



## REGULAR MEETING AGENDA

City of Black Hawk City Council  
211 Church Street, Black Hawk, CO  
April 27, 2016

**Public Officials Liability Training  
2:00 p.m.**

**Regular Meeting  
3:00 p.m.**

### RINGING OF THE BELL:

1. CALL TO ORDER
2. ROLL CALL & PLEDGE OF ALLEGIANCE:
3. ADENDA CHANGES:
4. CONFLICTS OF INTEREST: (Council disclosures are on file w/City Clerk & Sec. of State)
5. PRESENTATION: Retirement of Ronald Howle, Street Maintenance Worker
6. PUBLIC COMMENT: *Please limit comments to 5 minutes*
7. APPROVAL OF MINUTES: April 13, 2016
8. PUBLIC HEARINGS
  - A. CB7, An Ordinance Amending the City of Black Hawk 2016 Pay Plan by Revising the 2016 Hiring Range and Retitling the Position of Police Lieutenant to Police Commander
9. ACTION ITEMS:
  - A. Resolution 30-2016, A Resolution Approving a Certificate of Appropriateness for the Exterior Rehabilitation of Property Located at 400 Chase Street
  - B. Resolution 31-2016, A Resolution Approving a Certificate of Appropriateness for Retaining Walls on Multiple City-Owned Properties on the North Side of Gregory Street Between Selak and Church Streets, and on the South Side of Gregory Street Between Bobtail Road and High Street
  - C. Resolution 32-2016, A Resolution Approving the City of Black Hawk's Amended 401(A) Adoption Agreement Known as the ICMA Retirement Corporation Governmental Money Purchase Plan & Trust Adoption Agreement, as Amended Effective April 27, 2016
  - D. Resolution 33-2016, A Resolution Approving the Contract with Kaiser Permanente in the Estimated Amount of \$787,745 for Health Insurance
  - E. Resolution 34-2016, A Resolution Approving the Contract with Delta Dental in the Amount of \$104,518 for Group Dental Insurance
  - F. Resolution 35-2016, A Resolution Awarding the Bid and Approving the Agreement Between the City of Black Hawk and Concrete Express, Inc. for Construction of the Gregory Street Relocation Project in an Amount Not To Exceed \$7,765,950.50, Plus a Materials Testing Allowance of \$180,000.00
10. CITY MANAGER REPORTS:
11. CITY ATTORNEY:
12. EXECUTIVE SESSION:
13. ADJOURNMENT:

### MISSION STATEMENT

The mission of the City of Black Hawk is to progressively provide cost effective programs and services of the highest quality to the community.



**City of Black Hawk  
City Council**

**April 13, 2016**

**MEETING MINUTES**

Lynnette Hailey, Historic Preservation Commission Chair, rang the bell.

1. **CALL TO ORDER:** The regular meeting of the City Council was called to order on Wednesday, April 13, 2016, at 3:00 p.m. by Mayor Spellman.
  
2. **ROLL CALL:** Present were: Mayor Spellman, Aldermen Armbright, Bennett, Midcap, Moates, and Torres.  
  
Absent: Alderman Johnson.  
  
Staff present: City Attorney Hoffmann, City Manager Lewis, Police Chief Cole, City Clerk/Administrative Services Director Greiner, Finance Director Hillis, Community Planning and Development Administrator Linker, Public Works Director Isbester, Senior Civil Engineers Ford and Reed, Fire Chief Taylor, and Deputy City Clerk Martin.
  
- PLEDGE OF ALLEGIANCE:** Mayor Spellman led the meeting in the recitation of the Pledge of Allegiance.
  
3. **AGENDA CHANGES:** Deputy City Clerk Martin confirmed there were no agenda changes.
  
4. **CONFLICTS OF INTEREST:** City Attorney Hoffmann asked Council to declare any Conflicts of Interest on any issue appearing on the agenda this afternoon other than those previous disclosures and conflicts that have already been disclosed and are on file with the City Clerk and Secretary of State. There were no conflicts noted from City Council.  
  
City Attorney Hoffmann asked the audience if there were any objections to any member of Council voting on any issue on the agenda this afternoon. The audience had no objections.
  
5. **PUBLIC COMMENTS:** Deputy City Clerk Martin stated that Patricia Torres had signed up to speak. Mrs. Torres, Black Hawk resident and Vice Chair of the Historic Preservation Commission, had a corsage and boutonnières to hand out

to Council members, and chose to wait until the swearing in of the incumbents.

6. APPROVAL OF MINUTES

March 23, 2016.

**MOTION TO APPROVE**

Alderman Bennett **MOVED** and was **SECONDED** by Alderman Armbright to approve the Minutes as presented.

**MOTION PASSED**

There was no discussion and the motion passed unanimously.

7. SWEARING IN OF INCUMBENTS:

Honorable Judge Ronald W. Carlson swore in Mayor Spellman and then Aldermen Bennett, Moates, and Torres. All signed Oath of Office certificates and posed for photos.

Mrs. Torres then proceeded to thank Council for all their work and, in honor of celebrating the next four years in office, she presented each Alderman and the Mayor with a corsage and boutonnieres made in the Lakota Indian way using natural flowers from the Black Hawk area.

8. PUBLIC HEARINGS:

**A. Resolution 23-2016, A Resolution Amending the City of Black Hawk 2015 Budget**

Mayor Spellman read the title and opened the public hearing.

Finance Director Hillis said this amendment is to the 2015 budget and relates to bond interest, a capital project in the Water Fund, and closing out the Cemetery Fund to move the money over to the Historic Preservation Fund.

PUBLIC HEARING:

Mayor Spellman declared a Public Hearing on Resolution 23-2016, A Resolution Amending the City of Black Hawk 2015 Budget open and invited anyone wanting to address the Board either “for” or “against” the proposed ordinance to come forward.

No one came forward to speak and Mayor Spellman declared the Public Hearing closed.

**MOTION TO APPROVE**

Alderman Moates **MOVED** and was **SECONDED** by Alderman Torres to Approve Resolution 23-2016, A Resolution Amending the City of Black Hawk 2015 Budget.

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

9. ACTION ITEMS:

**A. Resolution 24-2016, A Resolution Approving the Purchase of a Replacement High Pressure Breathing Air Compressor and Fill Station from Centennial Fire and Safety Equipment LLC for the Amount of \$55,372**

Fire Chief Taylor explained the need to replace the current 17 year old fill station since it doesn't meet current safety standards. He said the SCBA replacement, compressor and cascade were within the Capital Projects budget, but had to split the two items as the SBCA is out for bid right now through the RFP process. He explained that the proposed new fill station is fully self-contained for safety and is able to increase their bottle fill capability by 50%, as well as their mutual aid partners' needs. He said the installation and electrical upgrade is not included in the price, but he has been working with Public Works on a solution and the amount will still fall within the allocated budget. When asked, Chief Taylor said the old ones could be donated.

**MOTION TO APPROVE**

Alderman Armbright **MOVED** and was **SECONDED** by Alderman Moates to approve Resolution 24-2016, A Resolution Approving the Purchase of a Replacement High Pressure Breathing Air Compressor and Fill Station from Centennial Fire and Safety Equipment LLC for the Amount of \$55,372.

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

**B. Resolution 25-2016, A Resolution Approving a Three Month Extension of the Historic Restoration and Community Preservation Program Project at 401 Chase Street**

**C. Resolution 26-2016, A Resolution Approving a Three Month Extension of the Historic Restoration and Community Preservation Program Project at 301 High Street**

Mayor Spellman combined Action Items B and C and read the titles.

Community Planning and Development Administrator Linker explained that the contractor laid asphalt patches during inclement weather at both properties and they subsequently failed. She said the building permits are ready to expire, so this approval would extend them for three months in order for the contractor to redo the work.

**MOTION TO**

**APPROVE**

Alderman Bennett **MOVED** and was **SECONDED** by Alderman Torres to approve Resolution 25-2016, A Resolution Approving a Three Month Extension of the Historic Restoration and Community Preservation Program Project at 401 Chase Street and Resolution 26-2016, A Resolution Approving a Three Month Extension of the Historic Restoration and Community Preservation Program Project at 301 High Street.

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

**D. Resolution 27-2016, A Resolution Approving the Title VI Plan for the Black Hawk Central City Tramway Operations**

Mayor Spellman read the title.

Public Works Director Isbester stated that as per CDOT requirements to ensure grant recipients meet the Civil Rights portion of the Federal Transit Administration (FTA) regulations, the governing body is to review and approve the Title VI Plan. He added this will also help in showing compliance for any future funding.

**MOTION TO APPROVE**

Alderman Midcap **MOVED** and was **SECONDED** by Alderman Torres to approve Resolution 27-2016, A Resolution Approving the Title VI Plan for the Black Hawk Central City Tramway Operations.

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

**E. Resolution 28-2016, A Resolution Approving the Agreement Between the City of Black Hawk and Davis Custom Welding for Construction of the Green Lake Pipeline Replacement Project Phase VI in an Amount Not to Exceed \$233,405.00**

Mayor Spellman read the title.

Senior Civil Engineer Ford was excited to state that this was the last phase of the pipeline project. He said the project completely replaced the entire turn-of-the century riveted steel pipeline from Leavenworth Creek down to Green Lake. He wanted to point out that the City owns 63% of the water in the reservoir and Clear Creek County owns the other 37%. He added that while this completes the pipeline project, there are still other projects at Green Lake, like the headgate project, yet to be completed.

**MOTION TO APPROVE**

Alderman Armbright **MOVED** and was **SECONDED** by Alderman Bennett to approve Resolution 28-2016, A Resolution Approving the Agreement Between the City of Black Hawk and Davis Custom

Welding for Construction of the Green Lake Pipeline Replacement Project Phase VI in an Amount Not to Exceed \$233,405.00.

**MOTION PASSED** There was no discussion and the motion **PASSED** unanimously.

**F. Resolution 29-2016, A Resolution Awarding the Bid and Approving the Construction of the R.A. Clark Emergency Operations Center Project to Roche Constructors, Inc. in an Amount Not to Exceed \$1,662,700.00**

Mayor Spellman read the title.

Senior Civil Engineer Reed reminded Council that they had awarded the design contract to Roche Constructors back in July of 2015, with the intent of performing the work as a design/build project. He said Roche has established their Guaranteed Maximum Price (GMP) and has a building permit in hand.

Mayor Spellman pointed out that \$1,500,000 was originally budgeted for and \$1,200,000 is an oversight in the budget to be corrected. Reed did add that originally the plan was for 3,900 square feet and it has been increased to 4,800 square feet to add a break room and increase the size of some of the storage areas.

Public Works Director Isbester said staff will come back before Council with a budget amendment for the additional budget amount.

**MOTION TO APPROVE**

Alderman Torres **MOVED** and was **SECONDED** by Alderman Moates to approve Resolution 29-2016, A Resolution Awarding the Bid and Approving the Construction of the R.A. Clark Emergency Operations Center Project to Roche Constructors, Inc. in an Amount Not to Exceed \$1,662,700.00.

**MOTION PASSED** There was no discussion and the motion **PASSED** unanimously.

**10. CITY MANAGER REPORTS:**

City Manager Lewis had nothing to report.

**11. CITY ATTORNEY:**

City Attorney Hoffmann had nothing to report.

Prior to adjourning into Executive Session, Mayor Spellman wanted to take a moment to thank Paricia Torres for her kind gesture and acknowledged that the City does have a good group that sits on Council and an excellent staff to help make it all work.

12. EXECUTIVE SESSION: City Attorney Hoffmann recommended item number 5 for Executive Session.

**MOTION TO  
ADJOURN INTO  
EXECUTIVE  
SESSION**

Alderman Bennett **MOVED** and was **SECONDED** by Alderman Armbright to adjourn into Executive Session at 3:22 p.m. to hold a conference with the City's attorney to determine positions relative to matters that may be subject to negotiations, develop a strategy for negotiations, and/or instruct negotiators, pursuant to C.R.S. § 24-6-402(4)(e).

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

**MOTION TO  
ADJOURN**

Alderman Bennett **MOVED** and was **SECONDED** by Alderman Johnson to adjourn the Executive Session at 4:00 p.m.

**MOTION PASSED**

There was no discussion and the motion **PASSED** unanimously.

13. ADJOURNMENT:

Mayor Spellman declared the Regular Meeting of the City Council closed at 4:00 p.m.

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Melissa A. Greiner  
City Clerk

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David D. Spellman  
Mayor

**COUNCIL BILL 7**

**AN ORDINANCE AMENDING  
THE CITY OF BLACK HAWK  
2016 PAY PLAN BY REVISING  
THE 2016 HIRING RANGE AND  
RETITLING THE POSITION OF  
POLICE LIEUTENANT TO  
POLICE COMMANDER**

**STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK**

**COUNCIL BILL NUMBER: CB7**

**ORDINANCE NUMBER: 7-2016**

**TITLE: AN ORDINANCE AMENDING THE CITY OF BLACK HAWK 2016 PAY PLAN BY REVISING THE 2016 HIRING RANGE AND RETITLING THE POSITION OF POLICE LIEUTENANT TO POLICE COMMANDER**

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, GILPIN COUNTY:

Section 1. The amendments to the City of Black Hawk 2016 Pay Plan, attached hereto and incorporated herein by this reference, revising the 2016 Hiring Range and retitling the position of Police Lieutenant to Police Commander, are hereby adopted, to be effective upon the effective date of this Ordinance.

Section 2. Safety Clause. The Board of Aldermen hereby finds, determines, and declares that this Ordinance is promulgated under the general police power of the City of Black Hawk, that it is promulgated for the health, safety, and welfare of the public, and that this Ordinance is necessary for the preservation of health and safety and for the protection of public convenience and welfare. The Board of Aldermen further determines that the Ordinance bears a rational relation to the proper legislative object sought to be attained.

Section 3. Severability. If any clause, sentence, paragraph, or part of this Ordinance or the application thereof to any person or circumstances shall for any reason be adjudged by a court of competent jurisdiction invalid, such judgment shall not affect application to other persons or circumstances.

Section 4. Effective Date. The City Clerk is directed to post the Ordinance as required by the Charter. This Ordinance shall become effective upon posting by the City Clerk.

READ, PASSED AND ORDERED POSTED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

# **CITY OF BLACK HAWK**

## **REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** Revised 2016 Hiring Range & Position Title Change

**RECOMMENDATION:** Staff recommends the following motion to the Mayor and Board of Aldermen:

**MOTION TO APPROVE** Council Bill 7, An Ordinance Amending the City of Black Hawk 2016 Pay Plan by Revising the 2016 Hiring Range and Retitling the Position of Police Lieutenant to Police Commander

### **SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

#### **Revised 2016 Hiring Range**

Council approved the 2016 Hiring Range during their regularly scheduled Council meeting on March 23, 2016.

When processing the salary increases after Council's approval, it was discovered that several of the 2016 comparables were not consistent with 2015 comparables. In addition, there is only one comparable city which uses individual positions for Police Officer II, III and only two comparable cities for Police Officer IV, within our competitive sets of survey cities. All other survey cities employ step systems for their Police Officer advancement.

In reviewing these inconsistencies, staff determined that when there are insufficient comparables (2 or less) in positions with advancement options, a 5% increase should be used between the minimum hiring ranges for these positions. This is consistent with the long standing policy for starting salary when employees move to an advanced position, i.e. Police Officer I to Police Officer II, etc. This policy provides that an employee's salary will increase by 5% or to the bottom of the hiring range, whichever is greater.

As data increases with each year of the City's current pay philosophy, we continue to hone the system, making recommendations to Council which adjust for anomalies that are uncovered with increased data.

The attached revised hiring range document reflects these corrections noted above.

#### **Position Title Change**

Two (2) Lieutenant positions currently exist within the Black Hawk Department; one supervising Patrol Operations and the other supervising Administrative Services (Records, Evidence, and Dispatch). The Department's structure is consistent with other police departments of similar size. We compare the Black Hawk Police "Lieutenant" position to the "Commander" position in other departments because the Lieutenant rank

is not a normal rank found in our comparison set of survey cities. The Commander job descriptions within our the competitive set is consistent with the Lieutenant position in the Black Hawk Police Department. It is the desire of Police Chief Stephen Cole to re-title the current "Lieutenant" positions within the Black Hawk Police Department to "Police Commander" consistent with our survey cities.

The title change will not result in a salary change or a change in job descriptions.

**AGENDA DATE:** 4/27/2016

**WORKSHOP DATE:** N/A

**FUNDING SOURCE:** Personnel

**DEPARTMENT DIRECTOR APPROVAL:**  Yes  No

**STAFF PERSON RESPONSIBLE:** Melissa A. Greiner  
City Clerk  
Administrative Services Director

**DOCUMENTS ATTACHED:** Approved 2016 Hiring Range  
Proposed 2016 Revised Hiring Range  
Job Description – Proposed Title Change

**RECORD:**  Yes  No

**CITY ATTORNEY REVIEW:**  Yes  N/A

**SUBMITTED BY:**

**REVIEWED BY:**



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Melissa A. Greiner  
City Clerk  
Administrative Services Director

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Jack D. Lewis, City Manager

**2016 Hiring Range  
Approved by  
City Council  
March 23, 2016**

<b>Black Hawk Job Titles</b>	<b>2016 Survey City Average Minimum</b>	<b>2016 Black Hawk Hiring Minimum</b>	<b>2016 Black Hawk Hiring Maximum</b>
<b>Administrative Services</b>			
Administrative Services Director	\$110,739	\$121,813	\$140,085
Human Resources Generalist	\$51,923	\$57,115	\$65,682
Executive Administrative Assistant	\$47,552	\$52,307	\$60,154
Deputy City Clerk	\$47,417	\$52,159	\$59,983
<b>Community Planning &amp; Development</b>			
CP&D Administrator	\$79,735	\$87,708	\$100,864
Administrative Assistant	\$47,552	\$52,307	\$60,154
Permit Technician	\$39,999	\$43,998	\$50,598
<b>Finance Department</b>			
Finance Director	\$110,376	\$121,414	\$139,626
Accountant	\$51,090	\$56,199	\$64,629
IT Manager	\$85,222	\$93,744	\$107,806
IT Support Technician	\$50,231	\$55,254	\$63,542
<b>Fire Department</b>			
Fire Chief	\$110,636	\$121,699	\$139,954
Fire Captain	\$81,578	\$89,736	\$103,197
Fire Lieutenant	\$78,853	\$86,739	\$99,749
Fire Inspector	\$57,739	\$63,512	\$73,039
Fire Engineer	\$69,928	\$76,921	\$88,459
Senior Firefighter	\$54,283	\$59,712	\$68,668
Firefighter	\$47,020	\$51,722	\$59,481
<b>Police Department</b>			
<b>PD Admin</b>			
Police Chief	\$112,538	\$123,791	\$142,360
Police Commander	\$93,380	\$102,718	\$118,125
Police Sergeant	\$80,077	\$88,084	\$101,297
Police Detective	\$57,406	\$63,146	\$72,618
Police Officer I	\$54,282	\$59,710	\$68,667
Police Officer II	\$62,406	\$68,647	\$78,944
Police Officer III	\$64,590	\$71,049	\$81,706
Police Officer IV	\$64,426	\$70,868	\$81,498
Administrative Assistant Training Coordinator	\$47,552	\$52,307	\$60,154
Police Property Evidence Technician	\$42,631	\$46,894	\$53,929
<b>PD Records</b>			
Police Records Supervisor	\$52,154	\$57,369	\$65,975
Police Rec Specialist/Mun Ct Clerk	\$36,301	\$39,931	\$45,921
<b>Communications</b>			
Communications Officer I	\$41,700	\$45,870	\$52,751
Communications Officer II	\$47,418	\$52,159	\$59,983
<b>Public Works Department</b>			
<b>PW Admin</b>			
Public Works Director	\$108,823	\$119,705	\$137,661
Senior Civil Engineer/Water Resources	\$75,628	\$83,190	\$95,669
Senior Civil Engineer	\$75,419	\$82,961	\$95,406
GIS Analyst/Eng Assoc	\$55,627	\$61,190	\$70,368
AA PW	\$47,552	\$52,307	\$60,154
<b>Facilities</b>			
Facilities Maint Supervisor	\$60,739	\$66,813	\$76,835
Facilities Maint Worker	\$40,262	\$44,288	\$50,931
<b>Fleet</b>			
Fleet Superintendent	\$75,775	\$83,352	\$95,855
Fleet Pur & Inv Asst	\$47,552	\$52,307	\$60,154
Fleet Technician I	\$42,594	\$46,853	\$53,881
Fleet Technician II	\$44,893	\$49,383	\$56,790
Fleet Technician Aide	\$27,053	\$29,758	\$34,222
<b>Streets</b>			
Street Superintendent	\$78,801	\$86,681	\$99,683
Street Maint Worker I	\$36,359	\$39,995	\$45,994
Street Maint Worker II	\$40,757	\$44,833	\$51,557
<b>Water Ops</b>			
Water Superintendent	\$76,778	\$84,456	\$97,124
Utility Operator I	\$38,156	\$41,972	\$48,268
Utility Operator II	\$44,726	\$49,199	\$56,579
Utility Operator III	\$44,734	\$49,207	\$56,589
Utility Operator IV	\$48,780	\$53,657	\$61,706

## 2016 Hiring Range Revised

Black Hawk Job Titles	2016 Survey City Average Minimum	2016 Black Hawk Hiring Minimum	2016 Black Hawk Hiring Maximum
<b>Administrative Services</b>			
Administrative Services Director	\$110,739	\$121,813	\$140,085
Human Resources Generalist	\$51,923	\$57,115	\$65,682
Executive Administrative Assistant	\$47,552	\$52,307	\$60,154
Deputy City Clerk	\$46,760	\$51,436	\$59,152
<b>Community Planning &amp; Development</b>			
CP&D Administrator	\$79,735	\$87,708	\$100,864
Administrative Assistant	\$47,552	\$52,307	\$60,154
Permit Technician	\$39,999	\$43,998	\$50,598
<b>Finance Department</b>			
Finance Director	\$110,376	\$121,414	\$139,626
Accountant	\$51,090	\$56,199	\$64,629
IT Manager	\$84,554	\$93,009	\$106,961
IT Support Technician	\$50,489	\$55,538	\$63,869
<b>Fire Department</b>			
Fire Chief	\$115,703	\$127,274	\$146,365
Fire Captain	\$77,139	\$84,853	\$97,581
Fire Lieutenant	\$78,901	\$86,791	\$99,809
Fire Inspector	\$57,739	\$63,512	\$73,039
Fire Engineer	\$63,290	\$69,619	\$80,062
Senior Firefighter	\$54,437	\$59,881	\$68,863
Firefighter	\$48,264	\$53,090	\$61,054
<b>Police Department</b>			
<b>PD Admin</b>			
Police Chief	\$112,538	\$123,791	\$142,360
Police Commander	\$93,380	\$102,718	\$118,125
Police Sergeant	\$80,077	\$88,084	\$101,297
Police Detective	\$57,406	\$63,146	\$72,618
Police Officer I	\$54,282	\$59,710	\$68,667
Police Officer II	\$56,996	\$62,696	\$72,100
Police Officer III	\$59,846	\$65,831	\$75,705
Police Officer IV	\$62,838	\$69,122	\$79,491
Administrative Assistant Training Coordinator	\$47,552	\$52,307	\$60,154
Police Property Evidence Technician	\$42,631	\$46,894	\$53,929
<b>PD Records</b>			
Police Records Supervisor	\$52,154	\$57,369	\$65,975
Police Rec Specialist/Mun Ct Clerk	\$36,301	\$39,931	\$45,921
<b>Communications</b>			
Communications Officer I	\$41,700	\$45,870	\$52,751
Communications Officer II	\$45,702	\$50,273	\$57,814
<b>Public Works Department</b>			
<b>PW Admin</b>			
Public Works Director	\$108,823	\$119,705	\$137,661
Senior Civil Engineer/Water Resources	\$75,628	\$83,190	\$95,669
Senior Civil Engineer	\$73,670	\$81,037	\$93,193
GIS Analyst/Eng Assoc	\$55,627	\$61,190	\$70,368
AA PW	\$47,552	\$52,307	\$60,154
<b>Facilities</b>			
Facilities Maint Supervisor	\$60,739	\$66,813	\$76,835
Facilities Maint Worker	\$40,262	\$44,288	\$50,931
<b>Fleet</b>			
Fleet Superintendent	\$75,775	\$83,352	\$95,855
Fleet Pur & Inv Asst	\$47,552	\$52,307	\$60,154
Fleet Technician I	\$41,677	\$45,845	\$52,722
Fleet Technician II	\$44,893	\$49,383	\$56,790
Fleet Technician Aide	\$27,053	\$29,758	\$34,222
<b>Streets</b>			
Street Superintendent	\$78,801	\$86,681	\$99,683
Street Maint Worker I	\$36,359	\$39,995	\$45,994
Street Maint Worker II	\$40,757	\$44,833	\$51,557
<b>Water Ops</b>			
Water Superintendent	\$77,511	\$85,262	\$98,051
Utility Operator I	\$38,156	\$41,972	\$48,268
Utility Operator II	\$44,726	\$49,199	\$56,579
Utility Operator III	\$44,734	\$49,207	\$56,589
Utility Operator IV	\$48,780	\$53,657	\$61,706

**City of Black Hawk  
2016 Job Description**

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**JOB TITLE:** Police ~~Lieutenant~~Commander  
Department

**DEPARTMENT:** Police

**REPORTS TO:** Police Chief

**EXEMPT:** Yes

**HIRING RANGE:** \$47.4480 – \$54.5653 / HR

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**SUMMARY**

The ~~Lieutenant~~Commander rank is the second highest rank in the Police Department and reports directly to the Chief of Police. ~~Lieutenant~~Commander(s) may assume the duties of the Chief of Police during absences and perform related functions in that capacity.

Specifically, ~~Lieutenant~~Commander(s) directly supervise all employees under their command to include sergeants, supervisors; officers and any employee in the absence of their direct supervisors. ~~Lieutenant~~Commanders(s) are in charge of various law enforcement and administrative functions. They perform a variety of duties such as reviewing correspondence, planning, organizing, directing, leading, creating, and supervising. They ensure administrative and criminal investigations are conducted appropriately; review the performance of other employees; enforce and develop policies; ensure subordinates are trained and prepared; inspect personnel and equipment; and conduct interviews of sworn and civilian personnel.

**SUPERVISION EXERCISED**

Exercises full supervision over sworn and non-sworn personnel assigned to the Department.

**Patrol ~~Lieutenant~~Commander**

- The assigned ~~Lieutenant~~Commander insures compliance with CIRSA standards and training requirements.
- Coordinates applicant interviews.
- Serves as the primary investigative supervisor in all Professional Standards Investigations and makes recommendations as to findings.
- Maintains training schedules and training logs for the entire department.
- Manages the firearms range and instructors.
- Supervises Detectives and ensures cases are assigned and disposed of properly.
- Coordinates multi-jurisdictional training with other departments and agencies.
- Supervises Patrol Sergeants and subordinates.
- Manages Patrol Operations.

- Chair of the Police Vehicle Accident Review Committee
- Supervises Crime Scene Investigations

### **Administration LieutenantCommander**

- The assigned Administrative LieutenantCommander serves as the primary administrator for the Department's RMS, CAD, and Court software. The Administration LieutenantCommander coordinates computer system maintenance and provides general trouble shooting as needed.
- Responsible for the compilation of statistical crime data and conducts crime analysis functions as needed.
- Responsible for ensuring adherence to State accreditation requirements and the management of the department's policy and procedure manual, which includes; drafting new policies for staff review; dissemination, and new policy training.
- Supervises the Records Section and responsible for overseeing day-to-day Records and Communication's Operations.
- Supervises property and evidence functions, including the proper storage and disposition of evidence.
- Coordinates applicant process.
- Conducts research as needed into new policies or procedures.
- Ensures SOP's are in place and up to date for all sections within the department.
- Coordinates all audits on critical processes and insures proper reporting and retention of pursuit files and use of force.
- Responsible for conducting and coordinating an annual citizen survey.
- Responsible for coordinating an annual report within the department.
- Supervises the Communications Center and its employees.
- Supervises the Records Section and its employees.
- Responsible for Department Strategic Planning.
- Building Maintenance coordination.
- Participates in 911 Authority Board meetings.
- Coordinates licensing and operation of the departments radio system.

### **ESSENTIAL DUTIES AND RESPONSIBILITIES**

- Establishes and maintains an effective system of communication throughout the organization and encourages a cooperative team function.
- Supervises personnel, sworn and non-sworn, offering guidance, establishing work priorities and evaluating performance.
- Reviews all employees' evaluations for general guidance to supervisors; composes all supervisory personnel's evaluations and personally meets with the assigned personnel.
- Provides guidance during emergency law enforcement problems as needed.

- Oversees planning for patrol and investigative responses to crime patterns and trends.
- Responds to serious or unique calls to oversee and instruct police officers in the proper handling of the incident.
- Responsible for victim assistance coordination.
- Effectively represents the organization to department employees, customers, other city departments, other criminal justice agencies and the general public.
- Organizes and participates in weekly staff meetings; guides weekly supervisory meetings; meets individually with supervisors and/or supervisor and employees, as needed.
- Develops plans and implements Department goals and objectives; completes research and development for policies and procedures; recommends and administers policies and procedures, subject to approval by the Chief of Police.
- Evaluate, train, and motivate supervisory personnel; work with supervisory employees to correct deficiencies. Impose progressive discipline and instruction; as well as employee development to all supervisors.
- Recommend constructive, corrective action and termination procedures involving any department employee to the Chief of Police.
- Confer with citizens and city officials on city crime prevention, law enforcement problems and assist in the development of innovative municipal law enforcement policies and solutions, as directed by the Chief of Police.
- Analyze administrative or operational problems and recommends solutions to management staff and/or Chief of Police. Adjusts department methods to new situations as required. Prepares special staff reports and assignments.
- Assists the Chief of Police to coordinate department activities with the management team, employees, outside agencies and organizations; prepare and present staff reports and other necessary correspondence. Effectively dispense advice, guidance, direction and authorization to carry out major plans and procedures, consistent with established policies and City Manager approval.
- Operates a variety of tools and equipment specific to law enforcement duties to include a police radio, baton, handcuffs, handgun, various firearms and other weapons as required.
- Examines and confirms compliance with rules, procedures, and objectives by assigned personnel.
- Investigates complaints, prepares case histories, field training reports, activity reports, staff reports, and incident reports.
- Explains, follows rules, procedures, communicates Police Department goals, objectives and implements instructions.
- Identifies operational problems and recommends solutions.
- Instructs police officers, in a variety of law enforcement subjects individually or as a group, participates in training courses and programs.
- Maintains employee management logs and progress reports; completes evaluations.

- Researches, updates and maintains department equipment.
- Instrumental in keeping communication open, clear and concise with assigned personnel as well as immediate supervisor.
- Maintains a strict adherence to confidentiality regarding personnel issues, professional standards, investigations or the protection of crime victims.
- Manages the activities of the Police Department, Administration, Communications, Investigations and Patrol. Reviews monthly operating results of the department and compares them to established objectives; ensures appropriate measures are taken to correct deficiencies.

## **QUALIFICATIONS**

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or the ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

### **Knowledge of:**

- A solid and well-rounded background in police work with a minimum of three years increasingly responsible police supervisory and management experience.
- Familiarity with program performance and management by objective budget approaches.
- Experience working with and effectively utilizing the talents of a skilled professional and technical staff.
- Must be self-confident, independent worker and possess professional integrity.
- Must have strong leadership skills, an attitude conducive to team building, and ability to incorporate organizational and personal goals.
- Superior written communications. Knowledge to be an articulate, effective public speaker and present a high visibility image, personally and professionally.
- State, Federal and local laws, ordinances and regulations applicable to the area assigned.
- Police Department organization, policies, practices, procedures, goals and objectives, rules, regulations and equipment.
- Effective supervisory and instructional principles and techniques.
- Community-based policing practices.
- Patrol, traffic enforcement, criminal investigation and related police services.
- Laws and rules governing criminal evidence, arrest, custody, search and seizure.
- Legal codes, to include penal, vehicle, health and safety codes; civil rights and enforcement procedures.

- City and county geography.
- English usage and grammar.
- Computer applications as they relate to area assigned.

**Ability to:**

- Ability to oversee and direct major crime investigations.
- Ability to provide objective analysis and realistic projections regarding department planning and ability to work comfortably and effectively as a member of the management team.
- Ability to give public presentations, speeches or training to general public under favorable or unfavorable conditions.
- Ability to maintain honest, open relationships and effectively interact with department staff, other City of Black Hawk departments, outside criminal justice agencies and citizen groups.
- Ability to excel in participatory climate without abdicating decision-making responsibilities, ability to maintain an effective organizational communication system, ability to deal fairly, firmly and effectively with all employees and employee groups and ability to maintain superior performance levels while faced with limited personnel and fiscal resources.
- Ability to develop and motivate command personnel, delegate effectively and function well in a systematic decision making process. Must have demonstrated leadership ability at the command level.
- Ability to read, analyze and interpret general Department periodicals, professional journals, policies and procedures, or governmental regulations.
- Ability to respond to common inquiries from the general public, business owners, regulatory, or law enforcement agencies.
- Ability to write concise and clear reports, and business correspondence.
- Coordinate, train and supervise the work of employees for an assigned unit/work section.
- Prepare and present accurate and concise staff reports and make oral presentations.
- Analyze and recommend solutions to law enforcement problems.
- Demonstrate proper use of applicable weapons, proper patrol and investigative procedures.
- Understand and carry out oral and written instructions independently.
- Communicate effectively orally and in writing.
- Deal with complex, fast-paced and/or volatile law enforcement situations.
- Remember names, faces and details of incidents. Meet the public with courtesy and tact. Establish and maintain effective relationships with those contacted in the course of work.

- Exercise self-control, independent, sound judgment in evaluating situations and in emergency/hazardous situations, makes quick, effective and reasonable decisions.

#### **Certifications:**

- Must possess a valid Colorado driver's license with safe driving record.
- Must be certified as having successfully completed the basic course of an accredited police academy meeting Colorado Peace Officer Standards and Training requirements.

### **EXPERIENCE AND EDUCATION**

Any combination equivalent to the experience and education that could likely provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge, skill and ability would be:

#### **Education and Experience:**

- Bachelor's degree from an accredited college or university in a related field or the equivalent of four (4) years of experience in a sworn, supervisory level position,  
-or-
- Associate of Arts degree in a related field, 60 or more accredited college credits or the equivalent of three (3) years of experience in a sworn, supervisory level position.

### **PHYSICAL DEMANDS**

The physical demands and work environment described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Though most work is performed in an office environment, this position may also respond to criminal activities and critical incidents and be exposed:

- To situations in which there are dangerous or deadly weapons. To use physical force to restrain violent, combative individuals. To use or be subjected to deadly physical force. In high-stress situations with little or no warning and be involved for long periods of time. To contact with individuals who have been exposed to infectious or contagious diseases.
- While performing the duties of this job, the employees are regularly required to walk, sit, use hands to manipulate or feel objects, tools, or controls; reach with

hands and arms; climb or balance; stoop, stand, kneel, crouch or crawl; talk, smell and hear.

- The employee must be able to wear police uniform and related necessary equipment that can weigh up to 30 pounds, as needed.
- The employee may occasionally lift and/or move more than 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.
- While performing the duties of this job, the employee may be exposed to blood, other bodily fluids/products, communicable diseases, grease/oil, a variety of fumes or airborne particles, extreme temperatures, solvents or chemicals, electrical hazards, various weather conditions, vehicular traffic and smoke.
- The employee frequently drives or is a passenger in a motor vehicle. May be seated for long periods of time. May operate a motor vehicle in adverse weather conditions. May operate a motor vehicle or be a passenger in a vehicle operated at high speeds.

## **NECESSARY REQUIREMENTS**

- Must pass a thorough background investigation, including but not limited to, a polygraph examination, psychological assessment and statement from a credit-reporting bureau. Applicants with a record of conviction for serious misdemeanors or felony crimes will be disqualified.
- Must be able to perform in a busy environment with frequent interruptions.
- Employees are expected to follow all types of safety rules and wear the department provided safety equipment. To include but not limited to: seatbelts, body armor, safety glasses eye and ear protection, etcetera.

## **COMMENTS**

The intent of this classification is to describe the types of job tasks and levels of responsibility and difficulty required of persons assigned to this classification title. This is not to be considered a detailed description of every duty/responsibility of the job.

The City of Black Hawk is an Equal Opportunity Employer. Pursuant to the *Immigrations Reform and Control Act*, it is the City's intention to hire only individuals who are United States citizens or aliens authorized to work and live in the United States.

**RESOLUTION 30-2016**  
**A RESOLUTION**  
**APPROVING A**  
**CERTIFICATE OF**  
**APPROPRIATENESS FOR**  
**THE EXTERIOR**  
**REHABILITATION OF**  
**PROPERTY LOCATED AT**  
**400 CHASE STREET**

**STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK**

**Resolution No. 30-2016**

**TITLE: A RESOLUTION APPROVING A CERTIFICATE OF APPROPRIATENESS FOR THE EXTERIOR REHABILITATION OF PROPERTY LOCATED AT 400 CHASE STREET**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

**Section 1.** The City Council hereby determines to conditionally approve the Certificate of Appropriateness for the exterior rehabilitation of property located at 400 Chase Street based on the criteria set forth in the staff report dated April 6, 2016. The Certificate of Appropriateness application for 400 Chase Street will meet the intent of the criteria outlined in the City of Black Hawk Historic Restoration and Community Preservation Fund Guide to Programs, Section 16-368 of the Black Hawk Municipal Code, and Sections 2, 3, 4, 5, 6 and 7.4 of the City of Black Hawk Residential Design Guidelines, and thus condition approval is provided upon satisfaction of the following conditions:

- A. Due to inconclusive evidence of the age of the windows from the limited window survey, the preference is for new uniform window types with durable exterior finishes that most closely resemble historical windows with true divided lights. Staff to administratively approve final determination of use of either modern thermopane true divided lights or false muttons, whichever most closely resembles a historic window;
- B. Allow frosted window at back bathroom, since it is not visible from the street right-of-way; and
- C. Repurpose the existing house siding still in good condition to repair/replace the deteriorated siding on the shed/carriage house and to replace the existing siding on the house with new uniform period style siding.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

## NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Black Hawk Board of Aldermen shall hold a public hearing concerning a Certificate of Appropriateness for the rehabilitation of the historic house, outbuilding, and site on property described in Exhibit A and generally located at 400 Chase Street, pursuant to the City of Black Hawk zoning ordinance.

The public hearing is to be held before the City of Black Hawk Board of Aldermen on Wednesday, April 27, 2016 at 3:00 p.m. or as soon as possible thereafter. The public hearing shall be held in the City of Black Hawk Council Chambers located at 211 Church Street, Black Hawk, Colorado, 80422, or at such other time or place in the event these hearings are adjourned.

ALL INTERESTED PARTIES  
MAY ATTEND

Melissa A. Greiner  
City Clerk

Exhibit A

S: 12 T: 3S R: 73W Subd: BLACK HAWK Block: 018 Lot: 003 AND:- Lot: 004  
PARCEL DESC BY QUIET TITLE 568/75 & IMPS

**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** Certificate of Appropriateness for Rehabilitation of 400 Chase Street.

**RECOMMENDATION:** Based on the discussion points and Staff recommendations, the Historic Preservation Commission recommends the following motion to the Mayor and Board of Aldermen:

*CONDITIONAL APPROVAL of Resolution No. 30-2016 for the Certificate of Appropriateness for the exterior rehabilitation of property located at 400 Chase Street based on the criteria set forth in the staff report dated April 6, 2016. The Certificate of Appropriateness application for 400 Chase Street will meet the intent of the criteria outlined in the City of Black Hawk Historic Restoration and Community Preservation Fund Guide to Programs, Section 16-368 of the Black Hawk Municipal Code, and Sections 2, 3, 4, 5, 6 and 7.4 of the City of Black Hawk Residential Design Guidelines, and thus condition approval is provided upon satisfaction of the following conditions:*

- A. Due to inconclusive evidence of the age of the windows from the limited window survey, the preference is for new uniform window types with durable exterior finishes that most closely resemble historical windows with true divided lights. Staff to administratively approve final determination of use of either modern thermopane true divided lights or false muttons, whichever most closely resembles a historic window;*
- B. Allow frosted window at back bathroom, since it is not visible from the street right-of-way; and*
- C. Repurpose the existing house siding still in good condition to repair/replace the deteriorated siding on the shed/carriage house and to replace the existing siding on the house with new uniform period style siding.*

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

The applicants, Josh Smith and Mary Keefhus, are requesting a Certificate of Appropriateness (CofA) for the rehabilitation of the historic house, outbuilding, and site at 400 Chase Street. In 2015, HPC and City Council approved the demolition of a non-historic garage as well as two non-historic additions on the building; that demolition has been completed. The site today contains a historic house and outbuilding.

The site and building features covered by this proposed rehabilitation are: **Site:** gravel parking, trees, stone retaining walls, wood retaining wall, stone planters, permeation grouting (foundation), fencing, bridges (vehicular & pedestrian), walkways, utilities; **Historic Residence:** porch, siding, windows, doors, roof, chimney, gutters & downspouts, foundation, cellar entrance, lighting; **Historic Outbuilding (Carriage House):** siding, window, door.

At the April 19, 2106 meeting of the Historic Preservation Commission, the Commissioners discussed if there was sufficient evidence that the Certificate of Appropriateness application met the intent of the criteria outlined in the City of Black Hawk *Historic Restoration and Community Preservation Fund Guide to Programs*, Section 16-368 of the *Black Hawk Municipal Code*, and Sections 2, 3, 4, 5, 6 and 7.4 of the *City of Black Hawk Residential Design Guidelines*.

The Commission based their recommendation on the following discussion points:

1. Period of Significance is 1859-1918.
2. Structure has been abandon for 20+ years.
3. Anthony & Associates provided a *limited* survey to provide insight about the age and general condition of the wood and windows. A detailed, in depth investigation was not requested by the City or performed by Anthony & Associates.
4. Structure modifications indicate extensive use of repurposed materials.
5. Windows; old but not original:
  - Although, the majority of the windows within the core and shell of the original structure are old and representative of the historic character, age of the windows is unconfirmed.
  - The study could not confirm that there are original historic windows remaining.
  - Windows are generally inoperable with no locking hardware.
  - Due to inconclusive evidence, the preference is for new uniform window types with durable exterior finishes that most closely resemble historical windows with the divided lights
  - Modern thermopane true divided lights versus false mutttons; administrative approval/staff determination.
  - Allow frosted window at back bathroom since it is not visible from the street right-of-way.
6. Siding:
  - The wood study indicates siding condition to be good, fair, and poor, with a minimum of four replacement or partial replacement campaigns of the siding.
  - The preference is to use the siding in good condition to repair/replace the deteriorated siding on the shed/carriage house.
  - With subsequent alterations made to the structure siding, the preference is to replace with new uniform period style siding.

<b><u>AGENDA DATE:</u></b>	April 27, 2016
<b><u>WORKSHOP DATE:</u></b>	N/A
<b><u>FUNDING SOURCE:</u></b>	Preservation Easement/Rehabilitation Grant
<b><u>DEPARTMENT DIRECTOR APPROVAL:</u></b>	[ X ]Yes      [ ]No
<b><u>STAFF PERSON RESPONSIBLE:</u></b>	Cynthia L. Linker, CP&D Administrator
<b><u>DOCUMENTS ATTACHED:</u></b>	Resolution No. 30-2016, Public Hearing Notice, Staff Report, Attachments A-D

**RECORD:**

[ ] Yes      [ X ] No

**CITY ATTORNEY REVIEW:**

[ X ] Yes      [ ] N/A

**SUBMITTED BY:**

**REVIEWED BY:**

*Cynthia L. Linker*

*Jack D. Lewis*

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Cynthia L. Linker

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Jack D. Lewis, City Manager



# **Staff Report**

**CITY OF BLACK HAWK  
PLANNING / LAND USE**

Date prepared: April 6, 2016  
HPC Meeting Date: April 19, 2016  
Council Meeting Date: April 27, 2016

**For:** Mayor and Board of Aldermen  
**Project:** Certificate of Appropriateness for Rehabilitation of 400 Chase Street  
**Property Address:** 400 Chase Street  
**Property Owners:** Josh Smith and Mary Keefhus  
**Zoning:** Historic Residential (HR)  
**Prepared by:** Deon Wolfenbarger, Historic Preservation Consultant  
**Reviewed by:** Cynthia Linker, CP&D Administrator

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**BACKGROUND:**

The applicants, Josh Smith and Mary Keefhus, are requesting a Certificate of Appropriateness (CofA) for the rehabilitation of the historic house, outbuilding, and site at 400 Chase Street. In 2015, HPC and City Council approved the demolition of a non-historic garage as well as two non-historic additions on the building; that demolition has been completed. The site today contains a historic house and outbuilding.

The estimated date of construction for the house at 400 Chase Street is ca. 1898. Period of Significance is 1859-1918. The property was first evaluated for its historic and architectural significance in 1986 when the National Park Service conducted a survey of historic resources in the communities of Black Hawk, Central City, and Nevadaville. In 1991, when Black Hawk was added to an expanded National Historic Landmark district, 400 Chase Street was counted as a “contributing” building to the historic district, meaning it had retained sufficient integrity to contribute to the historic character of the district. The building is a National Folk vernacular “gable-front-and-wing” building, containing a side gable wing and a front gable wing that joined to form an L-shaped building. The front entry door and one-story porch is set within the ell.

The intent of the CofA application as regulated by Sec. 16-368 of the City of Black Hawk Municipal Code is to ensure that all development and redevelopment is reviewed prior to construction, reconstruction, alterations or demolition. A CofA application requires Staff to review a proposed development for compliance with design and zoning standards as well as the Historic Restoration & Community Preservation Fund, and deem it acceptable for review by the Historic Preservation Commission (HPC). The regulations for a CofA have been reviewed by staff and comments are included below. Attached to this staff report are the CofA supporting documents. Excerpts from the supporting documents are included in the report. The HPC shall review the development and provide a recommendation to City Council.

The following site and building features will be covered by this proposed rehabilitation:

**Site**

- Gravel parking
- Trees
- Stone retaining walls
- Wood retaining wall
- Stone planters
- Permeation grouting (foundation)
- Fencing
- Bridges (vehicular & pedestrian)
- Walkways
- Utilities

**Historic Residence**

- Porch
- Siding
- Windows
- Doors
- Roof
- Chimney
- Gutters & downspouts
- Foundation
- Cellar entrance
- Lighting

**Historic Outbuilding (Carriage House)**

- Siding
- Window
- Door

A description of the proposed changes for each of these features is contained in the following sections, with excerpts from the relevant Residential Design guidelines.

*Existing Front (North) Elevation*



AB NORTH ELEVATION  
1/8" = 1'-0"

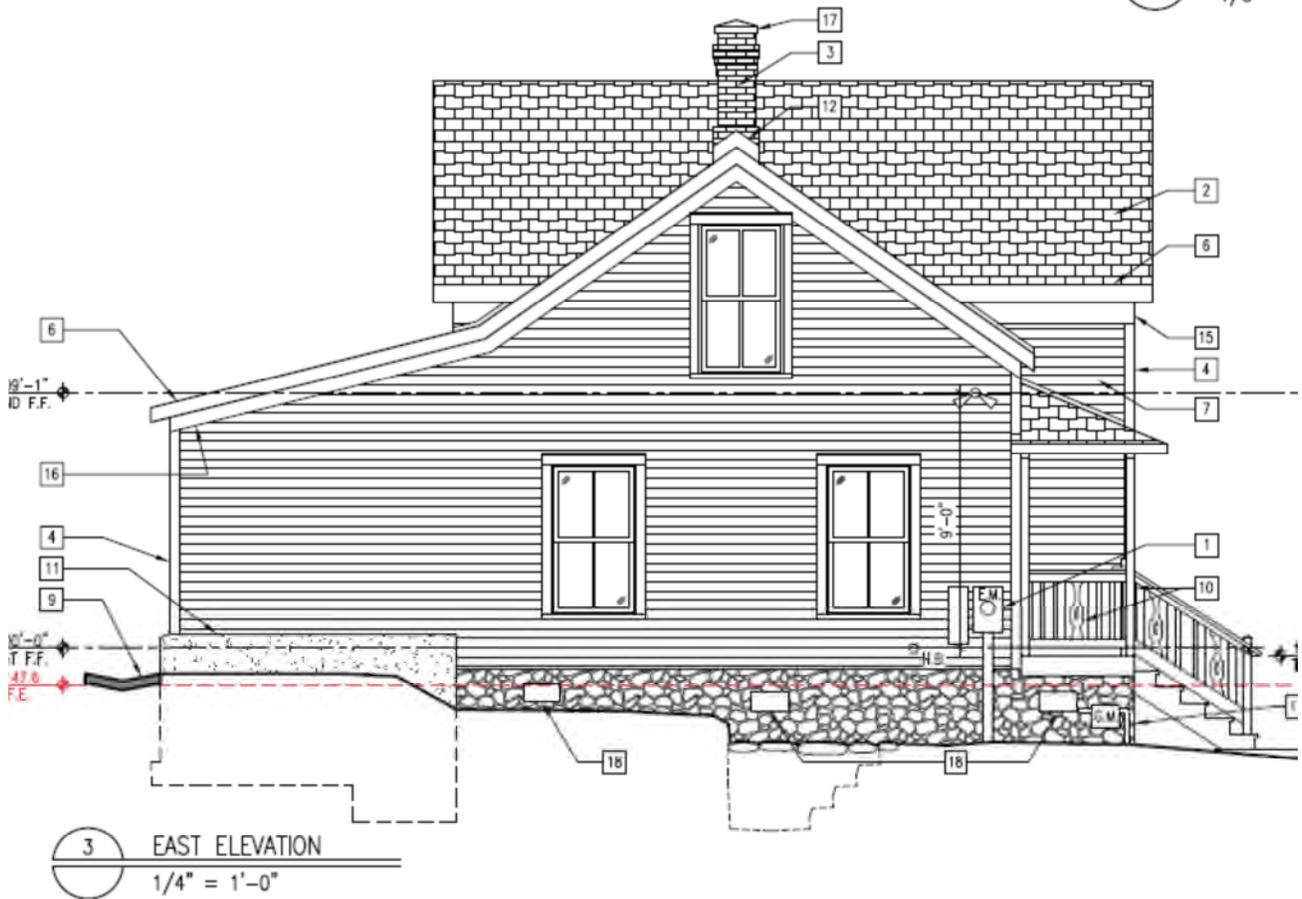
*Proposed Front (North) Elevation*



Existing East Elevation



Proposed East Elevation

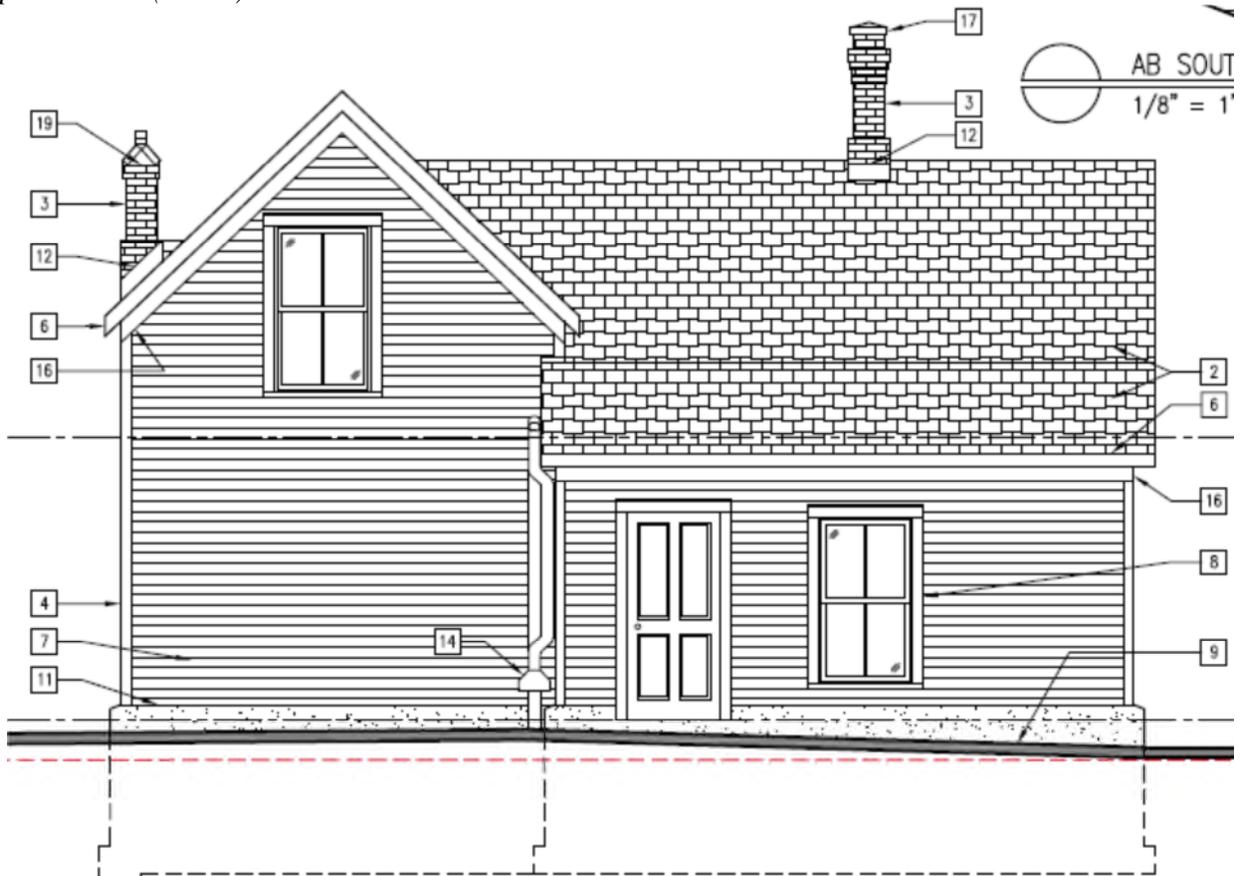




*Existing Rear (South) Elevation*



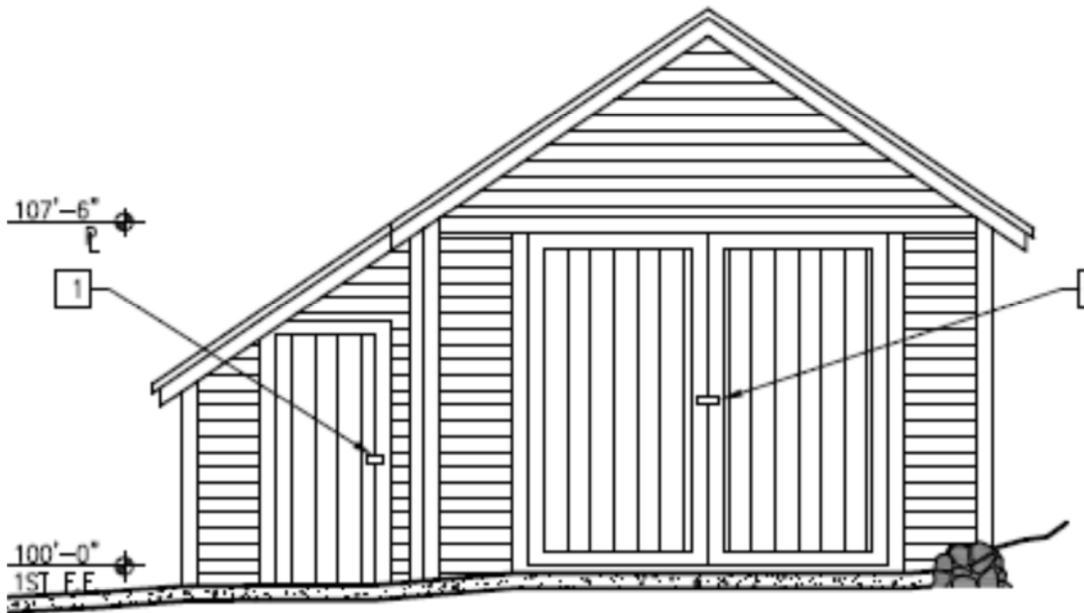
*Proposed Rear (South) Elevation*



*Existing Outbuilding – North Elevation*



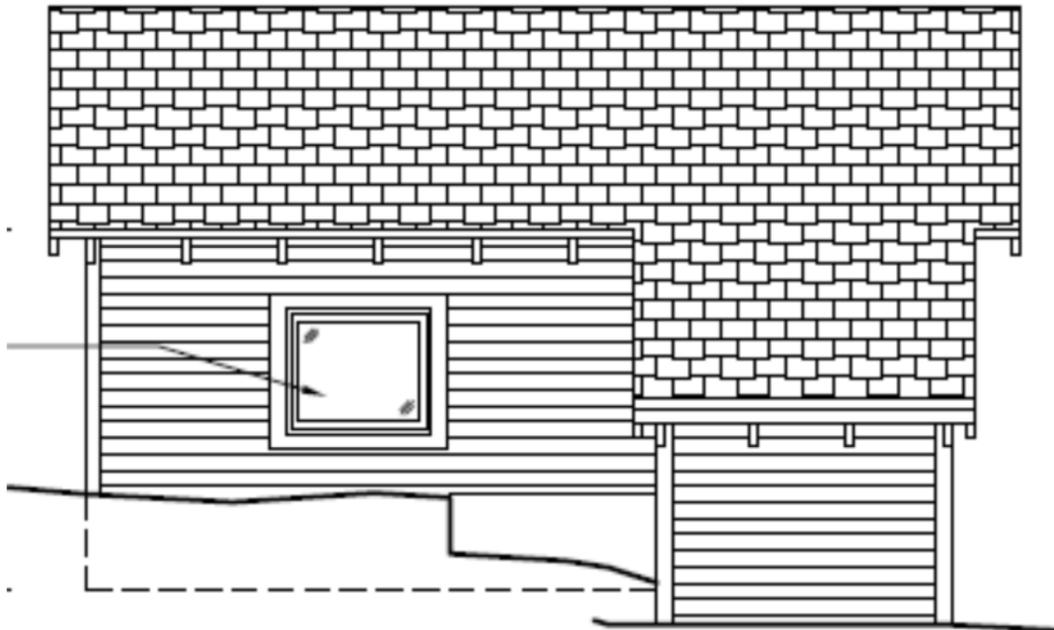
*Proposed Outbuilding – North Elevation*



*Existing Outbuilding – East Elevation*



*Proposed Outbuilding – East Elevation*



## **REVIEW CRITERIA:**

### **Applicable City of Black Hawk Regulations**

#### **Certificate of Appropriateness:**

Excerpts from:

**City of Black Hawk  
Zoning Code  
Chapter 16-368, City Council historic review process**

**Sec. 16-368. City Council historic review process.** Any person seeking to renovate the exterior of, add to or construct a new building shall be subject to the following procedures. Any such renovation, construction or demolition shall be subject to the City's design standards.

**16-368(3)(a).** No building permit or site development plan shall be issued unless accompanied by a Certificate of Appropriateness (CofA) issued by the City Council for any of the following acts:

1. Construction of a new building, structure or improvement
2. Alteration or reconstruction of, or addition to, the exterior of any improvement;
3. Demolition of any improvement;
4. Construction or erection of or addition to any improvement upon any land located within the City;
5. Excavation requiring an excavation permit.

**16-368(3)(f):** Criteria for determining appropriateness of erection, construction, reconstruction, alteration. In determining the appropriateness of work (other than demolition) as proposed in an application for a site development plan or a building permit, the Board of Aldermen shall consider the following:

1. All plans, drawings and photographs as may be submitted by the applicant.  
*The applicant has submitted all required plans and building elevations.*
2. Information presented at a public hearing held concerning the proposed work.  
*Findings and recommendations from the Historic Preservation Commission will be presented to the Board of Aldermen at the Public Hearing scheduled for April 27, 2016.*
3. The purpose of this Chapter.  
*Staff finds the proposed development to be in conformance with the City of Black Hawk zoning and design standards.*
4. Compliance with the ordinances of the City and the payment of all fees required by the ordinances of the City.  
*The applicant has and will continue to pay all necessary fees required by the City.*

5. The historical and architectural style, the general design, arrangement, texture, materials and color of the development, building or structure in question or its appurtenance fixtures; the relationship of such features to similar features of the other buildings within the City and the position of the building, structure, park or open space in relation to public right-of-way and to other buildings and structures in the City.  
*The existing historic residence is a National Folk vernacular “gable-front-and-wing” building, meaning that there was a side gable wing and a front gable wing that joined to form an L-shaped building. The front entry door and one-story porch is set within the ell. The historic outbuilding is a gable-front building with a shed-roofed addition on the east. Both buildings are clad in horizontal lap wood siding. The proposed rehabilitation of both structures will retain their key character-defining features that identify them as historic buildings that contribute to the National Historic Landmark District.*
6. The effects of the proposed work upon the protection, enhancement, perpetuation and use of the City which cause it to possess a special character or special historical or aesthetic interest or value.  
*The historic house is a contributing building to the National Historic Landmark District. The HPC should review the proposed alterations and evaluate their effect on the historic property’s potential eligibility.*
7. The design standards for the City.  
*The proposed structure has been reviewed against the Residential Design Guidelines for historic buildings. Sections 2, 3, 4, 5, 6 and 7 of the Residential Design Guidelines are the applicable sections; see below for description of proposed work, excerpts of the applicable sections, and evaluation of the proposed alterations.*

**City of Black Hawk  
Residential Design Guidelines  
2. Site Design**

**2.1: Site Design**

- 2.2.1. Respect historic settlement patterns and traditional patterns of building alignment and orientation.  
*The proposed rehabilitation will maintain the historic building and its outbuilding in their original locations.*

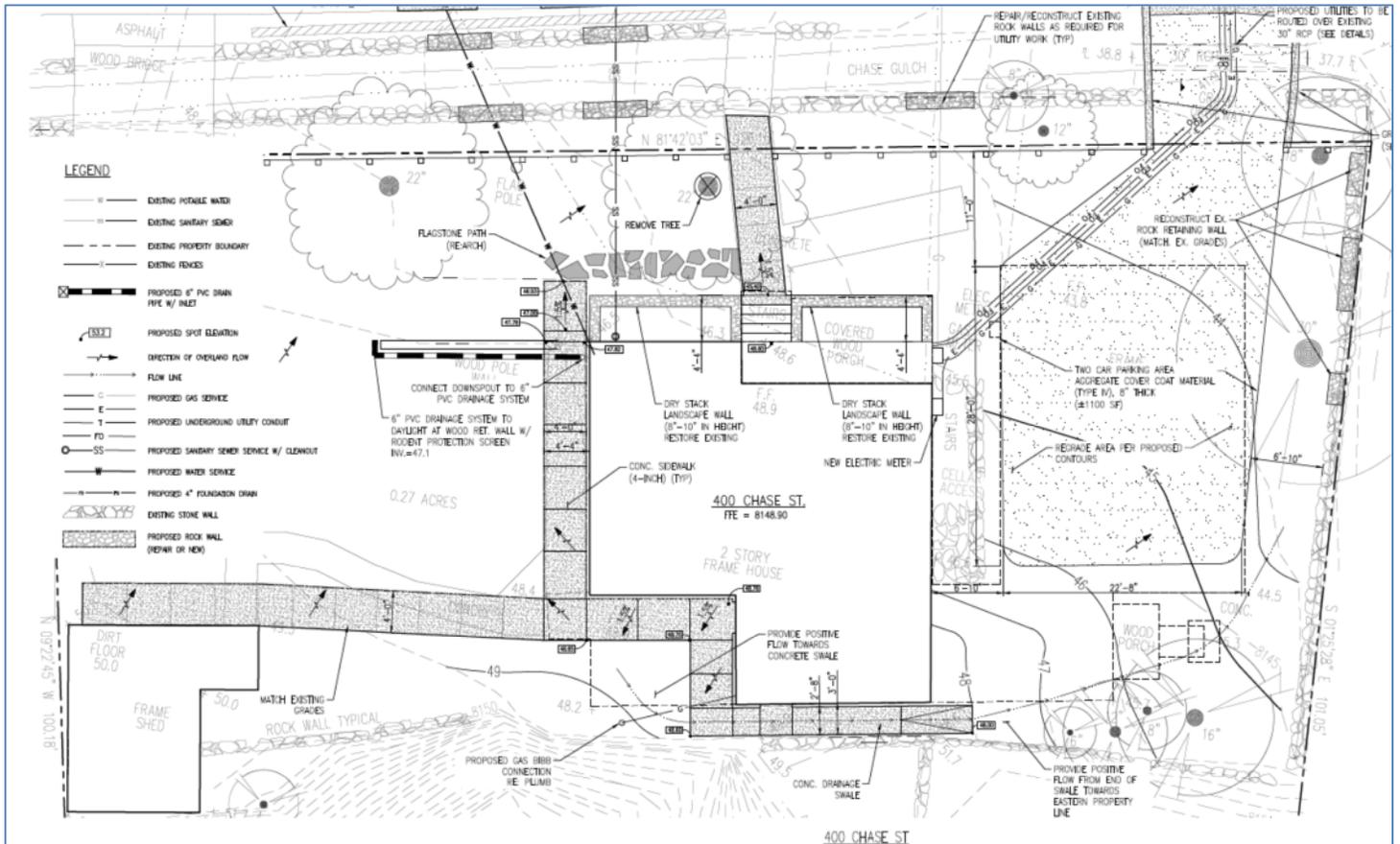
**2.2: Topography and Grade**

- 2.2.1 Existing topography should be maintained whenever possible.  
*The topography will be maintained throughout the site, with the exception of slight grading around the house, and in the proposed gravel parking area on the east side of the house.*

- b. Where natural rocks remains in stable condition, leave it undisturbed.  
*The natural rock cliffs behind the house and outbuilding will be undisturbed.*

2.2.5. All land that is visible from a public way shall be reclaimed in a manner described below. Preferred reclamation methods are: Plantings, as provided in the landscape standards; Natural rock, in a stable condition; Concrete retaining walls faced with native stone or appropriate wood cribbing.  
*The land that is disturbed by construction will be seeded in native grass, except for the gravel parking proposed for the east side of the property. The parking, situated on the site of the demolished non-historic garage, will be compacted and covered with 3/4" washed gravel rock.*

2.2.6. Retain existing natural drainage patterns where possible; design new drainage systems to complement and follow the existing terrain.  
 a. Design drainage systems and storm water detention basins as amenities.  
*The drainage system around the west side of the house will be handled by a new concrete sidewalk. On the south (rear) side of the house, the existing concrete swale will be demolished, and a new 4" thick concrete swale will be installed (see site plan below). While these systems are functional, they are not perceived as amenities per the guidelines.*



## 2.3: Fencing

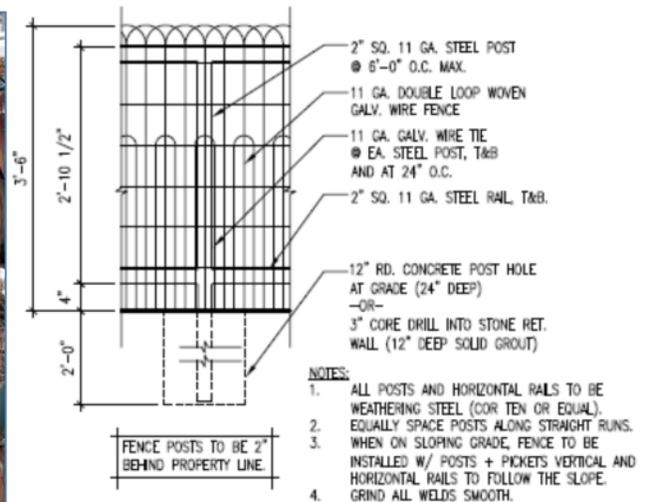
- 2.3.1. Painted wood, wrought iron, picket, woven wire, rail or stone fences are appropriate in residential-type areas.

*The historic woven wire fencing on the east side of the property will be retained; new posts will be replaced in one location due to existing collapsed stone retaining wall. New woven wire fencing in a similar design will be installed along the front property line; (see site plan above for location).*

Existing fence on east boundary



Detail of proposed fence on north boundary



- 2.3.4. Fences shall be similar to those seen historically.

*The new fence replicates the key features of the historic wire fence already found on the property.*

## 2.4: Retaining walls

- 2.4.1. Historic stone walls and other site features should be repaired or restored, replacing only those portions that are deteriorated beyond repair.

*The historic dry-stack stone retaining wall on the east boundary will be re-stacked only in those sections that are collapsed, (see site plan on previous page). This follows the recommendations found in the "Stone Masonry Foundation and Retaining Wall Evaluation Investigation" conducted by Atkinson-Noland & Associates, Consulting Engineers (see Attachment B.) The low stone planters along the front porch, the front elevation, and on the west side of the house will be re-stacked after construction is completed.*

## Other site features

Sidewalks, parking and bridges are not covered by the residential design guidelines. In these instances, the “Secretary of the Interior’s Standards for the Treatment of Historic Properties” was used to evaluate the proposal.

*This application proposed to repair the existing east vehicular bridge by removing debris from the bridge, laying a new gravel base, and adding concrete curbs.*

*The pedestrian bridge and the west vehicular bridge are proposed for demolition; as these bridges are not historic, demolition would be acceptable under the Secretary of the Interior’s Standards.*

*A new parking area will be installed in the location of the demolished non-historic garage. This parking will be comprised of ¾” washed gravel, which will allow for drainage on the site.*

*The concrete sidewalk on the west side of the house will be replaced in-kind. The concrete sidewalk leading from the house to the shed will be realigned for a more direct pathway. A new concrete sidewalk will lead from the front porch steps to the parking area (not shown on site map), and a flagstone path will lead from the porch steps to the west sidewalk. The concrete sidewalk (date unknown) leading from the porch steps to the pedestrian bridge will be removed, to discourage use of this bridge. Due to the topography, the new concrete sidewalk will not be very visible from the street, and the final plans will entail the same or slightly less concrete on the site, which would be preferred by the Secretary of the Interior’s Standards.*

## 3. Rehabilitation of Historic Structures

### 3.1: Appropriateness of Use

- 3.1.1 Seek uses that are compatible with the historic character of the building.  
*After rehabilitation, the historic dwelling will continue to be used for residential purposes. The outbuilding will be used for storage; both of these uses are compatible with the historic character of the building.*

### 3.2: Roofs

- 3.2.A.1. Preserve the original roof form. This includes the roof’s shape and decorative features.  
*The original roof form will be retained.*
- 3.2.B.2. When repair or replacement is necessary, use materials similar to the original.  
*The historic house likely had wood shingles when constructed; these are no longer allowed in Black Hawk. The application proposed to replace the existing deteriorated shingles with Owens Corning Oakridge Series in “Onyx Black.” The material is an acceptable substitute, although the color is not similar to wood shingles.*

*Oakridge Series, Onyx Black*



3.2.C.3. Half round galvanized gutters are historically appropriate and preferred on residential homes.

*The project proposes to install half found galvanized gutters and round downspouts.*

### **3.3: Exterior Materials: Wood Siding and Masonry**

3.3.A.1. Original historic finish materials should be preserved, rehabilitated and/or repaired.

*A wood investigation was conducted by Anthony & Associates, “Window, Siding, and Trim Investigation of 400 Chase Street” (see Attachment C). This investigation found that:*

- *The wood siding is likely not original to the construction. It is in generally good condition on the north and west elevations, in good to fair condition on the east elevation, and in fair to poor conditions on the south elevation of the house. The south elevation is a modern wood composite siding, and is replacement material.*
- *The window trim appears to date to the original construction, but could be a later repair*
- *The window sashes appear to date from original construction, or are early modifications. The condition of the windows was not assessed.*
- *The shed was likely resided or constructed at the same time of the historic kitchen addition*

- a. If portions of wood siding must be replaced, be sure to match the lap dimensions of the original.

*The application proposed to replace all siding, window and door trim, corner boards, and frieze board on the house. The siding will be horizontal lap wood siding with 4” reveal; the other features will be reconstructed to match the original. See proposed work in elevation drawings on pages 3 - 6. Only the deteriorated siding on the outbuilding will be replaced; the replacement boards will be taken from those salvaged off of the original house.*

*Siding on east elevation and north gable-front wing*



*Siding on west and south elevations*



*Proposed areas of replacement siding on historic outbuilding.*



3.3.B.4. Repair or replacement of mortar should be done by a masonry professional experienced in historic masonry repair.

*The stone foundation was analyzed by Atkinson-Noland & Associates, Consulting Engineers in the attached report “Stone Masonry Foundation and Retaining Wall Evaluation Investigation” (see Attachment B.) This report provided specification for repair and replacement of mortar. When this project is awarded, the contractor must follow these specifications.*

*West elevation: stone foundation, cellar door, and stone retaining wall*



*North elevation: stone foundation at gable-front wing; location of flood vent*



*The application proposes to retain the historic stone foundation along the north (front) elevation, the historic porch foundation, the west elevation foundation that supports the original house, and a historic stone stair well that currently leads to the crawl space. Interior stone cellar supports will also be retained. The east and south elevations will have concrete foundations (See “proposed elevations” on pages 3 – 6). As this building lies within the flood plain, metal flood vents are proposed for installing in the stone foundations on the north and west elevations; see items 18 on “proposed elevations” on pages 3 and 4. In order to stabilize the historic stone foundations, “permeation grouting” is proposed. This method of stabilization occurs underground, and is not visible (see Attachment D).*

*The application also proposes to repair the two historic brick chimneys. A low Portland cement mortar mix is proposed, in order to protect the historic bricks from spalling that can occur with a high cement mortar. The mortar will match the existing in color, and the joints will match the existing profile and rake.*

#### *Historic brick chimneys*



*The steps to leading to the crawl space will be filled with dirt, and thus retained for future restoration if desired. However, the door leading into the crawl space will be filled in with stone, matching the original in color and mortar. The retention of the historic stone foundation and the repair of the brick chimneys both meet the design guidelines. The new concrete foundation on the west will not be very visible from the public right-of-way due to the topography, and the concrete foundation on the south is not visible. The flood vents are a good alternative to raising the existing house above the flood plain.*

- 3.3.C.1. Protect and maintain significant stylistic elements.
- a. Avoid removing or altering any historic material or significant features.
  - b. Repair historic building features that are deteriorated where feasible.
  - c. When disassembly of an historic element is necessary for its restoration, use methods that minimize damage to the original materials.

*This application proposes to replace all exterior wood materials on the house. While many of these elements are not necessarily “significant stylistic features,” repair of wood materials was not proposed. The wood siding will be salvaged for re-use on the historic shed.*

- 3.3.C.2. Replace missing original features in kind where feasible
- b. Where reconstruction of an element is impossible, develop a compatible new design that is a simplified interpretation of the original.

*The existing porch is not original; it is deeper than the historic porch, which originally extended north only to the wall plane of the gable-front wing. This application proposes to restore the porch back to its historic footprint. Additional details are found under “porch” design guidelines on pg. 20. This reconstruction meets the design guidelines.*

#### **3.4: Doors**

- 3.4.1. Retaining and preserving original doors and door openings is preferred rather than replacement.

*The original door and door opening will be retained on the front (north) elevation. The original door location will be retained on the west side of the historic rear addition; however, this opening will be enlarged to 36” and a replacement door will be installed. A new door opening will be located on the rear (north) elevation, but will not be seen from any vantage point on the property unless one is situated immediately behind the rear elevation. The east side of the historic rear addition will not contain a door, as there is no photographic or physical evidence that a door existed here. See “proposed elevations” on pages 3 – 6. The doors on the historic outbuilding will be retained.*

*Exterior and interior views of historic front door (retained in proposal)*



3.4.2. Retain and preserve the functional, proportional and decorative features of a primary entrance.

- a. Such features can include frames, sills, heads, jambs and moldings.
- b. Door materials should be wood or appear similar to wood.

***The existing historic door surround is out-of-plumb at the top of the door. The simple wood surround will be replaced in-kind. The latch on the outbuilding door will be replaced.***

3.4.5. Avoid changing the position of historic doors.

- b. Also avoid adding additional doors to facades that are visible from the street.

***The new door at the south elevation is not visible from the street. The door on the west elevation is in its original location, and since there is no documentation of a door on the east elevation, no doors are proposed here.***

3.4.6. When replacing doors, use designs similar to those found historically on comparable buildings in Black Hawk.

c. Contemporary ornate doors are discouraged on “contributing” buildings, unless photographic evidence can substantiate their historic use.

*The door opening on the west elevation will be increased to 36” wide. The proposed wood door for this location will be wood, with two glass sashes above and two wood panels below. The south elevation door will be solid metal with four panels. These door designs are similar to those found historically on comparable dwellings in Black Hawk. The door hardware for all doors is shown below. It is acceptable hardware for new doors, although it is preferable that the original hardware be repaired for the front door.*

*West door, rear door, door hardware, and wood screen door*



3.4.7. If heat loss or energy conservation is a concern, consider installation of a storm door instead of replacing a historic entry door.

a. wood storm door is preferred. A colored metal storm door, featuring a simple design, may be appropriate.

*A simple wood screen door is proposed, which will allow the design of the historic front door to remain visible from the public right-of-way.*

3.5.C.6. Genuine, transparent glass shall be used in all windows and doors.

*Transparent glass is proposed for all doors.*

### 3.5: Windows

- 3.5.A.1. Identify, retain and preserve the functional and decorative features of windows found historically.

*A wood investigation was conducted by Anthony & Associates, “Window, Siding, and Trim Investigation of 400 Chase Street” (see Attachment C). This investigation determined that the windows and hardware are likely original, or at least historic, although the glazing is not historic. The condition of the windows was not evaluated. The proposal does not retain any historic windows or their features in the house; this does not meet the design guidelines. The window in the historic outbuilding will be repaired; this does meet the design guidelines.*

- 3.5.C.1. If replacement is necessary, replace in-kind. However, window materials that appear similar to wood may be considered on a case-by-case basis.

*All windows in the house will be replaced with double-hung, 2-over-2 windows. The replacement windows will be wood with metal sheathing: Marvin Windows Next Generation Ultimate Clad Double Hung series. The hardware will be satin nickel finish.*

- 3.5.C.3. Avoid changing the position of historic windows.

*The existing windows in the house and outbuilding will retain their original position. The window on the west elevation will be restored to its original size, as determined by an interior investigation that found the original window framing. The window on the south elevation is also restored to its original size based on interior investigation.*

- 3.5.C.4. Maintain the historic subdivisions of windows.

b. Where multiple-pane windows are appropriate, true divided lights are preferred. This especially true for windows that are at ground level and close to sidewalks and walkways where the window details may be clearly seen.

c. Do not use “internal” muntins that are stuck between two layers of glass.

*The replacement windows will have the appearance of 2/2 double hung windows, but do not have true divided lights. Instead there will be a 5/8” simulated divided light, with a metal grill between the glass; aluminum grill on the exterior; and a wood grill on the interior. This does not meet the design guidelines.*

- 3.5.C.6. Genuine, transparent glass shall be used in all windows and doors.

*Transparent glass panes are proposed for all windows except for the newly restored window on the west elevation. This window is located at an interior bathroom, and frosted panes are proposed. This does not meet the design guidelines, although is preferred by the homeowner for privacy.*

### 3.6: Porches

3.6.1. Original porches should be preserved.

*The existing porch is not original, as evidenced by late 20<sup>th</sup> century photographs from the Gilpin County Assessor's office and physical evidence on the building. The original porch was not as deep as the present porch, extending only as far as the plan of the north wall on the gable front wing. The stone foundation, seen in the photograph below, shows the extent of the original porch.*

*Existing porch. The red line indicates the edge of the original historic porch.*

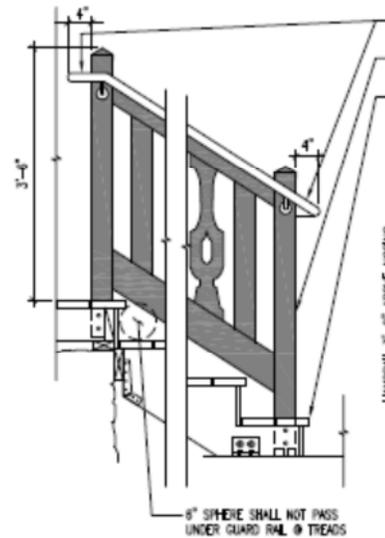
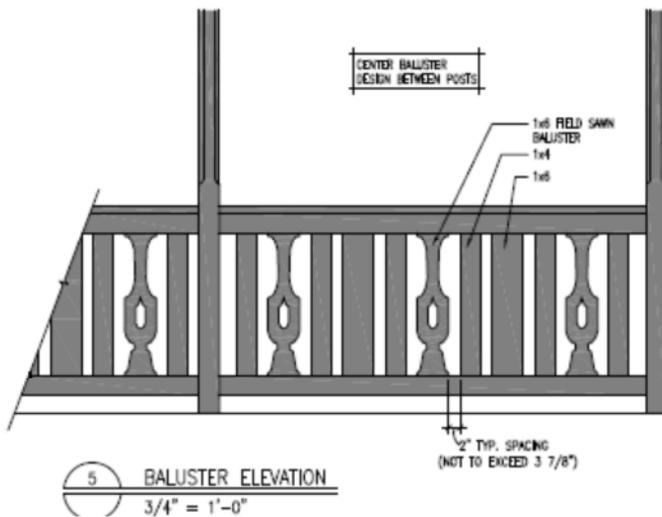


- 3.6.3. Reconstructing a missing historic front porch is encouraged.
- The replacement porch should be based on documented evidence of the original porch.
  - In the absence of documentation of the original porch, design a simplified version of porches found on houses of similar age and style.

*The application proposes to restore the front porch to its original footprint. Lacking historic documentation of the railing, and since it is a reconstructed feature, the new porch railings are higher than those on the original porch, and the balusters are a simplified version of the existing balusters. The proposal also combines a balustrade with a hand rail along the porch stairs, although there is no documentation that anything other than a simple hand rail was at the stairs. Restoring the porch to its original size meets the design guidelines, but there are more preferable alternatives to the higher porch railings. Compare existing and proposed east elevations on page 4 to see the new roof shape and smaller porch; compare existing and proposed north elevations on page 3 to see the higher railing; see plans below for the proposed balustrade.*

*Proposed front porch balustrade*

*Proposed balustrade & combined hand rail on porch steps*

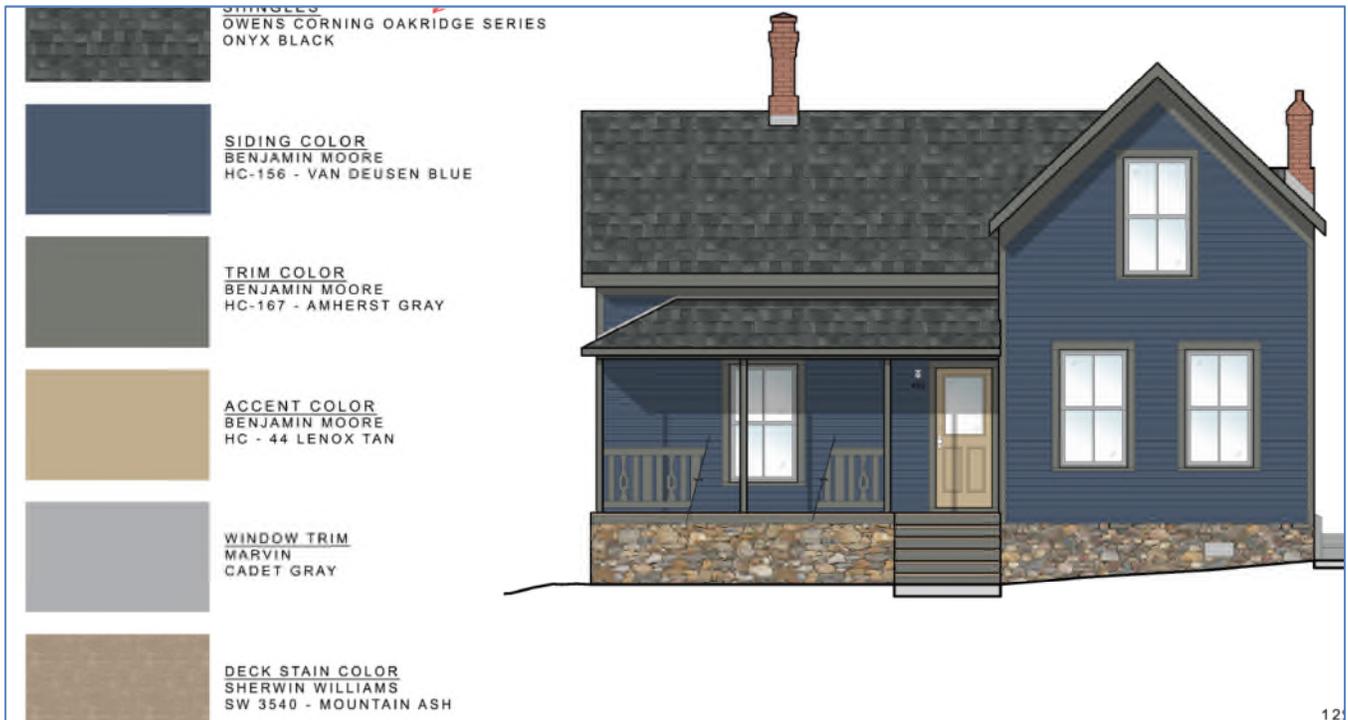


## 4. Paint, Paint Colors and Lead Paint Issues

### 4.1: Color

- 4.1.1. Use historic color schemes.  
*The proposed colors were selected from Benjamin Moore's line of paint colors that were developed for historic houses. Paint colors from this line are approved for use on Black Hawk's historic homes. The historic outbuilding will be painted in the same colors as the house.*
- 4.1.2. Develop a color scheme for the entire building that coordinates all the façade elements.  
*The illustration below shows the coordinating paint scheme for the house, with the following change: the frieze board beneath the roof eaves will be painted in the "Accent Color – Lenox Tan."*
- 4.1.3. Use muted colors for the base and brighter colors for accents.  
*The main color is muted, and the accent colors are lighter.*
- 4.1.4. Leave natural masonry finishes unpainted when feasible.  
*The stone foundation will be unpainted.*

*Paint Scheme for 400 Chase Street*



## 5. Additions to Historic Structures

- 5.1. Preserve older additions that have achieved historic significance in their own right.
- a. Examples may be a porch or a kitchen wing that was added to the original building early in its history.
  - b. Most alterations 50 years and older have achieved historical significance.  
***This proposal retains and rehabilitates the historic kitchen addition which is older than 50 years. There were two non-historic (less than 50 years old) additions that were approved for demolition in a previous Certificate of Appropriateness. The removal of these additions, as well as the non-historic garage, has reinforced the form of the original “gable-front-and-wing” house.***

## 6. Historic Accessory Structures

- 6.1. Preservation of Historic Structures.
- 6.1.1. The preservation of accessory structures is strongly encouraged.  
***The application proposes to preserve the historic outbuilding.***
  - 6.2.2. Repair deteriorated historic building features when feasible.  
***The application proposed to retain historic siding in good condition, and replace the deteriorated wood siding with boards salvaged from the historic house, since according to the investigative wood report, the siding on the two buildings is identical. The window on the east elevation will be repaired. Both of these treatment methods meet the design guidelines.***

## 7.4. Exterior Lighting

- 7.4.1. Lighting fixtures should contribute to the overall historic character of a house or neighborhood.  
***The proposed light fixtures are compatible with those that may have been found historically in Black Hawk.***
- 7.4.2. Lighting should be functional not just historically decorative.  
***The proposed lighting is functional.***
- 7.4.3. All lighting should focus downward.  
***The front door entry light, although focused down, is not shielded from uplighting. However, this light is set beneath the porch roof; it is further shielded on the west by the gable-front wing, so it will not add to light pollution. The rear door light is focused downward and is also shielded.***

*Entry light at front door*



*Entry light at rear door on west side of addition*



## **STAFF & CONSULTANT COMMENTS:**

All grants, whether Historic Preservation or Rehabilitation Grant, must adhere to the eligibility requirements in the City of Black Hawk Historic Restoration and Community Preservation Fund Guide to Programs. The project was evaluated using these standards and staff found the elements of the proposal are in accordance and meet the requirements.

The historic preservation consultant from Three Gables Preservation has evaluated the information provided for the proposed rehabilitation of the historic residence, outbuilding and site at 400 Chase Street, and has determined that the majority of the submittal meets the Residential Design Guidelines, and the Secretary of the Interior's Standards for the Treatment of Historic Properties. The repair of the stone foundation and use of permeation grouting, limited repair of stone walls, rehabilitation of the historic front door, and restoration of the front porch to its original size is laudable, as is the previously approved demolition of non-historic addition. However, the following elements of the proposal are not in compliance with the design guidelines:

- the existing windows, surrounds, and hardware were determined to be historic and should be repaired rather than replaced;
- the replacement windows do not have true divided lights;
- one window has frosted rather than transparent glass;
- the siding on the north and east elevations was determined to be in generally good condition and historic (although possibly not original), and should be repaired rather than replaced;
- historic height for the balustrade on the reconstructed porch, and alternatives for code compliance should be explored.

## **HISTORIC PRESERVATION COMMISSION (HPC) COMMENTS:**

### **DISCUSSION POINTS**

The Commission based their recommendation on the following discussion points:

1. Period of Significance is 1859-1918.
2. Structure has been abandon for 20+ years.
3. Anthony & Associates provided a *limited* survey to provide insight about the age and general condition of the wood and windows. A detailed, in depth investigation was not requested by the City or performed by Anthony & Associates.
4. Structure modifications indicate extensive use of repurposed materials.
5. Windows; old but not original:
  - Although, the majority of the windows within the core and shell of the original structure are old and representative of the historic character, age of the windows is unconfirmed.
  - The study could not confirm that there are original historic windows remaining.
  - Windows are generally inoperable with no locking hardware.
  - Due to inconclusive evidence, the preference is for new uniform window types with durable exterior finishes that most closely resemble historical windows with the divided lights
  - Modern thermopane true divided lights versus false muttons; administrative approval/staff determination.
  - Allow frosted window at back bathroom since it is not visible from the street right-of-way.

6. Siding:

- The wood study indicates siding condition to be good, fair, and poor, with a minimum of four replacement or partial replacement campaigns of the siding.
- The preference is to use the siding in good condition to repair/replace the deteriorated siding on the shed/carriage house.
- With subsequent alterations made to the structure siding, the preference is to replace with new uniform period style siding.

## SUMMARY

The Mayor and Board of Aldermen should evaluate the application, the comments in the report, any testimony by staff, consultants, and the applicant and the recommendation by The Historic Preservation Commission. The list of non-conforming elements in the previous section could serve as a starting guide for the City Council discussion.

The Historic Preservation Commission did discuss at their April 19, 2016 meeting if there was sufficient evidence that the Certificate of Appropriateness application meets the intent of the criteria outlined in the City of Black Hawk *Historic Restoration and Community Preservation Fund Guide to Programs*, Section 16-368 of the *Black Hawk Municipal Code*, and Sections 2, 3, 4, 5, 6 and 7.4 of the *City of Black Hawk Residential Design Guidelines*.

## RECOMMENDATION

Based on the discussion points and Staff recommendations, the Historic Preservation Commission recommends the following motion to the Board of Aldermen:

*I move to recommend to the Board of Aldermen **CONDITIONAL APPROVAL** of the Certificate of Appropriateness for the exterior rehabilitation of property located at 400 Chase Street based on the criteria set forth in the staff report dated April 6, 2016. The Certificate of Appropriateness application for 400 Chase Street will meet the intent of the criteria outlined in the City of Black Hawk Historic Restoration and Community Preservation Fund Guide to Programs, Section 16-368 of the Black Hawk Municipal Code, and Sections 2, 3, 4, 5, 6 and 7.4 of the City of Black Hawk Residential Design Guidelines, and thus condition approval is provided upon satisfaction of the following conditions:*

- A. Due to inconclusive evidence of the age of the windows from the limited window survey, the preference is for new uniform window types with durable exterior finishes that most closely resemble historical windows with true divided lights. Staff to administratively approve final determination of use of either modern thermopane true divided lights or false muttons, whichever most closely resembles a historic window;*
- B. Allow frosted window at back bathroom, since it is not visible from the street right-of-way;  
and*
- C. Repurpose the existing house siding still in good condition to repair/replace the deteriorated siding on the shed/carriage house and to replace the existing siding on the house with new uniform period style siding.*

**ATTACHMENTS:**

- A. Cultural Resource Evaluation Form
- B. Atkinson-Noland & Associates - *“Stone Masonry Foundation and Retaining Wall Evaluation Investigation”*
- C. Anthony and Associates - *“Window, Siding, and Trim Investigation of 400 Chase Street”*
- D. *Hayward Baker, Inc. – “Permeation Grouting Proposal”*

# **ATTACHMENT A**

BLACK HAWK CULTURAL RESOURCE SURVEY  
**Cultural Resource Re-evaluation Form**  
(page 1 of 2)

1. Current Address: **400 Chase**
2. Resource Number: **5GL.7.66 & 5GL.7.68** 3. NHL Resource Number: **B18-1**
4. Resource Name:
5. Purpose of this current site visit (check as many as apply)
- Site is within a current project area
  - Resurvey
  - Update of previous site form(s)
  - Surface collection
  - Testing to determine eligibility
  - Excavation
  - Other
6. Previous Recordings:
- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> 1986 National Park Service Survey          | <input checked="" type="checkbox"/> Photograph |  |
| <input checked="" type="checkbox"/> 1991 National Historic Landmark Nomination | No Photographs                                 | <input checked="" type="checkbox"/> Contributing |
| <input checked="" type="checkbox"/> 1998 Re-survey                             | <input checked="" type="checkbox"/> Photograph |  |
| <input checked="" type="checkbox"/> 2004 Photo survey                          | <input checked="" type="checkbox"/> Photograph |  |
| <input checked="" type="checkbox"/> Other: 1995 BLM Gorge Resource Area        | <input checked="" type="checkbox"/> Photograph | <i>(assigned 5GL.7.66 in this survey)</i>        |
7. Exterior alterations since 1986: **No permits recorded.**
8. Additional historical background: **Sanborn maps do not cover this far west on Chase Street. Deed research may reveal a more accurate construction date.**

Ca. 1898 Construction date  Estimate from 1986 NPS Survey  New estimate

Sources of information:

Sanborn Maps

- 1886
- 1890
- 1895
- 1900

Current Address: **400 Chase**

(page 2 of 2)

Resource Number: **5GL.7.66 & 5GL.7.68**

NHL Resource Number: **B18-1**

9. Changes to Location or Size Information: **A 1995 BLM Royal Gorge Resource area survey assigned two field survey numbers to 390 Chase & 400 Chase, but the CHS erroneously overlooked 390 Chase, and assigned both 5GL.7.66 & 5GL.7.68 to 400 Chase.**
10. Revised National Historic Landmark District- Contributing Building Eligibility Assessment:  
Contributing  Non contributing  Need data  **The garage is non-contributing.**
11. National Register - Individual Eligibility Assessment:  
Eligible  Not eligible  Need data
12. Is there National Register district potential? Yes  No   
Discuss: **This would be a contributing building to a potential district**
13. Local Designation - Individual Eligibility Assessment:  
Eligible  Not eligible  Need data
14. Is there Local district potential? Yes  No   
Discuss: **This would be a contributing building to a potential district**
15. Photograph Types and Numbers: **Digital, <.jpg> format. 400 Chase-1.JPG, 400 Chase-2.JPG**
16. Report Title: **Black Hawk Historic Resource Resurvey: 2009-2010**
17. Recorder(s): **Deon Wolfenbarger**
18. Date(s): **May 17, 2010**
19. Recorder Affiliation: **Three Gables Preservation**
20. Attachments  
(check as many as apply)  
 Photographs  
 Site sketch map  
 U.S.G.S. map photocopy  
 Other \_\_\_\_\_  
 Other \_\_\_\_\_
21. Official determination  
(OAHF USE ONLY)  
 Determined Eligible  
 Determined Not Eligible  
 Need Data  
 Nominated  
 Listed  
 Contributing to N.R. District  
 Not Contributing to N.R. Dist

Current Address: **400 Chase**  
Resource Number: **5GL.7.66 & 5GL.7.68**  
NHL Resource Number: **B18-1**

Continuation Sheets

Current Photographs  
Date: **05/13/2009 & 1/21/2010**



Current Address: **400 Chase**  
Resource Number: **5GL.7.66 & 5GL.7.68**  
NHL Resource Number: **B18-1**

Continuation Sheets

2004 Photograph



1998 Resurvey Photograph



Current Address: **400 Chase**  
Resource Number: **5GL.7.66 & 5GL.7.68**  
NHL Resource Number: **B18-1**

Continuation Sheets

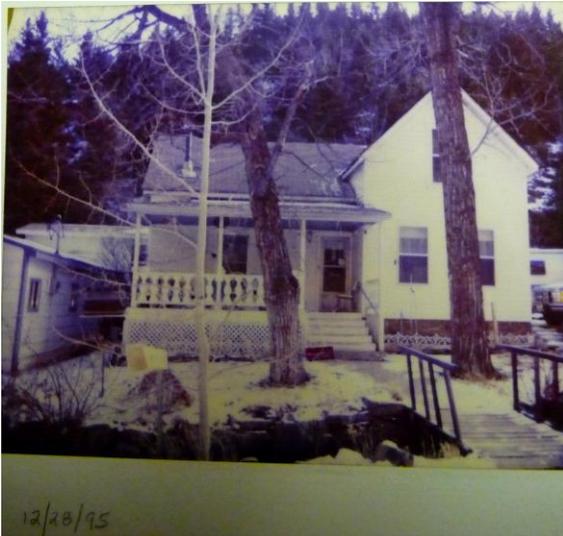
1986 Survey Photograph



Current Address: **400 Chase**  
Resource Number: **5GL.7.66 & 5GL.7.68**  
NHL Resource Number: **B18-1**

Continuation Sheets

Gilpin Assessor's Photographs



# **ATTACHMENT B**



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# Investigation Report

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## Stone Masonry Foundation and Retaining Wall Evaluation

400 Chase Street  
Black Hawk, Colorado

ANA Project #15-019

### Prepared for:

Ms. Cynthia L. Linker  
Community Planning and Development Administrator  
PO Box 68, 211 Church Street  
Black Hawk, CO 80422

### Prepared by:

Atkinson-Noland & Associates, Inc.  
Consulting Engineers  
2619 Spruce Street  
Boulder, CO 80302  
(303) 444-3620

July 7, 2015



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New York, NY 10005  
917.647.9530

## 1 Introduction and Background

Atkinson-Noland & Associates, Inc. (ANA) has prepared this report of findings and analysis of stone masonry foundations and retaining walls at 400 Chase Street in Black Hawk, Colorado. ANA performed observations at stone foundations of the existing house, stone stairs, and retaining walls designated as “7” and “10” on the drawing file entitled “400 CHASE STREET-IMPROVEMENT SURVEY\_Revised,” relevant portions of which are shown below in Figure 1.

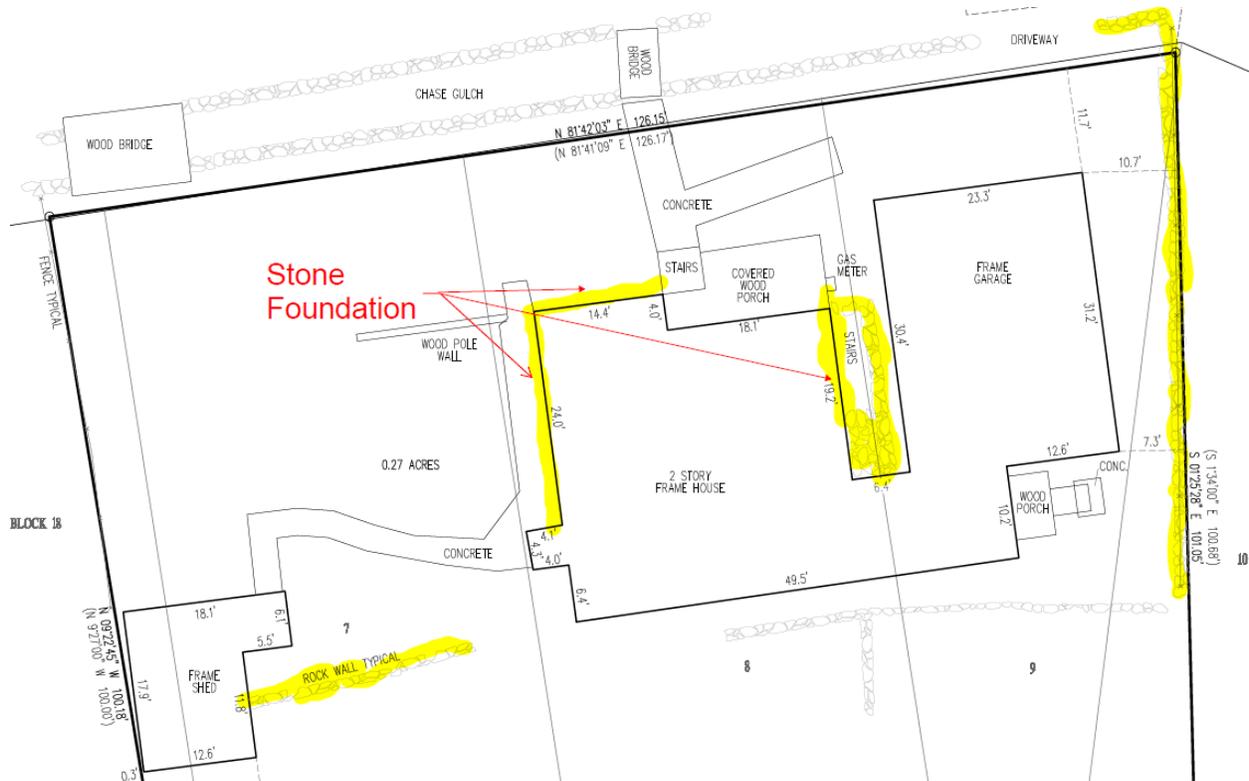


Figure 1. Portion of survey drawing with highlighted areas indicating stone walls investigated.

This report includes documentation of current conditions of stone masonry walls, results of simple structural analysis, results of laboratory mortar testing, and specifications for partial wall rebuilding where necessary.

Andrew E. Geister, P.E. of ANA was on site June 23, 2015 to perform the investigation and collect mortar samples. Scott McClelland of NV5 coordinated site access and provided electronic drawings used in this report.

## 2 Approach and Methodology

The typical approach that ANA followed was to observe, photograph, and note conditions at each wall investigated. Wall characteristics such as height, thickness, batter, and solidity were documented. The majority of wall characteristics were determined with visual observations and physical measurements; batter was determined using a laser level, and thickness was determined using ground penetrating

radar. Wall solidity was observed using a fiber optic borescope inserted into joints between stones. Observations were conducted at multiple locations and heights for each wall investigated.

A simple gravity analysis incorporating the wall characteristic data collected on site was performed to evaluate factors of safety for each wall against overturning and sliding.

A series of laboratory tests were performed to determine mortar binder/aggregate ratios, aggregate gradation, and the presence or absence of portland cement. A recommended mortar type for repairs, repointing, and rebuilding is based on these findings.

### 3 Findings and Analysis

#### 3.1 Wall 10

Wall 10 is approximately 65 feet long, runs along the east edge of the property and ranges in height from zero near the back of the house where the wall meets the hillside to 32 inches at the northeast corner of the property, with the vast majority of the wall measuring between 26 and 32 inches tall. A metal fence runs adjacent to the wall, and several large trees and other vegetation adjacent to the wall, visible in Figure 2. Three collapsed sections exist along the length of the wall with relative locations shown in Figure 3.



*Figure 2. Wall 10. Collapsed zones visible adjacent to large trees.*

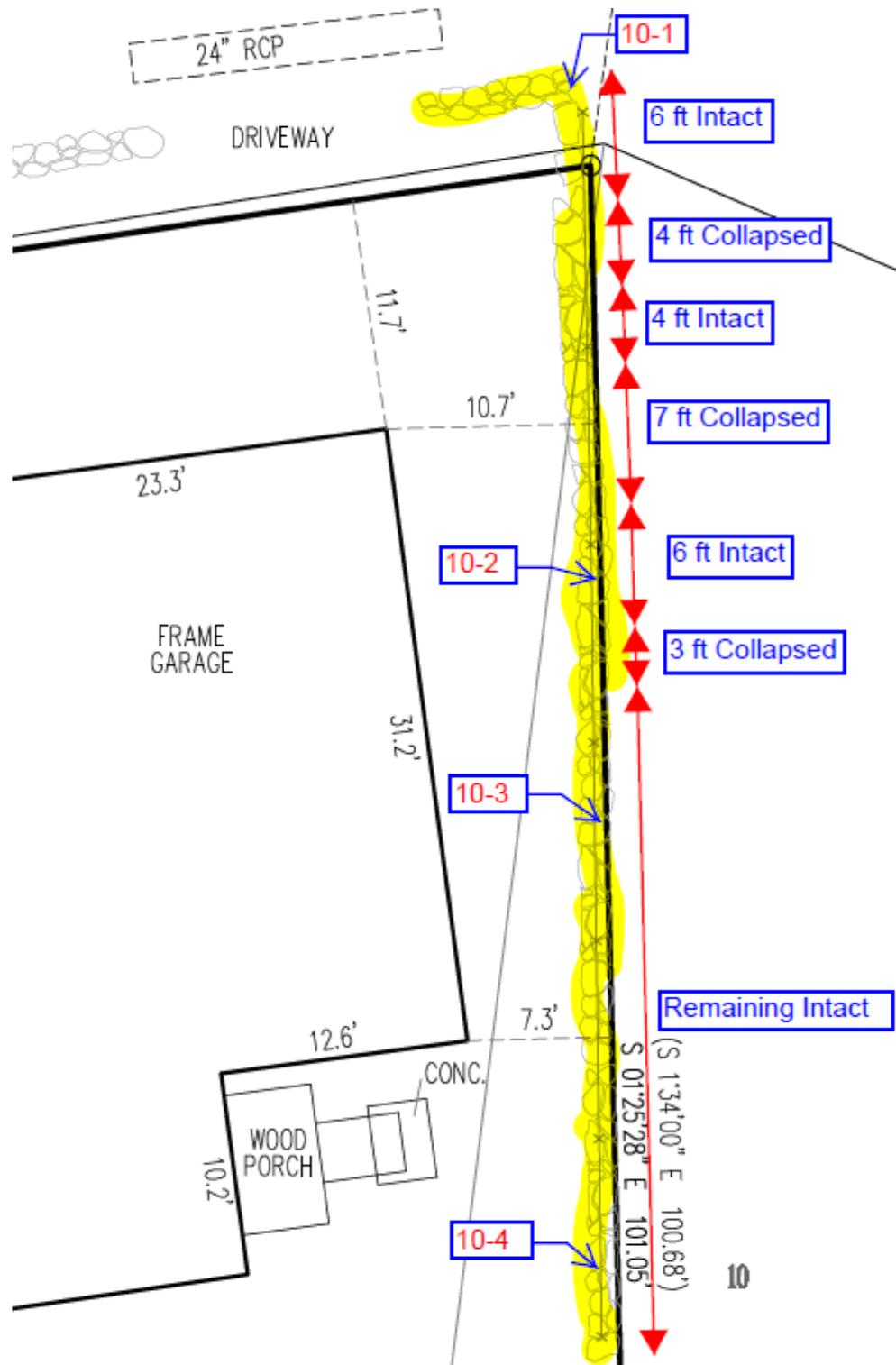


Figure 3. Observed intact and collapsed zones at Wall 10.

Wall thickness and face surface profile at Wall 10 was observed to vary. Table 1 lists measured dimensions and Figure 3 shows the results of wall surface profile measurements taken at each of the four locations along Wall 10 shown above.

Table 1. Dimension measurements at Wall 10.

Location	Wall Height	Thickness at Base	Thickness at Top
10-1	32 in.	30 in.	10 in.
10-2	26 in.	26 in.	10 in.
10-3	32 in.	24 in.	22 in.
10-4	16 in.	16 in.	26 in.

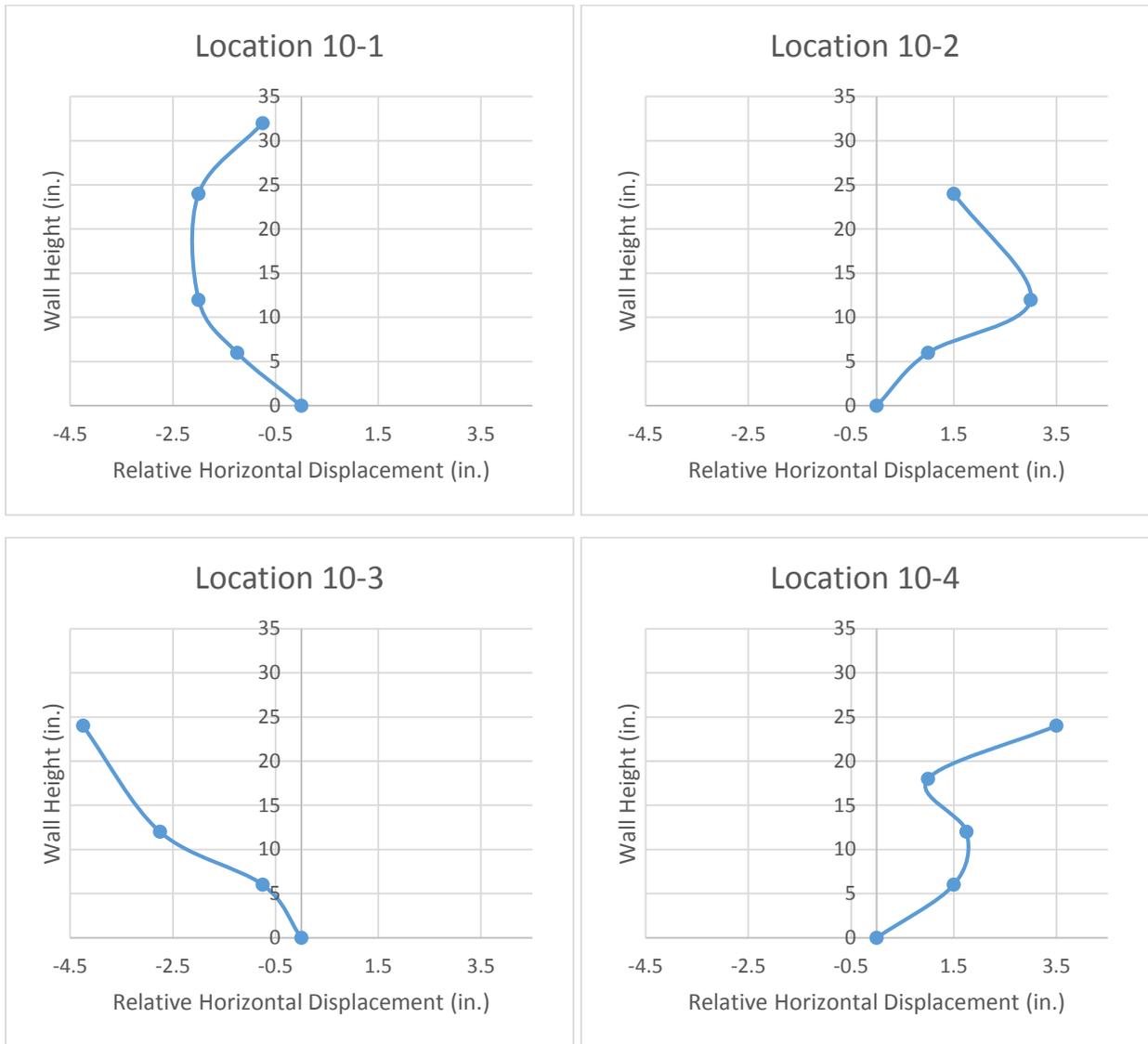


Figure 4. Wall 10 surface profile measurements.

Given such wide variations in surface profile over the length of the wall, displacements appear to be more likely due to leaning or bulging of the wall rather than a designed or intended batter.

Mortar is not visible at the exterior face of the wall. Large voids are visible between stones throughout the length of the wall. Soil and very soft mortar were encountered in joints within the wall thickness.

Analysis results for the wall using the minimum measured thickness and maximum measured height show adequacy against sliding and overturning, however without mortar, the wall may not act as a cohesive element. In addition, several large trees and other vegetation are present adjacent to the wall over much of its length and roots growing into or near the wall can be particularly disruptive to the wall's stability.

Table 2. Gravity analysis results for Wall 10.

Stability Analysis

Overturning

$\Sigma M_r$	2304	in-lb	<i>restoring moment</i>
$\Sigma M_o$	1101	in-lb	<i>overturning moment</i>
$FS_{ot} = \Sigma M_r / \Sigma M_o$	2.09		

Sliding

$\mu \Sigma V$	235	lb	<i>sliding resistance force</i>
$P_{a-h}$	103.2	lb	<i>sliding force</i>
$FS_{sl}$	2.27		

Bearing

$x = \Sigma M_A / \Sigma V$	0.25	ft	
$b/6$	0.14	ft	
$e$	0.17	ft	<b><i><math>e &gt; b/6</math>, resultant is outside the middle third</i></b>
$\sigma_{max}$	1,108	lb/ft <sup>2</sup>	
$FS_{bc}$	3.61		

References:

- AASHTO, Standard Specifications for Highway Bridges, 15th ed., AASHTO, Washington, DC, 1992
- Liu, C. and Evett, J. B., Soils and Foundations, 7th ed., Prentice Hall, Upper Saddle River, NJ, 2008.
- Lindeburg, M. R., Civil Engineering Reference Manual, 5th ed., Professional Publications Inc., San Carlos, CA, 1989.

### 3.2 Stone Stairs

A staircase consisting of four stone stairs is present at the east elevation of the existing house with stone retaining walls on two sides, and the stone foundation of the house on the third, shown in Figure 5 and in plan view in Figure 6. The area from the stair landing south to the house appears to be filled with stones to ground level. From the bottom stair landing the stone retaining walls were measured 34 inches tall at the east and 42 inches tall at the south. Table 3 lists measured dimensions and Figure 7 lists surface profile measurements of walls at stone stairs.

Mortar is generally not present at the exterior face of the wall, although small areas of intact mortar are visible near the foundation of the house. Large voids are visible between stones throughout the length of the wall. Soil and very soft mortar were encountered in joints within the wall thickness.

A gravity stability analysis shows that the wall is adequate for sliding, overturning, and bearing. Analysis results for the wall are shown in Table 4.



Figure 5. View of stone stairs and adjacent retaining wall.

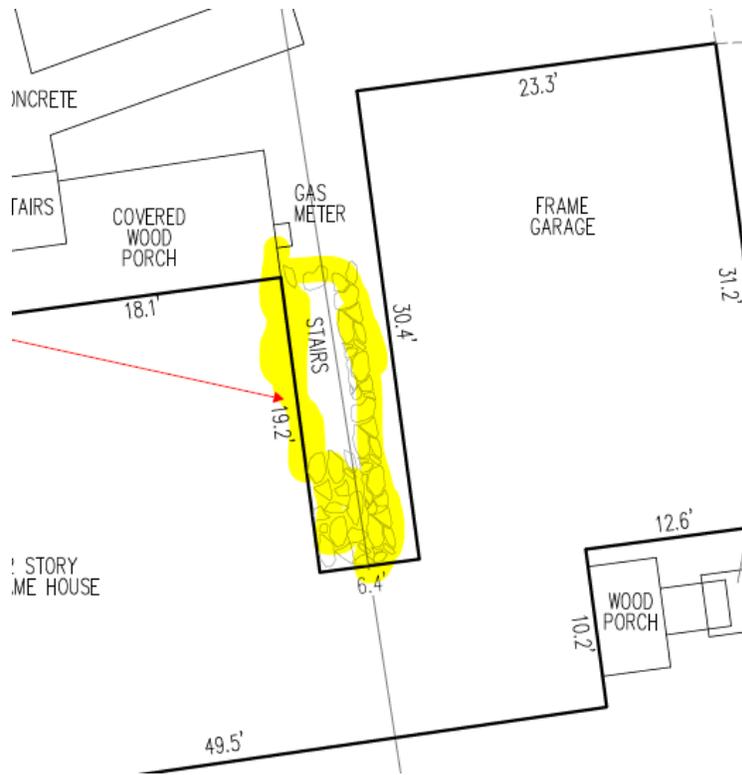


Figure 6. Plan location of stone stairs.

Table 3. Dimension measurements at stair walls.

Location	Wall Height	Thickness at Base	Thickness at Top
Stair Wall East	34 in.	12 in.	10 in.
Stair Wall South	42 in.	≈ 8 ft*	≈ 8 ft*

\*Appears to be filled with stones from wall to house.

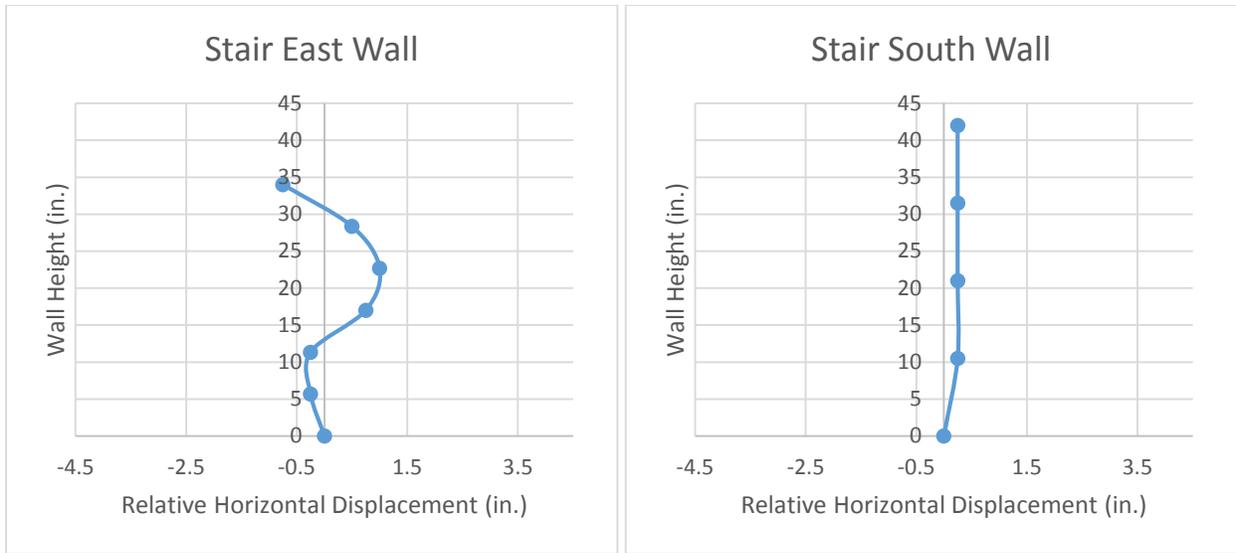


Figure 7. Wall surface profile measurements at stone stair walls.

Table 4. Gravity stability analysis for stone stair walls.

**Stability Analysis**

**Overturning**

$\Sigma M_r$	2329	in-lb	<i>restoring moment</i>
$\Sigma M_o$	1320	in-lb	<i>overturning moment</i>
$FS_{ot} = \Sigma M_r / \Sigma M_o$	1.76		

**Sliding**

$\mu \Sigma V$	177	lb	<i>sliding resistance force</i>
$P_{a-h}$	116.5	lb	<i>sliding force</i>
$FS_{sl}$	1.52		

**Bearing**

$x = \Sigma M_A / \Sigma V$	0.27	ft	
$b/6$	0.17	ft	
$e$	0.23	ft	<b><i><math>e &gt; b/6</math>, resultant is outside the middle third</i></b>
$\sigma_{max}$	756	lb/ft <sup>2</sup>	
$FS_{bc}$	5.29		

**3.3 Stone Foundation Walls**

The house is supported by stone masonry foundation walls which are accessible from the exterior at three locations, shown in Figure 8 and in plan view in Figure 9. Measured dimensions of foundation walls are listed in Table 5. A portion of the foundation wall interior was visible through the open door on the east elevation at the bottom of the stairs. The interior of the foundation wall steps out with depth and extends the full length of the crawlspace (Figure 10). Figure 11 shows surface profile measurements at foundation wall locations F1 and F2. Much of the west elevation foundation only contained a single course of stone above grade, and therefore profile measurements were not taken at F3.



Figure 8. Portions of stone foundation walls visible at house east (left) and northwest (right).

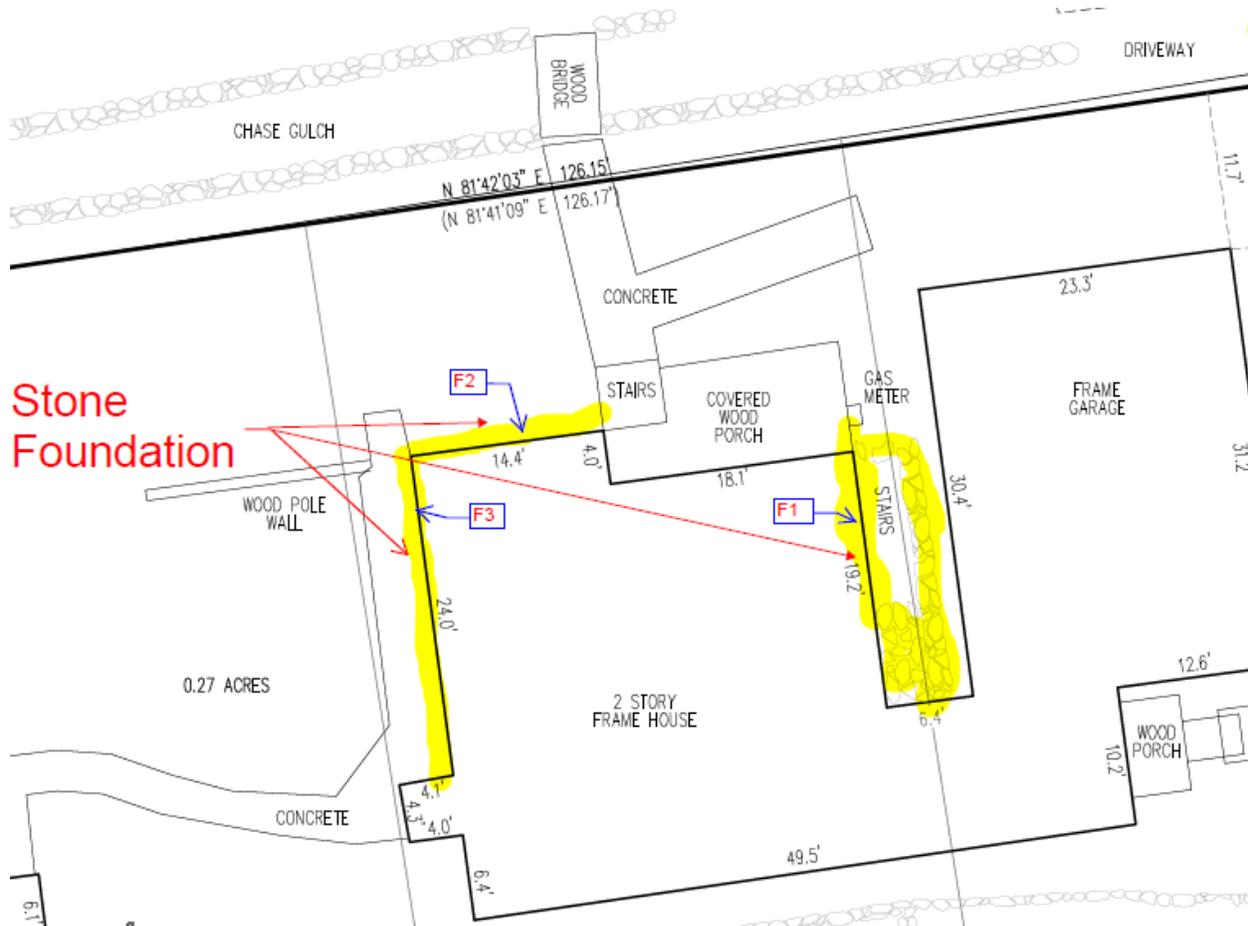


Figure 9. Locations of stone foundation walls.

Table 5. Dimension measurements at house foundation walls.

Location	Wall Height (Exterior)	Thickness at Base	Thickness at Top
F1	5'-0" at bottom of stairs, 3'-6" at top of stairs	Full bottom of crawlspace	12 in.
F2	2 ft	20 in.	14-16 in.
F3	1 ft at north end to 0 at south	20 in.	17 in.



Figure 10. Interior of east elevation foundation walls on each side of door.

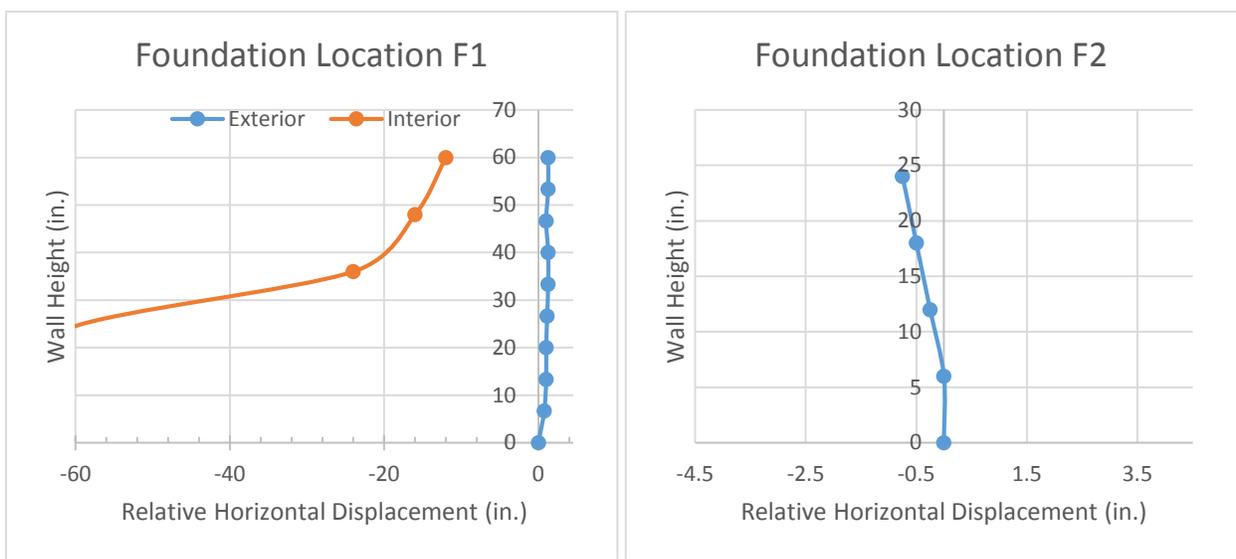


Figure 11. Surface profile measurements at stone foundation walls.

Some mortar cracking is visible at foundation exteriors, and large voids and mortar erosion are visible at wall interiors. Figure 12 shows a borescope image of internal wall conditions near location F1.



Figure 12. Borescope image of large gaps around stones at foundation interior.

The foundation wall at location F1 does not retain soil, and if foundation walls at locations F2 and F3 are assumed to have depths similar to F1, a conservative gravity stability analysis shows that the wall is adequate for sliding, overturning, and bearing. Analysis results for the wall are shown in Table 6.

Table 6. Gravity stability analysis of stone foundation walls.

Stability Analysis

Overturning

$\Sigma M_r$	1700	in-lb	<i>restoring moment</i>
$\Sigma M_o$	58	in-lb	<i>overturning moment</i>
$FS_{ot} = \Sigma M_r / \Sigma M_o$	29.29		

Sliding

$\mu \Sigma V$	82	lb	<i>sliding resistance force</i>
$P_{a-h}$	14.5	lb	<i>sliding force</i>
$FS_{sl}$	5.68		

Bearing

$x = \Sigma M_A / \Sigma V$	0.95	ft	
$b/6$	0.28	ft	
$e$	-0.12	ft	<b><i><math>e &lt; b/6</math>, resultant lies within the middle third</i></b>
$\sigma_{max}$	123	lb/ft <sup>2</sup>	
$FS_{bc}$	32.40		

### 3.4 Wall 7

Wall 7 is approximately 25 feet long, running nearly east-west and perpendicular to the east wall of the shed, shown in Figure 13, and in plan view in Figure 14. Wall dimension measurements are listed in Table 7. Figure 15 shows surface profile measurements. Wall 7 contains a slight batter of approximately 5 degrees from vertical.



Figure 13. Overall views of Wall 7.

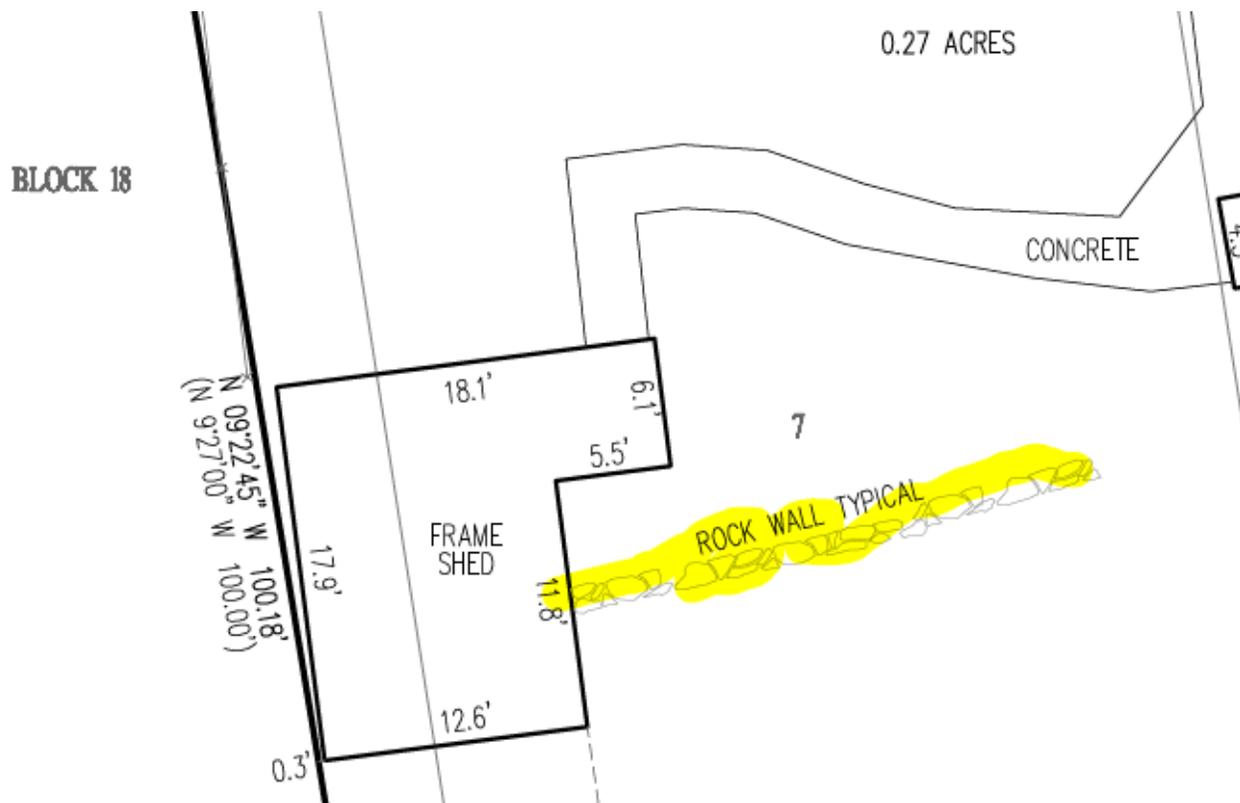


Figure 14. Plan view of Wall 7.

Table 7. Dimension measurements at Wall 7.

Location	Wall Height	Thickness at Base	Thickness at Top
Wall 7	18 in.	12 in.	10 in.

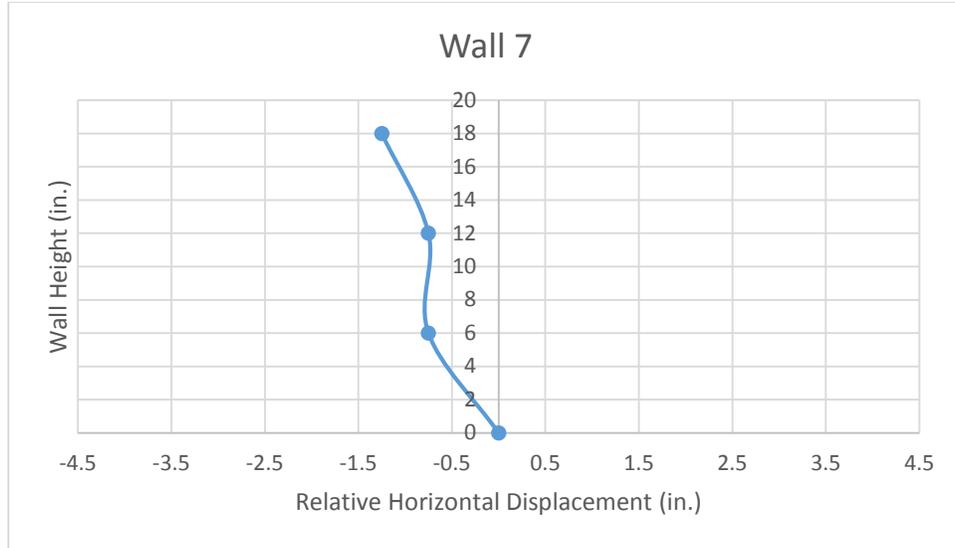


Figure 15. Surface profile measurements at Wall 7.

Mortar is not visible at the exterior face of the wall. Large voids are visible between stones throughout the length of the wall. Voids, soil, and debris was encountered in joints within the wall thickness (Figure 16), and no mortar was found at Wall 7.



Figure 16. Borescope image showing voids and debris between stones at Wall 7 interior.

A gravity stability analysis shows that the wall is adequate for sliding, overturning, and bearing. Analysis results for the wall are shown in Table 8.

Table 8. Gravity stability analysis of Wall 7.

Stability Analysis

Overturning

$\Sigma M_r$	1040	in-lb	<i>restoring moment</i>
$\Sigma M_o$	201	in-lb	<i>overturning moment</i>
$FS_{ot} = \Sigma M_r / \Sigma M_o$	5.17		

Sliding

$\mu \Sigma V$	86	lb	<i>sliding resistance force</i>
$P_{a-h}$	33.5	lb	<i>sliding force</i>
$FS_{sl}$	2.58		

Bearing

$x = \Sigma M_A / \Sigma V$	0.47	ft	
$b/6$	0.17	ft	
$e$	0.03	ft	<i><b><math>e &lt; b/6</math>, resultant lies within the middle third</b></i>
$\sigma_{max}$	182	lb/ft <sup>2</sup>	
$FS_{bc}$	22.04		

## 4 Mortar Evaluation

A total of 6 mortar samples were evaluated by ANA. Sample identification and location are described in Table 9.

Table 9. Mortar sample identification.

Sample ID	Location
10-2	Wall 10, Location 10-2
10-4	Wall 10, Location 10-4
Stair	Retaining wall at stone stairs
F1	House Foundation, Location F1
F2	House Foundation, Location F2
Wall 7	Wall 7

### 4.1 Analysis Techniques

Chemical mortar examination followed the method described by Middendorf, et al<sup>1</sup>. The method is based on the use of acid digestion and chemical analysis to identify soluble silica resulting from Portland cement hydration. Aggregate sieve analysis followed requirements of ASTM C136, *Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates*. The method is based on acid digestion of the binder and sieve analysis of the aggregate. The results of acid digestion of the mortar samples are shown in Table 10.

<sup>1</sup> Middendorf, et al. *Chemical Characterization of Historic Mortars*. State-of-the-Art Report of RILEM Technical Committee 167-COM: Characterization of Old Mortars with Respect to their Repair. RILEM Publications SARL, 2004.

Table 10. Results of acid digestion of mortar samples.

Sample ID	Mass before acid digestion (g)	Mass after acid digestion (g)	Binder mass (g)	Aggregate mass (g)	Binder volume (cm <sup>3</sup> )	Aggregate volume (cm <sup>3</sup> )	Total volume (cm <sup>3</sup> )	Binder (%)	Aggregate (%)
10-2	59.21	55.84	3.37	55.84	5.26	43.57	48.83	11	89
10-4	52.68	49.85	2.83	49.85	4.42	38.90	43.32	10	90
F1	55.09	43.65	11.44	43.65	17.85	34.06	51.92	34	66
F2	52.32	48.10	4.22	48.10	6.59	37.53	44.12	15	85
Stair	52.51	43.46	9.05	43.46	14.12	33.91	48.04	29	71
Wall 7	55.81	52.16	3.65	52.16	5.70	40.70	46.40	12	88

#### 4.2 Aggregate Sieve Analysis

The aggregate gradation curves, plotted in Figure 17 through Figure 19, show the mortar aggregates of the samples compared to the gradation range of coarse and fine aggregates as specified by ASTM C144, *Standard Specification for Aggregate for Masonry Mortars*. The aggregate colors are shown in Figure 20. Ideally, the aggregate for the replacement mortar should match the color and gradation of the existing mortar aggregates. Trial mixtures may be required to arrive at a mix that matches the original mortar with respect to color and texture.

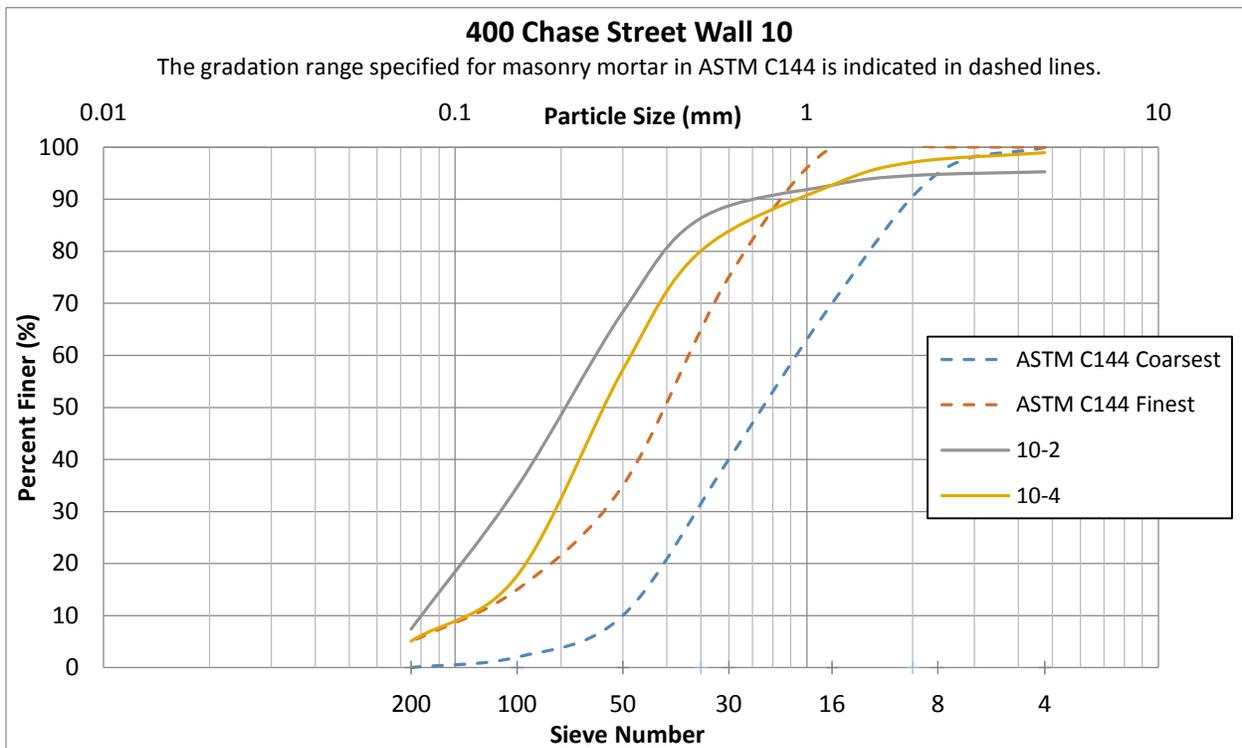


Figure 17. Aggregate distribution by sieve size for Wall 10 mortar samples.

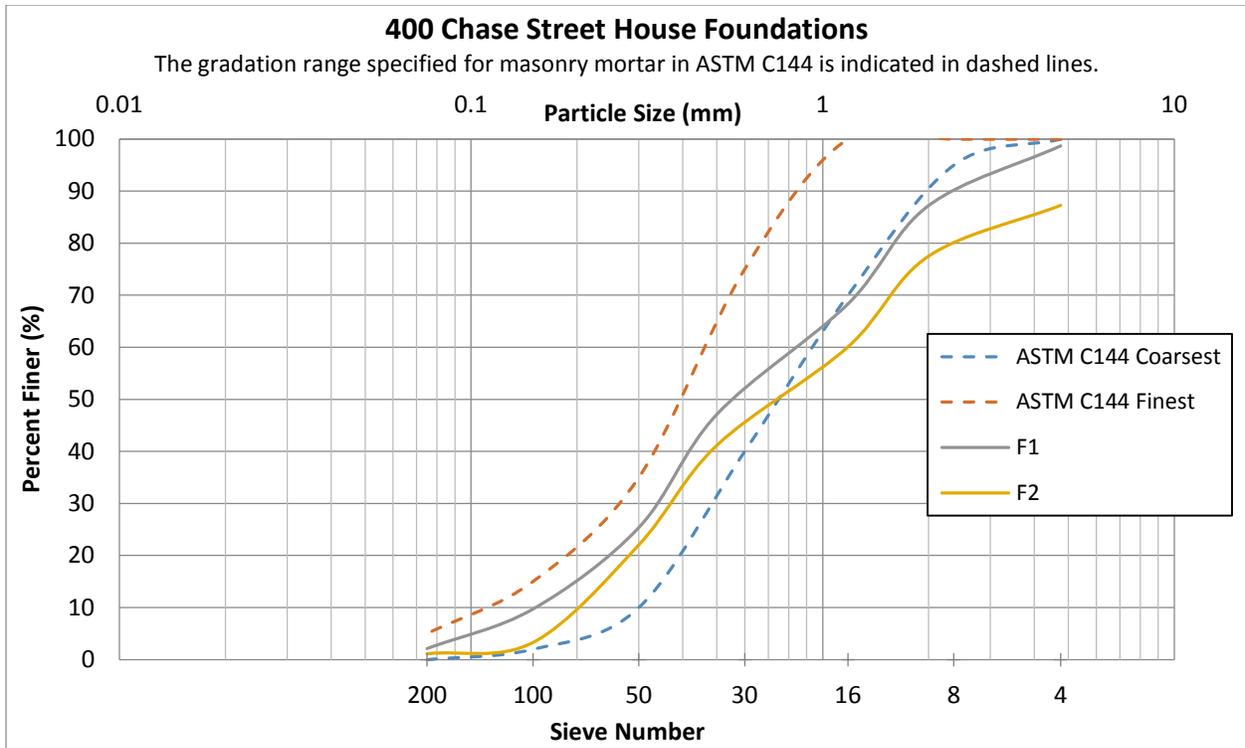


Figure 18. Aggregate distribution by sieve size for house foundation mortar samples.

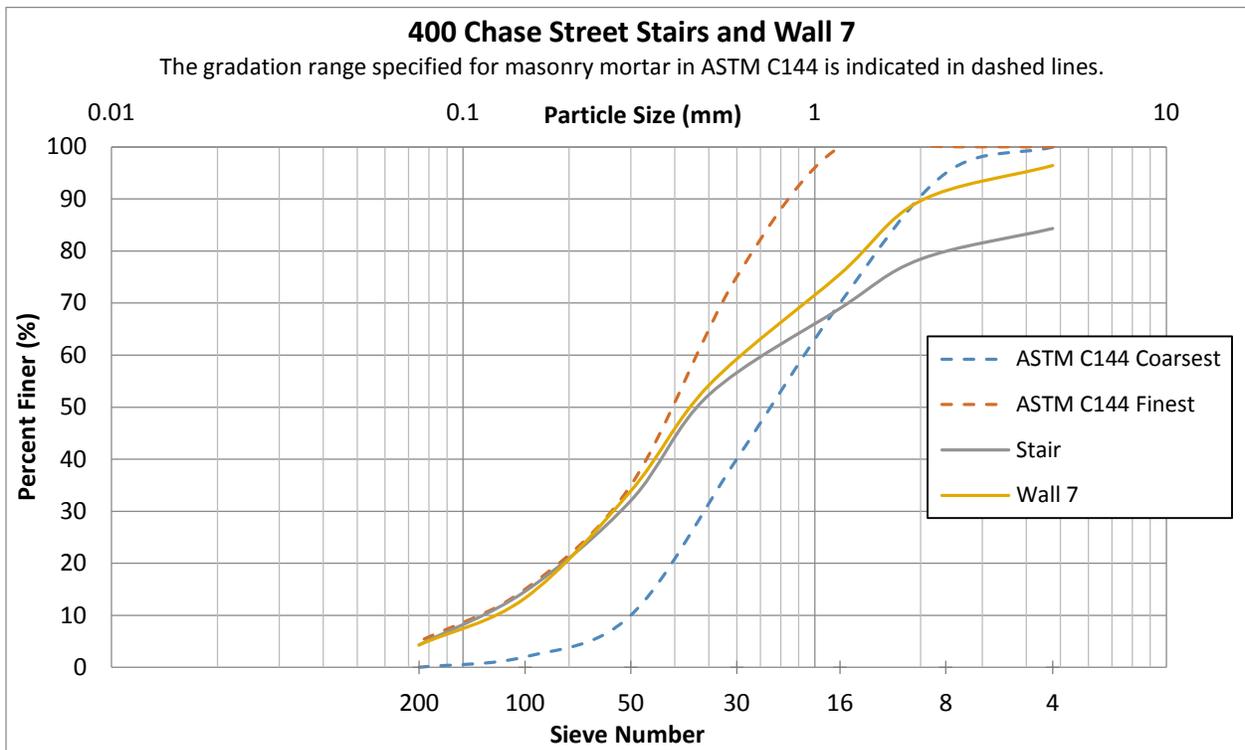


Figure 19. Aggregate distribution by sieve size for Stair wall and Wall 7.

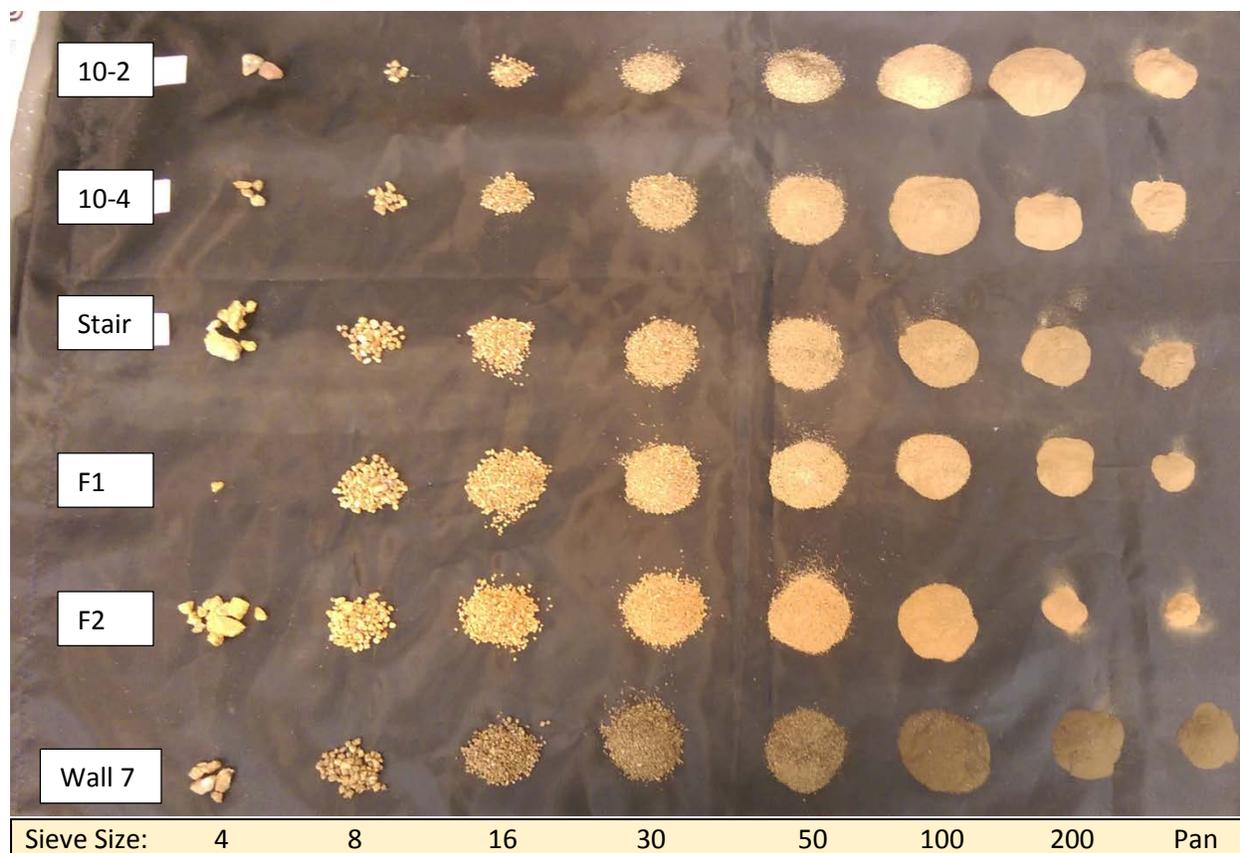


Figure 20. Aggregate distribution and color for furnished mortar samples.

#### 4.3 Binder Content and Recommended Mortar Formulation

The samples collected from Walls 10 and 7 consisted primarily of soil, with very little binder as indicated by field observations and acid digestion. Mortar at these locations appears to have originally been a lime mix, due to its relative softness and present lack of binder. Samples collected from stair and foundation walls were further analyzed for the presence of portland cement using the Middendorf method.

The chemical analysis results of the supplied mortar samples are summarized in Table 11. Although a trace amount of Portland cement was found in the stair wall mortar, the small measured quantity indicates that it is more likely due to a small amount of repointing mortar collected with the sample rather than part of the original mix. The foundation mortar was found to be a lime-sand mix.

Table 11. Results of chemical mortar analysis.

Sample ID	Sample Mass (g)	Aggregate Mass (g)	Soluble Silica (g)	Volumetric Ratio		
				Portland Cement	Lime	Aggregate
Stair	10.00	7.36	0.09	1	9	15
F2	10.00	9.41	0.01	0	1	8

ANA recommends the use of mortar that meets requirements of ASTM C270, *Standard Specification for Mortar for Unit Masonry*, for Type O mortar, with starting volumetric proportions of 1 part portland cement, 2 parts lime, and 8 to 9 parts sand.

The lack of portland cement in mortar samples indicates that stone masonry construction may have taken place prior to its widespread use in the United States, circa early 1900's.

## 5 Repair and Rebuilding Recommendations

Wall sections with cracked or heavily eroded mortar should be repaired using a deep repointing process, raking mortar out to a depth of at least 2 inches and pointing with new compatible mortar in lifts of no more than 1-¼ inches, compressing each lift and allowing to become thumbprint hard before proceeding with the next lift. This process most likely applies to all interior surfaces of foundation walls and visible cracks at foundation wall exteriors.

Retaining walls contain little to no mortar in joints between stones. Existing soil in joints should be removed as deep as possible, and the same repointing process described above should be followed. As an alternate, walls may be rebuilt, fully bedding stones in mortar as they are reset. This process applies to Wall 10, walls at stairs, and Wall 7. Collapsed sections of Wall 10 should be reset in this manner.

# **ATTACHMENT C**

*Report:*

**Window, Siding, and Trim Investigation of 400 Chase Street,  
Black Hawk, Colorado**



*Submitted to:*

The City of Black Hawk  
211 Church Street  
Black Hawk, CO 80422

*Submitted by:*

Anthony & Associates, Inc.  
P.O. Box 271400  
Fort Collins, CO 80527-1400

March 30, 2015

# Window, Siding, and Trim Investigation of 400 Chase Street, Black Hawk, Colorado

## BACKGROUND

This report is based on information provided by Ms. Cynthia Linker from the City of Black Hawk. Anthony & Associates, Inc. (A&A) was asked to conduct a limited investigation of the architectural wood of 400 Chase Street (the Building) located in Black Hawk, Colorado.

The Building, which is believed to have been constructed ca. 1898, is a 1 ½ story wood-frame building with an irregular, but predominantly square footprint. It is clad with wood trim and wood siding. There is one historic outbuilding to the west of the Building; an attached two-car garage on the east side of the Building is not historic and was not included in this investigation.

## SCOPE OF WORK

There were questions regarding the general condition and age of the Building's architectural wood, as well as questions regarding the age of the kitchen addition. The species of the wood used in the construction of the windows, siding, and trim was unknown. The level of investigation was chosen to provide insight about the age of the architectural wood and the kitchen addition and the general condition of the architectural wood.

The scope of work included the following tasks:

- Conducting a site visit to photograph and document existing conditions, followed with a limited assessment report.
- Removing a minimum of eight wood species samples to identify the wood species or wood species groups for the wood windows, siding and exterior trim elements of the Building and an outbuilding.
- Conducting a limited visual investigation of the visible wood conditions of the Building and outbuilding that includes taking moisture content measurements of a representative sample of siding elements to determine whether conditions exist

that are favorable to the growth of wood decay fungi and to identify areas of moisture intrusion.

- Examining the fasteners and the siding for indicators of age.

## **FIELD PROCEDURES**

Anthony & Associates, Inc. provided a wood specialist on February 25, 2015 to conduct an investigation of the wood windows, exterior wood siding, and exterior trim of the Building. The investigation was based on a combination of visual inspection, moisture content determination and species identification. These methods are described below.

### ***Terminology***

Existing wood conditions pertain to the wood substrate and do not describe wood coating (e.g. paint) conditions. Wood conditions are described as good, fair, or poor. Good condition describes wood that has no evidence of deterioration from wood decay fungi. Wood in good condition may exhibit moisture staining and light weathering from UV exposure but is not structurally impacted. Wood in fair condition may exhibit evidence of past moisture damage and UV light exposure, including weathering, light to medium surface texture, and small surface checks. Wood in fair condition remains serviceable but may have undesirable aesthetics. Wood in poor condition may exhibit through-splits, significant cupping, warping, or twist, heavy surface texture, and/or ongoing deterioration caused by wood decay fungi.

### ***Species Identification***

The Building is clad in wood siding with wood trim. Identifying wood species makes it possible to identify compatible material for repairs and can aid in historic interpretation of construction or repair campaigns. Wood species were identified by removing small samples from which the species or species group were identified under microscopic examination. Although a minimum of eight samples was included in the authorization, additional samples were removed to identify species of key architectural wood elements and to aid in developing historical documentation and interpretation.

### ***Visual Inspection***

Visual examination of the wood allows for identifying components that are missing, broken, or in an advanced state of deterioration. If missing components were intended to provide protection from the elements (i.e., to prevent moisture intrusion), their replacement may be essential to prevent long-term damage to the structure. Visual inspection also allows for the detection of past or current moisture problems, as evidenced by moisture stains on the exposed surface of the wood. Further, visual inspection enables detection of external wood decay fungi or insect activity as

determined by the presence of decay fruiting bodies, fungal growth, insect bore holes or wood substance removed by wood-destroying insects.

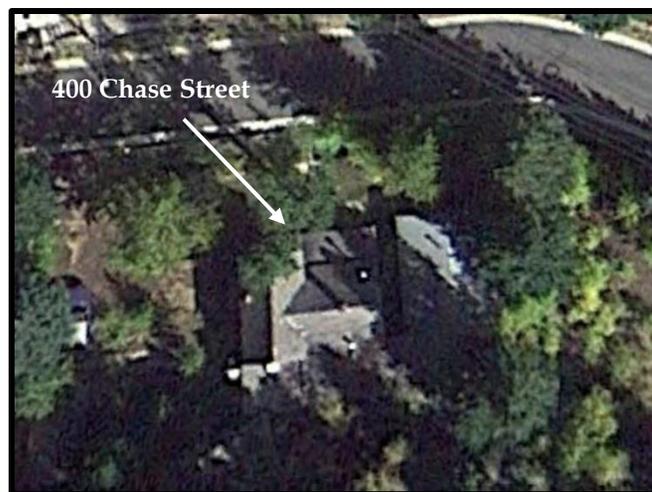
### ***Moisture Content Determination***

Prolonged exposure to moisture can produce undesirable conditions and maintenance issues for wood in a structure. Shrinkage, swelling, checking, loose connections, and decay are typical problems. Moisture content measurements were taken at multiple locations of the exterior siding and trim.

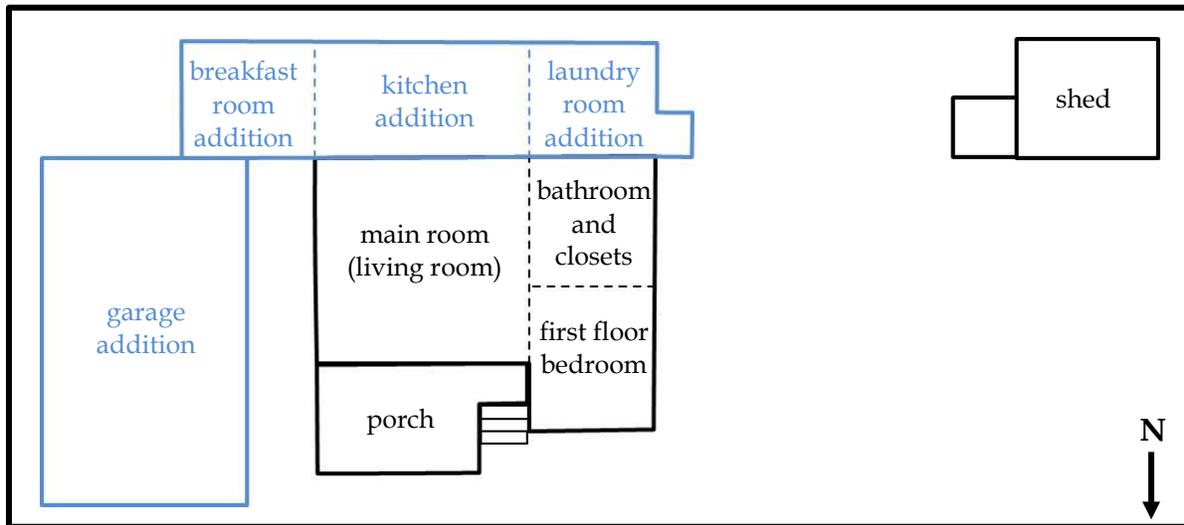
Moisture content measurements identify wood with favorable moisture levels for the growth of wood-decay fungi. Generally, if the moisture content is less than 20 percent, wood-decay fungi are unable to grow. While fungi may be present at lower moisture contents, they are unable to continue to deteriorate the wood without sufficient moisture. Moisture contents from 20 to 30 percent indicate areas of concern where sufficient moisture is present for fungi to grow but not sufficient to indicate advanced decay. Moisture contents above 30 percent can indicate advanced decay with internal voids and/or surface deterioration.

## **FINDINGS**

The Building currently has a primarily square footprint. The elevation facing Chase Street is the north elevation. The Building appears to have been constructed in multiple phases, and likely originally had an "L-shaped" footprint. The various alterations are apparent when viewed at the roofline (Figure 1), and when viewed in plan (Figure 2).



**Figure 1.** Google Earth image showing the roof line of the Building.



**Figure 2.** Sketch plan of the first floor of the Building (not to scale) with labeled additions (blue).

The foundation is stone masonry under what appears to be the original footprint of the Building (Figure 3) and poured concrete below the subsequent additions along the south elevation of the house (Figure 5). There is a crawl space or basement under the original “L-shaped” building; however, the basement door was frozen shut at the time of the field investigation and the crawl space could not be accessed. The Building is clad with wood and wood composite siding. The south elevation of the kitchen addition has modern wood composite siding, while the laundry room addition to the west has wood siding (see Figure 4). All siding appears to be attached with round wire nails.



**Figure 3.** Stone masonry foundation, view of the northwest corner of the Building.



**Figure 4.** Poured concrete foundation, view of the south kitchen addition. Note the wood composite siding on the kitchen addition.

All windows have been covered by aluminum storm windows (Figure 5). Most of the windows do not have locking hardware (Figure 6). Locking hardware, where present, indicates that the window sashes within the “L” footprint may be historic and/or original to the construction or early modification of the Building (Figure 7).

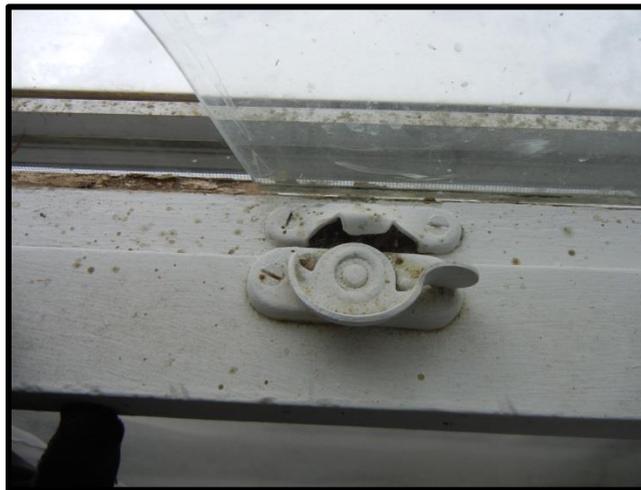


**Figure 5.** Aluminum storm windows on the south elevation.



**Figure 6.** Windows in the main living room, east elevation, with no locking hardware.

The horizontal wood siding on the exterior of the Building is in good to poor condition, depending on the elevation. Siding on the north and west elevations of the Building is in good condition, while siding on the east and south elevations is in fair to poor condition.



**Figure 7.** Window hardware within the first floor bedroom appears to date to the period of construction and/or early modification (ca. 1890s - 1920s).

#### *Outbuilding – Shed*

A small shed is located at the southwest corner of the property (Figure 8). The shed is constructed of wood framing with full dimension 2-inch by 4-inch wall studs, horizontal wood sheathing (Figure 9), and horizontal wood siding (visible in Figure 8).



**Figure 8.** The north elevation of the shed.

The wood siding on the north and west elevations is in good condition; the siding on the east elevation is in fair condition, and the siding on the south elevation is in fair to poor condition. The siding on all elevations is attached with wire nails.



**Figure 9.** Interior view of the shed showing full dimension wall studs and horizontal sheathing.

### *Moisture Content*

Limited moisture content measurements were taken using a capacitance moisture meter for siding and exterior trim at multiple locations along the building exterior, primarily near ground level, to gain insight into the moisture levels around the perimeter of the Building. Moisture content measurements generally did not exceed 7 percent in the tested areas indicating that the wood is currently at low risk for deterioration by wood decay fungi.

### Species Identification

Twenty samples were removed for species identification. Given the assumed age of the Building, historic materials such as siding would likely have been produced from trees with native ranges extending into Colorado, such as western yellow pine (a hard pine species group that includes ponderosa pine and lodgepole pine) and/or Engelmann spruce; however, western yellow pine is still used today for architectural siding and trim, so decisions regarding the age of the exterior architectural wood cannot be based on species alone.

**Table 1.** Wood Species Identification

Sample	Member	Location	Species
1	bottom sash meeting rail	NE window, living room	eastern white pine ( <i>Pinus strobus</i> )
2	bottom sash meeting rail	SE double-lite window, living room	eastern white pine
3	plank flooring	living room	western yellow pine ( <i>Pinus</i> spp.)
4	flooring	kitchen	hard maple ( <i>Acer</i> spp.)
5	horizontal muntin	SW six-lite kitchen window	western yellow pine
6	interior vertical window trim	first floor bedroom window	western yellow pine
7	interior vertical window trim	NE window, living room	western yellow pine
8	interior sill	SE double-lite window, living room	western yellow pine
9	interior sill	first floor bedroom window	western yellow pine
10	siding	kitchen (taken from the west interior wall of the laundry room)	eastern white pine
11	siding	laundry room (taken from the south interior wall)	western yellow pine
12	wall stud	shed	Engelmann spruce ( <i>Picea engelmannii</i> )
13	siding	shed	eastern white pine
14	horizontal sheathing	shed	western yellow pine

Sample	Member	Location	Species
15	siding	north elevation, front porch	eastern white pine
16	exterior vertical window trim	north elevation, front porch	western yellow pine
17	siding	south elevation, laundry room	western red cedar ( <i>Thuja plicata</i> )
18	exterior horizontal window trim	SE window, kitchen	western yellow pine
19	bottom sash meeting rail	first floor bedroom E window	eastern white pine
20	bottom sash meeting rail	first floor bedroom W window	eastern white pine

The kitchen addition has hard maple (*Acer* spp.) flooring, while the living room, within the original portion of the Building, has plank flooring made of western yellow pine (*Pinus* spp.).

Western yellow pine, a native wood species group was identified for all the window trim elements and for the siding located on the south interior wall of the laundry room addition. Eastern white pine, a non-native tree species, was identified as the material for the sampled windows and for siding on the exterior north elevation and the kitchen addition (the sample was taken from the interior west wall of the laundry room, as the south exterior elevation of the kitchen addition has modern wood composite siding), as well as the shed. Based on the species identification results, exterior walls of the laundry room addition are clad in western red cedar siding.

The siding on the Building is a mix of three wood species and one modern wood composite product, indicating that there was likely a minimum of four replacement or partial replacement campaigns of the siding. It seems likely that the Building was originally clad in western yellow pine siding, but that subsequent alterations made to the structure included residing the Building and the kitchen addition with eastern white pine siding. The laundry room addition was sided in a separate campaign with western red cedar siding, and finally, portions of the south elevation of the Building were sided with modern wood-composite siding.

The shed, with native Englemann spruce wall studs and western yellow pine sheathing, was constructed of locally available material. It is sided with eastern white pine siding (identical in size and profile to that on the north and west elevations of the Building), indicating that it was likely constructed before or during the second siding campaign of the Building.

### *Age of Siding and Trim*

Determining the exact age of the siding and trim by visual inspection alone is generally not possible. In conjunction with species identification and historical research and documentation, however, it is sometimes possible to determine the sequence in which materials were added or altered by examining the materials and fasteners in detail. A key identifier can be the type of fastener used to hold wood members or architectural elements together. Wire nails, in common use today, were not widely produced and used in construction until the 1890s. However, in rural parts of the country, common use of wire nails did not generally occur until after the turn of the 20<sup>th</sup> century.

While wire nails have flat, circular heads and round shafts, machine cut nails were typically stamped or cut from a sheet of metal, resulting in square or rectangular heads and square shafts. Machine cut nails were primarily used prior to the widespread manufacture and use of round wire nails. Given the assumed ca. 1893 date of construction, the use of machine cut nails would not be unusual; however, all of the visible fasteners on the siding and trim are wire nails (Figure 10).



**Figure 10.** A round wire nail head visible on the north elevation of the shed.

### *Age of the Windows*

The window sashes that were sampled for species identification were identified as eastern white pine (*Pinus strobus*), a tree species that is not native to Colorado, indicating that the windows were either manufactured on the east coast and shipped by train, or are replacement windows. Although most windows did not have window hardware, the presence of one locking unit on a window in the first floor bedroom indicates that the windows were likely installed ca. 1893-1930s. Screws with slotted heads, visible on the hardware in Figure 7, were the only screw type available in the U.S. until the mid-1930s when the Phillips head screw was patented and mass-

produced.<sup>1</sup> Due to the lack of distortions in the reflections, the glass within all the windows of the Building appears to either be replacement glass or to post-date the 1910s. The glass in all windows is uniform in thickness and does not appear to have distorted reflections common to wavy historic glass. Wavy glass is indicative of the manufacturing process and is either crown glass or cylinder glass. Crown glass was blown by hand and was generally not produced after 1850 in the U.S. Cylinder glass is typically associated with windows manufactured ca. the 1870s to the 1910s.

### *Age of the Kitchen Addition*

There were questions regarding the age of the kitchen addition. Although an exact determination of age is generally not possible, in many cases, a close examination of the materials used in the construction can provide some insight to the construction history. Although the unmodified walls within the original construction are plaster and lath, in at least some locations, the walls of the kitchen addition are made of fiber board over wood beadboard. Beadboard was a common wall treatment in kitchens and bathrooms during the Victorian era (ca. 1890 – 1915). Fiberboard, also commonly called by a historically popular brand name, Beaver Board, became popular in the 1920s and 1930s and was advertised as having insulating properties. The fiberboard in the kitchen addition can be found covering an old flue (Figures 11 and 12), suggesting that it may have been installed in order to insulate the flue.



**Figure 11.** Fiberboard over wood beadboard in the kitchen addition.

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<sup>1</sup> Soniak, Matt. 2011. “Screw This, Screw That: Why We have Different Types of Screws,” in *Mental Floss*, electronic document, <http://mentalfloss.com/article/26929/screw-screw-why-we-have-different-types-screws>.



**Figure 12.** The flue in the kitchen addition.

## **SUMMARY OF THE WOOD INVESTIGATION**

The exterior architectural siding and trim of 400 Chase Street ranges from good to poor condition. Conditions are associated with the aspect or exposure, with those on the south and east in the poorest conditions, and those on the north and west generally in good condition. Species identification results indicate that the original “L-shaped” building was likely clad in horizontal wood siding made from western yellow pine, a locally available tree species. A repair or replacement campaign of the siding with eastern white pine may have occurred with the construction of the kitchen addition, which likely dates to ca. 1910 to the 1930s based on the presence of beadboard and fiberboard. The shed may also have been built at that time, using locally available material for the structural members and eastern white pine siding. Assessment of the structural wood floor and wall members that make up the framing of the kitchen addition may shed additional light on its date of construction (the crawl space could not be accessed at the time of the investigation because the door was frozen shut). The western red cedar siding on the laundry room addition represents a third construction or repair campaign. The modern wood composite siding on the south elevation of the Building is replacement material.

The architectural window trim appears to date to the original construction based on the profiles, but may date to a repair campaign, as native tree species are still in use today for the production of architectural trim. One window has original or historic hardware in place, and most windows within the original “L-shaped” footprint are single lite, double-hung windows that are consistent in appearance with historic windows ca. 1893-1920.

The findings of the wood investigation can be summarized as follows:

- Based on a limited number of samples removed, the existing exterior architectural wood work (including siding and trim) is a combination of western yellow pine (*Pinus* spp.), western red cedar (*Thuja plicata*), and eastern white pine (*Pinus strobus*).
- The window sashes appear to date to the estimated date of construction or may be replacements from an early modification based on limited visual evidence of historic window hardware and the species identification results; the majority of the window trim may date to the period of construction.
- The shed was likely either resided or constructed at the same time as the kitchen addition based on the wood species identification of the siding.
- While the exact age of the existing wood siding is generally not possible, based on the wood species used and the use of round wire nail fasteners, it is likely not original to the construction with the possible exception of the interior north wall of the laundry room addition (the former exterior south wall of the original building), which was identified as western yellow pine, a locally available tree species group.
- The wood siding is, in general, in good condition on the north and west elevations, in good to fair condition on the east elevation, and in fair to poor condition on the south elevation of the Building.

# **ATTACHMENT D**



## GROUTING PROGRAM

The method of using Chemical or Permeation grouting to turn loose sands into sandstone-like mass is a time proven method. **The chemical grout materials are non-toxic and non-hazardous materials.**

The chemical grout materials would be placed through 1 inch “tube of manchette” injection pipes drilled to effective depths or bedrock.. Along the proposed treatment area, holes would be on the order of 1.5 foot centers with expected varying depths up to 6’ + or - The grout is injected into soils through the selected sleeve ports in calculated volumes to provide contiguous masses permeation grouted ground, that in aggregate are intended to bind the soils together as the voids are filled in in-situ soils. Grout ports will be designated primary or secondary

Utilizing an internal double packer assembly, chemical grout will be injected under a designed pressure at designated sleeve port location to fill pore spaces surrounding pervious soils. Initially, high pressures will be used to crack open the sleeve port and annular grout to initiate the flow of grout into the ground. Grouting pressures will generally not exceed 2.0 psi per foot of depth below the ground surface. Allowance of approximately 25 psi of extra grout pressure to expand the sleeve port assembly and overcome line losses will result in a net grouting pressure range of 45-60 psi, measured at the manifold.

Average injection flow rates will not exceed 10 gpm and it is expected that grout would be injected at approximately 2 to 5 gpm. The causes for sudden drops in injection pressures or increases in flow rates (which could suggest possible ground fracturing) will immediately be investigated. *Grouting will be stopped, be evaluated or revised if necessary to assure continuous and uniform penetration of grout into the defined zones if ground fracturing, surface leakage, leakage through the face of the cobble foundation wall, or other loss of grout flow control is suspected.*

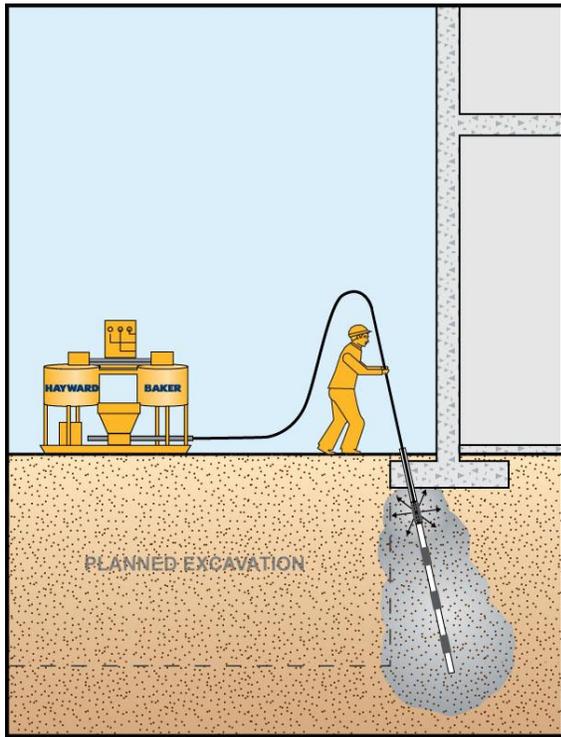
We understand that approximately 280 lineal feet of treatment is required. Depth of treatment is expected to be on the order of 3’ to 6 feet, for the chemical injection treatment. We propose that a single row of chemical injection locations be placed along this alignment on 1.5’ centers and approximately 51 will be utilized to stabilize the foundation.

**Exclusions:** This proposal specifically does not include the following:

- Staging area capable of storing materials and equipment
- Water to be used in the grout and for cleaning. If water is not available on site, a price adjustment will be warranted to capture the cost of water trucking to the site.

### **CHEMICAL GROUT MIX DESIGN**

The grout mix will yield a grout that, when fully hardened, has an unconfined compressive strength of from 105 to 500 psi. HBI will target mid-range strength to facilitate quicker, more precise zone of treatment. Bentonite cement annulus grout for the Tube-a-Manchette installation will be a blend of Portland cement and powdered bentonite that yields a grout that, when fully hardened, has an unconfined compressive strength of from 100 to 500 psi.



**image of Permeation grouting. Ignore planned**

**excavation note on drawing.**

### **TECHNICAL CONSIDERATIONS**

After reviewing the results of the field test pits HBI recognizes that the hole spacing will need to be on the order of 18 inches to better permeate the upper zone of the soil.

Due to the silty nature of the upper soils a re-grout application may be required to allow for proper permeation through the soils. Re-grouting will be performed by re-entering the same injection tubes used for initial treatment and pumping grout until a volumetric or pressure refusal is achieved (refusal criterion is discussed in previous sections).

It must be understood that the silty nature of the shallow soils can create a situation where isolated pockets of soil remain untreated. The isolated zones will not impact the success of the stabilization as a whole. The tight hole spacing and re-grouting of previously treated zones will help to limit the untreated portions.

HBI will also place a port opening directly at the bottom of the footer in each hole location. This placement of the grouting port will allow for directly entry of grout immediately beneath the bottom of the wall. HBI recognizes that the wall depth varies.

**QUALITY ASSURANCE AND QUALITY CONTROL PROGRAM**

HBI’s QA/QC program will consist of preconstruction submittals, field documentation and review of grouting pressures and quantities. HBI will employ a full time, qualified superintendent for the duration of the project

**SCHEDULE**

HBI proposes to perform the above scope of work for the unit-cost prices listed below. *Quantities are estimates only. Final quantities shall govern final payment.*

It is estimated that the chemical grouting will take approximately one to 1.5 weeks to complete the work. HBI anticipates mobilization of crew and equipment 2-3 weeks after receiving a written order to proceed and after all submittals have been submitted and approved.

We have attached our schedule of prices and list of conditions herein. This letter and its attachments constitute HBI's budgetary proposal and will be made a part of any contract between the GC or Owner and HBI. The acceptance of the price of this Proposal shall evidence the concurrent acceptance of all terms and conditions recited herein or incorporated by reference. Any resulting contract will not include any other agreements or documents not specifically given to HBI and referenced herein. We trust this budget is of interest to you and we look forward to being of service. If we can be of any assistance in clarifying any points in this proposal, please contact us at **303.469.1136**.

<b>Option 1: Full Scale Grouting Program</b>				
<b>Item Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate</b>	<b>Extension</b>
Mobilization/Prep	L.S.	1	\$9,500	\$9,500
Soil Stabilization –permeation Grouting	Wall L.F.	75	\$500	\$37,500
TOTAL with others providing water				
<b>TOTAL COST</b>				<b>\$47,000</b>

- All rates based upon 10 hour work day unless specified.
- Stand-by/Delay will be charged as a result of interruption of HBI work for reasons beyond our control, including actions by Owner, GC, or site Engineer
- The price is subject to the following Terms and Conditions outlined below.

Sincerely,  
**HAYWARD BAKER INC.**

Joe Harris – Vice President

## **SPECIFIC TERMS AND CONDITIONS**

The following facilities and services are to be provided to HBI by others free of all costs to HBI:

**Site Access:** Preparation and maintenance of clear, well drained, uninterrupted access ways and working platforms suitable for HBI equipment moving under its own power. Access includes adequate ramps at suitable levels and should be available at the time and to the extent necessary to suit HBI's operations.

**Sequence:** Work is to be made available in a sequence that will enable HBI to work efficiently and systematically without restriction.

**Progression of the Work:** HBI's proposal is based upon carrying out the work in an unobstructed manner during regular working hours, Monday through Saturday, in a single uninterrupted visit to the site. HBI reserves the right to work overtime or weekends at HBI's own discretion without incurring charges for inspection, site overhead or other consequential charges. In the event that HBI's work is interrupted for any reason beyond our control, including standby time between work if the next holes are not available to drill, HBI shall be compensated at the rate of \$3640.00 per shift for standby of the chemical grout crew and equipment.

**Site Preparation and Maintenance:** Removal of all surface or subsurface topsoil, brush, organic material and other unacceptable material in accordance with the requirements of the contract documents.

**Water Control:** All work necessary to control and maintain the site and excavation free of ground or surface water problems as they relate to HBI's operations.

Prevent surface water and subsurface or groundwater from accumulating in and on project site and surrounding area. Maintain the water table at least 10 feet below the grade of the work area. Provide local disposal of wastewater created by HBI's operations.

**Site Work:** The work under this proposal does not include any excavation, grading or sealing work required on the site to establish a working platform or to restore the site to the original or finished grade. All such work is to be furnished by others in a timely manner, so as not to impede the progress of the work or cause damage to the finished work.

**Excavation and Spoil Removal:** All necessary excavation and disposal, including removal of solid and liquid waste materials resulting from the work.

**Traffic Control:** All pedestrian and vehicular traffic control including signs and barricades, if and when required.

**Utilities:** HBI will utilize the Colorado Utility Notification System in order to locate utilities on the site. Location, potholing, removal or relocation of any utilities not located by this service is the responsibility of the Owner, Developer and/or Contractor. HBI will not accept any responsibility for damage to utilities not located by the one call service. Furthermore, any utilities located by the one call system that are in conflict with HBI's activities may need to be potholed, removed or relocated at the expense of the Contractor if HBI's work cannot be adjusted. Any costs associated with the adjustment of HBI's work due to utility conflicts will be the responsibility of the Contractor.

Layout: Continuous and complete survey and field layout of all necessary lines and grades from which HBI's work can be established. Any post construction survey of the work shall also be performed.

Permits and Easements: All site permits and easements required to legally perform the work.

Lighting: Reasonable site lighting for night work and site security.

Water Supply: Adequate supply of clean fresh potable water supplied to within 300 feet of HBI's operations at the rate of 60 gpm at 75 psi.

Sanitary Facilities: On-site sanitary facilities for the use of HBI employees.

Security: Site security during nights and weekends.

Site Yard: An area shall be provided on-site, adjacent to the work, for HBI's equipment, storage yard, workshop, and site office(s).

Crane Service: Operated and maintained crane service to load and unload HBI equipment and materials at the site. Crane service will also be required on an intermittent basis throughout the project for handling materials on-site.

Union Manning: Labor to comply with union requirements on HBI operations other than those specifically discussed in the proposal.

Labor Affiliations: This proposal is made with the understanding that HBI will employ open shop labor. In the event that union labor must be used the client will pay for any cost differential.

Hazardous Material: In the event that HBI encounters any hazardous material on the site that has not been rendered harmless, HBI shall immediately stop work in the area affected and report the condition in writing to the Owner and Engineer. To the fullest extent permitted by law, the Owner and Contractor shall indemnify and hold harmless HBI, their agents, consultants, and employees from and against all claims, damages, losses and expenses, including but not limited to attorney fees arising out of or resulting from performance of the work in the affected area.

**The following additional terms and conditions will apply to the proposed work:**

Liquidated Damages: The [Owner or Contractor] shall not be entitled to any liquidated damage, delay damage or other time related penalties arising from the work.

Sodium Silicate Curing: The strength of Sodium Silicate grout increases with time. When used as excavation support, or treatment for a tunneling operation, it is recommended that the grouted soil be permitted to cure a minimum of seven (7) days prior to excavating the adjacent soils.

Bonds: The cost of a bond premium is not included in the contract price. If desired by and paid by the [Owner or Contractor], HBI will furnish a Payment and Performance Bond.

Confidentiality: All specifications, drawings, price and technical data submitted by HBI are to be treated as confidential and shall not be used for any purpose other than the evaluation of this bid, nor shall such information be disclosed to any third party for any purposes without the express written consent of HBI. Such information shall remain HBI's property and be returned to HBI upon demand.

Period of Acceptance: This Proposal is offered for acceptance for a period of 30 days.

Exclusions: Any items of work not specifically included in this proposal shall not be the responsibility of HBI.

**GENERAL TERMS AND CONDITIONS**

Payment Terms: Progress payments will be submitted monthly and shall be payable within 30 days of the invoice date.

All other amounts due, including retention (if any), will be paid in full within 45 days of substantial completion of HBI's work, regardless of the anticipated project completion date.

An interest charge of 1-1/2% percent per month will be added to invoice amounts not paid within 30 days from date of invoice. All costs of collection, including attorneys' fees and court costs, will be added to unpaid invoice amount.

Changed Conditions: Notwithstanding all clauses of this contract, if HBI, during its work, encounters 1) subsurface conditions or latent physical conditions which differ from those indicated in this Agreement, or 2) unknown physical conditions of an unusual nature, differing from those ordinarily encountered, then HBI shall be entitled to an equitable price and schedule adjustment to compensate it for such changed condition.

Insurance: HBI will provide the following insurances within limits as shown.

Comprehensive General Liability:	
(Combined Single Limit, Bodily Injury and Property Damage)	\$1,000,000.00
Automobile Liability:	
(Combined Single Limit, Bodily Injury and Property Damage)	\$1,000,000.00
Workman's Compensation:	Statutory

Force Majeure: HBI cannot accept any liability for default or delay in the completion of the work when caused by strike, riot, war, or Act of God or other similar circumstances beyond HBI control.

Limitation of Liability: HBI does not accept liability for any damage to the structure, landscaping, utilities, french drains, septic systems, wells, physical installations and/or any consequential damages that may result from the performance of the work. All utilities and other services left in place shall be located, exposed, and shown to our on-site representative prior to commencement of work.

Liability: No liability can be accepted by HBI, nor shall HBI accept as in any way responsibility for defects of any kind whatsoever arising from a cause which is outside HBI's immediate control or knowledge, or for any fault in the junction between HBI's work and subsequent work carried out by others.

Indemnity: Subject to the terms of the Liability Clause above, and to the correct soil conditions having been provided to us prior to our work, HBI shall **insure**, indemnify and hold harmless the Owner and their employees from and against all claims, damages, losses, and expenses, including attorneys fees, but only to the extent of the negligence of HBI, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to the injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and only to the extent such claim is covered under the General Liability Policy of HBI.

Standard Construction Contracts: As an alternate to accepting HBI's proposal as the contract document, HBI considers the "Standard Form Construction Contract" as prepared jointly by AGC, ASA and the ASC, 1994 Edition

to be balanced and fair to all parties. Such contract, with no changes to the standard text thereof, along with this proposal and the specific documents herein, could form the contract for the work herein proposed. Any other contract form will require our review. Where incorporated into a contract, this proposal shall supercede all conflicting terms of such a contract.

Accepted By:

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**RESOLUTION 31-2016**  
**A RESOLUTION**  
**APPROVING A**  
**CERTIFICATE OF**  
**APPROPRIATENESS FOR**  
**RETAINING WALLS ON**  
**MULTIPLE CITY-OWNED**  
**PROPERTIES ON THE**  
**NORTH SIDE OF GREGORY**  
**STREET BETWEEN SELAK**  
**AND CHURCH STREETS,**  
**AND ON THE SOUTH SIDE**  
**OF GREGORY STREET**  
**BETWEEN BOBTAIL ROAD**  
**AND HIGH STREET**

STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK

Resolution No. 31-2016

**TITLE: A RESOLUTION APPROVING A CERTIFICATE OF APPROPRIATENESS FOR RETAINING WALLS ON MULTIPLE CITY-OWNED PROPERTIES ON THE NORTH SIDE OF GREGORY STREET BETWEEN SELAK AND CHURCH STREETS, AND ON THE SOUTH SIDE OF GREGORY STREET BETWEEN BOBTAIL ROAD AND HIGH STREET**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. The City Council hereby determines to approve the Certificate of Appropriateness for retaining walls on multiple City-owned properties on the north side of Gregory Street between Selak and Church Streets, and on the south side of Gregory Street between Bobtail Road and High Street.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

## NOTICE OF PUBLIC HEARING

Notice is hereby given that the City of Black Hawk Board of Aldermen shall hold a public hearing concerning a Certificate of Appropriateness for the Gregory Street Retaining Walls with Handrails, located on property described in Exhibit A and generally located at along the northern side of Gregory Street east of Bobtail Road, and along the southern side of Gregory Street west of Bobtail Road, pursuant to the City of Black Hawk Zoning Ordinance.

The public hearing is to be held before the City of Black Hawk Board of Aldermen on Wednesday, April 27, 2016 at 3:00 p.m. or as soon as possible thereafter. The public hearing shall be held in the City of Black Hawk Council Chambers located at 211 Church Street, Black Hawk, Colorado, 80422, or at such other time or place in the event these hearings are adjourned.

ALL INTERESTED PARTIES  
MAY ATTEND

Melissa A. Greiner  
City Clerk

Exhibit A

270 Gregory Street–

Block 27, Lots 3 thru 7; Block 28, Lots 1 thru 3; Block 31, Lots 13 thru 17; and Block 32, Lots 1 thru 5; in the Southwest Quarter of Section 7, Township 3 South, Range 72 West of the Sixth Principal Meridian, City of Black Hawk, County of Gilpin, State of Colorado.

**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

**SUBJECT:** Certificate of Appropriateness / Gregory Street Retaining Walls (P-16-04)

**RECOMMENDATION:** Staff recommends the following motion to the Mayor and Board of Aldermen:

**MOTION TO APPROVE Resolution No. 31-2016, a Resolution approving a Certificate of Appropriateness for the construction of the existing Gregory Street Retaining Walls with the following condition:**

1. All applicable building and electrical permits must be obtained prior to beginning construction.

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

The City of Black Hawk has received an application (4/4/2016) for a Certificate of Appropriateness (CofA) for multiple City-owned properties on the north side of Gregory Street between Selak and Church Streets, and on the south side of Gregory Street between Bobtail Road and High Street. This project proposes construction of two retaining walls (West Wall and East Wall), safety railings, and a stairwell. Attached to this staff report is a copy of the original land use application, and structural plans. Staff has determined that the submittal is in compliance and recommends that a Certificate of Appropriateness be approved.

**AGENDA DATE:**

April 27, 2016

**WORKSHOP DATE:**

N/A

**FUNDING SOURCE:**

N/A

**DEPARTMENT DIRECTOR APPROVAL:**

Yes       No

**STAFF PERSON RESPONSIBLE:**

Cynthia L. Linker, CP&D  
Vincent Harris, Baseline Corporation

**DOCUMENTS ATTACHED:**

Resolution 31-2016, Staff Report, Land Use Application, Structural Plans

**RECORD:**

Yes  No

**CITY ATTORNEY REVIEW:**

Yes  N/A

**SUBMITTED BY:**

  
\_\_\_\_\_  
4/15/2016  
Vince Harris, Baseline Corporation

**REVIEWED BY:**

  
\_\_\_\_\_  
Jack D. Lewis, City Manager

# **Staff Report**

**STAFF REPORT:** Certificate of Appropriateness – Gregory Street Retaining Walls  
**For:** City Council  
**Project:** Gregory Street Retaining Walls / P-16-04  
**Property Address:** Gregory Street  
**Applicants:** City of Black Hawk (Matt Reed, Public Works Dept.)  
**Zoning:** Core Gaming/HARD Districts  
**Prepared by:** Jaxon Fagan, Baseline Corporation  
**Approved by:** Vincent Harris, Baseline Corporation  
**Reviewed by:** Cynthia Linker, CP&D Administrator



**BACKGROUND:**

The City of Black Hawk has received an application (4/4/2016) for a Certificate of Appropriateness (CofA) for multiple City-owned properties on the north side of Gregory Street between Selak and Church Streets, and on the south side of Gregory Street between Bobtail Road and High Street. This project proposes construction of two retaining walls (West Wall and East Wall), safety railings, and a stairwell.

The project is necessary for the planned Gregory Street realignment, an integral part of the implementation of the Gregory Street Sub-Area Plan adopted by the City of Black Hawk in 2013. The application was submitted to the City of Black Hawk Community Development and Planning Department who will oversee the permitting of the proposed walls.

The intent of the CofA application as regulated by Section 16-368 of the City of Black Hawk Municipal Code is to ensure that all development and redevelopment is reviewed prior to construction, reconstruction, alterations or demolition. A CofA application requires Staff to review a proposed development for compliance with design and zoning standards and deem it acceptable for development and provide a recommendation to City Council.

The regulations for a CofA have been reviewed by staff and comments are included below. Attached to this staff report are the CofA supporting documents and application from the applicant. Excerpts from the supporting documents are included in the following graphics.

Figure 1. Existing Site – West Wall



Figure 2. Proposed Structure – West Wall

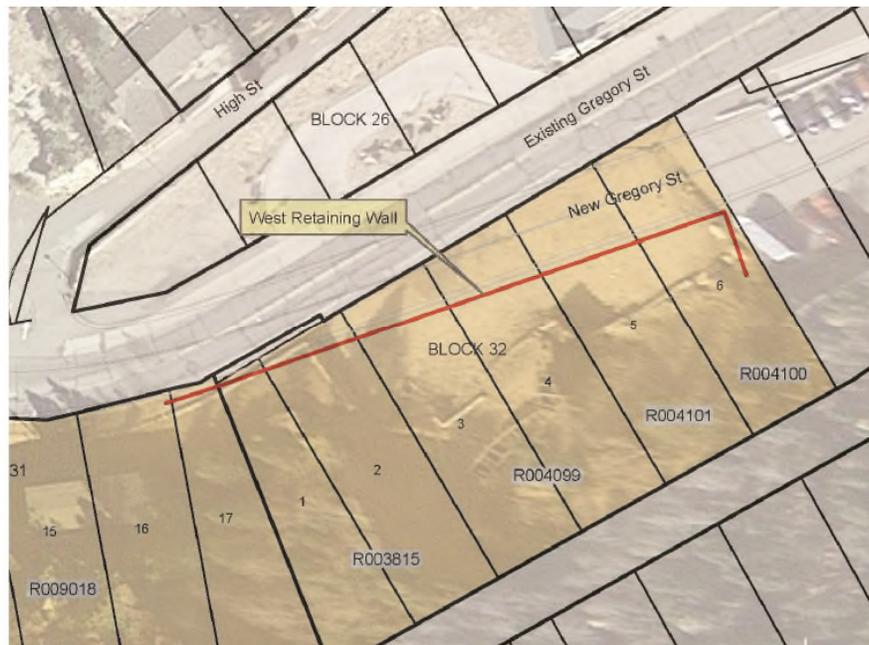


Figure 3. Proposed Structure – West Wall Elevation

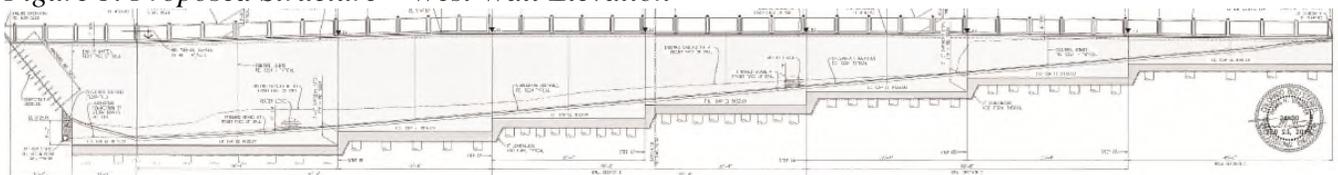


Figure 4. Existing Site – East Wall Overhead



Figure 5. Proposed Structure – East Wall Overhead

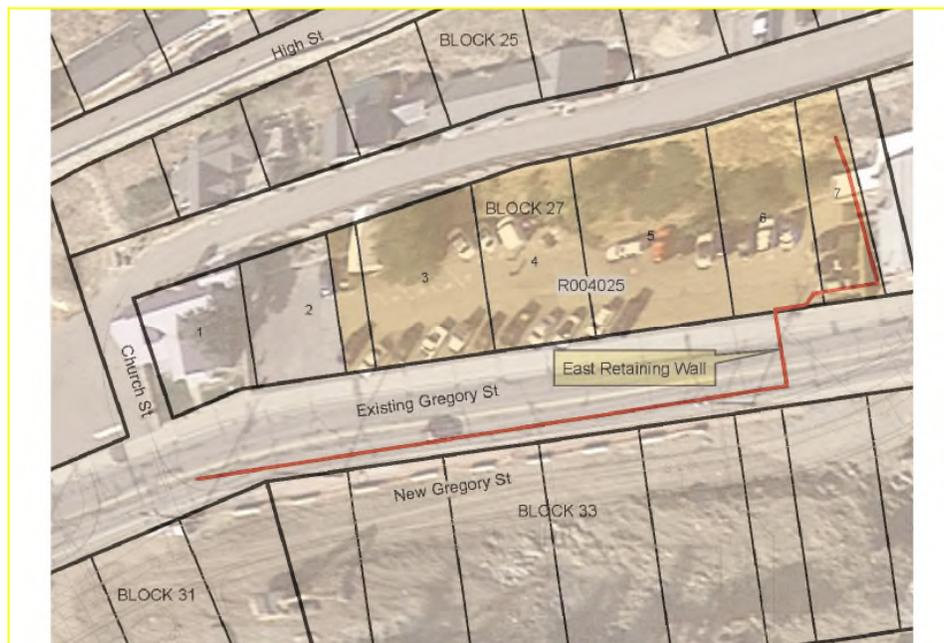
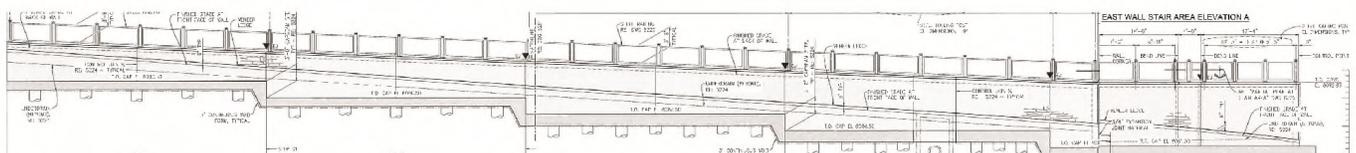


Figure 6. Proposed Structure – West Wall Elevation



*Figure 7. Proposed Material - Stone Veneer (Both Walls)*



*Figure 8. Proposed Material – Safety Railings (Both Walls) (To be painted black)*



## **REVIEW CRITERIA:**

The below paragraphs include text from the applicable sections of the City of Black Hawk Code, and staff comments pertaining to those sections. *All staff comments are in italicized text.*

### **Certificate of Appropriateness:**

Excerpts from:

**City of Black Hawk  
Zoning Code  
Chapter 16 - Zoning**

#### **16-361 Procedures and submittal requirements.**

All procedures and submittal requirements for a Certificate of Appropriateness have been reviewed by staff. All submittal requirements have been satisfied.

**Sec. 16-368. City Council historic review process.** Any person seeking to renovate the exterior of, add to or construct a new building shall be subject to the following procedures. Any such renovation, construction or demolition shall be subject to the City's design standards.

**16-368(3)(a).** No building permit or site development plan shall be issued unless accompanied by a Certificate of Appropriateness (CofA) issued by the City Council for any of the following acts:

1. Construction of a new building, structure or improvement
2. Alteration or reconstruction of, or addition to, the exterior of any improvement;
3. Demolition of any improvement;
4. Construction or erection of or addition to any improvement upon any land located within the City;
5. Excavation requiring an excavation permit.

**16-368(3)(f):** Criteria for determining appropriateness of erection, construction, reconstruction, alteration. In determining the appropriateness of work (other than demolition) as proposed in an application for a site development plan or a building permit, the Board of Aldermen shall consider the following:

1. All plans, drawings and photographs as may be submitted by the applicant. *The applicant has submitted all required plans and retaining wall plan sheets.*
2. Information presented at a public hearing held concerning the proposed work. *The applicant will provide additional information at the City Council meeting if needed.*
3. The purpose of this Chapter. The purpose of this Chapter is to ensure that all development and in this case, the new development, meet the design, development and zoning requirements of the City of Black Hawk. *Staff finds the proposed development to be in conformance with the City of Black Hawk zoning and development standards.*

4. Compliance with the ordinances of the City and the payment of all fees required by the ordinances of the City. ***The applicant has and will continue to pay all necessary fees required by the City.***
5. The historical and architectural style, the general design, arrangement, texture, materials and color of the development, building or structure in question or its appurtenance fixtures; the relationship of such features to similar features of the other buildings within the City and the position of the building, structure, park or open space in relation to public right-of-way and to other buildings and structures in the City. ***The proposed structure will match or compliment the current design, materials, and colors of similar structures and walls in the surrounding area. See below image and also the Commercial Design Guidelines adopted in July 2012 are referenced and evaluated with this application.***

***Figure 9. Near Proposed West Wall – Wall and buildings with a similar stone appearance***



***Near Proposed East Wall***

***Figure 10. Church St. (Foreground) and High Street (Background) Retaining Walls with a similar stone appearance and metal railings***



**Figure 11. 241 Gregory St. – Walls with a similar stone appearance.**



6. The effects of the proposed work upon the protection, enhancement, perpetuation and use of the City which cause it to possess a special character or special historical or aesthetic interest or value. ***The architecture of the proposed structure is compatible with the character promoted by the City and is consistent with the character of similar nearby structures. The Gregory Street Sub Area Plan envisions a ‘destination district’ and ‘pedestrian plaza’ in the immediate vicinity of the proposed wall. The walls will enhance the future redevelopment opportunity of the Gregory Street sub-area by providing safer pedestrian access while providing vehicular access in the area, additional developable space for future buildings and amenities, and additional character customary of the old mining town era.***
7. The design standards for the City. ***The proposed walls have been reviewed against the City of Black Hawk Commercial Design Guidelines. Section 4, subsections J and L, and Section.c.XII of the Design Guidelines provide standards for fences, retaining walls, and stairways within the City of Black Hawk. See below.***

**City of Black Hawk  
Commercial Design Guidelines**

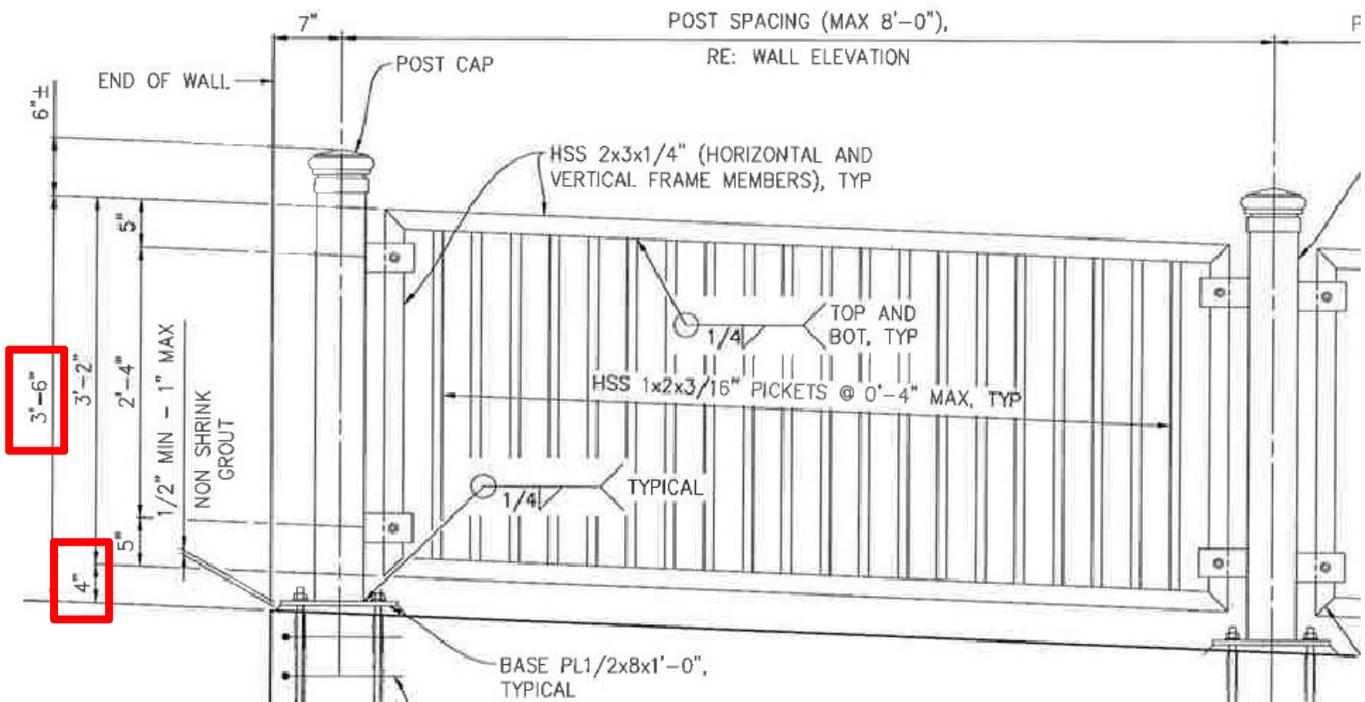
**Section 4 (J): Fencing**

- I. Fencing may be used to define property edges. ***Not relevant.***
- II. Fences shall transition smoothly with the grade or wall on which they are located. ***The metal fences/railings smoothly follow the grade of the wall.***
- III. Fences shall be similar to those seen historically in Black Hawk, having a modest, low-key appearance to support the sense of a natural setting.
  - a) Chain link, metal mesh, plastic, fiberglass or plywood fencing materials are not acceptable. Solid privacy or stockade-style fencing is not allowed. ***The proposed fencing/railing material is composed of metal which is an acceptable and desired material.***

b) Wrought iron fencing in styles similar to those seen historically is acceptable. Wrought iron fencing shall be either black or rust-colored. **The proposed fencing material is steel, and shall be painted black. Despite the reference for wrought iron fencing, cast steel will look similar to wrought iron after being painted, and will serve the safety needs and meet the intent of the guideline.**

IV. Fences shall not exceed 42 inches in height and shall not be less than 34 inches in height except variations which may occur at grade changes. The gap at the bottom of the fence shall be minimized, with no more than four inch gap recommended. **The proposed fences/railings are 42 inches in height, with a 4 inch gap at the bottom of the fence. See proposed design below.**

Figure 12. Safety fence dimensions.



#### Section 4 (L): Retaining Walls

- I. Use retaining walls to define property edges. **Not relevant**
- II. Use wall materials that are compatible with the primary building on the site, or with the streetscape and landscape of the site. **There are numerous nearby examples of retaining walls and buildings with a stone facade similar to the proposed walls. See Figures 9, 10 and 11.**

- a) Retaining walls shall be of dry-stack stone or stone masonry, similar to those used historically. Un-faced concrete, Jersey Barriers and concrete block are not appropriate for use as retaining walls. Where necessary to avoid site erosion, portions of the site may be terraced using concrete retaining walls faced with native stone or appropriate wood cribbing. ***The proposed walls are to be constructed of stone masonry, an acceptable material. See Figures 9, 10 and 11.***
  - b) Free-standing stone walls shall be similar in appearance to those seen historically, including finishing and joining. ***Not relevant.***
  - c) Stone used in masonry walls shall reflect the scale and height of the wall. Tall and expansive walls should be constructed of larger stone, while short and low walls should be constructed of smaller stone. Face stone or dry-stack stone is appropriate in low walls. ***The proposed stones are of an appropriate scale to the size of the proposed walls.***
  - d) Stone cap elements shall be used on top of stone or masonry walls. The cap should be sloped and extend 1"-2" beyond the edge of the wall to allow water to drip off the cap rather than run down the face of the wall. ***The plans specify a 1 foot wide concrete cap that will also extend 3" beyond the edge of the wall. Additionally, the grading and drainage system on the upslope side of the wall will prevent significant flows of water from upslope of the wall.***
  - e) Inappropriate materials include artificial brick or stone, smooth block or concrete, slump block, stucco and rustic brick. No concrete finishes on barriers or walls may be visible from a public way. Adhesive materials with photographs of natural materials on their surface are not allowed. ***The proposed walls are to be constructed of stone masonry, which is an acceptable material.***
  - f) Sculpted gunite, concrete or shotcrete surfaces are acceptable for retaining large, newly-exposed hillsides, subject to CP&D review and approval of an 8'x8' mockup of the proposed finish and color. ***Not relevant.***
  - g) Log and railroad ties may be considered on a limited basis as horizontal cribbing. ***Not relevant.***
- III. Reduce water pressure behind retaining walls by providing drains to allow moisture to pass through. ***To be considered at time of building permits.***
- IV. Long walls shall incorporate design details which prevent a long flat, consistent appearance. Examples of details which may be used to visually break up long stretches include cap treatments, accentuated columns, set-backs, the incorporation of planters, public art, etc. ***While these walls are not short walls – but many other walls in the City are longer – the proposed natural stone inherently has a variety of different size stones and will break up the length of the wall. In the future, the City could entertain placement of public art or additional façade elements as the Gregory Street Sub-area development occurs.***

- V. Walls shall have the same treatment on all exposed sides. *Not relevant.*
- VI. Public art, historical markers, and other similar elements may be incorporated into wall design. *As indicated above, in the future the City could entertain adding art or other elements desired as the Gregory Street planning effort proceeds forward.*

**Section 5.c.XII. Stairs and Ramps**

- a) In new buildings based on historic commercial forms, consider using metal or wood stairs that attach to the side of the building. *Not relevant.*
- b) When designing a project, look for interesting left-over spaces in which to locate required stairs on the building exterior. *Not relevant.*
- c) Steps and stairs shall be painted steel or wood, or natural or colored concrete or metal, and shall have closer risers. *The temporary stairs are proposed to be made out of metal and therefore comply with the intent.*
- d) Steps that are scaled appropriately to the building entrances will identify the entry location to the pedestrian and give presence to the building entry. *Not relevant.*
- e) Ramps must be provided on accessible commercial entrances, and auto operators are highly recommended on gaming establishments because of the elderly population. *Not relevant.*
- f) Ramps at the building entry shall blend into the design of the entry and not appear to be an addition. Start the ramp where the least elevation change would be negotiated. *Not relevant.*
- g) Ramps shall be constructed of concrete or wood, or may be part of a sidewalk circulation system. Metal ramps may also be used. *Not relevant.*

*From the staff perspective, the proposed architecture, style, and character of the Gregory Street Retaining Walls are in compliance with the Black Hawk Commercial Design Guidelines.*

**STAFF COMMENTS:**

Staff from Baseline Corporation has evaluated the information provided for the Gregory Street Retaining Walls. The City of Black Hawk Municipal Code allows for construction of the Gregory Street Retaining Walls with the approval of a Certificate of Appropriateness by City Council eventually followed by building permits. The proposed walls will offer the City an increased capacity to provide services, building pads, and parking to future visitors and clientele in the community.

In summary, staff has determined that the submittal is in substantial compliance and recommends that a Certificate of Appropriateness be approved, subject to the following condition:

1. All applicable building and electrical permits must be obtained prior to beginning construction.

## **FINDINGS:**

City Council may *approve, conditionally approve, or deny* this Certificate of Appropriateness. To support this proposal, the following findings can be used:

1. The proposed Gregory Street Retaining Walls will provide a significant asset to the City of Black Hawk, as the realignment of Gregory Street is an integral part of implementing the approved Gregory Street Sub Area Plan and future development opportunities in the immediate area.
2. The proposal meets the criteria outlined in the City of Black Hawk Municipal Code and Commercial Design Guidelines as noted and evaluated in the staff report presented to City Council.
3. The proposal furthers the goals of the Gregory Street Sub-Area Plan, which is a part of the City of Black Hawk 2004 Comprehensive Plan.

## **RECOMMENDATION:**

Baseline Staff recommends City Council consider a **MOTION TO CONDITIONALLY APPROVE WITH ONE CONDITION** a Certificate of Appropriateness for the Gregory Street Retaining Walls, as submitted. The proposed condition is as follows:

1. All applicable building and electrical permits must be obtained prior to beginning construction.

## **ATTACHMENTS:**

- Original Land Use Application
- Structural Plans

# **Applicant's Submittal**



# City of Black Hawk

Community Planning and Development  
211 Church Street  
P.O. Box 68  
Black Hawk, CO 80422  
Ph: 303-582-0615 Fax: 303-582-2239

**STEP 2**  
**PRE-PLANNING &**  
**LAND DEVELOPMENT**  
**APPLICATION**

DATE: April 4, 2016 APPLICANT NAME: City of Black Hawk  
 APPLICANT ADDRESS: 987 Miners Mesa Road, Black Hawk CO 80422  
 APPLICANT MAILING ADDRESS: P.O. Box 68, Black Hawk CO 80422  
 APPLICANT CONTACT NUMBER (303) 582-2288 EMAIL ADDRESS: mreed@cityofblackhawk.org  
 PROPERTY OWNER NAME: Same as Applicant  
 PROPERTY OWNER ADDRESS: \_\_\_\_\_  
 PROPERTY OWNER MAILING ADDRESS: \_\_\_\_\_  
 PROPERTY OWNER CONTACT NUMBER: \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_  
 PROJECT NAME: Retaining walls associated with the Gregory Street Relocation project  
 PROJECT ADDRESS: N/A Gregory Street  
 PROJECT DESCRIPTION: Two concrete retaining walls with stone veneer  
 IS PROPERTY WITHIN CITY LIMITS: YES  NO   
 PRESENT ZONING: Varies—See attached maps CURRENT USE: Vacant  
 NAME OF EXISTING PLANNED UNIT DEVELOPMENT (IF APPLICABLE): N/A  
 NAME OF EXISTING SUBDIVISION PLAT (IF APPLICABLE): N/A  
 GILPIN COUNTY ASSESSOR'S I.D. NO.(S): See attachments EXISTING PROPERTY SIZE: See attachments  
 (PLEASE ATTACH A COPY OF SURVEY/PLAT.)  
 EXISTING BUILDING SIZE: N/A SQ. FT. AND/OR NUMBER OF EXISTING RESIDENTIAL UNITS: N/A

**APPLICANT READ AND ACKNOWLEDGE THE FOLLOWING**

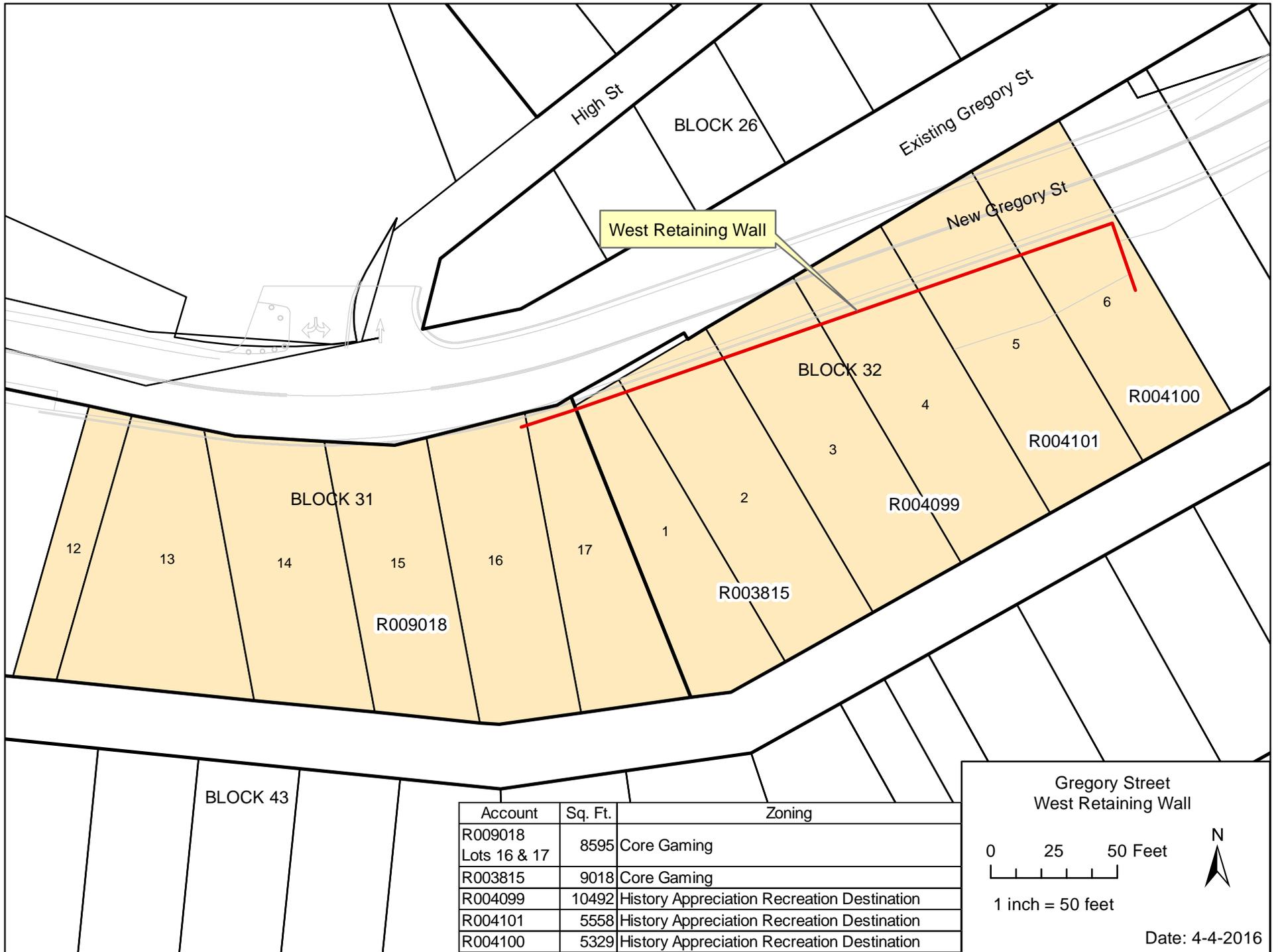
**FOR INFORMATIONAL PURPOSES, SECTION 16-370 OF THE BLACK HAWK MUNICIPAL CODE ESTABLISHES THE REQUIREMENT FOR APPLICANT TO PAY FEES TO COVER THE COSTS THE CITY MAY INCUR BY HAVING THE CITY APPROVED CONSULTANTS EVALUATE AND PROCESS APPLICATIONS. IF YOU HAVE ANY QUESTIONS RELATED TO THIS, PLEASE CONTACT COMMUNITY PLANNING AND DEVELOPMENT FOR CLARIFICATION.**

**APPLICANT AGREES TO THE FOLLOWING CERTIFICATION STATEMENT AND AFFIDAVIT:**

I, as the applicant, hereby certify that to the best of my knowledge and believe, all information supplied with this application is true and accurate and that consent of the property owner listed above, without which the requested action cannot lawfully be accomplished, has been granted. Permission is also hereby granted to the City of Black Hawk staff and their consultants to physically enter upon and inspect the subject property and take photographs as necessary for preparation of the case. In addition, I have read and understand Section 16-370 of the Black Hawk Municipal Code, the adopted Black Hawk Fee Schedule and by signing this application I am agreeing that I am authorized to sign on behalf of the property owner, or business-owner, or applicant and commit and agree to the payment of any and all fees associated with processing this application and further agree to pay City of Black Hawk invoices associated with the processing of this application.

SIGNATURE OF APPLICANT: MATT R DATE: 4-4-16

TO BE COMPLETED BY APPLICANT



Account	Sq. Ft.	Zoning
R009018 Lots 16 & 17	8595	Core Gaming
R003815	9018	Core Gaming
R004099	10492	History Appreciation Recreation Destination
R004101	5558	History Appreciation Recreation Destination
R004100	5329	History Appreciation Recreation Destination

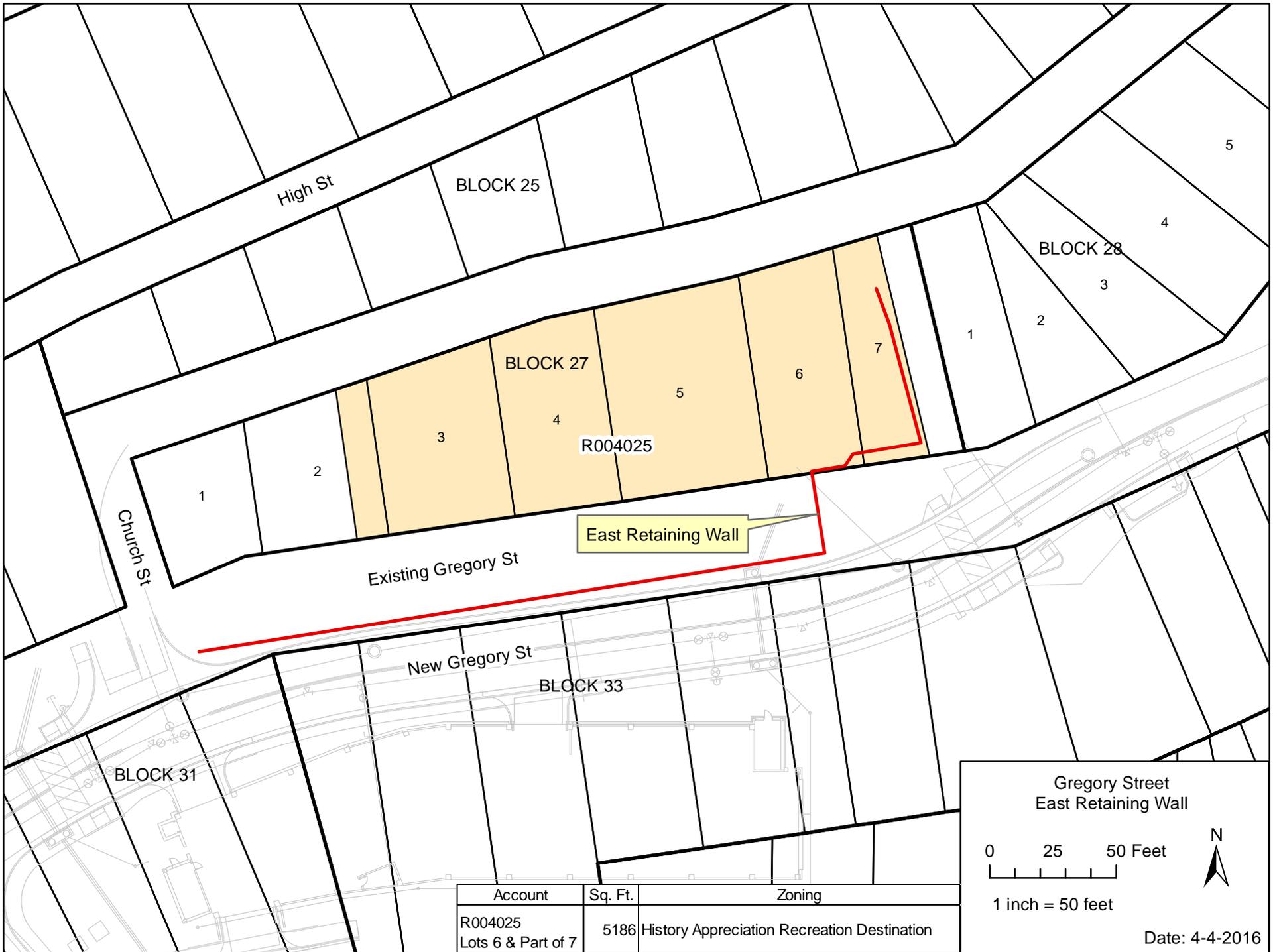
Gregory Street  
West Retaining Wall

0    25    50 Feet

1 inch = 50 feet

N  
↑

Date: 4-4-2016



Account	Sq. Ft.	Zoning
R004025 Lots 6 & Part of 7	5186	History Appreciation Recreation Destination

Gregory Street  
East Retaining Wall

0    25    50 Feet

1 inch = 50 feet

N  
↑

Date: 4-4-2016

**GENERAL STRUCTURAL NOTES**

- ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2011 EDITION, AS MODIFIED BY PROJECT SPECIAL PROVISIONS, SUPPLEMENTAL SPECIFICATIONS, AND THESE DRAWINGS.
- STATIONS, ELEVATIONS, AND DIMENSIONS CONTAINED IN THESE PLANS ARE CALCULATED FROM A RECENT FIELD SURVEY. THE CONTRACTOR SHALL VERIFY ALL DEPENDENT DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIALS.
- CONTRACTOR SHALL SUBMIT A METHOD OF HANDLING FLOW IN EXISTING FLUME DURING CONSTRUCTION TO THE ENGINEER FOR REVIEW AND ACCEPTANCE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMPLEMENTING OF THE PLAN AT ALL TIMES TO HANDLE ANY FLOW THAT OCCURS IN THE FLUME, AND IS RESPONSIBLE FOR ANY DAMAGES OR VIOLATIONS OF WATER QUALITY AS DETERMINED BY THE ENGINEER.
- CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND PROCEDURES AS RELATED TO THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS NOTED OTHERWISE.
- BACKFILL FOR THE CONCRETE BOX CULVERT AND RETAINING WALLS SHALL BE STRUCTURE BACKFILL (CLASS 1), OR OTHER GRANULAR MATERIAL MEETING THE APPROVAL OF THE GEOTECHNICAL ENGINEER. LIMITS OF THE STRUCTURE EXCAVATION AND BACKFILL SHALL BE AS SHOWN ON DRAWING S101.
- ITEMS NOT IN CONTRACT DENOTED: "(N.I.C.)" WILL BE COMPLETED UNDER A SEPARATE CONTRACT AFTER CONSTRUCTION IS COMPLETED.
- ALL WORK SHALL CONFORM TO THE RECOMMENDATIONS, AS APPLICABLE, DISCUSSED IN THE GEOTECHNICAL REPORT ENTITLED "SUBSURFACE EXPLORATION AND PAVEMENT DESIGN, GREGORY STREET RELOCATION, BLACK HAWK, COLORADO", DATED MAY 11, 2015 AND LETTER "TECHNICAL MEMORANDUM NO. 2 GREGORY STREET RELOCATION, EAST RETAINING WALL, BLACK HAWK, COLORADO" DATED JULY 10, 2015 BY GEOCAL, INC.
- FOR GRADING AND DRAINAGE, RE: "GRADING SUBSET."
- ALL EXCAVATIONS SHALL BE PROTECTED BY FENCING AS LONG AS THE EXCAVATION REMAINS OPEN.
- IT IS EXPECTED THAT DEWATERING WILL BE NECESSARY FOR SOME OF THE EXCAVATIONS. THE GROUNDWATER TABLE SHALL BE MAINTAINED 3 FEET BELOW ALL EXCAVATIONS. CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A DEWATERING PLAN ACCEPTABLE TO THE ENGINEER AND OBTAINING ALL NECESSARY PERMITS. THIS PERMITTING PROCESS SHALL BE STARTED AS SOON AS POSSIBLE IN ORDER TO PREVENT DELAYS TO THE PROJECT.
- REMOVAL OF PORTIONS OF PRESENT STRUCTURE WILL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS: CONCRETE, GROUTED ROCK, DETERIORATED AND/OR BENT METAL DECK FORMS; ABANDONED CONDUITS IDENTIFIED BY THE ENGINEER; AND ABANDONED ANCHOR BOLTS AND PIPE HANGERS. ALL REMOVALS SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HAULED OFF SITE.
- ALL MATERIAL EXCAVATED FOR THE CONCRETE BOX CULVERT AND RETAINING WALLS SHALL BE HAULED OFF SITE AND BECOME PROPERTY OF THE CONTRACTOR. ALL BACKFILL MATERIAL FOR THE CONCRETE BOX CULVERT AND RETAINING WALLS SHALL BE STRUCTURE BACKFILL (CLASS 1). THE CONTRACTOR MAY CHOOSE TO STOCKPILE, TEST, AND REUSE ANY ACCEPTABLE MATERIAL FOR BACKFILL.

**RETAINING WALL STRUCTURAL NOTES**

- A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL BE PRESENT TO OBSERVE FOUNDATION EXCAVATION, CAISSON PLACEMENT OPERATIONS, AND PLACEMENT OF BACKFILL MATERIAL ON A FULL TIME BASIS.
- TOP OF CONCRETE WALL IS DESIGNATED AS "T.O. CONC" AND TOP OF CAISSON CAP BEAM IS DESIGNATED AS "T.O. CAP" IN THE PLANS.
- RETAINING WALLS SHALL NOT BE BACKFILLED UNTIL THE WALL STEM CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF 4,500 P.S.I.
- ALL CONCRETE SURFACES RECEIVING STONE VENEER AND FUTURE CAPSTONES SHALL HAVE ALL FINIS AND IRREGULAR PROJECTIONS REMOVED AS PART OF THE CLASS 1, ORDINARY SURFACE FINISH.
- DAMPPOOFING OPERATIONS SHALL NOT COMMENCE UNTIL CONCRETE SURFACES HAVE BEEN CURED FOR THE MINIMUM REQUIRED CURING PERIOD AND ANY ADDITIONAL REQUIREMENTS OUTLINED BY THE DAMPPROOFING PRODUCT MANUFACTURER ARE MET.
- DAMPPOOFING SHALL BE APPLIED FOR THE LIMITS OF THE BACK FACE OF THE WALL EXTENDING FROM THE TOP OF CAP BEAM TO 1'-0" BELOW THE TOP OF WALL.
- RUBBER MEMBRANE SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- EXPANSION JOINT MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO SPECIFICATION M-213.
- STONE VENEER SHALL BE "HONEYSUCKLE" THIN MASONRY BY GENERAL SHALE AND SHALL MEET THE REQUIREMENTS OF REVISION OF SECTION 601 - STONE VENEER.
- EXPOSED CONCRETE ON RETAINING WALLS SHALL BE STAINED "BAJA RED" PER THE PROJECT SPECIFICATIONS.

- MINIMUM CLEARANCE FROM SURFACE OF CONCRETE TO THE FACE OF REINFORCEMENT SHALL BE 2 INCHES UNLESS OTHERWISE NOTED.
- ALL REINFORCING STEEL SHALL BE GRADE 60.
- THE MINIMUM CLASS B LAP SPLICE LENGTH FOR EPOXY COATED REINFORCING BARS, CONCRETE CLASS D, SHALL BE:

BAR SIZE:	#4	#5	#6	#7	#8	#9
SPLICE LENGTH:	1'-4"	1'-7"	1'-11"	2'-3"	2'-11"	3'-9"

THE MINIMUM LAP SPLICE LENGTH FOR NON-EPOXY COATED REINFORCING BARS, CONCRETE CLASS D, SHALL BE:

BAR SIZE:	#4	#5	#6	#7	#8	#9
SPLICE LENGTH:	1'-4"	1'-4"	1'-7"	1'-11"	2'-5"	3'-1"

THESE SPLICE LENGTHS SHALL BE INCREASED BY 25% FOR BARS SPACED AT LESS THAN 6" ON CENTER. FOR CAISSON SPLICE REQUIREMENTS SEE DRAWING S111.

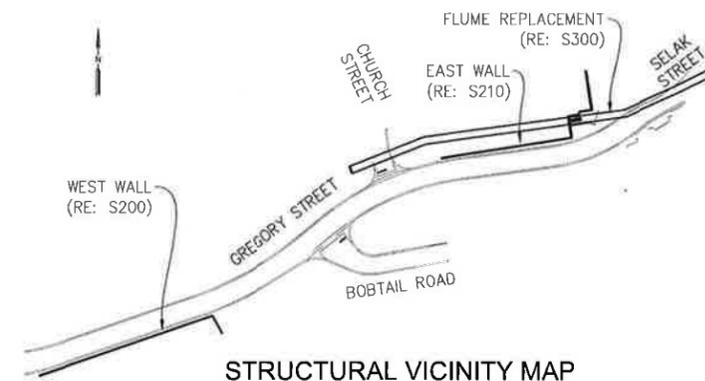
- ALL EPOXY COATED REINFORCING NOTED THUS (E).
- THE CONTRACTOR SHALL SUBMIT THE LOCATION OF ANY ADDITIONAL CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL.
- ALL CONCRETE SHALL BE CLASS D ( $F'_c = 4,500$  P.S.I.) UNLESS NOTED OTHERWISE.
- ALL CAISSON CONCRETE SHALL BE CLASS BZ ( $F'_c = 4,000$  P.S.I.) UNLESS NOTED OTHERWISE.
- ALL EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4".
- WALL CONCRETE SURFACES SHALL RECEIVE A CLASS 1, ORDINARY SURFACE FINISH, AS REQUIRED IN SECTION 601.14 OF THE CDOT STANDARD SPECIFICATIONS.
- THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE.
- THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF ALL UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES AND IS RESPONSIBLE FOR ANY DAMAGES THERETO.
- UTILITY LINES AS SHOWN ON THE PLAN DRAWINGS ARE PLOTTED FROM AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. CONTRACTOR SHALL POTHOLE ALL UTILITIES PRIOR TO BEGINNING WORK TO VERIFY LOCATION.
- THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1987 AT LEAST TWO DAYS (NOT INCLUDING THE DAY CONTACTED) PRIOR TO ANY EXCAVATION OR OTHER EARTHWORK.

**CONCRETE BOX CULVERT (CBC) STRUCTURAL NOTES**

- THE CONTRACTOR HAS THE OPTION TO REPLACE THE CAST-IN-PLACE CONCRETE BOX CULVERT, AS SHOWN IN THE PLANS, WITH A PRECAST CONCRETE BOX CULVERT, ITEM 603 - 9 FOOT X 5 FOOT CONCRETE BOX CULVERT (PRECAST). IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL DETAILS AND DESIGN NECESSARY FOR THE CONSTRUCTION OF A PRECAST BOX CULVERT ALTERNATIVE, INCLUDING: UTILITY PENETRATIONS, CONNECTION TO THE EXISTING FLUME AND MANHOLE ACCESS. A PRECAST BOX CULVERT ALTERNATIVE SHALL MEET THE REQUIREMENTS AS SPECIFIED IN THE CDOT M&S STANDARD M-603-3 WITH THE EXCEPTION THAT THE EXCAVATION AND BACKFILL WILL BE IN ACCORDANCE WITH DETAILS IN THESE PLANS. THE CONTRACTOR SHALL SUBMIT THE WORKING DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION AND CONSTRUCTION.
- THE CONTRACTOR IS TO BE MADE AWARE THAT EXCAVATING FOR THE BOX CULVERT MAY EXPOSE ARTIFICIAL FILL, LOOSE OR SOFT SOILS. OVER-EXCAVATION AND REPLACEMENT OF THESE SOILS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT.
- A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHALL BE PRESENT TO OBSERVE THE FOUNDATION EXCAVATION PRIOR TO CONSTRUCTION OF THE CONCRETE BOX CULVERT.
- ALL DIMENSIONS ARE PERPENDICULAR TO THE CENTER LINE OF THE BOX.
- ALL TRANSVERSE REINFORCING SHALL BE NORMAL TO THE CENTERLINE OF THE BOX UNLESS NOTED OTHERWISE.
- CONCRETE BOX CULVERT SHALL NOT BE BACKFILLED UNTIL THE TOP SLAB CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF 3,600 P.S.I.

**STRUCTURAL DRAWING INDEX**

S100	STRUCTURAL NOTES AND INFORMATION
S101	SUMMARY OF QUANTITIES, STRUCTURE EXCAVATION & BACKFILL
S110	RETAINING WALL CAISSON GEOMETRY PLANS
S111	RETAINING WALL CAISSON DETAILS
S200	WEST WALL PLAN AND ELEVATION (1 OF 2)
S201	WEST WALL PLAN AND ELEVATION (2 OF 2)
S210	EAST WALL PLAN AND ELEVATION (1 OF 3)
S211	EAST WALL PLAN AND ELEVATION (2 OF 3)
S212	EAST WALL PLAN AND ELEVATION (3 OF 3)
S220	WEST WALL SECTIONS
S221	EAST WALL SECTIONS (1 OF 2)
S222	EAST WALL SECTIONS (2 OF 2)
S223	WALL DETAILS (1 OF 2)
S224	WALL DETAILS (2 OF 2)
S225	STEEL RAILING DETAILS (1 OF 2)
S226	STEEL RAILING DETAILS (2 OF 2)
S300	CONCRETE BOX CULVERT (CBC) LAYOUT (1 OF 2)
S301	CONCRETE BOX CULVERT (CBC) LAYOUT (2 OF 2)
S310	CONCRETE BOX CULVERT (CBC) DETAILS



**STRUCTURAL VICINITY MAP**

**DESIGN DATA**

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 7TH EDITION

**DESIGN LOADS**

VEHICULAR SURCHARGE LOADING:

WEST WALL:	0 PSF
EAST WALL:	0 PSF
CBC:	240 PSF

BUILDING SURCHARGE LOADING:

WEST WALL:	0 PSF
EAST WALL:	240 PSF
CBC:	240 PSF

LATERAL EARTH PRESSURES (STRUCTURE BACKFILL) (CLASS 1)  
 38 PCF (ACTIVE)  
 60 PCF (AT REST)  
 475 PCF (PASSIVE)

DEAD LOAD:  
 CONCRETE: 150 LB/CU. FT  
 STRUCTURE BACKFILL: 135 LB/CU. FT

**REINFORCED CONCRETE**

CLASS BZ CONCRETE -  $F'_c = 4,000$  PSI (CAISSONS)  
 CLASS D CONCRETE -  $F'_c = 4,500$  PSI (CBC AND WALLS)  
 REINFORCING STEEL -  $F_y = 60,000$  PSI



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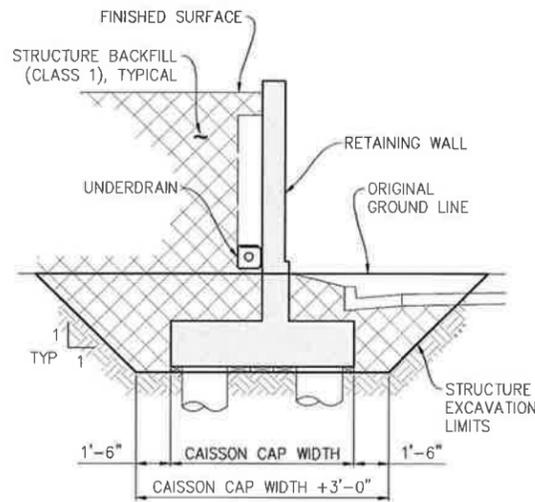
Print Date: February 23, 2016	<b>Sheet Revisions</b>	<b>For Construction</b>	<b>STRUCTURAL NOTES AND INFORMATION</b>	Project No./Code
File Name: bh_s100 general notes.dwg	Date:      Comments      Init.	No Revisions:	Designer: TNS	
Unit Information	Unit Leader	Revised:	Detailer: MNG	
	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.433.6100 MARTINMARTIN.COM	Void:	Sheet Subset: STRUCTURAL      Subset Sheet:      S100	Sheet Number <b>71</b>

**SUMMARY OF QUANTITIES**

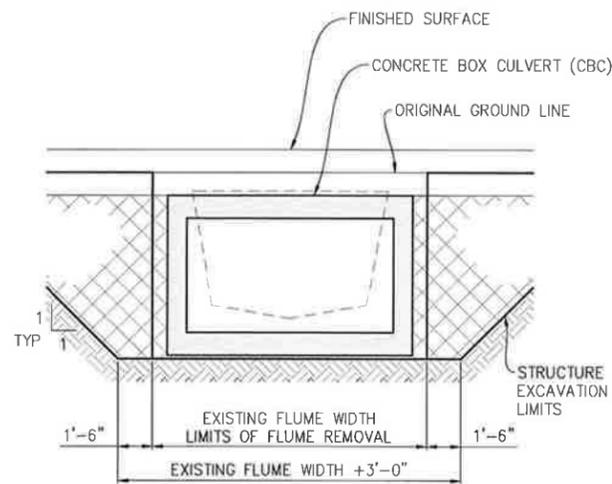
CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	WEST WALL	EAST WALL	C.I.P. BOX CULVERT	TOTAL
202	REMOVAL OF PORTIONS OF PRESENT STRUCTURE	LIN FT			560	560
206	STRUCTURE EXCAVATION	CU YD	1,487	865	1,662	4,014
206	STRUCTURE BACKFILL (FLOW-FILL)	CU YD			90	90
206	STRUCTURE BACKFILL (CLASS 1)	CU YD	2,771	1,452	1,322	5,545
206	FILTER MATERIAL (CLASS B)	CU YD	126	59		185
206	SHORING (AREA 1)	LS			1	1
503	DRILLED CAISSON (24 INCH)	LIN FT	1,341	1,152		2,493
509	STRUCTURAL STEEL (STAIRWAY)	LS			1	1
514	STEEL RAILING (SPECIAL)	LIN FT	297	314		611
601	CONCRETE CLASS D (BOX CULVERT)	CU YD			615	615
601	CONCRETE CLASS D (WALL)	CU YD	383	274		657
601	STONE VENEER	SF	3,700	1,610		5,310
602	REINFORCING STEEL	LB	68,460	30,530	70,900	169,890
602	REINFORCING STEEL (EPOXY COATED)	LB	9,810	7,690	42,000	59,500

**PAYMENT NOTES**

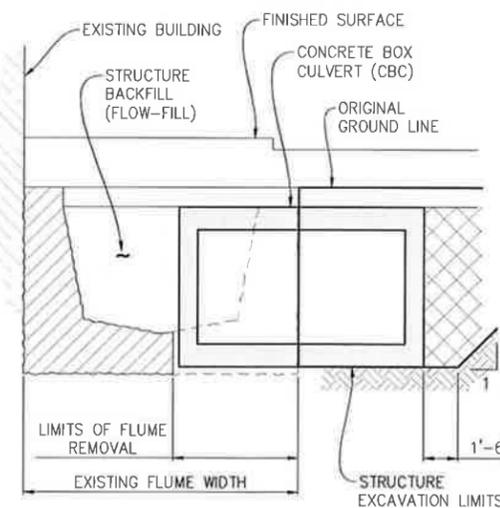
- PAYMENT FOR VOID FORMS SHALL BE MADE UNDER ITEM 601-CONCRETE CLASS D (WALL) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE VOID FORMS, INCLUDING PROTECTIVE BOARDS.
- PAYMENT FOR THE WALL DRAIN SYSTEM INCLUDING 4" PERFORATED PIPE, 3/4" AGGREGATE, AND FILTER FABRIC SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (WALL) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE WALL DRAIN SYSTEM.
- PAYMENT FOR DAMP-PROOFING SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (WALL) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE DAMP-PROOFING.
- PAYMENT FOR THE EXPANSION JOINTS SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (WALL) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE EXPANSION JOINT INCLUDING CAULKED JOINT AND RUBBER MEMBRANE.
- PAYMENT FOR CLASS 1, ORDINARY SURFACE FINISH SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D.
- PAYMENT FOR WALL ANCHORS SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (WALL) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE WALL ANCHORS.
- PAYMENT FOR THE FLUME ANCHORS SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (BOX CULVERT) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE FLUME ANCHORS.
- PAYMENT FOR MANHOLES AND STEPS SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (BOX CULVERT) AND SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE MANHOLES AND STEPS.
- PAYMENT FOR STONE VENEER SHALL INCLUDE ALL MATERIALS AND WORK NECESSARY TO INSTALL THE VENEER.
- PAYMENT FOR THE BEDDING AND ADDITIONAL EXCAVATION REQUIRED FOR INSTALLATION OF THE BEDDING SHALL BE MADE UNDER ITEM 603 - 9 FOOT X 5 FOOT CONCRETE BOX CULVERT (PRECAST).
- PAYMENT FOR CONCRETE STAINING SHALL BE MADE UNDER ITEM 601 - CONCRETE CLASS D (WALL).



**RETAINING WALLS**



**CONCRETE BOX CULVERT**



**CONCRETE BOX CULVERT ADJACENT TO BUILDING**

**STRUCTURE EXCAVATION AND BACKFILL**



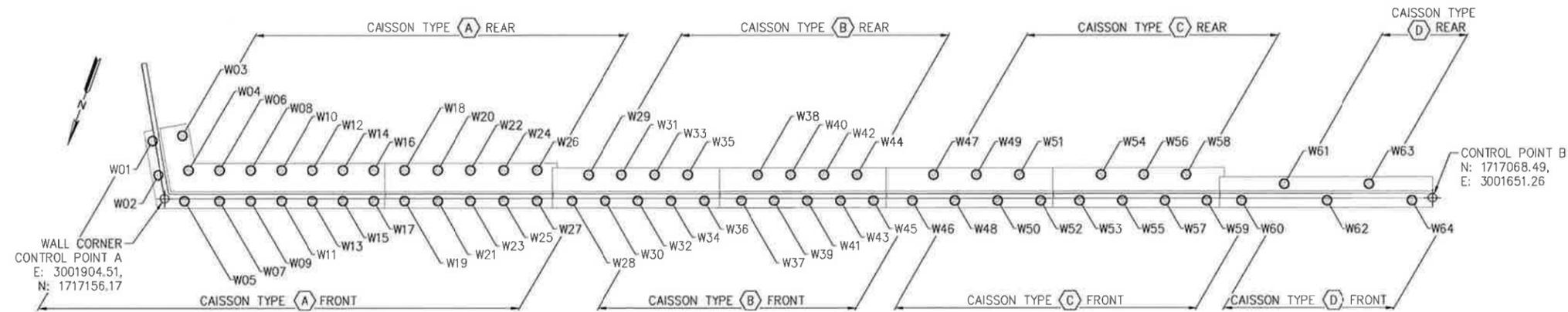
VICIL\CHAYMES14.D08-Creedy Sheet - Waik-DWG\BH\_S101 QUANTITIES AND

Print Date: February 23, 2016	
File Name: bh_s101 quantities and excavation.dwg	
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader

Sheet Revisions		
Date:	Comments	Init.

**City of Black Hawk**  
987 Miners Mesa Road  
P.O. Box 68,  
Black Hawk, Colorado 80422

For Construction	SUMMARY OF QUANTITIES, STRUCTURE EXCAVATION & BACKFILL		Project No./Code
No Revisions:	Designer: TNS		
Revised:	Detailer: MNG		
Void:	Sheet Subset: STRUCTURAL	Subset Sheet: S101	Sheet Number 72



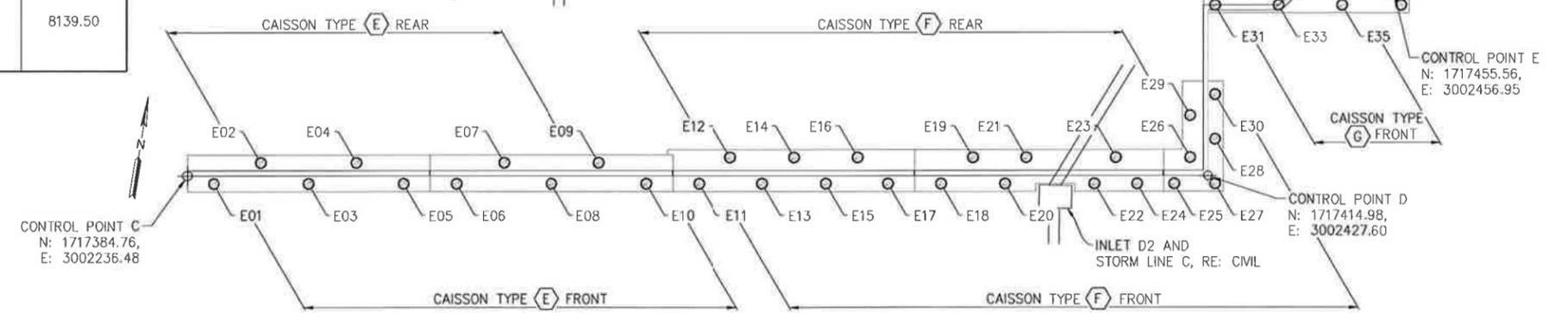
WEST WALL CAISSON LAYOUT

- CAISSON GEOMETRY NOTES:
- COORDINATES AND ELEVATIONS GIVEN ON THIS DRAWING SHALL BE COORDINATED WITH THE WALL PLANS AND ELEVATIONS ALONG WITH THE WALL SECTIONS.
  - CAISSON TYPES ARE NOTED THUS: "X" RE: "CAISSON SCHEDULE" S111.



WEST WALL CAISSON GEOMETRY									
CAISSON NUMBER	NORTHING	EASTING	ESTIMATED TIP ELEVATION	T.O. CAISSON ELEVATION	CAISSON NUMBER	NORTHING	EASTING	ESTIMATED TIP ELEVATION	T.O. CAISSON ELEVATION
W01	1717145.50	3001911.03			W37	1717116.84	3001789.38		
W02	1717151.90	3001907.46			W38	1717110.49	3001787.87		
W03	1717142.33	3001905.35			W39	1717114.55	3001782.76		
W04	1717148.87	3001901.75			W40	1717108.20	3001781.26		
W05	1717155.28	3001900.41			W41	1717112.26	3001776.15	8110.50	8130.00
W06	1717146.74	3001895.61			W42	1717105.91	3001774.64		
W07	1717152.88	3001893.48			W43	1717109.97	3001769.54		
W08	1717144.62	3001889.47			W44	1717103.63	3001768.03		
W09	1717150.76	3001887.34	8103.0	8121.00	W45	1717107.68	3001762.92		
W10	1717142.49	3001883.32			W46	1717104.95	3001755.05		
W11	1717148.63	3001881.20			W47	1717098.28	3001752.60		
W12	1717140.36	3001877.18			W48	1717102.00	3001746.54		
W13	1717146.51	3001875.06			W49	1717095.33	3001744.09	8114.50	8133.50
W14	1717138.24	3001871.04			W50	1717099.06	3001738.04		
W15	1717144.38	3001868.91			W51	1717092.39	3001735.59		
W16	1717136.11	3001864.90			W52	1717096.11	3001729.53		
W17	1717142.25	3001862.77			W53	1717093.39	3001721.66		
W18	1717133.98	3001858.75			W54	1717086.72	3001719.21		
W19	1717140.13	3001856.63			W55	1717090.44	3001713.15		
W20	1717131.69	3001852.14			W56	1717083.77	3001710.70	8115.50	8136.50
W21	1717137.84	3001850.01			W57	1717087.50	3001704.65		
W22	1717129.40	3001845.52	8105.5	8124.00	W58	1717080.83	3001702.20		
W23	1717135.55	3001843.40			W59	1717084.55	3001696.14		
W24	1717127.11	3001838.91			W60	1717082.15	3001689.21		
W25	1717133.26	3001836.78			W61	1717075.90	3001681.85		
W26	1717124.82	3001832.29			W62	1717076.27	3001672.20	8116.50	8139.50
W27	1717130.97	3001830.17			W63	1717070.01	3001664.84		
W28	1717128.56	3001823.24			W64	1717070.38	3001655.19		
W29	1717122.22	3001821.73							
W30	1717126.27	3001816.63							
W31	1717119.93	3001815.12							
W32	1717123.98	3001810.01	8109.5	8127.00					
W33	1717117.64	3001808.50							
W34	1717121.69	3001803.40							
W35	1717115.35	3001801.89							
W36	1717119.40	3001796.78							

EAST WALL CAISSON GEOMETRY									
CAISSON NUMBER	NORTHING	EASTING	ESTIMATED TIP ELEVATION	T.O. CAISSON ELEVATION	CAISSON NUMBER	NORTHING	EASTING	ESTIMATED TIP ELEVATION	T.O. CAISSON ELEVATION
E01	1717384.06	3002241.65			E25	1717412.49	3002421.42		
E02	1717389.42	3002249.92			E26	1717417.89	3002423.60		
E03	1717386.87	3002259.43	8069.0	8092.00	E27	1717413.74	3002429.32		
E04	1717392.23	3002267.69			E28	1717422.13	3002427.99	8053.5	8079.50
E05	1717389.68	3002277.21			E29	1717425.80	3002422.35		
E06	1717391.25	3002287.09			E30	1717430.53	3002426.66		
E07	1717396.60	3002295.35			E31	1717447.32	3002424.01		
E08	1717394.06	3002304.87	8065.0	8089.00	E32	1717454.68	3002428.92		
E09	1717399.41	3002313.13			E33	1717449.19	3002435.86	8049.5	8079.50
E10	1717396.87	3002322.64			E34	1717456.55	3002440.77		
E11	1717398.43	3002332.52			E35	1717451.07	3002447.71		
E12	1717404.31	3002337.67			E36	1717458.48	3002452.95		
E13	1717400.30	3002344.37			E37	1717452.84	3002458.91		
E14	1717406.18	3002349.52	8059.0	8085.50	E38	1717464.20	3002457.11		
E15	1717402.18	3002356.23			E39	1717467.37	3002451.55	8051.0	8079.50
E16	1717408.05	3002361.37			E40	1717474.07	3002455.55		
E17	1717404.05	3002368.08			E41	1717477.24	3002449.99		
E18	1717405.61	3002377.96			E42	1717483.95	3002453.99		
E19	1717411.49	3002383.10			E43	1717489.98	3002450.50		
E20	1717407.49	3002389.81			E44	1717495.02	3002447.18	8051.0	8082.00
E21	1717413.05	3002392.98	8054.5	8082.50	E45	1717500.85	3002448.79		
E22	1717410.14	3002406.60							
E23	1717415.72	3002409.77							
E24	1717411.39	3002414.50							



EAST WALL CAISSON LAYOUT

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Print Date: February 23, 2016	Sheet Revisions				City of Black Hawk 987 Miners Mesa Road P.O. Box 68, Black Hawk, Colorado 80422	For Construction	RETAINING WALL		Project No./Code
File Name: bh_s110 caisson geometry.dwg	Date:	Comments	Init.			No Revisions:	CAISSON GEOMETRY PLANS		
Horiz. Scale:	Vert. Scale:			Revised:	Designer: TNS				
Unit Information	Unit Leader			Void:	Detailer: MNG				
		12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM				Sheet Subset: STRUCTURAL	Subset Sheet: S110	Sheet Number 73	

CAISSON SCHEDULE									
CAISSON MARK	MIN BEDROCK PENETRATION (FT)	UNFACTORED LOAD (TONS)		FRONT CAISSON VERTICAL REINFORCING		REAR CAISSON VERTICAL REINFORCING			TYPICAL TIE SPACING
		MAX	MIN	SIZE	NUMBER	SIZE	NUMBER	PROJECTION	
A	11	148	-58	#6	11	#7	19	1'-5"	0'-8"
B	9	116	-53	#6	11	#7	19	1'-5"	0'-9"
C	6	72	-12	#6	11	#7	15	1'-5"	1'-0"
D	6	46	3	#6	11	#6	11	1'-2"	1'-0"
E	9	76	-21	#6	11	#7	15	1'-5"	1'-0"
F	11	123	-67	#7	15	#8	17	1'-9"	1'-0"
G	13	157	-62	#8	17	#8	17	1'-9"	1'-0"
H	12	101	-79	#6	11	#8	17	1'-9"	1'-0"

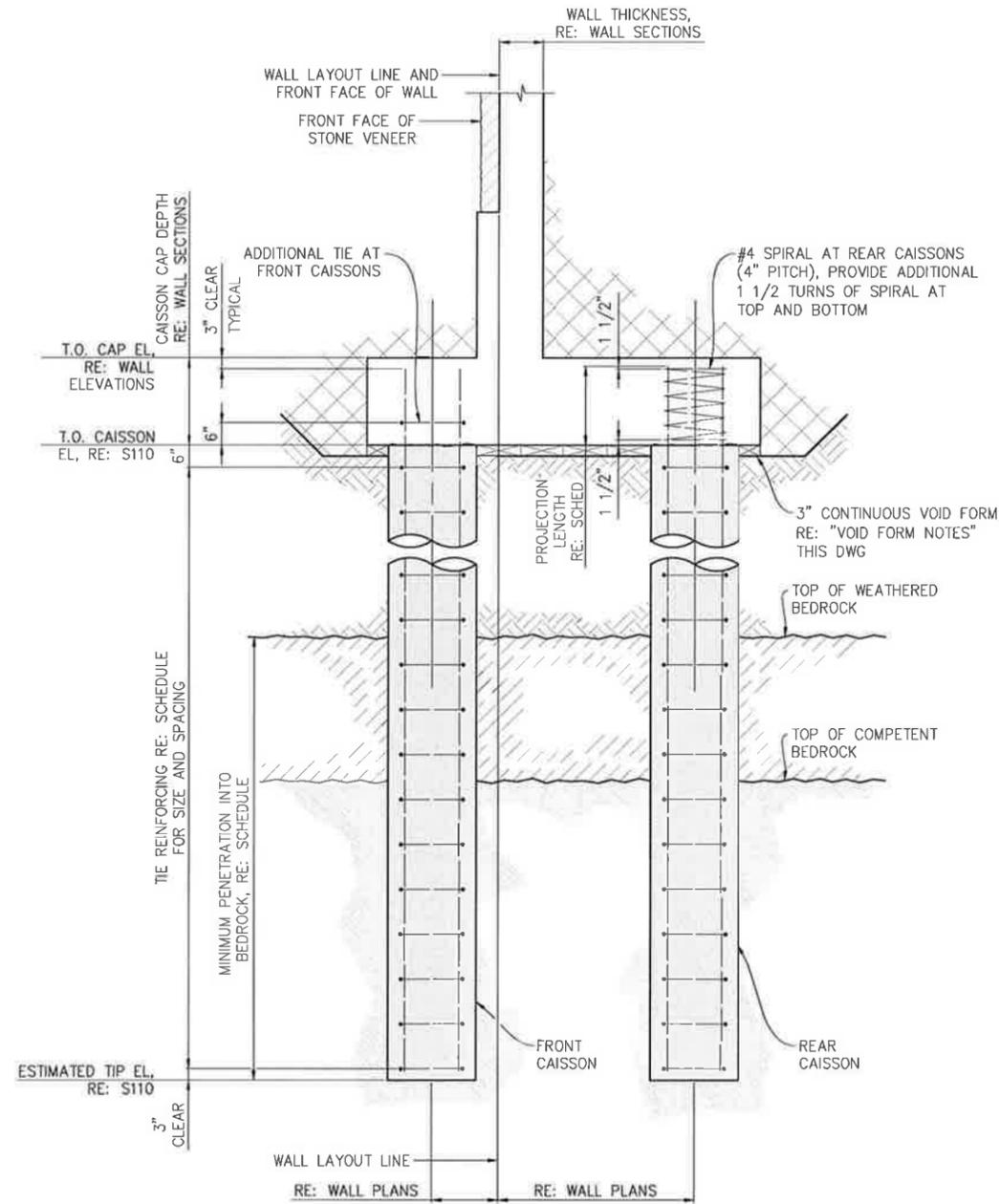
**CAISSON NOTES**

- UPLIFT NOTED AS A NEGATIVE LOAD IN TONS IN SCHEDULE.
- FOR ESTIMATED TIP AND TOP OF CAISSON ELEVATIONS, RE: CAISSON GEOMETRY TABLES ON DRAWING S110.
- ALL CAISSON REINFORCEMENT SHALL BE NON-EPOXY COATED.
- THE CAISSON TIP SHALL BE FOUNDED IN COMPETENT BEDROCK AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- CAISSON LENGTH ADJUSTMENT CONTINGENCY:

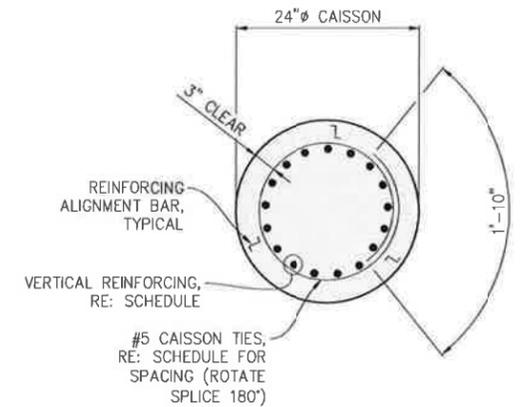
IN THE EVENT THE CAISSON HOLES ARE TO BE DRILLED TO A LOWER ELEVATION THAN SHOWN ON THE PLANS, THE REINFORCEMENT SHOWN IN THE CAISSON SECTION ON THIS DRAWING CAN BE USED UP TO AN ADDITIONAL 10 FEET OF CAISSON LENGTH. SHOULD THE CONTRACTOR ELECT TO SPLICE CAISSON VERTICAL REINFORCEMENT, ALL SPLICES SHALL BE PLACED A MAXIMUM OF 10'-0" FROM THE BOTTOM OF CAISSON. SPLICED REINFORCEMENT SHALL BE #6 BARS PLACED RADIALLY AND SPLICED TO THE INSIDE OF THE MAIN VERTICAL REINFORCEMENT. REQUIRED SPLICE LENGTHS FOR ADDITIONAL #6 CAISSON VERTICAL REINFORCEMENT SHALL BE 2'-7". ADDITIONAL TIE REINFORCEMENT WILL BE REQUIRED IN ACCORDANCE WITH THE SIZE AND SPACING LISTED ON THE CAISSON SCHEDULE. IN LIEU OF SPLICING ADDITIONAL REINFORCEMENT, THE CONTRACTOR MAY ELECT TO FABRICATE CAISSON REINFORCEMENT CAGES WITH ADDITIONAL LENGTH AS A CONTINGENCY FOR THE POTENTIAL OF DRILLING TO A LOWER ELEVATION THAN SHOWN ON THE PLANS.

**VOID FORM NOTES**

- VOID FORM SHALL BE AS MANUFACTURED BY SUREVOID PRODUCTS, INC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING VOID SPACES OF FULL SIZE AND EXTENT SHOWN IN THE PLANS.
- THE VOID FORMS SHALL BE PLACED IN THE LARGEST PIECES PRACTICAL AND SHALL BE ADEQUATELY SECURED IN PLACE WITH JOINTS SEALED TO PREVENT LEAKAGE OF CONCRETE INTO THE VOID SPACE.
- VOID FORMS SHALL HAVE SUFFICIENT STRENGTH TO SUPPORT WEIGHT OF WET CONCRETE AND ASSOCIATED CONSTRUCTION LOADS UNTIL THE CONCRETE BECOMES SELF SUPPORTING.
- STORE AND INSTALL VOID FORMS AND ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- PREPARE SUBSTRATE WHERE VOID FORMS ARE TO BE PLACED IN ACCORDANCE WITH THE VOID FORM MANUFACTURER'S RECOMMENDATIONS.
- ALL VOID FORMS SHALL BE COVERED WITH PROTECTIVE COVER BOARDS PLACED DIRECTLY ON VOID FORMS CONTINUOUSLY WITH JOINTS TAPED. PROTECTIVE COVER BOARDS MUST BE CAPABLE OF DISTRIBUTING ALL IMPOSED WORKING LOADS, BRIDGING SMALL GAPS, AND PROTECTING VOID MATERIAL FROM PUNCTURE AND OTHER DAMAGE DURING CONCRETE PLACEMENT.
- VOID FORMS THAT ARE EXPOSED AFTER CONCRETE FORMWORK IS REMOVED MUST BE SHIELDED WITH PERMANENT PROTECTIVE BOARDS TO PREVENT THE MIGRATION OF BACKFILL MATERIAL INTO THE VOIDED AREA. PROTECTIVE BOARDS SHOULD BE COMPRISED OF MATERIAL SUFFICIENT IN STRENGTH TO WITHSTAND BACKFILLING OPERATIONS AND DEGRADATION OVER TIME.



**CAISSONS ELEVATION**

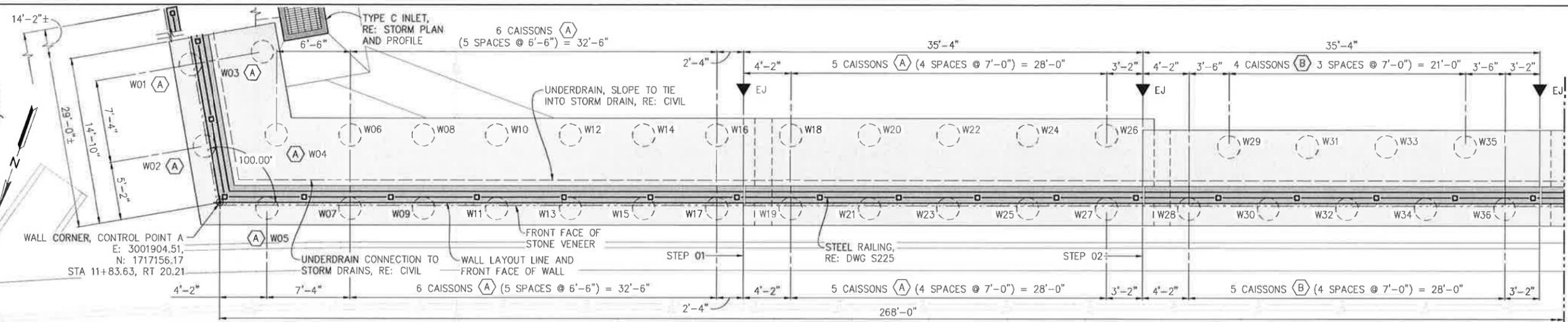


**TYPICAL CAISSON SECTION**



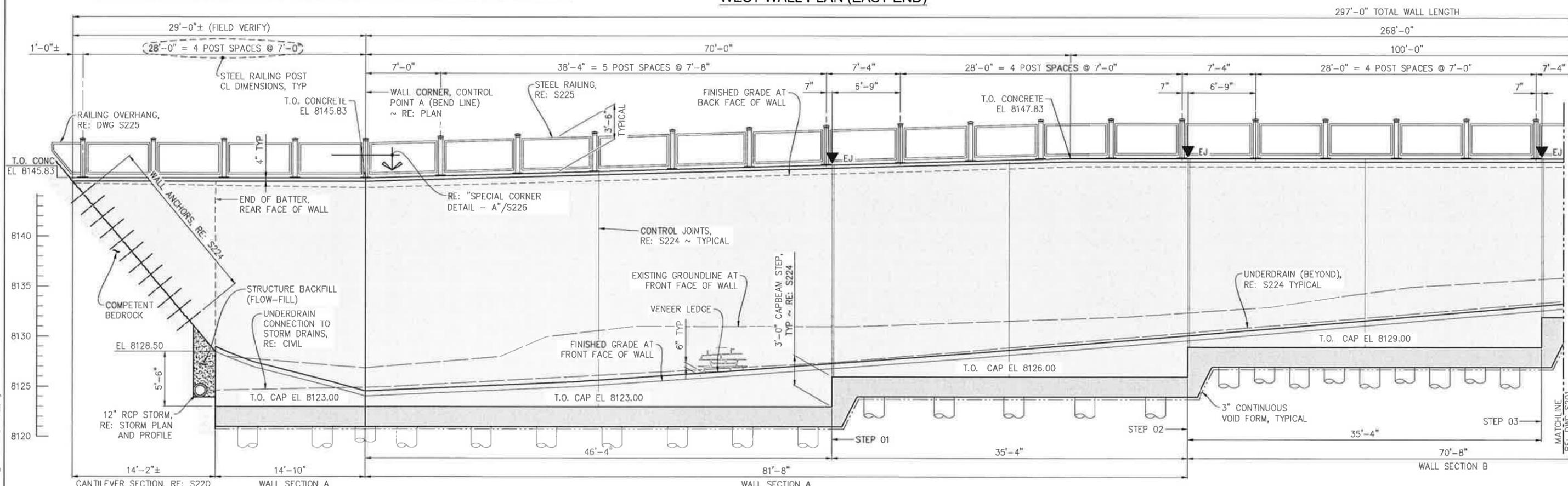
I:\CIVIL\HAYHESI14.DWG-Creepy Street - Wall.dwg\BH\_S111 CAISSON DETAILS.dwg

Print Date: February 23, 2016	Sheet Revisions				City of Black Hawk 987 Miners Mesa Road P.O. Box 68, Black Hawk, Colorado 80422	For Construction	RETAINING WALL CAISSON DETAILS		Project No./Code
File Name: bh_s111 caisson details.dwg	Date:	Comments:	Init.			No Revisions:			
Horiz. Scale:	Vert. Scale:			Revised:	Designer:	TNS			
Unit Information	Unit Leader:			Void:	Detailer:	MNG			
	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM			Sheet Subset:	STRUCTURAL	Subset Sheet:	S111	Sheet Number 74	



- WEST WALL NOTES:**
1. THE CONTRACTOR SHALL SCALE ALL LOOSE MATERIAL ALONG THE BEDROCK FACE WHERE THE WALL IS CONNECTED, PROVIDING A FULLY COMPETENT BEDROCK SURFACE FOR ATTACHMENT WITH WALL ANCHORS.
  2. STATIONS AND OFFSETS ARE GIVEN FROM GREGORY STREET HCL.
  3. CAISSON DIMENSIONS SHOWN SHALL BE COORDINATED WITH GEOMETRY GIVEN ON S110. CAISSON TYPES NOTED THUS: "X" ON PLAN, RE: "CAISSON SCHEDULE" S111.
  4. WALL SECTIONS A, B, C, D AND CANTILEVER SECTION ARE FOUND ON DRAWING S220.
  5. WALL EXPANSION JOINT NOTED THUS: "▼ EJ" ON PLAN AND ELEVATION. RE: "WALL EXPANSION JOINT DETAIL" S224. PROVIDE CONTROL JOINTS AS SHOWN ON ELEVATIONS CENTERED BETWEEN EXPANSION JOINTS AND AT 25' MAX SPACING.

**WEST WALL PLAN (EAST END)**



**WEST WALL ELEVATION (EAST END)**

NOTE: ALL DIMENSIONS ARE MEASURED AT WALL LAYOUT LINE (ALONG FRONT FACE OF WALL).

Print Date: February 23, 2016	File Name: bh_s200 s201 west wall.dwg
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader
<b>MARTIN/MARTIN</b> CONSULTING ENGINEERS	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM

Sheet Revisions		
Date:	Comments	Init.

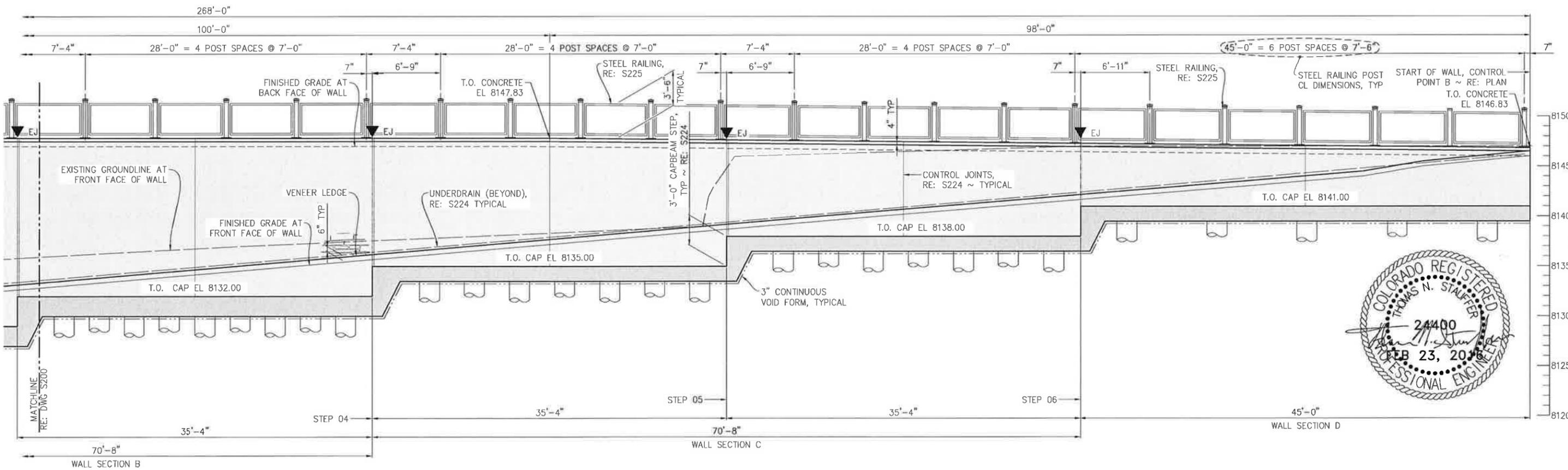
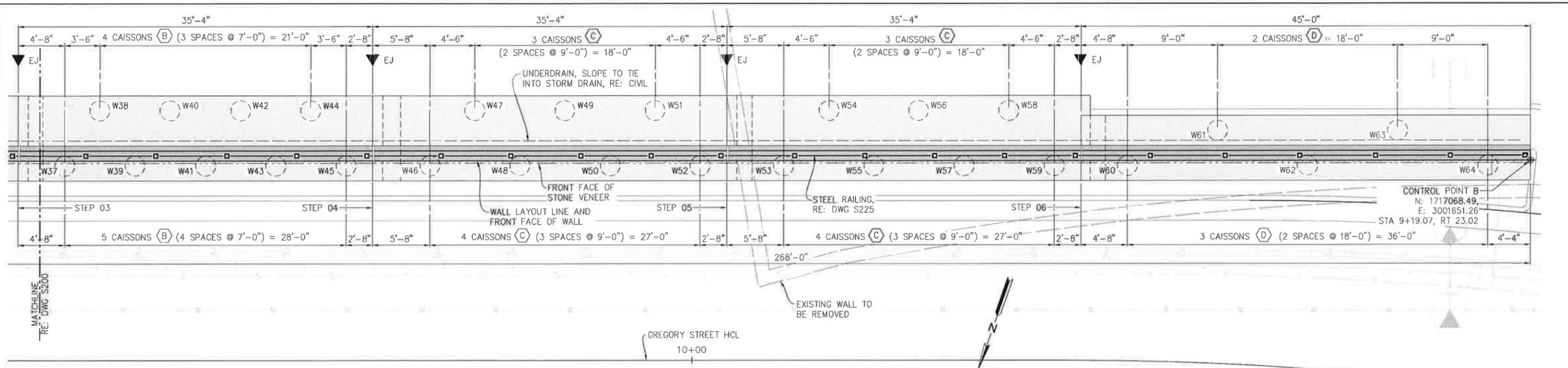
City of Black Hawk  
987 Miners Mesa Road  
P.O. Box 68,  
Black Hawk, Colorado 80422

For Construction
No Revisions:
Revised:
Void:

WEST WALL PLAN AND ELEVATION (1 OF 2)	
Designer: TNS	
Detailer: MNG	
Sheet Subset: STRUCTURAL	Subset Sheet: S200

Project No./Code
Sheet Number 75 48

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Print Date: February 23, 2016  
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 Horiz. Scale: Vert. Scale:  
 Unit Information Unit Leader

**MARTIN/MARTIN**  
 CONSULTING ENGINEERS

12499 WEST COLFAX AVENUE,  
 LAKEWOOD, COLORADO 80215  
 MAIN 303.431.6100  
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Sheet Revisions		
Date:	Comments	Init.



City of Black Hawk  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

For Construction

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 Revised:  
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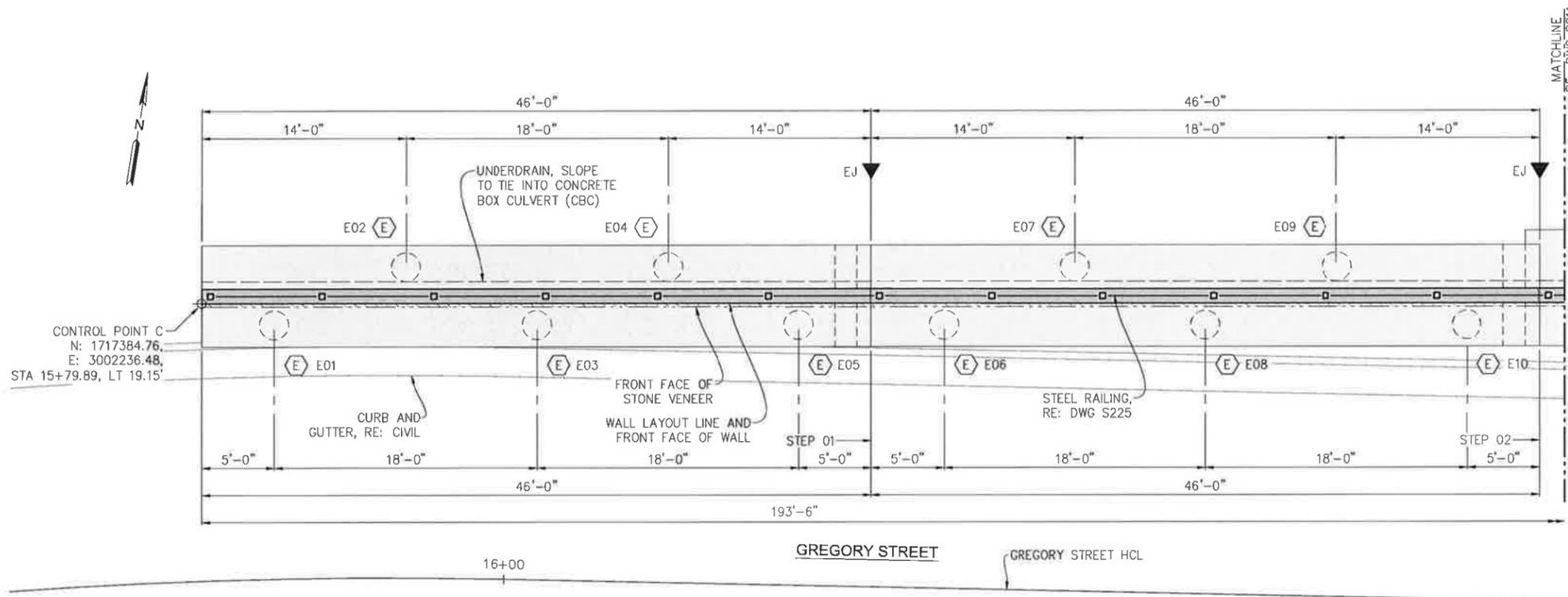
**WEST WALL PLAN  
 AND ELEVATION (2 OF 2)**

Designer: TNS  
 Detailer: MNG  
 Sheet Subset: STRUCTURAL Subset Sheet: S201

Project No./Code

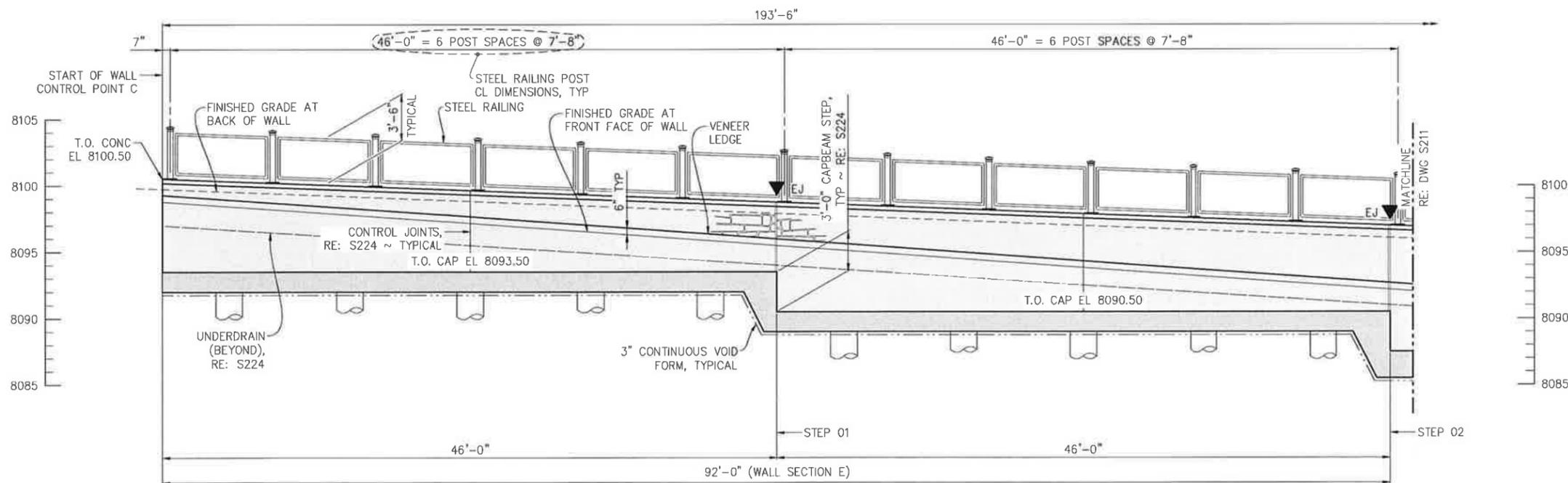
Sheet Number 76

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EAST WALL PLAN - GREGORY STREET (WEST END)

- EAST WALL PLAN NOTES:
1. STATIONS AND OFFSETS ARE GIVEN FROM GREGORY STREET HCL.
  2. CAISSON DIMENSIONS SHOWN SHALL BE COORDINATED WITH GEOMETRY GIVEN ON S110. CAISSON TYPES NOTED THUS: "X" ON PLAN, RE: "CAISSON TABLE" S111.
  3. WALL SECTIONS E, F, G, CANTILEVER SECTION, AND DETAILS OF WALL ABOVE THE CONCRETE BOX CULVERT (CBC) ARE FOUND ON DRAWING S221-S222.
  4. WALL EXPANSION JOINT NOTED THUS: "▼ EJ" ON PLAN AND ELEVATIONS. RE: "WALL EXPANSION JOINT DETAIL" S224. PROVIDE CONTROL JOINTS AS SHOWN ON ELEVATIONS CENTERED BETWEEN EXPANSION JOINTS AND AT 25' MAX SPACING.



EAST WALL ELEVATION - GREGORY STREET (WEST END)



Print Date: February 23, 2016	File Name: bh_s210 s211 s212 east wall.dwg
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader
<b>MARTIN/MARTIN</b> CONSULTING ENGINEERS	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.5100 MARTINMARTIN.COM

Sheet Revisions		
Date:	Comments	Init.

**BLACK HAWK**

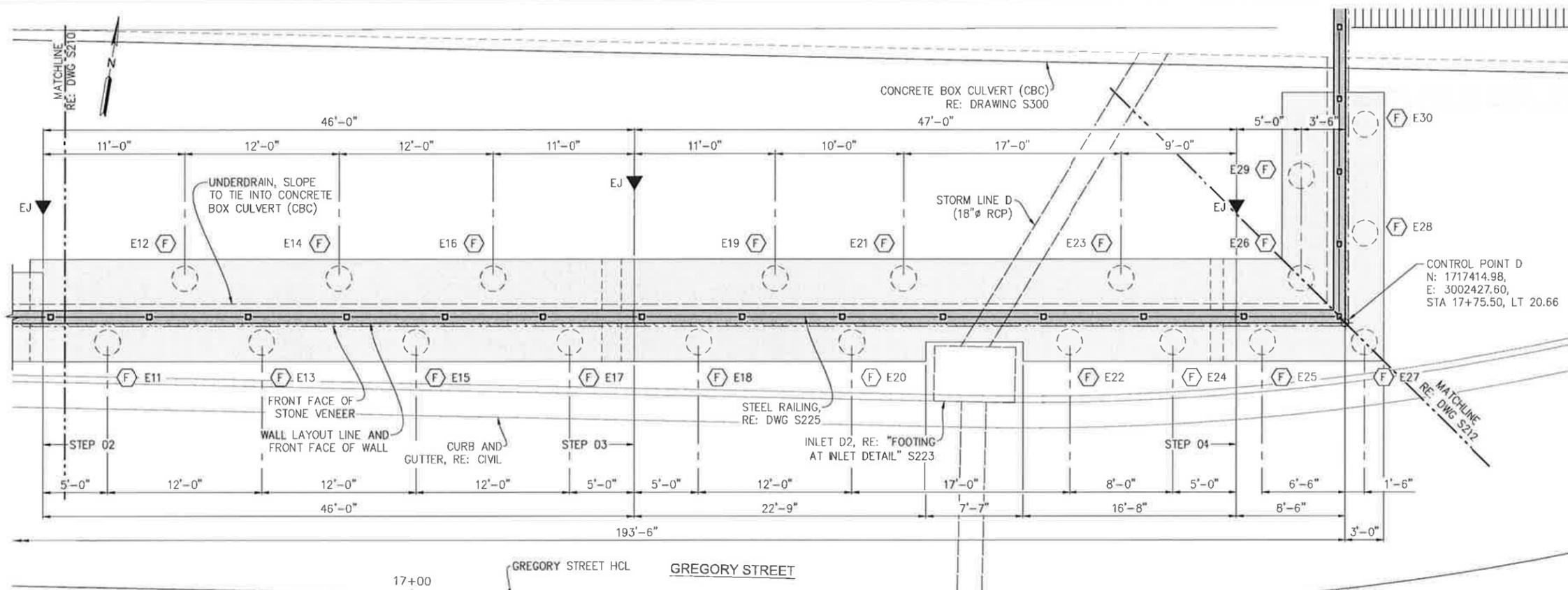
City of Black Hawk  
987 Miners Mesa Road  
P.O. Box 68,  
Black Hawk, Colorado 80422

For Construction
No Revisions:
Revised:
Void:

EAST WALL PLAN AND ELEVATION (1 OF 3)	
Designer: TNS	
Detailer: MNG	
Sheet Subset: STRUCTURAL	Subset Sheet: S210

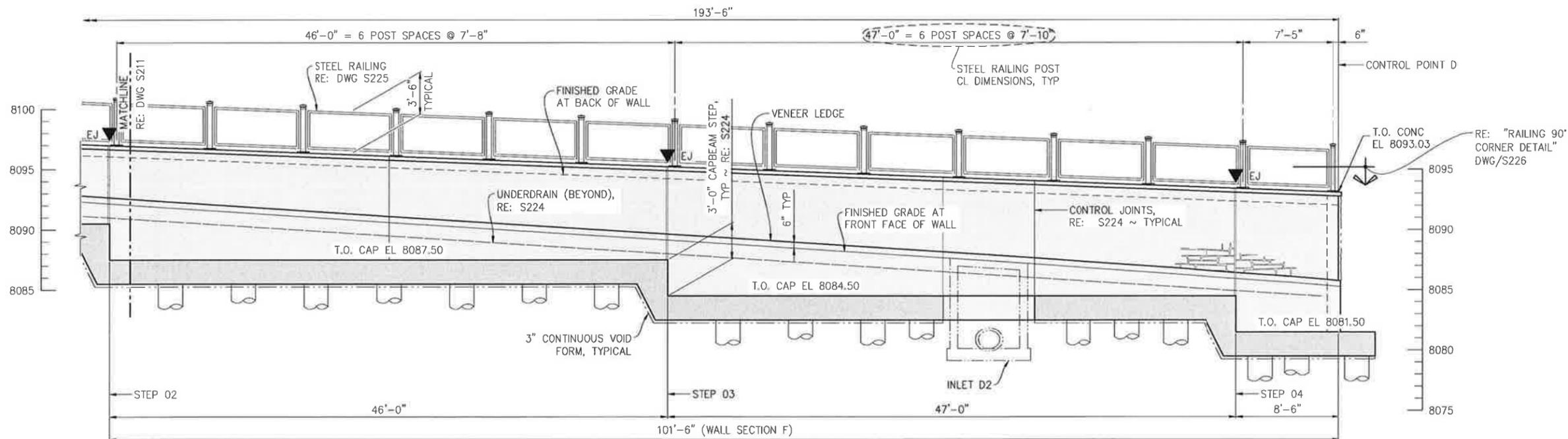
Project No./Code
Sheet Number 77

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**EAST WALL PLAN - GREGORY STREET (EAST END)**

RE: WEST WALL NOTES DRAWING S210.



**EAST WALL ELEVATION - GREGORY STREET (EAST END)**



Print Date: February 23, 2016  
 File Name: bh\_s210 s211 s212 east wall.dwg  
 Horiz. Scale: Vert. Scale:  
 Unit Information Unit Leader  
**MARTIN/MARTIN**  
 CONSULTING ENGINEERS  
 12499 WEST COLFAX AVENUE,  
 LAKEWOOD, COLORADO 80215  
 MAIN 303.431.6100  
 MARTINMARTIN.COM

Sheet Revisions		
Date:	Comments	Init.

**BLACK HAWK**  
 City of Black Hawk  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

For Construction  
 No Revisions:  
 Revised:  
 Void:

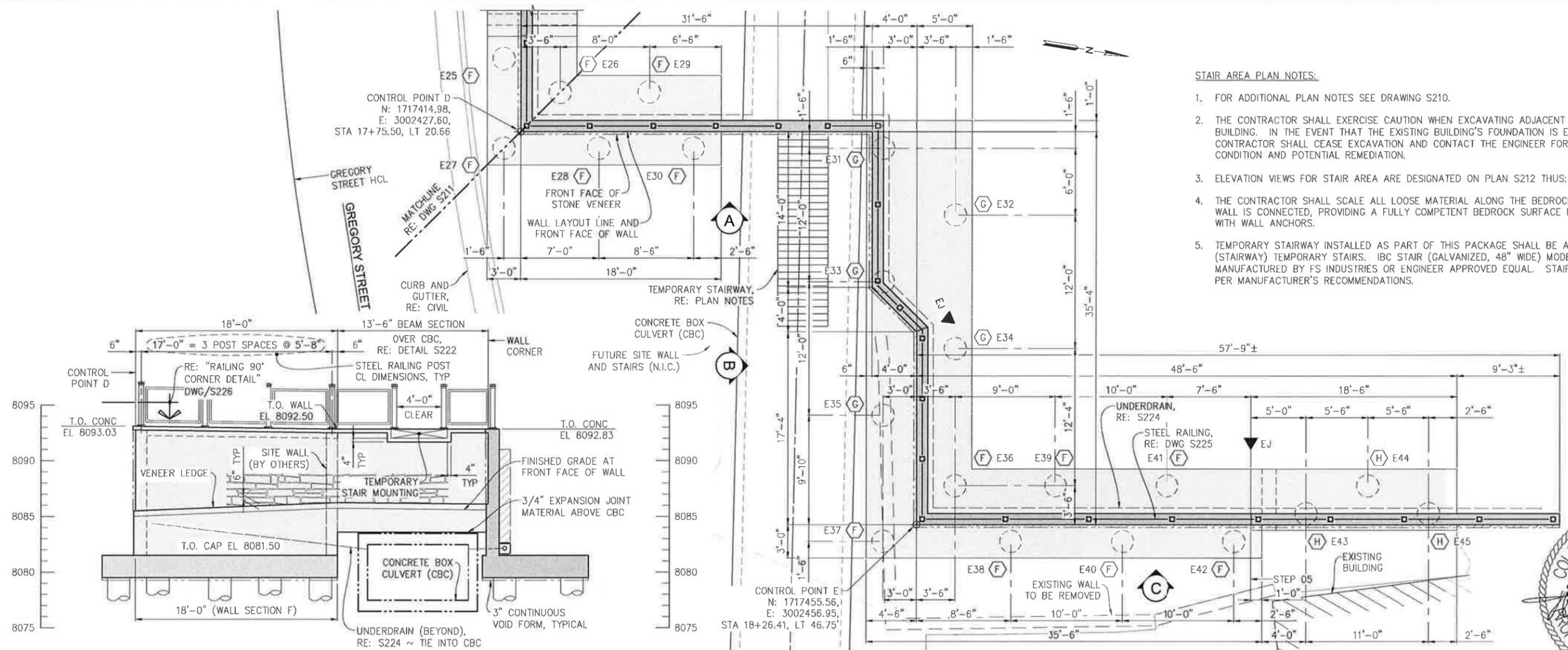
**EAST WALL PLAN AND ELEVATION (2 OF 3)**  
 Designer: TNS  
 Detailer: MNG  
 Sheet Subset: STRUCTURAL  
 Subset Sheet: S211

Project No./Code  
 Sheet Number **78**

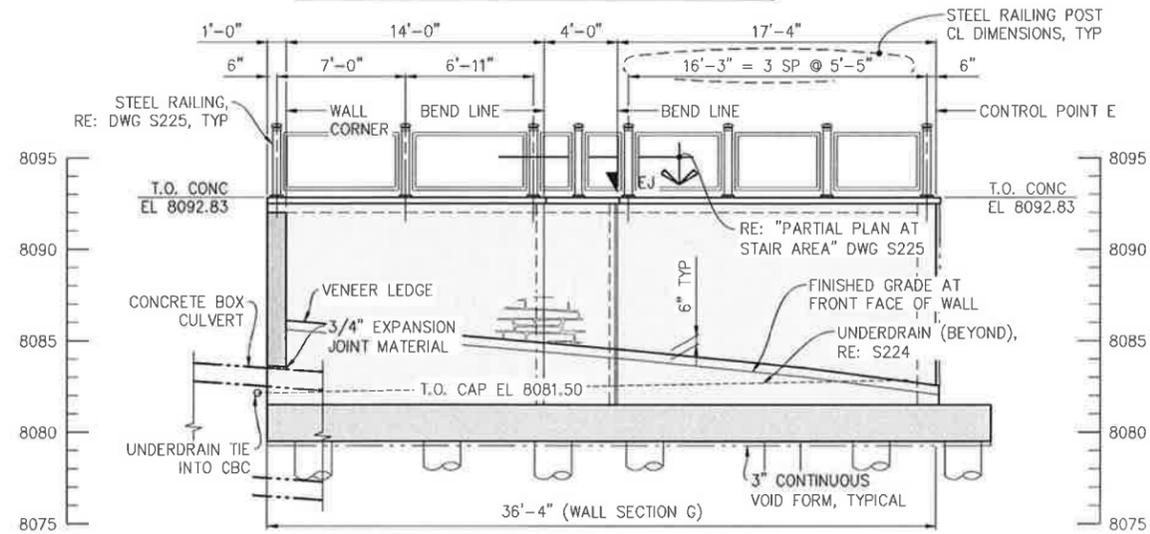
I:\CIVIL\HAYNES14.DWG-Gregory Street - Walls\DWG\BH\_S210 S211 S212 EAST WALL.dwg

**STAIR AREA PLAN NOTES:**

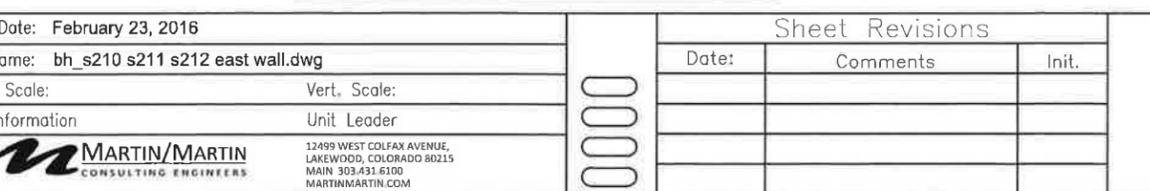
- FOR ADDITIONAL PLAN NOTES SEE DRAWING S210.
- THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING ADJACENT TO THE EXISTING BUILDING. IN THE EVENT THAT THE EXISTING BUILDING'S FOUNDATION IS EXPOSED THE CONTRACTOR SHALL CEASE EXCAVATION AND CONTACT THE ENGINEER FOR REVIEW OF THE CONDITION AND POTENTIAL REMEDIATION.
- ELEVATION VIEWS FOR STAIR AREA ARE DESIGNATED ON PLAN S212 THUS: "A", "B", "C".
- THE CONTRACTOR SHALL SCALE ALL LOOSE MATERIAL ALONG THE BEDROCK FACE WHERE THE WALL IS CONNECTED, PROVIDING A FULLY COMPETENT BEDROCK SURFACE FOR ATTACHMENT WITH WALL ANCHORS.
- TEMPORARY STAIRWAY INSTALLED AS PART OF THIS PACKAGE SHALL BE A STRUCTURAL STEEL (STAIRWAY) TEMPORARY STAIRS. IBC STAIR (GALVANIZED, 48" WIDE) MODEL #IBC 48128-G MANUFACTURED BY FS INDUSTRIES OR ENGINEER APPROVED EQUAL. STAIRS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



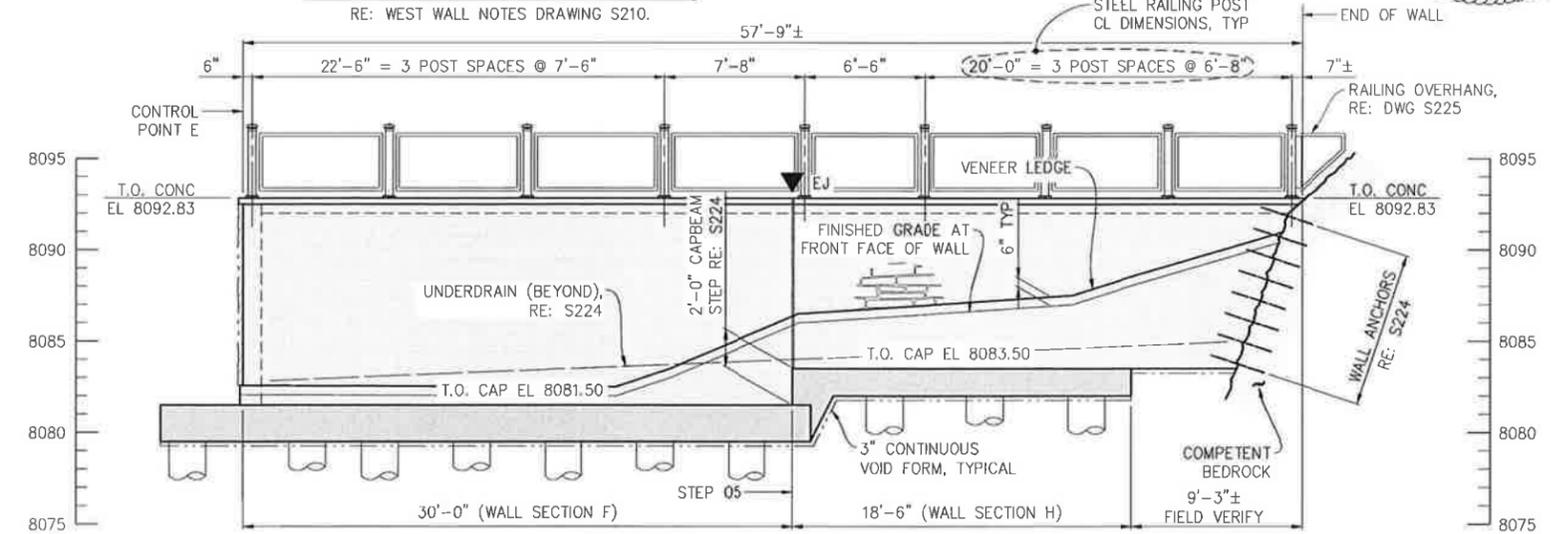
**EAST WALL STAIR AREA ELEVATION A**



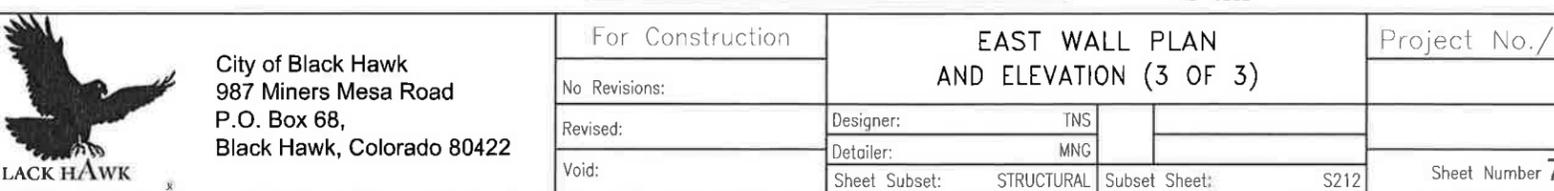
**EAST WALL STAIR AREA ELEVATION B**



**EAST WALL PLAN - STAIR AREA**



**EAST WALL STAIR AREA ELEVATION C**



VICIL/Civil/HA/NE/S14.0009-Gregory Street - Walls/DWG/SH\_S210 S211 S212 EAST WALL.dwg

Print Date: February 23, 2016	
File Name: bh_s210 s211 s212 east wall.dwg	
Horiz. Scale: Vert. Scale:	
Unit Information: Unit Leader	
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM	

Sheet Revisions		
Date:	Comments	Init.

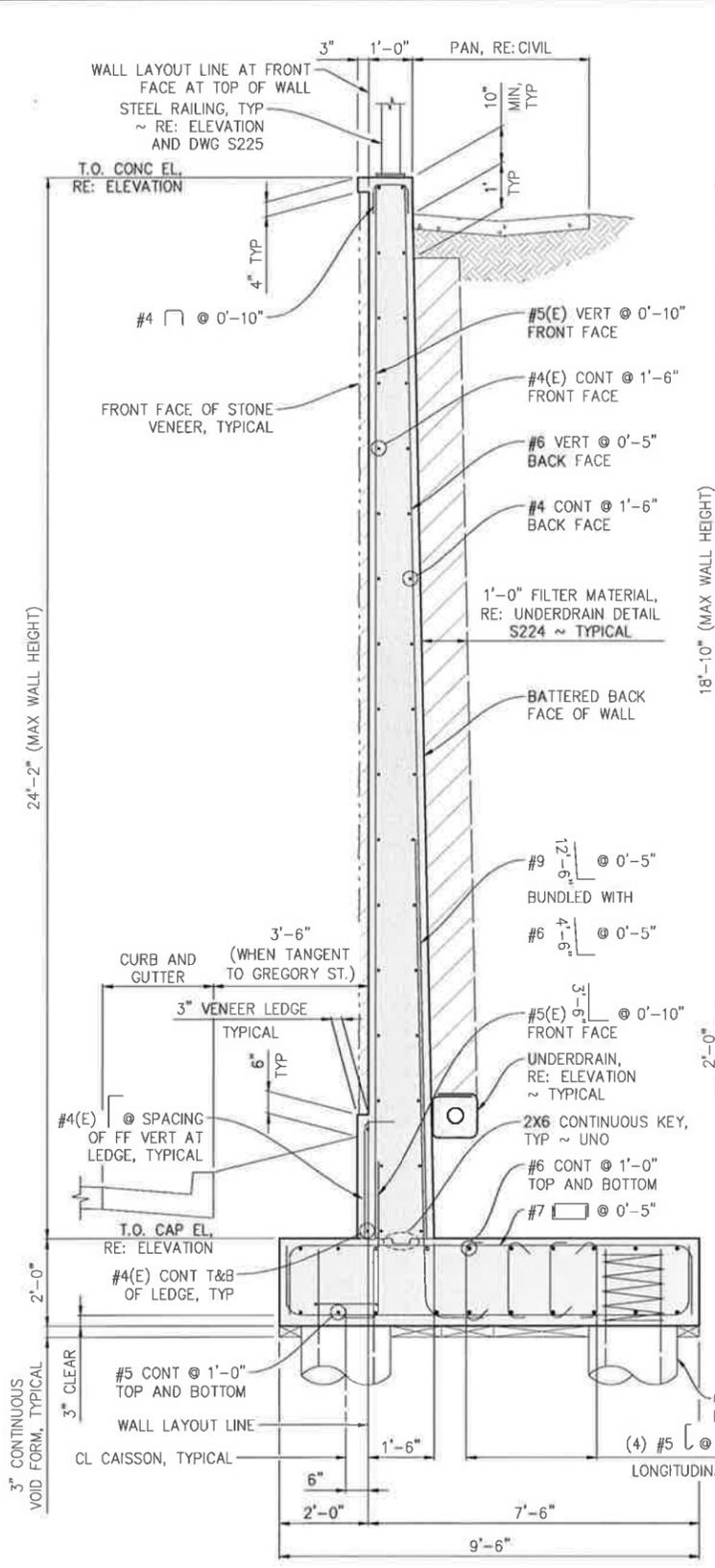


City of Black Hawk  
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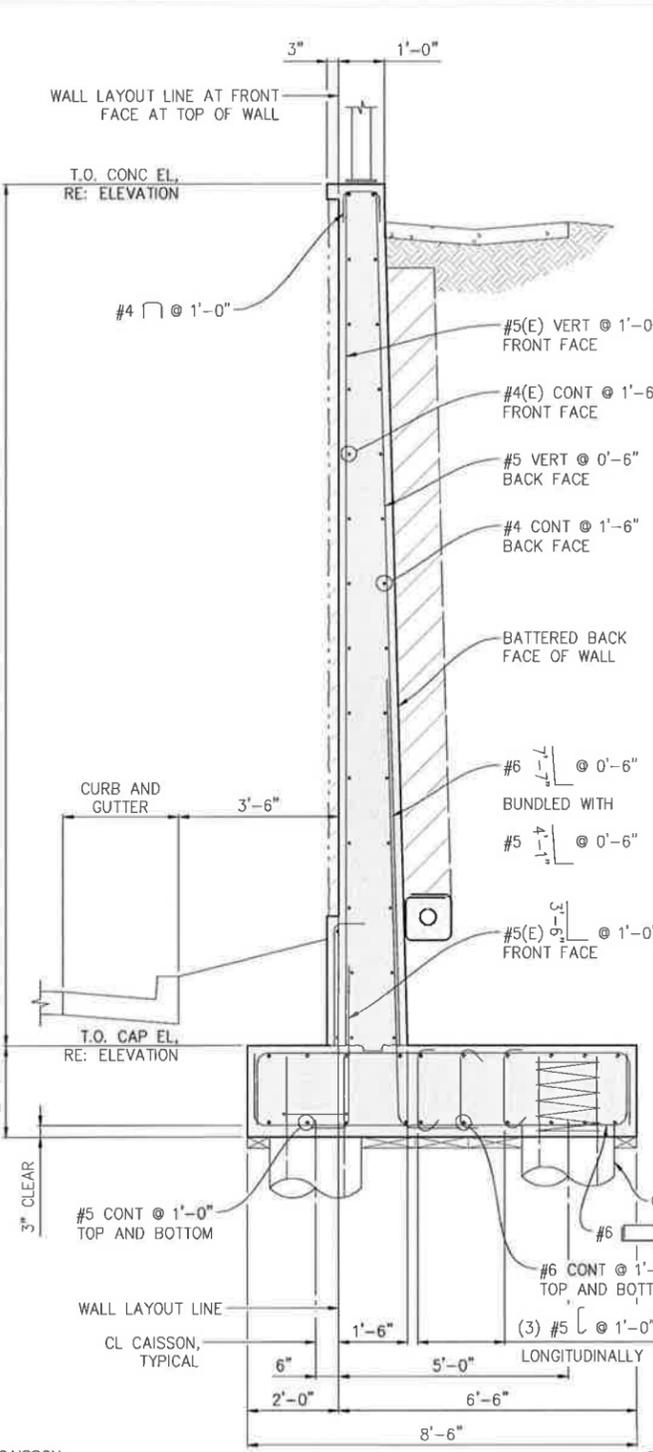
For Construction
No Revisions:
Revised:
Void:

<b>EAST WALL PLAN AND ELEVATION (3 OF 3)</b>	
Designer:	TNS
Detailer:	MNG
Sheet Subset:	STRUCTURAL
Subset Sheet:	S212

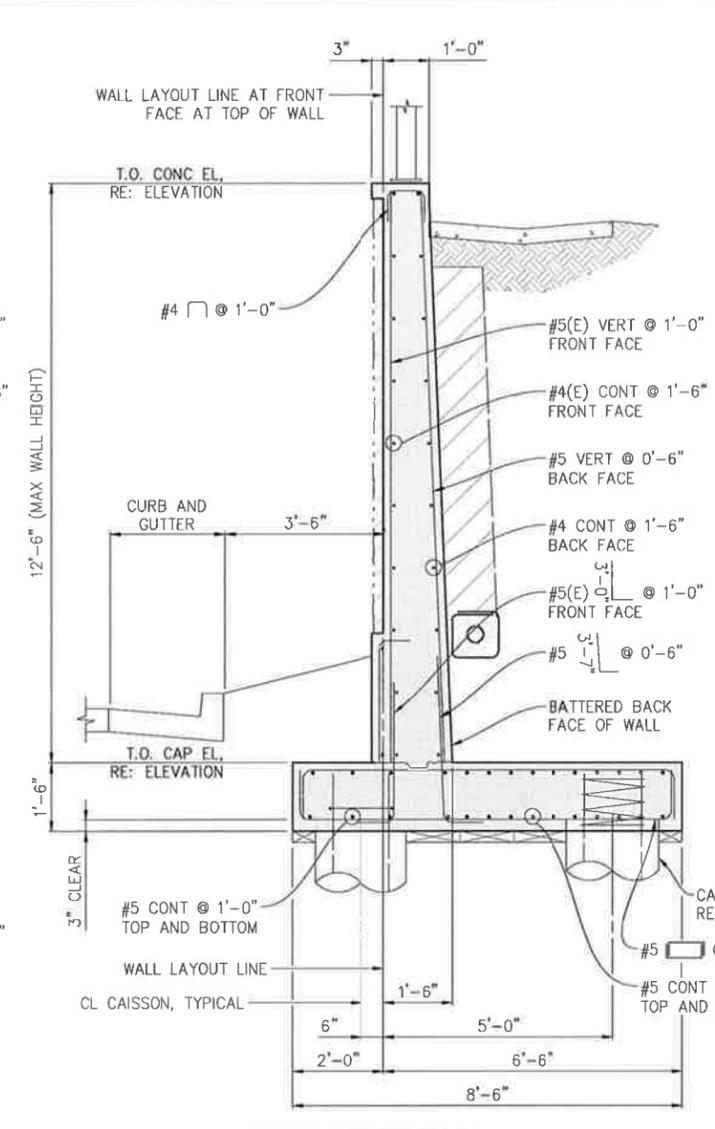
Project No./Code
Sheet Number 79



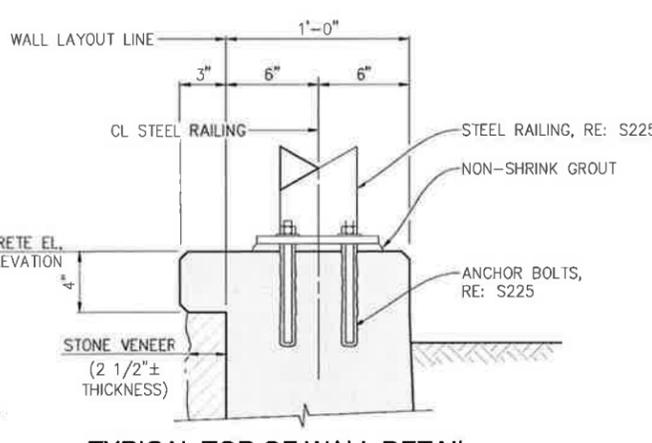
WALL SECTION A



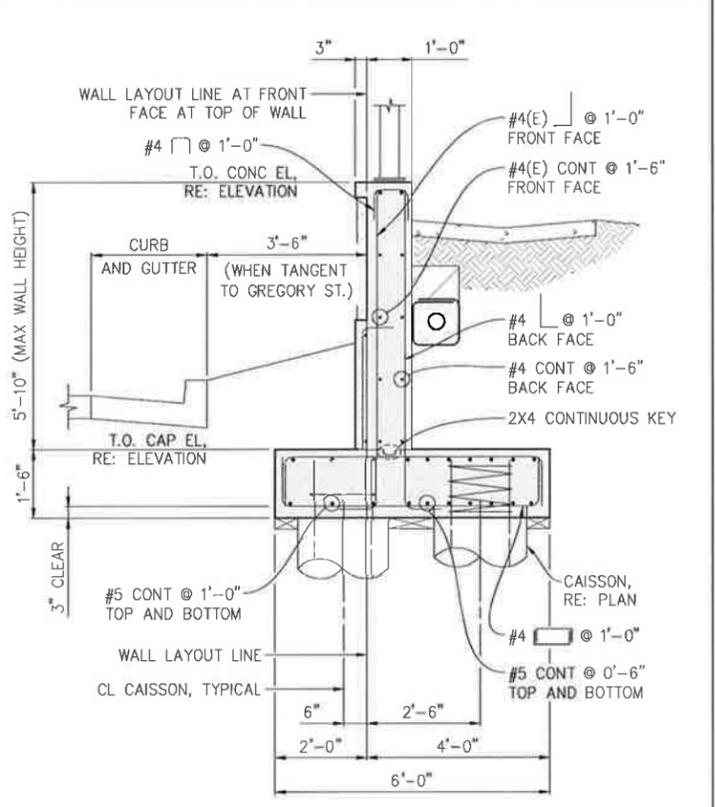
WALL SECTION B



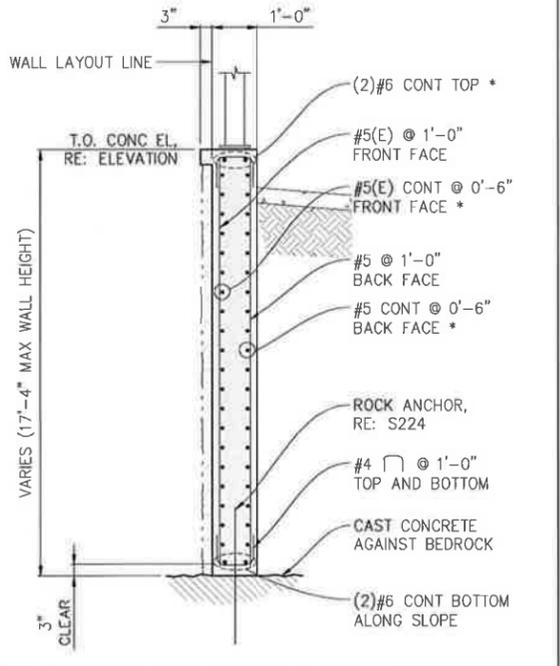
WALL SECTION C



TYPICAL TOP OF WALL DETAIL



WALL SECTION D



WEST WALL CANTILEVER SECTION

\* EXTEND REINFORCING INTO WALL SECTION A:  
 #5 (2'-11" MINIMUM)  
 #6 (3'-6" MINIMUM)



City of Black Hawk  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

Print Date: February 23, 2016  
 File Name: bh\_s220 west wall sections.dwg  
 Horiz. Scale: Vert. Scale:  
 Unit Information Unit Leader

MARTIN/MARTIN CONSULTING ENGINEERS  
 12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215  
 MAIN 303-431-5100 MARTINMARTIN.COM

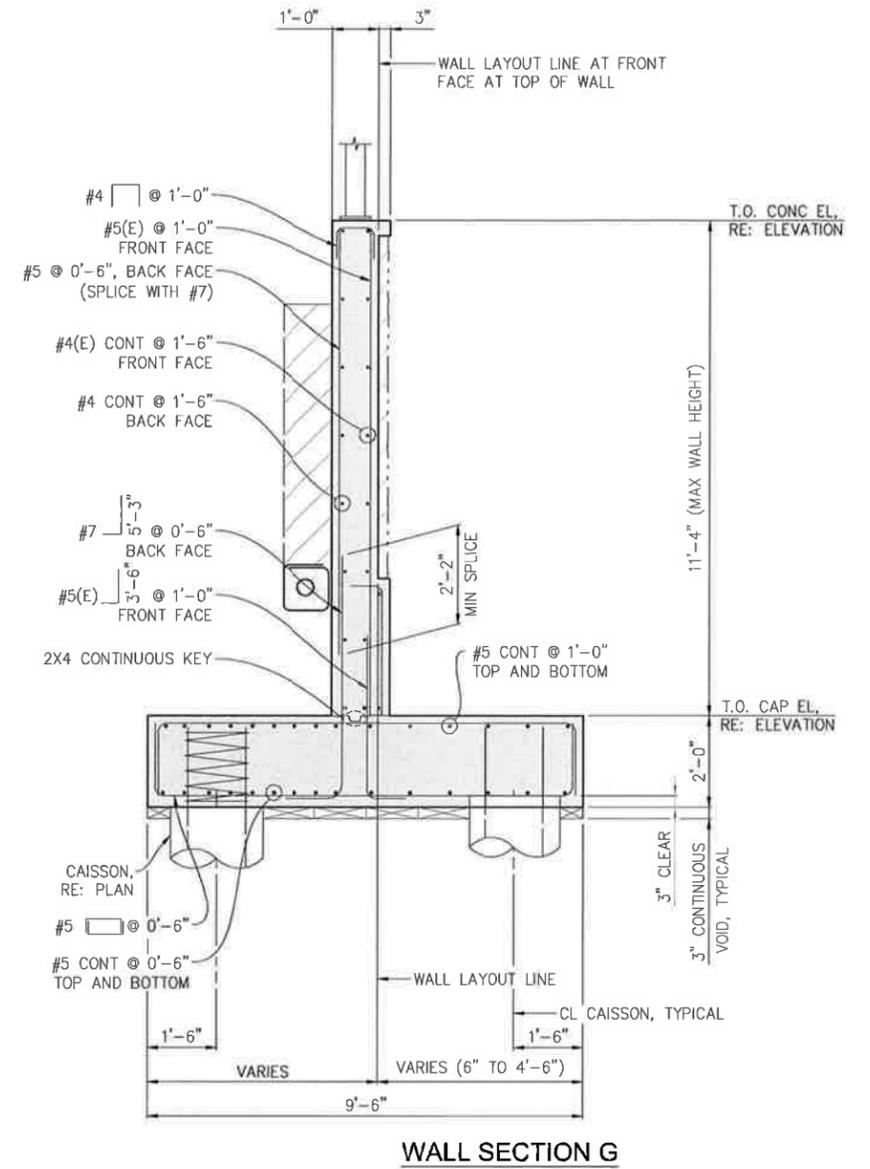
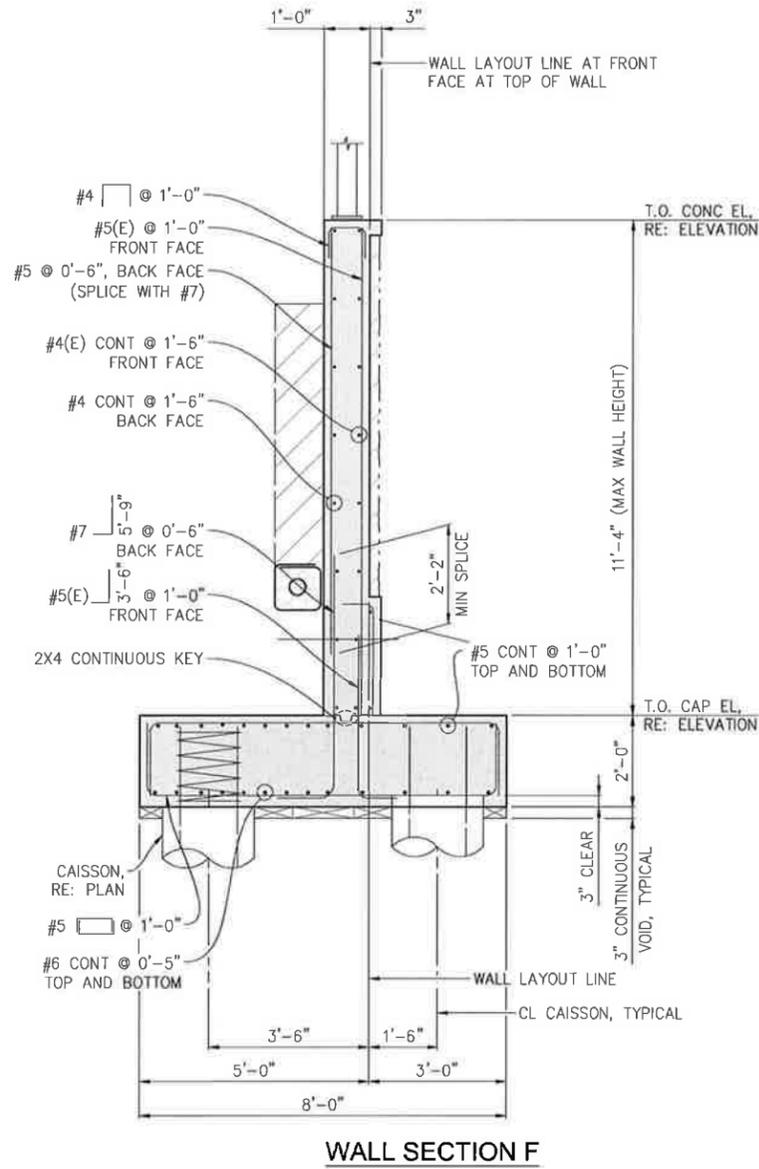
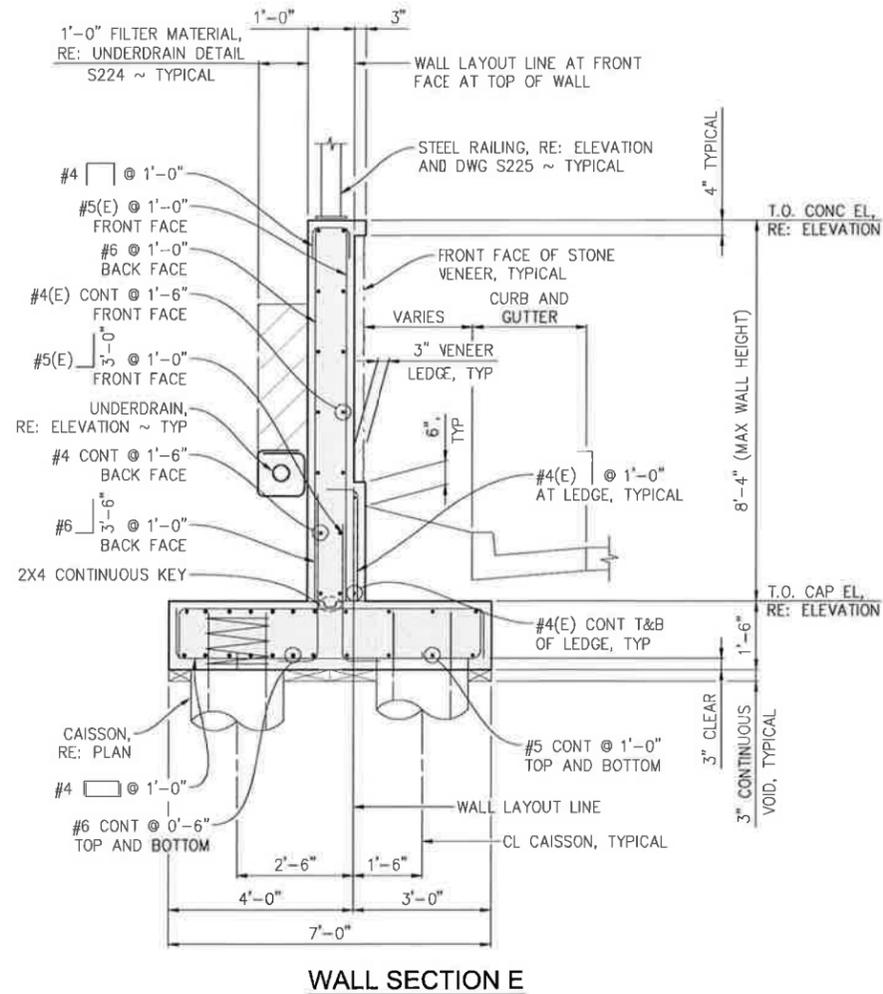
Sheet Revisions		
Date:	Comments	Init.

For Construction
No Revisions:
Revised:
Void:

WEST WALL SECTIONS	
Designer:	TNS
Detailer:	MNG
Sheet Subset:	STRUCTURAL
Subset Sheet:	S220

Project No./Code
Sheet Number 80

I:\CIVIL\HAYNES\14 0089-Gregory Street - Walls\DWG\BH\_S220 WEST WALL SECTIONS.dwg



I:\CIVIL\HAYNES\14 0069-Creggy Sheet - Walls\DWG\BH\_S221 EAST WALL SECTIONS.DWG

Print Date: February 23, 2016	
File Name: bh_s221 east wall sections.dwg	
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader
<b>MARTIN/MARTIN</b> CONSULTING ENGINEERS	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303-433-6100 MARTINMARTIN.COM

Sheet Revisions		
Date:	Comments	Init.

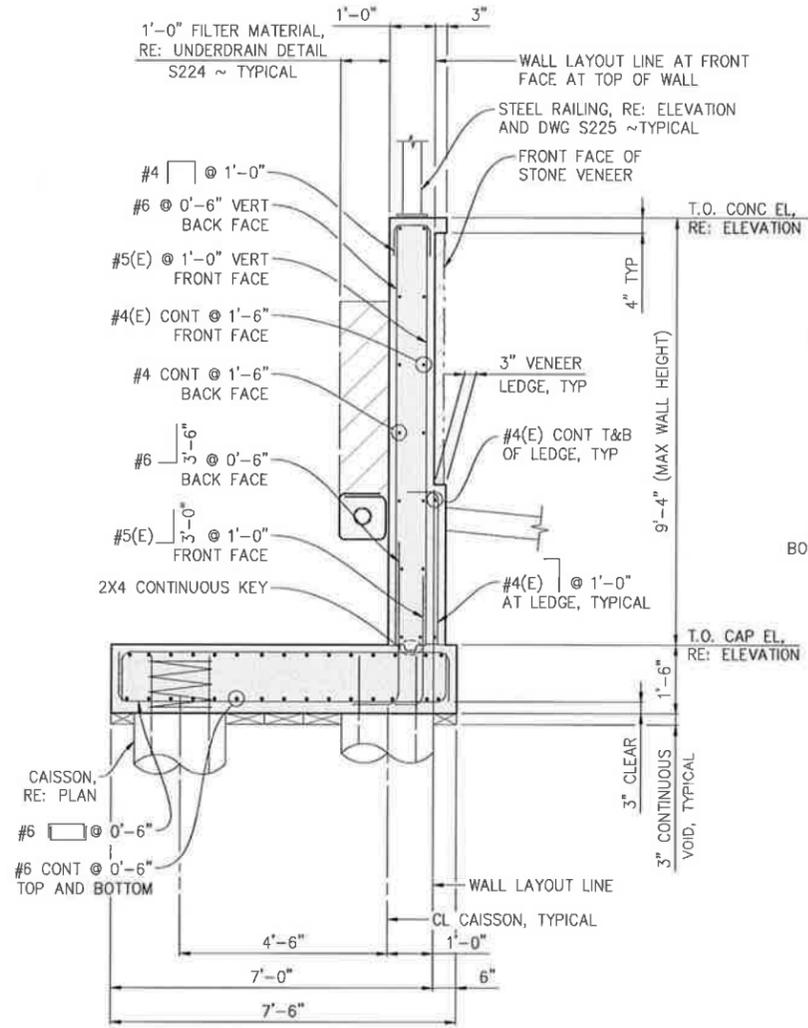


City of Black Hawk  
987 Miners Mesa Road  
P.O. Box 68,  
Black Hawk, Colorado 80422

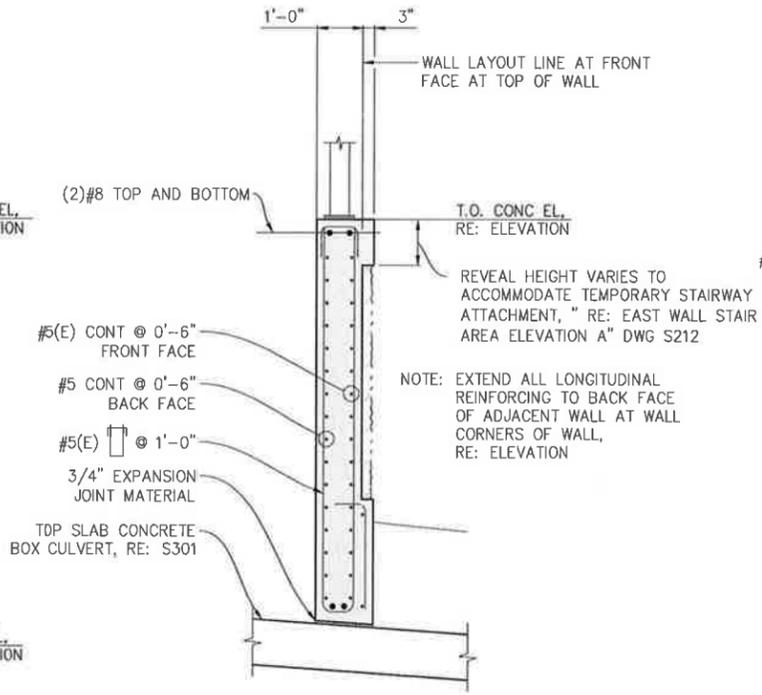
For Construction
No Revisions:
Revised:
Void:

EAST WALL SECTIONS (1 OF 2)	
Designer:	TNS
Detailer:	MNG
Sheet Subset:	STRUCTURAL
Subset Sheet:	S221

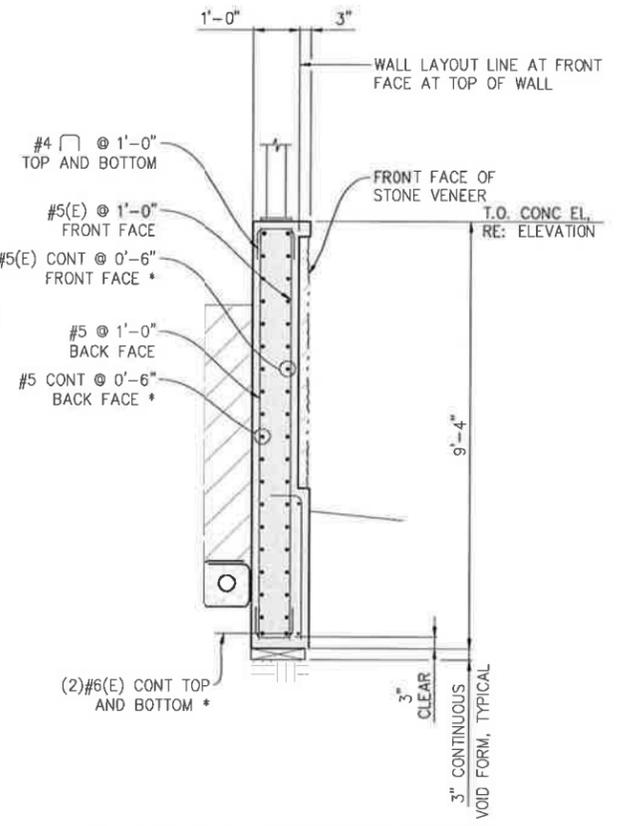
Project No./Code
Sheet Number <b>81</b>



**WALL SECTION H**



**BEAM SECTION OVER CBC**



**EAST WALL CANTILEVER SECTION**



Print Date: February 23, 2016	
File Name: bh_s221 east wall sections.dwg	
Horiz. Scale:	Vert. Scale:
Unit Information	Unit Leader
	12499 WEST COLFAX AVENUE LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM

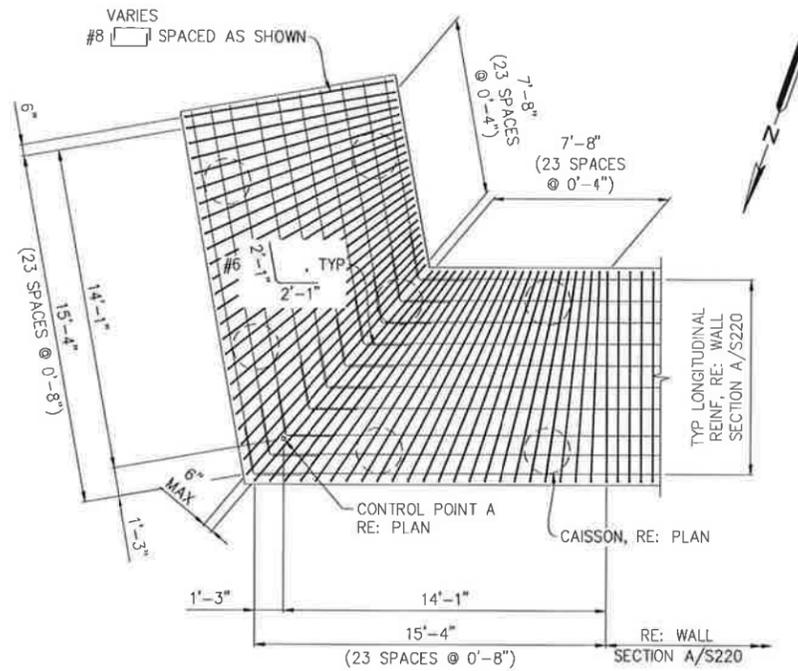
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Date:	Comments	Init.

**BLACK HAWK**

City of Black Hawk  
987 Miners Mesa Road  
P.O. Box 68,  
Black Hawk, Colorado 80422

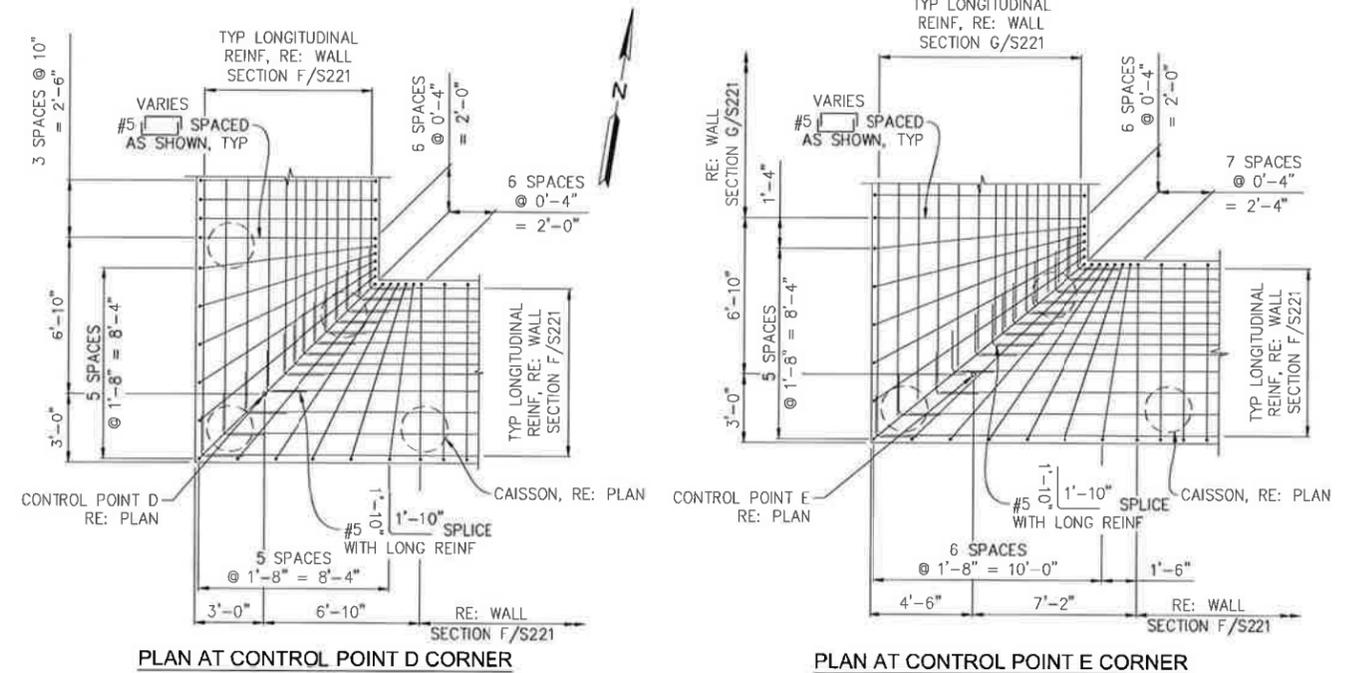
For Construction	EAST WALL SECTIONS (2 OF 2)		Project No./Code
No Revisions:			
Revised:	Designer: TNS		
Void:	Detailer: MNG		
	Sheet Subset: STRUCTURAL	Subset Sheet: S222	Sheet Number 82

N:\VLC\HW\HAYNES\14.0086\Gregory Street - Walls\DWG\BH\_S221 EAST WALL SECTIONS.DWG



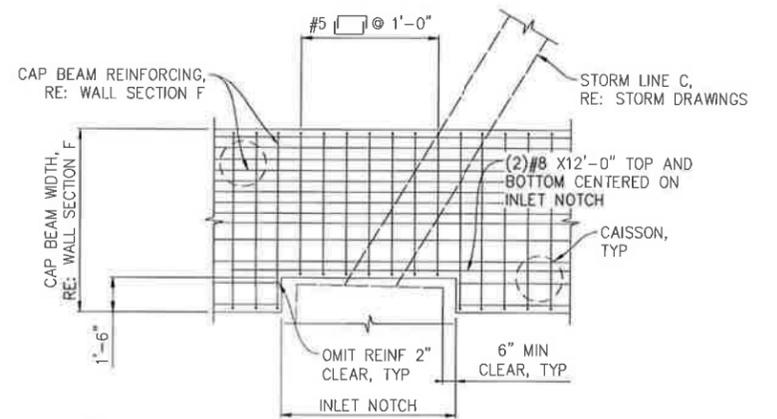
**WEST WALL FOOTING CORNER - REINFORCING PLAN**

NOTE: WALL ABOVE AND WALL REINFORCING NOT SHOWN.



**EAST WALL FOOTING CORNERS - REINFORCING PLANS**

NOTE: WALL ABOVE AND WALL REINFORCING NOT SHOWN.



**FOOTING AT INLET DETAIL**



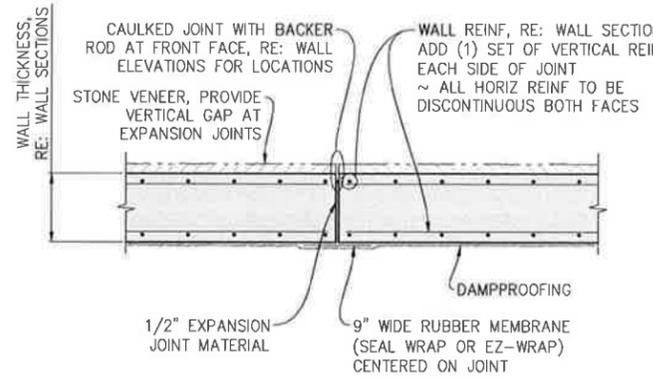
IC:\VILCHUR\HAYNES\14-0088-Design\Sheet - Walls\DWG\BH\_S223 WALL DETAILS.dwg

Print Date: February 23, 2016	
File Name: bh_s223 wall details.dwg	
Horiz. Scale:                      Vert. Scale:	
Unit Information                      Unit Leader	
	12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM

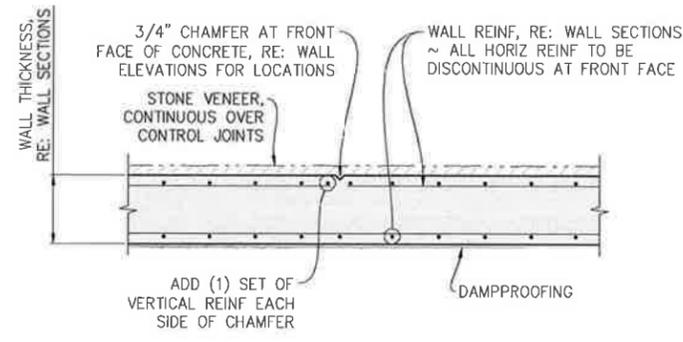
Sheet Revisions			
Date:	Comments	Init.	

**City of Black Hawk**  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

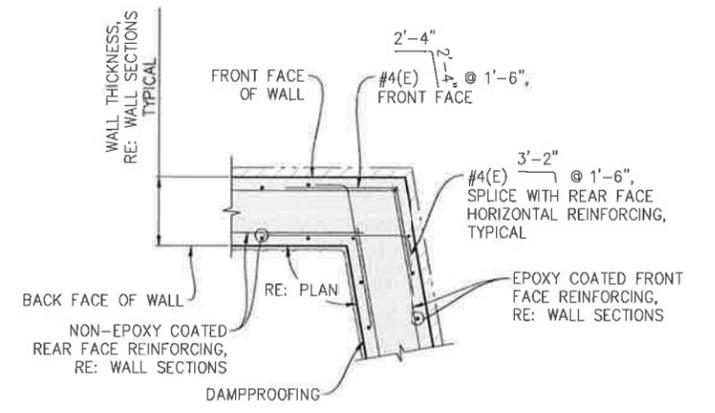
For Construction	WALL DETAILS (1 OF 2)		Project No./Code
No Revisions:	Designer: TNS		
Revised:	Detailer: MNG		
Void:	Sheet Subset: STRUCTURAL	Subset Sheet: S223	Sheet Number <b>83</b>



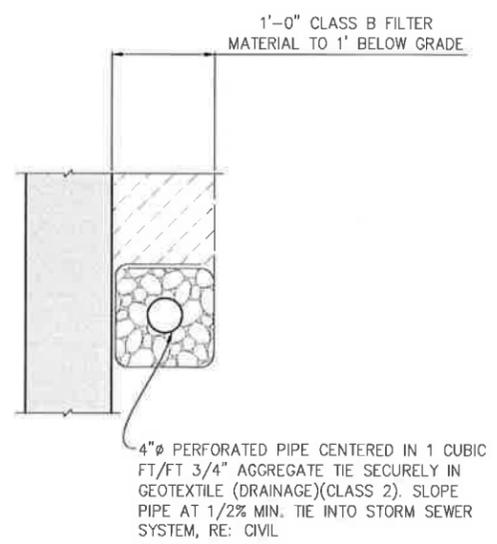
**EXPANSION JOINT DETAIL**



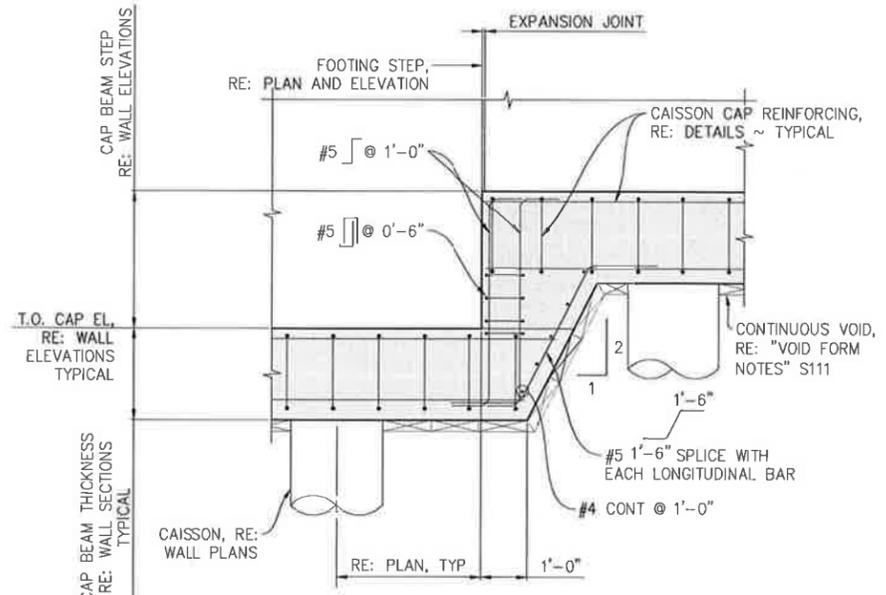
**CONTROL JOINT DETAIL**



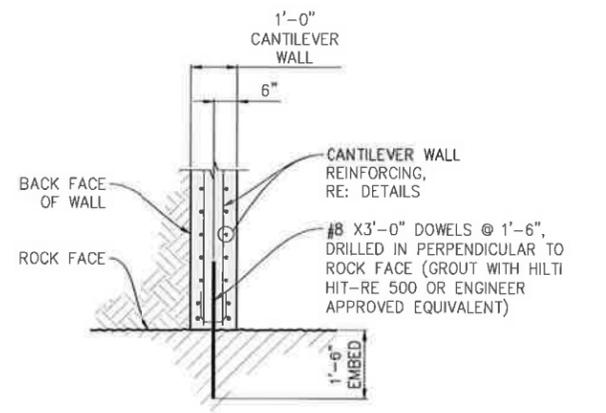
**TYPICAL CORNER REINFORCING PLAN**



**UNDERDRAIN DETAIL**



**TYPICAL CAPBEAM STEP DETAIL**



**WALL ANCHOR DETAIL**



I:\CIVIL\CHINA\HAYNES\14-0069-Grassy Street - Walls\DWG\BLS224 WALL DETAILS.dwg

Print Date: February 23, 2016	
File Name: bh_s224 wall details.dwg	
Unit Information	
Unit Leader	

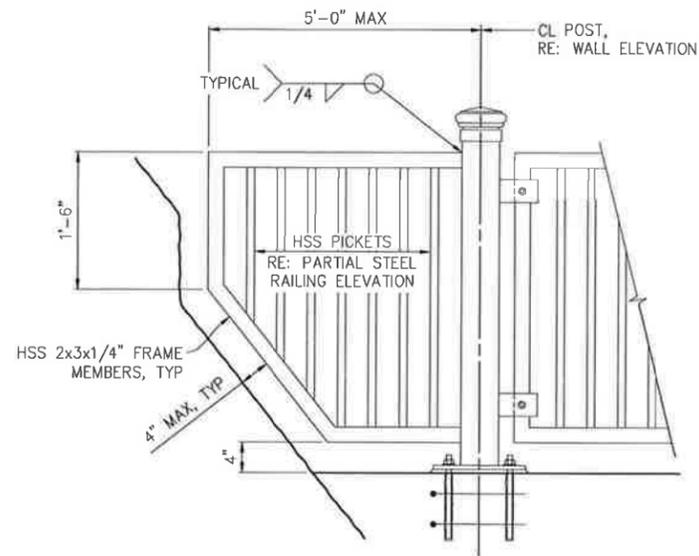
Sheet Revisions		
Date:	Comments	Init.

**City of Black Hawk**  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

For Construction
No Revisions:
Revised:
Void:

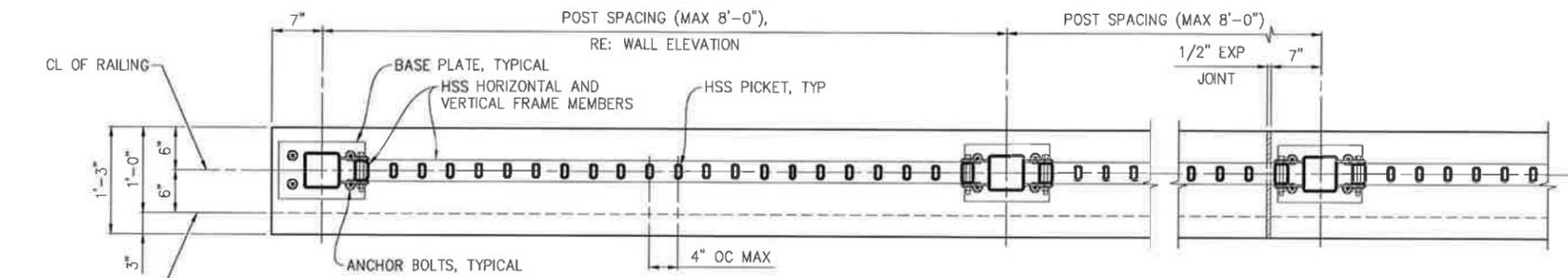
<b>WALL DETAILS (2 OF 2)</b>	
Designer:	TNS
Detailer:	MNG
Sheet Subset:	STRUCTURAL
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Project No./Code
Sheet Number <b>84</b>

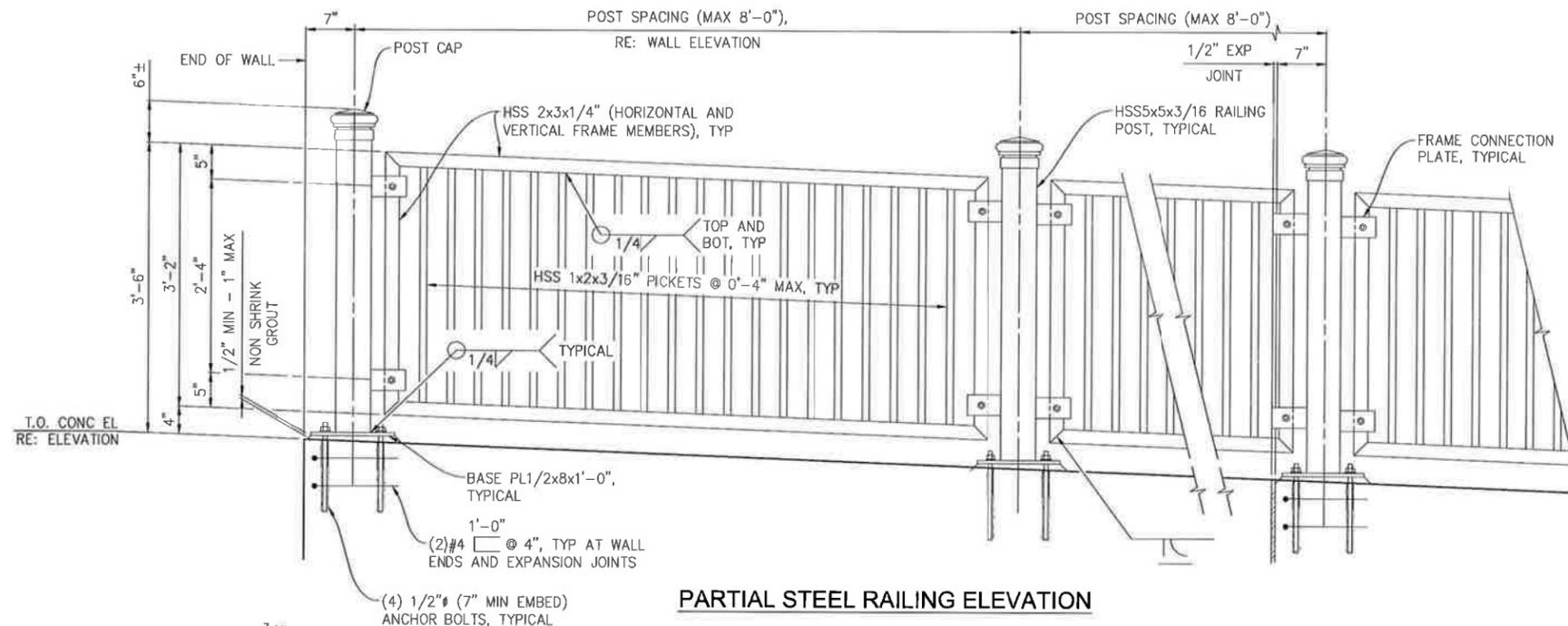


**STEEL RAILING OVERHANG ELEVATION**

FOR LOCATIONS RE:  
 "WEST WALL ELEVATION (EAST END)"-DWG S200 AND  
 "EAST WALL STAIR AREA ELEVATION C"-DWG S212



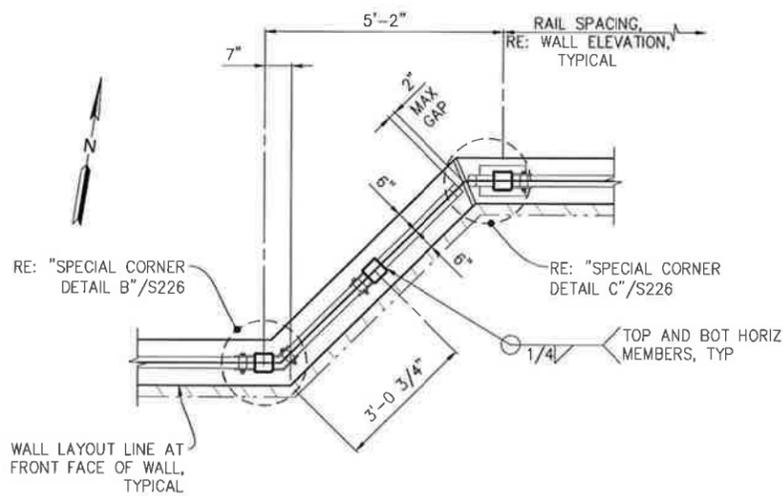
**PARTIAL STEEL RAILING PLAN SECTION**



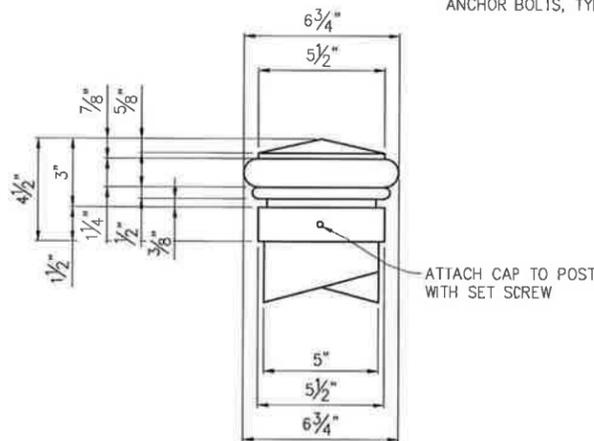
**PARTIAL STEEL RAILING ELEVATION**

**RAILING NOTES:**

1. ALL HORIZONTAL MEMBERS SHALL BE PARALLEL WITH TOP OF WALL.
2. ALL POSTS SHALL BE PLUMB.
3. ALL ANCHOR BOLTS SHALL BE AN EPOXY ADHESIVE ANCHOR SYSTEM WITH A MINIMUM ULTIMATE PULLOUT STRENGTH OF 20,000 LBS PER ANCHOR AND BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. DIAMETER OF THE HOLE SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
4. ANCHOR BOLTS SHALL BE TIGHTENED TO "SNUG TIGHT" CONDITION WITH THREADS BURRED.
5. RAIL ATTACHMENT BOLTS SHALL BE TIGHTENED TO "SNUG TIGHT" CONDITION, LOOSENED ONE FULL TURN (ONE SIDE OF PANEL ONLY) WITH THREADS BURRED.
6. ALL FENCE COMPONENTS SHALL BE POWDER-COATED BLACK (SHOP PAINTED WITH FIELD TOUCH-UPS USING POLYURETHANE PAINT). OWNER TO APPROVE COLOR PRIOR TO PAINTING.
7. POSTS SHALL BE PLACED AS SHOWN ON WALL ELEVATIONS.
8. ALL WELDS SHALL BE GROUND SMOOTH.
9. ALL HSS MEMBERS SHALL BE A500, GRADE B ( $F_y = 46$  KSI). ALL OTHER STEEL TO BE A36 ( $F_y = 36$  KSI).
10. ALL CONNECTION BOLTS TO BE A325. ANCHOR BOLTS TO BE F1554, GRADE 55.
11. POST CAPS TO MATCH THOSE USED ON CDOT PROJECT STU M040-011 (GRANDVIEW AVENUE BRIDGE OVER WADSWORTH BOULEVARD, ARVADA, CO) OR OWNER APPROVED EQUIVALENT.



**PARTIAL PLAN AT STAIR AREA**



**POST CAP ELEVATION**

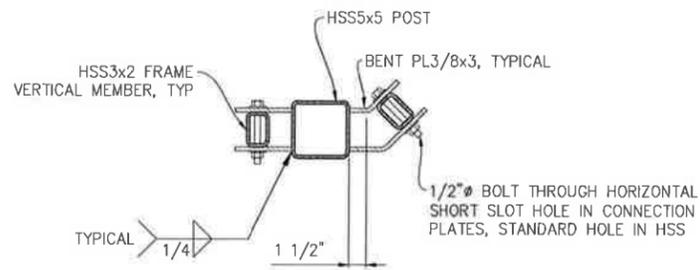


C:\VILCHAY\NERS14\_0068-Gregory Street - Walls\DWG\BHL\_S225 RAILING DETAILS.dwg

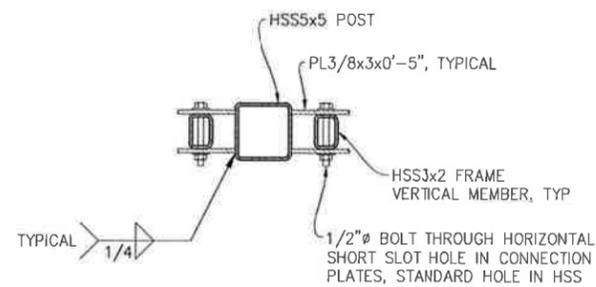
Print Date: February 23, 2016	Sheet Revisions			For Construction	STEEL RAILING DETAILS (1 OF 2)		Project No./Code
File Name: bh_s225 railing details.dwg	Date:	Comments	Init.	No Revisions:			
Horiz. Scale: Vert. Scale:				Revised:	Designer: TNS		
Unit Information: Unit Leader:				Void:	Detailer: MNG		
MARTIN/MARTIN CONSULTING ENGINEERS 12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM					Sheet Subset: STRUCTURAL	Subset Sheet: S225	Sheet Number 85



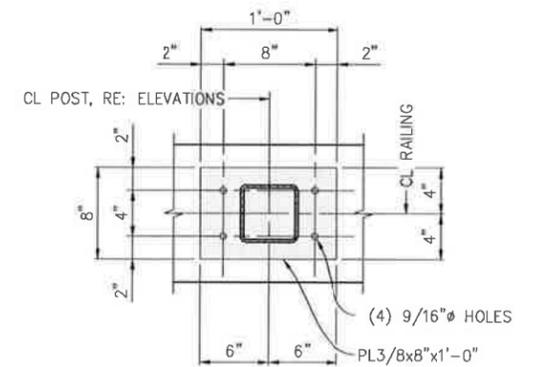
City of Black Hawk  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422



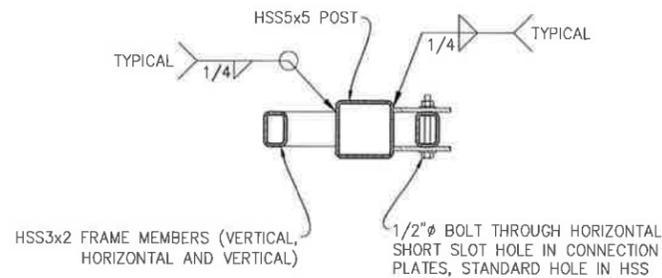
**SPECIAL CORNER DETAIL - B**



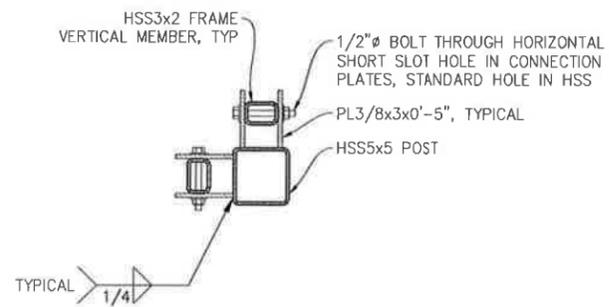
**RAILING FRAME CONNECTION DETAIL**



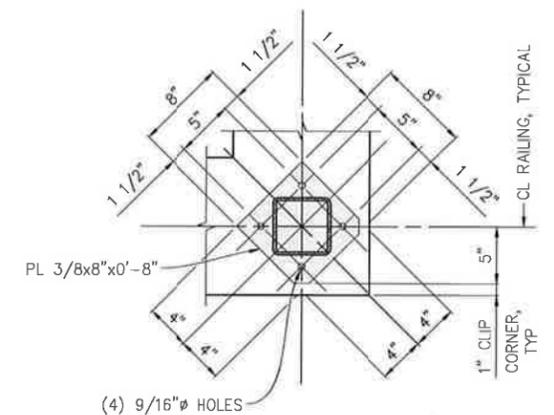
**TYPICAL BASE PLATE DETAIL**



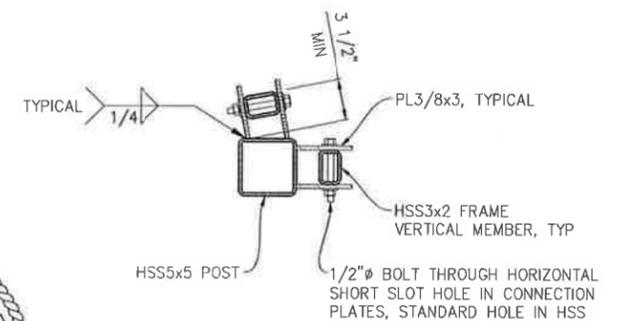
**SPECIAL CORNER DETAIL - C**



**RAILING 90° CORNER DETAIL**



**90° CORNER BASE PLATE DETAIL**

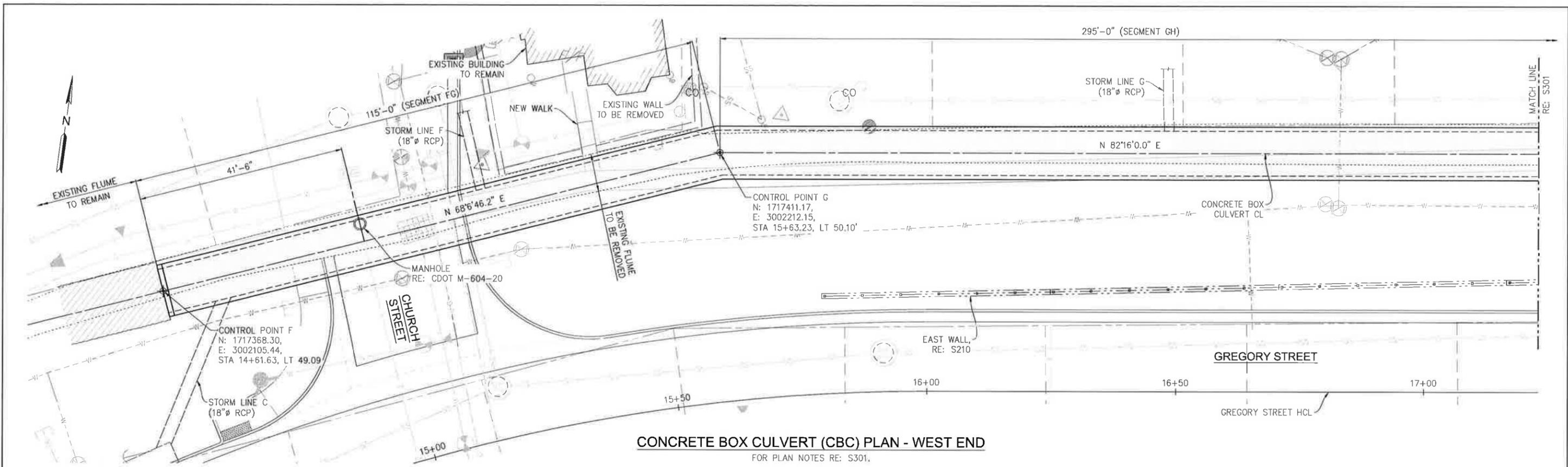


**SPECIAL CORNER DETAIL - A**

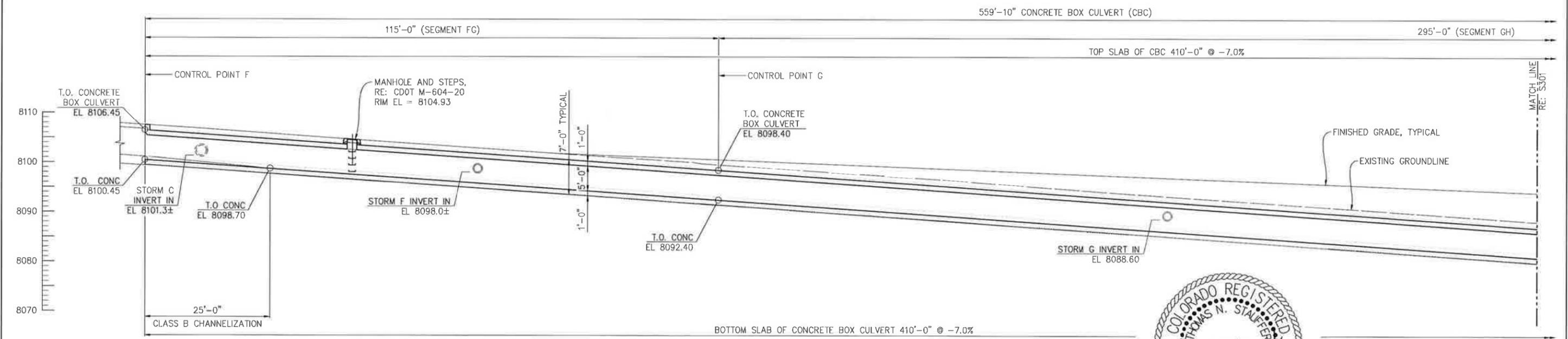


Print Date: February 23, 2016	Sheet Revisions			 <p>City of Black Hawk 987 Miners Mesa Road P.O. Box 68, Black Hawk, Colorado 80422</p>	For Construction	STEEL RAILING DETAILS (2 OF 2)		Project No./Code
File Name: bh_s226 railing details.dwg	Date:	Comments	Init.		No Revisions:	Designer: TNS		
Unit Information	Vert. Scale:				Revised:	Detailer: MNG		
	Unit Leader:				Void:	Sheet Subset: STRUCTURAL	Subset Sheet: S226	Sheet Number 86
 <p>MARTIN/MARTIN CONSULTING ENGINEERS</p>		<p>32499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.433.6100 MARTINMARTIN.COM</p>						

I:\V\CHINA\YES14 0069-2\regpy Street - Waller\DWG\BH\_S226 RAILING DETAILS.dwg



**CONCRETE BOX CULVERT (CBC) PLAN - WEST END**  
FOR PLAN NOTES RE: S301.

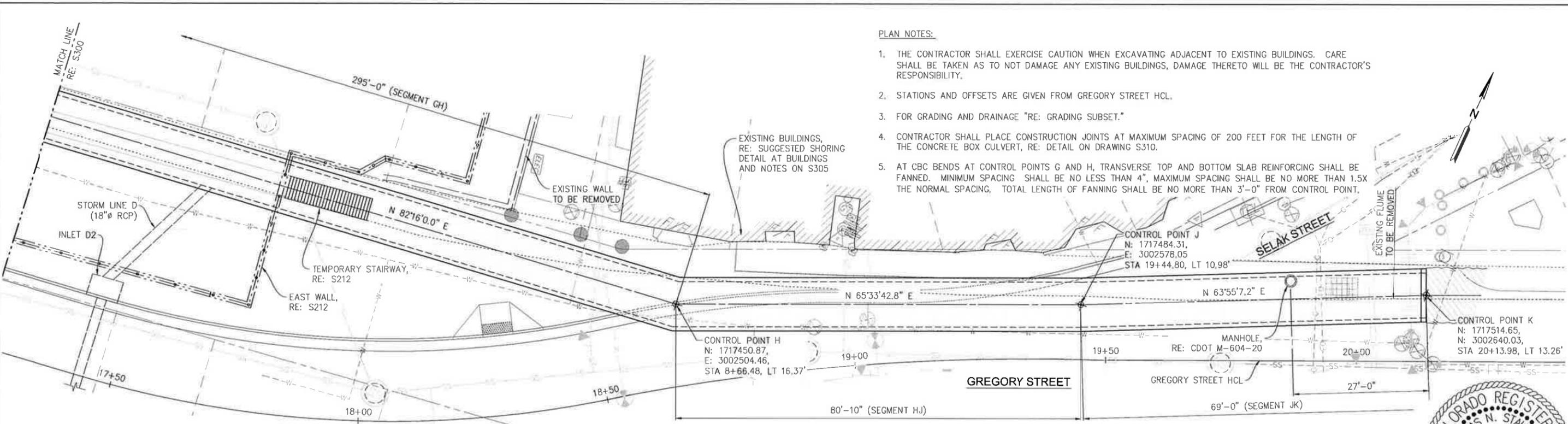


**CONCRETE BOX CULVERT (CBC) SECTION - WEST END**  
LONGITUDINAL SECTION TAKEN BOX CULVERT CENTER LINE



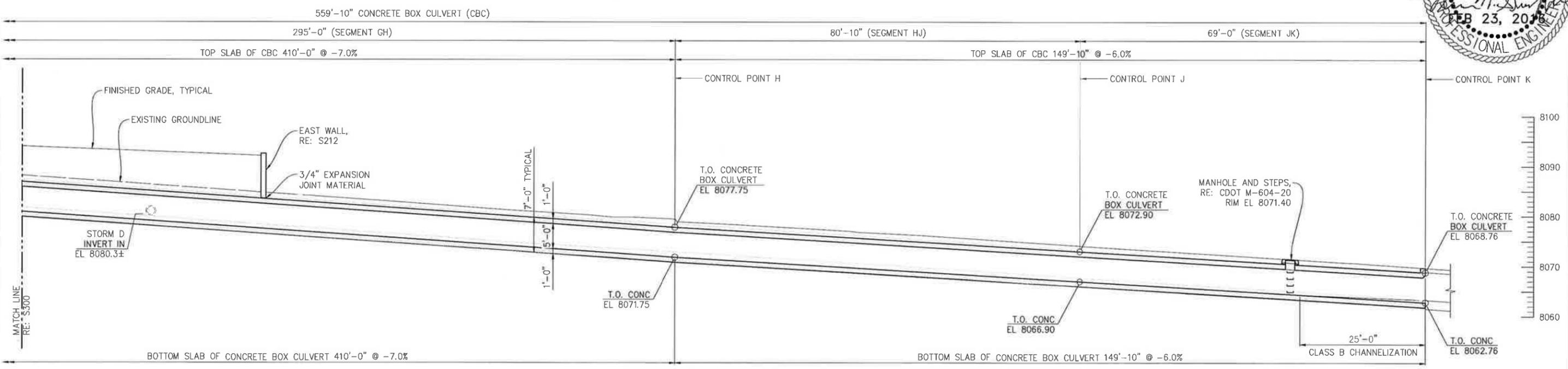
N:\CIVIL\HAYNES\14-0089-Gregory Street - Walk\DWG\BH\_S300\_S301 CONCRETE BOX

Print Date: February 23, 2016	Sheet Revisions			 <p>City of Black Hawk 987 Miners Mesa Road P.O. Box 68, Black Hawk, Colorado 80422</p>	For Construction	CONCRETE BOX CULVERT (CBC) LAYOUT (1 OF 2)		Project No./Code
File Name: bh_s300 s301 concrete box culvert.dwg	Date:	Comments	Init.		No Revisions:	Designer: TNS		
Horiz. Scale:	Vert. Scale:				Revised:	Detailer: MNG		
Unit Information	Unit Leader			Void:	Sheet Subset: STRUCTURAL	Subset Sheet: S300	Sheet Number 87 52	
 <p>MARTIN/MARTIN CONSULTING ENGINEERS</p>		<p>12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.431.6100 MARTINMARTIN.COM</p>						



- PLAN NOTES:**
1. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING ADJACENT TO EXISTING BUILDINGS. CARE SHALL BE TAKEN AS TO NOT DAMAGE ANY EXISTING BUILDINGS, DAMAGE THERETO WILL BE THE CONTRACTOR'S RESPONSIBILITY.
  2. STATIONS AND OFFSETS ARE GIVEN FROM GREGORY STREET HCL.
  3. FOR GRADING AND DRAINAGE "RE: GRADING SUBSET."
  4. CONTRACTOR SHALL PLACE CONSTRUCTION JOINTS AT MAXIMUM SPACING OF 200 FEET FOR THE LENGTH OF THE CONCRETE BOX CULVERT, RE: DETAIL ON DRAWING S310.
  5. AT CBC BENDS AT CONTROL POINTS G AND H, TRANSVERSE TOP AND BOTTOM SLAB REINFORCING SHALL BE FANNED. MINIMUM SPACING SHALL BE NO LESS THAN 4", MAXIMUM SPACING SHALL BE NO MORE THAN 1.5X THE NORMAL SPACING, TOTAL LENGTH OF FANNING SHALL BE NO MORE THAN 3'-0" FROM CONTROL POINT.

**CONCRETE BOX CULVERT (CBC) PLAN - EAST END**



**CONCRETE BOX CULVERT (CBC) SECTION - EAST END**  
LONGITUDINAL SECTION TAKEN BOX CULVERT CENTER LINE



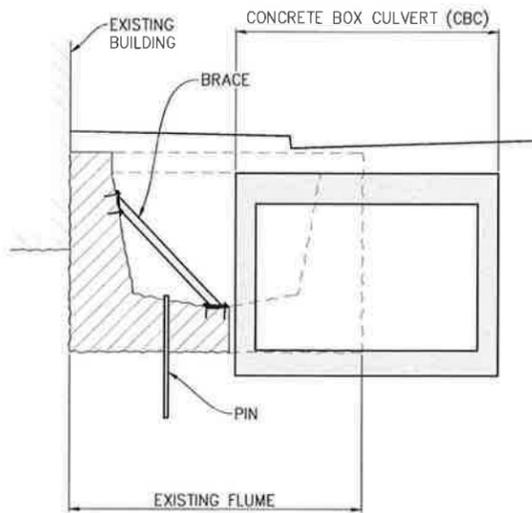
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Horiz. Scale:                      Vert. Scale:	
Unit Information                      Unit Leader	
12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303-431-6100 MARTINMARTIN.COM	

Sheet Revisions		
Date:	Comments	Init.

**City of Black Hawk**  
 987 Miners Mesa Road  
 P.O. Box 68,  
 Black Hawk, Colorado 80422

For Construction No Revisions: Revised: Void:	<b>CONCRETE BOX CULVERT (CBC)</b>		Project No./Code
	<b>LAYOUT (2 OF 2)</b>		
	Designer:	TNS	
	Detailer:	MNG	
Sheet Subset:	STRUCTURAL	Subset Sheet:	S301
			Sheet Number <b>88</b>

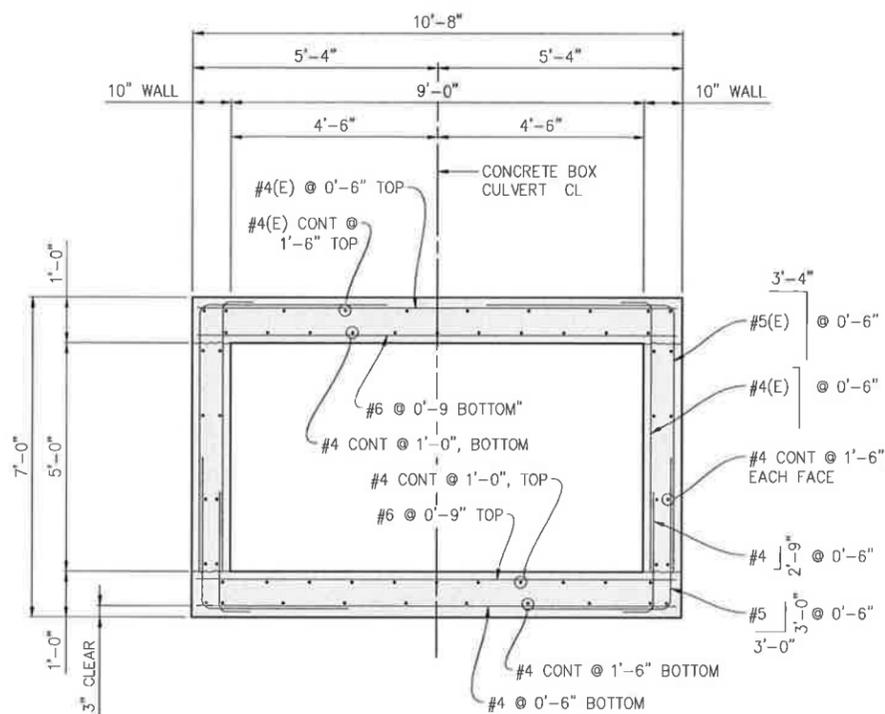
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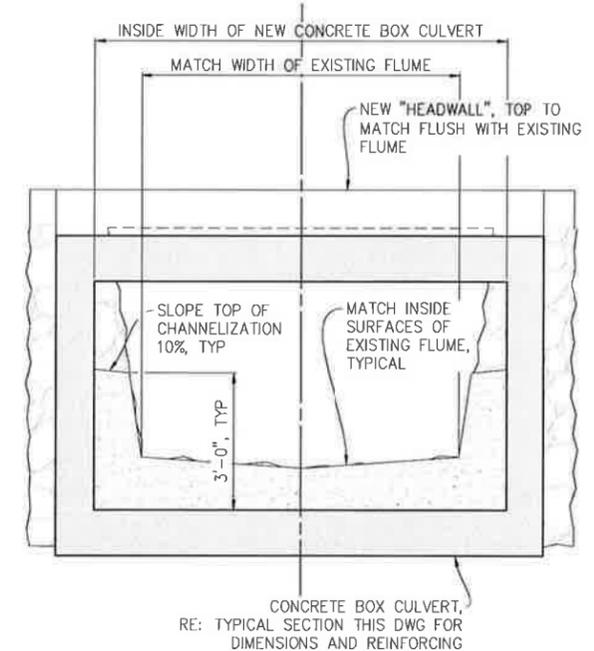
**SUGGESTED SHORING DETAIL AT BUILDINGS**

**SHORING NOTES:**

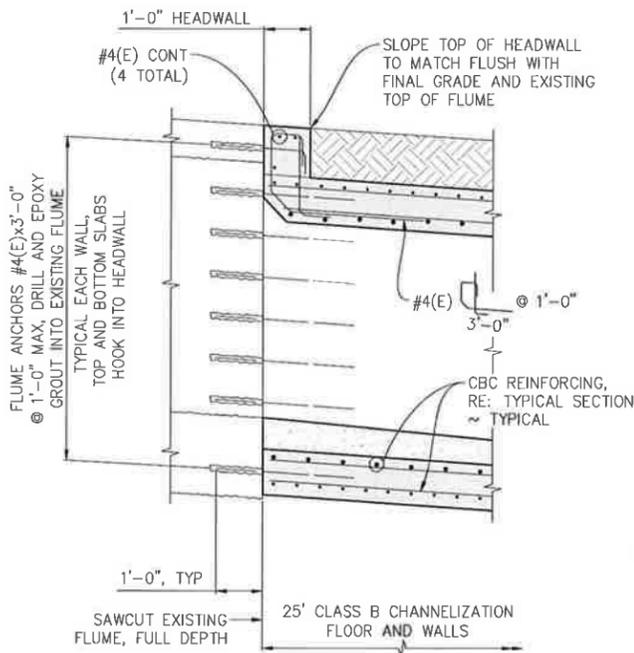
1. THE SUGGESTED SHORING GENERAL CONFIGURATION SHOWN ON THE PLANS MAY NEED TO BE MODIFIED OR A NEW SHORING METHOD DEVELOPED DEPENDING ON THE EXISTING CONDITIONS AND THE CONTRACTORS PREFERENCES.
2. THE CONTRACTOR SHALL ASSESS THE EXISTING CONDITIONS OF THE BUILDINGS AND ADJACENT FLUME AND WILL BE RESPONSIBLE FOR PREVENTING DAMAGE TO THE EXISTING BUILDINGS DURING CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PRODUCE SHORING DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.



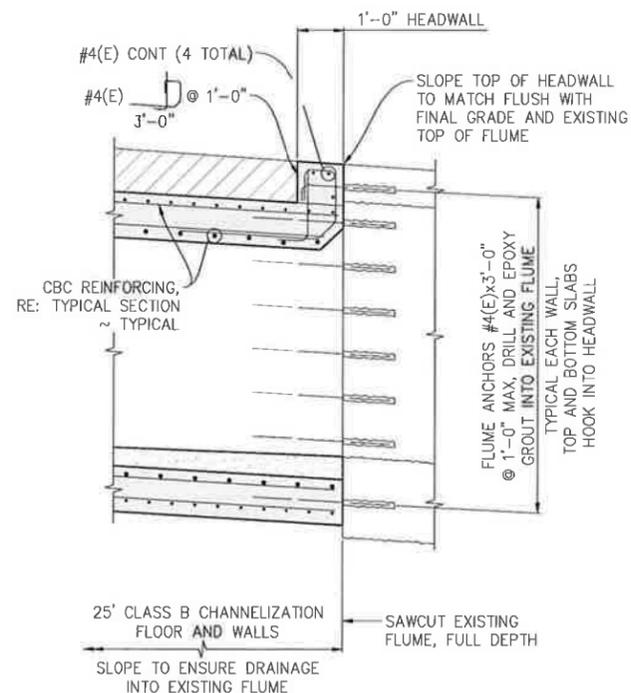
**CONCRETE BOX CULVERT (CBC) TYPICAL SECTION**



**TYPICAL CHANNELIZATION SECTION**



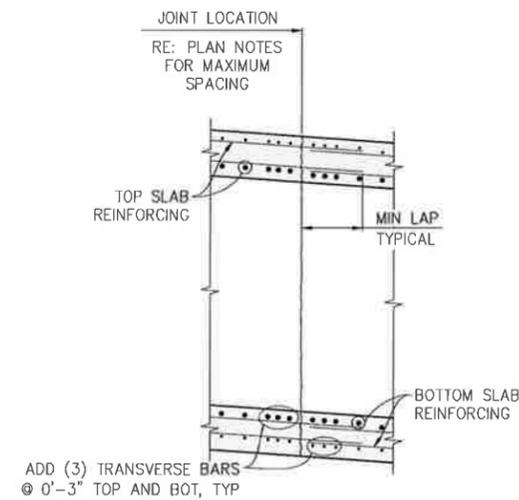
**WEST END**



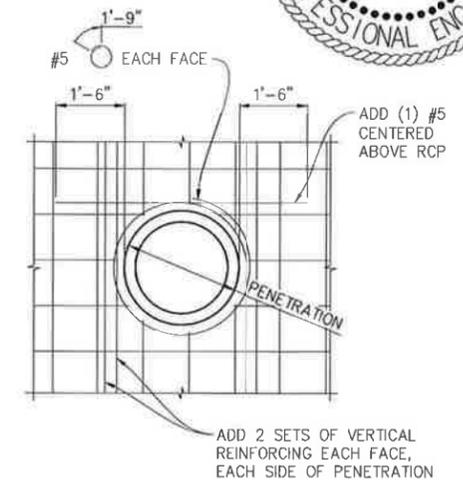
**EAST END**

NOTE:  
EPOXY GROUT FOR FLUME ANCHORS SHALL BE HILTI HIT-RE 500 OR ENGINEER APPROVED EQUAL.

**END CONNECTION DETAILS**



**CONSTRUCTION JOINT DETAIL**



**PIPE PENETRATION**



M:\CIVIL\CHERRYHAYNES14\0086-Gregory Street - Wells\DWG\BH\_S310 CONCRETE BOX CULVERT

Print Date: February 23, 2016	Sheet Revisions			 <p>City of Black Hawk 987 Miners Mesa Road P.O. Box 68, Black Hawk, Colorado 80422</p>	For Construction	CONCRETE BOX CULVERT (CBC) DETAILS		Project No./Code
File Name: bh_s310 concrete box culvert details.dwg	Date:	Comments	Init.		No Revisions:	Designer: TNS		
Horiz. Scale:	Vert. Scale:			Revised:	Detailer: MNG			
Unit Information	Unit Leader			Void:	Sheet Subset: STRUCTURAL	Subset Sheet: S310	Sheet Number 89	
 <p>MARTIN/MARTIN CONSULTING ENGINEERS 12499 WEST COLFAX AVENUE, LAKEWOOD, COLORADO 80215 MAIN 303.433.6100 MARTINMARTIN.COM</p>								

**RESOLUTION 32-2016**  
**A RESOLUTION**  
**APPROVING THE CITY OF**  
**BLACK HAWK'S**  
**AMENDED 401(A)**  
**ADOPTION AGREEMENT**  
**KNOWN AS THE ICMA**  
**RETIREMENT**  
**CORPORATION**  
**GOVERNMENTAL MONEY**  
**PURCHASE PLAN &**  
**TRUST ADOPTION**  
**AGREEMENT, AS**  
**AMENDED EFFECTIVE**  
**APRIL 27, 2016**

STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK

Resolution No. 32-2016

**TITLE: A RESOLUTION APPROVING THE CITY OF BLACK HAWK'S AMENDED 401(A) ADOPTION AGREEMENT KNOWN AS THE ICMA RETIREMENT CORPORATION GOVERNMENTAL MONEY PURCHASE PLAN & TRUST ADOPTION AGREEMENT, AS AMENDED EFFECTIVE APRIL 27, 2016**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

Section 1. The Amended 401(A) Adoption Agreement known as the ICMA Retirement Corporation Governmental Money Purchase Plan & Trust Adoption Agreement, as amended, effective April 27, 2016, attached hereto as **Exhibit A**, and incorporated herein by this reference, is hereby approved.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** ICMA-RC Restated Adoption Agreement

**RECOMMENDATION:** Staff recommends the following motion to the Mayor and Board of Aldermen:

**MOTION TO APPROVE** Resolution 32-2016, A Resolution Approving the City of Black Hawk's Amended 401(a) Adoption Agreement Known as the ICMA Retirement Corporation Governmental Money Purchase Plan & Trust Adoption Agreement, as Amended Effective April 27, 2016

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

The IRS has a six-year-review schedule for the type of 401 plan documents ICMA-RC makes available. ICMA-RC submitted the updated plan documents to the IRS for review and approval in 2012 and received a favorable opinion letter last year. However, plan participants are required to to adopt the restated plan document and ensure the documents are updated in accordance with current IRS regulations.

In the past, ICMA-RC has utilized a negative election adoption process, in an effort to make the plan document adoption process as easy as possible. This time around, per instructions from the IRS, each plan sponsor using the ICMA-RC plan document is required to execute a new adoption agreement restating the plan. IMCA-RC staff members worked through each section of the new plan document with City of Black Hawk staff to ensure the document was completed correctly.

According to ICMA-RC," not much" has changed in the document. The new document incorporates amendments for legislative and regulatory changes enacted since the prior restatement in 2006 and effective as of 2007. The old document included separate amendments for post-*EGTRRA legislative and regulatory changes* and for the *Heroes Earning Assistance and Relief Tax Act of 2008 (HEART)*. The provisions of these amendments are now part of the standard document.

**AGENDA DATE:** April 27, 2016

**WORKSHOP DATE:** N/A

**FUNDING SOURCE:** Retirement Line Item

**DEPARTMENT DIRECTOR APPROVAL:** [ ] Yes [ X ] No

**STAFF PERSON RESPONSIBLE:** Melissa A. Greiner, Administrative Services  
Director/City Clerk

**DOCUMENTS ATTACHED:** Plan Amendment

**RECORD:**    [ ] Yes    [ X ] No

**CITY ATTORNEY REVIEW:**    [ X ] Yes    [ ] N/A

**SUBMITTED BY:**



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Melissa A. Greiner  
Administrative Services Director  
City Clerk

**REVIEWED BY:**



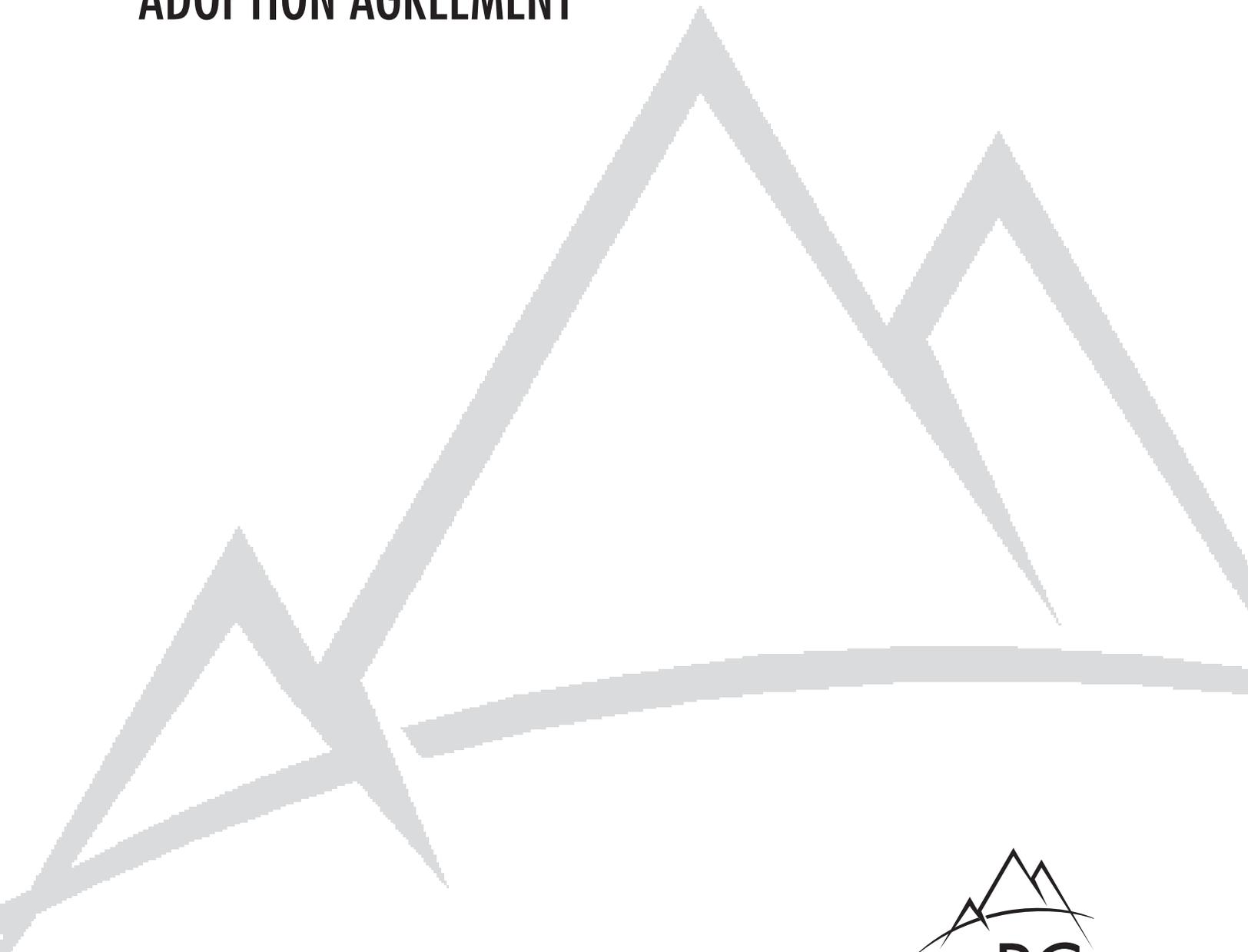
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Jack D. Lewis  
City Manager



ICMA RETIREMENT CORPORATION

# GOVERNMENTAL MONEY PURCHASE PLAN & TRUST ADOPTION AGREEMENT



**ICMA RETIREMENT CORPORATION  
GOVERNMENTAL MONEY PURCHASE PLAN & TRUST  
ADOPTION AGREEMENT**

Plan Number \_\_\_\_\_

The Employer hereby establishes a Money Purchase Plan and Trust to be known as \_\_\_\_\_  
(the "Plan") in the form of the ICMA Retirement Corporation Governmental Money Purchase Plan and Trust.

This Plan is an amendment and restatement of an existing defined contribution money purchase plan.

Yes                       No

If yes, please specify the name of the defined contribution money purchase plan which this Plan hereby amends and restates:

\_\_\_\_\_

**I. Employer:** \_\_\_\_\_

**II. Effective Dates**

1. **Effective Date of Restatement.** If this document is a restatement of an existing plan, the effective date of the Plan shall be January 1, 2007 unless an alternate effective date is hereby specified: \_\_\_\_\_

(Note: An alternate effective date can be no earlier than January 1, 2007.)

2. **Effective Date of New Plan.** If this is a new Plan, the effective date of the Plan shall be the first day of the Plan Year during which the Employer adopts the Plan, unless an alternate Effective Date is hereby specified:

\_\_\_\_\_

3. **Special Effective Dates.** Please note here any elections in the Adoption Agreement with an effective date that is different from that noted in 1. or 2. above.

(Note provision and effective date.)

**III. Plan Year** will mean:

- The twelve (12) consecutive month period which coincides with the limitation year. (See Section 5.03(f) of the Plan.)
- The twelve (12) consecutive month period commencing on \_\_\_\_\_ and each anniversary thereof.

**IV. Normal Retirement Age shall be age \_\_\_\_\_ (not to exceed age 65).**

*Important Note to Employers:* Normal Retirement Age is significant for determining the earliest date at which the Plan may allow for in-service distributions. Normal Retirement Age also defines the latest date at which a Participant must have a fully vested right to his/her Account. There are IRS rules that limit the age that may be specified as the Plan's Normal Retirement Age. The Normal Retirement Age cannot be earlier than what is reasonably representative of the typical retirement age for the industry in which the covered workforce is employed. An age under 55 is presumed not to satisfy this requirement, unless the Commissioner of Internal Revenue determines that the facts and circumstances show otherwise.

Whether an age between 55 and 62 satisfies this requirement depends on the facts and circumstances, but an Employer's good

Whether an age between 55 and 62 satisfies this requirement depends on the facts and circumstances, but an Employer's good faith, reasonable determination will generally be given deference. A special rule, however, applies in the case of a plan where substantially all of the participants in the plan are qualified public safety employees within the meaning of section 72(t)(10)(B) of the Code, in which case an age of 50 or later is deemed not to be earlier than the earliest age that is reasonably representative of the typical retirement age for the industry in which the covered workforce is employed.

## V. ELIGIBILITY REQUIREMENTS

1. The following group or groups of Employees are eligible to participate in the Plan:

- All Employees
- All Full Time Employees
- Salaried Employees
- Non union Employees
- Management Employees
- Public Safety Employees
- General Employees
- Other Employees (Specify the group(s) of eligible employees below. Do not specify employees by name. Specific positions are acceptable.) \_\_\_\_\_

The group specified must correspond to a group of the same designation that is defined in the statutes, ordinances, rules, regulations, personnel manuals or other material in effect in the state or locality of the Employer. The eligibility requirements cannot be such that an Employee becomes eligible only in the Plan Year in which the Employee terminates employment. **Note:** As stated in Sections 4.07 and 4.08, the Plan may, however, provide that Final Pay Contributions or Accrued Leave Contributions are the only contributions made under the Plan.

2. The Employer hereby waives or reduces the requirement of a twelve (12) month Period of Service for participation. The required Period of Service shall be (write N/A if an Employee is eligible to participate upon employment)\_\_\_\_\_.

If this waiver or reduction is elected, it shall apply to all Employees within the Covered Employment Classification.

3. A minimum age requirement is hereby specified for eligibility to participate. The minimum age requirement is \_\_\_\_\_ (not to exceed age 21. Write N/A if no minimum age is declared.)

## VI. CONTRIBUTION PROVISIONS

1. **The Employer shall contribute as follows:** (Choose all that apply, but at least one of Options A or B. If Option A is not selected, Employer must pick up Participant Contributions under Option B.)

**Fixed Employer Contributions With or Without Mandatory Participant Contributions.** (If Option B is chosen, please complete section C.)

A. Employer Contributions. The Employer shall contribute on behalf of each Participant \_\_\_\_\_% of Earnings or \$ \_\_\_\_\_ for the Plan Year (subject to the limitations of Article V of the Plan).

Mandatory Participant Contributions

are required     are not required

to be eligible for this Employer Contribution.

B. Mandatory Participant Contributions for Plan Participation.

Required Mandatory Contributions. A Participant is required to contribute (subject to the limitations of Article V of the Plan) the specified amounts designated in items (i) through (iii) of the Contribution Schedule below:

Yes                       No

Employee Opt-In Mandatory Contributions. Each Employee eligible to participate in the Plan shall be given the opportunity to irrevocably elect to participate in the Mandatory Participant Contribution portion of the Plan by electing to contribute the specified amounts designated in items (i) through (iii) of the Contribution Schedule below for each Plan Year (subject to the limitations of Article V of the Plan):

Yes                       No

Contribution Schedule.

- (i) \_\_\_\_\_% of Earnings,
- (ii) \$ \_\_\_\_\_, or
- (iii) a whole percentage of Earnings between the range of \_\_\_\_\_ (*insert range of percentages between 1% and 20% inclusive (e.g., 3%, 6%, or 20%; 5% to 7%)*), as designated by the Employee in accordance with guidelines and procedures established by the Employer for the Plan Year as a condition of participation in the Plan. A Participant must pick a single percentage and shall not have the right to discontinue or vary the rate of such contributions after becoming a Plan Participant.

Employer "Pick up". The Employer hereby elects to "pick up" the Mandatory Participant Contributions<sup>1</sup> (pick up is required if Option A is not selected).

Yes                       No (***"Yes" is the default provision under the Plan if no selection is made.***)

- C. Election Window (Complete if Option B is selected):  
Newly eligible Employees shall be provided an election window of \_\_\_\_\_ days (no more than 60 calendar days) from the date of initial eligibility during which they may make the election to participate in the Mandatory Participant Contribution portion of the Plan. Participation in the Mandatory Participant Contribution portion of the Plan shall begin the first of the month following the end of the election window.

An Employee's election is irrevocable and shall remain in force until the Employee terminates employment or ceases to be eligible to participate in the Plan. In the event of re-employment to an eligible position, the Employee's original election will resume. In no event does the Employee have the option of receiving the pick-up contribution amount directly.

2. The Employer may also elect to contribute as follows:

- A. Fixed Employer Match of Voluntary After-Tax Participant Contributions. The Employer shall contribute on behalf of each Participant \_\_\_\_\_% of Earnings for the Plan Year (subject to the limitations of Article V of the Plan) for each Plan Year that such Participant has contributed \_\_\_\_\_% of Earnings or \$ \_\_\_\_\_. Under this option, there is a single, fixed rate of Employer contributions, but a Participant may decline to make the required Participant contributions in any Plan Year, in which case no Employer contribution will be made on the Participant's behalf in that Plan Year.
- B. Variable Employer Match of Voluntary After-Tax Participant Contributions. The Employer shall contribute on behalf of each Participant an amount determined as follows (subject to the limitations of Article V of the Plan):  
\_\_\_\_\_ % of the Voluntary Participant Contributions made by the Participant for the Plan Year (not including Participant contributions exceeding \_\_\_\_\_% of Earnings or \$ \_\_\_\_\_);

---

<sup>1</sup> Neither an IRS advisory letter nor a determination letter issued to an adopting Employer is a ruling by the Internal Revenue Service that Participant contributions that are "picked up" by the Employer are not includable in the Participant's gross income for federal income tax purposes. Pick-up contributions are not mandated to receive private letter rulings; however, if an adopting employer wishes to receive a ruling on pick-up contributions they may request one in accordance with Revenue Procedure 2012-4 (or subsequent guidance).

PLUS \_\_\_\_\_% of the contributions made by the Participant for the Plan Year in excess of those included in the above paragraph (but not including Voluntary Participant Contributions exceeding in the aggregate \_\_\_\_\_% of Earnings or \$ \_\_\_\_\_).

Employer Matching Contributions on behalf of a Participant for a Plan Year shall not exceed \$ \_\_\_\_\_ or \_\_\_\_\_% of Earnings, whichever is \_\_\_\_\_ more or \_\_\_\_\_ less.

3. Each Participant may make a voluntary (unmatched), after tax contribution, subject to the limitations of Section 4.05 and Article V of the Plan:

Yes       No (***“No” is the default provision under the Plan if no selection is made.***)

4. Employer contributions for a Plan Year shall be contributed to the Trust in accordance with the following payment schedule (no later than the 15th day of the tenth calendar month following the end of the calendar year or fiscal year (as applicable depending on the basis on which the Employer keeps its books) with or within which the particular Limitation year ends, or in accordance with applicable law):

\_\_\_\_\_

5. Participant contributions for a Plan Year shall be contributed to the Trust in accordance with the following payment schedule (no later than the 15th day of the tenth calendar month following the end of the calendar year or fiscal year (as applicable depending on the basis on which the Employer keeps its books) with or within which the particular Limitation year ends, or in accordance with applicable law):

\_\_\_\_\_

6. In the case of a Participant performing qualified military service (as defined in Code section 414(u)) with respect to the Employer:

- A. Plan contributions will be made based on differential wage payments:

Yes       No (***“Yes” is the default provision under the Plan if no selection is made.***)

If yes is selected, this is effective beginning January 1, 2009 unless another later effective date is filled in here:

\_\_\_\_\_

- B. Participants who die or become disabled will receive Plan contributions with respect to such service:

Yes       No (***“No” is the default provision under the Plan if no selection is made.***)

If yes is selected, this is effective for participants who died or became disabled while performing qualified military service on or after January 1, 2007, unless another later effective date is filled in here:

\_\_\_\_\_

**VII. EARNINGS**

Earnings, as defined under Section 2.09 of the Plan, shall include:

- 1. Overtime  
 Yes                       No
- 2. Bonuses  
 Yes                       No
- 3. Other Pay (specifically describe any other types of pay to be included below)

**VIII. ROLLOVER PROVISIONS**

- 1. The Employer will permit rollover contributions in accordance with Section 4.12 of the Plan:  
 Yes                       No (*“Yes” is the default provision under the Plan if no selection is made.*)
- 2. Direct rollovers by non-spouse beneficiaries are effective for distributions after 2006 unless the Plan delayed making them available. If the Plan delayed making such rollovers available, check the box below and indicate the later effective date in the space provided.  
 Effective Date is \_\_\_\_\_.  
*(Note: Plans must offer direct rollovers by non-spouse beneficiaries no later than plan years beginning after December 31, 2009.)*

**IX. LIMITATION ON ALLOCATIONS**

If the Employer maintains or ever maintained another qualified plan in which any Participant in this Plan is (or was) a participant or could possibly become a participant, the Employer hereby agrees to limit contributions to all such plans as provided herein, if necessary in order to avoid excess contributions (as described in Section 5.02 of the Plan).

- 1. If the Participant is covered under another qualified defined contribution plan maintained by the Employer, the provisions of Section 5.02(a) through (e) of the Plan will apply unless another method has been indicated below.  
 Other Method. (Provide the method under which the plans will limit total Annual Additions to the Maximum Permissible Amount, and will properly reduce any excess amounts, in a manner that precludes Employer discretion.)
- 2. The Limitation Year is the following 12 consecutive month period: \_\_\_\_\_
- 3. Unless the Employer elects a delayed effective date below, Article 5 of the Plan will apply to limitations years beginning on or after July 1, 2007. \_\_\_\_\_  
*(The effective date listed cannot be later than 90 days after the close of the first regular legislative session of the legislative body with authority to amend the plan that begins on or after July 1, 2007.)*

## X. VESTING PROVISIONS

The Employer hereby specifies the following vesting schedule, subject to (1) the minimum vesting requirements and (2) the concurrence of the Plan Administrator. (For the blanks below, enter the applicable percent – from 0 to 100 (with no entry after the year in which 100% is entered), in ascending order.)

<b>Period of Service Completed</b>	<b>Percent Vested</b>
Zero	_____ %
One	_____ %
Two	_____ %
Three	_____ %
Four	_____ %
Five	_____ %
Six	_____ %
Seven	_____ %
Eight	_____ %
Nine	_____ %
Ten	_____ %

## XI. WITHDRAWALS AND LOANS

1. In-service distributions are permitted under the Plan after a participant attains (select one of the below options):

- Normal Retirement Age  
 Age 70½ (***“70½” is the default provision under the Plan if no selection is made.***)  
 Alternate age (after Normal Retirement Age): \_\_\_\_\_  
 Not permitted at any age

2. A Participant shall be deemed to have a severance from employment solely for purposes of eligibility to receive distributions from the Plan during any period the individual is performing service in the uniformed services for more than 30 days.

- Yes                       No (***“Yes” is the default provision under the plan if no selection is made.***)

3. Tax-free distributions of up to \$3,000 for the direct payment of qualifying insurance premiums for eligible retired public safety officers are available under the Plan.

- Yes                       No (***“No” is the default provision under the Plan if no selection is made.***)

4. In-service distributions of the Rollover Account are permitted under the Plan, as provided in Section 9.07.

- Yes                       No (***“No” is the default provision under the Plan if no selection is made.***)

5. Loans are permitted under the Plan, as provided in Article XIII of the Plan:

- Yes                       No (***“No” is the default provision under the Plan if no selection is made.***)

## XII. SPOUSAL PROTECTION

The Plan will provide the following level of spousal protection (select one):

- 1. Participant Directed Election. The normal form of payment of benefits under the Plan is a lump sum. The Participant can name any person(s) as the Beneficiary of the Plan, with no spousal consent required.
- 2. Beneficiary Spousal Consent Election (Article XII). The normal form of payment of benefits under the Plan is a lump sum. Upon death, the surviving spouse is the Beneficiary, unless he or she consents to the Participant's naming another Beneficiary. (***"Beneficiary Spousal Consent Election" is the default provision under the Plan if no selection is made.***)
- 3. QJSA Election (Article XVII). The normal form of payment of benefits under the Plan is a 50% qualified joint and survivor annuity with the spouse (or life annuity, if single). In the event of the Participant's death prior to commencing payments, the spouse will receive an annuity for his or her lifetime. (If C is selected, the spousal consent requirements in Article XII also will apply.)

## XIII. FINAL PAY CONTRIBUTIONS

The Plan will provide for Final Pay Contributions if either 1 or 2 below is selected.

The following group of Employees shall be eligible for Final Pay Contributions:

- All Eligible Employees
- Other: \_\_\_\_\_

**Final Pay shall be defined as (select one):**

- A. Accrued unpaid vacation
- B. Accrued unpaid sick leave
- C. Accrued unpaid vacation and sick leave
- D. Other (*insert definition of Final Pay – must be leave that Employee would have been able to use if employment had continued and must be bona fide vacation and/or sick leave*):  
\_\_\_\_\_

- 1. **Employer Final Pay Contribution.** The Employer shall contribute on behalf of each Participant \_\_\_\_\_ % of Final Pay to the Plan (subject to the limitations of Article V of the Plan).
- 2. **Employee Designated Final Pay Contribution.** Each Employee eligible to participate in the Plan shall be given the opportunity at enrollment to irrevocably elect to contribute \_\_\_\_ % (insert fixed percentage of final pay to be contributed) or up to \_\_\_\_\_% (insert maximum percentage of final pay to be contributed) of Final Pay to the Plan (subject to the limitations of Article V of the Plan).

Once elected, an Employee's election shall remain in force and may not be revised or revoked.

**XIV. ACCRUED LEAVE CONTRIBUTIONS**

The Plan will provide for accrued unpaid leave contributions annually if either 1 or 2 is selected below.

The following group of Employees shall be eligible for Accrued Leave Contributions:

- All Eligible Employees
- Other: \_\_\_\_\_

**Accrued Leave shall be defined as (select one):**

- A. Accrued unpaid vacation
- B. Accrued unpaid sick leave
- C. Accrued unpaid vacation and sick leave
- D. Other (insert definition of accrued leave that is bona fide vacation and/or sick leave):  
\_\_\_\_\_

1. **Employer Accrued Leave Contribution.** The Employer shall contribute as follows (choose one of the following options):

- For each Plan Year, the Employer shall contribute on behalf of each Eligible Participant the unused Accrued Leave in excess of \_\_\_\_\_ (insert number of hours/days/weeks (circle one)) to the Plan (subject to the limitations of Article V of the Plan).
- For each Plan Year, the Employer shall contribute on behalf of each Eligible Participant \_\_\_\_\_% of unused Accrued Leave to the Plan (subject to the limitations of Article V of the Plan).

2. **Employee Designated Accrued Leave Contribution.**

Each eligible Participant shall be given the opportunity at enrollment to irrevocably elect to contribute \_\_\_\_\_% (insert fixed percentage of accrued unpaid leave to be contributed) or up to \_\_\_\_\_% (insert maximum percentage of accrued unpaid leave to be contributed) of Accrued Leave to the Plan (subject to the limitations of Article V of the Plan). Once elected, an Employee's election shall remain in force and may not be revised or revoked.

**XV.** The Employer hereby attests that it is a unit of state or local government or an agency or instrumentality of one or more units of state or local government.

**XVI.** The Employer understands that this Adoption Agreement is to be used with only the ICMA Retirement Corporation Governmental Money Purchase Plan and Trust. This ICMA Retirement Corporation Governmental Money Purchase Plan and Trust is a restatement of a previous plan, which was submitted to the Internal Revenue Service for approval on April 2, 2012, and received approval on March 31, 2014.

The Plan Administrator hereby agrees to inform the Employer of any amendments to the Plan made pursuant to Section 14.05 of the Plan or of the discontinuance or abandonment of the Plan. The Employer understands that an amendment(s) made pursuant to Section 14.05 of the Plan will become effective within 30 days of notice of the amendment(s) unless the Employer notifies the Plan Administrator, in writing, that it disapproves of the amendment(s). If the Employer so disapproves, the Plan Administrator will be under no obligation to act as Administrator under the Plan.

**XVII.** The Employer hereby appoints the ICMA Retirement Corporation as the Plan Administrator pursuant to the terms and conditions of the ICMA RETIREMENT CORPORATION GOVERNMENTAL MONEY PURCHASE PLAN & TRUST.

The Employer hereby agrees to the provisions of the Plan and Trust.

**XVIII.** The Employer hereby acknowledges it understands that failure to properly fill out this Adoption Agreement may result in disqualification of the Plan.

**XIX.** An adopting Employer may rely on an advisory letter issued by the Internal Revenue Service as evidence that the Plan is qualified under section 401 of the Internal Revenue Code to the extent provided in applicable IRS revenue procedures and other official guidance.

In Witness Whereof, the Employer hereby causes this Agreement to be executed on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

EMPLOYER

ICMA RETIREMENT CORPORATION  
777 North Capitol St., NE Suite 600  
Washington, DC 20002  
800-326-7272

By: \_\_\_\_\_

By: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_



ICMA RETIREMENT CORPORATION  
777 NORTH CAPITOL STREET, NE | WASHINGTON, DC 20002-4240  
800-669-7400  
[WWW.ICMARC.ORG](http://WWW.ICMARC.ORG)  
BRC000-214-21268-201405-W1303

**RESOLUTION 33-2016**  
**A RESOLUTION**  
**APPROVING THE**  
**CONTRACT WITH KAISER**  
**PERMANENTE IN THE**  
**ESTIMATED AMOUNT OF**  
**\$787,745 FOR HEALTH**  
**INSURANCE**

**STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK**

**Resolution No. 33-2016**

**TITLE: A RESOLUTION APPROVING THE CONTRACT WITH KAISER PERMANENTE IN THE ESTIMATED AMOUNT OF \$787,745 FOR HEALTH INSURANCE**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

**Section 1.** The City Council hereby approves the contract with Kaiser Permanente for Health Insurance in the estimated amount of \$787,745.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** 2016-2017 Health Insurance Proposal

**RECOMMENDATION:** Staff recommends to the Mayor and Board of Aldermen the following:

**Motion to Approve** Resolution 33-2016, A Resolution Approving the Contract with Kaiser Permanente in the Estimated Amount of \$787,745, for Health Insurance

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

Kaiser Permanente (KP) originally presented a quote for health care coverage for 2016-2017 with a rate increase of 13.8%, which included a \$5,000 wellness benefit credit as they have in previous years.

Staff directed our benefit broker, IMA, to market the coverage and received quotes from Anthem (+4.8% over current), Aetna (+6.7 over current), CIGNA LocalPlus Network (-3.0 under current), CIGNA OAP Network (+15.5% over current), and United Healthcare (+3.6% over current). *While the CIGNA LocalPlus plan was the closest model to our current plan, none of the plans match our current High Deductible Healthcare Plan very closely.*

Representatives from IMA met with KP to present the results of their marketing efforts. KP reconsidered and offered a revised renewal quote of 1.5% increase over the current cost. The City budgeted for a 15% increase at renewal for plan year July 1, 2016 – June 30, 2017. The quoted estimated annual cost is based on current enrollment.

Current employer HSA/457 contributions will remain in place for the new plan year. The spousal surcharge/incentive programs will also continue.

**AGENDA DATE:** April 27, 2016

**FUNDING SOURCE:** Department Specific Group Health Insurance Line Item (xxx-xxxx-xxx-21-00)

**WORKSHOP DATE:** November 18, 2015

**STAFF PERSON RESPONSIBLE:**

Melissa Greiner  
Administrative Services Director/City Clerk

**DOCUMENTS ATTACHED:**

N/A

**RECORD:** [ ]Yes [X]No

**CITY ATTORNEY REVIEW:** [ ]Yes [X]N/A

**SUBMITTED BY:**

**REVIEWED BY:**



\_\_\_\_\_  
Melissa Greiner  
Administrative Services Director  
City Clerk



\_\_\_\_\_  
Jack D. Lewis  
City Manager

**RESOLUTION 34-2016**  
**A RESOLUTION**  
**APPROVING THE**  
**CONTRACT WITH DELTA**  
**DENTAL IN THE**  
**ESTIMATED AMOUNT OF**  
**\$104,518 FOR GROUP**  
**DENTAL INSURANCE**

**STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK**

**Resolution No. 34-2016**

**TITLE: A RESOLUTION APPROVING THE CONTRACT WITH DELTA DENTAL IN THE ESTIMATED AMOUNT OF \$104,518 FOR GROUP DENTAL INSURANCE**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

**Section 1.** The City Council hereby approves the contract with Delta Dental for Dental Insurance in the estimated amount of \$104,518.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk

**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** 2016-2017 Dental Insurance Proposal

**RECOMMENDATION:**

**Motion to Approve** Resolution 34-2016, A Resolution Approving the Contract with Delta Dental in the Estimated Amount of \$104,518 for Group Dental Insurance

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

We received a rate pass from Delta Dental on the renewal of the 2016-2017 with no change to the current plan design and no increase to our current premium. Staff budgeted for a 10% increase at renewal for plan year July 1, 2016 – June 30, 2017. The estimated annual cost is based on current enrollment.

**AGENDA DATE:** April 27, 2016

**FUNDING SOURCE:** Department Specific Group Health Insurance  
Line Item (xxx-xxxx-xxx-21-00)

**WORKSHOP DATE:** November 18, 2015

**STAFF PERSON RESPONSIBLE:** Melissa A. Greiner  
Administrative Services Director/City Clerk

**RECORD:** [ ]Yes [X]No

**CITY ATTORNEY REVIEW:** [ ]Yes [X]N/A

**SUBMITTED BY:**

**REVIEWED BY:**



Melissa Greiner,  
Administrative Services Director  
City Clerk



Jack D. Lewis  
City Manager

**RESOLUTION 35-2016**  
**A RESOLUTION AWARDING**  
**THE BID AND APPROVING**  
**THE AGREEMENT**  
**BETWEEN THE CITY OF**  
**BLACK HAWK AND**  
**CONCRETE EXPRESS, INC.**  
**FOR CONSTRUCTION OF**  
**THE GREGORY STREET**  
**RELOCATION PROJECT IN**  
**AN AMOUNT NOT TO**  
**EXCEED \$7,765,950.50, PLUS**  
**A MATERIALS TESTING**  
**ALLOWANCE OF \$180,000.00**

**STATE OF COLORADO  
COUNTY OF GILPIN  
CITY OF BLACK HAWK**

**Resolution No. 35-2016**

**TITLE: A RESOLUTION AWARDING THE BID AND APPROVING THE AGREEMENT BETWEEN THE CITY OF BLACK HAWK AND CONCRETE EXPRESS, INC. FOR CONSTRUCTION OF THE GREGORY STREET RELOCATION PROJECT IN AN AMOUNT NOT TO EXCEED \$7,765,950.50, PLUS A MATERIALS TESTING ALLOWANCE OF \$180,000.00**

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BLACK HAWK, COLORADO, THAT:

**Section 1.** The City Council hereby awards the bid and approves the Agreement between the City of Black Hawk and Concrete Express, Inc. for construction of the Gregory Street Relocation Project in an amount not to exceed \$7,765,950.50, plus a materials testing allowance of \$180,000.00, and authorizes the Mayor to execute the necessary documents on behalf of the City.

**Section 2.** The City Council further approves a construction management allowance in an amount not to exceed \$200,000.00, to be used on an as-needed basis when City Staff is unable to devote the necessary time to this project.

RESOLVED AND PASSED this 27<sup>th</sup> day of April, 2016.

\_\_\_\_\_  
David D. Spellman, Mayor

ATTEST:

\_\_\_\_\_  
Melissa A. Greiner, City Clerk



**CITY OF BLACK HAWK**  
**REQUEST FOR COUNCIL ACTION**

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**SUBJECT:** Awarding the bid for construction of the Gregory Street Relocation project to Concrete Express, Inc.

**RECOMMENDATION:**

If City Council chooses to approve Resolution 35-2016, a Resolution awarding the bid and contract between the City of Black Hawk and Concrete Express, Inc., the recommended motion is as follows: “Approve Resolution 35-2016, a Resolution awarding the bid and approving the agreement for construction of the Gregory Street Relocation project to Concrete Express, Inc. in the amount not to exceed \$7,765,950.50, plus a materials testing allowance of \$180,000.00.”

A construction management allowance of \$200,000.00 is also requested, to be used on an as-needed basis when City Staff is unable to devote the necessary time to this project. The total construction budget would therefore be \$8,145,950.50. Of this amount, the Black Hawk—Central City Sanitation District will reimburse the City \$1,396,402.25 for work related to sanitary sewer removal and construction. The net costs to the City would then be \$6,749,548.25.

**SUMMARY AND BACKGROUND OF SUBJECT MATTER:**

The Gregory Street Relocation project will realign Gregory Street from Selak Street to Mountain City to create more space conducive to commercial development. Water and sanitary sewer mains will be replaced from Selak Street to the Red Dolly Casino, and the existing flume will be reconstructed between Selak and Church Streets. Two concrete retaining walls with stone veneer will be constructed with this project. Martin/Martin Consulting Engineers prepared construction plans for this work. This project was publicly advertised in the Weekly Register-Call and on the Rocky Mountain Bid Systems website. Representatives from eleven companies attended the mandatory pre-bid meeting, although several of these were subcontractors or suppliers. Three contractors submitted bids, as shown on the attached Bid Recording Sheet.

**FUNDING SOURCE:** Gregory Street Redevelopment: 305-3101-431-75-14

**WORKSHOP DATE:** April 27, 2016

**ORIGINATED BY:** Matt Reed

**STAFF PERSON RESPONSIBLE:** Matt Reed

**PROJECT COMPLETION DATE:** September 30, 2017

**DOCUMENTS ATTACHED:** Bid Recording Sheet

**CITY ATTORNEY REVIEW:** [ ] Yes [ X ] No [ ] N/A INITIALS \_\_\_\_\_

**SUBMITTED BY:**



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**Thomas Isbester, Public Works Director**

**REVIEWED BY:**



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**Jack D. Lewis, City Manager**

