MADE OCCUR						a	PREMISES (Ea occurrence)	\$	
							8	MED EXP (Any one person)	\$	
	GEN'L AGGREGATE LIMIT APPLIES PER:						8	PERSONAL & ADV INJURY GENERAL AGGREGATE	\$	
	POLICY PRO- LOC						3	PRODUCTS - COMP/OP AGG	\$	
	OTHER:							FRODUCTS - COMPTOF AGG	\$	
	AUTOMOBILE LIABILITY							COMBINED SINGLE LIMIT (Ea accident)	\$	
	ANY AUTO							BODILY INJURY (Per person)	\$	
	OWNED SCHEDULED AUTOS ONLY AUTOS						*	BODILY INJURY (Per accident)	\$	
	HIRED NON-OWNED AUTOS ONLY							PROPERTY DAMAGE (Per accident)	\$	
	ACTOC CIVET							(i di doddoni)	\$	
	UMBRELLA LIAB OCCUR							EACH OCCURRENCE	\$	
	EXCESS LIAB CLAIMS-MADE							AGGREGATE	\$	
	DED RETENTION \$								\$	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY							PER OTH- STATUTE ER		
	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A						E.L. EACH ACCIDENT	\$	
	(Mandatory in NH)  If yes, describe under							E.L. DISEASE - EA EMPLOYEE	\$	
3320	DÉSCRIPTION OF OPERATIONS below							E.L. DISEASE - POLICY LIMIT	\$	nes resultant approach
Α	PROFESSIONAL LIABILITY			CM002222-06-2022		07/01/2022	07/01/2023	LIMIT		2,000,000
								SIR		1,000,000
DES	CRIPTION OF OPERATIONS / LOCATIONS / VEHIC	LES (A	ACORD	101, Additional Remarks Schedu	le, may b	e attached if mor	e space is requir	ed)		
CE	RTIFICATE HOLDER				CANO	CELLATION				
	TOWN OF CASTI F ROCK A COLORADO MUNICIPAL CORPORATION 100 N WILCOX STREET CASTLE ROCK, CO 80104				SHO THE	OULD ANY OF	N DATE THE	ESCRIBED POLICIES BE C EREOF, NOTICE WILL I Y PROVISIONS.		
					AUTHO	RIZED REPRESE	NTATIVE			
							-	Wansh 7154	19.	



#### **EXHIBIT 3**

#### TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, Louis Mattera, an authorized representative of PALL CORPORATION, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, Pall Corporation represents and warrants that it is its express intention to be employed as an independent contractor of the Town of Castle Rock (the "Town") for purposes of performing the work or services which are the subject of the Agreement. Pall Corporation understands and confirms that the Town reasonably relied on this intention in entering into the Agreement.
- The Town does not require Pall Corporation work exclusively for the Town, except that it may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- Pall Corporation is not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide Pall Corporation with tools or benefits for the performance
  of the work or services which are the subject of the Agreement, except materials and
  equipment may be supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.



- The Town makes checks payable to Pall Corporation, a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- Pall Corporation understands that if a professional license to practice a particular
  occupation under the laws of the State of Colorado requires the exercise of a
  supervisory function with regard to the work of services performed under this
  Agreement, such supervisory role shall not affect the independent contractor
  relationship with the Town.
- PALL CORPORATION UNDERSTANDS THAT NEITHER PALL CORPORATION NOR PALL CORPORATION'S EMPLOYEES, ARE ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS OF THE TOWN.
- PALL CORPORATION UNDERSTANDS THAT IT IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

PA	LL CORPORATION		
By:			
Nar	ne: Louis Mattera	_	
ST	ATE OF NEW YORK	)	
		) ss.	
CO	UNTY OF	)	
20_	2 2		ged before me this day of of the above mentioned Pall Corporation.
	Witness my official hand	d and seal.	
	My commission expires:		
			Notary Public



SUBJECT: APPENDIX J – SOLE SOURCE	Approval Date			
JUSTIFICATION FORM	1/1/2018			
DIVISION AND POLICY NUMBER	Revision Date			
PURCHASING	N/A			

COMMODITY OR SERVICE	
VENDOR	
AMOUNT OF PURCHASE \$	
REQUESTORS NAME	
DEPARTMENT	
DEPARTMENT DIRECTOR's Approval	
FINANCE DEPARTMENT's Approval	
TOWN MANAGER's (or Designee) Approval	
PURCHASING POLICY EXCEPTION ITEM	CHECK ONE
<ol> <li>Item(s) or service has been formally awarded to a vendor by the State of Colorado, MAPO, or other cooperative purchasing group and the product meets the needs of the Town of Castle Rock.</li> </ol>	
<ol> <li>The product or service is of a unique nature, or allows for standardization with existing equipment and will provide exceptional value to the Town of Castle Rock.</li> </ol>	
3. Emergency purchases where the well-being of the citizens, employees or Town property may be endangered if the purchase is delayed.	
1. Town of Castle Rock currently has a contract in place with a vendor for like products or services and the compatibility and/or continuity of those products or services are paramount to the success of the department or Town function.	

#### Per Municipal Code 3.02.060:

Purchases over \$1,000 and up to \$5,000 require three (3) verbal bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidder.

Purchases over \$5,000 and up to \$75,000 require three (3) informal written bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over \$75,000 require formal written sealed bids unless waived by the Town Council on the basis of sole source, emergency or unresponsive bidders.

The requesting department must provide written justification in addition to the one bid/quote to the Finance Department for review and forward it to the Accounting Manager. **Attach additional sheets as necessary.** 



#### Town of Castle Rock

#### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 8. File #: RES 2023-004

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Mark Marlowe, P.E., Director of Castle Rock Water From:

Roy Gallea, P.E., Engineering Manager

Scott Tait, E.I., Project Manager - Water Resources

Resolution Waiving the Formal Written Sealed Bid Requirement on the Basis of Sole Source and Approving an Equipment and Services Acquisition Agreement with PSI Water Technologies, Inc., for the Tank 17A and Tank 17B Monoclor Residual Control

System Project [Tanks 17A and 17B in Castle Rock, CO]

#### **Executive Summary**

Castle Rock Water (CRW) staff requests Town Council approval of a Resolution (*Attachment A*) approving a services and acquisition agreement with PSI Water Technologies, Inc. (Exhibit 1) to provide equipment for a Monoclor® Residual Control System at tanks 17A and 17B, in the amount of \$428,765.00 plus a 10% contingency of \$42,876.00 for a total authorization amount of \$471,641.00, as well as a sole source justification (Attachment B).

Tanks 17A and 17B completed in 2005 and 2008, respectively, are located on the mesa just South of Red Hawk Golf Course (*Attachment C*). These tanks store approximately four million gallons of water for the red pressure zone. Due to low demand in the red pressure zone, these tanks experience water quality issues yearly. Current operational management strategies to counter water quality issues at these tanks have consisted of keeping the water levels low or taking one tank completely offline. In order to maintain the tanks near capacity for CRW's strategic water storage initiative and for firefighting, a chloramination booster station is required at the tanks to monitor water quality and adjust chemical addition as needed. The Monoclor® Residual Control System is a unique and proprietary system that minimizes operational labor and chemical costs through automation. A separate agreement with Velocity Plant Services for the installation of the Monoclor® equipment, tanks and feed pumps in an environmentally temperature controlled building for \$195,861.00 is being requested via a Town Manager Memorandum bringing the total cost of this project to \$667,502.00.

#### **Notification and Outreach Efforts**

Castle Rock Water staff presented this item to the Castle Rock Water Commission at their meeting held on December 14, 2022, and the Castle Rock Water Commission voted unanimously 7 to 0 to

#### Item #: 8. File #: RES 2023-004

recommend Town Council approval of the Resolution as presented.

#### **Discussion**

The Monoclor Residual Control System is a proprietary booster disinfection instrumentation, chemical feed, and control process that effectively monitors and adjusts chloramine residual concentrations in potable water tanks and pipes within the distribution system. This system was selected based on its patents and installation history.

CRW's water treatment plants use the chloramination process at the end of the water treatment train as a disinfectant and this disinfectant is the primary disinfectant that is residual in the water as it flows through the water distribution system. Chloramines are a combination of chlorine and ammonia.

CRW switched to chloramination in 2013 as it has lower levels of chlorine and the disinfectant protects the water for a longer period of time as the water goes through the distribution system. CRW had to make the switch to chloramines to have water quality consistent with the Water Infrastructure Supply Efficiency (WISE) water. Chloramines are also being use more often nationwide by water providers because they produce less disinfection byproducts than chlorine alone.

Due to water demand within the red pressure zone, tanks 17A and 17B are not maintained near their capacity. Tanks 17A and 17B each have the capacity to hold two million gallons and are part of the red pressure zone. Additionally, these two tanks, completed in 2005 and 2008, were initially designed to operate at a higher demand rate than customers in the red zone currently require. As a result, chloramine residuals within the tanks drop as water age increases, especially in the summer. As a result, CRW has to utilize significant labor resources to monitor and sometimes drain the tanks when chlorine residuals fall too low. This wastes labor resources and water resources. The timing of the water resources being wasted is a problem as this issue arises primarily in the middle of irrigation season. It also creates a potential for a regulatory violation if tank chlorine residuals are not monitored closely.

The Monoclor Residual Control System, placed in each tank with adjacent support infrastructure, will monitor the chloramine residual and add chemicals as needed to maintain a residual in the tank.

#### **Budget Impact**

The budget impact of purchasing the equipment is shown below in the table. The total budget impact of the project including installation of the equipment is \$667,502.00.

		Balance	Budget Transfer Amount	Cost	Balance after Transfer
55	210-4275- 442.76-97	\$373,000.00	\$373,000.00		\$0.00
	210-4275- 442.75-38	\$170,016.67		\$471,641.00	\$71,375.67

#### Item #: 8. File #: RES 2023-004

#### **Staff Recommendation**

Staff recommends Town Council approve services and acquisition agreement with PSI Water Technologies, Inc. to provide equipment at Tanks 17A & 17B, for \$428,765.00, plus a 10% contingency equaling \$42,876.00, for a total authorization amount of \$471,641.

#### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

#### **Alternative Motions**

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions).

"I move to continue this item to the Town Council meeting on \_\_\_\_\_ date to allow additional time to (list information needed)."

#### **Attachments**

Resolution or Ordinance Attachment A: Contract/Agreement Exhibit 1.

Attachment B: Sole Sources Justification

Attachment C: **Location Map** 

#### **RESOLUTION NO. 2023-**

A RESOLUTION WAIVING THE FORMAL WRITTEN SEALED BID REQUIREMENT ON THE BASIS OF SOLE SOURCE AND APPROVING AN EQUIPMENT AND SERVICES ACQUISITION AGREEMENT WITH PSI WATER TECHNOLOGIES, INC., FOR THE TANK 17A AND TANK 17B MONOCLOR RESIDUAL CONTROL SYSTEM PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has identified a contractor to provide equipment for Castle Rock Water Tank's 17A and 17B (the "Project"); and

**WHEREAS**, the Town has determined PSI Water Technologies, Inc. (the "Contractor") is best suited to complete the Project as the work is of a unique nature and will allow for standardization of Town infrastructure; and

**WHEREAS**, under the Town Procurement Code, the requirement for formal written sealed bids may be waived where only one known source exists, only one single supplier can fulfill the requirements, the service is of a unique nature, the service allows for standardization with existing equipment, or the Town currently has a contract in place with a vendor for similar work ("sole source"); and

**WHEREAS**, according to Section 3.02.060.A.4 of the Town Procurement Code, Town Council has the authority to waive the requirement for formal written sealed bids on the basis of sole source for the procurement of work or services in excess of \$250,000; and

**WHEREAS**, Town Staff recommends Town Council waive the formal written sealed bid requirement on the basis of sole source for the Project in an amount of \$428,765.00; and

**WHEREAS**, should Town Council approve the sole source with Contractor, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will complete the Project ("the Agreement").

## NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

- **Section 1.** <u>Sole Source Approval</u>. The sole source justification form is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney.
- **Section 2.** <u>Agreement Approval</u>. The Agreement between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 2*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.

**Section 3.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 210-4275-442.75-38 in an amount not to exceed \$428,765.00, plus a Town-managed contingency in the amount of \$42,876.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water



# TOWN OF CASTLE ROCK EQUIPMENT AND SERVICES ACQUISITION AGREEMENT (Tanks 17A & 17B Monoclor Residual Control System)

PARTIES: TOWN OF CASTLE ROCK, a Colorado municipal corporation, 100 N.

Wilcox Street, Castle Rock, Colorado 80104 ("Town").

UGSI SOLUTIONS, INC., d/b/a PSI WATER TECHNOLOGIES, a California corporation, 550 Sycamore Dr., Milpitas, CA 95035 ("Contractor")

#### **RECITALS:**

A. The Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

#### **TERMS:**

- **Section 1.** Scope of Services. Contractor shall perform all of the services and provide all materials as set forth on *Exhibit 1* ("Work"). Contractor shall complete the Work consistent with standards and practices of the profession.
- **Section 2.** <u>Total Obligation</u>. The Town's total obligation to Contractor under this Agreement for the Work shall not exceed \$428,765.00, unless authorized in writing by the Town.
- Section 3. Payment. Contractor shall invoice Town upon completion of the Work. Town may withhold payment in whole, or in part for the Work found by the Town to be defective, untimely, unsatisfactory, or otherwise not conforming to this Agreement, not in conformance with all applicable federal, state, and local laws, ordinances, rules and regulations, or if Contractor is in default of Section 6, below. Town shall remit payment, whether whole or in part within 15 days receipt of such invoice.
- Section 4. <u>Completion.</u> Contractor understands time is of the essence in this Agreement. Contractor shall commence the Work by February 1, 2023 and complete the Work not later than December 31,2023. Contractor shall devote adequate resources to assure timely completion of the Work in accordance with the standards specified in this Agreement. Contractor shall perform the Work under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 10 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.



**Section 5.** <u>Subcontractors.</u> Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Work. Contractor will submit any proposed subcontractor and the description of subcontractor services to the Town for its prior approval.

**Section 6.** <u>Inspection and Warranty</u>. Town reserves the right to inspect the Work provided under this Agreement at all reasonable times and places during the term of this Agreement. Alternatively, the Town may refuse the Work and cancel all or any part of this Agreement if Contractor fails to deliver all or any part of the Work in accordance with the terms and conditions of this Agreement. Failure by the Town to inspect and test the Work shall not relieve Contractor of such responsibility. Any acceptance by the Town shall not be deemed a waiver or settlement of any defect or nonconformity in such Work. If Town elects to accept nonconforming or defective Work, Town, in addition to its other remedies, shall be entitled to deduct a reasonable amount from the price thereof to compensate Town for the nonconformity or defect.

Contractor expressly warrants that all materials and/or equipment furnished under this Agreement shall be free from defects in materials or workmanship, are installed properly and in accordance with the manufacturer recommendations or other industry standards, and will function in a failure-free manner for a period of one (1) year from the date of delivery or installation. Contractor, shall, at its option, repair or replace any material and/or equipment that fail to satisfy this warranty during the warranty period. Additionally, Contractor agrees to assign to the Town all written manufacturer warranties relating to the supplies and to deliver such written warranties to the Town.

**Section 7.** Risk of Loss. With respect to any equipment provided under this Agreement, risk of loss shall not pass to the Town until such equipment has been received and accepted by the Town, pursuant to Section 6, above, at the destination specified by the Town. Contractor assumes full responsibility for packing, crating, marking, transporting, and liability for loss or damage in transit, notwithstanding any agreement by the Town to pay freight, express or other transportation charges.

**Section 8.** Annual Appropriation. The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.

**Section 9.** Assignment. This Agreement shall not be assigned by Contractor without the written consent of the Town.

**Section 10.** <u>Notice.</u> Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other



address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.

- **Section 11.** <u>Insurance.</u> Contractor agrees to procure and maintain, at its own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
- A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
  - 1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.
  - 2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.
  - 3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Contractor's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.
  - 4. Professional Liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000) per claim and ONE MILLION DOLLARS (\$1,000,000) aggregate.
- B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as an additional insured. Every policy required above, except Workers' Compensation and Professional Liability insurance, if applicable,



shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Consultant. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Consultant shall be solely responsible for any deductible losses under each of the policies required above.

- C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as *Exhibit 2* as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
- D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.
- **Section 12.** Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.
- **Section 13.** <u>Indemnification.</u> Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.
- **Section 14.** <u>Delays.</u> Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.



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- **Section 15.** <u>Additional Documents.</u> The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
- **Section 16.** Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.
- **Section 17.** <u>Time of the Essence.</u> Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.
- **Section 18.** <u>Default and Remedies</u>. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.
- **Section 19.** <u>Waiver.</u> A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.
- Section 20. Governing Law. This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.
- Section 21. <u>Independent Contractor</u>. Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.
- **Section 22. No Third Party Beneficiaries.** It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained

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in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**Section 23.** <u>Counterparts.</u> This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

ATTEST:	TOWN OF CASTLE ROCK				
Lisa Anderson, Town Clerk	Jason Gray, Mayor				
Approved as to form:	Approved as to content:				
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water				
CONTRACTOR:					
UGSI SOLUTIONS, INC., d/b/a PSI WA	ATER TECHNOLOGIES				
By:					
Its:					

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## **EXHIBIT 1**

## SCOPE OF WORK AND FEE SCHEDULE

Contractor shall provide equipment for a Monocolor System and PAX Mixiers for two potable water tanks for Castle Rock Water, as described hereafter.



## **SECTION 4**

# TECHNICAL INFORMATION Monoclor® Residual Control System

- A. Background
- B. Process Description
- C. Major System Components
- D. Mixing Philosophy

#### **Attachments**

- 1. PAX Mixer Data Sheet
- 2. Smart Control Center Data Sheet
- 3. Water Quality Station Data Sheet
- 4. Chemical Feed Skid Data Sheet
- 5. Monoclor® RCS Process & Instrumentation Diagram



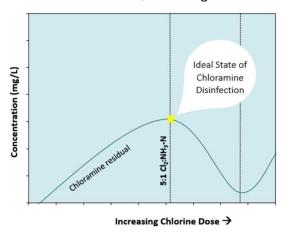
## A. BACKGROUND

Chloramines were initially used in water treatment for taste and odor control. However, it was soon recognized that chloramines were also more stable than free chlorine in the distribution system and consequently were found to be effective for controlling bacterial regrowth. In distribution systems, the disinfectant level against pathogens, or residual life, with chloramines was longer than that with chlorine. This reduced the need for chlorine booster additions in extended systems.

Due to concern over chlorinated organics (e.g., THM and HAA) in water treatment and distribution systems, many water utilities are converting to use of chloramines for disinfection in their distribution networks. Formation of these disinfection byproducts (DBP) occurs less frequently with chloramines, which is a weak oxidizer, than with a stronger oxidizer like free chlorine.

As with any chemical reaction, four fundamental criteria must be met for proper control of chloramines. Accurate dosing is necessary to ensure that the reactants, in this case ammonia and chlorine, are maintained at the correct ratio. Complete mixing keeps the reactor, or body of water, homogeneous and eliminates any stratification. High-energy mixing is used to instantaneously react chemicals upon introduction. Real-time monitoring and control logic sustains or achieves equilibrium by responding to dynamic environmental (e.g. reservoir) conditions. It is for this last reason that optimal chloramine management is challenging.

The ratio of 5:1 Cl<sub>2</sub> to NH<sub>3</sub>-N is ideal for the formation of *mono*-chloramine, the only chloramine compound which is desirable in water treatment systems. A lack of available chlorine will cause excess ammonia, resulting in nitrification complications as ammonia is a nutrient. Dosing excess chlorine will result in formation of the *di*-chloramine and *tri*-chloramine variants, which can cause significant taste and odor issues. The chloramine breakpoint curve shown in Figure 1 illustrates this relationship between the monochloramine concentration and the Cl<sub>2</sub> to NH<sub>3</sub>-N dosing ratio.



**Figure 1.** The chloramine breakpoint curves shows that with too low chlorine residual, nitrification issues result and with too high chlorine residual, *di*- and *tri*-chloramines are formed, resulting in a lower concentration of the desirable *mono*-chloramine.



Control of chloramines is further complicated by environmental factors including pH and temperature. Designed for control, monitoring, and sampling to provide optimum *monochloramine* levels, the Monoclor<sup>®</sup> RCS removes the guesswork and adds ease to disinfectant residual management.

#### B. PROCESS DESCRIPTION

The Monoclor® RCS is an automated system for controlling disinfectant residual in finished drinking water storage tanks and reservoirs. The system can work for both chlorinated and chloraminated water systems. The Monoclor® RCS is designed to continuously monitor the disinfectant level and precisely dose chemicals (such as chlorine and ammonia) in order to achieve a process objective, such as to control and maintain a disinfectant concentration target.

The Monoclor® RCS delivers increased stability and control of residual disinfectant by combining the powerful mixing action of the mixer and an advanced control algorithm to monitor and automatically dose an appropriate amount of disinfectant. The combination of a powerful mixer, the proprietary control algorithm developed and extensively validated in the PAX Water R&D Laboratory, and results from full-scale installations ensure reliable and consistent performance of the disinfectant control system.

Figure 2 shows a general layout of the Monoclor® RCS process for a drinking water storage tank. The Monoclor® RCS process is accomplished by:

- 1. Real-time monitoring of multiple water quality parameters, such as disinfectant level
- 2. Computing chemical dosage and pumping requirement to achieve process objective(s)
- 3. Chemical dosing using pump and injection systems

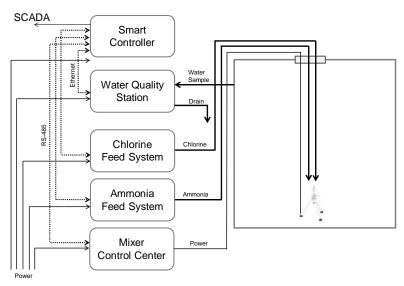


Figure 2. Monoclor® RCS Process Schematic for Chloraminated Water



## C. MAJOR SYSTEM COMPONENTS

## 1. Water Quality Station<sup>™</sup>

The Water Quality Station<sup>™</sup> (WQS) is an advanced water chemistry measurement system that precisely and continuously samples and measures the disinfectant chemistry inside a water tank or pipe. The WQS utilizes a set of sensors that measure the temperature, pH, Oxidation-Reduction Potential (ORP), total chlorine and, if the WQS is used for a storage tank, the water level. These measurements are displayed in real time on the Human-Machine Interface (HMI) display and are continuously logged onto a USB flash drive for analysis.

### 2. <u>Smart Control Center</u>

The Smart Control Center (SCC) is the "brain" of the Monoclor® RCS. The SCC is a controller, monitoring and data acquisition system all in one. By having an intuitive and user-friendly interface, the SCC menu allows the operator to program a set point for the disinfection level (monochloramine or free chlorine) and continuously monitors the water quality data from the WQS. When disinfectant levels fall below the set point, the SSC commands the chemical feed skids to precisely add disinfectant to maintain uniform and consistent water quality inside the tank.

As the WQS is continuously monitoring water quality and providing real-time feedback to SCC, the SCC is not only displaying the feedback for anyone to observe but also logging data from up to 24 operator-chosen outputs to an SD card inside the controller. This allows water system operators and managers to collect data on the quality of the water within the system for any duration of time from minutes to years. These data sets will allow utilities to evaluate day to day operations, react to unexpected changes in water chemistry and observe the effects of treatment plant changes on distribution system water quality. The system also has an extensive Alarm Management System built into the software that will alert the user of irregularities within the system and produce an automated response, from an alert on the screen to system shut down, in order to ensure safe operating conditions.

#### 3. Chemical Feed System

The Chemical Feed System is designed with the necessary components to safely and precisely inject disinfectant (ammonia and/or chlorine) into potable water. The Chemical Feed System provides power connections to the chemical dosing pump via an analog and/or digital signal or a direct 110V outlet activated by the Smart Control Center. The Chemical Feed System also monitors the pump and provides feedback to the Smart Control Center. Based on this feedback, the Smart Control Center can activate any alarms and system response that are included in the extensive Alarm Management System.



## 4. PWM400 Mixing System

The PWM400 Mixer is an active, submersible mixing system for cost effective management of drinking water quality in storage tanks and reservoirs. The PSI Water Mixer rapidly and completely mixes disinfectant chemicals into the entire volume of water in the tank, enabling rapid homogenization and maximum water quality stability and reliability. Efficient and effective mixing of large volumes is made possible by the patented geometry which establishes a stable flow structure throughout the storage volume.

## 5. <u>Chemical Storage Tanks</u>

Hypochlorite and liquid ammonium sulfate storage tanks are sized for project requirements. An ultrasonic level transmitter or pressure transducer continuously monitors the liquid level in the hypochlorite tank. Fill, supply, drain, overflow, , and vent piping connections are typically included in the hypochlorite tank design. The liquid ammonium sulfate tank design includes supply and drain connections. Top access is provided to facilitate inspection of both tanks.

### D. MIXING PHILOSOPHY

#### 1. Improved Water Quality Without Pumps, within the Reservoir

The deployment of the Mixing System is inherent to the Monoclor<sup>®</sup> Residual Control System. The upward rotational flow characteristics produced by the mixing system improve several water attributes. Complete mixing of the reservoir removes any isolation sections that could be subject to freezing. Moving cold water from the bottom of the reservoir upward to blend with the warm water at the top eliminates thermal stratification.

#### 2. Safe and Simple Installation

Deploying a Mixing System can easily be done in a few hours. The simple construction minimizes the amount of on-site assembly required. After the tubing and tether connections are made, the unit is lowered into the reservoir through the hatch without the use of boats, divers, or confined space entry. By running the tubing up the hatch for connection to the supply lines, the need for making any penetrations in the reservoir wall is eliminated.



## 3. Minimum Installation Cost and Time

Most parts for the Monoclor® RCS are inventoried at the factory or can be quickly shipped by our vendors, reducing lead times. The design of the integrated Monoclor® RCS system allows for quick and straightforward installation, with minimum time and cost. Hypochlorite, ammonia, sampling, and electrical connections are all predetermined and are clearly indicated.

# PWM400 MIXER Powerful Active Mixer for Water Storage Tanks

The PAX Water Mixer (PWM400) is a powerful active mixer that improves water quality in water storage tanks. The mixer's unique impeller creates a powerful vortex flow pattern to thoroughly circulate the entire tank volume while using very little energy. PAX Water Mixers are easy to install and maintain— no heavy cranes, lifting equipment or tank alterations are required and the mixer can be easily lowered through the tank hatch or installed by a diver.

- Eliminates thermal stratification
- Improves disinfectant residual levels
- Lowers DBPs and nitrifying bacteria
- Protects tank from ice damage and corrosion
- Reduces variability in water taste and odor



The PAX Water Mixer creates a powerful vortex flow pattern to thoroughly mix the entire tank volume.

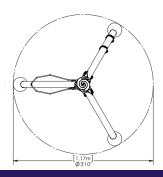




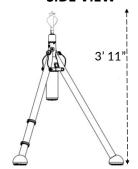
## **PWM400 MIXER**

MIXER SPECIFICATIONS					
Control Center Power Supply Requirement	120 VAC, 50/60 Hz, non-GFCI protected, 20 amp circuit	240 VAC, 50/60 Hz, non-GFCI protected, 20 amp circuit			
Motor Type	230 VAC, ½ HP, water-filled, water-lubricated				
RPM	2100				
Nominal Power Draw	0.575 kVA (575 watts)				
Impeller Specifications	316 stainless steel, 6" (16 cm) tall x 3" (8 cm) diameter				
Footprint Diameter	3′ 10″ (117 cm)				
Height	3′ 11″ (119 cm)				
Weight: Mixer Assembly	53 lbs. (24 kg)				
Control Center Dimensions	55 lbs. (25 kg) (20" x 21" x 8" / 50 cm x 53 cm x 20 cm)				
Material: Control Center	Powder-coated carbon steel, Type 4 enclosure				
Material: Stand	316 stainless steel				
Material: Motor Seals	Chlorine/chloramine-resistant NBR rubber				
Material: Feet	Chlorine/chloramine-resistant EPDM rubber				
Wiring	NSF 61 & UL-listed submersible pump cable 14 AWG (2.1 mm²) XLPE (.78" x .28" / 20 mm x 7 mm)				

## **TOP VIEW**



#### **SIDE VIEW**



## **CONTROL CENTER**





FOR REFERENCE ONLY. REFER TO SCOPE OF SUPPLY FOR EXACT COMPONENT CALLOUT FOR SUPPLY. NO MODEM WILL BE SUPPLIED WITH THIS SYSTEM EITHER.

**Product Specification** 

## **SMART CONTROL CENTER**

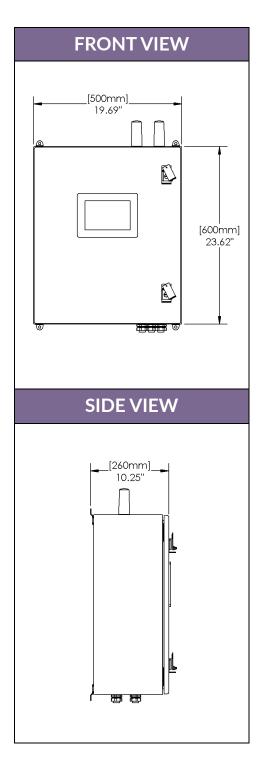
The Smart Control Center is the brain of the Monoclor® Residual Control System for managing distribution system water quality. The Smart Control Center continuously analyzes water quality data and issues dosing commands to the Chemical Feed System to maintain residual levels at a predetermined set-point. The Smart Control Center enables operators to set, maintain and monitor residual levels in the tank.

## The Smart Control Center features:

- Real-time water quality analysis and control
- Touch-screen dashboard to set residual level at predetermined set-point
- Remote monitoring of water quality in the distribution system (SCADA compatible)







SMART CONTROL CENTER SPECIFICATIONS					
нмі	7" LCD Touch screen				
Water Quality Station Communication	RS-485 2 conductor cable (Plug and Play)				
CFS Controller Communication	Quick disconnect RS-485 cable with RJ-45 Connector (Plug and Play)				
PAX Mixer Control Center Communication	Single Digital/Analog Cable or quick disconnect RS-485 cable with RJ-45 Connector (Plug and Play)				
Data-logging	USB flash drive				
Remote Monitoring System (RMS)	RMS sends e-mail to transmit alarm and/or performance to PSI's secure server (optional)				
SCADA	2 Analog Output (0-10 V) 6 Digital Outputs ("Dry-Contact")				
Power	Standard 100-120 VAC 10 Amp circuit breaker				
Communication	Ethernet and Modbus TCP/IP				
Operating Temperature	35-113°F (2-45°C)				
Enclosure	24"H x 20"W x 10"D (61 cm x 51 cm x 25 cm), powder-coated carbon steel Equal to or greater than Type 4R				
PLC	Allen Bradley MicroLogix 1400 1766L32BWAA				
I/O	10 Digital Inputs, 6 Digital Outputs 4 Analog Inputs (4-20 mA) 2 Analog Outputs (0-10 VDC)				
Cell Modem	Digi TransPort WR31 4G LTE				



## WATER QUALITY STATION

The Water Quality Station (WQS) is a panel containing advanced water chemistry sensors for managing residual levels in the distribution system. The WQS continuously samples and monitors residual, pH and temperature inside storage tanks (as a minimum) and provides real-time alerts when there are unexpected changes in water quality.

The WQS is a panel of advanced sensors that analyze the water chemistry inside your tank to provide:

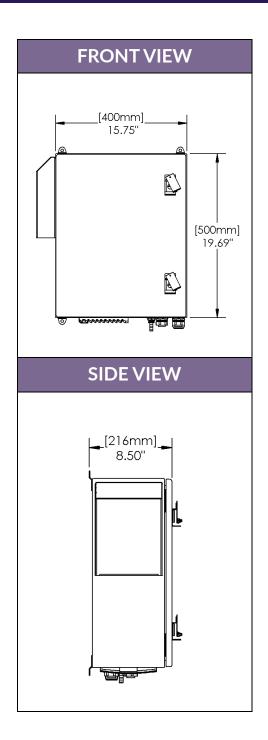
- Real-time data on water temperature, pH and chlorine (as a minimum)
- Alarm notifications when there are unexpected changes in water chemistry
- Remote monitoring of water quality in the distribution system (SCADA compatible)





WATER QUALITY STATION <sup>TM</sup> SPECIFICATIONS					
		Amperometric reagentless online sensor			
		Measuring range: 0-20 PPM			
	Total/ Free Chlorine Sensor(s)	Resolution: 0.01 PPM			
	3333.(3,	1-point calibration			
		Automatic temperature compensation			
	Temperature	Measuring range: 0-45°C (33-113°F)			
	remperature	Resolution: 0.1°			
		Automatic temperature compensation			
Parameters	nU	Measuring range: 0-14			
	рН	Resolution: 0.01			
		3-point calibration			
		Measuring range: 0-1000 mV			
	ORP	Resolution: 0.1 mV			
		2-point calibration			
	Pressure/ Water Level	Pressure transducer			
		Measuring range: 0-50 PSI			
		Resolution: 1% of maximum scale			
Operatin	g Temperature	0-45°C (33-113°F)			
Storage Temperature		Panel without Cl Sensor: 0 to 45°C (33 to 113°F)			
		Chlorine Sensor: 5-40°C (41 to 104°F) dry and without electrolyte			
		Electrolyte Gel: 5-25°C (41 to 77°F)			
Max Operating Pressure		30 psi (with retaining ring)			
Sampling and Discharge Flow Rate		Preferred value is 10 GPH (0.17 GPM or 0.63 LPM) Continuous			





WATER QUALI	TY STATION <sup>TM</sup> SPECIFICATIONS				
нмі	3.8" LCD Touch Screen				
Flow Control	Adjustable regulator valve				
Flow Verification					
Power Requirements	100-240 VAC, 50/60 Hz, 15 Watts				
Water Connection	3/8" Push-connect				
Connectivity	Ethernet connection with Smart Control Center				
	RS-485 connection with Smart Control Center				
Weight	Approximately 45 lbs (20kg)				
Enclosure	18"H x 16" W x 8" D, powder-coated carbon steel				
	Equal to or greater than NEMA Type 3R				
Data Logging	Real-time data acquisition on USB Flash Drive of process variables every 30 sec- onds and alarms on occurrence				
SCADA (Optional)	8 Analog Outputs (4-20 mA or 0-10 V)				



## **CHEMICAL FEED SKID**

The Chemical Feed Skid precisely and reliably delivers disinfectant chemicals (chlorine and/or ammonia) into a water tank or a distribution network.

## The Chemical Feed Skid features:

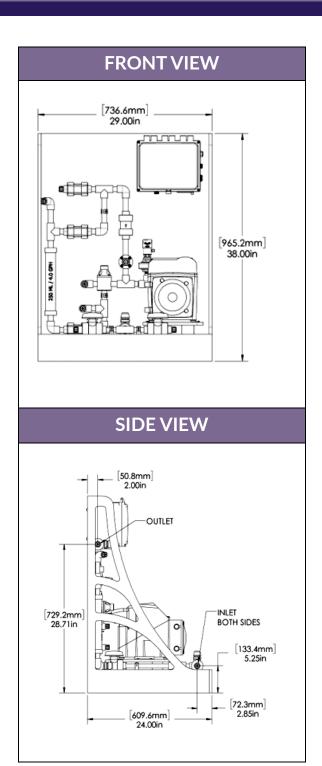
- Customizable pump skid to meet site specifications
- Monitoring of pump performance and chemical levels
- Leak detection and 9 gallons of secondary containment
- Integration with a Smart Control Center for precise chemical metering instructions



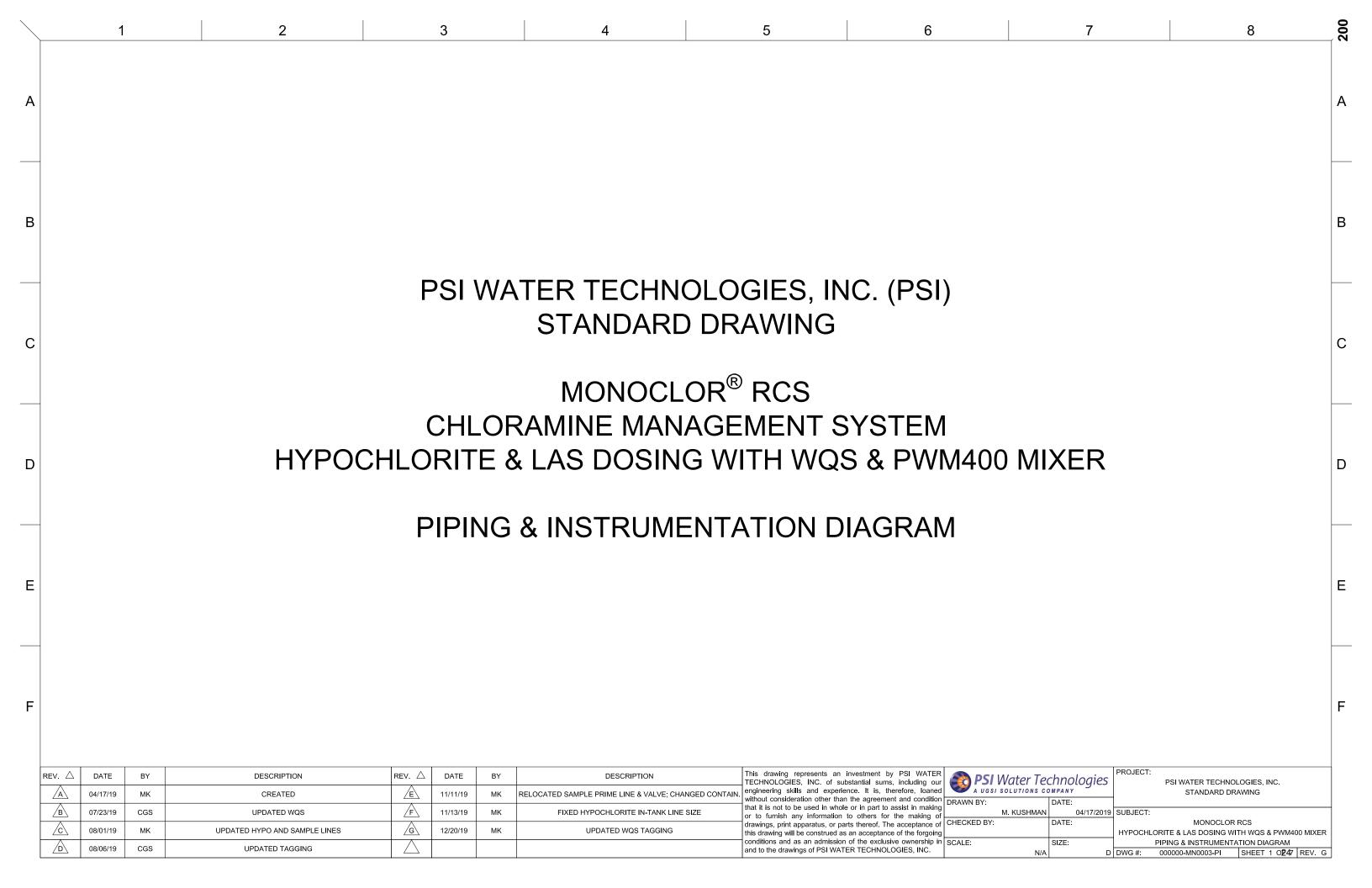


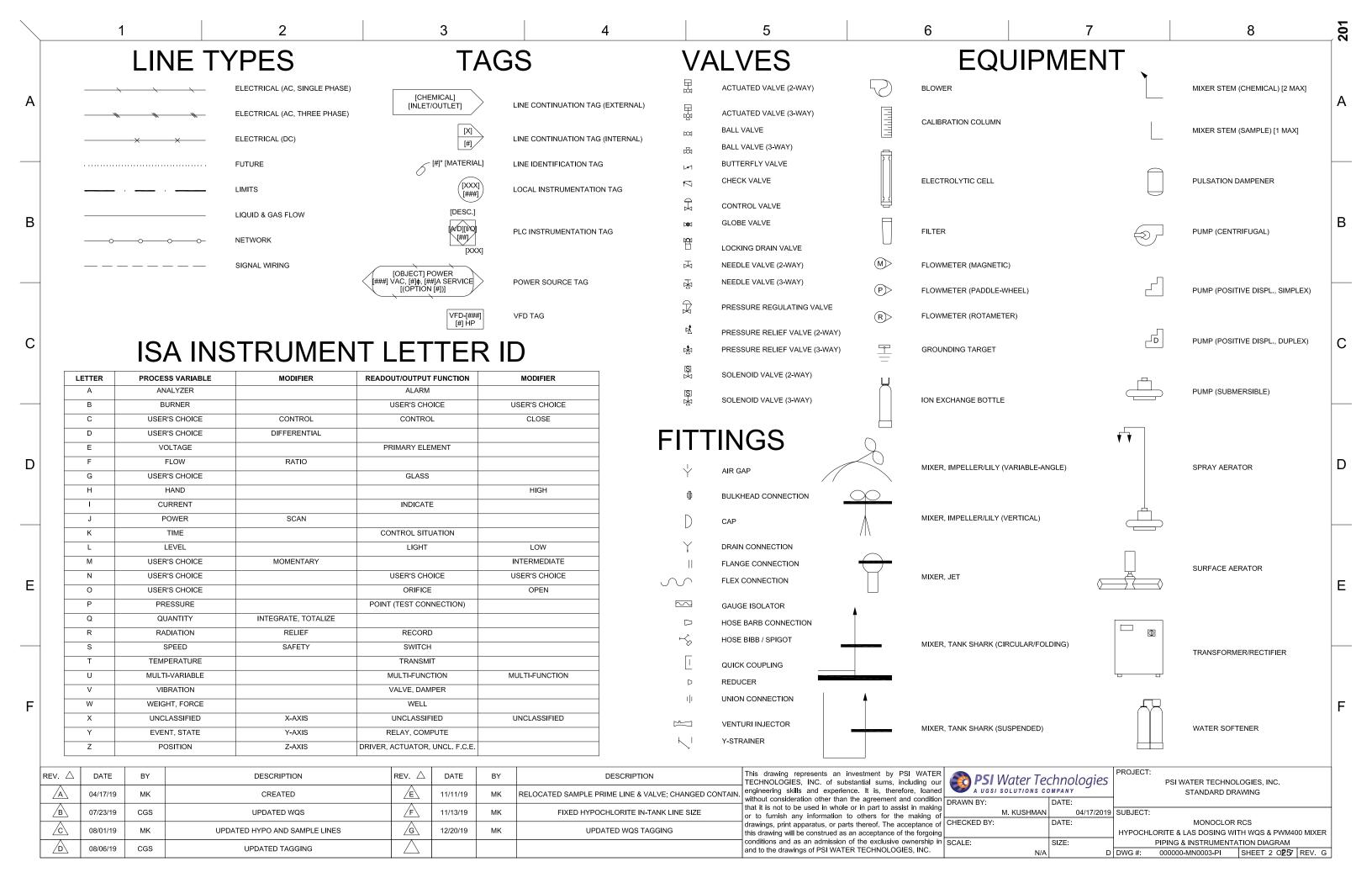
CHEMICAL FEED SKID SPECIFICATIONS				
Skid	Chemical resistant, UV protected black polypropylene			
Pump	Watson Marlow Qdos30 - Qdos120 Peristaltic Pump (7.93 - 31.7 GPH @ 60 - 100 PSI)			
Piping	PVC schedule 80			
Tubing	Sodium Hypochlorite: 1/4" I.D. Reinforced PVC tubing 180 PSI max. Must meet NSF 51 & 61 standards. Connections for PVC tubing are PVDF Barb sitting with soft tubing hose clamps.  Ammonia: 3/8" O.D. flexible polyethylene tubing, 500 PSI max.			
	Must meet NSF 51 $\&$ 61 standards. Connections for PE tubing are slip fit with compression nuts for leak free operation.			
Unions	PVC body, schedule 80, Viton or EPDM seals (chemical dependent)			
Ball Valves	True unions, PVC body, Viton or EPDM seals (chemical dependent)			
Pressure Relief Valve	PVC body, Viton/EPDM seals, adjustable pressure range 10-250 PSI, HDPE pressure adjusting screw			
Back Pressure Valve	PVC body, Viton/EPDM seals, adjustable pressure range 10-150 PSI, HDPE pressure adjusting screw			
Calibration Cylinder	PVC body and end caps, chemical resistant, break resistant, colored graduations, 250ml (4 GPH) volume, ½" outlet			
Pressure Transmitter	0-100 PSI, 316 stainless steel connection, 4-20mA output, +/- 0.5% Accuracy, with digital display			
Pressure Guard	PVC body, Viton or EPDM seals filled with FDA White mineral oil or FDA glycerin (chemical dependent)			
Check Valve	PVC body, Viton or EPDM seals (chemical dependent), cracking pressure 1.5 PSI			
Y-Strainer	PVC body, Viton or EPDM seals (chemical dependent)			
Mounting Clips	Gray Nylon Plastic, Snap-in			
Pump Mounting Brackets	316 stainless steel			
Mounting Hardware	316 stainless steel			
Secondary Containment	9 gallons secondary containment			



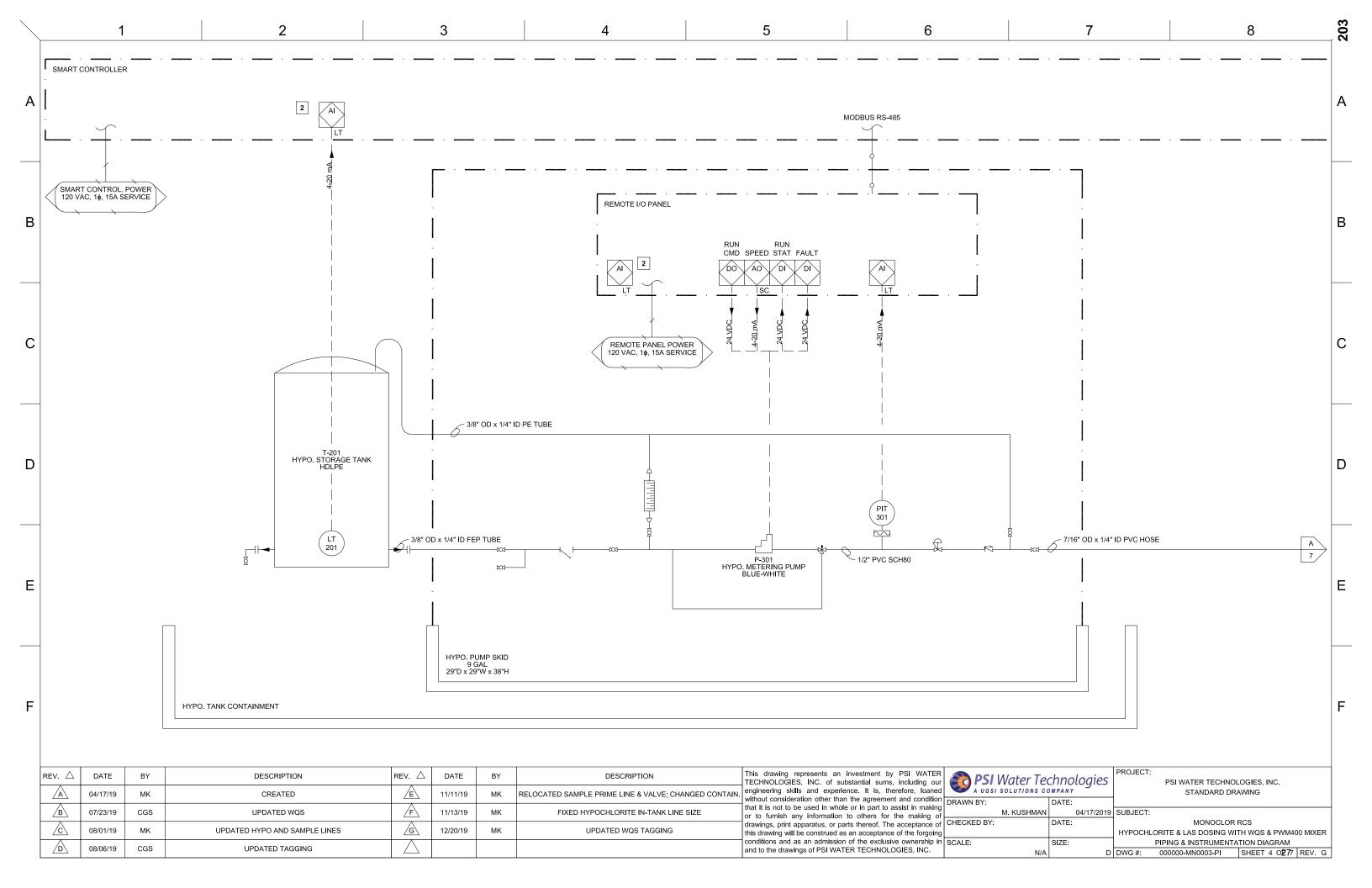


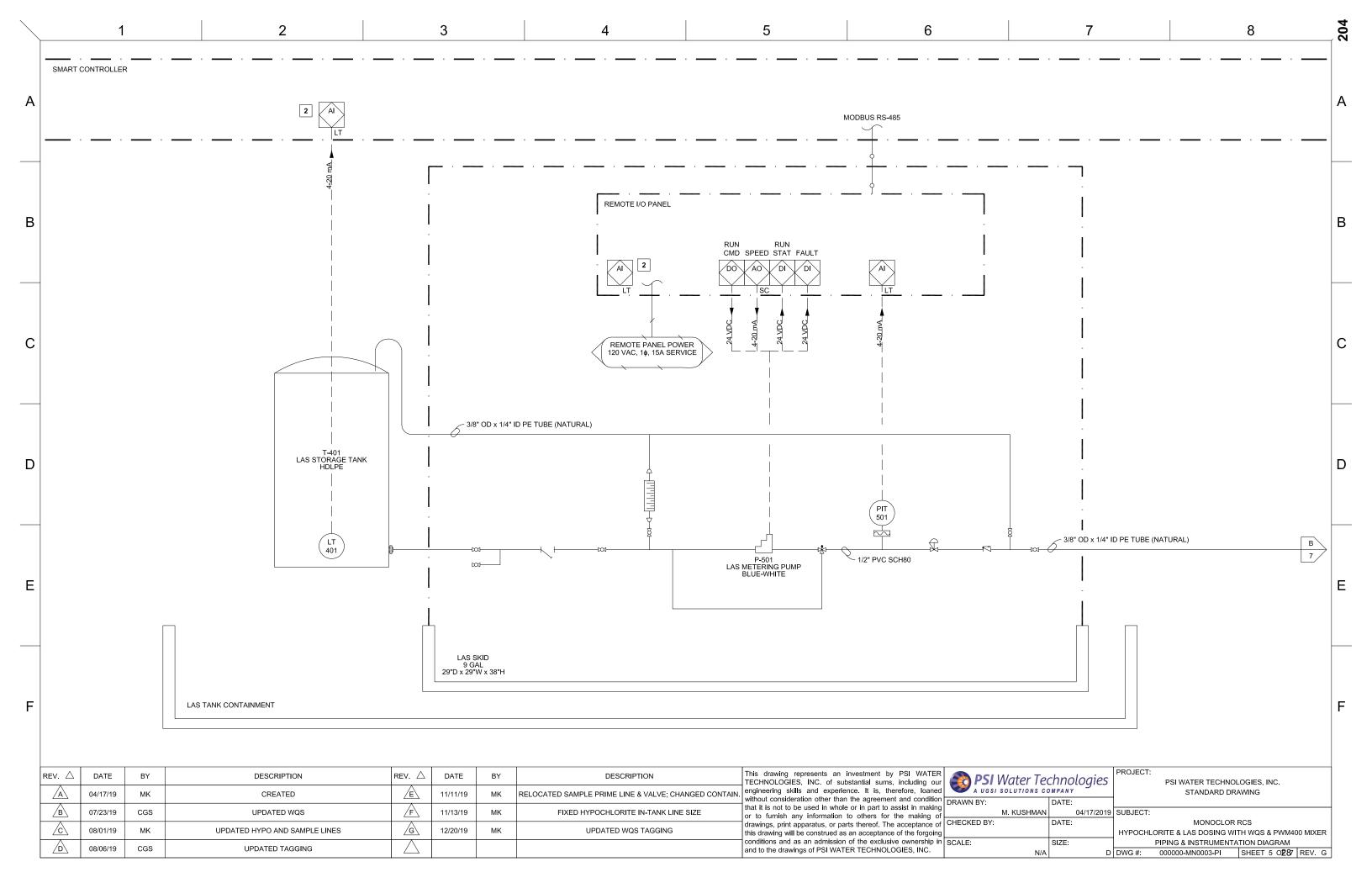
CHEMICAL DOSING CONTROLLER SPECIFICATIONS					
Input/Output	2 digital inputs 2 digital outputs 1 analog input 1 analog output				
Communication	Modbus protocol with Smart Control Center				
Connection	CAT 5 pass through cable				
Power	Standard 110VAC				
Enclosure	Dimensions: 10.0" x 8.0" x 6.0" NEMA Type 3R rating Black Polycarbonate				
Pump control option	Digital relay Analog (4-20mA) Power switch				
Sensor Inputs	Chemical Level Sensor and Pressure Transmitter				

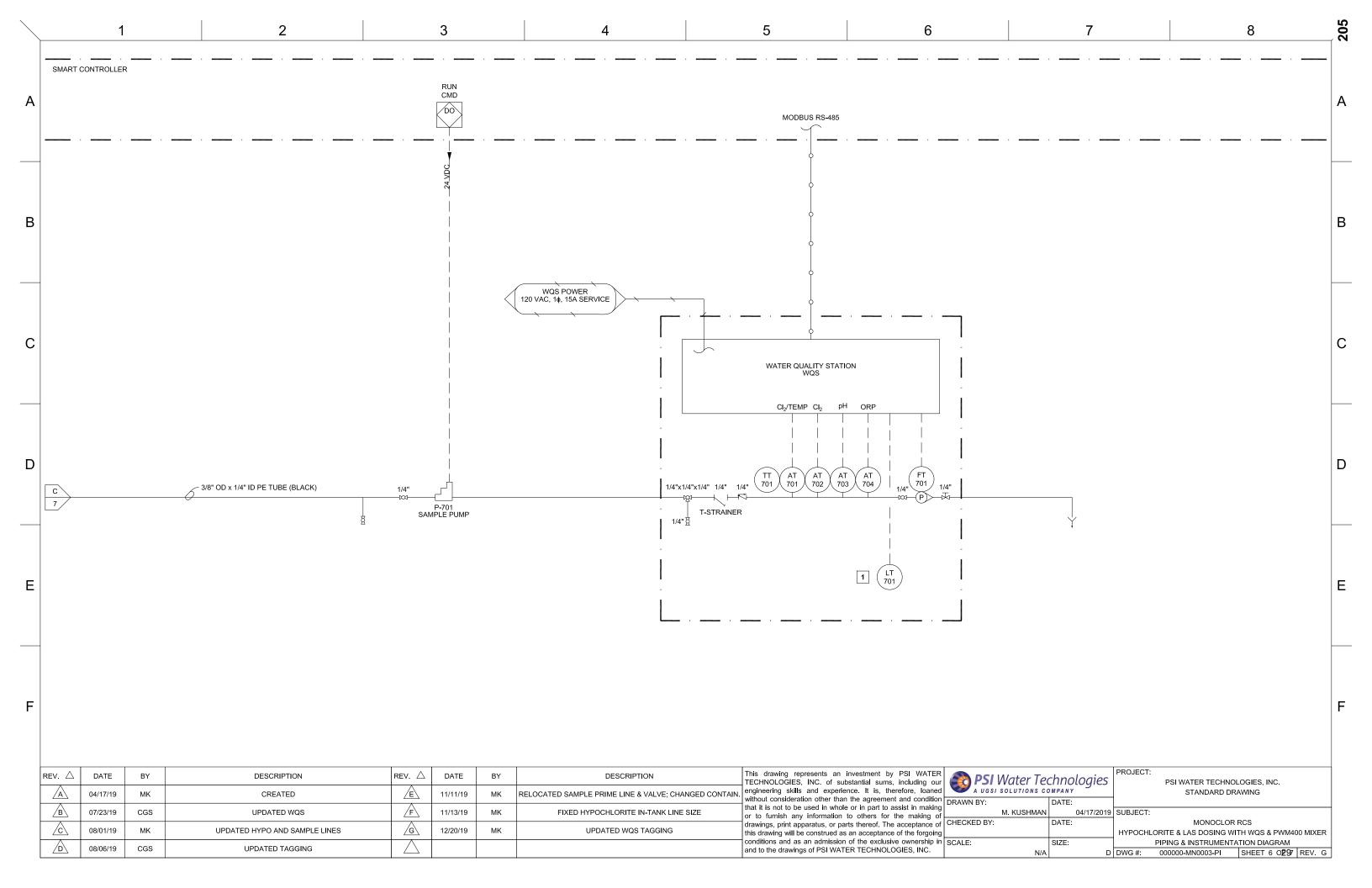


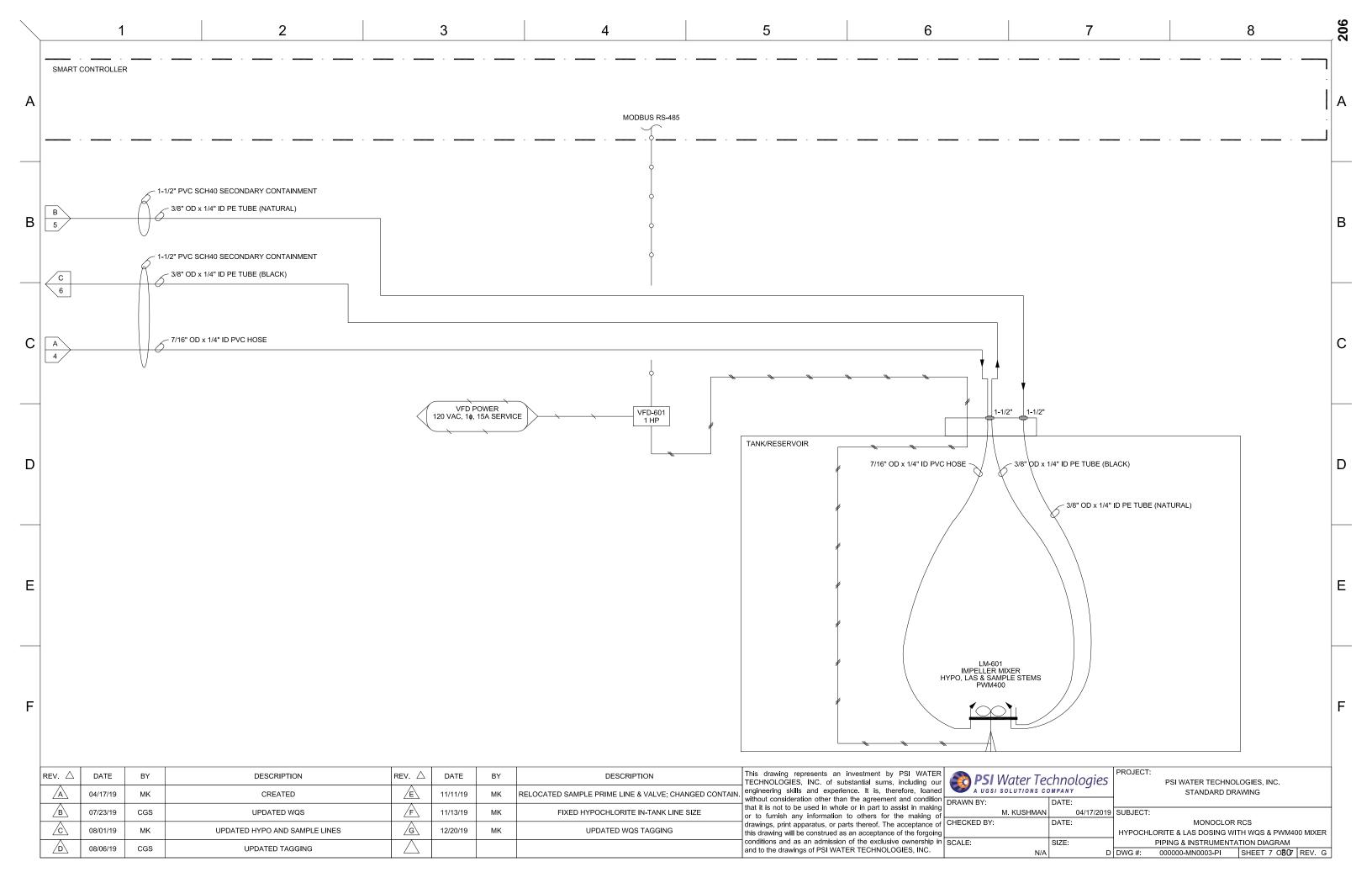














## A. SCOPE OF SUPPLY BY PSI – MONOCLOR® RCS – BULK HYPO

The following equipment and services constitute our scope of work. All equipment will be manufactured in accordance with the descriptions below.

No Item Description Qty.

#### 1. Integrated Smart Control Center, SCC1000(Custom)

- Purchase Parts and assemble Qty.1 UL508A Control Panels
- Panel to be 120VAC single phase 60Hz with 70A Main Circuit Breaker
- Main circuit breaker to be ABB XT 70A 50kAIC thermal magnetic with rotary disconnect and 3-multilug 6-pole distribution blocks with finger-safe cover
- Enclosure to be Weigman 60"X48"X10" NEMA 12 mild steel painted gray Stego LED enclosure light with on-off switch
- (2)Hammond enclosure door stop kit
- Stego 14CFM filter fan, exhaust grill and thermostat
   Hammond 400W enclosure heater with built in thermostat
- Automation Direct 22mm 3-position selector switch "Hand-Off-Auto"
- Allen Bradley Panelview Plus 7 10" performance HMI
- Allen Bradley Stratix 2500 managed Ethernet switch
- Prosoft Ethernet/IP to Modbus Serial Four-Port Communication Gateway
- Allen Bradley Compact Logix L33ER CPU with PA4 power supply
- IO Cards: (3)1769-IQ16,(1)1769-OB16,(3)1769-IF4CI,(1)1769-OF4I
- Winford 4-port RJ45 distribution communication module
- Phoenix Contact 500VA uninterruptible power supply with 128WH battery
- (2) Phoenix Contact Quint4 10A power supply and redundancy module Eaton FAZ-NA miniature circuit breaker
- Automation Direct ice cube relays with LED indicator and mounting socket
- (2)1/2Hp Tank Mixer with motor breaker for protection with adjustable trip and Powerflex 525 1Hp VFD and Schaffner sine wave filter
- C-UL-US 508A enclosed label with dual listing for USA or Canada.

1



<u>No</u>	Item Description	Qty.			
2.	Hypochlorite Storage Tank ■ 320 Gal, HDLPE, 48 D x 61 H, Dual Containment	1			
3.	Hypochlorite Storage Tank Level Transmitter:				
4.	Liquid Ammonium Sulfate (LAS) Storage Tank  120 Gal, HDLPE, 32 D x 47 H, Dual Containment	1			
5.	Liquid Ammonium Sulfate (LAS) Storage Tank Transmitter	1			
6.	<ul> <li>Water Quality Station, WQS1000</li> <li>Water Connection: 3/8" Push-connect</li> <li>Sampling Flow Rate: 10 GPH</li> <li>Connectivity: Modbus RS485 Connection</li> <li>Data Logging: Real-time DAQ on USB flash drive</li> <li>Measurement - Total Chlorine: Dual Amperometric reagent less online sensor, 0-10 PPM measuring range, 0.01 PPM resolution</li> <li>Measurement - ORP Sensor (Platinum Extended Tip)</li> <li>Measurement - Temperature: 32-212° F measuring range, 0.1° F resolution</li> <li>Measurement - pH: 0-14 measuring range, 0.01 resolution</li> <li>Measurement - Water Level (optional): pressure transducer, resolution of 1% maximum scale</li> <li>Enclosure: Equal to or greater than Type 3R rating</li> </ul>	2			
7.	Sample Pump  MFG: Micropump Model I Drive GJ Series 24VDC	2			
8.	<ul> <li>PWM400 Mixer Wet Assembly, including:</li> <li>Stainless steel 316 impeller designed to mix up to 9 million gallons of water</li> <li>Passivated to minimize corrosion</li> <li>The ability to function continuously regardless of tank cycles</li> <li>Fittings box</li> <li>230V three phase 1 horsepower water-cooled motor powered by the PAX Control Center</li> <li>Injection Stems</li> </ul>	2			
9.	Cable 70 ft., including:  Flat-jacketed 4 conductor	2			
10.	<ul> <li>Tripod, Bracket Assembly, PWM400/500/600, including:</li> <li>Stainless steel 316 legs</li> <li>Chlorine/chloramine resistant rubber foot pad to avoid scratching tank floor</li> </ul>	2			



<u>No</u>	<u>Item Description</u>				
	<ul> <li>Stainless steel knobs for tool-less installation</li> </ul>				
11.	Long Bail Handle & Chain  Stainless steel 316 handle to deploy mixer in full tanks	2			
12.	Tank Penetration Accessory ■ Stainless steel strain relief for 3/4 wire flat-jacketed cable	2			
13.	Chemical Feed System – Chlorine  Skid: Black polypropylene  Pump: Watson Marlow Q Dos 60 Peristaltic Pump, 15.85 GPH  60 PSI  Piping: PVC schedule 80  Secondary Containment: 9 gallons secondary containment  Controller - Input/Output: 4 digital inputs, 2 digital outputs, 2 analog inputs, 1 analog output  Controller - Communication: Modbus RS-485 with Smart Control Center  Controller - Pump Control Option: Digital relay, analog (4-20 mA), power switch  Spare pump head  Accessories:  Calibration Column  Pressure Relief Valve  Wye Strainer  Pressure Transmitter  Back Pressure Regulator	2			
14.	Chemical Feed System - Ammonia, ASP  Skid: Black polypropylene Pump: Watson Marlow Q Dos 30 Peristaltic Pump 7.93 GPH @ 60 PSI Piping: PVC schedule 80 Secondary Containment: 9 gallons secondary containment Controller - Input/Output: 4 digital inputs, 2 digital outputs, 2 analog inputs, 1 analog output Communication: Modbus protocol with Smart Control Center Connection: RS-485 cable Enclosure: Equal to or greater than Type 3R rating Pump Control Option: Digital relay, analog (4-20 mA), power switch Spare Pump Head Accessories: Calibration Column Pressure Relief Valve Wye Strainer	2			



No Item Description Qty. o Pressure Transmitter o Back Pressure Regulator 15. Manufacturer's Services for Installation Inspection, System Start-Included **Up, and Operator Training** 16. Submittal and Operation & Maintenance Manual as Follows Included Submittal: Sent Electronically O&M Manual: Sent Electronically 17. FOB Factory, Milpitas, CA with Full Freight Allowed to Jobsite, Included Castle Rock, CO \$428,765.00 FIRM PRICE [ITEMS 1-17]



## B. SCOPE OF WORK BY OTHERS

- 1. Equipment unloading and installation.
- 2. Secondary containment of all equipment and piping.
- 3. Tuff-Shed / Enclosure.
- 4. 12.5% Sodium Hypochlorite supply.
- 5. 40% Liquid Ammonium Sulfate supply.
- 6. Each chemical storage tank must be labeled appropriately according to local regulations. Check with your local regulating agency for requirements.
- 7. Proper distance between chemical storage tanks must be maintained according to local regulations.
- 8. All civil works and concrete pad for equipment.
- 9. Any underground or structural work.
- 10. Design and supply of anchor bolts and seismic restraints.
- 11. Water supply piping to motive water connection.
- 12. Water piping from booster pump outlet to tank/reservoir hatch.
- 13. Tank mounted fitting boxes for chemical and sample lines.
- 14. All interconnecting piping, including between chemical storage tanks, metering pumps and accessories motive water supply, water sampling cabinet/station, and connections at hatch.
- 15. Electrical power to sample pump, Water Quality Station (100VAC/1Ph/60Hz for 10A), Custom Control Center (100-120VAC/1PH/60Hz for 70A), and Chemical Feed Skid(s) (100-120VAC/1Ph/60Hz for 10A).
- 16. Any electrical conduit runs.
- 17. Any tank recoating services, labor, or parts.
- 18. All hose, pipe and tubing supports, strut, and clamps.
- 19. Freeze protection for all tubing and piping external to the reservoir, if required.
- 20. All electrical conduit, wiring, electrical material (including disconnect switches), etc. between control panel, hypochlorite tank, LAS Tank, metering pumps, SCADA, etc.
- 21. Hatch penetrations or modifications.
- 22. Room ventilation, air conditioning, or lighting.
- 23. Videotaping.
- 24. All taxes, fees, lien waivers, bonds and licenses.
- 25. Permitting or regulatory approval.
- 26. Valves, fittings, appurtenances not specifically listed under Scope of Supply by PSI
- 27. Any items not explicitly listed under Scope of Supply by PSI.

## C. CLARIFICATIONS

- Custom Control Center to House VFD for Mixers, Connectivity for both Water quality stations, pump skids, and valve controllers for both tank operations. Design based off BOM and layout provided by customer.
- 2. Custom Control Center will be equipped with Phoenix Contact UT Terminals / Jumpers / Labels.
- 3. Xetawave Radio and Accessories to be provided by customer for incorporation into Custom Control Center.
- 4. Site power may require upgrade based on amp requirement for driving two tank management systems on site.



- 5. All equipment excluding Mixers must be installed in an indoor location.
- 6. Sample water flow is 10 GPH to WQS and then routed to a nearby drain.
- 7. Reservoir Low Water Level must be above 8' for mixer to function properly.
- 8. PSI recommends adding secondary containment to Hypochlorite and Ammonia chemical feed lines. When possible, trenching these lines underground would be optimal.
- 9. The performance of the Monoclor® RCS design reported in this document is dependent on the tank operations data provided in the design criteria and may vary significantly under different operating conditions and/or scenarios.
- 10. Installation inspection, start-up and operator training can be provided by a PSI representative for a mutually agreed fee if they are not included in PSI's Scope of Supply above. Whether or not PSI is providing start-up services, PSI will provide a start-up checklist.
- 11. PSI requires a minimum of two (2) weeks notification prior to performing onsite installation inspection, system start-up and training. PSI will work with you to attempt to accommodate your scheduling needs.
- 12. Do not mix hypochlorite and ammonia as toxic vapors will be produced.

#### D. DELIVERY

Submittal: 6 - 8 Weeks After Receipt of Fully Executed Order

Equipment Shipment: 15-18 Weeks After Approval of Submittals

213



## **EXHIBIT 2**

# CONTRACTOR'S CERTIFICATE OF INSURANCE



#### **EXHIBIT 3**

## TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, \_\_\_\_\_\_, an authorized representative of UGSI SOLUTIONS, INC. d/b/a PSI WATER TECHNOLOGIES, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be employed as an independent contractor of the Town of Castle Rock (the "Town") for purposes of performing the work or services which are the subject of the Agreement. I understand and confirm that the Town reasonably relied on this intention in entering into the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may
   be
   supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.

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- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.
- I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

CONTRACTOR/CONSULTANT/VENDOR

UGSI SOLUTIONS, INC. d/b/a PSI WATER TECHNOLOGIES

Ву: _						
N	lame					
STATE (	OF COLORADO	)				
		) ss.				
COUNT	Y OF	)				
20 b Contracto	the foregoing instrument as byor/Consultant/Vendor.  Vitness my official hand and fy commission expires:	_ as	d before me	_	 	mentioned
			Notary P	ublic		

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# SUBJECT: APPENDIX J – SOLE SOURCE JUSTIFICATION FORM DIVISION AND POLICY NUMBER PURCHASING Approval Date 1/1/2018 Revision Date 9/16/2022

COMMODITY OR SERVICE
VENDOR
AMOUNT OF PURCHASE \$
REQUESTORS NAME
DEPARTMENT
DEPARTMENT DIRECTOR's Approval
FINANCE DEPARTMENT's Approval
TOWN MANAGER's (or Designee) Approval
TOWN COUNCIL's Approval, when necessary

	PURCHASING POLICY EXCEPTION ITEM	CHECK ONE
1.	Item(s) or service has been formally awarded to a vendor by the State of Colorado, MAPO, or other cooperative purchasing group and the product meets the needs of the Town of Castle Rock.	
2.	The product or service is of a unique nature, or allows for standardization with existing equipment and will provide exceptional value to the Town of Castle Rock.	
3.	Emergency purchases where the well-being of the citizens, employees or Town property may be endangered if the purchase is delayed.	
4.	Town of Castle Rock currently has a contract in place with a vendor for like products or services and the compatibility and/or continuity of those products or services are paramount to the success of the department or Town function.	

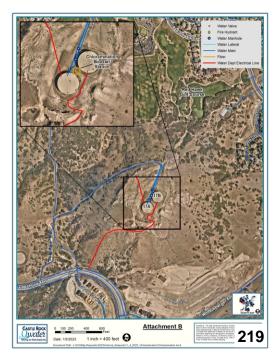
#### Per Municipal Code 3.02.060:

Purchases over one thousand dollars (\$1,000.00) and up to and including five thousand dollars (\$5,000.00) require three (3) verbal bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over five thousand dollars (\$5,000.00) and up to seventy-five thousand dollars (\$75,000.00) require three (3) informal written bids unless approved by the Town Manager on the basis of sole source, emergency or unresponsive bidders.

Purchases over seventy-five thousand dollars (\$75,000.00) require formal written sealed bids unless waived by the Town Manager for purchases up to and including two hundred fifty thousand dollars (\$250,000.00) or by Town Council for purchases over two hundred fifty thousand dollars (\$250,000.00) on the basis of sole source, emergency or unresponsive bidders.

The requesting department must provide written justification to the Finance Department for review and forward it to the Accounting Manager. **Attach additional sheets as necessary.** 





# Town of Castle Rock

# **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 9. File #: RES 2023-005

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Mark Marlowe, P.E., Director of Castle Rock Water From:

> J. David Van Dellen, P.E., Stormwater Manager Laura Kindt, P.E., Project Manager - Stormwater

Resolution Approving a Construction Contract with 53 Corporation, LLC, for the East Plum Creek Reach 6 Stabilization Project [Adjacent to Plum Creek Water

Reclamation Facility]

## **Executive Summary**

Castle Rock Water is seeking Town Council approval of a Resolution (Attachment A) awarding a Construction Contract to 53 Corporation, LLC, for the East Plum Creek Reach 6 Stabilization Project in the amount of \$1,353,006 plus a 10% Town-managed contingency in the amount of \$135,301 for a total authorization of \$1,488,307. This project will be funded through the Stormwater Enterprise Fund.

East Plum Creek Reach 6 parallels Santa Fe Drive (Highway 85) from the North Meadows Drive bridge at its upstream limit to the Plum Creek Water Reclamation Facility (PCWRF) at its downstream limit. Improvements generally include stream channel improvements, buried riffle drops, steel sheet pile, bank protection, water control, erosion control measures, seeding, planting and other appurtenances. This project will mitigate impacts and preserve the natural drainageway within the project area (see Attachment B). The project is scheduled to begin in January 2023 and be completed by August 2023.

The total project cost including construction is shown below:

		Bidding and Construction Services	Construction	Total
Project Budget	\$223,089	\$132,534.00	\$1,488,306.60	\$1,843,929.60

## **Notification and Outreach Efforts**

Improvements will primarily be constructed within Town owned property and developer owned property. The Town is in the process of securing a license agreement with Castle Rock Development Company for this work. Town staff will contact adjacent residents through notification letters and provide additional notifications through news releases and social media postings, as needed. Project details and updates are also provided on the Town website, CRgov.com.

# History of Past Town Council, Boards & Commissions, or Other Discussions

Town Council approved the East Plum Creek Watershed Master Plan Preliminary Design Report through Resolution 2009-03 on January 6, 2009. This project was included in the recommendations from the Watershed Master Plan.

Castle Rock Water staff will present this construction contract to the Castle Rock Water Commission at their meeting held on January 25, 2023. Castle Rock Water Commission was given a preliminary briefing on this project at their December 14, 2022 meeting.

## **Discussion**

East Plum Creek is the largest drainageway within the Town of Castle Rock limits other than Cherry Creek, which currently only has a minor segment within the Town limits. East Plum Creek Reach 6 flows from the southeast to the northwest to its confluence with Jarre Creek and West Plum Creek. combining into Plum Creek, the receiving water for the project. Plum Creek ultimately discharges to Chatfield Reservoir. The East Plum Creek Reach 6 Project limits include approximately 3,000 linear feet along the center line of the channel.

There were three previous studies completed for East Plum Creek, which include East Plum Creek Watershed Amended Flood Hazard Area Delineation 2013, East Plum Creek Watershed Master Plan Preliminary Design Report, 2009 and East Plum Creek Watershed Master Plan Stream Stability Report, 2007, that were referenced in the preparation of the design documents. The 2009 Master plan characterized East Plum Creek as having a wide floodplain with steep embankments and a low flow channel width of approximately 30 feet. Erosion in this section has caused slope failure and is slowly progressing towards private property. The 2009 Master Plan suggested proposed improvements including drop structures to reduce the channel slope. A stream gage will be reconstructed by United States Geological Survey (USGS) within the project reach following completion of the improvements. This gage will assist with accurate accounting of Town water rights along East Plum Creek.

Following approval of the design documents, the project was advertised for public bid from qualified contractors on November 22, 2022 on the Town's Rocky Mountain Bid Net site. Bids were received from nine contractors on Thursday December 15, 2022. Bid results are included in Table 1.

Table 1: Bid Results

Item #: 9. File #: RES 2023-005

Contractor	Total
American West Construction, LLC	\$2,192,865.00
Concrete Express, Inc.	\$2,896,846.00
D4 Excavating	\$3,817,598.95
Edge Contracting, Inc.	\$1,989,391.00
Graham	\$2,084,434.00
Lawrence Construction	\$2,083,958.00
Meridiam Partners, LLC	\$2,378,715.89
Tezak Heavy Equipment, Inc.	\$1,758,487.32
53 Corporation, LLC	\$1,353,006.00
Engineer's Estimate	\$2,438,558.00

53 Corporation, LLC, is the confirmed low bidder, having also met the qualification requirements under the contract. The Town along with 53 Corporation as the contractor have successfully completed multiple stream stabilization and drainage projects. 53 Corporation has a strong understanding of what is required to complete this work, and is a local contractor, allowing them to have a competitive bid. Previous projects completed by 53 Corporation have come in within budget, with minimal change orders. Although, 53 Corporation has a much lower bid than the other contractors as well as the engineer's estimate, the Town is confident that 53 Corporation will successfully complete the job within budget. The design engineer for this project, provided a positive recommendation for 53 Corporation with recent experience on the Industrial Tributary project. Construction is anticipated to begin in January 2023 and be substantially complete by August 2023, weather permitting.

#### **Budget Impact**

Funds for this Construction Contract will be charged to the Stormwater capital account below. Construction of this project was originally budgeted in 2019 however this project was delayed by four years as a result of delays in getting the necessary permitting. This project will require a budget transfer from stormwater capital account 212-4475-444.75-52 which has a budget of \$2,700,000 in 2023. Additionally, there is approximately \$10 million available in capital reserves to complete this project and maintain other priorities in the coming year.

Fund Description	Account Number	Amount	Contingency	Total
East Plum Creek	212-4475-	\$1,353,006	\$135,301	\$1,488,307
Stream	444.76-37			
Stabilization				

#### **Staff Recommendation**

Staff recommends Town Council approval of a Resolution awarding a Construction Contract to 53 Corporation, LLC, for the East Plum Creek Reach 6 Stabilization Project at a cost of \$1,353,006 plus a 10% Town-managed contingency in the amount of \$135,301 for a total authorization in the amount of \$1,488,307.

## Item #: 9. File #: RES 2023-005

## **Proposed Motion**

"I move to approve the Resolution as introduced by title."

## **Alternative Motion**

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions).

"I move to continue this item to the Town Council meeting on \_\_\_\_\_ date to allow additional time to (list information needed)."

## **Attachments**

Attachment A: Resolution

Exhibit 1: Construction Contract Attachment B: Project Site Map

#### **RESOLUTION NO. 2023-**

# A RESOLUTION APPROVING A CONSTRUCTION CONTRACT WITH 53 CORPORATION, LLC, FOR THE EAST PLUM CREEK REACH 6 STABILIZATION PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has solicited bids for creek stabilization improvements for the East Plum Creek Reach 6 Stabilization Project (the "Project"); and

**WHEREAS**, the Project selection team has determined 53 Corporation, LLC, (the "Contractor") is best qualified to perform work for the Project; and

**WHEREAS**, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will provide work for the Project.

# NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

- **Section 1.** <u>Approval</u>. The Construction Contract between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.
- **Section 2.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 212-4475-444.76-37 in an amount not to exceed \$1,353,006.00, plus a Town-managed contingency in the amount of \$135,301.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK			
Lisa Anderson, Town Clerk	Jason Gray, Mayor			
Approved as to form:	Approved as to content:			
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water			



# TOWN OF CASTLE ROCK CONSTRUCTION CONTRACT

(East Plum Creek Reach 6 Stabilization Project)

THIS CONSTRUCTION CONTRACT ("Contract") is made between the **TOWN OF CASTLE ROCK**, a Colorado municipal corporation ("Town"), 100 N. Wilcox Street, Castle Rock, Colorado 80104 and **53 CORPORATION**, LLC, a Colorado limited liability company, 5655 Peterson Road, Sedalia, Colorado 80135 ("Contractor").

In consideration of these mutual covenants and conditions, the Town and Contractor agree as follows:

**SCOPE OF WORK** The Contractor shall execute the entire Work described in the Contract.

**CONTRACT** The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, written or oral representations and agreements. The Contract incorporates the following Contract Documents. In resolving inconsistencies among two or more of the Contract Documents, precedence will be given in the same order as enumerated.

#### LIST OF CONTRACT DOCUMENTS

The Contract Documents, except for Modifications issued after execution of this Contract, are:

- 1. Change Orders
- 2. Notice to Proceed
- 3. Construction Contract
- 4. General Conditions
- 5. Where applicable, Davis-Bacon Act Wage Determinations
- 6. The following Addenda, if any:

Number	Date
1	November 22, 2022
2	November 22, 2022
3	December 9, 2022
4	December 13, 2022

- 7. Special Conditions of the Contract:
  - A. Town of Castle Rock Special Conditions
  - B. Standard Special Provisions
  - C. Project Special Conditions
- 8. The following Specifications:



- A. Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
- B. Town of Castle Rock Construction Methodology and Materials Manual
- C. Project Technical Specifications
- 9. The following Drawings/Reports:
  - A. Construction Plans for East Plum Creek Stabilization Project
  - B. Temporary Erosion & Sediment Control (TESC) Plans for East Plum Creek Stabilization Project
- 10. Notice of Award;
- 11. Invitation to Bid;
- 12. Information and Instructions to Bidders;
- 13. Notice of Substantial Completion;
- 14. Notice of Construction Completion;
- 15. Proposal Forms, including Bid Schedules;
- 16. Performance, and Labor and Material Payment Bonds;
- 17. Performance Guarantee; and
- 18. Insurance Certificates.

**CONTRACT PRICE.** The Town shall pay the Contractor for performing the Work and the completion of the Project according to the Contract, subject to Change Orders as approved in writing by the Town, under the guidelines in the General Conditions. The Town will pay \$1,353,246.00 ("Contract Price"), to the Contractor, subject to full and satisfactory performance of the terms and conditions of the Contract. The Contract Price is provisional based on the quantities contained in the Bid attached as *Exhibit 1*. The final Contract Price shall be adjusted to reflect actual quantities incorporated into the Work at the specified unit prices. The Town has appropriated money equal or in excess of the Contract Price for this work.

**COMPLETION OF WORK.** The Contractor must begin work covered by the Contract within ten (10) calendar days from the date of the Notice to Proceed, and must complete work within one hundred and eighty (180) calendar days from and including the date of Notice to Proceed, according to the General Conditions.

**LIQUIDATED DAMAGES.** If the Contractor fails to complete the Work by the date set for completion in the Contract, or if the completion date is extended by a Change Order, by the date set in the Change Order, the Town may permit the Contractor to proceed, and in such case, may deduct the sum of \$2,500.00 for each day that the Work shall remain uncompleted from monies due or that may become due the Contractor. This sum is not a penalty but is a reasonable estimate of liquidated damages.

The parties agree that, under all of the circumstances, the daily basis and the amount set for liquidated damages is a reasonable and equitable estimate of all the Town's actual damages for delay. The Town expends additional personnel effort in administering the Contract or portions of



the Work that are not completed on time, and has the cost of field and office engineering, inspecting, and interest on financing and such efforts and the costs thereof are impossible to accurately compute. In addition, some, if not all, citizens of Castle Rock incur personal inconvenience and lose confidence in their government as a result of public projects or parts of them not being completed on time, and the impact and damages, certainly serious in monetary as well as other terms are impossible to measure.

**SERVICE OF NOTICES.** Notices to the Town are given if sent by registered or certified mail, postage prepaid, to the following address:

TOWN OF CASTLE ROCK Town Attorney 100 N. Wilcox Street Castle Rock, CO 80104

With a copy to: <u>Legal@crgov.com</u>

**INSURANCE PROVISIONS.** The Contractor must not begin any work until the Contractor obtains, at the Contractor's own expense, all required insurance as specified in the General Conditions. Such insurance must have the approval of the Town of Castle Rock as to limits, form and amount. Certificate of Insurance ("COI") must be submitted along with the executed contract as **Exhibit 2**.

RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify, save harmless, and defend the Town, its officers and employees, from and in all suits, actions or claims of any character brought because of: any injuries or damage received or sustained by any person, persons or property because of operations for the Town under the Contract; including but not limited to claims or amounts recovered from any infringements of patent, trademark, or copyright; or pollution or environmental liability. The Town may retain so much of the money due the Contractor under the Contract, as the Town considers necessary for such purpose. If no money is due, the Contractor's Surety may be held until such suits, actions, claims for injuries or damages have been settled. Money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that the Contractor and the Town are adequately protected by public liability and property damage insurance.

The Contractor also agrees to pay the Town all expenses, including attorney's fees, incurred to enforce this Responsibility for Damage Claim clause.

Nothing in the **INSURANCE PROVISIONS** of the General Conditions shall limit the Contractor's responsibility for payment of claims, liabilities, damages, fines, penalties, and costs resulting from its performance or nonperformance under the Contract.

**STATUS OF CONTRACTOR.** Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. The Contractor is performing all work under the Contract as an independent



Contractor and not as an agent or employee of the Town. No employee or official of the Town will supervise the Contractor. The Contractor will not supervise any employee or official of the Town. The Contractor shall not represent that it is an employee or agent of the Town in any capacity. The Contractor and its employees are not entitled to Town Workers' Compensation benefits and are solely responsible for federal and state income tax on money earned. This is not an exclusive contract.

**THIRD PARTY BENEFICIARIES.** None of the terms or conditions in the Contract shall give or allow any claim, benefit, or right of action by any third person not a party to the Contract. Any person, except the Town or the Contractor, receiving services or benefits under the Contract is an incidental beneficiary only.

**INTEGRATION.** This contract integrates the entire understanding of the parties with respect to the matters set forth. No representations, agreements, covenants, warranties, or certifications, express or implied, shall exist as between the parties, except as specifically set forth in this Contract.

**DEFINITIONS.** The Definitions in the General Conditions apply to the entire Contract unless modified within a Contract Document.

Executed this day of	, 20
ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
APPROVED AS TO FORM:	APPROVED AS TO CONTENT:
Michael J. Hyman, Town Attorney	David L. Corliss, Town Manager
CONTRACTOR:	
53 CORPORATION, LLC	
By:	
Title:	

4



# **EXHIBIT 1**

CONTRACTOR'S BID

## **BID PROPOSAL**

PROJECT: EAST PLUM CREEK REACH (9 STABILIZATION
1. In compliance with your Invitation to Bid, and subject to all conditions thereof, the undersigned:
a Corporation incorporated in the State of
-OR, a partnership, / limited partnership, (select
one), registered in the State of, whose general partner(s) is/are
-OR-
a sole proprietor, whose trade name is
in the Town of, State of, offers this Bid Proposal for the construction of all items listed at the prices shown on the following Bid Schedule. (The attached Bid Schedule lists the various divisions of construction contemplated in the Plans and Specifications, together with an estimate of the units of each. With these units as the basis, extend each item, using the cost inserted in the unit column. Any total cost found inconsistent with the unit cost when the Bids are examined will be deemed in error and corrected to agree with the unit cost. Alternate Bids are optional.)
2. The undersigned Bidder declares and stipulates that this Bid is made in good faith, without collusion or connection with any other person or persons bidding for the same Work, and that it is made subject to all the terms and conditions of the Invitation to Bids, Information and Instruction for Bidders, and Construction Contract General Conditions, the Agreement for a Construction Contract, the Technical Specifications, and the Plans pertaining to the Work to be done, all of which have examined by the undersigned.
3. Accompanying this Bid is a Bid Guarantee for 5% of the total Bid amount according to the Invitation to Bids and Information and Instructions to Bidders.
4. The undersigned Bidder agrees to execute the Agreement for a Construction Contract, a Performance Bond and a Labor and Material Payment Bond within ten days from the date when the written Notice of Award is delivered at the address given on this Bid Proposal. The Performance Bond and Labor and Material Payment Bond shall each be for the amount of the total of this Bid and shall be from the same surety. The name and address of the corporate surety through which the Bidder proposes to furnish the specified Bonds is as follows:  EMPLOYERS MUTUAL CASUALTY COMPANY 5 030°  5. The submission of the Bid constitutes an agreement, and it shall not be withdrawn after the Bid Opening for a period of forty-five (45) days.
6. All the various phases of work enumerated in the Contract with individual jobs and overhead, whether specifically mentioned or not, are included by implication or appurtenance in the Contract. The Contractor shall perform all the various phases of work under one of the items listed in the Bid Schedule, irrespective of whether it is named in the Schedule.
7. Payment for the Work performed will be according to the Bid Schedule, subject to changes as provided in the Contract.
8. The undersigned Bidder hereby acknowledges receipt of addenda numbers through

Addenda No.	Date_	11	17/	22
Addenda No.	Date	11]	aa	22
Addenda No. 3'	Date _	121	9	aa
Addenda No	Date _	12!	13,	22
Addenda No	Date _	121/1	3/2	22_
Addenda No.	Date _	/		

RETURN BID TO:

TOWN OF CASTLE ROCK CASTLE ROCK WATER 175 Kellogg Court Castle Rock, CO 80109 Attn: Laura Kindt

The undersigned, being familiar with the existing conditions on the project area affecting the cost of the Work and the Contract Documents, and having verified the quantities and the availability of materials and labor, hereby proposes to furnish all supervision, labor, materials, machinery, tools, appurtenances, equipment, supplies, and services, including utility and transportation service required to construct and complete the Project listed above, according to the Contract, within the time specified, and at the prices stated below. These prices are to cover all expenses incurred in performing the Work required under the Contract of which this Bid is a part.

(The approximate quantities of Work to be completed in-place under the Contract are identified in the Bid Schedule and are for the purpose of comparing Bids. These quantities have been estimated and the quantities used are for the general information of the Bidder, representing the major items of the Work to be done. Minor details are not listed but shall be part of the complete Contract.)

9. The undersigned agrees to hold firm the Bid for forty-five (45) days for the purpose of the Town reviewing the Bids and investigating the qualifications of the Bidders prior to award of Contract. Mutually agreed upon extensions of time may be made if necessary.

This proposal is submitted by:

CONTRACTOR: 53 CORPORATION UC

ADDRESS: SEDAUA, CO 80135

(if corporation)

Min.

Married D.

## EAST PLUM CREEK REACH 6 STABILIZATION PROJECT

#### BID SCHEDULE (Addendum No. 3)

ITEM #	ITEM CODE	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
1	201-00001	Clearing and Grubbing	AC	5.7	\$3,500.	\$ 19,950.00
2	202-00010	Removal of Tree (4" or greater)	EA	24	\$ 230.00	\$ 5,520.00
3	203-00010	Unclassified Excavation (Complete In Place)	CY	3,630	\$ 10.00	\$36,300.
4	203-00210	Excavation, Export	CY	3,444	\$ 10.00	\$ 34.440.00
5	207-00205	Topsoil, Removal, Stockpile and Placement	CY	1,589	\$ 6.00	\$ 9,534.00
6	208-00002	Sediment Control Log Type 1	LF	5,696	\$ 3.00	\$ 17,088.00
7	208-00041	Reinforced Check Dam	LF	200	\$ 65.00	\$ 13,000.00
8	208-00070	Vehicle Tracking Control	EA	2	\$1,800.00	\$ 3.600.00
9	208-00550	Stabilized Staging Area	SY	762	\$ 4.00	\$ 3 048.09
10	208-00600	Construction Fence	LF	14,505	\$ 2.00	\$ 29,010.
11	208-00601	Ripping, Haul Road and Staging, 18-Inch Depth	AC	3.3	\$ 300.00	\$ 990.00
12	212-00706	Seeding - Riparian/Upland (see Planting Plan)	AC	5.1	\$ 2.300.00	\$ 11 730.00
13	212-00709	Seeding - Wetland (see Planting Plan)	AC	0.2	\$ 6,800.00	\$ 1,360.00
14	213-00005	Mulching, Crimped Straw	AC	4.6	\$ 1.800.00	\$ 8.280.00
15	214-01013	Willow Stakes	EA	3,885	\$ (9.00	\$ 23,310.°9
16	216-00042	Soil Retention Covering - Straw/Coconut ECB	SY	1,314	\$ 5.00	\$ 6,570.00
17	216-00043	Soil Retention Covering - Koirmat 700	SY	3,470	\$ 10.00	\$ 34, 700.
18	218-00001	Dewatering	LS	1	\$35,000.00	\$ 35,000.00
19	501-00200	Steel Sheet Piling (Type II), PZ-22	SF	13,930	\$ 39.00	\$ 543,270.0
20	501-00210	Steel Sheet Pile Cap	LF	188	\$ 120.00	\$ 22.560.00
21	506-00004	Soil Riprap, Type H, d50 = 18"	CY	2,030	\$ 66.00	\$ /33, 980.00
22	506-00005	Longitudinal Peak Stone Toe (Riprap, Soil, 18- Inch D50)	CY	470	\$ 660.00	\$ 31,020.00
23	506-00006	Riprap, Void-Filled, 18-Inch D50	CY	2,174	\$ 77.00	\$ 167,398
24	506-00007	Boulders, Ungrouted, 36-Inch	EA	91	\$ 324.00	\$ 29,484.00
25	619-30160	Stream Gage Work	LS	1	\$ 5,000.00	\$ 5,000.00
26	625-00000	Construction Surveying	LS	1	\$14,000.00	\$ 14,000.00
27	625-60800	Utility Location Allowance	LS	1	\$ 1,000.00	\$ 1,000.00
28	626-00000	Mobilization	LS	1	\$34,000.	\$ 34,000.
29	630-10005	Traffic Control	LS	1	\$ 3,500.0	\$ 3,500.00
30		Tree: 60ci (Peachleaf Willow)	EA	6	\$ 40.00	\$ 240.00
31		Tree: Pole (Narrowleaf Cottonwood)	EA	19	\$ 140.00	\$ 2,660.00
32		Tree: B&B (2" Caliper Narrowleaf Cottonwood)	EA	6	\$ 700.00	\$ 4,200.00
33		Wetland Plugs: 10ci (see Planting Plan)	EA	4,168	\$ 3.00	\$ 12,504.
34		Materials Testing	LS	1	\$5,000.00	\$ 5,000.
35	F/A-001	Minor Contract Revisions	LS	1	\$ 50,000.00	\$ 50,000.00

GRAND TOTAL \$1,353,246.

ONE MILLION THREE HUNDRED FIFTY THREE THOUSAND TWO HUNDRED FORTY SIX DOLLARS AND ZERO CENTS.

#### **BIDDER'S QUALIFICATIONS AND DATA**

All questions must be answered clearly and comprehensively. If necessary, separate sheets may be attached. The Bidder may submit additional information.

**MINIMUM EXPERIENCE REQUIRED:** Contractor, and subcontractor(s) if applicable, must show experience in completion of at least two (2) similar projects that include experience installing stream gages, constructing buried riffle and buried cascading boulder drop structures within the last five (5) years. A separate Bidder's Qualifications and Data Form should be provided for any subcontractor performing over 20% of the work.

1.	Name of Bidder: 53 CORPORATION, LIC
2.	Permanent main office address: 5655 PETERSON ROAD
	SEDALLA, CO 80135
3.	Phone: <u>720-733-0192</u> Fax# <u>303-814-9233</u>
4.	Bidder's federal tax identification number 84-1483153
5.	The Bidder is organized as a
6.	The date the Bidder was organized in its current form:
7.	If a corporation, the state where it is incorporated:
8.	How many years have you been engaged in the contracting business under your present firm or trade name? 23 years
9.	Contract(s) on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dated of completion.)
	Job: BLACK SAVIRKEL CREEK \$: 970,530 Completion Date: 4/30/23
	Job: GLENDAUF DOG PARK \$: 1,435,33 Completion Date: 3/30/23
	Job: <u>Covy Court</u> \$: <u>698,530.</u> Completion Date: <u>12/31/</u> 20
	Job: POUCE DEPARTMENT \$: 200,379. Completion Date: 12/31/22
10.	General character or work performed by your company:  GENERAL CONTRACTOR, DRAINAGEWAY IMPROVEMENT
11.	Have you ever been debarred or suspended by a government from consideration for the award of contracts? NO If so, where and why?
12.	Have you ever been charged liquidated damages on a contract? YES If so, where and why?  TOWN OF CASTLE ROCK - PUBLIC WORKS
13.	EXCEEDED CONTRACT BY 10 0475  List your major equipment AVAII ABLE FOR THIS PROJECT:
	SEE ATTACHED EQUIPMENT LIST

14.		ence in construction work similar to this project (provide specific project detail to confirm um required experience):
	a.	Description: CHANNEL IMP. INCLUDING GRADING, BOULDER DROP STRUCTURES  RIPCAPBANK PLOTECTION  Contract: \$ 1887,959. OU Change Order(s): \$ -36,084.90  Start/Completion Dates: 3/1/40 - 11/6/40  Contact Name/Phone: DAVIO VAN DELLEN- 720 733-6029
	b.	Job: Mc MUROD GUICH PRIORITY - TOWN OF CASTIF POCK  Description: CHANNEL IMP. INCLUDING GRADING, BOULDFIL DROP STRUCTURES  RIFFLE DROPS, RICHAP BANK PROTECTION  Contract: \$1,054,973.00 Change Order(s): \$-139,121.99  Start/Completion Dates: 6/1/20 - 1/6/20  Contact Name/Phone: DAVID VAN OFLIFA - 720-733-6029
	C.	Job: OMNI TRIBUTARY - PRAIRIE HAWK TO RED HAWK - TOWN OF Description: CHANNEL IMPROVEMENTS - GROUTED BOULDER DROCK STRUCTURES, SHEET PILE, RIPRA  Contract: \$1,337,740.00 Change Order(s): \$7535.00  Start/Completion Dates: 2/8/22 - 12/15/22  Contact Name/Phone: ERIK DAM - 720-733-6044
	d.	Description: CHANNEL IMP. INCLUDING EARTHWORK, TEIPRAP  GROUTED BOULDERS, SHEETPILE  Contract: \$ 566,923.99 Change Order(s): \$ 45,486.6  Start/Completion Dates: 11 19 21 - 5 6 22  Contact Name/Phone: BRAU THOMPSON 805-804-7642
15.	Backgr	round and experience of the principal members of your organization, including officers:
16. 17.		ng Limit: \$ 5,000,000 EA 8,000,000 AGGREGATE  ng Company: FMPLDYERS MUTDAL CASUAL Phone # 515.345-2689  as: 117 MULBERRY ST-

		DES MOINES, 1A	50309
	18.	Bank Reference(s): /NOEfeNOE	FUT FINANCIAL
	10.	<u>720 - 733</u>	
	19.	Will you, upon request, complete a detailed finar that may be required by the Town of Castle Rock	ncial statement and furnish any other information ck?
	20.	The undersigned hereby authorizes and request information requested by the Town of Castle Robidder's Qualifications and Data.	ts any person, firm or corporation to furnish any ock in verification of the recitals in this statement of
	CONTF	RACTOR: 53 CORPORATION, LLC 5655 PETERSON ROAD ESS: SEORLIA, CO 80135	BY: alax four
	ADDRE	ESS: SENAULA, CO 80/35	ITS: MANAGING MEMBER
WO F	Attest:	STARY: STARY:	DATE: 12/15/22
SOUTED	LIABIL	(if c <del>orpo</del> ration)	
50 35t	998 08ADC		
TIN COL	MPANT.		
1/1/1/11	******	'''',	

## BIDDER'S OFFICIALS DATA

Bidder's name 53 CORPORATION (CC)
For each officer of a corporation, partner of a firm, or owner of a sole proprietorship, provide the following information: (Use additional sheets as necessary.)
Name CAROL HOYT
Name CAROL HOYT Title MANAGING MEMBER EIN 84-1483153
Home address 2166 FIFTH STREET
Home address 2166 FIFTH STREET  Town, State, Zip CASTLE POCK, CO 80/04
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government? NO - N/A
Name
Title EIN
Home address
Town, State, Zip
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?
Name
TitleEIN
Home address
Town, State, Zip Other companies with whom this person has been affiliated in last 10 years
Other companies with whom this person has been anniated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?
government.
Name
EIN
Home address
Town, State, Zip
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?

# BID BOND

53 Corporation,	LLC, 5655 Peterson Road Sedalia, CO 80135	,		
	address or legal title of the Contractor) as Principal,			
and, Employers Mutual Casualty Company				
(insert the legal title of the Surety)				
as Surety, a corporation organized unde	r the laws of the State of lowa	_, and		
authorized to transact business in the St	ate of Colorado, with a general office at			
717 Mulberry Street, Des Moines, IA 5	0309			
are hereby bound to the Town of Castle	Rock, Colorado, (Town) as Obligee, in the amount of	and the last of th		
Five Percent Amount Bid		_ DOLLARS,		
in United States currency, for the payme	ent of which amount the Contractor and Surety bind th	emselves,		
their heirs, executors, administrators, su	ccessors, and assigns, jointly and severally. The Prince	cipal has		
submitted the accompanying Bid dated	December 15 , 2022 , for constr	ruction of the		
East Plum Creek Reach 6 Stabilization		Project.		
Guaranty, of at least five percent of the a execute the Agreement for Construction awarded the Contract, that the sum be penalty, for the Principal's failure to perform according to the Bid, as accepted. Payment Bond with good and sufficient faithful performance and proper fulfillme	ceiving the Bid, that the Principal deposit with the Tow amount of the Bid, conditioned so that if the Principal fa Contract, and furnish the required Bonds if the Principal did immediately to the Town, as liquidated damages a form.  Indeed, executes the Agreement for Construction Contract, and furnishes a Performance Bond and a Labor and I Surety or Sureties, upon the forms prescribed by the Town to fithe Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract, or pays to the Town the proper amount of the Contract of the Cont	ails to oal is and not as a with the Material own for the ount of		
effect.  Executed this 8th day of December 1		William Charles		
WITNESS WITNESS	PRINCIPAL 53 Corporation, LLC By its President Carol Hoyt, Managing Member SURETY	ORPOATA		
Allsomble	TITLE  BY:  Its Attorney-in-fact Jennifer Naber	ANY SO		
	, certify that	I am the		
I, <u>Jennifer Naber</u> Attorney-in-Fact	(title) of the Corporation named as Surety; the			
Carol Hoyt	, who signed the bond on behalf of the Princi	nal was		
	, who signed the bond on behalf of the Finish (title) of the Corporation; that I know his or h	er signature		
then Managing Member	d that the hand was duly signed sealed and attested	to for and		
and the signature thereto is genuine; and that the bond was duly signed, sealed, and attested to for and on behalf of the Corporation by authority of this governing body.				
on behalf of the Corporation by authority	y of this governing body.			
(CORPORATE SEAL)	Signed:			
	Title:Nattorney-in-Fact			





# POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT KNOW ALL MEN BY THESE PRESENTS, that:

- 1. Employers Mutual Casualty Company, an Iowa Corporation
- 2. EMCASCO Insurance Company, an Iowa Corporation
- 3. Union Insurance Company of Providence, an Iowa Corporation

- 4. Illinois EMCASCO Insurance Company, an Iowa Corporation
- 5. Dakota Fire Insurance Company, a North Dakota Corporation
- 6. EMC Property & Casualty Company, an Iowa Corporation

hereinafter referred to severally as "Company" and collectively as "Companies", each does, by these presents, make, constitute and appoint:

#### JENNIFER NABER

its true and lawful attorney-in-fact, with full power and authority conferred to sign, seal, and execute the Bid Bond

Any and All Bonds

and to bind each Company thereby as fully and to the same extent as if such instruments were signed by the duly authorized officers of each such Company, and all of the acts of said attorney pursuant to the authority hereby given are hereby ratified and confirmed.

# **AUTHORITY FOR POWER OF ATTORNEY**

This Power-of-Attorney is made and executed pursuant to and by the authority of the following resolution of the Boards of Directors of each of the Companies at the first regularly scheduled meeting of each company duly called and held in 1999:

**RESOLVED:** The President and Chief Executive Officer, any Vice President, the Treasurer and the Secretary of Employers Mutual Casualty Company shall have power and authority to (1) appoint attorneys-in-fact and authorize them to execute on behalf of each Company and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof; and (2) to remove any such attorney-in-fact at any time and revoke the power and authority given to him or her. Attorneys-in-fact shall have power and authority, subject to the terms and limitations of the power-of-attorney issued to them, to execute and deliver on behalf of the Company, and to attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and any such instrument executed by any such attorney-in-fact shall be fully and in all respects binding upon the Company. Certification as to the validity of any power-of-attorney authorized herein made by an officer of Employers Mutual Casualty Company shall be fully and in all respects binding upon this Company. The facsimile or mechanically reproduced signature of such officer, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power-of-attorney of the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN WITNESS THEREOF, the Companies have caused these presents to be signed for each by their officers as shown, and the Corporate seals to be hereto affixed this

22nd day of September , 2022 .

Seals



Scott R. Jean, President & CEO of Company 1; Chairman, President & CEO of Companies 2, 3, 4, 5 & 6 Todd Strother, Executive Vice President Chief Legal Officer & Secretary of Companies 1, 2, 3, 4, 5 & 6

On this 22nd day of September , 2022 before me a Notary Public in and for the State of Iowa, personally appeared Scott R. Jean and Todd Strother, who, being by me duly sworn, did say that they are, and are known to me to be the CEO, Chairman, President, Executive Vice President, Chief Legal Officer and/or Secretary, respectively, of each of the Companies above; that the seals affixed to this instrument are the seals of said corporations; that said instrument was signed and sealed on behalf of each of the Companies by authority of their respective Boards of Directors; and that the said Scott R. Jean and Todd Strother, as such officers, acknowledged the execution of said instrument to be their voluntary act and deed, and the voluntary act and deed of each of the Companies.

My Commission Expires October 10, 2025.

Notary Public in and for the State of lowa

## **CERTIFICATE**

I, Ryan J. Springer, Vice President of the Companies, do hereby certify that the foregoing resolution of the Boards of Directors by each of the Companies, and this Power of Attorney issued pursuant thereto on 22nd day of September, 2022, are true and correct and are still in full force and effect.

In Testimony Whereof I have subscribed my name and affixed the tacsimile seal of each Company this \_

8th day of

December

2022

Vice President

# NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of COLORADO )	
County of Oova (4-5)	
-0	g duly sworn deposes and says that:
1. He/She is the MANAGING MEMBEL (Title) of 53 (the Bidder that has submitted the attached Bid;	CORPORATION, LUC
<ol> <li>He/She is fully informed respecting the preparation and content of circumstances respecting such Bid;</li> </ol>	the attached Bid and of all pertinent
3. Such Bid is genuine and is not a collusive or sham Bid:	
4. Neither the Bidder nor any of its officers, partners, owners, agents, parties in interest, including this affiant, has in any way colluded, cons indirectly with any other Bidder, subcontractor, mechanic, materialmar a collusive or sham Bid in connection with the Contract for which the atto refrain from bidding in connection with such Contract, or has in any agreement, collusion, communication or conference in the attached Bi overhead, profit or cost element of the Bid price or the Bid price of any any collusion, conspiracy, connivance or unlawful agreement any advance or any person interested in the proposed Contract; and	pired, connived or agreed, directly or n, suppliers, firm or person to submit attached Bid has been submitted, or manner, directly or indirectly, sought id or any other Bidder, or to fix any other Bidder, or to secure through
5. The price or prices quoted in the attached Bid are fair and proper a conspiracy, connivance or unlawful agreement on the part of the Bidderepresentatives, owners, employees or parties in interest, subcontract suppliers, including this affiant.	er or any of its agents,
CONTRACTOR: 53 CORPORATION, LIC BY:	David of Manager
ADDRESS: SEDAUA CO 80/35 TITLE: //	PANAGING NEMBER
Attest: SECRETARY:  OKSEAL  (if corporation)  DATE:	12/15/22
SEAL TO LIABILITATION OF THE PROPERTY OF THE P	

# SUBCONTRACTORS AND RELATED DATA

For each Subcontractor to be utilized please provide the following information (use additional sheets as necessary):

Firm Name: TARRETTE CONSTRUC	TIDN,	INC.		000
Address: 5227 HORIZON RIDGE	DR.	WINDSON	2,00	805
Proposed work and percentage of total work to be assigned:	SHEE	Trif	ANO	CAP
			Percentage <sup>6</sup>	<u>40</u> %
Firm Name:				
Address:				
Proposed work and percentage of total work to be assigned:				
Firm Name:				
Address:				
Proposed work and percentage of total work to be assigned:				
			rereentage	^
Firm Name:				
Address:				
Proposed work and percentage of total work to be assigned:				
Firm Name:				
Address: Proposed work and percentage of total work to be assigned:				
Proposed work and percentage of total work to be assigned.				
Firm Name:				
Address:				
Proposed work and percentage of total work to be assigned:				
			Percentage	%
		Total	Percentage	%

# 53 Corporation - 2023 Equipment List

Equipment #	Equipment Description	Equipment #	Equipment Description
S10261	2007 Komatsu SK1026 Skid Steer	TT010	Kenworth w/ Sidedump
S1841	1999 Case 1840 Skid Steer	TT020	Kenworth w/ Lowboy
S2891	2021 CAT 289D3 Track Skid Steer	TT030	Mack w/ Trailer
S450	2022 Case TV450B Skid Steer	FT020	1986 GMC 2500 Gallon Water Truck
S370	2022 Case TV370B Skid Steer	GH010	E2200 Ground Heater
EX1451	2014 Case CX145 Excavator w/ Thumb	SE010	2010 Great Plains Seeder
EX2351	2018 Volvo ECR 235 Excavator w/ Thumb	SE020	Hydro Seeder
EX245	2022 Case EX245D Excavator	SE030	2012 Land Pride 3 Disc
EX3151	2019 CAT FLCR 315 Excavator w/ Thumb	SE050	Three Point Crimper
EX3503	2017 Case CX350 Excavator w/ Thumb	SE060	2006 Finn Straw Blower
WL1101	2015 Volvo L110H Wheel Loader	SE070	Mower Deck (6X6)
WL1102	2014 Volvo L110H Wheel Loader	SE080	Rake Attachment (3 Point)
WL2001	2013 Komatsu WA200 Wheel Loader	SE090	Flatbed Water Tank
WL9211	2014 Case 921F Wheel Loader	SE100	2014 Branson 5220C Tractor
MG030	2015 John Deere 772G Motor Grader	PU112	2012 Dodge 3500
D6T	2015 Cat D6T Dozer	PU113	2015 GMC Sierra 2500 (Brian)
D3K	2008 Cat D3 Dozer	PU115	2015 GMC Sierra 2500 (David)
W605D	2003 Vibromax W605D 66" Smooth Drum Roller	PU116	2015 GMC Sierra 2500 (Spare)
ST040	1988 International Fuel / Lube Truck	PU118	2016 GMC Canyon (Survey)
ST050	1999 Freightliner FL70 2000 Gallon Water Truck	PU121	2017 Chevrolet Silverado 3500 (Dann
ST060	1990 Ford F9000 4000 Gallon Water Truck	PU122	2012 Chevrolet Silverado 3500 (John
ST070	2006 Mack Tandem	PU123	2019 Chevrolet Silverado 3500 (Eric
ST090	2004 International 4X4 Hydra-mulch Truck	PU124	2019 Chevrolet Silverado 3500 (Travi
ST100	1998 F800 Fuel / Lube Truck	PU125	2019 Dodge Ram 1500 (Ken)
ST110	2014 Kenworth Semi-Truck	PU127	2016 Chevrolet 3500 Liftgate
ST120	2000 Ford F-650 Fuel / Lube Truck	CS010	Target Pro 65111 Asphalt/Concrete Sa
ST125	2009 Ford F-750 Service Truck	SM010	Sawmill
TR010	2008 Hudson Triple Axle Trailer	VP050	Stanley Vibe Plate
TR040	1997 Superior Flatbed Trailer	GEN040	2018 Honda ED2200I Generator
TR050	2000 Hallmark Cargo Trailer	HH010	2018 Hydraulic Hamer BRH501
TR060	2006 North American Cargo Trailer	JJ020	Stanley Jumping Jack
TR120	2007 Cargo Trailer	WE020	Hobart Ironman Welder
TR130	2014 Big Tex Dump Trailer	WE030	Miller 302 Welder
TR140	1997 Superior Pintle Flatbed Trailer	WE040	Lincoln Ranger Welder
TR150	2003 Maclander Flatbed Trailer	WP020	4" Submersible Pump - Thompson
TR160	2004 Benke Enterprises Trailer	WP030	Twin 4" Pump-Berkley WP Traile
TR170	2005 CNMI 16X8 Cargo Trailer	AT195	Rock Bucket
TR175	1998 VAC Trailer SPV500	AT200	Ripper
TR185	Brocks 44' Flatbed Gooseneck Trailer	AT205	SUIHE SH750 Hydr. Skid Breake
TR190	2016 STE Side Dump Trailer	AT210	SUIHE 72" Skid Vibe Roller
TR195	2016 Lowboy Trailer	AT215	72" Paladin Sweeper
	2007 PJ Flatbed Gooseneck Trailer	AT213	Hydraulic Skid Steer Auger
TR200		ATZZU	riyuraune skiu steer Auger
TR215	1993 Vermeer Tree Spade Trailer		
TR220	2005 Spool Trailer Homemade		
TR225	1999 Avion Travel Trailer		
TR230	2018 Trail King Lowboy		

# Carol Hoyt

1100 Whispering Oak Drive, Castle Rock, CO 80104 | 303/916-4920 | hoytlcarol@aol.com

# **Professional Summary**

Experienced professional with more than 20 years of experience emphasizing business development in heavy civil construction.

# **Skills & Abilities**

#### **MANAGEMENT**

Corporate/Operational Finance

Accounting

Internal/External Audits

Acquisition of Equipment

Office Management

Health & Safety Officer

• Strategic Planning

Performance Standards

P&L Management

**Budget Planning** 

Banking/Bonding

•

# **Experience**

# OWNER MANAGING MEMBER | 53 CORPORATION LLC | 08/98 TO PRESENT

- Responsibilities include:
- Overseeing Payroll and Accounts Payable Managers
- Accounts Receivable
- Obtaining banking (lines of credit, loans etc.)
- Obtaining financing for equipment
- Obtaining and maintaining bonding requirements for continued growth.
- Hiring/firing/EEO management
- · Management of Equipment
- · Health and Safety Officer

# OFFICE MANAGER | PHD CONTRACTORS, INC | 04/93-08/98

- Responsibilities include:
- Payroll
- Certified Payroll
- Accounts Payable
- Clerical
- Phones
- Filing

# **Education**

Glenrock High School

# **CHRIS HOYT**

Ch	IKIS HUTT
304 North Gilbert Street, Castle Rock, CO	80104 ♦ C: 303-884-1442 ♦ <u>chrisshoyt@aol.com</u>
PROFES	SSIONAL SUMMARY —————
Motivated Project Manager/Estimator with 23 y drainage and utility improvements. Offers an in-	ears of experience in heavy civil construction, specializing in depth understanding of project development methodologies. onstruction including estimating, plan review, scheduling, and
	- SKILLS -
<ul> <li>Subcontractor management</li> <li>Project scheduling</li> <li>Project planning and development</li> <li>Logistics management</li> <li>Multi-site operations</li> <li>Project management</li> </ul>	<ul> <li>Analytical</li> <li>Advanced problem solving</li> <li>Quality control</li> <li>Methodologies and deployment</li> <li>Project controls</li> <li>Multi-operations management</li> </ul>
W	ORK HISTORY
<ul> <li>and determining costs and profit.</li> <li>Review plans and specs during pre-construence.</li> <li>Conduct weekly production and operations.</li> <li>Perform regular job site observations to proform organize pre-construction conferences with.</li> <li>Work with engineers on plan revisions and formulated the project schedule, which incluence schedule contractors and materials deliverience.</li> <li>Perform inspections to ensure that work is preform inspections.</li> <li>Visit project sites during construction to make engineers.</li> </ul>	meetings.  ovide direction for contractor personnel.  a general contractors, subcontractors, and consultants.  improvements.  ude the sequence of construction activities.  es for multiple projects.  orogressing per the specifications of the project.
Bachelor of Science: Business Management, 199 Colorado Mesa University- Grand Junction, CC	99
	ATTRIBUTES —
<ul> <li>Extensive involvement in working with eng</li> </ul>	gineers in the design and construction stages of a project.

- Consistently completes projects on-time and under budget.
- Builds strong and lasting working relationships with owners, engineers, and consultants.
- Able to deal with adversity and challenges on various types of projects.

# Stacey Hoyt

#### 2422 Fairway Wood Circle, Castle Rock, CO 80109 C:303-903-8729 staceyahoyt@gmail.com

#### **Professional Summary**

Project Manager with 4 years of experience in heavy civil construction, specializing in drainage and utility improvements and an additional 21 years of experience in Project Administration.

#### **Skills**

- Project Management
- Project Administration
- Project Scheduling
- Subcontractor Management

- Permit Coordination and Management
- Contract Administration
- Organizational
- Quality Control

## **Work History**

# Project Manager – September 2015 to Current 53 Corporation, LLC – Sedalia, CO

- Schedule contractors and material deliveries for multiple projects
- Project scheduling
- Perform inspections to ensure that work is progressing per the specifications of the project
- Manage field crews and resource allocations for projects
- Attend weekly construction meetings with project owners, engineers and inspectors
- Visit project sites during construction to monitor progress and consult with contractors and on-site engineers
- Conduct weekly production and operations meetings
- Manage project compliance paperwork

# Project Administration – June 1998 to Current 53 Corporation, LLC – Sedalia, CO

- Project compliance
- Managing vendors, suppliers and subcontractors
- Pay applications
- Job costing
- Certified payroll
- Permit compliance

#### Education

1993 – 1994 Northwest College – Powell, WY 1994 – 1998 Metropolitan State College of Denver – Denver, CO

#### **Attributes**

- Builds strong and lasting relationships with owners, engineers, consultants and subcontractors.
- Consistently completes projects on-time and under budget.
- Able to deal with adversity and challenges on various types of projects.

# TRAVIS RUBERG

Phoenix Arizona | (C) 4802397859 | travisruberg4@gmail.com

# **Professional Summary**

Professional Construction operator with excellent interpersonal skills. Works in a timely and efficient manner to see tough jobs through to completion. I look for Solutions other than the problems. Do the job right the first time. Willing to learn and teach. Love what I do Safety First

# **Work History**

Operator

01/1996 to 01/1999

Desert Rat Excavating - Phoenix, Arizona

- Completed tear-down of existing structures and prepared for new construction.
- Dug trenches, backfilled holes and compacted earth to prepare for new construction.
- Consistently assumed additional responsibilities and worked extended hours to meet project deadlines.
- Operated equipment such as back hoe and trackhoe front loaders.

Lead operator

01/1999 to 09/2001

Srk Underground - Phoenix, Arizona

- Dug trenches, backfilled holes and compacted earth to prepare for new construction.
- Prepared and cleaned construction sites by removing debris.

Operated equipment such as back hoe and

Fork lifts tracker front end loaders mini excavators skid steers we've done a lot of commercial residential footings soils dry utilities

Owner operator

09/2001 to 10/2012

Precision digs - Phoenix, Arizona

Owned and operated a small business with five men. Maintained all my equipment. Had 5 trucks 5 backhoes. Maintain good relationship with customers, on time. We have gotten Mountainside house pads. We have done a lot of commercial and residential footings Plumbing dry utilities septic systems pools and basements I have experience in all aspects of the dirt work

Owner operator

09/2001 to 10/2012

Precision digs - Phoenix, Arizona

Operator / lead man

02/2016 to Current

Flatline grading and Paving - Phoenix, Arizona

- Completed tear-down of existing structures and prepared for new construction.
- Dug trenches, backfilled holes and compacted earth to prepare for new construction.
- Mixed porridge of catch basins and poured and sawed off concrete and asphalt.
- Consistently assumed additional responsibilities and worked extended hours to meet project deadlines.

Prepared and cleaned construction sites by removing debris.

 Operated equipment such as 950 loader and 320 trackhoe. Mini excavators skid steers and great trackers. I have a lot of experience on a lot of different equipment

#### Education

GED:

Paradise Valley High School - Phoenix, Arizona

#### Skills

I can run anything that has wheels or tracks. I can read and understand grade Stakes. I can read blueprints. I have strong work ethic and Leadership skills I am easy to work with and have a lot of experience in dirt work. Excavations demolitions new construction specializing in digging around live utilities. Harddigs. And demolitions of any kind

# John Robinson

2600 W. 82nd Pl. Westminster, CO 80031 | 303-557-8671 | John@53Corporation.com

#### **Attributes**

- Maintaining strong relationships with owners, engineers, consultants and subcontractors
- Extensive construction experience involving high risk and challenging projects
- Consistently completes projects on-time and under budget

#### Education

# ASSOCIATES IN CONSTRUCTION MANAGEMENT | DECEMBER, 2005 | RED ROCKS COMMUNITY COLLEGE

· Construction Management

# HIGH SCHOOL DIPLOMA | MAY 2003 | HARLAN COMMUNITY HIGH SCHOOL

## **Skills & Abilities**

#### MANAGEMENT

- · Project coordination
- · Project scheduling
- Manpower and Equipment scheduling
- · Subcontractor scheduling and coordination
- · Quality Control and Safety Management

# **Experience**

# PROJECT SUPERINTENDENT | 53 CORPORATION | AUGUST 2010 - PRESENT

- · Generate short term and long term schedules
- · Schedule and coordinate subcontractors, material deliveries, equipment and manpower
- · Monitor crew's productions and quality of work.
- · Attend and participate in weekly meetings with owners, engineers and inspectors
- · Assist project management in monthly pay applications and RFI clarifications

# OPERATOR | CLINE UTILITY CONTRACTOR | SEPTEMBER 2007 - JULY 2010

· Assist in installation of various underground utilities.

# OPERATOR/FORMAN | D&K DIRTWORKS | JANUARY 2006 -AUGUST 2007

 Residential construction of foundation excavations and back-filling. Oversee quality control of fine grading around new and existing homes. Attend meetings with builder superintendents to coordinate phasing and timelines

# BIDDER'S QUALIFICATIONS AND DATA - SUBCONTRACTOR

All questions must be answered clearly and comprehensively. If necessary, separate sheets may be attached. The Bidder may submit additional information.

MINIMUM EXPERIENCE REQUIRED: Contractor, and subcontractor(s) if applicable, must show experience in completion of at least two (2) similar projects that include experience installing stream gages, constructing buried riffle and buried cascading boulder drop structures within the last five (5) years. A separate Bidder's Qualifications and Data Form should be provided for any subcontractor performing over 20% of the work.

1.	Name of Bidder: Garrette Construction Inc.
2.	Permanent main office address: 5227 Herizon Ridge DC.
	Windsor Co 80550
3.	Phone: 976.402.4351 Fax#_ NA
4.	Bidder's federal tax identification number 81-0 88 54402_
5.	The Bidder is organized as a 5-Corp
6.	The date the Bidder was organized in its current form: 1/2016
7.	If a corporation, the state where it is incorporated: Colorado
8.	How many years have you been engaged in the contracting business under your present firm or trade name?
9.	Contract(s) on hand: (Schedule these, showing amount of each contract and the appropriate anticipated dated of completion.)
	Job: Nine Mile Station \$: 146K Completion Date: 12/24/22  Job: Black Squittel Creek \$: 140K Completion Date: Min Jan  Job: Walker Res. Cherry Creek \$: 21K Completion Date: February
	Job: Black Squittel Creek \$: 140 K Completion Date: Min Jan
	Job: Walker Res. Cherry Creck \$: 21K Completion Date: February
	Job: \$: Completion Date:
10.	General character or work performed by your company:  Sheet pile installation
11.	Have you ever been debarred or suspended by a government from consideration for the award of contracts? No lf so, where and why?
12.	Have you ever been charged liquidated damages on a contract? No If so, where and why?
13.	List your major equipment AVAILABLE FOR THIS PROJECT:  H: Fazh: ZX 350 EXCava For  Movax SP80 Vibra Fory Hammer  GFHL 12k Fork lift

14.	Experience in construction work similar to this project (provide specific project detail to confirm minimum required experience):	
	a.	Job: TEleven Slize - O-Roo Gas Station
		Description: Build coffer dam for fuel tanks
		Contract: \$ / 8,000 Change Order(s): \$
		Start/Completion Dates: Nov 15th Dec 5th 2022
		Contact Name/Phone: Pinner Granp
	b.	Job: Omn' Tributary Castle Rock  Description: sheet pile structures
		Description:
		Contract: \$_172 K Change Order(s): \$
		Start/Completion Dates: September - Wovember 9th 2022
		Contact Name/Phone: 53 Corp
	C.	Job: Black Creek Spillway Silverthorne Description: sheet pile structure for dam.
		Description: sheet pile structure for dam.
		Contract: \$ 28,281,00 Change Order(s): \$
		Start/Completion Dates: Angust 1st - 8th
		Contact Name/Phone: Restinction Corp.
	d.	Job: Caltar + Kalamath Apartment Building Description: shoring protection for building fundation
		Description: shoring protection for building fundation
		Contract: \$ 30K Change Order(s): \$ Warne
		Start/Completion Dates: July - Maternil waiting to be pulled
		Contact Name/Phone: Opis Design
15.	Backgro	ound and experience of the principal members of your organization, including officers:
	'' ' '	15. in Construction primarily sheet pile installation 131 idge setting (abutments, geoder setting)
	and	Bridge selling (abutment), givent
16.	Bonding	
17.	Bonding	Company: Through PFS Insurance Phone # 970 435-9400 : 4848 Thompson Pkwy Zuite 200 Johnstown CO 80534
	Address	: 4848 Thompson they Buite 200 Johnstown CO 80534

18.	Bank Reference(s): 45 Bank	
19.	Will you, upon request, complete a detailed fina that may be required by the Town of Castle Roo	incial statement and furnish any other information
20.	The undersigned hereby authorizes and reques	
CONTR	RACTOR: Garrette Construction Inc.	BY: Alexander J. Garrett
ADDRE	SS: 5227 Horizan Ridge Dr Windsor, Co gosso	ITS: Fresidant
Attest:	30,000	Title
SECRE	TARY:(if corporation)	DATE: 12/15/2022

BIDDER'S OFFICIALS DATA
Bidder's name Larsette Construction las
For each officer of a corporation, partner of a firm, or owner of a calculation in
(ose additional sneets as necessary.)
Name Alexander J. Garretts  Title Prisident EIN 81-0885462  Home address 5227 Hiszan Ridge Dr.  Town, State, Zip Windson CO 80550
Title_ 7:15: Aunt EIN_ \$1-0885462
Home address 5227 His.zon Ridge Dr.
Town, State, Zip _ Windson CO 80550
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?
Name
Name EIN
Home address
Home address Town, State, Zip
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?
Name
TitleEIN
Home address
Town, State, Zip
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?
Name
Title EIN
Home address
Town, State, Zip
Other companies with whom this person has been affiliated in last 10 years
Has that company ever been disbarred or suspended from participation in the award of contracts with a
government?



# **EXHIBIT 2**

# CONTRACTOR'S CERTIFICATE OF INSURANCE



#### **EXHIBIT 3**

# TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, \_\_\_\_\_, an authorized representative of **53 Corporation**, LLC, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be
  employed as an independent contractor of the Town of Castle Rock (the "Town") for
  purposes of performing the work or services which are the subject of the Agreement. I
  understand and confirm that the Town reasonably relied on this intention in entering into
  the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may be supplied.



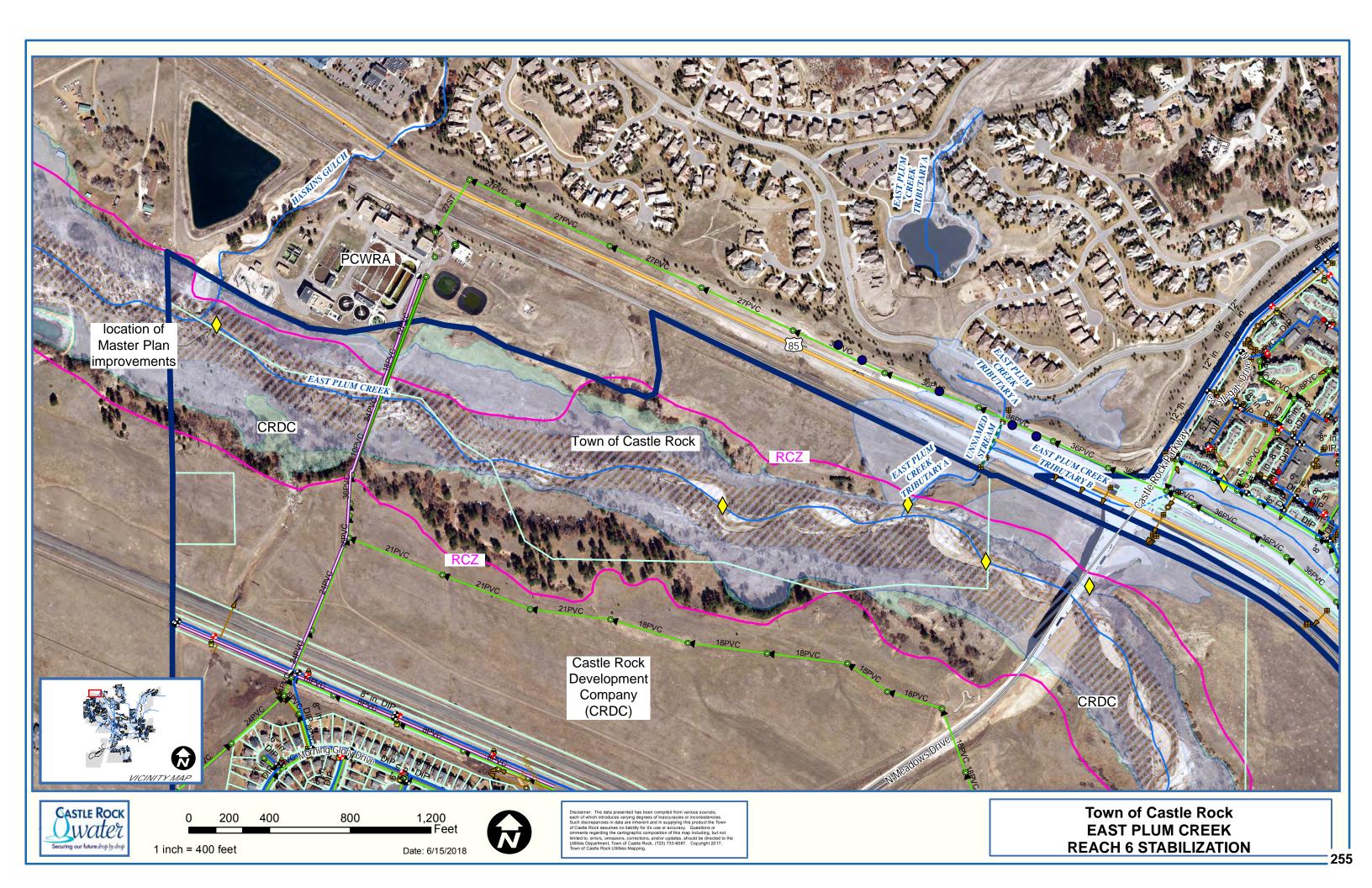
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.
- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.
- I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

CONTRACTOR:	
53 CORPORATION, LLC	
By:	
Name	
STATE OF COLORADO	)
	) ss.
COUNTY OF	)
	ment as acknowledged before me this day of, as of the above mentioned Contractor.
Witness my official l	
My commission expi	
	8



# Notary Public

9





# Town of Castle Rock

# **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 10. File #: MIN 2023-003

Honorable Mayor and Members of Town Council To:

Lisa Anderson, Town Clerk From:

Minutes: January 3, 2023 Town Council Meeting

# **Executive Summary**

Attached are minutes from the January 3, 2023 Town Council meeting for your review and approval.



# Town Council Meeting Minutes - Draft

Mayor Jason Gray
Mayor Pro Tem Kevin Bracken
Councilmember Ryan Hollingshead
Councilmember Laura Cavey
Councilmember Desiree Lefleur
Councilmember Max Brooks
Counclmember Tim Dietz

Tuesday, January 3, 2023

6:00 PM

Town Hall Council Chambers 100 North Wilcox Street Castle Rock, CO 80104 Phone in: 720-650-7664 Meeting code: 2499 482 6922 www.CRgov.com/CouncilMeeting

This meeting is open to the public and will be held in a virtual format in accordance with the Town Council Electronic Participation, Connected, and Hybrid Meeting Policy. Public may choose to attend in person at Town Hall, or electronically or by phone if preferred. This meeting will be hosted online and can be accessed at www.CRgov.com/CouncilMeeting, or phone in by calling 720-650-7664, meeting code 2499 482 6922 (if prompted for a password enter "Jan3Council"). All Town Council Meetings are also streamed online in real time at www.CRgov.com/WatchCouncil, and are broadcast for Comcast Cable subscribers on Channel 22 (please note there is a delay to the broadcast).

All times indicated on the agenda are approximate. Remote participants please visit www.CRgov.com/CouncilComments to sign up to speak to an item, and for related instructions. Public Comments may also be submitted in writing online by 1:00 p.m. on January 3, 2023, to be included in the public record.

#### **COUNCIL DINNER & INFORMAL DISCUSSION**

**INVOCATION - Jack Serr, Castlewood Canyon Church** 

#### CALL TO ORDER / ROLL CALL

**Present:** 7 - Mayor Gray, Mayor Pro Tem Bracken, Councilmember Hollingshead, Councilmember Cavey, Councilmember LaFleur, Councilmember Brooks, Councilmember Dietz

#### PLEDGE OF ALLEGIANCE

#### COUNCIL COMMENTS

Mayor Gray thanked the hospital and Brookside staff for their help with his mother who recently suffered an injury.

Councilmember Hollingshead, Cavey, LaFleur, and Mayor Pro Tem Bracken wished everyone happy new year.

Councilmember Brooks encouraged citizens to apply for boards and commissions as there will be openings in May.

Councilmember Dietz is thankful for 2023.

#### **UNSCHEDULED PUBLIC APPEARANCES**

Citizens that addressed Council:

Michael Forte, resident, has a disagreement with Castle Rock Police department alleging false police reports from July 2021 which are now causing him issues depriving him of his civil rights when this shows up on his background check. He provided a packet of the documentation to each member of Town Council.

#### **TOWN MANAGER'S REPORT**

#### DIR 2023-001

# Discussion/Direction: Designations for Liaisons to Town Boards and Commissions and other agencies

David Corliss, Town Manager, referenced the list of boards and commissions for Council's reference.

Mayor Gray went through each board and commission to decide on the Council liaison and alternate positions.

#### Council Consensus for the following Council liaison and alternate positions:

Board of Adjustment - Dietz/Hollingshead

Board of Building Appeals - Hollingshead/Dietz

Castle Rock Water - Gray/Cavey

Design Review Board - Lafleur/Brooks

Downtown Development Authority - Bracken/Brooks

Election Commission - Dietz

Historic Preservation - LaFleur/Hollingshead

Parks and Recreation - Dietz/Hollingshead

Planning Commission - Gray/Cavey

Public Art Commission - Dietz/Hollingshead

Public Safety Commission - Cavey/Hollingshead

Public Works Commission - Hollinghead/Dietz

Audit - Gray/Bracken

Police Forfeiture - Gray

Water Resources - Bracken & LaFleur

\* Mark Marlowe - noted this board requires two members of Council to be liaisons

Economic Development Board - Gray/LaFleur

Castle Rock Partnership - Gray/Bracken

Volunteer Pension Board - Gray

Chamber of Commerce - Bracken/LaFleur

Downtown Merchants Association - LaFleur/Brooks

Centennial Airport Noise Roundtable - Cavey, staff Vossler

Chatfield Watershed Authority - Cavey/Gray

Cherry Creek Water Basin Quality Authority - Brooks/LaFleur

Colorado Municipal League - Dietz, staff Read

Denver Regional Council of Governments - Dietz/Gray

Douglas County Community Foundation - Gray

Douglas County Homeless Initiative - Gray/Brooks

Douglas County Housing Partnership - Brooks/Dietz

Douglas County Youth Initiative - Dietz/Hollinghead

Partnership of Douglas County Government - Gray/Cavey

**ID 2023-002 Update: Calendar Reminders** 

David Corliss, Town Manager, referenced upcoming calendar items and

neighborhood meetings.

<u>ID 2023-003</u> Update: 2023 Community Survey Process

David Corliss, Town Manager, states this survey is done every other year. In February Council will be briefed on questions to be asked and staff will request feedback or suggestions from Council. All citizens will be able to participate.

<u>ID 2023-004</u> Update: Quasi-Judicial Projects

<u>ID 2023-005</u> Development Services Project Updates

#### TOWN ATTORNEY'S REPORT

No report.

#### **ACCEPTANCE OF AGENDA**

Moved by Councilmember Cavey, seconded by Councilmember LaFleur, to Approve the Agenda as presented. The motion passed by a vote of:

Yes: 7 - Gray, Bracken, Hollingshead, Cavey, LaFleur, Brooks, Dietz

#### CONSENT CALENDAR

ORD 2022-032 Ordinance Approving an Agricultural Lease Agreement Between the

Town of Castle Rock and Sublette, Inc. (Second Reading - Approved

on First Reading on December 20, 2022, by a vote 7-0) [Weld County, Colorado]

MIN 2023-002 Minutes: December 20, 2022 Town Council Meeting

Moved by Councilmember LaFleur, seconded by Councilmember Hollingshead, to Approve the Consent Calendar as presented. The motion passed by a vote of:

Yes: 7 - Gray, Bracken, Hollingshead, Cavey, LaFleur, Brooks, Dietz

#### ADVERTISED PUBLIC HEARINGS & DISCUSSION ACTION ITEMS

DIR 2023-002 Discussion/Direction: Proposed Concept for Improvements to

**Crowfoot Valley Road Widening Project** 

Dan Sailer, Director of Public Works, provided an overview of the public open house and is seeking Council direction on how to move forward. He provided their

recommendations and public preferences regarding signals, acceleration lanes, raised medians, speed limits, signage, transition from rural to Town limits, and automated enforcement.

Police Chief Cauely stated they looked at photo radar but they do not feel it is a good fit for the community or consistent with their policing philosophy. In addition, State law prohibits fines because it is not a residential street.

Councilmember Brooks asked how residents in the neighborhood feel about that. Cauley stated from their experience it could be seen as government overreach and is not consistent with their policing philosophy.

Sailer summarized the staff recommendation:

- 1. Wider and taller medians where possible.
- 2. Keep left turn acceleration lanes at non-signaled streets.
- 3. Traffic signal at Sapphire Point.

Mayor Gray noted Crowfoot Valley is growing and asked how we are working with the other municipalities in monitoring growth needs. Sailer stated they do long range forecasting and take additional traffic counts when they do annual evaluations.

David Corliss, Town Manager, spoke with representatives from Castle Pines about their plans for a road from Canyons development east of I-25 that would eventually connect to Crowfoot. They don't have any plans at this time, and it is dependent on development and feel it would be at least 5-10 years out.

Councilmember Cavey stated she has referred citizens to Castle Pines to inquire about that connecting road.

Councilmember Brooks inquired about the standard for acceleration lanes and the effectiveness of them with a signal or roundabout.

Citizens that addressed Council:

Caryn Johnson, resident, attended meetings and wasn't sure why staff mentioned a possible connecting road.

Councilmember Cavey stated the original design was to have the acceleration lanes and it was revised to remove them and to raise medians. The public comment asked to revise the plan to include the acceleration lanes.

Mayor Gray spoke in favor or the motion and feels it is important to continue to evaluate it.

Moved by Councilmember Cavey, seconded by Councilmember LaFleur, to Direct staff to continue design development as recommended. The motion passed by a vote of:

Yes: 7 - Gray, Bracken, Hollingshead, Cavey, LaFleur, Brooks, Dietz

#### **QUASI JUDICIAL HEARINGS**

DIR 2023-003

Request to Continue Public Hearings for Ordinance Nos. 2023-001, 2023-002, and 2023-003 to the Town Council meeting scheduled for Tuesday, February 21, 2023, at 6:00 p.m (Canyons Far South Annexation, Initial Zoning, and Development Agreement with Vesting)

Mayor Gray stated they have received a request to continue the last three items related to the Canyons Far South annexation, zoning and development agreement. Gray read each item into the record.

TJ Kucewesky, Assistant Director of Development Services stated they received a request to continue the items to the February 21, 2023 Council meeting. This parcel is 490 acres on the east side of Founders Parkway and Crowfoot Valley.

Moved by Councilmember Cavey, seconded by Councilmember Dietz, to Continue Ordinances 2023-001, 2023-002 and 2023-003 to the February 21, 2023 Council meeting. The motion passed by a vote of:

Yes: 7 - Gray, Bracken, Hollingshead, Cavey, LaFleur, Brooks, Dietz

ORD 2023-001 Ordinance Annexing to the Town of Castle Rock, Colorado, 409.008 Acres of Land Located in the South Half of Section 30 and the North Half of Section 31, Township 7 South, Range 66 West, and the Southeast Quarter of Section 25, Township 7 South, Range 67 West of the 6th Principal Meridian, Douglas County, Colorado, Pursuant to an Annexation Petition Submitted by Canyons South, LLC (First Reading) [Canyons Far South Annexation] [409 acres, located east of Founders Parkway, north of Crimson Sky Drive and west of Castle Oaks Drive] - Public Hearing To Be Continued to February 21, 2023

ORD 2023-002

Ordinance Approving the Initial Zoning for 409.008 Acres of Land Located in the South Half of Section 30 and the North Half of Section 31, Township 7 South, Range 66 West, and the Southeast Quarter of Section 25, Township 7 South, Range 67 West of the 6th Principal Meridian, Douglas County, Colorado, Pursuant to a Zoning Application Submitted by Canyons South, LLC (First Reading) [Canyons Far South Annexation] [409 acres, located east of Founders Parkway, north of Crimson Sky Drive and west of Castle Oaks Drive] -Public Hearing To Be Continued to February 21, 2023

ORD 2023-003

**Ordinance Approving the Canyons Far South Development** Agreement and Purchase Option Agreement; and Vesting a Site Specific Development Plan through December 31, 2037 (First Reading) - Public Hearing To Be Continued to February 21, 2023

## ADDITIONAL UNSCHEDULED PUBLIC APPEARANCES

None.

#### **ADJOURN**

Meeting Adjourned at 7:14 am.

Submitted by:

Lisa Anderson, Town Clerk

Moved by Councilmember LaFleur, seconded by Councilmember Cavey, to Adjourn. The motion passed by a vote of:

Yes: 7 - Gray, Bracken, Hollingshead, Cavey, LaFleur, Brooks, Dietz



# Town of Castle Rock

# **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 11. File #: RES 2023-006

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Tara Vargish, PE, Director, Development Services Department From:

Sandy Vossler, Senior Planner, Development Services Department

Resolution Approving a Site Development Plan for a Mixed-Use, Multi-Family Development in

the Meadows Town Center [3.93 Acres Mixed Use/Multifamily - Located Northeast, Southeast and Southwest of the Intersection of Mercantile and Future Streets in the

Meadows Town Center]

#### **Executive Summary**

The Garrett Companies, on behalf of the property owner Castle Rock Development Company, is seeking approval of a Site Development Plan (site plan or SDP) for a mixed use, multifamily development in the Meadows Town Center. The property proposed for development consists of three lots located northeast, southeast and southwest of the intersection of Mercantile and Future Streets, and is approximately 3.93 acres, collectively (Attachment A). The site plan proposes 85 dwelling units and approximately 6,200 square feet of retail and restaurant space (Attachment B, Exhibit 1).

The proposal is in conformance with the approved Meadows Planned Development (PD), 4th Amendment Plan and Zoning Regulations, and with Town Municipal Code and technical criteria. All staff and external comments have been addressed through the review process. At a public hearing held on December 22, 2022, the Planning Commission voted 4 - 0 to recommend to Town Council approval of the Site Development Plan, as proposed.

## **Notification and Outreach Efforts**

#### Public Notice

The public noticing requirements for this proposal have been satisfied. Public hearing notice signs for the Planning Commission public hearing were posted on each of the three properties on Tuesday, December 6, 2022. Written notice letters were sent to property owners and Homeowner Associations (HOA) within 500 feet of the property, at least 15 days prior to the Planning Commission public hearing. Town staff published notice of the Planning Commission public hearing on the Town's website and provided information about the proposal on the Town's Development Activity interactive map.

#### Item #: 11. File #: RES 2023-006

#### Neighborhood Meetings

The applicant held neighborhood meetings as required by the Municipal Code. neighborhood meeting was held on May 18, 2022, prior to the submittal of the SDP land use application. The meeting was conducted in a hybrid format. One member of the public attended the meeting virtually and did not have any questions or comments.

The second neighborhood meeting was held on August 18, 2022 in a hybrid format. No members of the public attended the meeting either in-person, or virtually.

The third and final neighborhood meeting was held on November 29, 2022 in a virtual format only. No members of the public attended the meeting.

## External Referrals

There are no outstanding external referral comments. External referrals were sent to local service providers and Douglas County agencies, Douglas County School District (DCSD), as well as, the Meadows Neighborhood Company HOA (MNC). The school district and HOA responded and indicated they had no comments. Douglas County Planning and Addressing had minor comments that have been addressed. CORE Electric provided their standards for placement of transformer boxes that will be implemented on the Construction Drawings. The remainder of the agencies contacted for comments did not respond.

#### **Budget Impact**

Development of the property will generate review and impact fees, along with use taxes for commercial development.

#### Staff Recommendation

Planning Commission voted 4 - 0 to recommend to Town Council approval of the Site Development Plan, as proposed.

#### **Proposed Motion**

# **Option 1: Approval**

"I move to approve the Resolution as introduced by title."

## **Option 2: Approval with Conditions**

"I move to approve Resolution, with the following conditions:" (list conditions)

#### Option 3: Continue item to next hearing (need more information to make decision)

#### Item #: 11. File #: RES 2023-006

"I move to continue this item to the Town Council meeting on [date certain], 2023, at 6 pm."

## **Attachments**

Attachment A: Vicinity Map Attachment B: Resolution

Attachment B: Exhibit 1: Site Development Plan

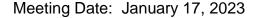
Attachment C: Surrounding Uses

Attachment D: Meadows PD 4th Amendment Zoning Regulations - Town Center Uses

Attachment E: Town Center Parking Standards

Attachment F: Town Center On-Street Parking Allocation

Attachment G: Traffic Impact Analysis





# **AGENDA MEMORANDUM**

**To**: Honorable Mayor and Members of Town Council

**Through:** David L. Corliss, Town Manager

From: Tara Vargish, PE, Director, Development Services Department

Sandy Vossler, Senior Planner, Development Services Department

Title: Resolution No. 2023 -006: A Resolution Approving a Site Development Plan

for a Mixed-Use, Multi-Family Development in the Meadows Town Center

[3.93 Acres Mixed Use/Multifamily - Located Northeast, Southeast and

Southwest of the Intersection of Mercantile and Future Streets in the Meadows

Town Center

# **Executive Summary**

The Garrett Companies, on behalf of the property owner Castle Rock Development Company,

is seeking approval of a Site Development Plan (site plan or SDP) for a mixed use, multifamily development in the Meadows Town Center. The property proposed for development consists of three lots located northeast, southeast and southwest of the intersection of Mercantile and Future Streets. and is approximately 3.93 acres, collectively (Attachment A). The site plan proposes 85 dwelling units and approximately 6.200 square feet of retail and restaurant space (Attachment B, Exhibit 1).

The proposal is in conformance with the approved Meadows Planned Development (PD), 4<sup>th</sup>



Figure 1: Vicinity Map

Amendment Plan and Zoning Regulations, and with Town Municipal Code and technical criteria. All staff and external comments have been addressed through the review process. At a public hearing held on December 22, 2022, the Planning Commission voted 4 - 0 to recommend to Town Council approval of the Site Development Plan, as proposed.

# **Background**

#### Zoning Regulations

The Meadows is a master planned subdivision located in the northwest portion of the Town of Castle Rock and is zoned for 10,644 dwelling units. To date, approximately 7,800 dwelling units have received a Certificate of Occupancy. The subject properties are located in the Town Center Use Area of the Meadows Planned Development, 4<sup>th</sup> Amendment. The Town Center Use Area is zoned for mixed-use development, a maximum of 3,679 dwellings, a minimum of 30,000 square feet of non-residential uses, and a maximum Floor Area Ratio (FAR) of 2.0. The Meadows PD 4<sup>th</sup> Amendment does not set a maximum number of dwelling units per acre for the Town Center Use Area.

# Existing Conditions and Surrounding Uses

The subject lots are three of the few remaining undeveloped lots in the Meadows Town Center. All of the surrounding properties have been developed, or are under construction (Attachment C). CVS is located north of the site. Talus Flats, IC Brew House, Town Center Park and The Springs multifamily complex are located to the west of the proposed development. Ubergrippen and Sherwin Williams are located to the south of the property. In-line commercial uses such as Ohana Grille and The Library restaurants are adjacent the site to the east.

# Talus Flats and Corrections Subject Properties Town Center Park Springs at Castle Rock Shenvin Williams Ubergrippen

Figure 2: Surrounding Uses

#### **Site Development Plan Discussion**

# Use

The Town Center Use Area of the Meadows PD, 4<sup>th</sup> Amendment was approved with a rezoning of the Meadows in 2003. The rezoning intentionally consolidated commercial, retail, office and institutional uses along with residential uses in the mixed-use Town Center neighborhood in order to promote economic vitality and to establish appropriate development standards for the area. The gross acreage of the Town Center neighborhood is approximately 269 acres, the maximum number of dwelling units allowed is 3,679 and the minimum square footage of office, retail, commercial uses allowed is 30,000.

Permitted residential uses include single-family attached and detached, townhomes, condominiums and apartments. A wide range of non-residential uses are permitted including restaurants, retail, service, office, lodging and schools (Attachment D). To date, approximately 1,545 dwelling units and 90,000 square feet of non-residential uses have been constructed. Colorado Early Colleges, a charter school with approximately 350 students, is also located with the Town Center Use Area.

This SDP proposes 85 dwelling units and approximately 6,200 square feet retail and restaurant uses. All of the residential units will be a for-lease product. The Use Table below indicates how the uses are distributed over the three lots.

Lot	Uses	Units	Non-Res SF
Parcel 1 - Lot 2A-1A, Block 3 (2.51 ac.)	Townhomes/Condos	41	0
Parcel 2 – Lot 1A-2, Block 3 (.75 ac.)	Apartments	23	0
Parcel 3 – Lot 1B-1, Block 3 (.67 ac.)	Apartments/Retail/Restaurant	21	6,248 sf

Figure 3: Use Table

Parcel 1 is located on the southwest corner of Mercantile and Future Streets, and is the largest of the three lots. The site plan proposes 41 townhouse units in six, 2-story buildings. The property is accessed from Future Street. Ninety-six on-site parking spaces are required and are being provided. Eighty-two of the parking spaces are provided in attached garages. The remaining 14 spaces are provided in the surface parking. Amenities on this site include an outdoor pool and shaded picnic area, complete with grills, a fire table and shade structure. No commercial uses are proposed on this site.

Parcel 2 is located on the southeast corner of Mercantile and Future Streets, where 23 apartment units in a single, 4-story building are proposed. The units will be a combination of one and two bedroom flats. A private amenity space for residents is planned on the ground floor of the building. Twenty-nine on-site parking spaces are required and are being provided. The on-site parking is a combination of seven attached garages, eight detached garages and fourteen surface parking spaces. No commercial uses are proposed on this site.

Parcel 3, located on the northeast corner of Mercantile and Future Streets, will have 21, one and two bedroom units in a single, 4-story building. The commercial uses will be located on the first level and will front to Mercantile Street. The anticipated retail and restaurant square footage requires 59 parking spaces. The commercial parking requirements are being met with 59 on-street parking spaces, as is allowed by the Meadows PD, 4<sup>th</sup> Amendment Zoning Regulations. The on-street parking allowance is discussed in further detail in the Development Standards section below.

#### **Development Standards**

The proposed uses, number of units and amount of non-residential square footage complies with the Meadows PD, 4<sup>th</sup> Amendment development standards. Per the zoning, the maximum height allowed is 60 feet and the setbacks are to be established with the site plan. The PD zoning does not establish a maximum density by lot or use. The maximum non-residential floor area ratio (FAR) is 2.

The site plan, and each lot in the plan, complies with the established development standards. The maximum height proposed is 59' 7" and the maximum FAR is .21. The setbacks are being set with the proposed site plan as shown in the table.

The Zoning Comparison Table in Figure 4 lists the standards required by the PD Zoning and demonstrates that the plan complies with all of the standards. This table is also shown on the Cover Sheet of the Site Development Plan (Attachment B, Exhibit 1).

The Meadows PD, 4<sup>th</sup> Amendment Zoning Regulations have specific parking regulations for the Town Center Use Area that supersede the Municipal Code requirements. On-site parking

requirements for

ZONING	G COMPARISON A	AND DEVELOPME	NT STANDARDS	
ZONE DISTRICT:		PD (THE MEADOWS F	FOURTH AMENDMENT)	
USE AREA		TC (TOWN CENTER NEIC	GHBORHOOD USE AREA)	
BLOCK	BLOO	CK 2	BLOO	CK 3
LOT		1B-1	2A-1A	1A-2
	PD REQUIREMENT	PROVIDED	PROVIDED	PROVIDED
USES		MIXED USE 15-1 BEDROOM 6-2 BEDROOM 648 SF RETAIL 5600 SF RESTAURANT	MULTI-FAMILY 27-2 BEDROOM 14-3 BEDROOM	MULTI-FAMILY 17-1 Bedroom 6-2 Bedroom
GROSS DENSITY FOR TOTAL SITE	N/A	21	.6 dwelling units per ac	RE
UNITS PER LOT	3,679 DU MAX FOR TC USE AREA	21 UNITS	41 UNITS	23 UNITS
MIN. SOUTH SETBACK	0,	10.17*	5.76'	43.81
MIN. EAST SETBACK	0,	10.08'	12.77'	4.91'
MIN. WEST SETBACK	0,	25.65'	17.51'	16.4'
MIN. NORTH SETBACK	0,	36.89'	18.4'	11'
MAX. BUILDING HEIGHT	60'	59'-7"	28'	54'
MAX. BUILDING COVERAGE	0'	25%	38.9%	23%
MAX. FLOOR AREA RATIO	2.0 (NON—RESIDENTIAL USES)	0.21	N/A	N/A
MIN. RESIDENTIAL PARKING SPACES	1 SPACE PER BEDROOM	27 SPACES (REQUIRED) 27 SPACES (PROVIDED)	96 SPACES (REQUIRED) 96 SPACES (PROVIDED)	29 SPACES (REQUIRED) 29 SPACES (PROVIDED)
MIN. COMMERCIAL PARKING SPACES	retail-1 space per 250 s.f. restaurant-1 space/100 s.f.	59 SPACES (REQUIRED) 59 SPACES (PROVIDED)		
HANDICAP OFF STREET SPACES		2 SPACES (REQUIRED) 2 SPACES (PROVIDED)	4 SPACE (REQUIRED) 4 SPACE (PROVIDED)	1 SPACE (REQUIRED) 2 SPACE (PROVIDED)
OFF STREET SPACES		19	14	14
GARAGE SPACES		8	82	15
TOTAL OFFSTREET SPACES (BY LOT)		27	96	29
TOTAL ON STREET SPACES			59	

Figure 4: Zoning Comparison Table

multi-family, retail, and restaurant uses are shown in Figure 5: Town Center Parking Requirements below, and in Attachment E. Lot 1B-1 is required to have, and is providing, 27 parking spaces on-site, based on the total number of bedrooms in the 21 units on the site. Lot 2A-1A is required to have 96 on-site spaces for residential use, and is providing 96 spaces. Lot 1A-2 is required to have 29 on-site spaces for residential use, and 29 on-site spaces are provided.

Use	Meadows Town Center: On-Site Parking Requirements
Multi-Family	1 space per bedroom
Retail	1 space for each 250 sf of useable retail floor area
Restaurant	1 space for each 100 sf of dining space floor area

Figure 5: Meadows PD 4th Amendment On-Site Parking Requirements

Additionally, Section 8.2 of the Meadows PD, 4<sup>th</sup> Amendment states that on-street parking within 300 feet of a proposed non-residential use may be counted toward the parking

requirements for retail and other non-residential uses. Assignment of on-street parking shall be allocated at the time of approval of the site plan.

The retail and restaurant uses require 59 parking spaces, all of which are being accommodated with on-street parking. The 59 on-street spaces also comply with the maximum 300-foot proximity requirement of the Town Center Parking Standards. It should be noted that as development has occurred in the Town Center Use Area, the Master Developer, Castle Rock Development Company, has maintained an accounting of the number of on-street parking spaces that have been allocated for commercial uses. With each Site Development Plan submittal and review, staff has verified the allocation and confirmed that no on-street parking spaces are allocated to two or more development projects (Attachment F). Staff has confirmed that 59 on-street parking spaces are available to meet the parking requirements for the retail and restaurant uses proposed.

# Lighting Plan

The site lighting on the three lots will be comprised of parking lot pole fixtures, exterior building wall fixtures, and under-canopy balcony and porch fixtures. The lighting plan meets the Municipal Code requirements for full cut-off features, lumen maximums, and photo-sensor controls for curfew hours.

#### **Landscaping**

Multifamily developments are required to landscape 20% of the site, parking lots must provide landscaping for 10% of the lot and streetscape is required along the street frontages. Although the development of the three lots is proposed in a single SDP, each lot was required to meet the Town's landscape requirements individually, and each lot does meet the Town's landscape requirements.

# Architectural Design

The six townhouse buildings will be two-stories with either attached, tucked under garages, or detached banks of enclosed garages. The apartment complex on Parcels 2 is a single, 4-story building. The apartment complex on Parcel 3 will also be a single 4-story building and will have retail and restaurant space on the ground level. The architectural design of the buildings proposed on all three lots includes 360-degree architecture, a similar color palette, exterior stone veneer, covered entryways, varied rooflines, corbels and faux truss details. Balconies have been incorporated into the apartment building design. Roof mounted mechanical units will be screened. Wall-mounted gas and electrical meter gangs will be painted to match the surrounding wall.

# Interface Regulations

The Town Center Use Area, located within the Meadows PD, 4<sup>th</sup> Amendment, was intentionally zoned to allow a vertical and horizontal mix of residential and non-residential uses. For that reason, the Residential/Non-Residential Interface Regulations or the Dissimilar Residential Interface Regulations are not applicable to development within the Town Center.

#### Skyline and Ridgeline Protections

None of the three lots proposed for development in this site plan are within the Skyline/Ridgeline Protection Area.

#### Open Space and Public Land Dedication

The open space and public land dedications for the Meadows Town Center have already been satisfied with the dedications identified at the time of the Meadows PD, 4<sup>th</sup> Amendment approval in 2003. No additional dedications are required with this Site Development Plan

#### Traffic Impact Analysis and Mitigation

The applicant has provided traffic analysis conformance reports for review by Town staff (Attachment G). The report demonstrates the proposed project does not exceed the traffic generation that was anticipated with the Town approved master traffic analysis performed in 2018.

Public Works concurs with the applicant's traffic consultant that the proposed residential and commercial development will not negatively impact the conclusions of the master traffic analysis and the traffic impacts associated with the proposed use will be adequately accommodated by the constructed/proposed road network without the need for additional improvements. The master traffic analysis identified that the intersection of Meadows Boulevard and Future Street should be signalized when traffic warrants are met.

# **Utilities**

The applicant was required to submit a Phase II Drainage Report and a Preliminary Utility Report with this site plan application. Castle Rock Water staff has reviewed and accepted both reports and concurs that adequate water, wastewater, and storm sewer infrastructure exists, or is proposed with this project, to serve the property.

# **Notification and Outreach**

#### Public Notice

The public noticing requirements for this proposal have been satisfied. Public hearing notice signs for the Planning Commission public hearing were posted on each of the three properties on Tuesday, December 6, 2022. Written notice letters were sent to property owners and Homeowner Associations (HOA) within 500 feet of the property, at least 15 days prior to the Planning Commission public hearing. Town staff published notice of the Planning Commission public hearing on the Town's website and provided information about the proposal on the Town's *Development Activity* interactive map.

# Neighborhood Meetings

The applicant held neighborhood meetings as required by the Municipal Code. The first neighborhood meeting was held on May 18, 2022, prior to the submittal of the SDP land use

application. The meeting was conducted in a hybrid format. One member of the public attended the meeting virtually and did not have any questions or comments.

The second neighborhood meeting was held on August 18, 2022 in a hybrid format. No members of the public attended the meeting either in-person, or virtually.

The third and final neighborhood meeting was held on November 29, 2022 in a virtual format only. No members of the public attended the meeting.

# External Referrals

There are no outstanding external referral comments. External referrals were sent to local service providers and Douglas County agencies, Douglas County School District (DCSD), as well as, the Meadows Neighborhood Company HOA (MNC). The school district and HOA responded and indicated they had no comments. Douglas County Planning and Addressing had minor comments that have been addressed. CORE Electric provided their standards for placement of transformer boxes that will be implemented on the Construction Drawings. The remainder of the agencies contacted for comments did not respond.

#### **Analysis**

This staff analysis takes into account the representations made in the application and attachments submitted to date.

SDP Review and Approval Criteria and Analysis 17.38.040

# A. Community Vision/Land Use Entitlements.

- 1. Generally, conforms to the Town's guiding documents that include, but are not limited to, Town Vision, Comprehensive Master Plans, Sub Area Plans, Design Guidelines, Corridor Plans and any other guiding document so long as the application of such document does not restrict the project's entitle use(s) and density.
- 2. Complies with existing Intergovernmental Agreements applicable to the development proposed.
- 3. Complies with any applicable Zoning Overlay Regulations and, if applicable, Skyline/Ridgeline Regulations.
- 4. Complies with the approved Planned Development Plan and Zoning Regulations.
- 5. Conforms to the Town's architectural goals by proposing architectural details that incorporate the use of high quality materials in a unique and varied design, while eliminating monolithic expanses of walls and rooflines through the use of varying planes and architectural projections to ensure a complete 360-degree architectural design.
- 6. Complies with all other relevant requirements of the CRMC.

Analysis: The proposed SDP meets this criterion. It generally conforms to the Town's 2030 Vision and Comprehensive Master Plan by adding to the Town's diversified housing types, and by promoting economic development. As detailed in this report, the proposal complies with the use and development standards of the Meadows PD, 4<sup>th</sup> Amendment PD Plan and Zoning Regulations. The architectural design meets the requirements of both the Meadows

Zoning Regulations and the goals of the Town's guiding documents. This site plan is not subject to an intergovernmental agreement, the Skyline/Ridgeline Ordinance, the Residential/Non-Residential Interface Regulations or the Dissimilar Residential Regulations. The proposal does comply with all other relevant requirements of the Castle Rock Municipal and technical criteria, as summarized in this report and asserted in the following criteria.

#### B. Site Layout.

- 1. Conforms to Chapter 17.50 Residential/Non-Residential Interface of the CRMC.
- 2. Site design shall be designed to maintain pedestrian and vehicle safety, provide for adequate fire safety, and mitigate impacts upon adjacent properties by ensuring all vehicular, fire and mitigation regulations contained within the CRMC, including technical criteria, have been met.
- 3. Provides adequate parking, on-site circulation and loading in accordance with Town regulations.
- 4. Provides appropriate screening and/or enclosure of outdoor storage of merchandise/materials, loading areas, trash receptacles, mechanical units, site utility equipment and building mounted utility hardware.
- 5. Provides adequate site design to protect major environmental characteristics that would include unique topographic features and significant vegetation where possible.

Analysis: The proposed SDP meets this criterion. The SDP meets all relevant site layout requirements outlined in the governing zoning and the Town's Municipal Code. Parking lots are designed for safe vehicle and pedestrian circulation. Castle Rock Fire has reviewed and approved the site design for access and fire safety. Proper screening has been provided for trash enclosures, rooftop mechanical units, and meter gangs.

#### C. Circulation and Connectivity.

- 1. Complies with all CRMC and technical criteria associated with circulation and connectivity.
- 2. Complies with all Fire regulations associated with land development.
- 3. Provides for pedestrian and bicycle traffic in a safe and convenient manner.
- 4. Provides for a high level of pedestrian connectivity between neighborhoods, schools, trails/open space and commercial areas.

Analysis: The proposed SDP meets this criterion. The SDP provides appropriate vehicular entrances into the properties, with interior drive aisles and parking that meet Town standards. Sidewalks will be constructed adjacent to the public right of way, and interior walkways will provide additional pedestrian connections to the residential units and retail and restaurant uses.

#### D. Services Phasing and Off-site Impact.

- 1. Complies with any phasing requirements associated with the approved zoning for the property. Provides phased improvements in a logical and efficient manner.
- 2. Adequate water resources have been conveyed or purchased. Existing or proposed water and wastewater systems can support the proposed development pattern, uses and density.

- 3. Existing or proposed stormwater systems can support the development and comply with applicable regulations.
- 4. Provides adequate consideration for the future extension of streets and utilities to adjacent properties.
- 5. Identifies and appropriately provides on-site and off-site public improvements to mitigate traffic impacts as required by the CRMC and technical criteria.

Analysis: The proposed SDP meets this criterion. Staff has reviewed the Preliminary Utility Report and the Phase II Drainage Report and concluded that infrastructure existing, or proposed with this SDP, has the capacity to service the development as proposed. The street network within the Town Center Use Area, and surrounding this development, has been constructed based on the permitted uses and densities allowed in the Town Center. The existing system is sufficient to support access and egress to these lots.

# E. Open Space, Public Lands and Recreation Amenities.

- 1. Provides adequate trail systems in terms of internal circulation and appropriate external connections deemed necessary by the Town to achieve connectivity goals.
- 2. Ensures functional and accessible open space, consistent with the overall open space plan for development and preserves significant natural features.
- 3. Ensures appropriate buffering, utilizing open space and/or setbacks to lessen any
- 4. Identified negative impacts.

Analysis: The proposed SDP meets this criterion, without negatively impacting the Meadows Town Center open space, park and trail system. No additional land dedications for open space, parks or trails are required with this site plan.

#### **Budget Impact**

Development of the property will generate review and impact fees, along with use taxes for commercial development.

#### **Findings**

All staff review comments and external referral comments have been addressed. Planning Commission found that the proposed Site Development Plan addresses the following:

- Generally, conforms with the objectives of the Town Vision and the Comprehensive Master Plan,
- Meets the requirements of the Meadows Preliminary PD Site Plan and PD Zoning Regulations, Amendment No. 4, and
- Meets the Site Development Plan review and approval criteria of the Municipal Code and the Town's technical criteria.

#### Recommendation

Planning Commission voted 4 - 0 to recommend to Town Council approval of the Site Development Plan, as proposed.

# **Proposed Motions**

# **Option 1: Approval**

"I move to approve Resolution <mark>No. 2023 - \_\_\_,</mark> as proposed."

## **Option 2: Approval with Conditions**

"I move to approve Resolution No. 2023 - \_\_\_, with the following conditions:" (list conditions)

## Option 3: Continue item to next hearing (need more information to make decision)

"I move to continue this item to the Town Council meeting on [date certain], 2023, at 6 pm."

# **Attachments**

Attachment A: Vicinity Map Attachment B: Resolution

Attachment B: Exhibit 1: Site Development Plan

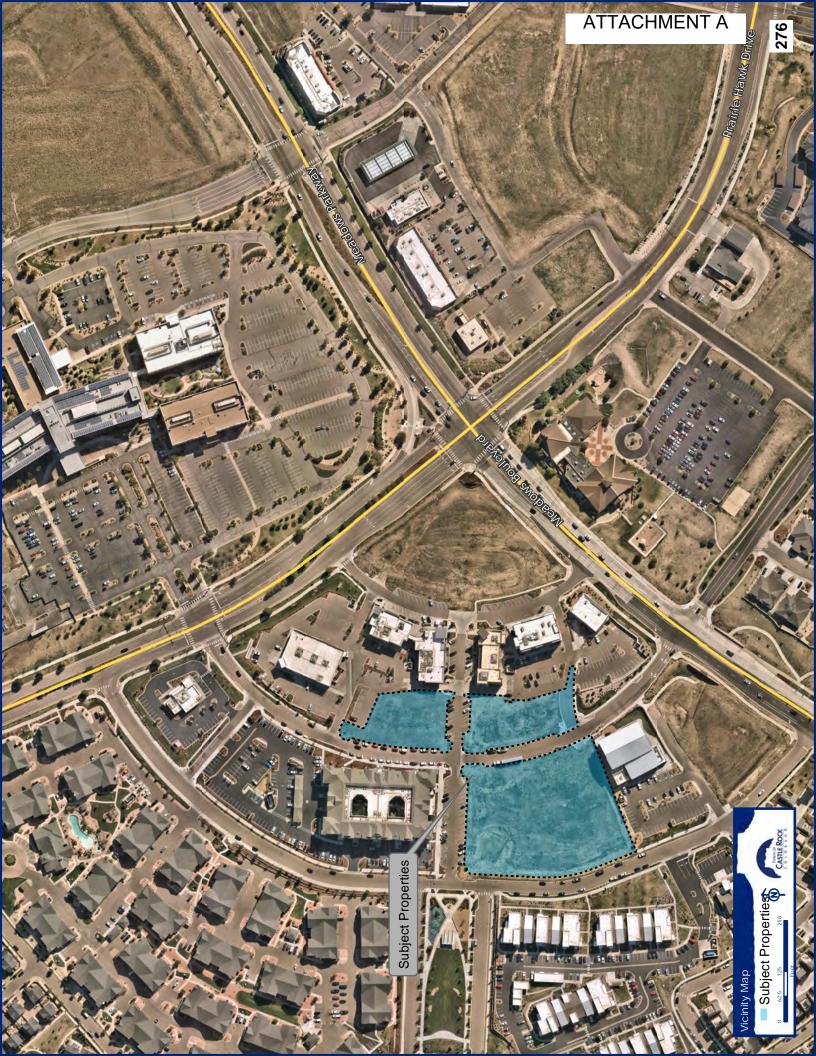
Attachment C: Surrounding Uses

Attachment D: Meadows PD 4<sup>th</sup> Amendment Zoning Regulations - Town Center Uses

Attachment E: Town Center Parking Standards

Attachment F: Town Center On-Street Parking Allocation

Attachment G: Traffic Impact Analysis



#### **RESOLUTION NO. 2023-**

# A RESOLUTION APPROVING A SITE DEVELOPMENT PLAN FOR A MIXED-USE, MULTI-FAMILY DEVELOPMENT IN THE MEADOWS TOWN CENTER

WHEREAS, the Garrett Companies, LLC, on behalf of the property owner, Castle Rock Development Company, has requested approval of a site development plan (the "Site Development Plan") for the development of a mixed-use, multifamily development consisting of 85 dwelling units and approximately 6,200 square feet of retail and restaurant space (the "Project"); and

WHEREAS, the Project is located on approximately 3.93 acres of property situated northeast, southeast and southwest of the intersection of Mercantile and Future Streets; and

**WHEREAS**, on December 22, 2022, a public hearing was held before the Planning Commission, which voted unanimously to recommend approval of the Site Development Plan to the Town Council; and

**WHEREAS**, based upon the evidence presented at a public hearing held at tonight's meeting, the Town Council finds that the Site Development Plan is in substantial compliance with:

- (i) The goals and objectives of the Town of Castle Rock's Vision 2030 and the 2030 Comprehensive Master Plan;
- (ii) The requirements of the Meadows Planned Development Plan, Amendment No. 4, and associated Zoning Regulations; and
- (iii) The review and approval criteria set forth in Section 17.38.040 of the Town of Castle Rock Municipal Code.

# NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

**Section 1.** <u>Approval.</u> The Site Development Plan for Parcel 1, Lot 2A-1A, Block 3, Meadows Filing No. 20, Phase 1, Amendment 16 and Parcel 3, Lot 1B-1, Block 2, Meadows Filing No. 20, Phase 1, Amendment 12 is hereby approved in the form attached as *Exhibit 1* and presented at tonight's meeting.

**PASSED, APPROVED AND ADOPTED** on first and final reading this 17th day of January, 2023, by the Town Council of the Town of Castle Rock by a vote of for and against.

ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	Tara Vargish, Director of Development Services

EXHIBIT 1 MERCANTILE STREET & BILBERRY STREET CASTLE ROCK, COLORADO Issue / Description 10F

88

Galloway

SHEET INDEX

DESCRIPTION

THE GARRETT COMPANIES

THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

PARCEL 2 (LOT1A-2, BLOCK 2, PHASE 1 - AMENDMENT NO.10)
PARCEL 3 (LOT1B-1, BLOCK 2, PHASE 1 - AMENDMENT NO.12) PARCEL 1 (LOT 2A-1A, BLOCK 3, PHASE 1 - AMENDMENT NO.16) SITE DEVELOPMENT PLAN - THE MEADOWS FILING 20

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PARCEL 2 (LOT 1A-2, BLOCK 3, PHASE 1 - AMENDMENT NO.10)
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5. ANY STREET SONS, STREPHIG, STREET LIGHTS AND CHRB RAMPS ARE CONCEPTUAL ONLY AND SLIBIECT TO TOWN REVIEW WITH THE CONSTRUCTION DOCUMENTS. THESE ITEMS SHALL COMPLY WITH THE TOWN OF CASTLE ROCK'S REGULATIONS, STANDARDS AND REQUIREMENTS.

4. THIS PROPERTY IS LOCATED WITHIN ZONE AS "X" PER FEMA FINA PANEL NO. 08035201696 DATED 03/16/2016.

OWNERSHIP CERTIFICATION
THE UNDESSAIDS ARE ALL THE OWNERS OF COSTAN LANDS IN THE TOWN OF CASTLE ROCK, COUNTRY OF DUCALS AND STATE OF CALDINOLO DESSAINED FREEN. DOUGLAS COUNTY CLERK AND RECORDER

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DAY OF

CASTLE ROCK DEVELOPMENT COMPANY, A COLORADO CORPORATION SJESCRIEED AND SAIDRN TO REFORE ME THS WITHERS MY HAND AND OFFICIAL SCAL. DIARY BLOCK

A RESIDED PROTESSAL UND SREVEN SPESSALD ET INS SIE BREIDINGT FAN TE SARCH MULLE ESSEMEN DIE SPESSALD ET INS SIE BREIDINGT FAN DE MULLE ESSEMEN DIE SPESSALS DIE SIERCE ACTUALT DES NOT DES ESTE ERGEDENT FAN ACSANTEL SPESSALS DIE SURVE.

REDISTERED LAND SURVEYOR

SURVEYOR'S CERTIFICATION

IY COMMISSION EIGHES.

PROJECT CONTACTS	DEVELOPER	THE CARRETT COMPANES 10375 PARK HEADONS DRIVE 125	LONE 1922, OD 60214	CONTACT: KARL STOUT	CIVIL ENGINEER	GALLOMAY & COMPANY, INC. 5500 ORENWOOD PLAZA BLVD, SUITE 200	ERELYMOOD WILMER, US BOTT TEL: (303) 770-8884	FAIC (303) 770–3636 COMTACT: JUE PARK, PE	SURVEYOR	CHE CONSILTANTS	S473 S. BEOLDMAY FALE FIND OF MITS	TEL: (303) 730-5977 CONTACT: AFF ANTON, LS	ARCHITECT	OCICLER DESIGN STREET, SUITE AT MICHAELES, INDIAN 40240 THE TO THE AT MICHAELES, INDIAN 40240 THE TO THE TOTAL ACTIVE THE TOT	CAMPAGE EVAN DENS	LANDSCAPE ARCHITECT	NSDLUTON LLC SIST EAST 64TH STREET, SUITE C NEUMAPOLIS, IN 46220	TEL: (SIT) 372-4647 CONTACT: AM RACO	CURRENT PROPERTY OWNER	CASTLENCK DEPLOPMENT COMPANY
	SHEET NUMBER	-	2			e un		,	0 4	92	11									

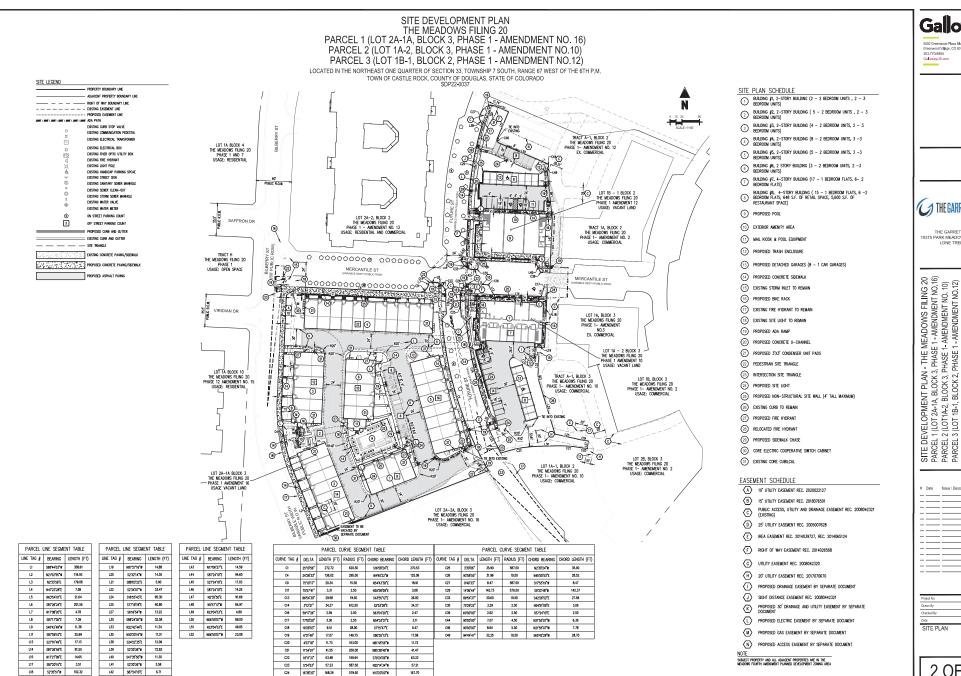
SONING	ZONE DISTRICT:	USE AREA	BLOCK	TOT		5301	GROSS DENSITY FOR TOTAL SITE	UNITS PER LOT	MIN. SCUTH SCTBACK	MIN, EAST SETBACK	MIN. WEST SETBACK	MIN. HORTH SETBACK	MAX. BULDING HEIGHT	MAX. BULDING CONDINCE	MAX. FLOOR AREA RATIO	NIN RESDENTIAL PARKING SPACES	MIN. COMMERCIAL PARKING SPACES	HANDICAP OFF STREET SPACES	OFF STREET SPACES	GARAGE SPACES	TOTAL OFFSTREET SPACES (BY LOT)	TOTAL ON STREET SPACES
			800X		TNEWENDER OF			3,679 DU MAX FOR TC USE AREA	ď	۵	٥	,0	,00	٥	2.0 (NON-RESIDENTIAL USES)	1 SPACE PER BETROOM	REML-1 SPICE FOR 250 S.F. RESTMANNE-1 SPICE/ 100 S.F.					
COMPARISON AND DEVELOPMENT STANDARDS	PD (THE MEADOWS F	TC (TOWN CENTER NEIC	X 2	18-1	озалон	MOED USE 15-1 BERROOM 6-2 BERROOM 648 SF RETAL 5000 SF RESTARRANT	12	ZI UNITS	10.17	,90'01	25.65	,88'96	297	258	12'0	(CEGNOSE) SEOVAS 47	(CECINOSE) SEOVAS 69	2 SPACES (REQUIRED) 2 SPACES (PROVIDED)	19	8	12	
INT STANDARDS	PD (THE MEADONS FOURTH AMERICANT)	IC (TOWN CENTER NEIGHBORHOOD USE AREA)	HOOK	24-14	азалон	MULTI-FAMLY 27-2 BEDROOM 14-3 BEDROOM	ZI.S DWELLING UNITS PER ACRE	SIND IF	5.80	12.77	12.51	18.6	36	38.9%	N/A	(COUNCIES (REQUISED) 86 SPACES (PROVIDED)		4 SPACE (REQURED) 4 SPACE (PROMBED)	14	28	*	89
			× 3	1A-2	PROVIDED	MILTI-FAMLY 17-1 BEDROOM 6-2 BEDROOM	×	23 UNITS	43.81	,167	38.6	μ,	34,	23%	N/A	29 SPACES (REQUIRES 29 SPACES (PROVIDES		1 SPACE (REDUNED) 2 SPACE (PROVIDED)	14	15	82	

88

BLOCK		BLCCK 2				8000	BL0CK 3		
101		1-81			2A-1A			14-2	
	H-8	ACRES	X OF GROSS	11-62	ACRES	A OF GROSS STE	11-62	ACRES	X OF GROSS
TOTAL LOT AREA	28,311	79°D	100	103,499	2.51	100	32,498	6.75	100
BUILDING COVERACE	9,427	0.15	n	43,400	66'0	39.6	3,427	0.21	38
INTERNAL DRIVES AND PARKING LOT	12875	0.13	ĝ	29,762	8970	2112	13,023	0.30	9
STEWLYS, TRASH BUCLOSURES, MISC.	4573	0.10	12	296	ZV		3,928	603	21
ROW COVERAGE			-	·	-		4,306	0.10	13.3
LANDSCAPE/ OPDN SPACE CONERACE	9,490	673	ā	27,007	2910	22.6	1/814	100	63

SITE UTILIZATION

	O NIN	OFF SI	TOTAL		8100X	5	TOTAL LOT AREA	BUILDING COVERAGE	PARKING LOT PARKING LOT SPECIALLY TRACK	DICTORNIES, INSC.	ROW COVERAGE	LANDSCAPE/ OPEN SPACE CONERACE					
NY COMMISSION EIPHESS	LEGAL DESCRIPTION	LOTAL A GROAT, HE REPORTE FINE WELFORD FINE ON 20 PHYSE L'ENDEMONTHY NY, M, ACCISENNE, UN TO ME AL IN THESSES RECORDED MARCH AZ, 2000 M PHYSE RECORDES OF THE DOILLA'S COUNTY, COLOMBOG OLDEN AND RECORDED UNION RECEPTION NY. TRE RECORDES OF THE DOILLA'S COUNTY,	PARZI, 2.  LOTI HA. BLOCK X, THE MEJONIS FILVIS NO, 20 PHACE 1 — AMENDMENT NO, 10 ACCORDING TO THE ME PLAT HERSON PECONSED OCTIONER 18, 2017 IN THE CFFRZ OF THE DOLIGALS OCHNIT, OCLORISOD CLERK AND RECORDER UNIEST RECEPTION NO. 2017/07/06/0.	PORTO: 1011 16-1, BOCK 2, THE MENDONS FILMS NO. 20 FHUSE 1-AMEDIMENT NO. 12, ACXIGENCE TO THE FALL "BESIDE RECORDS MARNA" STORM IN THE OFFICE OF BE DODGLAS COUNTY, CALCANAGO CLERK AND RECORDED NUGERS RECEPTION NO. 2010/13/18.	BASIS OF BEARING SOME UNE OF THE LOTS AS HE RECORNS TUNIS NO 20, PHARE 1-	AMENDARY NO.16, ERDIN ASSIMED TO BEAR S ABFANCY. W, UNDIMIENTED AS SHOWN HERSON, WITH ALL BREJAKUUS COMTANED HERBER REJATIVE THERETA.	BENCHMARK  POSTER SECTION TO DESCRIPTION TO DESCRIPTION OF SET IN PROPERTY.	COLLAR, PUBLISHED ELEVATION = 8082.18" (NAVO 88 DATUM)	PURPOSE OF THIS DEVELOPMENT	THIS STE CENTLOPHENT PLUM AMENDMENT PROPOSES A MOSE-LUSE PROJECT LOCATED OVER THREE LOTS IN THE MEMORIES MUCH.	WITH A SMINIMED POOL AND AMENITY AREA, PARCEL 2 WILL CONTAIN A 23 UNIT MALTH-FAMILY Brilding, along with an amenity area, parcel 3 will contain a 21 Unit Malth-Family	BULDING THAT WILL ALSO CONTAIN RESTAURANT AND RETALL SPAZE ON THE GROUND FLOOR.					
	CIVIL ENCINEER'S STATEMENT , BENG A RESSIDED PROFESSION.	DEBASER N HE STATE OF COLORON, PERENTIST HAT MA LENGWAY, ASSUME, UTITE AND REMANGE ARROGERST REPRESON HES STEE EDELINERS FAN HAVE ERSY RECEIVED FOR THE STATE DELINERS FAN HAVE ERSY RECEIVED FOR THE STATE DELINERS CONSTRUCTED TO REMANDES.	ROSSIDED PROFESSMAL DIGNERS		PLANNING COMMISSION RECOMMENDATION THE STE RECOMMEND FANN NA RECOMMENDS THE PANNING COMMISSIN OF THE	20 Note of the state of the sta	CHAR	ATTEST:	DIRECTOR OF INFORMATION CROWES			TOWN COUNCIL APPROVAL	THIS SITE REPLEMENT FLAN WAS APPROVED BY THE TOWN COUNCE OF THE TOWN OF CASTLE FIOCK, OXCORDO, ON THE	MAYOR	AITSE	TOWN OLEK	
	RITY GATES	NDS, AND V ETHER	CNS SHALL IN ONE SIDE RE ACCESS		ITEMS MAY												



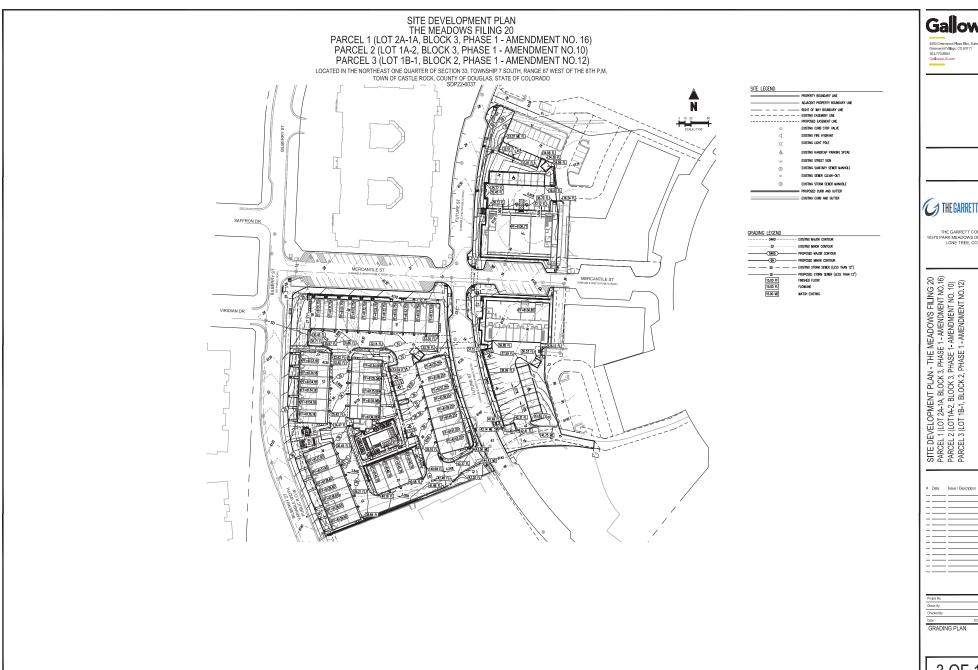


THE GARRETT COMPANIES

THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

TREET & BILE COLORADO

# Date Issue / Description

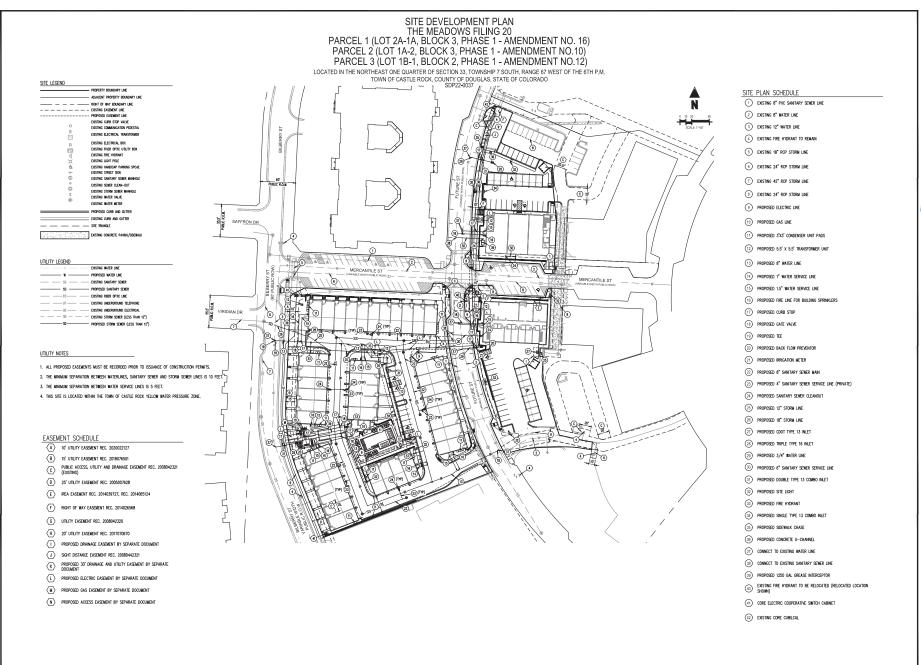






THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

MERCANTILE STREET & BILBERRY STREET CASTLE ROCK, COLORADO



Galloway

5500 Greenwood Plaza Bhrl, Suite 200
Greenwood Village, CO 801111

5500 Greenwood Plaza Bhrd, Suite 200 Greenwood Wlage, CO 80111 303,770,884 Galloway U.S.com

THE GARRETT COMPANIES

THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

75 PARK MEADOWS DRIVE, SUITE 12 LONE TREE, CO 80124

SITE DEVELOPMENT PLAN - THE MEADOWS FILING 20 PARCEL 1 (LOT 24-14, BLOCK 3, PHASE 1-AMENDMENT NO.16) PARCEL 2 (LOT1A-2, BLOCK 3, PHASE 1-AMENDMENT NO.10) PARCEL 3 (LOT 18-1, BLOCK 2, PHASE 1 - AMENDMENT NO.12)

MERCANTILE STREET & BILB CASTLE ROCK, COLORADO

# Date Issue/Descrition Incl.

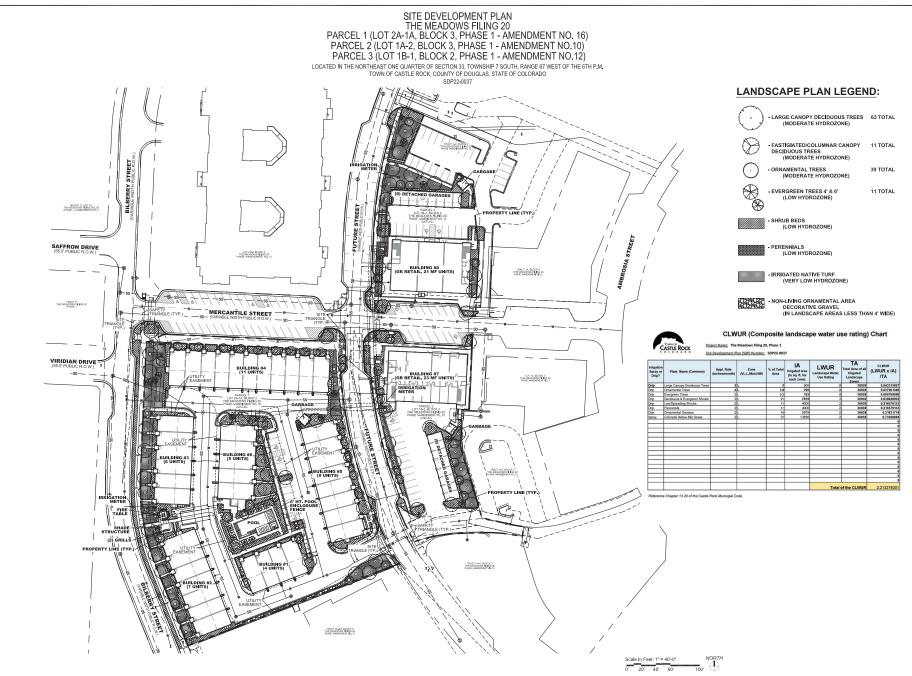
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 Drawn By:
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 Cheeded By:
 MEM

 Date:
 OCT06ER 6, 2022

 UTILITY PLAN





PRELIMINARY
FOR REVIEW PURPOSES ONLY
AND SHALL NOT BE USED FOR
BIDDING, PERMITTING, OR
CONSTRUCTION.

NICHOLAS ALLEN SMITH Registered Landscape Architect of the State of COLORADO

Registration Number: 1436

THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

MERCANTILE STREET & BILBERRY STREET CASTLE ROCK, COLORADO

SITE DEVELOPMENT PLAN - THE MEADOWS FILING 20 PARCEL 1 (LDT 24-14, BLOCK 3, PHASE 1 - AMENDMENT NO. 16) PARCEL 2 (LDT 442, BLOCK 3, PHASE 1 - AMENDMENT NO. 10) PARCEL 3 (LDT 18-1, BLOCK 2, PHASE 1 - AMENDMENT NO. 12)

# Date Issue / Description Inf.
801/2022 SDP RESUBWITTAL
901/2022 SDP RESUBWITTAL
11/20222 SDP RESUBWITTAL
11/20222 SDP RESUBWITTAL

GENERAL LANDSCAPE PLAN

# SITE DEVELOPMENT PLAN

THE MEADOWS FILING 20
PARCEL 1 (LOT 2A-1A, BLOCK 3, PHASE 1 - AMENDMENT NO. 16) PARCEL 2 (LOT 1A-2, BLOCK 3, PHASE 1 - AMENDMENT NO.10)

PARCEL 3 (LOT 1B-1, BLOCK 2, PHASE 1 - AMENDMENT NO 12) LOCATED IN THE NORTHEAST ONE QUARTER OF SECTION 33, TOWNSHIP 7 SOUTH, RANGE 67 WEST OF THE 6TH P.M.

TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

SDP22-0037

#### SITE DEVELOPMENT PLAN GENERAL NOTES:

- LANDSCAPE NOTES

  1. Final landscape area, coverage and plant quantities, shall meet or exceed quantities represented in this drawing and shall conform to subsequent submittal requirements.

- Location of plant materials are approximated and may change slightly due to unforeseen field constraints.

  All plants are to be properly hydrozoned per Town of Castle Rock Plant IIst.

  Distance of Trees to wet utility lines should be a mildrum of 10 feet.

  Permanent Irrigation is required for all landscaped areas greater than 500 square feet, per Section 4.2.3 of the Landscape and Irrigation Manual. 5. Permanent Irrigation is required for all landscaped areas greater than our square rest, per Section 1.2.0 in the Control of Castle Rock Water Use Management Plan (WUMP).

  6. Design must accommodate the watering restrictions as outlined in the Town of Castle Rock Water Use Management Plan (WUMP).

#### MULTI-FAMILY LANDSCAPE SITE INVENTORY TABLE: (AS REQUESTED BY WATER CONSERVATION PLAN REVIEWER)

ENTIRE PROJECT SITE (LOT 2A, BLOCK 3, LOT 1A, BLOCK 3 & LOT 1B, BLOCK 2):

		0020101121	EOI EM, DEOI	J. C O, LO I	iri, becom	0 a 201 15, 5	200112/.				
	GROSS SITE AREA		TURFGRASS LIST SPECIES ( (AREA IN SQ. FT.)		L REQUIRED	NO. OF TREE PROVIDED		NO. C SHRU PROVIC	SS AMOU	NTS (N CU	SEPARATE RRIGATION SERVICE ONNECTIONS
	171,308 SQ FT (100%)	36,938 SQ FT (22%)	13,556 SQ FT	982 SQ. FT.	69	71	138	138	1 4 001	SIC YD / SQ FT	YES
i	PARKING LOT LAN	DSCAPE: A MINIMUN	OF 10% OF THE PAR	KING LOT AREA	SHALL BE LANDS	CAPED. TOWN OF C	ASTLE ROCK LAND	CAPE AND IRRIG	ATION CRITERI	A MANUAL SEC	TION 5.2.1.2.2
1	TOTAL	PARKING LOT	PARKING LOT	NO. OF	NONLIVING	NO. OF INTERNAL	MININUM WIDTH	NO. OF TREES	NO. OF TREES	NO. OF	NO. OF
1	PARKING LOT	LANDSCAPE AREA	LANDSCAPE AREA	PARKING	RNAMENTAL	LANDSCAPE ISLANDS	OF INTERNAL	REQUIRED	PROVIDED	SHRUBS	SHRUBS
	AREA	REQUIRED	PROVIDED	SPACES (	(AREA IN SQ. FT.)		LANDSCAPE ISLANDS			REQUIRED	PROVIDED
	12,060 SQ FT	1,206 SQ FT	1,966 SQ FT	47	N/A	0	N/A	6	6	20	20

(100%)	(10%)	(16%)					-								
STREETSCAPE	:		NO.	OF TREES I	REQUIRED	NO. O	F TREES PRO	OVIDED	NO. OF	SHRUBS	REQUIRED	NO. C	OF SHRUBS	PROVIDED	1
BILBERRY STR	EET (280+143+15) REET (451 LF) F (309 + 250 + 267			15 11 21			15 11 21			60 44 84			60 44 84		

#### MULTI-FAMILY LANDSCAPE SITE INVENTORY TABLE: (AS REQUESTED BY PLANNER)

#### LOT 2A, BLOCK 3:

GROSS SITE AREA	LANDSCAPE AREA IN SQ. FT.	TURFGRASS LIST SPECIES (AREA IN SQ. FT.)	ORNAMENTAL	REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQU <b>I</b> RED		SOIL PREP. AMOUNTS (IN CU. YDS, PER 1000 SQ, FT.)	
109,499 SQ FT (100%)	22,751 SQ FT (21%)	7,482 SQ FT	982 SQ. FT.	44	44	88	88	4 CUBIC YD / 1000 SQ FT	YES

PARKING LOT LANDSCAPE: A MINIMUM OF 10% OF THE PARKING LOT AREA SHALL BE LANDSCAPED. TOWN OF CASTLE ROCK LANDCAPE AND IRRIGATION CRITERIA MANUAL SECTION 5.2.1.2.2										
TOTAL	PARKING LOT	PARKING LOT	NO. OF	NONLIVING	NO. OF INTERNAL	MININUM WIDTH	NO. OF TREES	NO. OF TREES	NO. OF	NO. OF
PARKING LOT	LANDSCAPE AREA	LANDSCAPE AREA	PARKING	ORNAMENTAL	LANDSCAPE ISLANDS	OF INTERNAL	REQUIRED	PROVIDED	SHRUBS	SHRUBS
AREA	REQUIRED	PROVIDED	SPACES	(AREA IN SQ. FT.)		LANDSCAPE ISLANDS			REQUIRED	PROVIDED
6,760 SQ FT	676 SQ FT	750 SQ FT	14	N/A	0	N/A	2	2	4	4
(100%)	(10%)	(11%)								

(100.0)				
STREETSCAPE:	NO. OF TREES REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQUIRED	NO. OF SHRUBS PROVIDED
MERCANTILE STREET (280 LF) BILBERRY STREET (451 LF) FUTURE STREET (309 LF)	7 11 8	7 11 8	28 44 32	28 44 32

#### LOT 1A, BLOCK 3:

GROSS SITE AREA	LANDSCAPE AREA IN SQ. FT.	TURFGRASS LIST SPECIES (AREA IN SQ. FT.)	ORNAMENTAL	REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQUIRED		SOIL PREP. AMOUNTS (IN CU. YDS, PER 1000 SQ, FT.)	
32,498 SQ FT (100%)	6,525 SQ FT (20%)	1,588 SQ FT	N/A	13	15	26	26	4 CUBIC YD / 1000 SQ FT	YES

PARKING LOT LANDSCAPE: A MINIMUM OF 10% OF THE PARKING LOT AREA SHALL BE LANDSCAPED. TOWN OF CASTLE ROCK LANDCAPE AND IRRIGATION CRITERIA MANUAL SECTION 5.2.1.2.2										
TOTAL	PARKING LOT	PARKING LOT	NO. OF	NONLIVING	NO. OF INTERNAL	MININUM WIDTH	NO. OF TREES	NO. OF TREES	NO. OF	NO. OF
PARKING LOT	LANDSCAPE AREA	LANDSCAPE AREA	PARKING	ORNAMENTAL	LANDSCAPE ISLANDS	OF INTERNAL	REQUIRED	PROVIDED	SHRUBS	SHRUBS
AREA	REQUIRED	PROVIDED	SPACES	(AREA IN SQ. FT.)		LANDSCAPE ISLANDS			REQUIRED	PROVIDED
2,000 SQ FT	200 SQ FT	570 SQ FT	14	N/A	0	N/A	2	2	8	8
(100%)	(10%)	(28%)								

STREETSCAPE:	NO. OF TREES REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQUIRED	NO. OF SHRUBS PROVIDED
MERCANTILE STREET (143 LF)	4	4	16	16
FUTURE STREET (250 LF)	6	6	24	24

#### LOT 1B, BLOCK 2;

GROSS SITE AREA	LANDSCAPE AREA IN SQ. FT.	TURFGRASS LIST SPECIES (AREA IN SQ. FT.)	ORNAMENTAL	REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQU <b>I</b> RED		SOIL PREP. AMOUNTS (IN CU. YDS, PER 1000 SQ, FT.)	
29,311 SQ FT (100%)	7,662 SQ FT (26%)	4,486 SQ FT	N/A	12	12	24	24	4 CUBIC YD / 1000 SQ FT	YES

PARK	PARKING LOT LANDSCAPE: A MINIMUM OF 10% OF THE PARKING LOT AREA SHALL BE LANDSCAPED. TOWN OF CASTLE ROCK LANDCAPE AND IRRIGATION CRITERIA MANUAL SECTION 5.2.1.2.2										
T	OTAL	PARKING LOT	PARKING LOT	NO. OF	NONLIVING	NO. OF INTERNAL	MININUM WIDTH	NO. OF TREES	NO. OF TREES	NO. OF	NO. OF
PAR	KING LOT	LANDSCAPE AREA	LANDSCAPE AREA	PARKING	ORNAMENTAL	LANDSCAPE ISLANDS	OF INTERNAL	REQUIRED	PROVIDED	SHRUBS	SHRUBS
1	AREA	REQUIRED	PROVIDED	SPACES	(AREA IN SQ. FT.)		LANDSCAPE ISLANDS			REQUIRED	PROVIDED
3,30	00 SQ FT	330 SQ FT	646 SQ FT	19	N/A	0	N/A	2	2	8	8
(1	100%)	(10%)	(19%)								

STREETSCAPE:	NO. OF TREES REQUIRED	NO. OF TREES PROVIDED	NO. OF SHRUBS REQUIRED	NO. OF SHRUBS PROVIDED
MERCANTILE STREET (150 LF)	4	4	16	16
FUTURE STREET (267 LF)	7	7	28	28

# Galloway

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CONSTRUCTION.

NICHOLAS ALLEN SMITH Registered Landscape Architect of the State of COLORADO

Registration Number: 1436



THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

SITE DEVELOPMENT PLAN - THE MEADOWS FILING 20 PARCEL 1 (LOT 24-14, BLOCK 3, PHASE 1- AMENDMENT NO.16) PARCEL 2 (LOT14-2, BLOCK 3, PHASE 1- AMENDMENT NO.10) PARCEL 3 (LOT 18-1, BLOCK 2, PHASE 1- AMENDMENT NO.12)

Date	Issue / Description	Int
	SDP RESUBUTITAL	100.
	SDP RESUBVITTAL	
	SDP RESUBNITTAL	
11/30/2022	SDP RESUBUTITAL	

raject No.	GC000000320
rawn By:	TGC
hecked By:	TGC
ete:	AUGUST 31, 2022

LANDSCAPE NOTES & MULTI-FAMILY LANDSCAPE SITE INVENTORY TABLES



TI/8" = 1'-0"







THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#### MEADOWS TOWNHOMES

Mercantile St & Bilberry St Castle Rock, Colorado



-			
	PROJ	ECT NO	136001
	COOF	RD:	SA
	DRAV	VN BY:	ED

SHEET NAME: BLDG TYPE 1 EXTERIOR ELEVATIONS

CHECKED BY: DATE:





9135 N. Meridian Street Suite A1 Indianapolis, IN 46260

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KEYED ELEVATION NOTES

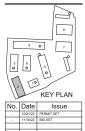
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TOWNHOME COLORS
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BORE ASTRONOMER, 19650-7)

#### MEADOWS TOWNHOMES

Mercantile St & Bilberry St Castle Rock, Colorado



13600	PROJECT NO.:					
s	COORD:					
E	DRAWN BY:					
BA	CHECKED BY:					

SHEET NAME: BLDG TYPE 2 EXTERIOR ELEVATIONS

DATE:





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THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#### **MEADOWS TOWNHOMES**

Mercantile St & Bilberry St Castle Rock, Colorado

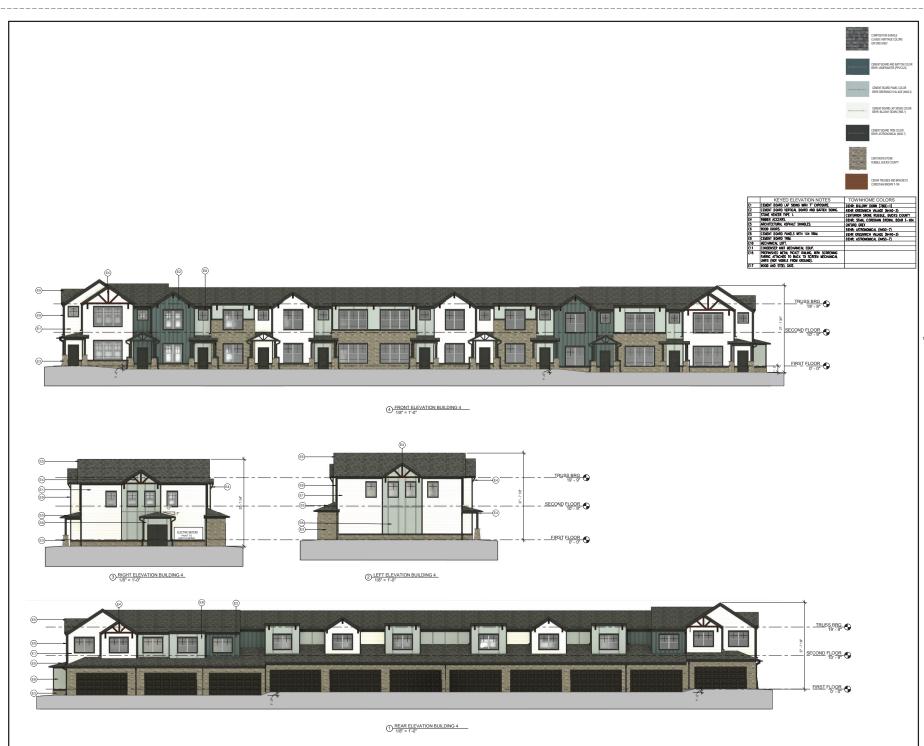


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SA	COORD:			
ED	DRAWN BY:			
: BAB	CHECKED BY:			

SHEET NAME: BLDG TYPE 3 EXTERIOR ELEVATIONS

16 NOV. 2022

DATE:





Architecture, Planning and Interior 9135 N. Meridian Street Suite A1 Indianapolis, IN 46260

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THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#### MEADOWS TOWNHOMES

Mercantile St & Bilberry St Castle Rock, Colorado



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PERMIT SET	10/21/22			
BID SET	11/16/22	-		
136001	PROJECT NO.:			
SA	COORD:			
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SHEET NAME:
BLDG TYPE 4 EXTERIOR
ELEVATIONS

CHECKED BY:



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THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#### **MEADOWS TOWNHOMES**

Mercantile St & Bilberry St Castle Rock, Colorado



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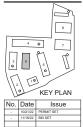
	KEYED ELEVATION NOTES	TOWNHOME COLORS
E١	CEMENT BOARD LAP SIDING WITH 7" EXPOSURE.	BEHR: BILLOWY DOWN (780E-1)
E2	CEMENT BOARD VERTICAL BOARD AND BATTEN SIDING.	BEHR GREENINCH VILLAGE (N440-3)
E3	SHOME VENEER TYPE 1.	CENTURION STONE RUBBLE, BUCKS COUNTY
E4	TIMBER ACCENTS.	BEHR: STAIN, CORDOVAN BROWN, BEHR T-104
E5 E6	ARCHITECTURAL ASPHALT SHINGLES.	CXFORD GREY
E6	W000 DOORS.	BEHR: ASTRONOMICAL (H450-7)
E8 E9	CEMENT BOARD PANELS WITH 1X4 TRIN.	BEHR GREENINCH VILLAGE (N440-3)
	CEMENT BOARD TRIM.	BEHR: ASTRONOMICAL (N450-7)
E10	MECHANICAL LOFT.	
E11	CONDENSER UNIT MECHANICAL EQUP.	
E15	PREFINISHED METAL PICKET RAILING, WITH SCRRENING	



THE GARRETT COMPANIES THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#### **MEADOWS TOWNHOMES**

Mercantile St & Bilberry St Castle Rock, Colorado



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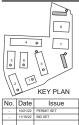
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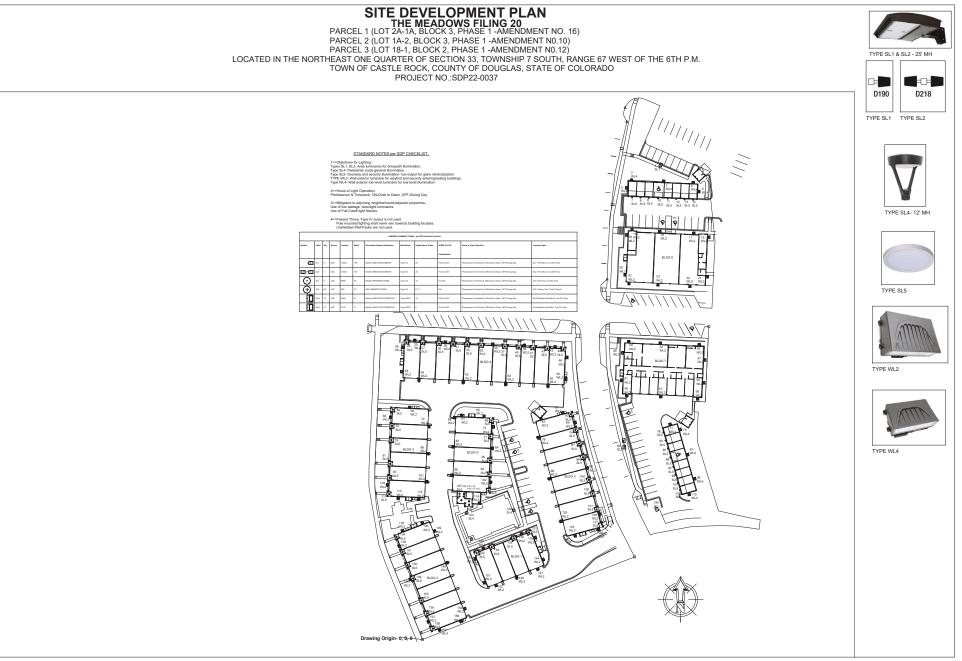
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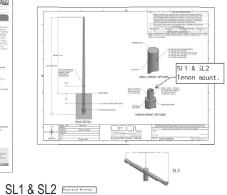
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Revisions

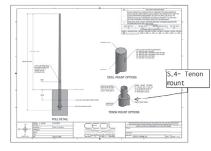
SITE DEVELOPMENT PLAN MEADOWS TOWNHOMES CASTLE ROCK, CO SITE LIGHTING PLAN

SITE DEVELOPMENT PLAN
THE MEADOWS FILING 20
PARCEL 1 (LOT 2A-1A, BLOCK 3, PHASE 1 - AMENDMENT NO. 16)
PARCEL 2 (LOT 1A-2, BLOCK 3, PHASE 1 - AMENDMENT NO.10)
PARCEL 3 (LOT 1B-1, BLOCK 2, PHASE 1 - AMENDMENT NO.12)
LOCATED IN THE NORTHEAST ONE QUARTER OF SECTION 33, TOWNSHIP 7 SOUTH, RANGE 67 WEST OF THE 6TH P.M.
TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO

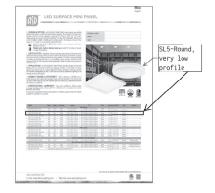
















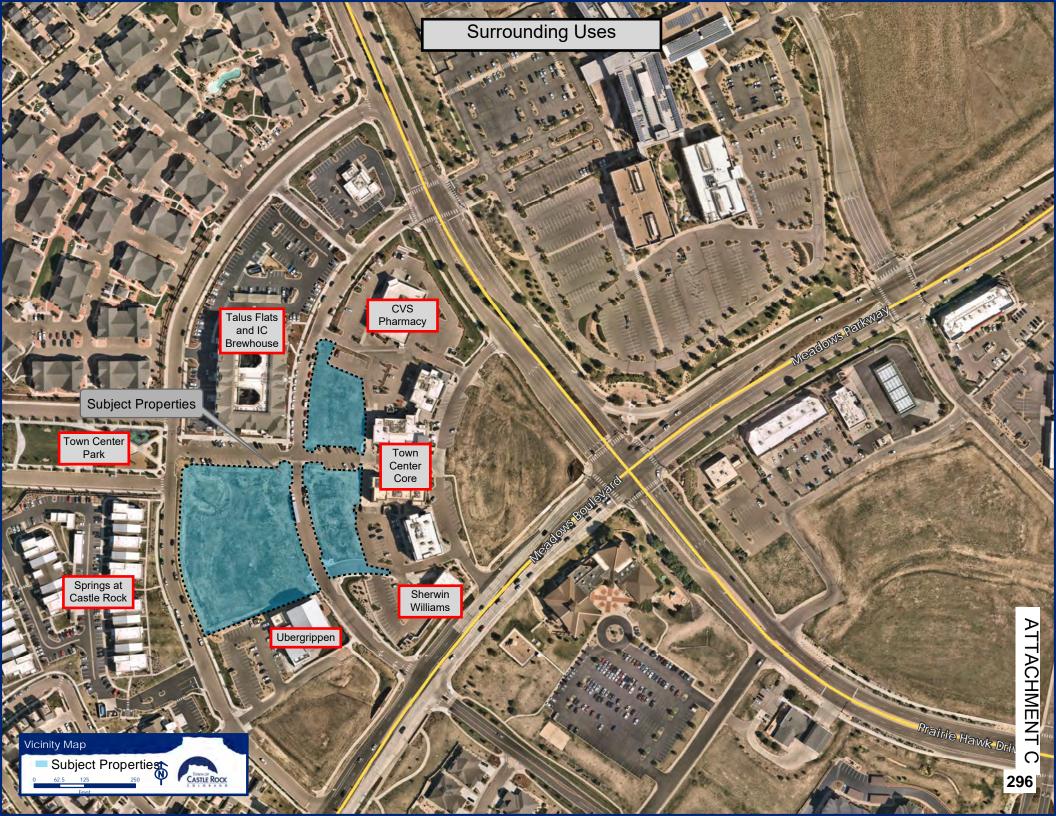
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SITE DEVELOPMENT PLAN - THE MEADOWS FILING 20 PARCEL 1 (LCT 24-'A, 3LOCK 3, PHASE 1 - AMENDMENT NO.16); PARCEL 2 (LCT14-2, BLOCK 3, PHASE 1 - AMENDMENT NO. 10) PARCEL 3 (LCT 18-', BLOCK 2, PHASE 1 - AMENDMENT NO.12) MERCANTILE STREET & BILBERRY STREE CASTLE ROCK, COLORADO

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Date:	11/07/2022	



1. Those accessory uses permitted under <u>Section 5.1</u> of these Amended Zoning Regulations.

#### C. Uses Permitted by Special Review

1. Those Uses Permitted by Special Review under <u>Section 5.1</u> of these Amended Zoning Regulations.

#### 5.3 NEIGHBORHOOD USE AREA TC: TOWN CENTER (TC)

Upon completion of all development within TC Neighborhood Use Area, there shall be a minimum of 15,000 square feet of developed retail and service commercial uses and a minimum of 15,000 square feet of developed office uses within the TC Neighborhood Use Area.

#### A. Permitted Uses

- 1. All permitted uses under <u>Sections 5.1</u> and all permitted uses under <u>Section 5.2</u> of these Amended Zoning Regulations.
- 2. Automobile parking lots, parking structures or garages.
- 3. Automobile repair garage and/or convenience service station provided that wrecked, junked or abandoned motor vehicles shall not be stored on the property; (Ord. No. 91-24, 7/91).
- 4. Bakery; up to twenty percent (20%) wholesale.
- 5. Banks/financial institutions.
- 6. Catering services.
- 7. Clinics.
- 8. Clubs, lodges and service organizations.
- 9. Confectionery shop.
- 10. Fine arts gallery and/or fine arts studio.
- 11. Government and public facilities, including but not limited to libraries, courthouses, police and fire stations, emergency care facilities, and offices.

- 12. Hospitals, nursing homes, assisted living facilities, senior housing and other health care or senior living facilities including clinics and medical offices.
- 13. Hotel/motel.
- 14. Indoor/outdoor recreation facilities.
- 15. Laboratories except those that involve any hazardous process or emit noxious noise, dust and odor.
- 16. Laundry, coin-operated, and dry cleaners collection stations.
- 17. Museum/civic institution.
- 18. Offices. Upon completion of all development within the TC Neighborhood Use Area, there shall be a minimum of 15,000 square feet of developed office within the TC Neighborhood Use Area.
- 19. Personal service shops, such as barber, beauty parlor.
- 20. Pharmacy.
- 21. Post office.
- 22. Printing/copy shops.
- 23. Public or private streets conforming to the street sections established by Section IX of these Amended Zoning Regulations.
- 24. Repair, rental, service of any item retailed in the TC Neighborhood Use Area.
- 25. Restaurants, cafes and other places serving food and beverages.
- 26. Retail business stores.
- 27. Retail and Service Commercial. Upon completion of all development within TC Neighborhood Use Area, there shall be a minimum of 15,000 square feet of developed retail and service commercial uses within the TC Neighborhood Use Area.
- 28. Studios, including television and radio broadcasting stations, but excluding antenna towers and microwave dishes.
- 29. Tailoring.
- 30. Theaters.

- 31. Upholstering.
- 32. Utilities office.
- 33. Day care centers.
- 34. Churches, synagogues, places of worship.
- 35. Small animal clinics.
- 36. Non-profit and community organization offices.
- 37. Community Sales Offices.
- 38. Transit Facilities.
- 39. Auditoriums.
- 40. Outdoor entertainment facilities, including amphitheatres.
- 41. Private clubs.
- 42. College or university schools; proprietary schools.
- 43. Amusement arcades and centers.
- B. <u>Accessory Uses</u> (permitted only in conjunction with a Permitted Use)
  - 1. Accessory Dwelling Units.
  - 2. Accessory uses as provided by Section 17.66.200 of the Castle Rock Municipal Code except that Accessory Dwelling Units shall be allowed.
  - 3. All permitted uses under <u>Sections 5.1</u> and all permitted uses under <u>Section 5.2</u> of these Amended Zoning Regulations.

#### C. Uses Permitted by Special Review

- 1. Ambulance service.
- 2. Caretaker in residence.
- 3. Mortuary.

- 4. Personal Wireless Service Facilities (including, telecommunications, cellular, radio and television antenna towers), subject to Chapter 17.92 of the Castle Rock Municipal Code.
- 5. Any use which is deemed to be compatible with the permitted uses specified in <u>Section 5.3</u> and which furthers the overall purposes of the Fourth Amended Preliminary PD Site Plan and these Amended Zoning Regulations.
- 5.4 NEIGHBORHOOD USE AREA C-O-I: COMMERCIAL, OFFICE, INDUSTRIAL, (C, O, I, ). Industrial uses shall not be permitted in the following two parcels: i) the approximately 32 acre, C-O-I parcel located just east of the intersection of Meadows Boulevard and Cherokee Drive; and ii) the approximately 8.7 acre, C-O-I parcel known as The Meadows Filing No. 11, Parcels 8 and 9.

#### A. Permitted Uses

- 1. Any light industrial uses except those specifically prohibited by the Castle Rock Municipal Code Chapter 17.52
- Commercial uses.
- 3. Hospital, nursing homes, assisted living facilities, senior housing and other health care or senior living facilities.
- 4. Office/warehouses.
- 5. Offices.
- 6. Parking lots, structures and garages.
- 7. Research facilities and laboratories.
- 8. Restaurants.
- 9. Retail (repair services, showrooms and support services).
- 10. Transit terminals/park-and-ride facilities.
- 11. Veterinarian clinics and kennels.
- 12. Churches, synagogues, places of worship.
- 13. Public or non-public schools, colleges and universities.

- provision of a lesser number of spaces or spaces of lesser size will still provide adequate offstreet parking for the proposed use(s).
- 8.2 Town Center. Off-street parking for the TC Neighborhood Use Area shall be provided in accordance with the parking ratios provided at Table VIIIA. On-street parking within 300' of a proposed use may be counted to meet the parking requirements for retail and other non-residential uses. Assignment of on-street parking shall be allocated at the time of approval of the Final PD Site Plan.

# TABLE VIIIA PARKING REQUIREMENTS

USE	PARKING SPACE REQUIREMENTS
Multi-Family Dwellings Units	One space per bedroom
Retail	One space for each 250 s.f. of useable retail floor area
Restaurant	One space per each 100 s.f. of dining space floor area
Hotel/Motel	One space for each guest room
Office	One space per 330 s.f. of useable office space
Civic/Institutional Uses	One space for each 330 s.f. of floor area

# SECTION IX TOWN CENTER STREETS

In the TC Neighborhood Use Area, streets shall be constructed pursuant to the right-of-way widths, streetscapes and visibility triangles provided in the street sections and intersections diagrams attached hereto as Exhibit B. Street alignments are subject to modification and adjustment as provided by Section 4.2 of these Amended Zoning Regulations.

### SECTION X LANDSCAPING

In the TC Neighborhood Use Area, street tree planting and tree lawn areas shall be provided. All landscaping shall conform to the Castle Rock water conservation standards. Tree planting areas and tree lawn areas may be located within public right-of-way and shall meet the requirements shown at Table XA and the diagrams attached hereto as **Exhibit C**.



5500 Greenwood Plaza Blvd, Suite 200 Greenwood Village, CO 80111 303.770.8884 • GallowayUS.com

#### Memorandum

To: Tom Reiff, Project Manager

Public Works Department

From: Brian Horan, PE

Date: December 5, 2022

Re: The Meadows – Filing 20

**Traffic Conformance** 



#### **INTRODUCTION**

This memorandum provides the results of a traffic conformance analysis performed in support of the development of Lot 2A-1A, Lot 1A-2, and Lot 1B-1 of The Meadows Filing 20 in Castle Rock, Colorado. The proposed site development is located east of Bilberry Street, west of Ambrosia Street, south of Meadows Boulevard, and north of Meadows Parkway. The lots are currently vacant. The site location is shown on Figure 1.



Figure 1 – Site Location



The subject site was previously studied with a mixed use as part of a larger proposed development, The Meadows Town Center (Filing 20) which was supported by an Arterial Street Access Plan Addendum (Access Plan) completed by Felsburg Holt & Ullevig (FHU) dated March 2018 and provided by Public Works Department (Staff). The full planning area for Filing 20 is shown on Figure 2.



Figure 2 - Filing 20

The Access Plan analyzed the Filing 20 planning area with the following uses (Table 1 of Access Plan):

- 1,018 Single Family Units
- 320 Townhome Units
- 444 Apartment Units
- 83 KSF Office Use
- 47.5 KSF Retail Use
- 5 KSF Bank Use
- 13 KSF Drug Store Use
- 717 Students Charter School

Excerpts from the Access Plan are included as Attachment I.

The Applicant, Garrett Companies, proposes to develop Lot 2A-1A, Lot 1A-2, and Lot 1B-1 of Filing 20 of The Meadows with a mix of townhome, apartment, and commercial uses. Specifically, the Applicant is proposing the following mix of uses:

- 41 Townhome Units
- 44 Apartment Units
- 6.3 KSF Commercial/Retail Use

A full-sized copy of the site plan is provided as Attachment II. The following memorandum has been prepared for Public Works as requested. The purpose is to evaluate the traffic generated by the currently proposed use in comparison to the approved land use support by the approved Access Plan.

#### ARTERIAL STREET ACCESS PLAN ADDENDUM TRIP GENERATION AND RECOMMENDATIONS

As mentioned previously, the Access Plan is dated March 2018 and contemplates a variety of uses for the subject site, Filing 20 of The Meadows. The Access Plan forecasted trip generation estimates for the above development program based on rates/equations published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9<sup>th</sup> Edition and industry standard methodologies for internal capture reductions.

The Access Plan concluded that in order to accommodate the projected volumes a number of roadway improvements would need to be provided. Suggested intersection geometries were provided for all affected intersections and access points included in the Access Plan as intersections 7, 8, 18, & 19, and included herein as Attachment I.

As determined by virtual field reconnaissance, the existing nearby unsignalized intersections have been constructed consistent with recommendations of the Access Plan. Intersection 19 has been signalized as recommended. Intersection 8 was identified for future signalization and improvements when warrants are met.

#### PROPOSED DEVELOPMENT AND TRIP GENERATION COMPARISON

As shown in the Attachment I excerpt, the Access Plan contemplates a mix of uses for the parcels of Filing 20 of The Meadows development. The proposed development would encompass 41 townhome units of the previously studied 320 townhome units, 44 apartment units of the previously studied 444 apartment units, and 6.3 KSF of the previously studied 47.5 KSF retail use.

Table 1 forecasts the trip generation for the proposed Meadows Townhome development using the ITE *Trip Generation Manual,* 11<sup>th</sup> Ed. As can be seen in the table, the proposed use is forecasted to generate 54 weekday AM peak hour trips, 55 weekday PM peak hour trips, and 514 average daily trips.

To conduct a more direct trip generation comparison between the forecasted Meadows development trips and the forecasted Filling 20 trips, the Filling 20 trip generation table originally made using the ITE *Trip Generation Manual* 9<sup>th</sup> Ed was updated to the 11<sup>th</sup> edition and is included in Table 1. This changed the forecasted number of daily trips from 21,834 to 21,017. Since 2018, many of the proposed Filling 20 developments have been constructed. The City of Castle Rock has provided a list of what has been developed as of 10/19/2022. The original list is included in Attachment II, while the condensed trip generation for developed land uses is shown in Table 1. It can be concluded that of the 21,017 daily trips forecasted to be generated upon completion of the Filling 20 development, 17,148 daily trips are currently being generated by what has been developed to date.

Once the Meadow Townhomes have been developed as a part of Filling 20, there will be a remainder of 581 weekday AM peak hour trips, 529 PM peak hour trips, and 3,355 average daily trips for the remainder of the undeveloped Filing 20 developments. The proposed residential and commercial use is in conformance with and would have no adverse effect on the conclusions or recommendations of the Access Plan.

Table 1 Meadows Townhomes - Castle Rock, CO Site Trip Generation

Site Trip Generation	Land Use			AM Peak Hour		PM Peak Hour			Average Daily	
Land Use	Code	Amount	Units	In	Out	Total	In	Out	Total	Trips
_ (1)										
Proposed: <sup>(1)</sup> Townhomes	220	41	DU	9	27	26	24	14	20	338
Apartments	220 221	23	DU	2	7	36 9	5 5	4	38 9	104
Apartments w/ Ground-Floor Commercial	230	23 21	DU	2	7	9	6	2	8	72
Meadow Townhomes To			DO	13	41	<u>54</u>	35	20	55	514
						0.				• • • • • • • • • • • • • • • • • • • •
Total Approved - 2017: (1)(2)										
Single-Family	210	1,018	DU	185	528	713	603	354	957	8,532
Multifamily Housing (Low-Rise)	220	320	DU	29	93	122	99	59	158	2,127
Multifamily Housing (Mid-Rise)	221	444	DU	42	142	184	106	68	174	2,071
Charter School (K-12)	538	717	Students	325	288	613	213	214	427	1,928
General Office Building	710	83	KSF	126	17	143	24	118	142	987
Shopping Plaza (40-150K)	821	47.5	KSF	51	31	82	121	126	247	3,207
Pharmacy/Drugstore with Drive-Through	881	13	KSF	25	24	49	66	67	133	1,364
Walk-in-Bank	911	5	KSF	59	54	113	67	65	132	1,452
Subtotal				842	1,177	2,019	1,299	1,071	2,370	21,668
Internal Capture <sup>(2)</sup>				(26)	(36)	(61)	(39)	(33)	(72)	(651)
Filling 20 Total Ap	proved			816	1,141	1,958	1,260	1,038	2,298	21,017
Built to Date (10/19/22)	0.4.0									
Single-Family	210	926	DU	147	418	565	507	298	805	7,820
Multifamily Housing (Low-Rise)	220	64	DU	10	33	43	30	18	48	486
Multifamily Housing (Mid-Rise)	221	555	DU	53	180	233	132	85	217	2,601
Rock Climbing Gym	434		KSF	20	7	13	13	10	23	253
Charter School (K-12)	538	350	Students	119	105	224	44	45	89	941
General Office Building	710	29.3	KSF	51	7	58	10	50	60	399
Shopping Plaza (40-150K)	821	30	KSF	32	20	52	76	80	156	2,026
Pharmacy/Drugstore with Drive-Through	881	13	KSF	25	24	49	66	67	133	1,364
Walk-in-Bank	911	3.8	KSF	45	41	86	51	49	100	1,100
Recreation Center	Town	Provided To	rip Gen	29	12	41	56	81	137	689
Subtotal				531	847	1,364	985	783	1,768	17,679
Internal Capture <sup>(2)</sup>				(16)	(26)	(41)	(30)	(24)	(54)	(531)
Filling 20 Developed	to Date			515	821	1,323	955	759	1,714	17,148

Note(s):
(1) Trip generation based on the Institute of Transportation Engineers' <u>Trip Generation Manual</u>, 11th Edition
(2) Arterial Street Access Plan Addendum Filing 20 (Town Center) in the Meadows by FHU dated March 2018

#### **CONCLUSIONS**

The conclusions of this comparative analysis are as follows:

- The subject site was previously contemplated under a mixed use for The Meadows development in Castle Rock, CO.
- According to the Arterial Street Access Plan Addendum (Access Plan) prepared by Felsburg Holt & Ullevig dated March 2018, the Access Plan analyzed Filing 20 with the following uses:
  - 1,018 Single Family Units
  - 320 Multi-Family Units
  - 444 Apartment Units
  - 83 KSF Office Use
  - 47.5 KSF Retail Use
  - 5 KSF Bank Use
  - 13 KSF Drug Store Use
  - 717 Student Charter School
- 3. The Applicant, Garret Companies, proposes to develop Lot 2A-1A, Lot 1A-2, and Lot 1B-1 of Filing 20 with a mix of residential and commercial uses. The Access Plan contemplated the subject site with a mix of residential, office, and commercial use. The proposed use is consistent with the assumptions of the approved Access Plan.
- 4. A comparison of trip generation between the undeveloped parcels uses and proposed uses suggests that the proposed use would leave a balance of trips for the remaining undeveloped parcels of 581 weekday AM peak hour, 529 weekday PM peak hour, and 3,355 average daily trips.
- 5. Based on the trip generation comparison contained herein, the proposed residential and commercial development would not negatively impact the conclusions of the Access Plan. The traffic impacts associated with the proposed use would be adequately accommodated by the constructed/proposed road network without the need for additional improvements.

We trust that the information contained herein satisfy the request of Castle Rock, CO. If you have any questions or need further information, please contact Brian Horan at <a href="mailto:BrianHoran@gallowayus.com">BrianHoran@gallowayus.com</a> or 303-770-8884.

# **Attachment I**

Arterial Street Access Plan Addendum – Filing 17, Filing 18 & Filing 20 (Town Center)
Felsburg Holt & Ullevig dated March 2018 excerpts

# ARTERIAL STREET ACCESS PLAN ADDENDUM

Filing 17, Filing 18 & Filing 20 (Town Center) in The Meadows

#### Prepared for:

Castle Rock Development Company 3033 East 1<sup>st</sup> Avenue, Suite 305 Denver, CO 80206

R.C. Hanisch, Development Director

#### Prepared by:

Felsburg Holt & Ullevig 6300 S. Syracuse Way, Suite 600 Centennial, CO 80111 303/721-1440

Project Manager: Richard R. Follmer, PE, PTOE



FHU Reference No. 117256-01

March 2, 2018 4<sup>th</sup> Edition

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#### I. INTRODUCTION

Castle Rock Development Company has been working with home and commercial builders on the construction of new land parcels in The Meadows subdivision of Castle Rock, Colorado, for many years. Residential homes, medical facilities, commercial and office space, and parks and open spaces continue to be built as The Meadows progresses toward its eventual buildout of the entire subdivision.

As The Meadows grows, it is necessary to understand the traffic impacts of these new projects, specifically along the main access routes near the core of the commercial development. To that end, this report is an addendum to the *Arterial Street Access Plan* (*Access Plan*) for Filings 17, 18 and 20 that was completed and approved by the Town of Castle Rock in June 2004.

Since 2004, intersection locations, turning movements, and access restrictions have been constructed as were recommended in the *Access Plan*. As such, this 2017 report assesses and confirms the recommendations from 2004 and provides input for new or revised geometric and traffic control improvements based on known uses and densities and on projections of future development uses.

This report includes information on:

- Existing land use, traffic control, and roadway data
- Available access routes and intersection characteristics
- Projected land uses and resulting traffic volume forecasts
- Recommended intersection geometry, auxiliary lanes, and traffic control
- Comparison of 2004 recommendations to 2017 recommendations

The analyses and recommendations of this report focus on Filings 17, 18 and 20 (also referred to as the Town Center). The physical land boundary of these filings is depicted on **Figure 1**. Access, traffic control and geometric improvements are focused along the arterial street system adjacent to these filings, being:

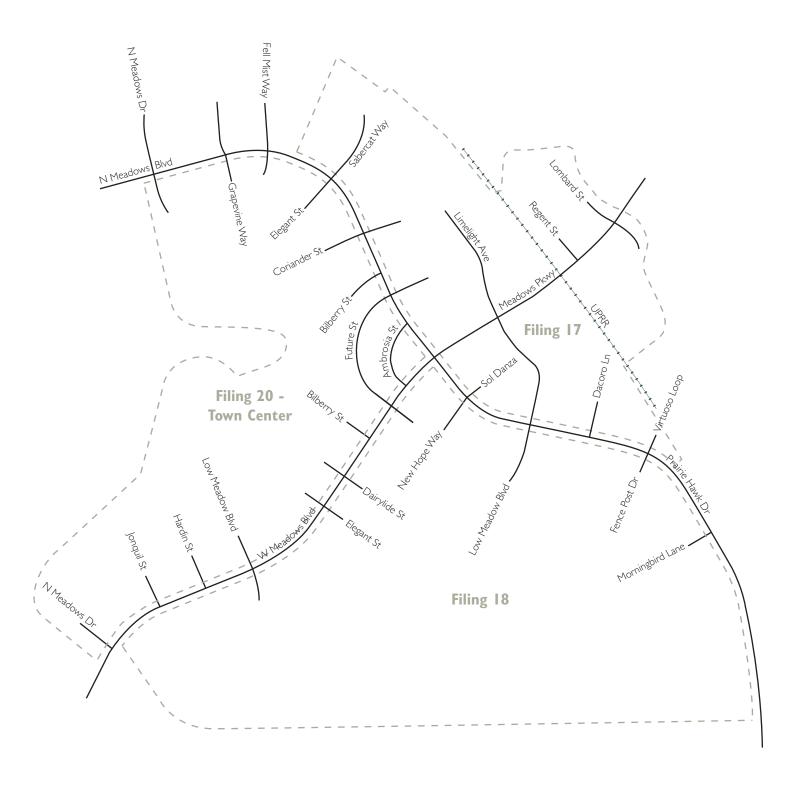
 Two segments of Meadows Boulevard – from North Meadows Drive to the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection (one segment between Filings 18 and 20 and the other segment between Filings 17 and 20)

Note: For the purposes of this report, the segment of Meadows Boulevard between Filings 18 and 20 is referred to as <u>West</u> Meadows Boulevard and the segment between Filings 17 and 20 is referred to as North Meadows Boulevard.

- Meadows Parkway from the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection to the Filing 17 access on the west side of Plum Creek (Lombard Street); this intersection currently provides parking lot access for the East Plum Creek Trail but will ultimately serve as the entry for the Filing 17 COI areas on the north and south sides of Meadows Parkway
- Prairie Hawk Drive from the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection to Morningbird Lane (being constructed)

This report provides the Town of Castle Rock and Castle Rock Development Company with information and recommendations that will satisfy the vehicle capacity demands of The Meadows through construction of the final land areas.





Filings 17, 18, and 20 Boundaries



313

#### II. EXISTING CONDITIONS COMPARISON

Since the completion of the *Access Plan* in 2004, significant development has occurred, and roadway projects have been constructed that provide a more complete street system in Filings 17, 18 and 20. Following is information on how the built environment of these filings has progressed since 2004.

#### II.A. Developed Environment

Residential homes, retail establishments, office space, a hospital, a charter school, medical office buildings (MOB's), an assisted care facility, and other uses have been constructed since the completion of the *Access Plan* in 2004. These land uses are throughout Filings 17, 18 and 20, but somewhat concentrated as:

- Retail, office, hospital, and MOB's in Filing 17
- Residential homes, charter school, and assisted living facility in Filing 18
- Retail, office, and residential homes (both single-family and multi-family) in Filing 20

These land uses follow what was envisioned by Castle Rock Development Company in 2004 in most cases but have been refined over the years based on economic market trends.

#### II.B. Access Routes

In 2004, most of the arterial street network in The Meadows had been constructed to a four-lane cross-section except in a few cases. West Meadows Boulevard between the Meadows Parkway/Meadows Boulevard/Prairie Hawk Drive intersection and Coachline Road was only a two-lane facility as was Prairie Hawk Drive to the south of Fire Station 154.

Additions to the street network provide new opportunities for residents, as well as patrons of its commercial areas, for vehicular movements to/from The Meadows and internally between the varying land uses.

None of the commercial land uses of Filing 17 existed in 2004, and, as such, none of the internal street network was in place. Only the AMC movie theater was being contemplated at that time, but Limelight Avenue or other streets had yet to be constructed.

Only the New Hope Presbyterian Church and Fire Station 154 had been built in Filing 18 in 2004. None of the internal street network for the residential homes or charter school existed, and the Town Center was totally void of any development or constructed street network.

#### II.C. Traffic Control

Traffic signals were in operation at only the Meadows Parkway/Meadows Boulevard/Prairie Hawk Drive intersection and at the North Meadows Boulevard/North Meadows Drive intersection in 2004. All other intersection movements were controlled by stop signs. Today, three other traffic signals have been added within the study area: 1) & 2) North Meadows Boulevard at Fell Mist Way and Elegant Street/Sabercat Way, and 3) Meadows Parkway/Limelight Avenue.



#### III. FUTURE CONDITIONS

The following subsections summarize the land uses, trip generation estimates, and trip distribution characteristics for Filings 17, 18 and 20, as well as describe the used to develop trip generation estimates for the *Access Plan* in 2004 and for those used in this current report.

#### III.A. Developing and Future Land Uses

**Figure 2** provides a representation of the developing and future construction projects. Areas of this figure that are not defined are existing, completed projects. The information of **Figure 2** is provided to summarize the development context of Filings 17, 18 and 20; that is, what parcels are undergoing construction now or will be constructed in the future. Filing 17 will include new commercial and office uses, Filing 18 will have additional residential dwelling units, and Filing 20, the Town Center, will be a mix of residential and commercial uses.

As found in Section III.C, the analyses for this addendum are based on known and assumed land uses in these filings, not simply ones that are under construction or are anticipated in the future.

#### III.B. Trip Generation Methodologies

As can be imagined, land use and density information for Filings 17, 18 and 20 are more defined now than they were in 2004. For example, the land areas in Filing 17 were zoned as Commercial/Office/Industrial (COI) in 2004 and without more exact information, trip generation estimates were developed with a 1/3, 1/3 split of these three land use types. Now these land areas are partially constructed and better assumptions of individual uses can be made.

Related to resultant trip generation estimates, an important factor to understand is that trip generation rates in 2004 for single-family homes were based on empirical trip generation data that was collected for homes in specific sections of The Meadows and in Founders Village. That investigation found that vehicle-trip rates on a daily and peak hour basis were less than what the Institute of Transportation Engineers' (ITE) publication *Trip Generation* would predict. The current study uses the standard ITE rates, resulting in a more conservative approach, one that should provide the Town with a level of confidence that the recommendations of this report are sufficient to meet the travel demands of The Meadows residents and commercial patrons as it continues to develop.

In 2004, an internal capture allowance of 25 percent was used to reflect the interaction of the varying residential, retail and office uses in Filing 20, the Town Center. The 25 percent allowance was based on information contained in ITE's *Trip Generation Handbook* and on conversations with Town of Castle Rock staff. Current analyses indicate that a 25 percent internal capture cannot be justified given the current mix of dwelling units and retail and office space (see next section). As such, a more conservative estimate of vehicle-trips for Filing 20 was used for the analyses.

The information above strives to convey that the methodologies of predicting vehicle-trips and resultant recommendations in 2004 and 2017 are different; ones that provide some slight variations to the recommendations of the 2004 *Access Plan*. These variations do not result in whole-scale changes to the access recommendations along the arterial street system.



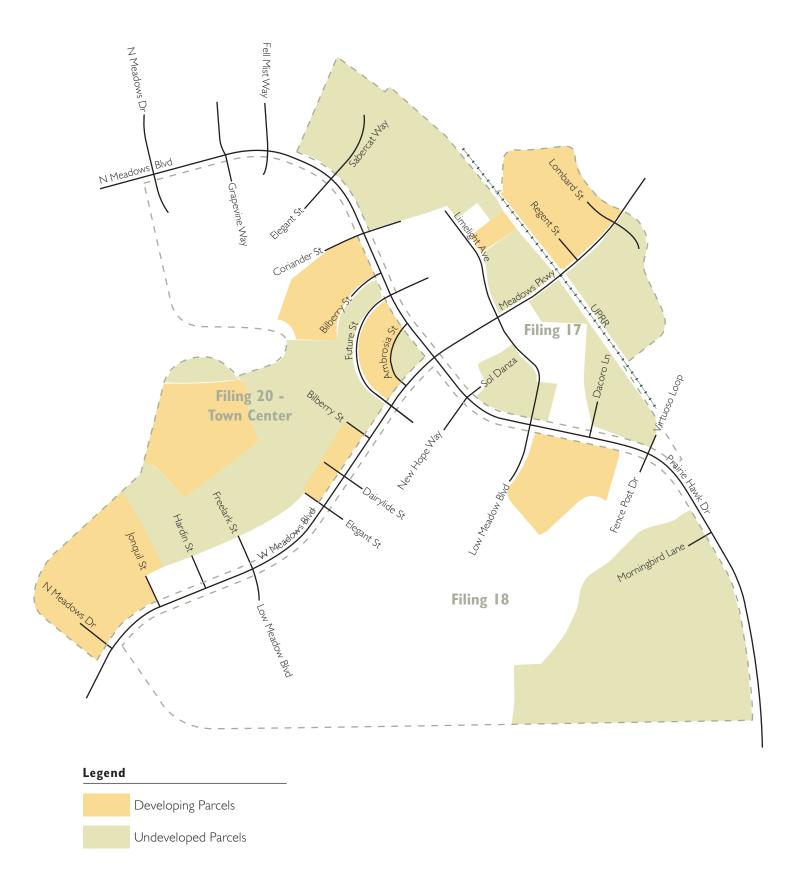




Figure 2
Developing and Future land Uses

#### III.C. Trip Generation Estimates and Trip Comparison

#### **Trip Generation**

Vehicle-trip estimates for Filings 17, 18 and 20 were prepared using information contained in *Trip Generation*, 9<sup>th</sup> Edition (2012), or information developed in previous traffic studies for non-typical land uses like the charter schools (see **Table 1** on pages 7 & 8).

**Table 1 also** shows the internal capture allowances used for each filing. The internal capture percentage for the Town Center used the *National Cooperative Highway Research Program 684* methodology to estimate the AM and PM peak hour reductions since the Town Center will have a good mix of land use types that allow this procedure to be used. Evaluation results indicate that an internal capture of 3 percent and 11 percent can be expected for the AM and PM peak hours, respectively (see **Appendix A**).

For Filings 17 and 18, the land use mix is not significant enough to use this procedure; that is, Filing 17 lacks a residential component, while Filing 18 lacks retail and office components. Regardless, it is projected that there will be some interaction between the differing land uses within these filings that will result in some internal capture, but not necessarily for each land use.

For example, in Filing 17, some internal capture will occur in the land area where the AMC movie theater is; interaction among restaurants, the theater, bank or convenience store will occur. Residents visiting the movie theater could have dinner at one of the restaurants before or after a movie. Frequenting the bank's ATM could occur before meals or before purchases at the convenience store. Businesses of varying types in this area of Filing 17 are very conducive to completing shared trips to support the internal capture concept.

There will also likely be interaction among the hospital, the MOBs, and the Arapahoe Community College (ACC) campus along Limelight Avenue. ACC may provide dental or medical programs that could support internships at one of the MOB's or at the hospital, or a hospital employee could take a class at ACC in the evening, for example; trips between land uses that do not require leaving and returning to the immediate area.

But not every parcel in Filing 17 will have an internal capture interaction. It is not expected that the COI parcel on the south side of Meadows Parkway adjacent to Plum Creek will have much interaction among the several office buildings in this land area.

Relative to Filing 18, there will be some internal capture between the residential dwelling units and the Aspen View Charter School. Some families may live within walking distance of the school or, even if they drive their children to school, they may return home and not proceed onto The Meadows arterial street system. Also, some vehicle-trips will have routes to/from the south through the Red Hawk development and to other areas of Castle Rock via Wolfensberger Road, which also do not use The Meadows arterial street system. Each condition contributes to some level of internal capture.

Considering this information, an allocation for internal capture has been used – 10 percent for the interaction between lands uses in Filings 17 and 18 have been applied to the trip generation estimates contained in **Table 1**.

**Table 1** also includes information at the end of each filing summary that compares trip generation data for Filings 17, 18 and 20 between what was estimated in 2004 and what is predicted now. A summary of the numerical difference is also included. Following **Table 1** is a brief description of these differences and what is likely causing them.



Table 1. Trip Generation for Filings 17, 18 and 20

Landillas	l lm:4	Ci-c	Daily	AM Peak Hour			PM Peak Hour		
Land Use	Unit	Size		In	Out	Total	In	Out	Total
	<del>-</del>	=	F	iling 17		-	<del>-</del>	-	
Retail	KSF	150	6,618	318	344	662	206	262	468
Office	KSF	237	2,748	353	48	401	64	312	376
Light Industrial	KSF	84.4	529	69	9	78	10	72	82
Hospital			4,953	246	78	324	115	272	387
Medical- Dental Office	KSF	110.5	4,088	209	55	264	92	237	329
Hotel	Rooms	130	1,062	71	50	121	40	38	78
ACC Campus	KSF	108	2,969	239	84	323	159	115	274
Mini- Warehouse	KSF	97.3	244	8	6	14	13	13	26
Restaurant	KSF	10	1,271	59	49	108	59	40	99
Car Wash	Bays	4	432	16	16	32	16	16	32
Bank	KSF	3.3	978	46	34	80	80	80	160
Convenience Store	KSF	3	2,537	62	61	123	76	77	153
Movie Theater	KSF	43.4	3,510	0	0	0	188	85	273
Day Care	KSF	18.7	1,385	121	107	228	108	122	230
2017 Subtotal			33,324	1,816	941	2,757	1,227	1,741	2,968
Internal Capture – 10% For Certain Parcel Interaction			-2,430	-120	-72	-192	-101	-115	-216
TOTAL External Trips to/from Filing 17			30,895	1,696	869	2,565	1,126	1,626	2,752
Filing 17 TOTAL - 2004			34,064	1,286	366	1,652	1,332	2,149	3,481
Difference (2017 vs. 2004)			-3,169	+410	+503	+913	-206	-523	-729



Table 1. Trip Generation for Filings 17, 18 and 20 (Continued)

Landllas	Unit	Size	Daily	AM Peak Hour			PM Peak Hour		
Land Use				In	Out	Total	In	Out	Total
Filing 18									
Single- Family	DU	1,176	11,978	228	683	911	749	440	1,190
Church	KSF	28	255	10	6	16	9	5	15
Charter School	Students	790¹	2,200	401	337	736	234	308	542
Assisted Living	Units	219	616	25	14	39	30	33	63
S	ubtotal		15,050	663	1,040	1,702	1,023	787	1,809
Between Char	Internal Capture – 10% Between Residential & Charter School			-63	-102	-165	-99	-75	-173
	TOTAL External Trips to/from Filing 18			600	938	1,537	924	712	1,636
Filing 18	TOTAL – 2	004	17,995	399	903	1,302	1,078	594	1,672
Difference	(2017 vs. 2	2004)	-4,363	+201	+35	+235	-154	+118	-36
			Filing 20	– Town	Center		-	_	
Single- Family	DU	1,018	10,318	195	585	781	645	378	1,023
Townhomes	DU	320	2,084	29	140	169	131	65	196
Apartments	DU	444	2,938	46	180	226	183	97	280
Office	KSF	83	915	114	16	129	21	103	124
Retail	KSF	47.5	2,183	105	113	218	88	112	200
Bank	KSF	5	741	34	26	60	61	61	122
Drug Store	KSF	13	1,250	23	21	45	64	64	128
Charter School	Students	717¹	2,005	364	305	668	212	280	492
Subtotal			22,433	910	1,388	2,298	1,405	1,159	2,564
Internal Capture 3% AM; 11% PM			-60	-28	-38	-66	-154	-183	-282
TOTAL Filing 20			22,373	882	1,350	2,232	1,251	1,031	2,282
Filing 20 TOTAL – 2004			22,530	441	1,237	1,678	1,344	923	2,267
Difference	•		-157	+441	+113	+554	-93	+108	+15
<sup>1</sup> Student size represents 95 percent of the maximum population to reflect average daily attendance.									



#### Trip Generation Comparison

The following information summarizes how the current trip generation estimates compare to what was projected in 2004. Of note, the trip generation summary in the 2004 *Access Plan* included an internal capture allowance for Filing 20 (the Town Center) which was discussed on Page 6 but also included estimates of vehicle-trips between entire filings since one of the objectives of the 2004 *Access Plan* was to understand how many vehicle-trips were entering and leaving the entire Meadows subdivision (different from internal capture within a filing). As such, the comparison of vehicle-trips in **Table 1** is between the 2017 projected vehicle-trips (minus any internal capture) and the estimates from the 2004 *Access Plan* (without any trip reductions for Filings 17 and 18, and for Filing 20 minus the 25 percent internal capture). This approach provides a better apples-to-apples comparison.

- Filing 17 Trip generation estimates in 2017 are less on a daily basis. AM peak hour trips are higher, while trips during the PM peak hour are lower. Partial reasoning is that some of the land uses are now known versus assumptions that were made in 2004.
- Filing 18 Daily vehicle-trips for Filing 18 are also lower, but slightly higher during the AM peak hour. Inbound and outbound trips in the PM peak hour are mixed, but the PM peak hour total is slightly lower. While the number of residential dwelling units is smaller than in 2004, the Aspen View Charter School has a higher trip generation, being essentially twice the projections for a public elementary school. Charter schools do not have bus service and, therefore, many students arrive by passenger car from anywhere in Castle Rock or outside Town limits.
- Filing 20 (Town Center) Trip generation projections for Filing 20 are slightly lower over
  the course of an entire day but are higher during the AM peak hour. Reasoning is that a
  significant internal capture percentage was allowed in 2004 (25 percent), which cannot
  be justified now due to current ITE methodologies. Additionally, while the number of
  residential dwelling units is less, the upcoming charter school in this filing has a higher
  trip generation than a typical public elementary school as also noted for Filing 18.

#### Vehicle-Trips – Undeveloped Parcels

As noted in Section III.A, certain parcels in Filings 17, 18 and 20 are currently undeveloped and are not contributing vehicle traffic to the surrounding street network at this time. **Table 2** uses information from **Table 1** to estimate the amount of traffic that could be added to the local street network as the undeveloped parcels are constructed.

As shown in **Table 2**, over 34,500 additional vehicle-trips per day are projected to be added to the surrounding arterial street network as Filings 17, 18 and 20 develop. These new trips are part of the expected number of vehicle-trips for the entire build-out of these filings.

Additionally, no internal capture is included in **Table 2**. If it is the Town's desire to compare projected vehicle-trips in Filings 17, 18 and 20 to the information contained in this table, individual traffic studies likely will not address internal capture for a larger area outside their immediate parcel. As such, a better apples-to-apples comparison will occur if internal capture allowances are not included in these comparisons.



 Table 2.
 Trip Generation for Undeveloped Parcels

Land Has	Unit	Size	Daily	AM Peak Hour			PM Peak Hour		
Land Use				In	Out	Total	In	Out	Total
Filing 17									
Retail	KSF	108	4,712	226	245	471	142	181	322
Office	KSF	205	2,397	309	42	351	56	272	328
Light Industrial	KSF	84.4	529	69	9	78	10	72	82
Medical- Dental Office	KSF	100	3,874	189	50	239	82	210	291
Hotel	Rooms	130	1,062	71	50	121	40	38	78
ACC Campus	KSF	108	2,969	239	84	323	159	115	274
Restaurant	KSF	10	1,271	59	49	108	59	40	99
Car Wash	Bays	4	432	16	16	32	16	16	32
Bank	KSF	3.3	489	23	17	40	40	40	80
Convenience Store	KSF	3	2,537	62	61	123	76	77	153
Filing	17 Totals		20,272	1,263	623	1,886	679	975	1,590
			F	Filing 18					
Single-Family	DU	209	2,069	39	117	156	129	75	204
Filing	18 Totals		2,069	39	117	156	129	<i>7</i> 5	204
			F	Filing 20					
Single-Family	DU	376	4,462	86	257	343	280	164	444
Multi-Family	DU	310	1,997	27	134	161	125	62	187
Apartments	DU	204	1,380	21	83	104	85	45	130
Office	SF	72	794	99	13	112	18	89	107
Retail	SF	37	1,674	80	87	167	67	85	152
Bank	SF	5	741	34	26	60	61	61	122
Drug Store	SF	13	1,250	23	21	45	64	64	128
Filing 2	12,279	371	621	992	701	569	1,270		
TOTAL No Undevelo	34,620	1,673	1,361	3,034	1,509	1,619	3,064		

Referring to **Table 1**, current daily vehicle-trip projections are less than what was approved for these filings in 2004 since there is now a better understanding of expected land use types and densities. As such, any trip generation comparisons that are made should reflect the approved densities, a level of vehicle-trips that is higher than an additional 34,620 vehicles per day (vpd).



#### III.D. Trip Distribution

Distribution of vehicles along the arterial street system defines how the projected vehicle-trips are assigned to individual left turn, right turn or through movements at the study area intersections. To develop the trip distribution relationship, the Denver Regional Council of Governments' (DRCOG) travel demand model was reviewed—both the base model and the one that was modified for the recent *Castle Rock Transportation Plan*.

The distribution of vehicles to/from Filings 17, 18 and 20 can vary slightly given their location within The Meadows. For example, Filing 17 trips will likely have a higher distribution toward the east along Meadows Parkway because it is closer to US 85 and I-25 than the other filings. Filing 18 will have a slightly higher distribution toward the south along Red Hawk Drive, while Filing 20, the Town Center, will have a higher distribution of traffic to/from the north along North Meadows Drive.

Considering these factors and the distribution assessments of the DRCOG traffic demand model, the following distribution of vehicle-trips for Filings 17, 18 and 20 were used for the *Access Plan* addendum.

Filing	To/From the North	To/From the East	To/From the West	To/From t		
	N. Meadows Drive	Meadows Parkway	Meadows Boulevard	Prairie Hawk Drive	Red Hawk Drive	TOTAL
Filing 17	20%	55%	5%		5%	100%
Filing 18	20%	45%	10%	15%	10%	100%
Filing 20	25%	45%	10%		5%	100%

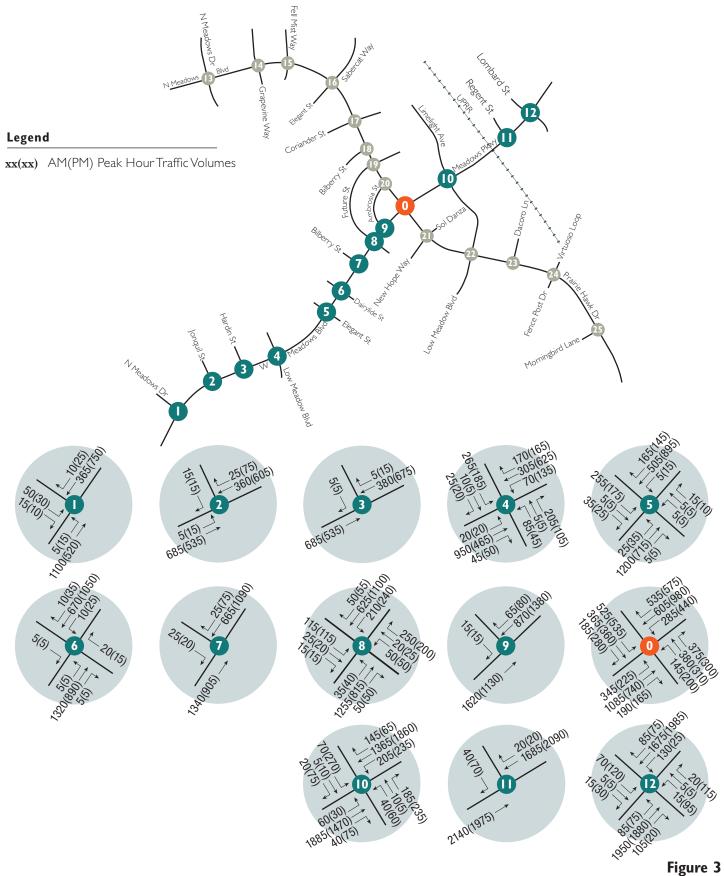
Table 3. Trip Distribution Projections

Distribution of vehicle-trips is somewhat different from what was estimated in 2004. As noted, the DRCOG travel demand models were used to make these assessments. A better understanding of developed and undeveloped land areas, and advancements in travel model accuracy, provide differing results than the travel model estimates from 13 years ago. The estimates of **Table 3** have been discussed with Town staff and are deemed acceptable for this addendum.

#### III.E. Projected Traffic Volumes

The projected traffic volumes of **Table 1** and the trip distribution estimates of **Table 3** were used as defining information to estimate vehicle movements to/from each intersection along Meadows Parkway, Meadows Boulevard, and Prairie Hawk Drive. The software program Vistro™ was used to organize distribution pathways and trip assignments for individual land areas in Filings 17, 18 and 20. Traffic volume data at the 25 intersections along these roadways are represented on **Figure 3** and **Figure 4**.





Projected Traffic Volumes
Meadows Boulevard/Meadows Parkway Intersections



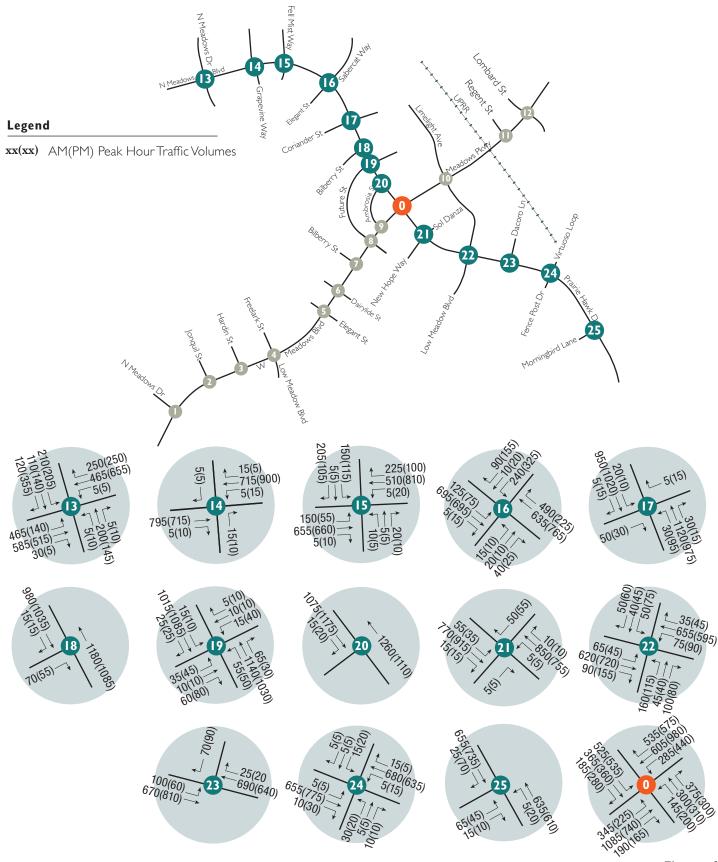


Figure 4
Projected Traffic Volumes
Meadows Boulveard/Prairie Hawk Drive Intersections



Having several access points for vehicle movements to/from Filings 17, 18 and 20 offers many routes for motorists to choose from when traveling to/from a destination. As such, traffic volumes are distributed over many intersection movements. **Figure 3** and **Figure 4** show that not one movement to/from these filings is excessive. Many movements are fewer than 25 vehicles per hour (vph) and few reach 200 vph. The highest levels of projected vehicle turning movements are:

- Intersections 4 & 5 Southbound left turn movements onto West Meadows Boulevard related to the proximity of the upcoming Apex Charter School. Based on empirical data collected by Felsburg Holt & Ullevig, charter schools generate twice as many daily and peak hour vehicle-trips as a traditional public elementary school of the same size.
- Intersection 4 Northbound right turn from Low Meadow Boulevard onto eastbound West Meadows Boulevard during the AM peak hour. Possibly related to movements from Aspen View Charter School.
- Intersection 8 Westbound left turn movement onto Red Hawk Drive; likely related to Red Hawk Drive being a cut-through route for residents of the Red Hawk subdivision.
- Intersection 10 Westbound left turn and northbound right turn to/from the commercial area along Limelight Avenue.
- Intersection 16 Northbound right turn and westbound left turn for movements to/from North Meadows Boulevard and Sabercat Way.

## III.F. Intersection Geometry

An assessment has been made relative to the projected intersection laneage requirements for the build-out of The Meadows when compared to existing intersection geometry. In summary, intersection laneage that currently exists is mostly deemed appropriate for the project traffic volumes. Only one pair of modifications is necessary to satisfy operational conditions if the traffic volume projections of this report are met:

- Meadows Parkway/Meadows Boulevard/Prairie Hawk Drive Intersection 2<sup>nd</sup> left turn lanes should be added to the westbound and northbound approaches; these can be added via pavement restriping. Castle Rock Development Company constructed these intersections to accommodate this lane geometry.
- Meadows Parkway/Limelight Avenue Intersection The existing lane striping on the southbound approach should be changed from separate left, through and right turn lanes to two left turn lanes and a shared through/right lane.

Additionally, only the Morningbird Lane access along Prairie Hawk Drive is not completed, but it is being constructed as part of the Prairie Hawk Drive widening currently underway. This intersection will serve only residential dwelling units in Filing 18 and the planned intersection laneage is deemed appropriate for this access.

As part of the analyses for this addendum, and related to intersection geometry, an assessment has been made about whether some intersections may warrant the installation of an auxiliary lane that does not exist or if one that does exist should be modified to add more vehicle storage length. These modifications are not related to traffic operations but are specifically related to meeting the Town of Castle Rock access requirements. The summary of that information is in Section IV.C, Auxiliary Lane Modifications. **Figure 5** and **Figure 6** represent the intersection lane geometry along the arterial street system in Filings 17, 18 and 20 to satisfy the <u>operational needs</u> for the build-out of these filings.



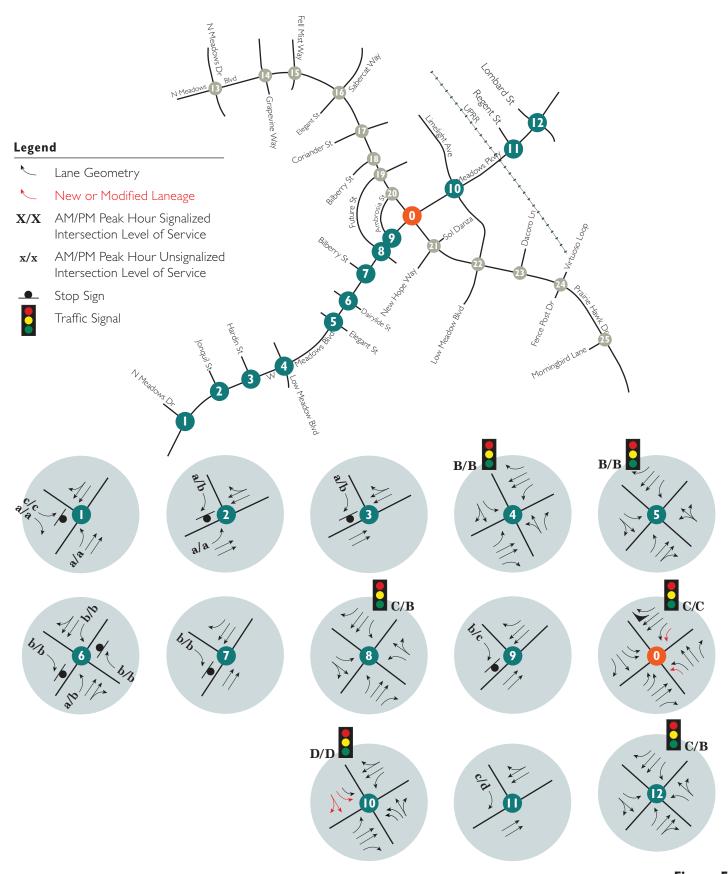


Figure 5
Intersection Geometry, Traffic Control, and Levels of Service
Meadows Boulevard/Meadows Parkway Intersections



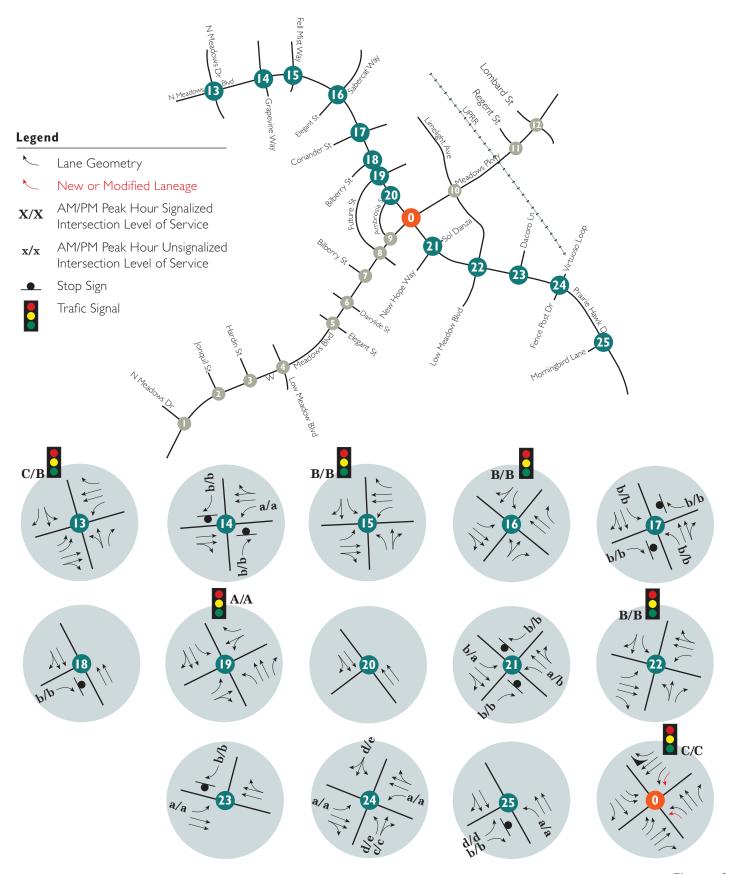


Figure 6
Intersection Geometry, Traffic Control, and Levels of Service
Meadows Boulveard/Prairie Hawk Drive Intersections



Avenue/Low Meadow Boulevard

## III.G. Traffic Signalization/Traffic Control

Understanding traffic control at each intersection along the arterial street system is important to the future functionality and operational capacity of these intersections. Along the developed roadway network are intersections that allow all vehicle movements, ones that restrict some movements, and one that allows only inbound right turns (into Filing 20).

For those intersections with restricted movements, traffic control is accomplished by stop signs. For intersections that allow all movements, an assessment was conducted to determine which ones may require the installation of a traffic signal by the build-out of these filings. Recognizing that three locations along North Meadows Boulevard are already signalized (North Meadows Drive, Fell Mist Way, and Elegant Street/Sabercat Way), as is the Meadows Parkway/Limelight Avenue intersection, there are a total of nine other full-movement intersections that have the potential for the installation of a traffic signal.

Each of the nine intersections was evaluated to determine whether it may meet the traffic-volume based traffic signal warrant criteria of the *Manual on Uniform Traffic Control Devices* (MUTCD). Because traffic volumes at these intersections are not yet sufficient to conduct a complete analysis of the MUTCD volume-based criterion, only the projected peak hour volumes were used in this evaluation. While Warrant 3, Peak Hour is not the correct warrant to use for normal public street intersections, it is the best guide available for making judgments on future conditions. A right turn volume reduction allowance for side street movements was used based on MUTCD criteria and on approach lanaege.

A graph showing whether these nine intersections meet the criteria of Warrant 3, using the highest peak hour of side street traffic volume at each location, can be found on **Figure 7**. This evaluation finds that six of the nine intersections are very likely to meet the MUTCD criterion by build-out of Filings 17, 18 and 20 (see **Table 4**).

Int. No. Location Int. No. Location West Meadows Boulevard/ 4 12 Meadows Parkway/Lombard Street Low Meadow Boulevard West Meadows Boulevard/ North Meadows Boulevard/ 19 5 Elegant Street **Future Street** West Meadows Boulevard/Future Prairie Hawk Drive/Limelight 8 22

 Table 4.
 Intersections with Traffic Signal Potential

Street/Red Hawk Drive

Keep in mind that this information is only a guide on the relative potential for signalization; each of the MUTCD warrants should be evaluated when considering installing a traffic signal at any location in The Meadows.

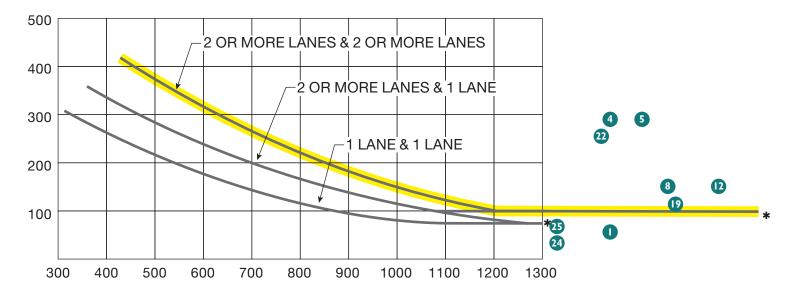
## III.H. Intersection Operations

Analyses were conducted to determine how well each intersection in this study will operate once the projected traffic volumes materialize and when considering the traffic control and access restrictions noted previously. The results of this analysis are a Level of Service (LOS) assessment, one that provides a letter designation form LOS A to LOS F, with LOS A representing free-flow conditions and LOS F being a condition with high vehicle delay and excessive congestion.



- -W. Meadows Blvd./N. Meadows Dr. (AM-1475/60)
- 4 -W. Meadows Blvd./Low Meadow Blvd. (AM-1475/295)
- 5 -W. Meadows Blvd./Elegant St. (AM-1820/285)
- 8 -W. Meadows Blvd./Future St./Red Hawk Dr. (PM- 2010/150)
- -Meadows Parkway/Lombard St. (PM-4015/150)
- 19 -N. Meadows Blvd./Future St. (PM- 2190/115)
- 22 -Prarie Hawk Dr./Limelight Ave./Low Meadow Blvd. (AM-1440/255)
- 24 Prarie Hawk Dr./Virtuoso Loop/Fence Post Dr. (AM-1350/45)
- 25 -Prarie Hawk Dr./Morningbird Lane (AM- 1320/75)





# MAJOR STREET - TOTAL OF BOTH APPROACHES - VEHICLES PER HOUR (VPH)

\* Note:100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor street approach with one lane.

Figure 7
Peak Hour Volume Warrant
(Above 40mph on Major Street)

When considering the information contained in **Table 4**, these six intersections were evaluated with traffic signal control along with the existing signalized intersections. All other intersections were evaluated with stop-sign control. Level of service results are provided for an entire intersection when signalized; at stop-controlled intersections, LOS is provided for those movements that must yield to opposing traffic to complete their respective maneuver. Following is a summary of the LOS analyses.

#### Signalized Intersections

Levels of service for the existing and future signalized intersections along Meadows Boulevard, Meadows Parkway, and Prairie Hawk Drive corridors are projected to operate at LOS D or better during both the AM and PM peak hours. Only the Meadows Parkway intersections at Meadows Boulevard/Prairie Hawk Drive and Limelight Avenue are projected to experience LOS D conditions, however. Other locations are projected to operate at LOS A, B, or C.

#### **Stop-Controlled Intersections**

Given the restricted nature of some intersections, most intersection movements will operate very well (LOS A or B) with only a few operating in the LOS C to D range. Two movements are projected to operate at LOS E during the PM peak hour—the left turn movement onto Prairie Hawk Drive from Fence Post Drive, and the shared left/through/right approach from Virtuoso Loop onto Prairie Hawk Drive. This intersection is not expected to meet MUTCD volume-based criterion for signalization and their projected traffic volume levels equate to a very low frequency during the PM peak hour. When a new traffic signal is installed at the Limelight Avenue/Low Meadow Boulevard intersection, it will create gaps in the vehicle travel stream that will assist motorists in making movements onto or across Prairie Hawk Drive. No access changes are recommended.

**Figure 5** and **Figure 6** show the LOS results for each intersection movement. **Appendix B** includes the analysis worksheets for each evaluated intersection.

#### III.I. Progression Analyses

Analyses were conducted to understand how well vehicles can travel along these arterial street corridors, i.e., from one end to the other without excessive stops. Large flows of traffic along West Meadows Boulevard/Meadows Parkway and North Meadows Boulevard/ Prairie Hawk Drive meet at the Meadows Parkway/Meadows Boulevard/Prairie Hawk Drive intersection. As such, this intersection operates as a natural break point for vehicle progression.

There is a high outflow of vehicles from The Meadows during the morning when motorists are heading to work and other activities with a corresponding high inbound flow of vehicles during the evening. While movements on North Meadows Boulevard and on Prairie Hawk Drive are somewhat similar during these peak hours, there is a primarily eastbound flow of motorists on Meadows Boulevard/Meadows Parkway in the morning with an opposite westbound flow during the evening peak period.

Additionally, traffic signals that are farther away from the Meadows Parkway/Meadows Boulevard/Prairie Hawk Drive intersection do not require as much vehicle progression time since overall intersection traffic volumes decrease to the north, south and west of this intersection. As such, a shorter cycle length can be used so that motorists on the intersecting streets do not wait for a green indication unnecessarily.



Therefore, the progression analyses were conducted with a 120 second traffic signal cycle length for the two Future Street intersections along North and West Meadows Boulevards, and from the Meadows Parkway/Meadows Boulevard/Prairie Hawk intersection eastward. 90-second cycle lengths were used for the remaining traffic signals. While this approach provides good levels of service at the intersections as noted previously in this report, vehicle progression is only optimal beginning one traffic signal to the north and west of the Meadows Parkway/ Meadows Boulevard/Prairie Hawk Drive intersection and eastward towards US 85.

Considering these influences, vehicle progression characteristics include:

## West Meadows Boulevard/Meadows Parkway

- The morning progression bandwidth in the eastbound direction on West Meadows
  Boulevard/Meadows Parkway works well beginning at Future Street. There will be a
  natural progression break at Future Street related to the shorter cycle lengths for the
  Low Meadow Boulevard and Elegant Street intersections.
- Westbound flows are disrupted in the morning at the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection due to the level of southbound traffic along North Meadows Boulevard. A progression break will occur at the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection.
- The evening bandwidths on West Meadows Boulevard/Meadows Parkway can be somewhat continuous with both directions working relatively well. Progression breaks will occur at Red Hawk Drive.

#### North Meadows Boulevard/Prairie Hawk Drive

- Vehicle progression works well to the north of Future Street. The southbound left turn
  movement from North Meadows Boulevard onto eastbound Meadows Parkway in the
  morning can be accommodated well via a secondary bandwidth created on Meadows
  Parkway.
- Progression through the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive and Limelight Avenue intersections can occur, but it is influenced by vehicle demands and traffic flow at the Meadows Boulevard/Meadows Parkway/Prairie Hawk Drive intersection.

The information contained above is only an initial evaluation of vehicle progression along the Meadows Parkway, Meadows Boulevard and Prairie Hawk Drive corridors. Other traffic signal cycle lengths or intersection phasing patterns could be used to optimize vehicle progression. Analyses of vehicle progression will be required as The Meadows continues to develop and as traffic volumes increase and new traffic signals are added.



## IV. ACCESS MANAGEMENT PLAN

This section summarizes recommendations related to access revisions along Meadows Parkway, Meadows Boulevard, and Prairie Hawk Drive for the complete development of Filings 17, 18 and 20. Information in this section summarizes the locations of existing access and their relative spacing, their access type, traffic control recommendations, and any auxiliary lane changes that are deemed necessary to meet the projected vehicle capacity demands and to provide good operations.

# IV.A. Existing Access Type and Spacing

#### Access Type

A total of 25 intersections of varying movement allowances exist along Meadows Parkway, Meadows Boulevard, and Prairie Hawk Drive adjacent to Filings 17, 18 and 20. Of these 25 access points, 13 allow all movements for which four are currently operated by traffic signals. Of the remaining locations, five are termed ¾ movement accesses, where left turns or crossing movements are not permitted from the side streets, while five are right-in/right-out (RIRO) intersections that permit only right turn movements to/from the intersecting streets. One intersection is a combination of ¾ and RIRO movements, being the Grapevine Way/Castle Rock Middle School access where it is a ¾ movement access for Grapevine Way, but only a RIRO access for movements to/from the Castle Rock Middle School. Additionally, the Ambrosia Street intersection along North Meadows Boulevard allows only inbound right turn movements (RI). Figure 8 shows the permitted movements at the public street intersections along the arterial street system.

## **Access Spacing**

The spacing of access points along Meadows Parkway, Meadows Boulevard, and Prairie Hawk Drive can be relevant related to the dimensions of auxiliary lanes along the arterial street system. Currently, access spacing appears to be sufficient for movements to/from the adjoining residential and commercial parcels of Filings 17, 18 and 20. **Figure 9** represents the spacing of each of the 25 access points to each other.

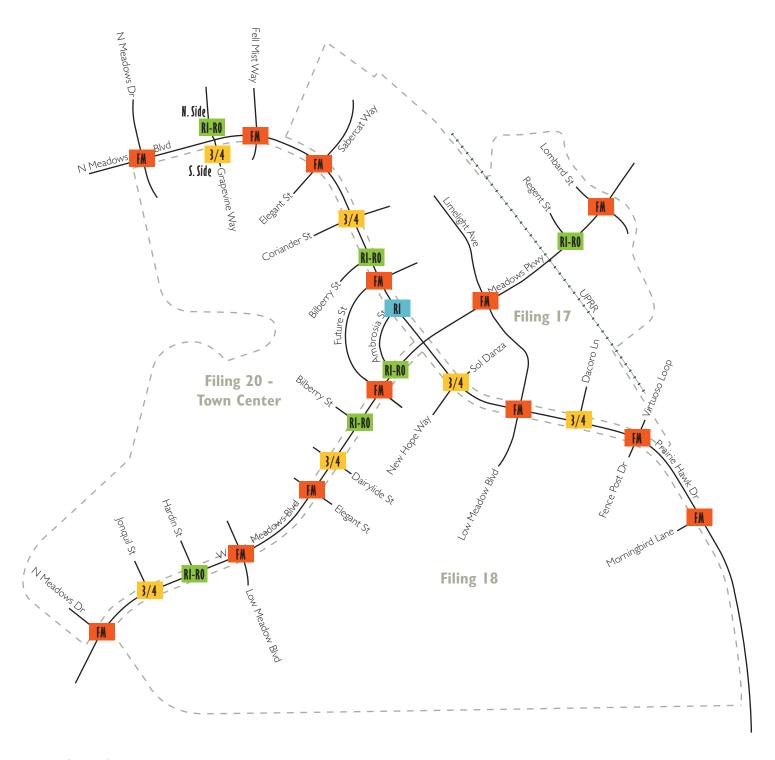
#### IV.B. Traffic Control

As noted previously, intersections that have restricted movements of some level are controlled by stop signs and will always have this type of control. For those locations that allow all vehicle movements (13 total), four are already signalized. Of the remaining nine, six have the potential for being signalized as Filings 17, 18 and 20 move toward complete build-out:

- Intersection 4 Meadows Boulevard/Low Meadow Boulevard
- Intersection 5 Meadows Boulevard/Elegant Street
- Intersection 8 Meadows Boulevard/Future Street/Red Hawk Drive
- Intersection 12 Meadows Parkway/Lombard Street
- Intersection 19 North Meadows Boulevard/Future Street
- Intersection 22 Prairie Hawk Drive/Limelight Avenue/Low Meadow Boulevard

These six intersections were also identified in the 2004 *Access Plan* as requiring signalization. Of the remaining three intersections, these locations are not expected to meet any of the traffic-volume based warrants of the MUTCD to install a traffic signal.





# Legend

Full Movement Intersection

RI-RO 3/4 Movement Intersection

3/4 Right-In/Right-Out Intersection

RI Right-In Only

Figure 8
Existing Access Types



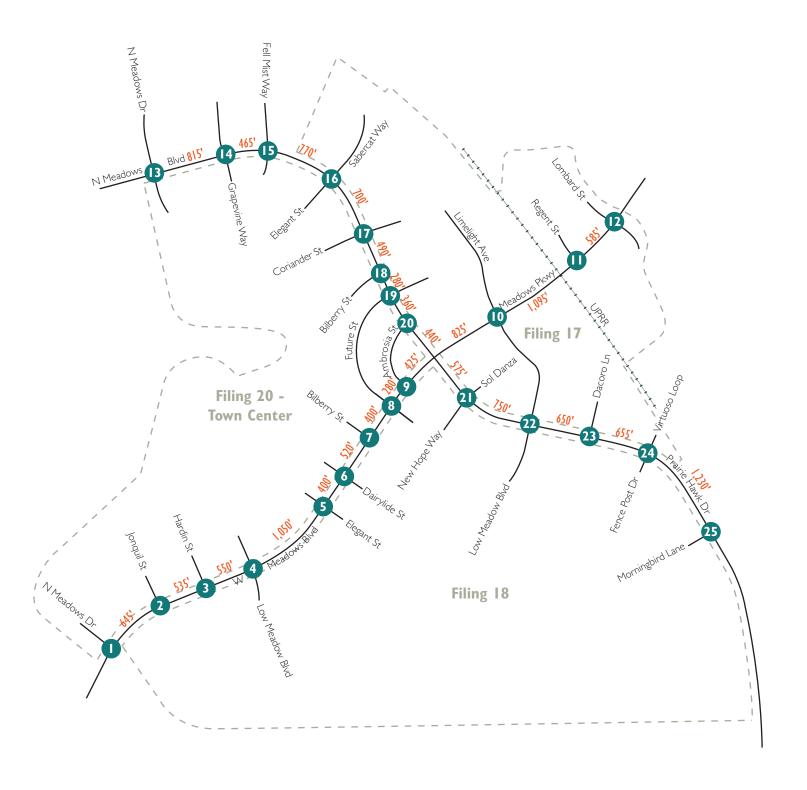


Figure 9
Existing Access Spacing



## IV.C. Auxiliary Lane Modifications

The Town of Castle Rock includes information in their *Transportation Design Criteria Manual* (the *Manual*) that summarizes the dimensional requirements for when left turn or right turn deceleration lanes are installed. It also states that the need for deceleration lanes shall be determined through an analysis contained in the traffic study. As such, an assessment was made to determine if new auxiliary lanes should be added at intersections along the arterial street system that currently do not have them. That assessment was based on the level of traffic volumes projected for each auxiliary lane and the results of the *Manual* criterion.

#### Right Turn Deceleration Lanes

For these auxiliary lanes, operational analyses will typically find that right turn movements will operate well with or without an exclusive right turn lane. As such, engineering judgment must be used to determine the true operational value of a right turn lane.

To make this judgment, the level of right turn movements must be considered. For the purposes of this assessment, a value of two right turn movements per minute is judged to be the criterion for installing a right turn lane (one every 30 seconds on average). Because right turn vehicles typically do not stop before completing their maneuver, only to slow down to an acceptable speed, the impact to motorists behind them is limited.

If considered an acceptable procedure, right turn deceleration lanes are not needed for movements with less than 120 right turn vehicles per hour. Keep in mind that the traffic volume projections contained in this report are for the two highest hours of vehicle traffic for a typical weekday. As such, there is less of a need for a right turn lane during other hours of a weekday and on weekends when there are fewer right turn movements.

The Town of Castle Rock and Castle Rock Development Company have installed right turn deceleration lanes on intersection approaches based on information contained in the original *Access Plan*. As such, when considering the criterion proposed above, only one new right turn deceleration lane is required—in the southbound direction at the Prairie Hawk Drive/Limelight Avenue/Low Meadow Boulevard intersection. This deceleration lane is currently being constructed as part of the Prairie Hawk Drive widening project. As such, no other right turn lane installations are needed.

#### Left Turn Deceleration Lanes

An assessment was conducted to understand whether any modifications to the length of existing left turn lanes should be made given current knowledge on projected traffic volumes. **Table 5** summarizes each of the existing (or future) left turn lanes, and it recommends a few changes to the left turn lane dimensions along Meadows Parkway or Meadows Boulevard based on information contained in the *Manual*, if necessary. Left turn lane dimensions on Prairie Hawk Drive are deemed sufficient for the projected traffic volumes.



 Table 5.
 Left Turn Deceleration Lane Modifications

Intersection	Direction	Highest Peak Hour Volume	Required Vehicle Storage	Existing Vehicle Storage	Recommendation
1 – W. Meadows	EB M.B. onto NB N.M.D. 15 (PM)		25'	120'	No Change
Boulevard/ N. Meadows Drive	SB N.M.D. onto EB M.B.	50 (AM)	50'	Design Plans = 150'	Develop When Constructed
2 – W. Meadows Boulevard/ Jonquil St.	EB M.B. onto NB Jonquil	15 (PM)	25'	100'	No Change
	EB M.B. onto NB L.M.	20 (AM/PM)	25'	100'	No Chango
A W Mandawa	WB M.B. onto SB L.M.	135 (PM)	135'	150'	No Change
4 – W. Meadows Boulevard/Low Meadow Drive	SB L.M. onto EB M.B.	265 (AM)	265'	Striped= 75'	Re-Stripe Toward Celestial Avenue When Apex Charter School Opens
	NB L.M. onto WB M.B.	90 (AM)	100'	100'	No Change
	EB M.B. onto NB Elegant	35 (PM)	50'	100'	
5 – W. Meadows Boulevard/	WB M.B. onto SB Elegant	15 (PM)	25'	100'	No Change
Elegant Street	SB Elegant onto EB M.B.	255 (AM)	255'	Striped= 75'	Re-Stripe Toward Celestial Avenue When Apex Charter School Opens
6 – W. Meadows	EB M.B. onto NB Dairylide	5 (AM/PM)	25'	100'	
Boulevard/ Dairylide St.	WB M.B. onto SB Dairylide	25 (PM)	25'	100'	No Change
	EB M.B. onto NB Future	40 (PM)	50'	100'	No Change
8 – W. Meadows	WB M.B. onto SB R.H.	240 (PM)	240'	125'	Increase WB Left Turn Lane by 115'
Boulevard/Future St./Red Hawk Dr.	SB Future onto EB M.B.	115 (AM/PM)	115'	Design Plans = 85'	Increase by 30' When Constructed
	NB R.H. onto WB M.B.	50 (PM)	100'	100'	No Change



Table 5. <u>Left Turn</u> Deceleration Lane Modifications (Continued)

Intersection	Direction	Highest Peak Hour Volume	Required Vehicle Storage	Existing Vehicle Storage	Recommendation
	EB M.P. onto NB Limelight	60 (AM)	50'	200'	
	WB M.P. onto SB Limelight	235 (PM)	235'	270'	No Change
10 – Meadows Parkway/Limelight Avenue	NB Limelight onto WB M.P.	60 (PM)	50'	125' (Each of 2 Lanes)	
	SB Limelight onto EB M.P.	270 (PM)	270'	200'	Revise Striping on SB Limelight from Left/Through/Right Lanes to Two Left Turn Lanes and a Shared Through/Right Lane
	EB M.P. onto NB Lombard	85 (AM)	100'	165'	No Change
42 Mandaus	WB M.P. onto SB Lombard	130 (AM)	130'	215'	No Change
12 – Meadows Parkway/Lombard Street	NB Lombard onto WB M.P.	95 (PM)	100'		Develop When
	SB Lombard onto EB M.P.	120 (PM)	120'	Design Plans = 150'	Constructed
	EB M.B. onto NB M.D.	465 (AM)	465'	345' (Each of 2 Lanes)	
13 – N. Meadows Boulevard/	WB M.B. onto SB M.D.	5 (AM/PM)	25'	115'	No Change
N. Meadows Drive	NB M.D. onto WB M.B.	205 (PM)	205'	>200'	
	SB M.D. onto EB M.B.	345 (SB)	345'	210'	Increase by 135' Via Striping Revisions when Needed
14 – N. Meadows Boulevard/ Grapevine Way	WB M.B. onto SB Grapevine	15 (PM)	25'	130'	No Change



Table 5. <u>Left Turn</u> Deceleration Lane Modifications (Continued)

Intersection	Direction	Highest Peak Hour Volume	Required Vehicle Storage	Existing Vehicle Storage	Recommendation
15 N Maadawa	EB M.B. into C.R. Middle School	Not an	Access Plan I		
15 –N. Meadows Boulevard/Fell Mist Way	WB M.B. onto Fell Mist	20 (PM)	25'	135'	No Change
	NB Fell Mist onto WB M.B.	10 (AM)	25'	70'	
	EB M.B. onto NB Sabercat	125 (AM)	125'	130'	
16 –N. Meadows Boulevard/Elegant Street/Sabercat Way	NB Elegant onto WB M.B.	35 (AM)	50'	75'	No Change
vvay	SB Sabercat onto EB M.B.	325 (PM)	325'	250'	Increase by 75' Via Striping Revisions when Needed
17 – N. Meadows Boulevard/	NB M.B. onto Coriander	95 (PM)	100'	150'	No Changa
Coriander Street	SB M.B. onto Coriander	20 (AM)	25'	150'	No Change
	NB M.B. onto Future	55 (AM)	50'	215'	
19 – N. Meadows	SB M.B. onto Future	15 (AM)	25'	150'	
Boulevard/ Future Street	EB Future onto NB M.B.	45 (PM)	50'	85'	No Change
	WB Future onto SB M.B.	50 (PM)	50'	75'	
21 – Prairie Hawk	NB P.H. onto N.H.	5 (AM/PM)	25'	90'	No Charage
Drive/New Hope Way/Sol Danza	SB P.H. onto S, D,	55 (AM)	50'	190'	No Change



 Table 5.
 Left Turn Deceleration Lane Modifications (Continued)

Intersection	Direction	Highest Peak Hour Volume	Required Vehicle Storage	Existing Vehicle Storage	Recommendation	
	NB P.H. onto L.M.	90 (PM)	100'	100'		
22 – Prairie Hawk Drive/Limelight	SB P.H. onto Limelight	65 (AM)	100'	100'	No Change	
Avenue/Low Meadow Boulevard	EB L.M. onto P.H.	205 (AM)	205'	>205'	No Change	
	WB Limelight onto P.H.	75 (PM)	100'	100'		
23 – Prairie Hawk Drive/ Dacoro Lane	SB P.H. onto Dacoro	100 (AM)	100'	125'	No Change	
24 – Prairie Hawk	NB P.H. onto F.P.	15 (PM)	25'	100'		
Drive/Virtuoso Loop/Fence Post Drive	SB P.H. onto Virtuoso	5 (AM/PM)	25'	100'	No Change	
25 – Prairie Hawk Drive/Morningbird Lane	NB P.H. onto Morningbird	20 (PM)	25'	100'	No Change	



## V. SUMMARY

An analysis of trip generation, access locations, intersection geometry, operational conditions, and auxiliary lane requirements has been conducted for the projected future conditions when build-out of Filings 17, 18 and 20 of The Meadows subdivision is completed. The results of these analyses are contained in this report and the salient findings include:

- Trip generation for the build-out of these filings is somewhat similar to what was
  predicted in 2004 within certain parameters. Vehicle-trips on a daily basis are estimated
  to be lower given the overall reduction in density. Peak hour trips are projected to be
  higher during the AM peak hour and relatively equal or somewhat lower during the PM
  peak hour.
- The analyses have concluded that the existing access locations along Meadows
  Boulevard, Meadows Parkway, and Prairie Hawk Drive can continue to have the same
  type of access movements as what was proposed in the 2004 Access Plan (see
  Figure 8). Full-movement intersections and ones with vehicle movement restrictions
  should remain as currently constructed. A few auxiliary lane modifications are
  necessary, however, to meet the projected vehicle demands for certain movements (see
  Table 5).
- Six additional intersections are expected to require traffic signalization by build-out of Filings 17, 18 and 20 to satisfy the projected vehicle demand. These intersections were also identified in 2004 as needing traffic signalization.
  - West Meadows Boulevard/Low Meadows Boulevard
  - West Meadows Boulevard/Elegant Street
  - West Meadows Boulevard/Future Street/Red Hawk Drive
  - Meadows Parkway/Lombard Street
  - North Meadows Boulevard/Future Street
  - Prairie Hawk Drive/Limelight Avenue/Low Meadows Boulevard
- Intersection levels of service (LOS) are projected to operate well, with LOS D or better expected for each intersection controlled by a traffic signal. Stop-sign controlled intersections are also projected to operate well with only a few movements operating below LOS D (Fence Post/Virtuoso Loop along Prairie Hawk Drive) and only during the PM peak hour (see Figure 5 and Figure 6). All other hours of a typical weekday or on a weekend are projected to operate better. Traffic signalization or access restrictions are not recommended at these two intersections.

The projected traffic volumes, trip distribution, and resultant recommendations are based on the entire build-out of Filings 17, 18 and 20. Keep in mind that any recommendations contained in this addendum may not be needed for some time. It will be necessary for the Town of Castle Rock to monitor the intersections along The Meadows arterial street system to determine if and when infrastructure improvements should occur. Also, land use assumptions for undeveloped parcels may change as development in The Meadows continues and as economic trends dictate.



# APPENDIX A NCHRP INTERNAL CAPTURE WORKSHEETS



	NCHRP 684 Internal Trip Capture Estimation Tool								
Project Name:	Meadows Arterial Access Plan Update		Organization:	Felsburg Holt & Ullevig					
Project Location:	Meadows-Castle Rock, CO		Performed By:	RRF					
Scenario Description:	AM Peak Hour		Date:	October 2017					
Analysis Year:	2017		Checked By:						
Analysis Period:	AM Street Peak Hour		Date:						

		ent Data (For Info		1	Estimates (Single-Use Site Estimate)  Estimated Vehicle-Trips <sup>3</sup>			
Land Use		,	, ,					
	ITE LUCs <sup>1</sup>	Quantity	Units	Total	Entering	Exiting		
Office		83,000	SF	130	114	16		
Retail		65,000	SF	323	162	161		
Restaurant				0				
Cinema/Entertainment				0				
Residential		1,782	DU	1,176	270	906		
Hotel				0				
All Other Land Uses <sup>2</sup>				0				
				1,629	546	1,083		

Table 2-A: Mode Split and Vehicle Occupancy Estimates								
Land Use		Entering Tri	ps		Exiting Trips			
Land USE	Veh. Occ.4	% Transit	% Non-Motorized		Veh. Occ.4	% Transit	% Non-Motorized	
Office								
Retail								
Restaurant								
Cinema/Entertainment								
Residential								
Hotel								
All Other Land Uses <sup>2</sup>								

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)								
Origin (From)	Destination (To)							
Origin (From)	Office	Office Retail Restaurant Cinema/Entertainment		Residential	Hotel			
Office								
Retail								
Restaurant								
Cinema/Entertainment								
Residential								
Hotel								

Table 4-A: Internal Person-Trip Origin-Destination Matrix*								
Origin (From)		Destination (To)						
Origin (From)	Office	Office Retail Restaurant Cinema/Entertainment		Residential	Hotel			
Office		4	0	0	0	0		
Retail	5		0	0	5	0		
Restaurant	0	0		0	0	0		
Cinema/Entertainment	0	0	0		0	0		
Residential	3	9	0	0		0		
Hotel	0	0	0	0	0			

Table 5-A: Computations Summary							
	Total	Entering	Exiting				
All Person-Trips	1,629	546	1,083				
Internal Capture Percentage	3%	5%	2%				
External Vehicle-Trips <sup>5</sup>	1,577	520	1,057				
External Transit-Trips <sup>6</sup>	0	0	0				
External Non-Motorized Trips <sup>6</sup>	0	0	0				

Table 6-A: Internal Trip Capture Percentages by Land Use							
Land Use	Entering Trips	Exiting Trips					
Office	7%	25%					
Retail	8%	6%					
Restaurant	N/A	N/A					
Cinema/Entertainment	N/A	N/A					
Residential	2%	1%					
Hotel	N/A	N/A					

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual* ).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

	NCHRP 684 Internal Trip Capture Estimation Tool							
Project Name:	Meadows Arterial Access Plan Update		Organization:	Felsburg Holt & Ullevig				
Project Location:	Meadows-Castle Rock, CO		Performed By:	RRF				
Scenario Description:	PM Peak Hour		Date:	October 2017				
Analysis Year:	2017		Checked By:					
Analysis Period:	PM Street Peak Hour		Date:					

	Table 1	-P: Base Vehicl	e-Trip Generatior	ı Es	timates (Single-Use Si	te Estimate)	
Land Use	Developme	ent Data ( <i>For Inf</i>	ormation Only)			Estimated Vehicle-Trips <sup>3</sup>	
Land Ose	ITE LUCs1	Quantity	Units		Total	Entering	Exiting
Office		83,000	SF		124	21	103
Retail		65,000	SF		450	213	237
Restaurant					0		
Cinema/Entertainment					0		
Residential		1,782	DU		1,500	960	540
Hotel					0		
All Other Land Uses <sup>2</sup>					0		
					2,074	1,194	880

		Table 2-P:	Mode Split and Vehi	cle Occ	upancy Estimates	3	
Land Use		Entering Tri	ps			Exiting Trips	
Land Use	Veh. Occ.4	% Transit	% Non-Motorized		Veh. Occ.4	% Transit	% Non-Motorized
Office							
Retail							
Restaurant							
Cinema/Entertainment							
Residential							
Hotel							
All Other Land Uses <sup>2</sup>							

	Table 3	3-P: Average L	and Use Interchan	ge Distances (Feet Walking	Distance)	
Origin (From)				Destination (To)		
Oligili (Floili)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

		Table 4-P: Ir	nternal Person-Trip	Origin-Destination Matrix	*	
Origin (Fram)				Destination (To)		
Origin (From)	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	0	0	2	0
Retail	5		0	0	62	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	12	21	0	0		0
Hotel	0	0	0	0	0	

Table 5-F	: Computatio	ns Summary	
	Total	Entering	Exiting
All Person-Trips	2,074	1,194	880
Internal Capture Percentage	11%	10%	14%
External Vehicle-Trips <sup>5</sup>	1,836	1,075	761
External Transit-Trips <sup>6</sup>	0	0	0
External Non-Motorized Trips <sup>6</sup>	0	0	0

Table 6-P: Interna	al Trip Capture Percentaç	ges by Land Use
Land Use	Entering Trips	Exiting Trips
Office	81%	18%
Retail	18%	28%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	7%	6%
Hotel	N/A	N/A

<sup>1</sup>Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

<sup>2</sup>Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

<sup>3</sup>Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

<sup>4</sup>Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be

<sup>5</sup>Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

<sup>6</sup>Person-Trips

\*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

# APPENDIX B LEVEL OF SERVICE ANALYSIS WORKSHEETS



Intersection							Į
Int Delay, s/veh	0.9						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	7	<b>^</b>	<b>†</b>	ופייי	JDL	7 JUN	
Traffic Vol, veh/h	<b>'1</b> 5	<b>TT</b> 1100	<b>T</b> ₱ 365	10	50	15	
Future Vol, veh/h	5	1100	365	10	50	15	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-		310p	None	
	120			None -	100		
Storage Length		-	-			0	
Veh in Median Storage		0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	5	1196	397	11	54	16	
Major/Minor	Major1	1	Major2	N	Minor2		Ī
Conflicting Flow All	408	0	viajoi z	0	1011	204	
Stage 1	400	-	-	-	402	204	
Stage 2	-	-	-	-	609	-	
Critical Hdwy	4.14	-			6.84	6.94	
	4.14	-	-	-			
Critical Hdwy Stg 1	-	-	-	-	5.84	-	
Critical Hdwy Stg 2	-	-	-	-	5.84	-	
Follow-up Hdwy	2.22	-	-	-	3.52	3.32	
Pot Cap-1 Maneuver	1147	-	-	-	236	803	
Stage 1	-	-	-	-	644	-	
Stage 2	-	-	-	-	505	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1147	-	-	-	235	803	
Mov Cap-2 Maneuver	-	-	-	-	235	-	
Stage 1	-	-	-	-	644	-	
Stage 2	-	-	-	-	503	-	
·							
Annraach	ED		WD		CD		
Approach	EB		WB		SB		
HCM Control Delay, s	0		0		21.4		
HCM LOS					С		
Minor Lane/Major Mvn	nt	EBL	EBT	WBT	WBR	SBLn1 S	ŞI
Capacity (veh/h)		1147	-		VVDIC	235	<i>,</i>
HCM Lane V/C Ratio		0.005	-	-		0.231	
HCM Control Delay (s)	١		-	-			
	1	8.2	-	-	-	24.9 C	
		٨					
HCM Lane LOS HCM 95th %tile Q(veh		A 0	-	-	-	0.9	

0.2					
EBL	EBT	WBT	WBR	SBL	SBR
					7
			25	0	15
		360	25	0	15
					0
					Stop
_				_	None
100	-	-	-	-	0
	0	0	-	0	-
_			-		-
92			92		92
					2
					16
U	7 10	071	21	U	10
		Major2		Minor2	
418	0	-	0	-	209
-	-	-	-	-	-
-	-	-	-	-	-
4.14	-	-	-	-	6.94
-	-	-	-	-	-
-	-	-	-	-	-
2.22	-	-	-	-	3.32
1138	-	-	-	0	797
-	-	-	-	0	-
-	-	-	-	0	-
	-	_	-		
1138	-	-	_	-	797
	_	_	_	_	-
	-	_	_	_	_
	_	_	_	_	_
EB		WB			
0.1		0		9.6	
				Α	
ł	FRI	FRT	WRT	W/RR '	SRI n1
		LDI	VVDI	VVDIX .	
	0.005	-	-	-	797
	けいけつ	-	-	-	0.02
	8.2	-	-	-	9.6
		-	-	-	9.6 A 0.1
	55 0 Free - 100 # - 92 2 5  Major1 418 4.14 2.22 1138 1138 EB	EBL EBT  5 685 5 685 0 0 0 Free Free - None 100 - # - 0 92 92 2 2 5 745  Major1 N 418 0 4.14 2.22 - 1138 1138 1138  EB  0.1	EBL         EBT         WBT           5         685         360           5         685         360           0         0         0           Free         Free         Free           - None         -         -           # -         0         0           92         92         92           2         2         2           5         745         391           Major1         Major2           418         0         -           -         -         -           4.14         -         -           -         -         -           2.22         -         -           1138         -         -           -         -         -           1138         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           -         -         -           - <td>EBL         EBT         WBT         WBR           5         685         360         25           5         685         360         25           0         0         0         0           Free         Free         Free         Free           - None         - None         100         -           # - 0         0         -         -           # - 0         0         -         -           92         92         92         92           2 2         2         2         2           5         745         391         27           Major1         Major2         N           418         0         -         0          </td> <td>EBL         EBT         WBT         WBR         SBL           5         685         360         25         0           5         685         360         25         0           0         0         0         0         0           Free         Free         Free         Stop           - None         - None         -         -           100         - None         -         0           4 - None         - None         -         0           92         92         92         92         92           92</td>	EBL         EBT         WBT         WBR           5         685         360         25           5         685         360         25           0         0         0         0           Free         Free         Free         Free           - None         - None         100         -           # - 0         0         -         -           # - 0         0         -         -           92         92         92         92           2 2         2         2         2           5         745         391         27           Major1         Major2         N           418         0         -         0	EBL         EBT         WBT         WBR         SBL           5         685         360         25         0           5         685         360         25         0           0         0         0         0         0           Free         Free         Free         Stop           - None         - None         -         -           100         - None         -         0           4 - None         - None         -         0           92         92         92         92         92           92

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
	EBL			WDK	SDL	
Lane Configurations		<b>^</b>	<b>↑</b> ↑	_	_	7
Traffic Vol, veh/h	0	685	380	5	0	5
Future Vol, veh/h	0	685	380	5	0	5
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
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	_	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	745	413	5	0	5
WWITH FIOW	U	743	413	3	U	ິນ
Major/Minor	Major1	<u> </u>	Major2	N	/linor2	
Conflicting Flow All	-	0		0	-	209
Stage 1		-	_	-	-	
Stage 2	_	_		_	_	_
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	_		-	0.74
			-	-		-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	797
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	797
Mov Cap-2 Maneuver	-	_	_	_		_
Stage 1	_	_	_	_	_	_
Stage 2	_	_				
Staye 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		9.5	
HCM LOS	Ū		Ū		A	
TOW LOO					, ,	
Minor Lane/Major Mvm	nt	EBT	WBT	WBR S	SBL <sub>n1</sub>	
Capacity (veh/h)		-		-	797	
HCM Lane V/C Ratio		-	_	-	0.007	
HCM Control Delay (s)		_	_	_	9.5	
			_	_	Α.	
HCM Lane LOS						
HCM Lane LOS HCM 95th %tile Q(veh	)	-	_	_	0	

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	/	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	*	<b>^</b>	7	7	<b>^</b>	7		ર્ન	7	Ţ	ĵ.	
Traffic Volume (vph)	20	950	45	70	305	170	85	5	205	265	10	25
Future Volume (vph)	20	950	45	70	305	170	85	5	205	265	10	25
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1779	1583	1770	1663	0
Flt Permitted	0.551			0.182				0.709		0.515		
Satd. Flow (perm)	1026	3539	1583	339	3539	1583	0	1321	1583	959	1663	0
Satd. Flow (RTOR)			127			185			218		27	
Lane Group Flow (vph)	22	1033	49	76	332	185	0	97	223	288	38	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Total Split (s)	12.0	45.0	45.0	12.0	45.0	45.0	21.0	21.0	21.0	12.0	33.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		5.5	5.5	4.0	5.5	
Act Effct Green (s)	52.9	46.0	46.0	55.9	50.8	50.8		11.5	11.5	25.0	23.5	
Actuated g/C Ratio	0.59	0.51	0.51	0.62	0.56	0.56		0.13	0.13	0.28	0.26	
v/c Ratio	0.03	0.57	0.06	0.24	0.17	0.19		0.57	0.57	0.85	0.08	
Control Delay	7.5	18.3	0.1	10.8	7.5	0.9		49.6	11.5	52.2	12.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	7.5	18.3	0.1	10.8	7.5	0.9		49.6	11.5	52.2	12.1	
LOS	А	В	Α	В	Α	Α		D	В	D	В	
Approach Delay		17.2			5.9			23.0			47.6	
Approach LOS		В			Α			С			D	
Queue Length 50th (ft)	4	215	0	9	24	0		52	3	140	5	
Queue Length 95th (ft)	14	310	0	31	38	9		99	63	#238	27	
Internal Link Dist (ft)		465			950			307			239	
Turn Bay Length (ft)	100		100	150		100			115	75		
Base Capacity (vph)	686	1808	870	338	1996	973		227	453	339	526	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.03	0.57	0.06	0.22	0.17	0.19		0.43	0.49	0.85	0.07	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 28 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 19.4

Intersection Capacity Utilization 67.8%

Intersection LOS: B ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 51: Low Meadow/Freelark



Build-Out LOS

Felsburg Holt & Ullevig

Synchro 9 Report Page 1

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>∱</b> ∱		ň	<b>^</b>	7		4		ň	f)	
Traffic Volume (vph)	25	1200	5	5	505	165	5	5	15	255	5	35
Future Volume (vph)	25	1200	5	5	505	165	5	5	15	255	5	35
Satd. Flow (prot)	1770	3536	0	1770	3539	1583	0	1691	0	1770	1615	0
Flt Permitted	0.421			0.148				0.922		0.587		
Satd. Flow (perm)	784	3536	0	276	3539	1583	0	1575	0	1093	1615	0
Satd. Flow (RTOR)						179		16			38	
Lane Group Flow (vph)	27	1309	0	5	549	179	0	26	0	277	43	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6		6	8			4		
Total Split (s)	12.0	34.0		12.0	34.0	34.0	27.0	27.0		17.0	44.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5	5.5		5.5		5.0	4.5	
Act Effct Green (s)	63.2	60.3		61.9	58.0	58.0		6.4		17.2	17.7	
Actuated g/C Ratio	0.70	0.67		0.69	0.64	0.64		0.07		0.19	0.20	
v/c Ratio	0.04	0.55		0.02	0.24	0.17		0.20		0.93	0.12	
Control Delay	4.3	7.2		6.2	9.2	2.5		27.1		70.9	10.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	4.3	7.2		6.2	9.2	2.5		27.1		70.9	10.4	
LOS	А	А		Α	Α	Α		С		Е	В	
Approach Delay		7.2			7.6			27.1			62.7	
Approach LOS		Α			Α			С			Е	
Queue Length 50th (ft)	2	76		1	39	0		6		~190	3	
Queue Length 95th (ft)	m7	214		5	134	33		30		#215	26	
Internal Link Dist (ft)		950			321			181			163	
Turn Bay Length (ft)	100			100		115				75		
Base Capacity (vph)	639	2369		325	2282	1084		388		299	730	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.04	0.55		0.02	0.24	0.17		0.07		0.93	0.06	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 31 (34%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 14.9

Intersection Capacity Utilization 62.5%

Intersection LOS: B ICU Level of Service B

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ħβ		ሻ	ħβ				7			7
Traffic Vol, veh/h	5	1320	5	10	670	10	0	0	5	0	0	20
Future Vol, veh/h	5	1320	5	10	670	10	0	0	5	0	0	20
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	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
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	5	1435	5	11	728	11	0	0	5	0	0	22
Major/Minor N	/lajor1			Major2		N	/linor1		N	/linor2		
Conflicting Flow All	739	0	0	1440	0	0		_	720		_	370
Stage 1	-	-	-	-	-	-	-	-		-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	_
Critical Hdwy	4.14	_	-	4.14	-	-	-	_	6.94	-	_	6.94
Critical Hdwy Stg 1	-	-	_	_	_	-	_	-	_	-	_	_
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	_	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	863	-	-	467	-	-	0	0	370	0	0	627
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	863	-	-	467	-	-	-	-	370	-	-	627
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	_
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Ŭ												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			14.9			10.9		
HCM LOS	U			0.2			B			В		
TOW LOS							ט			D		
Minor Lane/Major Mvmt	ı N	IDI n1	[DI	[DT	EBR	WBL	MPT	WPD	CDI n1			
	ı I	VBLn1	EBL	EBT			WBT	WBR S				
Capacity (veh/h)		370	863	-	-	467	-	-	627			
HCM Cantral Dalay (a)		0.015		-		0.023	-		0.035			
HCM Long LOS		14.9	9.2	-	-	12.9	-	-	10.9			
HCM Lane LOS		В	A	-	-	B	-	-	B			
HCM 95th %tile Q(veh)		0	0	-	-	0.1	-	-	0.1			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>^</b>	<b>^</b>	7	ODL	7
Traffic Vol, veh/h	0	1340	665	25	0	25
Future Vol, veh/h	0	1340	665	25	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	115	-	0
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1457	723	27	0	27
Major/Minor	Major1	N	//oior?	N	Minor2	
	Major1		Major2			241
Conflicting Flow All	-	0	-	0	-	361
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	- / 04
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	636
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		,
Mov Cap-1 Maneuver	-	-	-	-	-	636
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		10.9	
HCM LOS	U		U		В	
TIGIVI EUS					ט	
Minor Lane/Major Mvn	nt	EBT	WBT	WBR S		
Capacity (veh/h)		-	-	-	636	
HCM Lane V/C Ratio		-	-	-	0.043	
HCM Control Delay (s)		-	-	-	10.9	
HCM Lane LOS		-	-	-	В	
HCM 95th %tile Q(veh	)	-	-	-	0.1	

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	۲	<b>^</b>	7	7	<b>†</b>	7	Ť	f)		J.	f)	
Traffic Volume (vph)	35	1255	50	210	625	50	50	20	250	115	25	15
Future Volume (vph)	35	1255	50	210	625	50	50	20	250	115	25	15
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1604	0	1770	1758	0
Flt Permitted	0.393			0.095			0.729			0.233		
Satd. Flow (perm)	732	3539	1583	177	3539	1583	1358	1604	0	434	1758	0
Satd. Flow (RTOR)			100			100		221			16	
Lane Group Flow (vph)	38	1364	54	228	679	54	54	294	0	125	43	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	16.0	61.0	61.0	19.0	64.0	64.0	27.0	27.0		13.0	40.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.5	5.5		4.5	5.5	
Act Effct Green (s)	72.0	63.6	63.6	84.8	76.3	76.3	12.7	12.7		26.7	25.7	
Actuated g/C Ratio	0.60	0.53	0.53	0.71	0.64	0.64	0.11	0.11		0.22	0.21	
v/c Ratio	0.08	0.73	0.06	0.70	0.30	0.05	0.38	0.80		0.65	0.11	
Control Delay	7.9	26.1	0.5	50.4	5.3	0.1	54.8	30.3		54.1	24.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	7.9	26.1	0.5	50.4	5.3	0.1	54.8	30.3		54.1	24.9	
LOS	А	С	Α	D	А	Α	D	С		D	С	
Approach Delay		24.7			15.7			34.1			46.6	
Approach LOS		С			В			С			D	
Queue Length 50th (ft)	8	417	0	114	53	0	40	54		82	17	
Queue Length 95th (ft)	24	579	3	#231	84	m1	75	144		125	44	
Internal Link Dist (ft)		316			208			329			163	
Turn Bay Length (ft)	100		115	125		120	150			50		
Base Capacity (vph)	577	1875	885	341	2249	1042	243	468		191	516	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.07	0.73	0.06	0.67	0.30	0.05	0.22	0.63		0.65	0.08	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 21 (18%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 24.1

Intersection Capacity Utilization 85.9%

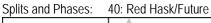
Intersection LOS: C ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.





Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
	LDL				JDL	
Lane Configurations	0	<b>^</b>	<b>^</b>		0	<b>*</b>
Traffic Vol, veh/h	0	1620	870	65	0	15
Future Vol, veh/h	0	1620	870	65	0	15
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storag	je,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1761	946	71	0	16
WWW. TOW	U	1701	710	, ,	U	10
Major/Minor	Major1	N	Major2	N	Minor2	
Conflicting Flow All	-	0	-	0	-	473
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	_	_	_	-	-
Critical Hdwy Stg 2	_	_	_	_	_	_
Follow-up Hdwy	_	_	_	_	_	3.32
Pot Cap-1 Maneuver	0	_	_	_	0	538
Stage 1	0	_	_	_	0	330
Stage 2	0	-	-	-	0	-
	U	-	-	-	U	-
Platoon blocked, %		-	-	-		F20
Mov Cap-1 Maneuver		-	-	-	-	538
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Annroach	EB		WB		SB	
Approach						
HCM Control Delay, s	6 0		0		11.9	
HCM LOS					В	
Minor Lane/Major Mvi	mt	EBT	WBT	WBR S	SBI n1	
Capacity (veh/h)			1101	-	538	
		-	-	-	0.03	
HI JUL SUC III. DOTIO		-	-			
HCM Control Dolay (c	•1			-	11.9	
HCM Control Delay (s	s)	-				
		-	-	-	B 0.1	

	۶	<b>→</b>	$\searrow$	•	<b>←</b>	•	1	<b>†</b>	/	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1/1	<b>^</b>	7	1,1	<b>†</b> †	7	1/4	<b>^</b>	7	77	<b>^</b>	7
Traffic Volume (vph)	345	1085	190	285	605	535	145	380	375	525	365	185
Future Volume (vph)	345	1085	190	285	605	535	145	380	375	525	365	185
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.269			0.098			0.518			0.291		
Satd. Flow (perm)	972	3539	1583	354	3539	1583	1872	3539	1583	1052	3539	1583
Satd. Flow (RTOR)			155			353			280			201
Lane Group Flow (vph)	375	1179	207	310	658	582	158	413	408	571	397	201
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		Free	8		8	4		4
Total Split (s)	19.0	33.0	33.0	19.0	33.0		17.0	24.0	24.0	44.0	51.0	51.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.5	6.5	4.5	6.5	6.5
Act Effct Green (s)	56.0	42.0	42.0	54.0	41.0	120.0	32.8	22.1	22.1	51.5	36.2	36.2
Actuated g/C Ratio	0.47	0.35	0.35	0.45	0.34	1.00	0.27	0.18	0.18	0.43	0.30	0.30
v/c Ratio	0.53	0.95	0.32	0.68	0.54	0.37	0.25	0.63	0.79	0.63	0.37	0.33
Control Delay	21.1	46.6	10.9	46.2	61.7	0.5	21.7	49.1	25.4	21.4	28.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	1.3	0.0	0.0
Total Delay	21.1	46.6	10.9	46.2	61.7	0.5	21.7	49.1	28.8	22.7	28.3	4.0
LOS	С	D	В	D	Е	Α	С	D	С	С	С	Α
Approach Delay		37.0			35.6			36.2			21.4	
Approach LOS		D			D			D			С	
Queue Length 50th (ft)	57	246	7	127	287	0	37	157	95	126	129	28
Queue Length 95th (ft)	118	#792	m72	179	#351	0	47	196	206	74	140	37
Internal Link Dist (ft)		369			730			462			371	
Turn Bay Length (ft)	155		110	230		150	180		100	290		155
Base Capacity (vph)	767	1238	654	539	1209	1583	733	667	525	1235	1328	719
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	56	435	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.95	0.32	0.58	0.54	0.37	0.22	0.62	0.87	0.71	0.30	0.28

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 33.1

Intersection Capacity Utilization 82.4%

Intersection LOS: C ICU Level of Service E

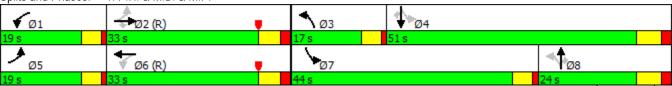
Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: P.H. & M.B. & M.P.



	•	<b>→</b>	•	•	•	•	•	<b>†</b>	/	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>^</b>	7	44	<b>^</b>	7	7	f)		ሻሻ	<b>₽</b>	_
Traffic Volume (vph)	60	1885	40	205	1365	145	40	10	185	70	5	20
Future Volume (vph)	60	1885	40	205	1365	145	40	10	185	70	5	20
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	1598	0	3433	1635	0
Flt Permitted	0.111			0.054			0.740			0.452		
Satd. Flow (perm)	207	3539	1583	195	3539	1583	1378	1598	0	1633	1635	0
Satd. Flow (RTOR)			100			158		80			22	
Lane Group Flow (vph)	65	2049	43	223	1484	158	43	212	0	76	27	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	12.0	77.0	77.0	14.0	79.0	79.0	29.0	29.0		29.0	29.0	
Total Lost Time (s)	7.0	6.0	6.0	7.0	6.0	6.0	7.0	7.0		7.0	7.0	
Act Effct Green (s)	75.0	71.0	71.0	80.0	75.4	75.4	22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.62	0.59	0.59	0.67	0.63	0.63	0.18	0.18		0.18	0.18	
v/c Ratio	0.34	0.98	0.04	0.70	0.67	0.15	0.17	0.59		0.25	0.09	
Control Delay	9.4	33.0	0.1	34.1	25.1	4.3	43.5	35.1		44.6	19.2	
Queue Delay	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.4	49.8	0.1	34.1	25.1	4.3	43.5	35.1		44.6	19.2	
LOS	Α	D	Α	С	С	Α	D	D		D	В	
Approach Delay		47.6			24.4			36.5			38.0	
Approach LOS		D			С			D			D	
Queue Length 50th (ft)	3	808	0	29	635	30	28	93		26	3	
Queue Length 95th (ft)	m11	m#970	m1	m68	716	m32	63	177		50	30	
Internal Link Dist (ft)		730			1326			566			560	
Turn Bay Length (ft)	200			200		300	125			200		
Base Capacity (vph)	194	2094	977	319	2223	1053	252	358		299	317	
Starvation Cap Reductn	0	125	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.34	1.04	0.04	0.70	0.67	0.15	0.17	0.59		0.25	0.09	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 58 (48%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 36.9

Intersection Capacity Utilization 97.4%

Intersection LOS: D ICU Level of Service F

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Limelight & M.P.



Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>^</b>	<b>†</b>			7
Traffic Vol, veh/h	0	2140	1685	20	0	40
Future Vol, veh/h	0	2140	1685	20	0	40
Conflicting Peds, #/hr		0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	Free	- -	Stop
Storage Length	_	NOTIC -		-	_	3iop
Veh in Median Storag		0	0	-	0	-
Grade, %	E,# -	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2326	1832	22	0	43
Major/Minor	Major1		Major2	١	/linor2	
Conflicting Flow All		0		0	_	916
Stage 1	-	-	_	-	_	-
Stage 2	_	_	_	_		_
Critical Hdwy	_	_	_	_	_	6.94
Critical Hdwy Stg 1	_			_		0.74
Critical Hdwy Stg 2	-		-	-	_	-
Follow-up Hdwy		-	-			3.32
	-		-	-	-	
Pot Cap-1 Maneuver	0	-	-	0	0	275
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver		-	-	-	-	275
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Annroach	EB		WB		SB	
Approach						
HCM Control Delay, s	0		0		20.5	
HCM LOS					С	
Minor Lane/Major Mvi	mt	EBT	WBT:	SBLn1		
Capacity (veh/h)		-	-			
HCM Lane V/C Ratio		_		0.158		
HCM Control Delay (s	;)	_	-			
HCM Lane LOS		_	_	C C		
HCM 95th %tile Q(vel	h)	_	_	0.6		
1101VI 73111 701116 Q(VEI	11)			0.0		

	۶	<b>→</b>	$\rightarrow$	•	•	•	4	<b>†</b>	<b>/</b>	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>∱</b> ∱		7	<b>^</b>	7	ň	ĵ.		7	f)	
Traffic Volume (vph)	85	1950	105	130	1675	85	15	5	20	70	5	15
Future Volume (vph)	85	1950	105	130	1675	85	15	5	20	70	5	15
Satd. Flow (prot)	1770	3511	0	1770	3539	1583	1770	1635	0	1770	1650	0
Flt Permitted	0.068			0.049			0.784			0.417		
Satd. Flow (perm)	127	3511	0	91	3539	1583	1460	1635	0	777	1650	0
Satd. Flow (RTOR)		8				95		22			16	
Lane Group Flow (vph)	92	2234	0	141	1821	92	16	27	0	76	21	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Total Split (s)	12.0	73.0		12.0	73.0	73.0	12.0	21.0		14.0	23.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Act Effct Green (s)	89.4	81.5		96.6	85.2	85.2	10.6	6.4		14.8	10.8	
Actuated g/C Ratio	0.74	0.68		0.80	0.71	0.71	0.09	0.05		0.12	0.09	
v/c Ratio	0.46	0.94		0.60	0.73	0.08	0.11	0.25		0.46	0.13	
Control Delay	16.3	32.3		24.8	25.9	5.6	43.5	30.1		53.7	27.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	32.3		24.8	25.9	5.6	43.5	30.1		53.7	27.8	
LOS	В	С		С	С	Α	D	С		D	С	
Approach Delay		31.7			24.9			35.1			48.1	
Approach LOS		С			С			D			D	
Queue Length 50th (ft)	14	~996		54	686	13	11	4		52	3	
Queue Length 95th (ft)	m18 r	n#1032		101	817	m44	31	34		97	30	
Internal Link Dist (ft)		200			1007			565			580	
Turn Bay Length (ft)	165			215		215	100			100		
Base Capacity (vph)	213	2386		236	2511	1150	161	243		179	271	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.43	0.94		0.60	0.73	0.08	0.10	0.11		0.42	0.08	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 6 (5%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 29.0

Intersection Capacity Utilization 86.2%

Intersection LOS: C

ICU Level of Service E

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Office Access/Filing 17 & M.P.



	•	<b>→</b>	•	•	<b>←</b>	•	4	<b>†</b>	<b>/</b>	<b>\</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	ሻ	<b>^</b>	7	ሻሻ	<b>^</b>	7
Traffic Volume (vph)	5	200	5	210	110	120	5	465	250	465	585	30
Future Volume (vph)	5	200	5	210	110	120	5	465	250	465	585	30
Satd. Flow (prot)	0	1861	1583	0	1803	1583	1770	3539	1583	3433	3539	1583
Flt Permitted		0.999			0.968		0.410			0.287		
Satd. Flow (perm)	0	1861	1583	0	1803	1583	764	3539	1583	1037	3539	1583
Satd. Flow (RTOR)			200			200			272			145
Lane Group Flow (vph)	0	222	5	0	348	130	5	505	272	505	636	33
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		2
Total Split (s)	22.0	22.0	22.0	28.0	28.0	28.0	9.0	23.0	23.0	17.0	31.0	31.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	4.0	6.0	6.0	4.0	6.0	6.0
Act Effct Green (s)		14.5	14.5		20.6	20.6	28.8	21.5	21.5	39.8	36.0	36.0
Actuated g/C Ratio		0.16	0.16		0.23	0.23	0.32	0.24	0.24	0.44	0.40	0.40
v/c Ratio		0.74	0.01		0.84	0.25	0.02	0.60	0.47	0.64	0.45	0.05
Control Delay		50.9	0.0		52.1	2.0	32.2	54.2	23.4	21.6	22.8	0.1
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		50.9	0.0		52.1	2.0	32.2	54.2	23.4	21.6	22.8	0.1
LOS		D	Α		D	Α	С	D	С	С	С	Α
Approach Delay		49.8			38.5			43.3			21.6	
Approach LOS		D			D			D			С	
Queue Length 50th (ft)		119	0		184	0	2	161	67	100	140	0
Queue Length 95th (ft)		194	0		#314	10	m6	216	123	141	226	0
Internal Link Dist (ft)		298			352			730			568	
Turn Bay Length (ft)			75			160	115		115	345		115
Base Capacity (vph)		341	453		450	545	303	844	584	807	1416	720
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.65	0.01		0.77	0.24	0.02	0.60	0.47	0.63	0.45	0.05

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 8 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 33.4

Intersection Capacity Utilization 71.8%

Intersection LOS: C

ICU Level of Service C

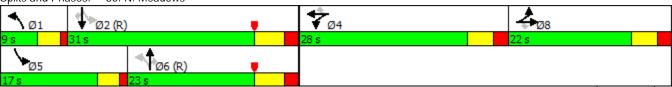
Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 35: N. Meadows



Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ሻ	ħβ			ħβ	
Traffic Vol, veh/h	0	0	15	0	0	5	5	715	15	0	795	5
Future Vol, veh/h	0	0	15	0	0	5	5	715	15	0	795	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	130	-	-	-	-	-
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	0	0	16	0	0	5	5	777	16	0	864	5
Major/Minor N	linor2			Minor1		N	/lajor1		N	/lajor2		
Conflicting Flow All	-	-	435	-	-	397	870	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-		-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	569	0	0	602	770	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	569	-	-	602	770	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.5			11			0.1			0		
HCM LOS	В			В								
				_								
Minor Lane/Major Mvmt	+	NBL	NBT	NBR F	EBLn1V	VBI n1	SBT	SBR				
Capacity (veh/h)		770	-	-	569	602	-	-				
HCM Lane V/C Ratio		0.007	_		0.029		_	_				
HCM Control Delay (s)		9.7	_			11		_				
HCM Lane LOS		Α.	-	-	В	В	_	_				
HCM 95th %tile Q(veh)		0	_	_	0.1	0	_	_				
1.5W 75W 70W Q(VCH)					0.1							

	۶	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	1	<b>†</b>	<b>/</b>	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	f)		ň	ĵ.		7	<b>^</b>	7	Ţ	ħβ	
Traffic Volume (vph)	10	5	20	150	5	205	5	510	225	150	655	5
Future Volume (vph)	10	5	20	150	5	205	5	510	225	150	655	5
Satd. Flow (prot)	1770	1635	0	1770	1589	0	1770	3539	1583	1770	3536	0
Flt Permitted				0.500			0.379			0.349		
Satd. Flow (perm)	1863	1635	0	931	1589	0	706	3539	1583	650	3536	0
Satd. Flow (RTOR)		22			223				245		1	
Lane Group Flow (vph)	11	27	0	163	228	0	5	554	245	163	717	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6		6	2		
Total Split (s)	10.0	23.0		10.0	23.0		12.0	45.0	45.0	12.0	45.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	6.0	6.0	4.0	6.0	
Act Effct Green (s)	10.4	7.4		12.1	9.4		46.6	39.0	39.0	69.1	65.1	
Actuated g/C Ratio	0.12	0.08		0.13	0.10		0.52	0.43	0.43	0.77	0.72	
v/c Ratio	0.05	0.18		0.87	0.62		0.01	0.36	0.30	0.20	0.28	
Control Delay	28.5	20.0		75.3	13.5		4.8	12.7	1.6	4.6	4.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	28.5	20.0		75.3	13.5		4.8	12.7	1.6	4.6	4.4	
LOS	С	В		Е	В		Α	В	Α	А	Α	
Approach Delay		22.5			39.2			9.3			4.5	
Approach LOS		С			D			Α			Α	
Queue Length 50th (ft)	6	3		~109	3		1	58	0	13	35	
Queue Length 95th (ft)	17	26		128	66		m3	81	12	m43	79	
Internal Link Dist (ft)		361			343			689			379	
Turn Bay Length (ft)	70			125			135		215	125		
Base Capacity (vph)	214	335		187	488		478	1533	824	799	2558	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.05	0.08		0.87	0.47		0.01	0.36	0.30	0.20	0.28	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 29 (32%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 13.0

Intersection Capacity Utilization 50.3%

Intersection LOS: B ICU Level of Service A

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Fell Mist



	۶	<b>→</b>	•	•	<b>←</b>	•	4	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	ň	f)			<b>^</b>	7	7	<b>∱</b> ∱	
Traffic Volume (vph)	15	20	40	240	10	90	0	635	490	125	695	5
Future Volume (vph)	15	20	40	240	10	90	0	635	490	125	695	5
Satd. Flow (prot)	0	1824	1583	1770	1611	0	0	3539	1583	1770	3536	0
Flt Permitted		0.883		0.732						0.319		
Satd. Flow (perm)	0	1645	1583	1364	1611	0	0	3539	1583	594	3536	0
Satd. Flow (RTOR)			73		98				533		2	
Lane Group Flow (vph)	0	38	43	261	109	0	0	690	533	136	760	0
Turn Type	Perm	NA	Perm	Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8		8	4					6	2		
Total Split (s)	23.0	23.0	23.0	23.0	23.0			54.0	54.0	13.0	67.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5			4.5	4.5	4.5	4.5	
Act Effct Green (s)		18.4	18.4	18.4	18.4			50.5	50.5	62.6	62.6	
Actuated g/C Ratio		0.20	0.20	0.20	0.20			0.56	0.56	0.70	0.70	
v/c Ratio		0.11	0.11	0.94	0.27			0.35	0.48	0.27	0.31	
Control Delay		30.2	3.5	77.6	10.0			11.5	2.5	5.2	5.4	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		30.2	3.5	77.6	10.0			11.5	2.5	5.2	5.4	
LOS		С	Α	Е	Α			В	Α	Α	Α	
Approach Delay		16.1			57.7			7.6			5.3	
Approach LOS		В			Е			Α			Α	
Queue Length 50th (ft)		18	0	147	5			105	0	34	100	
Queue Length 95th (ft)		44	12	#294	47			144	44	m20	m51	
Internal Link Dist (ft)		334			311			632			689	
Turn Bay Length (ft)			75	250					125	130		
Base Capacity (vph)		338	383	280	409			1987	1122	524	2460	
Starvation Cap Reductn		0	0	0	0			0	0	0	0	
Spillback Cap Reductn		0	0	0	0			0	0	0	0	
Storage Cap Reductn		0	0	0	0			0	0	0	0	
Reduced v/c Ratio		0.11	0.11	0.93	0.27			0.35	0.48	0.26	0.31	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 41 (46%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 14.3

Intersection Capacity Utilization 55.7%

Intersection LOS: B ICU Level of Service B

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 26: Elegant/Sabercat



Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ሻ	ħβ		ሻ	ħβ	
Traffic Vol, veh/h	0	0	50	0	0	5	30	1120	30	20	950	5
Future Vol, veh/h	0	0	50	0	0	5	30	1120	30	20	950	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	150	-	-	150	-	-
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	0	0	54	0	0	5	33	1217	33	22	1033	5
Major/Minor N	Minor2			/linor1			Major1		N	/lajor2		
Conflicting Flow All	-		519			625	1038	0	0	1250	0	0
Stage 1			J 1 7	_	-	UZJ	1000	-	-	1230	0	
Stage 2	-	-	-	-	-	-	-	-	-	-	-	_
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-		0.74	-		0.74	4.14	-	_	4.14	-	
Critical Hdwy Stg 2		-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	
Pot Cap-1 Maneuver	0	0	502	0	0	428	665	-	-	553	-	-
Stage 1	0	0	302	0	0	420	000	-	-	555	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	U	U	-	U	U	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	_	502	_		428	665	-	-	553	-	-
Mov Cap-1 Maneuver	-	-	302	-	-	420	000	-	-	555	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Staye 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13			13.5			0.3			0.2		
HCM LOS	В			В								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		665	-	-	502	428	553	-				
HCM Lane V/C Ratio		0.049	_			0.013		_	_			
HCM Control Delay (s)		10.7	_	_	13	13.5	11.8	_	_			
HCM Lane LOS		В	-	-	В	13.3 B	В	-				
HCM 95th %tile Q(veh)		0.2	-	-	0.4	0	0.1	-	-			
HOW 75th 70the Q(Veh)		0.2			0.4	0	0.1					

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	LUL	T T	NDL	<b>↑</b> ↑	<b>↑</b>	JUIC
Traffic Vol, veh/h	0	70	0	1180	980	15
Future Vol, veh/h	0	70	0	1180	980	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	- -	None	-		-	None
Storage Length	_	0	_	-	_	-
Veh in Median Storage,		-	_	0	0	_
Grade, %	0	_	_	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	76	0	1283	1065	16
IVIVIIIL FIOW	U	70	U	1203	1000	10
	/linor2		Major1	N	Major2	
Conflicting Flow All	-	541	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	485	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	485	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	_		_		_	_
Jugo Z						
			, LE		0.5	
Approach	EB		NB		SB	
HCM Control Delay, s	13.8		0		0	
HCM LOS	В					
Minor Lane/Major Mvmt	t _	NBT E	EBLn1	SBT	SBR	
Capacity (veh/h)		-		-	-	
HCM Lane V/C Ratio			0.157	_	_	
HCM Control Delay (s)			13.8			
HCM Lane LOS			В	-	-	
		-	0.6	-		
HCM 95th %tile Q(veh)		_	UD		-	

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ħ	f)			र्स	7	ň	<b>^</b>	7	7	<b>∱</b> ∱	
Traffic Volume (vph)	35	10	60	15	10	5	55	1140	65	15	1015	25
Future Volume (vph)	35	10	60	15	10	5	55	1140	65	15	1015	25
Satd. Flow (prot)	1770	1624	0	0	1809	1583	1770	3539	1583	1770	3525	0
Flt Permitted	0.740				0.729		0.225			0.213		
Satd. Flow (perm)	1378	1624	0	0	1358	1583	419	3539	1583	397	3525	0
Satd. Flow (RTOR)		65				64			71		4	
Lane Group Flow (vph)	38	76	0	0	27	5	60	1239	71	16	1130	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Total Split (s)	26.0	26.0		26.0	26.0	26.0	12.0	82.0	82.0	12.0	82.0	
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.0	6.0	6.0	4.0	6.0	
Act Effct Green (s)	8.8	8.8			8.8	8.8	103.4	99.9	99.9	101.0	95.7	
Actuated g/C Ratio	0.07	0.07			0.07	0.07	0.86	0.83	0.83	0.84	0.80	
v/c Ratio	0.38	0.42			0.27	0.03	0.14	0.42	0.05	0.04	0.40	
Control Delay	62.6	23.2			58.2	0.4	2.0	3.4	1.2	1.9	5.5	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	62.6	23.2			58.2	0.4	2.0	3.4	1.2	1.9	5.5	
LOS	Е	С			Е	Α	Α	Α	Α	Α	Α	
Approach Delay		36.3			49.2			3.3			5.4	
Approach LOS		D			D			Α			Α	
Queue Length 50th (ft)	29	8			20	0	1	30	0	1	141	
Queue Length 95th (ft)	64	56			50	0	m16	140	m6	5	206	
Internal Link Dist (ft)		212			159			306			203	
Turn Bay Length (ft)	85					75	213			150		
Base Capacity (vph)	246	344			243	336	453	2947	1330	431	2811	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.15	0.22			0.11	0.01	0.13	0.42	0.05	0.04	0.40	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 81 (68%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 6.2 Intersection Capacity Utilization 56.4% Intersection LOS: A ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Future



Build-Out LOS Felsburg Holt & Ullevig

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ሻ	ħβ		ሻ	<b>∱</b> }	
Traffic Vol, veh/h	0	0	5	0	0	50	5	850	10	55	770	15
Future Vol, veh/h	0	0	5	0	0	50	5	850	10	55	770	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	190	-	-
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	0	0	5	0	0	54	5	924	11	60	837	16
Major/Minor N	/linor2			Minor1			Major1		N	/lajor2		
Conflicting Flow All	-	-	427	-	-	467	853	0	0	935	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	576	0	0	542	782	-	-	728	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	576	-	-	542	782	-	-	728	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.3			12.4			0.1			0.7		
HCM LOS	В			В								
Minor Lane/Major Mvmi	t	NBL	NBT	NBR E	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		782	-	-	576	542	728	-	-			
HCM Lane V/C Ratio		0.007	-	-	0.009		0.082	-	-			
HCM Control Delay (s)		9.6	-	-		12.4	10.4	-	-			
HCM Lane LOS		Α	-	-	В	В	В	-	-			
HCM 95th %tile Q(veh)		0	-	-	0	0.3	0.3	-	-			
· · ·												

	•	<b>→</b>	$\rightarrow$	•	•	•	•	<b>†</b>	~	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	ሻ	ĵ»		7	<b>∱</b> }		7	<b>^</b>	7
Traffic Volume (vph)	160	45	100	50	40	50	75	655	35	65	620	720
Future Volume (vph)	160	45	100	50	40	50	75	655	35	65	620	720
Satd. Flow (prot)	0	1792	1583	1770	1706	0	1770	3511	0	1770	3539	1583
Flt Permitted		0.709		0.463			0.351			0.318		
Satd. Flow (perm)	0	1321	1583	862	1706	0	654	3511	0	592	3539	1583
Satd. Flow (RTOR)			109		54			7				783
Lane Group Flow (vph)	0	223	109	54	97	0	82	750	0	71	674	783
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Total Split (s)	41.0	41.0	41.0	41.0	41.0		12.0	37.0		12.0	37.0	37.0
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)		20.9	20.9	20.9	20.9		56.7	50.7		56.3	50.5	50.5
Actuated g/C Ratio		0.23	0.23	0.23	0.23		0.63	0.56		0.63	0.56	0.56
v/c Ratio		0.73	0.24	0.27	0.22		0.16	0.38		0.15	0.34	0.64
Control Delay		44.9	6.2	29.2	13.7		7.7	13.6		7.8	13.4	4.1
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		44.9	6.2	29.2	13.7		7.7	13.6		7.8	13.4	4.1
LOS		D	А	С	В		Α	В		Α	В	Α
Approach Delay		32.2			19.2			13.0			8.4	
Approach LOS		С			В			В			Α	
Queue Length 50th (ft)		118	0	25	19		14	121		12	106	0
Queue Length 95th (ft)		172	35	51	51		40	212		36	190	70
Internal Link Dist (ft)		237			257			574			663	
Turn Bay Length (ft)			140	90			100			100		160
Base Capacity (vph)		535	706	349	723		512	1980		475	1985	1231
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.42	0.15	0.15	0.13		0.16	0.38		0.15	0.34	0.64

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 88 (98%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

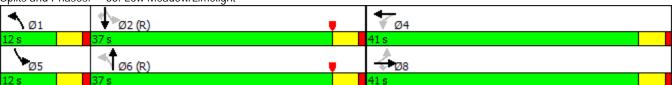
Intersection Signal Delay: 13.1

Intersection Capacity Utilization 65.2%

Intersection LOS: B ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 63: Low Meadow/Limelight



Build-Out LOS Felsburg Holt & Ullevig

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WDL	WDK		NUIL	3DL 1	<u> </u>
	0		<b>†</b>	٦F		
Traffic Vol, veh/h	0	70	690	25	100	670
Future Vol, veh/h	0	70	690	25	100	670
Conflicting Peds, #/hr	0	0	0	0	_ 0	_ 0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	100	-
Veh in Median Storage	e,# 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	76	750	27	109	728
WWW. LIOW	U	70	750	21	107	720
Major/Minor	Minor1	N	Major1	I.	Major2	
Conflicting Flow All	-	389	0	0	777	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	_	-
Critical Hdwy	-	6.94	-	_	4.14	_
Critical Hdwy Stg 1	_	-	_	_		_
	_	-	_	_	-	_
Critical Hdwy Stg 2	-		-	-		-
Follow-up Hdwy	-	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	0	610	-	-	835	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	610	-	-	835	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	_
Stage 2	-	-	_	_	_	_
Olago Z						
Approach	WB		NB		SB	
HCM Control Delay, s	11.7		0		1.3	
HCM LOS	В					
Minor Lane/Major Mvn	nt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		-	-	0.0	835	-
HCM Lane V/C Ratio		-	-	0.125	0.13	-
	<b>\</b>	-	-	11.7	10	-
HCM Control Delay (s)						
HCM Control Delay (s) HCM Lane LOS	)	-	-	В	Α	-
HCM Control Delay (s) HCM Lane LOS HCM 95th %tile Q(veh		-	-	B 0.4	A 0.4	-

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	Ą.			4		ሻ	ħβ		ሻ	ħβ	
Traffic Vol, veh/h	30	5	10	15	5	5	5	680	15	5	655	10
Future Vol, veh/h	30	5	10	15	5	5	5	680	15	5	655	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	100	-	-	100	-	-
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	33	5	11	16	5	5	5	739	16	5	712	11
Major/Minor N	/linor2		_	Minor1			Major1		N	Major2		
Conflicting Flow All	1111	1494	361	1128	1492	378	723	0	0	755	0	0
Stage 1	728	728	-	758	758	-		-	-	-	-	-
Stage 2	383	766	-	370	734	-	_	-	-	_	-	_
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	_	_	-	_
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	_	_	2.22	_	_
Pot Cap-1 Maneuver	164	122	636	159	122	620	875	-	-	851	-	-
Stage 1	381	427	-	365	413	-	-	-	-	-	-	_
Stage 2	611	410	-	622	424	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	_
Mov Cap-1 Maneuver	156	121	636	150	121	620	875	-	-	851	-	-
Mov Cap-2 Maneuver	156	121	-	150	121	-	-	-	_	-	_	_
Stage 1	379	424	-	363	411	-	-	-	-	-	-	_
Stage 2	594	408	-	600	422	_	_	_	_	_	_	_
g- =												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	29.3			30.7			0.1			0.1		
HCM LOS	29.3 D			30.7 D			U. I			U. I		
TIOWI LOG	D			U								
Minor Lang/Major M.		NDI	NDT	NDD	TDI -1	EDI 20	MDI -1	CDI	CDT	CDD		
Minor Lane/Major Mymi	l	NBL	NBT			EBLn2V		SBL	SBT	SBR		
Capacity (veh/h)		875	-	-	156	263	167	851	-	-		
HCM Lane V/C Ratio		0.006	-			0.062			-	-		
HCM Control Delay (s)		9.1	-	-	34.1	19.6	30.7	9.3	-	-		
HCM Lane LOS		A	-	-	D	С	D	A	-	-		
HCM 95th %tile Q(veh)		0	-	-	0.8	0.2	0.6	0	-	-		
HCM 95th %tile Q(veh)		0	-	-	8.0	0.2	0.6	0	-	-		

Intersection							
Int Delay, s/veh	1.6						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	l
Lane Configurations	LDL Š	LDK	NDL			אמכ	
				<b>^</b>	<b>↑</b> }	٦F	
Traffic Vol, veh/h	65	15	5	635	655	25	
Future Vol, veh/h	65	15	5	635	655	25	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Stop	Stop	Free	Free	Free	Free	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	0	100	-	-	-	
Veh in Median Storag	e, # 0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	71	16	5	690	712	27	
WWW. Tiow	, ,	10	J	070	712	2,	
Major/Minor	Minor2	N	Major1		Major2		
Conflicting Flow All	1082	370	739	0	-	0	
Stage 1	726	-	-	-	-	-	
Stage 2	356	_	_	_	-	-	
Critical Hdwy	6.84	6.94	4.14	_	_	_	
Critical Hdwy Stg 1	5.84	-		_	_	_	
Critical Hdwy Stg 2	5.84	_			-		
			2 22	-	-	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	-	
Pot Cap-1 Maneuver	212	627	863	-	-	-	
Stage 1	440	-	-	-	-	-	
Stage 2	680	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	211	627	863	-	-	-	
Mov Cap-2 Maneuver	211	-	-	-	-	-	
Stage 1	440	-	-	-	-	-	
Stage 2	676	_	_	_	_	_	
Olago 2	0,0						
Approach	EB		NB		SB		
HCM Control Delay, s	26.7		0.1		0		
HCM LOS	D						
Minor Lone /Maior M	w.ł	NDI	NDT	FDL 1	EDL 2	CDT	Į
Minor Lane/Major Mvr	nt	NBL		EBLn1		SBT	
Capacity (veh/h)		863	-		627	-	
HCM Lane V/C Ratio		0.006	-	0.335		-	
		9.2	_	30.4	10.9	-	
HCM Control Delay (s	5)	7.2					
	5)	7.2 A	-	D	В	-	
HCM Control Delay (s			-	D 1.4	B 0.1	-	

Intersection							
Int Delay, s/veh	0.7						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations	ሻ	<b>^</b>	ħβ		ሻ	7	
Traffic Vol, veh/h	15	750	385	25	30	10	
Future Vol, veh/h	15	750	385	25	30	10	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-		-	None	
Storage Length	120	-	-	-	100	0	
Veh in Median Storage,	,# -	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	16	815	418	27	33	11	
Major/Minor N	Notor1	N	//olor)		/inar?		
	/lajor1		Major2		Minor2	222	
Conflicting Flow All	446	0	-	0	872	223	
Stage 1	-	-	-	-	432	-	
Stage 2	-	-	-	-	440	-	
Critical Hdwy	4.14	-	-	-	6.84	6.94	
Critical Hdwy Stg 1	-	-	-	-	5.84	-	
Critical Hdwy Stg 2	-	-	-	-	5.84	-	
Follow-up Hdwy	2.22	-	-	-	3.52	3.32	
Pot Cap-1 Maneuver	1111	-	-	-	290	780	
Stage 1	-	-	-	-	622	-	
Stage 2	-	-	-	-	616	-	
Platoon blocked, %		-	-	-			
Mov Cap-1 Maneuver	1111	-	-	-	286	780	
Mov Cap-2 Maneuver	-	-	-	-	286	-	
Stage 1	-	-	-	-	622	-	
Stage 2	-	-	-	-	607	-	
Approach	EB		WB		SB		
HCM Control Delay, s	0.2		0		16.8		
HCM LOS	0.2		U		C		
TICIVI LOS					C		
Minor Lane/Major Mvm	t	EBL	EBT	WBT	WBR:	SBLn1 S	5
Capacity (veh/h)		1111	-	-	-	286	
HCM Lane V/C Ratio		0.015	-	-	-	0.114	(
HCM Control Delay (s)		8.3	-	-	-	19.2	
HCM Lane LOS		Α	-	-	-	С	
HCM 95th %tile Q(veh)		0	-	-	-	0.4	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	T T	<b>↑</b> ↑	<b>↑</b> ↑	WDIX	JDL	3DK
Traffic Vol, veh/h	15	535	605	75	0	15
Future Vol, veh/h	15	535	605	75	0	15
	0	0	000	0	0	0
Conflicting Peds, #/hr						
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	100	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	582	658	82	0	16
Major/Minor I	Major1	1	Major2	1	Minor2	
Conflicting Flow All	739	0		0	-	370
Stage 1	_	_	-	_	-	-
Stage 2	_	_	-	-	_	-
Critical Hdwy	4.14	_	_	_	_	6.94
Critical Hdwy Stg 1	-	_	_	_	_	-
Critical Hdwy Stg 2	_		_	_	_	_
Follow-up Hdwy	2.22	_		_	_	3.32
Pot Cap-1 Maneuver	863	<del>-</del>	_	_	0	627
Stage 1	- 003	_	_	_	0	021
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-	-	-	U	-
May Can 1 Manauyar	042	-	-			427
Mov Cap-1 Maneuver		-	-	-	-	627
Mov Cap-2 Maneuver	-	-	- - -	-	-	627 -
Mov Cap-2 Maneuver Stage 1	-	-	- - -	-	- -	627 - -
Mov Cap-2 Maneuver	-	-	- - -	-	- - -	627 - - -
Mov Cap-2 Maneuver Stage 1	-	-	- - - -	-	-	627
Mov Cap-2 Maneuver Stage 1	-	-	- - - - WB	-	- - - - SB	627
Mov Cap-2 Maneuver Stage 1 Stage 2	- - -	-	- - - - - WB	-	- - -	627
Mov Cap-2 Maneuver Stage 1 Stage 2	- - - EB	-		-	- - - SB	627
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s	- - - EB	-		-	SB 10.9	627
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS	- - - EB 0.3		0		SB 10.9	-
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm	- - - EB 0.3	EBL		-	SB 10.9 B	
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm Capacity (veh/h)	- - - EB 0.3	- - - - - EBL 863	0	under the second	SB 10.9 B	SBLn1 627
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio	EB 0.3	EBL 863 0.019	0	- - - - - WBT	SB 10.9 B	SBLn1 627 0.026
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	EB 0.3	EBL 863 0.019 9.3	0	under the second	SB 10.9 B WBR:	SBLn1 627 0.026 10.9
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS	EB 0.3	EBL 863 0.019 9.3 A	0	- - - - - WBT	SB 10.9 B	SBLn1 627 0.026 10.9 B
Mov Cap-2 Maneuver Stage 1 Stage 2  Approach HCM Control Delay, s HCM LOS  Minor Lane/Major Mvm Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	EB 0.3	EBL 863 0.019 9.3	EBT		SB 10.9 B WBR:	SBLn1 627 0.026 10.9

Intersection						
Int Delay, s/veh	0					
			\.\D=	MDE	0.01	000
	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>^</b>	Αβ			7
Traffic Vol, veh/h	0	535	675	15	0	5
Future Vol, veh/h	0	535	675	15	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage,	# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	582	734	16	0	5
	ajor1		Major2		/linor2	
Conflicting Flow All	-	0	-	0	-	375
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	623
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	_	_	_	-	623
Mov Cap-2 Maneuver	-	_	_	-	_	-
Stage 1	_	_	_	_	_	_
Stage 2		_		_		
Jiage 2	_					
Approach	EB		WB		SB	
Approach HCM Control Delay, s	EB 0		WB 0		SB 10.8	
HCM Control Delay, s					10.8	
HCM Control Delay, s HCM LOS		EDT	0	WIND	10.8 B	
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt		EBT		WBRS	10.8 B SBLn1	
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt Capacity (veh/h)		EBT -	0	-	10.8 B SBLn1 623	
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		EBT - -	0	-	10.8 B SBLn1 623 0.009	
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		-	0 WBT	-	10.8 B SBLn1 623 0.009 10.8	
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio		-	0 WBT -	- -	10.8 B SBLn1 623 0.009	

	•	<b>→</b>	•	•	<b>←</b>	•	•	<b>†</b>	/	-	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	<b>^</b>	7	ሻ	<b>^</b>	7		ર્ન	7	7	₽	
Traffic Volume (vph)	20	465	50	135	625	165	45	5	105	185	5	20
Future Volume (vph)	20	465	50	135	625	165	45	5	105	185	5	20
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	0	1783	1583	1770	1635	0
Flt Permitted	0.393			0.412				0.726		0.477		
Satd. Flow (perm)	732	3539	1583	767	3539	1583	0	1352	1583	889	1635	0
Satd. Flow (RTOR)			176			167			182		22	
Lane Group Flow (vph)	22	505	54	147	679	179	0	54	114	201	27	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Total Split (s)	10.0	37.0	37.0	15.0	42.0	42.0	25.0	25.0	25.0	13.0	38.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		5.5	5.5	4.0	5.5	
Act Effct Green (s)	54.4	46.4	46.4	60.6	54.6	54.6		8.9	8.9	21.2	19.7	
Actuated g/C Ratio	0.60	0.52	0.52	0.67	0.61	0.61		0.10	0.10	0.24	0.22	
v/c Ratio	0.04	0.28	0.06	0.24	0.32	0.17		0.41	0.36	0.68	0.07	
Control Delay	6.9	14.4	0.1	2.5	3.2	0.5		46.2	4.2	40.4	12.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	6.9	14.4	0.1	2.5	3.2	0.5		46.2	4.2	40.4	12.4	
LOS	Α	В	Α	Α	Α	Α		D	Α	D	В	
Approach Delay		12.8			2.7			17.7			37.1	
Approach LOS		В			Α			В			D	
Queue Length 50th (ft)	4	85	0	5	16	0		29	0	96	2	
Queue Length 95th (ft)	13	138	0	9	23	0		64	11	151	21	
Internal Link Dist (ft)		465			950			307			239	
Turn Bay Length (ft)	100		100	150		100			115	75		
Base Capacity (vph)	515	1824	901	640	2147	1026		292	485	297	604	
Starvation Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0		0	0	0	0	
Reduced v/c Ratio	0.04	0.28	0.06	0.23	0.32	0.17		0.18	0.24	0.68	0.04	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 64 (71%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

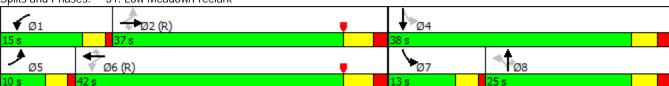
Intersection Signal Delay: 10.8

Intersection Capacity Utilization 51.3%

Intersection LOS: B ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 51: Low Meadow/Freelark



	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	/	<b>&gt;</b>	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ř	<b>∱</b> ∱		7	<b>^</b>	7		4		7	f)	
Traffic Volume (vph)	35	715	5	15	895	145	5	5	10	175	5	25
Future Volume (vph)	35	715	5	15	895	145	5	5	10	175	5	25
Satd. Flow (prot)	1770	3536	0	1770	3539	1583	0	1710	0	1770	1626	0
Flt Permitted	0.232			0.342				0.908		0.599		
Satd. Flow (perm)	432	3536	0	637	3539	1583	0	1571	0	1116	1626	0
Satd. Flow (RTOR)		1				139		11			27	
Lane Group Flow (vph)	38	782	0	16	973	158	0	21	0	190	32	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2			6		6	8			4		
Total Split (s)	12.0	41.0		12.0	41.0	41.0	22.0	22.0		15.0	37.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5	5.5		5.5		5.0	4.5	
Act Effct Green (s)	65.3	62.4		63.3	58.2	58.2		6.4		15.0	15.5	
Actuated g/C Ratio	0.73	0.69		0.70	0.65	0.65		0.07		0.17	0.17	
v/c Ratio	0.09	0.32		0.03	0.43	0.15		0.17		0.74	0.11	
Control Delay	4.0	5.6		5.3	10.6	3.2		29.4		50.9	12.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	4.0	5.6		5.3	10.6	3.2		29.4		50.9	12.6	
LOS	Α	Α		Α	В	Α		С		D	В	
Approach Delay		5.5			9.5			29.4			45.4	
Approach LOS		Α			Α			С			D	
Queue Length 50th (ft)	3	37		1	119	3		5		109	3	
Queue Length 95th (ft)	m11	151		10	250	36		28		152	24	
Internal Link Dist (ft)		950			321			181			163	
Turn Bay Length (ft)	100			100		115				75		
Base Capacity (vph)	433	2451		557	2286	1072		297		260	604	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.09	0.32		0.03	0.43	0.15		0.07		0.73	0.05	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 54 (60%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

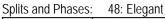
Intersection Signal Delay: 11.8

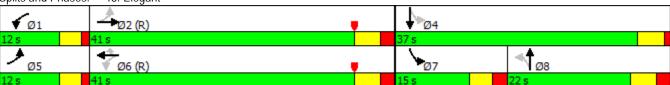
Intersection Capacity Utilization 53.8%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.





Build-Out LOS Felsburg Holt & Ullevig

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ች	<b>∱</b> }		ሻ	ħβ				7			7
Traffic Vol, veh/h	5	890	5	25	1050	35	0	0	15	0	0	5
Future Vol, veh/h	5	890	5	25	1050	35	0	0	15	0	0	5
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	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
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	5	967	5	27	1141	38	0	0	16	0	0	5
Major/Minor N	/lajor1			Major2		<u> </u>	Minor1		<u> </u>	/linor2		
Conflicting Flow All	1179	0	0	973	0	0	-	-	486	-	-	590
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	588	-	-	704	-	-	0	0	527	0	0	451
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	588	-	-	704	-	-	-	-	527	-	-	451
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			12			13.1		
HCM LOS							В			В		
Minor Lane/Major Mvm	t ſ	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR S				
Capacity (veh/h)		527	588	-	-	704	-	-	451			
HCM Lane V/C Ratio		0.031	0.009	-	-	0.039	-	-	0.012			
HCM Control Delay (s)		12	11.2	-	-	10.3	-	-	13.1			
HCM Lane LOS		В	В	-	-	В	-	-	В			
HCM 95th %tile Q(veh)		0.1	0	-	-	0.1	-	-	0			

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	LUL	<b>^</b>	<b>↑</b> ↑	₩ P	ODL	7
Traffic Vol, veh/h	0	905	1090	75	0	20
Future Vol, veh/h	0	905	1090	75	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	115	_	0
Veh in Median Storage	e.# -	0	0	-	0	-
Grade, %	- -	0	0	_	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	984	1185	82	0	22
IVIVIIIL I IOVV	U	704	1100	UZ	U	ZZ
Major/Minor	Major1	N	Major2	N	Minor2	
Conflicting Flow All	-	0	-	0	-	592
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	449
Stage 1	0	-	-	-	0	-
Stage 2	0	_	-	-	0	_
Platoon blocked, %		_				
Mov Cap-1 Maneuver	-	-	_	_	-	449
Mov Cap 1 Maneuver	_	_	_	_	_	- 17
Stage 1	_		_		_	
Stage 2	_					
Jiaye Z	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		13.4	
HCM LOS					В	
Minor Long/Major M.	o.t	<b>CDT</b>	WDT	WIDD	CDI1	
Minor Lane/Major Mvn	III	EBT	WBT	WBR S		
Capacity (veh/h)		-	-	-	449	
HCM Lane V/C Ratio		-	-		0.048	
HCM Control Delay (s)	)	-	-	-		
HCM Lane LOS		-	-	-	В	
HCM 95th %tile Q(veh	1)	-	-	-	0.2	

	۶	<b>→</b>	$\rightarrow$	•	•	•	•	<b>†</b>	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	<b>^</b>	7	*	<b>†</b>	7	, j	ĵ»		*	ĵ»	
Traffic Volume (vph)	40	815	50	240	1100	55	50	25	200	115	20	15
Future Volume (vph)	40	815	50	240	1100	55	50	25	200	115	20	15
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1615	0	1770	1745	0
Flt Permitted	0.189			0.239			0.732			0.288		
Satd. Flow (perm)	352	3539	1583	445	3539	1583	1364	1615	0	536	1745	0
Satd. Flow (RTOR)			177			141		217			16	
Lane Group Flow (vph)	43	886	54	261	1196	60	54	244	0	125	38	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	16.0	55.0	55.0	23.0	62.0	62.0	12.0	25.0		17.0	30.0	
Total Lost Time (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.5	5.5		4.5	5.5	
Act Effct Green (s)	74.8	66.4	66.4	85.0	74.5	74.5	19.3	9.4		24.3	15.1	
Actuated g/C Ratio	0.62	0.55	0.55	0.71	0.62	0.62	0.16	0.08		0.20	0.13	
v/c Ratio	0.15	0.45	0.06	0.57	0.54	0.06	0.21	0.75		0.55	0.16	
Control Delay	8.5	18.6	0.1	17.9	9.0	0.1	37.6	24.2		48.7	31.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.5	18.6	0.1	17.9	9.0	0.1	37.6	24.2		48.7	31.3	
LOS	А	В	Α	В	Α	Α	D	С		D	С	
Approach Delay		17.2			10.2			26.6			44.6	
Approach LOS		В			В			С			D	
Queue Length 50th (ft)	9	197	0	45	136	0	34	20		83	16	
Queue Length 95th (ft)	25	335	0	148	175	m1	63	100		126	46	
Internal Link Dist (ft)		316			208			329			163	
Turn Bay Length (ft)	100		115	125		120	150			50		
Base Capacity (vph)	377	1957	954	524	2195	1035	259	444		237	369	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.11	0.45	0.06	0.50	0.54	0.06	0.21	0.55		0.53	0.10	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 10 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.1

Intersection Capacity Utilization 72.5%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.





Intersection LOS: B

Build-Out LOS Felsburg Holt & Ullevig

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		<b>^</b>	<b>^</b>	7		7
Traffic Vol, veh/h	0	1130	1380	80	0	15
Future Vol, veh/h	0	1130	1380	80	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	100	-	0
Veh in Median Storage	e,# -	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1228	1500	87	0	16
WWW.CT 10W	· ·	1220	1000	0,		10
		_		_		
	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	750
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	354
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	354
Mov Cap-2 Maneuver	-	-	-	_	-	-
Stage 1	_	_	_	_	_	_
Stage 2	_	_	_	_	_	_
Olago 2						
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		15.7	
HCM LOS					С	
Minor Lane/Major Mvm	nt	EBT	WBT	WBR S	SBLn1	
Capacity (veh/h)				-	354	
HCM Lane V/C Ratio		_	_		0.046	
HCM Control Delay (s)	1				15.7	
HCM Lane LOS		_	_	_	C	
HCM 95th %tile Q(veh	)	_	-	-	0.1	
HOW FOUT FOUTE Q(VEH	')	_	-	_	U. I	

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	-	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	14.14	<b>^</b>	7	14.54	<b>†</b> †	7	1/1	<b>^</b>	7	77	<b>^</b>	7
Traffic Volume (vph)	225	740	165	440	980	575	200	310	300	535	360	280
Future Volume (vph)	225	740	165	440	980	575	200	310	300	535	360	280
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.158			0.209			0.521			0.324		
Satd. Flow (perm)	571	3539	1583	755	3539	1583	1883	3539	1583	1171	3539	1583
Satd. Flow (RTOR)			195			250			232			207
Lane Group Flow (vph)	245	804	179	478	1065	625	217	337	326	582	391	304
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		Free	8		8	4		4
Total Split (s)	13.0	45.0	45.0	21.0	53.0		12.0	30.0	30.0	24.0	42.0	42.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.5	6.5	4.5	6.5	6.5
Act Effct Green (s)	58.0	47.6	47.6	66.9	52.5	120.0	27.4	17.9	17.9	43.6	29.6	29.6
Actuated g/C Ratio	0.48	0.40	0.40	0.56	0.44	1.00	0.23	0.15	0.15	0.36	0.25	0.25
v/c Ratio	0.50	0.57	0.24	0.66	0.69	0.39	0.41	0.64	0.75	0.74	0.45	0.56
Control Delay	16.5	21.7	3.8	29.4	36.0	0.2	28.9	53.2	25.8	29.7	33.5	10.6
Queue Delay	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 Delay	16.5	21.7	3.8	29.4	36.0	0.2	28.9	53.2	25.8	29.7	33.5	10.6
LOS	В	С	Α	С	D	Α	С	D	С	С	С	В
Approach Delay		18.0			24.2			37.1			26.3	
Approach LOS		В			С			D			С	
Queue Length 50th (ft)	21	266	28	128	285	0	58	131	67	115	125	29
Queue Length 95th (ft)	47	370	56	m130	m285	m0	79	171	168	131	126	59
Internal Link Dist (ft)		369			730			462			371	
Turn Bay Length (ft)	155		110	230		150	180		100	290		155
Base Capacity (vph)	494	1403	745	792	1548	1583	526	693	496	793	1046	614
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.57	0.24	0.60	0.69	0.39	0.41	0.49	0.66	0.73	0.37	0.50

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 25.4

Intersection Capacity Utilization 75.3%

Intersection LOS: C ICU Level of Service D

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: P.H. & M.B. & M.P.



Build-Out LOS Felsburg Holt & Ullevig

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	<b>^</b>	7	ሻ	<b>^</b>	7	ሻሻ	ĵ.		1/1	î»	
Traffic Volume (vph)	30	1470	75	235		65	60	5	235	270	10	75
Future Volume (vph)	30	1470	75	235	1860	65	60	5	235	270	10	75
Satd. Flow (prot)	1770	3539	1583	1770		1583	3433	1589	0	3433	1617	0
Flt Permitted	0.073			0.065			0.697			0.444		
Satd. Flow (perm)	136	3539	1583	121	3539	1583	2519	1589	0	1604	1617	0
Satd. Flow (RTOR)			100			100		146			82	
Lane Group Flow (vph)	33	1598	82	255	2022	71	65	260	0	293	93	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2		2	6		6	8			4		
Total Split (s)	15.0	61.0	61.0	21.0	67.0	67.0	38.0	38.0		38.0	38.0	
Total Lost Time (s)	7.0	6.0	6.0	7.0	6.0	6.0	7.0	7.0		7.0	7.0	
Act Effct Green (s)	60.4	55.0	55.0	74.9		67.7	31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.50	0.46	0.46	0.62	0.56	0.56	0.26	0.26		0.26	0.26	
v/c Ratio	0.21	0.99	0.11	0.95	1.01	0.08	0.10	0.50		0.71	0.19	
Control Delay	13.7	46.7	6.2	59.8	50.5	6.6	34.5	19.8		51.0	10.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.7	46.7	6.2	59.8	50.5	6.6	34.5	19.8		51.0	10.4	
LOS	В	D	Α	Е		Α	С	В		D	В	
Approach Delay		44.2			50.2			22.8			41.3	
Approach LOS		D			D			С			D	
Queue Length 50th (ft)	7	411	5	178		2	19	71		106	6	
Queue Length 95th (ft)	m19	#790	m23	m#217	m#1048	m11	38	156		159	49	
Internal Link Dist (ft)		730			1326			566			560	
Turn Bay Length (ft)	200			200		300	125			200		
Base Capacity (vph)	179	1622	779	268	1996	936	650	518		414	478	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.18	0.99	0.11	0.95	1.01	0.08	0.10	0.50		0.71	0.19	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 107 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 45.4

Intersection Capacity Utilization 99.8%

Intersection LOS: D

ICU Level of Service F

Analysis Period (min) 15

Volume exceeds capacity, queue is theoretically infinite.

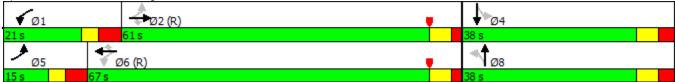
Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Limelight & M.P.



Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	LDL	<b>†</b> †	<b>↑</b> ↑	אטול	JDL	30K
Traffic Vol, veh/h	0	<b>1975</b>	2090	20	0	70
Future Vol, veh/h	0	1975	2090	20	0	70
Conflicting Peds, #/hr	0	0	2090	0	0	0
	Free	Free	Free	Free		
Sign Control					Stop	Stop
RT Channelized	-	None	-	Free	-	Stop
Storage Length	-	-	-	-	-	0
Veh in Median Storage,		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2147	2272	22	0	76
Major/Minor M	1ajor1	N	Major2	١	/linor2	
Conflicting Flow All	-	0	-	0	-	1136
Stage 1	_	-	_	-	_	-
Stage 2	_	_	_	_	_	_
Critical Hdwy			_	_		6.94
Critical Hdwy Stg 1	_	-	-	-	-	0.74
		-	-			
Critical Hdwy Stg 2	-	-	-	-	-	3.32
Follow-up Hdwy	-	-	-	-	-	
Pot Cap-1 Maneuver	0	-	-	0	0	196
Stage 1	0	-	-	0	0	-
Stage 2	0	-	-	0	0	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	-	196
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		34.6	
	U		U		_	
HCM LOS					D	
Minor Lane/Major Mvmt		EBT	WBT:	SBLn1		
Capacity (veh/h)		-	-	196		
HCM Lane V/C Ratio		-	_	0.388		
HCM Control Delay (s)		_	-			
HCM Lane LOS		_	_	D		
HCM 95th %tile Q(veh)		_	-			

	•	<b>→</b>	•	•	<b>←</b>	•	4	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	ļ	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	Ť	<b>∱</b> β		7	44	7	Ĭ	£		7	f)	
Traffic Volume (vph)	75	1880	20	25	1985	75	95	5	115	120	5	30
Future Volume (vph)	75	1880	20	25	1985	75	95	5	115	120	5	30
Satd. Flow (prot)	1770	3532	0	1770	3539	1583	1770	1595	0	1770	1621	0
Flt Permitted	0.051			0.053			0.512			0.615		
Satd. Flow (perm)	95	3532	0	99	3539	1583	954	1595	0	1146	1621	0
Satd. Flow (RTOR)		1				95		125			33	
Lane Group Flow (vph)	82	2065	0	27	2158	82	103	130	0	130	38	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8			4		
Total Split (s)	12.0	71.0		12.0	71.0	71.0	14.0	21.0		16.0	23.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Act Effct Green (s)	86.6	81.5		83.1	78.1	78.1	19.1	7.5		17.5	8.7	
Actuated g/C Ratio	0.72	0.68		0.69	0.65	0.65	0.16	0.06		0.15	0.07	
v/c Ratio	0.48	0.86		0.18	0.94	0.08	0.42	0.60		0.58	0.26	
Control Delay	28.6	10.7		7.4	22.2	0.3	46.5	22.0		54.6	23.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	28.6	10.7		7.4	22.2	0.3	46.5	22.0		54.6	23.3	
LOS	С	В		Α	С	Α	D	С		D	С	
Approach Delay		11.4			21.2			32.8			47.5	
Approach LOS		В			С			С			D	
Queue Length 50th (ft)	30	202		3	336	0	70	4		90	4	
Queue Length 95th (ft)	m42	m#235		m8	#1110	m1	116	64		142	37	
Internal Link Dist (ft)		200			1007			565			580	
Turn Bay Length (ft)	165			215		215	100			125		
Base Capacity (vph)	182	2400		173	2304	1063	245	327		231	277	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.45	0.86		0.16	0.94	0.08	0.42	0.40		0.56	0.14	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 12 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 18.3

Intersection Capacity Utilization 83.1%

Intersection LOS: B ICU Level of Service E

Analysis Period (min) 15

<sup>#</sup> 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Office Access/Filing 17 & M.P.



	۶	<b>→</b>	•	•	<b>←</b>	•	4	<b>†</b>	~	<b>&gt;</b>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7		ર્ન	7	*	<b>†</b> †	7	44	<b>^</b>	7
Traffic Volume (vph)	10	145	10	205	140	355	5	655	250	140	515	5
Future Volume (vph)	10	145	10	205	140	355	5	655	250	140	515	5
Satd. Flow (prot)	0	1857	1583	0	1809	1583	1770	3539	1583	3433	3539	1583
Flt Permitted		0.997			0.971		0.442			0.198		
Satd. Flow (perm)	0	1857	1583	0	1809	1583	823	3539	1583	716	3539	1583
Satd. Flow (RTOR)			200			386			194			145
Lane Group Flow (vph)	0	169	11	0	375	386	5	712	272	152	560	5
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		1	6		5	2	
Permitted Phases			8			4	6		6	2		2
Total Split (s)	18.0	18.0	18.0	31.0	31.0	31.0	12.0	20.0	20.0	21.0	29.0	29.0
Total Lost Time (s)		5.5	5.5		5.5	5.5	4.0	6.0	6.0	4.0	6.0	6.0
Act Effct Green (s)		11.6	11.6		22.9	22.9	34.4	26.7	26.7	40.4	36.5	36.5
Actuated g/C Ratio		0.13	0.13		0.25	0.25	0.38	0.30	0.30	0.45	0.41	0.41
v/c Ratio		0.71	0.03		0.82	0.56	0.01	0.68	0.45	0.27	0.39	0.01
Control Delay		54.3	0.1		46.4	6.3	3.8	10.2	3.0	16.8	21.7	0.0
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		54.3	0.1		46.4	6.3	3.8	10.2	3.0	16.8	21.7	0.0
LOS		D	Α		D	Α	Α	В	Α	В	С	Α
Approach Delay		51.0			26.0			8.2			20.5	
Approach LOS		D			С			Α			С	
Queue Length 50th (ft)		92	0		193	0	0	64	0	26	119	0
Queue Length 95th (ft)		#173	0		#299	65	m1	#278	m15	45	196	0
Internal Link Dist (ft)		298			352			730			568	
Turn Bay Length (ft)			75			160	115		115	345		115
Base Capacity (vph)		258	393		512	725	419	1048	605	835	1435	728
Starvation Cap Reductn		0	0		0	0	0	0	0	0	0	0
Spillback Cap Reductn		0	0		0	0	0	0	0	0	0	0
Storage Cap Reductn		0	0		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.66	0.03		0.73	0.53	0.01	0.68	0.45	0.18	0.39	0.01

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 28 (31%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 19.6

Intersection LOS: B ICU Level of Service C

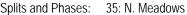
Intersection Capacity Utilization 66.7%

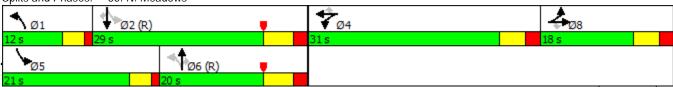
Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.





Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ሻ	ħβ			<b>†</b> }	
Traffic Vol, veh/h	0	0	15	0	0	5	15	900	5	0	715	10
Future Vol, veh/h	0	0	15	0	0	5	15	900	5	0	715	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	130	-	-	-	-	-
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	0	0	16	0	0	5	16	978	5	0	777	11
Major/Minor M	linor2			Minor1		N	/lajor1		<u> </u>	/lajor2		
Conflicting Flow All	-	-	394	-	-	492	788	0	0	-	-	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	0	0	605	0	0	522	827	-	-	0	-	-
Stage 1	0	0	-	0	0	-	-	-	-	0	-	-
Stage 2	0	0	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	605	-	-	522	827	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
,												
Approach	EB			WB			NB			SB		
HCM Control Delay, s	11.1			12			0.2			0		
HCM LOS	В			В								
Minor Lane/Major Mvmt		NBL	NBT	NBR I	EBLn1V	VBLn1	SBT	SBR				
Capacity (veh/h)		827	-	-	605	522	-	-				
HCM Lane V/C Ratio		0.02	_	-	0.027	0.01	-	-				
HCM Control Delay (s)		9.4	-	-		12	-	-				
HCM Lane LOS		Α	_	-	В	В	-	-				
HCM 95th %tile Q(veh)		0.1	-	-	0.1	0	-	-				
,												

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	<i>&gt;</i>	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	f)		ሻ	ĵ»		ሻ	<b>^</b>	7	ሻ	<b>∱</b> ∱	
Traffic Volume (vph)	5	5	10	115	5	105	20	810	100	55	660	10
Future Volume (vph)	5	5	10	115	5	105	20	810	100	55	660	10
Satd. Flow (prot)	1770	1671	0	1770	1595	0	1770	3539	1583	1770	3532	0
Flt Permitted				0.563			0.375			0.139		
Satd. Flow (perm)	1863	1671	0	1049	1595	0	699	3539	1583	259	3532	0
Satd. Flow (RTOR)		11			114				176		2	
Lane Group Flow (vph)	5	16	0	125	119	0	22	880	109	60	728	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6		6	2		
Total Split (s)	12.0	21.0		12.0	21.0		12.0	34.0	34.0	23.0	45.0	
Total Lost Time (s)	4.0	5.5		4.0	5.5		4.0	6.0	6.0	4.0	6.0	
Act Effct Green (s)	9.5	6.5		12.7	9.6		35.9	28.0	28.0	68.9	62.7	
Actuated g/C Ratio	0.11	0.07		0.14	0.11		0.40	0.31	0.31	0.77	0.70	
v/c Ratio	0.03	0.12		0.60	0.44		0.06	0.80	0.18	0.08	0.30	
Control Delay	28.2	25.7		45.3	13.2		5.1	23.3	2.0	8.1	14.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	28.2	25.7		45.3	13.2		5.1	23.3	2.0	8.1	14.4	
LOS	С	С		D	В		Α	С	Α	Α	В	
Approach Delay		26.3			29.7			20.6			13.9	
Approach LOS		С			С			С			В	
Queue Length 50th (ft)	3	3		71	3		4	242	9	17	136	
Queue Length 95th (ft)	11	22		105	51		m4	318	12	m42	248	
Internal Link Dist (ft)		361			343			689			379	
Turn Bay Length (ft)	70			125			135		215	125		
Base Capacity (vph)	234	296		214	378		390	1101	613	783	2463	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.02	0.05		0.58	0.31		0.06	0.80	0.18	0.08	0.30	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 8 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

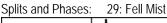
Control Type: Actuated-Coordinated

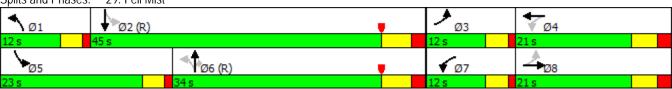
Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.2 Intersection Capacity Utilization 52.5% Intersection LOS: B ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.





Build-Out LOS Felsburg Holt & Ullevig

	•	-	$\rightarrow$	•	<b>←</b>	•	•	<b>†</b>	<b>/</b>	<b>&gt;</b>	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	¥	ĵ»			<b>^</b>	7	*	<b>∱</b> }	
Traffic Volume (vph)	10	10	25	325	20	155	0	765	225	75	695	15
Future Volume (vph)	10	10	25	325	20	155	0	765	225	75	695	15
Satd. Flow (prot)	0	1818	1583	1770	1615	0	0	3539	1583	1770	3529	0
Flt Permitted		0.874		0.743						0.240		
Satd. Flow (perm)	0	1628	1583	1384	1615	0	0	3539	1583	447	3529	0
Satd. Flow (RTOR)			73		168				200		4	
Lane Group Flow (vph)	0	22	27	353	190	0	0	832	245	82	771	0
Turn Type	Perm	NA	Perm	Perm	NA			NA	Perm	pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8		8	4					6	2		
Total Split (s)	31.0	31.0	31.0	31.0	31.0			34.0	34.0	25.0	59.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5			4.5	4.5	4.5	4.5	
Act Effct Green (s)		25.2	25.2	25.2	25.2			46.1	46.1	55.8	55.8	
Actuated g/C Ratio		0.28	0.28	0.28	0.28			0.51	0.51	0.62	0.62	
v/c Ratio		0.05	0.05	0.91	0.33			0.46	0.27	0.21	0.35	
Control Delay		23.2	0.2	60.5	7.2			16.3	4.4	2.8	2.7	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	
Total Delay		23.2	0.2	60.5	7.2			16.3	4.4	2.8	2.7	
LOS		С	А	Е	Α			В	Α	Α	Α	
Approach Delay		10.5			41.8			13.6			2.7	
Approach LOS		В			D			В			А	
Queue Length 50th (ft)		9	0	189	9			164	13	6	38	
Queue Length 95th (ft)		27	0	#346	57			224	56	m7	28	
Internal Link Dist (ft)		334			311			632			689	
Turn Bay Length (ft)			75	250					125	130		
Base Capacity (vph)		479	517	407	594			1812	908	578	2187	
Starvation Cap Reductn		0	0	0	0			0	0	0	0	
Spillback Cap Reductn		0	0	0	0			0	0	0	0	
Storage Cap Reductn		0	0	0	0			0	0	0	0	
Reduced v/c Ratio		0.05	0.05	0.87	0.32			0.46	0.27	0.14	0.35	

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 15.9

Intersection LOS: B
ICU Level of Service B

Intersection Capacity Utilization 61.2%

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.





Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ች	ħβ			<b>∱</b> }	
Traffic Vol, veh/h	0	0	30	0	0	15	95	975	15	10	1120	15
Future Vol, veh/h	0	0	30	0	0	15	95	975	15	10	1120	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	150	-	-	150	-	-
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	0	0	33	0	0	16	103	1060	16	11	1217	16
Major/Minor N	/linor2			Minor1			Major1			Major2		
Conflicting Flow All	-	-	617	-	-	538	1234	0	0	1076	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	433	0	0	488	560	-	-	644	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	433	-	-	488	560	-	-	644	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	14			12.6			1.1			0.1		
HCM LOS	В			В								
Minor Lane/Major Mvm	t	NBL	NBT	NBR E	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		560	-	-	433	488	644	-	-			
HCM Lane V/C Ratio		0.184	-	-	0.075	0.033	0.017	-	-			
HCM Control Delay (s)		12.9	-	-	14	12.6	10.7	-	-			
HCM Lane LOS		В	-	-	В	В	В	-	-			
HCM 95th %tile Q(veh)		0.7	-	-	0.2	0.1	0.1	-	-			

0.3					
	EDD	NDI	NDT	CDT	SBR
LDL		INDL			אמכ
٥		٥			15
					15
					15
					0 Eroo
					Free
					None
					-
					-
					-
					92
					2
0	60	0	1179	1125	16
Vinor2	N	Maior1	N	Maior2	
-					0
-	-	_	-	_	-
_	_	_	_	_	_
-	6 94	_	_	_	_
_	-	_	_	_	_
	_	_	_	_	_
	3 32		_		_
			_		_
			-		-
U	-	U	-		-
	161		-		-
	404		-	-	-
	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
EB		NB		SB	
13.9		0		0	
В					
В					
	Nov		057	055	
ıt B	NBT E	EBLn1	SBT	SBR	
	-	464	SBT -	SBR -	
nt	-	464 0.129			
	-	464 0.129 13.9	-	-	
nt	-	464 0.129	-	-	
	EBL  0 0 0 Stop 0 0 92 2 0 Minor2	EBL EBR  0 55 0 0 55 0 0 55 0 0 0 Stop Stop - None - 0 - 92 92 2 2 2 0 60  Minor2 N - 6.94 3.32 0 464 0 - 0 464 464 EB	EBL EBR NBL  0 55 0 0 55 0 0 0 0 0 Stop Stop Free - None - 0 - 0 0 - 92 92 92 2 2 2 2 0 60 0  Minor2 Major1 - 571 6.94 3.32 - 0 464 0 0 - 0 0 - 0 - 464 1 464 464	EBL EBR NBL NBT  0 55 0 1085 0 0 55 0 1085 0 0 0 0 0 Stop Stop Free Free - None - None - None - O O 92 92 92 92 2 2 2 2 2 0 60 0 1179  Minor2 Major1 N - 571 - O 6.94 3.32 3.32 464 0 - O - 0 - O O O - O O O - O	EBL         EBR         NBL         NBT         SBT           0         55         0         1085         1035           0         55         0         1085         1035           0         0         0         0         0           Stop         Free         Free         Free         Free           -         None         -         -         -           -         0         -         -         0         0           0         -         -         0

	•	<b>→</b>	$\rightarrow$	•	<b>←</b>	•	4	<b>†</b>	/	-	<b>↓</b>	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	f)			ર્ન	7	ň	<b>^</b>	7	7	<b>∱</b> ∱	
Traffic Volume (vph)	45	10	80	40	10	10	50	1030	30	10	1085	25
Future Volume (vph)	45	10	80	40	10	10	50	1030	30	10	1085	25
Satd. Flow (prot)	1770	1615	0	0	1792	1583	1770	3539	1583	1770	3529	0
Flt Permitted	0.722				0.575		0.199			0.247		
Satd. Flow (perm)	1345	1615	0	0	1071	1583	371	3539	1583	460	3529	0
Satd. Flow (RTOR)		87				64			50		4	
Lane Group Flow (vph)	49	98	0	0	54	11	54	1120	33	11	1206	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8			4		4	6		6	2		
Total Split (s)	26.0	26.0		26.0	26.0	26.0	12.0	82.0	82.0	12.0	82.0	
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.0	6.0	6.0	4.0	6.0	
Act Effct Green (s)	10.0	10.0			10.0	10.0	100.9	97.5	97.5	97.8	91.3	
Actuated g/C Ratio	0.08	0.08			0.08	0.08	0.84	0.81	0.81	0.82	0.76	
v/c Ratio	0.44	0.46			0.61	0.06	0.14	0.39	0.03	0.03	0.45	
Control Delay	63.2	20.1			79.4	0.6	2.8	5.3	0.8	2.1	6.5	
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.2	20.1			79.4	0.6	2.8	5.3	8.0	2.1	6.5	
LOS	Е	С			Е	Α	А	Α	Α	Α	Α	
Approach Delay		34.5			66.1			5.0			6.5	
Approach LOS		С			Е			Α			Α	
Queue Length 50th (ft)	37	8			41	0	7	137	0	1	163	
Queue Length 95th (ft)	75	59			83	0	13	264	m5	4	243	
Internal Link Dist (ft)		212			159			306			203	
Turn Bay Length (ft)	85					75	213			150		
Base Capacity (vph)	240	360			191	336	405	2875	1295	469	2685	
Starvation Cap Reductn	0	0			0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0			0	0	0	0	0	0	0	
Storage Cap Reductn	0	0			0	0	0	0	0	0	0	
Reduced v/c Ratio	0.20	0.27			0.28	0.03	0.13	0.39	0.03	0.02	0.45	

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 81 (68%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 8.9
Intersection Capacity Utilization 56.4%

Intersection LOS: A ICU Level of Service B

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Future



Build-Out LOS Felsburg Holt & Ullevig

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			7			7	ሻ	<b>†</b> \$		ሻ	<b>↑</b> ↑	
Traffic Vol, veh/h	0	0	5	0	0	55	5	755	10	35	915	15
Future Vol, veh/h	0	0	5	0	0	55	5	755	10	35	915	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	190	-	-
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	0	0	5	0	0	60	5	821	11	38	995	16
Major/Minor N	Minor2			Minor1			Major1		N	/lajor2		
Conflicting Flow All	-	-	505	-	-	416	1011	0	0	832	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	512	0	0	585	681	-	-	796	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	-	512	-	-	585	681	-	-	796	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12.1			11.9			0.1			0.4		
HCM LOS	В			В								
Minor Lane/Major Mvm	ıt	NBL	NBT	NBR I	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		681	-	-	512	585	796	-	-			
HCM Lane V/C Ratio		0.008	_			0.102		_	_			
HCM Control Delay (s)		10.3	-	-		11.9	9.7	-	-			
HCM Lane LOS		В	_	-	В	В	Α	-	-			
HCM 95th %tile Q(veh)		0	-	-	0	0.3	0.1	-	-			

	•	<b>→</b>	$\rightarrow$	•	•	•	•	<b>†</b>	~	<b>&gt;</b>	ļ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		ર્ન	7	ሻ	ĵ»		ሻ	ħβ		ሻ	<b>^</b>	7
Traffic Volume (vph)	115	40	80	75	45	60	90	595	45	45	720	155
Future Volume (vph)	115	40	80	75	45	60	90	595	45	45	720	155
Satd. Flow (prot)	0	1796	1583	1770	1703	0	1770	3500	0	1770	3539	1583
Flt Permitted		0.689		0.532			0.303			0.370		
Satd. Flow (perm)	0	1283	1583	991	1703	0	564	3500	0	689	3539	1583
Satd. Flow (RTOR)			87		65			11				168
Lane Group Flow (vph)	0	168	87	82	114	0	98	696	0	49	783	168
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		8	4			6			2		2
Total Split (s)	36.0	36.0	36.0	36.0	36.0		13.0	44.0		10.0	41.0	41.0
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)		16.7	16.7	16.7	16.7		62.3	57.5		59.9	54.7	54.7
Actuated g/C Ratio		0.19	0.19	0.19	0.19		0.69	0.64		0.67	0.61	0.61
v/c Ratio		0.71	0.24	0.45	0.31		0.20	0.31		0.09	0.36	0.16
Control Delay		49.6	8.0	38.7	16.2		6.0	9.4		5.6	11.2	2.4
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay		49.6	8.0	38.7	16.2		6.0	9.4		5.6	11.2	2.4
LOS		D	Α	D	В		Α	Α		Α	В	Α
Approach Delay		35.4			25.6			9.0			9.5	
Approach LOS		D			С			Α			А	
Queue Length 50th (ft)		90	0	42	24		14	94		7	114	0
Queue Length 95th (ft)		145	35	79	63		38	162		22	196	32
Internal Link Dist (ft)		237			257			574			663	
Turn Bay Length (ft)			140	90			100			100		160
Base Capacity (vph)		449	610	346	638		508	2240		534	2150	1027
Starvation Cap Reductn		0	0	0	0		0	0		0	0	0
Spillback Cap Reductn		0	0	0	0		0	0		0	0	0
Storage Cap Reductn		0	0	0	0		0	0		0	0	0
Reduced v/c Ratio		0.37	0.14	0.24	0.18		0.19	0.31		0.09	0.36	0.16

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 13.7

Intersection Capacity Utilization 51.3%

Intersection LOS: B
ICU Level of Service A

Analysis Period (min) 15

 Splits and Phases:
 63: Low Meadow/Limelight

 Ø1
 Ø2 (R)

 13 s
 41 s

 Ø5
 Ø6 (R)

Build-Out LOS Felsburg Holt & Ullevig

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
	WDL			NDK		
Lane Configurations	0	7	<b>↑</b>	20	<b>\</b>	<b>↑</b> ↑
Traffic Vol, veh/h	0	90	640	20	60	810
Future Vol, veh/h	0	90	640	20	60	810
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	100	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	98	696	22	65	880
	Minor1		Major1		Major2	
Conflicting Flow All	-	359	0	0	717	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	_	3.32	_	-	2.22	_
Pot Cap-1 Maneuver	0	638	_	_	880	_
Stage 1	0	-	_	_	-	_
Stage 2	0	_	_	_	_	_
Platoon blocked, %	U					
		420	-	-	000	-
Mov Cap-1 Maneuver	-	638	-	-	880	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB		NB		SB	
	11.7					
HCM Control Delay, s			0		0.6	
HCM LOS	В					
Minor Lane/Major Mvm	nt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		-		638	880	-
HCM Lane V/C Ratio		-		0.153		-
HCM Control Delay (s)		-	-	11.7	9.4	-
		•	-			
HCM Lane LOS	\	-	-	В	A	-
HCM 95th %tile Q(veh)	)	•	-	0.5	0.2	-

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	î,			4		*	ħβ		ሻ	ħβ	
Traffic Vol, veh/h	20	5	10	20	5	5	15	635	5	5	775	30
Future Vol, veh/h	20	5	10	20	5	5	15	635	5	5	775	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	100	-	-	100	-	-
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	5	11	22	5	5	16	690	5	5	842	33
Major/Minor N	Minor2			Minor1		<u> </u>	/lajor1		<u> </u>	/lajor2		
Conflicting Flow All	1250	1598	438	1161	1612	348	875	0	0	696	0	0
Stage 1	870	870	-	726	726	-	-	-	-	-	-	-
Stage 2	380	728	-	435	886	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	129	105	567	150	103	648	767	-	-	896	-	-
Stage 1	313	367	-	382	428	-	-	-	-	-	-	-
Stage 2	614	427	-	570	361	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	120	102	567	138	100	648	767	-	-	896	-	-
Mov Cap-2 Maneuver	120	102	-	138	100	-	-	-	-	-	-	-
Stage 1	306	365	-	374	419	-	-	-	-	-	-	-
Stage 2	588	418	-	548	359	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	33.2			36.1			0.2			0.1		
HCM LOS	D			Ε								
Minor Lane/Major Mvm	ıt	NBL	NBT	NBR I	EBLn1	EBLn2V	VBLn1	SBL	SBT	SBR		
Capacity (veh/h)		767	-	-	120	225	148	896	-	-		
HCM Lane V/C Ratio		0.021	_		0.181			0.006	_	_		
HCM Control Delay (s)		9.8	_	_	41.5	22.2	36.1	9	_	_		
HCM Lane LOS		Α.	_	_	E	C	E	Á	_	_		
HCM 95th %tile Q(veh)		0.1	-	-	0.6	0.2	0.8	0	-	-		
2001)		3			5.5	J	3.3					

Int Delay, s/veh  Movement  Lane Configurations  Traffic Vol, veh/h  Future Vol, veh/h  Conflicting Peds, #/l  Sign Control	E	1.2 BL	EDD				
Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/l		BL	EDD				
Lane Configurations Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/l		UL	FRR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h Future Vol, veh/h Conflicting Peds, #/	<b>ა</b>		EBR ř	NDL			אומכ
Future Vol, veh/h Conflicting Peds, #/l					<b>^</b>	<b>↑</b> ↑	70
Conflicting Peds, #/		45	10	20	610	735	70
		45	10	20	610	735	70
Sian Control		0	0	0	0	0	0
	Si	top	Stop	Free	Free	Free	Free
RT Channelized		-	None	-	None	-	None
Storage Length		0	0	100	-	-	-
Veh in Median Stora	age,#	0	-	-	0	0	-
Grade, %		0	-	-	0	0	-
Peak Hour Factor		92	92	92	92	92	92
Heavy Vehicles, %		2	2	2	2	2	2
Mvmt Flow		49	11	22	663	799	76
IVIVIIICI IOVV		17		22	000	,,,	70
Major/Minor	Mino	or2	Λ	/lajor1	1	Major2	
Conflicting Flow All	12	212	438	875	0	-	0
Stage 1		337	-	-	-	-	-
Stage 2		375	-	_	-	_	-
Critical Hdwy		.84	6.94	4.14	_	-	_
Critical Hdwy Stg 1		.84	-	-	_	_	_
Critical Hdwy Stg 2		.84	_			-	
				2 22	-	-	-
Follow-up Hdwy		.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuve		175	567	767	-	-	-
Stage 1		385	-	-	-	-	-
Stage 2		65	-	-	-	-	-
Platoon blocked, %					-	-	-
Mov Cap-1 Maneuv	er 1	170	567	767	-	-	-
Mov Cap-2 Maneuv	er 1	70	-	-	-	-	-
Stage 1		385	-	-	-	-	-
Stage 2		546	-	_	-	_	-
Olago Z		, 10					
Approach		EB		NB		SB	
HCM Control Delay	, s 31	0.3		0.3		0	
HCM LOS		D					
Minor Long/Maior N	/h mat		NDI	NDT	TDI1 I	CDL ~2	CDT
Minor Lane/Major M	/iVMI		NBL		EBLn1 I		SBT
Capacity (veh/h)			767	-	170	567	-
HCM Lane V/C Rati			0.028	-	0.288		-
<b>HCM Control Delay</b>	(s)		9.8	-	34.5	11.5	-
HCM Lane LOS			Α	-	D	В	-
HCM 95th %tile Q(v	veh)		0.1	-	1.1	0.1	-

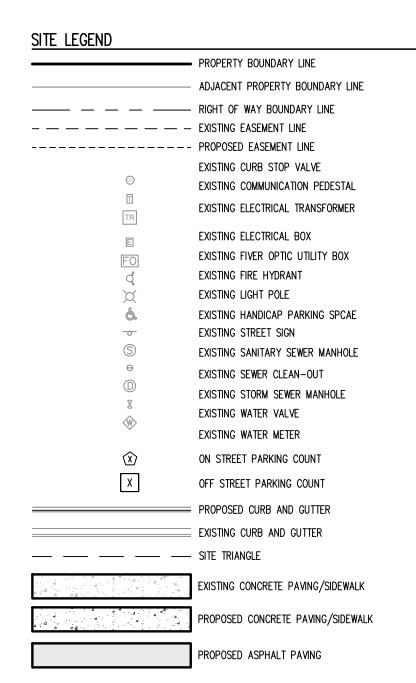
### **Attachment II**

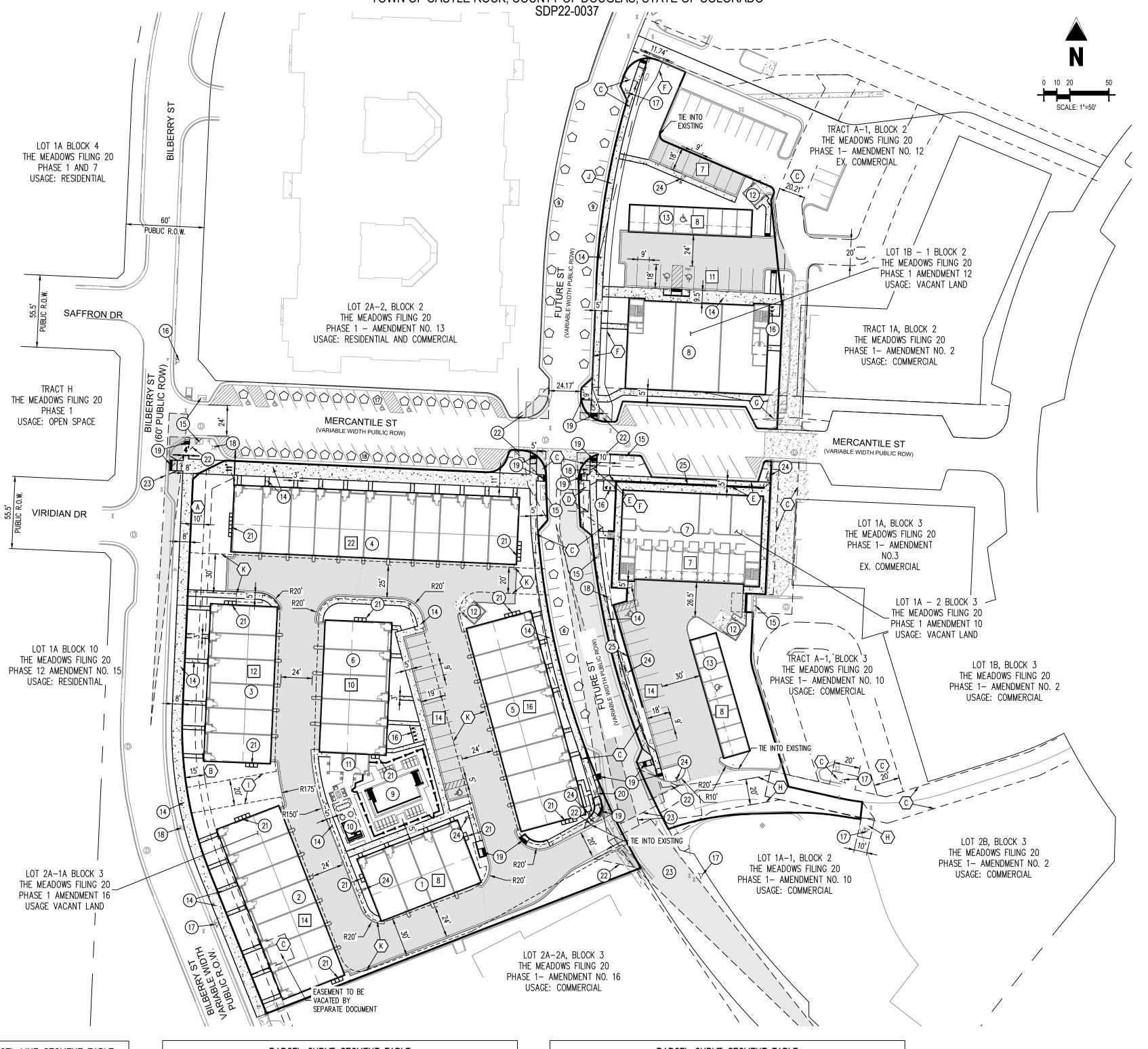
Site Plan Developed Land Use Table

# SITE DEVELOPMENT PLAN

# THE MEADOWS FILING 20 PARCEL 1 (LOT 2A-1A, BLOCK 3, PHASE 1 - AMENDMENT NO. 16) PARCEL 2 (LOT 1A-2, BLOCK 3, PHASE 1 - AMENDMENT NO.10) PARCEL 3 (LOT 1B-1, BLOCK 2, PHASE 1 - AMENDMENT NO.12)

LOCATED IN THE NORTHEAST ONE QUARTER OF SECTION 33, TOWNSHIP 7 SOUTH, RANGE 67 WEST OF THE 6TH P.M. TOWN OF CASTLE ROCK, COUNTY OF DOUGLAS, STATE OF COLORADO





PARCEL	LINE SEGME	INT TABLE
LINE TAG #	BEARING	LENGTH (FT)
L1	S68°44'03"W	308.61
L2	N21°52'55"W	116.93
L3	N2°33'56"E	179.08
L4	N47°23'28"E	7.08
L5	N63°54'01"E	21.64
L6	S87*26'24"E	201.56
L7	S87"17"05"E	7.39
L8	S40°42'48"W	11.38
L10	N50°30'19"W	11.31
L11	S87°09'10"E	25.99
L12	S27°01'49"E	17.13
L13	S87*26'59"E	81.50
L14	N17°27'09"E	14.65
L15	S87°20'16"E	3.51

PARCEL	LINE SEGME	NT TABLE
LINE TAG #	BEARING	LENGTH (FT)
L16	S2°35'51"W	102.32
L17	N87°27'16"W	14.88
L18	S2°32'14"W	14.30
L19	S88'03'22"E	5.90
L20	S2°34'07"W	33.47
L21	S16°55'43"E	95.30
L22	S7719'18"E	40.80
L23	S616'54"W	13.22
L24	S88°24'05"W	32.58
L25	N22'42'44"E	11.34
L26	N2°27'17"E	5.56
L27	N48'06'36"E	11.26
L28	N2°25'17"E	72.92
L29	N25'04'11"W	12.13

PARCEL LINE SEGMENT TABLE			
LINE TAG #	BEARING LENGTH (FT)		
L30	S66*59'02"E	23.07	
L31	S23°03'16"W	49.93	
L32	S66°48'39"E	89.02	
L33	S22°58'18"W	4.87	
L34	S5°58'27"E	84.85	
L35	S2*37'56"W	91.74	
L36	N87*51'56"W	14.20	
L37	N27*24'21"W	17.07	
L38	N87°28'06"W	94.56	
L39	S17'07'13"W	14.54	
L40	N88°04'28"W	6.73	

PARCEL CURVE SEGMENT TABLE					
CURVE TAG #	DELTA	LENGTH (FT)	RADIUS (FT)	CHORD BEARING	CHORD LENGTH (FT)
C1	24*28'33"	126.02	295.00	N9°40'22"W	125.06
C2	7510'17"	20.34	15.50	N54°43'38"E	18.91
C3	75°57'41"	3.31	2.50	N55°58'09"E	3.08
C4	86°54'30"	29.58	19.50	S43°55'12"E	26.82
C5	312'21"	34.27	612.50	S2'03'38"E	34.27
C6	2510'56"	272.72	620.50	S16"58'24"E	270.53
C7	3°30'06"	35.90	587.50	S2*30'24"E	35.90
C8	93°58'55"	31.99	19.50	S45°50'53"W	28.52
C9	77'00'20"	3.36	2.50	S54°33'31"W	3.11
C10	19°28'03"	9.51	28.00	S745'47"E	9.47
C11	6°31′49″	17.07	149.75	S80°35'13"E	17.06
C12	4°07′18″	11.73	163.00	S81°45'56"E	11.72
C13	11°54'07"	41.55	200.00	N85°38'48"W	41.47
C14	1871'31"	63.48	199.94	S79°24'06"W	63.22

	PARCEL CURVE SEGMENT TABLE				
CURVE TAG #	DELTA	LENGTH (FT)	RADIUS (FT)	CHORD BEARING	CHORD LENGTH (FT)
C16	16"38'20"	168.29	579.50	S13°20'00"E	167.70
C17	9014'36"	30.71	19.50	S4215'27"E	27.64
C18	14°06'53"	142.76	579.50	S9*33'48"W	142.40
C19	0°50'34"	8.64	587.50	S18*55'02*W	8.64
C20	94"29'59"	32.16	19.50	S65*37'17"W	28.64
C21	8919'47"	8.58	5.50	S22°21'46"E	7.73
C22	89°01'47"	6.99	4.50	N22°20'46"W	6.31
C23	59"19'31"	2.59	2.50	S57°27'34"E	2.47
C24	75°30'57"	3.29	2.50	N54"7'26"E	3.06

#### SITE PLAN SCHEDULE

- BUILDING #1, 2-STORY BUILDING (2 2 BEDROOM UNITS, 2 3 BEDROOM UNITS)
- BUILDING #2, 2-STORY BUILDING (5 2 BEDROOM UNITS, 2 3 BEDROOM UNITS)
- BUILDING #3, 2-STORY BUILDING (4 2 BEDROOM UNITS, 2 3 BEDROOM UNITS)
- BUILDING #4, 2-STORY BUILDING (8 2 BEDROOM UNITS, 3 -3 BEDROOM UNITS)
- BUILDING #5, 2-STORY BUILDING (5 2 BEDROOM UNITS, 3 -3 BEDROOM UNITS)
- BUILDING #6, 2 STORY BUILDING (3 2 BEDROOM UNITS, 2 -3 BEDROOM UNITS)
- 7 BUILDING #7, 4-STORY BUILDING (17 1 BEDROOM FLATS, 6- 2 BEDROOM FLATS)
- BUILDING #8, 4-STORY BUILDING (15 1 BEDROOM FLATS, 6 -2 BEDROOM FLATS, 648 S.F. OF RETAIL SPACE, 5,600 S.F. OF RESTAURANT SPACE)
- 9 PROPOSED POOL
- (10) EXTERIOR AMENITY AREA
- (11) MAIL KIOSK & POOL EQUIPMENT
- (12) PROPOSED TRASH ENCLOSURE
- (13) PROPOSED DETACHED GARAGES (8 1 CAR GARAGES)
- (14) PROPOSED SIDEWALK
- (15) EXISTING STORM INLET TO REMAIN
- (16) PROPOSED BIKE RACK
- (17) EXISTING FIRE HYDRANT TO REMAIN
- (18) EXISTING SITE LIGHT TO REMAIN
- (19) PROPOSED ADA RAMP
- (20) EXISTING COMMUNICATION PEDESTAL TO BE RELOCATED
- 21) PROPOSED 3'X3' CONDENSER UNIT PADS
- (22) PEDESTRIAN SITE TRIANGLE
- (23) INTERSECTION SITE TRIANGLE
- (24) PROPOSED SITE LIGHT
- 25) PROPOSED NON-STRUCTURAL SITE WALL (4' TALL MAXIMUM)

## EASEMENT SCHEDULE

- (A) 10' UTILITY EASEMENT REC. 2020022127
- B 15' UTILITY EASEMENT REC. 2018076501
- C PUBLIC ACCESS, UTILITY AND DRAINAGE EASEMENT REC. 2008042321
- $\langle D \rangle$  25' UTILITY EASEMENT REC. 2005007628
- (E) IREA EASEMENT REC. 2014039727, REC. 2014065124
- F RIGHT OF WAY EASEMENT REC. 2014026568
- ⟨G⟩ PUBLIC ACCESS, UTILITY & DRAINAGE EASEMENT REC. 2008042320
- H 20' UTILITY EASEMENT REC. 2017070670
- ( | ) PROPOSED 20' PUBLIC UTILITY AND DRAINAGE EASEMENT
- J SIGHT DISTANCE EASEMENT REC. 20080442321
- K PROPOSED 30' UTILITY EASEMENT

SUBJECT PROPERTY AND ALL ADJACENT PROPERTIES ARE IN THE MEADOWS FOURTH AMENDMENT PLANNED DEVELOPMENT ZONING AREA

5500 Greenwood Plaza Blvd, Suite 200 Greenwood Village, CO 80111 303.770.8884 GallowayUS.com

1	THE	GARRE	TTCON	<b>APANIES</b>

THE GARRETT COMPANIES 10375 PARK MEADOWS DRIVE, SUITE 125 LONE TREE, CO 80124

#	Date	Issue / Description	Init.
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Project No:	GCO000003.20
Drawn By:	TLS
Checked By:	MEM
Date:	JUNE 15, 2022

SITE PLAN

## Filing 20 Built and Approved Land Use Trip Data (10/19/22)

Land Use	Amount	AN	1 Peak	Hour	PN	/I Peak	Hour	ADT	
	(unit or SF)	In	Out	Total	In	Out	Total		
Single Family	926 d/u	176	531	707	586	344	930	8816	
- N. Meadows TC	147 d/u								
- Oakwood homes Ph 1	138 d/u								
- Oakwood Ph 2	50 d/u								
- Oakwood Ph 3	64 d/u								
- Lennar	118 d/u								
- KB Duplex Homes	257 d/u								
- 3-story Richmond homes	152 d/u								
Townhomes	64 d/u	10	21	31	21	16	37	461	
Echelon Apartments	240 d/u	25	97	122	98	52	150	1578	
Springs At Castle Rock Apts	204 d/u	21	83	104	85	45	130	1360	
Bilberry Apts	111 d/u	10	28	38	30	19	49	603	
Retail (Bilberry retail)	4,000 SF	22	18	40	24	15	39	449	
Ubergrippen (climbing gym)	14,173 SF	6	13	19	13	10	23	200	
3911 Ambrosia (Retail)	7416 SF								
3911 Ambrosia (office)	8331 SF								
3855 Ambrosia (office)	14339 SF								
3855 Ambrosia (retail)	7170 SF								
2240 Mercantile (retail)	7027 SF								
2240 Mercantile (office)	6597 SF								
Bank	3,827 SF	21	15	36	39	39	78	383	
Sherwin Williams (retail)	4,358 SF	3	2	5	10	11	21	224	
Drug Store	12,900 SF	23	22	45	64	64	128	1250	
Charter School (CO Early Colleges)	350 students	192	90	282	53	113	166	1004	
Recreation Center	Pool,court,emp	29	12	41	56	81	137	689	
TOTAL		_							



### Town of Castle Rock

### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 12. File #: RES 2023-007

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Mark Marlowe, P.E., Director of Castle Rock Water From:

Matt Benak, Water Resources Manager

Heather Justus, P.E., Water Resources Project Manager

Resolution Approving the Agreement Between ACM Dawson Trails VIII JV LLC and the Town of Castle Rock Regarding the Marketability of Title to Certain Water Rights

[Dawson Trails]

### **Executive Summary**

The Purpose of this memorandum is to request the Town Council's approval of a Resolution ( Attachment A) approving an agreement with ACM Dawson Trails VIII JV LLC (Dawson Trails) for the Town to accept the judicial decree in the quiet title action filed in the Douglas County Court for the purpose of establishing Dawson Trails' title to the Water Rights underlying the Dawson Trails property. The agreement is attached as (*Exhibit 1*) to (*Attachment A*). A memo from Lyons Gaddis, outside water rights legal counsel for the Town of Castle Rock, is attached as (Attachment B) providing a recommendation to enter into the agreement with Dawson Trails.

Dawson Trails has requested that the Town enter into an agreement to accept the final decree from the quiet title complaint as basis to satisfy the Town Municipal Code requirements for water rights to have good and marketable title. Due to the expense of entering the guiet title complaint into the county court, Dawson Trails wanted an agreement in place that justifies the expense to complete the course of action.

### **Discussion**

At the time, the Dawson Trials' Development Agreement was approved by Town Council, the Water Rights Title Opinion review was not completed per Town Code Chapter 4.04. Town staff along with Lyons Gaddis continued to work with Dawson Trails staff to satisfy the Water Rights Dedication requirements. It was determined that due to the complex nature of the prior conveyances of the property and water rights, we were unable to conclude through traditional methods of title opinion documentation that Dawson Trails had good and marketable title to the water rights.

Colorado property laws allow an owner to file a quiet title action in court for the purpose of

#### Item #: 12. File #: RES 2023-007

conclusively establishing title to a specified property, including water rights. Therefore, Dawson Trails filed a quiet title action in Douglas County Court, seeking a judicial decree determining that Dawson Trails has clear title to the Water Right (decree). Due to the cost and resources associated with the quiet title action, Dawson Trails has requested that the Town enter into an agreement. If the Town decides to enter into the agreement, the Town would agree based on the final decree from the quiet title complaint, that Dawson Trails has good and marketable title to the Water Rights for purposes of satisfying Section 4.04.060 of the Water Dedication Code.

Lyons Gaddis provided an additional memo (Attachment B) that provides additional details and recommendations for the Town to enter into the agreement with Dawson Trails.

### **Budget Impact**

There is no budget impact for this resolution other than staff time and materials. Outside legal fees will be recovered from the developer.

### Staff Recommendation

Staff recommends Town Council's approval of the agreement between the Town of Castle Rock and AMC Dawson Trails VIII JC LLC for the acceptance of the Decree in the quiet title filed in Douglas County Court for the clear title of Water Rights.

### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

### Alternative Motions

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions).

"I move to continue this item to the Town Council meeting on date to allow additional time to (list information needed)."

### **Attachments**

Attachment A: Resolution Exhibit 1: Agreement

Attachment B: Lyons Gaddis Memo

### RESOLUTION NO. 2023-

A RESOLUTION APPROVING THE AGREEMENT BETWEEN ACM DAWSON TRAILS VIII JV LLC AND THE TOWN OF CASTLE ROCK REGARDING THE MARKETABILITY OF TITLE TO CERTAIN WATER **RIGHTS** 

WHEREAS, ACM Dawson Trails VIII JV LLC ("Dawson Trails") is the owner of certain property that has been annexed into the municipal boundaries of the Town of Castle Rock ("Town"); and

WHEREAS, Dawson Trails intends to dedicate certain water rights to the Town for the purpose of satisfying, in whole or in part, the water dedication requirements associated with Dawson Trails' development of the property as set forth in Section 4.04.060 of the Town Municipal Code; and

WHEREAS, due to the complex nature of prior conveyances of the property and the water rights, Dawson Trails has proposed to file a quiet title action under C.R.C.P. Rule 105 for the purposes of confirming its ownership of the water rights; and

WHEREAS, Dawson Trails and the Town wish to enter into an agreement providing, in part, that if Dawson Trails prevails in the quiet title action, the Town will accept the marketability of Dawson Trails' title to the water rights.

### NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK AS FOLLOWS:

Section 1. **Approval.** The Agreement between ACM Dawson Trails VIII JV LLC and the Town of Castle Rock is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.

Annroyed as to form:	Approved as to content:
Lisa Anderson, Town Clerk	Jason Gray, Mayor
ATTEST:	TOWN OF CASTLE ROCK
,	<b>TED</b> this 17th day of January, 2023, by the Town o, on first and final reading by a vote of for

David L. Corliss, Town Manager

Michael J. Hyman, Town Attorney

### **AGREEMENT**

THIS AGREEMENT (Agreement) is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2022 (Effective Date), by and between **ACM Dawson Trails VIII JV LLC**, a Delaware limited liability company, (Dawson Trails) whose address is 4100 E Mississippi Ave, Suite 500, Glendale, CO 80246 and the **Town of Castle Rock**, a Colorado home rule municipal corporation (Castle Rock), whose legal address is 100 N. Wilcox Street, Castle Rock, CO 80108 (Parties).

### **RECITALS**

**WHEREAS**, Dawson Trails owns certain real property in Douglas County which is more specifically described in **EXHIBIT A** (Property).

**WHEREAS**, Dawson Trails owns certain water rights which are more specifically described in **EXHIBIT B** (Water Rights).

**WHEREAS,** the Property has been annexed into the municipal boundaries of the Town of Castle Rock and Dawson Trails intends to dedicate the Water Rights (in whole or in part) to satisfy Castle Rock's water dedication requirements associated with Dawson Trails' development of the Property.

**WHEREAS,** due to the complex nature of prior conveyances of the Property and the Water Rights, Dawson Trails has proposed to file a quiet title action under C.R.C.P. Rule 105 for the purposes of confirming its ownership of the Water Rights.

**WHEREAS**, Dawson Trails prepared and provided to Castle Rock a Complaint to Quiet Title to Ownership of Water Rights and Other Relief (Complaint) for the Water Rights Deeds (**EXHIBIT C**) prior to filing said Complaint.

**NOW THEREFORE**, for and in consideration of the mutual agreements contained in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are acknowledged by the Parties, the Parties agree as follows:

#### **AGREEMENT**

- 1. Upon successful litigation of the Complaint as evidenced by the issuance of an unappealed or unappealable Decree quieting title to any portion of the Water Rights (Decree), Castle Rock will accept the marketability of Dawson Trails' title to the Water Rights, as that title is ultimately described in the Decree as of the date of the Decree.
- 2. Castle Rock may rely upon and enforce any warranties of title to the Water Rights that have been made or may be made in the future by Dawson Trails for the benefit of Castle Rock. Dawson Trails will be required to convey the Water Rights to Castle Rock by Special Warranty Deed and execute such other documents as Castle Rock may require under Chapter 4.04 (the Water Dedication Code) of Castle Rock's Municipal Code, as may be amended, and the Dawson Trails Development Agreement, including any amendments. Castle Rock reserves the right to review Dawson Trails' title to the Water Rights prior to conveyance of those Water

Rights to Castle Rock for the purpose of confirming that Dawson Trails' title has not become unmarketable due to conveyances or encumbrances arising after the date of the Decree.

- 3. If the Decree confirms Dawson Trails' ownership of all right, title, and interest in and to the Water Agreement, dated July 15, 1983, and recorded with the Douglas County Clerk and Recorder on July 18, 1983, at Rec. No. 1983308035, Book 483, Page 282 (Water Agreement), Dawson Trails shall take all steps necessary to terminate the Water Agreement, including but not limited to executing and recording in Douglas County an instrument sufficient for that purpose, prior to Dawson Trails' dedication of any of the Water Rights that are the subject of the Water Agreement to Castle Rock. If the Decree establishes that Dawson Trails owns only a portion of the Water Rights that are the subject of the Water Agreement, Dawson Trails will take any mutually agreed upon steps as necessary to address any obligations that may be associated with Castle Rock's potential assumption of the Water Agreement.
- 4. Dawson Trails prepared the Complaint and shall prosecute the Complaint at its sole cost and expense and in its sole discretion and under the exclusive advisement of its own legal counsel. Except to the extent that Castle Rock is a named defendant in the Complaint, Castle Rock has no obligation to participate in the quiet title action but is not prevented from doing so as long as such participation is consistent with this Agreement.
- 5. Nothing in this Agreement modifies or waives any requirements of the Water Dedication Code, as it exists or as may be amended in the future. Castle Rock will adhere to its Water Dedication Code and the Dawson Trails Development Agreement for purposes of determining Dawson Trails' credit for conveying any portion of the Water Rights as described in the Decree.
- 6. Dawson Trails, as a prevailing party or otherwise, shall not under any circumstances seek from Castle Rock any award of attorneys' fees and costs; costs under C.R.C.P. Rule 54(b); and/or any other fees, costs, or both arising from or in any way relating to the quiet title action.
- 7. This Agreement will bind Castle Rock and benefit Dawson Trails and the successors and assigns of Dawson Trails; however, no party may assign this Agreement without the prior consent of the non-assigning party.

**IN WITNESS WHEREOF**, the Parties have executed this Agreement effective as of the date of its complete execution by all parties.

Dated	, 2023.	
ACN	A Dawson Trails VIII JV LLC	
By:		
J	Name:	
	Title:	

ATTEST:	TOWN OF CASTLE ROCK, acting by and through the Town of Castle Rock Water Enterprise
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water



#### MEMORANDUM RE DAWSON TRAILS - WATER RIGHTS AGREEMENT

To: Mark Marlowe, Matt Benak, and Heather Justus From: Madoline Wallace-Gross and Alison Gorsevski

Re: Proposed Agreement - Dawson Trails' Water Rights Quiet Title Action

Date: December 27, 2022

**I. SUMMARY.** At the request of the Town of Castle Rock ("Town"), we been working with Town staff and ACM Dawson Trails VIII JV LLC ("Dawson Trails") to evaluate Dawson Trails' title to the Denver Basin groundwater rights ("Water Rights") associated with its approximately 2,000-acre property located within the south-southwest quadrant of the Town ("DT Property"), in anticipation of Dawson Trails' dedication of the Water Rights to the Town.

The Town's Water Dedication Code requires Dawson Trails to establish that it has marketable title to the Water Rights before the Town will accept dedication. After reviewing the title documents, we advised the Town that Dawson Trials' title to the Water Rights is inconclusive. Consequently, Dawson Trails filed a quiet title action in Douglas County court, seeking a judicial decree determining that Dawson Trails has clear title to the Water Rights ("Decree").

Dawson Trails seeks an agreement with the Town that, once a Decree has entered, the Town will accept the marketability of Dawson Trails' title to the Water Rights for dedication purposes. We recommend that the Town enter into this Agreement (attached) to accept the marketability of Dawson Trails' title to the Water Rights as established by the Decree.

**II. BACKGROUND**. The DT Property has been annexed into the Town, and in 2022, the Town entered into a Development Agreement with Dawson Trails, the Dawson Trails Metropolitan Districts Nos. 1-5, and the Westfield Trade Center Metropolitan Districts Nos. 1 and 2 ("Development Agreement"). Dawson Trails wishes to proceed with its proposed development.

Dawson Trails must first satisfy the water dedication requirements set forth in Chapter 4.04 of the Castle Rock Municipal Code ("Water Dedication Code") and the Development Agreement. As an initial step, the Water Dedication Code, Section 4.04.060, requires Dawson Trails to provide a title opinion from an attorney to show that Dawson Trails has good and marketable title to the Water Rights. The Town will not accept dedication of the Water Rights until it is satisfied with Dawson Trails' title.

Dawson Trails provided a title opinion and supporting documents, and we have reviewed those materials. The DT Property and the Water Rights were conveyed to numerous different parties over the last 40+ years, including after several foreclosures and bankruptcies. As a result, title to the Water Rights is convoluted, at best. Our firm is presently unable to conclude that Dawson Trails has good and marketable title.

Colorado law allows a property owner to file a quiet title action in county court for the purpose of conclusively establishing title to specified property, including water rights. Acknowledging the difficulty of determining title to the Water Rights, Dawson Trails filed a quiet title action in Douglas County to establish its title to the Water Rights through a Decree. That case is pending.

Due to the costs and resources associated with a quiet title action, Dawson Trails has requested that the Town enter into an Agreement, under which the Town would agree that Dawson Trails



Town of Castle Rock December 27, 2022 Page 2

has good and marketable title to its Water Rights for purposes of satisfying Section 4.04.060 of the Water Dedication Code.<sup>1</sup>

**III. RECOMMENDATION AND BASIS.** The pending quiet title action is a legally valid way to establish Dawson Trails' title to the Water rights. Legally, Dawson Trails' quiet title action and the resultant Decree will cut off a third party's claims to ownership of the Water Rights. Therefore, because a Decree will establish Dawson Trails' title as a matter of law, the Town can rely upon that Decree to determine that Dawson Trails' title to the Water Rights is good and marketable for purposes of applying the Water Dedication Code.

For the reasons discussed above, we recommend that the Town enter into the attached Agreement with Dawson Trails.

#### VIII. ATTACHMENT.

a. Agreement between the Town of Castle Rock and ACM Dawson Trails VII JV LLC

<sup>&</sup>lt;sup>1</sup> Dawson Trails will still be required to satisfy all other requirements of the Water Dedication Code and the Development Agreement, including but not limited to establishing the amount of water dedication required for Dawson Trails' development.



### Town of Castle Rock

### **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 13. File #: RES 2023-008

**To:** Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Mark Marlowe, Director of Castle Rock Water

David Van Dellen, Stormwater Manager

Erik Dam, Project Manager

Resolution Approving a Service Agreement with Anderson Consulting Engineers, Inc., for the Mitchell Gulch Retention Pond Improvements Project [Mitchell Gulch just

north of Mikelson Boulevard]

### **Executive Summary**

The purpose of this memo is to request Town Council approval of a Resolution approving the Services Agreement with Anderson Consulting Engineers, Inc. for the Mitchell Gulch Retention Pond Improvements Project (see **Attachment A**). The scope of work generally includes engineering design, surveying, geotechnical investigation, alternatives analysis, dam construction and environmental permitting, subsurface utility engineering, conditional letter of map revision (CLOMR) preparation and submittal and easement preparation for this project, located within the Mitchell Gulch Drainageway directly north of Mikelson Boulevard (see **Attachment B**). The cost for these services is \$407,480 plus a town-managed 10% contingency in the amount of \$40,748 for a total authorization of \$448,228. This is less than the amount budgeted for design, see table below. Services under this agreement are anticipated to be completed by September 2024.

1 5	Wetlands Mitigation	Construction	Total
\$450,000	\$200,000	\$2,000,000	\$2,650,000

The timing of bidding and construction has not yet been determined and will be dependent largely on available funding.

### **Notification and Outreach Efforts**

The Town will hold to open houses to present the proposed project improvements and solicit feedback. The Town will utilize the normal Town outreach channels including social media and email to notify the public of the open houses.

Item #: 13. File #: RES 2023-008

### History of Past Town Council, Boards & Commissions, or Other Discussions

On December 19, 2006, Town Council passed, approved, and adopted a resolution approving the Mitchell Gulch Drainageway Master Plan.

### Discussion

Located directly north of Mikelson Blvd on the Mitchell Gulch tributary to Cherry Creek is an existing stock pond, whose outlet structure is undersized and prone to clogging from debris. Additionally, there is not a defined overflow spillway and the pond suffers from excessive vegetation and sedimentation that has reduced the ponds volume and is not favorable for aquatic species habitat. In 2022, the State Engineer required that a water right be acquired for the pond. Castle Rock Water (CRW) invested \$26,000 in securing an augmentation plan (water right) for the pond and is now required to monitor and report to the State Engineer on the plan and the water rights associated with the plan.

This design project will address these and other issues as follows:

- Evaluate recommendations in the Mitchell Gulch Watershed Master Plan for this reach of the Drainageway.
- Perform an alternatives analysis consisting of three possible solutions; (1) Lowering the pond embankment such that the dam would not be considered jurisdictional, (2) Maintaining the existing pond embankment height as it currently exists requiring jurisdictional hazard classification, and (3) Removing the existing dam embankment and pond and returning the channel to a natural condition with grade control features to stabilize the channel.
- Explore the opportunity for including regional water quality and detention storage in the pond.
- Enhance public recreational amenities for the area, including the addition of soft surface trails and fishing platforms to access the pond.
- Preserve valuable and sensitive riparian habitat and develop a comprehensive revegetation plan for areas of disturbance.
- Remap the floodplain within the project limits to reflect the proposed/constructed improvements and secure approval from FEMA.
- Design improvements to provide long-term protection of adjacent public infrastructure.

The Parks Department will be included in the Town team with respect to some of the design aspects that will be evaluated regarding use of the pond long term for recreation. The Town issued a Request for Proposals (RFP) to accomplish these objectives, and four (4) proposals were received, reviewed and ranked based on a weighted set of criteria included in the RFP document. The proposal fees for services ranged from \$217,351 to \$505,601. The top ranked firm from this selection process was Anderson Consulting Engineers, Inc. Their proposal and fee combination represented the best value for the Town in terms of project approach and understanding, technical expertise and scope of services provided.

#### Item #: 13. File #: RES 2023-008

### **Budget Impact**

Funds for this design agreement will be charged to the account below and will require a budget transfer from stormwater capital account 212-4475-444.75-52 which has a budget of \$2,700,000 in 2023. Additionally, there is approximately \$10 million available in capital reserves to complete this project and maintain other priorities in the coming year.

Fund	Account Number	Amount	Contingency	Total
Mitchell Gulch	212-4475-444.75-75	\$407,480	\$40,748	\$448,228

### **Staff Recommendation**

Staff recommends approval of the Services Agreement with Anderson Consulting Engineers, Inc. for the Mitchell Gulch Retention Pond Improvements Project at a cost of \$407,480 plus a town-managed 10% contingency in the amount of \$40,748 for a total authorization of \$448,228.

### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

### **Alternative Motions**

"I move to approve the resolution as introduced by title, with the following conditions: (list conditions).

"I move to continue this item to the Town Council meeting on date to allow additional time to (list information needed)."

### **Attachments**

Attachment A: Resolution

> Exhibit 1: Services Agreement

Attachment B: Site Map

#### **RESOLUTION NO. 2023-**

### A RESOLUTION APPROVING A SERVICE AGREEMENT WITH ANDERSON CONSULTING ENGINEERS, INC., FOR THE MITCHELL GULCH RETENTION POND IMPROVEMENTS PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has solicited proposals for engineering services for the Mitchell Gulch Retention Pond Improvements Project (the "Project"); and

**WHEREAS**, the Project selection team has determined Anderson Consulting Engineers, Inc., (the "Contractor") is best qualified to perform work for the Project; and

**WHEREAS**, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will provide work for the Project.

## NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

- **Section 1.** <u>Approval</u>. The Service Agreement between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.
- **Section 2.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 212-4475-444.75-52 in an amount not to exceed \$407,480.00, plus a Town-managed contingency in the amount of \$40,748.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK				
Lisa Anderson, Town Clerk	Jason Gray, Mayor				
Approved as to form:	Approved as to content:				
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water				



## TOWN OF CASTLE ROCK SERVICES AGREEMENT

### (Mitchell Gulch Retention Pond Improvements Project)

DATE:	·
PARTIES:	<b>TOWN OF CASTLE ROCK</b> , a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 (the "Town").
	ANDERSON CONSULTING ENGINEERS, INC, a Colorado corporation, 375 E. Horsetooth Road, Building 5, Suite 100, Fort Collins, Colorado 80525 ("Contractor").

### **RECITALS:**

A. Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

#### **TERMS:**

- **Section 1.** <u>Scope of Services.</u> Contractor shall provide engineering services as described in the attached *Exhibit 1* ("Services").
- **Section 2.** Payment. Contractor shall invoice Town on a monthly basis for the Services rendered in accordance with the rate and fee schedule set forth in *Exhibit 1*. The Town shall pay such invoices within 30 days receipt of such invoice. In no event shall payment exceed \$407,480.00, unless authorized in writing by Town.
- Section 3. <u>Completion.</u> Contractor shall commence the Services on February 1, 2023 and complete the Services by September 30, 2024. Contractor shall devote adequate resources to assure timely completion of the Services. Contractor shall perform the Services under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 30 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination. Contractor shall turn over all work product produced up to the date of termination.

**Section 4.** Annual Appropriation. The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.



- **Section 5.** <u>Subcontractors.</u> Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Services. Contractor will submit any proposed subcontractor and the description of their services to the Town for approval.
- **Section 6.** Assignment. This Agreement shall not be assigned by Contractor without the written consent of the Town.
- **Section 7.** Notice. Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.
- **Section 8.** <u>Insurance.</u> Contractor agrees to procure and maintain, at his own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
- A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
  - 1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.
  - 2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.
  - 3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000)



aggregate with respect to each of Contractor 's owned, hired and/or non-owned vehicles assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

- B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as additional insureds. Every policy required above, except Workers' Compensation shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Contractor. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Contractor shall be solely responsible for any deductible losses under each of the policies required above.
- C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as *Exhibit 2* as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
- D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.
- **Section 9.** Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §24-10-101, *et seq.*, C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.
- **Section 10.** <u>Indemnification.</u> Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.



- **Section 11.** <u>Delays.</u> Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.
- **Section 12.** Additional Documents. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
- **Section 13.** Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.
- **Section 14.** <u>Time of the Essence.</u> Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.
- Section 15. <u>Default and Remedies</u>. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.
- **Section 16.** <u>Waiver.</u> A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.
- **Section 17.** Governing Law. This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.
- **Section 18.** <u>Independent Contractor.</u> Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's



compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.

**Section 19.** No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**Section 20.** <u>Counterparts.</u> This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	David L. Corliss, Town Manager
CONTRACTOR:	
ANDERSON CONSULTING ENGINEE	RS, INC.
By:	
Its:	



### **EXHIBIT 1**

### SERVICES AND FEE SCHEDULE

#### PROPOSED FEE SCHEDULE for the MITCHELL GULCH RETENTION POND PROJECT

PROJECT: Mitchell Gulch Retention Pond CLIENT: Town of Castle Rock - Castle Rock Water		Anderson Consulting Engineers, Inc. Direct Labor ODC's					Totals				
OLICITY TOWN OF CASHE FLOOR - CASHE FLOOR WATER			Direct			Senier	0003		iotais		
ACE PROJECT NO.: XCOTOCR2022	Principal	Senior	Senior	Project	GIS/CADD	Senior Project	Other				
PREPARED BY: JMA AMH	Engineer	Engineer II	Engineer	Engineer	Technician	Assistant	Direct				
DATE: 12/7/2022	\$165/hr	\$135/hr	\$130/hr	\$105/hr	\$100/hr	\$85/hr	Costs				
Task/Description	Hours	Hours	Hours	Hours	Hours	Hours	Cost	Hours	Cost	Phase	
PHASE I - SURVEYING, SITE INVESTIGATION & ALTERNATIVES ANALYSIS										\$117,475	
Task 1.1 Survey	1		4	6	2		\$100	13	\$1,615		
Task 1.2 Geotechnical Investigation			8	6	2			16	\$1,870		
Task 1.3 Dam Breach Analysis		8	16	80			\$100	104	\$11,660		
Task 1.4 Alternative Analysis	8	12	54	120	24	4	\$100	222	\$25,400		
Task 1.5 Coordination & Meetings		8	16	16			\$100	40	\$4,940		
Table 110 000 amazon a mootingo	Outeido	Services			<u> </u>		Ψ.σσ		<b>V</b> 1,0 10		
									4.2.22		
	VI (Task 1.1							190	\$16,400		
Geotechnical Investigation	ı - CTL Thoi	mpson (Tas	k 1.2)					370	\$45,075		
Alternative Analy	sis - BHA (T	ask 1.3)						46	\$5,515		
Alternative Analysis - C	CTL Thomps	son (Task 1.	3)					56	\$5,000		
PHA	SE II - PREL	IMINARY DE	SIGN							\$80,080	
Task 2.1 Preliminary (30%) Design Drawings <sup>1</sup>	1	24	60	180	2	8		275	\$30,985		
Task 2.2 Preliminary Hydraulic Calculations		8	24	60		4		96	\$10,840		
Task 2.3 Environmental Permitting Coordination		8		4		•		12	\$1,500		
									-		
Task 2.4 SUE Survey		2		2				4	\$480		
Task 2.5 Coordination & Meetings		16	12	8			\$100	36	\$4,660		
	Outside	Services									
Preliminary (30%) Design	Drawings -	BHA (Task	2.1)					76	\$9,505		
Preliminary (30%) Design Draw	ings - CTL	Thompson	(Task 2.1)					8	\$4,500		
Preliminary (30%) Design Dr	awings - K-	Squared (Ta	sk 2.1)					16	\$2,000		
	(Task 2.4)	•						65	\$14,110		
Environmental Permitting Coordinati		nial Arabaa	ology /Tack	2 2)				4	\$500		
· · · · · · · · · · · · · · · · · · ·				2.3)				1			
Environmental Permitting								8	\$1,000		
PHASE III - FINAL DESI	GN & FLOO	1	DIFICATION	APPROVAL						\$209,925	
Task 3.1 90% Construction Drawings <sup>1</sup> 1         40         80         200         4							325	\$37,305			
Task 3.2 Dam Design Report and Submittal <sup>1,2</sup>		24	80	80	4	4		192	\$22,780		
Task 3.3 Temporary Erosion and Sediment Control (TESC) Plan		4	16	40	4	4		68	\$7,560		
Task 3.4 CLOMR Completion and Submittal <sup>1,3</sup>		8	20	120		4	\$6,500	152	\$23,120		
Task 3.5 Environmental Permitting (Section 404 - Assumes Individual Permit)		16	32	120		4		172	\$19,260		
Task 3.6 Utility Relocations		4		8				12	\$1,380		
		4	40	24				68	\$8,260		
Task 3.7 Technical Specifications		<b> </b>									
Task 3.8 Final Cost Estimate and Bid Schedule		4	4	16				24	\$2,740		
Task 3.9 Draft and Final Easements				4				4	\$420		
Task 3.10 100% Bid Set <sup>1</sup>	1	12	40	120			\$300	173	\$19,885		
Task 3.11 Coordination & Meetings		24	16	12			\$100	52	\$6,680		
	Outside	Services									
90% Construction Drawings - BHA (Task 3.1)								60	\$8,430		
90% Construction Dr	awings - br										
		mpson (Ta	sk 3.1)		90% Construction Drawings - CTL Thompson (Task 3.1)						
90% Construction Drawing	js - CTL Tho							24	\$3.000		
90% Construction Drawing 90% Construction Drawi	ıs - CTL∣Tho ings - K-Sqı	ared (Task	3.1)					24	\$3,000 \$4,500		
90% Construction Drawing 90% Construction Draw Dam Design Report -C	gs - CTL Tho ings - K-Squ CTL Thomps	uared (Task son (Task 3.	3.1) 2)					40	\$4,500		
90% Construction Drawing 90% Construction Draw Dam Design Report -C Environmental Permitting - V	js - CTL Tho ings - K-Squ CTL Thomps Vildland Cor	uared (Task son (Task 3. nsultants (T	3.1) 2) ask 3.5)					40 96	\$4,500 \$12,000		
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<sup>&</sup>lt;sup>1</sup>Task Budgets can be significantly reduced if Alternatives 1 or 2 are selected.

12/8/2022

<sup>&</sup>lt;sup>2</sup>Task does not include Dam Constrcution Permit Application, as it is dependent on construction costs, it is estimate that this fee will be around \$8,000

<sup>&</sup>lt;sup>3</sup>ODC's for this Task include On-Line FEMA Submittal Fee

**DECEMBER 8, 2022** 



### TECHNICAL PROPOSAL FOR ENGINEERING DESIGN SERVICES MITCHELL GULCH RETENTION POND IMPROVEMENTS PROJECT















ANDERSON CONSULTING ENGINEERS, INC. 375 E. HORSETOOTH ROAD, BLDG. 5 FORT COLLINS, CO 80525 (970) 226-0120



### **TEAM QUALIFICATIONS/RELATED EXPERIENCE**

Anderson Consulting Engineers, Inc. (ACE) is an employee-owned water resources engineering and environmental consulting firm providing a full range of water resources services. For more than 30 years ACE's principals have specialized in hydrologic and hydraulic engineering projects that emphasize master planning and design projects that incorporate flood mitigation/mapping, urban stormwater/stormwater quality management, and infrastructure improvements. ACE emphasizes a practical approach to the evaluation and design of water resources projects, resulting in a company culture that that has won the confidence of our wide variety of clients in both the public and private sectors.

ACE currently has a staff of 16 people consisting of 13 engineers, of which 10 are Registered Professional Engineers in Colorado. Five of our engineers are also Certified Floodplain Managers. All our Senior Staff have been with the company for at least 18 years and consist of some of the same staff that were involved with previous projects supporting the Town of Castle Rock. Our

Engineering/Technical Staff Member	Total Years Experience	Years of Experience with ACE
Greg Koch, P.E., CFM	37	32
Aaron Hansen, P.E., CFM	26	26
Michelle Martin, P.E.	20	20
Brian Smith, P.E., CFM	19	19
Scott Parker, P.E.	20	19
Jamis Darrow, P.E., CFM	18	18
Jason Albert, P.E., CFM	18	18
Matt Clark, P.E.	13	13
Michael Turner, P.E.	11	11
Clark Kephart, P.E.	9	9
Alison Osborn, EIT	3	3
Craig Hocking, EIT	4	2
Kevin To, EIT	1	1
Brian Thompson, GIS Analyst	25	15
Ben Ackert, GIS Analyst	16	13
ACE Project Manager ACE Assistant Project Manag	ger	

continuity of Senior Staff ensures management and oversight consistency throughout the duration of the project. ACE's Senior Staff are typically registered in several states, and all have advanced degrees and/or education in their fields. They are supported by dedicated, experienced engineers and a full complement of technical support personnel including GIS analysts/CAD designers, and a Part 107 Certified Drone Pilot.

From its single corporate office in Fort Collins, Colorado ACE provides engineering services specializing in: (a) the preparation of master drainage plans; (b) the design of capital improvement projects; (c) complex hydrologic and channel hydraulic modeling (both 1D/2D and steady/unsteady state); (d) alternative engineering/economic evaluations; (e) analysis, design and construction of flood control facilities, dams, major irrigation system components, and drainage improvement projects; (f) analysis, design and construction of channel stability and stream restoration projects; (g) completion of floodplain mapping and management studies; (h) water quality planning, design and implementation, including MS4 compliance guidance and support; (i) providing resident engineering services and related construction support; and (j) providing

aerial drone services including ortho production, site analysis and documentation.

### **ACE STAFF OFFERS:**

- Unparalleled hydraulic modeling and hydrologic analysis expertise in both riverine and urban settings
- Extensive experience with hydraulic design including designing flood mitigation, dams, storm drainage, and water quality improvements
- Outstanding experience providing flood mitigation and stream restoration services in a variety of situations, including post-flood and post-wildfire areas
- 30 years of experience producing FEMAcompliant submittals, including 15 years of corporate DFIRM production experience
- A commitment to excellence in the successful completion of a wide variety of municipal storm water and flood mitigation projects.

ACE has emphasized servicing governmental clients at all levels, including municipalities, counties, states, and federal agencies. However, our main client emphasis has been on municipalities, counties, and stormwater/irrigation districts.

ACE has a track record of success in retaining staff at all levels, which is illustrated in the ACE Staff Table above. This permanence of company personnel provides continuity and stability in project management, while promoting continuous quality service and accountability over multi-year contracts. The Town of Castle Rock can be assured that the same personnel who initiate work under this contract will be here to complete the work.

ACE's abilities are strengthened by our long working relationships with subconsultants that have supported us on countless past projects. The following paragraphs provide a summary of the ACE project team members whose services will be

### SECTION 1 – PROJECT TEAM QUALIFICATIONS AND RELATED EXPERIENCE (CONT.)

utilized during the project. Additionally, Table 1 at the end of this section summarizes the project team, their specialties, key personnel, and anticipated project responsibilities.

BHA Design Incorporated (BHA) is a landscape architecture and planning firm established in January of 1993. BHA provides landscape architecture, planning, urban design, and graphic design services to both public and private clients. BHA and ACE have an excellent and extensive list of successful projects together, a small sample of the projects ACE and BHA have completed include: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Poudre Downtown Whitewater Park, Fort Collins, CO; (c) Evert Pierson Kids' Fishing Pond, Boulder, CO; and (d) Eben Fine Park Rehabilitation, Boulder, CO.

CTL|Thompson, Inc. (CTL) is a consulting engineering firm offering dam design support, geotechnical, materials, and structural engineering services, construction observation, soil and materials testing, and forensic engineering. ACE and CTL have collaborated on numerous projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Latham Diversion Dam Spillway & Gate Rehabilitation, Evans, CO; and (c) South Loveland Outfall Phase 3, Loveland, CO.

**Wildland Consultants, Inc. (WCI)** was established in Larimer County in 1994 to provide high quality environmental, natural resource assessment, and ecological consulting services to private industry, cities, counties, and government agencies. WCI and ACE have teamed on numerous projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) West Vine Stormwater Outfall, Fort Collins, CO; (c) Rigden Reservoir, Fort Collins, CO; and (d) Prospect Road Bridge Replacement, Fort Collins, CO.

K<sup>2</sup> Aquatics specializes in science advisory, review and technical oversight for fishery, aquatic, instream flow, and interpretation of ecological modeling studies and mitigation development. Our major focus centers on fisheries management of both warm and cold-water habitats for sport fish recreation and native species recovery. K<sup>2</sup> and ACE have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Halligan Seaman Water Supply Project, Larimer County, CO; and (c) NISP Geomorphic Assessment-Cache La Poudre River, Larimer County, CO.

Centennial Archaeology was founded in 1984 and is headquartered in Fort Collins, Colorado. For three decades Centennial has conducted contract-based archaeological and historical research throughout the Southern Rocky Mountains, western Great Plains, eastern Great Basin, and Southwest. Centennial Archaeology and ACE have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Rigden Reservoir, Fort Collins, CO; (c) West Vine Pedestrian Trail Design, Fort Collins, CO; and (d) Prospect Road Bridge Replacement, Fort Collins CO.



**AVI. p.c.** (AVI) is a planning, civil engineering, and surveying firm with a focus on public works projects along the front range. Founded in 1979, AVI is headquartered in Cheyenne, WY, with an additional office located in Fort Collins, CO. The AVI team has years of experience providing engineering planning and survey with state, county and city government, private developers, and contractors. AVI and ACE

have collaborated on several projects including: (a) 6400 East Tributary Rehabilitation, Castle Rock, CO; (b) Lions Open Space Stabilization, Larimer County, CO; and (c) Wildsong Road-Buckhorn Creek, Larimer County, CO.

### **KEY PERSONNEL**

The ACE Project Manager and primary point of contact for the Mitchell Gulch Retention Pond Improvements Project will be Mr. Jason Albert, P.E., CFM. Mr. Albert will be responsible for project management, coordination with the Town's PM, quality control, permitting, and oversight of the project. He will be assisted by Ms. Michelle Martin, P.E. Ms. Martin will be the second point of contact in Mr. Albert's absence and will be responsible for the hydraulic analysis/design, alternatives analysis and the final design. Together, they bring their more than 38 years of combined experience in the field of water resources engineering and extensive experience in designing and managing dam design, flood mitigation, river restoration, sediment transport and stream stabilization projects in a variety of regulatory floodplain settings.

A summary of key personnel is identified in Table1 below with brief resumes of these staff being provided in Appendix A.

### SECTION 1 – PROJECT TEAM QUALIFICATIONS AND RELATED EXPERIENCE (CONT.)

**Table 1. Project Team** 

ACE Team Member	Specialties	Key Personnel (Brief Resumes in Appendix A)	Project Responsibilities
Anderson Consulting Engineers	Hydraulics/Hydrology/ Design/ Natural Channel Design/Fluvial Geomorphology	Jason Albert P.E. Michelle Martin, P.E.	Design, Hydraulic Analysis, Permitting, Coordination, Design Plans
bha	Landscape Architecture	Roger Sherman Douglas Elgar	Design of Park Enhancements and Integration
CTLITHOMPSON	Geotechnical/Materials/ Environmental/Structural Engineering	Mathew Montieth, P.E. Nicholas Reuter, P.E.	Structural Engineering Geotechnical Engineer and Investigation
wat court	Riparian Ecology/Habitat Restoration/Natural Channel Design	Ken Kehmeier	Fish Habitat Design
WCI	Environmental Assessment and Permitting	Eric Berg	Environmental Permitting
CENTENNIAL	Archaeological and Historical Research	Kristin Gensmer	State Historic Preservation Office Permitting
RAMERING RAMERING RAMERING RAMERING RAMERING	Survey/Legal Descriptions Subsurface Utility Engineering	Adam Deschler, PLS Tom Kent, PE	Site Survey, Topography, Legal Descriptions Subsurface Utility Engineering

### SECTION 2 – RESPONSE TO SCOPE OF WORK

### **PROJECT UNDERSTANDING**

Located along the eastern side of the Town of Castle Rock, Mitchell Gulch generally flows south to north, through the Founders Subdivision, before reaching its confluence with Cherry Creek northwest of the Highway 83 Highway 86 intersection. With respect to the Town of Castlerock's Mitchell Gulch Retention Pond Project, the subject reach extends approximately 600 feet from Mikelson Boulevard to just downstream of the existing Mitchell Pond embankment. This project limit may be adjusted according to project requirements.

Based on recent site visits, our findings were consistent with that of the URS's evaluation memo stating that the Mitchell Gulch Pond embankment is quite old and heavily vegetated, the inlet pipe is most likely buried or plugged, the impounded water is stagnant with algae, and the embankment is seeping. Additionally, the bedrock (Castle Rock Conglomerate) is very hard and contains fissures that water can infiltrate, exacerbating the seepage. Furthermore, the spillway, located adjacent to the Mitchell Gulch Trail, appears undersized and lacks sufficient erosion protection measures. Given the disrepair of the current embankment, any work completed as part of this Mitchell Gulch Project will likely require the removal of the embankment. Subsequent to URS's assessment in 2008, the project area has experienced sediment deposition that has reduced the surface area and depth of the pond. Consequently, regardless of the selected alternative, sediment transport mitigation measures should be considered.

The master plan calls for a water quality outlet structure installed at the upstream toe of the existing embankment which would result in 9 ac-ft of potential Water Quality Capture Volume (WQCV) and resulting in a "sunny day dry pond". Although this alternative would provide ample water quality, it would eliminate the public/wildlife amenity that is the pond itself. It was also noticed that the master plan does not address incoming sediment, which will likely be a critical component to this project.

To successfully accomplish this project, ACE has put together a team of experts in hydraulic and hydrologic evaluation, hydraulic design, dam design, geotechnical design, fish habitat design, sediment transport, geomorphology, channel rehabilitation and ecological restoration. With our team, we believe we can meet the Town's goals of providing an aesthetically pleasing restoration/rehabilitation project, enhance the gulch's riparian habitat, and create a public amenity.

The remainder of Section 2 serves to address the scope of work identified in the RFP, while providing insight to the ACE Team's approach for identifying a technically sound and economical solution, in context of the Town's goals and the project setting. It should be noted that the design of this project will be completed in accordance with the Town of Castle Rock's Storm Drainage Design and Technical Criteria Manual (SDDTCM).

### PHASE I: SURVEYING, SITE INVESTIGATION, DAM BREACH EVALUATION & ALTERNATIVE ANALYSIS

Prior to the initiation of data collection and formulation of alternatives, a project kick-off meeting will be scheduled to introduce the key members of the project team, identify project stakeholders, reconfirm the goals and objectives of the project, define project schedule and critical milestones, and finalize project budget. It is anticipated that the kick-off meeting will also involve a field reconnaissance visit to the site to identify the following: (a) specific site conditions and physical constraints; (b) the presence of existing wetlands and critical habitat areas; (c) channel restoration locations; (d) sources of incoming sediment to the pond; and (e) the limits of data collection for survey, environmental mapping, and the subsurface utility investigation.

Field Survey — A ground survey of the subject area, adequate to generate 1-foot topography, will be collected by our subconsultant AVI. The ground survey will focus on the embankment, channel and critical areas for the project design. In order to develop a comprehensive basemap for construction drawings, the ground survey will be supplemented, as needed, with the most up-to-date topographic data of the project area (assumed to be LiDAR provided by the Town). The accuracy and comprehensiveness of the survey work will be critical for the project as it will define the existing dimensions of the dam which will be utilized to perform the existing hydraulic hazard classification and dam breach analysis, identify erosion issues, provide a basis for all analytical and design work, and establish baseline conditions for the floodplain modeling and mapping. In addition to collection of ground survey, this effort will collect available property pins, identify current property ownership and easements, survey existing structures and trees, and set project control pins which can be utilized for construction. The topographic mapping, which will be referenced to NAVD88 and Colorado State Plane, will also inform the need to establish additional easements to support construction of the project, as well as provide access for future maintenance activities. It is noted that timing of the field survey will be dependent on weather conditions and may be delayed until a preferred project alternative has been selected to optimize the value/cost of the survey.

Geotechnical Investigation — The subsurface/geotechnical engineering evaluation will be conducted by our subconsultant CTL|Thompson (CTL) and will include a total of nine (9) borings. Along the existing embankment five borings with rock cores will be utilized to evaluate the existing dam and dam foundation. These borings will be extended to bedrock, and cores of the bedrock will be taken to a depth equal to the height of the embankment. Upon successful borehole completion, the bedrock within each hole will be tested for hydraulic conductivity via single-stage or straddle packers. The packer testing will provide indication of, if any, groundwater flow rates within the bedrock joints. Temporary nested piezometers will be installed in each of the five boreholes to determine the depth interval where seepage is flowing. A third piezometer will be set within the embankment for the purposes of hydraulic conductivity testing. Four additional borings will be drilled around the existing pond, soils and bedrock will be sampled using standard penetration test samplers. Slotted pipe will be inserted into each of the boreholes for groundwater monitoring.

<u>Dam Breach Analysis</u> - Due to the current condition of the dam, and to ensure that if the dam were to fail it would not result in significant damage to downstream infrastructure and most importantly cause a risk to human lives, a dam breach analysis should be conducted early in the project. Given the height of embankment, volume of water impounded by the embankment and lack of structures and infrastructure downstream of the embankment it is anticipated that current embankment will be categorized as a low hazard dam. If the current embankment is determined to be a high or significant hazard dam, we would recommend breaching the dam as soon as possible based on a breach plan that would be prepared and submitted to the State Engineers Office (SEO) for approval.

<u>Alternative Analysis</u> – To ensure that the ultimate solution best addresses the needs of the Town of Castle Rock, ACE will work closely with Town Staff to identify conceptual-level alternatives. Each alternative will be evaluated with the ultimate goal of providing conceptual level plan and profile drawings, relevant details, conceptual costs and alternative based pros/cons. This information, along with supporting documentation (survey, geotechnical, dam breach, etc.), will be provided to the Town of Castle Rock Staff as part of an Alternatives Memorandum to aid in selection of an

alternative to take to preliminary design. Additionally, this alternative analysis will be required in both the CLOMR and 404 permit submittals. Brief discussions of the three alternatives are provided below, and in Figure 1.

**Alternative 1 Remove dam:** This alternative would require the removal of the existing embankment and construction of a stable channel through the existing pond. There is currently about 8 feet of drop of 350 feet of length therefore, a stable channel with a slope of 0.5% would require three 2-foot-high drop structures. It is anticipated that these will be either boulder or riffle drop structures. This alternative would not provide additional water quality and most likely require a technical criteria variance through the Town.

Alternative 2 Reduce Embankment Height: This alternative would require the removal of the existing embankment, construction of a new embankment less than 10 feet in height, and the installation of a water quality outlet. This alternative could be designed either as a sunny day dry pond (i.e., the Masterplan) or with a permanent pool. If a permanent pool is desired, the depth of the pond may be inadequate to maintain a viable trout habitat. Consequently, the pond would need to be stocked with more tolerant fish, include vegetation control and incorporate aeration.

Alternative 3 Rebuild Embankment as Jurisdictional Dam: This alternative would require the removal of the existing embankment and construction of an embankment satisfying Dam Safety rules and regulations (likely requiring a larger footprint to meet Town/State embankment criteria). Given that the existing spillway is inadequately sized and is located such that it may pose a risk to pedestrians, it is recommended that the requisite spillway be relocated to the opposite (eastern) side of the reconstructed embankment. To provide a viable fish habitat, and depending on the depth to bedrock, it would also be ideal to excavate the pond to a depth of 10-12 feet.

### PHASE II: ALTERNATIVE ANALYSIS AND PRELIMINARY DESIGN

Based on the selected alternative, or a combination of alternative components, ACE will conduct preliminary design efforts and develop a 30% progress submittal, which will include all deliverables identified in the RFP for Phase II. In support of the Preliminary Design Phase, both SUE and Environmental Permitting Coordination will be completed. The following is provided to elaborate on specific tasks associated with Phase II. It should be noted that of the three alternatives, designing a jurisdictional dam will be the most extensive. Consequently, the scopes for Phase 2 and Phase 3, as well as the Fee Schedule (submitted separately), will be prepared assuming Alternative 3 is selected. However, If Alternative 3 is not selected, the fee schedule will be altered to reflect the significant reduction in effort (specific tasks whose effort would be greatly reduced if Alternative 3 is not chosen are identified accordingly in the Fee Schedule).

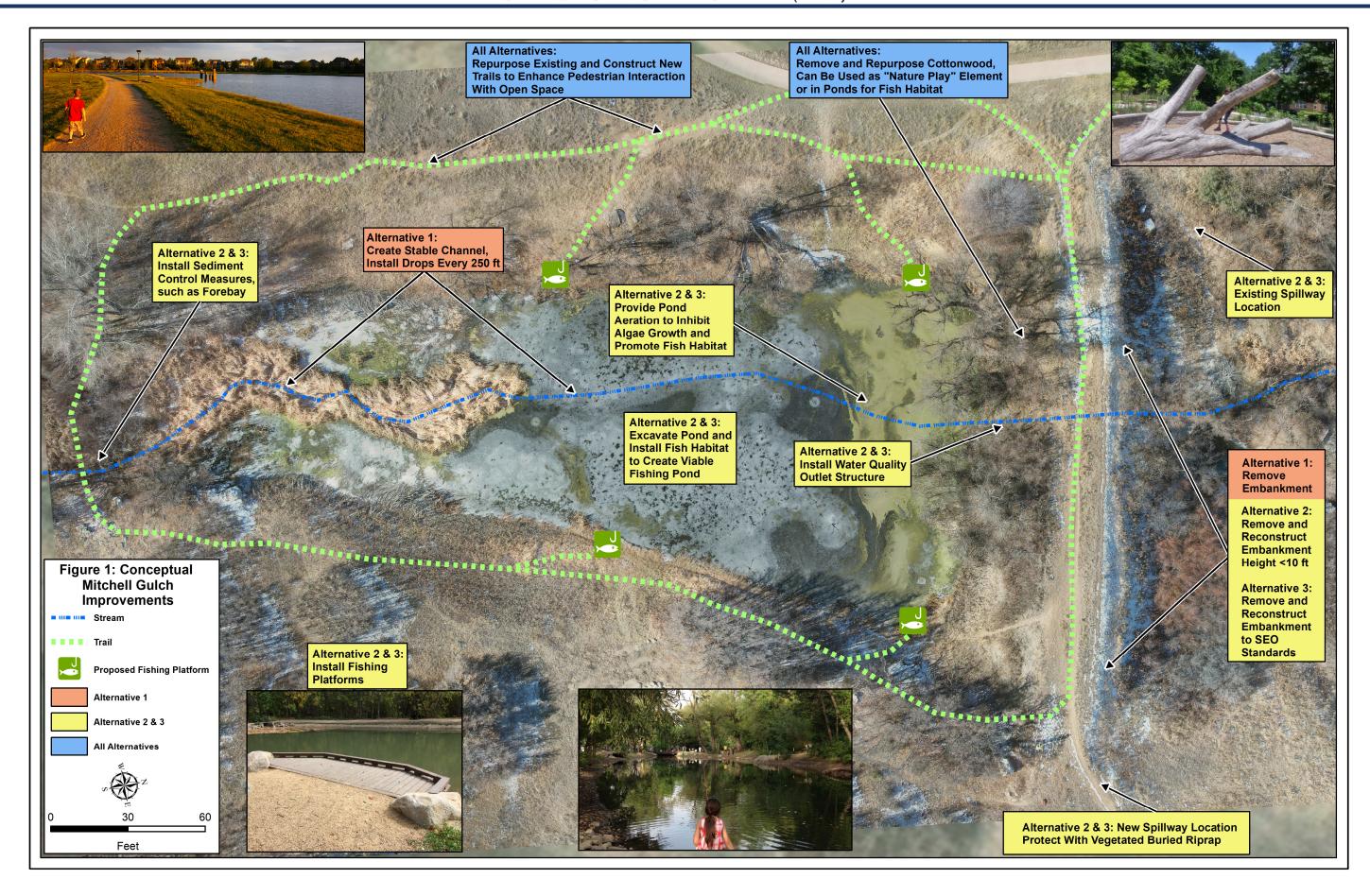
<u>Water Rights</u>. It is our understanding that a water rights investigation, and any requisite water rights permitting, for this project will be completed by the Town.

<u>Preliminary Design</u>. The preliminary design task will begin with the refinement of the selected alternative (for the purpose of this discussion it was assumed that Alternative 3 was selected). This effort will be to inform the selection of the various components associated with the final configuration including, but not limited to, the following:

- (a) size, location and type of primary (low level) outlet pipe and pipe intake system;
- (b) type, location and alignment of overflow spillway, possibly considering:
  - (i) a shorter, more structural spillway;
  - (ii) locating the spillway along the east side of the embankment;
  - (ii) an elongated overflow spillway/rundown swale that is more natural in appearance;
  - (iii) material types which could range from vegetated turf reinforcement matting to concrete, or somewhere in between such as rock riprap, articulated concrete block revetment, or soil cement; and
  - (iv) one or more confluence locations along the downstream channel;
- (c) stream channel stabilization needs and options.

A preliminary design plan set will be prepared including, but not limited to, the following: (a) grading plan reflective of the selected components; (b) the overflow spillway/rundown channel; (c) primary outfall pipe and associated structure; (d) requisite stabilization measures; (e) requisite plan and profile design sheets; and (f) requisite standard details. It is anticipated that this plan set will be taken to a 30% design level and will be submitted to the Town's Project Manager. At this point in the design, the State Engineers Office will also be contacted to inform and discuss with them the project. Contacting the SEO early in the design process will streamline the permitting process and identify any potential issues with the preliminary design.

<u>Preliminary Hydraulic Calculations</u> – A hydraulic model will be prepared to reflect existing (pre-project) and proposed (post-project) conditions, which will be compared to the effective model in order to determine if the project is creating a rise in base flood elevations (100-year water surface elevations). Using the proposed conditions hydraulic model, every effort will be made to design/refine the project to fall under a No-Rise Certification and avoid the need for both a Conditional Letter of Map Revision (CLOMR) submittal and eventual Letter of Map Revision (LOMR) submittal.



However, due to the anticipated, and potentially significant, changes associated with the Mitchell Gulch Retention Pond Project, it is conservatively assumed for this scope and associated budget that a CLOMR will be required and that a subsequent LOMR will be conducted under a separate scope/budget following construction.

<u>SUE Engineer</u> – To inform the preliminary design, and to meet Colorado Law SB18-167, a Subsurface Utility Engineering (SUE) investigation will be conducted by our subconsultant AVI based on ASCE 38-02 guidelines. AVI will conduct a SUE survey to collect and record any utilities within the project area to acquire a Quality Level B designation for existing subsurface utilities. Based on our current understanding of the project, we do not anticipate that there will be utilities within the project area that will require a Quality Level A (test hole and vertical location survey) designation. Therefore, a Quality level A utility investigation has not been assumed as part of AVI's current scope of work, but can be provided as part of additional services, if determined necessary as part of the preliminary design. Upon completion of the SUE investigation, AVI will develop and provide a set of stamped SUE drawings and a report. ACE will utilize the SUE drawings to incorporate and depict the utility information on the project construction drawings.

Environmental Permitting Coordination — An initial consultation with the U.S. Army Corps of Engineers (USACE) and U.S. Fish and Wildlife Service (USFWS) will be made to determine 404 and other ecological permitting requirements. The initial step will be to request a Jurisdictional Determination for the study area in an attempt to classify it as non-jurisdictional under the premise that there is not defined channel downstream that connects it to Waters of the US. Although not anticipated, a non-jurisdictional determination would eliminate the need for a USACE 404 permit. If the study area is found to be jurisdictional, every effort will be made to conduct this project under a USACE Nationwide Permit. However, given our previous experience on similar projects, namely the Paintbrush Park Project, it is anticipated that an USACE Individual 404 Permit (IP) will be required if the site is found to be jurisdictional.

Operating under the assumption that an IP will be required, Wildland Consultants, Inc. (WCI) will complete a formal wetland, ordinary high-water mark delineation for the project area. The results of this effort will be mapped and documented in a wetland delineation report that will be submitted to the Town and UASCE. WCI will also complete a riparian vegetation survey, in accordance with the methodologies outlined in the Colorado Stream Quantification Tool (CSQT) manual. ACE will collect all other requisite CSQT data, with Centennial Archaeology being tasked to complete a Class III archaeological investigation to determine if the project will potentially impact culturally significant areas or historic structures. It is noted that there is a prehistoric site in the larger section, that this project will not affect, however due to its proximity to this project a Class I investigation will most likely not meet permitting requirements.

### PHASE III: FINAL DESIGN & FLOODPLAIN MODIFICATION APPROVAL

Comments generated from the 30% progress submittal will be addressed and incorporated into a 90% progress submittal (submittal will include all deliverables identified in the RFP for Phase III). Following the 90% submittal, a public outreach open house will be conducted where the design will be presented for public comment. Comments generated by the Town and the public from the 90% submittal will then be addressed and incorporated into the 100% Bid Set in accordance with Town Criteria. In addition to the construction drawings (draft list of drawings identified in Section 3 of this proposal), the 90% progress submittal will include a number of additional products, which will be finalized along with the 100% Bid Set. These products are listed and discussed below.

- <u>Drainage Calculations (Dam Design Report)</u> All hydraulic analyses and supporting documentation, used as part of the design effort, will be summarized and provided in a Dam Design Report. This report will be submitted to the SEO to support the dam construction permit and will include, but not limited to, discussions and calculations of the following: hydraulic hazard classification, hydrologic hazard evaluation, spillway design, outlet design, geotechnical design, structural design, stabilization measures, water quality enhancements, an instrumentation and monitoring plan, mechanical design and a water control plan, as outlined in the SEO Project Review Guide. It should be noted that the dam construction permit application fee is not included in the cost estimate as it is dependent on estimated constructions costs (permit fees will be \$6 for every \$1,000 in dam construction costs), based on similar projects this fee will be around \$8,000.
- Temporary Erosion and Sediment Control (TESC) Plan ACE will prepare a TESC Plan and Report, stamped by a P.E., in accordance with the Town's TESC Manual (specifically Sections 2, 3 and 4) in order to obtain a Standard TESC Permit. This plan will include initial, interim and final TESC drawings as well as a water control plan and meet the requirements of a SWMP for use by the contractor to obtain a Construction Discharge Permit from the Colorado Department of Health & Environment.
- Floodplain Modification Study/Conditional Letter of Map Revision (CLOMR)— Based on our preliminary site
  evaluation, and information in the RFP, a CLOMR will most likely be required for this project, however ACE will
  investigate and discuss with the Town the feasibility of a no-rise permit. If a CLOMR is required, Endangered
  Species Act (ESA) compliance will be obtained from the U.S. Fish and Wildlife Service (USFWS). Having submitted

dozens of approved CLOMR applications in the past, we are intimately familiar with the process, limiting both review time and the number of comments that typically need to be addressed. So that we do not duplicate work, the report submitted to FEMA will double as the floodplain modification memo.

- Environmental Permitting As previously mentioned it is anticipated that this project will require an Individual 404 Permit. To meet State requirements, the dam footprint will be increased and will most likely reduce the functional length of Mitchell Gulch. Consequently, to obtain an IP a CSQT showing the project results in a functional stream length lift will be required. The IP application will include an alternatives analysis, CSQT analysis, wetland delineation, habitat assessment, Class III archeological investigation, photo log, and all necessary figures and documentation quantifying how the project will affect the Waters of the U.S. Due to the nature of the project the Town will likely need to purchase wetland mitigation credits. Consequently, a mitigation plan has not been included in this scope of work; however, the project will be designed to minimize wetland disturbance and thus minimizing the mitigation costs for the Town.
- <u>Utility Relocations</u> Based on the outcome of the SUE efforts, the ACE Team will coordinate with applicable agencies in order to complete utility relocation applications, as necessary.
- <u>Technical Specifications</u> Technical specifications from CDOT, the Town and Mile High Flood District will be tailored specifically to the Mitchell Gulch Retention Pond Project. Project related items not included in these standard specifications will be addressed in the Special Provisions section of the Bid Documents.
- <u>Traffic Control Plan</u> A traffic control plan will be prepared and included in the design sheet set. It is anticipated that this project will not affect vehicle traffic; however, being adjacent to the Mitchell Gulch Trail, pedestrian traffic will need to be safely routed during construction. This may involve temporary trails and/or detours; however, the intent will be to maintain public trail access to the extent possible during construction.
- Engineer's Opinion of Probable Cost Estimate and Bid Schedule Bid items and quantities will be determined from the construction drawings. This information will be used to develop a Bid Schedule and to prepare the Measurement and Payment Section. Estimated costs will be applied to the Bid Schedule to provide the Engineer's opinion of probable construction cost.
- <u>Easement Legal Descriptions and Exhibits</u> AVI will be tasked with the preparation of all legal descriptions and exhibits associated with both temporary and permanent construction related easements.

#### SECTION 3 – ACTION PLAN AND SCHEDULE

### **WORK BREAKDOWN STRUCTURE**

Person-hour effort by phase and discipline is provided in the table below. A detailed breakdown of hours by task within each project phase in included in the cost proposal provided under separate cover. Additionally, a project schedule is provided below, the proposed schedule provides more than adequate time to meet all milestones and complete this project within the Town's schedule.

### **WORK BREAKDOWN HOUR ESTIMATES**

ACE Team Member	Services	Hours					
ACE Team Member	Services	Phase 1	Phase 2	Phase 3	Total		
Anderson Consulting Engineers	Hydraulics/Design/Civil Engineering/Geomorphology	395	423	1,242	2,060		
ВНА	Trail Design and Landscaping	46	76	74	196		
CTL Thompson	Geotechnical and Structural	426	8	258	692		
AVI	Field Survey/SUE/ Easements	190	65	16	271		
WCI	Env. Survey & Permitting	0	8	96	104		
Centennial	Archaeological Survey	0	4	60	64		
K <sup>2</sup>	Fish Habitat Design	0	16	32	48		

### SECTION 3 – ACTION PLAN AND SCHEDULE (CONT.)

### **PROJECT SCHEDULE**

Task/Description	Start Date	End Date	DRAFT DRAWING LIST
PHASE I – SURVEYING & SITE IN			
Task 1.1 Survey	01/01/2023	01/31/2023	Cover Sheet
Task 1.2 Geotechnical Investigation	01/01/2023	03/15/2023	General Notes
Task 1.3 Dam breach Analysis	01/31/2023	03/15/2023	Survey Control/Boring Locations
Task 1.3 Alternative Analysis	01/15/2023	04/30/2023	Subsurface Utility Engineering Survey
PHASE II – PRELIMINARY	DESIGN		Demolition Plan
Task 2.1 Preliminary (30%) Design Drawing s	05/01/2023	07/31/2023	Bore Logs
Task 2.2 Preliminary Hydraulic Calculations	05/01/2023	07/31/2023	Traffic and Pedestrian Control Plan
Task 2.3 Environmental Permitting Coordination	06/01/2023	08/31/2023	Overall Site Improvements
Task 2.4 SUE Survey	06/01/2023	08/31/2023	Plan and Profile- (2 shts)
PHASE III – FINAL DESIGN & FLOODPLAIN M			
Task 3.1 90% Construction Drawings	Geotechnical Design (6 shts)		
Task 3.2 Dam Design Report and Permitting	08/24/2023	06/31/2024*	Structural (4 shts)
Task 3.3 TESC Plan	08/24/2023	12/31/2023	Erosion Countermeasure Plan (2 shts)
Task 3.4 CLOMR Completion and Submittal	11/02/2023	06/31/2024*	Erosion Countermeasures – Typical
Task 3.5 Environmental Permitting	09/01/2023	06/31/2024*	Sections and Details (2 shts)
Task 3.6 Utility Relocations	11/02/2023	12/31/2023	Trail and Recreation Details (2 shts)
Task 3.7 Technical Specifications	11/02/2023	12/31/2023	Planting/Revegetation Plan (2 shts)
Task 3.8 Final Cost Estimation and Bid Schedule	11/02/2023	12/31/2023	Fishing Pond Details (2 shts)
Task 3.9 Draft and Final Easements	11/02/2023	06/31/2024	General Details (2 shts)
Task 3.10 100% Bid Set	11/02/2023	12/31/2023	TESC Plan (8 shts)

Note: Project schedule is subject to modification due to weather conditions, and review/coordination schedule of regulatory entities

Note: Drawing list is subject to change based on the selected alternative

### SECTION 4 – SUMMARY OF SIMILAR PROJECTS

Provided below are references for projects completed by ACE and the ACE Project Team that are similar to the Mitchell Gulch Retention Pond Improvements Project.

**6400** East Tributary at Paintbrush Park Dam Rehabilitation, Town of Castle Rock, CO: The 6400 East Tributary flows south to north through Paintbrush Park in the Town of Castle Rock. In 2019 the Town of Castle Rock contracted with Anderson Consulting Engineers Inc. (ACE) to provide engineering design services for the 6400 East Tributary rehabilitation adjacent to Paintbrush Park. For this ongoing project ACE was aided by CTL Thompson, BHA Landscaping, and Wildland Consultants. This project will rehabilitate the existing dam to meet State Engineers standards, enhance the connection between the park and the stream, as well as stabilize the channel and overbanks downstream of the dam downstream to Painthorse Drive.

Design elements for this project included: (a) Rehabilitating the existing dam to meet SEO standards, (b) Channel Stabilization design included a combination of bio-stabilization measures and buried riprap, (c) Park enhancements include creating connections from the existing park to the channel as well as utilizing the impounded water as a fishing recreation area, and (d)Water quality enhancements and sedimentation control.

Client: Erik C. Dam, PE, CFM (720) 733-6044

Completed: Ongoing

**Budgeted Design Cost:** \$489,181

Cost at Completion: TBD

Personnel: Jason Albert, Aaron Hansen



<sup>\*</sup>This is the approximate date of approval; approval will take 4 to 6 months from the application date

### SECTION 4 – SUMMARY OF SIMILAR PROJECTS (CONT.)

The project is being permited thorugh the United States Corps of Enginneers via an **Individual 404 Permit**, FEMA and Mile High Flood District via a **CLOMR**, and the State Engineers Office Dam Safety Board via a **Dam Construction Permit**. Following construction a LOMR LOMR will be completed.

Dam Breach Inundation Mapping, Larimer and Weld County, CO: The Dam Safety Branch of the Colorado Division of Water Resources provides financial assistance to dam owners for projects to develop dam breach flood inundation mapping necessary for Emergency Action Planning (EAP). To reduce costs the Dam Safety Branch office combined projects for ten dams located within the Cache la Poudre Canyon. ACE provided dam breach flood inundation mapping for the following dam owners and corresponding reservoirs:

City of Fort Collins Dams: Joe Wright, and Halligan Reservoirs Water Supply and Storage Company Dams: Long Draw

Reservoir, and Chambers Lake Reservoir

**City of Greeley Dams:** Barnes Meadow Reservoir, Comanche Reservoir, Seaman Reservoir, Hourglass Reservoir, Peterson Lake Reservoir, and Twin Lakes Reservoir

Dam breach parameters including geometry and time to failure were developed using empirical equations recommended by the Colorado SEO Dam Safety Branch. Breach modeling was conducted using the USACE's HEC-RAS 1D Model to produce an

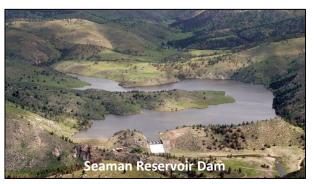
**Client:** Ms. Kallie Bauer, P.E., (970)352-8712 Ext 1218 Colorado DNR – Dam Safety

Completed: 2019

Budgeted Cost: \$ 118,268

Cost at Completion: \$118,268

Personnel: Michelle Martin, Jason Albert



outflow hydrograph. Flood routing and inundation mapping was conducted along 135 miles of river using the USACE's HEC-RAS 2D Model. The following 2D hydraulic models were developed: (a)Poudre Canyon 2D Model — covers approximately 30 miles of the Poudre River upstream of the North Fork confluence, 16 miles of the South Fork, 6 miles of Beaver Creek, 2 miles of La Poudre Pass Creek, and 7 miles of Joe Wright Creek, (b) North Fork 2D Model — includes the lower 23 miles of the North Fork Poudre River between Halligan Reservoir and the Main Stem, and; (c) Poudre 2D Model — includes approximately 25 miles of the Poudre River downstream of the North Fork Confluence Final deliverables of the project, produced individually for each dam, included an Inundation Mapping Report, inundation mapping, digital inundation boundaries and critical facilities shape files, and HEC-RAS modeling files.

**Terry Lake Neighborhood Regional Detention Pond Dam Design, Longmont, CO:** The Terry Lake Neighborhood (TLN) is located at the northern edge of the City of Longmont, CO and has a contributing drainage area of just over 10.5 square miles. This drainage basin has the potential to generate 3,900 cfs during a 100-year (1-percent annual chance of occurrence) storm event, which greatly exceeds the existing conveyance

**Client:** Mr. Chris Huffer, (303) 651-8351

Completed: 2016

**Budgeted Cost:** \$216,600 **Cost at Completion:** \$206,400

Personnel: Aaron Hansen, Brian Smith

capacity of downstream drainage facilities (roughly 87 cfs). Consequently, the City of Longmont identified the need to detain storm runoff to a level that downstream drainage facilities could accommodate. One of the prescribed detention facilities is the TLN Regional Detention Pond, which will occupy over 40 acres of land, providing approximately 420 acre-feet of detention storage. ACE completed final design of the TLN Regional Detention Pond which consisted of the following key elements: (a) Hydrologic modeling of the tributary drainage basin using CUHP/EPA SWMM to define design discharges and to evaluate various alternatives; (b) Formulation and hydraulic design of the regional detention facility; (c) Final design of the approximate 420 acre-foot TLN Regional Detention Pond, which meets the storm flow attenuation requirements of the City's receiving drainage infrastructure while limiting the impact to existing jurisdictional wetlands; (d) Final design of a 15-foot high, exempt jurisdictional dam embankment under Rule 17.1.1 of the Dam Safety Rules and Regulations; (e) Final design of an outlet structure, which incorporates both primary outlet and emergency spillway functions; (f) Final design of a 62-wide collector roadway to be constructed on top of the pond embankment; (g) A Nationwide 43 Permit (wetland delineation, threatened and endangered species survey, permit application, and a wetland mitigation plan); and (h) Preparation of final construction plans, technical specifications, and contract documents.

### SECTION 5 – REQUEST FOR PROPOSAL CONFIDENTIALITY

This technical response to the request for proposal is free to distribute and contains no portions we deem to be confidential. Consequently, the Letter of Indemnification for Withholding Confidential Information is not applicable and has not been included. We also acknowledge the receipt and incorporation of Addendum #1 into this response.

# APPENDIX A RESUMES OF KEY PERSONNEL

















### **EXHIBIT 2**

### CONTRACTOR'S CERTIFICATION OF INSURANCE



### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/09/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATIONIS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

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PRODUCER		CONTACT						
SI INSURANCE SERVICES LLC/PHS		NAME: PHONE (866) 467-8730 FAX						
34341438		PHONE						
The Hartford Business Service Cent	er	(A/C, No, Ext):		(A/C, No):				
3600 Wiseman Blvd		E-MAIL						
San Antonio, TX 78251		ADDRESS:						
,			INSURER(S) AFFORDING COVER	AGE	NAIC#			
INSURED	EERS, INC.	INSURER A:	Hartford Casualty Insurance 0	29424				
ANDERSON CONSULTING ENGIN		INSURER B:						
375 E HORSETOOTH RD BLDG 5 FORT COLLINS CO 80525-3155		INSURER C:						
		INSURER D:						
		INSURER E :						
		INSURER F:						
COVERAGES	CERTIFICATE NUMBER:		REVISION NUI	MBER:				

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED.NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

	TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.								
INSR LTR			SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/Y YYY)	LIMITS		
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	\$1,000,000	
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300,000	
	X General Liability	x					MED EXP (Any one person)	\$10,000	
Α				34 SBW KC5665	12/28/2022	12/28/2023	PERSONAL & ADV INJURY	\$1,000,000	
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$2,000,000	
	POLICY X PRO- JECT LOC						PRODUCTS - COMP/OP AGG	\$2,000,000	
	OTHER:								
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000	
	ANY AUTO						BODILY INJURY (Per person)		
Α	ALL OWNED SCHEDULED AUTOS AUTOS			34 SBW KC5665	12/28/2022	12/28/2023	BODILY INJURY (Per accident)		
	X HIRED X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)		
	X UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	\$8,000,000	
Α	EXCESS LIAB CLAIMS- MADE			34 SBW KC5665	12/28/2022	12/28/2023	AGGREGATE	\$8,000,000	
	DED X RETENTION \$ 10,000								
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						PER OTH- STATUTE ER		
	ANY Y/N PROPRIETOR/PARTNER/EXECUTIVE						E.L. EACH ACCIDENT		
	OFFICER/MEMBER EXCLUDED?	N/ A					E.L. DISEASE -EA EMPLOYEE		
	(Mandatory in NH)  If yes, describe under  DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT		
Α	EMPLOYMENT PRACTICES			34 SBW KC5665	12/28/2022	12/28/2023	Each Claim Limit	\$5,000	
	LIABILITY			34 3DW KC3003	12/20/2022	12/20/2023	Aggregate Limit	\$5,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Those usual to the Insured's Operations. Certificate holder is an additional insured per the Business Liability Coverage Form SS0008 attached to this policy.

CERTIFICATE HOLDER	CANCELLATION
Town of Castle Rock	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED
its Officers and Employees	BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED
100 N WILCOX ST	IN ACCORDANCE WITH THE POLICY PROVISIONS.
CASTLE ROCK CO 80104	AUTHORIZED REPRESENTATIVE
	Susan S. Castaneda

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CERTIFICATE LIQUEER

CANCELLATION



PRODUCER

### CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 12/09/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATIONIS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s). CONTACT

USI INSURANCE SERVICES LLC/PHS	;			NAME:					
34343366				PHONE		6) 467-8730	FA)	X C, No):	
The Hartford Business Service Center				(A/C, No	o, Ext):		(A/C	C, NO):	
3600 Wiseman Blvd				E-MAIL					
				ADDRES	SS:				
San Antonio, TX 78251				7.001121		IRER(S) AFFORDI	NG COVERAGE		NAIC#
INSURED					Hartfo	rd Insurance C	company of the		37478
ANDERSON CONSULTING ENGINEE	RS INC	C		INSURER A: Hartford Insurance Company of the Midwest					01410
375 E HORSETOOTH RD BLDG 5	,			INSURE					
FORT COLLINS CO 80525-3155									
				INSURER C:					
				INSURE					
				INSURE	RE:				
				INSURE	RF:				
COVERAGES	ERTIF	ICATI	E NUMBER:			REVIS	ION NUMBER:		
THIS IS TO CERTIFY THAT THE POLICI									
INDICATED.NOTWITHSTANDING ANY F									
CERTIFICATE MAY BE ISSUED OR N								s subje	ECT TO ALL THE
TERMS, EXCLUSIONS AND CONDITION		UCH PO			POLICY EFF	POLICY EXP	PAID CLAIMS.		
LTR TYPE OF INSURANCE	INSR	WVD	POLICY NUMBE	ER	(MM/DD/YYYY)	(MM/DD/Y YYY)		LIMITS	
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OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	-						E.L. DISEASE -EA EIVIF	PLOTEE	\$1,000,000
If yes, describe under							E.L. DISEASE - POLIC	Y LIMIT	\$1,000,000
DESCRIPTION OF OPERATIONS below	-	$\vdash$							
DESCRIPTION OF OPERATIONS / LOCATIONS /	 /EHIC! =	S (ACO)	RD 101 Additional Bo	marke Sa	hadula may bo sees	school if more spec	e is required)		
Those usual to the Insured's Operations		.5 (ACOI	No IVI, Additional Rei	mains SC	nedule, may be atta	ioneu ii more spac	o io iequiieu)		
CERTIFICATE HOLDER	<i>,</i> .				CANCELLA	TION			
					CANCELLA	1 1 ( ) ( ) ( )			

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SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED

BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED

IN ACCORDANCE WITH THE POLICY PROVISIONS.

Sugar S. Castaneda

**AUTHORIZED REPRESENTATIVE** 

Town of Castle Rock

100 N WILCOX ST

its Officers and Employees

CASTLE ROCK CO 80104



#### **EXHIBIT 3**

### TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, \_\_\_\_\_, an authorized representative of **Anderson Consulting Engineers, Inc.**, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

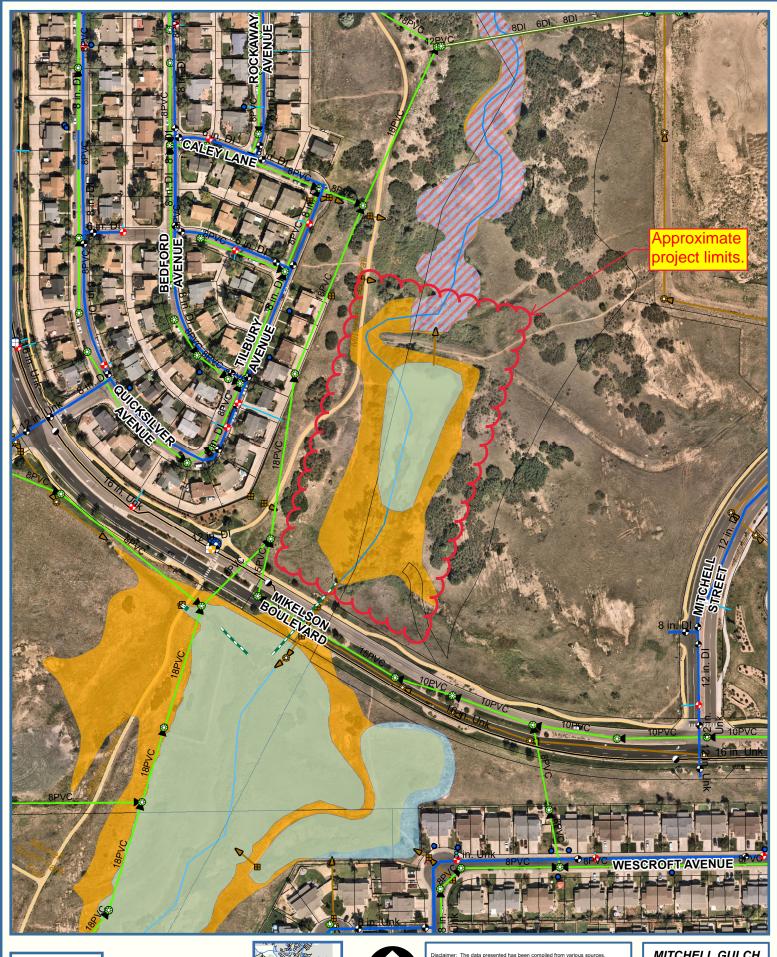
In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be
  employed as an independent contractor of the Town of Castle Rock (the "Town") for
  purposes of performing the work or services which are the subject of the Agreement. I
  understand and confirm that the Town reasonably relied on this intention in entering into
  the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may be supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.

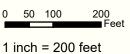


- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.
- I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

CONTRACTOR:		
ANDERSON CONSULTING	ENGINEERS	S, INC.
Ву:		
Name		
STATE OF COLORADO	)	
	) ss.	
COUNTY OF	)	
The foregoing instrume	nt as acknowle	edged before me this day of
20 by	_ as	of the above mentioned Contractor.
Witness my official hand	d and seal.	
My commission expires	:	
		Notary Public











Disclaimer: The data presented has been compiled from various sources, each of which introduces varying degrees of inaccuracies or inconsistencies. Such discrepancies in data are inherent and in supplying this product the Town of Castle Rock assumes no liability for its use or accuracy. Questions or comments regarding the cartographic composition of this map including, but not limited to, errors, omissions, corrections, and/or updates, should be directed to the Utilities Department, Town of Castle Rock, (720) 733-6056. Copyright 2022, Town of Castle Rock Utilities Mapping.

MITCHELL GULCH RETENTION POND IMPROVEMENTS SITE MAP



## Town of Castle Rock

## **Agenda Memorandum**

**Agenda Date:** 1/17/2023

Item #: 14. File #: RES 2023-009

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

Mark Marlowe, P.E., Director of Castle Rock Water From:

> J. David Van Dellen, P.E., Stormwater Manager Laura Kindt, P.E., Project Manager-Stormwater

Resolution Approving a Service Agreement with Olsson, Inc., for the East Plum

**Creek/Sellers Gulch Confluence Project** 

#### **Executive Summary**

Castle Rock Water is seeking Town Council approval of a Resolution (Attachment A) approving a service agreement with Olsson Associates for the East Plum Creek (EPC)/Sellars Gulch Confluence Project in the amount of \$647,754, plus staff requests a 10% Town-managed contingency in the amount of \$64,775, for a total project authorization of \$712,529. The East Plum Creek/Sellars Gulch Confluence Project is located in the heart of Downtown Castle Rock (see Attachment B) and will be funded through the Stormwater Fund. The scope of work generally includes survey, alternative analysis, preliminary and final design, environmental permitting and environmental approvals for stream stabilization improvements and regional water quality enhancement along EPC and Sellars Gulch. Project design and permitting is scheduled to be completed in fall of 2024. Additional funding partnerships through the Downtown Development Authority, Parks and Recreation, Chatfield Watershed Authority and grants will be pursued to determine if additional passive recreational uses are feasible within the project area.

#### **Notification and Outreach Efforts**

The Town will hold to open houses to present the proposed project improvements and solicit feedback. The Town will utilize the normal Town outreach channels including social media and email to notify the public of the open houses.

#### History of Past Town Council, Boards & Commissions, or Other Discussions

On January 6, 2009, Town Council passed, approved, and adopted a resolution approving the East Plum Creek Watershed Master Plan.

On January 6, 2009, Town Council passed, approved, and adopted a resolution approving the Sellars

Item #: 14. File #: RES 2023-009

Gulch Drainageway Master Plan.

#### **Discussion**

The Confluence project is located near Downtown Castle Rock and is generally bounded by East Plum Creek Parkway to the south, I-25 to the west, Douglas County Buildings to the north and East Plum Creek Trail to the east. The Confluence Project has a unique opportunity to provides downtown soft surface trail networks and gathering areas with East Plum Creek and Sellars Gulch treated as an amenity and focal point. To date, there have been multiple studies completed for the project area, including master plans for East Plum Creek and Sellars Gulch, Transportation Plan and Downtown Alley Plan for adjacent streets. The drainage master plans recommend stabilizing the channels with the use of grade control structures. The East Plum Creek master plan recommends incorporating regional water quality and detention within the confluence area along with defined soft trails. The Transportation Plans and Downtown Alley Plans provide additional access points to the confluence.

Under existing conditions East Plum Creek and Sellars Gulch are experiencing bed degradation, bank erosion and constricted channels. The bank erosion is impacting water quality with the increased sediment entering the stream. The incision of the channel has lowered the water table, impacting the vegetation and trees ability to access water, resulting in loss of vegetation and trees. The majority of the project is within the Town's Preble's meadow jump mouse (PMJM) habitat and the Riparian Conservation Zone (RCZ) as identified within the Douglas County Habitat Conservation Plan. The Town of Castle Rock along with Colorado Department of Transportation (CDOT) utilize portions of the project area as PMJM mitigation. The loss of vegetation and trees have a direct negative impact on the PMJM habitat through loss of habitat.

This project will require coordination and easements with multiple property owners within the project area, including, Town of Castle Rock, Douglas County, CDOT, one private land owner, and one unknown property. This project will require coordination with United States Fish and Wildlife Service (USFWS), United States Army Corp of Engineers (USACE) for wetland and PMJM impacts and Federal Emergence Management Agency (FEMA) for hydraulic analysis of the streams and CLOMR/LOMR approval.

Staff has already engaged multiple stakeholders and internal departments to understand their future projects and goals within and adjacent to the project. Some of which include the CDOT, DDA, Parks (environmental and trails) and Public Works.

The goal of this project is to further refine and implement the drainage master plans while providing a design to be compatible with other stakeholder goals to the extent practicable, such as soft trails and the additional access points that may be included at a later date.

The Town issued a Request for Proposals (RFP) via Rocky Mountain BidNet, and five (5) responses were received. A selection committee, consisting of David Van Dellen and Laura Kindt, reviewed and ranked each proposal based on a weighted set of criteria included in the RFP document. Following the qualification based selection process, the fee schedule for each firm was opened and reviewed, "not for low bid, but for a reasonable and appropriate level of effort from each team member." Barbara Spagnuolo and Kevin Tilson provided feedback on the proposals in regards to environmental

#### Item #: 14. File #: RES 2023-009

and downtown development. The five fee schedules ranged from \$569,887 to \$746,000. The top ranked firm in terms of qualifications, response to scope of work, understanding of project and team experience was Olsson, whose proposal represented the best overall value for the services requested. The Olsson fee is within the staff estimate for engineering services and Olsson has developed a track record for successful projects along the East Plum Creek corridor with the Town over the past several years. Although this project was originally budgeted only for improvements on Sellars Gulch, staff determined that it would be most cost effective to include the East Plum Creek reach in this design and permitting effort given the proximity of improvements and the integrated nature of the open space corridor at the confluence of these two streams.

#### **Budget Impact**

Funds for this design agreement will be charged to the accounts below and will require a budget transfer from stormwater capital account 212-4475-444.75-52 which has a budget of \$2,700,000 in 2023. Additionally, there is approximately \$10 million available in capital reserves to complete this project and maintain other priorities in the coming year.

Fund	Account Number	Amount	Cont.	Total	Budget
Sellars Gulch	212-4475-444.75- 72	\$161,938	\$16,194	\$178,132	\$180,860
East Plum Creek	212-4475-444.76- 37	\$485,815	\$48,581	\$534,396	\$0
Total		\$647,754	\$64,775	\$712,529	

#### **Staff Recommendation**

Staff recommends Town Council approval of a Resolution for approval of a services agreement with Olsson Associates for the East Plum Creek Reach/Sellars Gulch Confluence Project in the amount of \$647,754, plus staff requests a 10% Town-managed contingency in the amount of \$64,775, for a total project authorization of \$712,529.

#### **Proposed Motion**

"I move to approve the Resolution as introduced by title."

#### <u>Alternative Motion</u>

"I move to approve the resolution	n as introduced by tit	tle, with the following	g conditions: (list	conditions)

"I move to continue this item to the Town Council meeting on date to allow additional time to (list information needed)."

#### **Attachments**

## Item #: 14. File #: RES 2023-009

Attachment A: Resolution

Exhibit 1: Service Agreement

Attachment B: Site Maps

#### **RESOLUTION NO. 2023-**

# A RESOLUTION APPROVING A SERVICE AGREEMENT WITH OLSSON, INC., FOR THE EAST PLUM CREEK/SELLERS GULCH CONFLUENCE PROJECT

**WHEREAS**, the Town of Castle Rock, Colorado (the "Town") has solicited proposals for design engineering services for the East Plum Creek/Sellers Gulch Confluence Project (the "Project"); and

**WHEREAS**, the Project selection team has determined Olsson, Inc., (the "Contractor") is best qualified to perform work for the Project; and

**WHEREAS**, the Town and the Contractor have agreed to the terms and conditions by which the Contractor will provide work for the Project.

## NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF CASTLE ROCK, COLORADO AS FOLLOWS:

- **Section 1.** <u>Approval</u>. The Service Agreement between the Town and Contractor is hereby approved in substantially the same form attached as *Exhibit 1*, with such technical changes, additions, modifications, or deletions as the Town Manager may approve upon consultation with the Town Attorney. The Mayor and other proper Town officials are hereby authorized to execute the Agreement by and on behalf of the Town.
- **Section 2.** Encumbrance and Authorization for Payment. In order to meet the Town's financial obligations under the Agreement, the Town Council authorizes the expenditure and payment from account no. 212-4475-444.76-37 in an amount not to exceed \$647,754.00, plus a Town-managed contingency in the amount of \$64,775.00, unless otherwise authorized in writing by the Town.

**PASSED, APPROVED AND ADOPTED** this 17th day of January, 2023 by the Town Council of the Town of Castle Rock, Colorado, on first and final reading, by a vote of \_\_\_\_ for and \_\_\_ against.

ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	Mark Marlowe, Director of Castle Rock Water



### TOWN OF CASTLE ROCK SERVICES AGREEMENT (East Plum Creek/Sellers Gulch Confluence Project)

DATE:	
Diti L.	 

**PARTIES:** TOWN OF CASTLE ROCK, a Colorado municipal corporation, 100 N. Wilcox Street, Castle Rock, Colorado 80104 (the "Town").

**OLSSON, INC**, a Nebraska corporation, 1525 Raleigh Street, Suite 400, Denver, Colorado 80204 ("Contractor").

#### **RECITALS:**

A. Town wishes to engage Contractor to provide the services more fully described in the following Agreement and Exhibits.

#### **TERMS:**

- **Section 1.** <u>Scope of Services.</u> Contractor shall provide engineering services as described in the attached *Exhibit 1* ("Services").
- **Section 2.** Payment. Contractor shall invoice Town on a monthly basis for the Services rendered in accordance with the rate and fee schedule set forth in *Exhibit 1*. The Town shall pay such invoices within 30 days receipt of such invoice. In no event shall payment exceed \$647,754.00, unless authorized in writing by Town.
- Section 3. <u>Completion.</u> Contractor shall commence the Services on January 18, 2023 and complete the Services by December 31, 2024. Contractor shall devote adequate resources to assure timely completion of the Services. Contractor shall perform the Services under this Agreement using a standard of care, skill and diligence ordinarily used by reputable professionals performing under circumstances similar to those required by this Agreement.

Town shall have the right to terminate this Agreement at any time with 30 days written notice to Contractor. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination. Contractor shall turn over all work product produced up to the date of termination.

**Section 4.** Annual Appropriation. The continuance of this Agreement is contingent upon the appropriation of funds to fulfill the requirements of the Agreement by the Town. If the Town fails to appropriate sufficient monies to provide for the continuance of the Agreement, the Agreement shall terminate on the final day preceding the date of the beginning of the first fiscal year for which funds are not appropriated. The Town's only obligation in the event of termination shall be payment of fees and expenses incurred up to and including the effective date of termination.



- **Section 5.** <u>Subcontractors.</u> Contractor may utilize subcontractors to assist with specialized works as necessary to complete the Services. Contractor will submit any proposed subcontractor and the description of their services to the Town for approval.
- **Section 6.** Assignment. This Agreement shall not be assigned by Contractor without the written consent of the Town.
- **Section 7.** <u>Notice.</u> Any notice required or permitted by this Agreement shall be in writing and shall be deemed to have been sufficiently given for all purposes if sent by certified mail or registered mail, postage and fees prepaid, addressed to the party to whom such notice is to be given at the address set forth on the first page of this Agreement, or at such other address as has been previously furnished in writing to the other party or parties. Such notice shall be deemed given when deposited in the United States mail.
- **Section 8.** <u>Insurance.</u> Contractor agrees to procure and maintain, at his own cost, the following policy or policies of insurance. Contractor shall not be relieved of any liability, claims, demands or other obligations assumed pursuant to this Agreement by reason of its failure to procure or maintain insurance, or by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.
- A. Contractor shall procure and maintain, and shall cause each subcontractor of the Contractor to procure and maintain a policy with the minimum insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Town. All coverage shall be continuously maintained from the date of commencement of services hereunder. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage.
  - 1. Workers Compensation insurance to cover obligations imposed by the Workers Compensation Act of Colorado and any other applicable laws for any employee engaged in the performance of Work under this contract, and Employer's Liability insurance with minimum limits of FIVE HUNDRED THOUSAND DOLLARS (\$500,000) each accident, FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-policy limit, and FIVE HUNDRED THOUSAND DOLLARS (\$500,000) disease-each employee.
  - 2. Comprehensive General Liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate. The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including for contractual and employee acts), blanket contractual, independent contractors, products, and completed operations. The policy shall contain a severability of interests provision.
  - 3. Comprehensive Automobile Liability Insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) each occurrence and ONE MILLION DOLLARS (\$1,000,000) aggregate with respect to each of Contractor 's owned, hired and/or non-owned vehicles



assigned to or used in performance of the services. The policy shall contain a severability of interests provision.

- B. The policies required above, except Workers' Compensation insurance, Employers' Liability insurance and Professional Liability insurance shall be endorsed to include the Town, its officers and employees, as additional insureds. Every policy required above, except Workers' Compensation shall be primary insurance, and any insurance carried by the Town, its officers, or its employees, shall be excess and not contributory insurance to that provided by Contractor. The additional insured endorsement for the Comprehensive General Liability insurance required above shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Contractor shall be solely responsible for any deductible losses under each of the policies required above.
- C. Certificates of insurance shall be completed by Contractor's insurance agent and submitted at the time of execution of this Agreement as *Exhibit 2* as evidence that policies providing the required coverage, conditions and minimum limits are in full force and effect, and shall be subject to review and approval by the Town. Each certificate shall identify the Project and shall provide that coverage afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to the Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The Town reserves the right to request and receive a certified copy of any policy and any endorsement thereto.
- D. Failure on the part of Contractor to procure or maintain policies providing the required coverage, conditions, and minimum limits shall constitute a material breach of contract upon which at the Town's discretion may procure or renew any such policy or any extended connection therewith, and all monies so paid by the Town shall be repaid by Contractor to the Town upon demand, or the Town may offset the cost of the premiums against any monies due to Contractor from the Town.
- **Section 9.** Colorado Governmental Immunity Act. The parties understand and agree that the Town is relying on, and does not waive or intend to waive by any provision of this contract, the monetary limitations (presently \$424,000 per person, \$1,195,000 for two or more persons, per occurrence) or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, \$24-10-101, et seq., C.R.S., as from time to time amended, or otherwise available to Town, its officers, or its employees.
- **Section 10.** <u>Indemnification.</u> Contractor expressly agrees to indemnify and hold harmless Town or any of its officers or employees from any and all claims, damages, liability, or court awards including attorney's fees that are or may be awarded as a result of any loss, injury or damage sustained or claimed to have been sustained by anyone, including, but not limited to, any person, firm, partnership, or corporation, to the extent caused by the negligent acts, errors or omissions of Contractor or any of their employees or agents in performing work pursuant to this Agreement. In the event that any such suit or action is brought against Town, Town will give notice within ten (10) days thereof to Contractor.



- **Section 11.** <u>Delays.</u> Any delays in or failure of performance by any party of his or its obligations under this Agreement shall be excused if such delays or failure are a result of acts of God, fires, floods, strikes, labor disputes, accidents, regulations or orders of civil or military authorities, shortages of labor or materials, or other causes, similar or dissimilar, which are beyond the control of such party.
- **Section 12.** <u>Additional Documents.</u> The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
- **Section 13.** Entire Agreement. This Agreement represents the entire agreement between the parties and there are no oral or collateral agreements or understandings. This Agreement may be amended only by an instrument in writing signed by the parties. If any other provision of this Agreement is held invalid or unenforceable, no other provision shall be affected by such holding, and all of the remaining provisions of this Agreement shall continue in full force and effect.
- **Section 14.** <u>Time of the Essence.</u> Time is of the essence. If any payment or any other condition, obligation, or duty is not timely made, tendered or performed by either party, then this Agreement, at the option of the party who is not in default, may be terminated by the non-defaulting party, in which case, the non-defaulting party may recover such damages as may be proper.
- **Section 15. Default and Remedies**. In the event either party should default in performance of its obligations under this agreement, and such default shall remain uncured for more than 10 days after notice of default is given to the defaulting party, the non-defaulting party shall be entitled to pursue any and all legal remedies and recover its reasonable attorney's fees and costs in such legal action. In addition, no Party will be entitled to lost profits, economic damages, or actual, direct, incidental, consequential, punitive or exemplary damages in the event of a default.
- **Section 16.** <u>Waiver.</u> A waiver by any party to this Agreement of the breach of any term or provision of this Agreement shall not operate or be construed as a waiver of any subsequent breach by either party.
- **Section 17.** <u>Governing Law.</u> This Agreement shall be governed by the laws of the State of Colorado in the Douglas County District Court.
- **Section 18.** Independent Contractor. Contractor has completed the Affidavit of Independent Contractor Status, attached as *Exhibit 3*, and submitted same at the time of execution of this Agreement. In addition to the Affidavit, Contractor and the Town hereby represent that Contractor is an independent contractor for all purposes hereunder. Contractor represents and warrants that they are free from the Town's direction and control in the performance of their work or services and that they have an independent business doing the specific type of work or services which are the subject of this Agreement. More specifically, Contractor represents and warrants that the Town does not control what work or services they will perform or the manner in which such work or services will be performed. As such, Contractor is not covered by any worker's



compensation insurance or any other insurance maintained by Town except as would apply to members of the general public. Contractor shall not create any indebtedness on behalf of the Town.

**Section 19.** No Third Party Beneficiaries. It is expressly understood and agreed that enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to Town and Contractor, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other third party on such Agreement. It is the express intention of the parties that any person other than Town or Contractor receiving services or benefits under this Agreement shall be deemed to be an incidental beneficiary only.

**Section 20.** <u>Counterparts.</u> This Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which together shall be deemed to constitute one and the same instrument. Each of the Parties hereto shall be entitled to rely upon a counterpart of the instrument executed by the other Party and sent by electronic mail.

ATTEST:	TOWN OF CASTLE ROCK
Lisa Anderson, Town Clerk	Jason Gray, Mayor
Approved as to form:	Approved as to content:
Michael J. Hyman, Town Attorney	David L. Corliss, Town Manager
CONTRACTOR:	
OLSSON, INC.	
By:	
Its:	_



## **EXHIBIT 1**

## SERVICES AND FEE SCHEDULE

#### Work Breakdown Structure/Scope of Work

The proposed scope of work and associated fees is provided for discussion. We are confident our team can negotiate a scope of services that meets your needs.

Detailed tasks and hours are provided in Attachment A. Stream Landscape Architecture & Planning will provide landscape architecture, revegetation and planting plans, and related services throughout the project. Services are detailed in Attachment B, Stream's proposal dated December 9, 2022. CORVUS Environmental Consulting, LLC will provide environmental and permitting services as detailed in Attachment C, CORVUS' proposal dated December 8, 2022. Colliers Engineering & Design will provide subsurface utility engineering services as detailed in Attachment D, Colliers' proposal dated December 8, 2022. All other services will be performed by Olsson.

#### 1. Project Management, Coordination and Meetings

- a. Project Management Plan: Prepare Project Management Plan to communicate work assignments, project scope, budget and schedule to all team members.
- b. Kick-off Meeting and Site Visit: Attend kick-off meeting and site visit with Town of Castle Rock. Prepare and distribute meeting notes. Stream will attend the kickoff meeting.
- c. Progress Meetings: Prepare and distribute meeting notes. Ten (10) meetings are included in the fee proposal: one (1) each month when a review meeting is not occurring, nine (9) total, and one (1) additional as necessary. It is assumed four (4) meetings will be in-person and six (6) will be virtual. Stream and CORVUS are anticipated to attend all progress meetings. It is assumed that any stakeholders can attend a progress meeting.
- d. Review Meetings: Attend review meetings following the alternatives selection, 30%, and 90% submittals, three (3) total. Prepare and distribute meeting notes.
- e. Public Meetings: Prepare for and attend up to two (2) public meetings.
- f. Monthly Progress Reports: Prepare progress reports to advise the Town's project manager of work completed, work planned for the upcoming month and challenges that could affect budget or schedule.
- g. Stream: Services detailed in Stream's scope of services, Tasks 1.1 and 1.2: Project Coordination and Meetings.
- h. CORVUS: Services detailed in CORVUS' scope of services, Tasks 1 and 2: Progress Meetings (10) and Project Coordination and Management.
- i. Phase I Deliverables:
  - 1. Project Management Plan (PDF)
  - 2. Meeting notes (PDF)
  - 3. Monthly progress reports (PDF)

#### 2. Phase I: Surveying, Site Investigation & Alternatives Analysis

- a. Topographic Survey and Legal Descriptions
  - i. Olsson shall perform and prepare a boundary and topographic survey of multiple properties located in the Northwest and Southwest Quarters of Section 11, Township 8 South, Range 67 West, of the 6<sup>th</sup> PM. The properties to be surveyed are known as

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Douglas County Parcel Numbers 2505-112-14-014, 2505-112-14-026, 2505-112-17-005, 2505-112-99-011, 2505-112-21-001, 2505-112-99-010, 2505-112-21-002, 2505-112-99-009, 2505-112-22-001, 2505-112-22-002, 2505-112-00-024, 2505-113-00-022, 2505-113-00-003, 2505-113-04-002, 2505-113-04-009, 2505-113-04-003, & 2505-113-00-024. The Limits of the topographic survey are shown in Figure 1 and the parcels are shown on Figure 2.



Figure 1 - Suggested Survey Limits in Red

- ii. The survey shall be tied to the Colorado State Plane Coordinate System of 1983 (NAD 83) Central Zone and to the North American Vertical Datum of 1988 (NAVD88).
- iii. The topographic survey shall depict physical improvements including buildings, finished floor elevations, roads, driveways, parking, walking paths, fencing, general vegetation, outline of treed areas (individual trees not included), and visible above ground utilities. Olsson will locate and detail sanitary and storm utility structures to show pipe sizes and direction.
- The boundaries of the properties within the project area shall be determined based upon field investigations and documents within client provided Title Commitments. It is assumed the client will provide title commitments for each parcel being surveyed. Additional property research to support the title commitment will be performed by Olsson and performed through the Douglas County Assessor and Recorder's Offices. Survey work shall be done under the direction and supervision of a Licensed



Professional Land Surveyor licensed in the State of Colorado.

i. Olsson shall create legal descriptions with exhibits of the requested lands to be acquired by the client. Each legal description shall be a metes and bounds description accompanied by an exhibit that graphically depicts the description. Per Addendum 1 three (3) legal descriptions are included in this scope of work. However, it appears seven (7) separate legal descriptions may be necessary. Additional descriptions can be provided at \$1,250 per description. Legal descriptions may be moved to Phase II or III as necessary should the needed descriptions not be determined in Phase I.



Figure 2 - Parcel Map

- b. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase I, CORVUS proposes to complete Tasks 3 through 6 of their scope, including jurisdictional delineation of waters of the U.S., Preble's meadow jumping mouse (PMJM) habitat mapping, a baseline habitat quality assessment, and gather existing information on historic properties (to be performed by PaleoWest Archaeology). If the Town would prefer these tasks be performed during Phase II, they will be moved.
- c. Geomorphic Assessment: Olsson will provide a geomorphic assessment of the site including:



- i. Desktop analysis including, but not limited to, an evaluation of historic and contemporary maps, ground and aerial photos, survey data, bridge plans and inspection records, utility plans for stream crossings, existing watershed plans and reports, and hydrologic and hydraulic data and information.
- ii. Detailed site reconnaissance to document and map the existing morphology of the project channels. The site reconnaissance will be conducted based on the guidance provided in HEC-20 (Lagasse et al. 2012) and the Stream Reconnaissance Handbook by (Thorne 1998). Where possible, the evolutionary stage of stream reaches will be identified based on the Channel Evolution Models of Schumm et al. (1984), Simon and Hupp (1986), and Cluer and Thorne (2015). The site reconnaissance work will include documenting the general sediment caliber and character of the channel bed and banks where visible, delineating existing bank protection, delineating any structures in the channel including beaver dams, exposed utility crossings, sand and gravel bars, inset berms/benches, outfalls, and documenting any other man-made feature in or along the channels that could impact the channel morphology. Field notes and georeferenced ground photos will be used to document existing conditions.
- iii. A Geomorphic Stream Evaluation Report will be developed. The evaluation report will document all findings of the geomorphic evaluation and will include recommendations for improved sediment transport, improved flood flow conveyance, channel and stream bank maintenance, and channel and streambank stabilization.
- d. Alternatives analysis: The project team will complete up to four alternatives incorporating Master Plan intentions, stakeholder input, items for federal permitting, floodplain considerations, stream dynamics, trail and recreational considerations, the natural environment, and the urban connection. The alternatives will use the detailed survey shown in Figure 1 (in Item 2.a) plus LiDAR information outside of the survey. At the beginning of the phase, a constraints and opportunities workshop will be held to identify the environmental and physical constraints, prioritize desired improvements, and gain consensus on a path forward regarding allowable improvements. It is assumed it will be one of the progress meetings identified in Project Management and Coordination.
- e. Stream: Services detailed in Stream's scope of services, Tasks 1.3-1.7: Phase I: Site Investigation & Alternative Analysis
- f. Prepare a brief memorandum documenting the alternatives.
- g. Prepare a conceptual opinion of probable cost for each alternative.
- h. Conduct an independent QA/QC review.
- i. Phase I Deliverables
  - 1. Geomorphic Stream Evaluation Report
  - 2. Alternatives Memorandum including design discussion, recommendations, and selection matrix (PDF)
  - 3. Conceptual level plan and profile drawings as an appendix to the memorandum (PDF and AutoCAD)
  - 4. Conceptual level opinion of probable cost (OPC) for each alternative (PDF and Excel)
  - 5. Topographic and property boundary survey plan sheets (PDF and AutoCAD)
  - 6. Easement descriptions and exhibits, three (3) total (PDF). These may occur in later phases if they depend on improvements that haven't been determined in this phase.

#### 3. Phase II: Preliminary Design & Environmental Permitting

a. Site meeting to observe the locations of the preferred improvements and make adjustments to the

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locations, if needed. Because the grade control is anticipated to be designed close to utility crossings, staking was not included but can be done, if needed.

- b. Stream: Services detailed in Stream's scope of services, Tasks 2.1-2.8: Phase II: Preliminary Design
- c. Geotechnical Investigation: Olsson's geotechnical team will complete borings and laboratory testing to identify sub-surface conditions and recommendations for pedestrian bridge foundation design. Boring locations will be identified based on the selected alternative. Prepare a geotechnical report summarizing findings. Six (6) geotechnical boring are included, two (2) at each bridge location. Olsson can perform additional borings if additional bridges are added to the project assuming the borings are done during the same mobilization. This service is not included in the proposed budget but could be performed for an additional \$6.500.
- d. Preliminary (30%) Design: The project team will provide a 30% progress submittal based on the selected alternative from Phase I. For the purpose of estimating, it was assumed one main pond/water quality feature is included.
  - i. 30% Construction Drawings (22"x34" printable on 11"x17"):
    - 1. Cover (1 sheet)
    - General Notes, Abbreviations, Legend (1 sheet)
       Survey Control (1 sheet)

    - 4. Overall Improvements (1 sheet)
    - 5. Plan and Profile (3 sheets)
    - 6. Water Quality Pond Grading Plan (1 sheet)
    - 7. Preliminary Details (4 sheets)
    - 8. Preliminary Planting/Revegetation Plan (3 sheets)
    - 9. Pedestrian Trail/Landscape Plans (3 sheets)
  - ii. Preliminary Hydraulic Calculations: Olsson will prepare a Preliminary Floodplain Modification Study (FMS) that will contain preliminary hydraulic calculations and will be used as the basis for the CLOMR Report or No-Rise Certification, as applicable. The hours associated with the FMS are associated with some of the basic modeling and the information and narrative to be developed. The majority of the hours associated with the detailed modeling and other required submittals are included with the CLOMR. If the Town would prefer a different format, it can be developed.
  - iii. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase II, CORVUS proposes to complete Tasks 7 through 13 of their scope, consisting of agency pre-application coordination, FACWet Analysis. Colorado Stream Quantification Tool (CSQT), Compensatory Mitigation Plan (CMP), individual Permit (IP) application, Water Quality Certification Request, and USFWS concurrence letter request. The fee estimate includes \$1,122 for the 401 water quality certification request fee.
    - 1. Olsson will collect and provide information on the hydraulic and geomorphic parameters associated with the CSQT. It is anticipated that the following parameters and corresponding metrics will be utilized and the breakdown of parameter responsibility is noted.
      - a. Reach Runoff: Impervious cover and concentrated flow points (CORVUS)
      - b. Floodplain Connectivity: Bank height ratio and entrenchment ratio (Olsson)

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- c. Lateral migration: Greenline stability rating (CORVUS)
- d. Bed Form Diversity: Pool spacing ratio and pool depth ratio and percent riffle (Olsson)
- e. Riparian Vegetation: Riparian width and woody vegetation cover and herbaceous vegetation cover and percent native cover (CORVUS)
- iv. 30% Engineer's Opinion of Probable Cost
- v. Conduct an internal, independent QA/QC review.
- vi. Phase II Deliverables
  - 1. 30% Construction Drawings (PDF and AutoCAD)
  - 2. 30% Preliminary FMS that includes hydraulic calculations (or other format) (PDF and working files)
  - 3. 30% Floodplain workmap (PDF and AutoCAD)
  - 4. 30% OPC (PDF and working file)
  - 5. Geotechnical Report (PDF)

#### 4. Phase III: Final Design & Floodplain Modification Approval

- a. Stream: Services detailed in Stream's scope of services, Tasks 3.1-3.14: Phase III: Final Design and Floodplain Modification Approval.
- b. Subsurface Utility Engineering: Colliers will conduct subsurface utility engineering and develop a SUE Plan and Report to meet the requirements of SB18-167. Their scope and proposal are included as Attachment D. The project design will strive to avoid utilities wherever possible. While SUE services are included in Phase III, it may be beneficial to perform Quality Level D-B (QL-D-QL-B) locates during Phase II to inform the 30% design, and then perform QL-A test holes in Phase III. Ten (10) QL-A test holes are included.
- c. Environmental Permitting Coordination (CORVUS): CORVUS' proposed scope of services is included as Attachment C. During Phase III, CORVUS proposes to complete Task 14 of their scope, consisting of post submittal coordination.
- d. 90% structural design and coordination of three (3) pedestrian bridges and approximately 200 LF of pedestrian boardwalk.
- e. Final Design: The project team will provide a 90% progress submittal and 100% Bid Set submittal in accordance with Town Criteria.
  - i. 90% Construction Drawings (22"x34" printable on 11"x17"):
    - 1. Cover (1 sheet)
    - 2. General Notes, Abbreviations, Legend (1 sheet)
    - 3. Survey Control (1 sheet)
    - 4. Horizontal Control (1 sheet)
    - 5. Traffic and/or Pedestrian Control Plan (1 sheet)
    - 6. Overall Improvements Plan (1 sheet); include river stationing, property boundaries, easements, plan improvements, floodplain and RCZ (1 sheet)
    - 7. Channel Plan and Profile (3 sheets)
    - 8. Detailed Cross Sections: (2 sheets)
    - 9. Pedestrian Trail Plan and Profiles (3 sheets)

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- 10. Structural Plans and Details (3 prefabricated pedestrian bridges)
  - a. General Structural Notes and Quantities
  - b. GP&E
  - c. Geological Profile/Pile Layout
  - d. Abutments
  - e. Approaches
  - f. Safety Railing
  - g. Quantities
  - h. Misc. Plan Production
  - i. Structural Aesthetics
- Drop Structure Details: details plus cross sections through grade control structures, (6 sheets)
- 12. Details (4 sheets)
- 13. Planting / Revegetation Plan (2 sheets)
- 14. Planting / Revegetation Plan Details (2 sheets)
- ii. Floodplain Modification Study (FMS): Olsson will update the FMS (or other format) to the 90% and 100% levels. It will serve as the basis for the CLOMR Report. Additional information will be required.
- iii. CLOMR: Olsson will prepare and submit a CLOMR application and address comments as needed to obtain approval. A discussion of the alternatives evaluation and documentation of Environmental Species Act (ESA) compliance will be included. The CLOMR will be prepared in final form for Town and Douglas County review prior to submittal to FEMA, with the 90% submittal. Acknowledgement by Douglas County will be required on the MT-2 forms. Each task of the CLOMR is listed in the fee estimate.

Build upon the design modeling and FMS to prepare a CLOMR submittal. The majority of the hours for floodplain modeling and development of required maps and forms is included with the CLOMR task. The following items will be included:

- a. Duplicate effective model
- b. Existing/corrected effective model
- c. Existing floodplain delineation, 100-yr & 500-yr
- d. Post-project floodplain model
- e. Post-project floodway model
- f. Post-project floodplain delineation, 100-yr & 500-yr
- g. Post-project floodway delineation
- h. Workmap
- i. Annotated FIRM
- j. Annotated profile
- k. Annotated floodway table
- I. Agreement table
- m. Floodplain and floodway table
- n. CLOMR narrative
- o. MT-2 forms
- p. Owner notification letters and exhibit
- q. QA/QC
- r. Address sponsor comments
- s. Address FEMA comments
- t. FEMA review fee of \$6,500 is included.

Note that the costing spreadsheet shows the CLOMR after the remaining 90% and 100% tasks, rather than in this position in the order as it is helpful to track it separately.

iv. Temporary Erosion and Sediment Control (TESC) Plan and Report: Olsson will prepare a



TESC plan and TESC report for the project in accordance with the Town of Castle Rock TESC Manual. Submit a 90% progress set for Town review and 100% bid set.

- v. 90% Technical Specifications: The project team will prepare technical specifications, which are anticipated to be a combination of Town of Castle Rock, UDFCD, and CDOT specifications.
- vi. Technical Criteria Variance related to Water Quality Exclusion(s), if needed.
- vii. 90% OPC
- viii. Conduct an internal, independent QA/QC review.
- ix. 100% Bid Set
  - a. Address 90% review comments and prepare and submit 100% documents and a bid schedule.
  - b. Conduct an internal, independent QA/QC review.

#### f. Phase III Deliverables

- i. 90% and 100% Construction Drawings (PDF and AutoCAD)
- ii. Certified SUE Plan and Report (PDF and AutoCAD)
- iii. TESC Plan and Report (PDF, AutoCAD, and Word)
- iv. Drainage calculation memorandum of FMS (PDF and working files)
- v. CLOMR Report and Application (PDF and working files)
- vi. 404 Permit Application (PDF)
- vii. Memo and Exhibit(s) for USFWS Concurrence Request (PDF and working files)
- viii. Utility Relocation Agreements, as applicable (PDF)
- ix. Technical Specifications (PDF and Word Document)
- x. Technical Criteria Variance (PDF and Word Document)
- xi. Engineer's Opinion of Probable Cost (PDF and working files)
- xii. Bid Schedule (Excel or Word Document)
- xiii. Easement Legal Descriptions and Exhibits, if needed (PDF and AutoCAD)

#### 5. Assumptions and Clarifications

The following services are not included. If they are requested, a proposal will be prepared for your approval:

- 1. Survey
  - a. Client responsible for coordination and site access prior to commencing survey.
  - b. Any changes to survey scope may affect the cost and schedule of the survey. All additional work shall be approved by the client prior to commencement of that additional work.
  - c. The use of UAV/UAS (drones) will be allowed on and over the site.
  - d. Individual surveys for each property are excluded from this scope.
- 2. Final design of potential recreational amenities that have not been selected such as bike challenge courses, disc golf, etc. or comprehensive urban planning-related items
- 3. Bid phase and construction phase services.
- 4. As-built survey and record drawings.
- 5. Letter of Map Revision.

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-END



## OLSSON PROFESSIONAL SERVICES FEE ESTIMATE

Project Name: East Plum Creek Sellars Confluence
Project Number: Z22-06349
Project Manager: Deb Ohlinger

Project Manager:	Dep Omini	yeı													=				
							Estimated												
TASK	Team	Senior	Project	Assistant	Geomor-	Team	Project	Assistant	Senior	Team	Senior		Senior	2-person					
	Leader	Engineer	Engineer	Engineer	phologist	Leader	Engineer	Engineer	Technician	Leader	Surveyor	Surveyor	Survey	Survey	Total Labor	Sub- consult	Reimb	Sub Total	Total Phas
UOUDLY DATES		_		Ū	, ,	Structural	Structural	Structural		Survey	,		Tech	Crew	Cost		Expenses	Task Cost	Cost
HOURLY RATES	\$240.00	\$216.00	\$167.00	\$123.00	\$245.00	\$240.00	\$167.00	\$123.00	\$113.00	\$240.00	\$164.00	\$130.00	\$113.00	\$208.00					
Personnel	DO	AG/CU	MD/HP	MS	WS					NS									
Project Management, Coordination and Meetings																			
Project management plan	2		2												\$ 814	\$ -	\$ -	\$ 814	
Kick-off meeting and site visit, distribute meeting notes	4		5	5	5										\$ 3,635		\$ 179	\$ 3,814	
Progress meetings, distribute meeting notes (10 total - 4 in person,	18		26		16		10	10										\$ 15,935	
6 virtual)	10		26		10		10	10							\$ 15,482	ъ -	\$ 453	\$ 15,935	
Review meetings (alts, 30%, 90%), meeting notes	9		12		12										\$ 7,104		\$ -	\$ 7,104	
Public meetings (2)	8		10												\$ 3,590		\$ 96	\$ 3,686	
Monthly progress reports and general coordination	36		27				10								\$ 14,819	\$ -	\$ -	\$ 14,819	
Project Management, Coordination and Meetings (Stream Task 1.1-															\$ -	\$ 13,230	\$ -	\$ 13,230	
1.2)															,	, , , , ,	•	-, -,	
Project Management, Coordination and Meetings (CORVUS Tasks 1 and 2)															\$ -	\$ 8,319	\$ -	\$ 8,319	
rand 2)	77		82	5	33		20	10							\$ 45,444	\$ 21,549	\$ 728	\$ 67,721	\$ 67,7
	- 11	-	02	5	33	-	20	10	-	-	-	-	-	-	<b>Φ</b> 45,444	φ 21,549	<b>Ф</b> 720	\$ 67,721	Φ 67,7
Phase I: Surveying, Site Investigation & Alternatives Analysis																			
Survey															\$ -	\$ -	\$ -	\$ -	
Topographic Survey										5	56	70	99	170		\$ -	\$ 500	\$ 66,531	
Easement Descriptions and Exhibits															\$ -	\$ -		\$ 3,750	
Environmental Permitting (CORVUS Tasks 3-6)															\$ -	\$ 25,659	\$ -	\$ 25,659	
Geomorphic Assessment				8	48										\$ 12,744	\$ -	\$ 179	\$ 12,923	
Constraints & opportunities workshop (time included above)															\$ -	\$ -	\$ -	\$ -	
Alternatives Analysis															\$ -	\$ -	\$ -	\$ -	
Evaluate Existing Hydraulics	1	_	4	16											\$ 3,308	\$ -	\$ -	\$ 3,308	
Develop Alternatives (up to 4)	12		24	64	12										\$ 20,292	\$ -	\$ -	\$ 20,292	
Evaluate Proposed Hydraulics	1	2	8	24											\$ 4,960	\$ -	\$ -	\$ 4,960	
Conceptual Plan and Profiles	4	4	8	36	2										\$ 8,078	\$ -	\$ -	\$ 8,078	
Landscape architecture (Stream Task 1.3-1.7)															\$ -	\$ 25,900	\$ -	\$ 25,900	
Alternatives Memorandum (Stream Task 1.8)		0		0.4											\$ -	\$ 2,520	\$ -	\$ 2,520	
Alternatives Memorandum	2		8	24											\$ 5,200	\$ -	\$ -	\$ 5,200	
Conceptual OPC QA/QC	1	2 8	4	18											\$ 3,554 \$ 1,728	\$ -	\$ -	\$ 3,554 \$ 1,728	
QAVQC	21		56	190	62		_	_	_	5	56	70	99	170	\$ 1,728	\$ 54,079	\$ - \$ 4,429	\$ 1,728	
	21	52	30	130	UZ.		_	_	_	3	30	70	33	170	Ψ 123,033	Ψ 54,015	ψ +,+23	ψ 104,400	ψ 104,4
Phase II: Preliminary Design & Environmental Permitting																			
Site meeting to review selected alternative	4		4	4	4										\$ 3,100	\$ -	\$ 179	\$ 3,279	
Landscape architecture (Stream Task 2.1-2.8)					-										\$ -	\$ 42,990	\$ -	\$ 42,990	
Geotechnical Investigation (Olsson)																\$ -	\$ 25,000	\$ 25,000	
30% Construction Drawings																\$ -	\$ -	\$ -	
Cover sheet (1 sheet)			1	1											\$ 290	\$ -	\$ -	\$ 290	
General notes, abbreviations, legend (1 sheet)			1	2		<u> </u>									\$ 413		\$ -	\$ 413	
Survey control sheet (1 sheet)				1											\$ 123		\$ -	\$ 123	
Overall site improvements (1 sheet)		1	2			·									\$ 1,288		\$ -	\$ 1,288	
Plan and profile (1"=50', 3 sheets)	6	6	12		4										\$ 10,148		\$ -	\$ 10,148	
Water Quality Pond Grading Plan (1 sheet)	1		4												\$ 3,584		\$ -	\$ 3,584	
Preliminary details (4 sheets)	2	1	4		1										\$ 3,577		\$ -	\$ 3,577	
Planting/Revegetation plan (1"=50', 3 sheets)			1_	1											\$ 290		\$ -	\$ 290	
Pedestrian Trail/Landscape Plan (3 sheets)			1	1			1			1					\$ 290			\$ 290	
30% Floodplain Modification Study (FMS) w/calcs	1	2	4	32											\$ 5,276		\$ -	\$ 5,276	
Environmental Permitting (CORVUS Tasks 7-13)				20	48		1			1					\$ -	\$ 29,156		\$ 29,156	
Environmental Permitting (Olsson CSQT) 30% OPC	1	1	2	30 8	48		1			1					\$ 15,450 \$ 1,774				
QA/QC	1	8	2	8											\$ 1,774 \$ 1,728			\$ 1,774 \$ 1,728	
un u∪	4.5		36	158	57		1			1						\$ 72,146	•		
	15	20	36	158	5/	-	-	-	-	-	-	-	-	-	φ 47,331	<b>Φ</b> /2,146	<b>ა</b> ∠5,358	ъ 144,835	<b>Φ</b> 144,8

1 of 3

## OLSSON PROFESSIONAL SERVICES FEE ESTIMATE

Project Name: East Plum Creek Sellars Confluence
Project Number: Z22-06349
Project Manager: Deb Ohlinger

							= /- /-								•	1	I	1	ı
							Estimated		ı			1			1				
TASK	Team	Senior	Project	Assistant	Geomor-	Team	Project	Assistant	Senior	Team	Senior		Senior	2-person					
	Leader	Engineer	Engineer	Engineer	phologist	Leader	Engineer	Engineer	Technician	Leader	Surveyor	Surveyor	Survey	Survey	Total Labor	Sub- consult	Reimb	Sub Total	Total Phase
		_	·			Structural		Structural		Survey	,		Tech	Crew	Cost		Expenses	Task Cost	Cost
HOURLY RATES		\$216.00	\$167.00	\$123.00	\$245.00	\$240.00	\$167.00	\$123.00	\$113.00	\$240.00	\$164.00	\$130.00	\$113.00	\$208.00					
Personnel	DO	AG/CU	MD/HP	MS	WS					NS									
Phase III: Final Design & Floodplain Modification Approval																	•	<b>A</b> 00 000	
Landscape architecture (Stream Task 3.1-3.14)															\$ -	\$ 62,680	1	\$ 62,680	
SUE (Colliers)															\$ -	\$ -	\$ -	\$ -	
QL-D through QL-B															\$ -	\$ 23,500	·	\$ 23,500	
QL-A Test Holes (10)															\$ -	\$ 22,000		\$ 22,000	
Environmental Permitting (CORVUS Task 14)							40	40							\$ -	\$ 1,048		\$ 1,048	
90% Structural Design							12	16							\$ 3,972	\$ -	\$ -	\$ 3,972	
90% Construction Drawings															\$ -	\$ -	\$ -	\$ -	
Cover sheet (1 sheet)				1											\$ 123	\$ -	\$ -	\$ 123	
General notes, abbreviations, legend (1 sheet)			1	2											\$ 413	\$ -	\$ -	\$ 413	
Survey control (1 sheet)				1						1					\$ 123	\$ -	\$ -	\$ 123	
Horizontal control plan (1 sheet)			1	1						1					\$ 290	\$ -	\$ -	\$ 290	
Traffic and/or pedestrian control plan (1 sheet)		1	2												\$ 1,534	\$ -	\$ -	\$ 1,534	
Overall site improvements (1 sheet) Channel plan and profile (1"=50', 3 sheets)			1	4						1					\$ 659	\$ -	\$ -	\$ 659	
		4	12	36	4										\$ 8,276	\$ -	\$ -	\$ 8,276	
Detailed cross Sections (2 sheets)		1	6	18											\$ 3,432	\$ -	\$ -	\$ 3,432	
Pedestrian Trail Plan and Profiles (3 sheets)	1	1	1	1											\$ 746	\$ -	\$ -	\$ 746	
Structural Plans and Details (3 Pedestrian Bridges)									4						\$ -	\$ -	\$ -	\$ -	
General Structural Notes, Quantities								6							\$ 1,190	\$ -	\$ -	\$ 1,190	
GP&E							2	_							\$ 2,202	\$ -	\$ -	\$ 2,202	
Geological Profile / Pile Layout								4							\$ 1,396	\$ -	\$ -	\$ 1,396	
Abutments							8								\$ 6,056	\$ -	\$ -	\$ 6,056	
Approaches								4	-						\$ 944	\$ -	\$ -	\$ 944	
Safety Railing								4	4						\$ 944	\$ -	\$ -	\$ 944	
Quantities								8	2						\$ 1,210	\$ -	\$ -	\$ 1,210	
Misc Plan Production							8	40	30						\$ 3,390 \$ 3,696	\$ -	\$ -	\$ 3,390	
Structure Aesthetics		0	0	70			8	10	10						Ψ 0,000	\$ -	\$ -	\$ 3,696	
Drop structure details (6 sheets)	1	2	8	72											\$ 10,864 \$ 3,976	\$ -	\$ - \$ -	\$ 10,864	
Details (4 sheets)	1		8	16											Ψ 0,0.0	\$ -	Ψ	\$ 3,976	
Planting/revegetation plan (1"=50', 2 sheets)			1	1											Ψ 200	\$ -	\$ -	\$ 290 \$ 290	
Planting plan details (2 sheets)	4	2		1											Ψ 200	\$ -	Ψ		
90% FMS 90% TESC Plan	1		8	24 40											Ψ :,===	\$ -	\$ - \$ -	\$ 4,292 \$ 6,928	
90% TESC Plan 90% TESC Report	1	2	4												\$ 6,928 \$ 2,852	\$ -	I	\$ 6,928 \$ 2,852	
90% TESC Report 90% Technical Specifications	2		16												\$ 2,852	\$ -	Ψ	\$ 2,852	
90% OPC		10	10	2 12												\$ -	<u> </u>	\$ 6,854	
QA/QC		12	4	12		10	20								\$ 2,360 \$ 8,332	\$ -	-	\$ 2,360	
100% Documents		12				10	20								\$ 8,332	\$ -	<u> </u>	\$ 8,332	
Address 90% comments; prepare 100% bid set		4	20	60											\$ - \$ 11,584	\$ -	<u> </u>	\$ -	
100% OPC		4	20	6											\$ 1,121	\$ -	Ÿ		
100% OPC  100% Technical Specifications	-	2	4							1					\$ 2,084		\$ -		
100% TESC Plan		1	2												\$ 2,004	\$ -	\$ -		
100% TESC Plain 100% TESC Report		1	2												\$ 1,334		\$ -		
100% FESC Report	-	1	2							1					\$ 1,288		\$ -		
Bid Schedule	-	1	1							1					\$ 1,042			\$ 1,042	
QA/QC		8		1											\$ 506		\$ -	\$ 1,728	
UNUU	7	_	110	349	4	10	50	78	92	1						\$ 109,228			\$ 217,749
		04	110	349	4	10	50	/ 6	92	-	-	-	-	-	φ 100,321	φ 109,228	\$ -	φ 217,749	φ 217,749

## OLSSON PROFESSIONAL SERVICES FEE ESTIMATE

Project Name: East Plum Creek Sellars Confluence
Project Number: Z22-06349
Project Manager: Deb Ohlinger

							Estimated	Hours											
TASK	Team Leader	Senior Engineer	Project Engineer	Assistant Engineer	Geomor- phologist	Team Leader Structural	Project Engineer Structural	Assistant Engineer Structural	Senior Technician	Team Leader Survey	Senior Surveyor	Surveyor	Senior Survey Tech	2-person Survey Crew	Total Labor Cost	Sub- consult	Reimb Expenses	Sub Total Task Cost	Total Phase Cost
HOURLY RATES	\$240.00	\$216.00	\$167.00	\$123.00	\$245.00	\$240.00	\$167.00	\$123.00	\$113.00	\$240.00	\$164.00	\$130.00	\$113.00	\$208.00			·		
Personnel	DO	AG/CU	MD/HP	MS	WS					NS									
CLOMR																			
Duplicate effective model				2											\$ 246	*	\$ -	\$ 246	
Existing/corrected effective model		1	4	8											\$ 1,868		\$ -	\$ 1,868	
Existing floodplain delineation, 100-yr & 500-yr				8											\$ 984	*	\$ -	\$ 984	
Post-project floodplain model			2	6											\$ 1,072	\$ -	\$ -	\$ 1,072	
Post-project floodway model		1	1	2											\$ 629	\$ -	\$ -	\$ 629	
Post-project floodplain delineation, 100-yr & 500-yr				8											\$ 984	\$ -	\$ -	\$ 984	
Post-project floodway delineation				2											\$ 246	\$ -	\$	\$ 246	
Workmap		1	4	12											\$ 2,360	\$ -	\$ -	\$ 2,360	
Annotated FIRM				2											\$ 246	\$ -	\$ -	\$ 246	
Annotated profile				2											\$ 246	\$ -	\$ -	\$ 246	
Annotated floodway table				2											\$ 246	\$ -	\$ -	\$ 246	
Agreement table			1	4											\$ 659	\$ -	\$ -	\$ 659	
Floodplain and floodway table		1	1	4											\$ 875	\$ -	\$ -	\$ 875	
CLOMR narrative			4	16											\$ 2,636	\$ -	\$ -	\$ 2,636	
MT-2 forms			2	8											\$ 1,318	\$ -	\$ -	\$ 1,318	
Owner notification letters and exhibit			1	4											\$ 659	\$ -	\$ -	\$ 659	
QA/QC	2	8	8												\$ 3,544	\$ -	\$ -	\$ 3,544	
Address sponsor comments		2	4	12											\$ 2,576	\$ -	\$ -	\$ 2,576	
Address FEMA comments		4	8	24											\$ 5,152	\$ -	\$ -	\$ 5,152	
FEMA review fee		-	<del>-</del>												\$ -	\$ -	\$ 6.500	\$ 6,500	
	2	18	40	126	-	-	-	-	-	-	-	-	-	-	\$ 26,546	\$ -	\$ 6,500	\$ 33,046	\$ 33,046
Total Hours	122	134	324	828	156	10	70	88	92	5	56	70	99	170	\$ 353,737	\$ 257,002	\$ 37,015	\$ 647,754	
Total Cost	\$29,280	\$28,944	\$54,108		\$38,220	\$2,400	\$11,690		\$10,396	\$1,200		\$9,100			\$ 353,737		. ,	\$ 647,754	\$ 647,754
	, ,, ,,	, -,	, , , , , , ,	* - ,	, , == •	, ,,,,,,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		* -,	. ,	¥ - 7 · 0 · 1	, , , , ,	, , ,			1	AL PROJECT	,	\$ 647,754

## Scope and Fee

# landscape architecture + planning

East Plum Creek/Sellars Gulch Confluence - Town of Castle Rock

12/9/2022

1.1 1.2					TIME	(HOURS	5)				
1.1 1.2	No.		Jesse PRIN.		PM III	A.PM	LA-1	Acct.		TOTALS	3
1.1 1.2		Description	\$220		\$165	\$135	\$95	\$60			
1.2	6E I: 8	SURVEYING, SITE INVESTIGATION, & ALTERNATIVES ANA	ALYSIS				ı		<u> </u>	ı	\$41,650
1.2		Coordination and Meetings									
1.3		Project Administration: project setup, budgeting & contract admin.	12		8			15	35	\$4,860	\$4,860
		Progress meetings - assumes 1 per month	18		9	9	18		54	\$8,370	\$8,370 <b>\$13,230</b>
		Alternatives Analysis									ψ13,230
		Review of existing master plans/information/reports	1			4	4		9	\$1,140	\$1,140
1.4		Site Visit (assume 1 day)  Develop 3-4 Site Design Alternatives (including stream alignments).	6			6	6		18	\$2,700	\$2,700
		Stream will be involved with grading, water quality integration, channel									
1.5		design, 4 renderings.  Coordination: alternatives analysis related to habitat regs (CORVUS)	16 4		8	24	60 8		108 20	\$13,780 \$2,720	\$13,780 \$2,720
1.7		Update concept cost estimates	4		8	8	24		44	\$5,560	\$5,560
											\$25,900
		Deliverables Alternatives Memorandum w/ Conceptual Level Cost EstimatesStream									
		will review memo plans (prepared by Olsson) and provide memo									
1.8		narrative, where applicable.	2		8		8		18	\$2,520	\$2,520
											\$2,520
PHAS	E II: F	PRELIMINARY DESIGN									\$42,990
			1		Π	Π	l				<b>Q-12,000</b>
		Coordination and Meetings									
2.1		Progress meetings - assumes one per month Public Outreach Meetings (2 Assumed)	18 6		9	9	18 8		54 22	\$8,370	\$8,370
2.2		Coordination and support: habitat assessment and enhancement	0			0	0		22	\$3,160	\$3,160
2.3		(CORVUS)	4		8		8		20	\$2,960	\$2,960
-+		Stream Stabilization Design									\$14,490
2.4		Site Visits (assume 1 day)							0	\$0	\$0
2.5		Updates to layout and initial grading of proposed channel stabilization Updates to site concept layouts (trails, benches, signage, etc.), plus							0	\$0	\$0
		preparation of presentation materials for 2 public meetings; includes									
2.6		preliminary planting plan	8		16	24	60		108	\$13,340	\$13,340 <b>\$13,340</b>
		Deliverables									ψ10,040
2.7		30% Construction Drawings	8		16	24	40		88	\$11,440	\$11,440
2.8		30% Engineer's Opinion of Probable Cost	4		8		16		28	\$3,720	\$3,720 <b>\$15,160</b>
$\Box$											
PHAS	E III:	FINAL DESIGN & FLOODPLAIN MODIFICATION APPROVA	L*								\$62,680
		Coordination and Meetings									
3.1		Progress Meetings (2)	8			4	8		20	\$3,060	\$3,060
3.2		Site Visits (1 Day)	6			6	6		18	\$2,700	\$2,700
											\$5,760
		CONSTRUCTION DRAWINGS									
3.3		Grading design & coordination with Olsson  Landscape Plans (number of sheets depending on extent of	4			12	18		34	\$4,210	\$4,210
3.4		revegetation), 9-18 sheets	8		24	40	72		144	\$17,960	\$17,960
		Landscape Notes, Site and Planting Details & Planting Legend									
3.5		(Assumes no custom detailing will be needed for site features, standard details only), 6 sheets	6		8	16	24		54	\$7,080	\$7,080
0.0		astans striy), o shoots	Ŭ		Ŭ	- 10	27		04	ψ1,000	\$29,250
3.6		  SPECIFICATIONS									
3.7		Technical Specifications	4		12		8		24	\$3,620	\$3,620
3.8		Bid Schedule and Measurement and Payment	2		8				10	\$1,760	\$1,760
											\$5,380
		ENGINEER'S COST OPINION AND BID SCHEDULE									
		Revise OPC	2		8	4	4		18	\$2,680	\$2,680 \$2,680
3.9											72,000
		SUBMITTALS	4		16	-			20	\$3,520	\$3,520
3.9		Internal Senior Deview			מו	1				და,ე∠∪	
		Internal Senior Review 60% Check Set	4		4	8	12		24	\$2,880	\$2,880
3.9 3.1 3.11 3.12		60% Check Set Submittal of 90% Documents			8	16	24		48	\$5,760	\$2,880 \$5,760
3.9 3.1 3.11 3.12 3.13		60% Check Set Submittal of 90% Documents 90% Review and Revisions	2		8 6	16 12	24 16		48 36	\$5,760 \$4,570	\$2,880 \$5,760 \$4,570
3.9 3.1 3.11 3.12		60% Check Set Submittal of 90% Documents			8	16	24		48	\$5,760	\$2,880 \$5,760 \$4,570 \$2,880
3.9 3.1 3.11 3.12 3.13		60% Check Set Submittal of 90% Documents 90% Review and Revisions Submittal of 100% Documents	2		8 6 4	16 12 8	24 16 12		48 36 24	\$5,760 \$4,570	\$2,880 \$5,760 \$4,570
3.9 3.1 3.11 3.12 3.13		60% Check Set Submittal of 90% Documents 90% Review and Revisions Submittal of 100% Documents  Total Hours	2 157	0	8 6 4 196	16 12 8 250	24 16 12 482	15	48 36 24 1100	\$5,760 \$4,570 \$2,880	\$2,880 \$5,760 \$4,570 \$2,880
3.9 3.1 3.11 3.12 3.13		60% Check Set Submittal of 90% Documents 90% Review and Revisions Submittal of 100% Documents	2	0 \$0	8 6 4 196	16 12 8	24 16 12 482	15 \$900	48 36 24	\$5,760 \$4,570	\$2,880 \$5,760 \$4,570 \$2,880

## Scope and Fee



East Plum Creek/Sellars Gulch Confluence - Town of Castle Rock

12/9/2022

				TIME	(HOURS)			
			Jesse					TOTALS
Task	Sheet	Task	PRIN.	PM III	A.PM	LA-1	Acct.	
No.	No.	Description	\$220	\$165	\$135	\$95	\$60	

# Statement of Work for East Plum Creek/Sellars Gulch Confluence Project

December 8, 2022

Presented to:

Olsson 1525 Raleigh Street, Suite 400 Denver, CO 80204

Prepared by:



## **Project Information Summary**

CORVUS Client Name	Olsson
Client Project Manager	Deb Ohlinger
Project Name	East Plum Creek/Sellars Gulch Confluence Project
Project Purpose	Stabilize the East Plum Creek channel, enhancing wildlife habitat, water quality, and increase recreation and community spaces along East Plum Creek and Sellars Gulch.
Location	The project area generally includes East Plum Creek and Sellars Gulch between 2 <sup>nd</sup> Street and Plum Creek Parkway.
CORVUS Project Role	CORVUS' role will be to implement Clean Water Act Section 404 and Endangered Species Act environmental permitting approaches for the improvements. The role includes acting as the primary point of contact for communication between the project team, the U.S. Army Corps of Engineers (USACE), the US Fish and Wildlife Service (USFWS). CORVUS will work with the design team to optimize the compatibility of project design elements with the permitting approach. CORVUS will also coordinate consultation with the State Office of Historic Preservation (SHPO) regarding potential effects to historic properties.

## **Description of Study Area**

The study area includes the footprint of proposed improvements, including project elements that affect East Plum Creek and/or its adjacent wetlands. Revisions to the extent of the study area may require additional effort and associated changes in labor costs. CORVUS will coordinate with the Client Project Manager to determine if cost modifications are necessary prior to performing work in a revised study area.



## **Tasks**

The following tasks address compliance with Clean Water Act Section 404 (Section 404) and the Endangered Species Act (ESA). These tasks assume the project will require a Section 404 Individual Permit and that the proposed project will result in a net benefit to Preble's meadow jumping mouse (PMJM) through habitat improvements. However, the specific type of permit sought for this project will be determined once a pre-application meeting between the project team and the US Army Corps of Engineers (USACE) has been completed. CORVUS will work closely with the Client and project team to pursue project authorization using a nationwide permit (NWP) if appropriate. The tasks have been divided into project management and three phases: Phase I – Surveying and Site Investigation, Phase II – Preliminary Design; and Phase III – Final Project Design.

## Project Management, Coordination, and Meetings

**Task 1. Progress Meetings (10 meetings)** – CORVUS will participate in an estimated 4 in person and 6 virtual progress meetings or calls with the design team throughout the project to provide insight and strategy for environmental permitting requirements and status of permitting applications. Participation

in project meetings provides CORVUS with an opportunity to develop a well-rounded Section 404 permitting approach when drafting the Section 404 Permit application and ensures the project design meets ESA compliance needs. Additionally, participation results in the greatest predictability and efficiency for the design team when undergoing the Section 404 process.

**Task 2. Project Coordination and Management** – This task includes general coordination with the Client, design engineer, and time spent by CORVUS on quality control, project set up, and managing project budget, schedule, and billing.

#### Phase I – Site Investigations and Alternatives Analysis

CORVUS' approach to work in Phase I begins by coordinating with the Town of Castle Rock, the US Fish and Wildlife Service (USFWS), and the Colorado Department of Transportation (CDOT) to determine the availability of covered activity credits (based on the Douglas County Habitat Conservation Plan [DCHCP]) that could be used to incorporate recreational elements into the project and to determine activities allowed within the CDOT Preble's meadow jumping mouse (PMJM) mitigation bank and the Town of Castle Rock's PMJM mitigation areas. Additionally, CORVUS will identify the location, quantity, and quality of regulated resources, including wetlands and other waters of the U.S. (WOTUS), PMJM habitat, and historic properties. Regulated resource mapping and information on allowable activities will inform the design team's approach to proposed improvements.

Task 3. Initial PMJM Coordination – CORVUS will facilitate consultation between the Town of Castle Rock, USFWS, CDOT, and the design team to determine the availability of covered activity credits (based on the DCHCP) that could be used to incorporate recreational elements into the project and determine activities allowed within the CDOT PMJM mitigation bank and the Town of Castle Rock's PMJM mitigation areas. This coordination will ensure that the ESA compliance needs of all parties are addressed. This information will also inform the design team's approach to proposed improvements. This task includes preparation and participation in the design team's constraints and opportunities workshop.

Task 4. Delineation of WOTUS – CORVUS will complete a full field jurisdictional delineation of WOTUS, including adjacent wetlands at the start of the growing season (~April). The delineation will follow current USACE methods and guidance on delineating wetlands and the ordinary high water mark. CORVUS will provide the Client with an AutoCAD/SHP files of the WOTUS boundaries. Prior to the fieldwork, CORVUS will aerial delineate WOTUS for the purposes of avoiding and minimizing impacts during preliminary design.

Task 5. Pre-Project (Baseline) Habitat Quality Assessment – PMJM is known to occur on East Plum Creek and is assumed to be present in the project area. CORVUS will follow the "Interim Protocol for Habitat Improvement Activities" to field assess the project area's baseline condition of PMJM habitat at the start of the growing season (~April). CORVUS will complete the "Habitat Improvement Activity Checklist" for pre-project (baseline) conditions. While onsite, CORVUS will also assess the study area for the potential to support other species listed as threatened or endangered under ESA. Prior to the fieldwork, CORVUS will aerial assess PMJM habitat quality for the purposes of avoiding and minimizing impacts to PMJM habitat during preliminary design.

Task 6. Survey, Document, and Record Potential Historic Properties Task Management – This task is for coordination and consultation with PaleoWest Archaeology (PaleoWest), CORVUS' preferred heritage consulting firm. PaleoWest will be a sub-consultant to CORVUS, and their fee is provided as an expense. As part of the CWA Section 404 compliance process, the USACE must comply with Section 106 of the National Historic Preservation Act (NHPA). To do this, the USACE typically requires prospective permittees to submit the results of a survey for potential historic properties in the USACE permit area (also known as the area of potential effect [APE]). Potential historic properties include archaeological sites, farmsteads, irrigation ditches, transmission lines, and railroads.

The APE will be surveyed in detail for potential historic properties. The following activities are included in PaleoWest's fee:

- Request a file search of Office of Archaeology and Historic Preservation (OAHP) records for a
   1-mile radius around the survey areas (permit area)
- Conduct archival research, as needed, to determine if additional cultural resources are present within the project area
- Conduct an intensive pedestrian inventory of the project area
- Record the locations of any cultural resources encountered that are 50 years old or older
- Prepare limited results survey form

This statement of work does not include a mitigation plan for adverse effects on historic properties.

#### Phase II – Preliminary Design and Permitting

Phase II consists of preparing and submitting the individual permit application packet, which will include a compensatory wetland mitigation plan, Colorado Stream Quantification Tool (CSQT) package, historic properties report and effects determination, and a USFWS Concurrence Letter Request.

Task 7. Section 404 Permitting Approach and USACE Pre-Application Coordination — Based on CORVUS' participation in progress meetings with the Project team, CORVUS will analyze the project background, proposed improvements, and anticipated impacts to WOTUS to develop a permitting approach for the project that will serve as the basis of the Section 404 Permit Application (Individual Permit is assumed). This includes crafting a carefully worded project purpose and need statement; identifying key design elements, site, and design constraints; avoidance and minimization measures to WOTUS; and analyzing a set of practicable alternatives that comply with Section 404(b)(1) Guidelines.

CORVUS will coordinate with the USACE to discuss project purpose and need, schedule, preliminary design concepts, potential impacts to wetlands and waters of the U.S., and mitigation strategies. The purpose of the coordination is to allow the USACE to express any concerns with the project or proposed permitting approach.

**Task 8. FACWet Analysis (if required)** – When permanent adverse impacts to wetlands are anticipated, the Colorado Mitigation Procedures version 2 (COMP v2) specifies that a Functional Assessment of Colorado Wetlands (FACWet) analysis should be completed and submitted to assist in determining wetland functions impacted and compensatory wetland mitigation ratios. Based on the results of the delineation and proposed impacts to WOTUS, if it is determined that FACWet is required, CORVUS will

conduct a FACWet analysis on wetlands within the property and provide FACWet data forms and mapping with the 404 application submittal.

Task 9. Colorado Stream Quantification Tool – The CSQT is a spreadsheet-based calculator approved by the USACE to determine if a proposed stream project would result in a permanent loss of Functional Feet (FF) (as opposed to linear feet) after completion of a project and therefore possibly require mitigation. Per the COMP v2, the Project team proposes Debit Option 1, which uses the CSQT to calculate the change in condition at an impact site by comparing the existing and proposed conditions. The CSQT should be used to determine if stream mitigation is required to offset stream impacts resulting from the permitted activity.

The assessment of five specific parameters (within the "Reach Hydrology and Hydraulics" and "Geomorphology" Functional Categories) is required at all project sites evaluated for CWA Section 404 purposes, including Reach Runoff, Floodplain Connectivity, Lateral Migration, Bed Form Diversity, and Riparian Vegetation. This provides consistency between impacts and compensatory mitigation and allows for a more consistent accounting of functional change.

CORVUS will work collaboratively with Olsson to complete data collection and analysis of the required metrics within each of the five required CSQT parameters. The following sub-tasks address data collection and analysis for the Existing Condition Assessment/Score and Proposed Condition Assessment/Score for the five required CSQT parameters including Reach Runoff, Floodplain Connectivity, Lateral Migration, Bed Form Diversity, and Riparian Vegetation. The specific metrics used to assess each of these five parameters will be decided as part of developing the CSQT approach with the project team. **Table 1** shows the five required CSQT parameters and associated metrics as well as the party that may be responsible for completing the work associated with each parameter and/or metric for **BOTH Existing and Proposed Conditions**:

Table 1. Proposed CSQT Parameters, Metrics and Corresponding Datasheets

Parameter	Metric(s)	Datasheet(s)	Party Responsible
Reach Runoff	Land Use Coefficient (D) AND Concentrated Flow Points (F)	Field Value Documentation Form (Hydrology & Hydraulics) AND Project Reach Form Section II(b)	CORVUS
Floodplain Connectivity*	Bank Height Ratio (F) AND Entrenchment Ratio (F)	Field Value Documentation (Hydrology & Hydraulics)	Olsson
Lateral Migration**	Dominant Bank Erosion Hazard Index/Near Bank Stress (BEHI/NBS) AND Percent Streambank Erosion (F) OR Percent Armoring Metric (F) OR Greenline Stability Rating (F)	Field Value Documentation Form (Geomorphology) AND Project Reach Form Section II(c)	Olsson or CORVUS depending on metric selection

Parameter	Metric(s)	Datasheet(s)	Party Responsible
Bed Form Diversity	Pool Spacing Ratio (F) AND Pool Depth Ratio (F) AND Percent Riffle (F)	Field Value Documentation Form (Geomorphology)	Olsson
Riparian Vegetation	Riparian Extent (D/F) AND Percent Native Cover (F) AND Woody Vegetation Cover (F) OR Herbaceous Vegetation Cover (F)	Field Value Documentation Form (Geomorphology) AND Riparian Extent Form AND Riparian Veg Form	CORVUS

<sup>(</sup>D) indicates metrics are calculated using desktop methods; (F) indicates metrics are calculated or verified using field methods.

In addition, certain CSQT calculations and values are not directly associated with parameters and metrics but may require the completion of certain analyses and/or forms. Some of these items are only required for Existing Conditions. These additional items are presented in **Table 2** below:

Table 2. Proposed Additional CSQT Parameters, Metrics and Corresponding Datasheets

Additional Calculation/Value	Form	Party Responsible
Determination of Existing and Proposed Bankfull Width	Quantification Tool AND Bankfull Verification Documentation	Olsson
Valley Type and Reference Stream Type	Project Assessment	Olsson
Process Drivers Information	Project Assessment	Olsson
Site Information and Reference Selection	Quantification Tool	Olsson
Catchment Assessment	Catchment Assessment	Olsson
Bankfull Verification	Bankfull Verification Documentation	Olsson (to be conducted in the field using field-based indicators unless modelling bankfull is otherwise approved by the Corps)
Sub-Reach Survey Method (Rapid Survey OR Detailed)	Longitudinal Profile Form* / Cross Section Form* OR Rapid Survey Form*	Olsson

<sup>\*</sup>Not a required form in the CSQTv1.

<sup>\*\*</sup> If a project proposes to armor an eroding bank (as determined by BEHI/NBS), the Percent Erosion metric should be substituted for dominant BEHI/NBS in calculating the proposed condition score; the BEHI/NBS metric would not be applied to an armored bank.

**Subtask 9a. CSQT Coordination and Meetings (3 meetings)** — This task includes up to three meetings (one field meeting) to discuss the CSQT approach for the project with the project team and/or the USACE. Once 30 percent design is reached, CORVUS will set up a CSQT approach meeting with USACE and the project team to discuss reach determination and CSQT parameter and metric selections. This coordination aims to give the USACE an opportunity to express any concerns with the CSQT approach and concur with parameter and metric selections.

**Subtask 9b. Remote Desktop Analysis and Fieldwork Prep**—This task includes executing the desktop portion of the method for Reach Runoff and Riparian Vegetation data collection and prepare the necessary data and materials to execute the CSQT fieldwork.

Subtask 9c. CSQT Field Data Collection – CORVUS will execute the method for collecting CSQT parameter and metric data as described in the *Colorado SQT and Debit Calculator User Manual (Version 1)*. This task includes field sampling no more than three reaches with representative sub-reach lengths of no more than 600 linear feet (based on ~20 foot bankfull width) and no more than 20 riparian vegetation plots required in total. Additionally, this task includes no more than 5 reaches assessed using Impact Severity Tier 0 of the CSQT Debit Calculator Tool for bioenginnering treatments. This task also includes collecting data for the Greenline Stability Rating (if needed). This task includes additional mileage and GPS expense.

**Subtask 9d. CSQT Data Summary, Analysis, Form Completion, and Mapping** – Following the site visit, CORVUS will analyze and summarize CSQT data for Reach Runoff, Riparian Vegetation, and Lateral Migration (if needed) parameters for the existing and proposed condition and complete all applicable data forms per reach. Figures will be collaboratively prepared between CORVUS and Olsson.

**Subtask 9e. CSQT Project Report** – There is no formal requirement to submit a report for the CSQT effort. However, through CSQT consultations with multiple Denver Regulatory Office Project Managers, CORVUS has found that a CSQT Project Report has clarified the methods, data analysis, results, and proposed scoring of the CSQT parameters and metrics, and has demonstrated a reduction in post-submittal CORPS comments and consultation. A CSQT Project Report will be prepared according to the suggested CSQT Submittal Guidelines shown in **Table 3**. CORVUS will work collaboratively with Olsson to complete all required content.

Table 3. Suggested CSQT Submittal Guidelines, Summary of Information to include in the CSQT Project Report

CSQT Submittal Component	Summary of Required Content
CSQT Project Report	Project Description putting the study site and the purpose of the CSQT evaluation in context relative to physical conditions and project purpose(s)  Description of all parameters and metrics chosen for the evaluation and reasons for selection  A discussion of how bankfull was identified  Interpretation of the results of the CSQT evaluation, including differences between existing and proposed conditions
Field Forms	Longitudinal Profile Form (if used)     Standard Cross Section Form (if used)     Rapid Survey Form (even if Longitudinal Profile method is used)     Lateral Migration Form
Required Forms	Parameter Selection Checklist Project Reach Form Riparian Extent Form Riparian Veg Form Bankfull Verification Hydrology and Hydraulics Geomorphology
CSQT Workbook	Project Assessment     Catchment Assessment     Quantification Tool

Task 10. Compensatory Mitigation Plan (CMP) – When permanent wetland impacts greater than 0.1-acre are proposed, the USACE requires a CMP to comply with Section 404(b)(1) Guidelines to offset environmental losses resulting from unavoidable impacts to WOTUS. A CMP is typically when either onsite permittee-responsible mitigation or the purchase of credits through a wetland mitigation bank is proposed. Using the results of the delineation and proposed impacts to WOTUS, if it is determined that a CMP is required, CORVUS will draft a CMP that includes items described in 33 CFR 332.4 paragraphs (c)(2) through (c)(14). The Client will prepare mitigation design plans and specifications with input and review by CORVUS.

Task 11. Individual Permit (IP) Application – CORVUS assumes this project will be permitted with an IP. However, the specific type of permit sought for this project will be determined during the preapplication process. CORVUS will work closely with the Client and project team to pursue project authorization using a nationwide permit (NWP) if appropriate. With input from the USACE and design team, CORVUS will develop a project purpose and need statement that will guide the project design process. The purpose and need statement will be used to develop a reasonable range of practicable project alternatives for evaluation to identify the preferred alternative. Once a preferred alternative has been identified, CORVUS will prepare an Individual Permit application submittal to USACE. The submittal will include figures of project plans, impacts to WOTUS, and a compensatory mitigation plan. This task includes one round of revisions to the submittal based on Client and design team comments.

**Task 12. Water Quality Certification Request** – As part of the IP application process, a CWA Section 401 Water Quality Certification (WQC) must be obtained from the CDPHE. The Water Quality Division is currently following procedures established in the 2020 WQC Rule to process WQC Requests. CORVUS will request a pre-filing meeting with CDPHE, and if accepted, CORVUS will coordinate with the project

team and CDPHE to set up the meeting. CORVUS will also prepare and submit the 401 WQC memo and application. CDPHE requires a \$1,122 fee to process the 401 WQC request. *CORVUS will pay this fee directly and expense the cost to the project*. This task includes one round of revisions to the submittal based on Client and design team comments.

**Task 13. USFWS Concurrence Letter Request** – CORVUS will prepare a Concurrence Letter Request to USFWS that follows the DCHCP's "Interim Implementation Plan and Proposed Minor Amendments" and includes details on methods, proposed PMJM impacts, a mitigation plan, and the final Habitat Improvement Activity Checklist.

#### Phase III - Final Project Design

During Phase III, CORVUS address any questions or comments from USACE and USFWS and will ensure that the final design is consistent with information in the pre-construction notification application packet.

**Task 14. Post Submittal Coordination** – CORVUS will coordinate with the USACE, USFWS, and CDPHE after submitting the IP, concurrence letter request, and WQC to address any questions or comments from any agency. CORVUS review the 404 Permit, concurrence letter, and WQC once issued to ensure details concur with applications submitted. CORVUS will also review 100 percent construction drawings to ensure proposed improvements are consistent with all environmental permitting applications submitted.

## **Deliverables**

CORVUS will provide the following deliverables to the Client:

- AutoCAD/SHP files of WOTUS, including the ordinary high water mark and wetlands
- ESA Memo (for CLOMR), and section in IP
- Cultural resources limited survey form
- IP Submittal
- CSQT Package (in collaboration with the Client) for submittal to USACE
- FACWet Submittal to USACE
- CMP for submittal to USACE
- Concurrence Letter Request to USFWS
- Water Quality Certification Request for submittal to CDPHE

## **Assumptions**

Tasks and estimated costs are based on the following assumptions:

- The Client will be responsible for preparing project plans
- The work will be authorized under an IP and a Section 401 Water Quality Certification will be needed
- If permanent impacts to wetlands exceed 1/10-acre, a CMP will be required
- If permanent impacts exceed ½-acre, FACWet Analysis will be required
- If impacts to stream bed exceed 3/100 of an acre, a CSQT assessment will be required

- PMJM is assumed to be present and a presence/absence surveys will be not be required.
- Consultation with USFWS will be done via the DCHCP process for beneficial projects and a biological assessment will not be required
- A mitigation plan for adverse effects on historic properties is not included
- Suitable habitat for other species protected by ESA is not present and presence/absence surveys will not be required
- No more than 3 reaches/representative sub-reaches and 20 riparian vegetation will be required for the CSQT
- Unless otherwise requested by the Client, all CORVUS deliverables will be provided in digital format such as Portable Document Format (PDF), Microsoft Word, or other suitable format

# **Change Management Process**

In the event revisions to the study area and/or the Statement of Work tasks are determined necessary or desirable, either by CORVUS or the Client, CORVUS will coordinate with the Client Project Manager to determine if a formal request for contract modification is necessary. CORVUS will not perform work not described in this Statement of Work or a revised Statement of Work without written authorization from the Client.

## **Estimated Cost**

CORVUS will perform the tasks described in the statement of work on an hourly (time and materials) basis for the estimated cost itemized below. Subconsultants and other direct expenses are billed at cost.

# **Estimate**



Date 12-08-2022

Project 22-123 - East Plum Creek at Sellars Gulch

Client Olsson

1525 Raleigh St, #400 Denver, CO 80204 Attn: Deb Ohlinger

# **Project Totals**

Task	Estimate	Previous	Grand Total
1 - Progress Meetings	\$3,013.00	\$0.00	\$3,013.00
2 - Project Coordination and Management	\$5,306.00	\$0.00	\$5,306.00
3 - Initial PMJM Coordination	\$5,240.00	\$0.00	\$5,240.00
4 - Delineation of WOTUS	\$7,205.00	\$0.00	\$7,205.00
5 - PMJM habitat Assessment	\$5,240.00	\$0.00	\$5,240.00
6 - Historic Properties PM	\$524.00	\$0.00	\$524.00
7 - Permitting Approach and Pre-App	\$1,310.00	\$0.00	\$1,310.00
8 - FACWet Analysis	\$2,620.00	\$0.00	\$2,620.00
9 - CSQT	\$12,052.00	\$0.00	\$12,052.00
10 - CMP	\$2,620.00	\$0.00	\$2,620.00
11 - IP	\$3,406.00	\$0.00	\$3,406.00
12 - WQC Request	\$786.00	\$0.00	\$786.00
13 - Concurrence Letter	\$5,240.00	\$0.00	\$5,240.00
14 - Post Submittal Coordination	\$1,048.00	\$0.00	\$1,048.00
Labor Subtotal	\$55,610.00	\$0.00	\$55,610.00
Direct Expenses	\$8,572.00	\$0.00	\$8,572.00
Total	\$64,182.00	\$0.00	\$64,182.00

# **Direct Expenses Details**

Direct Expense	Quantity	Price	Total
Mileage	2,000	\$0.62	\$1,250.00
GPS	8	\$150.00	\$1,200.00
Paleowest Archaeology	1	\$5,000.00	\$5,000.00
401 WQC Fee	1	\$1,122.00	\$1,122.00
Su	btotal		\$8,572.00

CORVUS Environmental Consulting LLC | 6419 S Marion PL Centennial, CO 80121 1 of 2

# **Estimate**



Labor Total \$55,610.00

Direct Expenses Total \$8,572.00

Total Estimate \$64,182.00

Previous Contract Amount \$0.00

Grand Total Budget \$64,182.00

## Attachment D

7110 West Jefferson Avenue Suite 100 Lakewood Colorado 80235 Main: 877 627 3772 colliersengineering.com



VIA E-mail December 8, 2022

Olsson 1525 Raleigh Street, Suite 400 Denver. CO 80204

Proposal for Professional Services
East Plum Creek/Sellars Gulch Confluence Project – SW-RFP2022-03
Castle Rock, Co
Colliers Engineering & Design Proposal No.: 22013218P

Dear Deb,

Colliers Engineering & Design, Inc. is pleased to submit this revised scope and fee to provide professional Utility Investigation services for the above-entitled project. The Subsurface Utility Engineering (SUE) scope of this project as requested by Olsson calls for a SUE QL-D through QL-A investigation. The limits of this project are in Castle Rock, CO and as pictured in Exhibit A outlined in red.

This proposal is divided into four sections as follows:

**Section I** – Scope of Services

**Section II** – Business Terms and Conditions

Section III - Technical Staff Hourly Rate Schedule and Reimbursable Expenses

**Section IV** – Client Contract Authorization

The order in which the following scope of services are presented generally follows the sequence in which the project will be accomplished; however, depending on the project, the various authorized services contained in this proposal may be performed in a sequence as deemed appropriate by Colliers Engineering & Design to meet project schedules.

CED proposes to provide the following professional SUE services in support of the above-named project in accordance with the project limits as indicated in Exhibit A, to the standard of care applicable in the SUE profession. The services will meet the standard guidelines of ASCE C-I 38-02 circular for "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data". The following table in Section I describes the standards for subsurface utility engineering.

We very much appreciate the opportunity of submitting this proposal and look forward to performing these services for you.



# Section I – Scope of Services

Based on our conversations and information noted above, we propose to complete the following:

SERVICE	DESCRIPTION
QL-D Utility Records Research	Conduct comprehensive utility records research and collect applicable utility owner records to assist in identifying utility owners that may have facilities on or be affected by the project. Includes interfacing with utility owners/operators to ascertain the availability and completeness of record documents and to obtain verbal or historical information on existing subsurface facilities and operational status.
QL-C Surface Feature Survey	Prerequisite: Perform QL-D Tasks.  Information obtained by surveying and plotting visible above-ground utility features and by using professional judgment in correlating this information to quality level D information.
QL-B Utility Designation and Survey	Prerequisite: Perform QL-D & QL-C Tasks.  Information obtained through the application of appropriate surface geophysical methods to determine the existence and approximate horizontal position of subsurface utilities. This information is surveyed to applicable tolerances defined by the project and reduced onto plan documents.
QL-A  Utility Exposure and Identification of Precision Horizontal and Vertical Position	Precise horizontal and vertical location of utilities obtained by the actual exposure (or verification of previously exposed and surveyed utilities) and subsequent measurement of subsurface utilities, usually at a specific point. Minimally intrusive excavation equipment is typically used to minimize the potential for utility damage. A precise horizontal and vertical location, as well as other utility attributes, is shown on plan documents. Accuracy is typically set to 15-mm vertical and to applicable horizontal survey and mapping accuracy as defined or expected by the project owner.

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## Phase 1.0 QL-D through QL-B

#### Quality Service Level D (QL-D) Research and Collection of Existing Utility Records

Initiate a design ticket through Colorado811 to ascertain contact information for identified facility owners. Research to ascertain information on existing utilities within the project limits and request applicable utility owner records for assistance in identifying utility owners that may have facilities on, within, or potentially affected by the project.

CED will attempt to contact utility providers identified through collected utility easement information, One-Call systems, and via vehicle reconnaissance and inventory of utility marker posts along the scoped area and adjacent roadways. We will attempt to ascertain the ownership, type, size, encasement, and composition of the existing utilities through coordination with owners/representatives.

The QL-D data that is collected, including a list of known utility providers in the project limits, can be provided at the request of the Client as well as utility contact information, as available.

#### Quality Service Level C (QL-C) – Surveying and Plotting Visible Above-Ground Utility Features

Field surveying to obtain accurate horizontal position of visible utility surface features associated with suspected underground utility systems located within the project limits.

- Identify surface features on the plan and ground surface that are surface appurtenances of existing subsurface utilities.
- Survey features and determine accuracy and completeness for applicability with the existing project and by using professional judgment in correlating this information to quality level B information.

#### Quality Level B (QL-B) Designating Service (Horizontal Location of Utilities)

Designating is to indicate, by marking with paint, the presence and approximate horizontal location of subsurface utilities using geophysical prospecting techniques including, electromagnetic, sonic, and acoustical techniques. CED will provide the following designating services to aid the Client:

- Provide all equipment, personnel and supplies required for performing designating services. CED shall determine which equipment, personnel and supplies are required to perform these services.
- Designate the existing underground utility facilities within the identified area as described in Exhibit A.
- Conduct appropriate investigation of site conditions.
- During the SUE investigation, CED will notify the Client of any utilities that do not meet QL-B criteria.
- Create field sketch drawings of the designated utilities.

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It is our understanding that Client employs in-house Surveyor(s) and plans on utilizing the Clients in-house survey department for aspects of this project. To ensure compliance with Colorado Senate Bill 18-167, it is the understood that CED will perform the survey of the QL-C utility surface features and QL-B designating field marks.

## Phase 2.0 QL-A

#### Quality Level A (QL-A) Locating (Test Hole) Services

Locating services is to locate the accurate horizontal and vertical position of subsurface utilities by excavating up to ten (10) test holes using vacuum excavation techniques and equipment that is non-destructive to utilities shown in Exhibit A. QL-A Services will be performed at specific points within the project where precise vertical utility information is required to determine the extent of conflict or clearance with or from a proposed design element. QL-A test hole locations have been identified by the Project Owner or Client and have been transmitted to CED for performance of field work and data collection.

- Provide all equipment, personnel and supplies required to perform locating services. CED shall determine which equipment, personnel and supplies are required to perform such services.
- Excavate test holes to expose the utility to be measured in such a manner that ensures the
  safety of the excavation and the integrity of the utility to be measured. In performing such
  excavations, CED shall comply with applicable utility damage prevention laws. Excavations will
  be performed using specially developed vacuum excavation equipment that is nondestructive to existing facilities.
- If contaminated soils are discovered during the excavation process, CED will so notify the Client.
- Disposal of contaminated soils can be performed by CED at an additional out-of-scope cost.
- Locate and identify the precise horizontal and vertical position of existing facilities. Positive identification includes the determination or confirmation of facility type, size, depth, and material composition.
- Backfill around the exposed facility using the number 8 pea gravel compacted in six-inch lifts.
- In grass and landscape areas, restoration shall be as reasonably possible to the condition that existed prior to excavation.
- Permitting as required by the Jurisdiction/Municipality to enable CED to perform traffic control
  and/or street cuts will be conducted and includes excavation, watering, standard spoils
  removal, mobilization, and standard surface restoration as well as traffic control and traffic
  control plans as required by the municipality.

Test Hole data will be captured and recorded by CED and tied to existing project survey control provided by Client. This control will be provided to CED prior to equipment mobilization to the project site.

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#### **DELIVERABLES**

CED will provide CAD files detailing QL-D through QL-A information. Utilities will be surface designated, painted and surveyed. Utility Field Sketches will be performed of locate services performed. The Field Sketches will be color coded according to the American Public Works Association standards. Field sketches and QL-D records information can be provided at no additional cost and per the Clients request. The final deliverable is understood to be an AutoCAD .dwg file detailing all identified and surveyed utility information as well as a .pdf file of these findings, stamped and signed by CED's Colorado licensed Professional Engineer.

#### **SCHEDULE**

CED staff will mobilize to the site within 15 business days of written Notice to Proceed. CED preliminary schedule is as follows.

- Mobilize to the site within 15 business days of written Notice to Proceed (NTP).
- Perform field work within 30 business days of NTP.
- After the collection of all required field data, CED will submit all deliverable information within 18 business days.

Please note that the above schedule is based on preliminary documents provided by the Client. Deviations from the preliminary documents, and scope will require a revision to the schedule as provided above. Should a revision to the above schedule be requested, it is CED's understanding that we will be given the opportunity to revise the schedule and a schedule will be agreed upon between CED and the Client with the Owners/Stakeholders schedule expectations taken into consideration.

Please note that CED is aware that utility installations and removals are currently being performed within the scoped area. CED will not be responsible for updating in-progress utility installations or removals post collection of field data as described in the above schedule.

#### **FEE SUMMARY**

Phase Name	Description	Fee Type	Quantity	Rate	Fee
Phase 1.0	QL-D through QL-B	Lump Sum	1.0	\$23,500.00	\$23,500.00
Phase 2.0	QL-A	Each	10.0	\$2,200.00	\$22,000.00
			PROJECT SI	JBTOTAL FEE	\$45,500.00

This Contract and Fee Schedule are based upon the acceptance of Colliers Engineering & Design's Business Terms and Conditions contained in Section II of this Contract. Delivery, mileage, printing and reproduction, overnight mail service and postage costs are not included in the lump sum fees and will be added to each monthly invoice. **Payment terms are NET60 of receipt of invoice.** 

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Proposal is an estimate only; the cost may vary plus or minus due to unknown field conditions and/or municipality or Owner requirements. The above noted cost estimate has been based on various assumptions including the current stage of the design. Deviations from these assumptions or additional out of scope work will be billed at an additional cost agreed to by CED and the Client. However, no out of scope work will be conducted without the direct consent from the Client.

Information to be provided by Client: CED shall rely on the completeness and accuracy of all information and technical data provided by the Client and Client's other consultants. The Client shall provide all necessary information required by CED to complete its work, including any updates to previously provided information and any other information reasonably requested by CED.

#### **EXCLUSIONS AND UNDERSTANDINGS**

Services relating to the following items are not anticipated for the project or cannot be quantified at this time. Therefore, any service associated with the following items is specifically excluded from the scope of professional services within this agreement. If an item listed herein, or otherwise not specifically mentioned within this agreement, is deemed necessary, CED may prepare an addendum to this agreement for your review, outlining the scope of additional services and associated professional fees with regard to the extra services.

Services not specifically outlined above:

- Survey of culverts, bridge structures, underpass or overpass structures, or pedestrian walkway structures
- QL-B of unlocatable irrigation lines
- Suggested relocation plans and/or final relocation plans and specifications
- Utility coordination and/or utility clearance letters
- Boundary and/or topographic surveying
- Access coordination to closed, fenced, gated or private property
- Easement documents
- QL-B Permitting
- Platting
- Right of way determination
- Any other services not specifically included within the Scopes of Work contained herein
- Construction administration, construction specifications, construction stake-out and/or additional field surveying information
- Exploratory trenching, testing work, interpretations or conclusions related to determination of potential chemical, toxic, radioactive, or other type of contaminants on the site
- It is assumed that our staff will have access to the project site for 10 hours a day 7 days a week

#### **ACOUSTIC (APL) / CLARIFICATIONS**

Acoustic Pipe Locating (APL) effectiveness is dependent on soil conditions within the investigation area and burial depth of target facility. APL's resolution of subsurface anomalies may vary significantly across the investigation area. While APL can be a very effective tool in locating or identifying subsurface objects or facilities (anomalies), the results are interpretive and subject to

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possible misinterpretation or error. SUE Provider personnel will make every reasonable effort to properly identify and interpret APL signals in accordance with the performance limitations of the technology and provide recognizable markings for the Client.

#### **SUE PROVIDER CERTIFICATIONS**

The SUE Provider shall not be required to sign any documents, no matter by whom they may be requested, that would result in the SUE Provider having to certify, guarantee or warrant the existence of conditions which the SUE Provider cannot ascertain. The Client also agrees that it has no right to make the resolution of any dispute with the SUE Provider or the payment of any amounts due to the SUE Provider in any way contingent upon the SUE Provider signing any such certification.

#### Section II - Business Terms and Conditions

The Business Terms and Conditions of the Sub-Consultant Master Service Agreement for Professional Services Contract signed January 8, 2021, shall apply.

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## Section III - Rate Schedule

Technical Staff Rates 2023		
Billing Titles	Hourly Rates	
Executive Principal	310.00	
Senior Principal	265.00	
Principal	245.00	
Senior Technical Director	225.00	
Senior Project Manager	215.00	
Technical Director	200.00	
Project Manager	190.00	
Senior Project Specialist	190.00	
Project Specialist	180.00	
Technical Professional	170.00	
Technical Specialist	160.00	
Specialist	150.00	
Senior Data Technician	140.00	
Senior Technical Assistant	130.00	
Technical Assistant	115.00	
Field Technician	105.00	
Data Technician	105.00	
Survey Crew – 1 Person w/Robotic Equipment	165.00	
Additional Survey Crew Member	50.00	
SUE Crew (designating) – 1 Person	135.00	
Additional (designating) Member	50.00	
SUE Crew (locating) – 2 Person	185.00	
Additional (locating) Member	45.00	
Expert Witness	375.00	

Reimbursable Expenses		
General Expenses	Cost + 15%	
Travel (Hotel, Airfare, Meals)	Cost + 15%	
Sub-Consultants/Sub-Contractors	Cost + 20%	
Plotting	4.25 / Each	
Computer Mylars / Color Plots	100.00 / Each	
Photocopies	0.19 / Each	
Color Photocopies	2.00 / Each	
Document Binding	4.00 / Each	
Portable Media	100.00 / Each	
Exhibit Lamination (24" x 36" or larger)	85.00 / Each	
Initial Digital Signature	300.00	
Additional Digital Signatures	75.00 / Each	
Mileage Reimbursement*	0.625 / Per Mile	
	Field Vehicle 0.70 / Per Mile	

<sup>\*</sup>Mileage reimbursement subject to change based upon IRS standard mileage rate.

Schedule 2

Rates are effective through June 30, 2023

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### Section IV - Client Contract Authorization

Section iv Cheme Contract / Mathonizat	
I hereby declare that I am duly authorized to sig I have read, understand, and accept this contrac	gn binding contractual documents. I also declare tha ct.
Signature	Date
Printed Name	Title
	where indicated above in Section IV, and return one <b>NET60 of receipt of invoice</b> . This proposal is valid
We very much appreciate the opportunity of sulperforming these services for you. If there are a	9
Sincerely,	
Colliers Engineering & Design, Inc.	

Jeremy Garcia-Glasscock, PE Geographic Discipline Leader <u>jeremy.garciaglasscock@collierseng.com</u> 817-841-9358 (cell)

cc: Doug Ort, PLS, Colliers Engineering & Design (via email)

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## **EXHIBIT A**





## **EXHIBIT 2**

## CONTRACTOR'S CERTIFICATION OF INSURANCE



#### **EXHIBIT 3**

## TOWN OF CASTLE ROCK AFFIDAVIT OF INDEPENDENT CONTRACTOR STATUS

I, \_\_\_\_\_, an authorized representative of **Olsson, Inc.**, holding legal authority to sign this Affidavit declare under oath that I am 18 years or older and have the capacity to sign this Affidavit.

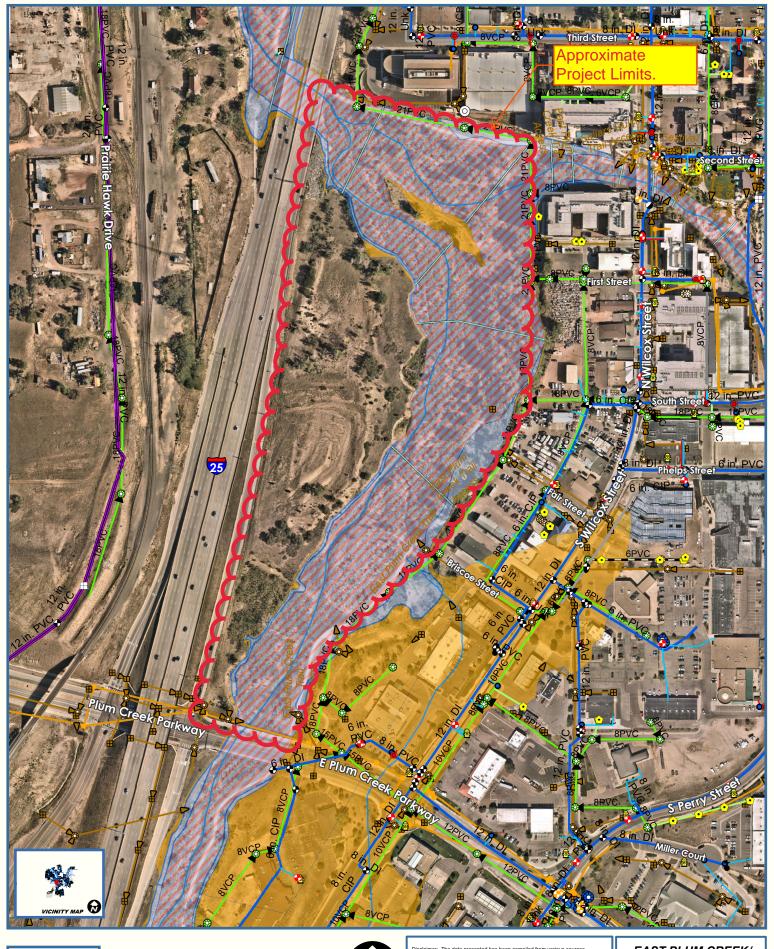
In accordance with Section 8-70-115, C.R.S., I certify the following:

- With respect to the Agreement, I represent and warrant that it is my express intention to be
  employed as an independent contractor of the Town of Castle Rock (the "Town") for
  purposes of performing the work or services which are the subject of the Agreement. I
  understand and confirm that the Town reasonably relied on this intention in entering into
  the Agreement.
- The Town does not require I work exclusively for the Town, except that I may choose to work exclusively for the Town for a finite period of time specified in the document.
- The Town does not establish a quality standard for the work or services performed pursuant to the Agreement, except that the Town may provide plans and specifications regarding the work but cannot oversee the actual work or provide instruction as to how the work is performed.
- The Town does not pay a salary or hourly rate but rather a fixed or contract rate, as noted in the terms and conditions of the Agreement, and any Exhibits made part of the Agreement.
- The Town cannot terminate the work or services performed during the contract period unless otherwise agreed to in the terms and conditions of the Agreement.
- I am not provided with anything, if at all, more than minimal training from the Town.
- The Town does not provide me with tools or benefits for the performance of the work or services which are the subject of the Agreement, except materials and equipment may be supplied.
- The Town does not dictate the time of performance, except that a completion schedule and a range of mutually agreeable work hours may be established in the Agreement.



- The Town does not pay me personally but rather makes checks payable to the trade or business name of the entirety for which I am employed and who is a party to the Agreement; and the Town does not combine their business operations in any way with the entity's business, but instead maintains such operations as separate and distinct.
- I understand that if a professional license to practice a particular occupation under the laws of the State of Colorado requires the exercise of a supervisory function with regard to the work of services performed under this Agreement, such supervisory role shall not affect the independent contractor relationship with the Town.
- I UNDERSTAND THAT I AM NOT ENTITLED TO UNEMPLOYMENT INSURANCE BENEFITS UNLESS UNEMPLOYMENT COMPENSATION COVERAGE IS PROVIDED BY ME OR THE ENTITY FOR WHICH I AM EMPLOYED.
- I UNDERSTAND THAT I AM OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THE AGREEMENT.

CONTRACTOR:		
OLSSON, INC.		
Ву:		
Name		
STATE OF COLORADO	)	
	) ss.	
COUNTY OF	)	
		dged before me this day of
		of the above mentioned Contractor.
Witness my official hand	d and seal.	
My commission expires	:	
		Notary Public





0 150 300 600 Feet

Date: 11/8/2022



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1 inch = 300 feet