
1: Meeting Commencement

- 1A. Pledge of Allegiance
- 1B. Review and Approval of Agenda

2: Petitions and Communications

- 2A. Proclamation Declaring June 2, 2024 as the 6th Annual Gun Violence Awareness Day
- 2B. Proclamation Pride Month
Proclamation Declaring June 2024 as LGBTQIA+ Pride Month

3: Councilmember Reports

4: Public Comment

5: Reports

6: Consent Items

- 6A. Approval of Minutes
Approval of minutes from the May 14, 2024 Regular Council Meeting
- 6B. Appointing BOE hearing officers and arbitrators
Re-appointing existing BOE hearing officers, appointing one additional BOE hearing officer and two additional BOE arbitrators
- 6C. Rezoning Process Changes and Inactive Applications Ordinance - 1st Reading
Adding Sections 16-04-040 Inactive Applications, Section 17-02-085 Inactive Applications, and amending Section 17-48-020 Procedure for Rezoning in the Broomfield Municipal Code
 - Ordinance No. 2232
- 6D. Family Child Care Ordinance - 1st Reading
Amendment to the Broomfield Municipal Code to Allow Family Child Care Homes
 - Ordinance No. 2233
- 6E. Construction Agreements for US 287 Soundwall Replacement
Proposed Resolution No. 2024-64, would approve an agreement between Broomfield and Integrated Site Services Inc. for the replacement of the existing soundwall along the east side of Highway 287 between W. 6th Avenue and W. 10th Avenue. Proposed Resolution No. 2024-65 would approve an amendment to the agreement between Broomfield and WSB LLC to add construction management services.
 - Resolution 2024-64 Approving a Construction Agreement for the US 287 Soundwall Replacement Project
 - Resolution 2024-65 Approving and Amendment for the US 287 Soundwall Replacement Project
- 6F. Annual Aggregate Spending with Oracle America, Inc.
A resolution approving an agreement for annual aggregate spend with Oracle America, Inc. for Cloud Services
 - Resolution No. 2024-61 Authorizing and Approving annual aggregate spending with Oracle America, Inc. for Cloud Software as a Service

6G. IGA with Central Colorado Water Conservancy District

A resolution approving an Intergovernmental Agreement with the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District for Joint Operation of Water Storage and Use of Augmentation Water

— Resolution No. 2024-58

6H. Agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project

A Resolution approving an agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project

— Resolution No. 2024-57

6I. Approving License Agreement with RTD for the US 36 Bike Shelters

RTD IGA

— Resolution 2024-72 Authoring an Agreement with RTD for the US 36 Bike Shelters Signage

6J. 287/Nickel Traffic Signal Maintenance IGA

CDOT IGA

— Resolution 2024-62 Approving an IGA with CDOT for the maintenance of the traffic signal at US 287 and Nickel St.

6K. Software Definition Update for Sales Tax (SaaS) - 1st Reading

Modernize our definition of software by explicitly incorporating Software as a Service (SaaS).

7: Action Items

7A. Public Hearing - Drought Response Plan - Second Reading

An Ordinance Amending Certain Sections of Chapter 13-36 of the Broomfield Municipal Code Water Use and Drought Restrictions

— Ordinance No. 2219- Amending Certain Sections of Chapter 13-36 of the Broomfield Municipal Code Water Use and Drought Restrictions

8: Mayor and Councilmember Requests for Future Action

9: Adjournment

The City and County of Broomfield operates without regard to race, color, national origin, ethnicity, citizenship, immigration status, gender, age, sex, sexual orientation, gender identity, gender expression, marital status, source of income, military status, or disability in all programs and activities.

Individuals with disabilities requiring accommodation or persons needing a language interpreter must submit such a request to the City Clerk no later than noon on Thursday prior to the scheduled Council meeting to allow adequate time to make arrangements. Please call 303.438.6332 or TDD 303.465.5411 or write cityclerk@broomfield.org to make your request.

During the meeting, individuals can click the “CC” button on Live Council meeting video feeds to view closed captioning. Auxiliary hearing aid equipment can be requested on the night of the meeting with our AV team located at the back of the Council Chambers.





City of Broomfield

City Council Regular Meeting

Proclamation Declaring June 2, 2024 as the 6th Annual Gun Violence Awareness Day

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Petitions and Communications	Item: 2A
Presented By		
Jason Vahling		
Community Goals		

Overview

[View Correspondence](#)

It is the primary responsibility of the Centers for Disease Control and Prevention (CDC), Colorado Department of Public Health and Environment (CDPHE), and local public health agencies to track intentional and unintentional injuries and deaths; research the best ways to prevent injuries and violence; implement effective strategies; and evaluate the impact of the prevention efforts. Based on these efforts, CDPHE has identified gun violence as a major public health issue, establishing the [Office of Gun Violence Prevention](#) in 2022.

Attachments

[Memo for Gun Violence Awareness Proclamation](#)
[2024 Gun Violence Awareness Day Proclamation \(2\).pdf](#)



Proclamation

PROCLAMATION DECLARING June 2, 2024 AS Gun Violence Awareness Day

- WHEREAS,** In 2022, there were 1,003 deaths due to firearms across the state with 69% of these deaths were due to suicide and the remaining deaths being homicides or accidental discharge of a firearm; *and*
- WHEREAS,** In 2022, there were 7 total deaths due to firearms among Broomfield residents, with the majority of these deaths occurring among males; *and*
- WHEREAS,** Addressing gun violence requires a comprehensive public health approach, including surveillance to track firearm-related deaths and injuries, research to examine if existing or new interventions are effective, and community-based approaches and resources to expand mental health services and programs;
- WHEREAS,** In 2023, the Broomfield Police Department partnered with several local law enforcement agencies and the Criminal Justice Coordinating Council for "Free Gun Lock Week" where residents were invited to stop by any of the participating agencies for a free gun lock.

NOW, THEREFORE, I, Guyleen Castriotta, Mayor of the City and County of Broomfield, do hereby declare and proclaim June 2, 2024 as:

GUN VIOLENCE AWARENESS DAY IN BROOMFIELD

In witness whereof, I hereunto set my hand and official seal on this the 28th day of May 2024.

Guyleen Castriotta
Mayor



City of Broomfield

City Council Regular Meeting

Proclamation Pride Month

Proclamation Declaring June 2024 as LGBTQIA+ Pride Month

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Petitions and Communications	Item: 2B
Presented By		
Vanessa Oldham-Barton		
Community Goals		
<input checked="" type="checkbox"/> Thriving, Diverse, Safe and Welcoming Community		

Overview

[View Correspondence](#)

Proclamation Declaring June 2024 as LGBTQIA+ Pride Month

Attachments

[Memo for Proclamation Declaring June 2024 as LGBTQIA+ Pride Month.pdf](#)
[LGBTQIA+ Pride Month Proclamation 2024 \(1\).pdf](#)

Summary

[View Correspondence](#)

The City and County of Broomfield is a welcoming community and an exceptional place to live, learn, work, play, and raise a family.

It is imperative that all people in the community feel valued, physically and psychologically safe, empowered, and supported by their peers, educators, and community leaders.

To demonstrate the City and County of Broomfield is dedicated to fostering inclusion of all its residents, and preventing discrimination and bullying based on sexual orientation and gender identity, Mayor Castriotta has proclaimed June 2024 as LGBTQIA+ Pride Month.

Financial Considerations

N/A

Prior Council or Other Entity Actions

The month of June has been proclaimed LGBTQIA+ Pride Month in the City and County of Broomfield every year since 2019

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

N/A

Alternatives

N/A



Proclamation

PROCLAMATION DECLARING JUNE 2024 AS LGBTQIA+ PRIDE MONTH IN THE CITY AND COUNTY OF BROOMFIELD, COLORADO

- WHEREAS, *The City and County of Broomfield is a welcoming community and an exceptional place to live, learn, work, play, and raise a family; and*
- WHEREAS, *The City and County of Broomfield recognizes the importance of equity and freedom; and*
- WHEREAS, *The City and County of Broomfield's LGBTQIA+ community are a vital part of Broomfield and contribute and inform a stronger community; and*
- WHEREAS, *The City and County of Broomfield is dedicated to fostering inclusion of all its residents and preventing discrimination and bullying based on sexual orientation, gender identity, and family makeup; and*
- WHEREAS, *The City and County of Broomfield is strengthened by and thrives upon the rich intersectional diversity of ethnic, cultural, racial, gender and sexual identities of its residents; all of which contribute to the vibrant character and integrity of our City; and*
- WHEREAS, *It is imperative that all people in the community, regardless of sexual orientation or gender identity, feel valued, physically and psychologically safe, empowered, and supported by their peers, educators, and community leaders; and*
- WHEREAS, *Broomfield has made a commitment to advancing the equitable treatment of all residents as a welcoming community, we recognize the importance of upholding the truth that LGBTQIA+ rights are human rights*

NOW, THEREFORE, I, Guyleen Castriotta, Mayor of the City and County of Broomfield, do hereby declare and proclaim June, 2024, as:

LGBTQIA+ PRIDE MONTH IN BROOMFIELD

and I urge residents to recognize the contributions made by members of the LGBTQIA+ community and to actively promote the principles of equity and liberty

In witness whereof, I hereunto set my hand and official seal on this the 28th day of May 2024.

Guyleen Castriotta
Mayor



City of Broomfield

City Council Regular Meeting

Approval of Minutes

Approval of minutes from the May 14, 2024 Regular Council Meeting

Meeting	Agenda Group
Tuesday, May 28, 2024, 6:00 PM	Consent Items Item: 6A
Community Goals	

Summary

Approval of the minutes of the May 14, 2024 Regular Council Meeting.

Attachments

[Minutes from the May 14, 2024 Regular Council Meeting.pdf](#)

Minutes for the City Council Regular Meeting

One Descombes Dr, Broomfield, CO 80020

May 14, 2024, 6:01 PM - May 14, 2024, 7:26 PM

Roll Call: *(The following members were in attendance)*

- **Guyleen Castriotta**, Mayor
- **Laurie Anderson**, Ward 4
- **Todd Cohen**, Ward 5
- **Paloma Delgadillo**, Ward 2
- **Heidi Henkel**, Ward 5
- **Bruce Leslie**, Ward 4 (Remote)
- **Jean Lim**, Ward 3
- **James Marsh-Holschen**, Ward 1
- **Kenny Van Nguyen**, Ward 1
- **Deven Shaff**, Mayor Pro Tem, Ward 3
- **Austin Ward**, Ward 2

Not Present

- **Paloma Delgadillo**, Ward 2 (Excused)

1. Meeting Commencement

1A. Pledge of Allegiance- 6:01 PM

1B. Review and Approval of Agenda- 6:02 PM

2. Petitions and Communications

2A. Proclamation Aging Well / Elder Abuse- 6:03 PM

(Board of Social Services - BSS)

2B. Proclamation Public Works Appreciation Week May 19-25, 2024- 6:09 PM

2C. Presentation on the 2024 Broomfield Trail Adventure and Kickoff for the Broomfield 100- 6:16 PM

3. Councilmember Reports

4. Public Comment

5. Reports

5A. Flatiron Crossing Development Update- 6:50 PM

6. Consent Items

Councilmember Ward moved to Approve the Consent Items 6A - 6E, seconded by Councilmember Marsh-Holschen. Motion passes 8-1, with Councilmember Henkel voting no.

6A. Approval of Minutes- 6:51 PM

6B. Increase Aggregate Spend with Interior Environments, LLC- 6:51 PM

6C. 2024 July 4th Fireworks Display Permit - 6:51 PM

6D. Left Hand Water District IGA with Broomfield- 6:51 PM

6E. Mile High Water License Purchase- 6:51 PM

7. Action Items

7A. Resolution 2024-60 Regarding Down Payment Assistance Program Modification - 7:02 PM

Councilmember Ward moved to adopt Resolution No. 2024-60, seconded by Councilmember Nguyen. Motion passes 9-0.

8. Mayor and Councilmember Requests for Future Action

9. Adjournment



City of Broomfield

City Council Regular Meeting

Appointing BOE hearing officers and arbitrators

Re-appointing existing BOE hearing officers, appointing one additional BOE hearing officer and two additional BOE arbitrators

Meeting	Agenda Group
Tuesday, May 28, 2024, 6:00 PM	Consent Items Item: 6B
Presented By	
Crystal Clemens, City Clerk	
Community Goals	

Overview

[View Correspondence](#)

Staff is requesting that Council, sitting as the Board of Equalization, 1) review and reauthorize the appointment of seven previously approved hearing officers who were appointed by the citizen constituted Board of Equalization, 2) appoint a new hearing officer, Alan Jones, and 3) appoint two new arbitrators, Alan Jones and Aaron Kline.

Attachments

[Memo for re-appointing BOE HOs, appointing Jones as BOE HO and Kline and Jones as BOE arbitrators\(Final\).pdf](#)

[Resolution 2024-41-BOE.pdf](#)

Summary

[View Correspondence](#)

Staff is requesting that Council, sitting as the Board of Equalization, 1) review and reauthorize the appointment of seven previously approved hearing officers who were appointed by the citizen constituted Board of Equalization, 2) appoint a new hearing officer, Alan Jones, and 3) appoint two new arbitrators, Alan Jones and Aaron Kline.

Financial Considerations

Sources and Uses of Funds	Amount
BOE Professional Services 02-14400-53170	\$10,000
Hearing Officers	-\$8,000
Arbitrators	-\$2,000
Projected Balance	\$0

Prior Council or Other Entity Actions

On February 13, 2024, Council approved [Ordinance 2225](#) transferring the Board of Equalization (BOE) duties from a separate resident board to Council.

Boards and Commissions Prior Actions and Recommendations

[Resolution 2017-08-BOE appointing Vicki Wemberly\[sic\]](#)

[Resolution 2021-02-BOE appointing Daisy \[Christensen\] Glassburn](#)

[Resolution 2022-07-BOE appointing Shelley Kechter and Shannon Wheeler](#)

[Resolution 2023-06-BOE appointing Lance Ingalls](#)

[Resolution 2023-14-BOE appointing Aaron Kline](#)

Proposed Actions / Recommendations

If Council desires to re-appoint all existing hearing officers, appoint Alan Jones as a hearing officer, and Alan Jones and Aaron Kline as arbitrators the motion is . . .

That Resolution 2024-41-BOE be adopted.

Alternatives

Appoint selected individual hearing officers rather than all existing hearing officers.

Not appoint Alan Jones as a hearing officer and rely upon the services of the reappointed hearing officers.

Not appoint Aaron Kline and/or Alan Jones as arbitrators and rely upon the services of the existing arbitrators currently approved by Council.

Background

On February 13, 2024, Council approved [Ordinance 2225](#) transferring the Board of Equalization (BOE) duties from a separate resident board to Council. The previously appointed citizen Board of Equalization in the past appointed hearing officers to assist with the annual property valuation protests that happen each year in July.

Pursuant to C.R.S. 39-8-102, the county board of equalization shall have the authority to appoint independent referees (CCOB uses the term “hearing officers”) who are experienced in property valuation to conduct hearings relating property valuations and to make findings and submit recommendations to the county board of equalization for its final action. The use of hearing officers with expertise in this area improves the efficiency of the property valuation and protest process.

Each year there are several statutory deadlines relating to the property valuations and protests of those values. Notably, all of the hearings on protests must take place between July 15th and August 5th each year. During intervening years, such as 2024, there tends to be fewer protests than in revaluation years (i.e. odd numbered years).

Below is a chart detailing the various deadlines.

Assessor/BOE Timeline (BOE (Council) Duties are in **YELLOW**)

Date	Description	Responsibility	Additional Information
May 28, 2024	Appointment of hearing officers	Board of Equalization (Council)	The memo will contain resumes of the hearing officers
June 8, 2024	Deadline for Protests - Real Property	Taxpayer submits - Assessor's Office reviews/determines value	C.R.S.39-5-121(1) C.R.S.39-5-122 (1),(2)
June 28, 2024	Deadline for Notice of Determination - Real Property	Assessor's Office	C.R.S.39-5-122(2) C.R.S.39-5-122.7
June 30, 2024	Deadline for Protests - Personal Property	Taxpayer submits - Assessor's Office reviews/ determines value	C.R.S.39-5-121(1.5)(a) C.R.S.39-5-122
July 10, 2024	Deadline for Notice of Determination - Personal Property	Assessor's Office	C.R.S.39-5-122(2)
By July 15	Assessor Report to BOE/Council	Assessor's Office	C.R.S.39-8-105

July 15 - August 5, 2024	Protest Hearings heard by the Council-appointed Hearing Officers with the taxpayer and a representative of the Assessor's Office present.	Clerk of the BOE/ Hearing Officers	Heard by Council-appointed Hearing Officers.
August 5, 2024 (Monday)	Special Meeting for the BOE to approve the findings of the protest Hearing Officers	Board of Equalization (Council)	Statutory deadline; can occur earlier if all hearings completed.
August 12, 2024	Letters mailed to the taxpayer advising of the outcome of their appeal.	Clerk to the BOE	Must be mailed within five business days following the BOE decision/hearing
30 Days after the decision was mailed	Taxpayers may appeal the decision to the Board of Assessment Appeals (BAA), District Court or request binding arbitration.	Taxpayer	Appeals must be filed no later than September 11, 2024.

Hearing Officer - Reappointments

Hearing officer appointments were previously handled by the Council-appointed Board of Equalization. With the transferring of duties to Council, staff is presenting Council the opportunity to review the resumes and qualifications for the existing hearing officers for reappointment. The appointed hearing officers will make recommendations to Council on protests and abatements; as a result, staff wants Council to feel comfortable with the qualifications of the individuals who are making the recommendations. The previously appointed hearing officers are listed below in alphabetical order:

[Daisy \[Christensen\] Glassburn](#) (appointed 2021)

[Lance Ingalls](#) (appointed 2023)

[Shelley Kechter](#) (appointed 2022)

[Aaron Kline](#) (appointed 2023)

[Shannon Wheeler](#) (appointed 2022)

[Vicki Wimberly](#) (appointed 2017)

Hearing officers are paid at the going rate charged among the counties, currently \$85 per hour. Of note, Mr. Ingalls is a former Douglas County attorney, he was appointed in 2023 due to the need for additional hearing officers with the increase in property tax appeal hearings last year. Mr. Ingalls is paid at a higher rate (\$250 per hour) because of his legal background. Staff limits the use of Mr. Ingalls as much as possible; however, staff has found it beneficial to have a hearing officer that is not committed during the season and who can provide services on short notice when other hearing officers are already scheduled with other counties.

All hearing officers have confirmed interest in continuing to serve Broomfield for both abatement and protest hearings but all have limited availability during peak seasons. Staff would recommend that all of the existing hearings officers be reappointed by Council. Staff will not ask Council to reappoint hearing officers each year, only this first year with the transition of the board of equalization duties to Council.

Hearing Officer - New Appointment

As discussed above, C.R.S. 39-8-102 authorizes the county board of equalization to "...appoint independent hearing officers who are experienced in property valuation to conduct hearings on behalf of the board and to make findings and submit recommendations to the board of equalization for its final action." To ensure coverage for abatement and protest hearings, staff recommends appointing Alan Jones as an additional hearing officer. [Alan Jones' resume](#) is attached for your review and consideration.

Arbitrators - New Appointments

In accordance with Colorado Revised Statutes and the Broomfield Municipal Code 2-66-020, decisions of the Broomfield Board of Equalization (BOE) regarding property values can be appealed to the Colorado Board of Assessment Appeals, District Court, or binding arbitration at the option of the taxpayer. If a taxpayer chooses arbitration, an arbitrator is selected by mutual agreement of the taxpayer and the City from a list of arbitrators established by Council. The arbitrator then conducts a hearing at which the property owner and the Broomfield Assessor, on behalf of the Board of Equalization, provide evidence as to the appropriate value of the property in question. The decision of the arbitrator is binding and no further appeals are available to the taxpayer. Each arbitrator selected by Council will enter into a contractual agreement with the City and County of Broomfield which remains in effect unless terminated by either party upon 10 days written notice. Note: The appointment of arbitrators has always been completed by Council and this process has not been impacted by the transition of BOE duties to Council.

Section 2-66-020 BMC requires that arbitrators selected have experience in the area of property taxation and may be any of the following:

- An attorney licensed to practice law in the state;
- An appraiser who is a member of the institute of real estate appraisers or its equivalent;
- A former county assessor;
- A retired judge; or
- A licensed real estate broker.

The method of payment for arbitrators is set forth in C.R.S. 39-8-108.5 and arbitrators' expenses and fees may not exceed \$150 for appeals concerning residential real property. For cases concerning personal property and commercial real property the arbitrators' expenses and fees are an amount agreed upon by the taxpayer and the Board of Equalization and are paid as provided in the arbitrator's decision. The Assessor's Office represents the county board of equalization at arbitration hearings.

Staff has received the resumes of [Aaron Kline](#) and [Alan Jones](#) who are experienced in property tax valuations, who would be willing to serve as arbitrators for Broomfield, and who would qualify to act as arbitrators under the provision of the BMC cited above.

Staff recommends that Aaron Kline and Alan Jones be named by the Council to act as arbitrators of property valuation disputes. While the City currently has six arbitrators appointed, one of the arbitrators only hears commercial cases which are rarely appealed to arbitration. One arbitrator is unavailable this year due to a transition with their employer which makes them ineligible to assist at this time. We only have four arbitrators available this year, and scheduling with these individuals can also be challenging; as a result, it is helpful to have additional arbitrators appointed and available.

RESOLUTION NO. 2024-41-BOE

A resolution re-appointing hearing officers, appointing a new hearing officer and two new arbitrators

Recitals.

- A. Pursuant to Chapter 2-66 of the Broomfield Municipal Code, B.M.C, the Board of Equalization of the County of Broomfield (BOE) was created to hear appeals from the Broomfield County Assessor's determinations regarding valuations for assessment in accordance with state law.
- B. Pursuant to C.R.S. 39-8-102, the BOE has authority to appoint independent referees, or hearing officers, who are experienced in property valuation to conduct hearings on behalf of the BOE and to make findings and submit recommendations to the BOE for its final action.
- C. Pursuant to B.M.C. 2-66-020, City Council/BOE shall develop a list of persons who are qualified to act as arbitrators of property valuation disputes.
- D. City Council acting as the Board of Equalization desires to re-appoint the existing hearing officers who have successfully provided such services to Broomfield in the past and to appoint a new hearing officer and two new arbitrators to hear property valuation and tax appeals.

Be it resolved by the Board of Equalization of the County of Broomfield, Colorado:

Section 1.

- A. The following individuals are hereby appointed as independent referees, or hearing officers, to conduct property valuation appeal hearings in accordance with state law to serve until they no longer desire or the agreement with the City terminates or expires:
 - 1. Daisy (Christensen) Glassburn
 - 2. Lance Ingalls
 - 3. Shelley Kechter
 - 4. Aaron Kline
 - 5. Shannon Wheeler
 - 6. Vicki Wimberly

Section 2.

That Alan Jones be appointed as an independent referee, or hearing officer, to conduct property valuation appeal hearings in accordance with state law, subject to Mr. Jones successfully completing a background check by the City and County of Broomfield and signing an Agreement in a form acceptable to the City and County Attorney's office.

Section 3.

That Aaron Kline and Alan Jones be appointed to the list of arbitrators to be selected for the conduct of property valuation appeal hearings in accordance with §2-66-020(A) of the Broomfield Municipal Code, subject to each party signing an agreement in a form acceptable to the City and County Attorney's office, and Alan Jones' successful completion of a background check, as Aaron Kline has already passed the background check.

Section 4.

This resolution is effective on the date of approval by the Board of Equalization.

Approved on May 28, 2024

Board of Equalization of the County of Broomfield,
Colorado

Chair

Attest:

Office of the City and County Clerk

Approved as to form:

KKH

City and County Attorney



City of Broomfield

City Council Regular Meeting

Rezoning Process Changes and Inactive Applications Ordinance - 1st Reading

Adding Sections 16-04-040 Inactive Applications, Section 17-02-085 Inactive Applications, and amending Section 17-48-020 Procedure for Rezoning in the Broomfield Municipal Code

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6C
Presented By		
Anna Bertanzetti		
Community Goals		
<div><div><input checked="" type="checkbox"/> Financial Sustainability and Resilience</div><div><input checked="" type="checkbox"/> Thriving, Diverse, Safe and Welcoming Community</div></div>		

Overview

[View Correspondence](#) and visit [BroomfieldVoice.com](https://broomfieldvoice.com)

Staff is bringing forth an ordinance which proposes to amend the Broomfield Municipal Code to add new sections to Titles 16 and 17 related to inactive development applications, and to amend Section 17-48 of the Broomfield Municipal Code to add a requirement for a pre-submittal neighborhood meeting and review criteria for rezoning requests.

Attachments

[Rezoning Process Changes and Inactive Applications Memo 1st Reading.pdf](#)
[Ordinance No. 2232.pdf](#)

Summary

[View Correspondence](#)

Staff is bringing forth an ordinance which proposes to amend the Broomfield Municipal Code to add new sections to Titles 16 and 17 related to inactive development applications, and to amend Section 17-48 of the Broomfield Municipal Code to add a requirement for a pre-submittal neighborhood meeting and review criteria for rezoning requests.

In August 2020, City Council adopted Ordinance No. 2127 which amended Titles 16 and 17 of the Broomfield Municipal Code including the addition of a requirement for neighborhood meetings prior to the submittal of a formal development application for Final Plats, Uses by Special Review, new Planned Unit Development (PUD) Plans, Amendments to PUD Plans, Site Development Plans and Site Development Plan Amendments.

At the time of adoption of Ordinance No. 2127, Broomfield was not receiving many standalone rezoning applications. Typically projects which were requesting to rezone a property were rezoning to PUD and had a companion PUD Plan which required a neighborhood meeting.

Since 2022, Broomfield has been taking a systematic approach to update the City's development review process tools. These updates have included changes to Broomfield's non-PUD zone districts either through amendments to modernize existing zone districts or through the creation of entirely new zone districts to encourage new non-PUD development.

As a result of these ongoing efforts to modernize Broomfield's zoning options, and the success of the neighborhood meeting requirement for various other applications, an expansion to require neighborhood meetings for rezoning applications is being proposed. During the two prior study sessions staff also proposed to add review criteria for both the Land Use Review Commission and City Council when considering rezoning requests. The Broomfield Municipal Code currently does not identify any criteria for approval or denial of rezoning requests. The proposed amendments will identify a review standard for future rezonings.

Additionally, in recent years Broomfield has seen more development applications move slowly through the planning process. With the regular updates to Standards and Specifications and the Building Code as well as the ongoing systematic approach to modernizing development tools including code requirements, these projects which go inactive for long periods of time are failing to keep up with changes to requirements.

As such, Proposed Ordinance No. 2232 proposes to add new sections of code to Titles 16 and 17 of the Broomfield Municipal Code to create a 180-day limit of inactivity of projects prior to their being deemed void and closed. The proposal also includes an opportunity for applicants to ask for extensions to this time limit of an additional 180 days.

Financial Considerations

Ordinance No. 2232 proposes to establish regulations related to development application expirations due to inactivity from applicants. The proposed regulations would deem development applications to be withdrawn if they go inactive for 180 days or have not been provided extension. If a project is deemed to be withdrawn it would mean that the applicant would need to submit a new development application and pay new application fees associated with their development proposal.

Prior Council Action

[August 11, 2020](#) - City Council adopted Ordinance No. 2127 which amended the public notice requirements for public hearings and established the requirement of neighborhood meetings prior to application submittal for specific planning applications.

[August 15, 2023](#) - City Council held a study session and request for direction related to modifications to the rezoning process, adding new transit oriented development and mixed use zone districts and adding a new administrative development plan process to the Broomfield Municipal Code.

[March 19, 2024](#) - City Council held a second study session related to modifications to the rezoning process and adding a new transit oriented development and two new mixed use zone districts to the Broomfield Municipal Code.

Board and Commissions Prior Actions and Recommendations

N/A

Proposed Actions/Recommendations

Based on the above, it is recommended...

That Ordinance No. 2232 be adopted on first reading and ordered published in full;

That a public hearing and second reading of the Ordinance be held on July 23, 2024, at 6pm as allowed by City Council Procedures and Rules of Order.

Alternatives

Make no changes to the Broomfield Municipal Code.

Amend the Broomfield Municipal Code in accordance with the proposed changes outlined in this memorandum.

Make changes to the Broomfield Municipal Code as directed by City Council.

Background

On August 11, 2020, City Council adopted Ordinance No. 2127 which amended Titles 16 and 17 of the Broomfield Municipal Code which modified the concept review process to allow for online concept reviews, made changes to the public notice requirements for various development projects and added a requirement for neighborhood meetings prior to the submittal of a formal development application for Final Plats, Uses by Special Review, new Planned Unit Development (PUD) Plans, Amendments to PUD Plans, Site Development Plans and Site Development Plan Amendments.

The requirement for neighborhood meetings has provided the community with an additional opportunity to engage with developers early in the planning process. Since 2020, Broomfield staff have attended

approximately 100 neighborhood meetings for development proposals. At the time of adoption of the neighborhood meeting requirement, Broomfield was not receiving many standalone rezoning applications. Typically projects which were requesting to rezone a property were rezoning to PUD and had a companion PUD Plan which required a neighborhood meeting.

Since 2022, Broomfield has been taking a systematic approach to updating the City's development review process tools. These updates included changes to Broomfield's non-PUD zone districts either through amendments to modernize existing zone districts or through the creation of entirely new zone districts to encourage new non-PUD development. As a result of these prior and ongoing efforts to modernize Broomfield's zoning options, and the success of the neighborhood meeting requirement for various other applications, an expansion to require neighborhood meetings for rezoning applications is being proposed.

The proposal to require rezoning applications to include a pre-submittal neighborhood meeting has been shared with council during two study sessions related to the proposed creation of new transit oriented and mixed use zone districts which took place in August 2023 and March 2024. Following the second study session on this topic in March 2024, staff has bifurcated the proposed rezoning application code changes from the proposed new zone districts.

At the time this memo was prepared, there was pending state legislation related to transit oriented communities which, if signed into law, could require modifications to be made to the proposed transit oriented development zone district, the separating of the rezoning changes allows those to be brought forward for council's consideration quicker than if it were to remain bundled with the proposed new zone districts.

During the two prior study sessions, staff also proposed to add review criteria for both the Land Use Review Commission and City Council when considering rezoning requests. The Broomfield Municipal Code currently does not identify any criteria for approval or denial of rezoning requests. This ordinance is proposing to add review criteria along with the neighborhood meeting requirement.

The final proposed change to the Broomfield Municipal Code included as part of Proposed Ordinance No. 2232 is related to inactive development applications. Broomfield's typical development review process includes multiple rounds of technical review of development applications. This can be visualized in the [typical development process flowchart](#), but generally consists of the City and various external referral agencies (utility providers, school districts, Metro Fire District, etc.) reviewing the development application and providing formal comments to the applicant.

Typically the comments shared with applicants require revisions to the development application materials and applicants require multiple weeks to make necessary revisions. In recent years there have been an increasing number of development applications that have gone inactive for extended periods of time between the applicant receiving comments and resubmitting revisions.

Extended periods of inactivity for development applications present challenges for both staff and developers. As Broomfield regularly updates the Engineering Standards and Specifications, Building Codes, and as the City is currently in the middle of systematically updating other development tools, projects that are going inactive for extended periods of time risk being resubmitted out of compliance of new requirements and resulting in additional rounds of review. Because of this, staff is proposing to establish new code sections to Title 16 and 17 of the Broomfield Municipal Code which would deem inactive applications to be withdrawn.

Many surrounding communities have municipal codes related to inactive projects. The table below outlines some of these communities, the period of time they allow applications to be inactive before being deemed to be withdrawn, and if they allow extensions and how long those extensions for inactivity can be.

Municipality	Inactive Application Period before being deemed withdrawn	Extension Availability
Arvada	180 days	Yes, 180 additional days
Boulder (City of)	60 days	Yes, 60 additional days
Brighton	120 days	No
Centennial	6 months	Yes, 6 additional months
Commerce City	60 days	No, but applicant has 30 additional days to take corrective action
Golden	180 days	Yes, 180 additional days
Longmont	120 days	No

Proposed Code Changes

Proposed Ordinance No. 2232 would make changes to three sections of the Broomfield Municipal Code. These changes are related to Title 16 and Title 17 of the Municipal Code. The changes include adding development application expiration processes for required applications for platting and land development for actions outlined in Titles 16 and 17. The proposed project expirations would apply to projects which have been deemed to be inactive for a period of 180 days. The other change to the Broomfield Municipal Code is related to the rezoning process and includes adding a requirement for a neighborhood meeting as well as establishing review criteria for rezoning applications. The proposed code language is outlined in detail below and mirrors the language in proposed Ordinance No. 2232.

Ordinance No. 2232 proposes to add two new sections to Titles 16 and 17 of the Broomfield Municipal Code. These new sections would be 16-04-040 and 17-02-085. Both of the new sections would be titled Inactive Applications and will mirror the same language in both titles. The proposed language is included below.

16-04-040 Inactive Applications

- (A) *Generally.* It is understood that applications for development approval as required by Title 16 of the Broomfield Municipal Code will be diligently pursued by the applicant. This section is intended to close such applications that become stale due to inaction by the applicant.
- (B) *Closing of Inactive Applications.* When an action by the applicant is required for further processing of an application (for example, if revisions are requested after agency referrals), the application shall become void and be deemed closed 180 days after the date that the action is requested if the applicant either fails to take action or fails to request an extension of time pursuant to subsection C below.

- (C) *Extension of Time.* The Director of Community Development may extend the expiration of an application by up to 180 additional days for good cause upon written request of the applicant before the end of the period set out in subsection B above.

17-02-085 Inactive Applications

- (A) *Generally.* It is understood that applications for development approval as required by Title 17 of the Broomfield Municipal Code will be diligently pursued by the applicant. This section is intended to close such applications that become stale due to inaction by the applicant.
- (B) *Closing of Inactive Applications.* When an action by the applicant is required for further processing of an application (for example, if revisions are requested after agency referrals), the application shall become void and be deemed closed 180 days after the date that the action is requested if the applicant either fails to take action or fails to request an extension of time pursuant to subsection C below.
- (C) *Extension of Time.* The Director of Community Development may extend the expiration of an application by up to 180 additional days for good cause upon written request of the applicant before the end of the period set out in subsection B above.

The addition of these new sections would establish a 180 day time frame for applicants to resubmit revisions to the Community Development Department for all land use development applications, including but not limited to: minor plats, final plats, site development plans, planned unit development plans, rezoning applications, and uses by special review. Staff is proposing to also include an opportunity for applicants to request an extension of an additional 180 days to resubmit.

The ordinance also includes changes to the rezoning process. As previously noted these changes include adding a requirement for applications for rezoning requests to hold a pre-submittal neighborhood meeting and adding review criteria for the Land Use Review Commission and City Council to use when making recommendations and approval or denial decisions for rezoning requests, respectively. The proposed code changes are outlined below.

17-48-020 Procedure for rezoning.

- (E) Prior to any official submittal of a rezoning, the applicant shall hold a neighborhood meeting. Notice for such neighborhood meetings shall be done consistent with Section 17-52, B.M.C. The neighborhood meeting provides the applicant and surrounding property owners an opportunity to review preliminary requests. The meeting should solicit input and exchange information about the proposal. The applicant shall record attendance on a sign-in sheet and shall create a summary of the meeting discussion which shall be submitted with the formal application.
- (F) The recommendation of the land use review commission and decision of the city council for rezoning requests shall consider the applicant's proposed rezoning request based upon the following criteria:

- (1) The proposal is in (i) general conformance with applicable land use plans including but not limited to the Broomfield Comprehensive Plan and, sub area plans, or (ii) there has been substantial change in the character of the area to support the rezoning action, or (iii) the official zoning classification is in error.
- (2) The proposal is compatible with existing and allowable land uses in the surrounding area.
- (3) The proposal's effect upon the health, safety, and welfare of the residents and landowners in the surrounding areas.
- (4) The proposal is an opportunity or an appropriate site, at an appropriate location, for the particular type of land use or development proposed and will help the city achieve a balance of land use, tax base, or housing types consistent with the city's overall planning and economic development goals.

Applicable City and County of Broomfield Plans

Broomfield Comprehensive Plan

The proposed amendments including the addition of new code sections to the Broomfield Municipal Code will help to promote a number of goals that were outlined in the 2016 Comprehensive Plan and 2016 Transportation Plan. These goals include:

- Goal LU-I: Development Standards - Use development standards and guidelines to help realize the community's overall vision and goals.
- Policy LU-I.2: Use Broomfield's existing design guidelines and standards as a basis for reviewing development applications, updating Broomfield codes and regulations and, in general, implementing the goals and policies of the 2016 Comprehensive Plan.
- Action Step LU-I.2.1: Review existing design guidelines and standards and refine and/or codify where necessary.

Public Engagement

A [Broomfield Voice page](#) has been created and provides information regarding the proposed amendments included in this proposed ordinance. The Broomfield Voice platform will allow for feedback on the proposed amendments to the Broomfield Municipal Code, and community engagement is encouraged. Comments received will be gathered and summarized to provide feedback as part of the public hearing process. There will also be an opportunity at the public hearing for the second reading of the proposed ordinance for additional public comments to be provided for City Council's consideration.

Ordinance No. 2232

Proposed Ordinance No. 2232 amends Chapters 16-02, 17-04 and 17-48 of the Broomfield Municipal Code. If approved on first reading, proposed Ordinance No. 2232 will be published in full, and a second reading a public hearing will be scheduled for July 23, 2024.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2232

An Ordinance adding Sections 16-04-040 Inactive Applications, Section 17-02-085 Inactive Applications, and amending Section 17-48-020 Procedure for Rezoning in the Broomfield Municipal Code

Be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 16-04-040 Inactive Applications, is added to the Broomfield Municipal Code as follows:

16-04-040 - Inactive Applications.

- (A) *Generally*. It is understood that applications for development approval as required by Title 16 of the Broomfield Municipal Code will be diligently pursued by the applicant. This section is intended to close such applications that become stale due to inaction by the applicant.
- (B) *Closing of Inactive Applications*. When an action by the applicant is required for further processing of an application (for example, if revisions are requested after agency referrals), the application shall become void and be deemed closed 180 days after the date that the action is requested if the applicant either fails to take action or fails to request an extension of time pursuant to subsection C below.
- (C) *Extension of Time*. The Director of Community Development may extend the expiration of an application by up to 180 additional days for good cause upon written request of the applicant before the end of the period set out in subsection B above.

Section 2.

Chapter 17-02-085 Inactive Applications, is added to the Broomfield Municipal Code as follows:

17-02-085 - Inactive Applications.

- (A) *Generally*. It is understood that applications for development approval as required by Title 17 of the Broomfield Municipal Code will be diligently pursued by the applicant. This section is intended to close such applications that become stale due to inaction by the applicant.
- (B) *Closing of Inactive Applications*. When an action by the applicant is required for further processing of an application (for example, if revisions are requested after agency referrals), the application shall become void and be deemed closed 180

days after the date that the action is requested if the applicant either fails to take action or fails to request an extension of time pursuant to subsection C below.

- (C) *Extension of Time.* The Director of Community Development may extend the expiration of an application by up to 180 additional days for good cause upon written request of the applicant before the end of the period set out in subsection B above.

Section 3.

Chapter 17-48-020 Procedure for rezoning of the Broomfield Municipal Code is amended with the following language:

17-48-020 Procedure for rezoning.

- (A) The owner of any property may apply to the land use review commission for rezoning of his or her property. The applicant shall pay an application fee of \$650.00 for rezoning ten acres or more of land and \$250.00 for rezoning less than ten acres of land.
- (B) The city manager is authorized to apply to the land use review commission for rezoning of any property within the city.
- (1) The city manager shall notify the owner or owners of any property subject to the application for rezoning that a hearing on the rezoning application will be held before the land use review commission and before the city council.
 - (2) The city manager's notification to the owner or owners shall set forth the reasons for the rezoning application.
 - (3) Notification to the owner or owners by the city manager shall be by personal service or by certified mail not less than thirty days prior to the public hearing before the land use review commission.
- (C) The land use review commission shall hold a public hearing on the application. Notice shall be given in accordance with the provisions of chapter 17-52, B.M.C. Following the hearing, the land use review commission shall make recommendations to the city council concerning the application.
- (D) The city council shall hold a public hearing on the application. Notice shall be given in accordance with the provisions of chapter 17-52. Following the hearing, the city council shall either deny the application or shall approve it by ordinance. An ordinance may impose conditions on rezoning.
- (E) Prior to any official submittal of a rezoning, the applicant shall hold a neighborhood meeting. Notice for such neighborhood meetings shall be done consistent with Section 17-52, B.M.C. The neighborhood meeting provides the applicant and surrounding property owners an opportunity to review preliminary requests. The meeting should solicit input and exchange information about the

proposal. The applicant shall record attendance on a sign-in sheet and shall create a summary of the meeting discussion which shall be submitted with the formal application.

(F) The recommendation of the land use review commission and decision of the city council for rezoning requests shall consider the applicant's proposed rezoning request based upon the following criteria:

- (1) The proposal is in (i) general conformance with applicable land use plans including but not limited to the Broomfield Comprehensive Plan and, sub area plans, or (ii) there has been substantial change in the character of the area to support the rezoning action, or (iii) the official zoning classification is in error.
- (2) The proposal is compatible with existing and allowable land uses in the surrounding area.
- (3) The proposal's effect upon the health, safety, and welfare of the residents and landowners in the surrounding areas.
- (4) The proposal is an opportunity or an appropriate site, at an appropriate location, for the particular type of land use or development proposed and will help the city achieve a balance of land use, tax base, or housing types consistent with the city's overall planning and economic development goals.

Section 5.

This ordinance shall be effective seven days after public notice following final passage.

Introduced and approved after first reading on May 28, 2024, and ordered published in full.

Introduced a second time and approved on July 23, 2024, and further ordered published.

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

KKH

City and County Attorney



City of Broomfield

City Council Regular Meeting

Family Child Care Ordinance - 1st Reading

Amendment to the Broomfield Municipal Code to Allow Family Child Care Homes

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6D
Presented By		
Anna Bertanzetti		
Community Goals		
<input checked="" type="checkbox"/> Thriving, Diverse, Safe and Welcoming Community		

Overview

[View Correspondence](#) and visit [BroomfieldVoice.com](https://broomfieldvoice.com)

The State of Colorado now requires local governing authorities to treat all family child care homes, including those caring for up to twelve (12) children under the age of eighteen (18) as a residential use. To bring the Broomfield Municipal Code into compliance with this legislation, staff proposes amending the code and, for clarity, cleaning up the vocabulary used in the code to describe these facilities. The current draft of the ordinance also includes the removal of a restriction on the proximity of Adult Day Care Homes from existing approved adult daycare facilities or residential assisted living facilities - a change that was suggested by City Council at the March 19 study session.

Attachments

[Memo- Family Child Care Homes First Reading.pdf](#)
[Ordinance no. 2233 - pdf](#)

Summary

[View Correspondence](#)

Introduction

During the March 19, 2024 Study Session, staff introduced the proposed Family Child Care Homes code cleanup ordinance to address a change in State of Colorado law.

In 2021, the State of Colorado passed [HB21-1222](#) regarding the regulation of family child care homes to expand opportunities to access child care in family child care homes. The new legislation noted “Colorado has a shortage of licensed, safe, and affordable child care options, while at the same time there is a growing need for child care in order to bolster the economy and allow parents to work.” The new legislation requires that local governing authorities treat family child care homes as a residential use.

The Broomfield Municipal Code (BMC) currently allows family child care homes caring for up to eight (8) children as a home occupation. In requiring that local governing authorities treat family child care homes as a residential use, the state requires municipalities to allow all types of family child care homes licensed by the state, and these include large family child care homes that care for up to twelve (12) children.

The proposed Family Child Care Homes ordinance is to bring Broomfield’s zoning code into compliance with state regulations by allowing up to 12 children in a family child care home as a home occupation. Additional revisions are also proposed to clean up the code details related to family child care homes.

Since the intent of the code update is to comply with state regulations, staff proposes for the code amendments to comply with state law. In response to a Council suggestion at the March 19 study session, the proposed ordinance includes the removal of a restriction on the proximity of Adult Day Care Homes from existing approved adult daycare facilities or residential assisted living facilities.

Existing Conditions

The BMC allows home occupations as an accessory use to a residential use. As currently regulated, home occupations mean a trade, occupation, or profession conducted by any person within or from a dwelling unit. Family child care homes are allowed as home occupations subject to the following requirements:

- (1) Family child care homes are those residential households in which care is provided for two or more children under the age of thirteen not related to each other or children from more than one family for less than twenty-four hours, on a regular weekly basis.
- (2) Family child care homes must be licensed by the state and comply with all state regulations promulgated by the Colorado Department of Human Services, and all local zoning and building regulations.
- (3) Family child care homes may care for no more than eight children total, including the children of the provider, and in no event more than six children not attending full-day school, including the children of the caretaker, at any one time.
- (4) Rear yard storage of playground equipment, swing sets, toys, and other items associated with outdoor activity related to a family child care home is allowed.

(5) No more than two motor vehicles associated with patrons or employees of the family child care home may be parked at any time on the dwelling unit site or on the street, other than fifteen minutes or less for the purpose of loading or unloading property or passengers.

The BMC specifies that large child care homes caring for more than eight children are classified as a type of child day care facility, which is not an allowed home occupation, but rather a use permitted in non-residential areas.

Based on the passing of [HB21-1222](#), the BMC regulations related to family child care homes no longer comply with state law and must be revised. Areas where the regulations conflict with the new state requirements include:

- The family child care homes in residential areas must allow up to twelve children.
- There is a specific limitation on the number of vehicles allowed to be parked on the property in association with the use.
- The state allows child care to be provided to children up to the age of eighteen (18).

In addition, Broomfield's adopted Building Code conflicts with the new requirements of HB21-1222, as large child care homes under the existing Building Code would be required to meet specific requirements that are not applicable to smaller family child care homes caring for eight or fewer children resulting in the need to amend the building code to ensure large family child care homes are not treated differently.

The BMC also allows Adult Day Care Homes as a permitted home occupation, subject to several requirements. One of these requirements is that "*Adult daycare homes shall not be located within 1,500 feet of an existing approved adult daycare facility or residential assisted living facility for persons sixty years of age or older.*" At the March 19th Study Session for this proposed ordinance, City Council directed that staff remove this proximity restriction, given the aging population in Broomfield.

Broomfield Comprehensive Plan

The code clean up could further the following Comprehensive Plan policy:

Policy CS-E.6: Promote more choices for those seeking childcare services, including a variety of settings and distributions across the community, types of programs, access to specialized child care, infant care and affordable child care.

Proposed Amendments for Consideration

To bring the Broomfield Municipal Code into full compliance with state law, staff proposes the following amendments.

1. Move all definitions into the Zoning Code [Chapter 17, Title 4 - Definitions](#).
2. Change the definition of Family Child Care Home to be inclusive of the state requirement to allow up to twelve (12) children under the age of eighteen (18).
3. Remove the clause defining the term large child care home from the definition of a child day care facility.
4. Change the definition of Adult Day Care Home to apply to individuals 18 years and older.
5. Amend a portion of [Chapter 15-04-101 - Amendments to the International Building Code](#) to allow up to twelve (12) children in a dwelling unit without requiring changes to the dwelling unit.

6. Adjust parking regulations related to family child care homes to comply with state law (limited parking restrictions can apply only to immediately adjacent large family child care homes).

To reconcile differences in the vocabulary used within the code to refer to day care centers, staff proposes to update the terms “day care,” “day care facility,” and “licensed day care center” to replace these terms with the definitions used in BMC 17-04 - Definitions. This would change the vocabulary used in:

7. BMC 5-36-120, regarding Sexually Oriented Businesses
8. BMC 9-56-040, regarding Restricting the Residency of a Sexually Violent Predator
9. BMC 17-24 and BMC 17-26, regarding Industrial Use Districts

At the March 19th Study Session, City Council directed that staff remove the proximity restriction between Adult Day Care Homes and existing approved adult daycare facility or residential assisted living facility. The removal of this restriction would strike the following clause from the Broomfield Municipal Code:

10. BMC 17-32-020 (E)(7)

Stakeholder and Public Outreach

The Planning Division has published a [webpage dedicated to the proposed ordinance on the BroomfieldVoice platform](#). A notice of the code amendment was placed in the Community Update. The ordinance will also be noticed in accordance with standard public notice requirements for an ordinance including a posting in the local newspaper.

Financial Considerations

N/A. Staff is proposing modifications to sections of the Broomfield Municipal Code. These proposed modifications are not expected to affect any city and county revenues or expenses.

Prior Council Actions

On September 11, 2001, City Council passed [Ordinance No. 1590](#) adding child care homes as a home occupation to the Broomfield Municipal Code, modifying the definition of a child day care facility, and addressing large child care homes be classified as a type of child day care facility.

On October 25, 2005, City Council passed [Ordinance No. 1817](#), which added adult daycare homes as a home occupation and established the current set of regulations.

On September 12, 2017, City Council passed [Ordinance No. 2051](#), which included a modification to off-street parking requirements for home occupations, including Family Child Care Homes.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve the amendments and revisions to the Code, the appropriate motion is...
That Ordinance No. 2233 be adopted on first reading and ordered published in full;

That a public hearing and second reading of the Ordinance be held on July 9, 2024, at 6pm as allowed by City Council Procedures and Rules of Order.

Alternatives

Do not make the proposed amendments to the Code, or as directed by Council.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2233

An ordinance amendment the Broomfield Municipal Code to Allow Family Child Care Homes

Be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 5-36, Sexually Oriented Businesses, of the Broomfield Municipal Code is amended as follows:

5-36-120 - Setback requirements.

- (A) No sexually oriented businesses may operate within 1,500 feet of any of the following, whether within or without the city limits:
 - (1) Any church;
 - (2) Any school meeting all requirements of the compulsory education laws of the state;
 - (3) Any boundary of any residentially zoned or used property;
 - (4) ~~Any day care facility~~**Any child day care facility**, as defined in section 17-04-080, B.M.C.;
 - (5) Any public park or open space adjacent to any residential district;
 - (6) Any preschool; or
 - (7) Any other sexually oriented business.
- (B) ...
- (C) For purposes of this section, the one-thousand-five-hundred-foot separation measurement shall be made in a straight line without regard to intervening structures or objects from the nearest portion of the building or structure used as part of the premises where the sexually oriented business is conducted to the nearest property line of another sexually oriented business, church, school, public park, residentially zoned or used property, or **child day care facility**.

Section 2.

Chapter 9-56, Restricting the Residency of a Sexually Violent Predator, of the Broomfield Municipal Code is amended as follows:

9-56-040 - Measurement.

For the purpose of determining the minimum distance separation required herein, the measurement shall be made by following a straight line from the outer property line of the property on which the park, playground, public or private school, ~~licensed day care center,~~ **child day care facility, family child care home**, recreation center, library, retail shopping mall, or public swimming pool is located to the nearest point of the permanent or temporary residence structure.

Section 3.

Chapter 15-03, Building Codes: Adoption and Administration, of the Broomfield Municipal Code is amended as follows:

15-03-020 - Adoption of building codes.

. . . .

- (1) ...
- (2) The "International Residential Code for One- and Two-Family Dwellings," 2021 Edition (IRC), published by the International Code Council, Inc., and in particular Chapters 2 through 10 and 12 through 32, and Appendix H - Patio Covers, Appendix P - Sizing of Water Piping System. The provisions of the International Residential Code for One- and Two-Family Dwellings as amended shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height.

EXCEPTIONS: The following shall be permitted to be constructed in accordance with this code where provided with a residential fire sprinkler system complying with section 2904:

- (A) Live/work units located in townhomes and complying with the requirements of Section 419 of the International Building Code.
- (B) Owner-occupied lodging houses with five or fewer guestrooms.
- (C) A care facility with eight or fewer persons receiving custodial care within a dwelling unit.
- (D) A care facility with five or fewer persons receiving medical care within a dwelling unit.
- ~~(E) A care facility with eight or fewer persons receiving care within a single family dwelling.~~

ADDITIONAL EXCEPTION: The following shall be permitted to be constructed in accordance with this code:

- (E) A care facility with twelve or fewer persons, including children 2 ½ years and younger, receiving care within a single family dwelling.

Section 4.

Chapter 15-04, International Building Code, of the Broomfield Municipal Code is amended as follows:

15-04-101 - Amendments to the International Building Code.

- (A) ...
- (B) Section 305.2.3 is amended to read as follows:
- 305.2.3 ~~Six~~ **Twelve** or fewer children in a dwelling unit. A facility such as above within a dwelling unit and having ~~six~~ **twelve** or fewer children, **including children 2 ½ years and younger**, receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the International Residential Code.

Section 5.

Chapter 17-04, Definitions, of the Broomfield Municipal Code is amended as follows:

...

17-04-018 - Adult day care home.

Adult day care home means a residential household in which care is provided for not more than five persons over the age of eighteen for less than sixteen hours per day, on a regular weekly basis.

...

17-04-080 - Child day care facility.

Child day care facility means a facility not located in a residence, by whatever name known, which provides less than twenty-four-hour care of five or more children under the age of sixteen years, and not related to the owner, operator, or manager thereof, whether such facility is operated with or without compensation for such care, and with or without stated educational purposes. ~~Child day care facility shall also apply to large child care homes, where licensed care is provided for nine to twelve children.~~ The term shall not apply to classes maintained in connection with any public, private, or parochial school system of at least six grades, nor to family child care homes, as defined in section ~~17-32-020~~ **17-04-132**. The facility shall be licensed by the State and shall comply with all applicable regulations promulgated by the Colorado Department of ~~Early Childhood Human Services~~ **Early Childhood Human Services**, as well as all local zoning and building codes.

. . .

17-04-132 - Family child care home.

Family child care home means a residential household that operates as a facility for child care in which care is provided for two to twelve children under the age of eighteen, who are not related to the head of such household, for less than twenty-four hours, on a regular basis.

. . .

17-04-245 Large family child care home.

Large family child care home shall mean a family child care home that provides care for seven to twelve children.

. . .

17-04-312 - Preschool.

Preschool means a school providing pre-elementary educational services on a scheduled basis to children through kindergarten. For the purposes of this definition, preschools are those facilities that maintain an affiliation with a public, private, or parochial school system of at least six grades. Said affiliation shall include the provision of educational services to children by the preschool as a part of an integrated program offered through the school system. A ~~child day care facility-day-care center~~ is not a preschool.

Section 6.

Chapter 17-24 - I-1 Limited Industrial District of the Broomfield Municipal Code is amended as follows:

. . .

17-24-020 - Permitted uses; by right.

The following uses are permitted by right in the I-1 district, provided that all dust, fumes, odors, smoke, vapor, noise, lights, glare, and vibrations are confined to the lot on which the use is located:

- (A) ...
- (B) Institutional, public and service uses, limited to the following:
 - (1) Churches and church facilities;
 - (2) Day-care facilities including child day care facilities;

Section 7.

Chapter 17-26 - I-2 General Industrial District of the Broomfield Municipal Code is amended as follows:

. . .

17-26-020 - Permitted uses; by right.

The following uses are permitted by right in the I-2 district, provided that they are conducted in a manner which confines all dust, fumes, odors, refuse matter, smoke, vapor, noise, lights, glare, and vibrations within the boundaries of the I-2 district in which they are located:

- (A) Office and commercial uses permitted by right in the I-1 district (section 17-24-020, B.M.C.), except for day-care facilities, **including child day care facilities**, and also permitting the following:

- (B)

. . .

17-26-030 - Permitted uses; by special review.

The following uses are permitted by special review in the I-2 district:

- (A) . . .

- (B) Institutional, public, and service uses, limited to the following:

- (1) Day-care facilities, **including child day care facilities**;

Section 8.

Chapter 17-32 - Accessory Buildings and Uses of the Broomfield Municipal Code is amended as follows:

17-32-020 - Home Occupations.

. . .

- (D) Family child care homes, as defined below, shall be allowed as home occupations, subject to the following regulations, except that family child care homes are not subject to the requirements of sections 17-32-020(C)(1) or ~~17-32-020(C)(3)~~, B.M.C., **but shall comply with the following:**

- ~~(1) Family child care homes are those residential households in which care is provided for two or more children under the age of thirteen not related to each other or children from more than one family for less than twenty-four hours, on a regular weekly basis.~~

- ~~(2)~~ — **(1)** Family child care homes must be licensed by the state and comply with all state regulations promulgated by the Colorado Department of **Early Childhood Human Services**, and all local zoning and building regulations.
 - ~~(3)~~ — **(2)** Family child care homes may care for no more than **twelve** ~~eight~~ children total, including ~~the any~~ children of the provider **under twelve years of age**, and in no event more than ~~six children not attending full-day school, including the children of the caretaker,~~ at any one time.
 - ~~(4)~~ — **(3)** Rear yard storage of playground equipment, swing sets, toys, and other items associated with outdoor activity related to a family child care home is allowed.
 - ~~(5)~~ — **(4)** No more than two motor vehicles associated with patrons or employees of ~~the immediately adjacent large~~ family child care home may be parked at any time ~~on the~~ **at each** dwelling unit site or on the street, other than fifteen minutes or less for the purpose of loading or unloading property or passengers.
 - (5)** Immediately adjacent large family child care homes shall be clearly incidental and secondary to the use of the dwelling for dwelling purposes, and shall not change the character of the area.
- (E) Adult daycare homes, as defined ~~below in section 17-04-018~~, shall be allowed as home occupations, subject to the following requirements:
- ~~(1)~~ — ~~Adult daycare homes are those residential households in which care is provided for not more than five persons over the age of thirteen for less than sixteen hours per day, on a regular weekly basis;~~
 - ~~(2)~~ — **(1)** Adult day care homes shall comply with all applicable state, federal and local laws and regulations, including local zoning, building and fire regulations;
 - ~~(3)~~ — **(2)** Adult daycare homes shall obtain all necessary licenses and certifications as required by the state;
 - ~~(4)~~ — **(3)** Adult daycare homes may only operate after approval from the city council following a public hearing. The city council shall consider the request and shall make a final decision of approval, of approval with conditions or of denial. Along with the other factors set forth in this section, city council shall consider the relation of the requested uses to the character of the surrounding neighborhood, the proposed hours of operation, any proposed expansion or remodeling of the residence, and the desirability and need for such a use in the specific area of the community at the public hearing prior to making its final decision. Notice of such public hearing shall be given in accordance with chapter 17-52, B.M.C.;
 - ~~(5)~~ — **(4)** Adult daycare homes may have not more than two motor vehicles associated with patrons or employees other than residents of the adult daycare home parked at any time on the dwelling unit site or on the

- street frontage of such dwelling unit, other than fifteen minutes or less for the purpose of loading or unloading property or passengers;
- ~~(6)~~ **(5)** At least 100 square feet of finished interior space, as defined in subsection 17-04-202(C), B.M.C., for each resident and care recipient; and
- ~~(7)~~ ~~Adult daycare homes shall not be located within 1,500 feet of an existing approved adult daycare facility or residential assisted living facility for persons sixty years of age or older.~~

Section 9.

This ordinance is effective seven days after publication following final passage.

Introduced and approved after first reading on May 28, 2024, and ordered published in full.

Introduced a second time and approved on _____, and further ordered published.

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City of Broomfield

City Council Regular Meeting

Construction Agreements for US 287 Soundwall Replacement

Proposed Resolution No. 2024-64, would approve an agreement between Broomfield and Integrated Site Services Inc. for the replacement of the existing soundwall along the east side of Highway 287 between W. 6th Avenue and W. 10th Avenue. Proposed Resolution No. 2024-65 would approve an amendment to the agreement between Broomfield and WSB LLC to add construction management services.

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6E
Presented By		
Katie Allen		
Community Goals		
<input checked="" type="checkbox"/> Thriving, Diverse, Safe and Welcoming Community		

Overview

[View Correspondence](#)

Proposed Resolution No. 2024-64, would approve an agreement between Broomfield and Integrated Site Services Inc. for the replacement of the existing soundwall along the east side of Highway 287 between W. 6th Avenue and W. 10th Avenue. Proposed Resolution No. 2024-65 would approve an amendment to the agreement between Broomfield and WSB LLC to add construction management services.

Attachments

[FINAL memo for US 287 Soundwall \(1\).pdf](#)
[Resolution 2024-64.pdf](#)
[287 Wall Construction Agreement Signed by Integrated Site Services.pdf](#)
[Resolution 2024-65.pdf](#)
[WSB Consulting Amendment 2 - Google Docs_PDJ.pdf](#)

Summary

[View Correspondence](#)

Proposed Resolution No. 2024-64, would approve an agreement between the City and County of Broomfield and Integrated Site Services Inc. for the replacement of the existing soundwall along the east side of Highway 287 between W. 6th Avenue and W. 10th Avenue.

Proposed Resolution No. 2024-65, would approve a second amendment to the agreement between the City and County of Broomfield and WSB LLC to add construction management services.

Streets Services began receiving concerns from residents about the condition of the sound wall in 2020. Street Services and Risk Management hired a structural engineering firm to evaluate the entire wall and recommend repairs. The report identified that based on the condition; the wall is at risk of failing in the near future. If the panels fail, there is a concern for liability for persons and property.

In 2021, the soundwall replacement was added to the budget. In 2022, EST, Inc., now WSB LLC (WSB), was hired to design the wall replacement. The original agreement was approved April 8, 2022 and was amended once by staff on September 25, 2023. The original agreement and amendment did not exceed \$200k therefore council approval was not required. City staff and WSB have worked with adjacent residents, Public Works, and Parks to identify design issues and construction challenges.

On March 11, 2024, staff advertised the wall replacement on Bidnet. One bid was received. Integrated Site Services Inc. (ISSI) submitted a bid in the amount of \$1,058,430 which is within budget. ISSI has completed numerous projects involving both wall construction and work in CDOT Right-of-Ways. Similar projects completed by ISSI include 2500 linear feet of wall for the Meadow and County Line Substations in Longmont and subdivision sound walls in Berthoud.

Due to the complexity of the wall construction and utility coordination, structural engineering expertise and significant inspection hours are needed which Broomfield staff cannot currently provide in-house. WSB will perform daily inspections of the new soundwall's structural components, and work closely with city staff, CDOT, utilities, the contractor, and adjacent residents. Because this second amendment to the WSB agreements exceeds the City and County Manager's \$200,000 authority, it is coming to Council for approval.

A separate irrigation contractor will replace the irrigation system between the back of the sidewalk and the new wall. The Parks department will design and replace landscaping where necessary.

If approved, construction is anticipated to begin in the summer of 2024.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
CIP Transportation Fund Project# 21R0012 Hwy 287 W. 6th Ave/W. 10th Ave. Sound Wall Replacement (20-70091-55200)	\$1,357,031

Sources and Uses of Funds	Amount
Construction Services - Integrated Site Services Inc.	\$1,058,430
Construction Management Services - WSB LLC	\$172,778
Irrigation Replacement	\$67,760
Landscape Restoration	\$35,000
Projected Balance	\$23,063

Prior Council or Other Entity Actions

Council authorized funds in the [2024 budget](#) for the US 287 Soundwall Replacement Project.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to proceed with the project, the appropriate motion is...

That Resolutions 2024-64 & 2024-65 be adopted.

Alternatives

Decide not to continue with the project.

RESOLUTION NO. 2024-64

A Resolution Approving a Construction Agreement with Integrated Site Services Inc. for the US 287 Soundwall Replacement Project

Be it resolved by the city council of the City and County of Broomfield, Colorado:

Section 1.

The construction agreement by and between the City and County of Broomfield and Integrated Site Services Inc. for the US 287 Soundwall Replacement project in the amount not to exceed \$1,058,430, is approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

The City and County Manager or a designee thereof is authorized to approve change orders in the aggregate amount not to exceed ten percent.

Section 4.

This resolution is effective on the date of approval by the City Council.

Approved on May 28, 2024.

The City and County of Broomfield,
Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

NCR

City and County Attorney

CONSTRUCTION AGREEMENT FOR US 287 SOUNDWALL REPLACEMENT PROJECT

1. PARTIES. The parties to this Construction Agreement (this “Agreement”) are the City and County of Broomfield, a Colorado municipal corporation and county, (the “City”) and Integrated Site Services, Inc. (the “Contractor”), collectively, the “Parties,” or individually, a “Party.”
2. RECITALS. The Recitals to this Agreement are incorporated herein by this reference as though fully set forth within the body of this Agreement.
 - 2.1. The City, seeking construction services for the 287 Soundwall Replacement Project, completed a competitive selection process by Invitation to Bid 21R0012C issued on March 22, 2024 (“ITB”).
 - 2.2. The Contractor’s response to the above referenced ITB was determined to be of best value, responsible, responsive bidder to the City for the procurement of the services requested.
 - 2.3. The Parties therefore desire to enter into this Agreement for completion of the services further described herein.
3. TERMS AND CONDITIONS. In consideration of the mutual covenants and promises of the Parties contained herein, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:
 - 3.1. Work. The Contractor agrees to furnish all necessary labor, materials, equipment, tools, and services necessary to perform in a workmanlike manner the work (hereinafter “Work”) described in the Contractor’s Cost Proposal attached hereto as Exhibit A and incorporated by this reference.
 - 3.1.1. *Key Personnel*. The Contractor’s key personnel shall include (i) the [Project Executive - Eliot Schmidt]; (ii) the [Field Superintendent - Tyler Mix] and (iii) the [Project Manager - Tyler Mix, Brayden Gilbert]. The Contractor’s obligation to provide adequate staffing is not limited to providing the key personnel, but is determined by the needs of the Project. The Contractor shall not replace any of the key personnel without the City’s prior written approval, which shall not be unreasonably withheld. If any of the key personnel become unavailable to perform services in connection with this Agreement due to death, illness, discharge or resignation, then the Contractor shall promptly appoint a replacement acceptable to the City. The City shall be entitled to complete information on each such replacement, including a current resume of his or her qualifications and experience.

- 3.2. Contract Documents. The Contract Documents shall consist of the following:
- 3.2.1. This Agreement; and
 - 3.2.2. The Contractor's Cost Proposal dated April 4, 2024, attached hereto as Exhibit A; and
 - 3.2.3. The ITB and addenda; and
 - 3.2.4. The Construction Plans for Project No. 21R0012; and
 - 3.2.5. The General Conditions included within the ITB; and
 - 3.2.6. Any change orders and contract amendments, as applicable; and
 - 3.2.7. City and County of Broomfield 2022 Standards and Specifications; Colorado Department of Transportation Standard Specifications for Road and Bridge Construction (2022), as amended; and
 - 3.2.8. Project Specifications for Project No. 21R0012; and
 - 3.2.9. The Insurance Requirements attached hereto as Exhibit B,

all of which are incorporated by reference as though set forth in full herein, whether or not attached hereto and shall form an integral part of this Contract. If there is any conflict between this Agreement and the other Contract Documents, this Agreement shall control.

- 3.3. Access and Inspection. The City and its representatives shall at all times have access to the Work. The Contractor shall provide proper facilities for access to and for inspection of the Work for the purpose of determining compliance with this Agreement and quality of workmanship and material. All materials, equipment and supplies used in the performance of the Work shall be subject to adequate inspection and testing in accordance with generally accepted standards. The City Representative may order that portions of the Work be uncovered, exposed or made available for observation, inspection or testing at no additional cost. The Contractor shall provide all labor, tools, materials, equipment and supplies necessary to comply with the request of the City Representative. If any portion of the Work is determined to be defective, the Contractor shall bear all costs involved to bring the Work into compliance with the Agreement, including without limitation the cost to replace any materials, to re-perform or to reconstruct. The Contractor shall remove from the work site all work or materials rejected by the City for failure to comply with the Contract whether incorporated in the Work or not at no additional cost to the City.
- 3.4. Site Clean-Up. On a daily basis, the Contractor shall maintain the work site free from accumulation of waste materials or rubbish caused by performance of the Work. The Contractor shall remove all rubbish, tools, construction equipment, machinery, and surplus material from the work site. If the Contractor fails to maintain the work site in an appropriate condition, the City

may, after notice to the Contractor, perform any necessary clean-up and charge the clean-up costs to the Contractor.

- 3.5. Protection of Property. All existing finishes, structures, utilities, services, roads, trees, shrubbery, etc. located on City property and adjacent property impacted by the Work shall be protected against damage or interrupted services at all times by the Contractor during the term of the Work. The Contractor shall be responsible for repairing or replacing any and all property which is damaged by reason of the Contractor's operation on the property to the satisfaction of the City within three (3) weeks of the notification of such damage, which may be extended with written approval of the City.
- 3.6. Utilities. The Contractor shall fully comply with the provisions of Article 1.5 of Title 9 of the Colorado Revised Statutes including, but not limited to, providing notices to the notification association. Unless otherwise provided in the Scope of Work, the Contractor shall be responsible for communicating and coordinating with utilities, as necessary. The Contractor shall cooperate with utilities and the City as provided in this Agreement and as required by law. The Contractor shall be responsible for determining the exact location of utilities that may interfere with construction of the Work by exploratory excavation sufficiently in advance of beginning construction in an area so that potential conflicts may be resolved. The Contractor will consider in the Contract Price all of the utility appurtenances within the project; and the Contractor shall not make a claim for delay or additional compensation due to any relocation operations by a utility.

Secure Areas. For Work performed in secured areas as determined by the City, the Contractor shall work with the City to develop a procedure to sign all workers in and out, and inventory all tools and equipment used in the Work. No later than two weeks prior to the start of the Work all workers will be required to provide the City with information required to perform security background checks. The City will approve all workers after a review of the security background checks and criminal histories and will have the right to reject any worker based on the worker's criminal history. Any changes in personnel during the project shall be subject to the security background check review and approval requirements contained herein prior to accessing the facility. Continuous surveillance of the Work may be provided by the City.

- 3.7. Security and On-Site Procedures. At the option of the City, all on-site personnel utilized by the Contractor shall undergo background checks and will be issued Contractor badges. Personnel utilized by the Contractor shall be required to display badges at all times while working on-site. The Contractor shall be required to return to the City project manager all badges issued to the

Contractor, its employees and agents, within 10 days of the Completion Date (the "Return Date"). If the Contractor is unable to return all issued badges on or before the Return Date, then the City will charge the Contractor fifty dollars (\$50.00) per missing badge which sum shall be deducted from any sum payable hereunder before final payment to the Contractor. The Contractor agrees to comply with all Contractor Work Schedule requirements set forth in the Agreement, as applicable.

- 3.8. Documents on Site. The Contractor shall maintain at the site for the City one electronic or hard copy of all drawings, specifications, addenda, change orders and other modifications, in good order and marked currently to record all changes made during construction. At the City's option, the referenced record drawings will be reviewed monthly by the City for acceptability. If, in the judgment of the City, the Contractor fails or refuses to keep these documents current, the Contractor shall not be entitled to progress payments until it makes the necessary changes to the documents to make them current.
- 3.9. Differing Site Conditions. The Contractor acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site and review of the Contract Documents.
 - 3.9.1. Contractor shall give immediate written notice to the City Representative if it encounters a "Differing Site Condition," defined as either:
 - 3.9.1.1. Subsurface or latent physical conditions at the site which differ materially from those indicated in the Contract Documents; or
 - 3.9.1.2. Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this Contract.
 - 3.9.2. Contractor acknowledges that no request for a change order or modification in Contract Price resulting from a Differing Site Condition shall be allowed unless immediate written notice is provided and the conditions remain undisturbed until the City has the opportunity to investigate.
4. Completion Date. Within ten (10) calendar days of receipt of executed Agreement, the Contractor shall provide the City acceptable bonds, if applicable, and certificates of

insurance. A Notice to Proceed will be issued upon City approval of the bonding and insurance. The Contractor shall perform no Work until the City Representative issues a Notice to Proceed.

The Contractor shall begin the Work on or before the fifth (5th) calendar day after receipt of the Notice to Proceed. The Notice to Proceed will stipulate the date on which the contract time count commences (the “Start Date”). The Contractor shall complete the Work and fulfill all of its other obligations within ninety (90) calendar days of the Start Date (the “Completion Date”). The time between the Start Date and the Completion Date shall be known as the “Contract Time.”

All time limits are of the essence in this Agreement. The Contractor acknowledges that a notice to proceed will not be issued until the City has received acceptable certificates of insurance and bonds, if applicable.

5. CONTRACTOR’S PROJECT SCHEDULE. The Contractor shall submit a completion schedule for the Work (the “Project Schedule”) beginning with receipt of the signed Agreement and concluding with Project Completion prior to the commencement of the Work and shall coordinate on a daily basis with the City’s project manager. The Project Schedule shall include all lead time for the order and delivery of equipment for the Work. Schedule updating shall be done on a weekly basis, or more often as necessary (each a “Schedule Update”). The revision shall indicate actual progress to date, changes resulting from change orders, and planned changes as necessary to complete the Work in accordance with the Contract Documents. All costs associated with the development and maintenance of the Project Schedule shall be borne by the Contractor. Acceptance by the City of the Contractor’s Project Schedule does not relieve the Contractor of any of its responsibility whatsoever for the accuracy or feasibility of the Project Schedule, or of the Contractor’s ability to meet the Contract Time, nor does such acceptance expressly or impliedly warrant, acknowledge or admit the reasonableness of the activities, duration, or cost loading of the Contractor’s Project Schedule.

6. UNUSUALLY SEVERE WEATHER CONDITIONS.

- 6.1. It is expressly understood and agreed, by and between the Contractor and the City, that the Contract Time for the completion of the Work is a reasonable time, taking into consideration the climatic and economic conditions and other factors prevailing in the locality of the Work. The Contract Time anticipates “Normal” weather and climate conditions in and around the vicinity of the project site during the times of year that the construction will be carried out. Extensions of time based upon weather conditions shall be granted only if the Contractor demonstrates clearly that such conditions were “unusually severe,” would not have been reasonably anticipated, and that such conditions

adversely affected the Contractor's Work and thus required additional time to complete the Work.

- 6.2. The following specifies the procedure for the determination of time extensions for unusually severe weather. The listing below defines the anticipated number of calendar days lost to adverse weather for each month and is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the geographic location of the project.

ANTICIPATED CALENDAR DAYS LOST TO ADVERSE WEATHER CONDITIONS:												
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
7	5	4	3	3	2	2	2	2	3	3	7	43 day

- 6.3. The above schedule of anticipated adverse weather will constitute the base line for monthly (or portion thereof) weather time evaluations. Upon acknowledgement of the notice to proceed and continuing throughout the Agreement on a monthly basis, actual adverse weather days and the impact of adverse weather days that delay the Work will be recorded on a day-to-day basis. It is assumed that the Work will be carried out Mondays through Fridays (holidays excepted); however, non-standard work hours will be required as specified in the Statement of Work and as shown on the Project Schedule. The number of calendar days of delayed Work due to adverse weather or the impact thereof will then be compared to the monthly adverse weather schedule above.
- 6.4. An actual adverse weather day must prevent Work for 50 percent or more of the Contractor's workday, delay Work critical to the timely completion of the Project, and be documented by the Contractor. The Contractor shall notify the City Representative in writing if work cannot proceed on a given date, within two calendar days of that date. The City will use the above written notification in determining the number of calendar days for which Work was delayed during each month.
- 6.5. At the end of each month if the number of calendar days for which Work was delayed due to adverse weather exceeds that shown in the above schedule a change order will be executed which increases the Contract Time.

- 6.6. The Contractor's Project Schedule must reflect the above-anticipated adverse weather delays on all weather-dependent activities. While extension of time shall be granted for "unusually severe" weather or climate conditions, or the impact thereof, the City shall make no monetary compensation for any costs to the Contractor arising out of such delays. The Contractor shall comply with the portions of the Contract Documents relating to its Project Schedule and amendments thereto which result from the "unusually severe" weather condition.
7. PRICE AND PAYMENT. The City shall pay the Contractor for performance of the Work an amount not to exceed \$1,058,430 (the "Contract Price") based upon the unit prices set forth on Contractor's Cost Proposal attached hereto as Exhibit A and in accordance with the following schedule:
- 7.1. If the Contractor is satisfactorily performing the Agreement, the City shall make partial payments at the end of each calendar month or as soon thereafter as practicable of ninety-five percent (95%) of the Contract Price based on the calculated value of the Work completed (the "Partial Payments") and shall retain five percent (5%) of the amount due to the Contractor (the "Retained Amount") until the Work is complete. If applicable, the Contractor shall make payments to its subcontractors in accordance with C.R.S. §24-91-103.
- 7.2. The City shall retain the Retained Amount until Final Acceptance (as defined in Final Acceptance and Final Payment below). If the Contractor has completed the Work in a manner finally acceptable to the City, the City may authorize final payment from the Retained Amount upon written request by invoice of the Contractor (the "Final Payment"). Before the Final Payment is made, the City and the Contractor, as applicable, shall comply with the Final Acceptance and Payment paragraph of this Agreement.
- 7.3. The Contractor shall, as soon as practicable after the end of each calendar month during performance of the Work, submit an itemized invoice for services performed, stating the percentage of the Work that has been completed and the type of services performed. Each invoice will also include an Application and Certificate of Payment form (AIA Document G702) or equivalent form approved by the City. The Contractor shall prepare the invoices at its sole cost and shall include sufficient detail to enable the City to verify the appropriateness of the invoice. Each invoice shall be subject to review and approval by the City Representative. The City shall not be required to pay disputed items until the dispute is resolved. Payment of any invoice shall not act as a waiver of the City's right to recover in full any over-payment revealed by any subsequent audit or inspection. No air travel, car rental, entertainment, education expense, meals or similar or related costs shall be

payable without prior written approval of the City. Incorrect payments to the Contractor due to omission, error, fraud, or defalcation may be recovered from the Contractor by deduction from subsequent payments due the Contractor under this Contract or other contracts between City and Contractor.

- 7.4. Change Orders. The Contractor will do nothing to cause the Contract Price to increase without prior execution of a change order by the City. The City will issue no change order requiring additional compensable work to be performed, which work causes the aggregate amount payable under this Agreement to exceed the amount appropriated for this Agreement. Except as provided below and as provided in C.R.S. 24-91-103.6, the City shall have no duty or obligation whatsoever to compensate or to reimburse the Contractor for any additional work not specifically authorized as provided herein. In the event (i) the City requires additional compensable work to be performed by the Contractor prior to the execution or other finalization of a change order or contract amendment, and (ii) the Contractor has submitted to the City an estimate of the cost for the additional compensable work, then the City shall reimburse the Contractor for the costs associated with such additional work on a periodic basis in accordance with the terms of this Agreement.

8. FINAL INSPECTION AND FINAL PAYMENT.

- 8.1. Final Inspection. The Contractor shall notify the City when the Work is complete and ready for final inspection by means of a letter of completion (the "Letter of Completion"). Within ten (10) calendar days of the City's receipt of the Letter of Completion, the City Representative shall make a final inspection to determine whether the Work has been completed in accordance with this Agreement and shall submit a written list of any defects to the Contractor (the "Punchlist"). The Contractor shall promptly correct all Punchlist items without additional cost to the City within ten (10) calendar days after receipt of the Punchlist. If any Punchlist item cannot be corrected within ten (10) calendar days, the Contractor shall submit a letter to the City Representative for approval requesting an extension of time to complete such item (the "Request for Extension"). The Request for Extension must be received by the City Representative within seven (7) calendar days of the Contractor's receipt of the Punchlist and shall include the Contractor's justification for the request and a schedule for completion of the Punchlist item. The Contractor shall also deliver to the City, all statements to support state sales and use tax refunds and any as-built drawings. The Contractor shall provide the City with a letter of approval for contract closure from any surety furnishing bonds for the Work provided on AIA Form G707 (Consent of Surety Letter) or equivalent form.

- 8.2. Final Payment. Upon satisfactory completion of the Work, the City Representative will provide the Contractor with a written acceptance of the Work (the "Final Acceptance"). Payment shall not be made until the City Representative has approved the payment and a notice of contractor's settlement has been published in accordance with C.R.S. §38-26-107. The City shall condition publication and final settlement upon receipt of any duly executed approvals of the corporate surety or sureties issuing the bonds required hereunder. Such final settlement shall be advertised as provided by statute at least twice, the last publication appearing at least ten (10) days prior to the date of final settlement. On the date of final settlement (or such later date as may be permitted by statute if claims are asserted or litigation is commenced alleging nonpayment of funds due for labor, materials, supplies, etc.), payment and final settlement shall be made in full.
9. CONTRACTOR'S REPRESENTATIONS. In order to induce the City to enter into this Agreement, the Contractor makes the following representations:
- 9.1. The Contractor has familiarized itself with the nature and extent of the Agreement, Work, the locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work. The Contractor acknowledges an obligation to comply with all applicable laws, including the Broomfield Municipal Code, to respect property rights by working within the defined work limits or designated staging areas, and to work within the prescribed work hours. The Contractor acknowledges that use of air compression brakes ("jake brakes") within City limits is prohibited, unless otherwise posted by the City Traffic Engineer.
- 9.2. Before submitting a proposal, the Contractor has become fully informed regarding the Work and any materials or equipment required, including the amount or quantity thereof. No adjustment or modification shall be allowed for any misunderstanding of the Work or of equipment or material requirements, or of the provisions contained in this Contract and in the other Contract Documents.
- 9.3. Contractor has given the City written notice of any conflicts, errors or discrepancies that he has discovered in the Agreement and exhibits incorporated therein and the written resolution thereof by the City is acceptable to the Contractor.
10. NOTICE AND AUTHORIZED REPRESENTATIVES. Any notice required or permitted by this Agreement shall be in writing and shall be sufficiently given for all purposes if sent by

email to the authorized representative identified below. Such notice shall be deemed to have been given when the email was sent and received. The City may change its representative at any time by notice to the Contractor. The Contractor shall not replace the Contractor Representative unless: (a) the City requests a replacement, or (b) the Contractor terminates the employment of the Contractor Representative and provides a satisfactory substitute. The City must approve a substitute Contractor Representative, and, if no substitute is acceptable, the City may terminate this Agreement. The Parties each designate an authorized representative as follows:

5.1 The City designates Joliette Woodson as the authorized representative of the City under this Agreement. Email address is jwoodson@broomfield.org.

5.2 The Contractor designates Eliot Schmidt as the authorized representative of the Contractor under this Agreement. Email address is eliot@integratedsiteaervices.com.

If the Contractor is alleging that the City is in breach of this Agreement or has violated any term of this Agreement, Legal Notice shall be made by making the notice above with a copy to citycountyattorney@broomfield.org.

Failure of City's on-site representative to call to the attention of the Contractor any defective work or deviations from the Contract Documents shall not constitute acceptance of such work by the City or relieve the Contractor of its obligation to perform the Work in strict accordance with the Contract Documents.

11. TIME EXTENSIONS AND COMPENSATION FOR DELAY.

11.1. Remedy. If the Contractor is delayed or disrupted in the performance of the Work, the Contractor's exclusive remedy with respect to such delay or disruption shall be as stated in this Section.

11.2. Time Extensions. Evaluation of all time extension requests shall be based upon the latest updated project schedule submitted to the City by the Contractor.

11.3. Definitions. The following words shall have the meaning set forth below:

11.3.1. "Contractor Delay" is defined as delay on a particular date resulting from acts or omissions within the control of the Contractor or its subcontractors, agents or suppliers, including any delay within their joint control.

11.3.2. "No-Fault Delay" is defined as delay on a particular date resulting from events beyond the reasonable control of and without the fault or negligence of either the Contractor or the City or their agents,

employees, contractors, subcontractors, sub-subcontractors or suppliers.

- 11.3.3. “Owner Delay” is defined as delay on a particular date resulting from acts or omissions within the control of the City, its agents, employees or contractors, including the City’s Representative.
- 11.3.4. “Concurrent Delay” is defined as the occurrence on a particular date of one or more instances of Owner Delay and Contractor Delay, Owner Delay and No-Fault Delay or Contractor Delay and No-Fault Delay.
- 11.4. Completion Date Adjustment. An adjustment in the Completion Date for delay on a particular date shall be made under this subparagraph if any delay on such date is classified as either Owner, No-Fault or Concurrent Delay. The adjustment in the Completion Date shall only be in proportion to the amount of the delay, which is attributable to Owner, or No-Fault Delay. No adjustment in the Completion Date shall be allowed for the portion of the delay that is attributable to Contractor Delay, including but not limited to, that portion of a Concurrent Delay which includes Contractor Delay.
- 11.5. Price Adjustment. An adjustment in the Contract Price for delay on a particular date shall be made under this subparagraph only if such delay is classified as either Owner Delay or Concurrent Delay when such Concurrent Delay includes Owner Delay. The adjustment in the Contract Price shall only be in proportion to the portion of the delay costs, which is directly attributable to Owner Delay. No adjustment in the Contract Price shall be made for the portion of the delay costs, which is attributable to Contractor Delay, or No-Fault Delay, or that portion of a Concurrent Delay which includes Contractor Delay or No-Fault Delay or both.
- 11.6. Mitigation. An adjustment in Contract Price shall be made under this subparagraph only to the extent to which the Contractor can demonstrate that its time-related costs to complete the Work will be increased. The Contractor expressly acknowledges its obligation to minimize the cost impact of compensable delays. The Contractor shall, to the best of its ability, re-assign labor and equipment, commence unaffected portions of the Work, and otherwise minimize delay costs. In no event shall the City be liable for payment of delay costs, which could have been avoided or mitigated by any means reasonably available to the Contractor or for consequential damages.
- 11.7. Notification of Delay and Recovery. The Contractor shall notify the City as soon as practicable regarding the nature and starting date of a delay, and the activities affected, but in no case later than seven (7) calendar days after the

event giving rise to the delay. In the case of a continuing delay, only one notification shall be necessary. Any claim for an extension of time for delay shall be made in writing to the City not more than ten (10) calendar days after the end of the delay; otherwise, such claim shall be waived. Recovery of delay costs shall be waived unless a request for a change order for delay costs is submitted within ten (10) calendar days after the end of the delay period. The Contractor must also provide a cost and time impact analysis with any request for a change order for delay costs. The cost impact analysis shall contain all direct and indirect labor costs, all material and equipment expenses, any and all documented impact costs related to, and/or occasioned by the Work described therein, as well as all taxes (if applicable under the provisions of this Contract), insurance and profit. Documentation supporting this cost impact analysis must be submitted at the time of the request for change order for delay costs.

12. DEFAULT AND DAMAGES. If the Contractor fails to comply with any provision of this Agreement, the Contractor shall be liable for any and all damages, including without limitation, the cost of procuring similar supplies and services and all other costs and expenses incurred by the City because of such failure. If the Contractor fails or refuses to perform the Work on schedule, or to complete the Work in a timely and satisfactory manner, the City may terminate this Contract and the Contractor's right to proceed hereunder. If the City terminates this Contract under this paragraph, the Contractor may, at the option of the City, be required to cease any or all Work provided for under this Contract and shall be liable for any additional cost to the City for services acceptable to the City from another contractor as well as any actual damages associated with such failure to perform. The cost to complete the Work or any portion thereof which remains unperformed at the time of such termination, together with any other damages, shall be deducted from any sum payable hereunder before final payment to the Contractor.
13. LIQUIDATED DAMAGES. Time is of the essence in completing the Work. Alternatively, and in lieu of actual damages for delay, in the event of delay in the completion of the Work as specified beyond the Completion Date, it would be difficult to determine the exact amount of the loss or damages suffered by the City due to delays in completion of the Work. However, the City has attempted to forecast a reasonable daily amount as compensation for the damages incurred due to late completion caused by the Contractor, based upon considerations which include, but are not limited to, public inconvenience and additional contract administration costs. Therefore, the Contractor will be liable to the City, as liquidated damages (and not as a penalty), in the amount of \$1,500.00 for each and every calendar day beyond the Completion Date. The City reserves the right to deduct said liquidated damages from any amount due the Contractor under this Agreement or, at its option, to collect such liquidated damages directly from the Contractor or its surety.

14. PERFORMANCE AND PAYMENT BONDS. In accordance with C.R.S. §38-26-105, if the Contract Price exceeds \$50,000, the Contractor shall furnish at its expense a separate performance bond and labor and materials bond, each for an amount not less than one hundred percent (100%) of the Contract Price. The bonds shall be issued by a qualified corporate surety licensed to transact business in Colorado. If at any time during performance of the Work the surety on the bonds shall be disqualified from doing business in Colorado, or shall become insolvent or otherwise impaired, the Contractor shall furnish bonds from an alternate surety acceptable to the City. The bonds shall remain in effect through Final Acceptance, and continuing in effect through completion of all warranty and guaranty work and shall be delivered to the City prior to the commencement of the Work. The Contractor shall secure an increase in the bonds in an amount equal to the cost of any additional work authorized pursuant to a duly executed change order or contract amendment.
15. COLORADO LABOR. If the Contract Price exceed \$500,000, the Contractor shall employ not less than eighty percent of Colorado labor of each type or class of labor in the several classifications of skilled and common labor to perform the work under this Agreement in accordance with the provisions of C.R.S. §8-17-101 et seq.
16. INDEPENDENT CONTRACTOR. The Contractor is an independent contractor as provided in C.R.S. § 8-40-202(2). The Contractor is not entitled to workers' compensation benefits and the Contractor is obligated to pay federal and state income tax on monies earned pursuant to this Agreement.
17. INDEMNIFICATION. The Contractor expressly agrees to indemnify, defend and hold harmless the City, its officers, employees and insurers from and against all claims, damages, losses, expenses and demands, including court costs, attorney's fees and expenses, due to injuries, losses or damages arising out of, resulting from, or in any manner connected with the Contractor, its officers, employees, subcontractors or agents in connection with the performance of the services pursuant to this Agreement. Except for workers' compensation, disability benefits or other similar employee benefit claims, Contractor is not obligated to indemnify the City hereunder for that portion of any claims, damages, losses, demands, and expenses arising out of or resulting from any negligent act or omission of the City, or its agents and employees. This indemnification is intended to comply with and be subject to C.R.S. 13-50.5-102(8), as amended from time to time. In the event that any such suit or action is brought against the City, the City will give timely notice thereof to the other Party.
18. INSURANCE. To assure the City that the Contractor is always capable of fulfilling specified indemnification obligations, the Contractor shall purchase and maintain

insurance of the kind and in the amounts required by the City, from an insurer with an AM Best FSR rating of A- or higher as more particularly set forth on Exhibit B. Current proof of such insurance is attached at Exhibit B, incorporated by this reference. However, proof of insurance attached as Exhibit B shall not be deemed to limit or define obligations of Contractor as provided elsewhere in this Agreement, and Contractor should rely on its expertise to obtain additional insurance coverage needed for the City and Contractor in its performance hereunder.

19. APPROVAL OF SUBCONTRACTORS AND CONSULTANTS. The Contractor shall not employ any subcontractors or consultants without the prior written approval of the City Representative. Prior to commencing any work, each subcontractor or consultant shall provide the appropriate insurance as required for the Contractor under this Agreement. The Contractor shall be responsible for coordination of the work and the acts and omissions of its agents, employees, subcontractors, consultants and suppliers, and shall bind each to the terms of this Agreement so far as are applicable. This Agreement is voidable by the City if subcontracted by the Contractor without the express written consent of the City.

20. WARRANTY.

- 20.1. Warranty Period. The Contractor warrants that it will perform the Work in a timely, accurate and complete manner in accordance with the provisions of this Agreement. The Contractor warrants that the materials and/or workmanship will conform to the Contract Documents and that the materials used will be of good quality and new and that the Work shall be free from defects. The Contractor shall guarantee the Work against defects in workmanship and materials for a period of 2 years, commencing on the date of final acceptance of the Work by the City Representative (the "Warranty Period"). The Contractor shall also assign to the City any longer term guarantee of materials used by the Contractor as may be provided by the manufacturer. The Contractor shall promptly replace any materials or re-perform any portion of the Work found to be defective within the Warranty Period in accordance with this Agreement and without expense to the City. The time allowed for such corrective action shall be mutually agreed upon by the City and the Contractor. If the Contractor fails to proceed promptly in accordance with these guarantees, the City reserves the right to place the Contractor in default of its contractual obligations and may have the Work performed at the expense of the Contractor. This provision shall survive the completion of the Work and the termination of this Agreement. The above guarantee does not limit any claims that the City may otherwise have against the Contractor.

- 20.2. Warranty Verification. At least 60 calendar days prior to the expiration of the Warranty Period, the City Representative shall have the option to make an

inspection to determine whether the Work has been completed in accordance with this Agreement and may submit a written list of any defects to the Contractor (the "Warranty Work"). In the event the City chooses this option, the Contractor shall promptly correct all Warranty Work without additional cost to the City within the Warranty Period. If any Warranty Work cannot be corrected within the Warranty Period, the Contractor shall submit a letter to the City Representative for approval requesting an extension of time to complete such item (the "Request for Extension of Warranty Work"). The Request for Extension of Warranty Work must be received by the City Representative within seven calendar days of the Contractor's receipt of the Warranty Work and shall include the Contractor's justification for the request and a schedule for completion of the Warranty.

21. NO THIRD PARTY BENEFICIARIES. This Agreement is intended to describe the rights and responsibilities only as to the parties hereto. This Agreement is not intended and shall not be deemed to confer any rights on any person or entity not named as a party hereto.
22. FINANCIAL OBLIGATIONS OF THE CITY. All financial obligations of the City under this Agreement are subject to appropriation, budgeting, and availability of funds to discharge such obligations. Nothing in this Agreement shall be deemed to pledge the City's credit or faith, directly or indirectly, to the Contractor. If funds for this Agreement are not appropriated and budgeted in any year subsequent to the fiscal year of execution of this Agreement as determined by the City, this Agreement may be terminated by the City upon written notice to the Contractor. The City's fiscal year is currently the calendar year.
23. EXHIBITS. All exhibits referred to in this Agreement are by reference incorporated herein for all purposes.
24. INTEGRATION AND AMENDMENT. 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. For purposes of clarity, the terms and conditions of any Contractor invoice, Contractor timesheet, or other form, including but not limited to indemnification, limitation of liability, or cancellation fees, shall be void and of no effect against the City notwithstanding any signatures on such form by a City employee. The Contractor's rights and obligations shall be solely governed by the terms and conditions of this Agreement.
25. SEVERABILITY. If any provision of this agreement as applied to either Party or to any circumstance shall be adjudged by a court to be void or unenforceable, the same shall in no way affect any other provision of this Agreement, the application of any such

provision in any other circumstances, or the validity or enforceability of the Agreement as a whole.

26. ADDITIONAL DOCUMENTS OR ACTION. The parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
27. MINOR CHANGES. The Parties executing this Agreement are authorized to make nonsubstantive corrections to this Agreement and attached exhibits, if any, as they consider necessary.
28. DOCUMENTS. All drawings, analyses, plans, tests, maps, surveys, electronic files and written material of any kind generated in the performance of this Agreement or developed specifically for work performed under this Agreement shall remain the sole and exclusive property of the City, and the other Party shall not provide copies of any such material to anyone without the express written consent of the City.
29. RECORDS RETENTION. The Contractor shall maintain complete and accurate records of time spent and materials used for performance of the Work, together with any invoices, time cards, or other supporting data reasonably requested. All records, data and documentation shall be retained by the Contractor for a period of not less than three (3) years after completion of the Work, and shall be subject to review, inspection and copying by the City upon reasonable notice.
30. OFFICIALS NOT TO BENEFIT. No elected or employed member of City government shall directly or indirectly be paid or receive any share or part of this Agreement or any benefit that may arise therefrom. The Contractor warrants that it has not retained any entity or person, other than a bona fide employee working solely for the Contractor, to solicit or secure this Agreement.
31. SALES TAX EXEMPTION. The Contractor and its subcontractors, consultants and suppliers will not be required to pay Colorado state sales and use taxes on property incorporated into the Work. The Contractor shall obtain a sales tax exemption permit from the State of Colorado Department of Revenue, if necessary, to obtain materials for the Work without the payment of Colorado state sales tax.
32. ASSIGNMENT. This Agreement shall not be assigned by either Party without the prior written consent of the other Party.
33. BINDING EFFECT. This Agreement shall inure to the benefit of and be binding upon the parties and their respective legal representatives, successors, heirs, and assigns, provided that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.

34. DAYS. If the day for any performance or event provided for herein is a Saturday, a Sunday, a day on which national banks are not open for the regular transactions of business, or a legal holiday pursuant to C.R.S. § 24-11-101(1), such day shall be extended until the next day on which such banks and state offices are open for the transaction of business.
35. NO PRESUMPTION. The Parties to this Agreement and their attorneys have had a full opportunity to review and participate in the drafting of the final form of this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction against the Party causing the Agreement to be drafted.
36. GOOD FAITH OF PARTIES. In the performance of this Agreement or in considering any requested approval, acceptance, or extension of time, the Parties agree that each will act in good faith and will not act unreasonably, arbitrarily, capriciously, or unreasonably withhold, condition, or delay any approval, acceptance, or extension of time required or requested pursuant to this Agreement.
37. WAIVER OF BREACH. This Agreement or any of its provisions may not be waived except in writing by a Party's authorized representative. 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.
38. GOVERNING LAW. This Agreement shall be governed by the laws of the State of Colorado. Any claims or litigation arising under this Agreement will be brought by the Parties solely in the District Court, Broomfield County, Colorado.
39. LAWS TO BE OBSERVED. The Contractor shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees. The Contractor shall procure all necessary approvals, licenses and permits at its own expense; provided, that, the Contractor will be able to receive no cost permits when such permits are issued by the City directly.
40. TERMINATION. The City reserves the right to terminate this Contract, in whole or in part, with or without cause by written notice to the Contractor. In the event of termination, the Contractor shall incur no additional expenses and shall perform no further Work for the City under this Agreement after the date of receipt of the notice

of termination, unless otherwise specified by the City. The City shall pay the Contractor for all work satisfactorily performed prior to receipt of the notice of termination and for other services required by the City to be completed prior to termination and satisfactorily performed.

41. SURVIVAL OF OBLIGATIONS. Notwithstanding anything to the contrary, the Parties understand and agree that all terms and conditions of this Agreement that require continued performance or compliance beyond the termination or expiration of this Agreement, including without limitation the indemnification provision, shall survive such termination or expiration and shall be enforceable against a Party if such Party fails to perform or comply with such term or condition.
42. EXECUTION; ELECTRONIC SIGNATURES. This Agreement may be executed in counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument. This Agreement shall not be binding upon any Party hereto unless and until the Parties have executed this Agreement. The Parties approve the use of electronic signatures for execution of this Agreement. All documents must be properly notarized, if applicable.

[The remainder of this page is intentionally left blank.]

This Agreement is executed by the Parties hereto in their respective names as of _____, 2024.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

Mayor
One DesCombes Drive
Broomfield, CO 80020

ATTEST:

City and County Clerk

APPROVED AS TO FORM:

City and County Attorney's Office

CONTRACTOR:

Integrated Site Services, Inc.

By: Eliot Schmidt

Name: Eliot Schmidt

Title: President

Address: Mail: P.O Box 823 Windsor CO 80550
Physical: 1316 S Summit View Drive Fort Collins, CO 80525

EXHIBIT A CONTRACTOR'S COST PROPOSAL

BID FORM					
US-287 Soundwall Replacement, Project #21R0012, Integrated Site Services, Inc.					
Round ALL unit prices to the nearest penny					
the quantities of work performed and materials to be furnished may be increased, decreased, or omitted. Payment will be based on the actual quantities of					
BASE BID					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL COST
201-00001	Clearing And Grubbing	ACRE	0.12	\$ 150,000.00	\$ 18,000.00
202-00008	Tree Trimming	HR	20.0	\$ 300.00	\$ 6,000.00
202-00010	Removal Of Tree	EACH	3.0	\$ 2,000.00	\$ 6,000.00
202-00155	Removal Of Wall	LF	815.0	\$ 164.00	\$ 133,660.00
202-01035	Removal Of Gate	EACH	1.0	\$ 800.00	\$ 800.00
203-01597	Potholing	HR	24.0	\$ 500.00	\$ 12,000.00
206-00000	Structure Excavation	CY	430.0	\$ 128.00	\$ 55,040.00
206-00100	Structure Backfill (Class 1)	CY	421.0	\$ 66.00	\$ 27,786.00
207-00700	Topsoil (Onsite)	CY	90.0	\$ 100.00	\$ 9,000.00
208-00020	Silt Fence	LF	1,678.0	\$ 2.00	\$ 3,356.00
208-00045	Concrete Washout Structure	EACH	1.0	\$ 3,000.00	\$ 3,000.00
208-00052	Storm Drain Inlet Protection (Type I)	EACH	1.0	\$ 500.00	\$ 500.00
208-00070	Vehicle Tracking Pad	EACH	1.0	\$ 6,000.00	\$ 6,000.00
208-00207	Erosion Control Management	DAY	90.0	\$ 173.00	\$ 15,570.00
210-01000	Reset Fence	LF	90.0	\$ 80.00	\$ 7,200.00
213-00005	Mulching (Decorative)	CF	399.0	\$ 23.00	\$ 9,177.00
213-00070	Landscape Weed Barrier Fabric	SY	134.0	\$ 18.00	\$ 2,412.00
213-00462	Metal Landscape Border (3/16 X 5-1/2 Inch)	LF	637.0	\$ 18.00	\$ 11,466.00
215-00010	Transplant Tree	EACH	2.0	\$ 1,500.00	\$ 3,000.00
607-11455	Fence Wood	LF	7.0	\$ 200.00	\$ 1,400.00
607-11525	Fence (Plastic)	LF	1,040.0	\$ 6.25	\$ 6,500.00
607-11580	Fence (Temporary)	LF	840.0	\$ 29.00	\$ 24,360.00
607-13000	Fence Masonry (Noise Barrier)	SF	7,210.0	\$ 57.10	\$ 411,691.00
607-60114	14 Foot Gate	EACH	1.0	\$ 8,000.00	\$ 8,000.00
620-00020	Sanitary Facility	EACH	1.0	\$ 2,400.00	\$ 2,400.00
625-00000	Construction Surveying	LS	1.0	\$ 15,600.00	\$ 15,600.00
626-00000	Mobilization	LS	1.0	\$ 87,500.00	\$ 87,500.00
627-00070	Preformed Thermoplastic Pavement Marking	SF	44.0	\$ 83.00	\$ 3,652.00
630-00000	Flagging	HR	40.0	\$ 100.00	\$ 4,000.00
630-00007	Traffic Control Inspection	DAY	70.0	\$ 240.00	\$ 16,800.00
630-00012	Traffic Control Management	DAY	20.0	\$ 200.00	\$ 4,000.00
630-80001	Flashing Beacon (Portable)	EACH	1.0	\$ 1,700.00	\$ 1,700.00
630-80337	Barricade (Type 3 M-C)(Temporary)	EACH	9.0	\$ 850.00	\$ 7,650.00
630-80341	Construction Traffic Sign Panel (Size A)	EACH	10.0	\$ 80.00	\$ 800.00
630-80342	Construction Traffic Sign Panel (Size B)	EACH	2.0	\$ 105.00	\$ 210.00
630-80355	Portable Message Sign Panel	EACH	1.0	\$ 7,800.00	\$ 7,800.00
630-80358	Advance Warning Flashing Or Sequencing Arrow Panel (C Type)	EACH	1.0	\$ 2,900.00	\$ 2,900.00
630-80360	Drum Channelizing Device	EACH	34.0	\$ 150.00	\$ 5,100.00
630-80364	Drum Channelizing Device (With Light)(Steady Burn)	EACH	8.0	\$ 175.00	\$ 1,400.00
700-70010	F/A Minor Contract Revisions	FA	1.0	\$ 75,000.00	\$ 75,000.00
700-70060	F/A Adjust Irrigation System	FA	1.0	\$ 10,000.00	\$ 10,000.00
700-90026	F/A Landscaping	FA	1.0	\$ 30,000.00	\$ 30,000.00
BASE BID COST					\$ 1,058,430.00

EXHIBIT B
INSURANCE REQUIREMENTS

CITY and COUNTY of BROOMFIELD INSURANCE REQUIREMENTS for CCOB & CDOT Contracts

1. All insurers must be licensed or approved to do business within the State of Colorado.
2. Contractor/Vendor's insurance carriers should have an A.M. Best Company rating of at least A-VII.
3. Additional Insured - City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations).
4. Primacy of Coverage – Coverage required of Contractors and Subcontractors shall be primary and non-contributory to any insurance carried by the City and County of Broomfield.
5. All subcontractors must meet the same insurance requirements for the Contract or Purchase Order unless Risk Management has approved a deviation.
6. Subrogation Waiver – All insurance policies required under this Contract maintained by Contractor or its Subcontractors shall waive all rights of recovery against City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield.
7. Cancellation, Change in Coverage or Limits– The above insurance policies shall include provisions preventing cancellation, non-renewal, or reduction in coverage or limits of any insurance, without at least 30 days prior notice to Contractor/Vendor and Contractor/ Vendor shall forward such notice to within seven days of receipt of such notice.
8. Certificates – Contractor and all Subcontractors shall provide certificates showing insurance coverage required hereunder to the City and County of Broomfield within 5 days of:
 - a. the effective date of the Contract
 - b. the expiration date of any coverage
 - c. a request by the City and County of Broomfield
9. Separation of Insureds. All insurance policies shall include coverage for cross liability and contain a "Separation of Insureds" provision in the general liability policy.
10. City and County of Broomfield in no way warrants that the limits required herein are sufficient to protect the Contractor/Vendor from liabilities that may arise out of the performance of the work under this Contract by the Contractor, its agents, representative, employees or subcontractors. The Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration or type.
11. All parties understand and agree that the City and County of Broomfield is relying on, and does not waive or intend to waive by any provision of this Contract, the monetary limitations, immunities, protections or any other rights provided by the Colorado Governmental Immunity Act.
12. The City and County of Broomfield reserves the right to negotiate additional specific insurance requirements at the time of the Contract.
13. The City and County of Broomfield and Contractor shall cooperate with each other in the

collection of any insurance proceeds which may be payable in the event of any loss, including the execution and delivery of any proof of loss or other actions required to effect recovery.

14. Contractors must carry all insurance or purchase the below insurance. No insurance will be waived for CDOT contracts.

Vendor/Contractor/Subcontractor shall obtain and maintain, at its own expense and for the duration of the contract including any warranty periods under which the Contract are satisfied, the following:

Insurance Requirements for CCOB & CDOT Contracts		
	COVERAGES AND LIMITS OF INSURANCE	Required
1.	Commercial General Liability <ul style="list-style-type: none"> Commercial General Liability insurance covering all operations by or on behalf of the contractor/vendor on an occurrence basis against claims for bodily injury, property damage (including loss of use), advertising liability, products and completed operations, and contractual liability. <p>Note: For contracts involving vendor/contractor contact with minors or at risk adults Sexual Abuse and Misconduct Coverage should be included in the coverage requirements.</p>	Minimum Limits: <ul style="list-style-type: none"> \$1,000,000 Each Occurrence \$2,000,000 General Aggregate (Per project aggregate for construction contracts) \$2,000,000 Products/Completed Operations Aggregate (for construction projects, this coverage should be maintained for a minimum of 3 years from the end of the project) \$50,000 any 1 fire
2.	Automobile Liability <ul style="list-style-type: none"> Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos). 	Minimum Limit: <ul style="list-style-type: none"> \$1,000,000 each accident combined single limit. If hazardous materials are transported, an MCS 90 form shall be included on the policy.
3.	Workers' Compensation <ul style="list-style-type: none"> Workers' Compensation Insurance as required by State statute, covering all Vendors/Contractors employees acting within the course and scope of their employment. <p>Note: This requirement shall not apply when a contractor or subcontractor is exempt under the Colorado Workers' Compensation Act AND when such contractor or subcontractor provides an appropriate sole proprietor letter.</p>	Employer's Liability with Minimum Limits: <ul style="list-style-type: none"> \$100,000 Each Accident \$100,000 Each Employee by Disease \$500,000 Disease Aggregate
4.	Professional Liability <ul style="list-style-type: none"> Contractor will purchase and maintain professional liability insurance covering any damages caused by an error, omission or negligent professional act to include the following coverages: <ul style="list-style-type: none"> Limited Contractual Liability If coverage is Claims Made, a retroactive date prior to the inception of the work If coverage is Claims Made, similar coverage must be maintained for three years following the completion of the work or an extended reporting period of 36 months must be purchased 	Minimum Limit: <ul style="list-style-type: none"> \$1,000,000 Per Claim /Aggregate
5.	Protected Information (Cyber) Liability <ul style="list-style-type: none"> Contractor will purchase and maintain liability insurance covering all loss of confidential information, such as PII, PHI, PCI, Tax Information and CJI, and claims based on alleged violation of privacy rights through improper use or disclosure of protected information. 	Minimum Limit: <ul style="list-style-type: none"> \$1,000,000 per Claim \$2,000,000 General Aggregate

6.	Crime Insurance coverage including employee dishonesty coverage.	Minimum Limit: <ul style="list-style-type: none"> • \$1,000,000 per Claim/Aggregate
<p>Additional Insured - The following shall be named an Additional Insured: The State of Colorado and The City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, Protected Information (Cyber) Liability, and Automobile Liability Insurance policies (construction contracts require Additional Insured coverage for completed operations). A Waiver of Subrogation is provided in favor of the Additional Insureds as respects to all policies.</p> <p>Certificate Holder is: City and County of Broomfield One DesCombes Drive Broomfield, CO 80020-2495 certificates@broomfield.org</p>		

No deviations below the standards given above will be approved by the City and County of Broomfield's Risk Management office for CDOT contracts.

RESOLUTION NO. 2024-65

A Resolution approving the Second Amendment to the Consulting Agreement with WSB LLC for the US 287 Soundwall Replacement Project

Be it resolved by the city council of the City and County of Broomfield, Colorado:

Section 1.

The Second Amendment to the Consulting Agreement by and between the City and County of Broomfield and WSB LLC adding additional services for \$172,778, bringing the total not to exceed amount to \$363,558, is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the Second Amendment, in form approved by the City and County Attorney.

Section 3.

The City and County Manager or a designee is authorized to approve change orders in aggregate amounts up to ten percent of the amended contract amount.

Section 4.

This resolution is effective on the date of approval by the City Council.

Approved on May 28, 2024.

The City And County Of Broomfield,
Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

NCR

City and County Attorney

SECOND AMENDMENT TO CONSULTING AGREEMENT BY AND BETWEEN
THE CITY AND COUNTY OF BROOMFIELD AND WSB LLC
FOR THE HIGHWAY 287 SOUNDWALL DESIGN PROJECT

1. PARTIES. The parties to this Second Amendment are the City and County of Broomfield, a Colorado municipal corporation and county, (the "City") and WSB LLC, a Minnesota Corporation (the "Consultant"), collectively, the "Parties", individually, the "Party".
2. RECITALS. The recitals to this Second Amendment are incorporated herein by this reference as though fully set forth in the body of this Second Amendment.
 - 2.1 The Parties entered into a Consulting Agreement dated April 8, 2022 (Agreement), in which the Consultant agreed to provide consulting services for the Highway 287 Soundwall Design Project.
 - 2.2 The parties to this Second Amendment desire to amend paragraph 3.1(b) Basic Services, 3.1(e) Completion Date and 3.4(a) Aggregate Limit.
3. THE AMENDMENT. In consideration of the mutual covenants and promises of the Parties contained herein, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:
 - 3.1 Paragraph 3.1(b), Basic Services, of the Agreement is hereby amended to add the following: The Consultant shall perform duties in Exhibit A, and the additional duties and responsibilities as described in Exhibit A-1 (attached hereto and made part hereof).
 - 3.2 Paragraph 3.1(e), Completion Date, of the Agreement is hereby amended to read as follows: Consultant shall complete the services of this Agreement by April 30, 2025.
 - 3.3 Paragraph 3.4(a), Aggregate Limit, of the Agreement is hereby amended to read as follows: Pricing for additional services shall be as noted on Exhibit A-1, attached hereto and incorporated by this reference. Unless extra services are approved in writing, the amount paid by the City to the Consultant under this Agreement shall not exceed \$363,558 (\$190,780 original agreement plus \$172,778 Second Amendment), including reimbursables. The Consultant will complete the Work for the amount shown.

4. AGREEMENT IN FULL FORCE AND EFFECT. Except as amended herein, all other terms, conditions, and provisions of the Agreement shall remain in full force and effect and are hereby ratified and reaffirmed by the Parties in their entirety.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, this Agreement is executed by the Parties hereto in their respective names as of _____, 2024.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

City and County Manager

APPROVED AS TO FORM:


City and County Attorney

WSB LLC
a Minnesota corporation



By: Paul Jesaitis

Title: Vice President, Transportation

EXHIBIT A-1 WSB - SUMMARY OF COST AND LABOR						
Cost Proposal for Construction Management, Inspection, and Materials Testing						
SH 287 Soundwall Replacement						
Updated 3-28-24						
	\$260.00	\$210.00	\$230.00	\$140.00		
 Task	Project Principal - Paul Jesaitis	Project Manager/Engineer (Part-time) - Laura Zamora	Senior Bridge Inspector (Part-time) - Ananna Anu	Senior Inspector (full-time) - Jason Okerlund	Total Labor Hours	Total Labor Cost
Assist with Job Showings and Bid Opening		8			8	\$1,680.00
Manage and Attend Preconstruction Meeting		8	3	3	14	\$2,790.00
Permitting and Utility Coordination		16			16	\$3,360.00
Daily Project Inspection		100	10	500	610	\$93,300.00
Shop and/or Working Drawing Reviews and submittals	5	30	10	10	55	\$11,300.00
1 Hour Weekly Progress Meetings (Assume 10)		20	5	20	45	\$8,150.00
Contractor RFI's (Assume 4)	5	10	10		25	\$5,700.00
Project Change Orders (Assume 2)		10	10		20	\$4,400.00
Review and Process Contractor Payments		15			15	\$3,150.00
Project / Permitting Closeout		20		20	40	\$7,000.00
Project As-builts		10			10	\$2,100.00
EST and Testing Monthly Invoicing (3 total) and Contract Changes		10			10	\$2,100.00
Totals	10	257	48	553	868	\$145,030.00
Mileage (\$0.56/mile)		3,000	400	3,500	6,900	\$3,657.00
Other Direct Charges (1%)						\$1,450.30
EST Total						\$150,137.30
Geocal (see attached fee)						\$22,640.00
Geocal Total						\$172,777.30
PROJECT SCHEDULE DETAILS						
	Project Duration (Days)		Notes: The project is anticipated to begin on approximately May 15, 2023 and be completed by November 15, 2023 (6 months) . Assume 90 calendar days.			
Pre Project Management	20					
Permitting and Utility Locates	20					
Fabrication	60					
Construction	90					
Project / Permit Closeout	20					
Total	210					



City of Broomfield

City Council Regular Meeting

Annual Aggregate Spending with Oracle America, Inc.

A resolution approving an agreement for annual aggregate spend with Oracle America, Inc. for Cloud Services

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6F
Presented By		
Kateri Abeyta, Director of Information Technology		
Community Goals		

Overview

[View Correspondence](#)

Proposed Resolution No. 2024-61 approves Oracle America, Inc. to provide cloud services in an amount not to exceed \$240,783. Proposed Resolution No. 2024-61 also authorizes the City and County Manager to approve annual aggregate spending with Oracle America, Inc. for three additional one-year periods subject to the annual budget appropriation approved by the City Council.

Attachments

[Memo for Annual aggregate spending with Oracle America, Inc.pdf](#)

[Oracle 2024 Ordering Document](#)

[Oracle Resolution 2024-61.pdf](#)

Summary

[View Correspondence](#)

In June 2017, Broomfield implemented the Oracle Human Capital Management Cloud solution which provides Human Resources and Payroll services.

On April 9, 2019, the Council approved an agreement with Oracle America, Inc. for licensing, maintenance, and support services for two additional years subject to annual budgeted funds. Renewing the maintenance and support services keeps the City and County of Broomfield current with new releases and provides access to technical support when issues arise.

The ongoing annual operating costs for licensing, maintenance, and support fees totaled \$196,912 in 2023. The 2024-2025 renewal totals \$210,783 (Exhibit A), a 7% increase from the 2022-2023 renewal. Staff is currently evaluating the Fusion HCM Analytics module that will provide pre-built reports, dashboards, and data visualization tools to help analyze human resource data more efficiently and effectively. If selected, the add-on module licensing cost will be \$23,370 annually.

Broomfield Municipal Code § 3-20-040(B) requires Council approval for aggregate spending to a single vendor in excess of \$200,000.

Proposed Resolution No. 2024-61 approves Oracle America, Inc. to provide cloud services in an amount not to exceed \$234,153. Proposed Resolution No. 2024-61 also authorizes the City and County Manager to approve annual aggregate spending with Oracle America, Inc. for three additional one-year periods subject to the annual budget appropriation approved by the City Council.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
IT Operating - Software as a Service (01-18700-53810)	\$210,783
IT Operating - Professional Svcs-Electronics (01-18700-53120)	23,370
Proposed 2024 Oracle SaaS Agreement (01-18700-53810)	-\$210,783
Proposed 2024 Oracle Fusion HCM Analytics (01-18700-53120)	-23,370
Projected Balance	\$0

Prior Council or Other Entity Actions

[April 9, 2019 - Resolution No. 2019-78](#) Approving an Agreement with Oracle America, Inc. for Cloud Software as a Service

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to permit Oracle to provide cloud services, the appropriate motion is...
That Resolution 2024-61 be adopted.

Alternatives

Direct staff to research other Human Resources and Payroll services vendors.



QUOTATION

Valid through 30-APR-2024

Name	CITY AND COUNTY OF BROOMFIELD	Contact	Kateri Abeyta
Address	1 Descombes Dr Ste 2C Broomfield CO 80020	Phone Number	1-720-7884520
		Email Address	kabeyta@broomfield.org

All fees on this Budgetary Quote are in **USD**

Renew Subscription Term: 25-Apr-2024 to 24-Apr-2025

Services Period: 12 months					
Cloud Services	Data Center Region	Quantity	Term	Unit Net Price	Net Fee
B91939 - Oracle Digital Assistant Platform for SaaS - Hosted Employee	NORTH AMERICA	1200	12 mo	0.54	7,776.00
B85800 - Oracle Fusion Human Capital Management Base Cloud Service - Hosted Employee	NORTH AMERICA	2000	12 mo	2.93	70,213.20
B86669 - Oracle Cloud Priority Support for SaaS: Base Fee	NORTH AMERICA	1	12 mo	1,312.50	15,750.00
B86668 - Oracle Cloud Priority Support for SaaS	NORTH AMERICA	1	12 mo	1,116.21	13,394.52
B86334 - Oracle Fusion Payroll Cloud Service for United States - Hosted Employee	NORTH AMERICA	2000	12 mo	1.58	37,807.11
B75365 - Oracle Fusion Time and Labor Cloud Service - Hosted Named User	NORTH AMERICA	2000	12 mo	0.68	16,203.05
B84490 - Oracle Additional Test Environment for Oracle Fusion Cloud Service - Each	NORTH AMERICA	1	12 mo	1,406.51	16,878.17
B87365 - Oracle HIPAA Advanced Security for Fusion SaaS in the Oracle Public Cloud - Each	NORTH AMERICA	1	12 mo	1,486.39	17,836.69

Services Period: 12 months					
Cloud Services	Data Center Region	Quantity	Term	Unit Net Price	Net Fee
B67295 - Oracle Fusion Workforce Compensation Cloud Service - Hosted Named User	NORTH AMERICA	1200	12 mo	0.68	9,721.83
Subtotal					205,580.55

New Subscription On or After 25-Apr-2024

Services Period: 12 months					
Cloud Services	Data Center Region	Quantity	Term	Unit Net Price	Net Fee
B92354 - Fusion HCM Analytics - Hosted Employee Per Month	Customer Selected	2000	12 mo	1.19	28,572.00
Subtotal					28,572.00

Pay As You Go (PAYG)						
Cloud Services	Data Center Region	Credit Period	Credit Quantity	Term	Total Credit Value	
B88206 - Oracle PaaS and IaaS Universal Credits	Customer Selected	PAYG	0		0.00	
Subtotal					0.00	

Fee Description	Net Fee
Cloud Services Fees	234,152.55
Net Fees	234,152.55
Total Fees	234,152.55

Rate Card Pricing for IaaS/PaaS Public Cloud Services

B88206 - Oracle PaaS and IaaS Universal Credits

Cloud Service Category Discounts

Cloud Service Category	Discount %
Management Cloud Service	0
Big Data Cloud Service	0
Application Development Cloud Service	0
Content Management Cloud Service	0
Analytics Cloud Service	0
Storage Cloud Service	0
Enterprise Integration Cloud Service	0
Security and Identity Management Cloud Service	0
Data Integration Cloud Service	0
Network Cloud Service	0
Compute Cloud Service	0
Data Management Cloud Service	0
Not Discount Eligible	0

Usage Item Description	Metric
Management Cloud Service	
B92809 - Oracle Cloud Infrastructure Logging Analytics-Archival Storage	Logging Analytics Storage Unit Per Hour
B92888 - Oracle Cloud Infrastructure Operations Insights for Oracle Autonomous Databases-Basic	OCPU Per Hour
B92889 - Oracle Cloud Infrastructure Operations Insights for Cloud Databases	OCPU Per Hour
B92890 - Oracle Cloud Infrastructure Operations Insights for External Oracle Databases and Host	Host CPU Core Per Hour
B92940 - Oracle Cloud Infrastructure Application Performance Monitoring Service-Tracing Data-Free	1,000 Events Per Hour
B92941 - Oracle Cloud Infrastructure Application Performance Monitoring Service-Tracing Data	100,000 Events Per Hour
B92942 - Oracle Cloud Infrastructure Application Performance Monitoring Service-Synthetic Usage	10 Monitor Runs Per Hour
B93082 - Oracle Cloud Infrastructure-Database Management-External DB BYOL	Host CPU Core Per Hour
B93083 - Oracle Cloud Infrastructure-Database Management-External DB	Host CPU Core Per Hour
B93426 - Oracle Cloud Infrastructure-Database Management-Cloud Databases	OCPU Per Hour

Usage Item Description	Metric
B93705 - Oracle Cloud Infrastructure Operations Insights for Warehouse-Extract	Gigabyte Per Month
B93706 - Oracle Cloud Infrastructure Operations Insights for Warehouse-Instance	OCPU Per Hour
B95634 - Oracle Cloud Infrastructure Logging Analytics-Active Storage	Logging Analytics Storage Unit Per Month 0 - 35 Logging Analytics Storage Unit Per Month 35 - 103 Logging Analytics Storage Unit Per Month 103 - 9999999999999999
B96199 - Oracle Cloud Infrastructure Operations Insights for Oracle Autonomous Databases-Basic	ECPU Per Hour
B96200 - Oracle Cloud Infrastructure-Database Management-Autonomous Databases-ECPU	ECPU Per Hour
B96629 - Oracle Cloud Infrastructure-Application Performance Monitoring Service-Synthetic Usage-Free	10 Monitor Runs Per Hour
B97140 - Oracle Cloud Infrastructure Operations Insights for Oracle Autonomous Databases-Full	ECPU Per Hour
B99259 - Oracle Cloud Infrastructure-Application Performance Monitoring Service-Stack Monitoring-Enterprise Edition	10 Monitored Resources Per Hour
Big Data Cloud Service	
B108080 - Oracle Cloud Infrastructure Generative AI-Llama2-70	10,000 Transactions
B108085 - Oracle Cloud Infrastructure Generative AI-Llama2-70-Dedicated	AI Unit Per Hour
B93423 - Oracle Cloud AI Services-Language-Pre-trained Inferencing	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B93545 - Oracle Cloud Infrastructure AI Services-Anomaly Detection	1000 Transactions 0 - 1 1000 Transactions 1 - 9999999999999999
B93555 - Oracle Big Data Service	OCPU Per Hour
B94282 - Oracle Cloud Infrastructure-Data Labeling	Annotated Data Record 0 - 1000 Annotated Data Record 1000 - 9999999999999999
B94896 - Oracle Cloud Infrastructure-Speech	Transcription Hour 0 - 5 Transcription Hour 5 - 9999999999999999
B94973 - Oracle Cloud Infrastructure-Vision-Image Analysis	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B94974 - Oracle Cloud Infrastructure-Vision-OCR	1,000 Transactions 0 - 5

Usage Item Description	Metric
B94977 - Oracle Cloud Infrastructure-Vision-Custom Training	1,000 Transactions 5 - 9999999999999999 Training Hour 0 - 15 Training Hour 15 - 9999999999999999
B95918 - Oracle Cloud Infrastructure-Language-Custom Inferencing-Dedicated	Inferencing Unit Hour 0 - 15 Inferencing Unit Hour 15 - 9999999999999999
B95919 - Oracle Cloud Infrastructure-Language-Custom Training	Training Hour 0 - 15 Training Hour 15 - 9999999999999999
B95920 - Oracle Cloud Infrastructure-Language-Text Translation	1000 Transactions 0 - 1 1000 Transactions 1 - 9999999999999999
B96110 - Oracle Cloud Infrastructure-Document Understanding-OCR	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B96111 - Oracle Cloud Infrastructure-Document Understanding-Document Properties	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B96112 - Oracle Cloud Infrastructure-Document Understanding-Document Extraction	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B96113 - Oracle Cloud Infrastructure-Document Understanding-Custom Training	Training Hour 0 - 15 Training Hour 15 - 9999999999999999
B97193 - Oracle Cloud Infrastructure-Document Understanding-Custom Document Properties	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
B97194 - Oracle Cloud Infrastructure-Document Understanding-Custom Document Extraction	1,000 Transactions 0 - 5 1,000 Transactions 5 - 9999999999999999
Application Development Cloud Service	
B88287 - Oracle Java Cloud Service-Enterprise	OCPU Per Hour
B88288 - Oracle Java Cloud Service-Standard	OCPU Per Hour
B88289 - Oracle Java Cloud Service-High Performance	OCPU Per Hour
B88399 - Oracle Java Cloud Service-Enterprise-BYOL	OCPU Per Hour
B88400 - Oracle Java Cloud Service-High Performance-BYOL	OCPU Per Hour
B88844 - Oracle Java Cloud Service-Standard-BYOL	OCPU Per Hour
B89646 - Oracle Visual Builder	OCPU Per Hour

Usage Item Description	Metric
B90203 - Oracle Visual Builder Studio-Additional Storage	Gigabyte Storage Capacity Per Month
B90260 - Oracle Digital Assistant Cloud Service	Request
B90304 - Oracle Mobile Hub Cloud Service	Request
B91346 - Oracle WebLogic Server Enterprise Edition for Oracle Cloud Infrastructure	OCPU Per Hour
B91347 - Oracle WebLogic Suite for Oracle Cloud Infrastructure	OCPU Per Hour
B92302 - Oracle Cloud Infrastructure-Blockchain Platform Cloud Service-Standard	OCPU Per Hour
B92303 - Oracle Cloud Infrastructure-Blockchain Platform Cloud Service-Enterprise	OCPU Per Hour
B92304 - Oracle Cloud Infrastructure-Blockchain Platform Cloud Service-Storage	Terabyte Storage Capacity Per Month
B92305 - Oracle Cloud Infrastructure-Blockchain Platform Cloud Service-Enterprise-BYOL	OCPU Per Hour
B92913 - Oracle WebLogic Server Enterprise Edition for Oracle Cloud Infrastructure Container Engine for Kubernetes	OCPU Per Hour
B92914 - Oracle WebLogic Server Suite for Oracle Cloud Infrastructure Container Engine for Kubernetes	OCPU Per Hour
B96582 - Oracle Tuxedo for Oracle Cloud Infrastructure	OCPU Per Hour
B96583 - Oracle Tuxedo Enterprise Edition for Oracle Cloud Infrastructure	OCPU Per Hour
B96584 - Oracle Tuxedo Mainframe Modernization Runtimes for Oracle Cloud Infrastructure	OCPU Per Hour
Content Management Cloud Service	
B95279 - Media Services-Media Flow-Standard-H264-SD-Below 30fps	Minute of Output Media Content
B95280 - Media Services-Media Flow-Standard-H264-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95281 - Media Services-Media Flow-Standard-H264-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95282 - Media Services-Media Flow-Standard-H264-HD-Below 30fps	Minute of Output Media Content
B95283 - Media Services-Media Flow-Standard-H264-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95284 - Media Services-Media Flow-Standard-H264-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95285 - Media Services-Media Flow-Standard-H264-4k-Below 30fps	Minute of Output Media Content
B95286 - Media Services-Media Flow-Standard-H264-4k-Above 30fps and Below 60fps	Minute of Output Media Content

Usage Item Description	Metric
B95287 - Media Services-Media Flow-Standard-H264-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95288 - Media Services-Media Flow-Standard-VP8-SD-Below 30fps	Minute of Output Media Content
B95289 - Media Services-Media Flow-Standard-VP8-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95290 - Media Services-Media Flow-Standard-VP8-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95291 - Media Services-Media Flow-Standard-VP8-HD-Below 30fps	Minute of Output Media Content
B95292 - Media Services-Media Flow-Standard-VP8-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95293 - Media Services-Media Flow-Standard-VP8-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95294 - Media Services-Media Flow-Standard-VP8-4k-Below 30fps	Minute of Output Media Content
B95295 - Media Services-Media Flow-Standard-VP8-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95296 - Media Services-Media Flow-Standard-VP8-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95297 - Media Services-Media Flow-Standard-H265VP9-SD-Below 30fps	Minute of Output Media Content
B95298 - Media Services-Media Flow-Standard-H265VP9-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95299 - Media Services-Media Flow-Standard-H265VP9-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95300 - Media Services-Media Flow-Standard-H265VP9-HD-Below 30fps	Minute of Output Media Content
B95301 - Media Services-Media Flow-Standard-H265VP9-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95302 - Media Services-Media Flow-Standard-H265VP9-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95303 - Media Services-Media Flow-Standard-H265VP9-4k-Below 30fps	Minute of Output Media Content
B95304 - Media Services-Media Flow-Standard-H265VP9-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95305 - Media Services-Media Flow-Standard-H265VP9-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95306 - Media Services-Media Flow-Speed-H264-SD-Below 30fps	Minute of Output Media Content
B95307 - Media Services-Media Flow-Speed-H264-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95308 - Media Services-Media Flow-Speed-H264-SD-Above 60fps and Below 120fps	Minute of Output Media Content

Usage Item Description	Metric
B95309 - Media Services-Media Flow-Speed-H264-HD-Below 30fps	Minute of Output Media Content
B95310 - Media Services-Media Flow-Speed-H264-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95311 - Media Services-Media Flow-Speed-H264-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95312 - Media Services-Media Flow-Speed-H264-4k-Below 30fps	Minute of Output Media Content
B95313 - Media Services-Media Flow-Speed-H264-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95314 - Media Services-Media Flow-Speed-H264-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95315 - Media Services-Media Flow-Speed-VP8-SD-Below 30fps	Minute of Output Media Content
B95316 - Media Services-Media Flow-Speed-VP8-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95317 - Media Services-Media Flow-Speed-VP8-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95318 - Media Services-Media Flow-Speed-VP8-HD-Below 30fps	Minute of Output Media Content
B95319 - Media Services-Media Flow-Speed-VP8-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95320 - Media Services-Media Flow-Speed-VP8-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95321 - Media Services-Media Flow-Speed-VP8-4k-Below 30fps	Minute of Output Media Content
B95322 - Media Services-Media Flow-Speed-VP8-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95323 - Media Services-Media Flow-Speed-VP8-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95324 - Media Services-Media Flow-Speed-H265VP9-SD-Below 30fps	Minute of Output Media Content
B95325 - Media Services-Media Flow-Speed-H265VP9-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95326 - Media Services-Media Flow-Speed-H265VP9-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95327 - Media Services-Media Flow-Speed-H265VP9-HD-Below 30fps	Minute of Output Media Content
B95328 - Media Services-Media Flow-Speed-H265VP9-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95329 - Media Services-Media Flow-Speed-H265VP9-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95330 - Media Services-Media Flow-Speed-H265VP9-4k-Below 30fps	Minute of Output Media Content
B95331 - Media Services-Media Flow-Speed-H265VP9-4k-Above 30fps and Below 60fps	Minute of Output Media Content

Usage Item Description	Metric
B95332 - Media Services-Media Flow-Speed-H265VP9-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95333 - Media Services-Media Flow-Quality-H264-SD-Below 30fps	Minute of Output Media Content
B95334 - Media Services-Media Flow-Quality-H264-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95335 - Media Services-Media Flow-Quality-H264-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95336 - Media Services-Media Flow-Quality-H264-HD-Below 30fps	Minute of Output Media Content
B95337 - Media Services-Media Flow-Quality-H264-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95338 - Media Services-Media Flow-Quality-H264-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95339 - Media Services-Media Flow-Quality-H264-4k-Below 30fps	Minute of Output Media Content
B95340 - Media Services-Media Flow-Quality-H264-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95341 - Media Services-Media Flow-Quality-H264-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95342 - Media Services-Media Flow-Quality-VP8-SD-Below 30fps	Minute of Output Media Content
B95343 - Media Services-Media Flow-Quality-VP8-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95344 - Media Services-Media Flow-Quality-VP8-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95345 - Media Services-Media Flow-Quality-VP8-HD-Below 30fps	Minute of Output Media Content
B95346 - Media Services-Media Flow-Quality-VP8-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95347 - Media Services-Media Flow-Quality-VP8-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95348 - Media Services-Media Flow-Quality-VP8-4k-Below 30fps	Minute of Output Media Content
B95349 - Media Services-Media Flow-Quality-VP8-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95350 - Media Services-Media Flow-Quality-VP8-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95351 - Media Services-Media Flow-Quality-H265VP9-SD-Below 30fps	Minute of Output Media Content
B95352 - Media Services-Media Flow-Quality-H265VP9-SD-Above 30fps and Below 60fps	Minute of Output Media Content
B95353 - Media Services-Media Flow-Quality-H265VP9-SD-Above 60fps and Below 120fps	Minute of Output Media Content
B95354 - Media Services-Media Flow-Quality-H265VP9-HD-Below 30fps	Minute of Output Media Content

Usage Item Description	Metric
B95355 - Media Services-Media Flow-Quality-H265VP9-HD-Above 30fps and Below 60fps	Minute of Output Media Content
B95356 - Media Services-Media Flow-Quality-H265VP9-HD-Above 60fps and Below 120fps	Minute of Output Media Content
B95357 - Media Services-Media Flow-Quality-H265VP9-4k-Below 30fps	Minute of Output Media Content
B95358 - Media Services-Media Flow-Quality-H265VP9-4k-Above 30fps and Below 60fps	Minute of Output Media Content
B95359 - Media Services-Media Flow-Quality-H265VP9-4k-Above 60fps and Below 120fps	Minute of Output Media Content
B95375 - Media Services-Media Streams	GB of Packaged Content
Analytics Cloud Service	
B89630 - Oracle Analytics Cloud-Professional	OCPU Per Hour
B89631 - Oracle Analytics Cloud-Enterprise	OCPU Per Hour
B89636 - Oracle Analytics Cloud-Professional-BYOL	OCPU Per Hour
B89637 - Oracle Analytics Cloud-Enterprise-BYOL	OCPU Per Hour
B92335 - Essbase for Oracle Cloud Infrastructure	OCPU Per Hour
B92682 - Oracle Analytics-Professional	User Per Month
B92683 - Oracle Analytics-Enterprise	User Per Month
B94568 - Oracle Analytics Server for Oracle Cloud Infrastructure	OCPU Per Hour
Storage Cloud Service	
B89057 - Oracle Cloud Infrastructure-File Storage	Gigabyte Storage Capacity per Month
B90938 - Oracle Cloud Infrastructure-Streaming-PUT or GET	Gigabytes of Data Transferred
B90939 - Oracle Cloud Infrastructure-Streaming-Storage	Gigabyte Per Hour
B91445 - Oracle Cloud Infrastructure-Block Volume-Free	Gigabyte Storage Capacity per Month
B91627 - Oracle Cloud Infrastructure-Object Storage-Requests	10,000 Requests per Month 0 - 5 10,000 Requests per Month 5 - 999999999
B91628 - Oracle Cloud Infrastructure-Object Storage-Storage	Gigabyte Storage Capacity per Month 0 - 10 Gigabyte Storage Capacity per Month 10 - 999999999
B91633 - Oracle Cloud Infrastructure-Archive Storage-Free	Gigabyte Storage Capacity per Month 0 - 10 Gigabyte Storage Capacity per Month 10 - 999999999

Usage Item Description	Metric
B91961 - Oracle Cloud Infrastructure-Block Volume Storage	Gigabyte Storage Capacity Per Month
B91962 - Oracle Cloud Infrastructure-Block Volume Performance	Performance Units Per Gigabyte Per Month
B93000 - Oracle Cloud Infrastructure-Infrequent Access Storage-Storage	Gigabyte Storage Capacity Per Month 0 - 10 Gigabyte Storage Capacity Per Month 10 - 9999999999999999
B93001 - Oracle Cloud Infrastructure-Data Retrieval-Storage	Gigabyte Storage Retrieved Per Month 0 - 10 Gigabyte Storage Retrieved Per Month 10 - 9999999999999999
B95410 - Oracle ZFS Storage-High Availability	Instance Per Hour
Enterprise Integration Cloud Service	
B89639 - Oracle Integration Cloud Service-Standard	5K Messages Per Hour
B89640 - Oracle Integration Cloud Service-Enterprise	5K Messages Per Hour
B89643 - Oracle Integration Cloud Service-Standard-BYOL	20K Messages Per Hour
B89644 - Oracle Integration Cloud Service-Enterprise-BYOL	20K Messages Per Hour
B92450 - Oracle SOA Suite for Oracle Cloud Infrastructure	OCPU Per Hour
B92451 - Oracle SOA Suite for Oracle Cloud Infrastructure-with B2B Adapter for EDI	OCPU Per Hour
B95504 - Oracle Cloud Infrastructure Process Automation-User	Active Process User Per Hour
B95505 - Oracle Cloud Infrastructure Process Automation-Execution Pack	Execution Pack Per Month 0 - 1 Execution Pack Per Month 1 - 9999999999999999
Security and Identity Management Cloud Service	
B90328 - Oracle Cloud Infrastructure-Key Management-Private Vault	Virtual Private Vault Per Hour
B90555 - Oracle Identity Cloud Service-Enterprise User	User Per Month
B90556 - Oracle Identity Cloud Service-Consumer User	User Per Month
B90557 - Oracle Identity Cloud Service-Enterprise User-BYOL	User Per Month
B90558 - Oracle Identity Cloud Service-Consumer User-BYOL	User Per Month
B90936 - Oracle Identity Foundation Cloud Service	Each
B92092 - Oracle Cloud Infrastructure-KMS Vault-Key Versions	Key Version per Month 0 - 20 Key Version per Month 20 - 9999999999

Usage Item Description	Metric
B93493 - Oracle Cloud Infrastructure Identity and Access Management-External User	User Per Month
B93494 - Oracle Cloud Infrastructure Identity and Access Management-Oracle Apps Premium	User Per Month
B93495 - Oracle Cloud Infrastructure Identity and Access Management-Premium	User Per Month
B93496 - Oracle Cloud Infrastructure Identity and Access Management-SMS	1 SMS Message Sent 0 - 1000 1 SMS Message Sent 1000 - 999999999999999
B93497 - Oracle Cloud Infrastructure Identity and Access Management-Token	Token 0 - 10000 Token 10000 - 999999999999999
B93498 - Oracle Cloud Infrastructure Identity and Access Management-Replication	User Per Month
B94173 - Oracle Threat Intelligence Service	API Calls
B94277 - Oracle Cloud Infrastructure-Web Application Firewall-Requests	1,000,000 Incoming Requests Per Month 0 - 10 1,000,000 Incoming Requests Per Month 10 - 999999999999999
B94579 - Oracle Cloud Infrastructure-Web Application Firewall-Instance	Instance Per Month 0 - 1 Instance Per Month 1 - 999999999999999
B97172 - Oracle Access Governance for Oracle Cloud Infrastructure-Workforce User	Workforce User Per Month 0 - 100000 Workforce User Per Month 100000 - 999999999999999
B97173 - Oracle Access Governance for Oracle Workloads-Workforce User	Workforce User Per Month 0 - 10000 Workforce User Per Month 10000 - 30000 Workforce User Per Month 30000 - 999999999999999
B97179 - Oracle Access Governance Premium-Consumer User	Consumer User Per Month
B97180 - Oracle Access Governance for Oracle Workloads-Consumer User	Consumer User Per Month
B97181 - Oracle Access Governance Premium-Workforce User	Workforce User Per Month 0 - 10000 Workforce User Per Month 10000 - 30000 Workforce User Per Month 30000 - 999999999999999
B98100 - Oracle Cloud Infrastructure-External Key Management	Key Version Per Month
B99597 - Oracle Cloud Infrastructure-Dedicated Key Management-(Minimum 3 HSM Partitions)	HSM Partition Per Hour
Data Integration Cloud Service	
B88299 - Oracle Data Integrator Cloud Service	OCPU Per Hour
B88310 - Oracle GoldenGate Cloud Service-Enterprise	

Usage Item Description	Metric
B88398 - Oracle GoldenGate Cloud Service-Enterprise-BYOL	OCPU Per Hour
B88406 - Oracle Data Integrator Cloud Service-BYOL	OCPU Per Hour
B92598 - Oracle Cloud Infrastructure-Data Integration-Workspace	OCPU Per Hour
B92599 - Oracle Cloud Infrastructure-Data Integration	Workspace Usage per Hour
B92695 - Oracle Stream Analytics for Oracle Cloud Infrastructure	Gigabyte of Data Processed per Hour
B92992 - Oracle Cloud Infrastructure-GoldenGate	OCPU Per Hour
B92993 - Oracle Cloud Infrastructure-GoldenGate-BYOL	OCPU Per Hour
B93306 - Oracle Cloud Infrastructure-Data Integration-Pipeline Operator Execution	OCPU Per Hour
	Execution Hour 0 - 30
	Execution Hour 30 - 999999999999999
Network Cloud Service	
B107975 - Oracle Cloud Infrastructure-FastConnect 400 Gbps	Port Hour
B88325 - Oracle Cloud Infrastructure-FastConnect 1 Gbps	Port Hour
B88326 - Oracle Cloud Infrastructure-FastConnect 10 Gbps	Port Hour
B88327 - Oracle Cloud Infrastructure-Outbound Data Transfer-Originating in North America, Europe, and UK	Gigabyte Outbound Data Transfer Per Month 0 - 10240
	Gigabyte Outbound Data Transfer Per Month 10240 - 999999999999999
B88523 - Oracle Cloud Infrastructure-Email Delivery	1,000 Emails Sent 0 - 3
	1,000 Emails Sent 3 - 999999999999999
B88525 - Oracle Cloud Infrastructure-DNS	1,000,000 Queries
B90323 - Oracle Cloud Infrastructure-Health Checks-Basic	Endpoints Per Month
B90325 - Oracle Cloud Infrastructure-Health Checks-Premium	Endpoints Per Month
B90327 - Oracle Cloud Infrastructure-DNS Traffic Management	1,000,000 DNS Traffic Management Queries
B90925 - Oracle Cloud Infrastructure-Monitoring-Ingestion	Million Datapoints 0 - 500
	Million Datapoints 500 - 999999999
B90926 - Oracle Cloud Infrastructure-Monitoring-Retrieval	Million Datapoints 0 - 1000
	Million Datapoints 1000 - 999999999
B90940 - Oracle Cloud Infrastructure-Notifications-HTTPS Delivery	

Usage Item Description	Metric
B90941 - Oracle Cloud Infrastructure-Notifications-Email Delivery	Million Delivery Operations 0 - 1 Million Delivery Operations 1 - 999999999
B92593 - Oracle Cloud Infrastructure-Logging-Storage	1,000 Emails Sent 0 - 1 1,000 Emails Sent 1 - 999999999
B93004 - Oracle Cloud Infrastructure-Notifications-SMS Outbound to Country Zone 1	Gigabyte Log Storage Per Month 0 - 10 Gigabyte Log Storage Per Month 10 - 999999999
B93005 - Oracle Cloud Infrastructure-Notifications-SMS Outbound to Country Zone 2	1 SMS Message Sent 0 - 100 1 SMS Message Sent 100 - 999999999999999
B93006 - Oracle Cloud Infrastructure-Notifications-SMS Outbound to Country Zone 3	1 SMS Message Sent 0 - 100 1 SMS Message Sent 100 - 999999999999999
B93007 - Oracle Cloud Infrastructure-Notifications-SMS Outbound to Country Zone 4	1 SMS Message Sent 0 - 100 1 SMS Message Sent 100 - 999999999999999
B93008 - Oracle Cloud Infrastructure-Notifications-SMS Outbound to Country Zone 5	1 SMS Message Sent 0 - 100 1 SMS Message Sent 100 - 999999999999999
B93030 - Oracle Cloud Infrastructure-Load Balancer Base	Load Balancer Hour 0 - 744 Load Balancer Hour 744 - 999999999
B93031 - Oracle Cloud Infrastructure-Load Balancer Bandwidth	Mbps Per Hour 0 - 7440 Mbps Per Hour 7440 - 999999999
B93126 - Oracle Cloud Infrastructure-FastConnect 100Gbps	Port Hour
B93455 - Oracle Cloud Infrastructure-Outbound Data Transfer-Originating in APAC, Japan, and South America	Gigabyte Outbound Data Transfer Per Month 0 - 10240 Gigabyte Outbound Data Transfer Per Month 10240 - 999999999999999
B93456 - Oracle Cloud Infrastructure-Outbound Data Transfer-Originating in Middle East and Africa	Gigabyte Outbound Data Transfer Per Month 0 - 10240 Gigabyte Outbound Data Transfer Per Month 10240 - 999999999999999
B95697 - Oracle Cloud Infrastructure Queue	1,000,000 Requests 0 - 1 1,000,000 Requests 1 - 999999999999999
Compute Cloud Service	
B88315 - Oracle Cloud Infrastructure-Compute-Bare Metal Standard-X5	OCPU Per Hour
B88317 - Oracle Cloud Infrastructure-Compute-Virtual Machine Standard-X5	

Usage Item Description	Metric
B88513 - Oracle Cloud Infrastructure-Compute-Bare Metal Standard-X7	OCPU Per Hour
B88514 - Oracle Cloud Infrastructure-Compute-Virtual Machine Standard-X7	OCPU Per Hour
B88515 - Oracle Cloud Infrastructure-Compute-Bare Metal Dense I/O-X7	OCPU Per Hour
B88516 - Oracle Cloud Infrastructure-Compute-Virtual Machine Dense I/O-X7	OCPU Per Hour
B88517 - Oracle Cloud Infrastructure-Compute-Bare Metal GPU Standard-X7	GPU Per Hour
B88518 - Oracle Cloud Infrastructure-Compute-Virtual Machine GPU Standard-X7	GPU Per Hour
B89734 - Oracle Cloud Infrastructure-Compute-GPU Standard-V2	GPU Per Hour
B90398 - Oracle Cloud Infrastructure-Compute-HPC-X7	OCPU Per Hour
B90425 - Oracle Cloud Infrastructure-Compute-Standard-E2	OCPU Per Hour
B90617 - Oracle Functions-Execution Time-10,000 Gigabyte Memory	Seconds 0 - 40
B90618 - Oracle Functions-Invocations	Seconds 40 - 999999999
	1,000,000 Function Invocations 0 - 2
	1,000,000 Function Invocations 2 - 999999999
B91119 - Oracle Cloud Infrastructure-Compute-Bare Metal Standard-B1	OCPU Per Hour
B91120 - Oracle Cloud Infrastructure-Compute-Virtual Machine Standard-B1	OCPU Per Hour
B91372 - Oracle Cloud Infrastructure-Compute-Microsoft SQL Enterprise	OCPU Per Hour
B91373 - Oracle Cloud Infrastructure-Compute-Microsoft SQL Standard	OCPU Per Hour
B91444 - Oracle Cloud Infrastructure-Compute-Virtual Machine Standard-E2 Micro-Free	OCPU Per Hour
B92072 - Oracle Cloud Infrastructure-API Gateway-1,000,000 API Calls	1,000,000 API Calls Per Month
B92306 - Oracle Cloud Infrastructure-Compute-Standard-E3-OCPU	OCPU Per Hour
B92307 - Oracle Cloud Infrastructure-Compute-Standard-E3-Memory	Gigabyte Per Hour
B92740 - Oracle Cloud Infrastructure-Compute-GPU-E3	GPU Per Hour
B93113 - Oracle Cloud Infrastructure-Compute-Standard-E4	OCPU Per Hour
B93114 - Oracle Cloud Infrastructure-Compute-Standard-E4-Memory	Gigabyte Per Hour
B93121 - Oracle Cloud Infrastructure-Compute-Dense I/O-E4	

Usage Item Description	Metric
B93122 - Oracle Cloud Infrastructure-Compute-Dense I/O-E4	OCPU Per Hour
B93123 - Oracle Cloud Infrastructure-Compute-Dense I/O-E4	Gigabyte Memory Per Hour
B93297 - Oracle Cloud Infrastructure-Compute-Standard-A1	NVMe Terabyte Per Hour
B93298 - Oracle Cloud Infrastructure-Compute-Standard-A1-Memory	OCPU Per Hour 0 - 3000 OCPU Per Hour 3000 - 999999999999999
B93311 - Oracle Cloud Infrastructure-Compute-Optimized-X9	Gigabyte Per Hour 0 - 18000 Gigabyte Per Hour 18000 - 999999999999999
B93312 - Oracle Cloud Infrastructure-Compute-Optimized-X9-Memory	OCPU Per Hour
B93544 - Oracle Cloud Infrastructure-Compute-GPU-E4	Gigabyte Per Hour
B93704 - Oracle Cloud Infrastructure-Compute-GPU-T1	GPU Per Hour
B94176 - Oracle Cloud Infrastructure-Compute-Standard-X9	GPU Per Hour
B94177 - Oracle Cloud Infrastructure-Compute-Standard-X9-Memory	OCPU Per Hour
B95518 - Oracle Cloud Infrastructure-Secure Desktop	Gigabyte Per Hour
B95907 - Oracle Cloud Infrastructure-Compute-GPU-A100-v2	Desktop per Month
B95909 - Oracle Cloud Infrastructure-Compute-GPU-A10	GPU Per Hour
B96109 - Oracle Container Engine for Kubernetes-Virtual Node	GPU Per Hour
B96479 - Oracle Compute Cloud@Customer-Compute-Standard-E5	Virtual Node Per Hour
B96480 - Oracle Compute Cloud@Customer-Compute-Standard-E5-Memory	OCPU Per Hour
B96481 - Oracle Compute Cloud@Customer-Block Volume Storage-Balanced	Gibibyte Memory Per Hour
B96482 - Oracle Compute Cloud@Customer-Block Volume Storage-Performance	Gigabyte Storage Capacity Per Month
B96483 - Oracle Compute Cloud@Customer-File Storage	Gigabyte Storage Capacity Per Month
B96484 - Oracle Compute Cloud@Customer-Object Storage-Storage	Gigabyte Storage Capacity Per Month
B96485 - Oracle Compute Cloud@Customer-Load Balancer	Gigabyte Storage Capacity Per Month
B96531 - Oracle Cloud Infrastructure-Compute-HPC-E5	Load Balancer Hour
B96545 - Oracle Container Engine for Kubernetes-Enhanced Cluster	OCPU Per Hour

Usage Item Description	Metric
B97384 - Oracle Cloud Infrastructure-Compute-Standard-E5-OCPU	Cluster Per Hour
B97385 - Oracle Cloud Infrastructure-Compute-Standard-E5-Memory	OCPU Per Hour
B98202 - Oracle Cloud Infrastructure-Compute-Dense I/O-E5 OCPU	Gigabytes Per Hour
B98203 - Oracle Cloud Infrastructure-Compute-Dense I/O-E5 Memory	OCPU Per Hour
B98204 - Oracle Cloud Infrastructure-Compute-Dense I/O-E5 NVMe	Gigabyte Per Hour
B98415 - Oracle Cloud Infrastructure-Compute-GPU-H100	NVMe Terabyte Per Hour
	GPU Per Hour
Data Management Cloud Service	
B108030 - MySQL Database-ECPU	ECPU Per Hour
B88290 - Oracle Database Cloud Service-Enterprise Edition-General Purpose	OCPU Per Hour
B88291 - Oracle Database Cloud Service-Enterprise Edition Extreme Performance-General Purpose	OCPU Per Hour
B88292 - Oracle Database Cloud Service-Enterprise Edition High Performance-General Purpose	OCPU Per Hour
B88293 - Oracle Database Cloud Service-Standard Edition-General Purpose	OCPU Per Hour
B88294 - Oracle Database Backup Service-Outbound Data Transfer	Gigabyte Outbound Data Transfer per Month 0 - 1 Gigabyte Outbound Data Transfer per Month 1 - 10240 Gigabyte Outbound Data Transfer per Month 10240 - 51200 Gigabyte Outbound Data Transfer per Month 51200 - 153600 Gigabyte Outbound Data Transfer per Month 153600 - 512000 Gigabyte Outbound Data Transfer per Month 512000 - 999999999
B88295 - Oracle Database Backup Service-GET and all other Requests	10000 Requests Per Month
B88296 - Oracle Database Backup Service-PUT, COPY, POST or LIST Requests	1000 Requests Per Month
B88297 - Oracle Database Backup Service-Storage Capacity	Gigabyte Storage Capacity per Month 0 - 1024 Gigabyte Storage Capacity per Month 1024 - 51200 Gigabyte Storage Capacity per Month 51200 - 512000 Gigabyte Storage Capacity per Month 512000 - 1024000 Gigabyte Storage Capacity per Month 1024000 - 5120000 Gigabyte Storage Capacity per Month 5120000 - 999999999

Usage Item Description	Metric
B88402 - Oracle Database Cloud Service-Enterprise Edition Extreme Performance RAC-BYOL	OCPU Per Hour
B88404 - Oracle Database Cloud Service-All Editions-BYOL	OCPU Per Hour
B88592 - Exadata Database OCPU-Dedicated Infrastructure	OCPU Per Hour
B88847 - Exadata Database OCPU-Dedicated Infrastructure-BYOL	OCPU Per Hour
B89737 - Oracle NoSQL Database Cloud Service-Write	Write Unit Per Month
B89738 - Oracle NoSQL Database Cloud Service-Read	Read Unit Per Month
B89739 - Oracle NoSQL Database Cloud Service-Storage	Gigabyte Storage Capacity Per Month
B89999 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Quarter Rack-X7	Hosted Environment Per Hour
B90000 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Half Rack-X7	Hosted Environment Per Hour
B90001 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Full Rack-X7	Hosted Environment Per Hour
B90230 - Oracle Database Backup Cloud-Object Storage	Gigabyte Storage Capacity Per Month
B90231 - Oracle Database Backup Cloud-Archive Storage	Gigabyte Storage Capacity Per Month
B90455 - Oracle Autonomous Transaction Processing-Exadata Storage	Terabyte Storage Capacity Per Month
B90569 - Oracle Base Database Service-Standard	OCPU Per Hour
B90570 - Oracle Base Database Service-Enterprise	OCPU Per Hour
B90571 - Oracle Base Database Service-High Performance	OCPU Per Hour
B90572 - Oracle Base Database Service-Extreme Performance	OCPU Per Hour
B90573 - Oracle Base Database Service-BYOL	OCPU Per Hour
B90777 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Base System	Hosted Environment Per Hour
B91121 - Oracle Cloud SQL-Compute Capacity	OCPU Per Hour
B91128 - Oracle Big Data Service-Compute-Standard	OCPU Per Hour
B91129 - Oracle Big Data Service-Compute-Dense I/O	OCPU Per Hour
B91130 - Oracle Big Data Service-Compute-HPC	OCPU Per Hour
B91391 - Oracle Autonomous Data Warehouse-Free	

Usage Item Description	Metric
B91392 - Oracle Autonomous Data Warehouse-Exadata Storage-Free	OCPU Per Hour
B91393 - Oracle Autonomous Transaction Processing-Free	Terabyte Storage Capacity Per Month
B91394 - Oracle Autonomous Transaction Processing-Exadata Storage-Free	OCPU Per Hour
B91535 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Quarter Rack-X8	Terabyte Storage Capacity Per Month
B91536 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Half Rack-X8	Hosted Environment Per Hour
B91537 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Full Rack-X8	Hosted Environment Per Hour
B91631 - Oracle Cloud Infrastructure-Data Safe for Database Cloud Service-Audit Record Collection Over 1 Million Records	Hosted Environment Per Hour
B91632 - Oracle Cloud Infrastructure-Data Safe for Database Cloud Service	10,000 Audit Records Per Target Per Month
B92023 - MySQL HeatWave-Standard	Each
B92024 - MySQL Database for HeatWave-Standard	Node Per Hour
B92181 - Oracle Autonomous Transaction Processing-Dedicated	Node Per Hour
B92182 - Oracle Autonomous Data Warehouse-Dedicated	OCPU Per Hour
B92183 - Oracle Autonomous Transaction Processing-Dedicated-BYOL	OCPU Per Hour
B92184 - Oracle Autonomous Data Warehouse-Dedicated-BYOL	OCPU Per Hour
B92212 - Oracle Autonomous JSON Database	OCPU Per Hour
B92380 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Quarter Rack-X8M	OCPU Per Hour
B92381 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Database Server-X8M	Hosted Environment Per Hour
B92382 - Oracle Cloud Infrastructure-Database Exadata Infrastructure-Storage Server-X8M	Hosted Environment Per Hour
B92425 - MySQL Database-Standard-E2	Hosted Environment Per Hour
B92426 - MySQL Database-Storage	OCPU Per Hour
B92483 - MySQL Database-Backup Storage	Gigabyte Storage Capacity per Month
B92627 - Oracle NoSQL Database Cloud-Write-Free	Gigabyte Storage Capacity per Month
	Write Unit Per Month

Usage Item Description	Metric
B92628 - Oracle NoSQL Database Cloud-Read-Free	Read Unit Per Month
B92629 - Oracle NoSQL Database Cloud-Storage-Free	Gigabyte Storage Capacity Per Month
B92733 - Oracle Cloud Infrastructure-Data Safe for On-Premises Databases & Databases on Compute	Target Database Per Month 0 - 100 Target Database Per Month 100 - 300 Target Database Per Month 300 - 500 Target Database Per Month 500 - 999999999999999
B92734 - Oracle Cloud Infrastructure-Data Safe for On-Premises Databases & Databases on Compute	10,000 Audit Records Per Target Per Month
B92759 - MySQL Analytics-Bare Metal Standard-E2	Node Per Hour
B92807 - MySQL Database-Bare Metal Standard-E2	Node Per Hour
B92911 - Oracle APEX Application Development	OCPU Per Hour
B92962 - MySQL Database-Standard-E3	OCPU Per Hour
B92963 - MySQL Database-Standard-E3-Memory	Gigabyte Per Hour
B93199 - Oracle Cloud Infrastructure Database Migration	Migration Hour
B93320 - Oracle APEX Application Development-Free	OCPU Per Hour
B93380 - Exadata Cloud Infrastructure-Quarter Rack-X9M	Hosted Environment Per Hour
B93381 - Exadata Cloud Infrastructure-Database Server-X9M	Hosted Environment Per Hour
B93382 - Exadata Cloud Infrastructure-Storage Server-X9M	Hosted Environment Per Hour
B93546 - MySQL Database for HeatWave-Bare Metal Standard	Node Per Hour
B93709 - Oracle Cloud Infrastructure Search with OpenSearch HA	Node Per Hour
B93710 - Oracle NoSQL Database Cloud-Write-Auto	Write Unit Per Month
B93711 - Oracle NoSQL Database Cloud-Read-Auto	Read Unit Per Month
B93712 - Oracle NoSQL Database Cloud-Hosted Environment	Hosted Environment Per Month
B95240 - Oracle Database Autonomous Recovery Service	Virtualized GB Per Month
B95241 - Oracle Database Zero Data Loss Autonomous Recovery Service	Virtualized GB Per Month

Usage Item Description	Metric
B95264 - Oracle Cloud Infrastructure Application Performance Monitoring Service-Stack Monitoring	Standard Edition
B95427 - MySQL Database-AWS-Storage	Gigabyte Storage Capacity Per Month
B95428 - MySQL Database-AWS-Backup Storage	Gigabyte Storage Capacity Per Month
B95435 - MySQL Database-Standard-AMD E4-Compute	OCPU Per Hour
B95436 - MySQL Database-Standard-AMD E4-Memory	Gigabyte Per Hour
B95437 - MySQL Database-Standard-Intel X7-Compute	OCPU Per Hour
B95438 - MySQL Database-Standard-Intel X7-Memory	Gigabyte Per Hour
B95439 - MySQL Database-Standard-Intel X9-Compute	OCPU Per Hour
B95440 - MySQL Database-Standard-Intel X9-Memory	Gigabyte Per Hour
B95441 - MySQL Database-Optimized-Intel X9-Compute	OCPU Per Hour
B95442 - MySQL Database-Optimized-Intel X9-Memory	Gigabyte Per Hour
B95485 - Oracle Cloud Infrastructure Full Stack Disaster Recovery Service	OCPU Per Hour
B95701 - Oracle Autonomous Data Warehouse-ECPU	ECPU Per Hour
B95702 - Oracle Autonomous Transaction Processing-ECPU	ECPU Per Hour
B95703 - Oracle Autonomous Data Warehouse-ECPU-BYOL	ECPU Per Hour
B95704 - Oracle Autonomous Transaction Processing-ECPU-BYOL	ECPU Per Hour
B95706 - Oracle Autonomous Database Storage for Transaction Processing	Gigabyte Storage Capacity Per Month
B95708 - Oracle Autonomous Data Warehouse-Exadata Cloud@Customer-ECPU	ECPU Per Hour
B95709 - Oracle Autonomous Transaction Processing-Exadata Cloud@Customer-ECPU	ECPU Per Hour
B95710 - Oracle Autonomous Data Warehouse-Exadata Cloud@Customer-ECPU-BYOL	ECPU Per Hour
B95711 - Oracle Autonomous Transaction Processing-Exadata Cloud@Customer-ECPU-BYOL	ECPU Per Hour
B95712 - Oracle Autonomous Data Warehouse-Dedicated-ECPU	ECPU Per Hour
B95713 - Oracle Autonomous Transaction Processing-Dedicated-ECPU	ECPU Per Hour

Usage Item Description	Metric
B95714 - Oracle Autonomous Data Warehouse-Dedicated-ECPU-BYOL	ECPU Per Hour
B95715 - Oracle Autonomous Transaction Processing-Dedicated-ECPU-BYOL	ECPU Per Hour
B95754 - Oracle Autonomous Database Storage	Gigabyte Storage Capacity Per Month
B96157 - MySQL HeatWave-AWS	HeatWave Capacity Per Hour
B96158 - MySQL Database-AWS-ECPU	ECPU Per Hour
B96159 - MySQL Database-AWS-Outbound Data Transfer-Inter AWS Region	Gigabyte of Data Transferred
B96160 - MySQL Database-AWS-Outbound Data Transfer-To Internet	Gigabyte of Data Transferred
B96625 - Oracle Cloud Infrastructure-HeatWave-Storage	Gigabyte Storage Capacity Per Month
B96626 - Oracle Cloud Infrastructure-HeatWave	HeatWave Capacity Per Hour
B97191 - Oracle NoSQL Database Cloud-Regional Replicated Write	Write Unit Per Month
B97197 - Oracle Base Database Service on Arm-Enterprise	OCPU Per Hour
B97198 - Oracle Base Database Service on Arm-High Performance	OCPU Per Hour
B97199 - Oracle Base Database Service on Arm-Extreme Performance	OCPU Per Hour
B97200 - Oracle Base Database Service on Arm-BYOL	OCPU Per Hour
B98217 - Oracle Cloud Infrastructure Cache with Redis-Low Memory (up to 10 GB per node)	Redis Memory Gigabyte Per Hour
B99060 - Oracle Cloud Infrastructure Database with PostgreSQL-X86	OCPU Per Hour
B99062 - Oracle Cloud Infrastructure Database Optimized Storage	Gigabyte Storage Capacity Per Month
B99591 - Oracle Cloud Infrastructure Cache with Redis-High Memory (over 10 GB per node)	Redis Memory Gigabyte Per Hour
B99593 - Oracle Globally Distributed Autonomous Transaction Processing-Dedicated	ECPU Per Hour
B99594 - Oracle Globally Distributed Autonomous Transaction Processing-Dedicated-BYOL	ECPU Per Hour
B99595 - Oracle Globally Distributed Autonomous Data Warehouse-Dedicated	ECPU Per Hour
B99596 - Oracle Globally Distributed Autonomous Data Warehouse-Dedicated-BYOL	ECPU Per Hour
B99708 - Oracle Autonomous JSON Database-ECPU	ECPU Per Hour

Usage Item Description	Metric
B99709 - Oracle APEX Application Development-ECPU	ECPU Per Hour
	ECPU Per Hour
Not Discount Eligible	
B108077 - Oracle Cloud Infrastructure Generative AI-Large Cohere	10,000 Transactions
B108078 - Oracle Cloud Infrastructure Generative AI-Small Cohere	10,000 Transactions
B108079 - Oracle Cloud Infrastructure Generative AI-Embed Cohere	10,000 Transactions
B108082 - Oracle Cloud Infrastructure Generative AI-Large Cohere-Dedicated	AI Unit Per Hour
B108083 - Oracle Cloud Infrastructure Generative AI-Small Cohere-Dedicated	AI Unit Per Hour
B108084 - Oracle Cloud Infrastructure Generative AI-Embed Cohere-Dedicated	AI Unit Per Hour
B88318 - Oracle Cloud Infrastructure-Compute-Windows OS	OCPU Per Hour
B92686 - Oracle Analytics for Fusion Applications-Free	Hosted Named User
B93307 - Autonomous JSON Database-Free	OCPU Per Hour
B95403 - Oracle Cloud Infrastructure-Network Firewall Instance	Instance Per Hour
B95404 - Oracle Cloud Infrastructure-Network Firewall Data Processing	Gigabyte of Data Processed 0 - 10240 Gigabyte of Data Processed 10240 - 999999999999999

This pricing example is provided for evaluation purposes. This quote is intended to further our discussions, it is not eligible for acceptance by you and is not a part of a binding contract between us for the products and/or services specified. User minimums and licensing rules may apply to the products specified. If you would like to purchase the products and/or services specified in this draft quotation, please ask Oracle to issue you a formal Quote (which may include an Oracle agreement if you do not already have an agreement with Oracle) for your acceptance and execution and return to Oracle. Your order will be effective only upon Oracle's acceptance of the formal Quote (and the Oracle agreement, if required).

RESOLUTION NO. 2024-61

A resolution approving an agreement for annual aggregate spend with Oracle America, Inc. for Cloud Services

Section 1.

The City and County Manager, or a designee, is authorized to approve agreements and purchase orders with Oracle America, Inc., during the 2024 calendar year, with aggregate total payments not to exceed \$234,153 for 2024.

Section 2.

The Mayor or the Mayor Pro Tem is authorized to sign, and the Office of the City and County Clerk to attest, the agreement and associated order documents in a form approved by the City and County Attorney.

Section 3.

The City and County Manager, or a designee, is authorized to approve agreements and purchase orders to Oracle America, Inc. for three additional one-year periods subject to annual budget appropriation approved by the City Council. Such purchase orders shall not exceed the appropriated budget.

Section 4.

This resolution is effective upon its approval by the City Council.

Approved on May 28, 2024

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City of Broomfield

City Council Regular Meeting

IGA with Central Colorado Water Conservancy District

A resolution approving an Intergovernmental Agreement with the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District for Joint Operation of Water Storage and Use of Augmentation Water

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6G
Presented By		
Ken Rutt, Director of Public Works		
Community Goals		

Overview

[View Correspondence](#)

The City and County of Broomfield owns, operates, and maintains a non-potable water delivery system that is used to irrigate parks, landscaped rights-of-way, and large commercial areas. Broomfield has been finalizing the plans for several capital projects to fully utilize the city's non-potable water rights. One capital project integral to Broomfield's complete utilization of its non-potable supplies is the completion of Heit Pit, a gravel pit storage reservoir located near Fort Lupton, Colorado, approximately 1,200 feet west of the South Platte River.

Heit Pit was acquired by Pulte Home Corporation as part of the transfer of water rights and non-potable infrastructure for the Anthem development. Once fully developed, Heit Pit will be used to deliver substitute water supplies to the South Platte River so Broomfield can use Colorado-Big Thompson (C-BT) project effluent for its non-potable system. The projected storage capacity of Heit Pit is around 1,000 acre-feet.

The proposed IGA would ultimately allow Broomfield to begin construction of the Little Dry Creek diversion structure at Heit Pit which is integral to the overall operation of this facility.

Attachments

[Memo for IGA with Central Colorado Water Conservancy District.pdf](#)

[Resolution No. 2024-58.pdf](#)

[Broomfield_IGA_Executed_20240416.pdf](#)

Summary

[View Correspondence](#)

The City and County of Broomfield owns, operates, and maintains a non-potable water delivery system that is used to irrigate parks, landscaped rights-of-way, and large commercial areas. Broomfield has been finalizing the plans for several capital projects to fully utilize the city's non-potable water rights. One capital project integral to Broomfield's complete utilization of its non-potable supplies is the completion of Heit Pit, a gravel pit storage reservoir located near Fort Lupton, Colorado, approximately 1,200 feet west of the South Platte River. On January 13, 2009, Council approved an agreement with Pulte Home Corporation which included acquiring Heit Pit as part of the transfer of water rights and non-potable infrastructure for the Anthem development. Once fully developed, Heit Pit will be used to deliver substitute water supplies to the South Platte River so Broomfield can use Colorado-Big Thompson (C-BT) project effluent for its non-potable system. The projected storage capacity of Heit Pit is around 1,000 acre-feet.

Heit Pit is currently being mined for sand and gravel. Mining is expected to be complete in 2025, after which Broomfield's use as a water storage facility may begin. Three separate improvement projects are needed to convert Heit Pit from an excavated pit to a functional reservoir facility and fully integrate it into Broomfield's non-potable system. These include a pump station to make releases from the pit to the South Platte River and a wellfield and river diversion structure (herein referred to as the Little Dry Creek diversion structure) to fill the pit using the various water rights in Broomfield's portfolio. Council authorized funds for each of these three projects in the [2023 2nd Budget Amendment](#).

Construction of the Little Dry Creek diversion structure requires an easement from the Central Colorado Water Conservancy District (Central). Central owns and operates the gravel pit adjacent to Heit Pit, known as Koenig Pit, and has worked with Broomfield over the years to construct certain shared infrastructure and allow for the commingling of each parties' water supplies within the two pits. In 2006, Broomfield entered into an Intergovernmental Agreement (IGA) with Central which allowed the city to use Central's ditch agreements, infrastructure, and storage capacity in Koenig in the interim until Heit Pit was constructed in return for allowing Central, from time to time, to lease Broomfield's excess water. This IGA expired in 2017.

In 2009, Broomfield entered into a second IGA with Central which contemplated the construction of shared conveyance facilities and outlet works to transfer water to and from the South Platte River and Koenig and Heit Pit. The IGA presented herein restates and supersedes in its entirety the 2009 IGA and provides for future use by the Parties of each other's excess water supplies similar to the 2006 IGA, in addition to:

- A new easement on Central's property for the purposes of construction, operation, maintenance, and repair of the proposed Little Dry Creek diversion structure.
- Dedication of 10% (or up to 3 cfs or cubic feet per second) of the overall capacity of the Little Dry Creek diversion structure to Central as consideration for the easement described above.
- Assignment of each parties' proportionate share of the ongoing cost of operation, maintenance and repair of the Little Dry Creek Diversion Structure.
- Compensation of \$50,000/year to Central in exchange for dedicated field staff, to assist with routine operation and maintenance of Heit Pit and related facilities, once operational.
- Contemplation of a separate lease agreement which would assist Broomfield in meeting its return flow obligations owed to Godding Hollow associated with its change of water rights application pending in District Court, Water Division 1, Case No. 20CW3216.

The proposed IGA would ultimately allow Broomfield to begin construction of the Little Dry Creek diversion structure at Heit Pit which is integral to the overall operation of this facility.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Annual Amount
Water Supply Operating Budget - Professional Services* (40-35100-53170 XWR0035)	\$50,000
Annual compensation to Central for field staff support	-\$50,000
Projected Balance	\$0

*Annual funds authorized by Council in the [2023 Budget](#)

Prior Council or Other Entity Actions

- On May 23, 2006, Council approved Resolution No. 2006-25, authorizing an IGA with Northern Colorado Water Conservancy District to provide substitute supplies for Colorado-Big Thompson project effluent.
- On January 13, 2009, Council approved Ordinance No. 1908, authorizing an agreement with Pulte Homes to acquire various reuse system water rights and infrastructure improvements.
- On August 25, 2009, Council approved Resolution No. 2009-144, authorizing an IGA with the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District, for the Construction of Water Facility Improvements for the Heit and Koenig Pits.
- On August 25, 2009, Council approved Resolution No. 2009-145, authorizing a carriage agreement with the Meadow Island No. 1 Ditch Company, to allow for Broomfield to utilize excess ditch capacity to carry water from the South Platte River to the Heit Pit.
- On July 9, 2013, Council approved Resolution Nos. 2013-97 and 2013-98 authorizing acquisition of utility easements in the vicinity of the Heit Pit.
- On June 28, 2016, Council approved Resolution No. 2016-100, authorizing an Agreement with Sunrise Engineering, Inc. for Heit Pit Owner's Representative Services.
- On [November 14, 2017](#), Council approved Resolution No. 2017-171, authorizing an Agreement with CGRS, Inc., for Construction of the Inlet/Outlet Facilities for Heit Pit Reservoir.
- On [August 10, 2021](#), Council approved Resolution No. 2021-138, authorizing an Agreement with Civil Resources, LLC for engineering and construction oversight of the remaining Heit Pit Campus infrastructure.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve the IGA, the appropriate motion is...

That Resolution 2024-58 be adopted.

Alternatives

Do not proceed with the IGA at this time.

RESOLUTION NO. 2024-58

A resolution approving an Intergovernmental Agreement with the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District for Joint Operation of Water Storage and Use of Augmentation Water

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The Intergovernmental Agreement attached hereto by and between the City and County of Broomfield and the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District for the Joint Operation of Water Storage and Use of Augmentation Water is approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the Intergovernmental Agreement, in form approved by the City and County Attorney.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on May 28, 2024

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

**RESTATED INTERGOVERNMENTAL AGREEMENT BETWEEN THE CITY AND
COUNTY OF BROOMFIELD AND THE GROUNDWATER MANAGEMENT
SUBDISTRICT OF THE CENTRAL COLORADO WATER CONSERVANCY
DISTRICT FOR JOINT OPERATION OF WATER STORAGE AND USE OF
AUGMENTATION WATER**

This Restated Intergovernmental Agreement (“Agreement”) restates and supersedes the Intergovernmental Agreement for the Construction of Conveyance Facilities and Outlet Works to Transfer Water to and From the South Platte River and Koenig and Heit Pit dated August 25, 2009, and is executed as set forth below, to be effective on April 16, 2024, by and between the City and County of Broomfield, a Colorado county, home rule city and municipal corporation (“Broomfield”) and the Ground Water Management Subdistrict of the Central Colorado Water Conservancy District, a quasi-municipal entity and political subdivision of the State of Colorado (“Central”), collectively “the Parties”.

RECITALS

WHEREAS, C.R.S. § 29-1-201, as amended, authorizes the Parties to cooperate and contract with one another with respect to functions lawfully authorized to each of the Parties and the people of the State of Colorado have encouraged such cooperation and contracting through the adoption of Colorado Constitution, Article XIV, §18(2); and

WHEREAS, the purpose of Part 2 of Article 1 of Title 29, C.R.S., is to implement the aforesaid provisions of the Colorado Constitution and authorize the Parties to enter into intergovernmental agreements; and

WHEREAS, C.R.S. § 29-1-203(1) provides, inter alia, that governmental units may cooperate with one another to provide any function, service, or facility lawfully authorized to each of the contracting units; and

WHEREAS, Broomfield owns and operates a municipal water system which supplies potable and non-potable water within its service area, as it may be revised from time to time, and extraterritorially by contract; and

WHEREAS, Central develops and implements water conservation, augmentation and management strategies, including provision of augmentation supplies, to protect water resources for the benefit of its customers and those within its districts; and

WHEREAS, Broomfield owns and operates the Heit Pit storage structure and water rights associated therewith; and

WHEREAS, Central owns and operates the Koenig Pit storage structure and water rights associated therewith; and

WHEREAS, the Heit Pit and Koenig Pit are located directly adjacent to each other, separated by Weld County Road 20, as depicted on the attached **Exhibit A**, and are sometimes collectively referred to in this IGA as the “Reservoirs”; and

WHEREAS, the Parties divert their water rights from Little Dry Creek and the South Platte River for storage in Heit Pit and Koenig Pit and subsequent release therefrom to Little Dry Creek and the South Platte River for augmentation and municipal purposes; and

WHEREAS, Broomfield and Central entered into an Intergovernmental Agreement for Exchange of Water Storage and Augmentation Water ("2006 IGA"), which has now expired, pursuant to which Broomfield agreed to allow Central to use certain Broomfield excess augmentation supplies in return for Broomfield's use of Central's augmentation and storage infrastructure, including Koenig Pit; and

WHEREAS, Broomfield and Central entered into an Intergovernmental Agreement for the Construction of Conveyance Facilities and Outlet Works to Transfer Water to and From the South Platte River and Koenig and Heit Pit ("2009 IGA"); and

WHEREAS, the Parties wish to restate and supersede in its entirety the 2009 IGA and to provide for future use by the Parties of each other's excess augmentation supplies similar to the 2006 IGA; and

WHEREAS, the Parties also wish to provide additional terms and conditions for construction, operation and maintenance of a diversion and augmentation station structure on Little Dry Creek for delivery of water to the Heit Pit and Koenig Pit for storage and for measurement of augmentation deliveries to Little Dry Creek; and

WHEREAS, the governing bodies of the Parties have each authorized the execution and delivery of this Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual undertakings herein contained and the mutual benefits to the Parties, the receipt and sufficiency of which are acknowledged, the Parties agree as follows:

1. Description of South Platte Conveyance Facilities: Pursuant to the 2009 IGA, the parties jointly designed and completed construction of the following conveyance facilities for delivery of South Platte River water to and from Heit Pit, for Broomfield, and to and from Koenig Pit, for Central:
 - 1.1. a shared junction box to connect two 18-inch outlet pipelines from Heit Pit and Koenig Pit to supply water to the gravity pipeline described in Paragraph 1.2;
 - 1.2. a 36-inch diameter gravity pipeline connected to the shared junction box to carry water from Koenig Pit and Heit Pit to the South Platte River and measuring structure located near the South Platte River to measure flows discharged into the River.

(Hereinafter "South Platte Conveyance Facilities").

2. Description of Little Dry Creek Structures: Broomfield intends to construct, operate and maintain a new diversion structure and augmentation station on Little Dry Creek where it

converges with Meadow Island Ditch, at the approximate location depicted on **Exhibit B** for purposes of diversion of the parties' respective water rights into storage in Heit Pit and Koenig Pit and for measurement and delivery back to Little Dry Creek. The water will be diverted from Little Dry Creek into a pipeline for delivery to a main manhole. Broomfield will deliver its water to Heit Pit from the main manhole, and Central will deliver its water from the main manhole into a second manhole for delivery of Central's water to Koenig Pit. The Little Dry Creek diversion structure, augmentation station, pipeline and main manhole are hereinafter collectively referred to as the "LDC Diversion Structure."

3. Design and Construction:

3.1. South Platte Conveyance Facilities' Design and Construction:

3.1.1. Construction of the South Platte Conveyance Facilities is complete. Pursuant to the 2009 IGA, the parties shared in the costs of design and construction of the South Platte Conveyance Facilities. The parties acknowledge that they have satisfied their respective 2009 IGA construction and payment obligations. Any structure that was proposed for construction in the 2009 IGA that was not constructed is no longer proposed for construction and the Parties are hereby relieved of any obligations related to any such structures.

3.1.2. Pursuant to the 2006 IGA, the Parties were to investigate construction of a hydraulic connection between the Koenig Pit and Heit Pit. The Parties conducted the investigation and have determined that a hydraulic connection between the Koenig Pit and Heit Pit is not technically or financially feasible at this time.

3.2. LDC Diversion Structure: The design and construction of the LDC Diversion Structure, with the exception of the second manhole, will be the sole responsibility and cost of Broomfield. The design, construction, maintenance and repair of the second manhole shall be the sole responsibility and cost of Central.

4. Use of South Platte Conveyance Facilities and LDC Diversion Structure:

4.1.1. The water diverted from either the South Platte Conveyance Facilities or LDC Diversion Structure and delivered to each Reservoir will be metered or measured separately by a measuring device installed and maintained by Broomfield for Heit Pit, and a measuring device installed and maintained by Central for Koenig Pit.

4.1.2. The parties shall share the capacity of the South Platte Conveyance Facilities 50/50. At times when either Party is not using its full 50% share of the capacity of the South Platte Conveyance Facilities, either party may use the other party's capacity upon prior notice to the other party. Said use may continue until either party gives notice to the other that it needs to utilize all or a portion of its 50% capacity.

4.1.3. The LDC Diversion Structure is anticipated to have a total capacity of thirty (30) cfs. As consideration for the easement described below in paragraph 4.2.2, Broomfield agrees to dedicate 3 c.f.s. of the capacity of the diversion structure for

Central's use. Broomfield retains the right to utilize the remaining capacity. If one party is not taking its full allotted flow in the LDC Diversion Structure, the other party shall be permitted to utilize the former party's capacity.

- 4.1.4. The parties agree to allow commingling of water and possible storage of water by Central in Heit Pit and possible storage of water by Broomfield in Koenig pit upon notice and mutual agreement between the parties.

4.2. Easements:

- 4.2.1. South Platte Conveyance Facilities: Pursuant to the 2009 IGA, Central confirms that it granted Broomfield an easement for operation and maintenance of the South Platte Conveyance Facilities, dated September 22, 2009, and recorded at Reception #3656370 on October 28, 2009 in Weld County Clerk and Recorder's Office. In addition, Central confirms that it will utilize the easements granted to Central in the Easement Agreement, recorded at Reception No. 2766178 on May 4, 2000, for the purposes of ongoing maintenance and operation of the South Platte Conveyance Facilities.

- 4.2.2. LDC Diversion Structure: Central owns the land on which the LDC Diversion Structure will be located. As consideration for use of up to a maximum of 3 cfs of capacity in the LDC Diversion Structure granted to Central herein, Central agrees to grant Broomfield an easement on its property for purposes of construction, operation, maintenance and repair of the LDC Diversion Structure in the form attached to this Agreement.

4.3. Ongoing Maintenance, Operation and Repair:

- 4.3.1. The Parties hereby designate Central to perform and/or contract for the operation and maintenance of the South Platte Conveyance Facilities and the LDC Diversion Structure pursuant to the foregoing paragraph 4.3.1 during the term of this Agreement. Broomfield shall provide Central 24 hours advance notice of any adjustments needed to the LDC Diversion Structure and/or South Platte Conveyance Facilities as they pertain to Heit Pit.
- 4.3.2. Broomfield shall reimburse Central its portion of the costs for the operation and maintenance of the South Platte Conveyance Facilities and LDC Diversion Structure annually within thirty (30) days of receipt of an invoice from Central for such costs. The Party responsible for operation and maintenance of the facilities may be changed upon mutual written agreement of the Parties.
- 4.3.3. Central maintains staffed facilities at the Koenig Pit for routine operation, maintenance and repair of Koenig Pit and related facilities. Upon completion of construction of Heit Pit and related facilities, which is expected to be Fall 2024, Broomfield will need assistance with routine operation, maintenance and repair of

such facilities. Central agrees to assist Broomfield with its routine operation and maintenance of Heit Pit and related facilities, as follows:

- 4.3.3.1. Visually inspect the system components during times of operation and promptly notify designated Broomfield staff of any irregularities, such as mechanical failures, damage to property, or system inefficiencies.
- 4.3.3.2. Assist as requested with coordinating sediment and debris removal from Broomfield's pump station facilities (i.e. the wetwell and junction box structure where the Heit and Koenig discharges join to the gravity outfall to the South Platte River) with a vac truck contractor.
- 4.3.3.3. Remove debris from the LDC Diversion Structure and the downstream Lupton Meadows Ditch check structure as needed.
- 4.3.3.4. When requested by Broomfield, exercise valves and other mechanical components of Broomfield's system.
- 4.3.3.5. Take manual readings and maintain records of Heit Pit stage and flow diversions upon request.
- 4.3.3.6. It is understood that larger maintenance and replacement of mechanical system components, and mowing/spraying/maintaining the perimeter of the Heit Pit, will be contracted out by Broomfield to a third party. However, Central may assist with smaller maintenance items and repairs as they arise.

5. Costs of Operation, Maintenance and Repair:

- 5.1. The Parties agree that each will pay 50% of the costs for ongoing operation, maintenance and repair of the South Platte Conveyance Facilities, and that Broomfield will pay 90% and Central will pay 10% for ongoing operation, maintenance and repair of the LDC Diversion Structure.
- 5.2. Each June the Parties shall meet and confer in good faith to determine the extent and necessity for repairs and maintenance to or replacement of any component of the South Platte Conveyance Facilities and/or the LDC Diversion Structure, and shall agree upon an annual operation and maintenance budget therefor before June 30th of each year for the following calendar year. Each party shall use its best efforts to annually appropriate sufficient funds to pay its respective shares of the costs associated therewith.
- 5.3. The Parties may agree in writing at any time after the effective date of this Agreement to adjust the cost split based on actual usage of the South Platte Conveyance Facilities and LDC Diversion Structure.
- 5.4. In addition to the shared costs for ongoing operation and maintenance of the South Platte Conveyance Facilities and LDC Diversion Structure, Broomfield shall pay Central \$50,000/year for routine operation and maintenance of the Heit Pit as described in paragraph 4.3.3, above. This compensation is based on the estimated time for routine

operation and maintenance of the Heit Pit on an annual basis. For the first year of operation, Broomfield shall provide one-month advance written notice to Central that construction of Heit Pit is complete and operational, and Broomfield shall pay the prorated amount of the annual \$50,000 charge based on the date of Heit Pit completion. The Parties may agree in writing to adjust the compensation based on the actual time required for routine operation and maintenance of the Heit Pit as well as increased costs of staffing the facilities at the Koenig Pit.

6. Excess Water Supplies:

6.1. Broomfield's Excess Augmentation or Replacement Supplies:

6.1.1. Broomfield owns or controls fully consumptive water and augmentation water supplies such as Windy Gap reusable effluent and effluent from the Consolidated Mutual Water Company (collectively "Augmentation Water"), and historical consumptive use credits for water rights that have been changed from agricultural use to municipal and augmentation uses in Case No. 2005CW290 ("CU Credits").

6.1.2. Central has a need for fully consumable water to replace ongoing depletions associated with the augmentation plans that Central operates including the augmentation plans decreed in Case Nos. 02CW335, 03CW99, 06CW274 and 16CW3202 and such other uses as Central may deem appropriate.

6.1.3. In the event that Broomfield determines in its sole discretion that it has excess Augmentation Water and/or CU Credits that it can make available for lease to Central, Broomfield shall notify Central of the amount and timing of such excess Augmentation Water and/or CU Credits, including the maximum monthly and annual amounts of such water. Central shall notify Broomfield of the amount it wishes to lease.

6.2. Central's Excess Storage, Augmentation or Replacement Supplies:

6.2.1. Godding Hollow Water: Central owns or controls water rights for fully consumable water and augmentation water supplies that are available for release to Godding Hollow and/or the St. Vrain River for replacement purposes.

6.2.1.1. From time to time, Broomfield may have certain return flow obligations owed to Godding Hollow associated with its change of water rights application pending in District Court, Water Division 1, Case No. 20CW3216. Broomfield may need fully consumable water for replacement of historical return flows on Godding Hollow.

6.2.1.2. If Broomfield requires water to be delivered to Godding Hollow at or below the Shores Reservoir Inlet on Godding Hollow and/or to St. Vrain Creek to make replacements to water rights on Godding Hollow or St. Vrain Creek, Central agrees to lease such replacement water to Broomfield for such purposes pursuant to a lease in the amount of 33 acre-feet per year which shall be negotiated by the parties promptly after execution of this Agreement, such

lease to have a term of at least ten years with an option to renew. Broomfield shall notify Central of the amount and timing of such replacement water it needs for the upcoming year.

6.2.2. Koenig Pit Construction Water: From time to time, Broomfield may need fully consumable water stored in Koenig Pit for construction of facilities related to Heit Pit and the LDC Diversion Structure. Central agrees to lease up to one acre-foot of excess supplies stored in Koenig Pit to Broomfield for such purposes. Central may lease more than one-acre foot of water to Broomfield if it determines in its sole discretion that it has excess supplies available. Broomfield shall notify Central of the amount and timing of such water needed.

6.3. Payment shall be made for leased supplies provided by either party annually and within thirty days of receipt of an invoice for the amount due. The Parties may agree in writing at any time after the effective date of this Agreement to adjust the cost to the price per acre-foot for leased supplies referenced in paragraphs 6.1.4 and 6.2.3.

7. Additional Terms and Conditions:

7.1. Each Party shall be responsible for obtaining any Water Court decree or other approval necessary for use of its water rights in the facilities described herein.

7.2. The Parties may individually insure their respective interests in the South Platte Conveyance Facilities, LDC Diversion Structure, Heit Pit and Koenig Pit, as each deems appropriate, or the Parties may agree to obtain joint insurance coverage on behalf of both Parties. To the extent allowed by law, each Party agrees to indemnify, defend and hold harmless the other Party from and against any and all losses, damages, costs, expenses, claims, and demands arising out of or relating to the Party's and its employees' and agents' acts or omissions with regard to the facilities. Neither Central or Broomfield is hereby waiving any of its rights or privileges under the Colorado Governmental Immunity Act, C.R.S. §24-10-101 et seq., or other similar statute.

7.3. Each Party shall be responsible for accounting at least monthly (or more frequently if required by State water officials) for water delivered through the South Platte Conveyance Facilities, LDC Diversion Structure to Heit Pit and/or Koenig Pit, and/or to the South Platte River. Each Party will timely provide a copy of its accounting records to the other Party. Each Party shall be responsible for giving notices and reports of its diversions and releases, as may be required, to the State Engineer, Division Engineer or the Water Commissioner.

7.4. Notwithstanding anything to the contrary in this Agreement, each Party's financial obligations hereunder are subject to annual appropriations therefor under the Taxpayer Bill of Rights (TABOR), Colorado Constitution, Article X, Section 20.

7.5. If either Party determines to sell its ownership interests in any of the South Platte Conveyance Facilities and/or the LDC Diversion Structure, or the Heit Pit and its inlet and outlet works, if the selling party is Broomfield, or the Koenig Pit and its inlet and outlet works, if the selling party is Central, the other Party shall have the right of first

refusal to purchase the same exercisable within 30 days following delivery by the selling party to the non-selling party of a copy of a bona fide offer to purchase from a third party. Exercise of the right of first refusal shall be upon the same terms and conditions as the bona fide offer.

- 7.6. This Agreement becomes effective on the date of execution, and its term shall be perpetual unless terminated by mutual agreement of the Parties.
- 7.7. Except as otherwise provided herein, each Party shall bear the cost of its implementation and administration of this Agreement.
- 7.8. The provisions of this Agreement are severable and in the event any provision, clause, sentence, section or part thereof is held to be invalid, illegal, unconstitutional, inapplicable or unenforceable to any person or circumstances, such invalidity, illegality, unconstitutionality, inapplicability or unenforceability shall not affect or impair any of the remaining provisions, sentences, clauses, sections, or parts of the Agreement or their application to the Parties. It is understood and agreed that the terms, conditions and covenants of this Agreement would have been made by both Parties if such invalid, illegal, unconstitutional, inapplicable or unenforceable provisions, sentence, clause, section or part had not been included therein. To the extent that any portion of this Agreement found to be invalid, illegal, unconstitutional, inapplicable or unenforceable may be made valid by striking of certain words or phrases; such words or phrases shall be deemed to be stricken and the remainder of the provisions and the remainder of the other portions of this Agreement shall remain in full force and effect. It is further agreed that this Agreement may be executed in counterparts, including counterparts by facsimile, each of which when considered together shall constitute the original contract.
- 7.9. In the event of an action to enforce the terms hereof or declare rights hereunder, the prevailing party in any such action, on trial or appeal, shall be entitled to an award of its reasonable attorney's fees and costs as determined by the court.
- 7.10. Notices and other communications under this Agreement shall be in writing, shall be addressed as set forth below (or otherwise as provided by notice pursuant to this paragraph), and shall be sent by U.S. Mail, certified, return receipt requested, by facsimile, or by hand delivery, or by email with delivery receipt.

If to Broomfield:

City and County of Broomfield
 Attn: City and County Public Works Director
 One DesCombes Drive
 Broomfield, CO 8002
 Email: _____

With a copy to:

City and County of Broomfield

Attn: City and County Attorney's Office
One DesCombes Drive
Broomfield, CO 8002
Email: _____

If to Central:

Ground Water Management Subdistrict of the
Central Colorado Water Conservancy District
3209 West 28th Street
Greeley, CO 80634
Email: _____

With a copy to: _____

- 7.11. This Agreement shall be governed by the substantive law of the State of Colorado. Venue for any dispute under this Agreement shall be in the Weld County District Court.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, two duplicate originals of this Agreement, each of which shall be deemed an original, on the date first written above.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

Mayor

ATTEST:

City & County Clerk

(SEAL)

APPROVED AS TO FORM:

City & County Attorney

CENTRAL'S SIGNATURE BLOCK TO BE PROVIDED

GROUNDWATER MANAGEMENT SUBDISTRICT OF THE
CENTRAL COLORADO WATER CONSERVANCY DISTRICT

By: Ralph T. Anders
Ralph Anders, President

ATTEST:

By: Ror
Secretary





City of Broomfield

City Council Regular Meeting

Agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project

A Resolution approving an agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6H
Presented By		
Ken Rutt, Director of Public Works		
Community Goals		

Overview

[View Correspondence](#)

Since 2001, Broomfield has contracted Schnabel Engineering, LLC (formerly Deere and Ault Consultants, Inc.) to provide dam monitoring, engineering analysis, and guidance for operational and maintenance issues. Schnabel's project team specializes in dam engineering and is listed as Broomfield's Engineering Representative for emergency response services for Great Western Dam.

Attachments

[Memo for Consulting Agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project.pdf](#)

[Resolution No. 2024-57.pdf](#)

[Great Western Dam Rehabilitation Consulting Agreement Vendor Signed.pdf](#)

Summary

[View Correspondence](#)

Great Western Reservoir, originally constructed in 1904, serves as the city's primary storage facility for the reuse water system. The dam's toe drain system, which is characteristic of most earthen embankment dams and helps to drain natural seepage through the embankment and increase the stability of the dam, was constructed in 1966 and is past the end of its design life.

In recent years, monitoring data has indicated an elevated water surface in the vicinity of the toe drain system at Great Western Dam, indicating the system is not functioning as designed. Through regular inspections staff have also identified visible buildup in both toe drains which has restricted flow through the system. Additionally, recent inspections of the dam's main outlet pipe have suggested that the pipe's joints are pulling apart and weko seals bulging. To the right is a photo of an example of a weko seal.



The pipe is also aligned through the dam's embankment which is no longer an acceptable standard of practice as this can lead to piping failures within the earthen embankment dam. The State Engineer's Office (SEO) classifies Great Western Dam as a jurisdictional high hazard dam, the highest hazard classification, meaning possible loss of human life is expected in the event of failure of the dam. Maintaining a structurally safe and operable dam is of the utmost importance and required under the state of Colorado's Dam Safety Program.

Since 2001, Broomfield has contracted Schnabel Engineering, LLC (formerly Deere and Ault Consultants, Inc.) to provide dam monitoring, engineering analysis, and guidance for operational and maintenance issues. Schnabel's project team specializes in dam engineering and is listed as Broomfield's Engineering Representative for emergency response services for Great Western Dam. Below is a table summarizing the Schnabel Engineering, LLC, involvement with Great Western Dam.

Section 3-20-150 of Broomfield's Municipal Code states that professional services are exempt from a formal solicitation process. Professional services means and includes architectural, engineering, surveying, legal, consulting, software maintenance or programming, or other services which involve primarily the furnishing of labor, time or expertise. The engineering services provided by Schnabel fall within this classification. Additionally, Schnabel's Longmont team has over 35 years of legacy involvement with Great Western Dam and Reservoir, serving as the Engineer of Record since 1986. Members of the currently proposed team have been directly involved in annual monitoring and major redesign efforts at Great Western Dam since 2001. A Waiver of Bid for Schnabel was approved for this work in the amount of \$2,000,000.

Schnabel has prepared a Statement of Qualifications and Technical Proposal to aid Broomfield in selecting an alternative and producing design documents to rehabilitate Great Western Dam. Schnabel will then aid Broomfield in selecting the preferred alternative, develop the associated design documents, and provide permitting and bid support to select a qualified contractor for the work. The cost schedule of Schnabel's proposal is outlined below, which shows a total cost of \$1,800,000 over 3 years.

Proposed Resolution 2024-57 will approve an agreement between the City and County of Broomfield and Schnabel Engineering, LLC for these services.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	2024 Budget
Great Western Reservoir Dam Toe Drain Replacement 47-70721-55200 (24R0030) <ul style="list-style-type: none">• 2024 - \$350,000• 2025 - \$923,000• 2026 - \$527,000	\$1,800,000*
Total Estimated Project Cost	-\$1,800,000
Projected Balance	\$0

*2024 budget will be reallocated across 2024, 2025, and 2026 based on the proposed cost schedule shown above

Prior Council or Other Entity Actions

Council authorized funds in the [2024 CIP Long-Range Plan](#) for the design and construction of the Great Western Dam Rehabilitation Project.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to proceed with the project, the appropriate motion is...
That Resolution 2024-57 be adopted.

Alternatives

Decide to not proceed with the project at this time.

RESOLUTION NO. 2024-57

A Resolution approving an agreement with Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project

Be it resolved by the city council of the City and County of Broomfield, Colorado:

Section 1.

The agreement attached hereto by and between the City and County of Broomfield and Schnabel Engineering, LLC for the Great Western Dam Rehabilitation Project is approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

This resolution is effective on the date of approval by the City Council.

Approved on May 28, 2024.

The City And County Of Broomfield,
Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

NCR

City and County Attorney

CONSULTING AGREEMENT BY AND BETWEEN
THE CITY AND COUNTY OF BROOMFIELD AND SCHNABEL ENGINEERING, LLC
FOR THE GREAT WESTERN DAM REHABILITATION PROJECT

1. PARTIES. The parties to this Consulting Agreement (this “Agreement”) are the City and County of Broomfield, a Colorado municipal corporation and county, (the “City”) and Schnabel Engineering, LLC (the “Consultant”), collectively, the “Parties,” or individually, a “Party.”
2. RECITALS. The recitals to this Agreement are incorporated herein by this reference as though fully set forth in the body of this Agreement.
 - 2.1. The City desires to obtain consulting services in connection with the Great Western Dam Rehabilitation Project (the “Project”).
 - 2.2. The Consultant provides professional services and is qualified to perform services required by the City for the Project.
3. TERMS AND CONDITIONS. In consideration of the mutual covenants and promises of the Parties contained herein, and other valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:
 - 3.1. Obligations of the Consultant.
 - 3.1.1. *General*. The Consultant shall consult with, advise, and represent the City as the City requires during the term of this Agreement. The Consultant shall act at the direction of the City employee assigned by the City to the Project as Project Manager. The Consultant shall communicate with the City about the Project only through the Project Manager.
 - 3.1.2. *Basic Services*. The Consultant shall perform the Basic Services described in Exhibit A attached hereto and incorporated by this reference and elsewhere in this Agreement.
 - 3.1.3. *Extra Services*. Upon the express, written approval of the City, the Consultant shall perform Extra Services. The Consultant shall charge the City for such Extra Services, if any, in accordance with such terms as the City may agree to in writing.
 - 3.1.4. *Authorization to Proceed*. No work on the Project shall be performed by the Consultant until written Authorization to Proceed has been issued by the City. If the Consultant proceeds with any work prior to receipt of said Authorization, the City is not responsible for payment for such work.
 - 3.1.5. *Completion Date*. The Consultant shall complete the services of this Agreement by December 31, 2026. Additionally, the Consultant shall meet the midterm milestones outlined in Exhibit A.
 - 3.2. Obligations of the City.

- 3.2.1. *General.* The City shall direct the work and coordinate reviews, approvals, and authorizations of all stages of work. All approvals and authorizations shall be in writing.
- 3.2.2. *Changes in Work.* Any changes with regard to the Consultant's cost, time requirements of performance, or scope of the work must be in writing and approved by the Parties hereto prior to any work or services being performed in contemplation of said change.
- 3.2.3. *Materials and Services to be Furnished by the City.* The City agrees to furnish the Consultant any material in the possession of the City to the extent that such material, in the opinion of the Project Manager, is readily available and will assist the Consultant in performing the work. The Consultant agrees to request such material in advance so as not to jeopardize the work schedule or meeting arrangements. The City shall not unreasonably withhold such material.

3.3. Commencement and Completion.

- 3.3.1. The Consultant shall commence work on the first working day following receipt of a written Authorization to Proceed issued by the City, or such later date as indicated in the Authorization to Proceed.
- 3.3.2. Except as may be agreed upon in writing by the City and the Consultant, the Consultant shall follow the time schedule shown in Exhibit A.
- 3.3.3. If due to Acts of God, public emergency, or acts of a public enemy, it becomes apparent that this Agreement cannot be fully completed within the agreed time, the Consultant shall so notify the City in writing at least thirty days prior to any scheduled completion date, in order that the Consultant and the City may review the work accomplished to date and determine whether to amend this Agreement to provide additional time for completion.

3.4. Payments to Consultant.

- 3.4.1. *Aggregate Limit.* Unless extra services are approved in writing, the amount paid by the City to the Consultant under this Agreement will not exceed \$1,800,000, including reimbursables. The Consultant will complete the Work for the amount shown.
- 3.4.2. *Billing.* The Consultant shall bill the City monthly for work done in accordance with the terms and conditions of this Agreement, using the pay request form provided by the City.
- 3.4.3. *Payment by City.* The City will pay each bill in full within 30 days of receipt of payment request and supporting documentation. Consultant shall furnish such additional documentation as the City shall reasonably

require. Incorrect payments to the Consultant due to omission, error, fraud, or defalcation may be recovered from the Consultant by deduction for subsequent payments due to the Consultant under this Agreement or other contracts between the City and the Consultant.

- 3.4.4. *Inspection of Records.* The Consultant will permit the authorized agents and employees of the City at reasonable hours, to inspect, review, and audit all records of the Consultant related to this project and the work to be performed hereunder.

3.5. Termination.

- 3.5.1. *For Cause.* This Agreement may be terminated by either party for a material breach of this Agreement by the other party not caused by any action or omission of the terminating party by giving the other party written notice at least five (5) business days in advance of the termination date. The termination notice shall specify in reasonable detail each such material breach.
- 3.5.2. *Without Cause.* In addition to the foregoing, this Agreement may be terminated by the City, in whole or in part, for its convenience and without cause of any nature by written notice to the Consultant. In the event of termination, the Consultant shall incur no additional expenses and shall perform no further services for the City under this Agreement after the date of receipt of the notice of termination, unless otherwise specified by the City. The City shall pay the Consultant for all work satisfactorily performed prior to receipt of the notice of termination and for other services required by the City to be completed prior to termination and satisfactorily performed.
- 3.5.3. *Upon Termination.* In the event of such termination, the Consultant will be paid for all services rendered to the date of termination, and upon such payment, all obligations of the City to Consultant under this Agreement will cease. Furthermore, in the event of such termination, the Consultant shall promptly deliver to the City all drawings, electronic data, computer programs, computer input and output, plans, photographic images, analyses, tests, maps, surveys, and written materials of any kind generated in the performance of this Agreement up to and including the date of termination. Termination pursuant to this subsection shall not prevent either party from exercising any other legal remedies which may be available to it.
- 3.5.4. *Dispute Resolution.* A Party seeking to terminate for cause must notify the other Party of its intent and provide written notice specifying the facts supporting any alleged material breach. Within fourteen (14) days after receipt of such notice, the Parties shall meet to resolve the matters described in the written notice. If either Party believes that mediation would assist in resolving the matters described in the written notice, the Parties shall participate in mediation with a mutually acceptable

mediator, to be conducted no later than sixty (60) days after receipt of the written notice of intent to terminate for cause. Mediation shall take place in Broomfield, Colorado and the Parties agree to split the costs of mediation and bear their own attorneys' fees.

- 3.6. Suspension. Without terminating this Agreement or breaching its obligations hereunder, the City may, at its pleasure, suspend the services of the Consultant hereunder. Such suspension may be accomplished by giving the Consultant written notice one (1) day in advance of the suspension date. Upon receipt of such notice, the Consultant shall cease its work in as efficient a manner as possible so as to keep his total charges to the City for services under the Agreement to the minimum.
- 3.7. Laws to be Observed. The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
- 3.8. Permits and Licenses. The Consultant shall procure all permits and licenses, pay all charges, fees and taxes and give all notices necessary and incidental to the due and lawful prosecution of its services.
- 3.9. Patented Devices, Materials, and Processes. The Consultant shall hold and save harmless the City from any and all claims for infringement, by reason of the use of any patented design, device, material, process, any trademark, or copyright and shall indemnify the City for any costs, attorney's fees, expenses and damages which it might be obligated to pay by reason of infringement, at any time during the prosecution or after completion of the work.

4. INSURANCE AND INDEMNIFICATION.

4.1. Standard of Care.

- 4.1.1. *Professional Liability*. The Consultant shall exercise in its performance of the Basic Services and Extra Services, if any, the standard of care normally exercised by locally recognized consulting organizations engaged in performing comparable services. The Consultant shall be liable to the City for any loss, damage, or cost incurred by the City for the repair, replacement, or correction of any part of the Project that is deficient or defective as a result of any failure of the Consultant to comply with this standard.
- 4.1.2. *Indemnification*. The Consultant shall indemnify and hold harmless the City and its agents and employees from and against all claims, damages,

losses, and expenses, including, but not limited to, reasonable attorneys' fees, arising out of or resulting from the performance of the Basic Services or Extra Services, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death or injury to or destruction of tangible property (other than the Project itself), including the loss of use resulting therefrom, and (2) is caused by any negligent act or error or omission of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph 4.1.2. Further, this indemnification is intended to comply with and be subject to Section 13-50.5-102 (8), C.R.S. as amended from time to time.

- 4.1.3. *No Limitation on Claims.* In any and all claims against the City or against any of its agents or employees by any employee of the Consultant, any subconsultant of the Consultant, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under subparagraph 4.1.2 shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Consultant or any subconsultant under Workers' Compensation Act of Colorado or other employee benefit legislation.

4.2. Insurance.

- 4.2.1. *Purchase and Maintain Insurance.* In order to assure the City that the Consultant is always capable of fulfilling specified indemnification obligations, Consultant shall purchase and maintain insurance, from an insurer with an AM Best FSR rating of A- or higher, of the kind, in the amounts, and subject to the conditions shown in the Insurance Requirements attached as Exhibit B.
- 4.2.2. *Coverage.* Said insurance shall be maintained in full force and effect during the term of this Agreement and shall protect the Consultant, its employees, subconsultant, agents and representatives, and the City from claims for damages for personal injury and wrongful death and for damages to property arising in any manner from acts or omissions of the Consultant, its employees, agents or representatives, in the performance of the services covered herein. The insuring company will provide thirty-day written notice prior to any cancellation of the above-referenced insurance.
- 4.2.3. *Valuable Papers.* Furthermore, the Consultant shall carry valuable papers insurance in an amount sufficient to assure the restoration of any plans, drawings, field notes or other similar data related to the services covered by this Agreement in the event of their loss or destruction until such time

as the final submission by the Consultant has been made and accepted by the City.

5. **NOTICE AND AUTHORIZED REPRESENTATIVES.** Any notice required or permitted by this Agreement shall be in writing and shall be sufficiently given for all purposes if sent by email to the authorized representative identified below. Such notice shall be deemed to have been given when the email was sent and received. The City may change its representative at any time by notice to the Consultant. The Consultant shall not replace the Consultant Representative unless: (a) the City requests a replacement, or (b) the Consultant terminates the employment of the Consultant Representative and provides a satisfactory substitute. The City must approve a substitute Consultant Representative, and, if no substitute is acceptable, the City may terminate this Agreement. The Parties each designate an authorized representative as follows:
 - 5.1. The City designates Brennan Middleton as the authorized representative of the City under this Agreement. Email address is bmiddleton@broomfield.org.
 - 5.2. Consultant designates Morley Beckman as the authorized representative of the Consultant under this Agreement. Email address is mbeckman@schnabel-eng.com.

If the Consultant is alleging that the City is in breach of this Agreement or has violated any term of this Agreement, Legal Notice shall be made by making the notice above with a copy to citycountyattorney@broomfield.org.

6. **INDEPENDENT CONTRACTOR.** The Consultant is an independent contractor as described in C.R.S. § 8-40-202(2). The Consultant is not entitled to workers' compensation benefits and is obligated to pay federal and state income tax on monies earned pursuant to this Agreement.
7. **APPROVAL OF SUBCONTRACTORS AND CONSULTANTS.** The Consultant shall not employ any subcontractors or consultants without the prior written approval of the City Representative. Prior to commencing any work, each subcontractor or consultant shall provide the appropriate insurance as required for the Consultant under this Agreement. The Consultant shall be responsible for coordination of the work and the acts and omissions of its agents, employees, subcontractors, consultants and suppliers, and shall bind each to the terms of this Agreement so far as are applicable. This Agreement is voidable by the City if subcontracted by the Consultant without the express written consent of the City.
8. **NO THIRD-PARTY BENEFICIARIES.** This Agreement is intended to describe the rights and responsibilities only as to the Parties hereto. This Agreement is not intended and shall not be deemed to confer any rights on any person or entity not named as a Party hereto.
9. **FINANCIAL OBLIGATIONS OF THE CITY.** All financial obligations of the City under this Agreement are subject to appropriation, budgeting, and availability of funds to

discharge such obligations. Nothing in this Agreement shall be deemed to pledge the City's credit or faith, directly or indirectly, to the Consultant. If funds for this Agreement are not appropriated and budgeted in any year subsequent to the fiscal year of execution of this Agreement as determined by the City, this Agreement may be terminated by the City upon written notice to the Consultant. The City's fiscal year is currently the calendar year.

10. EXHIBITS. All exhibits referred to in this Agreement are by reference incorporated herein for all purposes.
11. CONFLICTS WITHIN THE CONTRACT DOCUMENTS. In the event that conflicts exist within the terms and conditions of this Agreement and the attached or referenced Agreement documents or exhibits the former shall supersede.
12. INTEGRATION AND AMENDMENT. 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. For purposes of clarity, the terms and conditions of any Consultant invoice, Consultant timesheet, or other form, including but not limited to indemnification, limitation of liability, or cancellation fees, shall be void and of no effect against the City notwithstanding any signatures on such form by a City employee. The Consultant's rights and obligations shall be solely governed by the terms and conditions of this Agreement.
13. SEVERABILITY. If any provision of this Agreement as applied to either Party or to any circumstance shall be adjudged by a court to be void or unenforceable, the same shall in no way affect any other provision of this Agreement, the application of any such provision in any other circumstances or the validity, or enforceability of the Agreement as a whole.
14. ADDITIONAL DOCUMENTS OR ACTION. The Parties agree to execute any additional documents or take any additional action that is necessary to carry out this Agreement.
15. MINOR CHANGES. The Parties executing this Agreement are authorized to make nonsubstantive corrections to this Agreement and attached exhibits, if any, as they consider necessary.
16. DOCUMENTS. All drawings, computer programs, computer input and output, analyses, plans, photographic images, tests, maps, surveys, electronic files, and written material of any kind generated in the performance of this Agreement or developed by the Consultant specifically for the Project are and shall remain the exclusive property of the City. The Consultant shall not provide copies of any such material to any other party without the prior written consent of the City.

17. RECORDS RETENTION. The Consultant shall maintain complete and accurate records of time spent and materials used for performance of the Work, together with any invoices, time cards, or other supporting data reasonably requested. All records, data and documentation shall be retained by the Consultant for a period of not less than three (3) years after completion of the Work, and shall be subject to review, inspection and copying by the City upon reasonable notice.
18. OFFICIALS NOT TO BENEFIT. No elected or employed member of City government shall directly or indirectly be paid or receive any share or part of this Agreement or any benefit that may arise therefrom. The Contractor warrants that it has not retained any entity or person, other than a bona fide employee working solely for the Consultant, to solicit or secure this Agreement.
19. ASSIGNMENT. This Agreement shall not be assigned by the other Party without the prior written consent of the City.
20. BINDING EFFECT. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective legal representatives, successors, heirs, and assigns, provided that nothing in this paragraph shall be construed to permit the assignment of this Agreement except as otherwise expressly authorized herein.
21. DAYS. If the day for any performance or event provided for herein is a Saturday, a Sunday, a day on which national banks are not open for the regular transactions of business, or a legal holiday pursuant to C.R.S. § 24-11-101(1), such day shall be extended until the next day on which such banks and state offices are open for the transaction of business.
22. DELAYS. Any delays in or failure of performance by any Party of 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.
23. NO PRESUMPTION. The Parties to this Agreement and their attorneys have had a full opportunity to review and participate in the drafting of the final form of this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction against the Party causing the Agreement to be drafted.
24. GOOD FAITH OF PARTIES. In the performance of this Agreement or in considering any requested approval, acceptance, or extension of time, the Parties agree that each will act in good faith and will not act unreasonably, arbitrarily, capriciously, or

unreasonably withhold, condition, or delay any approval, acceptance, or extension of time required or requested pursuant to this Agreement.

25. WAIVER OF BREACH. This Agreement or any of its provisions may not be waived except in writing by a Party's authorized representative. 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.
26. GOVERNING LAW. This Agreement shall be governed by the laws of the State of Colorado. Any claims or litigation arising under this Agreement will be brought by the Parties solely in the District Court, Broomfield County, Colorado.
27. SURVIVAL OF OBLIGATIONS. The obligations contained in this Agreement that are not fully performed as of termination shall survive termination and shall continue to bind the Parties until fully performed.
28. LAWS TO BE OBSERVED. The Consultant shall be cognizant of all federal and state laws and local ordinances and regulations that in any manner affect those engaged or employed in the work or which in any manner affect the conduct of the work, and of all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same, and shall at all times observe and comply with all such existing laws, ordinances, regulations and decrees, and shall protect and indemnify the City against any claim or liability arising from or based on the violations of any such law, ordinance, regulation, order or decree, whether by itself, its subcontractors, agents or employees.
29. EXECUTION; ELECTRONIC SIGNATURES. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute but one and the same instrument. This Agreement shall not be binding upon any Party hereto unless and until the Parties have executed this Agreement. The Parties approve the use of electronic signatures for execution of this Agreement. All documents must be properly notarized, if applicable.

[The remainder of this page is intentionally left blank.]

IN WITNESS WHEREOF, this Agreement is executed by the Parties hereto in their respective names as of _____, 2024.

THE CITY AND COUNTY OF BROOMFIELD,
a Colorado municipal corporation and county

Mayor

ATTEST:

City and County Clerk

APPROVED AS TO FORM:

City and County Attorney

Notarization by *both* parties is only required when contracting with an *individual*. If an entity is a party to this agreement the notary block may be removed.

STATE OF COLORADO)
) ss.
COUNTY OF BROOMFIELD)

The foregoing instrument was acknowledged before me this ____ day of _____
2024, by _____ as _____
of the City and County of Broomfield.


WITNESS my hand and official seal.

(SEAL)

Notary Public

CONSULTANT:

Schnabel Engineering, LLC

By: 

Name: E. Morley Beckman
Senior Vice President

Address: 600 S. Airport Road, Suite A-205
Longmont, CO 80503

EXHIBIT A

Basic Services

The scope of services is as described in the Statement of Qualifications and Technical Proposal dated March 28, 2024 and summarized below/on the following pages:



Statement of Qualifications and Technical Proposal - Great Western Dam Redesign and Rehabilitation

March 28, 2024 / City and County of Broomfield, CO



March 28, 2024

Mr. Brennan Middleton
City and County of Broomfield
3951 West 144th Avenue
Broomfield, CO 80023
Email: bmiddleton@broomfield.org

**Subject: Statement of Qualifications and Technical Proposal - Great Western Dam
Redesign and Rehabilitation**

Dear Mr. Middleton:

SCHNABEL ENGINEERING, LLC (Schnabel) is pleased to submit this statement of qualifications in response to your request for the rehabilitation of Great Western Dam. This submittal demonstrates how our firm and local staff of experienced professionals are uniquely qualified and prepared to meet the project objectives for the City and County of Broomfield. Our team has collectively prepared hundreds of comprehensive feasibility studies, designs, and dam rehabilitation design packages. Our local professional staff has extensive experience with dam rehabilitation, and we are intimately familiar with Great Western Dam having worked on this site since 1986.

Key members of our proposed team have recently been involved with the semi-quantitative risk assessment workshops, annual monitoring, feasibility studies, dam safety inspections, and geotechnical investigations and evaluations at Great Western Dam. We understand the important role this dam and reservoir provide for the community as a critical asset. We are committed to partnering with you to efficiently and proactively identify, evaluate, and communicate all aspects of the project to ensure successful completion to the satisfaction of the City and County of Broomfield. *We are a committed project partner.*

Thank you for the opportunity to present our qualifications for this project. I will be serving as Project Manager and your primary point of contact. If you should have any questions with this submittal or require any additional information, please reach out to us at:

- Cell: 510.517.0285 / Office: 303.651.1469
- Address: 600 S. Airport Road, Suite A-205, Longmont, CO 80503
- Email: mbeckman@schnabel-eng.com

Sincerely,

SCHNABEL ENGINEERING, LLC



E. Morley Beckman, PE
Senior Vice President

Table of Contents



1 FIRM OVERVIEW

Background at Great Western Dam

Deterioration of Great Western Dam Toe Drains and Outlet Pipe

2 CAPABILITIES AND SERVICES

Field Investigations and Laboratory Testing

Geotechnical Engineering and Evaluations

Hydrology & Hydraulics (H&H) Modeling

Civil Site Works

Shafts and Microtunnels

Low Level Outlet Works

Developing Engineer's Opinions of Construction Cost

Bidding Phase Services

Construction Phase Services

3 ORGANIZATION STRUCTURE & KEY STAFF EXPERIENCE

4 PROJECT APPROACH & SCHEDULE

5 COST ESTIMATE

APPENDIX

A - SIMILAR PROJECT PROFILES

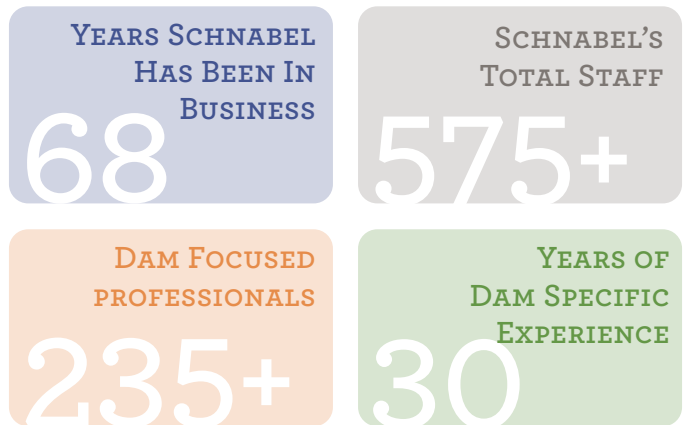
B - RESUMES

C - RATE SHEET

D - CERTIFICATE OF INSURANCE

• 1. FIRM OVERVIEW •

Schnabel is a national firm providing civil engineering services with a focus on dam and levee safety, geotechnical engineering, geostuctural design, tunnel and underground engineering, and engineering services during construction. With 26 offices located across the United States (US), our multi-disciplinary staff of 530+ professionals include dam, geotechnical, civil, hydraulic, structural, mechanical, environmental, material, and geostuctural engineers; hydrogeologists and hydrologists; geophysicists and geologists; wetland specialists; construction quality assurance managers; and engineering technicians. Schnabel has 13 offices that are dedicated to dam engineering with more than 230 professionals that work exclusively on dams and levees.



These professionals specialize in the planning, assessment, analysis, design, material evaluations, and construction support for all types of new and existing dams. As a national leader in dam and levee engineering for the past 29 years, more than 50% of Schnabel's total revenue is related to dams, with experience on over 5,000 dam and water resources projects. Dam engineering work is a corporate commitment and a critical part of our long-term strategy and business plan.

Schnabel's Longmont, Colorado office was formerly known as Deere & Ault Consultants, a small privately held firm that was acquired in 2020. Schnabel's Longmont team consists of over 30 engineering professionals, 25 of which are dam engineering professionals focusing on water rights, civil and geotechnical engineering, and hydraulics and hydrology. Additionally, in 2021 Schnabel opened a Lakewood, Colorado office which provides additional support to our statewide dam engineering expertise, and includes our national dam safety practice lead and our national dam safety risk lead. Schnabel's Longmont team has over 35 years of legacy involvement with Great Western Dam and Reservoir, serving as the Engineer of Record since 1986. Our dam engineering team previously worked together at Rocky Mountain Consultants in the 1980's and 1990's, at Tetra Tech RMC in the early 2000's, at Deere & Ault from 2005 to 2020, then at Schnabel since 2020. Members of the currently proposed team have been directly involved in annual monitoring and major redesign efforts at Great Western Dam since 2001.

THROUGH THE YEARS - AT A GLANCE - SCHNABEL'S WORK AT GREAT WESTERN DAM

- Geotechnical Investigations (1986, 2000, 2001, and 2023).
- Inclinator installation (2000).
- Toe drain investigation (2002).
- Attendance at occasional annual State Engineers Office (SEO) inspection visits 1986-2003, and annually since 2003.
- Preparation of monitoring reports summarizing instrumentation readings and trends in the data for the dam (1986 to present).
- Design of the toe berm, new toe drain manhole, new emergency spillway, sill walls, and new service spillway inlet structure constructed, including geotechnical investigation planning and logging, preparation of design drawings and specifications and construction cost estimates, and oversight of field construction activities (2003).
- Outlet gate rehabilitation (2003).
- Preparation of feasibility-level designs for dam rehabilitation alternatives to aid Broomfield in long-term capital budgeting (2020-2021).
- Coordination and facilitation of a 2-day Semi-Qualitative Risk Assessment (SQRA) workshop for the dam with participants from Broomfield, Schnabel and the SEO (2021).
- Analysis of toe drain flows and turbidity, and laboratory testing of toe drain buildup to ascertain the source of the buildup (2018-2020).
- Slope stability analyses of elevated phreatic surfaces (water levels) within the dam, and recommendations to Broomfield regarding "trigger levels" for monitoring wells at the dam (2021).
- Hydrologic analyses of the downstream impacts of dam safety incidents (2022).
- Preparation of a Comprehensive Dam Safety Evaluation (CDSE) report, submitted to the SEO (2023).

Through our history with Great Western Dam, Schnabel has always tried to balance the need for upkeep and rehabilitation of the dam with Broomfield's funding constraints. Until recent years, funding has been limited and Schnabel's mission has been to prioritize monitoring and time-critical repairs of the dam. The recently completed SQRA workshops in 2021 required a deeper dive into the project history, performance, and analyses of record. The process highlighted the risks posed by the outlet pipe and toe drain system at the dam and have elevated the urgency for replacement of these systems. Based on the risks identified, long term capital improvement funding has been allocated and a more thorough rehabilitation of Great Western Dam is advised.

• BACKGROUND AT GREAT WESTERN DAM •

Great Western Dam and Reservoir is owned and operated by the City and County of Broomfield (Broomfield) and is located approximately 3.5 miles southwest of Broomfield City Center. The reservoir is an important reuse water storage reservoir for Broomfield. Partially treated wastewater is pumped through an influent line that discharges near the right abutment into the reservoir. Water is released by gravity through the dam outlet pipe and then enters the reuse water system. The reservoir storage is approximately 2,350 acre-feet at the Normal Water Line (NWL) elevation of 5609.65 (Gage height 58). Great Western Dam was originally constructed in 1904 at a height of 35 feet and raised to 61 feet in 1910. In 1957, a shallow slope failure developed on the downstream slope of the dam. The downstream slope was partially stabilized by removing and replacing the area of the slide and the dam was further raised to 70 feet in 1960. Two weeks after filling the reservoir, a deep-seated downstream slope failure occurred and crushed the downstream end of the primary outlet conduit. Emergency actions were taken to lower the reservoir, and the dam was operated for several years at a lower level.



Great Western Dam Toe Berm During Construction in 2003



Great Western Dam Under Construction in 1966

In 1966 the dam was rebuilt, and the outlet conduit was replaced. In conjunction with the 1966 repairs, a new toe drain system was installed. Further details of the storied history of Great Western Dam may be found in Schnabel's annual monitoring reports, our toe drain analysis memorandum issued in 2021, our Hydrologic Analysis report issued in 2022, and our CDSE report issued in 2023. An important feature of Great Western Reservoir is its location about two miles due east and downstream of the US Department of Energy's Rocky Flats Environmental Technology Site, formerly the Rocky Flats Plant.

The Rocky Flats Plant manufactured nuclear bomb triggers in the 1950's and 1960's. In the 1960's, drums containing oil contaminated with plutonium leaked onto the ground at Rocky Flats, and some of the resulting contaminated soil was dispersed offsite by wind. There is documented testing on the sediment in Great Western Reservoir (performed by the USGS in 1992) indicating the presence of plutonium-239,240 ($^{239,240}\text{Pu}$). The study also documented sediment testing at nearby Standley Lake. The concentrations of $^{239,240}\text{Pu}$ and alpha and uranium isotopes detected in Great Western Reservoir were well below limits suggested by Colorado Department of Public Health and Environment, and below National Drinking Water Standards, and showed a slight decrease from previous sampling in 1983-1984.

Regardless of the low level of concentrations detected, during construction of a new outlet works at nearby Standley Lake, the decision was made not to drain the reservoir due to concerns about drying out the sediment and allowing radionuclide-contaminated soil to become airborne. Similar concerns apply to future work at Great Western Dam and Reservoir.

One final feature of note is the presence of a high voltage transmission line near the toe of the dam. The transmission line runs approximately parallel to the dam crest and five large transmission towers are located in close proximity to existing vaults, pipelines and other key dam features. This line will limit additional toe berm work and needs to be considered in the constructability of any alternatives.

• DETERIORATION OF GREAT WESTERN DAM TOE DRAINS AND OUTLET PIPE •

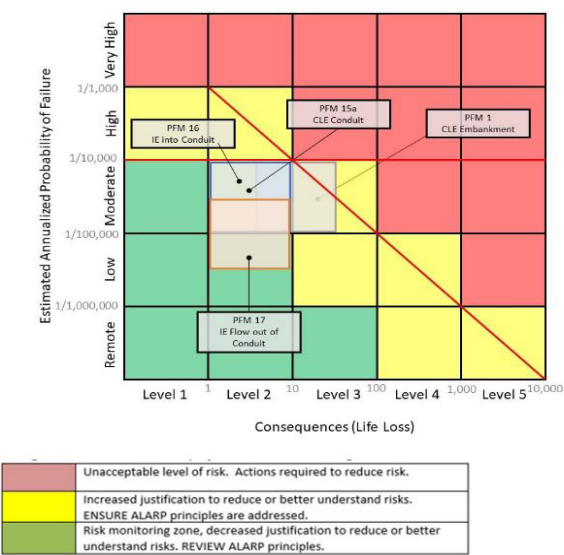
The toe drain system at Great Western, constructed in 1966, consists of 6-inch diameter corrugated metal pipes that extend under the original toe of the embankment, for a length of about 1,500 feet. When the toe berm was constructed in 2003 the existing toe drain system was left in place and connected into a new manhole and downstream outlet pipe. The toe drain pipes are now over 50 years old and are past the end of their design life, with recent video inspection (2021) indicating several portions of the pipes have collapsed. The blanket drain consists of large gravel, cobbles and boulders, and is not filter compatible with the dam embankment. There is visible buildup of grout or other chemical precipitate in the downstream end of both drains where they enter the collection manhole which has restricted flow through the toe drain pipes, manholes, and outfall pipe. In recent years, monitoring data has indicated an elevated water surface in the vicinity of the toe drain system, indicating the system is not likely functioning as designed.



Collecting Toe Drain Flow Data

The toe drain system is not the only element of Great Western Dam and Reservoir that is deteriorating with age. The primary outlet pipe used to drain water from the reservoir, which extends from the upstream face of the dam through the embankment, was originally constructed in 1966. It is a 24-inch ID steel pipe installed in 40-foot segments with external dresser couplings. The outlet pipe has shifted and required various repairs over the last 30 years, including the installation of internal rubber Weko seals to maintain pipe integrity at the joints. Several of these Weko seals have shifted and bulged in the last 15 years, indicating the pipe has continued to shift. Furthermore, the upstream end of the outlet pipe connects to two pipe extensions as the outlet system continues up the upstream face of the dam. These connections, recently video inspected for the first time in over 20 years, show separation and significant corrosion indicating they are overdue for replacement.

Our SQRA workshops, completed with Broomfield in late 2021 and summarized in the 2023 CDSE Report, identified four key risk-driving Potential Failure Modes (PFMs) for Great Western Dam. Three of these PFMs are related to the outlet pipe and would be addressed by replacement of the outlet works. The fourth PFM is related to the toe drain system and would be addressed by replacement of the blanket and toe drains.



PFMA Hazard Rating Chart from SQRA workshops

The Colorado Department of Natural Resources, SEO classifies Great Western Dam as a jurisdictional high hazard dam, meaning the SEO has jurisdiction over dam safety and storage at Great Western. Since 2019, the SEO has categorized Great Western Dam as “Conditionally Satisfactory” with “Conditional Full Storage” recommendations, meaning Broomfield may continue operations but must take steps toward improvement or full replacement of the toe drain system and outlet works as discussed above.

In summary, the need for rehabilitation of Great Western Dam has been thoroughly documented, and Schnabel is positioned to continue working on this effort as soon as Broomfield can provide notice to proceed. Our many years of focus and engineering support on this dam and our strong relationships with the team at Broomfield and SEO position Schnabel as the best firm to immediately get to work on the critical task of rehabilitating Great Western Dam.

• 2. CAPABILITIES AND SERVICES •

As demonstrated by the similar project profiles in Attachment A, and our prior history with Great Western Dam summarized above, Schnabel is exceptionally well qualified to investigate, review, design, and support Broomfield during construction for the rehabilitation of Great Western Dam. Details of our capabilities and services are outlined below, and further examples are available upon request.

• FIELD INVESTIGATIONS AND LABORATORY TESTING •



Schnabel employees conducting a geotechnical investigation along the Great Western Dam

Our geotechnical engineering professionals have specialized experience in subsurface explorations for dams, hard rock and soft ground tunneling, advanced geotechnical analysis, excavation support, dewatering, and ground improvement. We also have a depth of experience working with certified and accredited laboratories for testing of rock and soils. Our experience includes hundreds of geotechnical evaluations for dams and levees, including, but not limited to:

- Developing and executing subsurface exploration programs in accordance with Colorado SEO guidelines and USACE ER 1110-1-1807, Drilling in Earth Embankment Dams and Levees.
- In situ testing of soils and rock, and instrumenting dams and levees (including data analysis and evaluation).
- Embankment and foundation seepage analysis, evaluation, and remediation, including design of seepage control and management measures.
- Stability analysis of embankment dams, including design of stabilization measures (e.g. toe drain systems with filter compatibility calculations and toe berm construction).

• GEOTECHNICAL ENGINEERING AND EVALUATIONS •

Schnabel's two primary service areas are geotechnical and dam engineering, which comprise over 90 percent of our total business. We are adept at performing detailed engineering geologic mapping, geotechnical soils drilling and bedrock core drilling, laboratory testing and analysis of the gathered data, then using the results of our geotechnical and Hydrology & Hydraulics (H&H) studies to discuss with our clients and develop the most cost-effective and applicable solutions for the project.

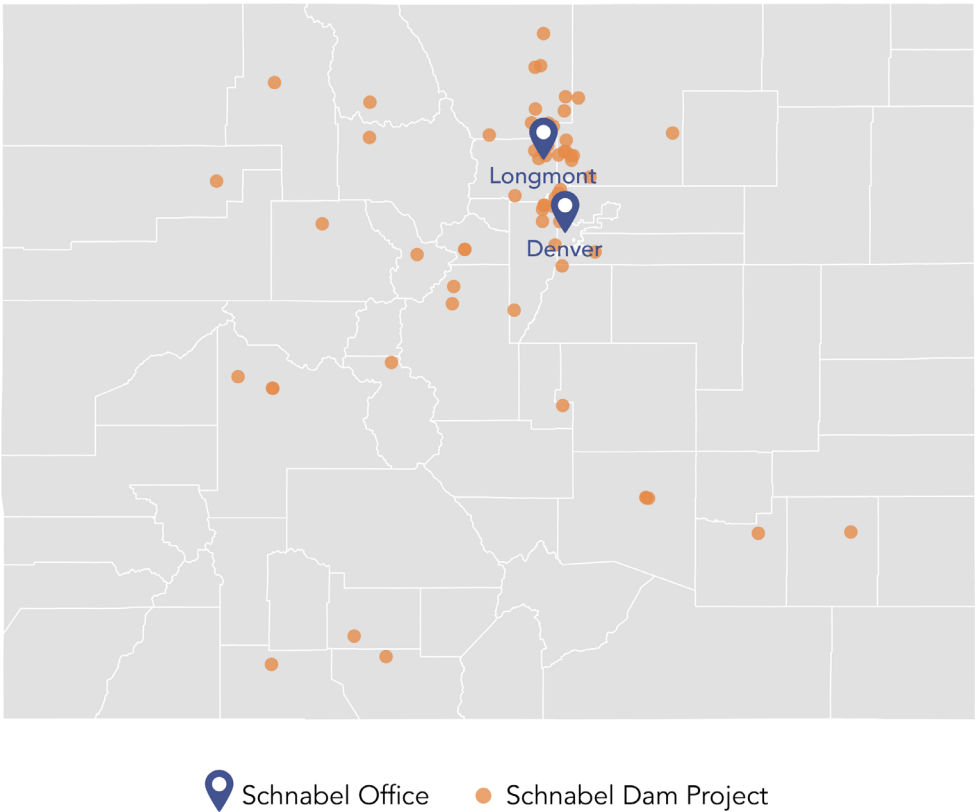
Our team has experience with all aspects of dam geotechnical engineering including earthwork, borrow source assessment, filter compatibility and filter design, and geotechnical characterization of dam foundations. Schnabel has experience with seepage and stability evaluations for dam and levee embankments founded on a variety of foundations. Our team uses GeoStudio (Slope/W and Seep/W) to model and evaluate seepage and the stability of earthen embankments.



Installation of Chimney Drain inside a dam embankment

Schnabel’s Colorado engineering staff have analyzed and developed design drawings, specifications and cost estimates for over 60 dams in Colorado. Our dam engineering projects range from the design of new embankments like Central and South Reservoir in Pueblo, to rehabilitation of existing dams like Rio Grande Dam near Creede.

Schnabel has more than 50 in-house geologists and geotechnical engineers with specific experience related to dams and levees, nine of which are located in Colorado and available to the Great Western Dam project team.



• H&H MODELING •

Schnabel has a deep bench of H&H engineers with experience in hydraulic modeling of spillways and hydraulic structures using 1- 2-, and 3-D hydraulic models. Our HEC-RAS and FLOW-3D experience, was utilized in the preparation of our 2022 Hydrologic Analysis report and our earlier 2002 spillway design.

For this project, we anticipate that we would look at the frequency of various inflows during construction so that we can better understand risk for various aspects of the project. For example, during toe drain replacement, it may be beneficial or necessary to draw down the reservoir some to improve the stability of the slope when it is excavated. We will also need to perform various hydraulic calculations for resizing the outlet works, gates, and various components. Schnabel has extensive experience modeling complex outlet works, conduits, gates, energy dissipaters, and other hydraulic structures.



Outlet work valve house at the Rio Grande Reservoir

• CIVIL SITE WORKS •

Our civil engineering capabilities span a wide range of projects, including flood control, roads, bridges, paving, site grading, utilities, buildings, potable water treatment, and wastewater collection and treatment. Our civil engineering work is often incidental to work at dams, fish facilities, water supply and irrigation projects, though we have performed many pure civil projects such as stream rehabilitation, levees, revetments and canals.



Concrete Ogee Weir at Tunnel Dam Reservoir in Wheatland, WY



Engineered Fill and drainage material being placed along downstream toe of Rio Grande Reservoir

• SHAFTS AND MICROTUNNELS •

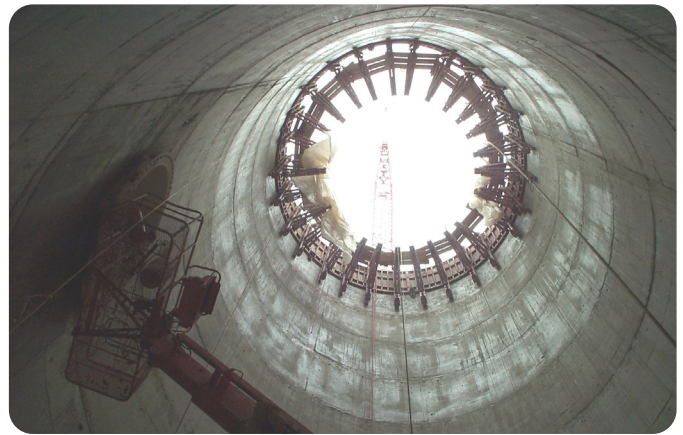
The use of a shaft and microtunnel have been identified as one of the most viable alternatives to replace the outlet works at Great Western. We believe this option reduces risk during and following construction and offers schedule and cost benefits as well. Please refer to the project profiles for Standley Lake and Arcadia Lake in Attachment A for examples of our shaft and microtunnel experience for reservoirs.

Schnabel's underground expertise includes geotechnical investigation, design, and construction engineering of temporary and permanent shafts for pump stations, tunnels and trenchless construction. This includes the complete design of shoring and stabilization for construction along with permanent shaft support utilizing rock bolts and mesh, shotcrete, steel rings, secant piles, and slurry walls. Our experience includes the design of appurtenant structures including thrust blocks for microtunnel boring machines and entry and exit seals to support earth and hydrostatic loads at the critical junction of the shaft and the tunnel. Schnabel has designed numerous conventional and secant pile shafts for both full size and microtunneling projects.

Schnabel has prepared numerous microtunnel designs including those with underwater retrieval of the microtunnel boring machines. Additional experience includes assessment of geotechnical and hydrogeologic conditions, tunneling method selection, assessment of construction impacts, alignment optimization, and contract document preparation. Design experience includes drilling techniques, tunnel support systems including pipe jacking, carrier pipe installation within tunnel, contact grouting, annular grouting, and backfill grouting.



Standley Lake Shaft



Standley Lake Shaft looking up



Shaft excavation at Arcadia Lake



MTBM in Shaft at Arcadia Lake

• LOW LEVEL OUTLET WORKS •

Our dam engineering group has a considerable relevant experience in outlet works design as well as the most up-to-date knowledge, standards, and innovations in the industry. This is further bolstered by our mechanical design group who have completed inspections and custom designs for valves and gates of all types, sizes, and configurations. The benefit to our clients is simple – *we have experience in the inspection, planning, design, and construction of outlet works projects that will save time in engineering, money in construction, and result in a quality finished project that will last for years to come.*

Schnabel has extensive, hands-on experience in the inspection, analysis and design of large diameter pipelines, penstocks, and other hydraulic steel structures. This has included custom fittings and bifurcations with working pressures in excess of 400 psi, outlet gates and operators for the USACE and public utilities, trash racks and bulkheads for Dominion Energy, and 126-in. steel pipe with 84-in. diameter fixed-cone valves for the San Luis Valley Irrigation District, among many other projects. Our experience also extends to less common situations, like cavitation analysis through outlet conduits or valves, and the evaluation of water quality to inform the design of cathodic protection systems.

Schnabel has a proven track record of delivering large and complex outlet works projects with public utilities, water authorities, and federal agencies. When custom fabricated gates or extensive modifications to existing outlet works are needed, our team can design and optimize every aspect of the assembly in accordance with USACE methodology and current industry standards. This includes the mechanical and structural design of the gates, pipelines, connections, seals, hoisting mechanisms and cathodic protection systems. Design of these fabrications is typically completed with 3D BIM software such as Revit or SolidWorks. After design, these models can be sent directly to a wide pool of fabricators for competitive bidding and then be used to efficiently make fabrication drawings. Additionally, Schnabel has evaluated and designed numerous trash racks and structure dewatering bulkheads and cofferdams. As part of these projects, we have extensive experience working collaboratively with underwater contractors and understand the unique requirements of working in the wet, at depths ranging from 10-feet to several hundred feet.



Reservoir control gates at Rio Grande Reservoir Valve House

• DEVELOPING ENGINEER'S OPINIONS OF CONSTRUCTION COST •

Understanding the construction market in Colorado's Front Range is paramount to developing accurate opinions of construction costs for the Great Western Dam project. For both dam/spillway and pipeline/intake pump station type projects, we have an extensive database from which to draw to develop estimates of unit prices for the various components of the project.

Our team has exceptional relationships with numerous contractors that will be contacted for input on changes to the construction market that could impact labor and material costs. Our long-term relationships with contractors enable us to have discussions during the design phase to obtain up-to-date information on the state of the construction market. Providing Broomfield an accurate opinion of construction cost is an important task for our Team. This is a part of budget control for the construction phase, where most of the costs are incurred by Broomfield.



Schnabel Engineering with City of Broomfield inspecting the down stream slope of the Terminal Reservoir

We understand that keeping the Owner apprised of estimated project costs throughout the design and construction phases is important. This allows for early identification of potential design modifications needed to maintain budget expectations.

• BIDDING PHASE SERVICES •

The Schnabel team has supported dozens of recent major construction projects in Colorado and elsewhere including dam replacements, new dams, new outlet works tunnels, installation of pipelines and control systems, and rehabilitation of earthen embankments and appurtenances. Schnabel assists Owners in the bidding process for construction of selected rehabilitation alternatives by performing the following:

- Prepare advertisements and provide recommendations to the Owner regarding the need to pre-qualify contractors.
- Print and distribute contract documents to eligible and prequalified bidders. Maintain a list of plan holders.
- Conduct a pre-bid conference and tour of the project site. Record, prepare, and distribute minutes of these conferences to plan holders.
- Prepare and issue addenda as required to respond to plan holders' requests for information and/or clarification.
- Attend bid opening.
- Prepare a complete tabulation of bids received with an analysis of compliance to bid document requirements.
- Assist in evaluation of apparent low, responsive, and responsible bidder(s) and provide recommendations for award of the construction contract.
- Assist in the preparation of contract documents for execution by the Contractor and the Owner.
- Develop a set of conforming documents utilizing the approved construction documents and addenda that were issued during the bid process.

• CONSTRUCTION PHASE SERVICES •

Our construction engineering work begins before construction bid documents are issued. We have experienced personnel that provide a thorough review of design documents throughout the design process. Their reviews ensure that the items of work provided as bidding documents are complete, biddable, and buildable.

We typically provide full time construction phase engineering services for high hazard dam projects that we design. Construction phase services are extremely important to ensure the design intent is met by the contractor. With dams, field decisions are commonly needed when excavating the foundation to modify the design to meet actual conditions. Having experienced, on-site construction resident project representatives with local support from our design engineers, allows the Schnabel team to efficiently document that construction work is being performed in general accordance with the design intent.

Schnabel typically staffs projects like Great Western Dam with a Resident Project Representative (RPR), who has significant experience with similar type projects. The RPR is supported by the Engineer-of-Record (EOR) and project engineers. Because the Schnabel office is close to the project site, engineers can be on site quickly to address issues that may arise. This approach allows the team to be sensitive to the project budget, while, at the same time, providing very experienced personnel to the project. During portions of the project, additional construction staff are available to support the RPR when multiple activities requiring observation are underway.



Construction oversight of ogee weir and outlet works construction at Tunnel Dam near Wheatland, WY



Completion of the Yocam Phase 1B Reservoir

• 3. KEY STAFF EXPERIENCE •

Schnabel has assembled a dedicated team of qualified and experienced professionals to serve your needs for this project. Our team will be led by Morley Beckman, PE who will serve as the Project Manager and EOR.



BROOMFIELD
Colorado

PROJECT MANAGER /
ENGINEER OF RECORD

MORLEY BECKMAN, PE

TECHNICAL
SENIOR REVIEWER

GLEN CHURCH, PE
THOMAS FITZGERALD, PE
ROBERT CANNON, PG

ASSISTANT
PROJECT MANAGER

QUINTON GRANTZ

TECHNICAL DISCIPLINE TEAM

CIVIL DESIGN LEAD

QUINTON GRANTZ

CIVIL DESIGN TEAM

BRYAN BLACK, PE
ALLYSON BOYD
JACK GOODE

GEOTECHNICAL LEAD

KAMI GARDELLA, PE

GEOTECHNICAL TEAM

JORDAN SCHAEFBAUER
JACK GOODE
ALLYSON BOYD

TUNNEL/SHAFT DESIGN LEAD

CHRISTOPH GOSS, PHD, PE

TUNNEL/SHAFT DESIGN TEAM

MARK KRONKE, PE
KEMP LEWIS, PE
SARA DORAN, PE

HYDROLOGY/HYDRAULICS
LEAD

GRANT JOHNSON, PE

HYDROLOGY/HYDRAULICS
TEAM

SHANE CUNNEFF, PE
NAVEEN KUMAR
BRIANNA CROTTY, PE

MECHANICAL/PIPELINE
LEAD

KELBY SOMMER, PE

MECHANICAL/PIPELINE
TEAM

BRYANT CHARLO, PE
TONY BRANZ

CADD LEAD

IAN RECK

CADD TEAM

BRUCE HOGNESS
JEREMY SLAUGHTER

SUBCONSULTANTS

DRILLING

VINE LABORATORY
AUTHENTIC DRILLING

SURVEY

SURVEY SYSTEMS

LABORATORY

ADVANCED TERRA TESTING
VINE LABORATORY



PRINCIPAL CONTACT

Morley Beckman, PE / P: 510.517.0285 / E: mbeckman@schnabel-eng.com
600 S. Airport Road, Suite A-205, Longmont, CO 80503

The Project will be led from our Longmont, CO office.

Morley Beckman, PE will be the primary point of contact for City and County of Broomfield and will work closely with the client project manager to oversee the work on this project. Morley will be fully committed to supporting your needs in whatever capacity necessary to get the job done. She can be reached anytime at 510.517.0285. A brief biography of our selected technical discipline leads are found below. Full resumes for each can be found under Appendix B.



MORLEY BECKMAN, PE

Project Manager

Morley has over 22 years of engineering and geology experience, primarily focused in the fields of geotechnical engineering, engineering geology, and construction management. She is also the branch leader for Schnabel's Longmont office. Morley's professional experience includes analysis and engineering designs for both new and rehabilitated dams; geotechnical analysis of slope stability, soil conditions, and seismic hazard risk; review of levee seepage, stability, and seismic conditions for Federal Emergency Management Agency (FEMA) certification; SQRA for dams; abandoned mine retrofit and rehabilitation design; and construction management for dam rehabilitation and mine retrofit projects. Her field experience includes dam inspections, field coordination and oversight for complex horizontal and inclined deep borings and wells, geologic mapping, observation of soil and rock drilling, instrumentation installation and monitoring, mine adit and bulkhead inspections, and supervision of abandoned mine grouting.



QUINTON GRANTZ

Assistant Project Manager

Quinton is a Senior Staff Engineer with experience in geotechnical and civil engineering. He has experience as a construction engineer on several civil engineering projects throughout the State of Colorado. These projects have included slurry walls, concrete structures, pipeline, and water related industrial facilities. His experience on these projects ranges from conceptual layout to the development of construction drawings and specifications, cost estimates, and construction related engineering.



GLEN CHURCH, PE

Technical Senior Reviewer

Glen is a Principal Engineer with over 30 years of experience and has worked on numerous heavy civil construction and engineering projects throughout the US for both governmental agencies and private industry. His experience includes design of dams and reservoirs, pipelines, concrete structures, tunnels, slurry walls, canals, and roadways. For these projects, he has performed initial site analyses, feasibility studies, construction cost estimates, preparation of construction plans and specifications, and onsite construction related services. Glen has also completed numerous feasibility studies for new dams and rehabilitation of existing dams.

**THOMAS FITZGERALD, PE****Technical Senior Reviewer**

Tom has over 25 years of experience and has been the Lead Design Engineer, Engineer of Record, Senior Reviewer and Project Manager for the evaluation, design, and construction of numerous new and existing dams. He has also served as the Independent Consultant for multiple Federal Energy Regulatory Commission (FERC) Part 12 inspections and numerous regular and formal dam safety inspections for dams regulated by other state and federal agencies. Tom has extensive experience in the evaluation and rehabilitation of existing earth and concrete dams with various deficiencies; and the planning, design, and permitting of new dams. Specific dam-related experience includes stability evaluations for earth and concrete dams, spillway replacement, design of roller compacted concrete (RCC) dams, earthen embankment design, seepage analyses, post tensioning systems, overtopping protection, development of instrumentation systems, grouting, and various concrete repairs.

**ROBERT CANNON, PG****Technical Senior Reviewer**

Robert has over 40 years of experience in program and project management for large infrastructure projects. He provides geotechnical support of site characterization, remedial investigation, feasibility study, design, remedial design, and construction oversight projects for dams and other critical facilities. He has managed multidisciplinary site evaluation programs, developed site-specific field investigation plans, and managed their implementation at numerous sites. Project responsibilities have also included support in public hearings, expert testimony, site construction supervision, seismology and reservoir induced seismicity assessments, technical review, and project management.

**KAMI GARDELLA, PE****Geotechnical Lead**

Kami Gardella has more than 18 years of experience in rock mechanics, geotechnical engineering, and dam engineering. Her professional experience includes project management; geotechnical/geological subject matter expertise for risk assessments; developing and executing geotechnical site explorations for a variety of project sizes; analytical and engineering design for dams, levees, and rock slopes; quality assurance and quality control review; construction management and observation; extensive drilling experience using a variety of methods; and development and execution of instrumentation plans. She has experience with stability modeling and kinematic analysis of rock slopes, point cloud data manipulation, and the Geo-Slope International programs SEEP/W and SLOPE/W.

**CHRISTOPH GOSS, PHD, PE****Tunnel / Shaft Design Lead**

Christoph has over 20 years of experience and has served as resident engineer on various types of tunnel and pipe jacking projects including drill & blast, hard rock rehabilitation, roadheader, microtunnel, digger shield, and wheel excavator. Christoph has served in other capacities, including claims analysis on subway, road, hydroelectric, and utility tunnels constructed via drill & blast, earth pressure balance shield, and slurry shield methods. He has also been involved in the support evaluation of various mine tunnels, drifts, stopes, and adits. His experience in quarries/surface mines includes geological investigations, volume estimating/modeling, slope stability, seepage, and mine layout. Christoph has also been involved in the investigation, design, and construction of numerous dam and reservoir projects. His work in this field includes site evaluation, geotechnical analysis, project layout, specification writing, construction engineering, and dam monitoring.

**GRANT JOHNSON, PE****Hydrology / Hydraulics Lead**

Grant has been an engineer in the dam and water resource industry for over 10 years. He has led numerous types of water resource projects including spillway design, dam hazard classification studies, dam breach modeling and inundation mapping, basin hydrology studies, streambank stabilization projects, design of ditch and riverine structures, and hydraulic design of dam outlet works. Grant is a skilled hydraulic modeler who is proficient with steady- and unsteady-state modeling applications in both one- and two-dimensional HEC-RAS. His experience also includes floodplain hydraulic analyses, submittals to FEMA for flood map revisions, and submittals to local governments for floodplain development permits.

**KELBY SOMMER, PE****Mechanical / Pipeline Lead**

Kelby has experience in hydraulic structures, water supply, facility inspection and construction management. The majority of his experience involves analytical and physical design for hydraulics structures, surface water diversions, intakes, water treatment, and pump stations, and the associated civil and mechanical components to create a complete project.

**IAN RECK****CADD Lead**

Ian has 18 years of experience with Autodesk Civil 3D and GIS industry software and practices. He specializes in 3D surface modeling, 3D visualizations, surface analysis, volume calculations, and CAD survey data management. He is highly experienced in data mapping, georeferencing data, and 3D rendering. Ian is responsible for providing ongoing support to contractors, surveyors, and engineers in the field during project exploration and construction. He has been instrumental in the analysis, planning, and design of several large scale civil and geotechnical projects including: the construction and rehabilitation of dams, spillways, outlets and accompanying infrastructure, tunnels, adits, shafts, bulkheads, mine structural support, and waterways.

SUBCONSULTANTS



VINE LABORATORIES, INC. (VINE)

Drilling / Laboratory

VINE is headquartered in Commerce City, Colorado. VINE is a professional services firm providing 19 years of QA/QC management, materials testing, construction inspections, laboratory analysis, and field exploration (geotechnical & environmental drilling, and hydro-vac services) on projects of varying size and complexity. VINE has a full-service geotechnical laboratory accredited by AMRL/CCRL in concrete, soils, asphalt, masonry, and fireproofing. VINE has certifications as: disadvantaged business enterprise (DBE), small business enterprise (SBE), minority woman-owned business enterprise (MWBE), economically disadvantaged woman-owned business enterprise (EDWOSB), and woman-owned small business (WOSB).



AUTHENTIC DRILLING, INC.

Drilling

Authentic Drilling specializes in difficult access geotechnical, water well and exploration drilling. All of their rigs are versatile and capable of drilling auger, casing advancer, air and mud rotary, core and odex. Their CME rigs can drill up to 30 degrees off vertical and our Acker Renegade and Ejkelkamp sonic rigs can drill up to 45 degrees off vertical and has a 1000 RPM drill head complete with bean and moyno pumps for the ultimate coring setup. Authentic Drilling has certifications as: DBE, WBE, SBE and WOSB.

SURVEY SYSTEMS SURVEY SYSTEMS, INC. (SSI)

Surveying

SSI has projects ranging in size and scope with a proven track record of coordinating those projects through their diverse and qualified staff. SSI retains three Professional Land Surveyors with varying degrees of experience. Because of the diversity of our company, SSI is able to handle any situation that arises. Their field crews are made up of four party chiefs and four instrument operators. Many of their employees have been with SSI for over five years. And some of whom, which have military backgrounds, enabling them to work cohesively as a team. SSI is located in Evergreen, CO and is a certified Service Disabled Veteran Owned Small Business (SDVOSB).



ADVANCED TERRA TESTING (ATT)

Laboratory

ATT is a full-scope, state-of-the-art geotechnical laboratory providing advanced capability in soil & rock mechanics and geosynthetics testing. ATT provides physical properties test data for geotechnical, seismic, and hydrologic design analyses, construction quality assurance, and regulation required pre-construction testing. The laboratory provides field emulation testing of waste/geosynthetic/soil/fill/and/or rock sequences for a wide variety of civil and environmental projects such as construction, engineering, waste, design, architectural, mining, oil & gas, chemical, and manufacturing industry projects. In addition, ATT provides field sampling and testing services including design, installation, and management of field laboratories, Manufacturing Quality Assurance (MQA) for geosynthetics products and Construction Quality Assurance (CQA) field services for civil project support. They also provide consultation on design of laboratory testing and field sample collection programs. ATT operates under a formal Quality Assurance Program compliant with NQA-1 and ISO 9000. Included are standard technical and sample handling and tracking procedures. ATT also possess a license to handle Radioactive Materials from the Colorado Department of Health and Environment.

• 4. PROJECT APPROACH AND SCHEDULE •

Schnabel will perform the following scope of services to aid Broomfield in selecting an alternative and producing design documents to rehabilitate Great Western Dam. Our scope assumes preparation of figures and cost estimates for up to three feasibility-level alternatives, aiding Broomfield in the selection of the alternative, providing 30%, 60%, 90% and final design level packages for bidding, and aiding Broomfield in the bidding and award process. This scope of services is divided into eighteen tasks:

- | | |
|--|--|
| 1. 2024 Project Management | 10. Phase III Geotechnical Investigation |
| 2. Surveying and Updating Basemaps | 11. 60% Design Submittal |
| 3. Phase II Geotechnical Investigation and GDR | 12. 2025 Contingency |
| 4. Radiological Assessment | 13. 2026 Project Management |
| 5. Alternatives Analysis and Report | 14. 90% Design Submittal |
| 6. 2024 Contingency | 15. 90% Design Review by SEO |
| 7. 2025 Project Management | 16. Final Design Submittal |
| 8. Screening of Alternatives | 17. Permitting Assistance |
| 9. 30% Design Submittal | 18. Bidding and Award |

The goal of this project is to present a design to replace the deteriorating outlet pipe and toe drain system discussed in Section 1, with added benefits of improving other aging infrastructure at the dam.

• TASK 1 - PROJECT MANAGEMENT •

Efforts under this task will include coordination with Broomfield through in-person and virtual meetings, emails, and correspondence; scheduling and coordinating the efforts of the design team; preparation of budget summary reports for Broomfield; and monthly invoice preparation. This work will include up to 7 monthly meetings with Broomfield and members of the design team to discuss overall project status. This task also includes managing subconsultants and subcontractors.

Task 1 Deliverables

- Budget Summary Reports, Meeting Minutes, Meeting Agendas, and Monthly Invoices

• TASK 2 - SURVEYING AND UPDATING BASEMAPS •

The existing topographic survey data for Great Western Dam dates back to 2005. The data is low resolution and lacks detail for numerous site features. Schnabel will subcontract with licensed land surveyors Survey Systems Inc. to perform topographic mapping of the dam site, downstream toe berm, toe drain system, outlet works, instrumentation, and eastern reservoir rim; to establish construction benchmarks; and to perform a bathymetric survey of the reservoir bottom. Base maps will include as-built conditions of the outlet works, spillway, toe drains, electrical power poles, boat ramp, manholes, and existing instrumentation. Approximate limits of the survey are shown above/below.



The topographic survey will be performed by our subcontractor and accomplished using a combination of LiDAR mapping techniques and traditional site survey. Topographic maps of the dam, bathymetry and appurtenant structures will be prepared with one-foot contours. Benchmarks will be established during this task that will serve as control points for future design efforts and eventual construction. The benchmarks will be located near the work, but outside the anticipated construction zone. Structure surveys of as-built dimensions of accessible portions of the outlet works , toe drain system, and spillway will be collected and incorporated into the as-built base map.

A bathymetric survey will be performed by our subcontractor within Great Western Reservoir using a 25-foot Armstrong Marine survey boat using multibeam sonar equipment. The boat will be launched from the existing ramp on the north reservoir bank used by Broomfield Environmental Services division. The objective of this survey is to determine the sediment elevation within the reservoir to plan for future drilling and sampling of the sediment, and to update the storage capacity within the reservoir . The bathymetry will be combined with the above water topography to provide a single basemap for use on the project . The above water topographic and bathymetry surveys will use a horizontal datum of Colorado State Plane and a vertical datum of NAVD88. All survey will be signed and sealed by a Colorado licensed professional land surveyor.

Task 2 Deliverables

- Topographic Survey, Construction Benchmarks, Structure Survey and Bathymetric Survey data in electronic (CADD) format.

Task 2 Assumptions

- Broomfield will provide access to the vaults at the toe of the dam for survey of key features. Broomfield personnel will be on site during survey to identify key measurement points for instrumentation (e.g. zero point for piezometers). Broomfield will provide access to the Reservoir for the survey subconsultant's boat. Survey is anticipated to require 2 days for terrestrial survey and 2 days on the water for bathymetric survey.

• TASK 3 - PHASE II GEOTECHNICAL INVESTIGATION AND GDR •

This task includes the field, laboratory, survey and coordination work required to acquire additional necessary geotechnical data for design of the proposed rehabilitation. Schnabel previously submitted a two-phase geotechnical investigation plan to Broomfield on May 24, 2023. The investigation plan was reviewed and approved by the SEO. Phase I of the investigation was completed in August 2023 and included five borings, installation of two piezometers, and laboratory testing of soil and rock collected from the borings. Currently, there are thirteen functioning piezometers including eleven installed between 1967 and 2005, and two installed during Phase I.

Phase II geotechnical investigation is anticipated to be completed in Fall 2024 and will include an additional five borings and associated laboratory testing. This task will also include as-built topographic survey of all Phase I and Phase II boring locations. The purpose of this geotechnical investigation is to better understand and characterize the dam embankment and foundation stratigraphy, to assess the filter compatibility of the existing blanket drain materials, and to assess the embankment condition in the vicinity of the outlet pipe. This information will assist Schnabel in refining the improvement alternatives for the dam. Phase II investigation plan is summarized in Table 1 below:

**TABLE 1: GREAT WESTERN DAM AND RESERVOIR
PHASE II GEOTECHNICAL INVESTIGATION PLAN SUMMARY**

Boring ID	Depth (ft)	Drilling Methods	Backfill Method	Sampling Interval	PFM Addressed	Boring Purpose
Phase 2 - 2024						
SE-1	100	HSA (~50 ft) and HQ Rock Coring (~50 ft)	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand dam stratigraphy, assess location of potential new outlet shaft, assess stratigraphy for internal erosion potential.
SE-3	100	HSA (~80 ft) and HQ Rock Coring (~20 ft)	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand dam stratigraphy, assess stratigraphy for internal erosion potential.
SE-4	100	HSA (~80 ft) and HQ Rock Coring (~20 ft)	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand dam stratigraphy, assess stratigraphy for internal erosion potential.
SE-6	50	Sonic	Bentonite Pellets/ Chips	Continuous	1, 15a, 15b, 16, 17	Determine blanket drain extents and assess filter compatibility, assess stratigraphy for internal erosion potential, assess erosion of embankment into blanket drain system, characterize soils around outlet pipe.
SE-7	50	Sonic	Bentonite Pellets/ Chips	Continuous	1	Determine blanket drain extents and assess filter compatibility, assess stratigraphy for internal erosion potential, assess erosion of embankment into blanket drain system.

PFM = Potential Failure Mode

HSA = Hollow Stem Auger

HQ = 3.8" OD / 2.5" ID rock core bit

SPT = Standard Penetration Test

MC = Modified California Sampler

All subsurface exploration activities will be overseen by a qualified Schnabel engineer or geologist. Prior to beginning the subsurface investigation, all borings will be staked/marked by a Schnabel representative and a utility locate ticket will be submitted per Colorado 811 requirements.

Schnabel will subcontract with Advanced Terra Testing and Vine Laboratories to collect and test selected soil samples to gain a better understanding of the engineering properties of the materials encountered at Great Western Dam. The soil lab testing will include approximately:

- 20 – Natural density and moisture content
- 20 – Sieve analyses
- 5 – Percent finer than No.200 sieve
- 5 – Hydrometer analyses
- 5 – Specific gravity
- 20 – Atterberg limits
- 4 – Triaxial compression (CU) per confining stress
- 4 – Direct shear
- 4 – Standard proctors

The rock lab testing performed will include 6 natural moisture content and density tests and 6 unconfined compressive strength tests. Additional details for the proposed drilling and testing program (exploration team, figures showing drilling locations, subsurface exploration methods, field logging methods, contingency plan, and emergency action plan) were approved by the SEO in 2023, and are documented in our field investigation plan, available upon request.

Following completion of the aforementioned field and laboratory work, Schnabel will review the data and prepare a Geotechnical Data Report (GDR). The GDR will detail the results of both Phase I (2023) and Phase II (2024) geotechnical investigations. The GDR will include boring logs, piezometer construction logs, laboratory test results, subsurface cross sections, and a written narrative of all Phase I and Phase II field activities. The GDR will also incorporate selected data from previous geotechnical investigations (2002 and earlier) performed at the dam.

Task 3 Deliverables

- Draft and final Geotechnical Data Reports (GDRs).

Task 3 Assumptions

- Only minor revisions are required for the investigation plan (detailing adjusted grouting methodology for rock core borings SE-1, SE-3 and SE-4). Drilling activities will be performed in August/September, subject to subcontractor availability.

• TASK 4 - RADIOLOGICAL ASSESSMENT •

Great Western Dam is located downstream and downwind of the former Rocky Flats nuclear weapons manufacturing facility. Background documentation on Great Western Reservoir, obtained from the SEO, includes articles and correspondence about radiological contamination of some sediment within the reservoir.

To further assess the impact this radiological material may have on rehabilitation design, Schnabel will perform literature review, research, and coordination with Broomfield and Colorado Department of Public Health & Environment regarding the potential risks or concerns with exposing the sediment in the bottom of the reservoir. Our scope will include review of prior radiological assessments, review of regulatory concerns and requirements impacting work at nearby Standley Lake where similar radiological materials were noted, and research of current Colorado standards and regulations related to disturbance of radiological sediment. We will summarize our findings in an assessment memorandum.

Task 4 Deliverables

- Radiological assessment memorandum.

Task 4 Assumptions

- Publicly available data and prior publications will be reviewed. This task will not involve field sampling or testing. If such investigations or third-party environmental consultants are required, they may be handled via contingency funding outlined in Task 6 or Task 12.

• TASK 5 - ALTERNATIVES ANALYSIS AND REPORT •

Schnabel will prepare feasibility-level descriptions, figures and cost estimates for up to three primary dam rehabilitation alternatives. These feasibility-level alternatives will update and supersede the alternatives discussed in our 2021 feasibility technical memorandum. As a result of our 2021 risk assessment workshops, several of those alternatives are no longer considered appropriate as they do not address the primary risk-driving failure modes identified for Great Western Dam.

The proposed alternatives will be evaluated for cost, technical complexity, feasibility, effectiveness at reducing risk, and overall benefit to Broomfield. Considerations will include:

Considerations will include:

- Radiological sediment exposure
- Impacts of soft/ loose zones within the existing embankment
- Triggering expanded state and federal permitting requirements
- Triggering expanded environmental requirements
- Risk of dam movement due to construction sequencing
- Analyses of seepage and stability of embankment during staged excavation
- Filter compatibility of existing and proposed embankment and drainage blanket materials

- Potential for increasing reservoir storage capacity
- Availability of suitable dam fill
- Time and coordination needed for SEO approval
- Ability to use reservoir during construction
- Maximum safe storage level during construction
- Risks of abandoning outlet works in place vs. complete removal
- Impact of power transmission lines located at dam toe
- Impacts to the existing spillway
- Risk of uncontrolled seepage through dam
- Impact to water rights usage

Task 5 Deliverables

- Figures and Cost Estimates for each of three alternatives, an Alternatives Report summarizing the Selected Alternative for Design, Meeting Minutes and Agendas.

• TASK 6 - 2024 CONTINGENCY •

This task will include an additional \$25,000 that may be used in 2024 or early 2025 at the discretion of Broomfield, in coordination with Schnabel. Some possible uses include:

- Additional geotechnical laboratory testing.
- Radiological sampling and testing if deemed critical to alternative selection.
- Additional topographic or bathymetric survey beyond the limits and details outlined above.
- Meetings and coordination with owners of the power transmission line located at the dam toe.

Schnabel Engineering will provide a written proposal for any changes that exceed \$5,000. Work on the proposed changes will not proceed until Schnabel receives a written confirmation from Broomfield for the use of contingency funds.

• TASK 7 - 2025 PROJECT MANAGEMENT •

Efforts under this task will include coordination with Broomfield through in-person and virtual meetings, emails, and correspondence; scheduling and coordinating the efforts of the design team; preparation of budget summary reports for Broomfield; and monthly invoice preparation. This work will include up to 12 monthly meetings with Broomfield and members of the design team to discuss overall project status. This task also includes managing subconsultants and subcontractors.

Task 7 Deliverables

- Budget Summary Reports, Meeting Minutes, Meeting Agendas, and Monthly Invoices.

• TASK 8 - SCREENING OF ALTERNATIVES •

Schnabel will meet with Broomfield to discuss the alternatives and aid Broomfield in selecting the preferred alternative. Schnabel will then meet with the SEO to discuss the selected alternative and identify key SEO concerns or requirements. Schnabel will prepare a memorandum summarizing the alternatives selection process, Broomfield's input, and SEO concerns or requirements.

Task 8 Deliverables

- Meeting minutes and summary memorandum.

Task 8 Assumptions

- One two-hour meeting with Broomfield to review and select alternatives. One two-hour meeting with the SEO to discuss the selected alternative.

DESIGN OVERVIEW

Schnabel will provide a design to replace the deteriorating outlet pipe and toe drain system at Great Western Dam. This process will include a 30%, 60%, 90% and a final design submittal. In the following sections we have provided topics and deliverables, separated by discipline, that will be addressed in each design phase.

To cost our design effort (Tasks 9 through 18) we have assumed the selected rehabilitation alternative will consist of a new outlet works shaft on the left abutment, a microtunneled intake (single alignment) into the reservoir, an outlet pipe under the emergency spillway, abandonment in-place of the existing outlet pipe, and sequential excavation and replacement of the blanket / chimney drain and toe drain system. We have assumed the dam will not be raised, the spillway will not be altered, and the maximum level in the reservoir will not be increased. All construction will take place with the water in the reservoir drawn down as low as possible, but not fully drained, due to radiological dust concerns. As the final selected alternative cannot be detailed at this time, our assumptions are general and our overall level of effort for each milestone has been estimated based on our experience with similar projects. After the alternatives review and selection process, we can update our scope and fee for each design submittal stage if Broomfield desires.

Based on discussions with Broomfield, we intend to provide regular updates of overall budget status (as outlined under the yearly Project Management tasks) and can adjust the design phase budgets as required. If the overall level of effort required to fully advance and finalize the design is significantly greater than outlined herein, additional funding may be required. We will make every effort to reduce the need for additional funding, but the uncertain nature of the final design alternative may make that impractical.

We estimate 65 to 80 design plan sheets will be needed for the design and they are as follows: Cover Page, Sheet Index, Existing Conditions and Survey, General Plan, Rating Curves, Overhead Powerlines Plan, Geotechnical Investigation (3-4 sheets), Excavation/ Borrow (3-4 sheets), Shaft Plan (5-7 sheets), Mechanical Sheets for Shaft (4-6 sheets), Inlet Microtunnel (3-6 sheets), Intake Structure (2-5 sheets), Outlet Works Microtunnel (3-6 sheets), Intake and Outlet Works Pipe (6-9 sheets), Outlet Works Connection to Existing (3-5 sheets), Blanket Drain and Toe Drain Replacement (6-8 sheets), Existing Outlet Works Abandonment (2-3 sheets), Erosion Control and Instrumentation (5-7 sheets), Electrical (3-4 sheets).

• TASK 9 - 30% DESIGN SUBMITTAL •

- **Our Dam Embankment and General design in the 30% design phase will include:**
 - Preparation of general plans including cover, existing site plans with new survey data, geotechnical investigation sheet, and preliminary excavation and borrow plans.
 - Preparation of a plan and profile of old outlet works, and preliminary layout of new outlet works.
 - Preparation of plan and profiles of new toe drains and manhole layout.
 - Preliminary excavation plan for toe drains.
 - Preliminary filter compatibility calculations.
 - Preliminary seepage analyses.
 - Preliminary dewatering plan to aid the contractor in the construction dewatering plan.
 - Slope stability analyses to evaluate toe drain excavation.
 - Evaluation of potential conflicts with existing power lines and consideration of alternatives for re-routing them, if necessary.
 - Evaluation of data needs for the Phase III Geotech Investigation.
 - Discussions with Broomfield regarding outlet works control automation, automation of existing geotechnical instrumentation, and automation of new outlet works valves and gates.
- **The Shaft and Microtunnel design in the 30% design phase will include:**
 - Discussions with Broomfield about number of new intake tunnels needed.
 - Preliminary selection of shaft and microtunnel locations.
 - Using available geotechnical data to prepare initial shaft and microtunnel excavation plan.
 - Preparing preliminary sizing and plan / profile of shaft and microtunnels.
- **The Mechanical design in the 30% design phase will include:**
 - Discussions with Broomfield to identify existing infrastructure (vaults, valves, pipe sizes and alignments) that needs to be protected or replaced.
 - Discussions with Broomfield to determine required flow rates for releasing water for preliminary pipe sizing.
 - Preparation of plan and profile of pipes within tunnels.
 - Preparation of preliminary intake structure and outlet works connection vault plan and profile.
- **Development of a preliminary engineer's opinion of probable construction cost (EOPCC).**

Task 9 Deliverables

- Design Drawings (30%), EOPCC (30%), Meeting Minutes.

Task 9 Assumptions

- One 2-hour design submittal meeting with Broomfield to review 30% design. One 2-hour design submittal meeting with the SEO to discuss our 30% design.

• TASK 10 - PHASE III GEOTECHNICAL INVESTIGATION •

This task includes the field, laboratory, survey, and coordination work required to acquire additional geotechnical data for design of the proposed rehabilitation. Schnabel will prepare an investigation plan for approval by the SEO. The investigation plan is assumed to consist of three additional borings along the alignment of the new outlet works, one additional boring along the alignment of the existing outlet works pipeline, and three additional borings within the reservoir along the alignment of the new intake tunnel. The three reservoir borings will be drilled from a barge-mounted drill rig.

The Phase II I geotechnical investigation is anticipated to be completed in Summer 2025 and will include an additional seven borings, as detailed above, and associated laboratory testing. This task will also include as-built survey of all Phase III explorations. The purpose of this geotechnical investigation is to better understand and characterize the dam embankment and foundation stratigraphy along the selected alternative outlet works alignment, the embankment material near and around the existing outlet works pipeline for abandonment design, and the sediment and foundation stratigraphy along the alignment for the new intake tunnel. This information will assist Schnabel in refining the 60% design for the dam. The tentative Phase III investigation plan is summarized in Table 2 below:

**TABLE 2: GREAT WESTERN DAM AND RESERVOIR
PHASE III GEOTECHNICAL INVESTIGATION PLAN SUMMARY**

Boring ID	Depth (ft)	Drilling Methods	Backfill Method	Sampling Interval	PFM Addressed	Boring Purpose
Phase 2 - 2024						
SE-11	80	HSA (~40 ft) and HQ Rock Coring (~40 ft)	Cement-Bentonite Grout	2.5 ft SPT/MC Packer Tests	1	Understand Dam stratigraphy, assess location of potential new outlet pipeline, assess stratigraphy for Internal Erosion potential.
SE-12	50	HSA (~45 ft) and HQ Rock Coring (~5 ft)	Cement-Bentonite Grout	2.5 ft SPT/MC Packer Tests	1	Understand Dam stratigraphy, assess location of potential new outlet pipeline, assess stratigraphy for Internal Erosion potential.
SE-13	50	HSA (~45ft) and HQ Rock Coring (~5ft)	Bentonite Pellets/ Chips	2.5 ft SPT/MC Packer Tests	1	Understand Dam stratigraphy, assess stratigraphy for Internal Erosion potential.
SE-14	50	HSA (~45 ft) and HQ Rock Coring (~5ft)	Cement-Bentonite Grout	2.5 ft SPT/MC Packer Tests	1	Understanding Dam stratigraphy near existing outlet works, assess stratigraphy for Internal Erosion.
BD-1	100	Barge Drilling	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand stratigraphy, assess location of potential new inlet tunnel, assess soil strengths for tunneling.
BD-2	100	Barge Drilling	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand stratigraphy, assess location of potential new inlet tunnel, assess soil strengths for tunneling.
BD-3	100	Barge Drilling	Cement-Bentonite Grout	2.5 ft SPT/MC	1	Understand stratigraphy, assess location of potential new inlet tunnel, assess soil strengths for tunneling.

PFM = Potential Failure Mode

HSA = Hollow Stem Auger

HQ = 3.8" OD / 2.5" ID rock core bit

SPT = Standard Penetration Test

MC = Modified California Sampler

All subsurface exploration activities will be overseen by a qualified Schnabel engineer or geologist. Prior to beginning the subsurface investigation, all borings will be staked/marked by a Schnabel representative, with the exception of the reservoir borings, and a utility locate ticket will be submitted per Colorado 811 requirements. The reservoir borings will be located using handheld GPS and aligning with staked locations on land.

Schnabel will subcontract with Advanced Terra Testing and Vine Laboratories to collect and test selected soil samples to gain a better understanding of the engineering properties of the materials encountered at Great Western Dam. The soil lab testing will include approximately:

- 20 – Natural density and moisture content
- 20 – Sieve analyses
- 5 – Percent finer than No.200 sieve
- 5 – Hydrometer analyses
- 5 – Specific gravity
- 20 – Atterberg limits
- 4 – Triaxial compression (CU) per confining stress
- 4 – Direct shear
- 4 – Standard proctors

The rock lab testing performed will include 6 natural moisture content and density tests, and 6 unconfined compressive strength tests. Additional details for the proposed drilling and testing program (exploration team, figures showing drilling locations, subsurface exploration methods, field logging methods, contingency plan, and emergency action plan) will be provided in the drilling investigation plan for SEO approval.

Following completion of the aforementioned field and laboratory work, Schnabel will review the data and prepare an addendum to the GDR. The updated GDR will include the results of Phase III (2025) along with the previously documented results from both Phase I (2023) and Phase II (2024) geotechnical investigation. The GDR will include boring logs, piezometer construction logs, laboratory test results, subsurface cross sections, and an updated written narrative of all Phase I, Phase II, and Phase III field activities.

Task 10 Deliverables

- Draft and final addenda to the Geotechnical Data Report (GDR).

Task 10 Assumptions

- Only minor revisions are required for the investigation plan written for Phase I and Phase II (such as detailing plan for barge mounted drilling).
- The barge-mounted drilling has been estimated at a lump sum cost to collect data along a single intake alignment. The cost will need to be re-estimated with the sub-contractor to confirm unit rates in the future and/or if multiple intakes are required.
- Drilling activities will be performed in April/May 2025, subject to subcontractor availability.

• TASK 11 - 60% DESIGN SUBMITTAL •

- **Our Dam Embankment and General design in the 60% design phase will include:**
 - Based on additional data from the Phase III investigation, we will update filter compatibility, excavation slope stability, and seepage analyses.
 - Based on revised seepage analyses we will update the preliminary dewatering plan to aid in the contractors construction dewatering plan.
 - Based on the updated analyses, we will finalize the excavation plan for toe drains and show on plans.
 - Preliminary sections and details will be prepared for the toe drain repair based on analyses.
 - Preparation of a preliminary abandonment plan for the old outlet works.
 - Preliminary erosion control and BMP plans and details will be prepared based on the proposed work.
 - Preparation of preliminary valve, gate and geotechnical instrumentation automation plan and a preliminary construction dam monitoring plan.
- **The Shaft and Microtunnel design in the 60% design phase will include:**
 - Finalizing shaft and tunnel size and location.
 - Based on data from the Phase III investigation, we will update the shaft and microtunnel excavation plan.
 - Preliminary structural calculations for bracing of shaft and tunnels will be prepared.
 - Preparation of preliminary shaft and tunnel support and lining details.
- **The Mechanical design in the 60% design phase will include:**
 - Finalizing pipe size and preparation of preliminary valve layout plan.
 - Preparation of plan and profile of piping and personnel access within shaft.
 - Sections and details for proposed piping including:
 - » Sections for intake structure and outlet works connection vault.
 - » Structural concrete and rebar calculations and sections for the intake structure and connection vault.
 - » Details on connection with the existing delivery system.
 - Development of conceptual approach for intake structure placement in the wet.
 - Preparation of preliminary sections and details for trash racks, intake pipeline, outlet pipeline and connection to existing distribution system.
- **Development of updated EOPCC.**
- **Preparation of preliminary electrical and controls layouts for the selected arrangement.**
- **Initial draft of technical specifications.**
- **Initial draft of basis of design report.**
- **Update outlet rating curve.**

Task 11 Deliverables

- Design Drawings (60%), EOPCC (60%), Initial draft of Technical Specifications, Initial draft of basis of design report, Meeting minutes.

Task 11 Assumptions

- One 2-hour design submittal meeting with Broomfield to review 60% design. One 2-hour design submittal meeting with the SEO to discuss our 60% design.

• TASK 12 - 2025 CONTINGENCY •

This task will include an additional \$50,000 that may be used at the discretion of Broomfield, in coordination with Schnabel. Some possible uses include:

- Updates to the Comprehensive Dam Safety Evaluation Report (Issued in 2022) to address the impact of the proposed design on the Potential Failure Modes previously identified.
- Additional seepage and slope stability analysis.
- Additional coordination with electrical engineering sub-contractor.
- Additional geotechnical laboratory testing.
- Additional topographic or bathymetric survey beyond the limits and details outlined above.
- Meetings and coordination with contractors and specialty subcontractors for tunneling and shaft design, dam excavation techniques, pipeline connection in the wet, mechanical automation, and telemetry.
- Meetings and coordination with owners of the power transmission line located at the dam toe.

Schnabel Engineering will provide a written proposal for any changes that exceed \$5,000. Work on the proposed changes will not proceed until Schnabel receives a written confirmation from Broomfield for use of contingency funds.

• TASK 13 - 2026 PROJECT MANAGEMENT •

Efforts under this task will include coordination with Broomfield through in-person and virtual meetings, emails, and correspondence; scheduling and coordinating the efforts of the design team; preparation of budget summary reports for Broomfield; and monthly invoice preparation. This work will include up to 9 monthly meetings with Broomfield and members of the design team to discuss overall project status. This task also includes managing subconsultants and subcontractors.

Task 13 Deliverables

- Budget Summary Reports, Meeting Minutes, Meeting Agendas, and Monthly Invoices.

• TASK 14 - 90% DESIGN SUBMITTAL •

- Our Dam Embankment and General design in the 90% design phase will include:
 - Finalizing abandonment plan for old outlet works.
 - Preparation of final sections, details and structural details for the toe drain system, manholes and seepage collection/measurement system.
 - Finalizing erosion control and BPM plan.
 - Preparation of final valve, gate and geotechnical instrumentation automation plan and construction monitoring instrumentation plan.
 - Preparation of final conceptual dewatering plan with a memorandum describing our analyses and conclusions. Our conceptual plan will aid the contractor in creating the final construction dewatering plan.

- **The Shaft and Microtunnel Design in the 90% design phase will include:**
 - Finalizing structural calculations for bracing of shaft and tunnels.
 - Preparing final shaft and tunnel support and lining details.
 - Preparing a grouting plan for intake and outlet pipes in place within tunnels.
- **The Mechanical Design in the 90% design phase will include:**
 - Finalizing valve and gate layout plan.
 - Finalizing sizing and detailing valves and gates.
 - Preparing final sections, details and structural details for the intake structure and outlet works connection vault.
 - Finalizing sections and details for trash racks, intake pipeline, outlet pipeline and connection to existing distribution system.
 - Finalizing plan and profile of piping and personnel access within shaft.
 - Finalizing conceptual approach for intake structure placement in the wet.
- **Finalizing electrical design drawings.**
- **Updating the EOPCC.**
- **Updating technical specifications.**
- **Providing an initial draft construction schedule.**
- **Finalizing the basis of design report.**
- **Finalizing the GDR.**

Task 14 Deliverables

- Design Drawings (90%), EOPCC (90%), Initial draft construction schedule, Updated draft of technical specifications, Finalized basis of design report, Finalized GDR, Meeting minutes.

Task 14 Assumptions

- One 2-hour design submittal meeting with Broomfield to review 90% design, EOPCC, technical specifications and construction schedule.

• TASK 15 - 90% DESIGN REVIEW BY SEO •

Schnabel will prepare a 90% review package (construction drawings, technical specifications, and cost estimate) for the SEO's preliminary review. We will incorporate comments from Broomfield from the 90% design review meeting into the documents before submittal to the SEO. We provisionally estimate 6 weeks for the SEO to review the documents. Schnabel will meet with the SEO to discuss any comments received from the review.

Task 15 Deliverables

- 90% Construction Documents for SEO preliminary review, One 2-hour meeting with SEO, Meeting Agenda and Minutes

• TASK 16 - FINAL DESIGN SUBMITTAL •

The Final Design Phase will include the following tasks:

- Addressing comments received from SEO review for the Dam Embankment and General Design, Tunnel and Shaft Design, and Mechanical Design.
- Providing a final EOPCC.
- Providing a final set of technical specifications.
- Providing a final estimated construction schedule.
- Providing final outlet rating curve.
- Providing final basis of design report.

Task 16 Deliverables

- Final complete bidding package (design drawings, technical specifications, basis of design report and GDR). Getting final approval , signatures and stamps from Broomfield and the SEO.

Task 16 Assumptions

- One 2-hour meeting with Broomfield to present our final design plans, cost estimate, technical specifications, and construction schedule.

• TASK 17 - PERMITTING ASSISTANCE •

Schnabel will provide engineering support including transmitting plans, quantities, and calculations outlined in our design tasks above; attending meetings and providing written explanations of the scope of work to support others acquiring the necessary permits.

Task 17 Assumptions

- Construction will not have any wetland impacts or include any building, grading and construction within any USACE in-water work
- The selected alternative will not trigger any expanded state, federal or environmental permitting requirements
- No special permitting for radiological soils will be required.

• TASK 18 - BIDDING AND AWARD •

Schnabel will attend a pre-bid conference meeting and assist Broomfield in responding to questions from prospective bidders. We will prepare a meeting agenda, take notes, and distribute meeting minutes to all attendees.

We will assist Broomfield with inquiries from bidders regarding the project scope and the contract documents. We understand that all questions will be routed through Broomfield and distributed to us for response. We will assist Broomfield in preparing addenda to answer bidder's questions during this bidding phase.

We will assist Broomfield in tabulating the bids and reviewing the proposed costs. We will also assist Broomfield in evaluating the qualifications of the bidders. Schnabel will evaluate the bids and make recommendations on award of the construction contract.

Final revisions to the contract documents will be developed based on addenda issued during the bid phase. All documents will be noted as "For Construction" and dated with the general contractor's notice of award date.

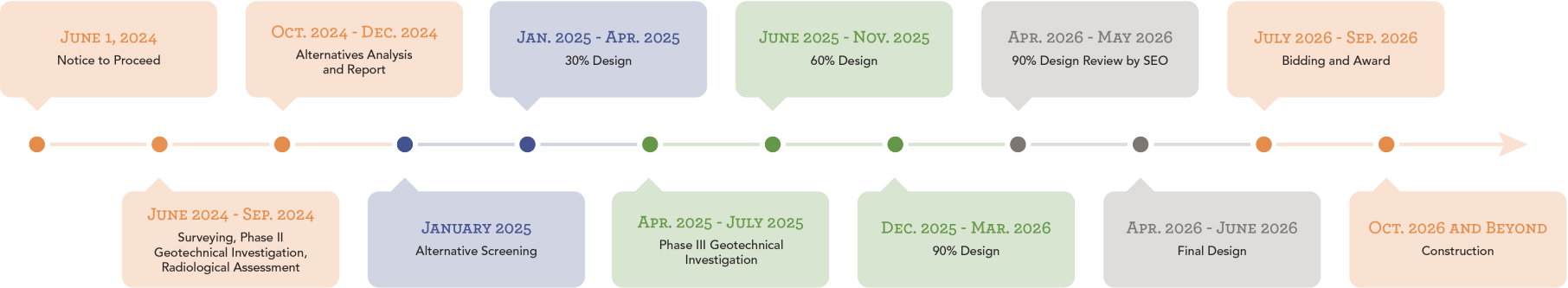
Task 18 Assumptions

- We assume 40 hours at an average billing rate for responses to bidder's questions .

• DESIGN SCHEDULE SUMMARY •

The design for the Great Western Dam Rehabilitation, as outlined above, is assumed to take about 28 months to complete. Our cost estimate has been prepared to reflect this schedule. Variations may occur depending on review time, geotechnical investigation progress, and other factors. Schnabel will provide monthly updates to Broomfield and adjust the schedule as needed.

SCHEDULE



• 5. COST ESTIMATE •

	TASK	DESCRIPTION	ESTIMATED COST
2024	Task 1	2024 Project Management	\$12,580
	Task 2	Surveying and Updating Basemaps	\$48,380
	Task 3	Phase II Geotechnical Investigation and GDR	\$127,690
	Task 4	Radiological Assessment	\$22,290
	Task 5	Alternatives Analysis and Report	\$114,330
	Task 6	2024 Contingency	\$25,000
	Total 2024 Estimated Cost (rounded to nearest 1,000's)		\$350,000
2025	Task 7	2025 Project Management	\$63,080
	Task 8	Screening of Alternatives	\$7,580
	Task 9	30% Design Submittal	\$205,440
	Task 10	Phase III Geotechnical Investigation	\$251,880
	Task 11	60% Design Submittal	\$345,210
	Task 12	2025 Contingency	\$50,000
	Total 2025 Estimated Cost (rounded to nearest 1,000's)		\$923,000
2026	Task 13	2026 Project Management	\$53,470
	Task 14	90% Design Submittal	\$296,930
	Task 15	90% Design Review by SEO	\$22,150
	Task 16	Final Design Submittal	\$112,710
	Task 17	Permitting Assistance	\$10,980
	Task 18	Bidding and Award	\$30,510
	Total 2026 Estimated Cost (rounded to nearest 1,000's)		\$527,000
TOTAL ESTIMATED COST (rounded to nearest 1,000's)			\$1,800,000

Appendix A

Similar Project Profiles

Schnabel is dedicated to providing technical excellence, value, environmental stewardship, and innovation on every project. Schnabel considers client satisfaction our most important mission. We endeavor to exceed expectations on every project, and through regular client satisfaction surveys, clients assure us that they consider Schnabel to be superior in technical quality and service as compared to our competitors. One of the hallmarks of Schnabel is the longevity of our staff with the firm and the range of services that we provide, allowing for continuity of services from the initial phases to the end of construction of projects. Knowing that our clients are the best source of information in regard to our past performance, we have listed individuals who have direct knowledge of our capabilities pertaining to similar projects that we have completed.

STANDLEY LAKE DAM IMPROVEMENTS

Dan Strietelmeier | Senior Engineer | Westminster, CO

Phone: 303.658.2500 | Email: DStriete@CityofWestminster.us



SERVICES

- » Geotechnical Engineering including Preparation of Geotechnical Baseline Report
- » Design of the Microtunnel Lake Taps, Valve Shaft, and Outlet Tunnel
- » Plans and Specifications
- » Construction Engineering

OWNER / CLIENT

- » City of Westminster, CO

Standley Lake Dam Improvement project included the complete replacement of the outlet works, a new spillway with roller compacted concrete drop structures, enlargement of the toe berm, valve house construction, and the abandonment of the existing outlet works. The underground portion of the Standley Lake Rehabilitation was comprised of two intakes, a shaft, and an outlet tunnel. The 100-foot deep, 35-foot diameter shaft, located on the north abutment of the Standley Lake Dam, had to be watertight. Primary support for the shaft during excavation consisted of shotcrete, rock dowels, and steel ribs. The final support was a 27-inch thick reinforced concrete lining. From the shaft, two 72-inch steel intake pipes were microtunneled out into the lake at lengths of 1,246 and 636 feet. In both cases, the MTBM required an underwater retrieval. The outlet tunnel, 962 feet long and 11.5 feet in diameter, was constructed in swelling claystone that quickly slaked into mud when exposed to air and water. The tunnel was driven with a roadheader from a downstream portal to the valve shaft. Ground support consisted of shotcrete and lattice girders. Upon tunnel completion, 104-inch diameter steel pipe was placed in the tunnel and the annular space was filled with cellular concrete grout.

GREAT WESTERN RESERVOIR

Brennan Middleton | Water Resource Manager | Broomfield, CO
Phone: 303.464.5605 | Email: bmiddleton@broomfield.org



SERVICES

- » Geotechnical Engineering
- » Geotechnical Investigations
- » Dam Inspection
- » Dam Engineering
- » Mechanical Engineering
- » Instrumentation Monitoring
- » Seepage Analysis
- » Stability Analysis
- » Feasibility Alternatives
- » Construction Cost Estimates
- » Risk Assessment Following CO CDSE and Federal Guidelines
- » Hydrologic and Hydraulic Analysis
- » Construction Oversight
- » Earthfill Testing

OWNER/CLIENT

- » City/County of Broomfield

As the Engineering of Record for over 20 years, Schnabel has supported the City and County of Broomfield (Broomfield) with inspections, assessments, evaluations, and conceptual designs for remediation of dam safety issues at Great Western Dam. In recent years, Broomfield and Schnabel identified several dam safety issues at Great Western Dam related to the drainage system and the outlet works, and Schnabel developed conceptual rehabilitation designs to address these issues. Given limited funding for design and construction, Schnabel proposed a risk assessment consistent with Comprehensive Dam Safety Evaluation (CDSE) guidance to better understand the dam safety risks and prioritize additional engineering evaluations, field explorations, and potential risk reduction measures (interim and long term). Our team previously designed and oversaw construction of an embankment toe berm and enlarged emergency spillway at Great Western Dam.

Schnabel conducts yearly site visits to monitor the condition of the dam, including the condition of the chimney and toe drain systems and outlet pipes, as well as the dams and primary spillways. Schnabel reviews piezometer, inclinometer, survey and toe drain flow data collected by the dam owner, evaluates the phreatic surface within the existing dam, and prepares the annual monitoring reports for the Great Western dam, summarizing the conditions and commenting on necessary remedial actions to keep the dam in compliance with state regulations. We coordinate on behalf of the Owner with the SEO for annual inspections, review of monitoring data, and review of repair alternatives to address issues with the dam.

In late 2021 Schnabel conducted a Semi-Qualitative Risk Analysis (SQRA) for Great Western Dam to assess potential failure modes at the dam and advise the owner on future rehabilitation and monitoring efforts. We planned and facilitated two SQRA workshops with personnel from Schnabel, Broomfield, and the SEO. These workshops covered extensive background information on this 110+-year-old earthen dam. Our team prepared hydrologic and hydraulic models to assess the probable maximum flood (PMF) for the dam, and to estimate downstream consequences due to dam breach. We reviewed subsurface and instrumentation data to determine areas of potential internal erosion. The results of these SQRA workshops were compiled in a CDSE report.

ROUND VALLEY RESERVOIR

Marc B. Brooks, P.E. | Executive Director | Clinton, NJ

Phone: 908.638.6121 x255 | Email: mbrooks@njwsa.org



SERVICES

- » Bidding and Prequalification Contract Procurement
- » Construction Administration and Management
- » Construction Dewatering Design and Permitting
- » Dam Inspections
- » Dam Rehabilitation Design – Earth Embankments and Rock Grouting
- » Design and Evaluation of Dredging of Tower Intake Channels
- » Design of Dam Rehabilitation Appurtenant Structures (Towers, Vaults, Security Improvements, etc.)
- » Geotechnical Evaluation
- » Permitting and Regulatory Compliance
- » Public Financing Support
- » Public Outreach and Communications
- » Risk Analysis
- » Safe Yield Modelling
- » Soil Testing

OWNER/CLIENT

- » New Jersey Water Supply Authority

The New Jersey Water Supply Authority (NJWSA) is making improvements to extend the operating life of the Round Valley Reservoir, a 55-billion gallon pumped storage reservoir that is part of a system supplying raw water to more than 1.5 million residents of central New Jersey. All three of the earth embankment dams that impound the reservoir rank among the top 10 highest dams in the state. South Dam (180-feet-high) is the third highest dam in the state. North Dam is 135 feet high and the Dike is 80-feet-high. The dam safety modifications for these three embankments include installation of a chimney, blanket, and toe drains to filter seepage through the embankments. An abutment grouting program at the North and South Dams was also designed and constructed to supplement the existing grout curtains and control seepage. The project includes rehabilitation of ancillary infrastructure, including building and security improvements; repairs at two intake towers; abandonment by grouting of existing low-level outlet works; and dredging of the South Dam tower intake to restore gate functionality.

Dam Safety Risk Assessment and Project Risk Register

The entire dam safety modification project for Round Valley Reservoir was risk informed. This was used as a framework to evaluate dam safety risk reduction of the two alternatives considered. In addition, a construction risk register was performed to evaluate the impact of the construction on the identified baseline risks and evaluate potential construction risks.

As part of issue evaluation and final design of the dam safety modifications, Schnabel's extensive geotechnical analysis included evaluation of each embankment for existing conditions and two modification alternatives. The analysis included seepage modeling that was calibrated to piezometer readings and measured seepage flows:

- Slope stability analysis and evaluation.
- Seismic deformation analysis and evaluation.
- Filter compatibility calculations for existing and proposed filters and drains.
- Geologic characterization of the bedrock foundations for evaluation and design for abutment grouting.
- Evaluation of existing instrumentation and monitoring systems.
- Design of the construction dewatering systems at all three dams. The dewatering design incorporated the results of 3D groundwater flow models calibrated to existing phreatic and seepage data.

SAVANNAH RIVER SITE - POND B DAM

Bruce Triplett | Subcontract Technical Representative | Aiken, SC

Phone: 800.249.8155 | Email: N/A



SERVICES

- » Monitor and Control Radionuclides in Pond and Seepage Water
- » Borehole and SCPT Investigations
- » Seismic Analysis
- » Permitting Support
- » Conceptual Design Alternative Analysis
- » Liquefaction Analysis
- » Hydrology and Hydraulic Analysis
- » Seepage Analysis
- » Stability Analysis
- » Remedial Design
- » Filter and Drainage Design
- » Erosion and Sediment Control Plan
- » Permitting Support
- » Construction Support

OWNER

- » Department of Energy

CLIENT

- » Westinghouse Savannah River Company

Pond B Dam is a zoned embankment dam with an asphalt-concrete mat on the upstream face for erosion protection. The dam has a height of 50 feet and crest length of 1,750 feet. The sediments in the pond are contaminated with radionuclides.

Schnabel provided a comprehensive investigation and analysis of the dam to determine its stability under static and seismic loading. The investigation included soil borings, seismic piezocone penetration tests (SCPT), test pit sampling, installation of piezometers through the dam and downstream, static stability analysis, seepage flow analysis, seismic analysis using Shake, laboratory soils testing for standard parameters, and triaxial shear testing. The seismic stability evaluation for Pond B was conducted using industry standard engineering analytical methods and was in conformance with guidelines provided by FERC for seismic analysis of dams. Hydrology and hydraulic modeling of flow conditions was also developed.

A Conceptual Design Alternative Analysis was prepared to correct instability due to seismic loading, to repair the asphalt-concrete face, and for seepage control. Cost estimates were developed for alternatives and for a replacement dam. After alternatives were selected, a final design was prepared. In addition, a Maintenance and Operations Manual was prepared for use by the client.

The investigation, analysis, alternatives assessment, and remedial design of the project were completed under a fast-track schedule of about seven months. All work was performed under strict QA/QC requirements set by WSRC.

ARCADIA LAKE INTAKE

Amber Wooten | Carollo Engineers Project Manager | Edmond, OK
Phone: 405.840.7785 | Email: awooten@carollo.com



SERVICES

- » Microtunnel Design
- » Geotechnical and Structural Design
- » Shaft Design
- » Mechanical Design
- » Pump Station Design
- » Spill Prevention and Containment Design
- » Road Design

OWNER / CLIENT

- » City of Edmond / Carollo Engineers

Arcadia Lake is a multipurpose facility funded by the City of Edmond and the US Army Corps of Engineers. By agreement with the federal government, the City's current Water Treatment Plant (WTP) capacity of 12 mgd is transmitted through the facility's low-level outlet works. However, as the city of Edmond continues to grow, capacity of the existing system is quickly becoming insufficient for the WTP's needs. In 2016, the City of Edmond reached a decision to construct a new raw water intake and pump station that can provide 30 mgd and be readily expanded to meet an ultimate 65 mgd capacity.

As a subconsultant to Carollo Engineers, Schnabel Engineering is providing planning and design services along with permitting assistance to the City for this work. The final design being completed by Schnabel consists of a new multi-level intake along the bank of Arcadia Lake. The intake is composed of three stainless steel tee screens that direct water through individual microtunnels to the intake's 50-foot diameter by 80-foot-deep wet well shaft. The pump station deck above the wet well shaft supports five pumps, motors, compressors and appurtenant equipment. Twin 42-inch diameter raw water pipelines exit the pump station below grade and proceed 6,000 feet to the water treatment plant.

Schnabel also completed the design of the paving, grading, and drainage around the pump station in addition to the site's access roadway and onsite backup generators. The backup generators include full 72-hour capacity sub-base fuel storage with a spill containment system surrounding the generators and refueling area to ensure no contamination of Arcadia Lake.

SIENA DAM AND RESERVOIR

Brennan Middleton | Water Resources Manager | Broomfield, CO

Phone: 303.464.5605 | Email: bmiddleton@broomfield.org



SERVICES

- » Dam Engineering
- » Dam Inspection
- » Emergency Action Plan
- » Geophysical Investigation
- » Pipeline and Reservoir Inspection
- » Seepage Assessment

OWNER / CLIENT

- » City and County of Broomfield

Schnabel (previously Deere & Ault Consultants) has been the Dam Engineer for Siena Dam since 2009, advising the City and County of Broomfield on safe dam operation and maintenance. In addition to annual monitoring and dam inspection services, Schnabel has performed geophysical surveys and assessments at the dam to ascertain the source of seepage on the downstream abutments of the east dam. These geophysical surveys concluded the seepage was a result of upwelling through the laminated shale bedrock and flow in an underlying paleochannel, rather than seepage through the dam embankment. Those conclusions allowed Broomfield to allay SEO concerns about the seepage without incurring costly field investigation or repair costs.

In 2023, Schnabel provided guidance to Broomfield on safe lowering of the reservoir for the first time since construction, as a pump station was constructed on the west bank of the reservoir. For routine annual services, Schnabel reviews piezometer, survey, and toe drain flow data collected by the dam Owner; evaluates the phreatic surface within the existing dam; and prepares the annual monitoring report, summarizing the conditions at the dam and commenting on necessary remedial actions to keep the dam in compliance with state regulations. Schnabel coordinates with the SEO for annual inspections, review of monitoring data, and review of repair alternatives to address issues with the dam.

TONY WHITE NO. 1 DAM OUTLET WORKS REHABILITATION

Tom Koehler | Dam Owner/Operator | Conifer, CO

Phone: 309.697.3719 | Email: tkecho@outlook.com



SERVICES

- » Dam Rehabilitation Design
- » Geotechnical Investigation and Analysis
- » Engineering Services during Construction
- » Geophysical Investigation
- » Pipeline and Reservoir Inspection
- » Seepage Assessment

OWNER / CLIENT

- » Tom Koehler

Tony White No.1 Dam is classified as a Low Hazard Dam by the Colorado State Engineer's Office. The reservoir is located in Jefferson County 3.7 miles west of Conifer, Colorado. The existing outlet works is in poor condition, consisting of a 10-inch diameter corrugated metal pipe (CMP) that transitions to an 18-inch diameter CMP with an upstream 10-inch sloping slide gate. A 24-inch diameter CMP riser pipe, located at the transition between the 10-inch and 18-inch diameter outlet works pipe, acts as a service spillway for the dam.

Schnabel Engineering was hired by Tom Koehler to design the proposed work that includes excavation of the existing dam; demolition of the existing outlet works structures and pipelines; installation of upstream concrete intake structure; concrete encased ductile iron outlet works pipelines; concrete gate vault and service spillway; downstream concrete discharge structure; placing and compacting dam embankment material to return the dam slopes to its pre-construction grades; installation of a staff gage within the gate vault; and addition of a toe drain system. Erosion control measures will be installed in accordance with the specifications of Jefferson County. A temporary cofferdam will be installed upstream of the dam with a temporary bypass pipeline to divert stream flows through the dam during construction. The cofferdam will be removed once construction is completed. All disturbed areas will be revegetated at the completion of the project.

WHEATLAND IRRIGATION DISTRICT - TUNNEL DAM REHABILITATION

Skylor Wade | Associate, Senior Mechanical Engineer | Wheatland, WY

Phone: 307.634.7848 | Email: skylor.wade@stantec.com



SERVICES

- » Concrete Design
- » Construction Management
- » Dam Design
- » Dam Rehabilitation
- » Earthfill Testing
- » Geological Engineering
- » Geotechnical Engineering
- » Outlet Works
- » Rock Foundations
- » Structural Engineering

OWNER / CLIENT

- » Wheatland Irrigation District / Wenck (now part of Stantec)

AWARDS

- » Concrete Association of Wyoming Award Winning Projects of 2021

Originally constructed in 1901, Wheatland Irrigation District's Tunnel Dam is a diversion structure on the Laramie River in Albany County, Wyoming. The dam is a low hazard hybrid dam structure with 144 acrefeet of storage, and consists of an 80-foot-wide concrete weir section abutting a retaining wall and a 300-foot-long earthen embankment. Tunnel Dam is the sole structure to divert water from the Laramie River through the Bluegrass Tunnel into Bluegrass Creek. After over 100 years of use, this dam, critical to delivery of water to much of the District, was in need of significant rehabilitation.

The earthen embankment dam was removed and replaced with an upgraded proper filter system, and the concrete weir (over 100 years old) was resurfaced with a new upstream overlay, ogee crest weir, and downstream outlet stilling basin. Schnabel Engineering (formerly Deere and Ault) led the geotechnical investigation as well as led the geotechnical and structural design team during the design phase. Schnabel provided a Field Project Manager and the Lead Engineering Inspector during the construction phase.

Our team of field personnel performed construction observation, quality assurance, and field engineering coordination for excavation of the existing dam; preparation of the bedrock surface; construction of a 40-foot-high counterfort retaining wall; construction of the new overlays and outlet works; installation of a new slide gate; and reconstruction of the earthen dam. Schnabel redesigned the retaining wall and outlet works during construction due to unexpected variations in the bedrock surface. The redesign was completed in just over a month, with several delay days allocated to the Contractor, thus minimizing the potential for significant delay claims or change orders. Construction was completed in late 2021 and involved considerable work during extreme winter weather conditions at the site in rural Wyoming.

TERMINAL STORAGE (GLASSER) DAM AND RESERVOIR

Brennan Middleton | Water Resources Manager | Broomfield, CO

Phone: 303.464.5605 | Email: bmiddleton@broomfield.org



SERVICES

- » Annual Dam Evaluation
- » Annual Engineering Report
- » Data Review
- » Monument Surveys
- » Site Work Review

OWNER / CLIENT

- » City and County of Broomfield

Terminal Storage (Glasser) Dam and Reservoir is owned and operated by the City and County of Broomfield (City). The reservoir is an important raw water storage reservoir for the nearby City and County of Broomfield Water Treatment Plant, and is filled via a pipeline from Carter Lake. Schnabel personnel (previously Rocky Mountain Consultants personnel) designed the dam in the early 1990's. The earthen embankment was originally constructed in two phases and was completed in 1994. The total structural height of the dam at the maximum embankment section is 26-feet. The embankment is 2,080-feet-long. The concrete lined Community Ditch runs along the east side of the embankment on the toe berm for the dam. The reservoir features an outlet works, service spillway, and an emergency spillway. Schnabel also installed piezometers for the ongoing monitoring of the dam. There are 5 piezometers total, one in the crest, one in the toe berm, and three in the toe of the dam.

Schnabel provides engineering services to the City for the Dam and Reservoir. Routine yearly services include review of the dam monitoring data from the previous year, annual dam evaluation, preparation of the annual report, and a site visit with the SEO representative. Additional services have included tracking Community Ditch flows versus toe drain flows, monument surveys, and reviewing plans for continuing work in the area.

RIO GRANDE DAM AND RESERVOIR REHABILITATION

Rob Phillips | President | Hinsdale County, CO

Phone: 719.490.9013 | Email: robert@slvid.org



SERVICES

- » Dam Outlet Facilities Engineering Design
- » Geotechnical Analysis
- » Hard Rock Tunneling
- » Slope Stability Study
- » Full-time Resident Engineering

OWNER / CLIENT

- » San Luis Valley Irrigation District

AWARDS

- » Colorado Contractors Association H2O Project Award, 2021 Excellence in Construction Management, Dam / Reservoir

Rio Grande Reservoir is located in the headwaters of the Rio Grande River in central Hinsdale County, Colorado at an elevation of 9,450 feet. The 54,082 acre reservoir is impounded by a 111-foot-high by 550-foot-long earth and rockfill dam. The facility includes a 15-foot-wide horseshoe-shaped, unlined rock outlet tunnel through the right abutment.

Phase I – The Rio Grande Dam was constructed on a large landslide mass on the left abutment. To reduce excessive seepage through the abutment and allow the reservoir to be safely operated at a higher capacity, Schnabel designed a clay slope liner over the left abutment slide mass. In addition, a double-lined grout curtain was used in the bedrock on the right abutment to further limit the seepage losses with clay blankets that transition into the slope liner and grout curtain. Riprap was also replenished on the upstream face of the dam before completion in the summer of 2013.

Phase II - The outlet works at the dam consist of an unlined 11-foot by 15-foot rock tunnel that curves through the right abutment. Three gates mounted near the dam's centerline experienced extreme vibrations and rattling during large discharge events, and limit the capability of the tunnel to less than half of the design capacity. To provide reliable operation for the next century, Schnabel designed a new low-level outlet system consisting of a new intake structure and a section of shotcrete lined rock tunnel excavated around the existing gate shaft that outlets to a 126-inch diameter welded steel pipe. From here, the pipe continues 220 feet downstream where it bifurcates into twin 84-inch fixed cone valves within a newly designed pre-cast concrete valve vault. Schnabel also provided full-time resident engineering during construction of the new outlet works.

YOCAM RESERVOIR PHASE 1B CONSTRUCTION

Josh Suter | Manager | Orchard, CO

Phone: 720.626.1123 | Email: josh@mspreservoir.com



SERVICES

- » Dam Engineering
- » Earthwork Design
- » Construction Support

OWNER / CLIENT

- » Middle South Platte Reservoir Company

Phase 1B Yocam Forebay Reservoir is a 200 acre-foot reservoir recently constructed near Fort Morgan, CO. The reservoir was formed by excavating 230,000 cy of sandy soils and constructing a 1,000-foot-long, 15-foot-tall dam with chimney, finger, and toe drains. The reservoir bucket is lined with roughly 2 million sf of 45mm thick flexible LDPE geomembrane liner and woven geotextile. A 48-inch welded steel outlet encased in concrete feeds a 2,700 lf discharge pipeline. Water is delivered into the reservoir through a baffled concrete inlet structure.

The 2021-2022 schedule for constructing the geomembrane lined reservoir was constrained by the availability of contractors and supply chain delays. Schnabel Engineering developed a 2-step plan to fast track the excavation and lining of the reservoir. Our plan was to complete the reservoir and dam embankment earthwork first. Earthwork construction drawings were developed and made available for construction to begin immediately in the fall of 2021. This phased plan allowed extra time to complete the outlet works and spillway design in time for procuring the geomembrane liner, outlet works piping, and other ancillary materials, while allowing the client to begin construction as scheduled. This unconventional phased approach of preparing the earthwork drawings ahead of the design and construction drawings for the remaining dam and reservoir features was coordinated with the Dam Safety Branch of the Colorado State Engineer's Office. The reservoir was completed in the fall of 2022.

Appendix B

Resumes

E. Morley Beckman, PE

PROJECT MANAGER / ENGINEER OF RECORD

Expertise

Geology, Geotechnical Engineering

Education

Masters Certificate,
Underground Construction
and Tunnel Engineering,
Colorado School of Mines,
2021

Master of Science,
Geotechnical Engineering,
University of California
Berkeley, 2005

Bachelor of Arts, Geology,
Pomona College, 2001

Registrations

Professional Engineer / CA, CO

Certifications

MSHA 40-Hour Underground
Mine Certification
OSHA HAZWOPER
OSHA HAZWOPER Site
Supervisor

Affiliations

ASCE, AEG, ASDSO, SME

Years with Schnabel/Total
4/22

Morley Beckman has over 22 years of engineering and geology experience, primarily focused in the fields of geotechnical engineering, engineering geology, and construction management. Her primary areas of focus are dams and hard rock tunnels. Morley's professional experience includes analysis and engineering designs for both new and rehabilitated dams; geotechnical analysis of slope stability, soil conditions, and seismic hazard risk; review of levee seepage, stability, and seismic conditions for FEMA certification; semi-qualitative risk assessment for dams; abandoned mine retrofit and rehabilitation design; and construction management for dam rehabilitation and mine retrofit projects. Morley's field experience includes dam inspections, field coordination and oversight for complex horizontal and inclined deep borings and wells, geologic mapping, observation of soil and rock drilling, instrumentation installation and monitoring, mine adit and bulkhead inspections, and supervision of abandoned mine grouting. She is the branch leader for Schnabel's Longmont office.

Great Western Dam / Broomfield, CO

Project Manager and lead geotechnical engineer for this evaluation of an existing earthen dam. Morley conducts yearly site visits to monitor the condition of the dam, including the condition of the toe drain system, outlet pipe, and earthen toe berm, as well as the dam and primary spillway. Morley reviews piezometer, inclinometer, survey and toe drain flow data collected by the dam owner, evaluates the phreatic surface within the existing dam, and prepares the annual monitoring report, summarizing the conditions at the dam and commenting on necessary remedial actions to keep the dam in compliance with state regulations. She coordinates with the State Engineers Office (SEO) for annual inspections, review of monitoring data, and review of repair alternatives to address issues with the dam. Morley has also coordinated subcontractors who conduct video inspection of various pipelines through/near the dam, and who conduct pipe jetting/cleanout to remove debris from these pipelines.

Great Western Dam – Semi Qualitative Risk Analysis / Broomfield, CO

In recent years, Broomfield and Schnabel identified several key dam safety issues at Great Western Dam related to the drainage system and the outlet works, and Schnabel provided rehabilitation designs for these features. Given limited funding for design and construction, Schnabel proposed a risk assessment to prioritize additional engineering evaluations, field explorations, and rehabilitation design/construction. This was the first time Broomfield implemented this risk informed approach for prioritizing dam safety actions. Morley led the Schnabel risk assessment team as they reviewed and summarized over 100 years of historic documentation on the dam, including inundation mapping prepared by others to provide background related to spillway capacity, embankment stability, and deficiencies with the drainage system and outlet works at Great Western Dam. In late 2021, Schnabel held a 2-day risk assessment workshop with participants from Broomfield, the Colorado State Engineers Office (SEO), and Schnabel subject matter experts. Morley and her team prepared a Comprehensive Dam Safety Evaluation (CDSE) report summarizing the risk assessment efforts for Great Western Dam, which will be used by Broomfield and the SEO to guide rehabilitation and evaluation efforts in the future.

E. Morley Beckman, PE

PROJECT MANAGER / ENGINEER OF RECORD

Tunnel Dam / Wheatland, WY

Project Manager and lead geotechnical engineer for this dam rehabilitation project. The earthen embankment dam was removed and replaced with an upgraded proper filter system, and the concrete weir (over 100 years old) was resurfaced with a new upstream overlay, ogee crest weir, and downstream outlet stilling basin. Morley led the final field geotechnical investigation and led the geotechnical and structural design team during the design phase, culminating in publication of full design drawings and specifications. Morley then served as one of two Field Project Managers during the construction phase. Morley's team of field personnel performed construction observation, quality assurance, and field engineering coordination for excavation of the existing dam; preparation of the bedrock surface; construction of a 40-foot-high counterfort retaining wall which included considerable structural steel and concrete elements; construction of the new overlays and outlet works; and installation of a new slide gate and reconstruction of the earthen dam. Construction was completed in late 2021, and involved considerable work during extreme winter weather conditions at the site in rural Wyoming.

Copeland Dam and Lake Storage Modifications/ Allenspark, CO

Morley prepared seepage and stability analyses for existing conditions and several dam remediation alternatives for this high-altitude water storage dam built in the early 1900s. She is the lead geotechnical author on the feasibility report, which includes conceptual drawings and cost estimates for three alternatives to modernize and improve the water storage within Copeland Lake. These alternatives include a stability berm at the toe of the dam, a full removal and replacement of the dam, and lining the reservoir and the upstream face of the dam with a manufactured liner system to reduce seepage through the dam and into the glacial till beneath the reservoir.

Centennial Water Treatment Plant Forebay Embankment / Highlands Ranch, CO

Project Manager and lead geotechnical engineer for evaluation of an earthen embankment at a water treatment plant. Evaluation included review of construction records, field surveying of dam width and height, and assessment of whether the embankment meets state criteria for jurisdictional dams. The state agreed the dam is of jurisdictional size. Morley also managed a hydraulic engineering team who completed a hazard classification report determining the dam is classified Significant Hazard, and prepares annual condition assessments of the embankment along with state-mandated emergency operations plans for the dam owner. From 2021 through 2023, she led a team of geotechnical, structural, and hydraulic engineers preparing design drawings and specifications for a new inlet dissipation structure, replacement of the emergency spillway, and regrading and replacement of riprap along the entire upstream face of the dam. Construction of these repairs is underway, and Morley is overseeing the team of younger engineers performing services during construction.

Colorado Parks and Wildlife High and Significant Hazard Dams Semi-Quantitative Risk Analyses / Statewide, CO

Subject Matter Expert (SME) on geotechnical engineering for the Lake John Dam semi-quantitative risk assessment (SQRA) and comprehensive dam safety evaluation (CDSE). As SME, Morley reviewed background materials, assisted in preparation of the dam specific information briefing for the workshop team, and participated in an all-day SQRA/CDSE workshop with other engineers, representatives of the state engineer's office, and representatives of the dam Owner's agency (Colorado Parks and Wildlife). Schnabel is teamed with HDR to perform SQRA workshops for 37 significant and high hazard dams. Morley will also be serving as a Geotechnical Engineering SME for future SQRAs.

Quinton Grantz

ASSISTANT PROJECT MANAGER

Expertise

Geotechnical Engineering,
Civil Engineering

Education

Bachelor of Science, Civil
Engineering, University of
Wyoming

Registrations

Engineer-In-Training / WY

Certifications

Troxler Nuclear Density Testing
Certified
MSHA 24-Hour Surface Mine
Certified

Years with Schnabel/Total

3/3

Quinton Grantz is a Senior Staff Engineer with experience in geotechnical and civil engineering. He has experience as a construction engineer on several civil engineering projects throughout the State of Colorado. These projects have included slurry walls, concrete structures, pipeline, and water related industrial facilities. His experience on these projects ranges from conceptual layout to the development of construction drawings and specifications, cost estimates, and construction related engineering.

Yocam Phase 1B Reservoir / Orchard, CO

Project Engineer responsible for construction oversight of a sand embankment dam, chimney drain, toe drain, concrete encased 48-inch steel pipe outlet works pipeline, 24-inch ductile iron outlet works pipeline, 16-inch PVC outlet works pipeline (total of 2,700 lf of outlet works pipeline), sloping stainless steel outlet works sluice gate, sloping staff gage, concrete baffled intake structure, concrete spillway, flow meter and valve system for intake and outlet works, geotextile and HDPE liner installation inside reservoir, and for coordination with contractor, owners, electricians and equipment communication services, submittals, and field observations.

Rio Grande Dam and Reservoir / Creede, CO

Project Engineer responsible for construction oversight of a shotcrete and concrete hard rock bypass tunnel, a valve house outlet works for the dam, riprap installation downstream of the outlet works, backfill around the 126-inch steel outlet works pipeline, a drain system on the downstream side of the dam, submittal reviews, daily field reports and field observations.

Delta Water Storage Reservoir and Mine / Greeley, CO

Senior Staff Engineer. Assisted as a project representative in construction supervision, writing up the as-built report, and onsite engineer conducting control testing and bedrock approval for a bentonite slurry cutoff wall and active aggregate mine, located just north of Denver. The 8,000-foot-long bentonite slurry wall is the deepest to be constructed in Colorado, with depths reaching up to 120 feet. The cutoff wall will be used to store water for a series of farms around the Northern Colorado region, while the inside area of the wall was mined for aggregate.

South Reservoir Inflow Channel / Pueblo, CO

Project Engineer responsible for construction oversight of a concrete diversion structure off the Excelsior Ditch, a grouted riprap plunge pool, a grouted riprap drop structure, an earth lined inflow ditch, a concrete box culvert, a grouted riprap rundown, a 12-inch low flow HDPE pipeline, a concrete spillway, slurry wall crossing and repairs, Rubicon flume gate installation, a Rubicon Picometer installation, a stainless steel sluice gate installation, submittals, and field observations.

Quinton Grantz

ASSISTANT PROJECT MANAGER

Ragsdale Slurry Wall / Fort Lupton, CO

Performed construction engineering and quality control for a 7,700 lf soil-bentonite slurry wall with an average depth of 40 feet that encompassed 71 acres.

North Dahlia Outlet Gate Repair / Thornton, CO

Project Engineer responsible for construction oversight of the demolition of the old outlet gate system, the construction of the new outlet gate wall with two heavy duty cast-iron slide gates, a leak for the gates, submittal reviews and field observations.

Burlington Ditch Flow Measurement / Thornton, CO

Project Engineer responsible for assisting in the design of a below grade flow measurement vault used to fill the South Tani Reservoir off the Burlington Ditch Canal. Included in this design was connecting onto two existing steel pipelines, one a 42-inch pipe and the other a 48-inch pipe, reducing both pipelines to a 36-inch pipe and bringing them into the same vault. Inside the vault was flow measurement devices and all valving requirements need to safely operate the system. The project design included transmitting of flow data to the City of Thornton and allowing the State of Colorado access to the data as well.

Blue Ribbon Slurry Wall, Great Lakes Environmental & Infrastructure / Fort Lupton, CO

Performed construction engineering and quality control for a 252,500 sf soil-bentonite slurry wall with an average depth of 45 feet that encompassed 44 acres.

Shores Pond C Pump Station and Pipeline Slurry Wall Repair / Firestone, CO

Provided quality control to repair three sections of a slurry wall after crossings were complete. Two of the crossings were pipe crossings: a 24-inch PVC pipe, and a 60-inch reinforced concrete pipe. The third crossing was a 96-inch manhole, 22 feet deep. The project included quality assurance on the demolition of a slurry wall, the repair of a slurry wall using compacted clay and bentonite, a leak test for slurry wall repair, and field observations.

Bonus Ditch Company Intake Structure and Pump Station / Longmont, CO

Project Engineer responsible for construction of a pump station at the St. Vrain Creek. This included installation of two slide gates at the St. Vrain Creek, construction of a pump and piping system, installation of a new trashrack, construction of a flow meter vault, submittal review, and field observation.

Shores Pond C Pump Station and Pipeline, Central Colorado Water Conservancy District / Firestone, CO

Project Engineer responsible for construction of a concrete diversion structure, a concrete pump station, a 1,900-foot pipeline, a concrete long-throated flume on the Tri Town Ditch, two fiberglass Parshall Flumes on the Rural Ditch, and a fiberglass Parshall flume on the discharge of the pipeline. The project included excavation and subgrade inspection, construction of a diversion structure with a slide gate, construction of a concrete long-throated flume, riprap inspection, steel/PVC/concrete pipe inspection, Cathodic protection installation, earthwork inspection, quality assurance, submittal review and field observations.

Glen G. Church, PE

TECHNICAL SENIOR REVIEWER

Expertise

Dam Engineering

Education

Master of Science, Civil
Engineering, Geotechnical
Emphasis, University of
Colorado - Boulder

Bachelor of Science, Civil
Engineering, University of
Wyoming

Registrations

Professional Engineer / CO

NCEES Record Holder

Affiliations

ASCE, ACI, AWWA

Years with Schnabel/Total

18/31

Glen Church is a Principal Engineer who has served as a Project Manager and as a Project, Designer, and Resident Engineer on numerous heavy civil construction and engineering projects throughout the United States for both governmental agencies and private industry. His experience includes design of dams and reservoirs, pipelines, concrete structures, tunnels, slurry walls, canals, and roadways. For these projects, he has performed initial site analyses, feasibility studies, construction cost estimates, preparation of construction plans and specifications, and onsite construction related services.

Glen has managed, designed, and provided engineering related construction services on numerous water storage and water conveyance projects. His water storage work includes homogeneous and zoned earthfill, masonry arch, concrete faced rockfill (CFRD), and roller compacted concrete (RCC) dams in Colorado. He has been approved as and served as a Third Party Reviewer for the Dam Safety Branch, State of Colorado Division of Water Resources. Glen has also completed numerous feasibility studies for new dams and rehabilitation of existing dams. He has served as the Engineer of Record for several dams in Colorado. He has assisted in design and provided construction related services for several miles of both raw and treated waterlines. These pipelines have ranged from 126-inch diameter welded steel pipe to 6-inch diameter ductile iron pipe, and have been constructed in a variety of environments from high altitude mountainous terrain to within busy urban streets.

Rio Grande Reservoir Phase 2 Rehabilitation, San Luis Valley Irrigation District / Center, CO

Project Manager for installation of outlet tunnel repairs, bypass tunnel construction, and installation of a new valve house. The project is remote and is being constructed at EL 9,500 in the San Juan Mountains during the winter months (2018/2019 and 2019/2020). It involves tunnel blasting, shotcreting, rock bolting, installation of a 126-inch diameter steel pipe, dual 84-inch and 36-inch cone jet valves and knifegates, as well as the latest SCADA features.

Standley Lake Reservoir / Westminster, CO

Design Engineer and Resident Engineer for replacement of outlet works for a 100-foot-tall, 50,000 acre-feet reservoir, which included construction of a 100-foot-deep, 40-foot diameter vertical valve shaft; microtunneling of two 72-inch diameter outlet tunnels, 650 and 1,250 feet long, respectively, beneath the reservoir for a live lake tap; a 12-foot diameter by 1,000-foot-long tunnel; and 4,000 feet of 102-inch and 84-inch steel pipe.

Union Reservoir Inlet Canal Bridge / Longmont, CO

Project Manager for investigation and design of 47-foot-wide steel bridge for public access over the Oligarchy Canal. Project included a geotechnical investigation, drilled pier foundation design, and a custom fabricated steel bridge design within the Union Reservoir and City of Longmont recreation area.

Glen G. Church, PE

TECHNICAL SENIOR REVIEWER

Button Rock Dam Outlet Works Gate Replacement and Spillway Investigation / Longmont, CO (2020 to Present)

Project Manager for removal and repair/refabrication of existing 48-inch sluice gate used for control on a 210-foot-tall earth and rockfill dam. This project is a design-build contract with coordination of multiple machine shops, hydraulic shops, and industrial painting shops. Work was also coordinated with the City's required release schedule from the outlet works to satisfy downstream water rights. Project also included updating analysis of Inflow Design Flood (IDF) for the existing reservoir and spillway in accordance with the latest State of Colorado (SEO) criteria.

South Reservoir, Triview Metropolitan District / Monument, CO

Project Manager for design and construction of a concrete diversion measurement structure and pump station for the 2,000 acre-feet South Reservoir. Project included installation of three flume gates, valves, and pipeline as well as an earthen channel for flow rates up to 150 cfs. Project included working and coordinating with the current gravel miner, State of Colorado Division Engineers, Division of Mine Reclamation and Safety, and County of Pueblo officials. Currently the pump station is being installed that was designed in 2021. Ongoing work includes working with the SEO to construct an above grade dam embankment while minimizing impacts to the surrounding 100-year flood plain of the Arkansas River.

Central Reservoir, Triview Metropolitan District / Monument, CO

Project Manager for updating design of an 8,000 acre-feet offstream reservoir and 40-foot-tall earth dam embankment. Design updates included relocating the spillway and outlet works to the west side of the project to aid water deliveries to the Arkansas River for water rights administration. The construction drawings, specifications, and Design Report from 2007 were updated to meet 2020 SEO regulations. The construction documents were submitted and approved by the SEO for construction in spring 2022. Work also included developing and reviewing a 20-year lease agreement between the future aggregate miner and the District. Construction is scheduled to begin summer 2022.

Lake McIntosh Outlet Works Replacement, Lake McIntosh Reservoir Company / Longmont, CO

Project Manager for replacement of collapsed outlet works pipe for Lake McIntosh, including development of construction drawings, specifications, and working with the City of Longmont personnel and the State Engineer. The project included hand tunneling to install 200 feet of 60-inch Hobas pipe under buried high voltage power lines and city streets. Project construction was done in two phases and completed in early 2018.

Burch Lake Outlet Works Replacement, Oligarchy Ditch Company / Longmont, CO

Project Manager for feasibility analysis and design of replacement outlet works on an existing 30-foot-tall dam embankment. Work included design and replacement of a 24-inch diameter concrete encased outlet works pipe, new outlet gates, and a 30-foot-tall concrete outlet works vault. Construction was completed in Fall 2016.

Wild Horse Reservoir, Hamre Rodriguez Ostrander Dingess / Aurora, CO

Project Engineer for feasibility study and report for a 32,000 acre-feet reservoir with three dams and a 25-mile, 48-inch diameter steel discharge pipeline. Work included developing the dam embankment type and zone, outlet works, spillway, and associated construction cost estimates. The dam embankments range from a 20-foot-tall homogeneous earthen embankment to a 100-foot-tall zoned earth and rockfill dam.

Thomas Fitzgerald, PE

TECHNICAL SENIOR REVIEWER

Expertise

Inspection, Evaluation, and
Design of Dams

Education

MBA, Elon University, Love
School of Business

Master of Science, Water
Resources Engineering,
Rutgers College of
Engineering

Bachelor of Science, Civil
Engineering, Rutgers College
of Engineering

Registrations

Professional Engineer / AK, CO,
ID, KY, MI, MT, NC, NJ, OR,
PA, VA, WA

Affiliations

ASCE, past president North
Carolina Section
ASTM Subcommittee C09.45
Roller Compacted Concrete
NHA, Hydropower Technical
Committee, Chair
ASDSO, NWA, USSD

Years with Schnabel/Total
24/27

Tom Fitzgerald has been the Lead Design Engineer, Engineer of Record, Senior Reviewer and Project Manager for the evaluation, design, and construction of numerous new and existing dams. He has also served as the Independent Consultant for multiple FERC Part 12 inspections and numerous regular and formal dam safety inspections for dams regulated by other state and federal agencies. Tom has extensive experience in the evaluation and rehabilitation of existing earth and concrete dams with various deficiencies; and the planning, design, and permitting of new dams. Specific dam-related experience includes stability evaluations for earth and concrete dams, spillway replacement, design of roller compacted concrete (RCC) dams, earthen embankment design, seepage analyses, post tensioning systems, overtopping protection, development of instrumentation systems, grouting, and various concrete repairs.

MT DNRC East Fork of Rock Creek Dam Rehabilitation / Granite County, MT

Engineer of Record for the 90-foot-high zoned embankment dam located in southwest Montana. Constructed in 1936, the dam and appurtenances require rehabilitation to ensure safe performance of the dam and extend the service life of the spillway and outlet works. The rehabilitation project includes full replacement of the 600-foot-long concrete chute spillway; refurbishment of the 54-inch guard gate and pivot valve; repairs to the control tower and outlet works tower; and seepage filters and drains including a conduit filter diaphragm and seepage berms to provide filtering and stabilization in areas of significant seepage and artesian conditions downstream of the dam.

Post Falls North Channel Dam Spillway Design / Post Falls, ID

Principal in Charge for the evaluation of alternatives and design development for refurbishment / replacement of the spillway at the North Channel Dam for the Post Falls development. The work included performing a comprehensive review of historical project documentation, a condition assessment, and developing alternatives for refurbishment or replacement of the eight radial gates and one 100-foot-long rolling sector gate. The project also includes developing control of water and stream diversion options for the Spokane River just downstream of Lake Coeur d'Alene. The North Channel Dam serves as the primary spillway for the Post Falls Hydroelectric Development.

Black Beauty Reservoir / Hawthorne, NV

Senior Reviewer for the rehabilitation of Black Beauty Reservoir in west-central Nevada on the Hawthorne Army Depot (HWAD). The reservoir is a 52-foot-deep earthen embankment that impounds up to 50 MG of raw water for the HWAD's water treatment plant. Since its construction in 1952, Black Beauty has experienced numerous slope failures associated with drawdown of the reservoir and poor material drainage. Schnabel designed embankment improvements, a new HDPE membrane lining system, underdrain system, aspiration aeration pumps along the surface of the reservoir, and new inlet/outlet piping for the facility.

Thomas Fitzgerald, PE

TECHNICAL SENIOR REVIEWER

Consumers Energy, Hardy Dam Auxiliary Spillway Replacement Project / Newaygo County, MI

Engineer of Record for the investigation and design of a new replacement auxiliary spillway for the FERC regulated Hardy Dam. The scope of services included development of a drilling program plan (DPP) for FERC approval; subsurface investigations; optimization of the selected design concept; performing a risk register; preparation of 30%, 60%, 90% and final plans; specifications, schedule, cost estimates, and design report. All submittals are reviewed by an independent Board of Consultants and FERC. The proposed auxiliary spillway consists of a labyrinth control section, converging concrete chute, Type III Stilling Basin, armored outlet channel, and terminal structure to transition flows into the Muskegon River below the site. Design challenges include evaluation of construction risks and long-term performance issues associated to complex geology and artesian conditions at the dam.

Town of Boiling Spring Lakes, Sanford Dam Rehabilitation / Boiling Spring Lakes, NC (2020)

Senior Reviewer for the evaluation and development of rehabilitation plans for four dams that failed from overtopping during Hurricane Florence. Subsurface investigations were performed at each of the sites consisting of borings, cone penetrometer testing (CPT), geophysics and test pits. Rehabilitation of the main dam includes replacement of the spillway with a new reinforced concrete box drop inlet, box culvert outlet conduits, and stepped outlet structure. Deep mixed panels are proposed along the upstream and downstream embankment slopes to meet seismic stability criteria. A 60-foot-deep cutoff wall was designed for the entire length of the embankment to be extended into the underlying limestone bedrock to address seepage and sinkhole related issues. The three smaller upstream dams include replacement spillways and reconstruction of the failed earthen embankments.

New Jersey Water Supply Authority Round Valley Reservoir / Clinton, NJ

Senior Reviewer for the rehabilitation of this 55 billion gallon pumped storage reservoir that is part of a system supplying raw water to more than 1.5 million residents of central New Jersey and is a significant regional recreational resource. The reservoir is impounded by three earth embankment dams; all three rank among the top 10 highest dams in the state (the largest, South Dam, is 180 feet high, and the third highest in the state). Responsibilities include coordination with other senior reviewers; performing technical review of final plans, specifications, and cost estimates; and design report and quality assurance review to confirm that design meets internal design standards, addresses the scope of work, and meets the current standard of care.

Eugene Water and Electric Board Trail Bridge Dam Evaluations / Linn County, OR

Trail Bridge Dam is one of three developments within the Carmen-Smith Hydroelectric Project. Three sinkholes were observed upstream of the dam during a routine bathymetric survey in 2021. Responsibilities included facilitation of the issue specific potential failure mode analyses (PFMA) and detailed review of construction records, subsurface investigation data, instrumentation data, water testing and geophysics. Assisted EWEB with the development of interim risk reduction measures based on the PFMs identified. Work also included presentation to a Board of Consultants and development of a new subsurface investigation program to better understand the PFMs and progression.

Robert P. Cannon, PG

TECHNICAL SENIOR REVIEWER – RADIOACTIVE MATERIALS AND DAM ENGINEERING

Expertise

Dam Engineering;
Project Management and
Technical Support for
Radioactive Waste and
Complex Dam Remediation
Projects

Education

Master of Science, Geology,
University of North Carolina,
Chapel Hill

Bachelor of Science, Geology,
University of North Carolina,
Chapel Hill

Registrations

Professional Geologist / KY, NC,
VA

Certifications

OSHA: Hazardous Waste
Operations and Emergency
Response (HAZWOPER)
Hazardous Waste Operations
Site Supervisor
29CFR1910.120(e)(4)

Affiliations

AEG, ASDSO, GSA, IAEG, USSD

Years with Schnabel/Total
23/47

Robert Cannon is a registered professional geologist with over 45 years of experience in project management and geotechnical support of site characterization, remedial investigation, feasibility study, design, and remedial design projects for radioactive waste and dam engineering. He has managed multidisciplinary site evaluation programs and developed site-specific field investigation plans and managed their implementation at numerous sites, including those with radioactive contamination. He has supported radioactive waste projects, including siting, licensing, design, and construction activities. His clients have included utilities, DOE, FERC, NRC, and industry. His project management experience is exemplified in many projects, including low-level radioactive and hazardous waste projects and dams retaining radioactive waste. His capability to address complex projects is shown by his experience on many projects, a few of which are noted below. Robert's experience has included both high- and low-level site characterization, and remedial investigations/feasibility Studies. He has served as Project Manager and lead geologist/geochemist on various radioactive waste projects and has conducted specialized geochemical studies of radionuclide migration by groundwater flow.

Pond B Dam (with a Radionuclide Contaminated Reservoir) Analysis and Repair Project, Westinghouse Savannah River Company (DOE subcontractor / Savannah River Site, SC

Program Manager for multiple contracts to investigate, evaluate, and provide remedial designs for the dam under aggressive completion schedules. The dam is a zoned embankment. The dam has a height of 50-feet and a crest length of 1,750-feet. The sediments in the pond are contaminated with radionuclides. The project tasks included full investigation of the dam and the design of seepage blanket and stability berm to stabilize the dam and control contaminated seepage.

Remedial Investigation/Feasibility Study (RI/FS), Design, and Construction Support, Maxey Flats LLRW Disposal Site, Maxey Flats Steering Committee, Kentucky: Project Manager for the Remedial Investigation/Feasibility Study (RI/FS) under EPA regulations and oversight. Robert was responsible for all radiological evaluation and civil design studies conducted to evaluate remedial alternatives which can be applied to stabilize the site and to protect public health and safety.

Evaluation of Groundwater Model, WAG 6, Oak Ridge National Laboratory, Tennessee Project Manager for evaluation and review of the groundwater model for a low-level radioactive waste burial site at Waste Area Grouping (WAG) 6 at the ORNL in eastern Tennessee. The 3-D saturated/unsaturated groundwater flow model was developed by others, and the review included evaluation of input parameters, appropriateness of model codes, and reasonableness of output with respect to the conceptual model and calibration targets. The application of the model to proposed remediation designs including cutoff walls and interceptor trenches was also evaluated.

Tacoma Power Utilities, Mossyrock Dam Seismic Stability Analysis / Lewis County, WA

Board of Consultants Member. Robert serves as BOC Geologist for this FERC regulated project. Mossyrock Dam was completed in 1968 and is a 606-foot-high, double curvature arch-gravity dam on the Colwitz River which provides 40% of Tacoma Power's electricity. The spillway intakes are at the top center of the dam, and seismic stability concerns have been raised. Tacoma Public Utilities has lowered the reservoir 30-feet while the issue is being addressed.

Robert P. Cannon, PG

TECHNICAL SENIOR REVIEWER – RADIOACTIVE MATERIALS AND DAM ENGINEERING

Missouri River Energy Services, Red Rock Dam Hydroelectric Retrofit / Des Moines River, IA

Geology/Geotechnical Expert. Robert served as a geology and geotechnical panel member on the Safety Assurance Review (SAR) review teams for this 95-foot-high earthen embankment and concrete control section. Missouri River Energy Services is retrofitting a hydroelectric plant with a 36.4 MW capacity adjacent to the control section of the dam. As the reservoir is required to be fully operational during construction, this complex project consists of a number of retaining walls, large cofferdams, and dewatered excavations.

Glade Reservoir / Fort Collins, CO

Technical Advisor Panel Member. Robert is serving as the geologist SME for this proposed 18.6M cy, 300-foot-high zoned embankment dam on complex foundation conditions. The core has to reach significant depths to cut through stream placed sediments. Although located in the Front Range of Colorado, the dam will be founded on highly folded and faulted Front Range sedimentary rocks faulted against PreCambrian crystalline basement rock near the west abutment. The complexly folded and faulted sedimentary rocks under the dam include limestone and gypsum beds, requiring the TAP to consider adequate seepage cutoff options.

USACE, Norfolk District, Indefinite Delivery Contract (IDC), US Navy and Marine Corps Dam Safety Program, Gathright Dam / Alleghany County, VA

Project Manager for an independent evaluation of the existing seepage conditions and monitoring program at the dam. It is a 257-foot-high zoned rockfill dam, and is operated by the USACE, Norfolk District. The dam is built on a karstic limestone foundation and abutments which, in part, led to the USACE assigning a Dam Safety Action Classification of II (Urgent – Unsafe or Potentially Unsafe) during their Screening for Portfolio Risk Assessment. The independent seepage evaluation included reviewing as-built drawings of seepage control measures, the assessment of springs and sinkholes in the dam area and project vicinity, subsurface data collected during the design and construction of the dam, and 30 years of seepage monitoring instrumentation data. A critical PFM was identified, resulting in the recommendation for additional monitoring.

USACE Rough River Dam Safety Assurance Review / Falls of Rough, KY

Geology Expert. Robert served on the Safety Assurance Review panel for the design of seepage barrier improvements at the Rough River Dam. Robert provided technical review during several phases of the project, including: (a) test grouting and evaluation of the rock foundation; (b) production grouting of the rock foundation; (c) evaluation of design alternatives for extending the cutoff wall through the existing conduit; and (d) evaluation of concept design of a preferred cutoff alternative through the embankment consisting of a concrete diaphragm wall keyed into the sandstone, shale and limestone foundation at the site. The review focused on evaluation of the risk associated with each phase of the project.

Lake Townsend Dam and Intake Structure/Pump Station Design / City of Greensboro, NC

Project Manager for the investigation, alternatives assessment, and design and construction of a replacement spillway and dam. He was also the Project Manager responsible for the fast-track design and installation of emergency repairs to the existing spillway when deep open cracks were found by a diver during investigation in the upstream face of the spillway. The existing spillway and raw water intake structure were rapidly failing because of Alkali Silicate Reactivity (ASR). Also responsible for the geotechnical report for a new raw water intake structure and pump station, and for a subcontractor's design of these structures. He is currently overseeing the construction management and QA/QC team.

Kami D. Deputy Gardella, PE

TECHNICAL SENIOR REVIEWER

Expertise

Geotechnical Engineering,
Rock Mechanics, Dam
Engineering

Education

Master of Science, Civil
Engineering – Geotechnical,
Virginia Polytechnic and
State University, 2005

Bachelor of Science, Geological
Engineering – Engineering
Geology, Montana Tech of
the University of Montana,
2004

Registrations

Professional Engineer / CO,
NM, WA, WY

Affiliations

Association of Engineering and
Environmental Geologists –
Previous Mile High Chapter
Chair, Previous Co-Director
Communication Committee,
Previous Governance
Committee, Previous Region
5 Regional Director
ASDSO, USSD

Years with Schnabel/Total
3/18

Kami Gardella has more than 18 years of experience in rock mechanics, geotechnical engineering, and dam engineering. Her professional experience includes project management; geotechnical/geological subject matter expertise for risk assessments; developing and executing geotechnical site explorations for a variety of project sizes; analytical and engineering design for dams, levees, and rock slopes; quality assurance and quality control review; construction management and observation; extensive drilling experience using a variety of methods; and development and execution of instrumentation plans. She has experience with stability modeling and kinematic analysis of rock slopes, point cloud data manipulation, and the Geo-Slope International programs SEEP/W and SLOPE/W.

City and County of Broomfield / Great Western Dam / Broomfield, CO

Analyzer and Subject Matter Expert. Great Western Dam was originally constructed in 1904 as a 35-foot-high earthen embankment. The dam geometry has been modified several times since initial construction and is currently a 70-foot-high earthen embankment with a downstream toe berm and downstream blanket drain. In recent years, monitoring data has indicated an elevated water surface in the vicinity of the toe drain system, indicating the system may not be functioning as designed. There is also visible buildup in the downstream end of both drains where they enter the collection manhole. The SEO requested an analysis of the toe drains to evaluate the risk posed by the recorded trend of an elevated phreatic surface in the toe drain system. Schnabel reviewed historic construction records for the toe drain system and the collection manhole, compared current phreatic surface data to original design phreatic surface assumptions, and performed engineering slope stability analyses to determine a “safety threshold” for the water levels recorded by the piezometers near the toe drain system. Kami performed the slope stability analyses and assisted with preparation of the memorandum to the SEO. She participated in a Comprehensive Dam Safety Evaluation with the owner, SEO, and others from Schnabel. Recently, Kami was onsite to observe drilling and sampling through the embankment to characterize the embankment and foundation as well as provide PE oversight for the drilling per the SEO’s request upon their approval of the drill plan.

City of Cheyenne Board of Public Utilities Safety of Dams Services 2022 - 2027 / Cheyenne, WY

Project Manager and Engineer of Record. Kami is managing this multi-year contract for inspection and reporting at eight dams owned and operated by the City of Cheyenne. During the first year two large embankment dams were inspected, as well as the outlet works (using diving methods) at one concrete arch dam and one granite masonry arch dam. The second year two large embankment dams were inspected as well as the team provided training and setup for BOPU to use their own inclinometer equipment. The contract also includes a tunnel inspection and a semi-quantitative risk assessment for the portfolio of dams.

Kami D. Deputy Gardella, PE

TECHNICAL SENIOR REVIEWER

Middle South Platte Reservoir / Phase 2 Investigation and Design / Weld County, CO

Project Manager. Kami is coordinating this multi-year, multi-disciplinary, and multi-office project to design an off-channel reservoir. The reservoir will have a 3-mile-long, 40-foot-tall embankment dam with a seepage barrier, inlet/outlet works, spillway, pipeline to the South Platte River and pump station, river intake, and seepage barrier walls, in addition to evaluating the cultural and natural resources of the area and water availability from the South Platte River. An upstream "cell" is also being designed and will have another 1-mile-long soil-cement dam to have an area with a maintained pool elevation. The work includes a geotechnical investigation of 120 borings, 27 cone penetrometer tests, 20 test pits to evaluate borrow materials, plate load testing, infiltration testing, and various other tests and associated lab testing. The site was surveyed using geophysical methods to identify depths to bedrock, groundwater, and stratigraphy underlying the reservoir basin and proposed dam location. The borings were advanced using hollow stem augers, mud rotary, and sonic methods. The site has been also surveyed using geophysical methods to identify depths to bedrock, groundwater, and stratigraphy underlying the reservoir basin and proposed dam location. Design is ongoing and planned to be completed by the end of 2024.

Northern Water Chimney Hollow Reservoir / Larimer County, CO

Project Manager and Field Inspector. Chimney Hollow Reservoir is an off-channel dam that will be impounded by a 350-foot-tall rockfill dam with an asphalt core at the north end and a smaller rockfill saddle dam to the south. When complete, it will be the second dam in the United States to have a flexible asphalt core. The reservoir will be filled primarily by the Colorado-Big Thompson pipeline. Schnabel was retained to assist with engineering services for the layout and design of two cofferdams, care and diversion water scheme, evaluation of the high walls of the granite quarry and the rim slope of the overburden, and haul roads being utilized on the project. Kami assisted with writing the construction plan for the cofferdam just upstream of the main dam. She attended site specific training and onsite inspections during construction of the cofferdam, provided field inspection and slope stability evaluation and recommendations for a rockslide on shallow dipping rock lithologies, and continues to provide observation at the quarry excavation and highwall inspections. Barnard requested a change to the quarry slopes to supplement the amount of material needed for the main dam rockfill and Kami performed kinematic analyses and global stability calculations to support their intent to modify the quarry slopes. Schnabel also provided structural calculations and design plans for a bridge to support haul trucks crossing over the asphalt core of main dam during construction that could be picked up and moved as the dam is constructed.

Terminal Storage (Glasser) Dam / Broomfield, CO

Field Inspector. Performed dam inspection with Schnabel team and State Engineer.

Copeland Dam Alternatives Analysis, St. Vrain and Left Hand Water Conservancy District / Allenspark, CO

Project Manager and Engineer of Record. Kami managed the alternatives evaluation for rehabilitating Copeland Dam. A SEO approved geotechnical investigation was performed advancing hollow stem auger borings and excavating test pits to evaluate the dam spillway foundation and reservoir soil characteristics. Additionally, a hydrologic and hydraulic hazards analysis was updated for the dam. Alternatives include lining the reservoir, rehabilitating the existing dam, removing the dam and building a larger embankment following current Colorado SEO guidance, as well as evaluating the existing spillway, raising the spillway crest, or placing a new spillway. The alternatives have been presented for conceptual level with plans and an Engineer's Estimate of Probable Cost to assist the client in budgeting and selection of an alternative.

Christoph Goss, PhD, PE

TUNNEL / SHAFT DESIGN LEAD

Expertise

Tunnel Engineering,
Engineering Geology, Mine
Rehabilitation, Mine
Bulkheads, Shotcrete,
Ground Control

Education

Ph.D., Mining and Earth
Systems Engineering,
Colorado School of Mines,
2000
Bachelor of Science, Civil
Engineering, Colorado School
of Mines, 1997

Registrations

Professional Engineer / CO, IL,
WA, WY

Certifications

PMI Project Management
Professional – PMP
MSHA 40-Hour Underground
Certification
American Shotcrete Association
- Shotcrete Nozzleman
Trainer
American Concrete Institute -
Shotcrete Nozzleman
Certification Program
Examiner
Fellow: American Society of
Civil Engineers

Affiliations

ASCE, ACI, AEG, ASDSO, ASA,
SME, PMI
Tau Beta Pi National
Engineering Honor Society

Years with Schnabel/Total
18/26

Dr. Goss has worked in the mining and heavy civil construction field from labor to engineering both in the United States and internationally. His field expertise is in construction engineering, monitoring, and quality assurance. Dr. Goss has also worked on the investigation, analysis, and design of numerous tunnels, mines, abandoned mines, mine bulkheads, quarries, dams, and reservoirs in both hard rock and soft ground. His formal education included significant coursework in soil mechanics, rock mechanics, engineering geology, tunnel investigations, surface and underground mine design, tunneling, engineering mathematics, and geotechnical modeling.

Dr. Goss has served as resident engineer on various types of tunnel and pipe jacking projects including drill & blast, hard rock rehabilitation, roadheader, microtunnel, digger shield, and wheel excavator. Dr. Goss has served in other capacities, including claims analysis on subway, road, hydroelectric, and utility tunnels constructed via drill & blast, earth pressure balance shield, and slurry shield methods. He has also been involved in the support evaluation of various mine tunnels, drifts, stopes, and adits. His experience in quarries/surface mines includes geological investigations, volume estimating/modeling, slope stability, seepage, and mine layout. Dr. Goss has also been involved in the investigation, design, and construction of numerous dam and reservoir projects. His work in this field includes site evaluation, geotechnical analysis, project layout, specification writing, construction engineering, and dam monitoring.

Great Western Reservoir / Broomfield, CO

Dam monitoring and toe drain/outlet pipeline investigations and rehabilitation feasibility study.

Siena Reservoir / Broomfield, CO

Dam monitoring and toe drain/outlet pipeline investigations. Slope monitoring during drawdown.

Rio Grande Reservoir Rehabilitation Phase 2 / Creede, CO

Design of outlet tunnel rehabilitation. Resident engineer for outlet tunnel rehabilitation with shotcrete and rock bolts.

Standley Lake Dam Improvement Project / Westminster, CO

Resident Engineer for a valve shaft, two microtunneled lake taps, and a shotcrete/lattice girder outlet tunnel driven with a roadheader.

Arcadia Lake Pump Station Project / Edmund, OK

Design of shaft and microtunneled lake taps for a new pump station at a water supply reservoir. Work included preparation of plans, specifications, and GBR.

Christoph Goss, PhD, PE

TUNNEL / SHAFT DESIGN LEAD

South Platte Reservoir / Littleton, CO

Resident Engineer for the construction of a 6,480 acre-feet reservoir, including a 3.5 million cy, 11,400-foot-long earth embankment dam/slope liner, PMF channel, spillway, outlet works, and associated structures. Work also included vibration analysis for sheet pile installation near a residential area, material volume estimating, preparation of as-built plans, and ongoing post construction monitoring and analysis.

Everist Reservoir Complex / Fort Lupton, CO

Project Manager for feasibility study and design of multi-cell reservoir complex along the South Platte River. Design included pump station wet well, breach repair, and 500' long, 48" diameter interconnect tunnels from pump station wet well to new reservoir cells through claystone. Work included geotechnical investigation, preparation of the geotechnical design report, design of the tunnel interconnects and providing on site geotechnical construction engineering for the tunneling, shaft construction, and earthwork. Resident engineer during construction.

Milestone Reservoir / Loudoun County, VA)

Design review of bulkhead in tunnel between two reservoirs. Preparation of specifications for bulkhead, new pump station shaft, and intake tunnels.

Brushy Creek Regional Utility Authority Phase 2 Deep Water Intake / Round Rock, TX

Review of plans, specs, and GBR for new lake tap including intake towers; two-mile, 11-foot excavated diameter intake tunnel through rock; pump station with an underground cavern; a 30-foot diameter, 300-foot-deep wet well and access shaft; six pump raise-bore well shafts; and ½-mile-long, 10-foot excavated diameter transmission pipeline tunnel. Submittal review and part-time onsite engineering.

Federal Quarry Decline and Shaft / McCook, IL

Shotcrete evaluation, geotechnical evaluation, and ground support design for 25' x 23' x 1,000-foot-long decline tunnel at bottom of an existing limestone quarry. Grouting design for ventilation shaft. Onsite resident engineer during rehabilitation of tunnel after original contractor was dismissed.

North Creek Interceptor / Bothell, WA

Expert witness for geotechnical and soft ground tunneling on 72-inch open face digger shield tunnel through glacial deposits. Work as expert witness included evaluation of the geotechnical investigation, evaluation of Geotechnical Baseline Report, differing site condition claim evaluation, preparation of rebuttal report, and deposition.

Sprat-Platte Reservoir Interconnect / Thornton, CO

Project Engineer for the independent review and engineering consultation on a 675 foot long microtunneled interconnect pipe through claystone under the South Platte River. Services included design review and construction engineering.

South Platte Reservoir Raw Water Transmission Pipeline Phase 2 / Littleton, CO

Geotechnical investigation and construction engineering for a six-foot diameter waterline tunnel underneath a major road and two railroad tracks.

Grant R. Johnson, PE

HYDROLOGY / HYDRAULICS LEAD

Expertise

Hydraulic Engineering, Water Resources, Project Management

Education

Bachelor of Science, Civil Engineering, University of California - Davis

Registrations

Professional Engineer / CO

Years with Schnabel/Total

4/13

Grant Johnson has been an engineer in the dam and water resource industry for over 10 years. He has led numerous types of water resource projects including spillway design, dam hazard classification studies, dam breach modeling and inundation mapping, basin hydrology studies, streambank stabilization projects, design of ditch and riverine structures, and hydraulic design of dam outlet works. Grant is a skilled hydraulic modeler who is proficient with steady- and unsteady-state modeling applications in both one- and two-dimensional HEC-RAS. His experience also includes floodplain hydraulic analyses, submittals to FEMA for flood map revisions, and submittals to local governments for floodplain development permits.

Tony White Dam Outlet Works Replacement / Conifer, CO

Senior hydraulic engineer responsible for hydraulic design review of the proposed outlet works for Tony White Dam, which included a new outlet pipe and concrete gate vault structure, service spillway, intake structure, and downstream discharge structure.

Rio Grande Reservoir Rehabilitation / Hinsdale County, CO

Project Engineer. Performed a detailed basin hydrology study and determined the Inflow Design Flood (IDF) for Rio Grande Dam and Reservoir using precipitation estimates from NOAA HMR 55A. After determining that the existing spillway was unable to safely pass the runoff from the HMR 55A storm, the hydrology study was updated using newly acquired precipitation estimates from a site-specific hydrometeorological analysis of the basin. The updated hydrology study provided justification to the State Dam Safety Engineer that the existing spillway was indeed adequately sized, thereby eliminating the need for an expensive spillway enlargement project.

Highland No. 3 Reservoir Spillway and Toe Drain Upgrades / Mead, CO

Project Manager for hydrologic hazard evaluation, hydrology study, and spillway and toe drain designs for the existing Highland No. 3 Dam. A proposed residential development adjacent to the dam and reservoir (by others) prompted the State Dam Safety Engineer to request a spillway upgrade and replacement of the existing toe and field drains, which no longer function properly, with new drains that meet modern dam design standards. Our spillway design is trapezoidal with 10H:1V side slopes for vehicle access and a bottom width of 120 feet. A riprap rundown and stilling basin will convey spillway flows down the slope and tie into a flood channel designed by others as part of the residential development. The spillway is sized to route the 10,000-year inflow design flood through the reservoir with two feet of residual freeboard below the dam crest.

Button Rock Dam Spillway Evaluation / Boulder County, CO

Task Leader for evaluating the hydrologic adequacy of the existing emergency spillway at Button Rock Dam. Oversaw junior employees' development of a spillway rating curve and basin hydrology model, estimation of the critical rainfall event using the Colorado-New Mexico Regional Extreme Precipitation Study (REPS) tools, and routing the design flood through the reservoir. The results of the analysis showed that the existing spillway was undersized according to current Colorado Dam Safety guidelines.

Grant R. Johnson, PE

HYDROLOGY / HYDRAULICS LEAD

Phase 1B Forebay / Orchard, CO

Senior Hydraulic Engineer. Led the hydraulics and hydrology team in evaluating the hydrology for a new off-channel water storage reservoir in rural Weld County. The basin was modeled using two-dimensional HEC-RAS to account for the basin's numerous surface depressions and poorly defined drainage paths. The 2D model results were used to design bypass channels to direct floodwaters around the reservoir. This design prevents any surface runoff from entering the reservoir for rainfall events up to the 100-year storm. The reservoir will be a pump station forebay for a large future reservoir.

Copeland Lake Feasibility Study / Allenspark, CO

Task Leader for determining the dam hazard classification, hydrologic hazard, and inflow design flood for several conceptual dam and spillway rehabilitation alternatives at Copeland Lake. Oversaw junior employees' development of a basin hydrology model and spillway rating curves, estimation of the critical rainfall event using the Colorado-New Mexico Regional Extreme Precipitation Study (REPS) tools, and routing the design flood through the different reservoir alternatives.

Pleasant Valley Reservoir Spillway Modifications / Longmont, CO

Project Engineer. Performed a basin hydrology study and determined the IDF for Pleasant Valley Reservoir. An incremental damage analysis was used to justify a smaller magnitude IDF than what would have been required by using the SEO's standard prescriptive methodology. Performed design of the new principal spillway, and developed discharge rating curves for the reservoir's principal, secondary, and service spillways.

Park Creek Reservoir Enlargement / Larimer County, CO

Lead hydraulic and hydrologic design engineer for raising the dam and spillway crest elevations at Park Creek Reservoir, which is an existing High Hazard dam with an Extreme Hydrologic Hazard rating. The spillway crest was raised 10 feet to provide roughly 3,000 acre-feet of additional storage capacity for irrigation water. Grant was responsible for leading a team to estimate the Inflow Design Flood (IDF), develop a spillway crest wall and energy dissipation design, perform spillway hydraulic computations for control section sizing and spillway channel freeboard berm design, and to develop dam breach inundation mapping. Grant also served as the hydraulics and hydrology Subject Matter Expert (SME) for the Semi-Quantitative Risk Assessment (SQRA) of the dam. The final spillway design is a vertical concrete crest wall with an opening width of 202 feet and a design capacity of about 7,400 cfs.

Upper Derby Lake Spillway, Rocky Mountain Arsenal National Wildlife Refuge / Commerce City, CO

Project Manager and lead design engineer responsible for preparing construction plans and providing construction observation for a new emergency spillway at Upper Derby Lake. Developed the design storm using tools from the Colorado-New Mexico Regional Extreme Precipitation Study (CO-NM REPS). Performed 2D HEC-RAS modeling for the hydraulic design to address unique and complex hydraulic conditions in the upstream drainage basin and at the spillway tailwater. The completed spillway consists of buried soil riprap along the spillway channel and un-grouted riprap at the downstream discharge point. The buried soil riprap was revegetated with native grasses to provide habitat, aesthetics, and long-term soil stability. As a result of this project, the dam at Upper Derby Lake was downgraded from a jurisdictional size, Significant Hazard dam to a non-jurisdictional size, No Public Hazard dam, and is now in compliance with State dam safety regulations.

Kelby Sommer, PE

MECHANICAL / PIPELINE LEAD

Expertise

Hydraulic Structures, Water Supply, Construction Management

Education

Bachelor of Science, Civil Engineering, University of Idaho

Registrations

Professional Engineer / ID, SC, UT, TX

Affiliations

ASCE, NWSA, ASDSO

Years with Schnabel/Total

9/9

Kelby Sommer has experience in hydraulic structures, water supply, facility inspection and construction management. The majority of his experience involves analytical and physical design for hydraulics structures, surface water diversions, intakes, water treatment, and pump stations, and the associated civil and mechanical components to create a complete project.

Great Western Dam / Broomfield, CO

Senior Engineer for the design and replacement of a custom 24-inch diameter inspection access steel wye fitting for the low-level outlet works at Great Western Dam. The work included the design and specification of a replacement fitting with improvements for access and maintenance and new coating systems to provide a long service life.

Rio Grande Dam Low-Level Outlet Rehabilitation / Creede, CO

Resident Engineer. Kelby served as the resident engineer during construction of this \$22 million project for the San Luis Valley Irrigation District. The work included construction of a new intake structure, shotcrete tunnel lining, a tunnel bypass around an existing gate structure, 126-inch diameter steel pipe placement, and the installation of three new fixed cone valves up to 84 inches in diameter within a new concrete valve house. Kelby's services included the monitoring of concrete mixing and placement, steel pipe welding and installation, review of valve lifting procedures, shop inspection of equipment, and commissioning of the facility. Kelby also reviewed contractor submittals for civil, structural, and mechanical equipment and components for conformance with the contract documents.

Arcadia Lake Intake and Pump Station / Edmond, OK

Project Engineer for the design of a new raw water intake and pump station for the City of Edmond, Oklahoma. The facility consisted of three 60-inch diameter microtunnel intakes, each with a 72-inch square isolation gate, a 50-foot diameter by 78-foot-deep wet well shaft, and a 30 mgd, 1,050 hp pump station, with the ability to upgrade to 65 mgd and 2,000 hp at the buildout capacity of the facility. Kelby designed site civil features for the paving, grading, and drainage. He also provided the mechanical and hydraulic design of the pumps, piping, gates, intake tee screens and appurtenant equipment. The design required analysis and wide-ranged design conditions to ensure the facility could accommodate larger future equipment to meet increased water demands for the city and accommodate fluctuations in the reservoir water surface elevation. Kelby also performed hydraulic design for portions of two 42-inch diameter HDPE discharge pipelines to connect with the main transmission lines to the City's water treatment plant.

Homestake Arkansas River Diversion Improvements / Colorado Springs, CO

Kelby served as a project engineer for the design and construction of the ARD in Colorado. The project included replacement of an existing diversion, installation of a recreational rafting channel, a weir and pool fishway, 66-inch diameter steel pipeline and two new 66-inch diameter triple offset butterfly valves. The project also included the design of abutments for a 90-foot span Acrow utility bridge for access across the river during construction. The work for ARD also included extensive permitting for the USACE Section 404 and SHPO. Kelby also provided resident engineering services during construction for this \$9.5M project.

Kelby Sommer, PE

MECHANICAL / PIPELINE LEAD

Middle South Platte Reservoir / Phase 2 Design / Weld County, CO

Senior Engineer for the water conveyance facilities to supply and discharge flows from this new off-channel storage reservoir. Kelby is leading the conceptual design for the river intake, diversion canal, pump station, and a 7-mile long, 60-in. diameter steel pipeline to convey up to 100 cfs to and from the reservoir. Kelby is also developing the mechanical design for the dam intake/outlet structure including trash racks, gates, the outlet conduit through the new embankment, and access for inspection and maintenance. These facilities will be designed to provide bi-directional flows to serve the multi-purpose needs of the reservoir.

Hokestra Ponds 5 & 6 / Firestone, CO

Project Engineer for the design of an inclined submersible pump station for the Central Colorado Water Conservancy District (CCWCD). The pump station provides water right augmentation flows from the Hokestra Ponds to the St. Vrain River. Kelby developed hydraulic calculations for the pump, and designed and wrote technical specifications for the pumping equipment, pump can, and discharge piping. He also provided review for the intake and pump station structure to verify its adequacy and adherence to current design standards.

Walker Recharge Project / Orchard, CO

Project Engineer for the design of a water right augmentation well field for the Central Colorado Water Conservancy District (CCWCD). He developed technical specifications for 12 VFD operated well pumps with a combined flow of 60 cfs and a total connected load of 2,500 hp. He selected materials for all pump components to provide corrosion resistance based on water chemistry data and consultation with the CCWCD about failures at neighboring facilities. He also worked on the design of support platforms for the well pumps to raise the discharge heads and motors above the 100-year flood elevation and provide inspection and maintenance access. The design of the platforms included development of a finite element model to evaluate the natural frequency of the platform and provide a safe margin to the operating frequency of the pumps, preventing the chance of resonant conditions that could cause premature failure of the pumps and costly modifications during construction.

Everist Reservoir Pump Station / Fort Lupton, CO

Project Engineer conducting vibration mitigation studies and modifications for the pumps at Aurora Water's Everist Reservoir pump station. Kelby conducted detailed inspections and data collection for the pumps to determine the operating frequencies and wet well water levels that caused the resonant conditions and excessive vibrations on the units. He assisted in the fabrication and installation of additional braces for the pumps to stiffen the units and alter their natural frequencies, reducing the problem operating frequencies by 60%. He also developed detailed frequency block-out regions for the pump VFDs to minimize the loss of operating ranges on the units and reduce future nuisance shutdowns for the pumps.

Ian T. Reck

CADD LEAD

Expertise

3D Modeling, CAD Design,
Geologic Mapping

Education

Associate of Arts and Science -
Civil Engineering Graphics,
Front Range Community
College

Certifications

Autodesk Civil 3D Specialized
Training
Accredited & Certified Drafter
and CAD Operator

Years with Schnabel/Total

4/18

Ian Reck has 18 years of experience with Autodesk Civil 3D and GIS industry software and practices. He specializes in 3D surface modeling, 3D visualizations, surface analysis, volume calculations, and CAD survey data management. He is highly experienced in data mapping, georeferencing data, and 3D rendering. Ian is responsible for providing ongoing support to contractors, surveyors, and engineers in the field during project exploration and construction. He has been instrumental in the analysis, planning, and design of several large scale civil and geotechnical projects including: the construction and rehabilitation of dams, spillways, outlets and accompanying infrastructure, tunnels, adits, shafts, bulkheads, mine structural support, and waterways.

Ian plays a key role in moving projects from concept to final design and is essential in the development of construction plan sets. Ian has a strong knowledge of national CAD standards as well as civil, geotechnical, and structural engineering conventions and practices.

Rio Grande Reservoir Phase 2 Rehabilitation / Creede, CO

CAD Manager for installation of outlet tunnel repairs, bypass tunnel construction, and installation of a new valve house. The project involves tunnel blasting, shotcreting, rockbolting, installation of a 126-inch diameter steel pipe, dual 84-inch and 36-inch cone jet valves and knife gates, as well as the latest SCADA features.

Arcadia Lake / Edmond, OK

CAD Designer for a shaft and three microtunneled lake taps.

Tunnel Dam Repair / Albany County, WY

CAD Manager for feasibility and design level geologic mapping and geotechnical investigations for the repair design of a 120-year-old concrete and earth embankment diversion dam.

Yocam Forebay Reservoir Design Phase 2 / Weld County, CO

CAD Manager for this multi-year, multi-discipline project to design a 2-mile-long embankment dam, outlet works, spillway, pipelines and pump station, slurry walls, in addition to evaluating the cultural and natural resources of the area and water availability from the South Platte River.

Yocam Phase 1B Reservoir / Orchard, CO

CAD Manager responsible for construction design of a sand embankment dam, chimney drain, toe drain, concrete encased 48-inch steel pipe outlet works pipeline, 24-inch ductile iron outlet works pipeline, 16-inch PVC outlet works pipeline (total of 2,700 lf of outlet works pipeline), sloping stainless steel outlet works sluice gate, sloping staff gage, concrete baffled intake structure, concrete spillway, flow meter and valve system for intake and outlet works.

Ian T. Reck

CADD LEAD

Copeland Feasibility Study / Longmont, CO

CAD Manager. A high-altitude water storage dam built in the early 1900s. Prepared several dam remediation conceptual drawings for three alternatives to modernize and improve the water storage within Copeland Lake. These alternatives include a stability berm at the toe of the dam, a full removal and replacement of the dam, and lining the reservoir and the upstream face of the dam with a manufactured liner system to reduce seepage through the dam and into the glacial till beneath the reservoir.

Central Dam & Reservoir / Avondale, CO

CAD Manager for the design of the Central Dam and Reservoir Stage 1 and 2. The Central Reservoir will include a 20±-foot-high earthen embankment, slurry wall cutoff, gravity outlet works, and overflow spillway.

South Reservoir Inflow Channel / Pueblo, CO

CAD Manager responsible for 3D design and construction drawings for a concrete diversion structure off the Excelsior Ditch, a grouted riprap plunge pool, a grouted riprap drop structure, an earth lined inflow ditch, a concrete box culvert, a grouted riprap rundown, a 12-inch low flow HDPE pipeline, a concrete spillway, slurry wall crossing and repairs.

High Peak Camp Dam #4 Restoration / Denver, CO

CAD Manager. Dam No. 4 is an existing on-stream storage facility located on Tahosa Creek. The dam is on the southeast side of the reservoir. Controlled breaches of the existing dam at two locations were performed in 2013 during heavy flooding to prevent an uncontrolled overtopping breach. The restored dam will have an embankment height of 18 feet above the reservoir bottom and impound 14.7 acre-feet at the normal water line. Major project components include a zoned compacted soil embankment dam with a clay core cutoff to bedrock, a gravity outlet works controlled from a vertical gate vault, a service spillway within the gate vault, and an emergency overflow spillway.

Bonita Peak IRODS / Silverton, CO

CAD Manager for an EPA project where Schnabel has been contracted to evaluate the stability of historic bulkheads and provide engineering solutions for the remediation within the abandoned mine workings of the Bonita Peak region. Mr. Reck analyzed and created 3D models of tunnel systems using the informative mapping of the Bonita Peak regional geology, structures, and other mining features.

Boulder Creek Streambank Stabilization / Erie, CO

CAD Manager for a streambank stabilization project that included regrading an eroded bank to a stable slope, armoring the bank using soil riprap and bioengineered reinforcement, and rerouting the low flow channel to its historical alignment. The stabilized slope will reduce the risk of Boulder Creek migrating eastward into critical water infrastructure including a water reclamation plant and a horizontal alluvial well facility.

Martin Marietta Home Office Reclamation Project / Fort Collins, CO

CAD Manager in charge of the design of an award winning mine reclamation that included compacted embankment that bifurcates a larger cell with a compacted clay slope liner for the creation of a lined below-grade water storage reservoir and groundwater underdrain.

Appendix C

Rate Sheet

RATE SCHEDULE
2024
(Published November 2, 2023)

<u>Classification</u>	<u>Hourly Charge Rate</u>
Senior Consultant – Geotechnical (see note)	\$375.00
Principal Engineer	\$260.00
Senior Associate Engineer/Geologist	\$225.00
Associate Engineer/Geologist	\$195.00
Senior Engineer/Geologist	\$175.00
Project Engineer/Geologist	\$160.00
Senior Staff Engineer/Geologist	\$145.00
Staff Engineer/Geologist	\$130.00
CAD Manager	\$150.00
CAD Technician	\$135.00
Intern	\$95.00
Clerical/Admin Manager	\$95.00
Clerical/Administrative Assistant	\$80.00

NOTES:

Direct reimbursable expenses, such as travel, printing, deliveries, copies and other outside services shall be reimbursed at cost plus 10 percent. Mileage shall be reimbursed at the current allowable IRS mileage reimbursement rate. Rates are subject to an annual increase, 5% rate increase for 2025, and another 5% increase for 2026. Senior Consultant – Geotechnical rate for expert witness work varies.

Appendix D

Certificate of Insurance

EXHIBIT B

INSURANCE REQUIREMENTS

Attach insurance requirements.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

11/27/2023

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 rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Scott Insurance - Richmond 3900 Westerre Parkway, Suite 200 Richmond VA 23233	CONTACT NAME: Cherice Tracy PHONE (A/C, No, Ext): 804-545-2234 E-MAIL ADDRESS: ctracy@scottins.com	FAX (A/C, No): 434-455-8524
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A: Continental Casualty Company (A)		20443
INSURER B: Transportation Insurance Company (A)		20494
INSURER C:		
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES**CERTIFICATE NUMBER:** 372593798**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.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			6018601512	7/1/2023	7/1/2024	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			6018601526	7/1/2023	7/1/2024	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			6018601557	7/1/2023	7/1/2024	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
B B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N <input checked="" type="checkbox"/> N	N / A	6 18601543 7034214158	7/1/2023 7/1/2023	7/1/2024 7/1/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Professional Liability \$200,000 Retention			AEH591906042	1/1/2023	1/1/2024	Per Claim Aggregate 1,000,000 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Umbrella Policy applies over General Liability, Auto Liability and Employers Liability. General Liability does not exclude xcu coverages. Workers Compensation applies in VA, GA, NC, MD, SC, PA, MD, NJ, NV, TX, NY, TN, KY, WV, CO, ID and DC; and all other states except ND, OH, WA and WY. Workers Compensation Policy includes USL&H coverage. Coverages provided by Owner or Contractor Controlled Programs are excluded from policies referenced herein.

IF REQUIRED BY WRITTEN CONTRACT, the following provisions apply to General Liability, Auto Liability, Workers Compensation and Umbrella Liability: Additional Insureds on a primary, noncontributory basis for General Liability, for ongoing & completed operations for work performed by the Named Insured; & for Auto Liability & Umbrella Liability. Waiver of Subrogation in favor of Additional Insureds for General Liability, Auto Liability, Workers Compensation, Umbrella See Attached...

CERTIFICATE HOLDER**CANCELLATION**

City and County of Broomfield
One DesCombes Drive
Broomfield Co 80020-2495
United States

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

© 1988-2015 ACORD CORPORATION. All rights reserved.

**ADDITIONAL REMARKS SCHEDULE**Page 1 of 1

AGENCY Scott Insurance - Richmond		NAMED INSURED Deere and Ault Consultants, Inc. and Schnabel Engineering, LLC 600 S. Airport Road, Suite A-205 Longmont CO 80503
POLICY NUMBER		
CARRIER	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Liability and Professional Liability.

Additional Insured: The City and County of Broomfield, its officers, board members, agents, employees and volunteers acting within the scope of their duties for the City and County of Broomfield shall be named as Additional Insured on all Commercial General Liability, Umbrella Liability and Automobile Liability Insurance policies.



City of Broomfield

City Council Regular Meeting

Approving License Agreement with RTD for the US 36 Bike Shelters

RTD IGA

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6I
Presented By		
Brian Graham		
Community Goals		
<input checked="" type="checkbox"/> Mobility		

Overview

[View Correspondence](#)

The Regional Transportation District (RTD) installed the first bike shelter at the westbound Broomfield Station in 2018. The remaining three bike and ride shelters in Broomfield along the US 36 corridor at 5000 W. Midway Blvd., at 8010 Transit Way, and at the US 36 & Flatiron Station West Side Park-N-Ride were installed in 2023. To complete the project, signage is needed to clearly identify the facilities. RTD requires a license agreement to allow the shelter signage to be installed on the four shelters. Proposed Resolution No. 2024-72 will approve the Intergovernmental License Agreement with RTD for the US 36 Bike and Ride Shelter Signage Project.

Attachments

[FINAL US 36 Bike Shelters Signage License Agreements with RTD Memo.pdf](#)

[Resolution 2024-72.pdf](#)

[License - City and County of Broomfield US 36 Bicycle Shelter Signage \(with Legal Signature\).pdf](#)

Summary

[View Correspondence](#)

The US 36 Bike and Ride Shelters project was the top-ranked recommendation from the US 36 First and Final Mile Plan.

The Regional Transportation District (RTD) installed the first bike shelter at the westbound Broomfield Station in 2018. The remaining three bike and ride shelters in Broomfield along the US 36 corridor at 5000 W. Midway Blvd., at 8010 Transit Way, and at the US 36 & Flatiron Station West Side Park-N-Ride were installed in 2023 as a CIP project with federal Transportation Improvement Program (TIP) funding.

To complete the project, signage is needed to clearly identify what the facilities are, how to use them, and provide a sense of place at the stations so users can orient themselves upon arrival. Signage will be consistent with other US 36 branding, including other US 36 Bike N Ride shelters and US 36 Bikeway wayfinding signage.

RTD requires a license agreement to allow the shelter signage to be installed on the four shelters.

Proposed Resolution No. 2024-72 will approve the Intergovernmental License Agreement with RTD for the US 36 Bike and Ride Shelter Signage Project.

The License Agreement is an intergovernmental agreement (IGA) and, pursuant to the City Charter, requires a two-thirds affirmative vote of the entire City Council for approval.

Financial Considerations

As shown in the sources and uses of funds summary below, the project can be completed within the budgeted amount.

Sources and Uses of Funds	Amount
CIP Fund Transportation Project - Bike N Ride Signage Project# 24T0010 (20-70090-55200)	\$50,000
Signage Design, Fabrication, and Installation Estimate	-\$50,000
Projected Balance	\$00

Prior Council or Other Entity Actions

On June 12, 2018, Council approved an Intergovernmental Agreement with RTD Resolution No. [2018-104](#) for the local contribution, maintenance, marketing, and operation of the westbound Broomfield Station bicycle shelter.

On April 7, 2020, Council approved Resolution No. [2020-89](#) for the First Amendment to an Intergovernmental Agreement with the Regional Transportation District (RTD) for Local Contribution to the Construction, Maintenance, Marketing, and Operation of Bicycle Shelter.

On April 12, 2022, Council approved Resolution Nos. [2022-51](#), [2022-52](#), and [2022-53](#) for Intergovernmental License Agreements with the Regional Transportation District (RTD) for the US 36 Bike and Ride Shelters Project at 5000 W. Midway Blvd, 8010 Transit Way, and at the US 36 & Flatiron Station West Side Park-N-Ride.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to proceed with the shelter signage, the appropriate motion is...
That Resolution 2024-72 be adopted.

Alternatives

Decide not to enter into the Intergovernmental License Agreement with RTD and not to complete the Bike and Ride Shelter Signage.

RESOLUTION NO. 2024-72

A Resolution Approving an Intergovernmental License Agreement with the Regional Transportation District for the US 36 Bike N Ride Shelters Signage Project

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The intergovernmental license agreement attached hereto by and between the City and County of Broomfield and the Regional Transportation District for the US 36 Bike and Ride Shelters Signage Project is approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the agreement, in form approved by the City and County Attorney.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on May 28, 2024

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney

LICENSE AGREEMENT

FOR CITY OF BROOMFIELD US 36 BICYCLE SHELTER SIGNAGE

THIS LICENSE AGREEMENT ("**Agreement**") is made by and between the REGIONAL TRANSPORTATION DISTRICT, a political subdivision of the State of Colorado, whose address is 1660 Blake St., Denver, Colorado 80202 ("**RTD**"), and City and County of Broomfield, a home rule municipal corporation of the State of Colorado, whose address is One DesCombes Drive, Broomfield, Colorado 80020 ("**Licensee**").

RECITALS

- A. RTD owns or controls parcels of land located at 8010 Transit Way, 7880 West 116th Ave., 398 East Flatiron Circle, and 5000 West Midway Blvd., all in Broomfield, Colorado, for mass transit purposes (together, the "**RTD Property**").
- B. Licensee has constructed bicycle shelters at 8010 Transit Way, 398 East Flatiron Circle, and 5000 West Midway Blvd., all in Broomfield, Colorado, pursuant to three license agreements dated April 22, 2022, which RTD and Licensee are party to.
- C. RTD has constructed a bicycle shelter at 7880 West 116th Ave., Broomfield, Colorado, pursuant to an intergovernmental agreement dated October 22, 2018, which RTD and Licensee are party to (together, with the aforementioned "**Bicycle Shelters**").
- D. Licensee desires to place bicycle and pedestrian wayfinding signage on the panels and doors of the Bicycle Shelters.

In consideration of the mutual promises contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are acknowledged, the parties agree as follows:

ARTICLE 1. LICENSE

- A. Subject to all the terms and conditions of this Agreement, RTD grants to Licensee a non-exclusive, revocable license and permission to enter upon and have ingress to and egress from the RTD Property ("**License**") solely for the purpose(s) of attaching bicycle and pedestrian wayfinding signage to the panels and doors of the Bicycle Shelters within the area shown on the attached **Exhibit A** ("**Licensed Area**") and in accordance with the Plans attached as **Exhibit B**.
- B. RTD shall retain all rights in and usage of the Licensed Area. The License is subject to existing interests, easements, leases, licenses, and permits (if any) previously granted, reserved or held by RTD, its predecessors in interest, or any other person or entity affecting any of the Licensed Area or RTD Property, whether of record or not. Licensee's use of the Licensed Area shall not interfere with RTD's use and/or maintenance of RTD facilities and the RTD Property, nor with the needs and requirements of RTD's tenants, easement beneficiaries, licensees, or lien holders, nor with the use of their improvements on the RTD Property.
- C. Licensee shall require its agents, employees, contractors, and subcontractors (collectively, "**Licensee's Agents**") performing work pursuant to this Agreement to comply with each of

the terms and conditions of this Agreement and to acknowledge all rights reserved to RTD pursuant to this Agreement.

- D. All recitals and attached exhibits are deemed incorporated into this Agreement. Exhibits may not be modified without prior approval by RTD; any approved modifications to exhibits shall be incorporated in this Agreement by an amendment to the Agreement signed by both parties.

ARTICLE 2. TERM

This Agreement shall become effective upon the last date of execution by both parties ("Effective Date") and shall remain in effect for 180 days or until terminated by either party pursuant to the provisions of Article 3 or terminated by court order, whichever is earlier.

ARTICLE 3. TERMINATION AND DEFAULT

- A. In the event of Licensee's violation of any of the terms of this Agreement, RTD may terminate this Agreement in part or in full, effective immediately upon Licensee's receipt of RTD's written termination notice.

ARTICLE 4. WORK AND COORDINATION WITH RTD

- A. Licensee shall coordinate all work with RTD's Manager, Civil Engineering ("RTD Representative") at office number 303.299.6963 or by email at susan.johnson@rtd-denver.com. Licensee's Agent shall notify the RTD Representative 2 weeks prior to placing the wayfinding signage
- B. Licensee will ensure that each of Licensee's Agents requiring access to and entry upon the Licensed Area to perform work under this Agreement, with the exception of individual Licensee employees, obtains a fully executed current form of RTD's Contractor Right of Entry Agreement similar to the form attached as **Exhibit C ("Contractor ROE")**. Licensee shall submit any request for a Contractor ROE to the Manager of Real Property at the address provided in this Agreement or by email to RealProperty@RTD-Denver.com. Licensee's Agent shall sign the Contractor ROE and submit it, or have the Licensee submit it, with all required supporting documentation to RTD not less than 14 days in advance of the entry of the respective Licensee's Agent upon the Licensed Area.

ARTICLE 5. ACCESS

- A. Licensee shall conduct any work under this Agreement in accordance with **Exhibit B**.
- B. During any work under this Agreement, Licensee agrees to maintain the Licensed Area in a clean, neat, and sanitary condition, and to properly and promptly dispose of all litter and debris. Following completion of the work, Licensee shall promptly remove all tools, equipment, and materials and restore the Licensed Area, including re-vegetation, to substantially the same state and condition as when entered upon. If Licensee does not complete the restoration work within a reasonable time, RTD may complete the restoration work at Licensee's sole expense; Licensee shall reimburse RTD within 30 days of Licensee's receipt of a written invoice

and supporting documentation. Licensee's obligation to restore the Licensed Area or to reimburse RTD for such restoration shall survive any termination of this Agreement.

- C. Licensee shall obtain a Buildings and Grounds Access Permit ("**BGAP**") from RTD Facilities Maintenance by submitting the permit form, which can be found at <https://www.rtd-denver.com/business-center/construction-engineering/right-of-way-agreements-and-permits>, to bgapermits@rtd-denver.com whenever Licensee, Licensee's Agents, or their equipment will be present on the Licensed Area. Licensee must initiate its request for a BGAP five business days before the work is scheduled to begin. Any conditions set forth in a BGAP shall be deemed to be incorporated in this Agreement by this reference.
- D. **In case of emergency** within the Licensed Area, Licensee shall immediately notify RTD of the emergency at 303.299.2980 or such other number provided by RTD and advise of Licensee's proposed actions to immediately address the emergency. Licensee shall be responsible for any costs incurred by RTD in connection with any emergency in accordance with the process set forth in this Article 6.
- E. RTD reserves the right to have its personnel present during any work under this Agreement.
- F. Licensee shall be responsible for safety related to all aspects of its work under this Agreement. Licensee shall obtain all health, fire, and other relevant safety regulations, work practices, and procedures prescribed by law and by RTD and shall ensure that Licensee's Agents are notified of, understand, and abide by them at all times. Licensee shall provide all required personal protective equipment and other equipment required for the safe performance of the work.
- G. Licensee shall promptly report all accidents, safety incidents, injuries, and environmental incidents concerning the RTD Property or RTD facilities to government authorities as required by law and to RTD.
- H. At any reasonable time, RTD may inspect a work site and appropriate records regarding Licensee's safety procedures and statistics to ascertain compliance with the safety requirements of this Agreement. Neither the existence nor exercise of such right by RTD shall relieve Licensee of its responsibility for compliance with, and for monitoring compliance by Licensee and its subcontractors with, the safety requirements of this Agreement.
- I. Licensee shall stop work when an imminent hazard to persons, the RTD Property, or RTD facilities is identified and shall immediately notify RTD that work has stopped, providing the reasons for stopping the work and an estimate of when the work will resume. Licensee shall take all appropriate measures to abate the imminent hazard.
- J. Licensee shall ensure that Licensee's Agents understand their right to stop work at any time they feel there is an unsafe condition or unsafe behavior in place that could harm them, others, property, or the environment. The work shall not resume until all appropriate measures to abate the hazards have been implemented.
- K. Notwithstanding any other provision of this Agreement, RTD has the right to immediately suspend the performance of the work under this Agreement if RTD, in its sole judgment, determines that any of Licensee's Agents is failing to comply with RTD safety requirements

or applicable safety laws and regulations while performing the work, or if the safety of RTD employees or patrons is at risk or RTD operations are at risk. The suspension will continue until RTD notifies Licensee that the suspension is lifted. Licensee acknowledges that RTD has no obligation to lift the suspension until RTD is satisfied that Licensee will comply with applicable requirements. RTD shall not be liable for any delays in the completion of the work that result from an RTD suspension under this paragraph.

ARTICLE 6. NOTICES

Unless otherwise prescribed in this Agreement, any notices required to be given shall be provided in writing and mailed by U.S. mail, first class postage prepaid, or by electronic mail and addressed as follows:

If to RTD:	Regional Transportation District Attn: Senior Manager, Real Property 1560 Broadway, Suite 650 Denver, Colorado 80202 303.299.2440 susan.altes@rtd-denver.com
If to Licensee:	City and County of Broomfield Attn: Joliette Woodson, Transportation Engineer One Descombes Drive Broomfield, Colorado 80020 303.464.5868 jwoodson@broomfield.org

Any such notice shall be deemed to have been provided three days after such notice or communication is mailed. Each party will provide notice of any changes to its address, email address, or contact person.

ARTICLE 7. LIABILITY

- A. Licensee shall be responsible for any damage to any property, including the Licensed Area, the RTD Property or other RTD property, Licensee's property, adjacent property, utilities, adjacent structures, and other third party real and personal property on or under the RTD Property that is caused by Licensee or Licensee's Agents. Licensee shall either promptly repair such damage or pay damages to the reasonable satisfaction of the owner of the damaged property, in either case at no cost to RTD. RTD and Licensee shall notify one another of any such damage and any potential claims arising out of such damage.
- B. Licensee shall require Licensee's agents, contractors, and subcontractors to, indemnify, defend and hold harmless RTD and its officers, directors, employees, agents, and contractors against and from all claims (including without limitation actions, demands, expenses, costs, attorneys' fees, court costs, and judgments) arising out of or caused by the use of the Licensed Area and RTD Property under this Agreement. Licensee shall agree that RTD shall not be liable for any such claims. In the event of any claims made or suits filed, each party

shall give the other prompt written notice, and RTD shall have the option to defend or reasonably settle the same as to claims or suits made against it, without effect as to Licensee's obligations under this Agreement.

- C. Nothing in this Agreement shall be deemed to waive any of Licensee's or RTD's privileges or immunities pursuant to the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*
- D. The provisions of this Article shall survive the termination, in whole or in part, of this Agreement.

ARTICLE 8. NO WARRANTY

- A. RTD does not grant nor purport to grant any right not specifically set forth in this Agreement. Permission for Licensee or Licensee's Agents to traverse the property of any other property owners or interest-holders other than RTD is the sole responsibility of Licensee, as is the procurement of any applicable regulatory permission or consent.
- B. The right to use the Licensed Area and RTD Property is granted subject to their "AS IS" physical condition without any warranty, express or implied.
- C. Licensee specifically assumes all risk of loss, damage, or destruction to any tools, equipment, or materials, if any, that Licensee or Licensee's Agents store on the Licensed Area or the RTD Property, whether the loss, damage, or destruction results from accident, act of God, the elements, severe weather, theft, or vandalism.

ARTICLE 9. INSURANCE

- A. Licensee is a self-insured governmental entity that agrees to maintain the coverages set forth below. Licensee may comply with and satisfy any or all of its insurance obligations under this Agreement in lieu of actually obtaining the applicable insurance policy(ies) by notifying RTD of Licensee's election to be self-insured as to the applicable insurance coverage. The same coverages and limitations prescribed in this Agreement shall apply except that Licensee shall not be required to provide the endorsements set forth below in this Article. If requested by RTD at any time, Licensee shall provide RTD with a letter of such self-insurance in a form reasonably acceptable to RTD. In addition, Licensee shall require that Licensee's Agents, with the exception of individual Licensee employees, procure and maintain the following types of insurance, at a minimum, with an insurer or insurers and in a form satisfactory to RTD. All insurance policies shall name RTD as an additional insured, with the exception of Workers' Compensation and Employers' Liability Insurance.
 - 1. Commercial General Liability Insurance with contractual liability endorsement, which shall provide coverage for limits of not less than \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000, and shall also include, but not be limited to, coverage for bodily injury, property damage, and products and completed operations. Following the completion of construction, this insurance will be maintained (renewed annually) for a time period no less than through the period of the applicable Colorado statute(s) of limitation and, if applicable, the Colorado statute of repose.

2. Umbrella/Excess Liability Insurance. An umbrella/excess liability policy may be procured to meet the requirements of the Commercial General Liability Insurance limits.
 3. Automobile Liability Insurance with a combined single limit of at least \$1,000,000 per occurrence, and including coverage for, but not limited to, bodily injury liability and property damage liability for any vehicles owned, used, or hired.
 4. Workers' Compensation and Employers' Liability Insurance covering all employees of Licensee, wherever they may be in the United States of America so long as they are engaged in the work covered by this Agreement. The policy or policies shall cover the entire liability of Licensee as determined by the workers' compensation laws of the state or states under which such liability arises, and shall contain, so far as it is lawful to obtain, a waiver of insurer's right of subrogation against RTD for payments made to or on behalf of employees of Licensee. Employers' Liability Insurance shall provide coverage for limits of not less than \$500,000. This insurance, when procured by Licensee's Agents, shall also cover Licensee's Agents' employees.
- B. Prior to entry upon, above, or adjacent to the RTD Property and the Licensed Area, Licensee agrees to furnish RTD with a certificate of the required insurance for each of Licensee's and Licensee's Agents' policy(ies). Licensee shall provide 30 days' advance notice of cancellation of such policy(ies) by registered or certified mail. Certificates of insurance shall be provided to the RTD Senior Manager of Real Property as provided in this Agreement.
- C. Each insurance certificate required above shall have the following endorsements attached:
1. An endorsement naming RTD an additional insured, except on Workers' Compensation and Employers' Liability Insurance;
 2. An endorsement evidencing coverage for a liability assumed under an insured contract for liability assumed by Licensee and Licensee's Agents;
 3. A Broad Form Property Damage endorsement if the policy does not provide for the equivalent coverage; and
 4. Waiver of subrogation in favor of and acceptable to RTD.
- D. In the event of reduction or exhaustion of the applicable aggregate limit or limits of liability under the primary policy or policies referred to in the certificate of insurance solely by reason of losses paid under this Agreement on account of occurrences during the policy period, the excess policy, if any, referred to in the certificate shall (1) in the event of reduction, apply as excess of the reduced limit of liability thereunder; and (2) in the event of exhaustion, continue in force as though it were primary insurance. For claims covered by the insurance specified in this Agreement, the insurance coverage shall be primary and non-contributory insurance with respect to the insured, additional insured parties, and their respective members, directors, officers, employees, and agents, and it shall specify that coverage continues notwithstanding the fact that Licensee and Licensee's Agents have left the RTD Property.

- E. The insurance shall apply separately to each insured and additional insured party against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- F. Liability of Licensee under this Agreement shall not be limited to coverage provided under the required insurance policies.
- G. Only those Licensee's Agents whose operations are covered by the required insurance will be authorized to work upon or about the Licensed Area or the RTD Property.

ARTICLE 10. HAZARDOUS MATERIALS

Licensee and Licensee's Agents shall not use, produce, treat, generate, release, discharge, store, transport, or cause to be transported, or dispose of any Hazardous Materials at, on, under, in, or about the Licensed Area or RTD Property in violation of applicable law. "**Hazardous Materials**" shall mean any and all substances, chemicals, wastes, or other materials now or from time to time defined or characterized as hazardous substances or hazardous wastes pursuant to laws or regulations of any government authority having jurisdiction over the RTD Property, the State of Colorado, or the United States, or otherwise posing a present or potential risk to human health, welfare, or the environment.

ARTICLE 11. SAMPLES AND REMOVAL

As between Licensee and RTD, Licensee shall be solely responsible for the lawful removal, manifesting, transport, testing, and disposal of any samples or other materials, including but not limited to Hazardous Materials, removed from the RTD Property or Licensed Area or generated as a result of work performed pursuant to this Agreement, and shall duly and properly perform or cause to be performed any such work that it undertakes or is required to undertake pursuant to federal, state, and local laws and applicable industry standards. As between Licensee and RTD, Licensee is the sole generator (as the term "generator" is used in applicable statutes and regulations concerning the removal, transport, and/or disposal of Hazardous Materials, substances, waste, or other contaminants) of any materials, including but not limited to Hazardous Materials, removed from the RTD Property or Licensed Area by Licensee or Licensee's Agents or generated as a result of sampling and/or testing undertaken by Licensee or Licensee's Agents.

ARTICLE 12. GENERAL

- A. Assignment. Licensee may not assign this Agreement, or any part or interest in this Agreement, without the prior written consent of RTD. No RTD-approved assignment shall release Licensee from any liability under this Agreement. Any assignment in violation of this Agreement shall be null and void.
- B. Agreement Binding. This Agreement and all of the covenants, terms, and conditions in this Agreement shall be binding upon and inure to the benefit of the parties and their respective permitted successors and assigns.
- C. Execution in Counterparts. This Agreement (and each amendment, modification, and waiver in respect of this Agreement) may be executed and delivered in counterparts, each of which

will be deemed an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement shall be effective as delivery of a manually executed counterpart of this Agreement.

- D. Governing Laws; Jurisdiction and Venue. The laws of the State of Colorado and applicable federal, state, and local laws, rules, regulations, and guidelines govern this Agreement. Jurisdiction and venue for all disputes shall be in the county in which the Licensed Area is located, and Licensee expressly submits itself to such jurisdiction.
- E. No Recordation. Neither party (nor any of their respective agents or representatives) shall record this Agreement (or any memorandum or short form of this Agreement) without the prior written consent of the other party.
- F. Amendment. This Agreement may not be amended except in writing by mutual agreement of the parties, nor may rights be waived except by an instrument in writing signed by the party charged with such waiver.
- G. No Agency. It is expressly understood and agreed that RTD and Licensee do not intend to be and shall not in any respect be deemed agents of each other.
- H. Headings. The headings in this Agreement are inserted for reference purposes only and are not restrictive as to content.
- I. Liens. Licensee shall not permit any lien, claim, or other charge to be placed on the RTD Property, and Licensee shall promptly cause any such lien, claim, or charge to be removed. If any mechanic's lien, claim, or other charge is filed against the RTD Property, Licensee shall discharge the same of record by a release or bond within 30 days after the filing of any notice of such lien, claim, or other charge. This provision shall survive termination, in whole or in part, of this Agreement.
- J. Waiver; Severability. The failure of either party to exercise any right under this Agreement, or to insist upon strict compliance by the other party, shall not constitute a waiver of either party's right to demand strict compliance with the terms and conditions of this Agreement. If any provision of this Agreement is held to be unenforceable for any reason, its unenforceability shall not affect the remainder of this Agreement, which shall remain in full force and effect and enforceable in accordance with its terms.
- K. Legal Authority. Licensee warrants that it possesses the legal authority to enter into this Agreement and that it has taken all actions required by its procedures, bylaws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Agreement and to bind Licensee to its terms. The person(s) executing this Agreement on behalf of Licensee warrant(s) that such person(s) have full authorization to execute this Agreement.
- L. No Dedication; Third Parties. Nothing in this Agreement shall be deemed to be a gift or dedication of any portion of the Licensed Area or the RTD Property to the general public or for any public use or purpose whatsoever. Except as specifically provided in this Agreement, no rights, privileges, or immunities of either party shall inure to the benefit of any third party,

nor shall any third party be deemed to be a beneficiary of any of the provisions contained in this Agreement.

- M. Breach. Any failure of Licensee to fulfill any of Licensee's obligations under this Agreement shall constitute a breach of this Agreement and subject Licensee to immediate termination of the Agreement, as well as damages and costs, including attorneys' fees.
- N. Applicable Laws; Violation. Licensee shall use the Licensed Area in a safe and careful manner and shall comply with all applicable ordinances and regulations of the jurisdiction in which the Licensed Area is located; federal, state, and local laws; and all other rules of governmental authorities as may be in force and effect during the term of this Agreement. If at any time the use of the Licensed Area by Licensee violates applicable ordinances or laws, Licensee shall cease and desist from continuing such use upon demand by RTD.
- O. Additional Uses. Licensee understands and agrees that the RTD Property may be used by the public or otherwise, and Licensee shall conduct its work so as not to unreasonably interfere with such other uses.
- P. RTD Equipment. Licensee shall not use RTD equipment, tools, or furnishings located in or about the Licensed Area or RTD Property without prior written approval by RTD.
- Q. Entire Agreement. This Agreement represents the entire agreement between the parties regarding the Licensed Area and the RTD Property.
- R. Electronic Signatures. This Agreement may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed versions of an original signature, electronically scanned and transmitted versions of an original signature, and digital signatures.

Signature Page(s) to Follow

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the Effective Date.

REGIONAL TRANSPORTATION DISTRICT

By: _____
Jyotsna Vishwakarma
Acting Assistant General, Manager
Capital Programs

APPROVED AS TO LEGAL FORM FOR THE
REGIONAL TRANSPORTATION DISTRICT

By: _____
Tyler Albo
Assistant General Counsel

Date: 04/23/2024

LICENSEE
CITY AND COUNTY OF BROOMFIELD

By: _____

Name: _____


Title: _____

Date: _____

Memorandum



TO: Susan Altes, Senior Manager, Real Property

FROM: Jyotsna Vishwakarma, Acting AGM, Capital Programs 

DATE: 28 July 2023

SUBJECT: Delegation of Authority

This is to confirm that during the period starting Monday, 31 July 2023, until revoked, you will assume the additional duties of Acting Assistant General Manager, Capital Programs in regard to documents that require my signature on Real Property documents.

Your authority shall extend only to those Real Property documents. This authority shall not be further delegated by you.

cc: Senior Leadership Team
Debra A. Johnson, General Manager and CEO
Brian Welch, Acting Assistant General Manager, Planning
Kathy Rinkel, Budget Analyst IV
Ashland Vaughn, Sr. Manager Construction
Susan Altes, Senior Manager, Real Property
Kim Tostenson, Supervisor, Facilities Maintenance
Aprajit Desai, Manager, Engineering Construction
Luke Johnson, Manager, Mapping and Engineering Data
Patrick Stanley, Manager, Engineering Programs
Kevin Diviness, Director Quality Assurance
Ron Posey, Manager, Facilities Maintenance Operating Facilities

EXHIBIT A
Licensed Area

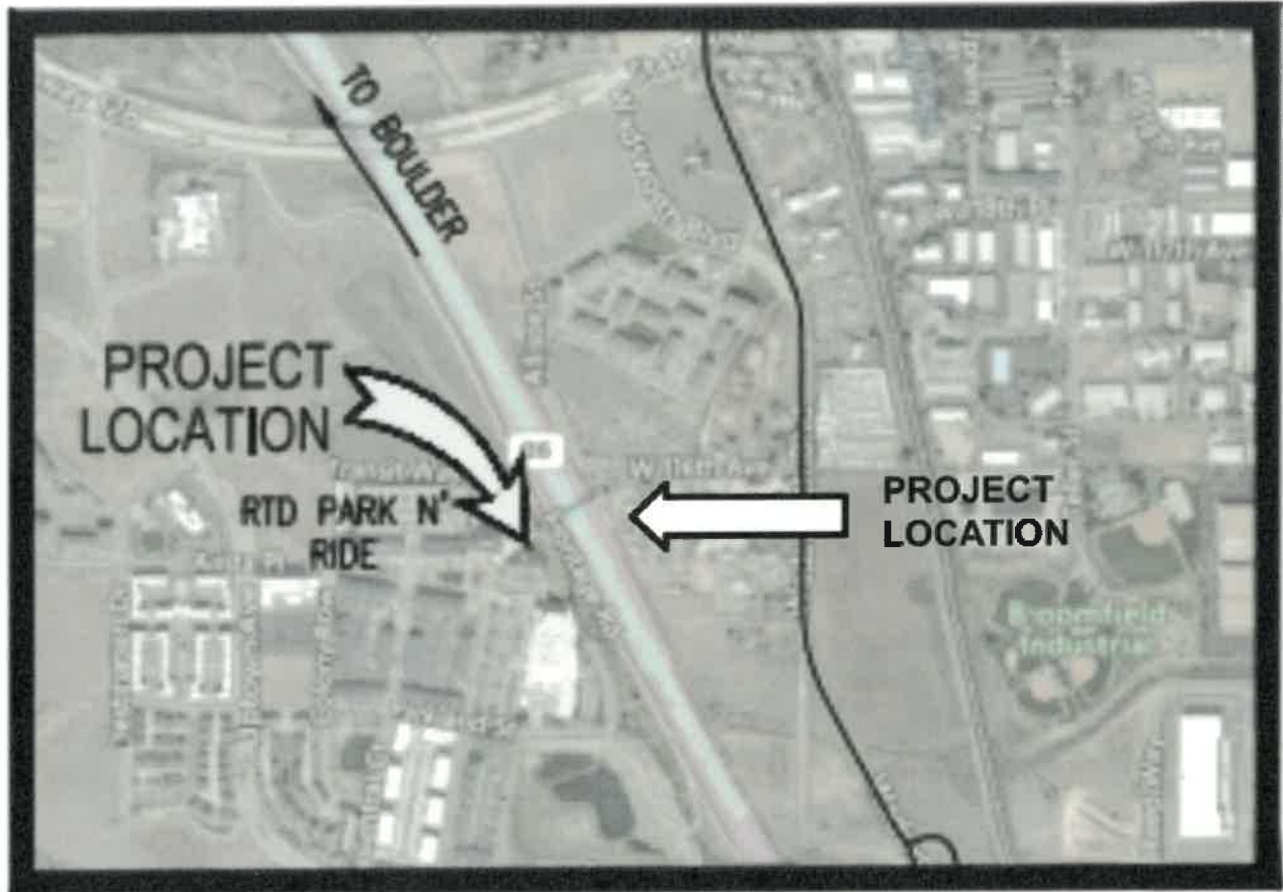
EXHIBIT B
Plans

EXHIBIT C
Contractor Right of Entry Agreement

EXHIBIT A

Page 1 of 6

US 36 & Broomfield Station Project Locations
8010 Transit Way and 7880 West 116th Avenue

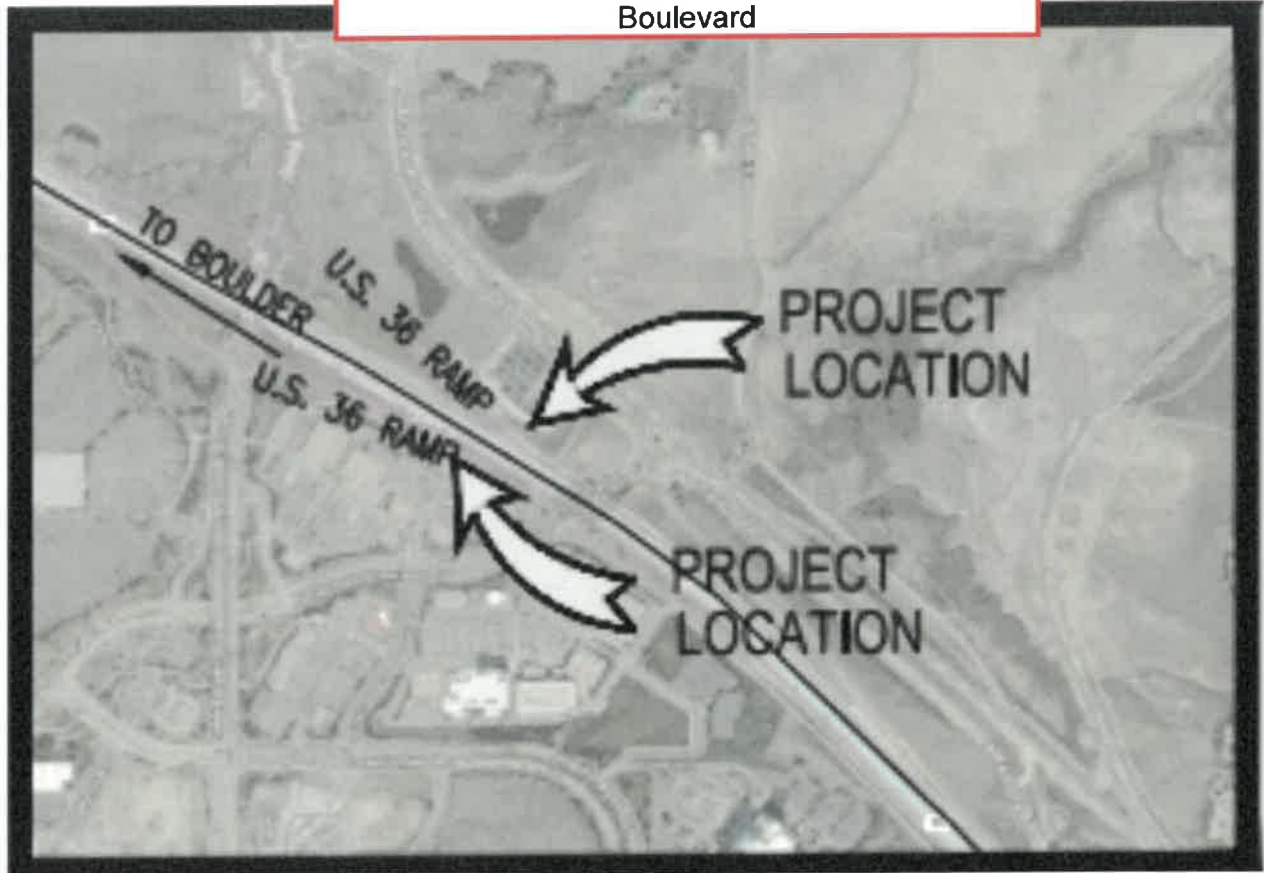


US 36 @ Broomfield Station

EXHIBIT A

Page 2 of 6

US 36 & Flatiron Station Project Locations
398 East Flatiron Circle and 5000 West Midway
Boulevard



US 36 @ Flatirons Station

EXHIBIT A

Page 3 of 6

Bicycle Shelter located at West Side
of US 36 & Broomfield Station
8010 Transit Way



EXHIBIT A
Page 4 of 6
Bicycle Shelter located at East Side
of US 36 & Broomfield Station
7880 West 116th Avenue



EXHIBIT A
Page 5 of 6
Bicycle Shelter located at West Side
of US 36 & Flatiron Station
398 East Flatiron Circle



EXHIBIT A

Page 6 of 6

Bicycle Shelter located at East Side
of US 36 & Flatiron Station
5000 West Midway Boulevard

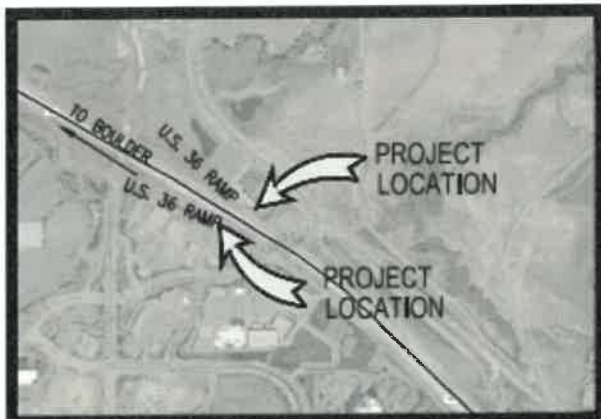


EXHIBIT B
Plans

SCOPE OF WORK

1. Project Location:

- US 36 & Broomfield Station Westbound: 7880 W. 116TH AVE, Broomfield
 - US 36 & Broomfield Station Eastbound: 8010 TRANSIT WAY, Broomfield
 - US 36 & Flatiron Station Eastbound 5000 W. MIDWAY BLVD, Broomfield
 - US 36 & Flatiron Station Westbound: 300 E. FLATIRON CROSSING DR, Broomfield
- Note: Parking is available in the parking lot or adjacent to the shelter.
Absolutely no parking in the bus lanes/stops.



US 36 @ Flatirons Station



US 36 @ Broomfield Station

2. Links to Available Documents:

- [Existing Shelter Photos](#)
- Westbound Broomfield Shelter [Signage Concept](#)
- Example Signage at Existing Shelters:

Louisville WB McCaslin	Superior EB McCaslin
Table Mesa	Sheridan
CO 119 / Hover	CO 119 8th & Coffman
- Construction Design [Documents](#)
- Existing Shelter Specifications for [Eastbound Broomfield Station and Eastbound and Westbound Flatirons Stations](#)
- Existing Shelter Specifications for [Westbound Broomfield Station](#)
- US 36 General [Signage Specifications](#)
- [Graphic Files](#)

3. Signage Information: Signs must be 0.100 thickness, 10 gauge, aluminum with non-reflective vinyl with graffiti resistant coating. Tamper-proof hardware shall be used to mount the new signage to the shelters. Care shall be used in installation so as not to mark, scuff or mar the new signage. An access card to enter the shelters shall be provided to the Contractor.

- Broomfield Station Westbound
 - Top Panel:
 - Text: US 36 and Broomfield | Westbound | Bike-n-Ride Shelter
 - Location: All sides
 - Logo: Red RTD Bike-n-ride
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 7880 W. 116TH AVE, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided]. ”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).
- Broomfield Station Eastbound
 - Top Panel:
 - Text: US 36 and Broomfield | Eastbound | Bike-n-Ride Shelter
 - Location of panel: All sides
 - Logo: RTD Bike-n-ride
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 8010 TRANSIT WAY, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided]. ”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).

- Flatiron Station Westbound
 - Top Panel:
 - Text: US 36 and Flatiron | Westbound | Bike-n-Ride Shelter
 - Location of Panels: Three sides: West, East, North
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 300 E. FLATIRON CROSSING DR, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided].”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).
- Flatiron Station Eastbound
 - Top Panel:
 - Text: US 36 and Flatiron | Eastbound | Bike-n-Ride Shelter
 - Location of Panels: All sides
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 5000 W. MIDWAY BLVD, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided].”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).

4. Example Top Panel and Door Signage:



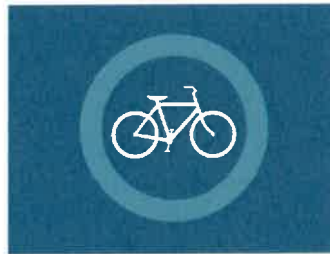
5. Example Middle Panel:



6. Logos/Graphics:



RTD bike-n-ride logo (provided)

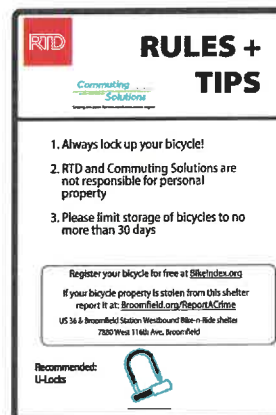
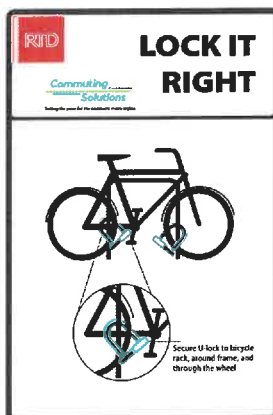


Bike logo (not provided)



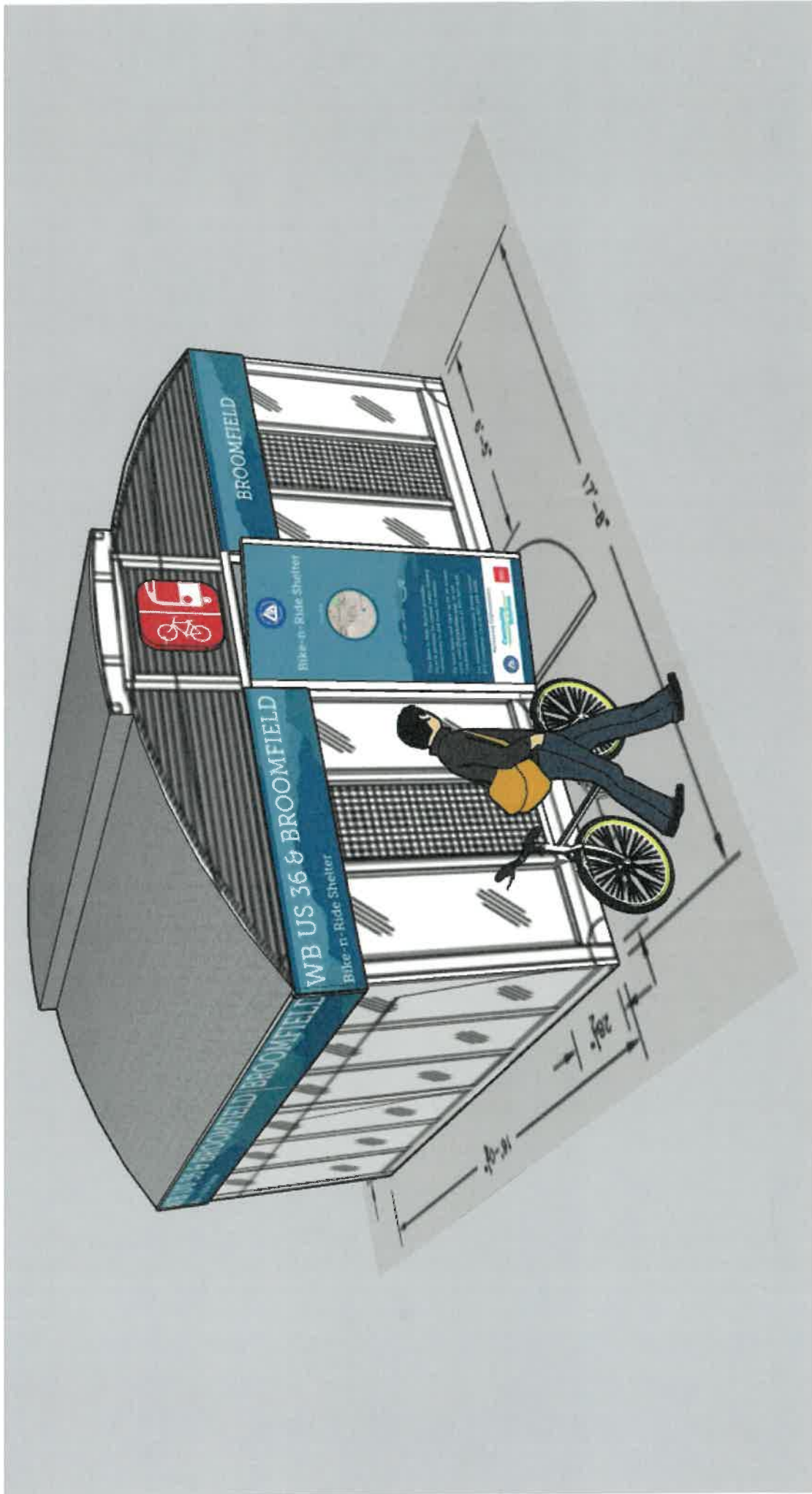
Broomfield logo (provided in white)

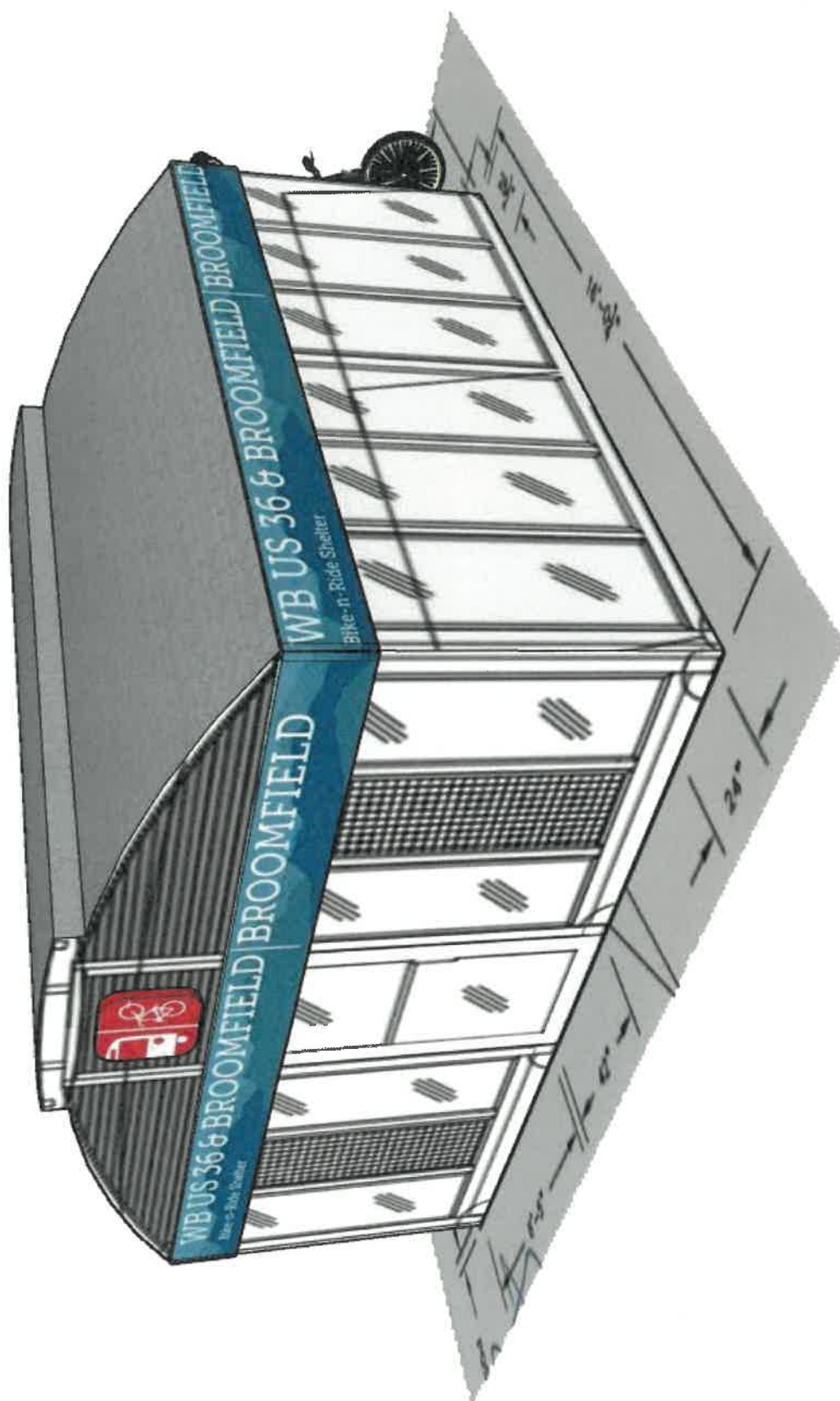
7. Safety Signage



Project General Notes

1. Work shall be performed in accordance with applicable sections of the *Broomfield Standards and Specifications*, latest edition, available online:
<http://www.broomfield.org/DocumentCenter/View/1972>.
2. The awarded Vendor must have an active [contractor's license](#) (Class C, \$50) with the City and County of Broomfield Building Department.
3. Work hours are Monday through Friday, 7 a.m. to 7 p.m. Saturday work may be allowed 9 a.m. to 6 p.m. with a pre-approved Weekend/Holiday Work Request form.
4. The site shall be maintained in a clean and tidy condition without miscellaneous debris, etc. Stockpiled materials and equipment shall be neatly organized and in locations coordinated with RTD and Broomfield's CIP Project Manager.
5. A Broomfield PPIP permit is required, however, there will be no Broomfield permit fees, no bonding is required, and the project is tax-exempt. A tax exempt certificate will be provided to the awarded Vendor. The awarded Vendor is required to obtain a RTD BGAP permit. BGAP fees must be included in the CCOB and RTD Permitting Item.
<https://www.broomfield.org/DocumentCenter/View/1408/Public-Private-Improvement-Permit-Fillable-Right-of-Way-Permit-4-15-20?bidId=>
<https://www.rtd-denver.com/doing-business-with-rtd/construction-engineering/row-agreements-permits/facility-tracks-access-policy>
6. The Vendor shall be responsible for working with the CIP Project Manager and RTD to minimize impacts to the public. Once the Vendor has started work, continual onsite progress shall be made until the work is complete.





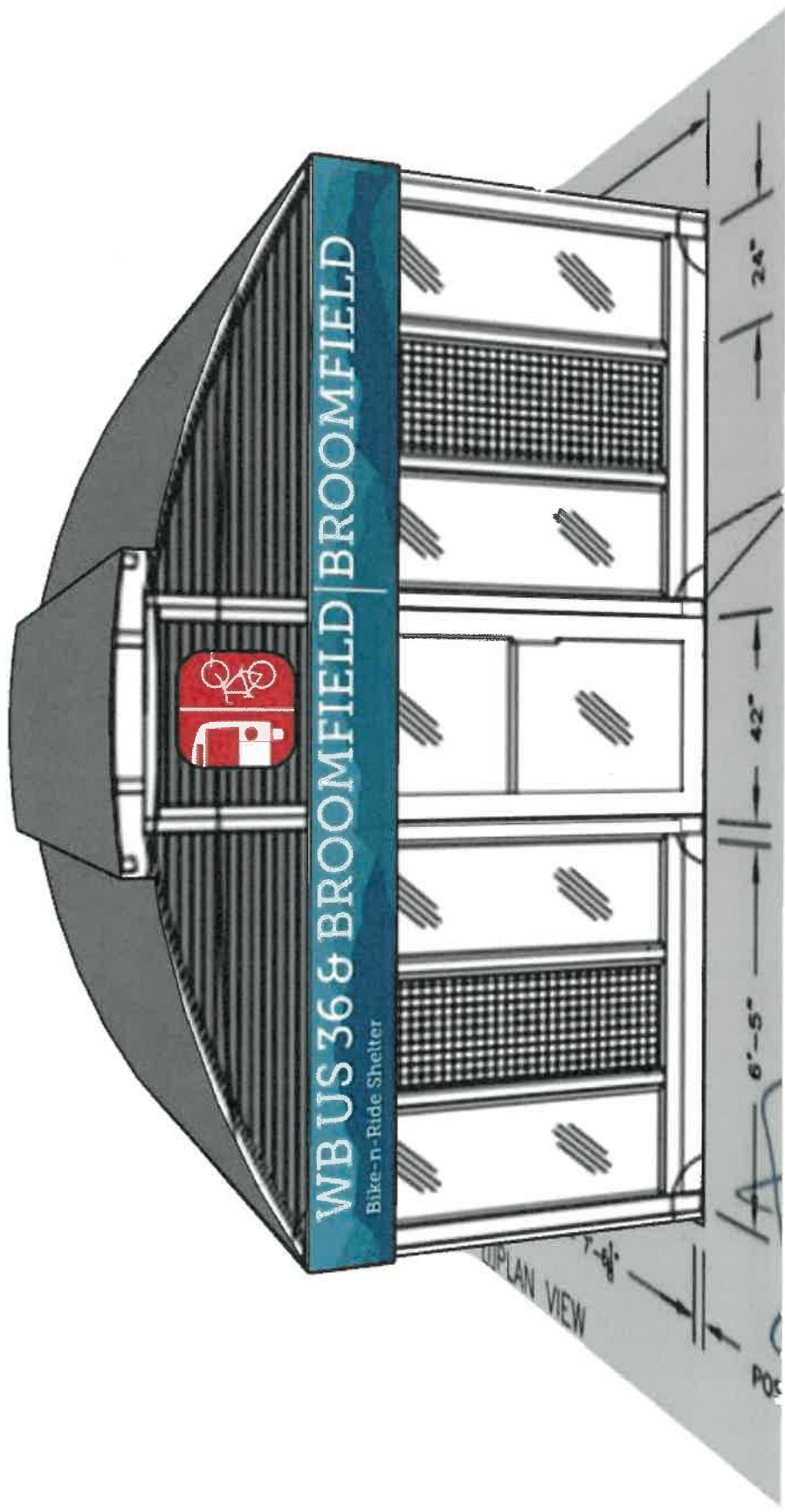


EXHIBIT C
Contractor Right of Entry Agreement

EXHIBIT C
CONTRACTOR RIGHT OF ENTRY AGREEMENT
US 36 BICYCLE SHELTER SIGNAGE INSTALLATION

This CONTRACTOR'S RIGHT OF ENTRY AGREEMENT ("**Agreement**") is made by and between the REGIONAL TRANSPORTATION DISTRICT, a political subdivision of the State of Colorado, whose address is 1660 Blake St., Denver, Colorado 80202 ("**RTD**"), and _____¹ whose address is _____ ("**Contractor**").

RECITALS

- A. RTD owns or controls parcels of land located at 8010 Transit Way, 7880 West 116th Ave., 398 East Flatiron Circle, and 5000 West Midway Blvd., all in Broomfield, Colorado, for mass transit purposes (together, the "**RTD Property**").
- B. RTD and the City and County of Broomfield ("**Licensee**") are parties to a License Agreement dated _____² ("**License**"), whereby RTD granted a non-exclusive license and permission to Licensee to enter upon and have ingress to and egress from the RTD Property, as defined in the License, pursuant to the terms of the License, for the purpose of placing bicycle and pedestrian wayfinding signage on the panels and doors of the Bicycle Shelters, as defined in the License. The License is incorporated into this Agreement by reference.
- C. Licensee has contracted with Contractor and requested RTD to permit Contractor to perform the work related to the Bicycle Shelters on the RTD Property pursuant to the License.

In consideration of the permission of RTD for Contractor to enter upon the RTD Property pursuant to the License, the parties agree as follows:

ARTICLE 1. RIGHT OF ENTRY

- A. Subject to all the terms and conditions of this Agreement and the License, RTD grants to Contractor the non-exclusive, revocable right to enter upon and have ingress to and egress from the RTD Property solely to perform work under the License within the area shown on the attached **Exhibit 1** ("**Licensed Area**") and in accordance with the Plans attached as **Exhibit 2**.
- B. RTD shall retain all rights in and usage of the Licensed Area. This Agreement is subject to existing interests, easements, leases, licenses, and permits (if any) previously granted, reserved, or held by RTD, its predecessors in interest, or any other person or entity affecting any of the Licensed Area or RTD Property, whether of record or not. Contractor's use of the Licensed Area shall not interfere with RTD's use and/or maintenance of RTD facilities and the

1 Insert name and address of Contractor.

2 Insert date of License Agreement.

RTD Property, nor with the needs and requirements of RTD's tenants, easement beneficiaries, licensees, or lien holders, nor with the use of their improvements on the RTD Property.

- C. Contractor shall require its agents, employees, and subcontractors (collectively, "**Contractor's Agents**") performing work pursuant to this Agreement to comply with each of the terms and conditions of this Agreement and to acknowledge all rights reserved to RTD pursuant to this Agreement.
- D. In the event of Contractor's violation of any of the terms of this Agreement, RTD may terminate this Agreement in part or in full, effective immediately upon Contractor's receipt of RTD's written termination notice.
- E. All recitals and attached exhibits are deemed incorporated into this Agreement. Exhibits may not be modified without prior approval by RTD; any approved modifications to exhibits shall be incorporated in this Agreement by an amendment to the Agreement signed by both parties.

ARTICLE 2. TERM

This Agreement shall become effective upon the last date of execution by both parties ("**Effective Date**") and shall remain in effect for [XX] days, until completion of the work, until earlier termination of this Agreement, or until the License is terminated, whichever occurs first.

ARTICLE 3. WORK AND COORDINATION WITH RTD

- A. Contractor shall perform the work in accordance with **Exhibit 2** with due care, at Contractor's expense, and in full compliance with federal, state, and local laws and applicable industry and RTD standards.
- B. Contractor shall coordinate all work with RTD's Manager, Civil Engineering ("**RTD Representative**") at office number 303.299.6963 or by email at susan.johnson@rtd-denver.com. Contractor's Agent shall notify the RTD Representative 2 weeks prior to placing the wayfinding signage.

ARTICLE 4. ACCESS

- A. During any work under this Agreement, Contractor agrees to maintain the Licensed Area in a clean, neat, and sanitary condition, and to properly and promptly dispose of all litter and debris. Following completion of the work, Contractor shall promptly remove all tools, equipment, and materials and restore the Licensed Area, including re-vegetation, to substantially the same state and condition as when entered upon. If Contractor does not complete the restoration work within a reasonable time, RTD may complete the restoration work at Contractor's sole expense; Contractor shall reimburse RTD within 30 days of Contractor's receipt of a written invoice and supporting documentation. Contractor's obligation to restore the Licensed Area or to reimburse RTD for such restoration shall survive any termination of this Agreement.
- B. Contractor shall obtain a Buildings and Grounds Access Permit ("**BGAP**") from RTD Facilities Maintenance by submitting the permit form, which can be found at <https://www.rtd->

denver.com/business-center/construction-engineering/right-of-way-agreements-and-permits, to bgapermits@rtd-denver.com whenever Contractor, Contractor's Agents, or their equipment will be present on the Licensed Area. Contractor must initiate its request for a BGAP five business days before the work is scheduled to begin. Any conditions set forth in a BGAP shall be deemed to be incorporated in this Agreement by this reference.

- C. **In case of emergency** caused by failure of or in connection with Contractor's work within the Licensed Area, Contractor shall immediately notify RTD of the emergency at 303.299.2911 or such other number provided by RTD and advise of Contractor's proposed actions to immediately address the emergency. Contractor shall be responsible for any costs incurred by RTD in connection with any of Contractor's actions in relation to such failure or emergency, in accordance with the reimbursement requirements of this Agreement.
- D. RTD reserves the right to have its personnel present during any work under this Agreement.
- E. Contractor shall be responsible for safety related to all aspects of its work under this Agreement. Contractor shall obtain all health, fire, and other relevant safety regulations, work practices, and procedures prescribed by law and by RTD and shall ensure that Contractor's Agents are notified of, understand, and abide by them at all times. Contractor shall provide all required personal protective equipment and other equipment required for the safe performance of the work.
- F. Contractor shall promptly report all accidents, safety incidents, injuries, and environmental incidents concerning the RTD Property or RTD facilities to government authorities as required by law and to RTD.
- G. At any reasonable time, RTD may inspect a work site and appropriate records regarding Contractor's safety procedures and statistics to ascertain compliance with the safety requirements of this Agreement. Neither the existence nor exercise of such right by RTD shall relieve Contractor of its responsibility for compliance with, and for monitoring compliance by Contractor and its subcontractors with, the safety requirements of this Agreement.
- H. Contractor shall stop work when an imminent hazard to persons, the RTD Property, or RTD facilities is identified and shall immediately notify RTD that work has stopped, providing the reasons for stopping the work and an estimate of when the work will resume. Contractor shall take all appropriate measures to abate the imminent hazard.
- I. Contractor shall ensure that Contractor's Agents understand their right to stop work at any time they feel there is an unsafe condition or unsafe behavior in place that could harm them, others, property, or the environment. The work shall not resume until all appropriate measures to abate the hazards have been implemented.
- J. Notwithstanding any other provision of this Agreement, RTD has the right to immediately suspend the performance of the work under this Agreement if RTD, in its sole judgment, determines that any of Contractor's Agents is failing to comply with RTD safety requirements or applicable safety laws and regulations while performing the work, or if the safety of RTD employees or patrons is at risk or RTD operations are at risk. The suspension will continue until RTD notifies Contractor that the suspension is lifted. Contractor acknowledges that RTD

has no obligation to lift the suspension until RTD is satisfied that Contractor will comply with applicable requirements. RTD shall not be liable for any delays in the completion of the work that result from an RTD suspension under this paragraph.

ARTICLE 5. NOTICES

Unless otherwise prescribed in this Agreement, any notices required to be given shall be provided in writing and mailed by U.S. mail, first class postage prepaid, or by electronic mail and addressed as follows:

If to RTD:	Regional Transportation District Attn: Senior Manager, Real Property 1560 Broadway, Suite 650 Denver, Colorado 80202 303.299.2440 susan.altes@rtd-denver.com
------------	---

If to Contractor:

Any such notice shall be deemed to have been provided three days after such notice or communication is mailed. Each party will provide notice of any changes to its address, email address, or contact person.

ARTICLE 6. LIABILITY

- A. Contractor shall be responsible for any damage to any property, including the Licensed Area, the RTD Property or other RTD property, Contractor's property, adjacent property, utilities, adjacent structures, and other third party real and personal property on or under the RTD Property that is caused by Contractor or Contractor's Agents. Contractor shall either promptly repair such damage or pay damages to the reasonable satisfaction of the owner of the damaged property, in either case at no cost to RTD. RTD and Contractor shall notify one another of any such damage and any potential claims arising out of such damage.
- B. Contractor shall, and shall require Contractor's agents and subcontractors to, indemnify, defend, and hold harmless RTD and its officers, directors, employees, agents, and contractors against and from all claims (including without limitation actions, demands, expenses, costs, attorneys' fees, court costs, and judgments) arising out of or caused by the use of the Licensed Area and RTD Property under this Agreement. In the event of any claims made or suits filed, each party shall give the other prompt written notice, and RTD shall have the option to defend or reasonably settle the same as to claims or suits made against it, without effect as to Contractor's obligations under this Agreement.
- C. Nothing in this Agreement shall be deemed to waive any of RTD's privileges or immunities pursuant to the Colorado Governmental Immunity Act, C.R.S. § 24-10-101, *et seq.*
- D. The provisions of this Article shall survive the termination, in whole or in part, of this Agreement.

ARTICLE 7. NO WARRANTY

- A. RTD does not grant nor purport to grant any right not specifically set forth in this Agreement. Permission for Contractor or Contractor's Agents to traverse the property of any other property owners or interest-holders other than RTD is the sole responsibility of Contractor, as is the procurement of any applicable regulatory permission or consent.
- B. The right to use the Licensed Area and RTD Property is granted subject to their "AS IS" physical condition without any warranty, express or implied.
- C. Contractor specifically assumes all risk of loss, damage, or destruction to any tools, equipment, or materials, if any, that Contractor or Contractor's Agents store on the Licensed Area or the RTD Property, whether the loss, damage, or destruction results from accident, act of God, the elements, severe weather, theft, or vandalism.

ARTICLE 8. INSURANCE

- A. Contractor shall, throughout the Term of this Agreement, procure and maintain, and shall require that Contractor's Agents, with the exception of individual Contractor employees, procure and maintain, the following types of insurance, at a minimum, with an insurer or insurers and in a form satisfactory to RTD. All insurance policies shall name RTD as an additional insured, with the exception of Workers' Compensation and Employers' Liability Insurance.
 - 1. Commercial General Liability Insurance with contractual liability endorsement, which shall provide coverage for limits of not less than \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000, and shall also include, but not be limited to, coverage for bodily injury, property damage, and products and completed operations. Following the completion of construction, this insurance will be maintained (renewed annually) for a time period no less than through the period of the applicable Colorado statute(s) of limitation and, if applicable, the Colorado statute of repose.
 - 2. Umbrella/Excess Liability Insurance. An umbrella/excess liability policy may be procured to meet the requirements of the Commercial General Liability Insurance limits.
 - 3. Automobile Liability Insurance with a combined single limit of at least \$1,000,000 per occurrence, and including coverage for, but not limited to, bodily injury liability and property damage liability for any vehicles owned, used, or hired.
 - 4. Workers' Compensation and Employers' Liability Insurance covering all employees of Contractor, wherever they may be in the United States of America so long as they are engaged in the work covered by this Agreement. The policy or policies shall cover the entire liability of Contractor as determined by the workers' compensation laws of the state or states under which such liability arises, and shall contain, so far as it is lawful to obtain, a waiver of insurer's right of subrogation against RTD for payments made to or on behalf of employees of Contractor. Employers' Liability Insurance shall provide coverage for limits of not less than \$500,000. This insurance, when procured by Contractor's Agents, shall also cover Contractor's Agents' employees.

- B. Prior to entry upon, above, or adjacent to the RTD Property and the Licensed Area, Contractor agrees to furnish RTD with a certificate of the required insurance for each of Contractor's and Contractor's Agents' policy(ies). Contractor shall provide 30 days' advance notice of cancellation of such policy(ies) by registered or certified mail. Certificates of insurance shall be provided to the RTD Senior Manager of Real Property as provided in this Agreement.
- C. Each insurance certificate required above shall have the following endorsements attached:
 - 1. An endorsement naming RTD an additional insured, except on Workers' Compensation and Employers' Liability Insurance;
 - 2. An endorsement evidencing coverage for a liability assumed under an insured contract for liability assumed by Contractor and Contractor's Agents;
 - 3. A Broad Form Property Damage endorsement if the policy does not provide for the equivalent coverage; and
 - 4. Waiver of subrogation in favor of and acceptable to RTD.
- D. In the event of reduction or exhaustion of the applicable aggregate limit or limits of liability under the primary policy or policies referred to in the certificate of insurance solely by reason of losses paid under this Agreement on account of occurrences during the policy period, the excess policy, if any, referred to in the certificate shall (1) in the event of reduction, apply as excess of the reduced limit of liability thereunder; and (2) in the event of exhaustion, continue in force as though it were primary insurance. For claims covered by the insurance specified in this Agreement, the insurance coverage shall be primary and non-contributory insurance with respect to the insured, additional insured parties, and their respective members, directors, officers, employees, and agents, and it shall specify that coverage continues notwithstanding the fact that Contractor and Contractor's Agents have left the RTD Property.
- E. The insurance shall apply separately to each insured and additional insured party against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- F. Liability of Contractor under this Agreement shall not be limited to coverage provided under the required insurance policies.
- G. Only those Contractor's Agents whose operations are covered by the required insurance will be authorized to work upon or about the Licensed Area or the RTD Property.
- H. In the event that any Contractor's Agent does not have its own insurance coverage as set forth in this Article, Contractor shall cause such Contractor Agent to be a named insured under Contractor's policies.

ARTICLE 9. HAZARDOUS MATERIALS

Contractor and Contractor's Agents shall not use, produce, treat, generate, release, discharge, store, transport, or cause to be transported, or dispose of any Hazardous Materials at, on, under, in, or about the Licensed Area or RTD Property in violation of applicable law. "**Hazardous Materials**" shall mean any and all substances, chemicals, wastes, or other materials

now or from time to time defined or characterized as hazardous substances or hazardous wastes pursuant to laws or regulations of any government authority having jurisdiction over the RTD Property, the State of Colorado, or the United States, or otherwise posing a present or potential risk to human health, welfare, or the environment.

ARTICLE 10. SAMPLES AND REMOVAL

As between Contractor and RTD, Contractor shall be solely responsible for the lawful removal, manifesting, transport, testing, and disposal of any samples or other materials, including but not limited to Hazardous Materials, removed from the RTD Property or Licensed Area or generated as a result of work performed pursuant to this Agreement, and shall duly and properly perform or cause to be performed any such work that it undertakes or is required to undertake pursuant to federal, state, and local laws and applicable industry standards. As between Contractor and RTD, Contractor is the sole generator (as the term "generator" is used in applicable statutes and regulations concerning the removal, transport, and/or disposal of Hazardous Materials, substances, waste, or other contaminants) of any materials, including but not limited to Hazardous Materials, removed from the RTD Property or Licensed Area by Contractor or Contractor's Agents or generated as a result of sampling and/or testing undertaken by Contractor or Contractor's Agents.

ARTICLE 11. GENERAL

- A. Assignment. Contractor may not assign this Agreement, or any part or interest in this Agreement, without the prior written consent of RTD. No RTD-approved assignment shall release Contractor from any liability under this Agreement. Any assignment in violation of this Agreement shall be null and void.
- B. Agreement Binding. This Agreement and all of the covenants, terms, and conditions in this Agreement shall be binding upon and inure to the benefit of the parties and their respective permitted successors and assigns.
- C. Execution in Counterparts. This Agreement (and each amendment, modification, and waiver in respect of this Agreement) may be executed and delivered in counterparts, each of which will be deemed an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement shall be effective as delivery of a manually executed counterpart of this Agreement.
- D. Governing Laws; Jurisdiction and Venue. The laws of the State of Colorado and applicable federal, state, and local laws, rules, regulations, and guidelines govern this Agreement. Jurisdiction and venue for all disputes shall be in the county in which the Licensed Area is located, and Contractor expressly submits itself to such jurisdiction.
- E. No Recordation. Neither party (nor any of their respective agents or representatives) shall record this Agreement (or any memorandum or short form of this Agreement) without the prior written consent of the other party.
- F. Amendment. This Agreement may not be amended except in writing by mutual agreement of the parties, nor may rights be waived except by an instrument in writing signed by the party charged with such waiver.

- G. No Agency. It is expressly understood and agreed that RTD and Contractor do not intend to be and shall not in any respect be deemed agents of each other.
- H. Headings. The headings in this Agreement are inserted for reference purposes only and are not restrictive as to content.
- I. Liens. Contractor shall not permit any lien, claim, or other charge to be placed on the RTD Property, and Contractor shall promptly cause any such lien, claim, or charge to be removed. If any mechanic's lien, claim, or other charge is filed against the RTD Property, Contractor shall discharge the same of record by a release or bond within 30 days after the filing of any notice of such lien, claim, or other charge. This provision shall survive termination, in whole or in part, of this Agreement.
- J. Waiver; Severability. The failure of either party to exercise any right under this Agreement, or to insist upon strict compliance by the other party, shall not constitute a waiver of either party's right to demand strict compliance with the terms and conditions of this Agreement. If any provision of this Agreement is held to be unenforceable for any reason, its unenforceability shall not affect the remainder of this Agreement, which shall remain in full force and effect and enforceable in accordance with its terms.
- K. Legal Authority. Contractor warrants that it possesses the legal authority to enter into this Agreement and that it has taken all actions required by its procedures, bylaws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Agreement and to bind Contractor to its terms. The person(s) executing this Agreement on behalf of Contractor warrant(s) that such person(s) have full authorization to execute this Agreement.
- L. No Dedication; Third Parties. Nothing in this Agreement shall be deemed to be a gift or dedication of any portion of the Licensed Area or the RTD Property to the general public or for any public use or purpose whatsoever. Except as specifically provided in this Agreement, no rights, privileges, or immunities of either party shall inure to the benefit of any third party, nor shall any third party be deemed to be a beneficiary of any of the provisions contained in this Agreement.
- M. Breach. Any failure of Contractor to fulfill any of Contractor's obligations under this Agreement shall constitute a breach of this Agreement and subject Contractor to immediate termination of the Agreement, as well as damages and costs, including attorneys' fees.
- N. Applicable Laws; Violation. Contractor shall use the Licensed Area in a safe and careful manner and shall comply with all applicable ordinances and regulations of the jurisdiction in which the Licensed Area is located; federal, state, and local laws; and all other rules of governmental authorities as may be in force and effect during the term of this Agreement. If at any time the use of the Licensed Area by Contractor violates applicable ordinances or laws, Contractor shall cease and desist from continuing such use upon demand by RTD.
- O. Additional Uses. Contractor understands and agrees that the RTD Property may be used by the public or otherwise, and Contractor shall conduct its work so as not to unreasonably interfere with such other uses.

- P. RTD Equipment. Contractor shall not use RTD equipment, tools, or furnishings located in or about the Licensed Area or RTD Property without prior written approval by RTD.
- Q. Entire Agreement. This Agreement represents the entire agreement between the parties regarding the Licensed Area and the RTD Property.
- R. Electronic Signatures. This Agreement may be executed by electronic signature, which shall be considered as an original signature for all purposes and shall have the same force and effect as an original signature. Without limitation, "electronic signature" shall include faxed versions of an original signature, electronically scanned and transmitted versions of an original signature, and digital signatures.

Signature Page(s) to Follow

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the Effective Date.

REGIONAL TRANSPORTATION DISTRICT

By: _____
Henry J. Stopplecamp, P.E.
AGM, Capital Programs

APPROVED AS TO LEGAL FORM FOR THE
REGIONAL TRANSPORTATION DISTRICT

By: _____
Tyler Albo
Assistant General Counsel

Date: 04/23/2024

CONTRACTOR

[INSERT CONTRACTOR NAME]

By: _____

Name: _____

Title: _____

Date: _____

EXHIBIT 2

Plans

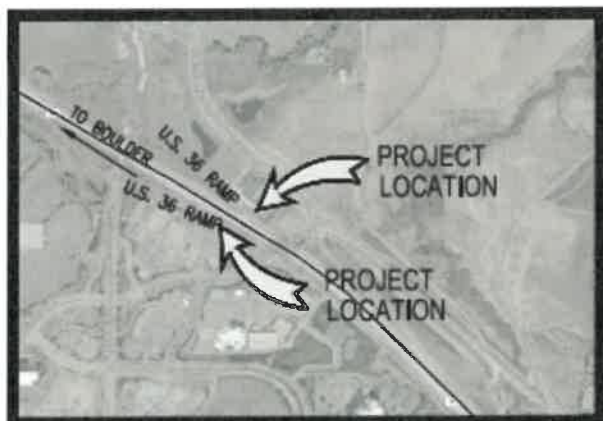
SCOPE OF WORK

1. Project Location:

- US 36 & Broomfield Station Westbound: 7880 W. 116TH AVE, Broomfield
- US 36 & Broomfield Station Eastbound: 8010 TRANSIT WAY, Broomfield
- US 36 & Flatiron Station Eastbound 5000 W. MIDWAY BLVD, Broomfield
- US 36 & Flatiron Station Westbound: 300 E. FLATIRON CROSSING DR, Broomfield

Note: Parking is available in the parking lot or adjacent to the shelter.

Absolutely no parking in the bus lanes/stops.



US 36 @ Flatirons Station



US 36 @ Broomfield Station

2. Links to Available Documents:

- [Existing Shelter Photos](#)
- Westbound Broomfield Shelter [Signage Concept](#)
- Example Signage at Existing Shelters:

Louisville WB McCaslin	Superior EB McCaslin
Table Mesa	Sheridan
CO 119 / Hover	CO 119 8th & Coffman
- Construction Design [Documents](#)
- Existing Shelter Specifications for [Eastbound Broomfield Station and Eastbound and Westbound Flatirons Stations](#)
- Existing Shelter Specifications for [Westbound Broomfield Station](#)
- US 36 General [Signage Specifications](#)
- [Graphic Files](#)

3. Signage Information: Signs must be 0.100 thickness, 10 gauge, aluminum with non-reflective vinyl with graffiti resistant coating. Tamper-proof hardware shall be used to mount the new signage to the shelters. Care shall be used in installation so as not to mark, scuff or mar the new signage. An access card to enter the shelters shall be provided to the Contractor.

- Broomfield Station Westbound

- Top Panel:

- Text: US 36 and Broomfield | Westbound | Bike-n-Ride Shelter
 - Location: All sides
 - Logo: Red RTD Bike-n-ride

- Middle Panel:

- Mountain graphic

- Door:

- Circular bike logo on top half of the door.
 - Address: 7880 W. 116TH AVE, Broomfield
 - Text: "Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided]."
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).

- Broomfield Station Eastbound

- Top Panel:

- Text: US 36 and Broomfield | Eastbound | Bike-n-Ride Shelter
 - Location of panel: All sides
 - Logo: RTD Bike-n-ride

- Middle Panel:

- Mountain graphic

- Door:

- Circular bike logo on top half of the door.
 - Address: 8010 TRANSIT WAY, Broomfield
 - Text: "Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided]."
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).

- Flatiron Station Westbound
 - Top Panel:
 - Text: US 36 and Flatiron | Westbound | Bike-n-Ride Shelter
 - Location of Panels: Three sides: West, East, North
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 300 E. FLATIRON CROSSING DR, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided].”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).
- Flatiron Station Eastbound
 - Top Panel:
 - Text: US 36 and Flatiron | Eastbound | Bike-n-Ride Shelter
 - Location of Panels: All sides
 - Middle Panel:
 - Mountain graphic
 - Door:
 - Circular bike logo on top half of the door.
 - Address: 5000 W. MIDWAY BLVD, Broomfield
 - Text: “Tap Card Here. This bike shelter provides secure bicycle parking for commuters making connections to and from transit. To learn more and sign-up for an access card visit commutingsolutions.org/bike-n-ride or call [Number to be provided]. For immediate assistance, please contact [Number to be provided].”
 - White Broomfield logo and red RTD logo at the bottom.
 - (Interior):
 - Safety signage (provided).

4. Example Top Panel and Door Signage:



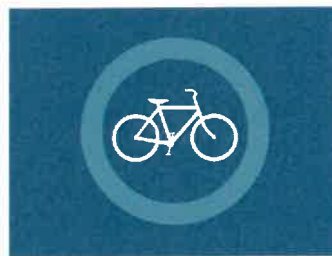
5. Example Middle Panel:



6. Logos/Graphics:



RTD bike-n-ride logo (provided)

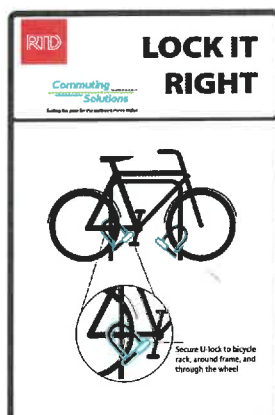


Bike logo (not provided)



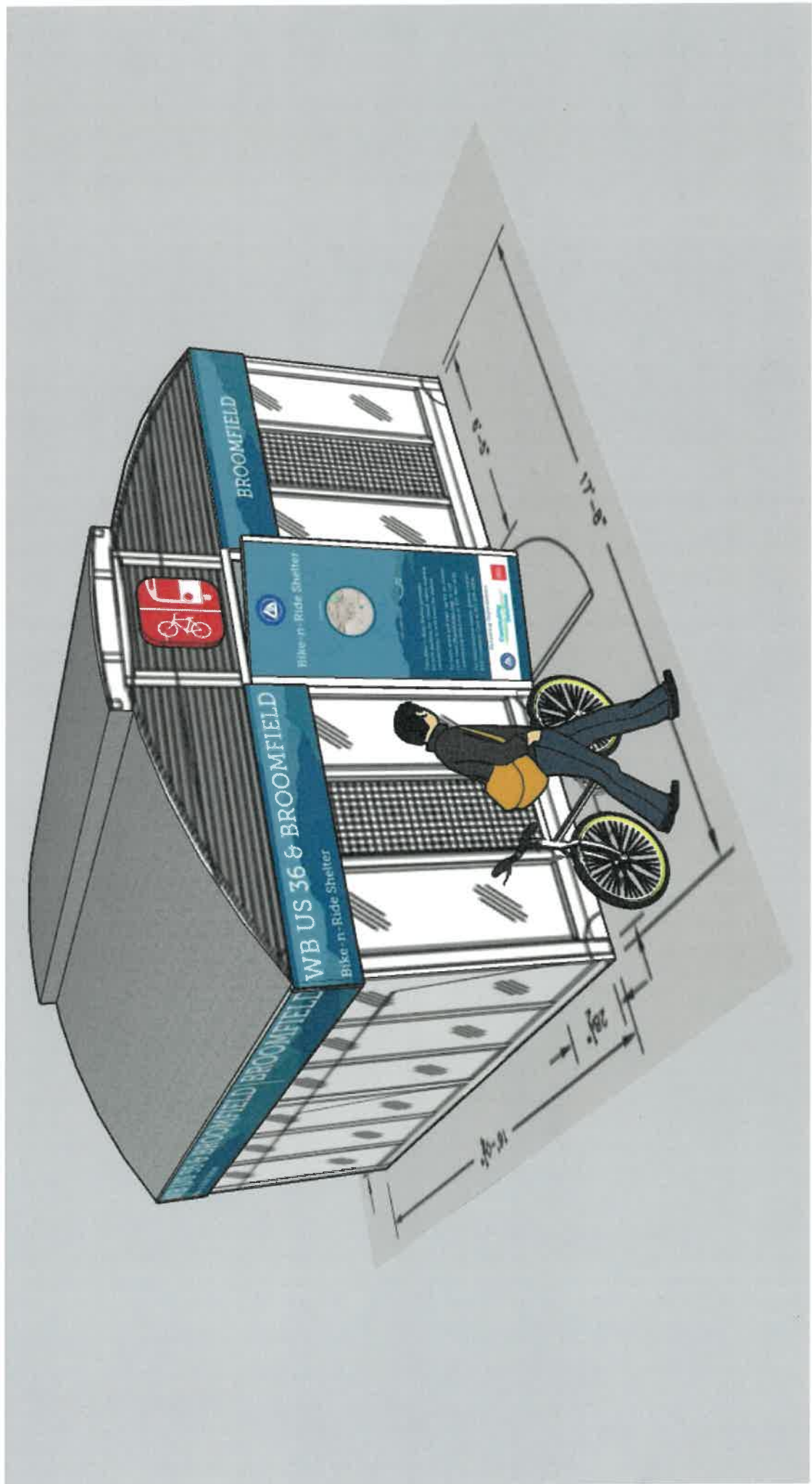
Broomfield logo (provided in white)

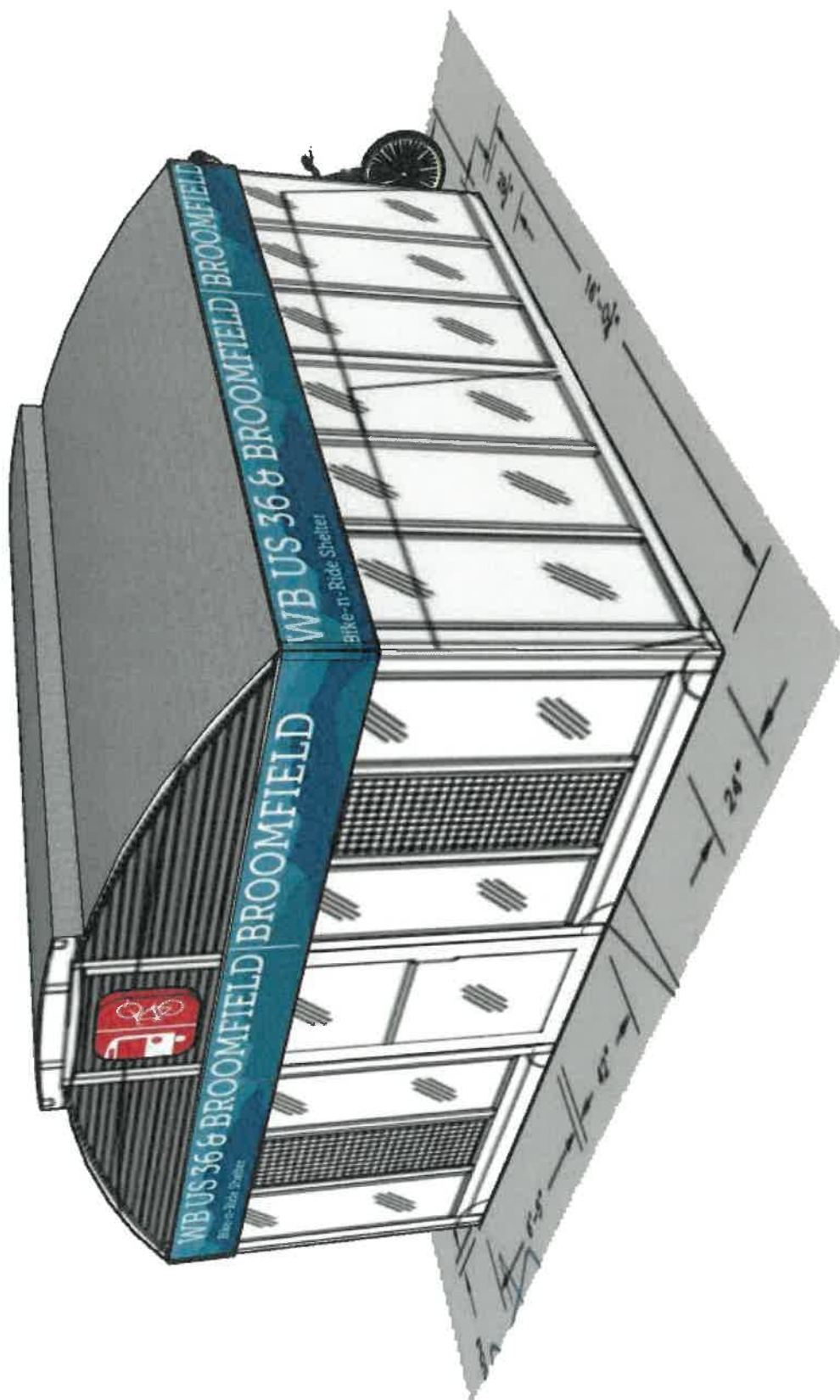
7. Safety Signage



Project General Notes

1. Work shall be performed in accordance with applicable sections of the *Broomfield Standards and Specifications*, latest edition, available online:
<http://www.broomfield.org/DocumentCenter/View/1972>.
2. The awarded Vendor must have an active [contractor's license](#) (Class C, \$50) with the City and County of Broomfield Building Department.
3. Work hours are Monday through Friday, 7 a.m. to 7 p.m. Saturday work may be allowed 9 a.m. to 6 p.m. with a pre-approved Weekend/Holiday Work Request form.
4. The site shall be maintained in a clean and tidy condition without miscellaneous debris, etc. Stockpiled materials and equipment shall be neatly organized and in locations coordinated with RTD and Broomfield's CIP Project Manager.
5. A Broomfield PPIP permit is required, however, there will be no Broomfield permit fees, no bonding is required, and the project is tax-exempt. A tax exempt certificate will be provided to the awarded Vendor. The awarded Vendor is required to obtain a RTD BGAP permit. BGAP fees must be included in the CCOB and RTD Permitting Item.
<https://www.broomfield.org/DocumentCenter/View/1408/Public-Private-Improvement-Permit-Fillable-Right-of-Way-Permit-4-15-20?bidId=>
<https://www.rtd-denver.com/doing-business-with-rtd/construction-engineering/row-agreements-permits/facility-tracks-access-policy>
6. The Vendor shall be responsible for working with the CIP Project Manager and RTD to minimize impacts to the public. Once the Vendor has started work, continual onsite progress shall be made until the work is complete.





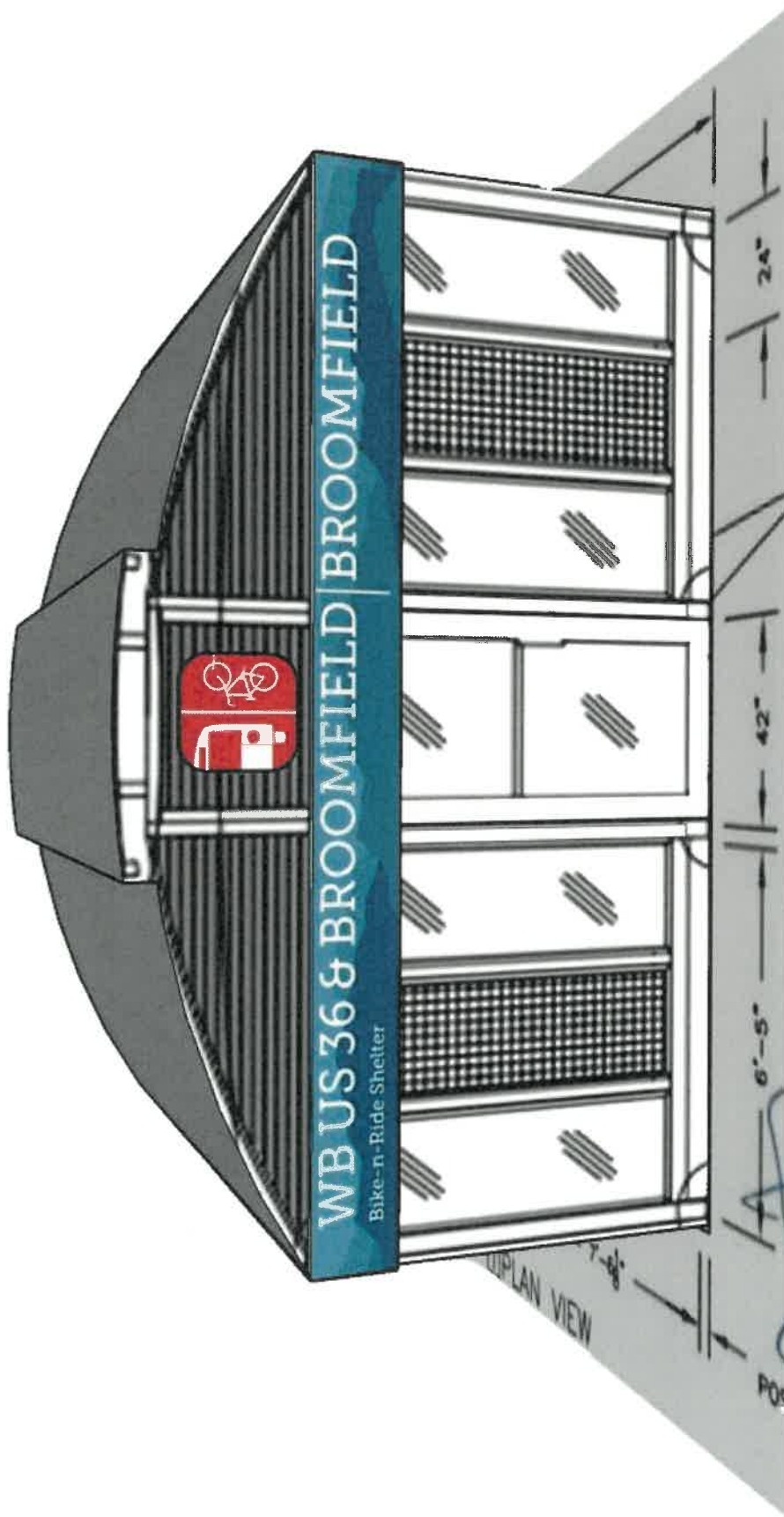
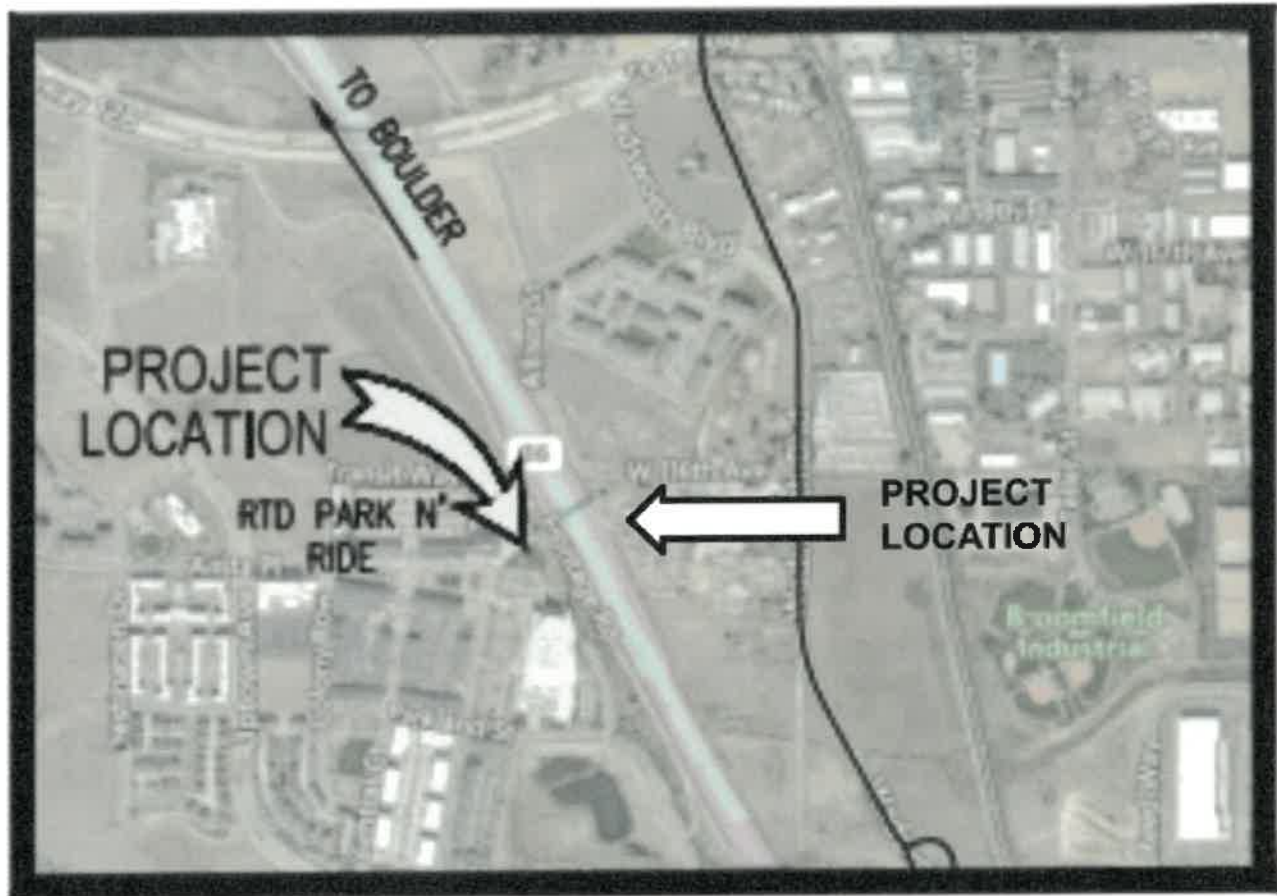


EXHIBIT 1
Licensed Area

EXHIBIT 1

Page 1 of 6

US 36 & Broomfield Station Project Locations
8010 Transit Way and 7880 West 116th Avenue

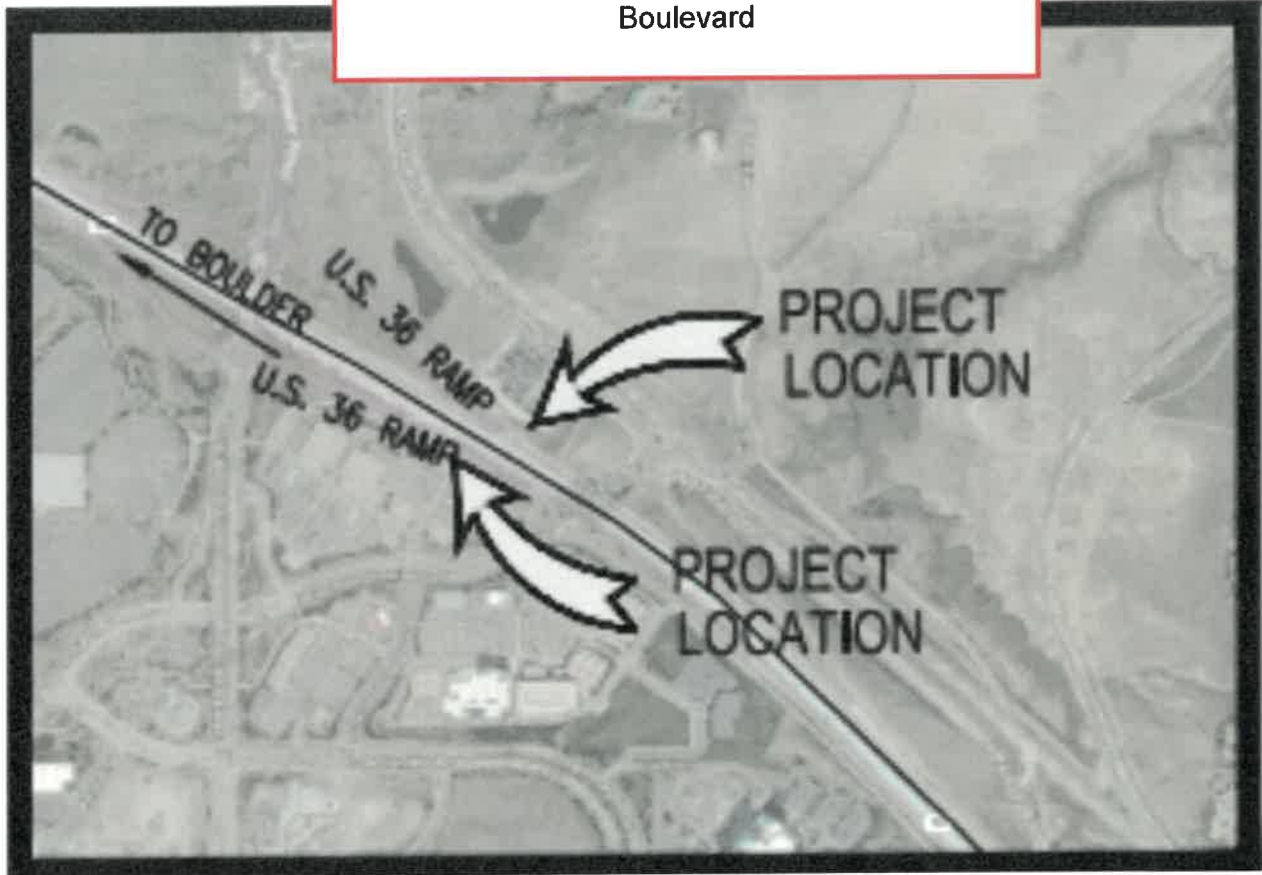


US 36 @ Broomfield Station

EXHIBIT 1

Page 2 of 6

US 36 & Flatiron Station Project Locations
398 East Flatiron Circle and 5000 West Midway
Boulevard



US 36 @ Flatirons Station

EXHIBIT 1

Page 3 of 6

Bicycle Shelter located at West Side
of US 36 & Broomfield Station
8010 Transit Way



EXHIBIT 1

Page 4 of 6

Bicycle Shelter located at East Side
of US 36 & Broomfield Station
7880 West 116th Avenue

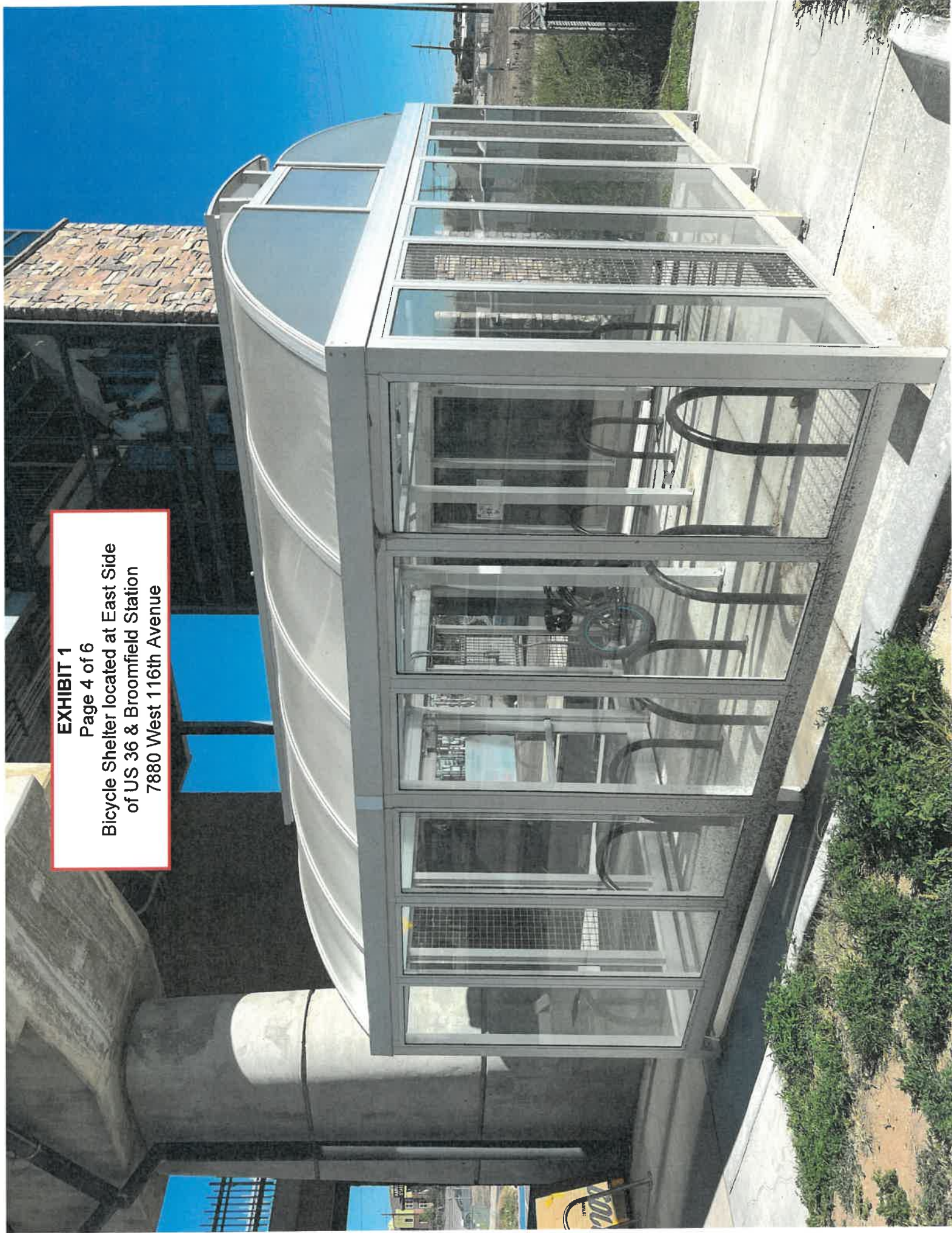


EXHIBIT 1

Page 5 of 6

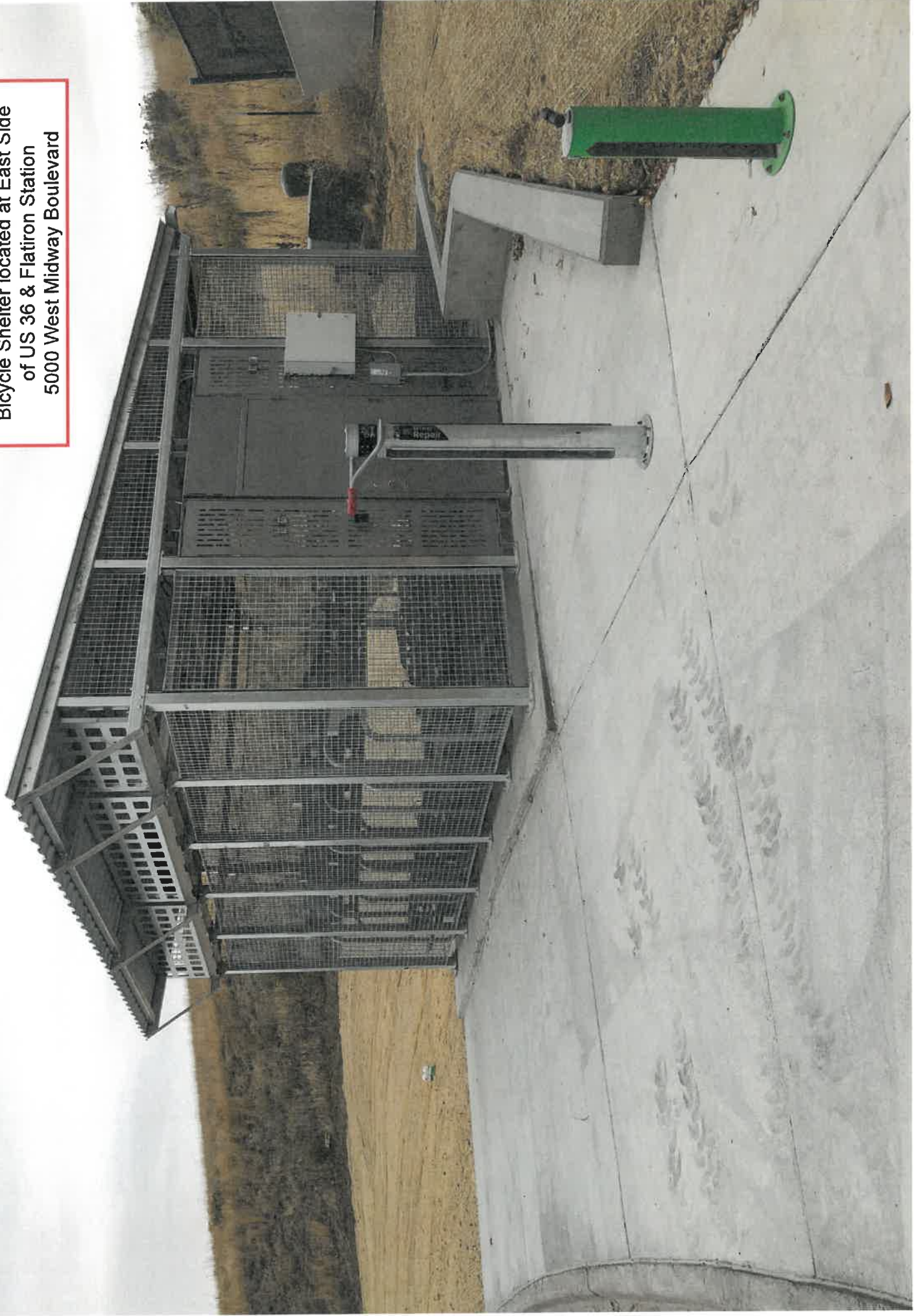
Bicycle Shelter located at West Side
of US 36 & Flatiron Station
398 East Flatiron Circle



EXHIBIT 1

Page 6 of 6

Bicycle Shelter located at East Side
of US 36 & Flatiron Station
5000 West Midway Boulevard





City of Broomfield

City Council Regular Meeting

287/Nickel Traffic Signal Maintenance IGA

CDOT IGA

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6j
Presented By		
Katie Allen		
Community Goals		
<input checked="" type="checkbox"/> Mobility		

Overview

[View Correspondence](#)

The Industrial Lane and Nickel / Commerce Street Intersection project will design modifications to the 3-way intersection to reduce delay and improve safety by installing a traffic signal that will be coordinated with the traffic signal at US 287 and Nickel St. and with the Burlington Northern Santa Fe (BNSF) Railroad crossing. During design, the project team, including the Colorado Department of Transportation (CDOT), determined that the existing traffic signal at US 287 and Nickel St, which is owned and operated by CDOT, and the proposed traffic signal at the Industrial Lane and Nickel Street / Commerce Street intersection should be operated by one entity to best ensure safe operation. An intergovernmental agreement (IGA) with CDOT will allow Broomfield Public Works staff to maintain the traffic signal at US 287 and Nickel St, the cost of which will be reimbursed by CDOT annually.

Attachments

[FINAL 287_Nickel Traffic Signal Maintenance IGA Memo.pdf](#)

[Resolution 2024-62.pdf](#)

[Complete Draft MTCE Broomfield 331003320 Mar 8 2024.pdf](#)

Summary

[View Correspondence](#)

The Industrial Lane and Nickel / Commerce Street Intersection project was selected as a priority project by the Broomfield Transportation Forum. The project will design modifications to the 3-way intersection of Industrial Lane and Nickel Street / Commerce Street to reduce delay and improve safety by installing a traffic signal that will be coordinated with the traffic signal at US 287 and Nickel St. and with the Burlington Northern Santa Fe (BNSF) Railroad crossing. The project will improve vehicular circulation, substandard bicycle facilities, and pedestrian ramps in need of ADA upgrades. The project, once constructed, will complement the Industrial Lane Bikeway Project, enhancing safety and continuity for active modes facilities from US 287 at Nickel St. to the US 36 / Broomfield and US 36 / Flatiron Stations.

The project was submitted to the 2020-2023 Transportation Improvement Program (TIP) grant and was supported by Denver Regional Council of Governments (DRCOG) Metro Vision values. Broomfield's application was approved by the DRCOG Board on August 21, 2019 for inclusion in the 2020-2023 TIP. In 2022 the project received additional funds through the 2021 Coronavirus Response and Relief Supplemental Appropriations Act.

In 2021, Fehlsburg Holt and Ullevig (FHU) was hired to design the project. During design, the project team, including the Colorado Department of Transportation (CDOT), determined that the existing traffic signal at US 287 and Nickel St, which is owned and operated by CDOT, and the proposed traffic signal at the Industrial Lane and Nickel Street / Commerce Street intersection should be operated by one entity to best ensure safe operation. An intergovernmental agreement (IGA) with CDOT will allow Broomfield Public Works staff to maintain the traffic signal at US 287 and Nickel St.

Proposed Resolution No. 2024-62 will approve an IGA with CDOT for the maintenance of the traffic signal at US 287 and Nickel St. The IGA requires Broomfield to provide annual maintenance to the traffic signal with CDOT reimbursement to Broomfield for the annual costs. The IGA will be valid for 5 years.

Pursuant to the City Charter, an intergovernmental agreement requires a two-thirds affirmative vote of the entire City Council.

If approved, staff anticipates bidding the project in the summer with construction beginning in late fall of 2024.

Prior Council or Other Entity Actions

On March 9, 2021, Council approved Resolution No. [2021-37](#), authorizing and approving an Intergovernmental Agreement Between the City and County of Broomfield and the Colorado Department of Transportation for the Industrial Lane & Nickel Street / Commerce Intersection Operational Improvements.

On September 14, 2021, Council approved Resolution No. [2021-146](#), approving an agreement between the City and County of Broomfield and FHU, Inc. for the design of the Industrial Lane & Nickel Street / Commerce Intersection Operational Improvements.

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If Council desires to approve the contract, the appropriate motion is...

That Resolution 2024-62 be adopted.

Alternatives

Not proceed with Industrial Lane & Nickel Street / Commerce Intersection Operational Improvements.

RESOLUTION NO. 2024-62

A Resolution Authorizing an Intergovernmental Agreement between the City and County of Broomfield and the Colorado Department of Transportation for Traffic Signal Maintenance at the Intersection of US 287 and Nickel St.

Be it resolved by the City Council of the City and County of Broomfield, Colorado:

Section 1.

The Intergovernmental Agreement attached hereto by and between the City and County of Broomfield and the Colorado Department of Transportation for Traffic Signal Maintenance at the intersection of US 287 and Nickel Street is hereby approved.

Section 2.

The Mayor or Mayor Pro Tem is authorized to sign and the Office of the City and County Clerk to attest the Intergovernmental Agreement, in form approved by the City and County Attorney.

Section 3.

This resolution is effective upon its approval by the City Council.

Approved on May 28, 2024

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

KKH

City and County Attorney

(State \$Traffic Mtce)
CITY & COUNTY OF BROOMFIELD

Rev 10/03
Region: R1 (DMM)

CONTRACT

THIS AGREEMENT is entered into by and between the CITY & COUNTY OF BROOMFIELD (hereinafter called the "Local Agency"), and the STATE OF COLORADO acting by and through the Department of Transportation (hereinafter called the "State" or "CDOT").

RECITALS:

1. Authority exists in the law and funds have been budgeted, appropriated and otherwise made available and a sufficient uncommitted balance thereof remains available for payment of project and Local Agency costs. Total Contract Amount: \$16,800.00.
2. Required approval, clearance and coordination have been accomplished from and with appropriate agencies.
3. Section 43-2-102 and 103, C.R.S., require the State to maintain State highways (including where such highways extend through a city or an incorporated town), and Section 43-2-135(1)(i), C.R.S., as amended, requires the State to install, operate, maintain and control, at State expense, all traffic control devices on the State highway system within cities and incorporated towns.
4. The parties desire to enter this contract for the Local Agency to provide some or all of the certain Highway maintenance services on State highways that are the responsibility of the State under applicable law, and for the State to pay the Local Agency a reasonable negotiated fixed rate for such services.
5. The parties also intend that the Local Agency shall remain responsible to perform any services and duties on State highways that are the responsibility of the Local Agency under applicable law, at its own cost.
6. The State and the Local Agency have the authority, as provided in Sections 29-1-203, 43-1-106, 43-2-103, 43-2-104, and 43-2-144, C.R.S., as amended, and if applicable, in an ordinance or resolution duly passed and adopted by the Local Agency, to enter into contract with the Local Agency for the purpose of maintenance of traffic control devices on the State highway system as hereinafter set forth.
7. The Local Agency has adequate facilities to perform the desired maintenance services on State highways within its jurisdiction.

THE PARTIES NOW AGREE THAT:

Section 1. Scope of Work

The Local Agency shall perform all maintenance services for the specified locations located within the Local Agency's jurisdiction and described in **Exhibit A**. Such services and highways are further detailed in Section 5.

Section 2. Order of Precedence

In the event of conflicts or inconsistencies between this contract and its exhibits, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. Special Provisions contained in section 22 of this contract
2. This contract
3. **Exhibit A** (Scope of Work)
4. **Exhibit C** (Option Letter)
5. **Exhibit D** (Encumbrance Letter)
6. **Exhibit E** (PII Certification)
7. **Exhibit B** (Local Agency Resolution).

Section 3. Term

This contract shall be effective upon the date signed/approved by the State Controller, or designee, or on July 1, 2025, whichever is later. The term of this contract **ends on June 30, 2030**. Provided, however, that the State's financial obligation for each subsequent, consecutive fiscal year of that term after the first fiscal year shall be subject to and contingent upon funds for each subsequent year being appropriated, budgeted, and otherwise made available therefor.

Section 4. Project Funding and Payment Provisions

- A. The Local Agency has estimated the total cost of the work and is prepared to accept the State funding for the work, as evidenced by an appropriate ordinance or resolution duly passed and adopted by the authorized

representatives of the Local Agency, which expressly authorizes the Local Agency to enter into this contract and to complete the work under the project. A copy of any such ordinance or resolution is attached hereto and incorporated herein as **Exhibit B**.

- B. Subject to the terms of this contract, for the satisfactory performance of the maintenance services on the Highways, as described in Section 5, the State shall pay the Local Agency on a lump sum basis, payable in monthly installments, upon receipt of the Local Agency's Statements, as provided herein.
- C. The State shall pay the Local Agency for the satisfactory operation and maintenance of traffic control devices under this agreement at the rates described in **Exhibit A**.
- D. The Local Agency will provide maintenance services as described in **Exhibit A**, for a **total maximum amount of \$3,360.00 per State fiscal year, and a maximum contract total shall not exceed the cumulative five-year total of \$16,800.00**. The negotiated rate per location shall remain fixed for the full five-year term of the contract, unless this rate is renegotiated in accord with the procedure set forth herein in Section 17. The total payments to the Local Agency during the term of this contract shall not exceed that maximum amount, unless this contract is amended. The Local Agency will bill the State monthly and the State will pay such bills within 45 days.
- E. The Statements submitted by the Local Agency for which payment is requested shall contain an adequate description of the type(s) and the quantity(ies) of the maintenance services performed, the date(s) of that performance, and on which specific sections of the highways such services were performed, in accord with standard Local Agency billing standards.
- F. If the Local Agency fails to satisfactorily perform the maintenance services or if the Statement submitted by the Local Agency does not adequately document the payment requested, after notice thereof from the State, the State may deduct and retain a proportionate amount from the monthly payment, based on the above rate, for that segment or portion.

Section 5: State & Local Agency Commitments:

- A. The Local Agency shall perform the maintenance services for the certain State highway system locations described herein. Such services and locations are detailed in **Exhibit A**.
- B. The Local Agency shall operate and maintain the specific traffic control devices, and at the particular locations, all as listed on **Exhibit A**, in a manner that is consistent with current public safety standards on State highways within its jurisdictional limits, and in conformance with applicable portions of the "Manual on Uniform Traffic Control Devices" and the "Colorado Supplement" thereto, which are referred to collectively as the "Manual" and which are incorporated herein by reference as terms and conditions of this agreement. The Local Agency shall provide all personnel, equipment, and other services necessary to satisfactorily perform such operation and maintenance.
- C. The Parties shall have the option to add or delete, at any time during the term of this agreement and subject to §17 of this agreement, one or more specific traffic control devices to the list shown in **Exhibit A** and therefore amend the maintenance services to be performed by the Local Agency under this agreement. The State may amend **Exhibit A** by written notice to the Local Agency using an Option Letter substantially equivalent to **Exhibit C**.
- D. The Local Agency may propose, in writing, other potential specific traffic control devices to be operated and maintained by the Local Agency during the term of this agreement, based on the same rates that had been initially agreed to by the Local Agency in **Exhibit A**. If the State determines in writing that operation and maintenance of those other devices by the Local Agency is appropriate, and is desirable to the State, and if the State agrees to add such devices to this agreement, then the State shall, by written Option Letter issued to the Local Agency in a form substantially equivalent to **Exhibit C**, add such devices to this contract.
- E. The Local Agency shall perform all maintenance services on an annual basis. The Local Agency's performance of such services shall comply with the same standards that are currently used by the State for the State's performance of such services, for similar type highways with similar use, in that year, as determined by the State. The State's Regional Transportation Director, or his representative, shall determine the then current applicable maintenance standards for the maintenance services. Any standards/directions provided by the State's representative to the Local Agency concerning the maintenance services shall be in writing. The Local Agency shall contact the State Region office and obtain those standards before the Local Agency performs such services.

Section 6. Record Keeping

The Local Agency shall maintain a complete file of all records, documents, communications, and other written materials that pertain to the costs incurred under this contract. The Local Agency shall maintain such records for a

period of three (3) years after the date of termination of this contract or final payment hereunder, whichever is later, or for such further period as may be necessary to resolve any matters which may be pending. The Local Agency shall make such materials available for inspection at all reasonable times and shall permit duly authorized agents and employees of the State and, if applicable, FHWA to inspect the project and to inspect, review and audit the project records.

Section 7. Termination Provisions

This contract may be terminated as follows:

- A. This contract may be terminated by either party, but only at the end of the State fiscal year (June 30), and only upon written notice thereof sent by registered, prepaid mail and received by the non-terminating party, not later than 30 calendar days before the end of that fiscal year. In that event, the State shall be responsible to pay the Local Agency only for that portion of the highway maintenance services actually and satisfactorily performed up to the effective date of that termination, and the Local Agency shall be responsible to provide such services up to that date, and the parties shall have no other obligations or liabilities resulting from that termination.

Notwithstanding subparagraph A above, this contract may also be terminated as follows:

- B. Termination for Convenience. The State may terminate this contract at any time the State determines that the purposes of the distribution of moneys under the contract would no longer be served by completion of the project. The State shall effect such termination by giving written notice of termination to the Local Agency and specifying the effective date thereof, at least twenty (20) days before the effective date of such termination.
- C. Termination for Cause. If, through any cause, the Local Agency shall fail to fulfill, in a timely and proper manner, its obligations under this contract, or if the Local Agency shall violate any of the covenants, agreements, or stipulations of this contract, the State shall thereupon have the right to terminate this contract for cause by giving written notice to the Local Agency of its intent to terminate and at least ten (10) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs and reports or other material prepared by the Local Agency under this contract shall, at the option of the State, become its property, and the Local Agency shall be entitled to receive just and equitable compensation for any services and supplies delivered and accepted. The Local Agency shall be obligated to return any payments advanced under the provisions of this contract.

Notwithstanding the above, the Local Agency shall not be relieved of liability to the State for any damages sustained by the State by virtue of any breach of the contract by the Local Agency, and the State may withhold payment to the Local Agency for the purposes of mitigating its damages until such time as the exact amount of damages due to the State from the Local Agency is determined.

If after such termination it is determined, for any reason, that the Local Agency was not in default or that the Local Agency's action/inaction was excusable, such termination shall be treated as a termination for convenience, and the rights and obligations of the parties shall be the same as if the contract had been terminated for convenience, as described herein.

- D. Termination Due to Loss of Funding. The parties hereto expressly recognize that the Local Agency is to be paid, reimbursed, or otherwise compensated with federal and/or State funds which are available to the State for the purposes of contracting for the project provided for herein, and therefore, the Local Agency expressly understands and agrees that all its rights, demands and claims to compensation arising under this contract are contingent upon availability of such funds to the State. In the event that such funds or any part thereof are not available to the State, the State may immediately terminate or amend this contract.

Section 8. Legal Authority

The Local Agency warrants that it possesses the legal authority to enter into this contract and that it has taken all actions required by its procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize its undersigned signatory to execute this contract and to bind the Local Agency to its terms. The person(s) executing this contract on behalf of the Local Agency warrants that such person(s) has full authorization to execute this contract.

Section 9. Representatives and Notice

The State will provide liaison with the Local Agency through the State's Region Director, Region R1, 2829 W Howard Pl. Said Region Director will also be responsible for coordinating the State's activities under this contract and will also issue a "Notice to Proceed" to the Local Agency for commencement of the work. All communications relating to the day-to-day activities for the work shall be exchanged between representatives of the State's Transportation Region R1 and the Local Agency. All communication, notices, and correspondence shall be

addressed to the individuals identified below. Either party may from time to time designate in writing new or substitute representatives.

If to State

CDOT Region: R1
Christopher Vokurka
Project Manager
2829 W Howard Pl
Denver, CO 80204
303-512-4058

If to the Local Agency

City and County of Broomfield
Jesse Alberts
303-464-5694
3951 W 144th Ave
Broomfield, CO 80020
303-464-5694

Section 10. Successors

Except as herein otherwise provided, this contract shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

Section 11. Third Party Beneficiaries

It is expressly understood and agreed that the enforcement of the terms and conditions of this contract and all rights of action relating to such enforcement, shall be strictly reserved to the State and the Local Agency. Nothing contained in this contract shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of the State and the Local Agency that any such person or entity, other than the State or the Local Agency receiving services or benefits under this contract shall be deemed an incidental beneficiary only.

Section 12. Governmental Immunity

Notwithstanding any other provision of this contract to the contrary, no term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, § 24-10-101, et seq., C.R.S., as now or hereafter amended. The parties understand and agree that liability for claims for injuries to persons or property arising out of negligence of the State of Colorado, its departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of § 24-10-101, et seq., C.R.S., as now or hereafter amended and the risk management statutes, §§ 24-30-1501, et seq., C.R.S., as now or hereafter amended.

Section 13. Severability

To the extent that this contract may be executed and performance of the obligations of the parties may be accomplished within the intent of the contract, the terms of this contract are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof.

Section 14. Waiver

The waiver of any breach of a term, provision, or requirement of this contract shall not be construed or deemed as a waiver of any subsequent breach of such term, provision, or requirement, or of any other term, provision or requirement.

Section 15. Entire Understanding

This contract is intended as the complete integration of all understandings between the parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any force or effect whatsoever, unless embodied herein by writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a writing executed by the parties and approved pursuant to the State Fiscal Rules.

Section 16. Survival of contract Terms

Notwithstanding anything herein to the contrary, the parties understand and agree that all terms and conditions of this contract and the exhibits and attachments hereto which may require continued performance, compliance or effect beyond the termination date of the contract shall survive such termination date and shall be enforceable by the State as provided herein in the event of such failure to perform or comply by the Local Agency.

Section 17. Modification and Amendment

This contract is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this contract on the effective date of such change as if fully set forth herein. Except as provided above, no modification of this contract shall be effective unless agreed to in writing by both parties in an amendment to this contract that is properly executed and approved in accordance with applicable law.

A. Amendment

Either party may suggest renegotiation of the terms of this contract, provided that the contract shall not be subject to renegotiation more often than annually, and that neither party shall be required to renegotiate. If the parties agree to change the provisions of this contract, the renegotiated terms shall not be effective until this contract is amended/modified accordingly in writing. Provided, however, that the rates will be modified in accordance with applicable cost accounting principles and standards (including sections 24-107-101, et seq., C.R.S. and implementing regulations), and be based on an increase/decrease in the "allowable costs" of performing the Work. Any such proposed renegotiation shall not be effective unless agreed to in writing by both parties in an amendment to this contract that is properly executed and approved by the State Controller or delegee. Any such rate change will go into effect on the first day of the first month following the amendment execution date.

B. Option Letter

- a. The State may increase/decrease the quantity of goods/services described in **Exhibit A** at the same unit prices (rates) originally established in the contract. The State may exercise the option by written notice to the Local Agency in a form substantially equivalent to **Exhibit C**.
- b. As a result of increasing/decreasing the locations, the State may also unilaterally increase/decrease the maximum amount payable under this contract based upon the unit prices (rates) originally established in the contract and the schedule of services required, as set by the terms of this contract. The State may exercise the option by providing a fully executed option to the Local Agency, in a form substantially equivalent to **Exhibit C**, immediately upon signature of the State Controller or an authorized delegate. The Option Letter shall not be deemed valid until signed by the State Controller or an authorized delegate. Any such rate change will go into effect on the first day of the first month following the option letter execution date.

C. State Encumbrance Letter

The State may encumber the funds up to the maximum amount allowed during a given fiscal year by unilateral execution of an encumbrance letter in a form substantially equivalent to **Exhibit D**. The State shall provide a fully executed encumbrance letter to the Local Agency after execution. Delivery/performance of the goods/services shall continue at the same rate and under the same terms as established in the contract.

Section 18. Disputes

Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract, which is not disposed of by agreement, will be decided by the Chief Engineer of the Department of Transportation. The decision of the Chief Engineer will be final and conclusive unless, within 30 calendar days after the date of receipt of a copy of such written decision, the Local Agency mails or otherwise furnishes to the State a written appeal addressed to the Executive Director of the Department of Transportation. In connection with any appeal proceeding under this clause, the Local Agency shall be afforded an opportunity to be heard and to offer evidence in support of its appeal. Pending final decision of a dispute hereunder, the Local Agency shall proceed diligently with the performance of the contract in accordance with the Chief Engineer's decision. The decision of the Executive Director or his duly authorized representative for the determination of such appeals will be final and conclusive and serve as final agency action. This dispute clause does not preclude consideration of questions of law in connection with decisions provided for herein. Nothing in this contract, however, shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

Section 19. Does not supersede other agreements

This contract is not intended to supersede or affect in any way any other agreement (if any) that is currently in effect between the State and the Local Agency for other "maintenance services" on State Highway rights-of-way within the jurisdiction of the Local Agency. Also, the Local Agency shall also continue to perform, at its own expense, all such activities/duties (if any) on such State Highway rights-of-ways that the Local Agency is required by applicable law to perform.

Section 20. Subcontractors

The Local Agency may subcontract for any part of the performance required under this contract, subject to the Local Agency first obtaining approval from the State for any particular subcontractor. The State understands that the Local

Agency may intend to perform some or all of the services required under this contract through a subcontractor. The Local Agency agrees not to assign rights or delegate duties under this contract [or subcontract any part of the performance required under the contract] without the express, written consent of the State, which shall not be unreasonably withheld. Except as herein otherwise provided, this agreement shall inure to the benefit of and be binding only upon the parties hereto and their respective successors and assigns.

Section 21. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3)

These Special Provisions apply to all contracts. Contractor refers to Local Agency and Contract refers to Agreement.

A. STATUTORY APPROVAL. §24-30-202(1), C.R.S.

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee. If this Contract is for a Major Information Technology Project, as defined in §24-37.5-102(19), then this Contract shall not be valid until it has been approved by the State's Chief Information Officer or designee.

B. FUND AVAILABILITY. §24-30-202(5.5), C.R.S., applicable Local Agency law, rule or regulation

Financial obligations of the Parties payable after the current State Fiscal Year or fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

Liability for claims for injuries to persons or property arising from the negligence of the Parties, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

D. INDEPENDENT CONTRACTOR

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State. Contractor shall not have authorization, express or implied, to bind the State to any agreement, liability or understanding, except as expressly set forth herein. **Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall (i) provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, (ii) provide proof thereof when requested by the State, and (iii) be solely responsible for its acts and those of its employees and agents.**

E. COMPLIANCE WITH LAW.

Contractor shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW, JURISDICTION, AND VENUE.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. PROHIBITED TERMS.

Any term included in this Contract that requires the Parties to indemnify or hold Contractor harmless; requires the Parties to agree to binding arbitration; limits Contractor's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Contract shall be construed as a waiver of any provision of §24-106-109 C.R.S. Any term

included in this Contract that limits Contractor's liability that is not void under this section shall apply only in excess of any insurance to be maintained under this Contract, and no insurance policy shall be interpreted as being subject to any limitations of liability of this Contract.

H. SOFTWARE PIRACY PROHIBITION.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.

THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK

Section 22. SIGNATURE PAGE

THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT

* Persons signing for the Local Agency hereby swear and affirm that they are authorized to act on the Local Agency's behalf and acknowledge that the State is relying on their representations to that effect.

<p>THE LOCAL AGENCY CITY & COUNTY OF BROOMFIELD</p> <p>Name: _____ (print name)</p> <p>Title: _____ (print title)</p> <p>_____ *Signature</p> <p>Date: _____</p>	<p>STATE OF COLORADO Jared S. Polis Department of Transportation</p> <p>By _____ Keith Stefanik, P.E., Chief Engineer (For) Shoshana M. Lew, Executive Director</p> <p>Date: _____</p>
<p>2nd Local Agency Signature if needed</p> <p>Name: _____ (print name)</p> <p>Title: _____ (print title)</p> <p>_____ *Signature</p> <p>Date: _____</p>	<p>STATE OF COLORADO LEGAL REVIEW Philip J. Weiser, Attorney General</p> <p>By _____ Signature – Assistant Attorney General</p> <p>Date: _____</p>

ALL AGREEMENTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State agreements. This agreement is not valid until signed and dated below by the State Controller or delegate. The Local Agency is not authorized to begin performance until such time. If the Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay the Local Agency for such performance or for any goods and/or services provided hereunder.

<p>STATE OF COLORADO STATE CONTROLLER Robert Jaros, CPA, MBA, JD</p> <p>By: _____ Colorado Department of Transportation</p> <p>Date: _____</p>

EXHIBIT A

SCOPE OF WORK

Traffic Signal Maintenance:

List of Traffic Control Locations –

US 287 at:

- Nickel ST

(1 Signals)

Total Number of Signals = 1

Scope of Work:

- The City shall maintain the traffic signals and associated pavement markings within the footprint of the intersection, including stop bars and crosswalks, at the intersections listed above.
- Any reconstruction, modification, or improvement initiated by the City or performed as a result of a City project shall be included in the maintenance provided by the City.
- Any reconstruction, modification, or improvement initiated by the State or performed as a result of a State project shall be paid for separately by the State.
- The City shall perform inspections of each location, in all directions, and submit documentation to CDOT annually by October 10 for each year of this contract. Inspection shall include, but no limited to,
 - Each signal lens operating and visible.
 - Signal timing is operating as programmed.
 - Controller and cabinet are clean and in good repair.
 - Communication to signal is connected and operating.
 - Vehicle detection is operating properly.
 - All luminaires attached to signal structure are operating.
 - Backup power testing.
 - Signal conflict monitor testing.
- Any defects in the items listed above found at these intersections shall be remedied within 72 hours. Defects and remediation shall be documented and kept on file at the City and copied to CDOT. Any defects not remedied will incur a price reduction in the following month's compensation in the amount of \$280 per intersection.
- CDOT will perform structural inspection of overhead signal structural elements and their supports on a cycle established by the Staff Bridge Branch Ancillary Structures Inspection Program.

- CDOT will be responsible for remediation of structural defects requiring foundation, pole, or mast-arm replacement of CDOT-standard structures. The City shall be responsible for remediation of structural defects requiring foundation, pole, or mast-arm replacement of non-CDOT-standard structures as well as remediation of structural defects not requiring foundation, pole, or mast-arm replacement.
- CDOT will be responsible for remediation of underground structural defects requiring conduit replacement.
- CDOT will be responsible for full underground wiring replacement and full overhead wiring replacement. The City will be responsible for minor wiring replacement.
-

Rate / Cost Schedule

\$280 per signal per month

X 1 Signals = \$280.00 Monthly Total

\$280.00 Monthly Total

X 12 Months = \$3,360.00 Annual Total

\$3,360.00 Annual Total

X 5 Year Contract (IGA) = \$16,800.00 over 5 Years of Contract

EXHIBIT B – LOCAL AGENCY RESOLUTION

**LOCAL AGENCY
ORDINANCE
or
RESOLUTION
(if applicable)**

EXHIBIT C - SAMPLE OPTION LETTER

SAMPLE IGA OPTION LETTER

Highway or Traffic Maintenance

(This option has been created by the Office of the State Controller for CDOT use only)

Date:	State Fiscal Year:	Option Letter No.	Routing #
-------	--------------------	-------------------	-----------

Vendor name:

1) SUBJECT:

Change in the amount of goods within current term.

2) REQUIRED PROVISIONS:

In accordance with Section 17 of contract routing number insert FY, agency code & routing #, between the State of Colorado, Department of Transportation, and insert Local Agency name the state hereby exercises the option to an increase/decrease in the amount of goods/services at the same rate(s) specified in Exhibit A.

The amount of the current Fiscal Year contract value (encumbrance) is increased/decreased by \$ amount of change to satisfy services/goods ordered under the contract for the current fiscal year insert fiscal year. The Contract Encumbrance Amount in Recital 1 is hereby modified to \$amount of new annual encumbrance, and Section 4, B, 1 shall also be modified to show the annual not to exceed amount to \$amount of new annual encumbrance and the Contract (five-year term) not to exceed amount shall be modified to \$amount of the new five-year maximum.

The total contract value to include all previous amendments, option letters, etc. is \$insert accumulated/total encumbrance amount.

3) EFFECTIVE DATE:

The effective date of this Option Letter is upon approval of the State Controller or delegate, whichever is later.

APPROVALS:

State of Colorado:

JARED S. POLIS, GOVERNOR

By: _____ Date: _____
Keith Stefanik, P.E., Chief Engineer, Colorado Department of Transportation

ALL CONTRACTS MUST BE APPROVED BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Local Agency is not authorized to begin performance until such time. If Local Agency begins performing prior thereto, the State of Colorado is not obligated to pay Local Agency for such performance or for any goods and/or services provided hereunder.

State Controller
Robert Jaros, CPA, MBA, JD

By: _____

Date: _____

Form date: August 16, 2013

EXHIBIT D – SAMPLE ENCUMBRANCE LETTER

ENCUMBRANCE LETTER

Date: <input type="text"/>	State Fiscal Year: <input type="text"/>	Encumbrance Letter No. <input type="text"/>	Routing #: <input type="text"/>
		Orig. IGA: <input type="text"/>	PO: <input type="text"/>

1) **Encumber fiscal year funding in the contract.**

2) **PROVISIONS:** In accordance with Section 4 and Exhibit C of the original Contract routing number Orig Routing # between the State of Colorado, Department of Transportation, and Contractor's Name, covering the term July 1, Year through June 30, Year, the State hereby encumbers funds for the goods/services specified in the contract for fiscal year .

The amount to be encumbered by this Encumbrance Letter is \$ amount of change. The Total contract (encumbrance) amount, including all previous amendments, option letters, etc. is \$ Insert New \$ Amt.

3) **EFFECTIVE DATE.** The effective date of this Encumbrance Letter is upon approval of the State Controller.

STATE OF COLORADO
Jared S. Polis, GOVERNOR
Department of Transportation

By: _____

Keith Stefanik, P.E., Chief Engineer
(For) Shoshana M. Lew, Executive Director

Date: _____

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER
Robert Jaros, CPA, MBA, JD

By: _____

Department of Transportation

Date: _____

EXHIBIT E

PII Certification

STATE OF COLORADO

LOCAL AGENCY CERTIFICATION FOR ACCESS TO PII THROUGH A DATABASE OR AUTOMATED NETWORK

Pursuant to § 24-74-105, C.R.S., I, _____, on behalf of _____ (legal name of Local Agency) (the “Local Agency”), hereby certify under the penalty of perjury that the Local Agency has not and will not use or disclose any Personal Identifying Information, as defined by § 24-74-102(1), C.R.S., for the purpose of investigating for, participating in, cooperating with, or assisting Federal Immigration Enforcement, including the enforcement of civil immigration laws, and the Illegal Immigration and Immigrant Responsibility Act, which is codified at 8 U.S.C. §§ 1325 and 1326, unless required to do so to comply with Federal or State law, or to comply with a court-issued subpoena, warrant or order.

I hereby represent and certify that I have full legal authority to execute this certification on behalf of the Local Agency.

Signature: _____

Printed Name: _____

Title: _____

Date: _____



City of Broomfield

City Council Regular Meeting

Software Definition Update for Sales Tax (SaaS) - 1st Reading

Modernize our definition of software by explicitly incorporating Software as a Service (SaaS).

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Consent Items	Item: 6L
Presented By		
Graham Clark, Deputy Director of Finance		
Community Goals		

Overview

[View Correspondence](#)

These proposed amendments to the Broomfield Municipal Code aim to modernize our definition of software by explicitly incorporating Software as a Service (SaaS). This update is prompted by technological advancements and the widespread adoption of SaaS, ensuring our code accurately reflects the evolving landscape of software delivery models. For clarity, Broomfield has been taxing software, and software as a service under the current code through our municipal home rule authority, and as such this is not a tax policy change. Rather these code revisions are clarifications to provide a comprehensive understanding of software, accommodating the current industry trends and innovations. The code changes match the Colorado Municipal League definitions for software as a service, which standardized the definition and aligns with the definitions used by other local municipalities.

Attachments

[FINAL_Software as a Service definition_1st Reading Memo.pdf](#)
[Ordinance No. 2234.pdf](#)

Summary

[View Correspondence](#)

These proposed amendments to the Broomfield Municipal Code aim to modernize our definition of software by explicitly incorporating Software as a Service (SaaS). This update is prompted by technological advancements and the widespread adoption of SaaS, ensuring our code accurately reflects the evolving landscape of software delivery models.

For clarity, the City has been taxing software, and software as a service under the current code through our municipal home rule authority, and as such this is not a tax policy change. Rather these code revisions are clarifications to provide a comprehensive understanding of software, accommodating the current industry trends and innovations.

The code changes match the Colorado Municipal League definitions for software as a service, which standardized the definition and aligns with the definitions used by other local municipalities.

Financial Considerations

The proposed code revisions are revenue neutral and not intended to change any of the existing tax collection policies.

Prior Council or Other Entity Actions

February 28, 2023 - Council approved [Ordinance No. 2207](#) amending [Chapter 3-04](#) relating to remote sales (i.e. internet sales).

Boards and Commissions Prior Actions and Recommendations

N/A

Proposed Actions / Recommendations

If the Council desires to proceed it is recommended that:

- That Ordinance 2234 be adopted on first reading and ordered published in full; and
- That a public hearing and second reading of the Ordinance be held on July 9, 2024, at 6pm in the Council Chambers at the George Di Ciero City and County Building.

Alternatives

- Make no changes to the Broomfield Municipal Code.
- Make changes to the Broomfield Municipal Code as directed by City Council.

Additional Details

As a home rule entity, Broomfield has the authority to govern the imposition and collection of city and county sales and use taxes independently. The regulations governing these taxes are outlined in the Broomfield Municipal Code (BMC) Chapters 3-04, Sales Tax, and 3-08, Use Tax. In Colorado, there are approximately 70 home rule municipalities, each one establishing the regulations for setting the sales and use tax rates, the base that the rates are applied to, how those taxes are collected, and how remittances of the tax are audited.

The proposed changes to the Broomfield Municipal Code aim to clarify the taxation of Software as a Service (SaaS) to reflect technological advancements and maintain consistency with other Colorado home rule municipalities.

To illustrate how technology has advanced over time, consider tax preparation software like TurboTax. Ten years ago, if a Broomfield taxpayer wanted to complete their taxes they would typically go to a local retailer such as BestBuy or Walmart and purchase a box containing a number of disks, or more recently CDs, with the tax software. The person would pay for their sales tax when they purchased the software at the store and then proceed home to load the software onto a computer to complete their tax return. Now, with the advances in technology, many people skip the step of going to the store to purchase the software, and instead people access the software on the internet (or the cloud) and complete their taxes on-line while still paying for the software services. Staff views this transaction of completing your taxes with software on the internet the same as when a person used to go to the store and physically purchase the software, now one simply skips one step in the process. As a result, staff has consistently indicated to businesses and taxpayers that these types of services are subject to tax within Broomfield.

Background

- **Historical Context:** Since 2018, following recommendations from a task force including the Colorado Municipal League, Broomfield has adopted standardized definitions for more efficient local tax collection. These facilitate easier filing, reporting, and remittance for businesses through tools like the Sales & Use Tax Software (SUTS) system. Make no changes to the Broomfield Municipal Code.
- **Recent Developments:** In 2023, additional definitions were integrated to support the use of SUTS, allowing businesses to manage sales tax obligations across jurisdictions more effectively. Make changes to the Broomfield Municipal Code as directed by City Council.

Current Challenges

- **Historical Context:** Despite ongoing efforts, there remains confusion among business owners regarding SaaS taxation. Historically, software was taxed as tangible personal property, but the digital nature of SaaS has complicated this classification.
- **State vs. Local Tax Policy:** The State of Colorado generally exempts SaaS from taxation, contrasting with Broomfield's approach and leading to misunderstandings among taxpayers.

Proposed Clarifications

- **New Definitions:** To eliminate ambiguity, we propose adding definitions for 'software as a service,' 'software license fee,' 'software maintenance agreement,' and 'software program.' These terms will align with those used by other local jurisdictions and the Colorado Municipal League.
- **Taxation Consistency:** The amendments will affirm that SaaS continues to be taxable in Broomfield, consistent with past practices. This approach counters the state's stance and aligns with the expectations for local tax collection.

Conclusion

The proposed amendments are designed to update and clarify the Broomfield Municipal Code without altering existing tax collection policies. They aim to reduce confusion and ensure that SaaS is appropriately taxed, reflecting both technological progress and our commitment to clear, transparent governance.

Bold type indicates new material to be added to the Broomfield Municipal Code
~~Strikethrough type~~ indicates deletions from the Broomfield Municipal Code

ORDINANCE NO. 2234

An ordinance amending Chapter 3-04 of the Broomfield Municipal Code to clarify the treatment of Software as a Service

Be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 3-04-070 - Definitions, of the Broomfield Municipal Code is amended as follows:

3-04-070 - Definitions.

As used in this chapter, unless the context clearly indicates otherwise, certain words, terms, and phrases are defined as follows:

- ~~(OO) Software or computer software means and includes any computer software in machine readable or human readable form, including, but not limited to, software contained on cards, tapes, discs, coding sheets, or other medium and including follow up maintenance provided with software purchase. Software includes downloaded software because such programs or data have a physical existence upon the device once downloaded, and software that has been modified, so long as the price of the modifications does not exceed 50% of the price of the unmodified software and excluding software created specifically for the user. For purposes of this definition, modification means actual programming specific to the customer, and the price of modifications shall not include training, installation or customer support but shall be limited to the actual programming or creation thereof specific to the customer.~~
- (OO) *Software as a service*** means software that is rented, leased or subscribed to from a provider and used at the consumer's location, including, but not limited to, applications, systems or programs.
- (PP) *Software license fee*** means a fee charged for the right to use, access, or maintain software programs.
- (QQ) *Software maintenance agreement*** means an agreement, typically with a software provider, that may include (1) provisions to maintain the right to use the software; (2) provisions for software upgrades including code updates, version updates, code fix modifications, enhancements, and added

or new functional capabilities loaded into existing software; or (3) technical support.

- (RR) *Software program* means a sequence of instructions that can be measured, interpreted and executed by an electronic device (e.g. a computer, tablets, smart phones) regardless of the means by which it is accessed (e.g. downloaded) or the medium of conveyance. Software program includes: (1) custom software program, which is a software program prepared to the special order or specifications of a single customer; (2) pre-written software program, which is a software program prepared for sale or license to multiple users, and not to the special order or specifications of a single customer. Pre-written software is commonly referred to as “canned,” “off-the-shelf (“COTS”),” “mass produced” or “standardized;” (3) modified software, which means pre-written software that is altered or enhanced by someone other than the purchaser to create a program for a particular user; and (4) the generic term “software;” “software application,” as well as “updates,” “upgrades,” “patches,” “user exits,” and any items which add or extend functionality to existing software programs.

- (SS) ~~(PP)~~ *Tangible personal property* means personal property . . .

Note: All of the corresponding amendments within Section 3-04-070 are updated to reflect the new lettering with the addition of the new amendments such that the amendments are in alphabetical order.

Section 2.

Chapter 3-04-090 - Property and services taxed, of the Broomfield Municipal Code is amended as follows:

3-04-090 - Property and services taxed.

There is levied and there shall be collected and paid a tax in the amount stated in section 3-04-020 as follows:

- (A) On the purchase price paid or charged upon all sales, leases, and rentals of tangible personal property at retail, unless specifically exempted in section 3-04-100 of this chapter.
- . . .
- (J) Upon the purchase price for digital products, software programs, software as a service, software license fees, and software maintenance agreements; except, that, custom software programs and modified software so long as

the price of the modifications exceeds 50% of the price of the unmodified software shall not be taxable.

Section 4.

If any provision of this ordinance, or the application of such provision to any person or circumstance, is held to be unconstitutional, then the remainder of this ordinance, and the application of the provisions of such to any person or circumstance, shall not be affected thereby.

Section 5.

This ordinance is effective seven days after publication following final passage.

Introduced and approved after first reading on May 28, 2024, and ordered published in full.

Introduced a second time and approved on July 9, 2024, and ordered published.

The City and County of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved as to form:

NCR

City and County Attorney



City of Broomfield

City Council Regular Meeting

Public Hearing - Drought Response Plan - Second Reading

An Ordinance Amending Certain Sections of Chapter 13-36 of the Broomfield Municipal Code Water Use and Drought Restrictions

Meeting	Agenda Group	
Tuesday, May 28, 2024, 6:00 PM	Action Items	Item: 7A
Presented By		
Ken Rutt, Director of Public Works		
Community Goals		
<input checked="" type="checkbox"/> Financial Sustainability and Resilience		

Overview

[View Correspondence](#)

During the February 20, 2024 Study Session, staff reintroduced the updated Drought Response Plan and requested Council's direction on proposed changes to the Broomfield Municipal Code (BMC) 13-36 related to enforcing future mandatory drought restrictions and improving overall drought preparedness. This will be the second reading for Proposed Ordinance 2219, which makes specific changes to the Code related to drought restrictions.

Staff is not recommending any changes to the overall approach for declaring drought stages. In other words, staff will continue to monitor conditions and make drought recommendations to the City Council. City Council will decide when to move into Drought Conditions I, II, or III per Chapter 13-36 of the BMC.

Attachments

[Memo for Public Hearing - Drought Response Plan Ordinance No. 2219 - Second Reading.pdf](#)
[Attachment 1 Water User and Drought Water Use 13-36-Enforcement Procedure-draft 021323.pdf](#)
[Ordinance No. 2219_Modified from First Reading.pdf](#)

Summary

[View Correspondence](#)

On [April 23, 2024](#), staff presented Ordinance No. 2219 on first reading, which amends certain sections of Title 13 of the Broomfield Municipal Code regarding drought declarations, drought water use restrictions, and the enforcement of these mandatory water use restrictions. Proposed changes to Ordinance 2219, as modified by staff on first reading, are summarized in subsequent sections of this memo. Additionally, staff has included the Administrative Penalty procedure it will use related to Chapter 13-36.

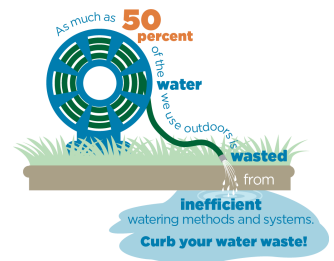
Staff is not recommending any changes to the overall approach for declaring drought stages. In other words, staff will continue to monitor conditions and make drought recommendations to the City Council. City Council will decide when to move into Drought Conditions I, II, or III per Chapter 13-36 of the BMC.

Staff is recommending certain changes to the BMC Chapter 13-36, most notably:

(1) Title Update - “Water Use and Drought Water Use Restrictions” - the purpose is to encompass the broader intent to reduce the risk of additional water restrictions in the future;

(2) The adoption of a standard (i.e. “normal year”) watering schedule of 3 days per week between the hours of 6:00 p.m. and 10:00 a.m. based on even and odd street addresses;

- Watering rules for the lawn are more important than ever as Colorado’s population continues to increase and climate warms, putting more pressure on this limited resource.
- Outdoor Water Use in Broomfield - 5 year average - 52% of the total potable (drinking water) annual consumption. In 2023, with the wet spring and early summer, the outdoor water use was 45% of the total consumption; accounting for approximately 1.56 billion gallons.
- The watering rules incorporate best practices for efficient outdoor water use that will help keep your landscape healthy. It’s a simple way for Broomfield to help protect our water supply now and in the future.



(3) Added a provision stating “it is unlawful to waste water by allowing excess runoff from watering or other uses to flow down the gutters”;

- There is a fixed amount of water and the reality is our water resources are stressed, increased population, drought conditions, changing climate and water contamination are affecting the available supply and cost to bring treatment water to the customer.

(4) Added enforcement provision consistent with other sections of the BMC;

- Attachment 1 outlines the responsibilities, educational and administrative penalties. The overarching goal is to bring water awareness to the true value of water, promote sustainability, conservation and water efficiency practices.

(5) Increases to the penalty ranges for non-compliance of mandatory water use restrictions during times of declared drought;

- Drought is a normal climate pattern that has occurred in varying degrees of length, severity, and size throughout history. Droughts may last several years to even decades occur naturally in the southwestern U.S. Annual trends toward earlier spring melt and reduced snowpack are already affecting water resources in the western United States.
- Mandatory Water Use Restrictions mean that our water supply is limited throughout the water system. Decreased storage water levels impact water quality, and increases cost of treatment.
- The goal is to reduce usage by at least 50% reduction in usage. As stated above, over the past 5 years, outdoor water use accounts for 52% of potable water usage.
- Drought conditions can increase wildfire intensity and severity, and fighting these fires can place significant stresses on the overall water supply.

(6) The ability to adopt an additional drought surcharge which could be applied to customers' monthly water usage fees during times of declared drought.

- Droughts can result in significant economic, social, environmental and water utility operational impacts, including: Loss of water supply; Poor source water quality that may affect treatment and the ability to meet drinking water standards. Stressed alternative and supplementary water sources due to high demand by other drought-affected users. Increased demand from customers. Increased costs and reduced revenues related to drought response.

Delay Implementation for Public Education

Staff is proposing a delayed implementation of Ordinance 2219 until January 1, 2025, to allow time for additional public education and outreach, particularly related to the new three day per week watering requirement. Watering deeply 2-3 times per week makes grass roots grow deeper and more tolerant to drought, whereas frequent, short watering encourages shallow roots and turf susceptible to drought, weeds, and disease. Watering schedule guidance will be provided to help customers understand how long to run their systems (based on the time of year and type of irrigation system), in addition to how many days per week is appropriate.

Financial Considerations

Staff is proposing modifications to sections of Broomfield Municipal Code pertaining to wasting water, drought surcharges and drought water use restrictions. The proposed amendments are consistent with BMC 1-12 and will increase the penalties imposed under Chapter 13-36-060 for any violation of the drought water use restrictions described in Chapter 13-36, and introduce a new drought surcharge on Broomfield water customers' monthly water service fees. The proposed surcharge is intended to recover lost revenue associated with any mandatory water use restrictions and further incentivize water conservation amongst customers during a drought.

Prior Council or Other Entity Actions

On July 23, 2002, City Council adopted Ordinance 1683 - BMC Chapter 13-36, Drought Watering Restrictions. On September 28, 2002, City Council adopted Ordinance 1693 amending Chapter 13-36

On May 27, 2003, City Council adopted Resolution 2003-98 - Declaring Stage 1 Drought response, removing mandatory water use restrictions and moving to voluntary conservation

On June 19, 2012, City Council held a Study Session, including an update on the 2012 Draft Drought Response Plan.

On [May 16, 2023](#), City Council held a study session which introduced the updated Drought Response Plan and request for Council's direction on the associated code changes.

On [July 11, 2023](#), staff presented Ordinance No. 2219 Amending Certain Sections of Title 13 of the Broomfield Municipal Code Regarding Drought Water Use Restrictions. The ordinance was not carried forward to second reading.

On [February 20, 2024](#), City Council held a study session reintroducing the updated Drought Response Plan and request for Council's direction on the associated code changes.

On [April 23, 2024](#), staff presented Ordinance No. 2219 Amending Certain Sections of Title 13 of the Broomfield Municipal Code Regarding Drought Water Use Restrictions.

Boards and Commissions Prior Actions and Recommendations

On May 8, 2023, staff presented the updated Drought Response Plan and associated code changes to the Advisory Committee on Environmental Sustainability (ACES). ACES supported staff's update to the Drought Response Plan and unanimously voted in favor of the revised code related to drought watering restrictions.

Proposed Actions / Recommendations

If Council desires to approve the proposed changes to the Broomfield Municipal Code, the appropriate motion is...

That Ordinance 2219, effective January 1, 2025, be adopted on second reading and ordered published.

Alternatives

Make no changes to Broomfield Municipal Code or modify the proposed ordinance as directed by City Council.

STAFF CHANGES TO ORDINANCE 2219 ON FIRST READING

Proposed modifications to the drought water use restrictions defined under Municipal Code 13-36, as presented during first reading, are summarized in this [memo](#). Staff changes to Ordinance 2219 since first reading are summarized below.

13-36-015 - Irrigation Practices During Times with No Declared Drought Condition

Staff removed the "to the extent" feasible language for the time of day water use restrictions in order to avoid confusion regarding the mandatory nature of this requirement. Staff also clarified that small properties (less than 2.3 acres) must water on designated days while large properties (greater than 2.3 acres) may irrigate over multiple consecutive days within a single evening (e.g. from 6:00 p.m. to 10:00 a.m. on the following day). For these large properties day of the week designations assign the day in which irrigation must begin.

Section (B) regarding system maintenance and (C) regarding hand and drip irrigation systems were added consistent with language which was already included under Drought Conditions I, II, and III.

The term "monetary" was added to Section (E) to clarify that only the monetary penalties set forth in Chapter 1-12 are applicable in this instance.

13-36-070 Water service Drought Condition surcharges.

Staff clarified that the water service surcharges contemplated in this section shall be supported by an analysis of projected costs, revenue, and potential deficits in the water and/or reuse enterprise funds.

Section 2.

Staff updated the effective date of the ordinance to January 1, 2025, as well as the date of Second Reading.

Attachment 1

WATER USER AND DROUGHT WATER USE CHAPTER 13-36

PROCEDURE 101- Administrative Penalty

101.0. Enforcement Action Procedures

101.1 Purpose:

This procedure outlines the steps to be taken in the event a user fails to comply with the requirements of Chapter 13-36 Water User and Drought Water Use Restrictions or the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment per 5 CCR 1002-84 Regulation No. 84 - Reclaimed Water Control Regulation.

101.2 Responsibilities:

101.2.1 The Regulatory Compliance Coordinator will:

1. Prepare a report on non-compliance within 24 hours of discovering the non-compliance listing the following
 - a. Name and location
 - b. Name and address of authorized representative
 - c. Type of violation
 - d. Compliance history

101.2.2 The Stormwater/Pretreatment/Reuse Manager will:

1. Coordinate investigations.
2. If an actual or potential threat to Broomfield infrastructure, public health or environment, immediately bring the report to the attention of the Water Recovery Superintendent or if the violation is recurring, is one of a group of violations.
3. If the violation is an isolated event that causes no immediate or apparent harm to Broomfield infrastructure, public health or environment, prepare a report on the incident of noncompliance within five (5) working days of discovering violation.
4. Route the report with any necessary documentation to the Water Recovery Division Superintendent.
5. Provide educational materials and issue oral warnings for violations immediately where warranted.
6. Review and issue notices of violation (NOV) without penalties to include educational materials.

7. Recommend more severe enforcement action when necessary.

101.2.3 The Water Recovery Division Superintendent will:

1. Review the report on non-compliance within five (5) working days of receiving the report.
2. Report violations with recommended penalties to the Director of Public Works prior to issuing the NOV with penalties.
3. Once approval has been received from the Director of Public Works, issue administrative enforcement responses beyond notices of violation (NOV) within five (5) working days.
4. Recommend more severe enforcement action where warranted, within five working days, to the Director of Public Works.
5. Initiate more severe enforcement action within five working days after approval of the Director of Public Works.

101.2.4 The Deputy Director of Public Works will:

1. Act as the designee of the Director of Public Works in matters concerning Chapter 13-36 Water User and Drought Water Use Restrictions of the Broomfield Municipal Code and/or the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment.

101.2.5 The Director of Public Works will:

1. Administer and implement the provisions of Chapter 13.36 of the Broomfield Municipal Code, the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment and the these enforcement procedures.
2. Review the recommended enforcement action.
3. Consult with the City and County Attorney or designee of recommended enforcement action with penalties.
4. Inform the City Manager of enforcement action to be taken beyond notice of violation without penalties.
5. Authorize any Administrative Fines.

101.2.6 The City and County Attorney will:

1. Review recommended administrative penalties provided by the Director of Public Works or designee to ensure legally defensible.
2. Represent the City's interests related to Chapter 13.36 of the Broomfield Municipal Code, the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment and these enforcement procedures.

101.2.7 The Duty City and County Manager

1. Act as the designee of the City Manager in matters concerning Chapter 13-36 Water User and Drought Water Use Restrictions of the Broomfield Municipal Code and/or the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment.

101.2.8 The City and County Manager

1. The city manager ensures for the effective administration of these policies and procedures and may delegate such functions as he or she deems necessary. The city manager may establish, adopt, amend, or rescind other administrative policies and procedures consistent with the applicable provisions of the Broomfield Municipal Code.

101.3 Enforcement-Penalties Schedule:

This document is intended to show the minimum administration penalties the City and County will initiate. Administrative Penalties are subject to per day per event assessment and may increase thereby as determined by the Director of Public Works.

Any violation that causes damage to either public or private property, harm to the public or the City employees, Broomfield street, water, reuse, stormwater infrastructure (collection conveyance, retention/detention pond, water quality, stream) or increases the cost of Broomfield operations and/or are intentional or the result of gross negligence may constitute additional action as defined by Broomfield Municipal Code.

101.3.1 Schedule

The following apply to any twelve (12) month period as defined from January 1 to December 31.

1. Notice of violation with educational materials included
2. Second Notice of violation with educational materials included
3. Notice of violation with penalty fine (\$50) educational materials included
4. Notice of violation with penalty fine (\$100) educational materials included
5. Notice of violation with penalty fine (\$250) educational materials included
6. Notice of violation with penalty fine (\$500) educational materials included
8. Notice of violation with penalty fine (\$1,000) educational materials included
9. Review with city and county manager and city and county attorney and evaluate additional enforcement actions as defined in the Broomfield Municipal Code

101.3.2 Penalty Fine not paid within thirty (30) days of due date:

1. Chapter 13-12-040 provides for delinquencies and disconnection of service
2. If the penalty fine is unpaid thirty calendar days after the billing date, the account shall be considered delinquent
3. All delinquent accounts shall be assessed a five-dollar-per-billing-period late charge.
4. The property owner or occupant is entitled to an administrative hearing and advising the property owner or occupant of the hearing procedure as outlined below.

101.3.3 Payment Responsibility:

Chapter 13-12-035 provides for and defines payment responsibility for water and sewer services as follows:

1. The owner of every premises, building, lot, house, or dwelling unit is liable for all charges for water and sewer services associated with said premises, building, lot, house, or dwelling unit. The owner may designate another person to whom bills containing the water and sewer charges and the notices of the proposed disconnection of water service shall be sent. Mailing of a bill for water and sewer service to any address shall in no way affect the power of the city to enforce payment of charges or to take any other action provided in this chapter or authorized by law or equity.
2. A statement to the occupant that if he or she is a tenant and he or she believes that the property owner is responsible for payment of charges or for corrections of violations of this title 13, he or she must notify the city of the name and address of the property owner at the time he or she requests a hearing. If the occupant notifies the city of the name and address of the property owner pursuant to this subsection, notice shall also be provided to the property owner.

101.3.4 Hearing procedures.

1. The property owner or occupant shall be entitled to an administrative hearing before the city manager or his or her designee. The hearing shall be for the purpose of determining whether cause exists for the issuance of the penalty fine.
2. The property owner or occupant may appeal the penalty by sending a written notice of intent to appeal within 15 days of the date of the penalty notice. The written notice of appeal shall include the full payment of the fine. The appeal notice shall set forth the nature of the order or determination being appealed, the date of such order or determination, the reason for the appeal, and a request for a hearing.
3. Upon receipt of a request for a hearing, the city manager or his or her designee shall set a time and place for the hearing; provided, however, that the hearing must be held within ten working days of said request. Notice of the time, date, and place for the hearing shall be served personally or mailed by Fedex, certified mail or registered mail service to the party filing the notice of appeal at least ten days prior to the hearing.
4. The city manager or his or her designee may continue the hearing, from time to time, thereafter, as deemed necessary, without further notice. Whether or not a duly notified user appears or is represented at the hearing, the director may immediately pursue any other enforcement action authorized under this chapter.
5. When the city manager or his or her designee finds that a user has violated, or continues to violate, any provision of Chapter 13-36 Water User and Drought Water Use Restrictions or the Reuse Authorization of Use issued by Colorado Department of Public Health and Environment or order issued thereunder, the director may fine such user in accordance with the enforcement responsible guidelines and/or penalties set. The burden of showing that reasonable grounds exist to support the action shall be upon city personnel.
6. The city manager or his or her designee shall make written findings and an order disposing of the matter and shall provide the property owner or occupant with a copy

of such decision by certified mail within fifteen calendar days of the date of the hearing.

7. The decision of the city manager or his or her designee shall be final, subject only to judicial review.
8. Payment arrangements. The city manager or his or her designee is authorized to make such payment arrangements with delinquent customers in accordance with policies promulgated by the city manager.
9. Unpaid charges, fines, and penalties shall, after thirty calendar days, be assessed an additional penalty of 25% of the unpaid balance, and interest shall accrue thereafter at a rate of 5% per month.

ORDINANCE NO. 2219

An Ordinance Amending Certain Sections of Chapter 13-36 of the Broomfield Municipal Code
Water Use and Drought Restrictions

Be it ordained by the City Council of the City and County of Broomfield, Colorado:

Section 1.

Chapter 13-36 of the Broomfield Municipal Code is amended as follows:

Chapter 13-36 - **Water Use and Drought Watering Use Restrictions**

13-36-010 Purpose

(A) In order to maximize the long-term reliability of Broomfield's potable and reclaimed water supplies, and to prevent wasteful landscape irrigation, all turf areas in Broomfield should be irrigated following efficient practices.

(B) Whenever the city council declares a drought condition ~~emergency~~ and the necessity for mandatory water use restrictions ~~conservation measures~~, the provisions of this chapter shall implement such mandatory water use restrictions ~~conservation measures~~ for the preservation of public property, health, peace, and safety of the public. ~~The provisions of this chapter apply to both potable water and reclaimed water uses.~~

13-36-015 - Irrigation Practices During Times with No Declared Drought Condition

(A) During times not declared a drought condition as set forth in this Chapter, the customer, owner, and occupant of the licensed premises shall adhere to the following standard irrigation practices:

(1) For turf areas irrigated by potable or reclaimed water, irrigation is limited to three days per week. A "house number" is defined by the last two digits of a street address. (Ex. - 02, 14, 22 are even numbers; 15, 19, 27 are odd numbers).

(a) Addresses ending in an even number may irrigate on Monday, Wednesday, and Friday of the week.

(b) Addresses ending in an odd number may irrigate on Sunday, Tuesday, and Thursday of the week.

(2) Turf irrigation shall be avoided between the hours of 10:00 a.m. and 6:00 p.m.

(a) For small parcels irrigation must occur on designated days. Small parcels are those with less than 100,000 square feet (or 2.3 acres) of irrigated turf.

(b) For large parcels where irrigation may span multiple days over a single evening (e.g. 6:00 p.m. to 10:00 a.m. on the following day), day of the week designations, as referenced throughout this Chapter, means the day in which irrigation must begin. Large parcels are those with more than 100,000 square feet (or 2.3 acres) of irrigated turf.

(3) Turf areas irrigated by reclaimed water shall not irrigate before April 1 or after November 30.

(B) System maintenance. An irrigation system may be operated at any time for the purpose of repair or regular maintenance, provided that misuse or waste of water does not occur in violation of section 13-24-010, B.M.C.

(C) Trees, shrubs, gardens. The irrigation of trees, shrubs, or gardens may occur at any time if watered by hand, a drip irrigation system, a bubbler system, or by a soaker hose. Hand watering means holding in the hand a hose with an attached positive shutoff nozzle, and does not include operating a hose with a sprinkler or manually operating an irrigation controller.

(D) It shall be unlawful to waste water by allowing excess runoff from watering or other uses to flow down the gutters.

(E) When the City Manager or designee finds that a user has violated, or continues to violate, any provision of this chapter, or order issued hereunder, the city manager or designee may fine such user in accordance with the monetary penalties set forth in chapter 1-12, of the B.M.C. Such fines shall be assessed on a per-violation, per-day basis.

13-36-020 Declaration of drought.

(A) The city council finds, determines, and declares a condition of severe drought, and said condition of drought has, and will continue to have, a deleterious effect upon the quantity and availability of potable **and/or reclaimed** water the city provides to its citizens and to others served by the city.

(B) The necessity of mandatory water **use restrictions** ~~conservation measures~~ applicable to city water delivery systems is deemed warranted and is duly declared.

(C) The city council determines that it is necessary to implement mandatory water **use restrictions** ~~conservation measures~~ for the preservation of public property, health, peace, and safety of the public.

(D) The city council may declare, by resolution, a Drought Condition for the potable and/or reclaimed water systems at any given time. City council may declare a drought

condition for one system but not the other and there is no requirement that the declared drought conditions be the same for both systems.

13-36-030 Drought Condition I; mandatory ~~drought-watering~~ use restrictions.

Upon the declaration of a Drought Condition I ~~drought-emergency~~ by resolution of the city council, all customers, owners, or occupants of any licensed premises, including all out-of-city water customers and members served by the Mile High Water Company, shall comply with the following water restrictions:

(A) ***Watering days on residential and small commercial parcels.*** Irrigation of turf grasses of any kind shall be limited to two days each week of the month as follows:

(1) Single-family dwellings and duplex dwellings with an address ending in an odd number may irrigate only on Wednesdays and Saturdays of the week.

(2) Single-family dwellings and duplex dwellings with an address ending in an even number may irrigate only on Sundays and Thursdays of the week.

(3) ~~Homeowners' associations; multiple family dwelling of three or more families; mobile home communities, including residents therein; and business, commercial or industrial uses may irrigate only on Tuesdays, and Fridays of the week.~~ **Other small parcels (those with less than 100,000 square feet or 2.3 acres of irrigated turf) may irrigate only on Tuesdays and Fridays. Other small parcels include those within homeowners' association common areas; multiple-family dwellings of three or more families; mobile home communities, including residents therein; and small business, commercial or industrial parcels.**

(4) There shall be no irrigation of turf grasses on Mondays except by permit.

(B) ~~Time restrictionslimit per day. The irrigation of turf grasses permitted by subsection (A) above be limited to two hours at any time before is prohibited between the hours of 10:00 a.m. and or after 6:00 p.m. on the authorized watering day. Residential turf grass areas that are greater than 12,000 square feet may be irrigated for an additional one hour on the authorized watering day at any time before the hours of 10:00 a.m. or after 6:00 p.m.~~

(C) **Alternative irrigation schedule.** Property owners may be allowed to follow an alternative irrigation schedule if they can demonstrate to city staff that they do not exceed the quantitative irrigation target of no more than 1.0 inch per week. Authorization for an alternative irrigation schedule, if approved by city staff at their discretion, will be issued by city staff in writing, which can include email.

(DC) **Large irrigation areas.** Large business, commercial, or industrial irrigation turf areas are required to limit total irrigation of turf to no more than 1.0 inch per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. Large parcels are those with more than 100,000 square feet (or 2.3 acres) of irrigated turf.,~~in addition to the irrigation limitations prescribed in subsections (A) and (B) above, shall be subject to the following limitations:~~

~~(1) — Pop-up irrigation zones shall be limited to fifteen minutes.~~

~~(2) — Full rotor irrigation zones shall be limited to forty five minutes.~~

~~(3) — One half rotor irrigation zones shall be limited to thirty minutes.~~

Employees or agents of the city are hereby authorized and permitted without a warrant to enter upon the property of any business, commercial, or industrial irrigation turf area for the limited purpose of examining irrigation clocks or timing devices.

(EØ) Parks and athletic fields. Public parks and athletic fields and school athletic fields are required to limit total irrigation of turf to no more than 1.0 inch per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. ~~exempt from the turf irrigation water day and watering hour limitations prescribed above, provided that such irrigation occurs at any time before the hours of 10:00 a.m. or after 6:00 p.m., and further provided that a 30% reduction in irrigation use is established.~~

(FE) Golf courses. Golf courses are required to limit total irrigation of turf to no more than 1.0 inch per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. ~~exempt from the turf irrigation water day and watering hour limitations prescribed above, provided that a thirty percent reduction in irrigation use is established. Golf courses shall not water the roughs unless the golf course irrigation cannot separate fairway from rough watering.~~

(G F) New seed or sod. New sod, seed, or re-seed shall not be installed between June 1 and September 15 during Drought Condition I. Any newly sodded, seeded, or re-seeded turf areas in the city are exempt from the turf irrigation water day and watering hour limitations prescribed above, provided the newly sodded, seeded, or re-seeded turf area is registered with the department of public works. Once registered with the department of public works, newly sodded, seeded, or re-seeded turf areas are subject to the following limitations:

(1) Total irrigation is limited to 2.0 inches per week for up to two weeks from initial installation of sod or seed. There shall be no irrigation between ~~Newly sodded, seeded, or re-seeded turf areas may be irrigated twice each day for not more than two hours at any time before the hours of 10:00 a.m. or after 6:00 p.m. for a period of two weeks, provided that such newly sodded, seeded, or re-seeded turf areas are installed before June 16 or after September 1.~~

(2) Any newly sodded, seeded, or re-seeded turf areas that cannot be irrigated within the two hour period, may be watered in accordance with the provisions prescribed for large irrigation areas in subsection (C) above.
After the first two weeks of establishment irrigation, newly sodded, seeded, or re-seeded turf areas are subject to the requirements under subsections A-D above.

(HG) System maintenance. An irrigation system may be operated at any time for the purpose of repair or regular maintenance, provided that misuse or waste of water does not occur in violation of section 13-24-010, B.M.C.

(IH) Trees, shrubs, gardens. The irrigation of trees, shrubs, or gardens may occur at any time if watered by hand, a drip irrigation system, a bubbler system, or by a soaker hose. Hand watering means holding in the hand a hose with an attached positive shutoff nozzle, and does not include operating a hose with a sprinkler or manually operating an irrigation controller.

(JH) Swimming pools. The city shall not issue building permits for new swimming pools. Existing swimming pools may be filled once a year and the water level maintained in the swimming pool throughout the year.

(KH) Washing of vehicles.

- (1) Personal vehicles may be washed no more often than once each week using a hose with a positive shutoff mechanism.
- (2) Vehicles in government or commercial operations or fleets may be washed no more often than once a week.
- (3) Vehicles may be washed at a commercial car wash at any time.

(LK) Impervious areas. Impervious surfaces, such as sidewalks, driveways, or patios, may not be washed by hoses, except when necessary for public health or safety reasons.

(ML) Building maintenance. Buildings may be washed by a pressure washer to clean the surface in preparation for maintenance, provided that misuse or waster of water does not occur in violation of section [13-24-010](#), B.M.C.

(NA) Permits. For good cause shown, the director or deputy director of public works may issue water variance permits in instances of personal hardship.

13-36-040 Drought Condition II; mandatory ~~drought-watering~~ **drought-use** restrictions.

Upon the declaration of a Drought Condition II ~~drought-emergency~~ by resolution of the city council, all customers, owners, or occupants of any licensed premises, including all out-of-city water customers and members served by the Mile High Water Company, shall comply with the following water restrictions:

(A) **Watering days for residential and small commercial parcels.** Irrigation of turf grasses of any kind shall be limited to **one two-days each week not to exceed 0.75 inches per week of the month** as follows:

- (1) Single-family dwellings and duplex dwellings with an address ending in an odd number may irrigate only on Wednesdays ~~and Saturdays of the week~~.
- (2) Single-family dwellings and duplex dwellings with an address ending in an even number may irrigate only on Sundays ~~and Thursdays of the week~~.
- (3) **Other small parcels (those with less than 100,000 square feet or 2.3 acres of irrigated turf) may irrigate only on Fridays. Other small parcels including those within homeowners' association common areas; multiple-family dwellings of three or**

more families; mobile home communities, including residents therein; and small business, commercial or industrial parcels.

(4) There shall be no irrigation of turf grasses on Mondays, Tuesdays, Thursdays, and Saturdays except by permit.

(B) ~~Time restriction limit per day.~~ The irrigation of turf grasses permitted by subsection (A) above shall be limited to two hours at any time before is prohibited between the hours of 10:00 a.m. and or after 6:00 p.m. on the authorized watering day. Residential turf grass areas that are greater than 12,000 square feet may be irrigated for an additional one hour on the authorized watering day at any time before the hours of 10:00 a.m. or after 6:00 p.m.

(C) Alternative irrigation schedule. Property owners may be allowed to follow an alternative irrigation schedule if they can demonstrate to city staff that they do not exceed the quantitative irrigation target of no more than 0.75 inches per week

(DE) Large irrigation areas. Large business, commercial, or industrial irrigation turf areas are required to limit total irrigation of turf to no more than 0.75 inches per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. Large parcels are those with more than 100,000 square feet (or 2.3 acres) of irrigated turf., in addition to the irrigation limitations prescribed in subsections (A) and (B) above, shall be subject to the following limitations:

(1) ~~Pop up irrigation zones shall be limited to fifteen minutes.~~

(2) ~~Full rotor irrigation zones shall be limited to forty five minutes.~~

(3) ~~One half rotor irrigation zones shall be limited to thirty minutes.~~

~~Employees or agents of the city are hereby authorized and permitted without a warrant to enter upon the property of any business, commercial, or industrial irrigation turf area for the limited purpose of examining irrigation clocks or timing devices.~~

(EĐ) Parks and athletic fields. Public parks and athletic fields and school athletic fields are required to limit total irrigation of turf to no more than 0.75 inches per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. exempt from the turf irrigation water day and watering hour limitations prescribed above, provided that such irrigation occurs at any time before the hours of 10:00 a.m. or after 6:00 p.m., and further provided that a 30% reduction in irrigation use is established.

(FE) Golf courses. Golf courses are required to limit total irrigation of turf to no more than 0.75 inches per week. There shall be no irrigation of turf areas between the hours of 10:00 a.m. and 6:00 p.m. exempt from the turf irrigation water day and watering hour limitations prescribed above, provided that a thirty percent reduction in irrigation use is established. Golf courses shall not water the roughs unless the golf course irrigation cannot separate fairway from rough watering.

(GF) New seed or sod. **Installation of new sod or seed, or re-seeding existing turf is prohibited during Drought Condition II. Any newly sodded, seeded, or re-seeded turf areas in the city are subject to turf irrigation provisions set forth in subsections (A) through (C) above.**

(HG) System maintenance. An irrigation system may be operated at any time for the purpose of repair or regular maintenance, provided that misuse or waste of water does not occur in violation of section 13-24-010, B.M.C.

(IH) Trees, shrubs, gardens. The irrigation of trees, shrubs, or gardens may occur at any time if watered by hand, a drip irrigation system, a bubbler system, or by a soaker hose. Hand watering means holding in the hand a hose with an attached positive shutoff nozzle, and does not include operating a hose with a sprinkler or manually operating an irrigation controller.

(Ji) Swimming pools. The city shall not issue building permits for new swimming pools. Existing swimming pools may be filled once a year and the water level maintained in the swimming pool throughout the year.

(Kj) Washing of vehicles.

(1) Personal vehicles may be washed no more often than once each week using a hose with a positive shutoff mechanism.

(2) Vehicles in government or commercial operations or fleets may be washed no more often than once a week.

(3) Vehicles may be washed at a commercial car wash at any time.

(LK) Impervious areas. Impervious surfaces, such as sidewalks, driveways, or patios, may not be washed by hoses, except when necessary for public health or safety reasons.

(ML) Building maintenance. Buildings may be washed by a pressure washer to clean the surface in preparation for maintenance, provided that misuse or waster of water does not occur in violation of section 13-24-010, B.M.C.

(NM) Water features. Operation of outside water features, such as fountains or outdoor misting systems, is prohibited, except if such features or systems are used to sustain aquatic life or maintain water quality.

(OM) Permits. For good cause shown, the director or deputy director of public works may issue water variance permits in instances of personal hardship.

13-36-050 Drought Condition III; mandatory ~~drought~~ watering use restrictions.

Upon the declaration of a ~~Drought Condition III drought emergency~~ by resolution of the city council, all customers, owners, or occupants of any licensed premises, including all out-of-city water customers and members served by the Mile High Water Company, shall comply with the following water restrictions:

(A) Watering days for residential and small commercial parcels. The irrigation of turf grasses of any kind is prohibited.

- (B) Time restrictions ~~limit per day~~. The irrigation of turf grasses of any kind is prohibited.
- (C) Large irrigation areas. The irrigation of turf grasses of any kind is prohibited.
- (D) Parks and athletic fields. Turf irrigation is prohibited except for athletic fields. **Actively used athletic fields may be irrigated no more than 0.75 inches of water per week. No turf irrigation is allowed between the hours of 10:00 a.m. and 6:00 p.m. on any day. The City and County Manager may further restrict irrigation of athletic fields if drought conditions persist or worsen.** ~~Public parks and athletic fields and school athletic fields are exempt from the turf irrigation water day and watering hour limitations prescribed above, provided that such irrigation occurs at any time before the hours of 10:00 a.m. or after 6:00 p.m., and further provided that a 50% reduction in irrigation use is established.~~
- (E) Golf courses. Only the tees and greens on golf courses may be irrigated. **Limit turf irrigation of tees and greens to no more than 0.75 inches of water per week. No turf irrigation is allowed between the hours of 10 AM and 6 PM on any day. The City Manager may further restrict irrigation of golf courses if drought conditions persist or worsen.**
- (F) New seed or sod. **Installation of new sod or seed, or re-seeding existing turf is prohibited during Drought Condition III, and t**~~The irrigation of turf grasses of any kind is prohibited.~~
- (G) System maintenance. An irrigation system may be operated at any time for the purpose of repair or regular maintenance, provided that misuse or waste of water does not occur in violation of section [13-24-010](#), B.M.C.
- (H) Trees, shrubs, gardens. The irrigation of trees, shrubs, or gardens may occur at any time if watered by hand, a drip irrigation system, a bubbler system, or by a soaker hose. Hand watering means holding in the hand a hose with an attached positive shutoff nozzle, and does not include operating a hose with a sprinkler or manually operating an irrigation controller.
- (I) Swimming pools. The city shall not issue building permits for new swimming pools. Private swimming pools may not be filled. Public swimming pools, private club swimming pools, and homeowner's association swimming pools may be filled.
- (J) Washing of vehicles.
- (1) Personal vehicles may be washed no more often than once each week using a hose with a positive shutoff mechanism.
 - (2) Vehicles in government or commercial operations or fleets may be washed no more often than once a week.
 - (3) Commercial car washes shall have recycling capabilities in order to operate and are required to obtain a permit from the director or deputy director of public works as a condition of operation.
- (K) Impervious areas. Impervious surfaces, such as sidewalks, driveways, or patios, may not be washed by hoses, except when necessary for public health or safety reasons.

(L) Building maintenance. Buildings may be washed by a pressure washer to clean the surface in preparation for maintenance, provided that misuse or waster of water does not occur in violation of section [13-24-010](#), B.M.C.

(M) Water features. Operation of outside water features, such as fountains or outdoor misting systems, is prohibited, except if such features or systems are used to sustain aquatic life or maintain water quality.

(N) Permits. Except as provided for commercial car washes, no permits shall be issued.

13-36-060 Enforcement of drought watering use restrictions.

The customer, owner, or occupant of the licensed premises shall be responsible for complying with the drought watering use restrictions imposed by this chapter. **City staff are authorized to monitor customer water consumption via direct observation, through use of billing data, or through any other lawful means to help enforce drought water use restrictions. City staff may place information fliers on licensed premises or approach property owners, occupants, or managers to review drought conditions and water use.**

In addition to the penalties imposed by chapter 1-12, B.M.C., for any violation of this chapter, the following charges shall be added to the monthly water service charges of the ~~customer, owner of the relevant water service account(s) or occupant of the licensed premises:~~

(A) For the first violation of any drought watering use restriction, the ~~account customer, owner, or occupant~~ will be notified in writing served personally or **with the monthly water service invoice by certified mail.**

(B) For the second violation of any drought watering use restriction at the same premises, ~~\$100.00~~ **\$200.00** shall be added to the monthly water service charges of the account ~~customer, owner for, or occupant of~~ single-family dwellings and duplex dwellings and ~~\$200.00~~ **\$400.00** shall be added to the monthly water service charges of all other customer ~~types, owners, or occupants.~~

(C) For the third violation of any drought watering use restriction at the same premises, ~~\$300.00~~ **\$600.00** shall be added to the monthly service charges of the account ~~customer, owner of, or occupant of~~ single-family dwellings and duplex dwellings and ~~\$600.00~~ **\$1,200.00** shall be added to the monthly water service charges of all other customer ~~types, owners, or occupants.~~

(D) For the fourth violation of any drought watering use restriction at the same premises, ~~\$500.00~~ **\$1,000.00** shall be added to the monthly service charges of the account ~~customer, owner, or occupant of~~ single-family dwellings and duplex dwellings and ~~\$1,000.00~~ **\$2,000.00** shall be added to the monthly water service charges of all other customer ~~types, owners, or occupants.~~

(E) For the fifth and any subsequent violation of any drought watering use restriction at the same premises, ~~\$1,000.00~~ **\$2,000.00** shall be added to the monthly service charges of the account ~~customer, owner, or occupant of~~ single-family dwellings and duplex dwellings and

~~\$2,000.00~~ **\$4,000.00** shall be added to the monthly water service charges of all other customer types, owners, or occupants.

13-36-070 Water service Drought Condition surcharges.

(A) In addition to the water use restrictions for declared Drought Conditions set forth in this Chapter. The City Council may, by resolution, implement surcharges that would be added to the monthly water service charges provided for in section 13-12-010, B.M.C. Surcharges may be implemented for potable or reuse water. Such surcharges are intended to recover lost revenue associated with mandatory water use restrictions and are separate from and in addition to any penalty imposed, and shall be supported by an analysis of projected costs, revenue, and potential deficits in the water and/or reuse enterprise funds.

(B) The City Manager or designee may propose drought surcharges as part of or subsequent to any recommendation to the City Council to declare a Drought Condition I, II, or III.

(C) Any approved surcharges must meet these requirements:

(1) Surcharges will specify the percentage increase for each customer class and the resulting new water rates.

(2) Surcharges will be temporary and will be removed when the City Council lifts a drought condition I, II, or III declaration and returns to a normal drought status.

(3) The percentage increase for any individual water use rate shown in section 13-12-010, B.M.C., will be no more than 50%.

(4) There will be no surcharge on the lowest rate tier for residential water use.

(5) For non-residential potable water customers, there will be no surcharge for water use up to average winter water consumption (as defined in section 13-12-010, B.M.C.) in any one month.

(D) The surcharges authorized herein as a part of the water service charges set forth in section 13-12-010, B.M.C. Therefore, any failure to pay a surcharge will be subject to the same enforcement and penalty provisions applicable to water charges as provided for by Chapter 13-12.

Section 2.

This ordinance shall be effective January 1, 2025.

Introduced and approved after first reading on April 23, 2024, and ordered published in full.

Introduced a second time and approved on May 28, 2024, and further ordered published.

The City And County Of Broomfield, Colorado

Mayor

Attest:

Office of the City and County Clerk

Approved As To Form:

NCR

City and County Attorney