



# Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856  
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • [www.bouldercounty.org](http://www.bouldercounty.org)

## HISTORIC PRESERVATION ADVISORY BOARD

**Thursday, March 1, 2018 – 6:00 p.m.**

Commissioners Hearing Room  
Third Floor of the Boulder County Courthouse

### **AGENDA**

1. Citizen participation for items not otherwise on the agenda
2. Approval of minutes from previous meetings
3. Building Permit Reviews for Structures 50 Years of Age and Older
4. Defensible Space Final Project Presentation from Stefan Reinhold, Senior Forestry – Fire Resource Specialist and Nathan McBride, Resource Technician – Forestry
5. Landmarks:
  - a. **Docket HP-18-0001: Lower Castle Rock Bridge**

Request:	Boulder County Historic Landmark Designation of the historic lower bridge
Location:	29350 Boulder Canyon Drive along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.
Zoning:	Forestry (F)
Owner/Applicant:	Boulder County Parks and Open Space
  - b. **Docket HP-18-0002: Upper Castle Rock Bridge**

Request:	Boulder County Historic Landmark Designation of the historic upper bridge
Location:	29350 Boulder Canyon Drive along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.
Zoning:	Forestry (F)
Owner/Applicant:	Boulder County Parks and Open Space
6. Referral:
  - a. **Docket BCCP-13-0001: Boulder County Comprehensive Plan: Discussion of the Cultural Resources Element update**
7. Other Business



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## BOULDER COUNTY HISTORIC PRESERVATION ADVISORY BOARD

### MINUTES December 7, 2017 6:00 PM Hearing Room, Third Floor, County Courthouse, Boulder

**DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT**

On Thursday, December 7, 2017, the Boulder County Historic Preservation Advisory Board held a regular meeting, convening at 6:01 p.m. and adjourning at 7:20 p.m.

Board Members Present: Jim Burrus - chair, Steven Barnard, Ilona Dotterer, Marissa Ferreira, Chuck Gray, Stan Nilson, Rosslyn Scamehorn and George Schusler

Board Members Excused: Jason Emery

Staff Present: Denise Grimm, Jessica Fasick and Charlene Collazzi, Land Use

Interested Others: 4

### 1. CITIZEN PARTICIPATION

None.

### 2. MINUTES

Approval of the July 6, 2017 Historic Preservation Advisory Board Minutes:

**MOTION:** Rosslyn Scamehorn **MOVED** to approve the July 6, 2017 minutes as submitted.

**SECOND:** George Schusler

**VOTE:** Motion **PASSED** unanimously

### 3. BUILDING PERMIT REVIEWS FOR STRUCTURES 50 YEARS & OLDER

None.

### 4. LANDMARK

#### a. Docket HP-17-0005: Rangeview Ranch

Request:	Boulder County Historic Landmark Designation
Location:	8941 Overland Road, in Section 21, T2N, R72W in the 6th Principal Meridian.
Zoning:	Forestry (F) Zoning
Owner:	Rocky Mountain Ecodharma Retreat Center
Agent:	Johann Robbins

Staff member, Denise Grimm, gave the staff presentation. An application for landmark designation of the 181 acre site with the lodge, cabin, outhouse and barn contributing, has been submitted by the owners, the Rocky Mountain Ecodharma Retreat Center.

All of the existing structures on the parcel are located south of Overland Road within the two meadows north of the creek. The existing historic structures consist of a 3,876-square-foot lodge, a 1,013-square-foot cabin, a 1,500-square-foot barn, and an outhouse. The lodge dates to 1939 and the cabin and outhouse to the early to mid 1890s, the barn is later than the cabin but earlier than the lodge. Uses have included mining, ranching and a guest lodge and retreat use.

In the 1890s G. Monteau and Martin Bossen filed location certificates on several mining claims on the property. They subsequently made improvements including building structures. In 1919 after Martin Bossen died (1916) his wife Mary Elizabeth Bossen received the patents on the claims. In 1922 she sold the property to William T. Schmoll who later deeded the property to his daughter, Hazel Schmoll in 1922. Other portions of the property were homesteaded by Felix Read (patented in 1917) who sold to William T. Schmoll in 1926 and deeded to Hazel in 1932.

Hazel Schmoll, who constructed the lodge and established the guest ranch on the property, was a conservationist and the first state botanist in Colorado from 1919-1935. She offered outdoor activities on the property. In 1976, she granted a conservation easement to the Nature Conservancy in Colorado in order to protect the property and restrict how it could be used. The property was transferred to the First Church of Christ, Scientist who continued the use. This summer the property was purchased by Rocky Mountain Ecodharma Retreat Center.

There are four contributing structures on the property. The lodge, built in 1939, has the capacity to sleep 30 people. It is entirely made of wood, with a stone fireplace, and includes a wooden porch on three sides. The one story wood cabin located west of the lodge was historically the original Bossen homestead, and more recently used by a caretaker of the guest ranch. Its age is approximately 1895. The outhouse also dates from this time. The pole barn located southwest of the homestead cabin. It was probably built sometime between the homestead and the lodge. An earlier barn and a few smaller buildings appear in photos from 1895 but are no longer there.

#### SIGNIFICANCE

The Rangeview Ranch qualifies for landmark status under Criteria 1, 3 and 4.

Criterion 15-501(A)(1) The character, interest, or value of the proposed landmark is part of the development, heritage, or cultural characteristics of the county;

Rangeview Ranch is significant for its association with the development of mining and ranching in the Ward area and also for its association with the use as a lodge for tourists seeking a natural setting.

Criteria 15-501(A)(3) the identification of the proposed landmark with a person or persons significantly contributing to the local, county, state, or national history;

Rangeview Ranch is significant for its association with Hazel Schmoll.

Criteria 15-501(A)(4) The proposed landmark is an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;

The cabin is significant as an example of a log cabins, the barn as a western-style barn and the lodge as a rustic tourist-oriented structure.

## RECOMMENDATION

Staff recommends that the Historic Preservation Advisory Board APPROVE and recommend that the BOCC approve **HP-17-0005: Rangeview Ranch** under Criteria 1, 3 and 4 and subject to the following conditions:

1. Alteration of any exterior feature of the landmarked structures will require review and approval of a Certificate of Appropriateness (CA) by Boulder County (note: applicable county review processes, including but not limited to Site Plan Review, may be required).
2. Regular maintenance which prolongs the life of the landmark, using original materials or materials that replicate the original materials, will not require review for a Certificate of Appropriateness, provided the Land Use Director has determined that the repair is minor in nature and will not damage any existing architectural features. Emergency repairs, which are temporary in nature, will not require review (note: Depending on the type of work, a building permit may still be required.)

Johann Robbins, the agent for Rangeview Ranch, was available to answer questions.

## OPEN PUBLIC COMMENT

- Brian Donahue, 105 Wagener Road

## CLOSE PUBLIC COMMENT

**MOTION:** Chuck Gray MOVED that HPAB APPROVE and recommended that the Board of County Commissioners APPROVE **Docket HP-17-0005: Rangeview Ranch**

**SECOND:** Stan Nilson



**VOTE: Motion PASSED unanimously**

**b. Docket HP-17-0006: Tahosa Valley Land Office**

Request: Boulder County Historic Landmark Designation  
Location: 12247 Hwy 7, in Section 14, T3N, R73W in the 6th Principal Meridian.  
Zoning: Forestry (F) Zoning  
Owner: LAB Rentals LLC  
Applicants: Brian and Rosemary Donahue

Staff member, Denise Grimm, gave the staff presentation. An application for landmark designation of the Land Office has been submitted by Brian and Rosemary Donahue with permission from the owners, LAB Rentals LLC. The Donahues are currently in the process of purchasing the property.

The structure dates to around 1937 and first served as the Land Office for Siegfried Wagener. Wagener, a journalist, had immigrated to the United States from Germany in 1926, eventually working as a reporter in Chicago. In 1932 he came to Colorado for solitude and befriended Charles Hewes at the Hewes Kirkwood Inn. Wagener traveled back and forth to Chicago for years, working in business and journalism, married Chicago art educator and program administrator Winnie Sparks, and made plans to subdivide 160 acres that he owned in Tahosa Valley from his Land Office.

In 1939 Wagener started analyzing the “shortwave propaganda” being distributed by pro-Nazis via radio. A month after the United States entered World War II, his column “We’re Listening” (written under pseudonym B.E. Lucas) was picked up by the Chicago Times. The Land Office was soon turned into a listening post from which Wagener could monitor and analyze broadcasts from around the world. In 1940-41 Siegfried and Winnie built a home together on an adjacent parcel and they raised cattle and poultry as Winnie continued to work in Chicago. Also in 1941, Wagener started broadcasting twice weekly from KFEL in Denver but soon insisted that he broadcast from Tahosa Valley and a government phone line was installed. It is believed that Wagener broadcast from both the Land Office as well as their new home.

Wagener briefly held a position with the Office of Strategic Services in Washington, D.C. after which he returned to Tahosa Valley to try to lead a quieter life. Before long he was embroiled in local affairs and worked adamantly on bringing power to the Meeker Park and Allenspark area. Winnie retired in 1950 and around that time the Land Office became the Tahosa Gift Shop. Winnie died in 1971 and Siegfried died in 1976.

The Land Office was originally about half the size that it is today. Around 1951 an addition was added to the east side of the structure. The existing fireplace became double-sided as it went from being on the east side to being in the center of the structure. Additionally, the realignment of State Hwy 7 moved the highway away from the Land Office whereas it used to pass directly in front of the structure accounting for its orientation.

Allenspark historian Edie DeWeese suggests that local builder Charles Baker probably built the Land Office for Wagener as the two were friends and Baker built many cabins in the area.

The home that Siegfried and Winnie built together and which appears in several of the Allenspark Wind photos is at 247 Wagener Road and has been altered from its original form.

**SIGNIFICANCE**

Preservation staff believes the Tahosa Valley Land Office qualifies for landmark status under Criteria 1, 2 and 3.

Criterion 15-501(A)(1) The character, interest, or value of the proposed landmark is part of the development, heritage, or cultural characteristics of the county;

The Tahosa Valley Land Office is significant for its association with the development of the Tahosa Valley area.

Criterion 15-501(A)(2) The proposed landmark as a location of a significant local, county, state, or national event;

The Tahosa Valley Land Office is significant first as the location of Siegfried Wagener's listening post and then as a location from which Wagener broadcast shows.

Criteria 15-501(A)(3) the identification of the proposed landmark with a person or persons significantly contributing to the local, county, state, or national history;

The Tahosa Valley Land Office is significant for its association with Siegfried Wagener, a journalist whose newspaper column and radio broadcasts analyzed pro-Nazi propaganda during World War II.

The landmark application would add Criteria 4 and 5. Preservation staff believes the structure should not qualify under Criterion 4 as its type of construction does not rise to the level of significance warranted for landmark status. Further, preservation staff believes the structure should not qualify under Criterion 5 because the builder's identity has not been confirmed.

Criteria 15-501(A)(4) the proposed landmark as an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;

The Tahosa Valley Land Office is significant as an example of log construction.

Criteria 15-501(A)(5) the proposed landmark as identification of the work of an architect, landscape architect, or master builder whose work has influenced development in the county, state, or nation;

The Tahosa Valley Land Office is significant as possibly being an example of the work of local builder Charles Baker who built many cabins in the area.

## **RECOMMENDATION**

Staff recommends that the Historic Preservation Advisory Board APPROVE and recommend that the BOCC approve **HP-17-0006: Tahosa Valley Land Office** under Criteria 1, 2 and 3 and subject to the following conditions:

1. Alteration of any exterior feature of the landmarked structure will require review and approval of a Certificate of Appropriateness (CA) by Boulder County (note: applicable county review processes, including but not limited to Site Plan Review, may be required).
2. Regular maintenance which prolongs the life of the landmark, using original materials or materials that replicate the original materials, will not require review for a Certificate of Appropriateness, provided the Land Use Director has determined that

the repair is minor in nature and will not damage any existing architectural features. Emergency repairs, which are temporary in nature, will not require review (note: Depending on the type of work, a building permit may still be required.)

Applicants, Brian and Rosemary Donahue, were available to answer questions.

#### OPEN PUBLIC COMMENT

- Paul Brown, Estes Park

#### CLOSE PUBLIC COMMENT

**MOTION:** Marissa Ferreira **MOVED** that HPAB **APPROVE** and recommended that the Board of County Commissioners **APPROVE** Docket HP-17-0006: Tahosa Valley Land Office

**SECOND:** George Schusler

**VOTE:** Motion **PASSED** unanimously

### 5. OTHER BUSINESS

- Denise Grimm informed the board of the CLG grant that Boulder County received for an Historic Context Study on A-frame Architecture in Boulder County. The project is financed with funds from the Historic Preservation Fund, National Park Service, U.S. Department of the Interior and the History Colorado State Historical Fund.
- Denise Grimm informed the board that the Land Use Department received approval for a new part-time position to help write architectural inventory forms.

### 6. ADJOURNED

The Boulder County Historic Preservation Advisory Board meeting was adjourned at 7:20 p.m.

*Detailed information regarding the docket items, including maps and legal descriptions are available for public use at the Land Use Department, 13th and Spruce, Boulder, CO 303-441-3930.*



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## HISTORIC PRESERVATION ADVISORY BOARD

### AGENDA ITEM

Thursday, March 1, 2018 – 6:00 p.m.  
Third Floor Hearing Room  
Boulder County Courthouse

## PUBLIC HEARING

**STAFF PLANNER:** Denise Grimm

## STAFF RECOMMENDATION RE:

### Docket HP-18-0001: Lower Castle Rock Bridge

Request: Boulder County Historic Landmark Designation of the historic lower bridge  
Location: The bridge is located at 29350 Boulder Canyon Drive along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.  
Zoning: Forestry (F) Zoning  
Owner/  
Applicant: Boulder County Parks and Open Space

## PURPOSE

To determine if the nominated property qualifies for landmark designation, determine if the application is complete, and formulate recommendations for the Board of County Commissioners.

## BACKGROUND

An application for landmark designation of the Lower Castle Rock Bridge has been submitted by Boulder County Parks and Open Space. The landmark application includes a request to landmark the structure. The bridge was built by convict labor from the Colorado State Penitentiary in 1917 as part of the reconstruction of Boulder Cañon Road undertaken from 1914-1918. This portion of the road which ran south and east of Castle Rock was rerouted around the northwest side of Castle Rock by 1947 and this area remained as a side road no longer part of the highway. Boulder County now owns this road section.

The Lower Castle Rock Bridge is an excellent example of a reinforced concrete vehicular bridge that spans Middle Boulder Creek approximately nine miles west of Boulder by the rock formation known as Castle Rock. The bridge was designed by engineers for the Colorado Highway Commission using a standard developed by the Bureau of Public Roads.

The Lower Castle Rock Bridge displays typical early concrete design and detailing. The 16-inch-thick slab spans between the abutments on a 30-degree skew. Reinforcing consists of steel I-beams embedded at the bottom of the slab. The abutments carry the span almost nine feet above the stream level and are flanked on all four corners by angled concrete wingwalls. The roadway deck is lined on both sides by relatively heavy, reinforced concrete guardrails. These are composed of three-foot-tall concrete parapet walls, over which are positioned 10"x12"concrete posts and 6"x8"balusters.

With decorative stepped chamfering on the balusters, the guardrails constitute the only architectural features on the structure. The Lower Castle Rock Bridge presently stands in structurally fair and historically unaltered condition.

## **SIGNIFICANCE**

The Lower Castle Rock Bridge qualifies for landmark designation under Criteria 1, 4 and 7.

Criteria 15-501(A)(1) The character, interest, or value of the proposed landmark is part of the development, heritage, or cultural characteristics of the county;

The Lower Castle Rock Bridge is significant for its contribution as an integral component of the Boulder Cañon Road to the development, heritage or cultural characteristics of the county and the state.

Criteria 15-501(A)(4) The proposed landmark is an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;

The Lower Castle Rock Bridge is significant as one of the few intact examples of convict-built highway bridges remaining in Colorado.

Criteria 15-501(A)(7) The proposed landmark is an example of either architectural or structural innovation;

The Lower Castle Rock Bridge is significant as one of the first of its structural type built by the state highway department in the 1910s.

## **RECOMMENDATION**

Staff recommends that the Historic Preservation Advisory Board APPROVE and recommend that the BOCC approve **Docket HP-18-0001: Lower Castle Rock Bridge** under Criteria 1, 4 and 7 subject to the following conditions:

1. Alteration of any feature of the structure will require review and approval of a Certificate of Appropriateness (CA) by Boulder County (note: applicable county review processes, including but not limited to Site Plan Review, may be required).
2. Regular maintenance which prolongs the life of the landmark, using original materials or materials that replicate the original materials, will not require review for a Certificate of Appropriateness, provided the Land Use Director has determined that the repair is minor in nature and will not damage any existing architectural features. Emergency repairs, which are temporary in nature, will not require review (note: Depending on the type of work, a building permit may still be required.)



# Boulder County Land Use Department

2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Vicinity

29350 BOULDER CANYON DR

## Legend

Subject Parcel

### Streams

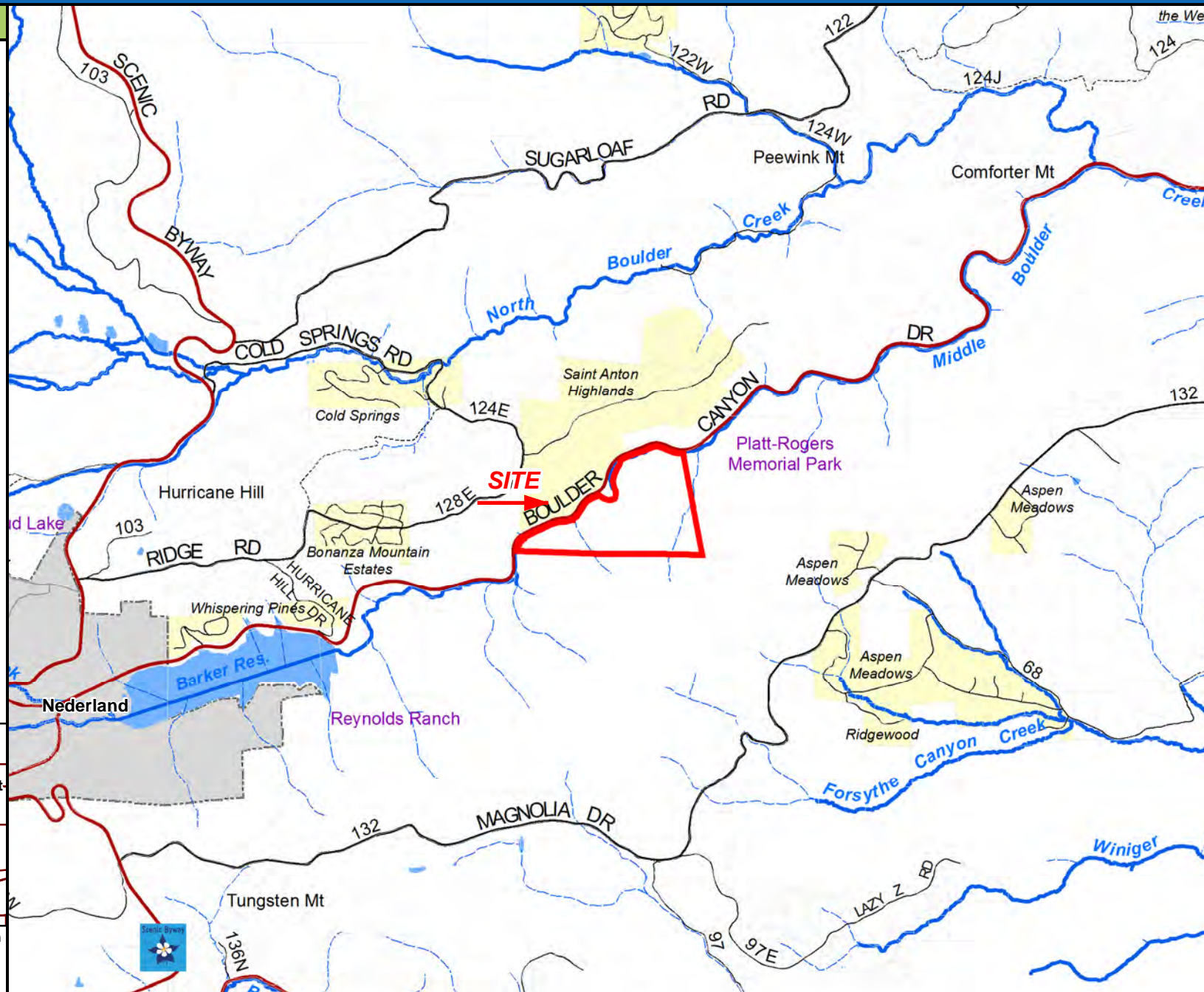
Intermittent Stream

Perennial Stream

Municipalities

### Subdivisions

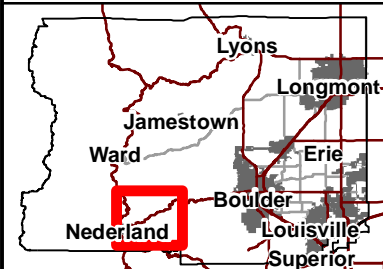
Subdivisions



0 4,000  
Feet

NORTH 1 inch = 4,000 feet

Area of Detail Date: 2/20/2018



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# Boulder County Land Use Department

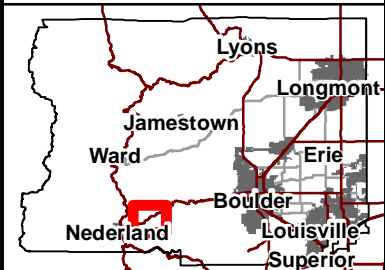
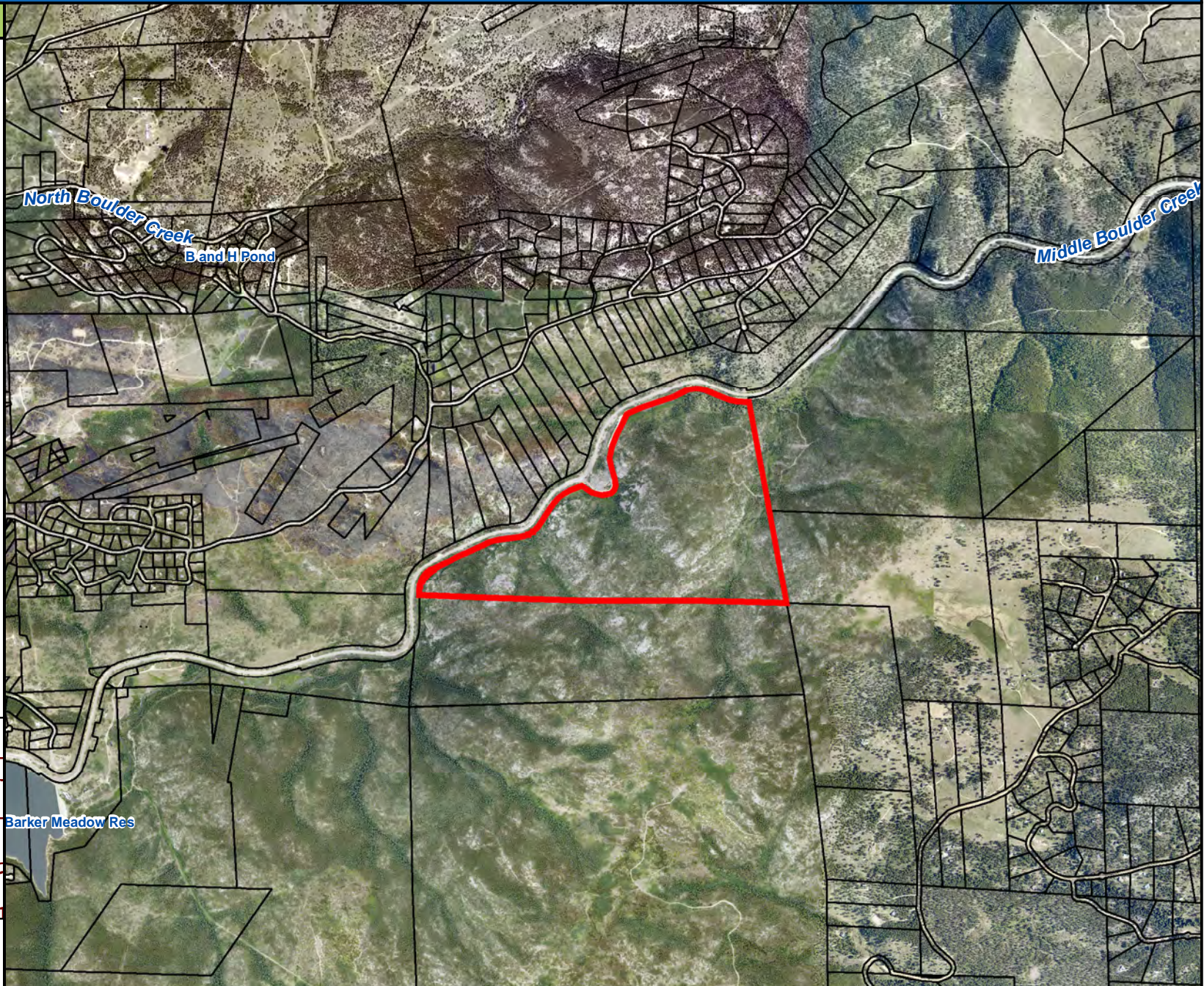
2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Aerial

29350 BOULDER CANYON DR

## Legend

 Subject Parcel



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# Boulder County Land Use Department

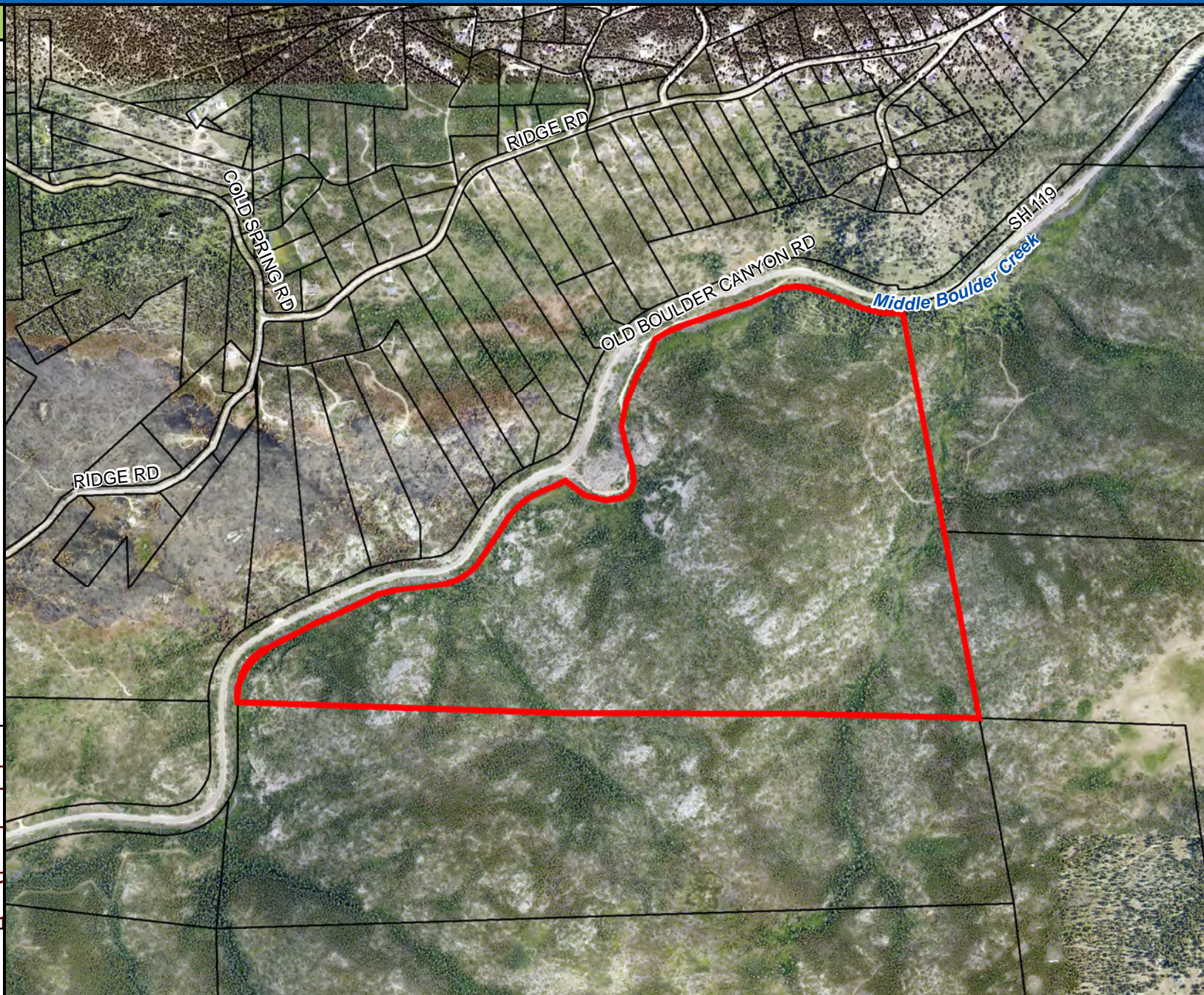
2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Aerial

29350 BOULDER CANYON DR

## Legend

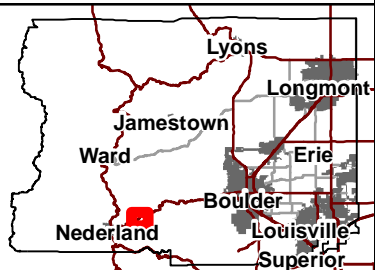
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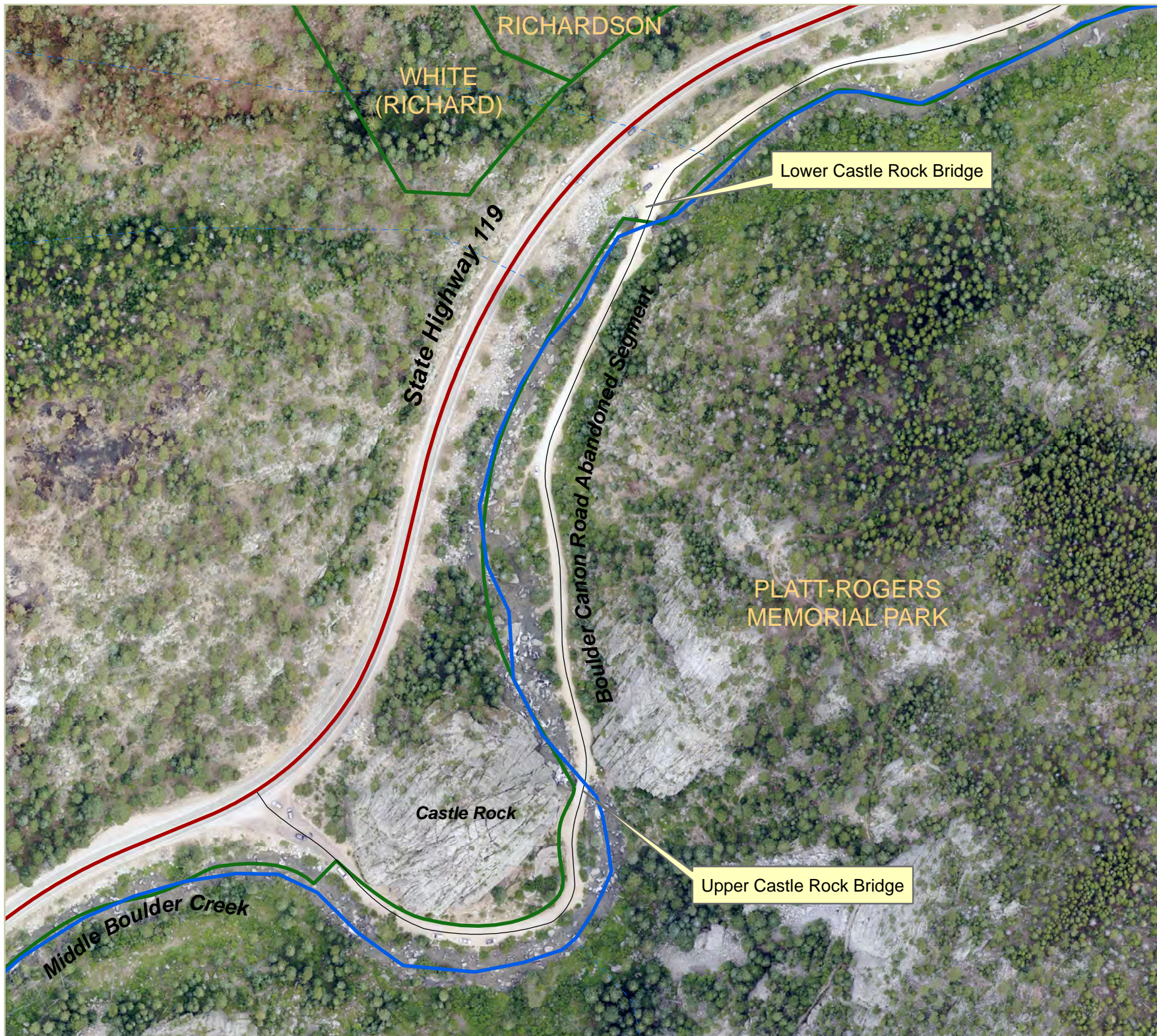
NORTH 1 inch = 1,000 feet

Area of Detail Date: 2/20/2018



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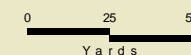


# Castle Rock Bridges



Parks &  
Open Space

2018



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Boulder County Land Use Department  
Annex Building - 13th and Spruce Streets - Boulder  
PO Box 471 - Boulder, CO 80306  
(303) 441-3930, phone (303) 441-4856, fax

## 1. Name of Property

**Historic Name:** N/A

**Current Name:** Lower Castle Rock Bridge

**Site ID:** 5BL.12038

### Historical Narrative:

*Historical narrative section up to the year 1919 quoted from FraserDesign Structural Inventory Form 5BL.12038.*

The original Boulder Cañon Road was constructed in 1871 and was heavily damaged by flooding in 1894. In 1913 the Boulder County Commission moved to reconstruct the road, contacting Thomas Tynan, warden of the Colorado State Penitentiary in Cañon City, regarding the use of convict labor for the work. In a meeting with the county commissioners, Tynan offered to rebuild the Boulder Cañon Road to a 16-foot width over its entire length for \$2,500. He estimated that a crew of 35 to 40 men could complete work on about three miles of road per month (less in the narrows area), and the total cost of upkeep of the camp, including food for the convicts and feed for the livestock, would not exceed \$800 per month.

The following spring the prisoners began work at the canyon's east end and worked their way slowly westward. They undertook the first large-scale work on the road since its initial construction, regrading it to two-lane width, easing sharp curves and eliminating bridges and steep grades when possible. The men dug a three-foot-wide ditch on the roadway's uphill side to allow for drainage and left a three-foot-wide space on the downhill side for later construction of retaining walls. The convict crew had worked in the canyon less than two months when the canyon flooded—the worst flood since 1894. All the wagon bridges below Boulder Falls were washed out, as were dams east of Nederland, large stretches of the wagon road and much of Boulder's main water supply line.

After rebuilding the camp, the convict gang resumed work on the road. With prisoners rotating in and out of the crew from details elsewhere in the state, the men worked without serious incident through the remainder of 1914 and into 1915. A movement to replace the convicts with unemployed

miners circulated briefly in early 1915 but never really gained traction, and the crew worked steadily up the canyon through 1915 and into 1916. By May 1916 the roadwork had been completed to Eagle Rock Bridge; by September the men were reported building the concrete footings for the bridge at Boulder Falls.

In February 1917 the Boulder Commercial Association staged a banquet for the prison crew “as a token of appreciation of the good work done in Boulder Cañon.” Held at the Hotel Boulderado, the fete was, according to Warden Tynan, the first time that a city had played host to convicts. About forty felons mingled with “the pink of Boulder society” at the banquet, an event novel enough to attract a motion picture crew. “Boulder was placed on the map,” according to the *Camera*, “also on the screens.”

Later that year the road crew had made it as far up the canyon as Castle Rock. Here the men encountered two existing bridges over Boulder Creek, built sometime after the 1894 flood. The existing lower Castle Rock bridge was a timber stringer structure, with log crib pier and abutments and timber deck. Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the replacement for the lower Castle Rock bridge was configured as a heavily skewed, single-span concrete slab, held nine feet above the stream on massive reinforced concrete abutments with angled wingwalls. The existing upper bridge, located a mile up the canyon, resembled the lower bridge. Here CDH engineered a single-span transverse-joist girder, with the steel superstructure supported by a reinforced concrete substructure.

The convicts demolished the existing upper and lower Castle Rock bridges and constructed their concrete/steel replacements, first placing the concrete abutments and later the superstructures. The new bridges were completed by the end of the year. The crew continued work westward through 1918 and had the Boulder Cañon Road completed to Nederland by 1919. With the United States at war in Europe, there was no dedication ceremony to commemorate the event.

In the 1940s and 1950s the Bureau of Public Roads reconstructed the Boulder Cañon Road removing some of the original road sections from the floodway. By 1947, the road segment that includes the lower bridge is realigned to the north side of Castle Rock and the original road segment, including the bridge, abandoned.

In 1954, Boulder County Commissioners declared this abandoned segment of the road a "public road"; however, the road was not declared a county road nor added to county maintenance schedule since it was specifically not declared a county road, just a public road.

By 1955, the State Bureau of Public Roads completed the new highway to the Boulder city limits at a total cost of \$2.38 million and that same year, legal proceedings defined the highway right of way as lands north of the centerline of Boulder Creek. As part of those proceedings, property owners along the right-of-way corridor were compensated for the loss of their lands through a court decree. One of those owners was Platt Rogers.

In 1994, Boulder County acquired the 780 acre Platt Rogers property south of the centerline of Boulder Creek, from the University of Denver/Phipps Estate (Margaret Rogers Phipps, daughter of Platt Rogers, Sr.).

In 2000, Boulder County Parks & Open Space completed the first management plan for Platt Rogers Memorial Park. At the time, the entire Castle Rock area, including the bridge, was thought to be all with-in Colorado Department of Transportation (CDOT) right-of- way and no management decisions for the bridge were included in the plan.

In 2011, a local climbing group approached Boulder County to partner on improvements around the base of Castle Rock to create a sustainable climbing staging area and provide for better access. Boulder County contacted CDOT about this request, and as a result of the inquiry, CDOT determined that Castle Rock itself is in the CDOT right-of-way, but the bridge, which is very close to Castle Rock, was abandoned by CDOT or CDOH between 1950-1979 and therefore not in the CDOT right-of-way since 1979.

CDOT issued Boulder County a special use permit to complete the sustainable climbing staging area and access improvements at the base of Castle Rock. Boulder County also determined that as the owner of the surrounding Platt Rogers Memorial Park open space, it would take management responsibilities for both bridges and the entire length of the abandoned road as the agency best suited to manage recreation in this area.

That same year, CDOT began inspecting both bridges as part of their Off System Bridge Inspection Program. The inspection is done in accordance with the National Bridge Inspection Standards. As a result of the inspection, Boulder County Road Maintenance completed minor repairs on both the upper and lower bridges. The work included repairing the guard rail on the upper bridge, removing a damaged hanging concrete guard rail section on the lower bridge, resurfacing the roadway across both bridges, and adding riprap armoring around the abutments of both bridges. The bridge inspection report also identified major scour damage under both abutments of the lower bridge and on one of the abutments of the upper bridge.

In June 2013, Boulder County hired engineering firm Short Elliot Hendrickson Inc. to produce a design and cost estimate to repair the scour damage identified in the bridge inspection report. Unfortunately, the scour repair was not completed at this time because the one bid exceeded the available budget and the September 2013 flood forced Boulder County to focus on flood related priorities. Luckily, the flood caused very little damage to the bridges.

In 2015, Boulder County applied for an Off-System Bridge Program Grant to partially fund the scour repair project. This grant program, financed by the Federal Highway Administration (FHWA) and administered by the Colorado Department of Transportation, partially funds the rehabilitation or replacement of publically owned substandard bridges. The grant award in January 2016 allowed Boulder County to proceed forward with the scour repair project.

In December 2016, Boulder County hired engineering firm Yeh and Associates to assist with the construction management, materials testing, and document processing for the scour repair project. After a competitive bid process, Boulder County awarded the scour repair project to Mountain Constructors Inc. in October 2017. The scope of work included installing a cutoff wall around the base of the abutments and pumping concrete into the scour area to plug the void. The work began in late November 2017 and was completed in early January 2018 for the lower bridge.

## 2. Location

Address(s): 29350 Boulder Canyon Drive

## 3. Classification

Property Ownership:     ☒ Public     ☐ Private     ☐ Other

Category of Property:     ☒ Structure     ☐ Site     ☐ District

Number of Resources Within the Property (sites and districts only):

☐ Contributing Resources     ☐ Non-contributing Resources

**Narrative Describing Classification of Resources:**

The lower castle rock bridge is a single structure that spans Middle Boulder Creek and serves as a transportation corridor to allow visitors to cross Middle Boulder Creek along the .5 mile segment of the abandoned Boulder Cañon Road.

## 4. Structure Function or Use

**Historic Functions:** Transportation – vehicular bridge

**Current Functions:** Transportation – vehicular bridge

## 5. Description

**Narrative Describing Resource:**

*Quoted from FraserDesign Structural Inventory Form 5BL.12038*

The lower Castle Rock bridge is an excellent example of a reinforced concrete vehicular bridge that spans Middle Boulder Creek approximately nine miles west of Boulder. It is situated northeast of Castle Rock, spanning the boulder-strewn creek in a narrow section of the canyon characterized by steep walls and deep forest. The bridge features a single concrete span carried on a heavy skew by concrete abutments. The span length between the abutments is 20'-2" (effectively reduced to 16'-6" by the angled haunches of the concrete slab), and the outside width is 22'-2", with a roadway width of 20'-2" between the guardrails.

Designed by engineers for the Colorado Highway Commission using a standard developed by the Bureau of Public Roads, the lower Castle Rock bridge is configured with a reinforced concrete slab supported by a reinforced concrete substructure. With its deck and superstructure poured integrally in a single flat sheet over steel reinforcement, the concrete slab is the most rudimentary of the concrete bridge types. A few concrete slab bridges had been built by Colorado counties after the turn of the 20th century, but it was not until the state highway commission issued its first standard plans for reinforced concrete slab and girder bridges in 1917 that the structure began to gain general acceptance on roads in the state. Based upon standard designs developed by the Bureau of Public Roads and widely distributed among the counties, these design standards featured haunches that were angled or arched from the abutments to decrease the effective span length by cantilevering. Their guardrails were bounded on both sides by solid concrete parapets or concrete post and beam guardrails.<sup>1</sup>

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<sup>1</sup> Colorado State Highway Commission, *Third Biennial Report 1913-1914* (Denver: Smith-Brooks Printing Company, 1915); J.E. Maloney, "Standard Bridge Plans." *Colorado Highways Bulletin*, 2:11 (November 1919).

Although cantilevering the slab from the abutments allowed greater economy, the practice compromised the structure's durability by allowing any movement in the abutments to be transferred directly to the span. This had the potential for caused cracking and – ultimately – failure of the

bridge's span. For this reason, the highway commission discontinued the use of cantilevered haunches on its slab and girder bridges by the late 1920s.

The lower Castle Rock bridge displays typical early concrete design and detailing. The 16-inch-thick slab spans between the abutments on a 30-degree skew. Reinforcing consists of steel I-beams embedded at the bottom of the slab. The abutments carry the span almost nine feet above the stream level and are flanked on all four corners by angled concrete wingwalls. The roadway deck is lined on both sides by relatively heavy, reinforced concrete guardrails. These are composed of three-foot-tall concrete parapet walls, over which are positioned 10"x12"concrete posts and 6"x8"balusters.

With decorative stepped chamfering on the balusters, the guardrails constitute the only architectural features on the structure. The bridge has suffered collision damage to its guardrails, resulting in the loss of the guardrail over the southeast wingwall (part of which has been laid on the ground beside the bridge). Differential settlement of the south abutment has caused minor cracking at the haunch, and the concrete abutments have suffered from spalling, checking and scouring. Despite these, the lower Castle Rock bridge presently stands in structurally fair and historically unaltered condition.

## **6. Statement of Significance**

*Quoted from FraserDesign Structural Inventory Form 5BL.12038*

The lower Castle Rock bridge is eligible for listing as a Boulder County Landmark for its contribution as an integral component of the Boulder Cañon Road to the development, heritage or cultural characteristics of the county and the state. The reconstruction of the road in 1914-1918 occurred at a time when highway administration was just getting underway in the county, the state and the country. The Colorado Highway Department (CHD) was just developing its engineering and construction procedures and learning how to coordinate its efforts with the Bureau of Public Roads, which itself was just getting started. Similarly, Boulder County was at that time acquiring the administrative skill for modern highway construction. Among the principal agencies, the state penitentiary was the most experienced, having sent prisoners out to work for six years before embarking on the Boulder Cañon project. Yet Warden Tynan proved to have underestimated woefully the amount of time, work and money for the project when he assured the county that he could rebuild the mountain road in a few months' time at a cost of only \$2,500. In truth, none of the



principals in the project could state with confidence that it really knew what it was doing. It would take years of experience accrued over time to develop the necessary efficiencies in design, construction and administration. The lower Castle Rock bridge is historically significant on a statewide basis for its illustration of this formative nature of road and bridge construction in Colorado at the time.

More importantly, the Boulder Cañon Road represents one of the few instances in Colorado of the use of convict labor for road construction. Such construction flourished in the early 20th century in America. Colorado's was one of the most successful convict road programs in the country during the 1910s, and the Boulder Cañon Road was one of the state's most noteworthy prison-sponsored ventures. That a structurally sophisticated highway bridge such as this could be built by a relatively unskilled work force illustrates the efficacy of the program. The lower Castle Rock bridge is historically significant as one of the few intact examples of convict-built highway bridges remaining in Colorado.

The lower Castle Rock bridge is also eligible for listing as a Boulder County Landmark for its embodiment of architectural or structural innovation. It was among the first of its structural type built by the state highway department in the 1910s. CHD was at that time encouraging concrete/ steel construction as a more durable alternative to timber. The agency promulgated standard designs for concrete slab, concrete girder and steel stringer bridges to the counties in the 1910s, but the counties resisted, claiming that the CHD structures were heavier and more expensive than they could afford. The lower Castle Rock bridge serves to confirm this suspicion.

It was ostensibly a concrete slab structure. But with a deck thickness of 16 inches and relatively heavy steel I-beam reinforcing, it was structurally indeterminate as to whether it functioned as a concrete slab with heavy reinforcement or as a steel beam structure encased in concrete.

This ambiguity was attributable to the lack of experience on the part of CHD engineers. Even more questionable was the fact that the span was tied rigidly to the abutments as further reinforcement, a practice that would prove structurally unsound. In short, the bridge was significantly over engineered, carrying an unnecessarily heavy dead load in a manner that made it structurally vulnerable.

This structural type was never built in abundance in Colorado and was soon superseded by more efficient and more modern bridges. Though innovative at the time of its deployment, it fell victim to the rapidly changing state of the engineering art of the 1910s. To put it in Darwinian terms, it represents an evolutionary dead end in the development of bridge engineering. Ironically, it is this over-engineering that has contributed to structures' excellent state of preservation. As a result, the lower Castle Rock bridge is technologically significant as among the best preserved and the last remaining examples of its structural type found in Colorado.

In almost pristine condition structurally, the span accrues an additional degree of integrity of setting from the fact that the adjacent road is essentially unimproved since its initial construction in 1917. State Highway 119 was rerouted before it could be paved along this section, leaving the road and bridge in essentially original condition. It is thus among a small number of structures standing today that convey a strong feeling of what it was like to travel Colorado's earliest highways in the 1910s and early 1920s.

**Boulder County Criteria for Designation (*check all that apply*):**

- ☒ the character, interest, or value of the proposed landmark as part of the development, heritage, or cultural characteristics of the county;
- ☐ proposed landmark as a location of a significant local, county, state, or national event;
- ☐ the identification of the proposed landmark with a person or persons significantly contributing to the local, county, state, or national history;
- ☒ the proposed landmark as an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;
- ☐ the proposed landmark as identification of the work of an architect, landscape architect, or master builder whose work has influenced development in the county, state, or nation;
- ☐ the proposed landmark's archaeological significance;
- ☒ the proposed landmark as an example of either architectural or structural innovation; and
- ☐ the relationship of the proposed landmark to other distinctive structures, districts, or sites which would also be determined to be of historic significance.

**Areas of Significance:** transportation and engineering

**Period of Significance:** 1917-1947

**Significant Dates:** 1917 (Criteria 4); 1917-1947 (Criterion 1 & 7)

**Significant Persons:** Thomas Tynan

## **7. Bibliographical References**

Becker, Isabell M., "Nederland, A Trip to Cloudland," Denver, Scott Becker Ltd., 1989.

Boulder County. Proceedings of the Board of County Commissioners, Boulder County, Colorado. Resolution II. Journal 15, Pages 75-76, 1954. Board of County Commissioners, Boulder, CO.

Boulder County. Decree. Boulder of County Commissioners vs. A.B. Reeves, et al. Book 980, Page 269, 1955. Boulder County Clerk & Records Office, Boulder, CO.

Fraserdesign. Structural Inventory Form. 5BL.12038. 2013. Boulder County Parks & Open Space, Boulder, CO.

Fraserdesign. Castle Rock Bridges Report. 2013. Boulder County Parks & Open Space, Boulder, CO.

## **8. Geographical Data**

**Legal Description of Property:** The bridge is located along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.

**Boundary Description:** The designation only includes the bridge structure

**Boundary Justification:** N/A

## **9. Property Owner(s)**

**Name:** Boulder County

**Address:** P.O. Box 471, Boulder, CO 80306

**Phone:** 303-678-6200

## **10. Form Prepared By:**

**Name:** Carol Beam

**Address:** Boulder County Parks and Open Space, 5201 St. Vrain Rd., Longmont, CO 80503

**E-Mail:** cbeam@bouldercounty.org **Phone:** 303-678-6272

## **11. Photos, Map, and Site Plan**

See attached.

### **For Office Use Only**

**Docket Number:**

**Assessor ID:**

**Parcel Number:**

**Application Date:**

### **Historic Photos**



*Boulder Canon Convict Road Camp, 1915*  
*Boulder Daily Camera ("Boulder Treated Prisoners to Banquet," 22 July 1954)*



*Convicts working on the Boulder Canon Road, 1915*  
*Boulder Daily Camera ("Boulder Treated Prisoners to Banquet," 22 July 1954)*





Undated photo from Boulder Creek photographs, 1890-1926 collection  
208-4-24 photo 12  
Carnegie Branch Library for Local History

## Current Photos



View to the west



View to the east





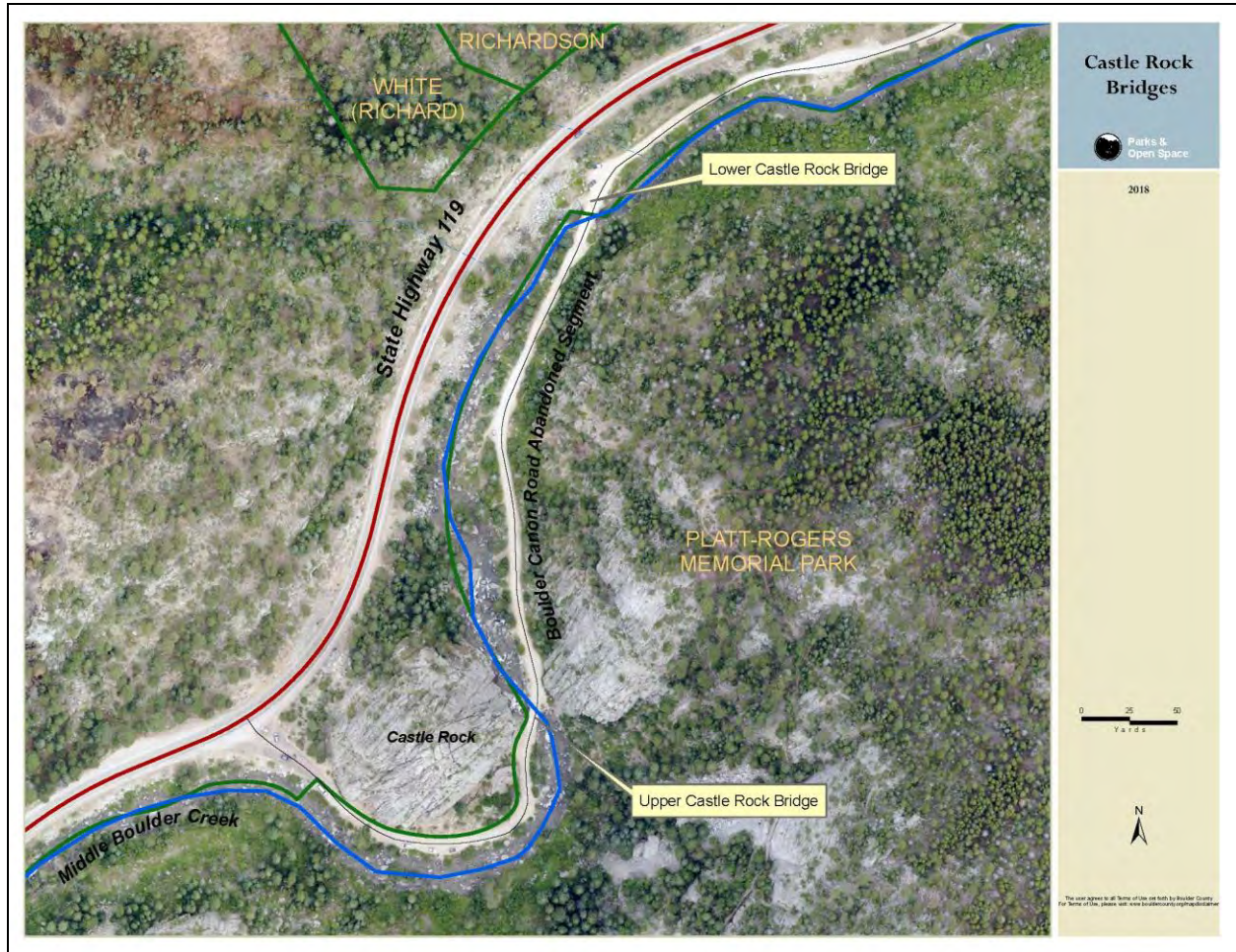
View to the south guardrail



View to the north guardrail



# Map



**DETERMINATION**

Initials \_\_\_\_\_

Eligible - NR

Determined Not Eligible - NR

Colorado Cultural Resource Survey

**STRUCTURAL INVENTORY FORM****OFFICIAL ELIGIBILITY**

Date

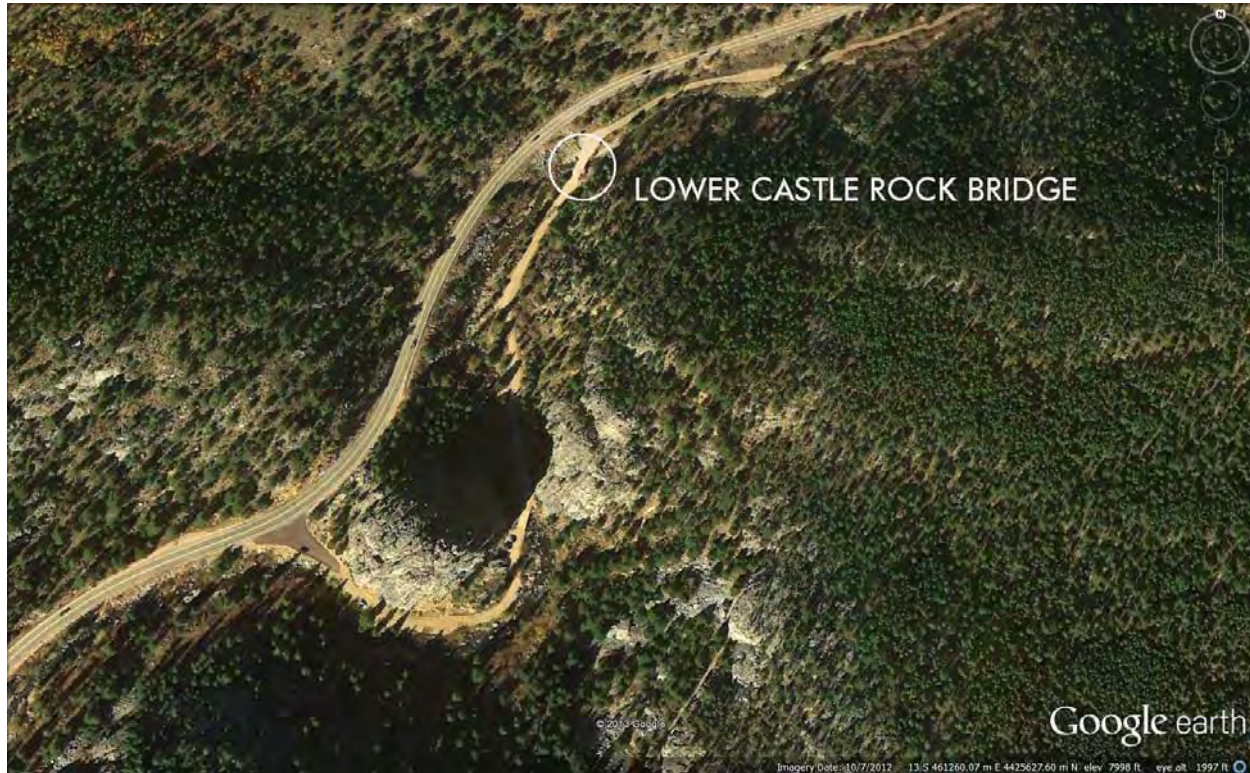
\_\_\_\_ Determined

\_\_\_\_ Determined Eligible - SR

\_\_\_\_ Determined Not Eligible - SR

\_\_\_\_ Need Data

\_\_\_\_ Contributes to Eligible NR District



Google Earth Map, 10/7/2012

**I. IDENTIFICATION**

1. resource number 5BL.12038
2. temporary resource number BCPOS-LOWER BR
3. county Boulder
4. city Nederland vicinity
5. historic structure name Boulder Creek Bridge
6. current structure name Lower Castle Rock Bridge
7. structure address abandoned State Highway 119 at Castle Rock
8. owner name and address Boulder County  
P.O. Box 471  
Boulder, Colorado 80306

**II. GEOGRAPHIC INFORMATION**

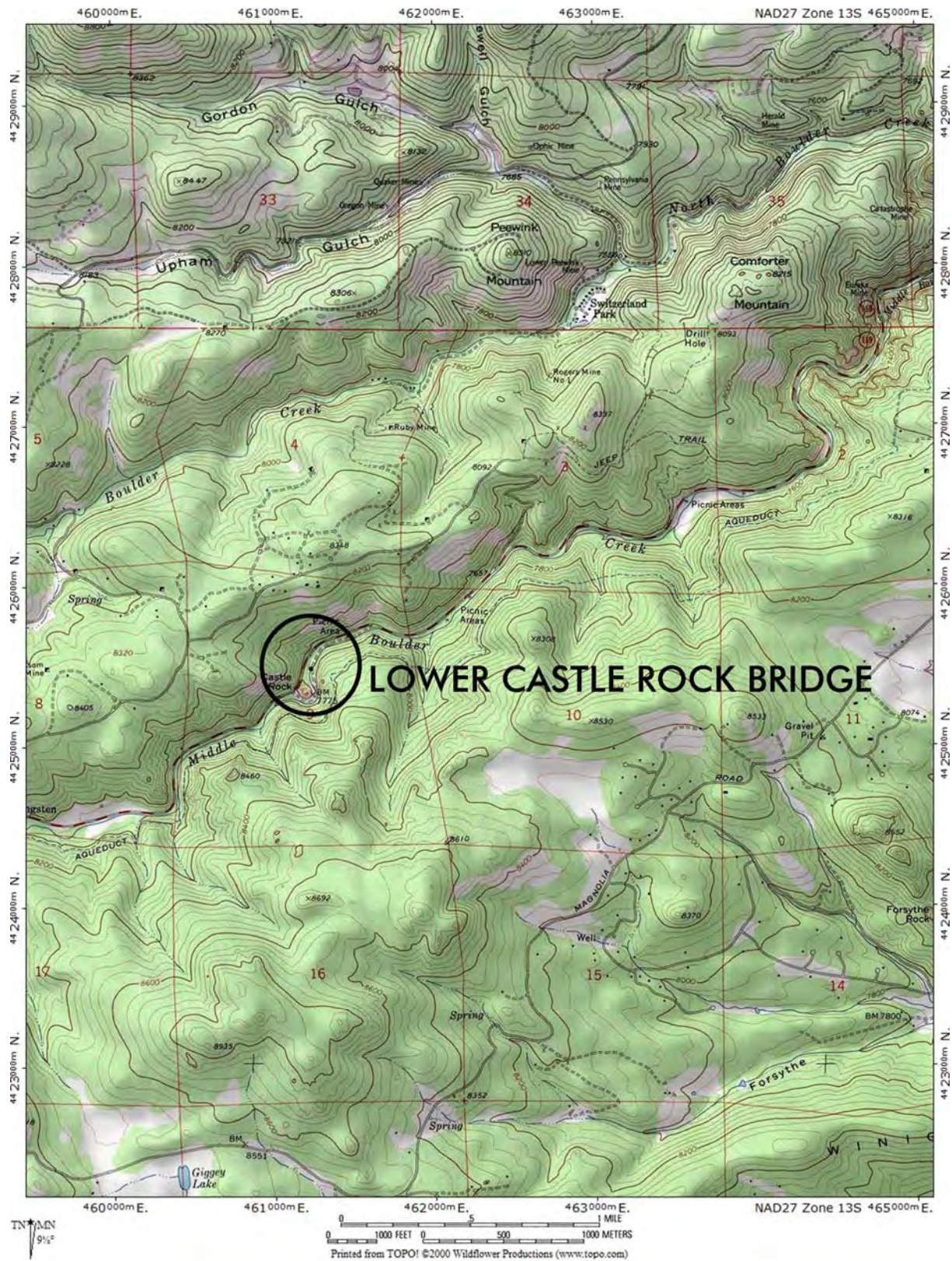
9. public land survey system P.M. 6 township 1S range 72W section NE  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of NE  $\frac{1}{4}$  of S9
10. UTM reference zone 13 easting 461240 northing 4425490
11. USGS quad name Tungsten 7½-minute quadrangle (2011)

12. boundary justification      The boundary contains but does not exceed the land  
historically associated with the property.



# LOWER CASTLE ROCK BRIDGE

5BL.12038



# LOWER CASTLE ROCK BRIDGE

5BL.12038

Location map, taken from USGS Tungsten 7½-Minute Quadrangle (2011)

## III. STRUCTURAL DESCRIPTION

Note: Drawings used here have been reproduced from Bureau of Reclamation, *Colorado-Big Thompson Project* (1957). Written descriptions have been adapted from Christine Pfaff, "Inventory and Evaluation of Significance of the Colorado-Big Thompson Project" (1998).

13. general structural description Located on an abandoned one-mile segment of the Boulder Cañon High-

way (State Highway 119), this reinforced concrete vehicular bridge spans Middle Boulder Creek approximately nine miles west of Boulder. It is situated northeast of Castle Rock, spanning the boulder-strewn creek in a narrow section of the canyon characterized by steep walls and deep forest. The bridge features a single concrete span carried on a heavy skew by concrete abutments. The span length between the abutments is 20'-2" (effectively reduced to 16'-6" by the angled haunches of the concrete slab), and the outside width is 22'-2", with a roadway width of 20'-2" between the guardrails.

Designed by engineers for the Colorado Highway Commission using a standard developed by the Bureau of Public Roads, the Lower Castle Rock Bridge is configured with a reinforced concrete slab supported by a reinforced concrete substructure. With its deck and superstructure poured integrally in a single flat sheet over steel reinforcement, the concrete slab is the most rudimentary of the concrete bridge types. A few concrete slab bridges had been built by Colorado counties after the turn of the 20<sup>th</sup> century, but it was not until the state highway commission issued its first standard plans for reinforced concrete slab and girder bridges in 1917 that the structure began to gain general acceptance on roads in the state. Based upon standard designs developed by the Bureau of Public Roads and widely distributed among the counties, these design standards featured haunches that were angled or arched from the abutments to decrease the effective span length by cantilevering. Their guardrails were bounded on both sides by solid concrete parapets or concrete post and beam guardrails.<sup>1</sup> Although cantilevering the slab from the abutments allowed greater economy, the practice compromised the structure's durability by allowing any movement in the abutments to be transferred directly to the span. This had the potential for caused cracking and - ultimately - failure of the bridge's span. For this reason, the highway commission discontinued the use of cantilevered haunches on its slab and girder bridges by the late 1920s.

The Lower Castle Rock Bridge displays typical early concrete design and detailing. The 16-inch-thick slab spans between the abutments on a 30-degree skew. Reinforcing consists of steel I-beams embedded at the bottom

<sup>1</sup>Colorado State Highway Commission, *Third Biennial Report 1913-1914* (Denver: Smith-Brooks Printing Company, 1915); J.E. Maloney, "Standard Bridge Plans." *Colorado Highways Bulletin*, 2:11 (November 1919).

of the slab. The abutments carry the span almost nine feet above the stream level and are flanked on all four corners by angled concrete wingwalls. The roadway deck is lined on both sides by relatively heavy, reinforced concrete guardrails. These are composed of three-foot-tall concrete parapet walls, over which are positioned 10"x12" concrete posts and 6"x8" balusters. With decorative stepped chamfering on the balusters, the guardrails constitute the only architectural features on the structure.

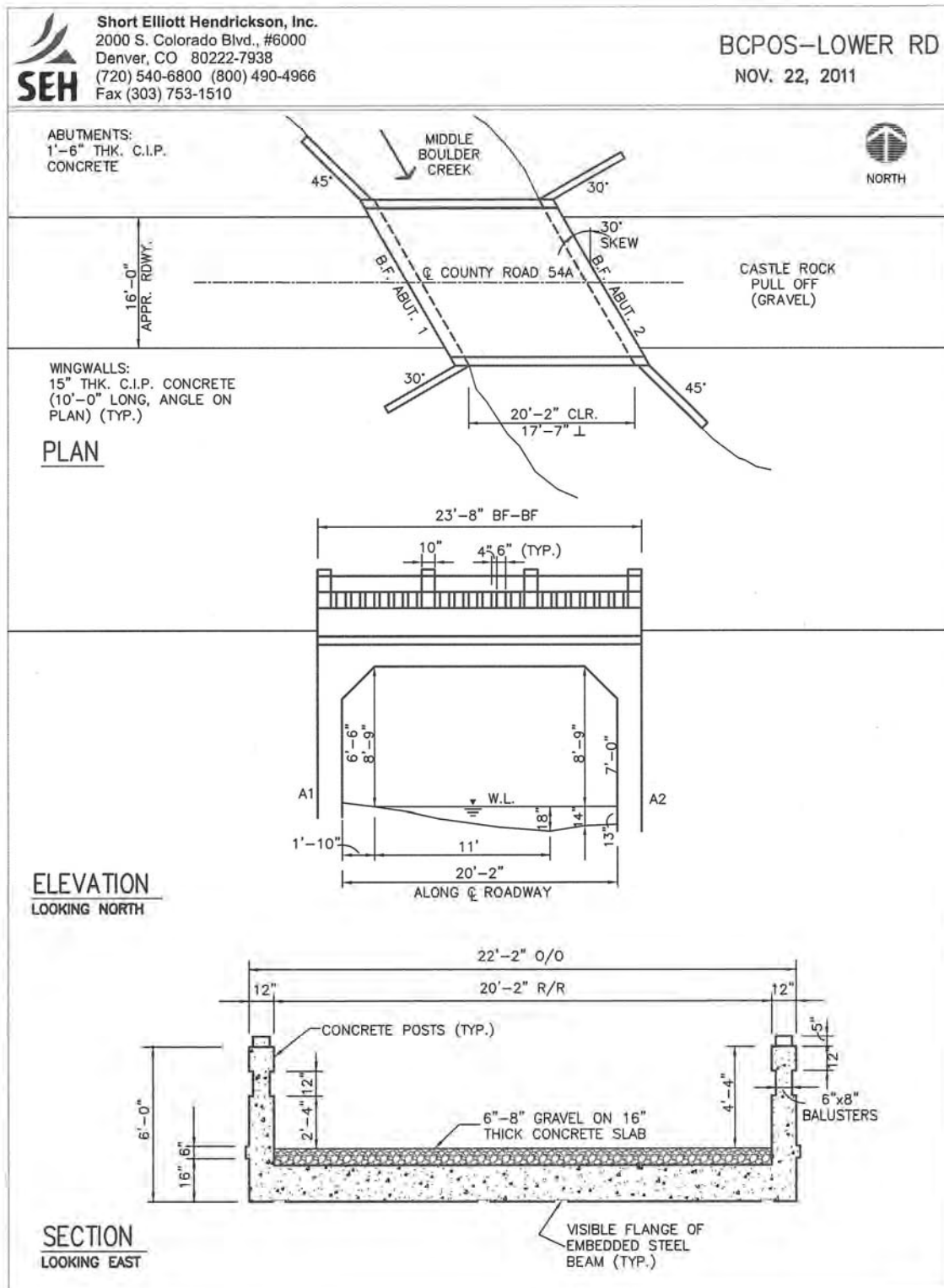
The bridge has suffered collision damage to its guardrails, resulting in the loss of the guardrail over the southeast wingwall (part of which has been laid on the ground beside the bridge). Differential settlement of the south abutment has caused minor cracking at the haunch, and the concrete abutments have suffered from spalling, checking and scouring. Despite these, the Lower Castle Rock Bridge presently stands in structurally fair and historically unaltered condition.





# LOWER CASTLE ROCK BRIDGE

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Structural schematics, Short Elliott Hendrickson, Inc. (November 2011).

## IV. STRUCTURAL HISTO

R Y

14. date of construction	actual	1917
source of information	Colorado Highway Department / Boulder newspapers	
15. engineer	Colorado Highway Department / U.S. Bureau of Public Roads	
source of information	Colorado Highway Department	
16. builder / contractor	convict work force, Colorado State Penitentiary	
source of information	Colorado Highway Department / Boulder County Commission / Boulder newspapers	
17. original owner	Colorado Highway Department	
source of information	Colorado Highway Department	
18. construction history	(See also overview report)	The original Boulder Cañon Road was construc-

ted in 1871 and was heavily damaged by flooding in 1894. In 1913 the Boulder County Commission moved to reconstruct the road, contacting Thomas Tynan, warden of the Colorado State Penitentiary in Cañon City, regarding the use of convict labor for the work. In a meeting with the county commissioners, Tynan offered to rebuild the Boulder Cañon Road to a 16-foot width over its entire length for \$2,500. He estimated that a crew of 35 to 40 men could complete work on about three miles of road per month (less in the narrows area), and the total cost of upkeep of the camp, including food for the convicts and feed for the livestock, would not exceed \$800 per month.

The following spring the prisoners began work at the canyon's east end and worked their way slowly westward. They undertook the first large-scale work on the road since its initial construction, regrading it to two-lane width, easing sharp curves and eliminating bridges and steep grades when possible. The men dug a three-foot-wide ditch on the roadway's uphill side to allow for drainage and left a three-foot-wide space on the downhill side for later construction of retaining walls. The convict crew had worked in the canyon less than two months when the canyon flooded—the worst flood since 1894. All the wagon bridges below Boulder Falls were washed out, as were dams east of Nederland, large stretches of the wagon road and much of Boulder's main water supply line.

After rebuilding the camp, the convict gang resumed work on the road. With prisoners rotating in and out of the crew from details elsewhere in the state, the men worked without serious incident through the remainder of 1914 and into 1915. A movement to replace the convicts with unemployed miners circulated briefly in early 1915 but never really gained traction, and the crew worked steadily up the canyon through 1915 and into 1916. By May 1916 the roadwork had been completed to Eagle Rock Bridge; by September the men were reported building the concrete footings for the bridge at Boulder Falls.

## LOWER CASTLE ROCK BRIDGE

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In February 1917 the Boulder Commercial Association staged a banquet for the prison crew "as a token of appreciation of the good work done in Boulder cañon." Held at the Hotel Boulderado, the fete was, according to Warden Tynan, the first time that a city had played host to convicts. About forty felons mingled with "the pink of Boulder society" at the banquet, an event novel enough to attract a motion picture crew. "Boulder was placed on the map," according to the *Camera*, "also on the screens."

Later that year the road crew had made it as far up the canyon as Castle Rock. Here the men encountered two existing bridges over Boulder Creek, built sometime after the 1894 flood. The existing Lower Castle Rock Bridge was a timber stringer structure, with log crib pier and abutments and timber deck. Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the replacement for the Lower Castle Rock Bridge was configured as a heavily skewed, single-span concrete slab, held nine feet above the stream on massive reinforced concrete abutments with angled wingwalls. The existing Upper Bridge, located a mile up the canyon, resembled the Lower Bridge. Here CDH engineered a single-span transverse-joist girder, with the steel superstructure supported by a reinforced concrete substructure.

The convicts demolished the existing Upper and Lower Castle Rock Bridges and constructed their concrete/steel replacements, first placing the concrete abutments and later the superstructures. The new bridges were completed by the end of the year. The crew continued work westward through 1918 and had the Boulder Cañon Road completed to Nederland by 1919. With the United States at war in Europe, there was no dedication ceremony to commemorate the event.

19. original location     x     moved                      date of move(s)

### V. HISTORICAL ASSOCIATIONS

20. original use(s)	TRANSPORTATION - vehicular bridge
21. intermediate use(s)	TRANSPORTATION - vehicular bridge
22. current use(s)	TRANSPORTATION - vehicular bridge
23. site type(s)	reinforced concrete vehicular bridge
24. historical background	(See overview report)
25. sources of information	Short Elliott Hendrickson Inc. "Bridge Inspection Report: Lower Bridge, Structure Number BCPOS-LOWER BR." 14 December 2011. "Beautiful Cañon Road Convicts Will Build." <i>Boulder Daily Camera</i> , 2 April 1914.

## LOWER CASTLE ROCK BRIDGE

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- Boulder County Commissioners. *Proceedings of the Board of County Commis-sioners* - 1898-1954. Located at Boulder County Courthouse, Boulder, Colorado.
- Becker, Isabel M. *Nederland: A Trip to Colorado*. Nederland: Nederland Area Historical Society, 2004.
- "Boulder County Spent Money Largely for Building Roads." *Boulder Daily Camera*, 22 February 1922.
- "Boulder Creek on Rampage Washes Out Many Bridges." *Boulder Daily Camera*, 2 June 1914.
- Colorado State Highway Commission. *Fourth Biennial Report of the State Highway Commission of the State of Colorado 1917*. Denver: Eames Bros., 1915.
- Colorado State Highway Commission. *Third Biennial Report of the State Highway Commission of the State of Colorado 1914*. Denver: Smith-Brooks Printing Company, 1915.
- Maloney, J.E. "Standard Bridge Plans." *Colorado Highways Bulletin*, 2:11 (November 1919).
- "Movies Will See Convicts Dining in Boulder Society." *Boulder Daily Camera*, 21 February 1917.
- McGinn, Elinor Myers. *At Hard Labor: Inmate Labor at the Colorado State Penitentiary, 1871-1940*. New York: Peter Lang Publishing Co., 1993.
- Pettem, Silvia. "Tracking Down Boulder, Colorado's Railroads and Roads of the Mountains and Plains (typewritten)." 1996. Located in Carnegie Library, Boulder, Colorado
- "Work in Boulder Cañon Is Proceeding Finely." *Boulder Daily Camera*, 16 September 1916.
- "Mr. Tynan Is Ready to Boost Boulder." *Boulder Daily Camera*, 17 September 1913.
- "Convicts Work on the County Roads." *Boulder Daily Camera*, 9 December 1910.
- "Rigid Standards Needed in Good Bridge Construction." *Colorado Highways Bulletin* 1:2 (July 1918), 5.
- Wilmot, Sydney. "Use of Convict Labor for Highway Construction in the North." *Proceedings of the Academy of Political Science* IV:2 (January 1914), 246-340.

## VI. SIGNIFICANCE

26. local landmark designation yes \_\_\_\_ no x

date of designation



designating authority

## 27. applicable National Register criteria

- ☒ A associated with events that have made a significant contribution to the broad pattern of history
- ☐ B associated with the lives of persons significant in the past
- ☒ C embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction
- ☐ D has yielded, or may be likely to yield, information important in history or prehistory
- ☐ qualifies under Criteria Considerations A through G
- ☐ does not meet any of the above National Register criteria

28. area(s) of significance      transportation;    engineering

29. period of significance      1917-1947

30. level of significance      national ☐    state ☒    local ☐

31. statement of significance      (See overview report)      The Lower Castle Rock Bridge is eligible for listing

as a Boulder County Landmark—as well as a State and National Register Historic Place—for its contribution as an integral component of the Boulder Cañon Highway to the development, heritage or cultural characteristics of the county and the state. The reconstruction of the road in 1914-1918 occurred at a time when highway administration was just getting underway in the county, the state and the country. The Colorado Highway Department was just developing its engineering and construction procedures and learning how to coordinate its efforts with the Bureau of Public Roads, which itself was just getting started. Similarly, Boulder County was at that time acquiring the administrative skill for modern highway construction. Among the principal agencies, the state penitentiary was the most experienced, having sent prisoners out to work for six years before embarking on the Boulder Cañon project. Yet Warden Tynan proved to have underestimated woefully the amount of time, work and money for the project when he assured the county that he could rebuild the mountain road in a few months' time at a cost of only \$2,500. In truth, none of the principals in the project could state with confidence that it really knew what it was doing. It would take years of experience accrued over time to develop the necessary efficiencies in design, construction and administration. The Castle Rock Bridge is historically significant on a statewide basis for its illustration of this formative nature of road and bridge construction in Colorado at the time.

More importantly, the Boulder Cañon Road represents one of the few instances in Colorado of the use of convict labor for road construction. Such construction flourished in the early 20<sup>th</sup> century in America. Colorado's was one of the most successful convict road programs in the country during the 1910s, and the Boulder Cañon Road was one of the state's most noteworthy prison-sponsored ventures. That a structurally sophisticated highway bridge such as this could be built by a relatively unskilled work force illustrates the efficacy of the program. The Castle Rock Bridge is historically significant as one of the few—and perhaps the

only— intact examples of convict-built highway bridges remaining in Colorado.

The Lower Castle Rock Bridge is also eligible for listing as a Boulder County Landmark—and, again, as a State and National Register Historic Place—for its embodiment of architectural or structural innovation. It was among the first of its structural type built by the state highway department in the 1910s. CHD was at that time encouraging concrete/ steel construction as a more durable alternative to timber. The agency promulgated standard designs for concrete slab, concrete girder and steel stringer bridges to the counties in the 1910s, but the counties resisted, claiming that the CHD structures were heavier and more expensive than they could afford. The Lower Castle Rock Bridge serves to confirm this suspicion.

It was ostensibly a concrete slab structure. But with a deck thickness of 16 inches and relatively heavy steel I-beam reinforcing, it was structurally indeterminate as to whether it functioned as a concrete slab with heavy reinforcement or as a steel beam structure encased in concrete. This ambiguity was attributable to the lack of experience on the part of CHD engineers. Even more questionable was the fact that the span was tied rigidly to the abutments as further reinforcement, a practice that would prove structurally unsound. In short, the bridge was significantly over-engineered, carrying an unnecessarily heavy dead load in a manner that made it structurally vulnerable.

This structural type was never built in abundance in Colorado and was soon superseded by more efficient and more modern bridges. Though innovative at the time of its deployment, it fell victim to the rapidly changing state of the engineering art of the 1910s. To put it in Darwinian terms, it represents an evolutionary dead end in the development of bridge engineering. Ironically, it is this over-engineering that has contributed to structures' excellent state of preservation. As a result, the Lower Castle Rock Bridge is technologically significant as among the best-preserved and the last remaining examples of its structural type found in Colorado.

In almost pristine condition structurally, the span accrues an additional degree of integrity of setting from the fact that the adjacent road is essentially unimproved since its initial construction in 1917. State Highway 119 was rerouted before it could be paved along this section, leaving the road and bridge in essentially original condition. It is thus among a small number of structures standing today that convey a strong feeling of what it was like to travel Colorado's earliest highways in the 1910s and early 1920s.

32. assessment of historic physical integrity The structure retains a high degree of integrity, as discussed

## LOWER CASTLE ROCK BRIDGE

5BL12038

below. Location: Location is the place where a property was built and occupied during its period of significance. The Lower Castle Rock Bridge was erected on this site and functioned on this site during its period of significance. It thus exhibits integrity of location. Design: Design is the combination of elements that create the form, plan, space, structure and style of a property. The bridge appears to have undergone no alterations to its design. It retains its character-defining elements and thus its integrity of design. Setting: The setting is the area of environment in which a historic property is found. The bridge was constructed on a two-lane gravel-surfaced road in a rural setting, which has not changed appreciably since its construction. It thus retains integrity of setting. Materials: Materials are the physical elements that were combined during a particular period and in a particular pattern or configuration to form a historic property. The materials that comprise the bridge have not been changed since its completion, and the structure therefore retains its material integrity. Workmanship: Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history. The bridge was constructed with a relatively specific degree of workmanship -- that is, a professionally engineered structure constructed under the auspices of a government agency of the 1910s. In this regard, it remains unchanged and thus maintains integrity of workmanship. Feeling: Feeling is the property's expression of the aesthetic or historic sense of a particular period of time. As a structure operating in its original physical context and functional capacity, the bridge maintains a high degree of integrity of feeling. Association: Association is the direct link between an important historic event or person and a historic property. As a structure erected by a convict work gang on a mountain highway during the earliest years of the Colorado State Highway Commission, the bridge retains a strong integrity of association. The fact that the adjoining section of roadway was abandoned in 1947, while it was still a winding, gravel-surfaced route, contributes considerably to the site's sense of feeling and association. The Lower Castle Rock Bridge is thus one of the best-preserved bridges - in both its physical condition and its surroundings - dating from the Colorado Highway Commission's formative period.

### VII. NATIONAL REGISTER ELIGIBILITY ASSESSMENT

33. National Register eligibility field assessment:

eligible   x   not eligible        need data       

34. National Register district potential yes        no   x  

If there is National Register district potential, is this structure: contributing        noncontributing       

35. If the structure is in existing National Register district, is it: contributing        noncontributing       

### VIII. RECORDING INFORMATION

36. photographer: Clayton B. Fraser

## LOWER CASTLE ROCK BRIDGE

5BL.12038

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37. photo date: April 2013  
38. negatives filed at: Boulder County Parks and Open Space Department  
Longmont, Colorado  
39. report title: Castle Rock Bridges: Documentation and Evaluation  
40. report date: 30 May 2013  
41. recorder(s): Clayton B. Fraser  
Fraserdesign  
5700 Jackdaw Drive  
Loveland, Colorado 80537  
970-669-7969





Lower Castle Rock Bridge, overall view from highway. View to southwest.



Lower Castle Rock Bridge, overall view from present State Highway 199. View to south.





Lower Castle Rock Bridge, overall view from highway. View to northeast.



Lower Castle Rock Bridge, overall view from Middle Boulder Creek. View to west.





Lower Castle Rock Bridge, north portal. View to southwest.



Lower Castle Rock Bridge, south portal. View to northeast.





Lower Castle Rock Bridge, west side. View to southeast.



Lower Castle Rock Bridge, east side. View to northwest.





Lower Castle Rock Bridge, west side and north portal. View to south.



Lower Castle Rock Bridge, west side. View to southeast.





Lower Castle Rock Bridge, south abutment, showing guardrail damage in southeast corner. View to west.



Lower Castle Rock Bridge, north abutment. View to north.





Lower Castle Rock Bridge, west-side guardrail. View to northwest.



Lower Castle Rock Bridge, east-side guardrail, showing damage in southeast corner. View to northeast.





Lower Castle Rock Bridge, remnant of guardrail from southeast corner, lying beside bridge. View to north.





**COLORADO**

**Department of Transportation**

Region 4

10101 West 10<sup>th</sup> Street

Greeley, CO 80634

(970) 350.2153 (Fax) 350.2203

January 18, 2018

Carol A. Beam, Historic Preservation Specialist  
Boulder County Parks & Open Space  
5201 St. Vrain Road  
Longmont, CO 80503

**Subject: Proposed County Landmarking of the Upper and Lower Castle Rock Bridges on Abandoned State Highway 119 in Boulder County, Colorado**

Dear Carol:

I am writing to express the Colorado Department of Transportation's (CDOT's) support for local historic landmark designation of the Lower Castle Rock Bridge (5BL.12038) and the Upper Castle Rock Bridge (5BL.12039) along abandoned State Highway (SH) 119 near Nederland in Boulder County. These bridges (and all of Boulder County) are situated within CDOT's Region 4. I have reviewed the historic resource inventory forms and documentation for these bridges prepared by Clayton B. Fraser of Fraserdesign in April-May of 2013, and am in complete agreement that these well-preserved, convict-labor built bridges are highly significant resources embodying both historical and engineering significance. Landmark designation will provide the recognition and ensure the stewardship that they deserve as important vestiges of Boulder County's transportation heritage.

As a representative of CDOT responsible for helping the agency achieve its historic preservation mandate, I thank you for the opportunity to express CDOT's support for this worthy proposal.

Sincerely,

Jason Marmor  
CDOT Region 4 Senior Historian

cc: James Eussen, Region 4 Planning and Environmental Unit Manager; File/Central Files



# Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856  
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • [www.bouldercounty.org](http://www.bouldercounty.org)

## HISTORIC PRESERVATION ADVISORY BOARD

### AGENDA ITEM

Thursday, March 1, 2018 – 6:00 p.m.  
Third Floor Hearing Room  
Boulder County Courthouse

## PUBLIC HEARING

**STAFF PLANNER:** Denise Grimm

## STAFF RECOMMENDATION RE:

### Docket HP-18-0002: Upper Castle Rock Bridge

Request: Boulder County Historic Landmark Designation of the historic upper bridge  
Location: The bridge is located at 29350 Boulder Canyon Drive along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.  
Zoning: Forestry (F) Zoning  
Owner/  
Applicant: Boulder County Parks and Open Space

## PURPOSE

To determine if the nominated property qualifies for landmark designation, determine if the application is complete, and formulate recommendations for the Board of County Commissioners.

## BACKGROUND

An application for landmark designation of the Upper Castle Rock Bridge has been submitted by Boulder County Parks and Open Space. The landmark application includes a request to landmark the structure. The bridge was built by convict labor from the Colorado State Penitentiary in 1917 as part of the reconstruction of Boulder Cañon Road undertaken from 1914-1918. This portion of the road which ran south and east of Castle Rock was rerouted around the northwest side of Castle Rock by 1947 and this area remained as a side road no longer part of the highway. Boulder County now owns this road section.

The Upper Castle Rock Bridge is an excellent example of a steel/concrete vehicular bridge that spans Middle Boulder Creek approximately ten miles west of Boulder by the rock formation known as Castle Rock. The bridge was designed by engineers for the Colorado Highway Commission using a standard developed by the Bureau of Public Roads.

The Upper Castle Rock Bridge displays typical transverse-joist girder design and detailing. The two 24-inch-deep girders are positioned in a slightly through configuration, meaning their upper flanges extend just slightly above the roadway level. The joists are bolted to the girders using angle brackets, with six bolts at each connection. Corrugated steel culvert sections with a 12-inch arch span between the joists and rest on the joists' lower flanges. Steel lattice guardrails are supported by steel angle columns, which are bolted to the outside flanges of the two girders. The bridge's superstructure rests directly, without benefit of bearing shoes, on a reinforced concrete substructure.

The Upper Castle Rock Bridge has undergone some minor collision damage to its guardrails – which has recently been repaired – and the concrete abutments have suffered from spalling, checking and scouring, but it presently stands in structurally fair and historically unaltered condition.

## **SIGNIFICANCE**

The Upper Castle Rock Bridge qualifies for landmark designation under Criteria 1, 4 and 7.

Criteria 15-501(A)(1) The character, interest, or value of the proposed landmark is part of the development, heritage, or cultural characteristics of the county;

The Upper Castle Rock Bridge is significant for its contribution as an integral component of the Boulder Cañon Road to the development, heritage or cultural characteristics of the county and the state.

Criteria 15-501(A)(4) The proposed landmark is an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;

The Upper Castle Rock Bridge is significant as one of the few intact examples of convict-built highway bridges remaining in Colorado.

Criteria 15-501(A)(7) The proposed landmark is an example of either architectural or structural innovation;

The Upper Castle Rock Bridge is significant as one of the first of its structural type built by the state highway department in the 1910s.

## **RECOMMENDATION**

Staff recommends that the Historic Preservation Advisory Board APPROVE and recommend that the BOCC approve **Docket HP-18-0002: Upper Castle Rock Bridge** under Criteria 1, 4 and 7 subject to the following conditions:

1. Alteration of any feature of the structure will require review and approval of a Certificate of Appropriateness (CA) by Boulder County (note: applicable county review processes, including but not limited to Site Plan Review, may be required).
2. Regular maintenance which prolongs the life of the landmark, using original materials or materials that replicate the original materials, will not require review for a Certificate of Appropriateness, provided the Land Use Director has determined that the repair is minor in nature and will not damage any existing architectural features. Emergency repairs, which are temporary in nature, will not require review (note: Depending on the type of work, a building permit may still be required.)



# Boulder County Land Use Department

2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Vicinity

29350 BOULDER CANYON DR

## Legend

Subject Parcel

### Streams

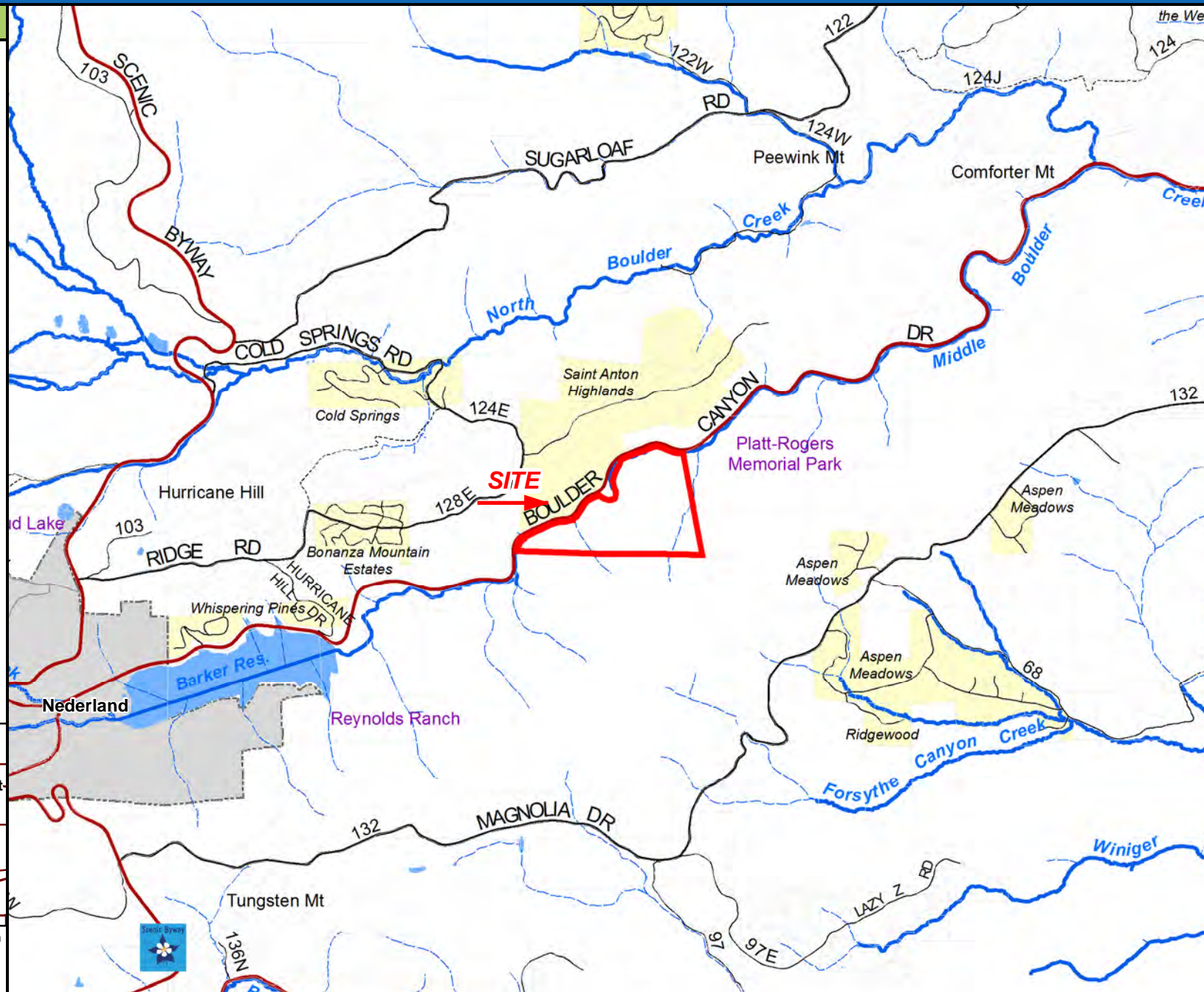
Intermittent Stream

Perennial Stream

Municipalities

### Subdivisions

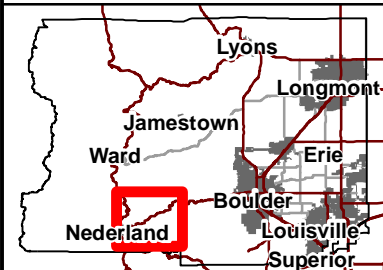
Subdivisions



0 4,000  
Feet

NORTH 1 inch = 4,000 feet

Area of Detail Date: 2/20/2018



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# Boulder County Land Use Department

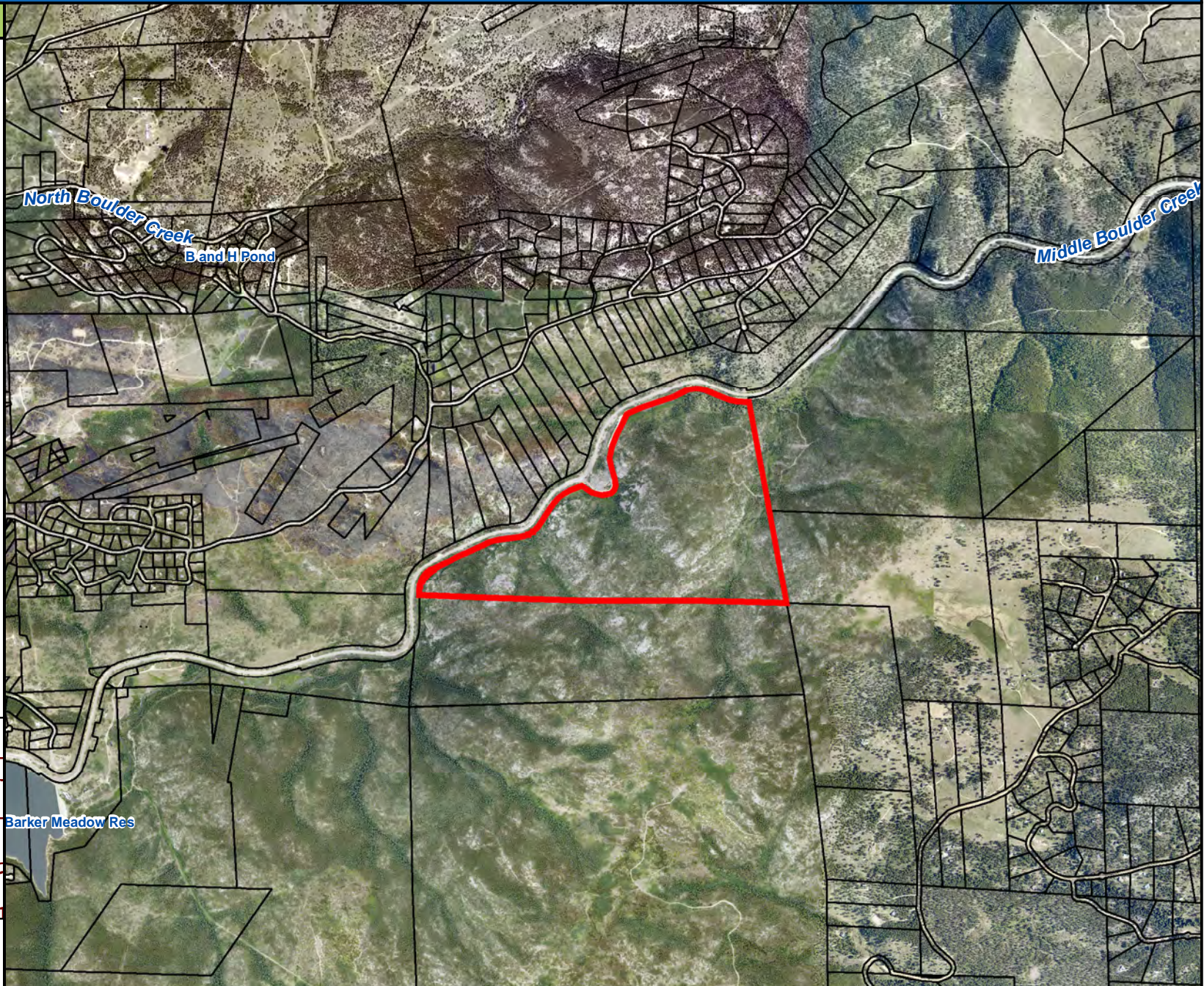
2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Aerial

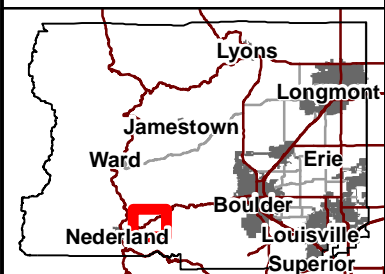
29350 BOULDER CANYON DR

## Legend

 Subject Parcel



0 1,000 2,000 Feet  
NORTH 1 inch = 2,000 feet  
Area of Detail Date: 2/20/2018



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# Boulder County Land Use Department

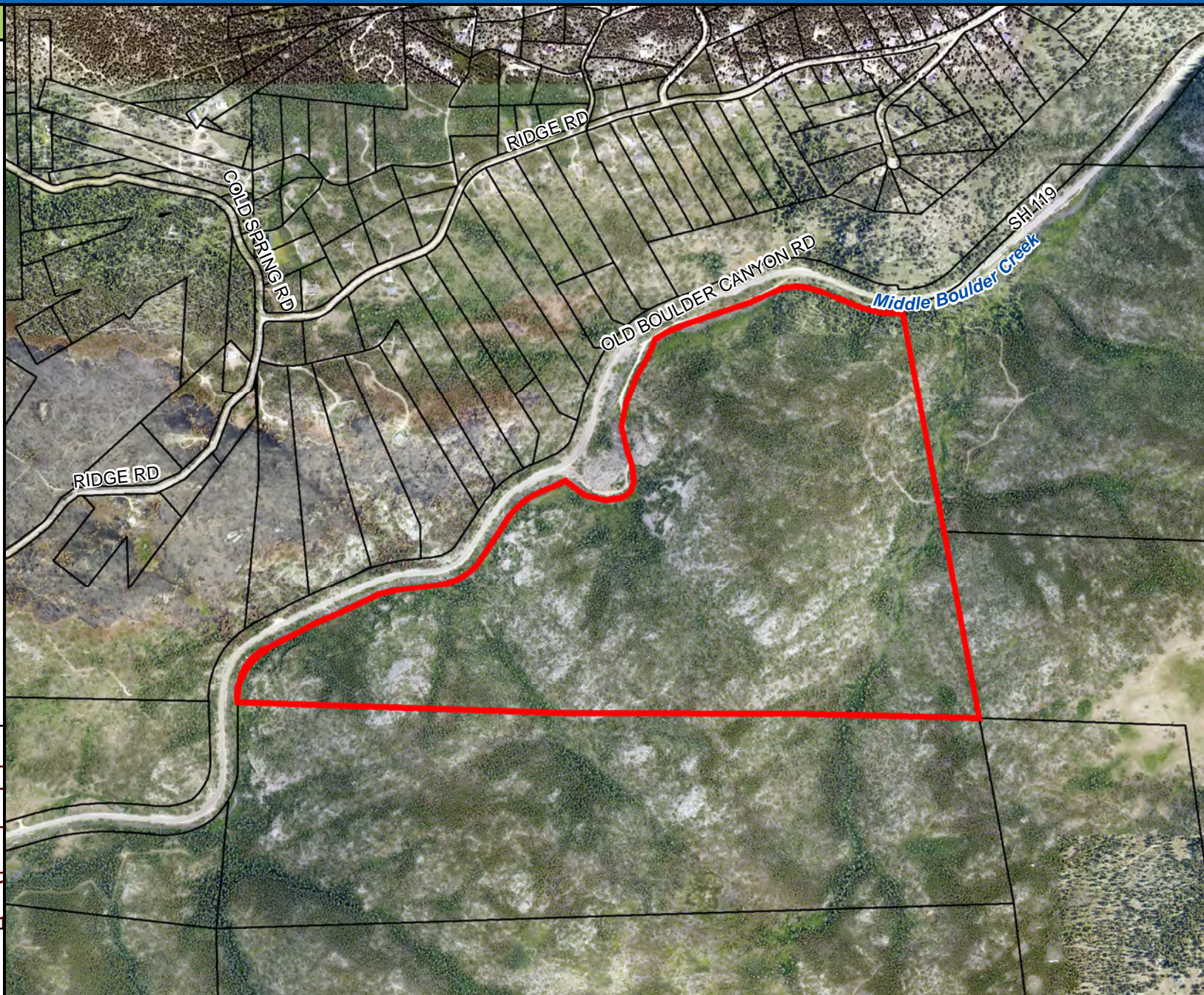
2045 13th Street, Boulder, CO 80302 303-441-3930 [www.bouldercounty.org/lu](http://www.bouldercounty.org/lu)

Aerial

29350 BOULDER CANYON DR

## Legend

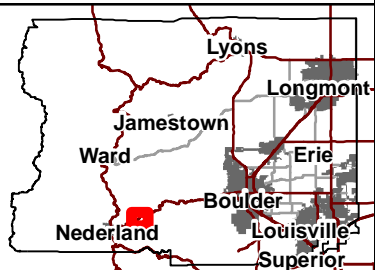
 Subject Parcel



0 1,000  
Feet

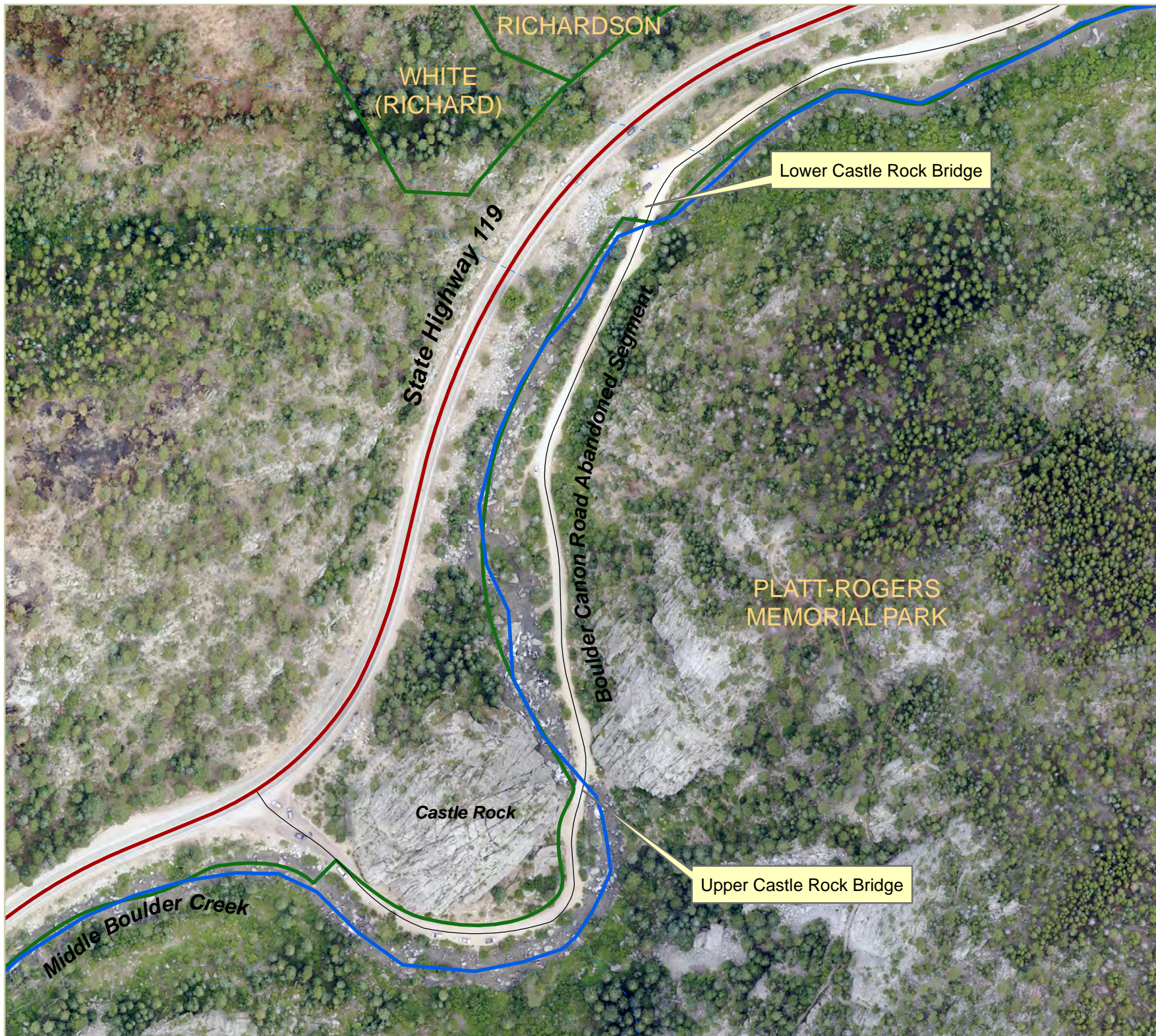
NORTH 1 inch = 1,000 feet

Area of Detail Date: 2/20/2018



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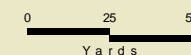


# Castle Rock Bridges



Parks &  
Open Space

2018



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Boulder County Land Use Department  
Annex Building - 13th and Spruce Streets - Boulder  
PO Box 471 - Boulder, CO 80306  
(303) 441-3930, phone (303) 441-4856, fax

## 1. Name of Property

**Historic Name:** N/A

**Current Name:** Upper Castle Rock Bridge

**Site ID:** 5BL.12039

### Historical Narrative:

*Historical narrative up to the year 1919 quoted from FraserDesign Structural Inventory Form 5BL.12039.*

The original Boulder Cañon Road was constructed in 1871 and was heavily damaged by flooding in 1894. In 1913, the Boulder County Commissioners moved to reconstruct the road, contacting Thomas Tynan, warden of the Colorado State Penitentiary in Cañon City, regarding the use of convict labor for the work. In a meeting with the county commissioners, Tynan offered to rebuild the Boulder Cañon Road to a 16-foot width over its entire length for \$2,500. He estimated that a crew of 35 to 40 men could complete work on about three miles of road per month (less in the narrows area), and the total cost of upkeep of the camp, including food for the convicts and feed for the livestock, would not exceed \$800 per month.

The following spring the prisoners began work at the canyon's east end and worked their way slowly westward. They undertook the first large-scale work on the road since its initial construction, regrading it to two-lane width, easing sharp curves and eliminating bridges and steep grades when possible. The men dug a three-foot-wide ditch on the roadway's uphill side to allow for drainage and left a three-foot-wide space on the downhill side for later construction of retaining walls. The convict crew had worked in the canyon less than two months when the canyon flooded—the worst flood since 1894. All the wagon bridges below Boulder Falls were washed out, as were dams east of Nederland, large stretches of the wagon road and much of Boulder's main water supply line.

After rebuilding the camp, the convict gang resumed work on the road. With prisoners rotating in and out of the crew from details elsewhere in the state, the men worked without serious incident through the remainder of 1914 and into 1915. A movement to replace the convicts with unemployed



miners circulated briefly in early 1915 but never really gained traction, and the crew worked steadily up the canyon through 1915 and into 1916. By May 1916, the roadwork had been completed to Eagle Rock Bridge; by September the men were reported building the concrete footings for the bridge at Boulder Falls.

In February 1917, the Boulder Commercial Association staged a banquet for the prison crew “as a token of appreciation of the good work done in Boulder Cañon.” Held at the Hotel Boulderado, the fete was, according to Warden Tynan, the first time that a city had played host to convicts. About forty felons mingled with “the pink of Boulder society” at the banquet, an event novel enough to attract a motion picture crew. “Boulder was placed on the map,” according to the *Camera*, “also on the screens.”

Later that year the road crew had made it as far up the canyon as Castle Rock. Here the men encountered two existing bridges over Boulder Creek, built sometime after the 1894 flood. The existing upper Castle Rock bridge was a two-span timber stringer structure, with log crib pier and abutments, timber deck and log hub rails bolted to the roadway’s edges. The structure was located relatively low to the water, and its replacement would be only slightly higher. Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the upper Castle Rock bridge was configured as a single-span transverse-joist girder, with the steel superstructure supported by a reinforced concrete substructure. The existing lower bridge, located a mile down the canyon, resembled the upper bridge. For this structure, the engineers delineated a heavily skewed, single-span concrete slab, held nine feet above the stream on massive reinforced concrete abutments with angled wing walls.

The convicts demolished the existing upper and lower Castle Rock bridges and constructed their concrete/steel replacements, first placing the concrete abutments and later the superstructures. The new bridges were completed by the end of the year. The crew continued work westward through 1918 and had the Boulder Cañon Road completed to Nederland by 1919. With the United States at war in Europe, there was no dedication ceremony to commemorate the event.

In the 1940s and 1950s, the Bureau of Public Roads reconstructed the Boulder Cañon Road removing some of the original road sections from the floodway. By 1947, the road segment that

includes the upper bridge is realigned to the north side of Castle Rock and the original road segment, including the bridge, abandoned.

In 1954, Boulder County Commissioners declared this abandoned segment of the road a "public road"; however, the road was not declared a county road, nor added to county maintenance schedule since it was specifically not declared a county road, just a public road.

By 1955, the State Bureau of Public Roads completed the new highway to the Boulder city limits at a total cost of \$2.38 million. That same year, legal proceedings defined the highway right of way as lands north of the centerline of Middle Boulder Creek. As part of those proceedings, property owners along the right-of-way corridor were compensated for the loss of their lands through a court decree. One of the owners compensated for the loss of their land was Platt Rogers.

Platt Rogers began acquiring holdings in the area around 1874. Rogers owned a considerable amount of land on the north and south sides of Middle Boulder Creek. The lands were used for prospecting, mining, milling, timber production and family stays. Rogers was a wealthy lawyer and politician who served as the mayor of Denver from 1891 to 1893.

In 1994, Boulder County acquired the 780 acre Platt Rogers property south of the centerline of Boulder Creek, from the University of Denver/Phipps Estate (Margaret Rogers Phipps, daughter of Platt Rogers, Sr.).

In 2000, Boulder County Parks & Open Space Department completed the first management plan for Platt Rogers Memorial Park. At the time, the entire Castle Rock area, including the bridge, was thought to be all with-in Colorado Department of Transportation (CDOT) right-of- way and no management decisions for the bridge were included in the plan.

In 2011, a local climbing group approached Boulder County to partner on improvements around the base of Castle Rock to create a sustainable climbing staging area and provide for better access. Boulder County contacted CDOT about this request, and as a result of the inquiry, CDOT determined that Castle Rock itself is in the CDOT right-of-way, but the bridge, which is very close to Castle Rock, was abandoned by CDOT or CDOH between 1950-1979 and therefore not in the CDOT right-of-way since 1979.

CDOT issued Boulder County a special use permit to complete the sustainable climbing staging area and access improvements at the base of Castle Rock. Boulder County also determined that as the owner of the surrounding Platt Rogers Memorial Park open space, it would take management responsibilities for both bridges and the entire length of the abandoned road as the agency best suited to manage recreation in this area.

That same year, CDOT began inspecting both bridges as part of their Off System Bridge Inspection Program. The inspection is done in accordance with the National Bridge Inspection Standards. As a result of the inspection, Boulder County Road Maintenance completed minor repairs on both the upper and lower bridges. The work included repairing the guard rail on the upper bridge, removing a damaged hanging concrete guard rail section on the lower bridge, resurfacing the roadway across both bridges, and adding riprap armoring around the abutments of both bridges. The bridge inspection report also identified major scour damage under both abutments of the lower bridge and on one of the abutments of the upper bridge.

In June 2013, Boulder County hired engineering firm Short Elliot Hendrickson Inc. to produce a design and cost estimate to repair the scour damage identified in the bridge inspection report. Unfortunately, the scour repair was not completed at this time because the one bid exceeded the available budget and the September 2013 flood forced Boulder County to focus on flood related priorities. Luckily, the flood caused very little damage to the bridges.

In 2015, Boulder County applied for an Off-System Bridge Program Grant to partially fund the scour repair project. This grant program, financed by the Federal Highway Administration (FHWA) and administered by the Colorado Department of Transportation, partially funds the rehabilitation or replacement of publically owned substandard bridges. The grant award in January 2016 allowed Boulder County to proceed forward with the scour repair project.

In December 2016, Boulder County hired engineering firm Yeh and Associates to assist with the construction management, materials testing, and document processing for the scour repair project. After a competitive bid process, Boulder County awarded the scour repair project to Mountain Constructors Inc. in October 2017. The scope of work included installing a cutoff wall around the base of the abutments and pumping concrete into the scour area to plug the void.

The work began in late November 2017 and was completed in early January 2018. During the January 2018 final inspection of the upper bridge, a previously unidentified small scour area was discovered on one of the upper bridge abutments. Boulder County will complete this repair in late summer 2018 during low water levels and warm weather.

## 2. Location

**Address(s):** 29350 Boulder Canyon Drive

## 3. Classification

**Property Ownership:**     ☒ Public     ☐ Private     ☐ Other

**Category of Property:**     ☒ Structure     ☐ Site     ☐ District

**Number of Resources Within the Property (sites and districts only):**

☐ Contributing Resources     ☐ Non-contributing Resources

**Narrative Describing Classification of Resources:**

The upper castle rock bridge is a single structure that spans Middle Boulder Creek and serves as a transportation corridor to allow visitors to cross Middle Boulder Creek along the .5 mile segment of the abandoned Boulder Cañon Road.

## 4. Structure Function or Use

**Historic Functions:** Transportation – vehicular bridge

**Current Functions:** Transportation – vehicular bridge



## 5. Description

### **Narrative Describing Resource:**

*Quoted from FraserDesign Structural Inventory Form 5BL.12039*

The upper castle rock bridge is an excellent example of a steel/concrete vehicular bridge that spans Middle Boulder Creek approximately ten miles west of Boulder. It is situated immediately east of Castle Rock, spanning the boulder-strewn creek in a narrow section of the canyon characterized by steep walls and deep forest. The bridge features a single simply supported steel span carried by concrete abutments. Its span length between the abutments is 28'-5" (the structural girders are 33'-2" in overall length), and the outside width is 16'-10", leaving a roadway width of 15'-6" between the girders.

Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the upper Castle Rock bridge is configured as a transverse-joist girder, with a steel superstructure supported by a reinforced concrete substructure. As the name implies, the transverse-joist girder structural type features rolled I-beam girders on both sides of the roadway, to which shallower I-beam joists are attached transversely. The joists are attached to the girders' webs by means of bolted steel brackets. Used in both through-girder and deck-girder configuration, the design was considered inexpensive to fabricate and erect, because the components could be easily standardized, minimizing custom design work for fabrication. Erection was quick, using a small labor force and requiring no expensive falsework. Relatively few transverse-joist girder bridges were ever built in Colorado, but the structural type was used extensively in Nebraska during the 1910s and 1920s – to the extent that the state highway department there developed standard plans for it and machined the multiple punch necessary for its manufacture. Praised by one Nebraska engineer as "one of the simplest types of permanent bridges manufactured," the transverse-joist girder had some serious structural drawbacks, however. The connections between the joists and girders made skewing of the roadways impractical. The relatively deep girders and joists proved heavier and less efficient than similar steel-stringer spans. And economics of construction dictated a maximum width of twenty feet, rendering widening of the bridges at a later date difficult and expensive.<sup>1</sup>

The upper Castle Rock bridge displays typical transverse-joist girder design and detailing. The two 24-inch-deep girders are positioned in a slightly through configuration, meaning their upper flanges extend just slightly above the roadway level. To these are bolted the transverse joists – 12-inch-deep I beams – that are spaced at four-foot centers. The joists are bolted to the girders using angle brackets, with six bolts at each connection. Corrugated steel culvert sections with a 12-inch arch span between the joists and rest on the joists' lower flanges. These function as the forms for the concrete deck, which varies between 4½ and 15½ inches in depth. Steel lattice guardrails are supported by steel angle columns, which are bolted to the outside flanges of the two girders. The bridge's superstructure rests directly, without benefit of bearing shoes, on a reinforced concrete substructure. This is comprised of relatively short abutments with asymmetrically angled concrete wing walls at the bridge's four corners. The bridge has undergone some minor collision damage to its guardrails – which has recently been repaired – and the concrete abutments have suffered from spalling, checking and scouring, but it presently stands in structurally fair and historically unaltered condition.

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<sup>1</sup>Robert Z. Drake, chief engineer of the Nebraska Highway Department, was given credit in that state for the invention of the transverse-joist girder, though there is some question about the provenance of the bridge's development. Spans were typically fifty to sixty feet for major river bridges, with roadways ranging from 16 to 20 feet in width. By 1927, there were more than 1,000 transverse-joist girder bridges in Nebraska. Ted Johnson, "A Discussion of Transverse Joist Girder Bridges," *Nebraska Blue Print*, March 1927.

## **6. Statement of Significance**

*Quoted from FraserDesign Structural Inventory Form 5BL.12039*

The upper Castle Rock bridge is eligible for listing as a Boulder County Landmark for its contribution as an integral component of the Boulder Cañon Road to the development, heritage or cultural characteristics of the county and the state. The reconstruction of the road in 1914-1918 occurred at a time when highway administration was just getting underway in the county, the state and the country. The Colorado Highway Department (CHD) was just developing its engineering and construction procedures and learning how to coordinate its efforts with the Bureau of Public Roads, which itself was just getting started. Similarly, Boulder County was at that time acquiring the administrative skill for modern highway construction. Among the principal agencies, the state penitentiary was the most experienced, having sent prisoners out to work for six years before

embarking on the Boulder Cañon project. Yet Warden Tynan proved to have underestimated woefully the amount of time, work and money for the project when he assured the county that he could rebuild the mountain road in a few months' time at a cost of only \$2,500. In truth, none of the principals in the project could state with confidence that it really knew what it was doing. It would take years of experience accrued over time to develop the necessary efficiencies in design, construction and administration. The upper Castle Rock bridge is historically significant on a statewide basis for its illustration of this formative nature of road and bridge construction in Colorado at the time.

More importantly, the Boulder Cañon Road represents one of the few instances in Colorado of the use of convict labor for road construction. Such construction flourished in the early 20th century in America. Colorado's was one of the most successful convict road programs in the country during the 1910s, and the Boulder Cañon Road was one of the state's most noteworthy prison-sponsored ventures. That a structurally sophisticated highway bridge such as this could be built by a relatively unskilled work force illustrates the efficacy of the program. The upper Castle Rock bridge is historically significant as one of the few intact examples of convict-built highway bridges remaining in Colorado.

The upper Castle Rock bridge is also eligible for listing as a Boulder County Landmark for its embodiment of architectural or structural innovation. It was among the first of its structural type built by the state highway department in the 1910s. CHD was at that time encouraging concrete/ steel construction as a more durable alternative to timber. The agency promulgated standard designs for concrete slab, concrete girder and steel stringer bridges to the counties in the 1910s, but the counties resisted, claiming that the CHD structures were heavier and more expensive than they could afford. The upper Castle Rock bridge serves to confirm this suspicion. It employed a straightforward structural type, but its configuration as a transverse-joist girder would prove to be structurally inefficient and functionally limited. This structural type was never built in abundance in Colorado and was soon superseded by more efficient and more modern bridges. Though innovative at the time of its deployment, it fell victim to the rapidly changing state of the engineering art of the 1910s. To put it in Darwinian terms, it represents an evolutionary dead end in the development of bridge engineering. Ironically, it is this over-engineering that has contributed to structures' excellent state of preservation. As a result, the upper Castle Rock bridge is technologically significant as among the best-preserved and the last remaining examples of its structural type found in Colorado.

In almost pristine condition structurally, the span accrues an additional degree of integrity of setting from the fact that the adjacent road is essentially unimproved since its initial construction in 1917. State Highway 119 was rerouted before it could be paved along this section, leaving the road and bridge in essentially original condition. It is thus among a small number of structures standing today that convey a strong feeling of what it was like to travel Colorado's earliest highways in the 1910s and early 1920s.

**Boulder County Criteria for Designation (*check all that apply*):**

- ☒ the character, interest, or value of the proposed landmark as part of the development, heritage, or cultural characteristics of the county;
- ☐ proposed landmark as a location of a significant local, county, state, or national event;
- ☐ the identification of the proposed landmark with a person or persons significantly contributing to the local, county, state, or national history;
- ☒ the proposed landmark as an embodiment of the distinguishing characteristics of an architectural style valuable for the study of a period, type, method of construction, or the use of indigenous materials;
- ☐ the proposed landmark as identification of the work of an architect, landscape architect, or master builder whose work has influenced development in the county, state, or nation;
- ☐ the proposed landmark's archaeological significance;
- ☒ the proposed landmark as an example of either architectural or structural innovation; and
- ☐ the relationship of the proposed landmark to other distinctive structures, districts, or sites which would also be determined to be of historic significance.

**Areas of Significance:** transportation and engineering

**Period of Significance:** 1917-1947

**Significant Dates:** 1917 (Criteria 4); 1917-1947 (Criterion 1 & 7)

**Significant Persons:** Thomas Tynan

## **7. Bibliographical References**

Becker, Isabell M., "Nederland, A Trip to Cloudland," Denver, Scott Becker Ltd., 1989.

Boulder County. Proceedings of the Board of County Commissioners, Boulder County, Colorado. Resolution II. Journal 15, Pages 75-76, 1954. Board of County Commissioners, Boulder, CO.

Boulder County. Decree. Boulder of County Commissioners vs. A.B. Reeves, et al. Book 980, Page 269, 1955. Boulder County Clerk & Records Office, Boulder, CO.

Fraserdesign. Structural Inventory Form. 5BL.12039. 2013. Boulder County Parks & Open Space, Boulder, CO.



Fraserdesign. Castle Rock Bridges Report. 2013. Boulder County Parks & Open Space, Boulder, CO.

## 8. Geographical Data

**Legal Description of Property:** The bridge is located along a .5 mile segment of the Boulder Cañon Road (also known as County Rd. 54A), between mile markers 29 and 30, in the NE ¼ of the NW ¼ of the SW ¼ of the NE ¼ of Section 9, T1S, R72W, of the 6th Principal Meridian.

**Boundary Description:** The designation only includes the bridge structure

**Boundary Justification:** N/A

## 9. Property Owner(s)

**Name:** Boulder County  
**Address:** P.O. Box 471, Boulder, CO 80306  
**Phone:** 303-678-6200

## 10. Form Prepared By:

**Name:** Carol Beam  
**Address:** Boulder County Parks and Open Space, 5201 St. Vrain Rd., Longmont, CO 80503  
**E-Mail:** cbeam@bouldercounty.org **Phone:** 303-678-6272

## 11. Photos, Map, and Site Plan

See attached.

## For Office Use Only

**Docket Number:**

**Assessor ID:**

**Parcel Number:**

**Application Date:**

## Historic Photos



U.S. Geological Survey Photographic Library, ID: Jackson, W.H. 1303, 1873

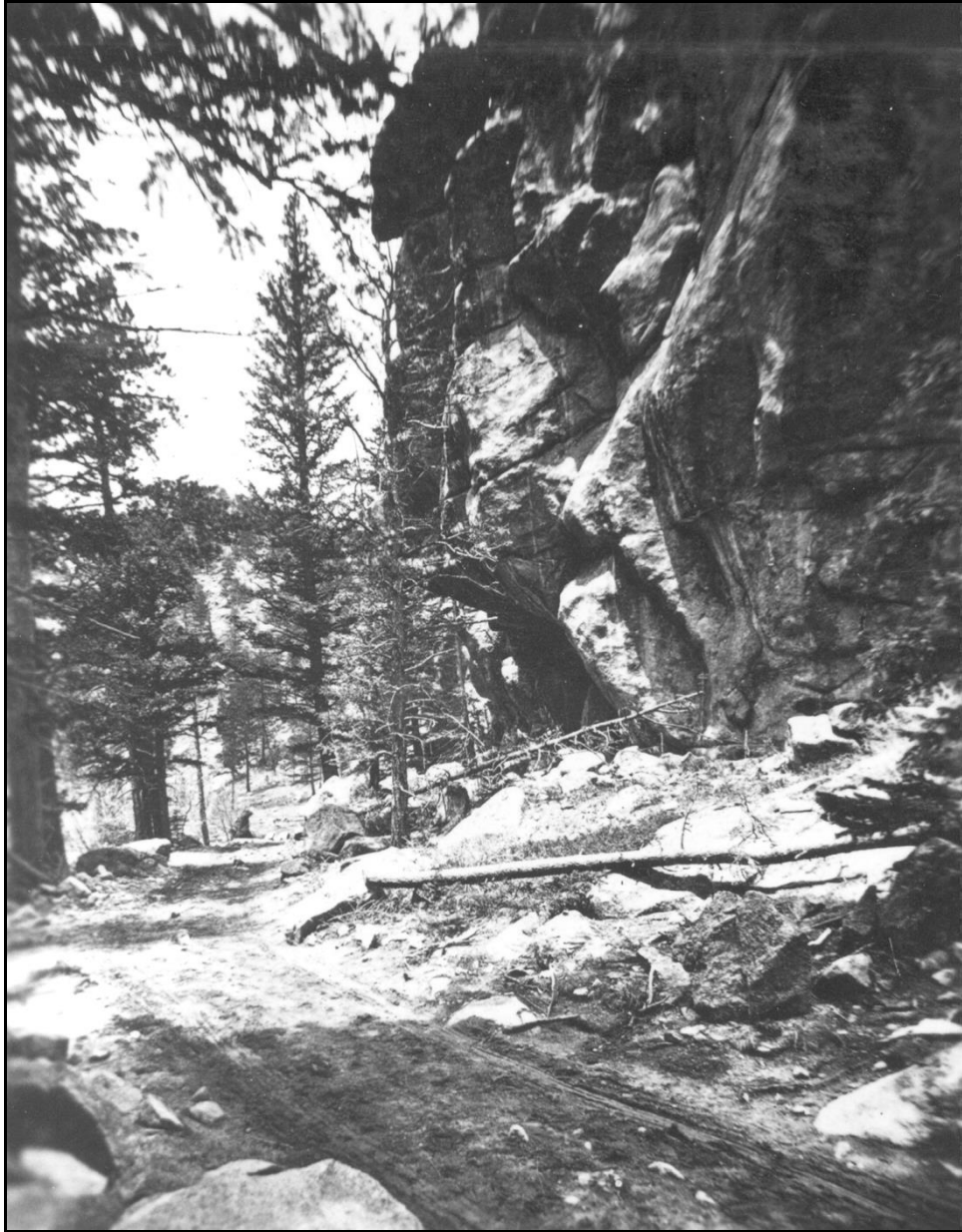


U.S. Geological Survey Photographic Library, ID: Jackson, W.H. 1418, 1873





U.S. Geological Survey Photographic Library, ID: Jackson, W.H. 1419, 1873



Roadway under Castle Rock

U.S. Geological Survey Photographic Library, ID: Jackson, W.H. 1003, 1873



U.S. Geological Survey Photographic Library, ID: Jackson, W.H. 1002, 1873





Man in creek with dog in road. Denver Public Library, Z-7031, between 1872-1875



Denver Public Library, MCC-991, L.C. McClure Collection, between 1900-1910



Denver Public Library, CHS.J3598, W.H. Jackson, 1902



Carnegie Branch Library for Local History. 141-11-5photo\_1  
Hickox's Stanley Steamer at Castle Rock on the initial run of the  
Boulder-Nederland stage line, 1911





*Boulder Canon Convict Road Camp, 1915*  
*Boulder Daily Camera ("Boulder Treated Prisoners to Banquet," 22 July 1954)*



*Convicts working on the Boulder Canon Road, 1915*  
*Boulder Daily Camera ("Boulder Treated Prisoners to Banquet," 22 July 1954)*



## Current Photos



View to the northwest



View to the east





View to the west



View showing I-beams, I-beam joists and corrugated steel culvert sections





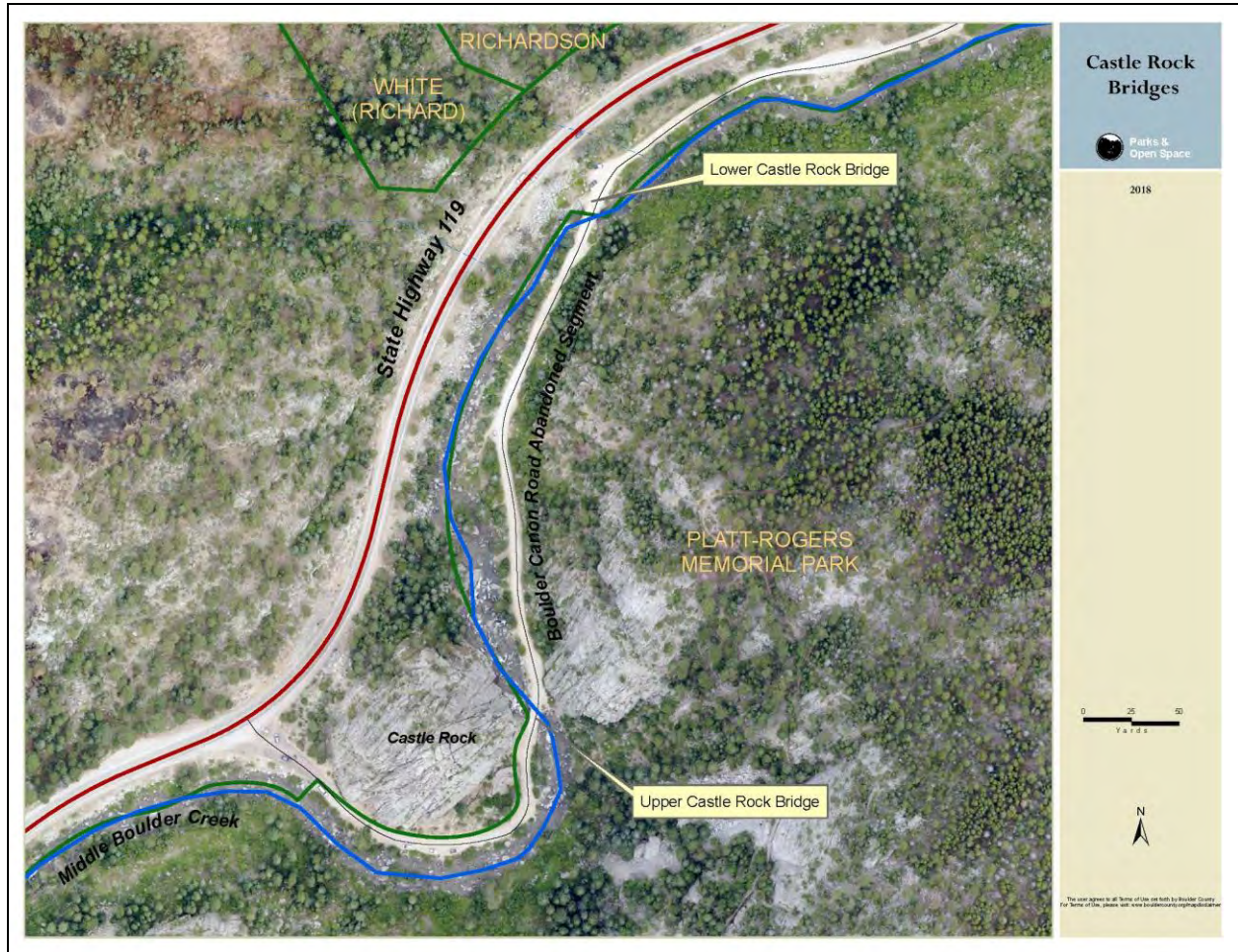
View of north guardrail



North guardrail detail



# Map



**DETERMINATION**

Initials \_\_\_\_\_

Eligible - NR

Determined Not Eligible - NR

Colorado Cultural Resource Survey

**STRUCTURAL INVENTORY FORM****OFFICIAL ELIGIBILITY**

Date

\_\_\_\_ Determined

\_\_\_\_ Determined Eligible - SR

\_\_\_\_ Determined Not Eligible - SR

\_\_\_\_ Need Data

\_\_\_\_ Contributes to Eligible NR District



Google Earth Map, 10/7/2012

**I. IDENTIFICATION**

1. resource number 5BL.12039
2. temporary resource number BCPOS-UPPER BR
3. county Boulder
4. city Nederland vicinity
5. historic structure name Boulder Creek Bridge
6. current structure name Upper Castle Rock Bridge
7. structure address abandoned State Highway 119 at Castle Rock
8. owner name and address County of Boulder  
P.O. Box 471  
Boulder, Colorado 80306

**II. GEOGRAPHIC INFORMATION**

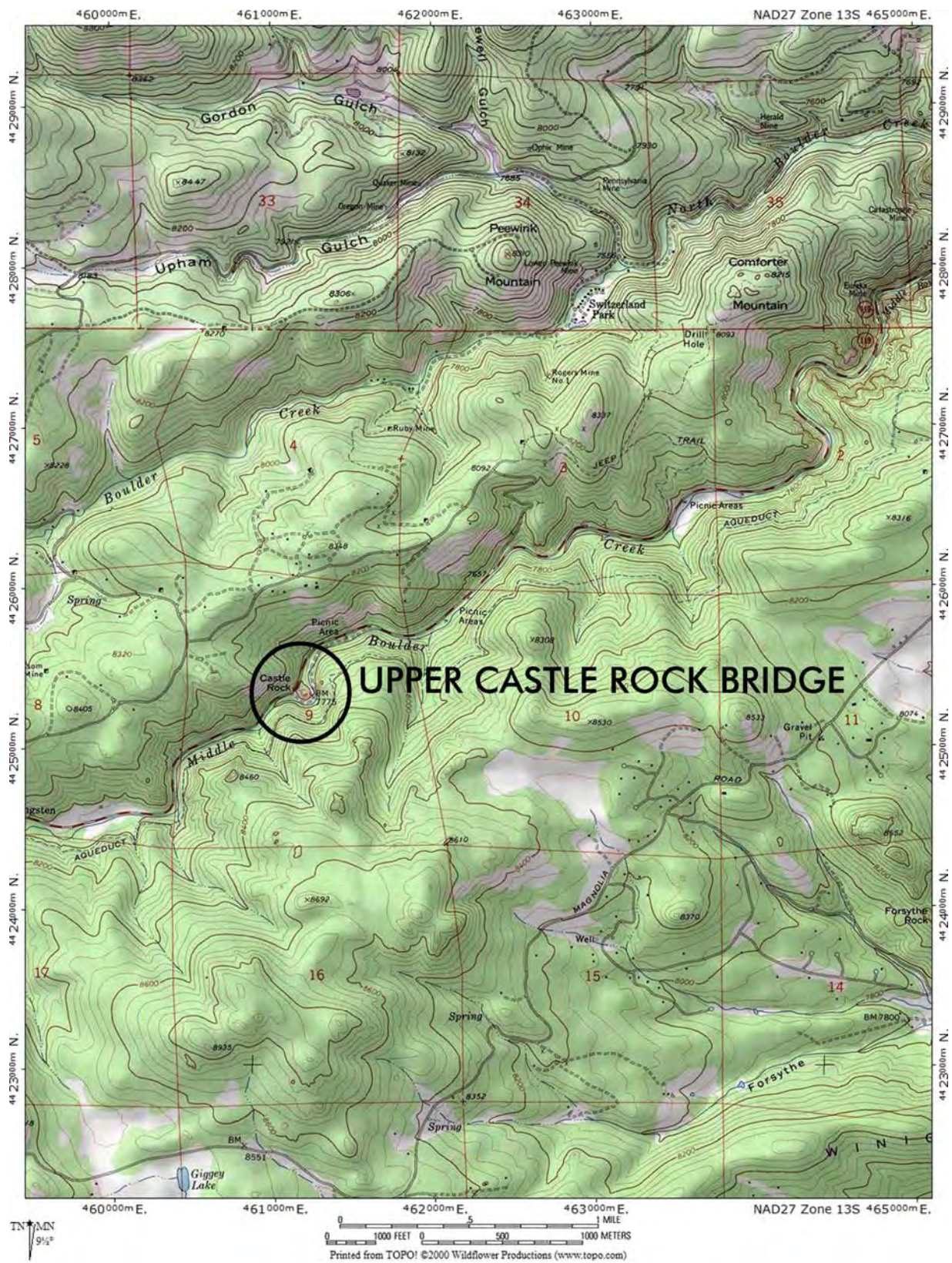
9. public land survey system P.M. 6 township 1S range 72W section NE  $\frac{1}{4}$  of NW  $\frac{1}{4}$  of SW  $\frac{1}{4}$  of NE  $\frac{1}{4}$  of S9
10. UTM reference zone 13 easting 461270 northing 4425345
11. USGS quad name Tungsten 7½-minute quadrangle (2011)



12. boundary justification      The boundary contains but does not exceed the land  
historically associated with the property.

# UPPER CASTLE ROCK BRIDGE

5BL.12039



# UPPER CASTLE ROCK BRIDGE

5BL.12039

Location map, taken from USGS Tungsten 7½-Minute Quadrangle (2011)



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III. STRUCTURAL DESCRIPTION

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Note: Drawings used here have been reproduced from Bureau of Reclamation, *Colorado-Big Thompson Project* (1957). Written descriptions have been adapted from Christine Pfaff, "Inventory and Evaluation of Significance of the Colorado-Big Thompson Project" (1998).

13. general structural description Located on an abandoned one-mile segment of the Boulder Cañon High-

way (State Highway 119), this steel/concrete vehicular bridge spans Middle Boulder Creek approximately ten miles west of Boulder. It is situated immediately east of Castle Rock, spanning the boulder-strewn creek in a narrow section of the canyon characterized by steep walls and deep forest. The bridge features a single simply supported steel span carried by concrete abutments. Its span length between the abutments is 28'-5" (the structural girders are 33'-2" in overall length), and the outside width is 16'-10", leaving a roadway width of 15'-6" between the girders.

Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the Upper Castle Rock Bridge is configured as a transverse-joist girder, with a steel superstructure supported by a reinforced concrete substructure. As the name implies, the transverse-joist girder structural type features rolled I-beam girders on both sides of the roadway, to which shallower I-beam joists are attached transversely. The joists are attached to the girders' webs by means of bolted steel brackets. Used in both through-girder and deck-girder configuration, the design was considered inexpensive to fabricate and erect, because the components could be easily standardized, minimizing custom design work for fabrication. Erection was quick, using a small labor force and requiring no expensive falsework. Relatively few transverse-joist girder bridges were ever built in Colorado, but the structural type was used extensively in Nebraska during the 1910s and 1920s - to the extent that the state highway department there developed standard plans for it and machined the multiple punch necessary for its manufacture. Praised by one Nebraska engineer as "one of the simplest types of permanent bridges manufactured," the transverse-joist girder had some serious structural drawbacks, however. The connections between the joists and girders made skewing of the roadways impractical. The relatively deep girders and joists proved heavier and less efficient than similar steel-stringer spans. And economics of construction dictated a maximum width of twenty feet, rendering widening of the bridges at a later date difficult and expensive.<sup>1</sup>

The Upper Castle Rock Bridge displays typical transverse-joist girder design and detailing. The two 24-inch-deep girders are positioned in a slightly through configuration, meaning their upper flanges extend just slightly above the roadway level. To these are bolted the transverse joists

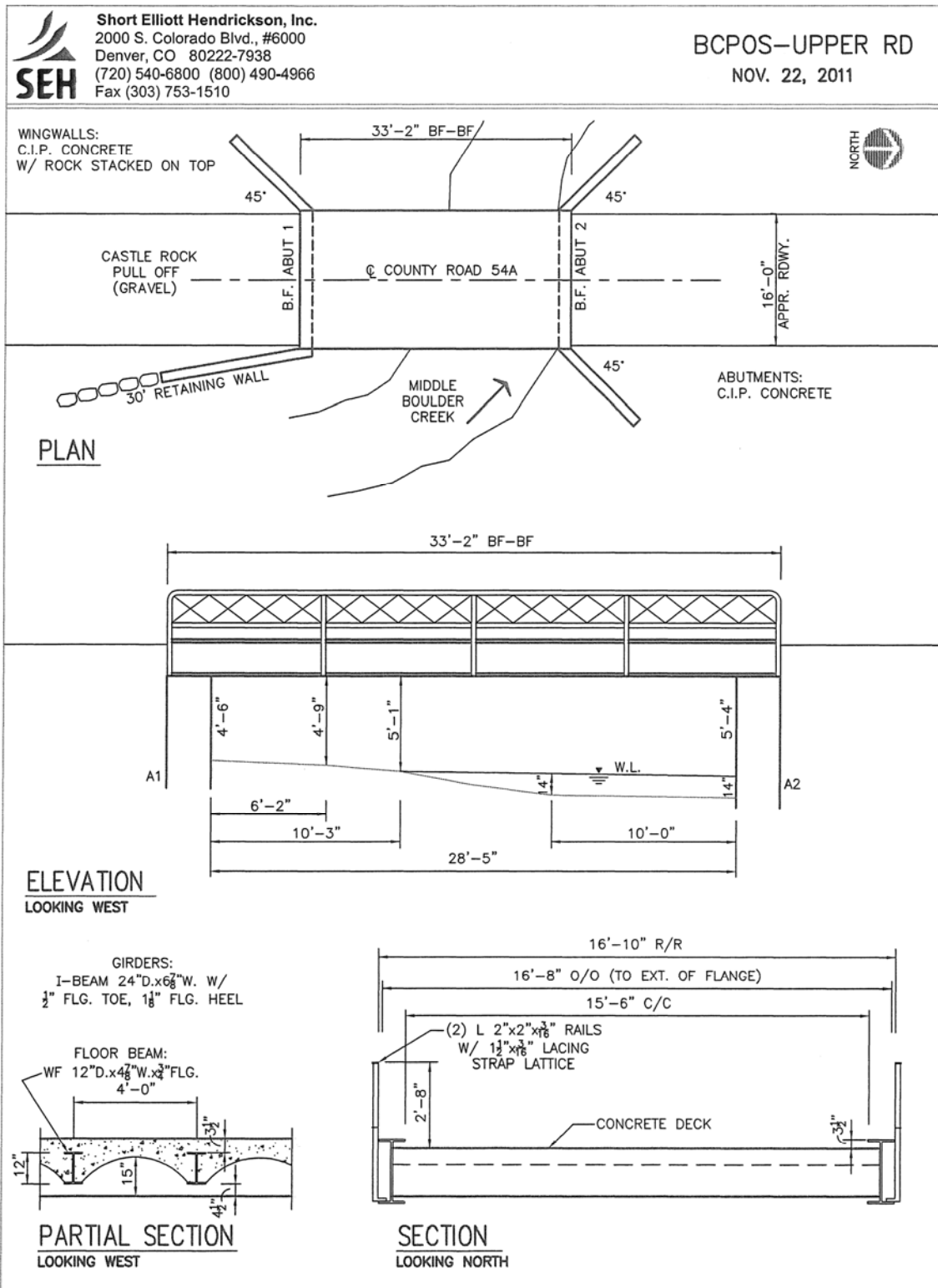
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<sup>1</sup>Robert Z. Drake, chief engineer of the Nebraska Highway Department, was given credit in that state for the invention of the transverse-joist girder, though there is some question about the provenance of the bridge's development. Spans were typically fifty to sixty feet for major river bridges, with roadways ranging from 16 to 20 feet in width. By 1927, there were more than 1,000 transverse-joist girder bridges in Nebraska. Ted Johnson, "A Discussion of Transverse Joist Girder Bridges," *Nebraska Blue Print*, March 1927.

- 12-inch-deep I beams - that are spaced at four-foot centers. The joists are bolted to the girders using angle brackets, with six bolts at each connection. Corrugated steel culvert sections with a 12-inch arch span between the joists and rest on the joists' lower flanges. These function as the forms for the concrete deck, which varies between 4½ and 15½ inches in depth. Steel lattice guardrails are supported by steel angle columns, which are bolted to the outside flanges of the two girders. The bridge's superstructure rests directly, without benefit of bearing shoes, on a reinforced concrete substructure. This is comprised of relatively short abutments with asymmetrically angled concrete wingwalls at the bridge's four corners. The bridge has undergone some minor collision damage to its guardrails - which has recently been repaired - and the concrete abutments have suffered from spalling, checking and scouring, but it presently stands in structurally fair and historically unaltered condition.

# UPPER CASTLE ROCK BRIDGE

5BL12039



Structural schematic, Short Elliott Hendrickson, Inc. (November 2011).



## IV. STRUCTURAL HISTOR

Y

- |                          |  |   |
|--------------------------|--|---|
| 14. date of construction | actual   | 1917  |
| source of information    | Colorado Highway Department / Boulder newspapers                             |   |
| 15. engineer             | Colorado Highway Department / U.S. Bureau of Public Roads                    |   |
| source of information    | Colorado Highway Department  |   |
| 16. builder / contractor | convict work force   |   |
| source of information    | Colorado Highway Department / Boulder County Commission / Boulder newspapers |   |
| 17. original owner       | Colorado Highway Department  |   |
| source of information    | Colorado Highway Department  |   |
| 18. construction history | (See also overview report)   | The original Boulder Cañon Road was construc- |

ted in 1871 and was heavily damaged by flooding in 1894. In 1913 the Boulder County Commission moved to reconstruct the road, contacting Thomas Tynan, warden of the Colorado State Penitentiary in Cañon City, regarding the use of convict labor for the work. In a meeting with the county commissioners, Tynan offered to rebuild the Boulder Cañon Road to a 16-foot width over its entire length for \$2,500. He estimated that a crew of 35 to 40 men could complete work on about three miles of road per month (less in the narrows area), and the total cost of upkeep of the camp, including food for the convicts and feed for the livestock, would not exceed \$800 per month.

The following spring the prisoners began work at the canyon's east end and worked their way slowly westward. They undertook the first large-scale work on the road since its initial construction, regrading it to two-lane width, easing sharp curves and eliminating bridges and steep grades when possible. The men dug a three-foot-wide ditch on the roadway's uphill side to allow for drainage and left a three-foot-wide space on the downhill side for later construction of retaining walls. The convict crew had worked in the canyon less than two months when the canyon flooded—the worst flood since 1894. All the wagon bridges below Boulder Falls were washed out, as were dams east of Nederland, large stretches of the wagon road and much of Boulder's main water supply line.

After rebuilding the camp, the convict gang resumed work on the road. With prisoners rotating in and out of the crew from details elsewhere in the state, the men worked without serious incident through the remainder of 1914 and into 1915. A movement to replace the convicts with unemployed miners circulated briefly in early 1915 but never really gained traction, and the crew worked steadily up the canyon through 1915 and into 1916. By May 1916 the roadwork had been completed to Eagle Rock Bridge; by September the men were reported building the concrete footings for the bridge at Boulder Falls.

In February 1917 the Boulder Commercial Association staged a banquet for the prison crew "as a token of appreciation of the good work done in Boulder cañon." Held at the Hotel Boulderado, the fete was, according to Warden Tynan, the first time that a city had played host to convicts. About forty felons mingled with "the pink of Boulder society" at the banquet, an

# UPPER CASTLE ROCK BRIDGE

5BL12039

event novel enough to attract a motion picture crew. "Boulder was placed on the map," according to the *Camera*, "also on the screens."

Later that year the road crew had made it as far up the canyon as Castle Rock. Here the men encountered two existing bridges over Boulder Creek, built sometime after the 1894 flood. The existing Upper Castle Rock Bridge was a two-span timber stringer structure, with log crib pier and abutments, timber deck and log hub rails bolted to the roadway's edges. The structure was located relatively low to the water, and its replacement would be only slightly higher. Designed by engineers for the Colorado Highway Commission from a standard plan developed by the Bureau of Public Roads, the Upper Castle Rock Bridge was configured as a single-span transverse-joist girder, with the steel superstructure supported by a reinforced concrete substructure. The existing Lower Bridge, located a mile down the canyon, resembled the Upper Bridge. For this structure, the engineers delineated a heavily skewed, single-span concrete slab, held nine feet above the stream on massive reinforced concrete abutments with angled wingwalls.

The convicts demolished the existing Upper and Lower Castle Rock Bridges and constructed their concrete/steel replacements, first placing the concrete abutments and later the superstructures. The new bridges were completed by the end of the year. The crew continued work westward through 1918 and had the Boulder Cañon Road completed to Nederland by 1919. With the United States at war in Europe, there was no dedication ceremony to commemorate the event.

19. original location     x     moved                      date of move(s)

## V. HISTORICAL ASSOCIATIONS

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20. original use(s)	TRANSPORTATION - vehicular bridge
21. intermediate use(s)	TRANSPORTATION - vehicular bridge
22. current use(s)	TRANSPORTATION - vehicular bridge
23. site type(s)	steel / concrete vehicular bridge
24. historical background	(See overview report)
25. sources of information	Short Elliott Hendrickson Inc. "Bridge Inspection Report: Upper Bridge, Structure Number BCPOS-UPPER BR." 14 December 2011.
	"Beautiful Cañon Road Convicts Will Build." <i>Boulder Daily Camera</i> , 2 April 1914.
	Boulder County Commissioners. <i>Proceedings of the Board of County Commissioners - 1898-1954</i> . Located at Boulder County Courthouse, Boulder, Colorado.
	Becker, Isabel M. <i>Nederland: A Trip to Colorado</i> . Nederland: Nederland Area Historical Society, 2004.
	"Boulder County Spent Money Largely for Building Roads." <i>Boulder Daily Camera</i> , 22 February 1922.

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- "Boulder Creek on Rampage Washes Out Many Bridges." *Boulder Daily Camera*, 2 June 1914.
- Colorado State Highway Commission. *Fourth Biennial Report of the State Highway Commission of the State of Colorado 1917*. Denver: Eames Bros., 1915.
- Colorado State Highway Commission. *Third Biennial Report of the State Highway Commission of the State of Colorado 1914*. Denver: Smith-Brooks Printing Company, 1915.
- Johnson, Ted. "A Discussion of Transverse Joist Girder Bridges," *Nebraska Blue Print*, March 1927.
- "Movies Will See Convicts Dining in Boulder Society." *Boulder Daily Camera*, 21 February 1917.
- McGinn, Elinor Myers. *At Hard Labor: Inmate Labor at the Colorado State Penitentiary, 1871-1940*. New York: Peter Lang Publishing Co., 1993.
- Pettem, Silvia. "Tracking Down Boulder, Colorado's Railroads and Roads of the Mountains and Plains (typewritten)." 1996. Located in Carnegie Library, Boulder, Colorado
- "Work in Boulder Cañon Is Proceeding Finely." *Boulder Daily Camera*, 16 September 1916.
- "Mr. Tynan Is Ready to Boost Boulder." *Boulder Daily Camera*, 17 September 1913.
- "Boulder Men Made Dirt Fly Along the Boulder Cañon Road." *Boulder Daily Camera*, 28 May 1913.
- "Convicts Work on the County Roads." *Boulder Daily Camera*, 9 December 1910.
- "Rigid Standards Needed in Good Bridge Construction." *Colorado Highways Bulletin* 1:2 (July 1918), 5.
- Wilmot, Sydney. "Use of Convict Labor for Highway Construction in the North." *Proceedings of the Academy of Political Science* IV:2 (January 1914), 246-340.

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VI. SIGNIFICANCE

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26. local landmark designation yes ☐ no ☒

date of designation

designating authority

27. applicable National Register criteria

- ☒ A associated with events that have made a significant contribution to the broad pattern of history
- ☐ B associated with the lives of persons significant in the past
- ☒ C embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction



# UPPER CASTLE ROCK BRIDGE

5BL12039

- ☐ D has yielded, or may be likely to yield, information important in history or prehistory  
☐ qualifies under Criteria Considerations A through G  
☐ does not meet any of the above National Register criteria

28. area(s) of significance      transportation;    engineering

29. period of significance      1917-1947

30. level of significance      national ☐    state ☒    local ☐

31. statement of significance      (See also overview report)      The Upper Castle Rock Bridge is eligible for listing

as a Boulder County Landmark—as well as a State and National Register Historic Place—for its contribution as an integral component of the Boulder Cañon Highway to the development, heritage or cultural characteristics of the county and the state. The reconstruction of the road in 1914-1918 occurred at a time when highway administration was just getting underway in the county, the state and the country. The Colorado Highway Department was just developing its engineering and construction procedures and learning how to coordinate its efforts with the Bureau of Public Roads, which itself was just getting started. Similarly, Boulder County was at that time acquiring the administrative skill for modern highway construction. Among the principal agencies, the state penitentiary was the most experienced, having sent prisoners out to work for six years before embarking on the Boulder Cañon project. Yet Warden Tynan proved to have underestimated woefully the amount of time, work and money for the project when he assured the county that he could rebuild the mountain road in a few months' time at a cost of only \$2,500. In truth, none of the principals in the project could state with confidence that it really knew what it was doing. It would take years of experience accrued over time to develop the necessary efficiencies in design, construction and administration. The Castle Rock Bridge is historically significant on a statewide basis for its illustration of this formative nature of road and bridge construction in Colorado at the time.

More importantly, the Boulder Cañon Road represents one of the few instances in Colorado of the use of convict labor for road construction. Such construction flourished in the early 20<sup>th</sup> century in America. Colorado's was one of the most successful convict road programs in the country during the 1910s, and the Boulder Cañon Road was one of the state's most noteworthy prison-sponsored ventures. That a structurally sophisticated highway bridge such as this could be built by a relatively unskilled work force illustrates the efficacy of the program. The Castle Rock Bridge is historically significant as one of the few—and perhaps the only—intact examples of convict-built highway bridges remaining in Colorado.

The Upper Castle Rock Bridge is also eligible for listing as a Boulder County Landmark—and, again, as a State and National Register Historic Place—for its embodiment of architectural or structural innovation. It was among the first of its structural type built by the state highway department in the 1910s. CHD was at that time encouraging concrete/ steel

construction as a more durable alternative to timber. The agency promulgated standard designs for concrete slab, concrete girder and steel stringer bridges to the counties in the 1910s, but the counties resisted, claiming that the CHD structures were heavier and more expensive than they could afford. The Upper Castle Rock Bridge serves to confirm this suspicion. It employed a straightforward structural type, but its configuration as a transverse-joint girder would prove to be structurally inefficient and functionally limited. This structural type was never built in abundance in Colorado and was soon superseded by more efficient and more modern bridges. Though innovative at the time of its deployment, it fell victim to the rapidly changing state of the engineering art of the 1910s. To put it in Darwinian terms, it represents an evolutionary dead end in the development of bridge engineering. Ironically, it is this over-engineering that has contributed to structures' excellent state of preservation. As a result, the Upper Castle Rock Bridge is technologically significant as among the best-preserved and the last remaining examples of its structural type found in Colorado.

In almost pristine condition structurally, the span accrues an additional degree of integrity of setting from the fact that the adjacent road is essentially unimproved since its initial construction in 1917. State Highway 119 was rerouted before it could be paved along this section, leaving the road and bridge in essentially original condition. It is thus among a small number of structures standing today that convey a strong feeling of what it was like to travel Colorado's earliest highways in the 1910s and early 1920s.

32. assessment of historic physical integrity The structure retains a high degree of integrity, as discussed

below. Location: Location is the place where a property was built and occupied during its period of significance. The Upper Castle Rock Bridge was erected on this site and functioned on this site during its period of significance. It thus exhibits integrity of location. Design: Design is the combination of elements that create the form, plan, space, structure and style of a property. The bridge appears to have undergone no alterations to its design. It retains its character-defining elements and thus its integrity of design. Setting: The setting is the area of environment in which a historic property is found. The bridge was constructed on a two-lane gravel-surfaced road in a rural setting, which has not changed appreciably since its construction. It thus retains integrity of setting. Materials: Materials are the physical elements that were combined during a particular period and in a particular pattern or configuration to form a historic property. The materials that comprise the bridge have not been changed since its completion, and the structure therefore retains its material integrity. Workmanship: Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history. . The bridge was constructed with a relatively specific degree of workmanship -- that is, a professionally engineered structure constructed under the auspices of a government agency of the

1910s. In this regard, it remains unchanged and thus maintains integrity of workmanship. Feeling: Feeling is the property's expression of the aesthetic or historic sense of a particular period of time. As a structure operating in its original physical context and functional capacity, the bridge maintains a high degree of integrity of feeling. Association: Association is the direct link between an important historic event or person and a historic property. As a structure erected by a convict work gang on a mountain highway during the earliest years of the Colorado State Highway Commission, the bridge retains a strong integrity of association. The fact that the adjoining section of roadway was abandoned in 1947, while it was still a winding, gravel-surfaced route, contributes considerably to the site's sense of feeling and association. The Upper Castle Rock Bridge is thus one of the best-preserved bridges - in both its physical condition and its surroundings - dating from the Colorado Highway Commission's formative period.

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#### VII. NATIONAL REGISTER ELIGIBILITY ASSESSMENT

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33. National Register eligibility field assessment:

eligible  x  not eligible   need data

34. National Register district potential yes   no  x

If there is National Register district potential, is this structure: contributing   noncontributing

35. If the structure is in existing National Register district, is it: contributing   noncontributing

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#### VIII. RECORDING INFORMATION

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36. photographer: Clayton B. Fraser  
37. photo date: April 2013  
38. negatives filed at: Boulder County Parks and Open Space Department  
Longmont, Colorado  
39. report title: Castle Rock Bridges: Site Nos. 5BL.12038 and 5BL.12039  
40. report date: 30 May 2013  
41. recorder(s): Clayton B. Fraser  
Fraserdesign  
5700 Jackdaw Drive  
Loveland, Colorado 80537  
970-669-7969





Upper Castle Rock Bridge, overall view from highway with Castle Rock at right. View to south.



Upper Castle Rock Bridge, overall view from Castle Rock. View to northeast.





Upper Castle Rock Bridge, overall view from highway with Castle Rock at left. View to north.



Upper Castle Rock Bridge, overall view with Castle Rock behind. View to west.





Upper Castle Rock Bridge, north portal. View to south.



Upper Castle Rock Bridge, south portal. View to north.





Upper Castle Rock Bridge, west side. View to east.



Upper Castle Rock Bridge, east side. View to west.





Upper Castle Rock Bridge, east side. View to northwest.



Upper Castle Rock Bridge, view along east girder looking toward north abutment. View to northwest.





Upper Castle Rock Bridge, south abutment, showing bearing of west girder. View to southeast.



Upper Castle Rock Bridge, south abutment, showing bearing of east girder. View to southwest.





Upper Castle Rock Bridge, detail of west girder, showing lattice guardrail and bolts connecting transverse joists to girder. View to northeast.



# UPPER CASTLE ROCK BRIDGE

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5BL.12039

Upper Castle Rock Bridge, underside and north abutment. View to north.





Upper Castle Rock Bridge, detail of guardrail. View to southeast.



Upper Castle Rock Bridge, detail of girder, showing steel manufacturer's mark. View to east.





**COLORADO**

**Department of Transportation**

Region 4

10101 West 10<sup>th</sup> Street  
Greeley, CO 80634  
(970) 350.2153 (Fax) 350.2203

January 18, 2018

Carol A. Beam, Historic Preservation Specialist  
Boulder County Parks & Open Space  
5201 St. Vrain Road  
Longmont, CO 80503

**Subject: Proposed County Landmarking of the Upper and Lower Castle Rock Bridges on Abandoned State Highway 119 in Boulder County, Colorado**

Dear Carol:

I am writing to express the Colorado Department of Transportation's (CDOT's) support for local historic landmark designation of the Lower Castle Rock Bridge (5BL.12038) and the Upper Castle Rock Bridge (5BL.12039) along abandoned State Highway (SH) 119 near Nederland in Boulder County. These bridges (and all of Boulder County) are situated within CDOT's Region 4. I have reviewed the historic resource inventory forms and documentation for these bridges prepared by Clayton B. Fraser of Fraserdesign in April-May of 2013, and am in complete agreement that these well-preserved, convict-labor built bridges are highly significant resources embodying both historical and engineering significance. Landmark designation will provide the recognition and ensure the stewardship that they deserve as important vestiges of Boulder County's transportation heritage.

As a representative of CDOT responsible for helping the agency achieve its historic preservation mandate, I thank you for the opportunity to express CDOT's support for this worthy proposal.

Sincerely,

Jason Marmor  
CDOT Region 4 Senior Historian

cc: James Eussen, Region 4 Planning and Environmental Unit Manager; File/Central Files



# Land Use

Courthouse Annex • 2045 13th Street • Boulder, Colorado 80302 • Tel: 303.441.3930 • Fax: 303.441.4856  
Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • [www.bouldercounty.org](http://www.bouldercounty.org)

## **BOULDER COUNTY HISTORIC PRESERVATION ADVISORY BOARD**

**MARCH 1, 2018 – 6:00 PM**

**Hearing Room, Third Floor  
Boulder County Courthouse**

### **PUBLIC HEARING**

#### **Docket BCCP-13-0001: BOULDER COUNTY COMPREHENSIVE PLAN UPDATE: Cultural Resources Element Update**

HPAB discussion of the Cultural Resources Element update.

*Staff:* Denise Grimm, Senior Planner

### **INTRODUCTION**

The purpose of this item is to request final comments from HPAB on the update of the Cultural Resources (CR) Element of the Boulder County Comprehensive Plan (BCCP). Following HPAB comment, staff will take this to the Planning Commission for adoption. The content in the updated CR Element was approved by HPAB and the Planning Commission in 2013, with a request for minor edits to address language consistency, etc. The project was deferred following the 2013 flood. Staff is now finalizing the updated content and applying the new BCCP template structure. Staff asks for any final comments.

### **CONTENTS**

Section	Description	Pages
Section I	Background and Process	2
Section II	Summary of Proposed Changes	2-3
Section III	Conclusion	3
Attachment A	Existing BCCP Cultural Resources Element	
Attachment B	Proposed Revised BCCP Cultural Resources Element	
Attachment C	Table Summarizing Changes	

## **I. BACKGROUND AND PROCESS**

Staff worked with the Historic Preservation Advisory Board (HPAB) and Planning Commission to review and revise this element in 2013. It was approved by Planning Commission but not yet adopted pending additional edits to take into account their suggestions on editing and consistency of language. We also wanted to follow the progress of other BCCP elements and revise to follow the format being established through those updates. Flood recovery has delayed getting back to the project but now we are ready to complete the process and we have other BCCP elements that have set the format and organizational style that the CR element can now follow as well.

Since the beginning of the update process of the CR element, staff has made an effort to achieve the BCCP update project goals which include: clarifying, eliminating redundancies, correcting outdated references, removing policies which are programmatic in nature rather than policy-oriented, and achieving a more concise and understandable form. We believe the attached draft can be approved but are open to continued comment if the Commissioners have further suggestions.

## **II. SUMMARY OF PROPOSED CHANGES**

For this proposed draft of the CR Element staff shortened the introduction, streamlined and removed some policies, and added some policies to cover issues related to energy efficiency, natural disasters and funding. In addition, staff revised some terminology for consistency, and made additional minor changes to address previous input from the Planning Commission and Historic Preservation Advisory Board.

There has been a concerted effort to delete programmatic items throughout all of our Comprehensive Plan elements, and to ensure that the scope this document is limited to broader policy vision-related content. This accounts for the removal of some items from the existing CR Element. That doesn't mean that we are no longer pursuing those efforts, but rather that they are too specific or belong in an implementation document rather than a policy document. When the CR element was first created in 1994 a number of the items pertained to creating historic preservation program. Now that we have had an operating program since the early 1990s our goals and policies are geared more towards maintaining that effort rather than creating a new system.

## **III. CONCLUSION**

Staff requests comments from the Board (HPAB) before taking for adoption by the Planning Commission.



# ATTACHMENT A

## EXISTING BCCP CULTURAL RESOURCES ELEMENT



Boulder County Comprehensive Plan

CULTURAL  
RESOURCES

Goals, Policies, & Maps Element

*As time progresses, Boulder County faces the loss of more and more of one of its truly non-renewable resources. These resources are the archaeological and historic sites that give the county's modern day residents a tie to the past. Many of these cultural resources are being purposefully demolished or destroyed while others face the natural elements and slowly erode away. Encroaching development and modernization lend an urgency to the need for preservation of archaeologically and historically significant sites.*

Archaeologists typically describe the period of time between 12,000 years ago and the first contact by people of European, African, and Asian decent as prehistoric. The term "prehistoric" is used because written records of this period either are nonexistent or very rare. Instead of researching past cultures by studying their written records, archaeologists must study prehistoric cultures by excavation and similar techniques. Unlike historic sites that are above ground and visible, archaeological sites are often hidden from view, buried underground. Most of the archaeological data that is gathered in Boulder County relates to the Native American population that dominated the entire State of Colorado until the mid 1800s. The most common tribes in Colorado included the Apache, Comanche, Arapaho, Cheyenne, and Ute.

Prehistoric sites are protected through federal, state, and local historic preservation legislation. For each historical site listed in the *Boulder County Historic Sites Survey*, the archaeological potential of the site is evaluated. The exact location of sensitive archaeological sites may be withheld from the public in order to prevent artifact gathering and other forms of destruction. Additionally, archaeological sites must be addressed in a manner that is sensitive to the cultural beliefs of the affected population.

**Archaeological sites must be addressed in a manner that is sensitive to the cultural beliefs of the affected populations.**

In 1991, Boulder County took action on the policy to preserve historic sites by requiring, for the first time, a permit in order to demolish a structure in unincorporated areas of the county. Soon after this initial action, a consultant was hired and public meetings were held to create the foundations for a historic preservation program. On September 29, 1992, the Board of County Commissioners adopted regulations that formulated Boulder County's Historic Preservation Program and led to Boulder County becoming the first county-level Certified Local Government for historic preservation in the State



AMENDMENT STATUS

Goals & Policies	Associated Maps	Background Element
Created 7/27/94	Created March 1978	Created 7/27/94

**TR 8.06 Manage Public Rights-of-Way**

Manage and preserve existing public rights-of-way for current and future community benefit. Vacate public rights-of-way only when it no longer plays a role in the present or planned transportation network nor serves any other public interest.

● **Objective**

**Ensure Transportation System Access for Low-Income, Elderly, and Mobility-Impaired Populations**

Work to create a transportation system that provides affordable and convenient transportation options for all income levels and special mobility populations.

Support programs that reduce the financial burden on and increase affordable transportation options for low-income populations.

**TR 9.01 Promote Affordable Transportation**

Support programs that reduce the financial burden on and increase affordable transportation options for low-income populations.

**TR 9.02 Serve the Mobility-Impaired**

Support coordinated programs that provide safe, accessible, and affordable transportation options for people with limited mobility, including older adults and people with disabilities.

**Glossary**

**Maintenance:** Snow removal, sweeping, asphalt patching, crack filling, road grading, cleaning of culverts and roadside drainage, and repair or replacement of traffic signs and pavement markings.

**Rehabilitation:** Reconstruction, asphalt overlay, and surface treatments.



**TR 7.03 Explore User Fees**

Explore appropriate user fee programs that take into account the full costs of travel, including immediate and long-term impacts to facilities and the environment, to help fund transportation enhancements.

**TR 7.04 Require Appropriate Off-site Improvements**

Require property owners or developers to provide appropriate off-site transportation improvements that are necessitated by or reasonably related to the impacts of new development.

- **Objective**

**Foster a Community Connection**

Preserve, highlight, and enhance the County's rural character, environment and rich history.

**TR 8.01 Context Sensitive Design**

Consider the surrounding natural environment, local community, scenic vistas, and landscape features, through aesthetic treatments and the context-sensitive design of transportation facilities.

**TR 8.02 Encourage Community Involvement**

Recognize that public feedback is an important source of information for decisions about the development of transportation facilities and services. Work collaboratively with the public by providing meaningful opportunities to be involved in decision-making processes. Make decision-making transparent by sharing information and encouraging discussion.

**TR 8.03 Preserve View Corridors**

Prevent the disruption of scenic views by transportation improvements. Promote overlooks, trails, and turnouts on recreational routes and in unique scenic areas.

**TR 8.04 Ensure Natural Preservation**

Make every effort to preserve mature trees, landscape plantings, and other elements of the natural environment during the design, construction, and maintenance of transportation improvements.

**TR 8.05 Preserve Cultural and Historic Resources**

Consider the cultural and historical context of the surrounding area when planning and designing transportation improvements. Work with residents of townsites, such as Eldorado Springs, Allenspark, Raymond/Riverside, Gold Hill, and Eldora and other distinct communities, to identify important aspects of community character that should be preserved and enhanced by transportation improvements.

Work collaboratively with the public by providing meaningful opportunities to be involved in decision-making processes.

<p>Allow for special assessments to fund transportation improvements to the properties that specially benefit from such improvements, such as subdivisions or commercial, institutional, private recreational, or other benefitted development.</p>	<p><b>TR 6.03 Prohibit Improvements with Unacceptable Impacts</b></p> <p>After considering reasonable mitigation, transportation system facilities and access improvements may be prohibited. This may include improvements on public and/or private lands that cause unacceptable impacts to the natural environment, including scenic views and rural character, or to the surrounding community; that unreasonably compromise public safety or emergency response; or that facilitate development incompatible with the goals of the Comprehensive Plan.</p> <p><b>TR 6.04 Promote Public Safety</b></p> <p>Promote the safety of transportation system users and the public as a core parameter when designing, constructing, or approving transportation facilities. Coordinate with local fire districts, emergency responders, and other agencies to implement appropriate transportation public safety measures.</p> <p><b>TR 6.05 Manage Access to the Transportation Network</b></p> <p>Implement an access management program that systematically manages the number, location, spacing, design and operation of driveways, median openings and road connections to ensure the safety and mobility of all road users, and to minimize environmental impacts.</p>	<p><b>TR 6.06 Provide Implementation through the Transportation Standards</b></p> <p>The Boulder County Road Standards and Specifications shall reflect the goals of the Comprehensive Plan. All transportation improvements shall be designed and constructed consistent with the Boulder County Road Standards and Specifications and the Boulder County Land Use Code.</p> <p>● <b>Objective</b></p> <p><b>Secure Funding in an Equitable Manner</b></p> <p>Explore multiple funding sources to serve citizens and meet Countywide transportation needs in a fair and equitable manner.</p> <p><b>TR 7.01 Allow for Special Assessments</b></p> <p>Allow for special assessments to fund transportation improvements to the properties that specially benefit from such improvements, such as subdivisions or commercial, institutional, private recreational, or other benefitted development. Funding mechanisms may include special assessments or other appropriate revenue-generating programs.</p> <p><b>TR 7.02 Create Funding Partnerships</b></p> <p>To improve, maintain, and insure the integrity of the transportation system, pursue to the extent possible funding partnerships and creative funding sources.</p>
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**TR 5.03 Use Sustainable Practices**

Use resource-efficient materials and equipment to the greatest extent feasible in the construction, maintenance, and operation of County transportation facilities.

- discourage development in natural hazard areas or other dangerous locations where unsafe conditions may be exacerbated or emergency services not practically or safely available.

**TR 5.04 Manage Parking**

Develop parking management policies for public and private facilities that encourage the use of alternative modes.

Methods to address these concerns may include revising Boulder County Road Standards and Specifications, limiting public funding or authorization for maintenance of unimproved roads, and adopting zoning provisions to balance remote rural land uses with the absence of developed vehicular access in such areas.

- Objective**

**Provide Safe and Environmentally Compatible Transportation Improvements**

Require all transportation improvements to uphold the goals of the Comprehensive Plan.

**TR 6.01 Manage Rural Roads to Preserve Rural Character**

Explore reasonable means to retain necessary existing, unimproved or unmaintained public roads in a relatively undeveloped state to:

- prevent the over-intensive use of sensitive or remote lands,
- preserve the County's valued rural character,
- minimize adverse scenic and environmental impacts,
- avoid inappropriate and costly road maintenance activities in environmentally fragile areas, and

**TR 6.02 Minimize and Mitigate Impacts**

Ensure that transportation system facilities and access improvements, which may include sections on public and/or private lands, are designed, constructed, and maintained to minimize impacts to the natural environment, including scenic views and rural character, and to the surrounding community. All improvements shall reasonably mitigate the adverse impacts resulting from them.

Ensure that transportation system facilities and access improvements are designed, constructed, and maintained to minimize impacts to the natural environment.



**TR 3.06 Require Appropriate Right Of Way Dedications**

Require new development and redevelopment to dedicate their fair share of right-of-way for any County transportation facility shown on an adopted transportation plan on which the development abuts, consistent with the right-of-way widths specified on the transportation plan.

**TR 3.07 Encourage Right of Way Annexation**

Encourage local communities to annex the full right-of-way when the adjacent land is annexed.

● **Objective**

**Move People**

Implement a transportation system that moves people safely and effectively independent of an assumed mode of travel.

**TR 4.01 Reduce Single-Occupant-Vehicle Travel**

Reduce single-occupant-vehicle (SOV) travel and shift SOV travel to off-peak periods through a variety of programs and techniques, including Transportation Demand Management (TDM).

**TR 4.02 Increase Person Capacity**

Increase the overall person-carrying capacity of the transportation network through the efficient use of existing rights-of-way.

**TR 4.03 Make Balanced Multimodal Decisions**

When considering proposed improvements, use a person-based, rather than vehicle-based, evaluation to balance transit, pedestrian, bicycle, and vehicle mobility.

**TR 4.04 Facilitate Active Living**

Create a transportation system that enables active and healthy lifestyles by providing safe and attractive opportunities to walk and bike as part of everyday living.

● **Objective**

**Minimize Reliance on Fossil Fuels**

Foster a transportation system that reduces demand for and reliance upon petroleum.

**TR 5.01 Reduce Vehicle Miles Traveled**

Set goals for vehicle miles traveled (VMT) per capita reductions for 2015, 2020 and 2030. Encourage incorporated areas inside the County to adopt similar goals.

**TR 5.02 Use Energy Efficient Transportation Technologies and Fuels**

Encourage public use of renewable energy and energy-efficient vehicle technologies and plan for related infrastructure needs. Participate in efforts to decrease use of GHG-intensive fuels and increase vehicle fuel efficiency.

Implement a transportation system that moves people safely and effectively independent of an assumed mode of travel.

**TR 2.02 Facilitate Project Collaboration.**

Promote efforts to collaborate on the design and implementation of local and regional projects. Initiate activities that bring together different communities, agencies, and other stakeholders to develop creative ways to meet County goals and those of others.

**TR 2.03 Encourage Alternative Transportation**

Support efforts by local communities that decrease single-occupant vehicle travel on the Countywide transportation system.

**TR 2.04 Connect Communities**

Focus County services and resources on enabling seamless multimodal travel between urban areas within the County and region.

- **Objective**

**Optimize County Facility Management and Maintenance**

Maintain and operate County transportation facilities at the highest level of quality, commensurate with available resources and consistent with the goals of the Comprehensive Plan. The County's investment in the existing transportation system shall be protected by emphasizing maintenance of existing facilities.

**TR 3.01 Prioritize Travel Corridors**

In order to benefit the most people, and connect all parts of the County, give priority to improving mobility in, and the maintenance and rehabilitation of, the County's arterial and collector transportation corridors.

**TR 3.02 Prioritize Operations Over Construction**

Implement operational improvements to improve mobility in a corridor before initiating construction-based solutions. Reduce the need for new capital improvements through investments in operations, demand management strategies, and system management activities that improve the efficiency of the current system.

**TR 3.03 Ensure Sustainable Design**

Design all new County facilities to minimize future maintenance costs and environmental impacts, and to encourage the use alternative modes to the degree feasible.

**TR 3.04 Maintain Bicycle and Pedestrian Facilities**

Maintain bicycle and pedestrian facilities on County-owned or controlled right-of-way in a safe condition.

**TR 3.05 Monitor Gravel Roads**

Consider the paving of County-owned roads when the minimum level of 500 vehicles per day, average daily traffic, is attained. In making paving decisions, evaluate factors such as safety, costs, residential density, traffic volume, traffic composition, air quality levels and mitigation, and compliance with applicable regulations. In addition, consider the impact of paving on health, the rural character of the County, the nature of the surrounding community, potential effects on growth, public input, and other goals of the Comprehensive Plan.

Maintain and operate County transportation facilities at the highest level of quality, commensurate with available resources and consistent with the goals of the Comprehensive Plan

# ATTACHMENT B

## PROPOSED REVISED BCCP CULTURAL RESOURCES ELEMENT



## **Attachment B**

### **Boulder County Comprehensive Plan**

#### **Cultural Resources**

##### **Overview**

As time progresses, Boulder County faces the loss of more and more truly non-renewable resources: the cultural resources that tie the county's modern day residents to the past. Many of these cultural resources are being purposefully demolished or destroyed while others face the natural elements and slowly erode away. Encroaching development and modernization lend urgency to the need for the preservation of our significant cultural resources.

Cultural resources can be anything resulting from human activity. These resources can include buildings, sites, districts, landscapes, tools, art, trails, etc., that are important to our knowledge of human development. These resources range from the earliest known human habitation dating back thousands of years, to the modern developments of the 21st century.

Boulder County's preservation efforts focus primarily on: archaeological resources (either historic or prehistoric), as well as historic buildings, sites, districts and landscapes (including resources from prehistoric times to 50 years of age).

##### **Goal**

**Goal 1.** Identify and Protect. Boulder County identifies and protects cultural resources which meet national, state, or local criteria for historic designation from destruction or harmful alteration.

##### **Policies**

CR 1.01 Documentation of Resources. Boulder County shall continue researching and documenting the county's cultural resources including maintaining a comprehensive historic sites survey. This survey will be updated as necessary to include those sites and new sites as they become 50 years old.

CR 1.01.01 Boulder County shall periodically update its Historic Preservation Work Plan to assess the success of previous preservation efforts and determine the priority of preservation efforts.

CR 1.01.02 Boulder County staff may monitor landmark sites to ensure that the terms of the landmarking are being met by the property owner.

CR 1.02 Treatment of County Owned Properties. Properties containing significant cultural resources acquired by Boulder County both in unincorporated and incorporated areas, will be documented, protected, preserved, and where appropriate, restored.

CR 1.02.01 After acquisition, an inventory of cultural resources on the property will be undertaken and the historic significance of each resource will be determined.

CR 1.02.02 Resources that meet the criteria for local landmark, or State or National Register status will be nominated for such status by the county as time and resources permit.

CR 1.03 Protection of Resources. The Boulder County Land Use Code and attendant regulations will ensure that significant cultural resources are protected.

CR 1.03.01 The Historic Preservation Advisory Board shall be a referral agency for all land use proposals where a possible impact to cultural resources has been identified. Boulder County will seek protection of significant resources through local designation or other protective means when a proposal by the private sector is subject to discretionary development review.

CR 1.03.02 The applicant for land use proposals received for areas identified as being archaeologically sensitive may be required to conduct an investigation of the area's archaeological significance. The scale and location of the proposal will determine if such an investigation will be required.

CR 1.03.03 In communities where Boulder County's zoning regulations are not consistent with the historical pattern of development, the county shall recognize the importance of the historical pattern by implementing zoning amendments or taking the historical pattern of development into consideration during the review process.

CR 1.03.04 Boulder County may offer a variety of tools to address preservation and conservation objectives.

*Put in sidebar:*

*Specific tools may include incentives programs, landmark designation of cultural resources, design review, conservation districts, and easements, among others. These tools may be applied in areas that do not qualify as local historic districts but contain features that contribute to the quality of the community. These areas may include historic resources that have lost integrity, neighborhoods with significant character but that are not historically significant, and scattered sites that share a common historic or architectural theme.*

CR 1.04 Cooperation with Other Jurisdictions. Boulder County shall encourage inter-jurisdictional cooperation to further the goals of cultural resource preservation.

CR 1.04.01 Boulder County shall maintain Certified Local Government status with the State of Colorado and the United States Department of the Interior and participate in the nomination and designation of properties eligible for the state and national registers.

CR 1.04.02 Through the use of intergovernmental agreements, Boulder County may cooperate with incorporated municipalities to offer the advantages of a local landmarking program to the municipalities within the county that do not have such a program.

CR 1.04.03 Boulder County shall pursue joint preservation plans and/or intergovernmental agreements with municipalities which address the preservation of cultural resources of interest to both jurisdictions, and continued recognition of county historic landmark status after annexation by the municipality.

CR 1.05 Informational Resource. Boulder County, and specifically the Historic Preservation Advisory Board, shall be an informational resource to Boulder County citizens interested in historic preservation.

CR 1.06 Traditional Cultural Places. Sites within Boulder County associated with traditional cultural practices may fall within the purview of the county's historic preservation regulations, provided that the use of the site can be documented and meets the criteria for designation at the local, state, or national level.

CR 1.06.01 Applicants engaged in a discretionary land use proposal in a location where American Indian artifacts have been found, or where oral traditions indicate the site was used by American Indians in the past, shall conduct research to determine the extent of the archaeological significance of the site. Prior to the removal of any artifacts or further development on any such site, the applicant shall confer with the affected tribes to determine the appropriate mitigation measures necessary for protection of the site.

CR 1.07 Energy Efficiency. As Boulder County pursues efforts to improve the energy and resource efficiency of new and existing buildings, the county will be sensitive to the unique situations that involve historic preservation and allow for reasonable flexibility to further both goals.

CR 1.08 Natural Disasters. Boulder County will pursue efforts to protect cultural resources from natural disasters.

CR 1.09 Funding. Boulder County shall continue to research, review, and take action to secure funding and technical assistance from other agencies and institutions to advance cultural resource identification, protection and restoration when appropriate. **Goal**

**Goal 2.** Educate and Incentivize. Whenever possible, Boulder County furthers the goal of cultural resource preservation using education and incentives in lieu of regulatory controls.

## **Policies**

CR 2.01 Education and Incentives. Boulder County shall implement its historic preservation goals through education of the public and the offering of incentives whenever possible.

CR 2.01.01 Boulder County may offer the owners of properties that are designated as historic landmarks variations from the building code requirements, provided the variations support preservation of the landmark and the variation is not placing the health, safety, and welfare of county residents and visitors at risk.

CR 2.01.02 Boulder County shall continue to implement and explore new opportunities for local incentive programs for historic preservation.

*Put in sidebar:*

*Incentive programs may include, but are not limited to, a grant program, a revolving loan fund, offering bonus density for the preservation of significant archaeological sites or historic structures, exceptions to Land Use Code and building code requirements, and a local tax-credit program.*

CR 2.01.03 Boulder County shall recognize its citizens by nominating outstanding preservation efforts for archaeological and historic preservation awards.



# ATTACHMENT C

## TABLE SUMMARIZING CHANGES

## Attachment C

NUMBER	CURRENT	PROPOSED	COMMENT
	<b>Goals</b>		
K.1 to 1	Every effort shall be made to identify and protect prehistoric and historic sites which meet national, state, or local criteria for historic designation from destruction or harmful alteration.	Identify and Protect. Boulder County identifies and protects cultural resources which meet national, state, or local criteria for historic designation from destruction or harmful alteration.	
K.2 to 2	Whenever possible, the county shall further the goal of cultural resource preservation using education and incentives in lieu of stringent regulatory controls.	Incentivize. Whenever possible, Boulder County furthers the goal of cultural resource preservation using education and incentives in lieu of regulatory controls.	
	<b>Policies</b>		
CR1.01	Boulder County, utilizing staff, volunteers, and professionals, shall continue researching county historic structures, sites, and districts and archaeologically sensitive areas.	Documentation of Resources. Boulder County shall continue researching and documenting the county's cultural resources including maintaining a comprehensive historic sites survey. This survey shall be updated as necessary to include those sites and new sites as they become 50 years old.	CR.1.01 and 1.01.01 combined
CR 1.01.01	A comprehensive historic sites survey shall be conducted which identifies the resources of historic significance within the county. This survey shall be updated as necessary to include those sites which, though not presently over 50 years of age, become so as time goes on.		See above
CR 1.01.02 to CR 1.01.01	The county shall annually update its Historic Preservation Work Plan to assess the success of previous preservation efforts and determine the priority of preservation efforts throughout the coming year.	Boulder County shall periodically update its Historic Preservation Work Plan to assess the success of previous preservation efforts and determine the priority of preservation efforts.	

CR 1.02.03- (note: number ring incorrect in current version) to CR 1.01.02	Boulder County staff shall monitor landmark sites to ensure that the terms of the landmarking are being met by the property owner.	Boulder County staff may monitor landmark sites to ensure that the terms of the landmarking are being met by the property owner.	
CR 1.02	Significant archaeological and historic sites and structures acquired by the county both in unincorporated and incorporated areas, shall be documented, protected, preserved, and where appropriate, restored.	County Owned Properties. Properties containing significant cultural resources acquired by Boulder County both in unincorporated and incorporated areas, shall be documented, protected, preserved, and where appropriate, restored.	
CR 1.02.01	After acquisition, an inventory of cultural resources on the property shall be undertaken and the historic significance of each resource shall be determined.	No change.	
CR 1.02.02	Resources that meet the criteria for local landmark, or State or National Register status should be nominated for such status by the county.	No change.	
CR 1.03	The Boulder County Land Use Code and attendant regulations shall insure that historic and archaeological resources are protected.	Protection of Resources. The Boulder County Land Use Code and attendant regulations shall ensure that significant cultural resources are protected.	
CR 1.03.01	The Historic Preservation Advisory Board shall be a referral agency for all land use proposals where a possible impact to a historic or archaeological site has been identified.	The Historic Preservation Advisory Board shall be a referral agency for all land use proposals where a possible impact to cultural resources has been identified. Boulder County will seek protection of significant resources through local designation or other protective means when a proposal by the private sector is subject to discretionary development review.	



CR 1.03.02	The applicant for land use proposals received for areas identified as being archaeologically sensitive may be required to conduct an investigation of the area's archaeological significance. The scale and location of the proposal will determine if such an investigation will be required.	No change.	
CR 1.03.03	In communities where the county's zoning regulations are not consistent with the historical pattern of development, the county shall recognize the importance of the historical pattern by implementing zoning amendments or taking the historical pattern of development into consideration during the variance process.	In communities where the county's zoning regulations are not consistent with the historical pattern of development, the county shall recognize the importance of the historical pattern by implementing zoning amendments or taking the historical pattern of development into consideration during the review process.	
New CR 1.03.04		Boulder County may offer a variety of tools to address preservation and conservation objectives.	<i>Put in sidebar: Specific tools may include incentives programs, landmark designation of cultural resources, design review, conservation districts, and easements, among others. These tools may be applied in areas that do not qualify as local historic districts but contain features that contribute to the quality of the community. These areas may include historic resources that have lost integrity, neighborhoods with significant character but that are not historically significant, and scattered sites that share a common historic or architectural theme.</i>

CR 1.04	Boulder County shall encourage interjurisdictional cooperation to further the goals of historic and archaeological preservation.	Cooperation with Other Jurisdictions. Boulder County shall encourage inter-jurisdictional cooperation to further the goals cultural resource preservation.	
CR 1.04.01	The county shall maintain Certified Local Government status with the State of Colorado and the United States Department of the Interior and participate in the nomination and designation of state and national landmarks.	Boulder County shall maintain Certified Local Government status with the State of Colorado and the United States Department of the Interior and participate in the nomination and designation of properties eligible for the state and national registers.	
CR 1.04.02	Through the use of intergovernmental agreements, the county shall cooperate with incorporated municipalities to offer the advantages of a local landmarking program to the municipalities within the county that do not have such a program.	Through the use of intergovernmental agreements, Boulder County may cooperate with incorporated municipalities to offer the advantages of a local landmarking program to the municipalities within the county that do not have such a program.	
CR 1.04.03	Boulder County shall pursue intergovernmental agreements with municipalities which address the issue of preservation of county historic landmarks after annexation by the municipality.	Boulder County shall pursue joint preservation plans and/or intergovernmental agreements with municipalities which address the preservation of cultural resources of interest to both jurisdictions, and continued recognition of county historic landmark status after annexation by the municipality.	
CR 1.04.04	Notice of Historic Preservation Advisory Board Hearings and a complete packet of information shall be forwarded to each municipality within the county that requests to be regularly informed of the HPAB's activities.	Removed	Programmatic
CR 1.04.5 - (note: numbering incorrect in current version)	The City of Boulder Landmarks Board shall be a referral agency for proposals affecting cultural resources within the Boulder Valley. Examples of such proposals include, nomination of historic landmarks and the demolition or alteration of historic properties owned by the City of Boulder.	Removed	Programmatic

CR 1.04.06	As necessary, the Boulder County Parks and Open Space Advisory Committees should be consulted when projects on county open space affect historic structures or sites. Similarly, the City of Boulder Open Space Board should be consulted when projects on city open space land affect historic structures or sites.	Removed	Programmatic
CR 1.04.07	The City of Longmont Landmarks Board shall be a referral agency for county landmark designation of structures, sites, or districts within the City's planning area.	Removed	Programmatic
CR 1.05	The county and specifically, the Historic Preservation Advisory Board, shall be an informational resource to Boulder County citizens interested in historic preservation.	Informational Resource. Boulder County, and specifically the Historic Preservation Advisory Board, shall be an informational resource to Boulder County citizens interested in historic preservation.	
CR 1.05.01	The Historic Preservation Advisory Board shall maintain expertise in architecture, agriculture, mining, and history in order to guide property owners with the technical experience necessary for preservation of archaeological and historic sites.	Removed	Programmatic
CR 1.05.02	The county shall distribute current copies of the Boulder County Historic Site Survey to local libraries that specialize in history and the Colorado Historical Society.	Removed	Programmatic
CR 1.05.03	Pursuant to state and federal laws regarding disclosure of information pertaining to historic and archaeological sites, the location of extremely fragile sites shall not be public information in order to protect these sites.	Removed	Programmatic
CR 1.05.04	The county shall maintain a current listing of structures, sites, and districts included in the Boulder County Register of Historic Landmarks.	Removed	Programmatic



CR 1.05.05	A listing of all agencies, non-profit organizations, historical societies, history museums, libraries with history collections, and other entities and organization involved in archaeology and/or historic preservation shall be maintained by the county as an educational resource for owners of cultural resources and other interested parties.	Removed	Programmatic
CR 1.06 to CR 2.01	The county shall implement its historic preservation goals through education of the public and the offering of incentives whenever possible.	Education and Incentives. Boulder County shall implement its historic preservation goals through education of the public and the offering of incentives whenever possible.	
CR 1.06.01 to CR 2.01.01	The county may offer the owners of properties that are designated as historic landmarks variations from the building code requirements, provided the variations support preservation of the landmark and the variation is not placing the health, safety, and welfare of county residents and visitors at risk.	No change	
CR 1.06.02	The county shall provide information about state and national financial incentive programs and support grant and tax credit requests of the state by owners of designated properties.	Remove	Programmatic
CR 1.06.03 to CR 2.01.02	Boulder County shall investigate the feasibility of a local incentive program for historic preservation. Such program may include tools such as a revolving loan fund, the offering of bonus density for the preservation of significant archaeological sites or historic structures, and a local tax credit program.	Boulder County shall continue to implement and explore new opportunities for local incentive programs for historic preservation.	<i>Put in sidebar: Incentive programs may include, but are not limited to, a grant program, a revolving loan fund, the offering of bonus density for the preservation of significant archaeological sites or historic structures, exceptions to Land Use Code and building code requirements, and a local tax-credit program.</i>

CR 1.06.04 to CR 2.01.03	The county shall recognize its citizens by nominating outstanding preservation efforts for archaeological and historic site preservation for awards.	Boulder County shall recognize its citizens by nominating outstanding preservation efforts for archaeological and historic preservation awards.	
CR 1.07 to CR 1.06	Sites within the county associated with traditional cultural practices may fall within the purview of the county's historic preservation regulations, provided that the use of the site can be documented and meets the criteria for designation at the local, state, or national level.	Traditional Cultural Places. Sites within the Boulder County associated with traditional cultural practices may fall within the purview of the county's historic preservation regulations, provided that the use of the site can be documented and meets the criteria for designation at the local, state, or national level.	
CR 1.07.01 to CR 1.06.01	Applicants engaged in a discretionary land use proposal in a location where Native American artifacts have been found or where oral traditions indicate the site was used by Native Americans in the past, shall conduct research to determine the extent of the archaeological significance of the site. Prior to the removal of any artifacts or further development on any such site, the applicant shall confer with the affected Native American nation or nations to determine the appropriate mitigation measures necessary for protection of the site.	Applicants engaged in a discretionary land use proposal in a location where American Indian artifacts have been found, or where oral traditions indicate the site was used by American Indians in the past, shall conduct research to determine the extent of the archaeological significance of the site. Prior to the removal of any artifacts or further development on any such site, the applicant shall confer with the affected tribes to determine the appropriate mitigation measures necessary for protection of the site.	
New CR 1.07		Energy Efficiency. <u>As Boulder County pursues efforts to improve the energy and resource efficiency of new and existing buildings, the county will be sensitive to the unique situations that involve historic preservation and allow for reasonable flexibility to further both goals.</u>	
New CR 1.08		Natural Disasters. Boulder County will pursue efforts to protect cultural resources from natural disasters.	

New CR 1.09		Funding. <u>Boulder County shall continue to research, review, and take action to secure funding and technical assistance from other agencies and institutions to advance cultural resource identification, protection and restoration when appropriate.</u>	
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