

## 3.15 HISTORIC PRESERVATION

### 3.15.1 Affected Environment

#### 3.15.1.1 REGULATORY COMPLIANCE

Legislation at the state and federal levels requires that governmental agencies assess the impacts of proposed projects on historic and archaeological resources before undertaking a project. The federal legislation that protects historic and archaeological resources includes Section 106 (36 CFR Part 800) of the National Historic Preservation Act of 1966 (NHPA as amended) and Section 4(f) (49 USC 303, Sec. 771.135) of the U.S. Department of Transportation Act.

Section 106 of the NHPA requires that federal agencies or other agencies undertaking federal actions consider the effects of their undertakings on historic properties. A historic property is defined as any prehistoric or historic site, district, structure, building, object or archaeological resource included on or eligible for the National Register of Historic Places (NRHP). In order to qualify for the NRHP, a property or resource possesses sufficient integrity of location, design, setting, materials, workmanship, feeling, and association, and meet one or more of the following eligibility criteria:

**Criterion A:** The property is associated with events that have made a significant contribution to the broad pattern of our history.

**Criterion B:** The property is associated with the lives of persons significant in our past.

**Criterion C:** The property 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.

**Criterion D:** The property has yielded or may be likely to yield information important in history or prehistory.

The Section 106 process (36 CFR 800.4) includes steps to: 1) identify consulting parties, 2) define an Area of Potential Effect (APE), 3) identify and evaluate historic properties, 4) assess the impacts of an undertaking on the historic properties, and 5) consult with appropriate agencies for techniques to avoid, minimize, or mitigate any adverse effects. The process for complying with the state legislation (State Register Act Article 80.1, Register of Historic Properties) is similar.

#### What's in Section 3.15?

##### 3.15 Historic Preservation

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1 For the North I-25 EIS, the Colorado Department of Transportation (CDOT) and the Federal  
2 Highway Administration (FHWA) have formally arranged with the State Historic Preservation  
3 Officer (SHPO) to substitute the project's National Environmental Policy Act's (NEPA)  
4 documents (Draft and Final EIS) in lieu of separate correspondence, in order to accomplish the  
5 Section 106 consultation process. The document substitution process is intended to reduce  
6 the time and complexity of the review process involving the SHPO and other Section 106  
7 consulting parties, by providing detailed information about project impacts associated with the  
8 various alternatives in the EIS rather than additional documents.

9 For the North I-25 EIS, the Section 106 consultation step involving determinations of NRHP-  
10 eligibility for all historic and archaeological resources was accomplished by the traditional  
11 method of submitting survey reports and site forms to the SHPO and other Section 106  
12 consulting parties. The survey reports and site forms included the eligibility determinations  
13 proposed by CDOT, FHWA, and FTA for SHPO concurrence. A number of resources within  
14 the North I-25 project APE were determined eligible for inclusion on the NRHP as a result of  
15 past studies and were assumed eligible for this project. After the Draft EIS was released, four  
16 additional properties were identified as eligible through consultation. Concurrence on eligibility  
17 was received from the SHPO on January 3, 2011. This document provides the formal  
18 documentation for consultation on effects for all the alternatives. In addition, the Final EIS  
19 includes responses to comments received on the Draft EIS.

20 Following consultation on the effects, the resolution of adverse effects will be documented in a  
21 Programmatic Agreement (PA) to be signed by CDOT, FHWA, the SHPO and any of the  
22 consulting parties that would like to concur with the agreement. Effects for the Preferred  
23 Alternative are in nearly all cases reduced from those presented for Packages A or B.  
24 Following consultation on effects, FHWA and CDOT will work to resolve issues with the  
25 consulting parties and the SHPO.

26 CDOT sent out letters to all certified local governments in the regional study area as well as a  
27 few other agencies and entities with interest in historic preservation officially inviting them to  
28 participate as consulting parties in the Section 106 process for this project. Letters were sent  
29 to the cities and communities of Berthoud, Brighton, Broomfield, Fort Collins, Fort Lupton,  
30 Greeley, Longmont, Loveland, Northglenn, and Timnath. They were also sent to Boulder  
31 County, Colorado Preservation, Inc., and the National Trust for Historic Preservation.  
32 Responses were received from the following entities agreeing to participate as consulting  
33 parties:

- 34 ▶ City of Greeley Historic Preservation Office
- 35 ▶ City of Fort Lupton Historic Preservation Board
- 36 ▶ City of Longmont Historic Preservation Commission

### 37 **3.15.1.2 HISTORICAL RESOURCES**

#### 38 *Historical Resource Surveys*

39 Historical resources were evaluated within the APE. The APE for this project was discussed at  
40 several meetings in early 2006 and further evaluated during a field trip with staff from SHPO  
41 and CDOT on June 15, 2006. The boundaries of the APE were agreed to by the SHPO in a  
42 letter dated March 12, 2007 (see **Appendix E**). Specific APE boundaries have been defined  
43 for the three proposed transportation improvements under evaluation—the North I-25 corridor

1 including queue jumps along US Highway (US) 34 associated with the bus rapid transit or  
2 express bus under the Preferred Alternative, a commuter rail corridor, and a commuter bus  
3 route along US 85. The APE boundaries for each specific corridor are described in detail under  
4 each of the corridor descriptions that follow.

5 Activities undertaken to identify historical resources in the APE included a file search at the  
6 Colorado Historical Society, a review of NRHP and State Register of Historic Properties  
7 (SRHP) listings, a review of any local landmark listings, a review of previous historical  
8 resource assessments in the general area, and field surveys of the APE.

### 9 *Historical Resources*

10 From all the historical resources that were surveyed for this project or that had previously been  
11 surveyed, 72 were determined eligible for or already listed on the NRHP. These include  
12 35 resources surveyed on the I-25 corridor, 35 resources surveyed on the commuter rail  
13 corridor, and two resources on US 85. This total includes eight resources that have already  
14 been listed on the NRHP (see **Table 3.15-1**).

15 A total of 27 individual historic ditches and canals, made up of 44 linear segments, are located  
16 within the APE. The 18 railroad segments comprise linear portions of five railroad lines and  
17 one railroad siding within the APE.

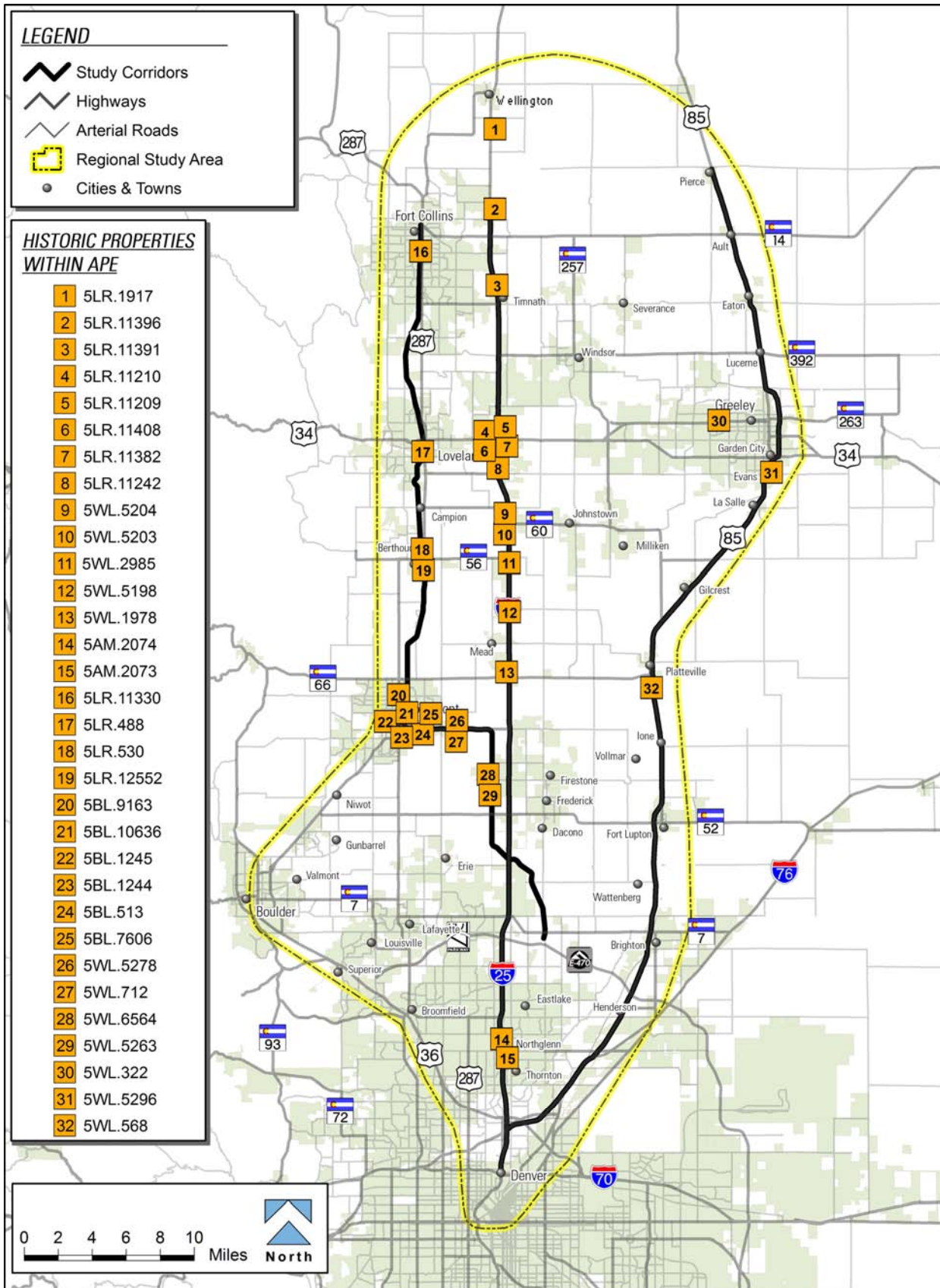
### 18 *North I-25 Corridor*

19 The APE for the North I-25 corridor includes an area encompassing the maximum area of  
20 disturbance for this project, which is generally the existing right-of-way plus portions of  
21 adjacent properties.

22 Intensive-level surveys of the historical resources were conducted within the APE. A total of  
23 133 historical resources were surveyed or re-evaluated in this corridor. Linear sites (e.g.,  
24 railroads, irrigation ditches) are evaluated as segments that are either supporting or non-  
25 supporting segments of an entire NRHP-eligible linear resource. Those historical resources  
26 eligible for the NRHP are listed in **Figure 3.15-1** and **Figure 3.15-2** by location from north to  
27 south.

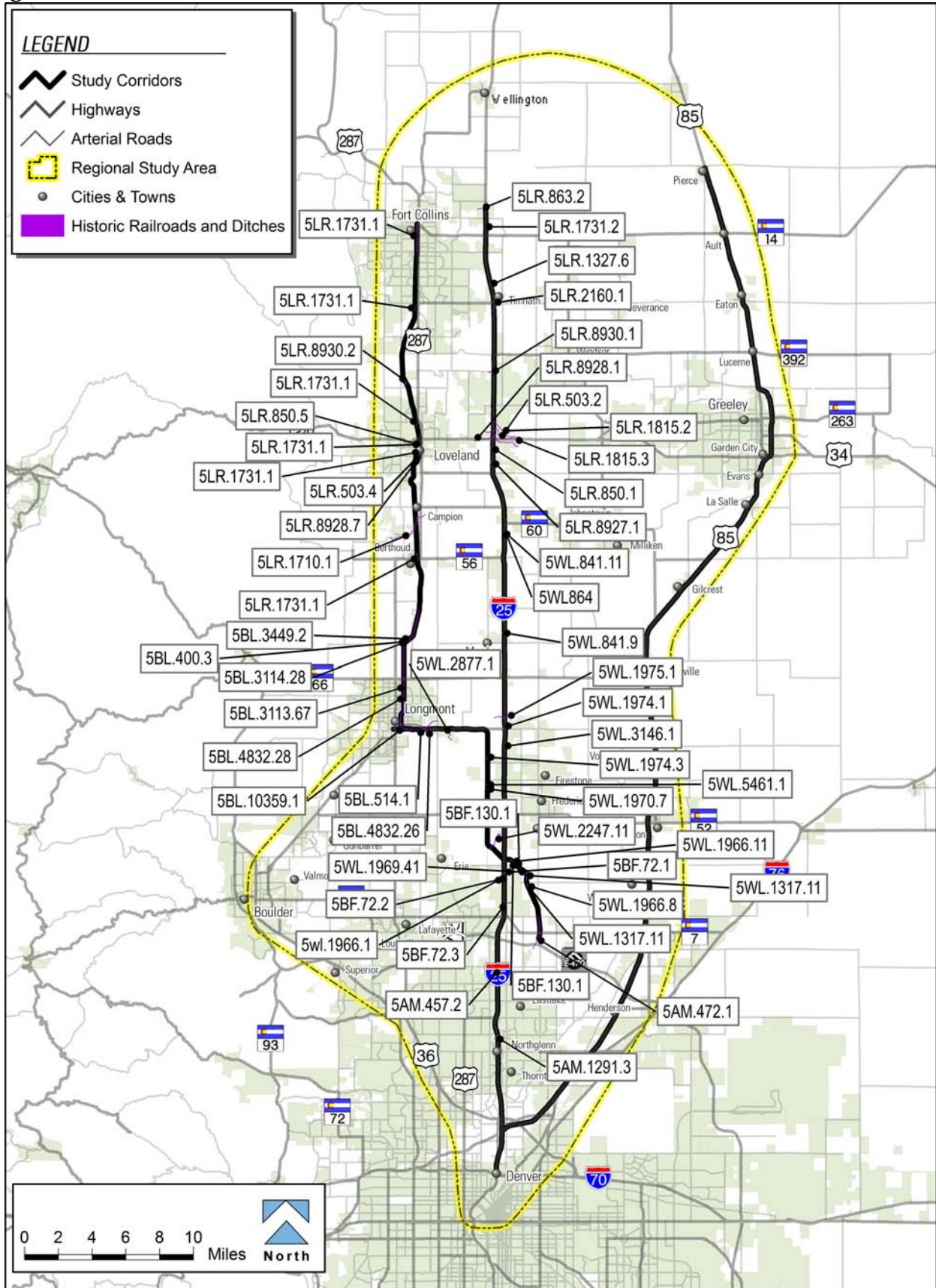
28

1 **Figure 3.15-1 Non-Linear Historical Resources within the Area of Potential Effect**



2

1 Figure 3.15-2 Linear Historical Resources within the Area of Potential Effect



2

1 **Table 3.15-1 NRHP Listed<sup>a</sup> or Eligible Historical Resources and Linear Historical**  
2 **Resource Segments Within the APE Tabulated from North to South by**  
3 **Corridor**

Site #	Address	Name
<b>I-25 Highway Corridor</b>		
5LR.1917	4320 E. County Rd. 58	Bee Farm
5LR.8932.1	T8N/R68W, SW1/4 Sec. 15	Larimer County Ditch
5LR.11396	1320 Northeast Frontage Road	Einarsen Farm
5LR.863.2	T7N/R68W, NE¼ Sec. 4	Larimer and Weld Canal
5LR.1731.2	T7N/R68W, EC Sec. 9	Colorado & Southern Railroad
5LR.11409.1	T7N/R68W, SE¼ Sec. 16	Cache La Poudre Reservoir Inlet
5LR.11391	4434 E. County Road 40	Gallatin Residence
5LR.1327.6	T7N/R68W, SW¼ Sec. 27	Colorado & Southern Railroad
5LR.2160.1	T7N/R68W, S½ Sec. 34	Boxelder Ditch
5LR.8930.1	T6N/R68W, N½ Sec. 27	Louden Ditch
5LR.1815.2	T5N/R68W, SE¼ Sec. 3	Union Pacific Railroad Fort Collins Branch
5LR.503.2	T5N/R68W, S½ Sec. 10	Loveland and Greeley Canal
5LR.8928.2	T5N/R68W, NW¼ Sec. 15	Farmers' Ditch (Farmers Irrigation Ditch)
5LR.8928.1	T5N/R68W, N½ Sec. 14-15	Farmers' Ditch
5LR.1815.3	T5N/R68W, SE¼ Sec. 11	Union Pacific Railroad Fort Collins Branch
5LR.11209	5464 E. Highway 34	Schmer Farm
5LR.11210	4856 E. Highway 34	McDonough Farm
5LR.850.1	T5N/R68W, C Sec. 15	Great Western Railway
5LR.11408		Zimmerman Grain Elevators
5LR.11382	640 Southeast Frontage Road	Hatch Farm
5LR.8927.1	T5N/R68W, N½ Sec. 22	Hillsboro Ditch
5LR.11242 <sup>a</sup>	5331 SH 402	Mountain View Farm
5WL.5204	3807 CR 48	Bashor Barn
5WL.5203	3766 CR 48	Bein Farm
5WL.3149.1	T4N/R68W, N1/2 Sec. 10	Handy/Home Supply Ditch Confluence
5WL.864	T4N/68W, WC Sec. 11	Great Western Railway Buda Siding
5WL.841.11	T4N/R68W, EC Sec. 10	Great Western Railway
5WL.2985 <sup>a</sup>	E. I-25 Frontage Road at Little Thompson River	Little Thompson River Bridge No. C-17-BN
5WL.5198	17820 E. I-25 Frontage Road	Olson Farm
5WL.1978	3865 Highway 66	Rademacher/Hilgers Residence
5WL.841.9	T3N/R68W, EC Sec. 10	Great Western Railway
5WL.1975.1	T2N/R68W, NW¼ Sec. 2	Last Chance Ditch
5WL.1974.1	T2N/R68W, SW¼ Sec. 3	Rural Ditch
5WL.3146.1	T2N/R68W, NW¼ Sec. 14	Flume Ditch
5WL.1970.1	T2N/R68W, SE¼ Sec. 27	Lower Boulder Ditch
5WL.1966.1	T1N/R68W, SE¼ Sec. 22	Bull Canal/Standley Ditch
5BF.72.1	T1N/R68W, NW¼ Sec. 23	Bull Canal/Standley Ditch
5BF.72.2	T1N/R68W, SW¼ Sec. 23	Bull Canal/Standley Ditch
5BF.72.3	T1N/R68W, NE¼ Sec. 34	Bull Canal/Standley Ditch
5BF.76.2	T1S/R68W, NE¼ Sec. 3	Bull Canal
5AM.457.3	T1S/R68W, NE¼ Sec. 3	Bull Canal

4

1 **Table 3.15-1 NRHP Listed<sup>a</sup> or Eligible Historical Resources and Linear Historical**  
2 **Resource Segments Within the APE Tabulated from North to South**  
3 **by Corridor (cont'd)**

Site #	Address	Name
5AM.457.8	T1S/R68W, NE¼ Sec. 15	Bull Canal
5AM.457.2	T1S/R68W, N½ Sec. 22	Bull Canal
5AM.457.4	T1S/R68W, NW¼ Sec. 27	Bull Canal
5AM.1291.3	T2S/R68W, N½ Sec. 10	Farmers Highline Canal/Nivers Canal
5WL.322 <sup>a</sup>	955 39th Avenue, Greeley	White—Plumb Farm
5AM.2074	Southeast corner I-25 and 112th Avenue	North Glenn Second Filing
5AM.2073	Northeast corner 1-25 and 104th Avenue	North Glenn First Filing
<b>Commuter Rail Corridor</b>		
5LR.1731.1	Larimer/Boulder County line north to Cherry Street in Fort Collins (eclipses 5LR1731.4, 5LR1731.7, and 5LR9888.1)	Colorado Central, Colorado & Southern/Burlington Northern & Santa Fe Railroad
5LR.11330 <sup>b</sup>	128 Prospect St., Fort Collins	Public Service Company of Colorado — Fort Collins Substation
5LR.10819.2	T7N/R69W, N½ Sec. 26	Larimer County Canal No. 2
5LR.10681.1	T6N/R69W, NE¼ Sec. 2	New Mercer Ditch
5LR.8930.2	T6N/R69W, SW¼ Sec. 26	Louden Ditch
5LR.850.5		Great Western Railroad
5LR.488 <sup>a</sup>	405-409 Railroad Ave., Loveland	Colorado and Southern Railway Depot / Loveland Depot
5LR.503.4	T5N/R69W, SW¼ Sec. 13	Loveland & Greeley Canal
5LR.1729.2	T5N/R69W, SE¼ Sec. 23	Big Thompson Ditch
5LR.1731.11	T5N/R69W, NW¼ Sec. 24	Colorado Central/Colorado & Southern/Burlington Northern & Santa Fe, Business Spur
5LR.8928.7	T5N/R69W, NW¼ Sec. 24	Farmers' Ditch
5LR.12552	205-207 S 1st St., Berthoud	Ludlow Brothers Property
5LR.1710.1	T4N/R69W, SE¼ Sec. 2	Handy Ditch
5BL.400.3	Larimer/Boulder County line south to Longmont	Colorado Central/Colorado & Southern Railroad/BN&SFRR
5BL.3449.2	T3N/R69W, SE¼ Sec. 11	Supply Ditch
5BL.3114.28	T3N/R69W, SE¼ Sec. 11	Highland Ditch
5BL.3113.67	T3N/R69W, NE¼ Sec. 27	Rough & Ready Ditch
5BL.4832.28	T3N/R69W, NE¼ Sec. 34	Oligarchy Ditch
5BL.9163	846 Atwood St. Longmont	Kitely House
5BL.10636 <sup>b</sup>	122 8th Ave., Longmont	Boggs Residence
5BL.1245	103 Main Street, Longmont	Old City Electric Building
5BL.1244	100 Main Street, Longmont	Colorado & Southern /BNSF Depot
5BL.514.1	T2N/R69W, S1/2 Sec. 2	Great Western Railway
5BL.513	11939 to 11801 Sugarmill Road, Longmont	Great Western Sugar Plant
5BL.7606	1020 Sugar Mill Road	Novartis Seeds/Syngenta Seeds
5BL.4832.26	T2N/R69W, N1/2 Sec. 12	Oligarchy Ditch
5WL.5278	545 SH 119	William H. Dickens Farm
5WL.2877.2	T2N/R68W, NW1/4 Sec. 7	Union Reservoir Outlet Ditch/Coffin Spring Gulch Ditch
5WL.712 <sup>a</sup>	T2N/R68W, NE1/4 Sec. 7	Sandstone Ranch
5WL.5461.1	T2N/R68W, NW1/4 Sec. 27	Boulder and Weld County Ditch
5WL.5263	7523 WCR 7	Hingley Farm
5WL.6564	2877 WCR 18, Longmont	Jillson Farm

4

1 **Table 3.15-1 NRHP Listed<sup>a</sup> or Eligible Historical Resources and Linear Historical**  
2 **Resource Segments Within the APE Tabulated from North to South**  
3 **by Corridor (cont'd)**

Site #	Address	Name
5WL.1970.7	T2N/R68W, W1/2 Sec. 27	Lower Boulder Ditch
5WL.2247.11	T1N/R68W, SW 1/4 Sec. 10	Community Ditch
5WL.1974.3	2N,R68W,SW ¼ Sec.15	Rural Ditch
5WL.1966.11	T1N/R68W, S1/2 Sec. 14	Bull Ditch segment of the Bull Canal/Standley Ditch
5WL.1317.11	T1N/R68W, NW1/4 Sec. 24	UPRR—Dent Branch
5WL.1969.41		Denver Pacific/Kansas Pacific/UPRR—Denver & Boulder Valley Branch
5WL.1966.8	T1N/R68W, NW1/4 Sec. 25	Bull Ditch segment of the Bull Canal/Standley Ditch
5WL.1969.1	T1N/R68W, SE¼ Sec. 15	Union Pacific Railroad, Denver & Boulder Valley Branch
5BF.130.1		Denver Pacific/Kansas Pacific/UPRR—Denver & Boulder Valley Branch
5AM.472.1	UPRR Segment within Adams County	UPRR—Dent Branch
5LR.530 <sup>a</sup>	228 Museum Avenue, Berthoud	Bimson Blacksmith Shop/Little Thompson Valley Pioneer Museum
<b>US 85 Corridor Queue Jumps</b>		
5WL.5296	3611 Idaho Street, Evans	Flagstone Residence—Goetzel
5WL.568 <sup>a</sup>	13412 US 85	Fort Vasquez

<sup>a</sup> Resources listed on the NRHP.

<sup>b</sup> SHPO concurrence pending.

4 ***Commuter Rail Corridor***

5 The commuter rail corridor extends along the existing Burlington Northern Santa Fe (BNSF)  
6 railroad tracks from Fort Collins to Longmont. For Package A this includes a double-tracked  
7 commuter rail line using the existing BNSF railroad track plus one new track. From Longmont,  
8 a new double-tracked commuter rail line connects this point to the North Metro end-of-line  
9 station in Thornton. The new alignment trends eastward along SH 119 until WCR 7, and then  
10 continues on the west side of WCR 7 in a southward direction for about seven miles until it  
11 intersects with the existing abandoned UPRR tracks near Erie. For the Preferred Alternative  
12 the rail line will be largely single-track with passing tracks in four locations:

- 13 ▶ Beginning at 6th Street in Loveland, continuing north to 0.04 mile south of West 57th Street  
14 in Loveland. (Length = 3.7 miles)
- 15 ▶ Beginning 0.3 mile south of East CR 6c in Berthoud, continuing north to 0.4 mile north of  
16 WCR 14. (Length = 4.5 miles)
- 17 ▶ Beginning in Longmont 0.05 mile west of Martin Street, continuing north along existing  
18 BNSF corridor to 19th Avenue. (Length = 2.3 miles)
- 19 ▶ Beginning 0.6 mile west of I-25, continuing north along existing UPRR to 0.3 mile south of  
20 CR 20. (Length = 5.2 miles)

21 Additionally, a maintenance road has been included in the Preferred Alternative which would  
22 run parallel to the commuter rail line in areas where no other roadway access is available.



1 Intensive surveys were conducted of the historical resources within the APE. A total of  
2 100 resources were surveyed or re-evaluated in this corridor, of which 35 have been  
3 determined eligible for the NRHP. These include two former power plants, two railroad depots,  
4 one sugar factory, one former blacksmith shop, one former ranch, one business, three farms,  
5 three residences, four railroads, and seventeen ditches. These historic properties are listed in  
6 **Table 3.15-1**

7 *Queue Jumps Along US 34 and US 85*

8 The queue jump improvements occur along two highways—US 85 from Platteville through  
9 Evans associated with the commuter bus and US 34 from State Highway (SH) 257 to US 85  
10 for the bus rapid transit. A queue jump consists of a modification to an existing signal light to  
11 allow buses to proceed through an intersection ahead of regular traffic on a separately timed  
12 green light. A short right-turn/bus-only lane is striped onto the existing outside lane of the  
13 highway to facilitate this bus movement.

14 Surveys were conducted of the properties within the APE. A total of seven historical resources  
15 were surveyed or re-evaluated in these corridors, two of which are already listed on the NRHP.  
16 These historic properties are also listed in **Table 3.15-1**.

17 *Stations and Maintenance Facilities*

18 This project also includes potential sites for the locations of stations and maintenance facilities.  
19 The specific boundaries of these stations and maintenance facilities were provided. Most of  
20 the stations are on vacant land and no buildings would be affected. In cases where there are  
21 buildings older than 40 years on or adjacent to the station site, the historical buildings were  
22 surveyed and evaluated for NRHP eligibility.

23 A total of six historical resources were surveyed on or adjacent to the station locations, two of  
24 which have been determined NRHP-eligible. There were no structures on any of the proposed  
25 maintenance facility sites. These historic properties are listed in **Table 3.15-1**.

26 **3.15.1.3 ARCHAEOLOGICAL RESOURCES**

27 *North I-25 Corridor*

28 This evaluation was conducted in accordance with the requirements of 36 CFR 800.4. Where  
29 right-of-entry was granted, an intensive pedestrian survey was conducted for all parcels within  
30 the APE. The North I-25 corridor surveys resulted in the recordation of 26 archaeological  
31 resources, including 22 isolated finds (IFs) and four sites. None of the isolated finds are  
32 eligible for the NRHP. The four sites identified as requiring additional data to assess their  
33 NRHP eligibility are listed in **Table 3.15-2**.

34 **Table 3.15-2 Archaeological Resources Identified as Needing Data within the North**  
35 **I-25 APE Listed from North to South**

Site #	Description	Evaluation
5LR11435	Site (M)—Lithic Scatter and Trash Scatter	Need Data
5LR11436	Site (P)—Open Lithic Scatter	Need Data
5WL5320	Site (P)—Open Lithic Scatter	Need Data
5AM1928	Site (P)—Open Lithic Scatter	Need Data

M...Multi-component

P...Prehistoric

1 Two of these archaeological sites—site 5WL.5320 under all alternatives, and site 5AM.1928  
2 under Package B and the Preferred Alternative—could be subject to direct impacts due to their  
3 proximity to the construction zones defined for each of the build packages. However,  
4 installation of retaining walls has been employed to avoid any impacts to these sites. All  
5 untested or “Needs Data” sites have been avoided, and therefore no further Section 106  
6 actions are necessary.

### 7 *Commuter Rail Corridor*

8 Intensive pedestrian surveys of the length of the BNSF railroad track were conducted within  
9 the current right-of-way from Fort Collins to Longmont. From Longmont to FasTracks North  
10 Metro, an intensive pedestrian survey was conducted within the APE (300-foot-wide corridor)  
11 wherever right-of-entry was granted. No archaeological resources eligible for the NRHP were  
12 identified during surveys conducted within the rail corridor.

### 13 *Queue Jumps Along US 85 and US 34*

14 Where right-of-entry, was granted a pedestrian survey was conducted within the APE. Surveys  
15 of the properties within the APE yielded no prehistoric or historic archaeological resources. All  
16 of the proposed impact areas are heavily disturbed by the current highway right-of-way.

### 17 *Station Site Alternatives for Commuter Bus, Commuter Rail, Express Bus and Bus* 18 *Rapid Transit (BRT)*

19 Where right-of-entry was granted, the station site alternatives for commuter bus, rail, and BRT  
20 were subjected to intensive pedestrian surveys. No prehistoric or historic archaeological  
21 resources were identified.

### 22 *Operation and Maintenance Facilities*

23 No right-of-entry was granted for proposed locations of operation and maintenance facilities.  
24 No archaeological surveys were conducted.

### 25 *Results of Archaeological Resource Surveys*

26 From all the archaeological resources that were surveyed for this project or that had previously  
27 been surveyed, only four have been determined to have potential to yield information important  
28 to prehistory. However, further subsurface testing is needed in order to evaluate the  
29 information contained by these sites and to make definitive evaluations of NRHP-eligibility.  
30 Test excavations at the sites will not be conducted under the auspices of this project since  
31 there will be no direct effects to any of these localities. Lands within the APE for which right-of-  
32 entry was not granted will be surveyed for archaeological resources at the time of final design  
33 and prior to construction.

## 34 **3.15.2 Environmental Consequences**

35 Cultural resource impacts were assessed for each of the project alternatives. The range of  
36 impacts may be direct or indirect and short-term or long-term. Direct impacts include the  
37 removal or modification of historic properties. Indirect impacts result from the project but are  
38 generally further removed in distance or may affect the setting for a historic property. Indirect  
39 impacts include visual, auditory, and atmospheric changes in the vicinity of an historic property

1 that affect the qualities that make the property or resource historic. For historic resources,  
2 most impacts would be long-term, but there can also be temporary impacts associated with  
3 construction of the transportation improvements.

4 The Advisory Council on Historic Preservation (ACHP) has developed regulations  
5 (36 CFR 800) to assist federal agencies in evaluating and mitigating the impacts of their  
6 undertakings on historic properties. Historic properties on or eligible for the NRHP are affected  
7 when the characteristics of a historic property are altered. The categories of impacts to historic  
8 resources are: No Historic Properties Affected, No Adverse Effect and Adverse Effect as  
9 defined in 36 CFR 800.5.

10 As part of the process, the SHPO and consulting parties reviewed the Section 106  
11 determinations of eligibility and effects made by FHWA and the Federal Transit Administration  
12 (FTA). For the North I-25 EIS, review of the effects determinations is being done as a part of  
13 this EIS. If the Finding of Effect is that historic properties are adversely affected, then a  
14 Memorandum of Agreement (MOA) will be prepared. The MOA would set forth measures to  
15 mitigate the adverse effects and would be agreed upon by the project sponsor (FHWA, FTA,  
16 CDOT), SHPO and ACHP. Mitigation actions may include such measures as detailed archival  
17 recordation of adversely affected historic properties or development of historic interpretive  
18 signage.

### 19 **3.15.2.1 CONSEQUENCES OF THE ALTERNATIVES**

20 This section describes the consequences of the No-Action Alternative and Packages A, B and  
21 the Preferred Alternative with regard to historic properties (NRHP-eligible or listed historical  
22 and archaeological sites). Throughout the following discussion, figures are only provided in  
23 cases when there are direct impacts to a resource from an alternative or in order to provide a  
24 more complete understanding of the proposed alternative as it relates to the resource. This  
25 discussion provides a basis for comparison of the alternatives.

26 Mitigation measures to address adverse impacts of the alternatives on this resource are  
27 discussed in **Section 3.15.3**.

28 All of the build options would entail short-term effects associated with construction of either  
29 package. Short term effects include dust from construction, noise and vibration associated with  
30 the construction, increases in roadway congestion and changes in the way people commute  
31 around the area.

### 32 **3.15.2.2 NO-ACTION ALTERNATIVE**

33 The No-Action Alternative would generally not affect historic properties. There would still be  
34 increasing traffic and congestion in this corridor. The present trend of conversion of many of  
35 the remaining historical farmsteads into residential, industrial and commercial development  
36 would also continue.

37

1 **3.15.2.3 PACKAGES A, B, AND THE PREFERRED ALTERNATIVE HIGHWAY**  
2 **COMPONENTS**

3 Direct and indirect effects to eligible historic properties, including supporting segments of  
4 NRHP-eligible linear resources, related to each highway component are described in this  
5 section. Some linear resources would be affected by both highway and transit components. In  
6 these cases, direct and indirect effects of both highway and transit components are described  
7 in this section to facilitate presentation of the effects on the resource as a whole.

8 **SH 1 TO SH 14**

9 **5LR.1917 (Bee Farm)**

10 **Resource Description:** This property is located on the east side of I-25, approximately two  
11 miles south of Wellington. The Bee Farm is significant for its long association with the  
12 development of agriculture in Larimer County and the high plains of Colorado and for its  
13 important role in early pioneer settlement of the Boxelder valley. It is also significant for its  
14 architecture and construction techniques which represent those used by early farmers with  
15 limited resources and materials. It contains a collection of farm structures in their original  
16 historic context representing over a century of agriculture.

17 **Eligibility Determination:** The Bee Farm was listed on the National Register of Historic  
18 Places on November 25, 2002. It was listed as significant under Criteria A and C. It was  
19 designated a Colorado Centennial Farm in 1994.

20 **Effects Determination – Package A:** Under Package A all transportation improvements  
21 would take place within the existing right-of-way adjacent to the Bee Farm resulting in no direct  
22 impacts to the Bee Farm. Indirect impacts would be a temporary increase in dust and noise  
23 during construction. Package A improvements would not diminish the agricultural or  
24 architectural qualities for which the property has been listed on the NRHP. Therefore, FHWA,  
25 FTA and CDOT have determined that Package A improvements would result in *no historic*  
26 *properties affected* with respect to the Bee Farm.

27 **Effects Determination – Package B:** Under Package B all transportation improvements and  
28 resulting direct and indirect impacts would be similar to Package A. Package B improvements  
29 would not diminish the agricultural or architectural qualities for which the property has been  
30 listed on the NRHP. FHWA, FTA and CDOT have determined that Package B improvements  
31 would result in *no historic properties affected* with respect to the Bee Farm.

32 **Effects Determination – Preferred Alternative:** Under the Preferred Alternative all  
33 transportation improvements would take place within the existing right-of-way adjacent to the  
34 Bee Farm resulting in no direct impacts to the Bee Farm. Indirect impacts would be a  
35 temporary increase in dust and noise during construction. The Preferred Alternative  
36 improvements would not diminish the agricultural or architectural qualities for which the  
37 property has been listed on the NRHP. Therefore, FHWA, FTA and CDOT have determined  
38 that the Preferred Alternative would result in *no historic properties affected* with respect to the  
39 Bee Farm.

1 **5LR.8932.1 (Larimer County Ditch)**

2 **Resource Description:** The Larimer County Ditch crosses I-25 approximately 900 feet north  
3 of Larimer County Road (CR) 56, south of the town of Wellington. The open ditch crosses  
4 underneath I-25 and the east frontage road inside two concrete culverts. The earthen ditch  
5 segment is approximately 20 feet wide with grassy levees, and traverses rural terrain.

6 **Eligibility Determination:** In 2001 the Larimer County Ditch (5LR.8932) was determined to  
7 be eligible for NRHP. Segment 5LR.8932.1 does not support the eligibility of the greater ditch  
8 resource due to past modifications to its structure at the culvert crossings underneath I-25 and  
9 the existing east frontage road.

10 **Effects Determination – Package A:** Package A improvements include a wider frontage  
11 road along the existing alignment parallel to the southbound I-25 mainline, requiring a 38-foot-  
12 long culvert extension to the west side of the existing 35-foot-long culvert. A new 40-foot-wide  
13 frontage road would be built parallel to the east side of the northbound I-25 mainline, requiring  
14 a new concrete box culvert (CBC) crossing of the ditch at that location. The new culvert would  
15 place 45 feet of open ditch within a concrete culvert. The length of open ditch placed inside  
16 new culvert extensions would total 83 feet. There would be no mainline I-25 improvements in  
17 this area (see **Figure 3.15-3**).

18 Because the qualities that make the entire resource NRHP-eligible have already been  
19 compromised by modifications associated with construction of I-25 and the frontage road and  
20 Package A improvements are minor in relative extent, FHWA, FTA and CDOT therefore has  
21 determined that Package A would result in *no adverse effect* to the Larimer County Ditch.

22 **Effects Determination – Package B:** Package B improvements include the same impacts as  
23 Package A. Because the qualities that make the entire resource NRHP-eligible have already  
24 been compromised by modifications associated with construction of the I-25 and frontage road  
25 and Package B improvements are minor in relative extent, FHWA, FTA AND CDOT therefore  
26 has determined that Package B would result in *no adverse effect* to the Larimer County Ditch  
27 (see **Figure 3.15-3**).

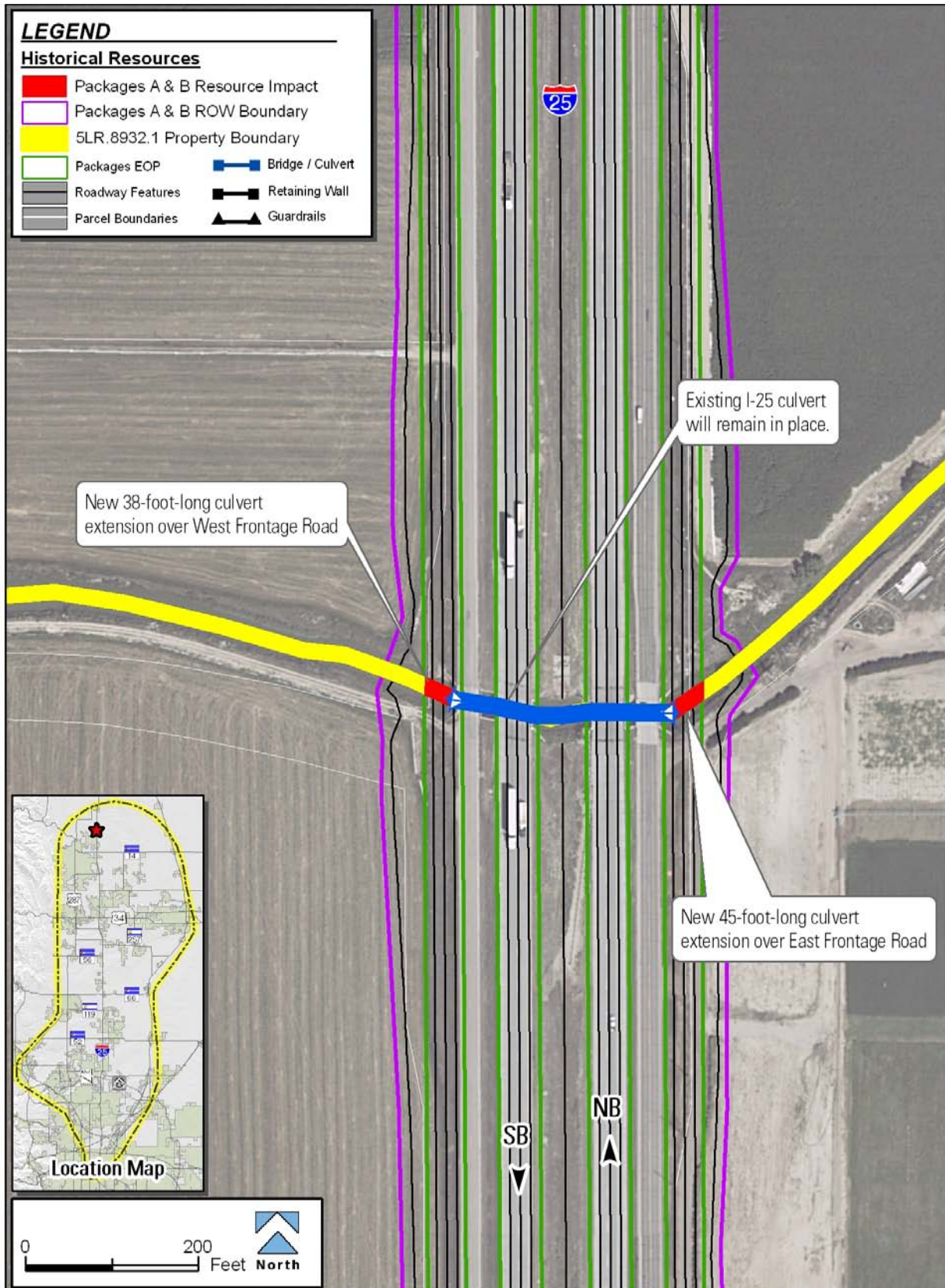
28 **Effects Determination – Preferred Alternative:** Preferred Alternative improvements include  
29 a wider frontage road along the west side of the existing alignment parallel to the southbound  
30 I-25 mainline and a new 40-foot-wide frontage road parallel to the east side of the northbound  
31 I-25 mainline. The Preferred Alternative also includes one new travel lane and a buffer  
32 separated TEL in each direction. The overall footprint for improvements has been reduced  
33 from Packages A and B as a result of moving the additional highway lanes to the center  
34 median as opposed to outside the existing highway footprint. The resulting impact to this  
35 resource is the addition of a 25-foot-long culvert extension to the west side and a 30-foot-long  
36 culvert extension on the east side of the existing 35-foot-long culvert under I-25. The length of  
37 open ditch placed inside new culvert extensions would total 55 feet (see **Figure 3.15-4**).

38 Because the qualities that make the entire resource NRHP-eligible have already been  
39 compromised by modifications associated with construction of I-25 and the frontage road and  
40 Preferred Alternative improvements are minor in relative extent, FHWA, FTA and CDOT  
41 therefore has determined that the Preferred Alternative would result in *no adverse effect* to the  
42 Larimer County Ditch.

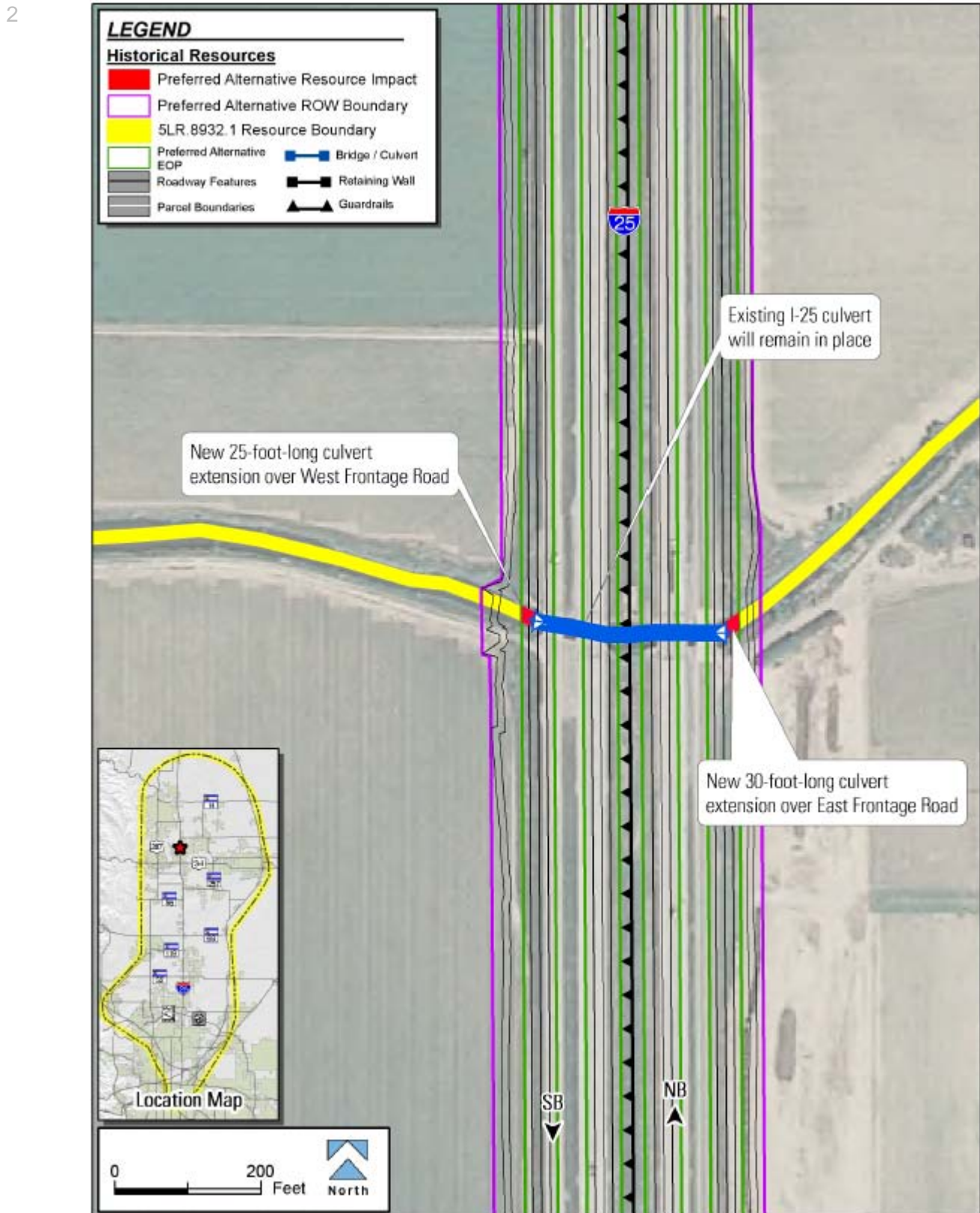
43

1 Figure 3.15-3 5LR.8932.1 (Larimer County Ditch) – Packages A and B

2



1 Figure 3.15-4 LR.8932.1 (Larimer County Ditch) – Preferred Alternative



1 **5LR.11396 (Einarsen Farm)**

2 **Resource Description:** The historic Einarsen Farm (5LR.11396) is located in the project APE  
3 on the east side of I-25 at 1320 Northeast Frontage Road. The farm, which was established in  
4 1890, contains an intact barn and hipped roof cottage-style farmhouse.

5 **Eligibility Determination:** Based on its association with 19th century Larimer County  
6 agriculture and the good integrity of the farm structures built during the period of significance  
7 (1880s-1940s), this farm has been determined to be eligible for listing on the NRHP under  
8 Criteria A and C.

9 **Effect Determination – Package A:** In this location, the existing configuration of two general  
10 purpose lanes in each direction would be maintained, although the northbound and  
11 southbound roadways and the east frontage road would be widened to improve shoulders.  
12 Under Package A, a narrow sliver of land extending north from East Vine Drive would be  
13 permanently incorporated into the transportation right-of-way. This acquired right-of-way would  
14 allow construction of wider roadway shoulders and would permanently bury open farmland  
15 along the southwestern edge of this historic farm property under fill slopes associated with the  
16 wider frontage road. This strip of land measures approximately 1,600 feet in length, and 50  
17 feet at its widest extent near the East Vine Drive intersection tapering down to the  
18 northernmost point near the ranch access road. The impacted area is along the edge of a  
19 cultivated field and contains 1.76 acres and constitutes less than 1 percent of the total area of  
20 the 220 acres within the historic boundary. No historical buildings are near the proposed  
21 improvements (see **Figure 3.15-5**).

22 The historical farm setting was permanently altered in the 1960s by initial construction of I-25  
23 and introduction of the highway and associated traffic noise. Currently, the farmhouse is  
24 located 80 feet from the east edge of the existing frontage road. With the Package A  
25 improvements, the farmhouse would be 70 feet away from the east edge of the frontage road.  
26 Noise levels associated with increased Package A traffic levels on I-25 and frontage road  
27 would result in a two decibel increase over existing conditions. This noise increase is barely  
28 perceptible. The changes to the local terrain are minimal and there are no highway features  
29 introduced by the proposed improvements that would indirectly affect the historic farm or visual  
30 context of the farm. Changes in noise and physical setting and atmosphere are not expected  
31 to diminish the function, character, feel, or attributes that render the farm or farm buildings and  
32 farmhouse NRHP-eligible.

33 A temporary construction easement could be necessary along the western edge of the  
34 property for haul roads, construction access, and staging areas to facilitate roadway widening  
35 and slope building. No permanent impacts would be anticipated from this use of the farmland  
36 property, and no farm structures would be affected. Construction related noise generated by  
37 construction equipment and trucks would be temporary in nature, and would not permanently  
38 affect the atmosphere of the farm setting. Thus indirect effects caused by temporary  
39 construction activities would occur, but would not be expected to significantly diminish the  
40 function, character, or attributes that render the farm, farm structures and farmhouse NRHP-  
41 eligible.

42 Due to the small amount of farmland directly impacted, its proximity to the existing non-  
43 historic frontage road, and the fact that no historic farm buildings are located in this vicinity,  
44 FHWA, FTA and CDOT have determined that Package A would result in *no adverse effect*  
45 to the Einarsen Farm.



1 **Effect Determination – Package B:** Direct impacts to this historical farm under  
2 Package B are very similar in nature and extent to those anticipated under Package A. A  
3 slightly shorter segment of the east frontage road would be realigned and widened. The  
4 acquired right-of-way to allow construction of wider roadway shoulders would permanently  
5 bury open farmland along the southwestern edge of this historical farm property under fill  
6 slopes associated with the wider frontage road. The impacted strip of land measures  
7 approximately 1,600 feet in length, and 50 feet at its widest extent near the East Vine Drive  
8 intersection tapering to 0 feet wide at the northernmost point. The impacted 1.76 acres are  
9 located along the edge of a cultivated field and constitutes less than 1 percent of the total  
10 area of the 220 acres within the historic boundary. No historical buildings are near the  
11 proposed improvements (see **Figure 3.15-5**).

12 Noise levels associated with increased traffic levels on I-25 would result in a three decibel  
13 increase over existing conditions. While one decibel louder than noise expected with  
14 Package A, this increase is still in the barely perceptible range. The changes to the local  
15 terrain are minimal and there are no highway features introduced by the proposed  
16 improvements that would indirectly affect the visual context of the farm. Changes in noise  
17 and physical setting and atmosphere are not expected to diminish the function, character,  
18 feel, or attributes that render the farm, farm structures and farmhouse NRHP-eligible.  
19 Indirect effects due to temporary construction activities would be the same as for  
20 Package A.

21 Due to the small amount of farmland impacted, its proximity to the existing non-historic  
22 frontage road, and the fact that no historical farm buildings are located in this vicinity,  
23 FHWA, FTA and CDOT have determined that Package B would result in *no adverse effect*  
24 to the Einarsen Farm.

25 **Effect Determination – Preferred Alternative:** The Preferred Alternative would add one  
26 general purpose lane and one TEL in each direction. A narrow sliver of land extending  
27 along and north from East Vine Drive would be permanently incorporated into the  
28 transportation right-of-way to accommodate these improvements and construct wider  
29 shoulders along the eastern frontage road. This acquired right-of-way would permanently  
30 bury open farmland along the southwestern edge of this historic farm property under fill  
31 slopes associated with the wider frontage road and at the intersection with East Vine Drive.  
32 The impacted area is along the edge of a cultivated field and contains 1.90 acres and  
33 constitutes less than 1 percent of the total area of the 220 acres within the historic  
34 boundary. No historical buildings are near the proposed improvements (see  
35 **Figure 3.15-6**).

36 With the Preferred Alternative improvements, the farmhouse would be 70 feet away from the  
37 east edge of the frontage road as opposed to the 80 feet away it currently sits. Noise levels  
38 associated with increased traffic levels on I-25 and the frontage road would result in a  
39 two-decibel increase over existing conditions. This noise increase is barely perceptible. The  
40 changes to the local terrain are minimal and there are no highway features introduced by the  
41 proposed improvements that would indirectly affect the historic farm or visual context of the  
42 farm. Changes in noise and physical setting and atmosphere are not expected to diminish the  
43 function, character, feel, or attributes that render the farm or farm buildings and farmhouse  
44 NRHP-eligible.

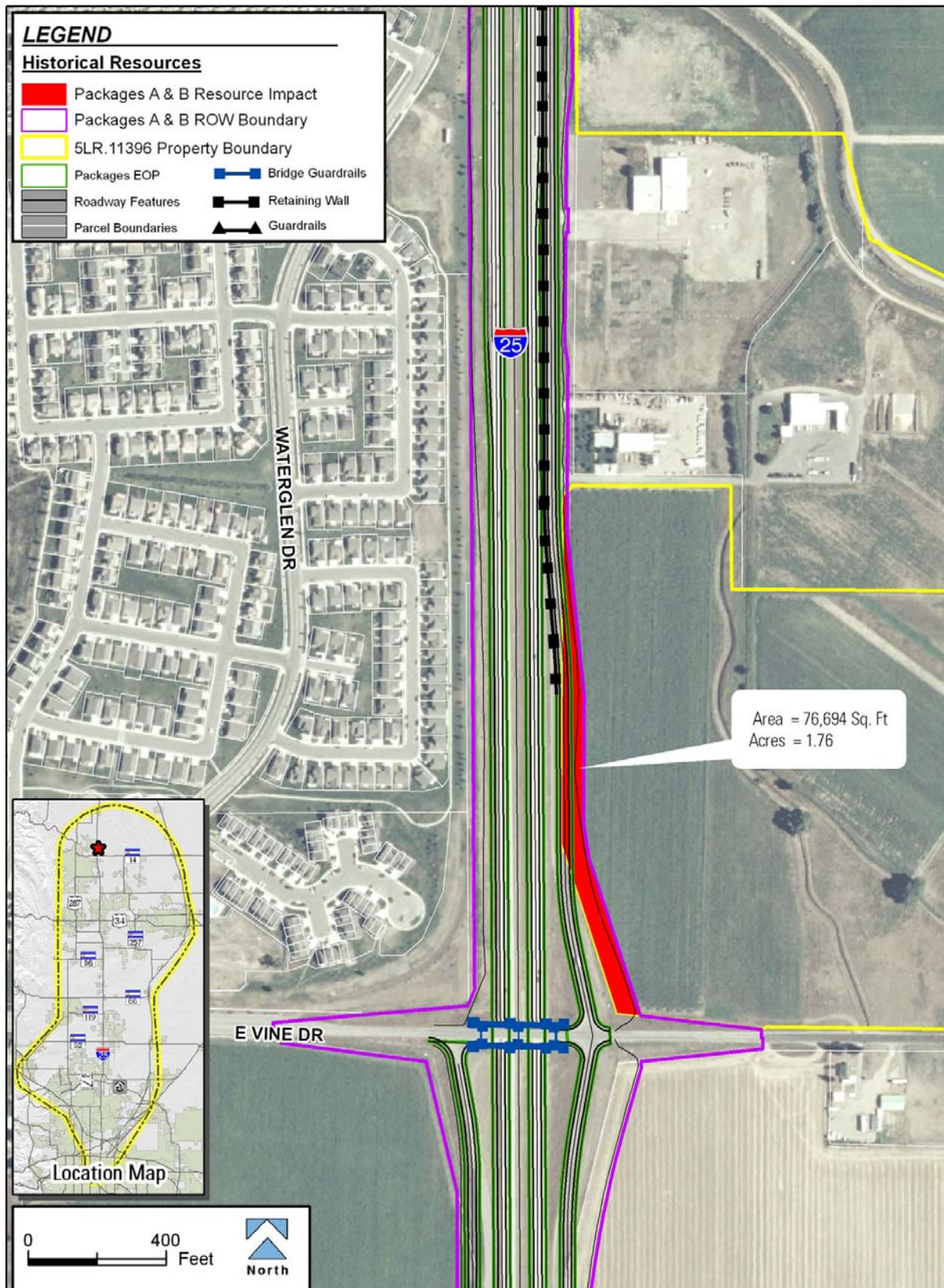
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1 A temporary construction easement could be necessary along the western edge of the  
2 property for haul roads, construction access, and staging areas to facilitate roadway widening  
3 and slope building. No permanent impacts would be anticipated from this use of the farmland  
4 property, and no farm structures would be affected. Construction related noise generated by  
5 construction equipment and trucks would be temporary in nature, and would not permanently  
6 affect the atmosphere of the farm setting. Thus indirect effects caused by temporary  
7 construction activities would occur, but would not be expected to significantly diminish the  
8 function, character, or attributes that render the farm, farm structures and farmhouse NRHP-  
9 eligible.

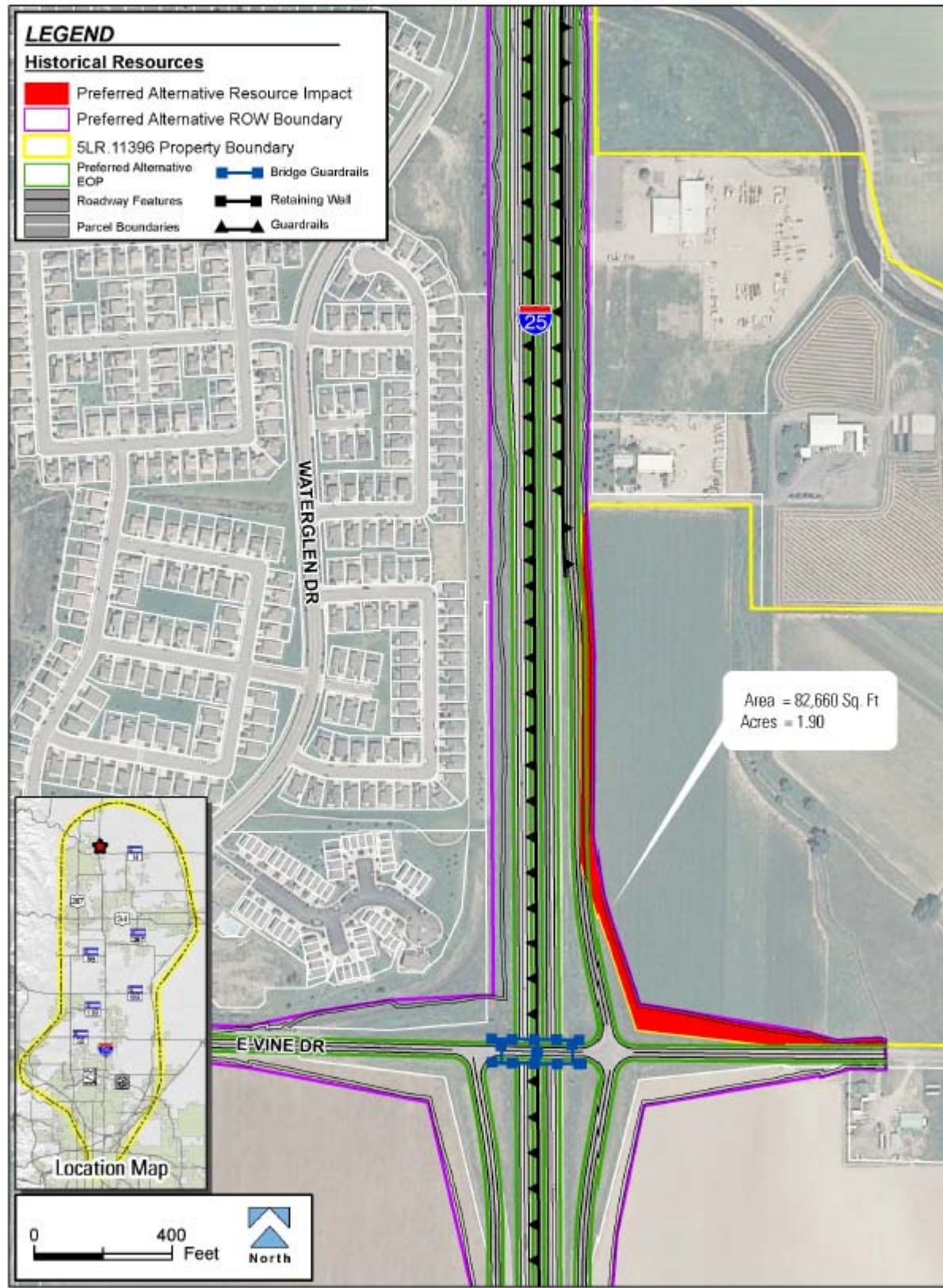
10 Due to the small amount of farmland impacted, its proximity to the existing non-historic  
11 frontage road, and the fact that no historical farm buildings are located in this vicinity, FHWA,  
12 FTA and CDOT have determined that the Preferred Alternative would result in *no adverse*  
13 *effect* to the Einarsen Farm.

14

1 Figure 3.15-5 5LR.11396 (Einarsen Farm) – Packages A and B



1 Figure 3.15-6 LR.11396 (Einarsen Farm) – Preferred Alternative



2

1 **5LR.863.2 (Larimer and Weld Canal)**

2 **Resource Description:** This segment of the Larimer and Weld Canal generally runs  
3 perpendicular to I-25 and crosses both the highway and the frontage road. The canal was  
4 originally built between 1878 and 1881. The canal is approximately 30 feet in width. The  
5 portion of the canal that crosses under the highway was altered when the highway was  
6 constructed in the 1960s. The entire canal is approximately 45 miles long. The segment in the  
7 project APE (5LR.863.2) is 3,782 feet long. The levees along both banks of the canal are  
8 grassy and in many areas lined with coarse stone riprap. The surrounding area includes  
9 agricultural and residential development.

10 **Eligibility Determination:** The entire canal is eligible for the NRHP under Criterion A for its  
11 important association with the development of water rights and agriculture in Larimer and  
12 Weld Counties. The segment (5LR.863.2) within the project APE retains sufficient integrity of  
13 location, setting, feeling, and use to support the eligibility of the entire linear resource.

14 **Effect Determination – Package A:** Currently, 3 bridges span the canal, carrying multiple  
15 lanes of northbound and southbound I-25, and the east frontage road. Each of these  
16 roadways would be widened to add wider shoulders and new acceleration and deceleration  
17 lanes associated with the Mountain Vista Drive interchange ramps. To accommodate the  
18 proposed improvements under Package A, the existing northbound 48-foot-long, rolled  
19 I-beam composite bridge improvements over the canal would be widened by 25 feet from its  
20 current 38-foot-width. The existing southbound bridge is identical to the northbound bridge  
21 and would be widened by 20 feet. The existing east frontage road bridge is a 48-foot-long,  
22 24-foot-wide concrete slab and girder bridge over the canal. It would be widened by 12 feet.  
23 All highway and frontage road widening would be supported on top of the new bridge  
24 structures. New bridge piers and abutments used to support the widened bridge deck would  
25 be placed outside the historic boundary of the canal and would therefore not result in direct  
26 impacts (see **Figure 3.15-7**).

27 The widened bridges would increase the amount of open canal located underneath the bridge  
28 deck. This increased overhead cover due to increased bridge deck area would be an indirect  
29 effect to the historic setting of the canal, however; this would not alter the qualities that render  
30 this ditch segment NRHP-eligible.

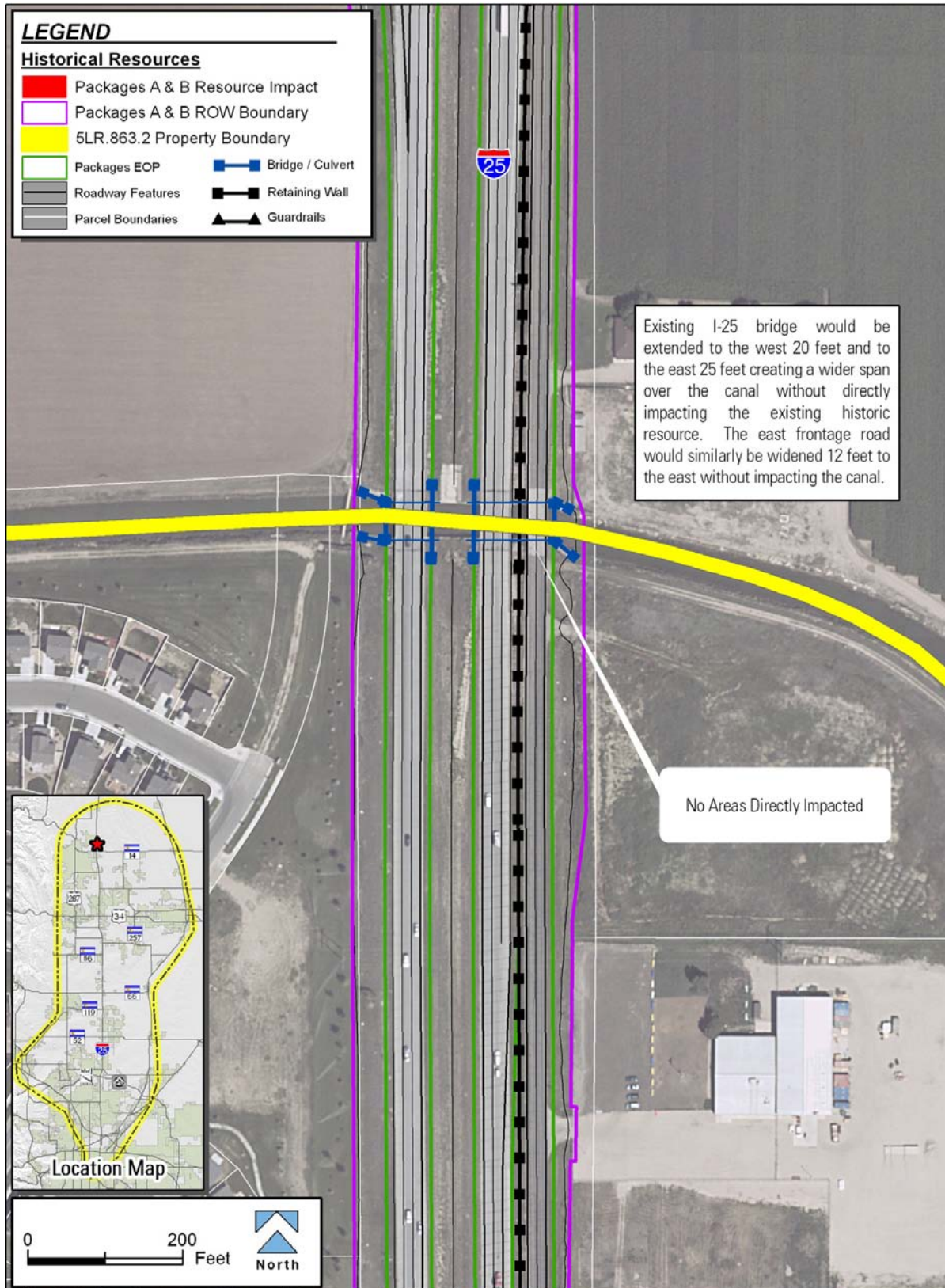
31 Installation of the new bridge piers and deck structures would likely require a temporary use  
32 within the boundary of the historic property for equipment access and minor construction  
33 activities. The canal would remain operational and irrigation water would be protected from all  
34 encroachment by construction. All disturbances caused by construction equipment or  
35 construction activities would be temporary in nature and affected areas would be restored to  
36 their original condition and appearance.

37 No direct impacts to the resource would occur as a result of these improvements. Indirect  
38 effects to the canal would not diminish the function, alignment, attributes, or setting that  
39 render the canal NRHP-eligible. FHWA, FTA and CDOT therefore have determined that  
40 Package A would result in *no adverse effect* to the Larimer and Weld Canal.

41 **Effect Determination – Package B:** Impacts are identical to Package A. FHWA, FTA and  
42 CDOT have determined that Package B would also result in *no adverse effect* to the Larimer  
43 and Weld Canal (see **Figure 3.15-7**).

1 Figure 3.15-7 5LR.863.2 (Larimer and Weld Canal) – Packages A and B

2



1 **Effect Determination – Preferred Alternative:** Impacts are identical to Package A. FHWA,  
2 FTA and CDOT have determined that the Preferred Alternative would also result in *no adverse*  
3 *effect* to the Larimer and Weld Canal (see **Figure 3.15-8**).

4 **5LR.1731, 5LR.1327, 5BL.400 (Colorado & Southern Railroad)**

5 **Resource Description:** Multiple segments of the Colorado & Southern (C&S) Railroad in  
6 Larimer and Boulder counties are located within the APE of the potential highway package  
7 improvements. Several different site numbers have been assigned to this rail line, but they all  
8 refer to the same overall resource (see **Figure 3.15-9**).

9 The northernmost railroad segment affected by highway improvements is segment  
10 5LR.1731.2, an 836-foot-long segment of the historic C&S Black Hollow Branch that runs  
11 eastward from Black Hollow Junction, which is located northeast of the Downtown Fort Collins  
12 Airpark, to Black Hollow in Weld County. It was built in 1906 by the Colorado Railroad  
13 Company, a subsidiary of C&S and then absorbed by C&S in 1930. The C&S was dissolved in  
14 1981 and the tracks taken over by Burlington Northern, which in 1995 became the BNSF. The  
15 total length of the C&S Black Hollow Branch is 9 miles. The I-25 alignment crosses the C&S  
16 alignment just northwest of the SH 14 interchange. The bridges that carry I-25 over the railroad  
17 were built during construction of I-25 in the 1960s.

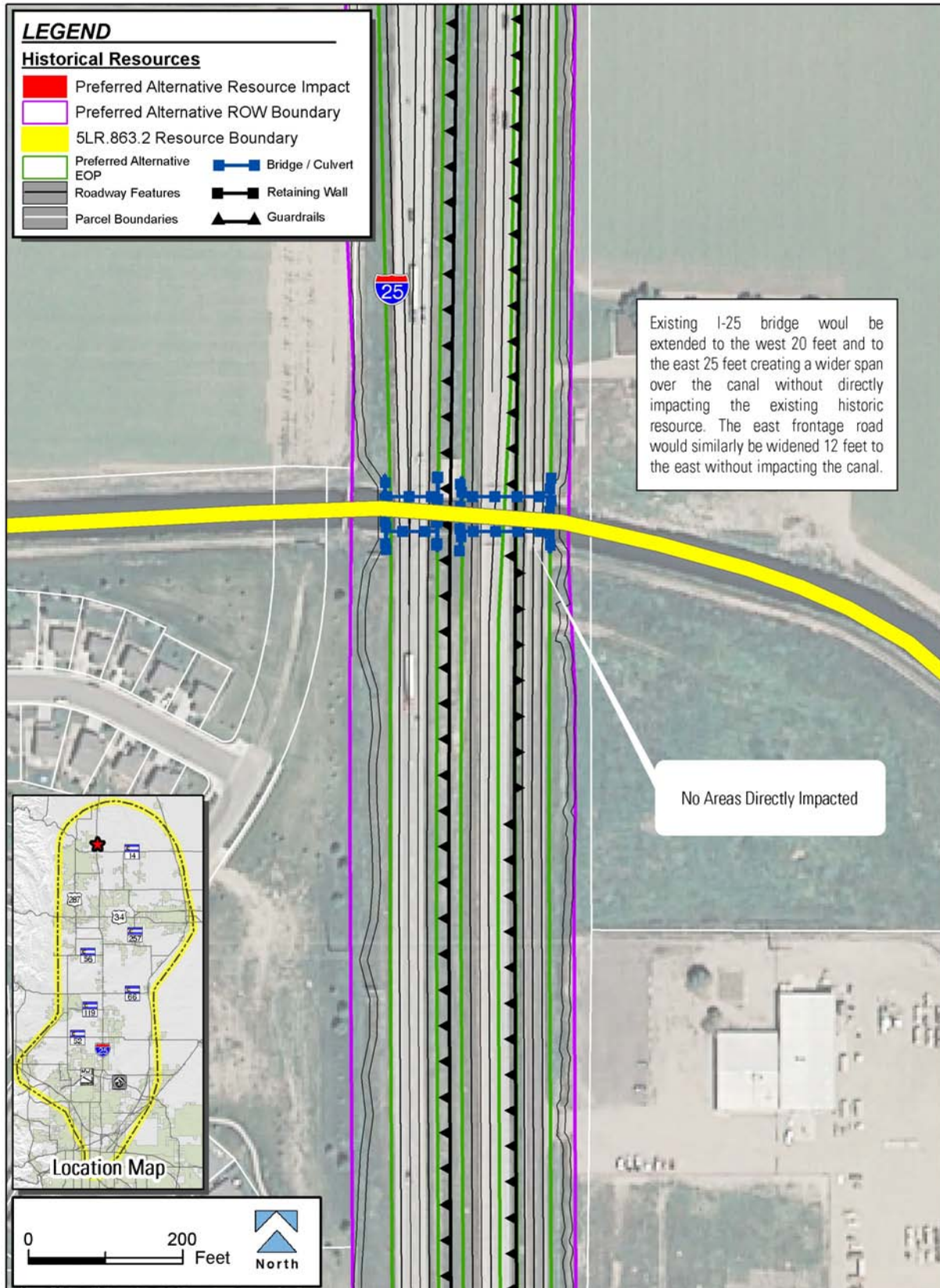
18 The second affected segment (5LR.1327.6) is a 1,661-foot-long railroad segment originally  
19 built in 1882 as part of the Greeley, Salt Lake, & Pacific Railroad. In 1899, the rail line became  
20 part of the C&S. The segment is part of an approximately 13 mile-long link that extends  
21 diagonally from Fort Collins to Greeley. I-25 crosses this segment of the C&S alignment just  
22 south of the SH 14 interchange. The bridge that carries the highway over the railroad was built  
23 during construction of I-25 in the 1960s.

24 The third segment of the C&S line (5LR1731.11) in the APE is also known as the Colorado  
25 Central(CC)/C&S/BNSF Business Spur. The spur is a commercial access spur line running  
26 north from the mainline BNSF RR just south of West 1<sup>st</sup> Street in Loveland. This disused spur  
27 is 262 feet long, retains rail and ties, and includes a wooden trestle bridge  
28 (5LR.1731.11.mm6028) over the Farmers Irrigation Ditch (5LR8928.7). The bridge is in a  
29 deteriorated state.

30 The Larimer County segment 5LR.1731.1 and the Boulder County segment 5BL.400.3  
31 represent the southernmost Colorado Central/Colorado & Southern Railroad/Burlington  
32 Northern & Santa Fe Railroad segments in the APE. Segment 5LR.1731.1 runs 7.8 miles  
33 south from the Larimer County line to South Pratt Parkway in Longmont. These segments  
34 were built in 1877 and have been in constant service for 130 years. The CC/C&S/BNSF runs  
35 23.4 miles generally south from Cherry Street in Fort Collins to the Boulder County line. The  
36 entire CC/C&S/BNSF rail line in Boulder County is 33.8 miles long.

37 **Eligibility Determination:** The entire C&S railroad (5LR.1731, 5LR.1327, 5BL.400) is eligible  
38 under NRHP Criterion A for its association with the development of railway transportation.  
39 Railway transportation was critically important to the settlement and economic development of  
40 Colorado. Segments 5LR.1731.2, 5LR.327.6 and 5LR.1731.1 of the railway retain integrity of  
41 the original location, design, and function, and collectively support the eligibility of the entire  
42 linear resource. Segment 5LR1731.11 has been heavily modified and due to this loss of  
43 integrity no longer supports the eligibility of the entire railroad.

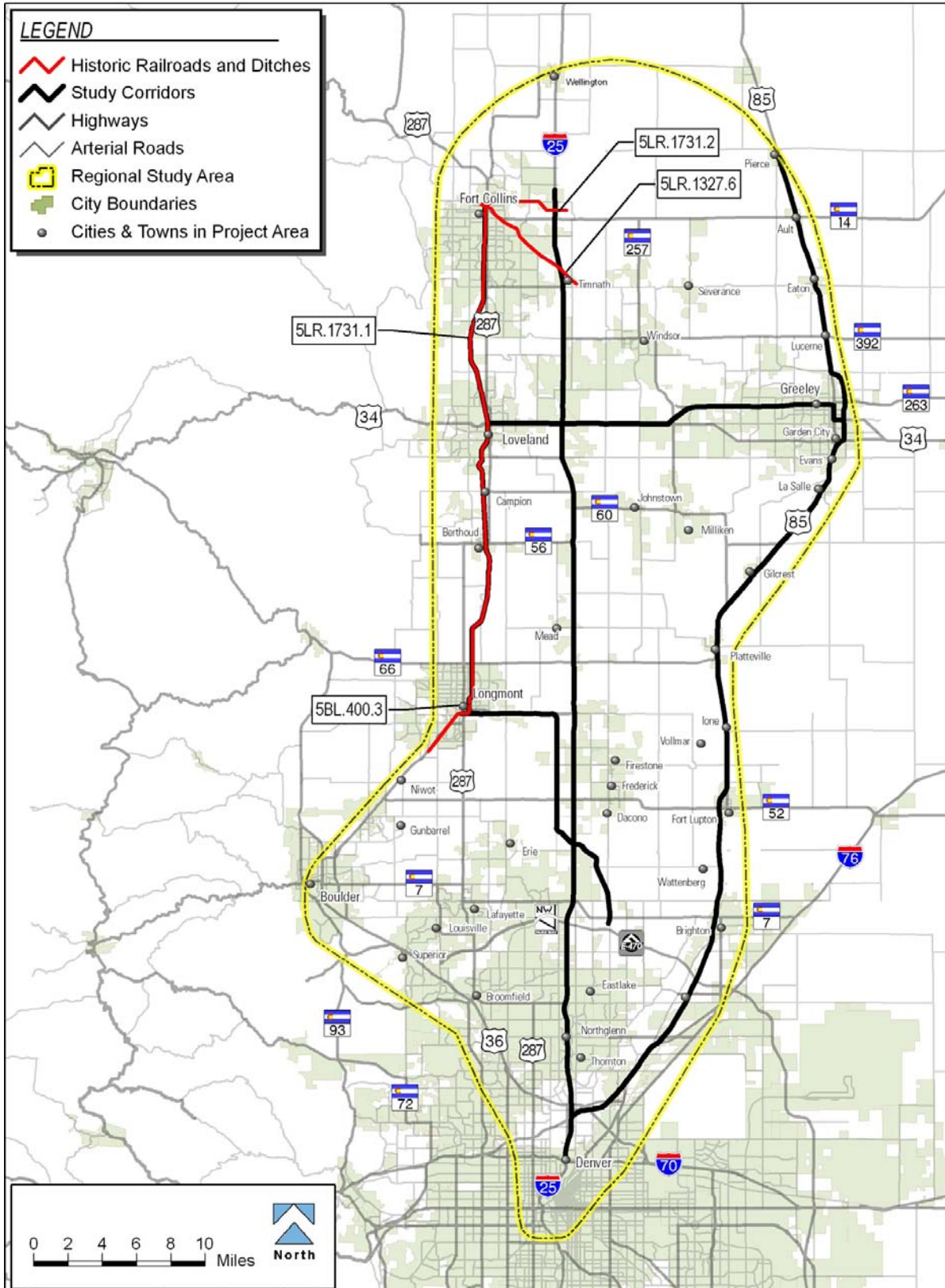
1 Figure 3.15-8 5LR.863.2 (Larimer and Weld Canal) – Preferred Alternative



2



1 **Figure 3.15-9 5LR.1731, 5LR.1327, 5BL.400 (Colorado & Southern Railroad) Segments**  
2 **Intersecting Project APE**



3

1 **Effect Determination:**

2 In order to determine the effect to the entire linear resource, impacts to each of the segments  
3 passing through the project APE were assessed. These impact assessments are presented  
4 below, followed by a determination of effect to the entire C&S Railroad in Larimer and Boulder  
5 counties.

6 **Impacts to segment 5LR.1731.2 – Package A:** I-25 is currently carried over this historic  
7 railroad by two parallel, 125-foot-long, 38-foot-wide welded girder composite bridges for the  
8 northbound and southbound traffic lanes. The existing bridges result in a combined 76 feet of  
9 overhead railroad coverage. The existing east and west frontage roads are provided with at-  
10 grade railroad crossings. Package A in this location consists of a transition area from three  
11 general purpose lanes in each direction on the south to two general purpose lanes in each  
12 direction on the north. The northbound I-25 roadway would be widened to the east of the  
13 existing roadway edge, while the southbound roadway would be widened to the west of the  
14 existing roadway edge. Wider bridge structures would replace the existing bridges to  
15 accommodate the larger roadway template. These new bridges would each be 79 feet long  
16 and 63 feet wide, constructed as pre-stressed concrete girder type structures. Due to their  
17 wider dimensions, an additional 50 feet of railroad would be covered by the two new highway  
18 bridges. The frontage roads would remain in their current locations and would be maintained in  
19 their existing at-grade railroad crossing configurations (see **Figure 3.15-10**).

20 The alignment and operation of the railroad would not be changed. The entire widened I-25  
21 roadway would continue to be carried over the historic railway on top of the new bridge  
22 structures. The new bridges would be supported by piers placed outside the historic rail  
23 corridor boundary (railroad right-of-way) resulting in no direct impacts to the historic railway.

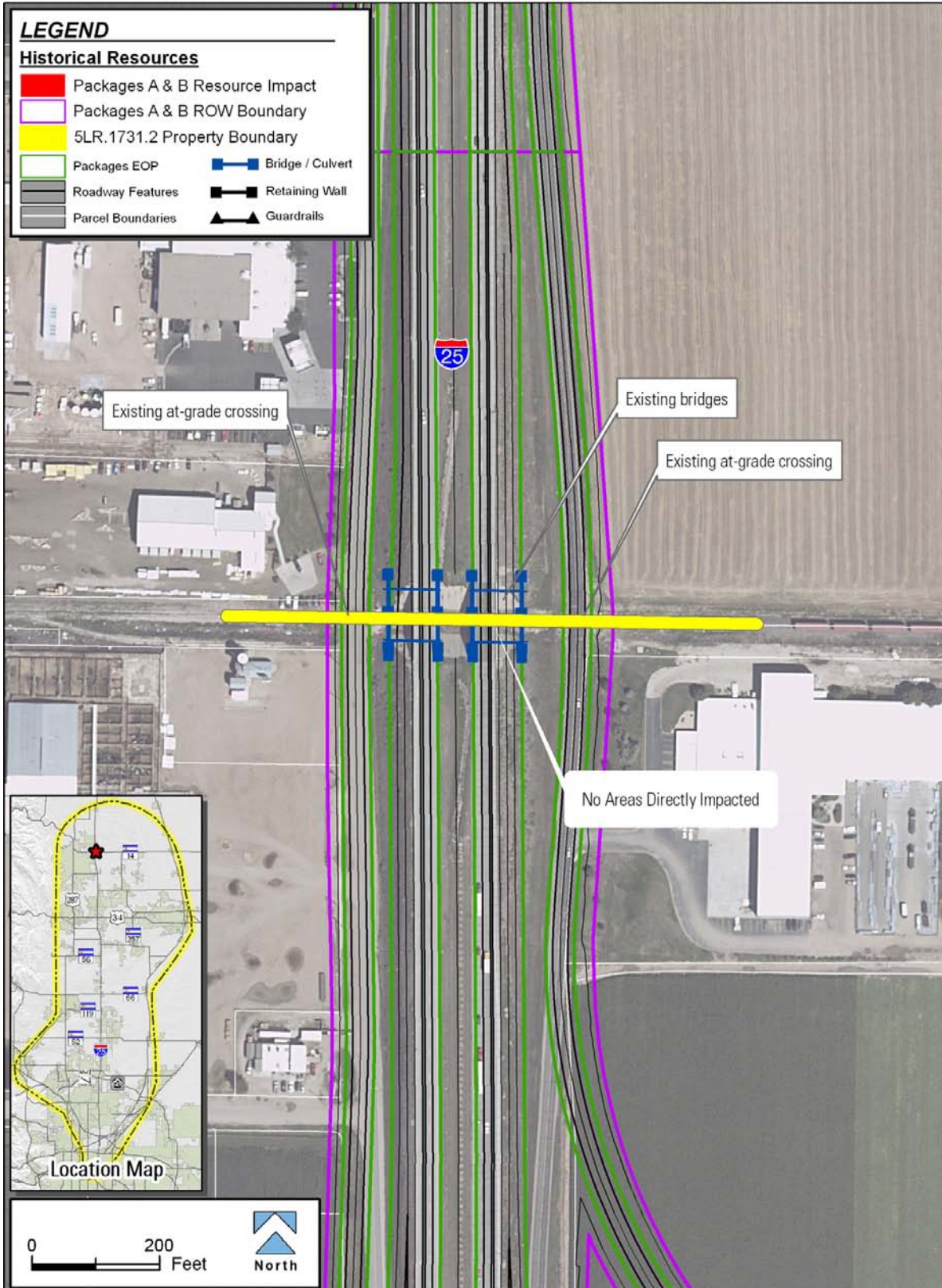
24 Installation of the new bridge piers and deck structures would likely require a temporary  
25 construction easement on the historic property for equipment access and minor construction  
26 activities. The railway would remain operational and would be protected from all encroachment  
27 by construction. All disturbances caused by construction equipment or construction activities  
28 would be temporary in nature and affected areas would be restored to their original condition  
29 and appearance.

30 The widened bridges would increase the amount of railway located underneath the bridge  
31 deck by 50 feet. This increased overhead cover due to a wider bridge deck would be an  
32 indirect effect to the historic setting of the railway; however, this minor impact would not  
33 diminish the qualities that render this railway segment NRHP-eligible.

34 No direct impacts would occur. The proposed transportation improvements associated with  
35 Package A would not substantially diminish or alter characteristics that render the property  
36 eligible for the NRHP.

37

1 Figure 3.15-10 5LR.1731.2 (Colorado & Southern Railroad, Black Hollow Branch) –  
2 Packages A and B



3

1 **Impacts to segment 5LR.1731.2 – Package B:** The changes associated with Package B at  
2 this location are similar in character to those associated with Package A. In the vicinity of the  
3 historic railroad, Package B consists of a transition area from two general purpose lanes plus a  
4 buffer-separated managed lane in each direction to a section containing only two general  
5 purpose lanes in each direction. The northbound roadway would be widened to the east of the  
6 existing roadway edge, while the southbound roadway would be widened to the west of the  
7 existing roadway edge. Wider northbound and southbound bridge structures would be required  
8 to accommodate the larger roadway template. These new bridges would each be 79 feet long  
9 and 63 feet wide, constructed as pre-stressed concrete girder type structures. The frontage  
10 roads would remain in their current locations and at-grade crossings would be maintained in  
11 their current configurations (see **Figure 3.15-10**).

12 The alignment and operation of the railroad would not be changed. The entire widened I-25  
13 roadway would continue to be carried over the historic railway on top of the new bridge  
14 structures. The new bridges would be supported by piers placed outside the historic rail  
15 corridor boundary (railroad right-of-way) resulting in no direct impacts to the historic railway.

16 The widened bridges would increase the amount of railway located underneath the bridge  
17 deck. This increased overhead cover due to a wider bridge deck would be an indirect effect to  
18 the historic setting of the railway; but would not alter the property's historic function or  
19 alignment, nor diminish the character or attributes that render the railway NRHP-eligible.  
20 Construction access across the railway property may be required for installation of new bridge  
21 piers. This temporary direct impact would not diminish qualities that render the railway NRHP-  
22 eligible.

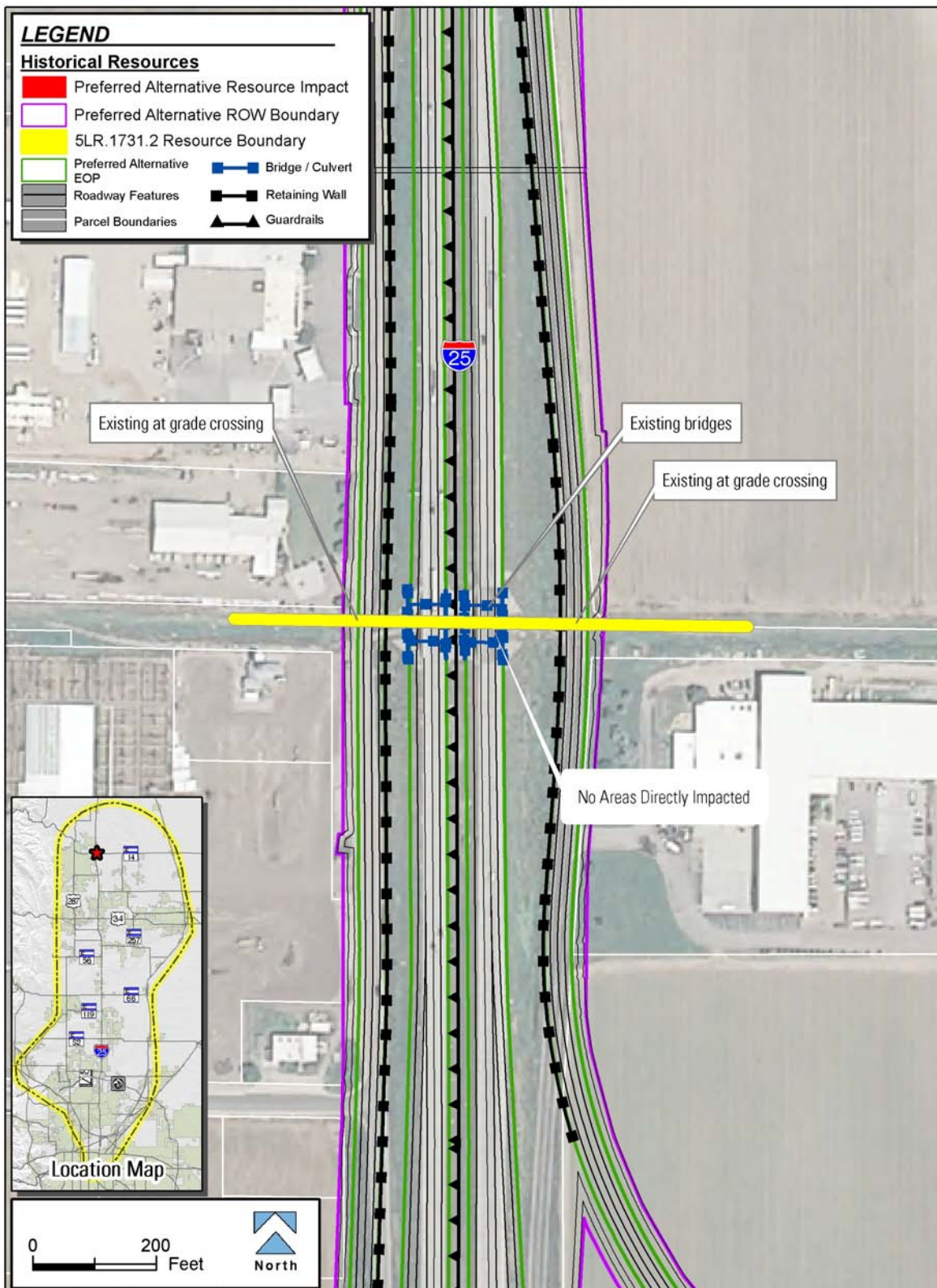
23 The proposed transportation improvements associated with Package B would not substantially  
24 diminish or alter characteristics that render the property eligible for the NRHP.

25 **Impacts to segment 5LR.1731.2 – Preferred Alternative:** The changes associated with the  
26 Preferred Alternative at this location consist of a transition area from three general purpose  
27 lanes plus a buffer-separated managed lane in each direction to a section containing only two  
28 general purpose lanes in each direction. The northbound roadway would be widened to the  
29 east of the existing roadway edge, while the southbound roadway would be widened to the  
30 west of the existing roadway edge. Wider northbound and southbound bridge structures would  
31 be required to accommodate the larger roadway template. These new bridges would each be  
32 79 feet long and 63 feet wide, constructed as pre-stressed concrete girder type structures. The  
33 frontage roads would remain in their current locations and at-grade crossings would be  
34 maintained in their current configurations (see **Figure 3.15-11**).

35 The widened bridges would increase the amount of railway located underneath the bridge  
36 deck. This increased overhead cover due to a wider bridge deck would be an indirect effect to  
37 the historic setting of the railway; however, this minor impact would not diminish the qualities  
38 that render this railway segment NRHP-eligible.

39 No direct impacts would occur. The proposed transportation improvements associated with the  
40 Preferred Alternative would not substantially diminish or alter characteristics that render the  
41 property eligible for the NRHP.

1 **Figure 3.15-11 5LR.1731.2 (Colorado & Southern Railroad, Black Hollow Branch) –**  
2 **Preferred Alternative**



3

1 **Impacts to Segment 5LR.1327.6 – Package A:** Presently, I-25 is bridged over the historic  
2 rail line via two 172-foot-long, 3-span welded girder and concrete bridges for northbound  
3 (B-17-BC) and southbound lanes (B-17-BD). The existing northbound bridge is 44 feet wide  
4 and the existing southbound bridge is 38 feet wide. Under Package A, the I-25 template would  
5 be widened approximately 60 feet on the east side of the existing highway to provide space for  
6 the overall expansion of the highway footprint to accommodate three general purpose lanes in  
7 each direction. The expanded I-25 section would require replacement of the old bridges with  
8 new, larger bridge structures to span the rail line. The southbound bridge (B-17-BD) would be  
9 demolished and replaced in approximately the same position. Bridge structure B-17-BC would  
10 be demolished and the new northbound bridge would be constructed approximately 30 feet  
11 east of that location. The northbound bridge would be 208 feet long and 63 feet wide, and the  
12 southbound bridge would be 218 feet long and 63 feet wide. The alignment and operation of  
13 the railroad would not be changed, and the new bridge piers would be placed outside the  
14 historic rail corridor boundary. The frontage road would be widened approximately 12 feet to  
15 improve paved shoulder width. Where the frontage road crosses the railway, no changes to  
16 the road width or alignment are planned. Package A would result in no direct impacts to this  
17 resource (see **Figure 3.15-12**).

18 The larger bridges would increase the amount of railway located underneath the bridge deck  
19 by approximately 44 feet. This increased overhead cover would constitute an indirect effect to  
20 the historic setting of the railway, however; because the existing setting includes the modern  
21 highway and bridge spans, Package A improvements would not substantially impair the  
22 function, alignment, character, or other attributes that render the railway NRHP-eligible.

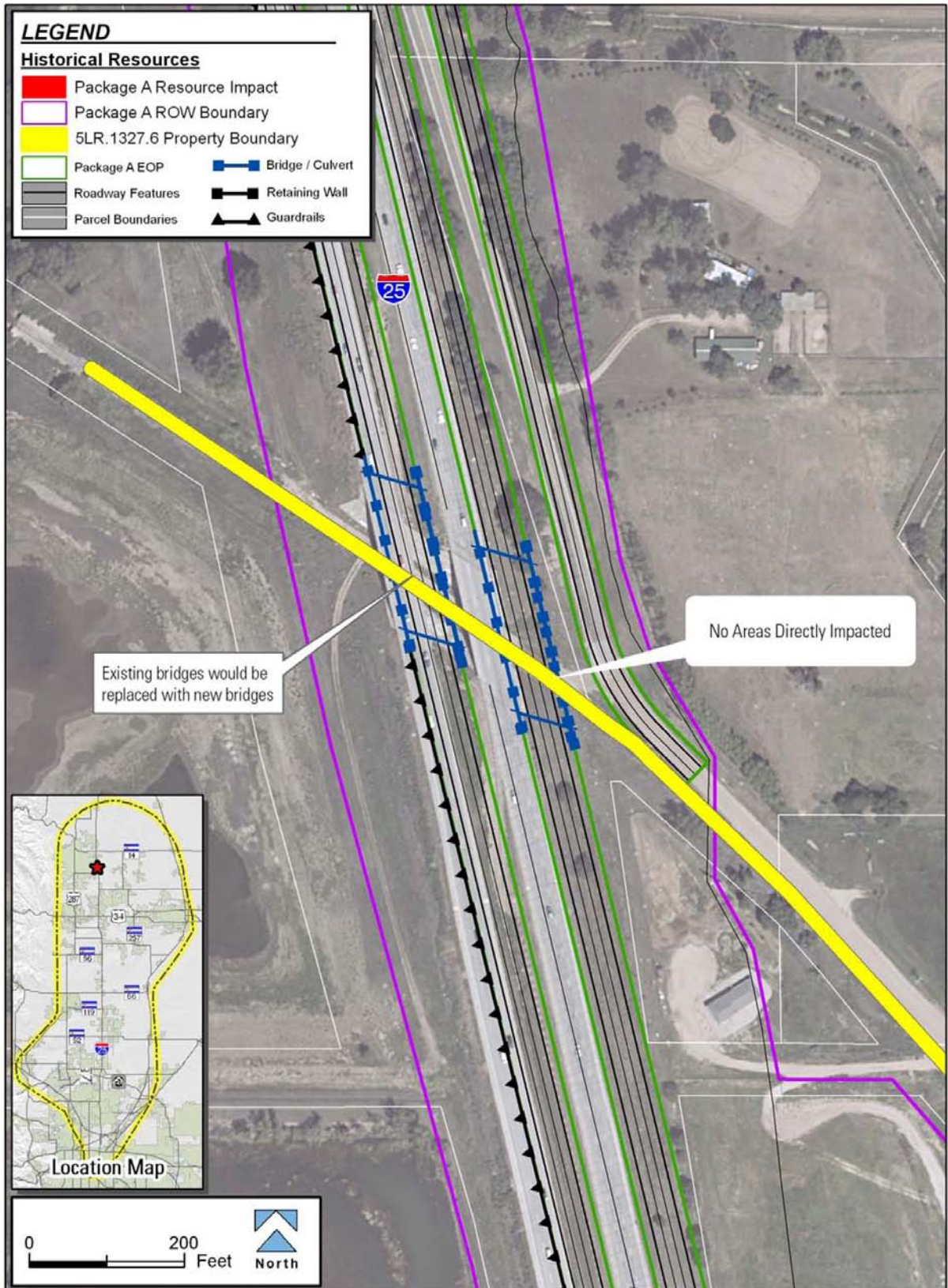
23 Installation of the new bridge piers and decking structures would likely require a temporary  
24 construction easement on a small portion of the historic property for equipment access and  
25 minor construction activities. The railway would remain operational and would be protected  
26 from all encroachment by construction. All disturbances caused by construction equipment or  
27 construction activities would be temporary in nature and any affected areas would be restored  
28 to their original condition and appearance.

29 No direct impact to the resource would occur as a result of these improvements. Indirect  
30 effects to the railway would not substantially diminish the function, alignment, attributes, or  
31 setting that contribute to the historic integrity and render the canal NRHP-eligible.

32 **Impacts to segment 5LR.1327.6 – Package B:** Under Package B, the I-25 template would  
33 be widened nearly 100 feet to the east and approximately 12 feet to the west to accommodate  
34 an 8-lane highway template made up of two general purpose lanes and two barrier-separated  
35 managed lanes in each direction. The existing bridges spanning the historic rail line would be  
36 replaced by new, longer bridge structures to carry 4-lanes in each direction. The northbound  
37 bridge would be 201 feet long, and the southbound bridge would be 183 feet long. Although  
38 the dimensions of the Package B bridge replacements and highway widening are larger, the  
39 effect to the railroad is the same as described under Package A. The alignment and operation  
40 of the railroad would not be changed, and the new bridge piers would be placed outside the  
41 historic rail corridor. No direct impacts would occur to the resource (see **Figure 3.15-13**).

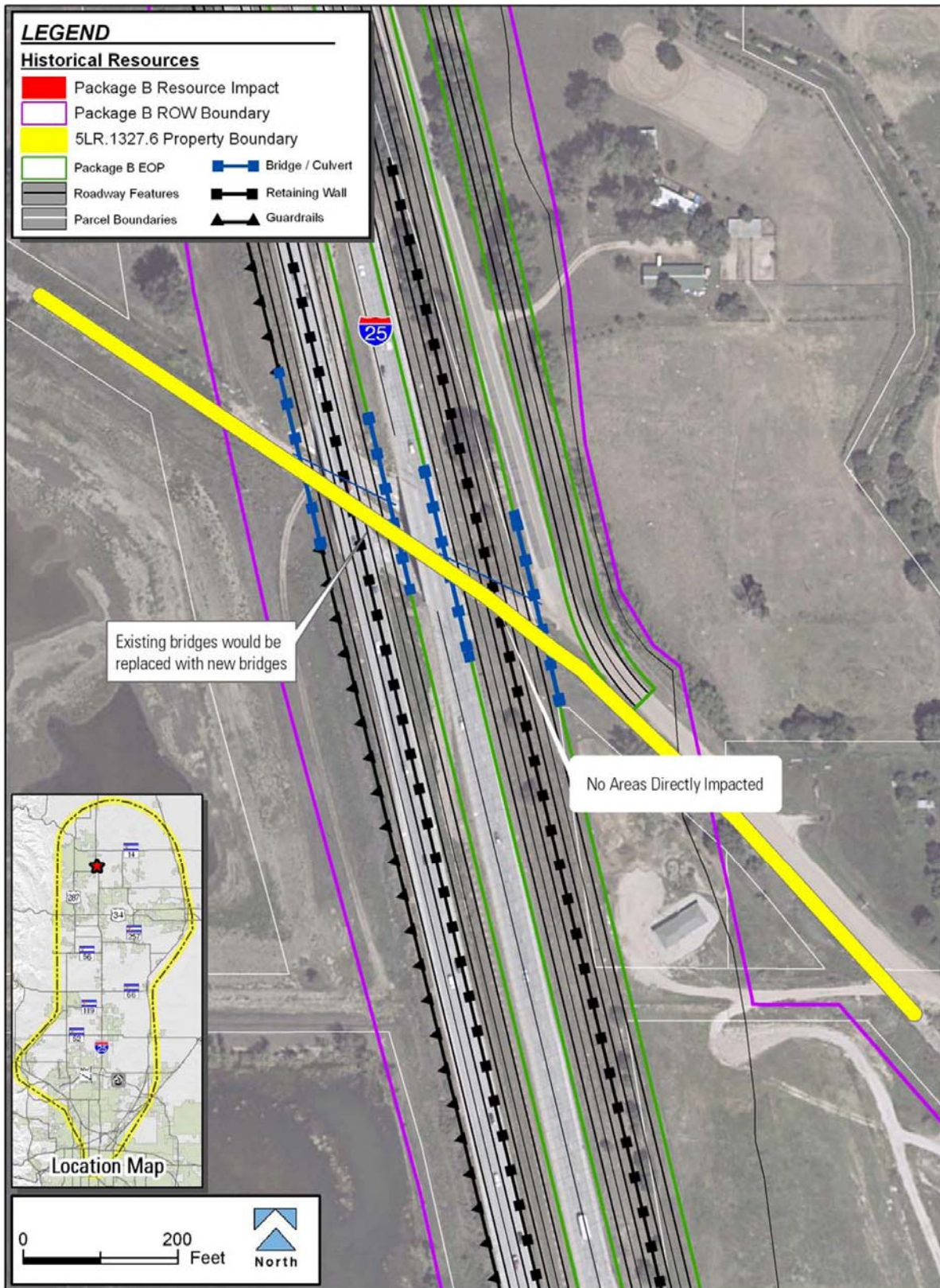
42 The larger bridges would increase the amount of railway located underneath the bridge deck  
43 by approximately 80 feet. This increased overhead cover would constitute an indirect effect to  
44 the historic setting of the railway, however; because the existing setting includes the modern  
45 highway and bridge spans, Package B improvements would not substantially impair the  
46 function, alignment, character, or attributes that render the railway NRHP-eligible.

1 Figure 3.15-12 5LR.1327.6 (Colorado & Southern Railroad) – Package A



2

1 Figure 3.15-13 5LR.1327.6 (Colorado & Southern Railroad) – Package B



2



1 Installation of the new bridge piers and decking structures would likely require temporary use  
2 of a small portion of the historic property for equipment access and minor construction  
3 activities. The railway would remain operational and would be protected from all encroachment  
4 by construction. All disturbances caused by construction equipment or construction activities  
5 would be temporary in nature and affected areas would be restored to their original condition  
6 and appearance.

7 The proposed transportation improvements associated with Package B would not substantially  
8 diminish or alter characteristics that render the property eligible for the NRHP.

9 **Impacts to Segment 5LR.1327.6 – Preferred Alternative:** Under the Preferred Alternative,  
10 the I-25 template would be widened into the median and approximately 60 feet on the east  
11 side of the existing highway to provide space for the overall expansion of the highway footprint  
12 to accommodate three general purpose lanes and a TEL in each direction. The expanded I-25  
13 section would require replacement of the old bridges with new, larger bridge structures to span  
14 the rail line. The southbound bridge (B-17-BD) would be demolished and replaced with a wider  
15 bridge extending into the existing median. Bridge structure B-17-BC would be demolished and  
16 the new northbound bridge would be constructed adjacent to and east of that location. The  
17 alignment and operation of the railroad would not be changed, and the new bridge piers would  
18 be placed outside the historic rail corridor boundary. The frontage road would be widened  
19 approximately 12 feet to provide a paved shoulder. Where the frontage road crosses the  
20 railway, no changes to the road width or alignment are planned. The Preferred Alternative  
21 would result in no direct impacts to this resource (see **Figure 3.15-14**).

22 The alignment and operation of the railroad would not be changed. The entire widened I-25  
23 roadway would continue to be carried over the historic railway on top of the new bridge  
24 structures. The new bridges would be supported by piers placed outside the historic rail  
25 corridor boundary (railroad right-of-way) resulting in no direct impacts to the historic railway.

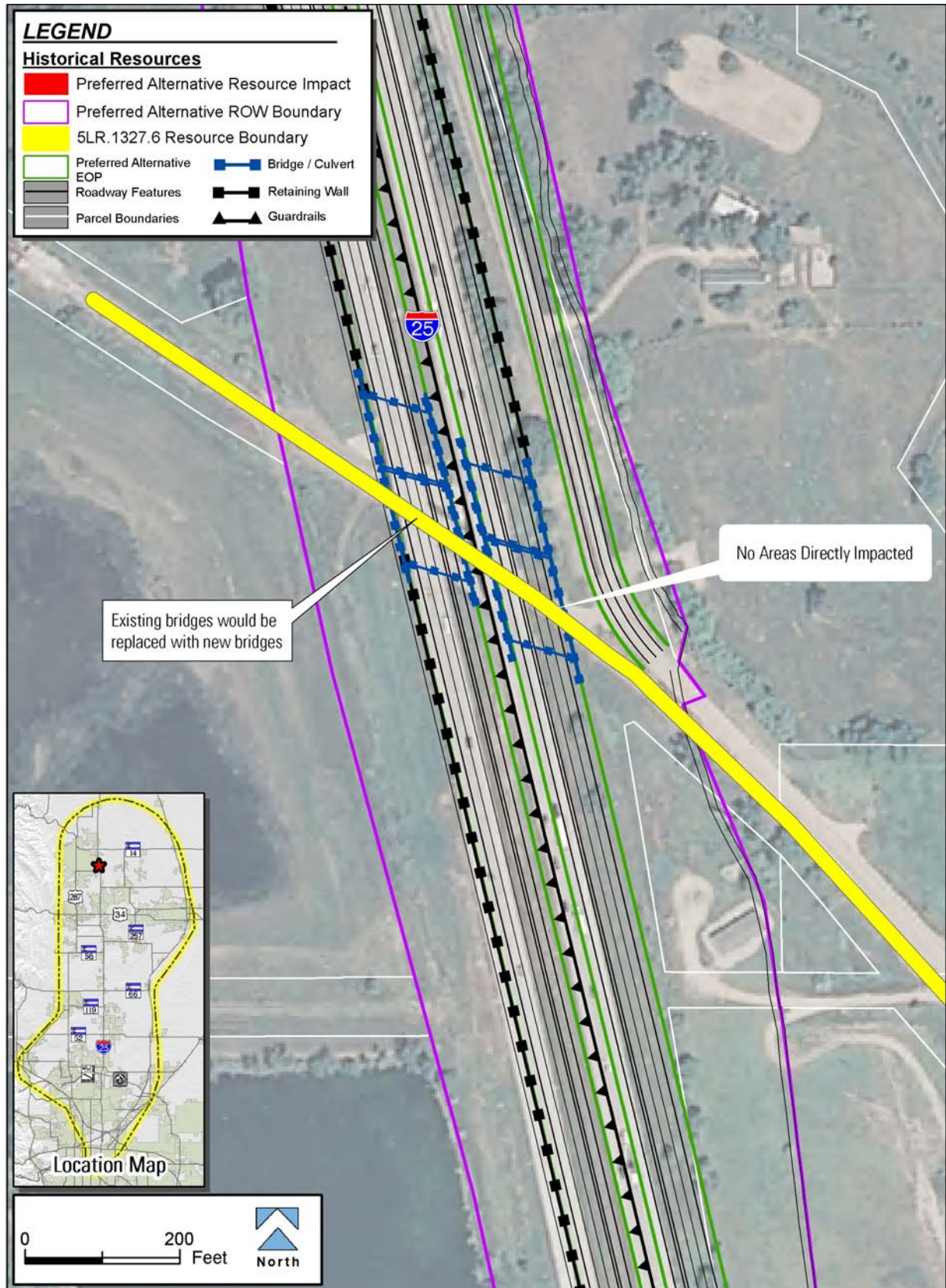
26 The widened bridges would increase the amount of railway located underneath the bridge  
27 deck by approximately 165 feet. This increased overhead cover due to a wider bridge deck  
28 would be an indirect effect to the historic setting of the railway; but would not alter the  
29 property's historic function or alignment, nor diminish the character or attributes that render the  
30 railway NRHP-eligible. Construction access across the railway property may be required for  
31 installation of new bridge piers. This temporary direct impact would not diminish qualities that  
32 render the railway NRHP-eligible.

33 The proposed transportation improvements associated with the Preferred Alternative would not  
34 substantially diminish or alter characteristics that render the property eligible for the NRHP.

35 **Impacts to segment 5LR.1731.1 – Package A:** Commuter rail transit stations would be  
36 developed at six locations along this historic rail line in the cities of Fort Collins and Loveland.  
37 These stations would include new station platforms of concrete flatwork at track level,  
38 American with Disabilities (ADA) compliant high-blocks (short raised platforms for wheelchair  
39 access to trains), various minor station amenities (trash cans, benches, etc), and pedestrian  
40 overpasses/underpasses (see **Figure 3.15-15**).

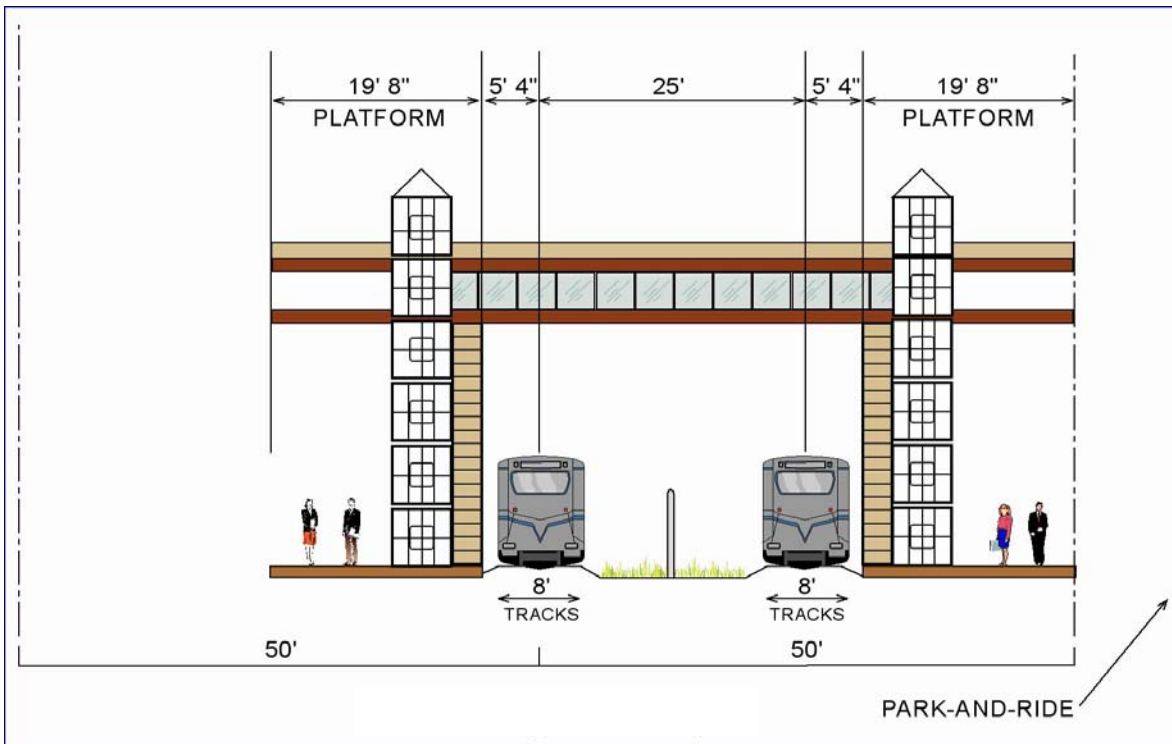
41

1 Figure 3.15-14 5LR.1327.6 (Colorado & Southern Railroad) – Preferred Alternative



1 Figure 3.15-15 Typical Commuter Rail Station Design and Cross Section

2



1 The historic resource is comprised of the ballast, bed and track. In all of the station locations  
2 the existing rail line would remain in its current (historic) alignment, and thus no direct impacts  
3 would occur.

4 Wooden and iron/steel pedestrian train crossing bridges were common elements of major  
5 railroad stations of the early Front Range railways. Pedestrian bridges and ADA components,  
6 building layout, and parking facilities proposed under Package A would, however, introduce a  
7 modern design element into the historic setting. Modern station infrastructure would be  
8 considered an indirect effect to the historic setting of the railway; however, it is not expected to  
9 substantially harm the function, alignment, character, or other attributes that render the railway  
10 NRHP-eligible.

11 The Package A commuter rail would be located east of the existing spur line and would not  
12 directly or indirectly affect the switching or track of the spur. There would be no change in the  
13 current configuration of the railroad spur or trestle bridge crossing due to commuter rail  
14 improvements in Package A.

15 **Impacts to segment 5LR.1731.1 – Preferred Alternative:** Commuter rail transit stations  
16 would be developed at six locations along this historic rail line in the cities of Fort Collins,  
17 Loveland, and Berthoud. These stations would include new station platforms of concrete  
18 flatwork at track level, American with Disabilities (ADA) compliant high-blocks (short raised  
19 platforms for wheelchair access to trains), various minor station amenities (trash cans,  
20 benches, etc), and pedestrian overpasses/underpasses.

21 The historic resource is comprised of the ballast, bed and track. In all of the station locations,  
22 the existing rail line would remain in its current (historic) alignment, and thus no direct impacts  
23 would occur.

24 Wooden and iron/steel pedestrian train crossing bridges were common elements of major  
25 railroad stations of the early Front Range railways. Pedestrian bridges and ADA components,  
26 building layout, and parking facilities proposed under Package A would, however, introduce a  
27 modern design element into the historic setting. Modern station infrastructure would be  
28 considered an indirect effect to the historic setting of the railway; however, it is not expected to  
29 substantially harm the function, alignment, character, or other attributes that render the railway  
30 NRHP-eligible.

31 The Preferred Alternative commuter rail would operate on the existing line and would not  
32 directly or indirectly affect the switching or track. There would be no change in the current  
33 configuration of the railroad line due to commuter rail improvements in the Preferred  
34 Alternative.

35 **Impacts to segment 5BL.400.3 – Package A:** Commuter rail facilities would be developed at  
36 several locations along this historic rail line in the Longmont vicinity. In all cases the existing rail  
37 line would remain in its current, historic alignment. No direct impacts to the historic railroad  
38 ballast, bed and track would occur. The installation of an adjacent set of tracks supporting the  
39 new commuter rail line would indirectly affect the historic setting of the historic railroad line, but  
40 would not substantially harm the function, alignment, character, or other attributes that render  
41 the railroad NRHP-eligible.

42

1 **Impacts to segment 5BL.400.3 – Preferred Alternative:** Commuter rail facilities would be  
2 developed at several locations along this historic rail line in the Longmont vicinity. In all cases  
3 the existing rail line would remain in its current, historic alignment. No direct impacts to the  
4 historic railroad ballast, bed and track would occur. The construction of an adjacent maintenance  
5 road would indirectly affect the historic setting of the historic railroad line, but would not  
6 substantially harm the function, alignment, character, or other attributes that render the railroad  
7 NRHP-eligible.

8 **Summary Effect Determination:**

9 Package A: No direct impacts would occur at any segment locality. Temporary construction  
10 impacts and indirect effects due to expanded overhead coverage by the highway bridges at  
11 localities along the corridor would affect two segments of the railroad (5LR.1731.2 and  
12 5LR.1327.6). Commuter rail stations and new track along the transportation corridor would  
13 contribute to new, but visually compatible rail infrastructural elements to the historic setting of  
14 two other segments (5LR.1731.1 and 5LBL.400.3). Taking all of these indirect impacts at  
15 specific localities into account, the proposed transportation improvements associated with  
16 Package A would not substantially diminish or alter characteristics that render the entire linear  
17 resource eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that the  
18 Package A transit improvements would result in a no adverse effect with respect to the entire  
19 linear resource (the C&S Railroad in Larimer and Boulder counties/ 5LR.1731, 5LR.1327, and  
20 5BL.400).

21 Package B: No direct impacts would occur at any segment locality. Temporary construction  
22 impacts and indirect effects due to expanded overhead coverage by the highway bridges at  
23 localities along the corridor would affect two segments of the railroad, 5LR.1731.2 and  
24 5LR.1327.6). Taking these indirect impacts into account, the proposed transportation  
25 improvements associated with Package B would not substantially diminish or alter  
26 characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT  
27 therefore have determined that the Package B transit improvements would result in no adverse  
28 effect with respect to the entire linear resource (the C&S Railroad in Larimer and Boulder  
29 counties/ 5LR.1731, 5LR.1327, and 5BL.400).

30 Preferred Alternative: No direct impacts would occur at any segment locality. Temporary  
31 construction impacts and indirect effects due to expanded overhead coverage by the highway  
32 bridges at localities along the corridor would affect two segments of the railroad  
33 (5LR.1731.2 and 5LR.1327.6). Commuter rail stations along the alignment would contribute to  
34 new, but visually compatible rail infrastructural elements to the historic setting of two other  
35 segments (5LR.1731.1 and 5LBL.400.3). Taking all of these indirect impacts at specific  
36 localities into account, the proposed transportation improvements associated with the  
37 Preferred Alternative would not substantially diminish or alter characteristics that render the  
38 entire linear resource eligible for the NRHP. FHWA, FTA and CDOT therefore have  
39 determined that the Preferred Alternative transit improvements would result in a no adverse  
40 effect with respect to the entire linear resource (the C&S Railroad in Larimer and Boulder  
41 counties 5LR.1731, 5LR.1327, and 5BL.400).

42

1 SH 14 to SH 60

2 **5LR.11409.1 (Cache la Poudre Reservoir Inlet):**

3 **Resource Description:** The entire inlet ditch was built as part of a larger irrigation system  
4 developed in 1892. The ditch is 10 miles long ending at Cache la Poudre Reservoir. The ditch  
5 crosses I-25 approximately 1,400 feet north of Prospect Road. The ditch crosses I-25 at a drop  
6 box running east under I-25, and continues southeast terminating at a point where the ditch  
7 parallels Prospect Road. This well maintained segment is 3,750 feet long, 36 feet wide, and  
8 10 feet deep. The ditch segment is concrete lined and contains a modern drop box, control  
9 house and complex system of gated box culverts that are interactive with Lake Canal. The  
10 ditch traverses cultivated fields, and is sporadically lined with riparian habitat of shrubs, willows  
11 and cottonwoods.

12 **Eligibility Determination:** The entire feature (5LR.11409) is eligible under A and C, but this  
13 segment (5LR.11409.1) is non-supporting. The Cache la Poudre Reservoir Inlet is eligible  
14 under A for its associated with period of intensive development of successful agriculture. The  
15 inlet ditch is significant as part of engineered water storage and delivery system associated  
16 with corporate irrigation projects in Colorado prior to the sugar beet industry. This segment is  
17 non-supporting due to modifications including piping under I-25 and other improvements.

18 **Effects Determination – Package A:** Package A would require an extended culvert at  
19 STA 4050. A 75-foot-long extension of double CBC farther east of the existing culvert outflow  
20 and a 10-foot-long extension west of the intake at the same double CBC would be needed to  
21 carry the widening of west frontage road shoulders and the widened Prospect Road  
22 interchange northbound I-25 on-ramp (see **Figure 3.15-16**).

23 Because the qualities that make the entire resource NRHP-eligible have already been  
24 compromised by modifications associated with construction of the I-25 ramps and frontage  
25 road and Package A improvements are minor in relative extent, FHWA, FTA and CDOT,  
26 therefore, have determined that Package A would result in *no adverse effect* to the Cache  
27 la Poudre Reservoir Inlet.

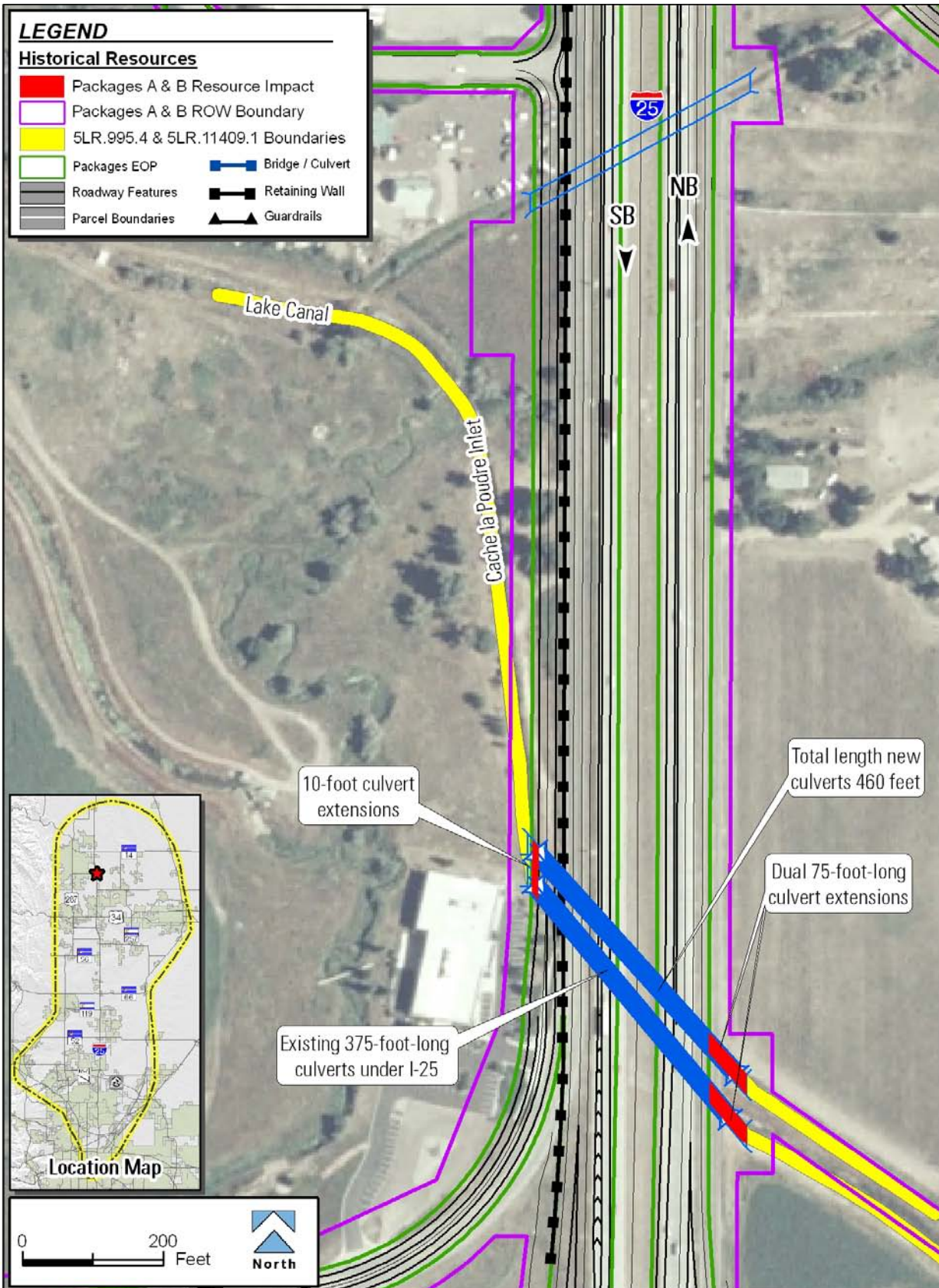
28 **Effects Determination – Package B:** Package B would require an extended culvert at  
29 STA 4050. A 75-foot-long extension of double CBC farther east of the existing culvert outflow  
30 and a 10-foot-long extension west of the intake at the same double CBC would be needed to  
31 carry the widening of west frontage road shoulders and the widened Prospect Road  
32 interchange northbound I-25 on-ramp (see **Figure 3.15-16**).

33 Because the qualities that make the entire resource NRHP-eligible have already been  
34 compromised by modifications associated with construction of the I-25 ramps and frontage  
35 road and Package B improvements are minor in relative extent, FHWA, FTA and CDOT  
36 therefore, have determined that Package B would result in *no adverse effect* to the Cache  
37 la Poudre Reservoir Inlet.

38 **Effects Determination – Preferred Alternative:** The Preferred Alternative would require an  
39 extended culvert at STA 4050. A 75-foot-long extension of double CBC farther east of the  
40 existing culvert outflow and a 10-foot-long extension west of the intake at the same double  
41 CBC would be needed to carry the widening of west frontage road shoulders and the widened  
42 Prospect Road interchange northbound I-25 on-ramp (see **Figure 3.15-17**).

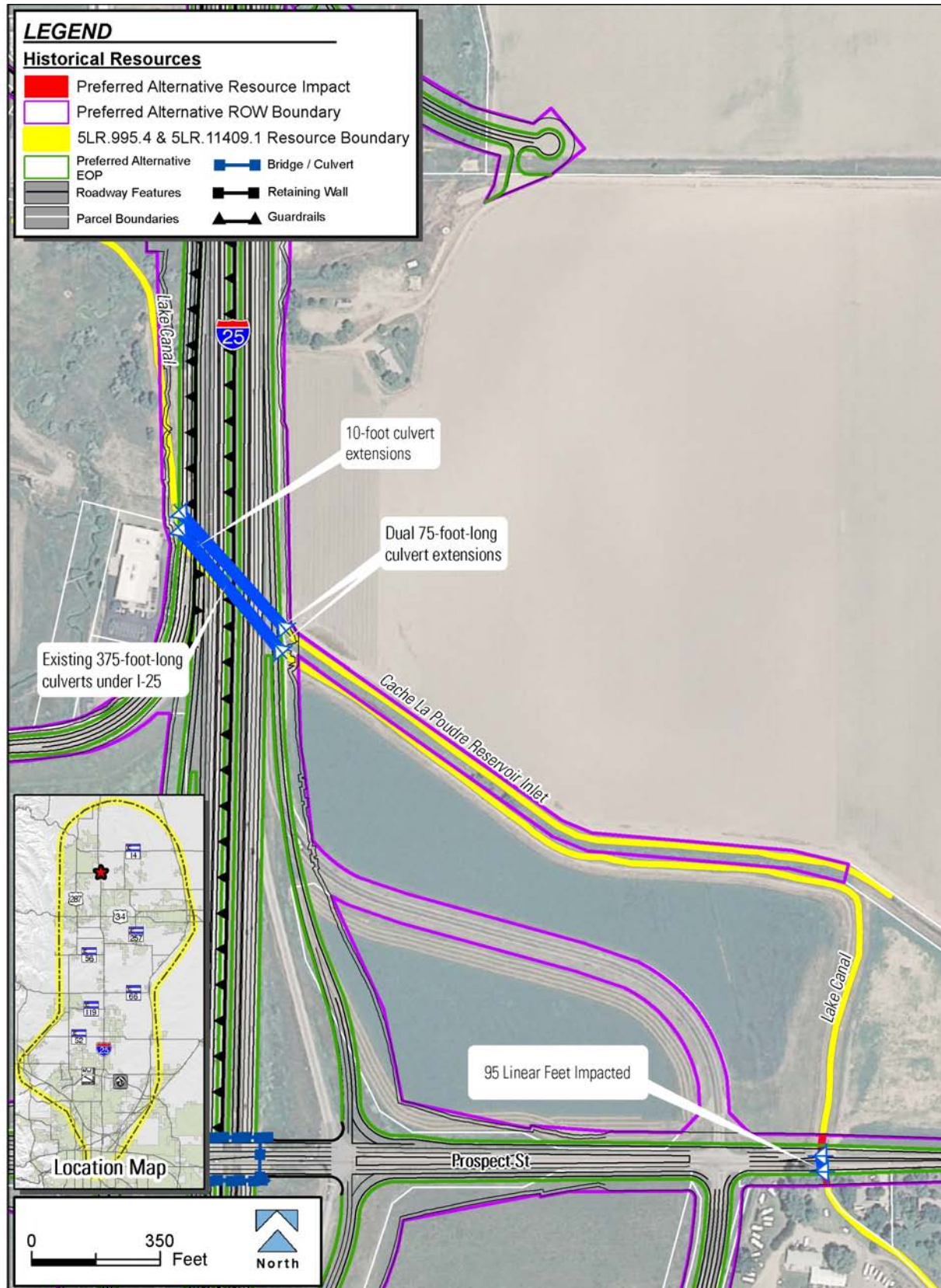
43

1 Figure 3.15-16 5LR.11409.1 (Cache la Poudre Reservoir Inlet) – Packages A and B



2

1 Figure 3.15-17 5LR.11409.1 (Cache la Poudre Reservoir Inlet) – Preferred Alternative



2



1 Because the qualities that make the entire resource NRHP-eligible have already been  
2 compromised by modifications associated with construction of the I-25 ramps and frontage  
3 road and the Preferred Alternative improvements are minor in relative extent, FHWA, FTA  
4 and CDOT therefore, have determined that the Preferred Alternative would result in *no*  
5 *adverse effect* to the Cache la Poudre Reservoir Inlet.

## 6 **5LR.11391 (Gallatin Residence)**

7 **Resource Description:** This property, located on the east side of I-25 approximately  
8 0.75 mile northwest of the town of Timnath on CR Road 40, contains a historic wood frame  
9 dwelling constructed in 1925. The house is a side-gabled Bungalow-type structure with wide  
10 overhanging eaves and a projecting, front-gabled porch featuring a balustrade railing. The  
11 dwelling is surrounded by mature shade trees. Five small outbuildings, including three sheds,  
12 are located on the property.

13 **Eligibility Determination:** The Gallatin Residence (5LR.11391) is eligible for the NRHP  
14 under Criterion C as a well preserved, representative specimen of a rural Bungalow type  
15 dwelling in Colorado, surrounded by its historic agricultural setting.

16 **Effect Determination – Package A:** This 2.6-acre property is located east of an active rail  
17 line, and all proposed improvements to I-25 in this vicinity are located west of this rail line.  
18 Therefore, no direct or indirect impacts would occur to the historic property, and FHWA, FTA  
19 and CDOT have determined that Package A improvements would result in *no historic*  
20 *properties affected* with respect to the Gallatin Residence.

21 **Effect Determination – Package B:** This 2.6-acre property is located east of an active rail  
22 line, and all proposed improvements to I-25 in this vicinity are located west of this rail line.  
23 Therefore, no direct or indirect impacts would occur to the historic property, and FHWA, FTA  
24 and CDOT have determined that Package B improvements would result in *no historic*  
25 *properties affected* with respect to the Gallatin Residence.

26 **Effect Determination – Preferred Alternative:** This 2.6-acre property is located east of an  
27 active rail line, and all proposed improvements to I-25 in this vicinity are located west of this  
28 rail line. Therefore, no direct or indirect impacts would occur to the historic property, and  
29 FHWA, FTA and CDOT have determined that the Preferred Alternative improvements would  
30 result in *no historic properties affected* with respect to the Gallatin Residence.

## 31 **5LR.2160.1 (Boxelder Ditch)**

32 **Resource Description:** This segment of the Boxelder Ditch crosses I-25, Harmony Road,  
33 and the northbound highway ramp at the Harmony Road interchange. The earthen irrigation  
34 ditch is approximately 12 feet wide. The portion of the ditch that crosses under the existing  
35 roadways was altered when the highway was constructed and routed through a steel pipe  
36 culvert.

37 The ditch was originally built in the mid-1880s. The entire ditch is approximately five miles  
38 long. The recorded segment in the project APE (5LR.2160.1) is 3,194 feet or approximately  
39 0.6 mile long. Grassy vegetation covers both banks of the ditch in most areas. The  
40 surrounding area includes agricultural and residential development.

41 **Eligibility Determination:** The Boxelder Ditch (5LR.2160) was officially determined to be  
42 NRHP-eligible by the Colorado Office of Archeology and Historic Preservation (OAHP)

1 in 1996. The ditch was re-evaluated for the North I-25 Draft EIS as eligible for the NRHP under  
2 Criterion A because of its important association with the development of water rights and  
3 agriculture in Larimer County. The segment within the project APE retains sufficient integrity of  
4 location, design, and use to support the eligibility of the entire linear resource.

5 **Effect Determination – Package A:** Under Package A, the I-25/Harmony Road interchange  
6 would be modified, including widening of the on- and off-ramps. Boxelder Ditch is currently  
7 enclosed inside a pipe underneath the existing ramps, fill slopes and mainline I-25 traffic lanes.  
8 To accommodate construction of a new southbound off-ramp from I-25, which would be situated  
9 90 feet west of the existing ramp alignment, a 75-foot-long section of the open Boxelder Ditch  
10 would need to be enclosed inside a box culvert beneath the ramp. The remainder of the ditch  
11 located within the area proposed for Package A highway improvements is already piped under  
12 I-25, the northbound onramp to I-25, and Harmony Road, and no new direct impacts would occur  
13 in those locations (see **Figure 3.15-18**).

14 A small direct impact would occur where the ditch would pass beneath a new property access  
15 road on the southeast side of the interchange. This new access road is a cul-de-sac, required  
16 to replace the existing access from the abandoned east frontage road. A total of 62.5 feet of  
17 open ditch would have to be enclosed inside a box culvert beneath the proposed cul-de-sac.

18 Installation of the new culvert would likely require a temporary use of the historic property for  
19 equipment access and construction activities. The ditch would remain operational and  
20 irrigation water would be protected from all sediment and physical encroachment by  
21 construction. All disturbances caused by construction equipment or construction activities  
22 would be temporary in nature and affected areas would be restored to the original condition  
23 and appearance.

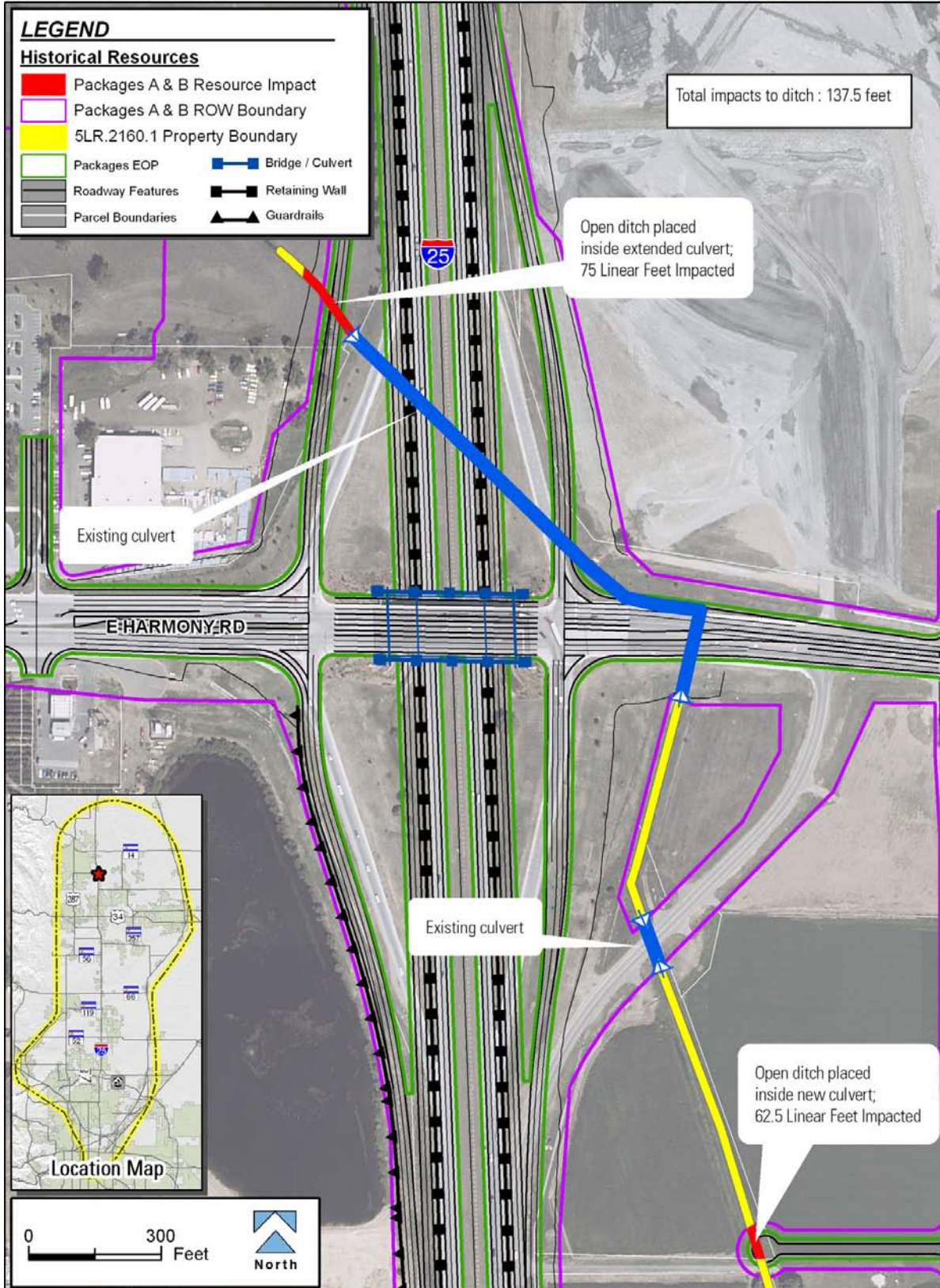
24 The two box culverts required under Package A would enclose a total of 137.5 feet of open  
25 ditch that retain integrity, but would not alter its historic alignment. These direct impacts  
26 constitute less than one percent of the entire length of the Boxelder Ditch, and would not  
27 significantly diminish or alter characteristics that render the ditch eligible for NRHP, and  
28 FHWA, FTA and CDOT have determined that Package A would result in *no adverse effect* to  
29 the resource.

30 **Effect Determination – Package B:** Impacts are identical to Package A. FHWA, FTA and  
31 CDOT have determined that Package B would also result in *no adverse effect* to the entire  
32 Boxelder Ditch (see **Figure 3.15-18**).

33 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, the  
34 I-25/Harmony Road interchange would be modified, including widening of the on- and off-ramps.  
35 Boxelder Ditch is currently enclosed inside a pipe underneath the existing ramps, fill slopes and  
36 mainline I-25 traffic lanes. To accommodate construction of a new southbound off-ramp from  
37 I-25, which would be situated 90 feet west of the existing ramp alignment, a 124-foot-long section  
38 of the open Boxelder Ditch would need to be enclosed inside a box culvert beneath the ramp.  
39 The remainder of the ditch located within the area proposed for Preferred Alternative highway  
40 improvements is already piped under I-25, the northbound on-ramp to I-25, and Harmony Road,  
41 and no new direct impacts would occur in those locations (see **Figure 3.15-19**).

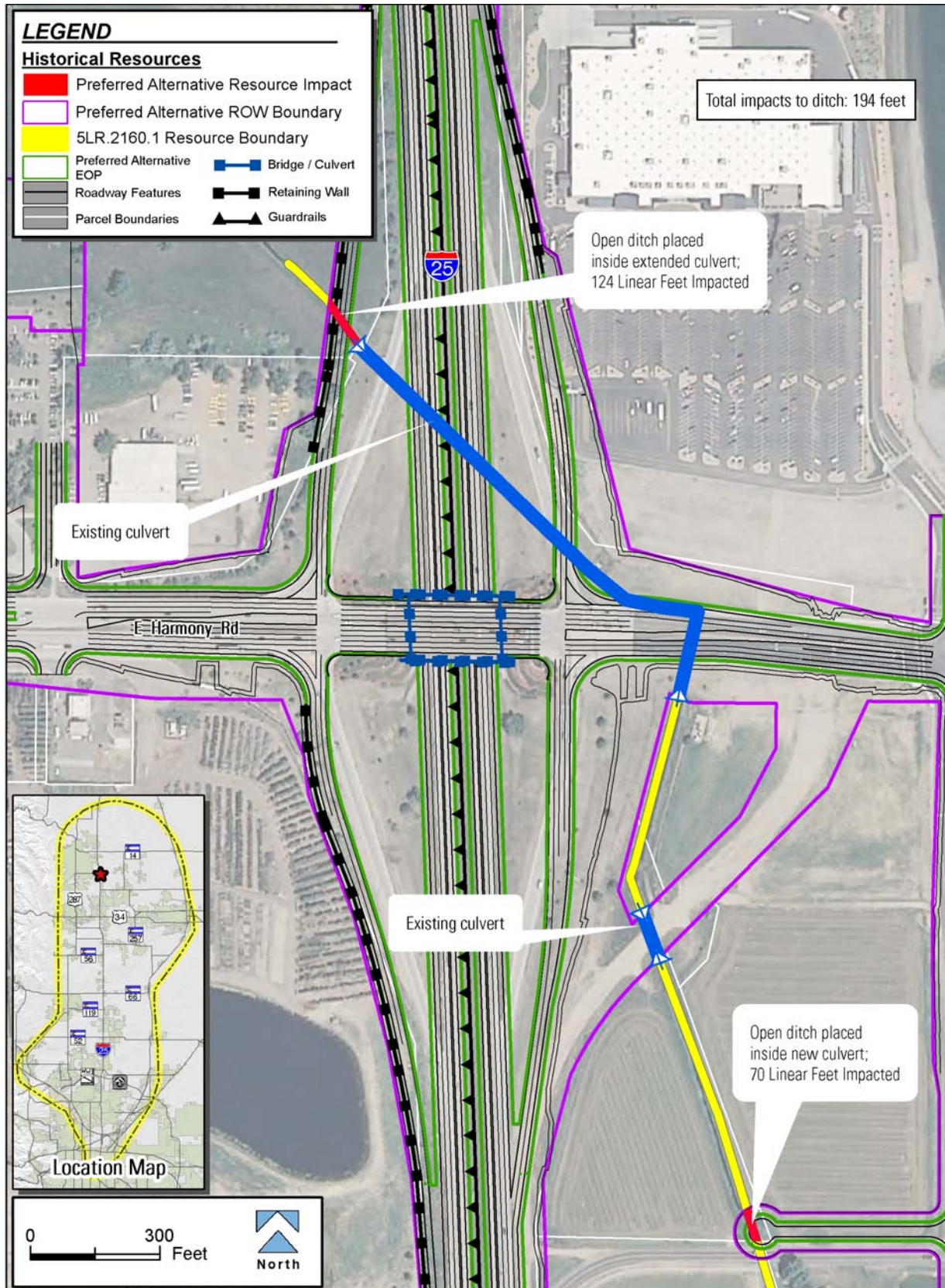
42 A small direct impact would occur where the ditch would pass beneath a new property access  
43 road on the southeast side of the interchange. This new access road is a cul-de-sac, required  
44 to replace the existing access from the abandoned east frontage road. A total of 70 feet of  
45 open ditch would have to be enclosed inside a box culvert beneath the proposed cul-de-sac.

1 Figure 3.15-18 5LR.2160.1 (Boxelder Ditch) – Packages A and B



2

1 Figure 3.15-19 5LR.2160.1 (Boxelder Ditch) – Preferred Alternative



2

1 Installation of the new culvert would likely require a temporary use of the historic property for  
2 equipment access and construction activities. The ditch would remain operational and  
3 irrigation water would be protected from all sediment and physical encroachment by  
4 construction. All disturbances caused by construction equipment or construction activities  
5 would be temporary in nature and affected areas would be restored to the original condition  
6 and appearance.

7 The two box culverts required under the Preferred Alternative would enclose a total of 194 feet  
8 of open ditch that retain integrity, but would not alter its historic alignment. These direct  
9 impacts constitute less than one percent of the entire length of the Boxelder Ditch, and would  
10 not significantly diminish or alter characteristics that render the ditch eligible for NRHP, and  
11 FHWA, FTA and CDOT have determined that the Preferred Alternative would result in *no*  
12 *adverse effect* to the resource.

### 13 **5LR.8930 (Louden Ditch)**

14 **Resource Description:** The ditch was originally built in 1871. The entire ditch is approximately  
15 23.25 miles long. The excavated earthen ditch is approximately 20 feet wide. Two segments of  
16 the historic Louden Ditch are located within the APE (see **Figure 3.15-20**). Segment 5LR.8930.1  
17 crosses I-25 and the existing frontage road at LCR 30 East. The portion of the ditch that crosses  
18 under I-25 and the frontage road was placed within a culvert when the highway and frontage  
19 roads were constructed in the 1960s. The documented segment in the project APE (5LR.8930.1)  
20 is 3,316 feet long. Heavy riparian growth exists along the northwest banks of the ditch. The  
21 remainder of the ditch has been dredged within the project area and no vegetation is present  
22 along the ditch levee. The surrounding area includes agricultural and residential development.

23 The second segment 5LR.8930.2 of the Louden Ditch crosses I-25 and the existing frontage  
24 road. Here the earthen ditch is approximately 8 feet wide. The portion of the ditch that crosses  
25 under I-25 and the frontage road was altered when I-25 was constructed in the 1960s and the  
26 ditch was placed inside a CBC. The segment occurring in the project APE (5LR.8930.2) is  
27 200 feet long. Both banks of the ditch areas are lined with grassy vegetation. The surrounding  
28 area includes retail and residential development.

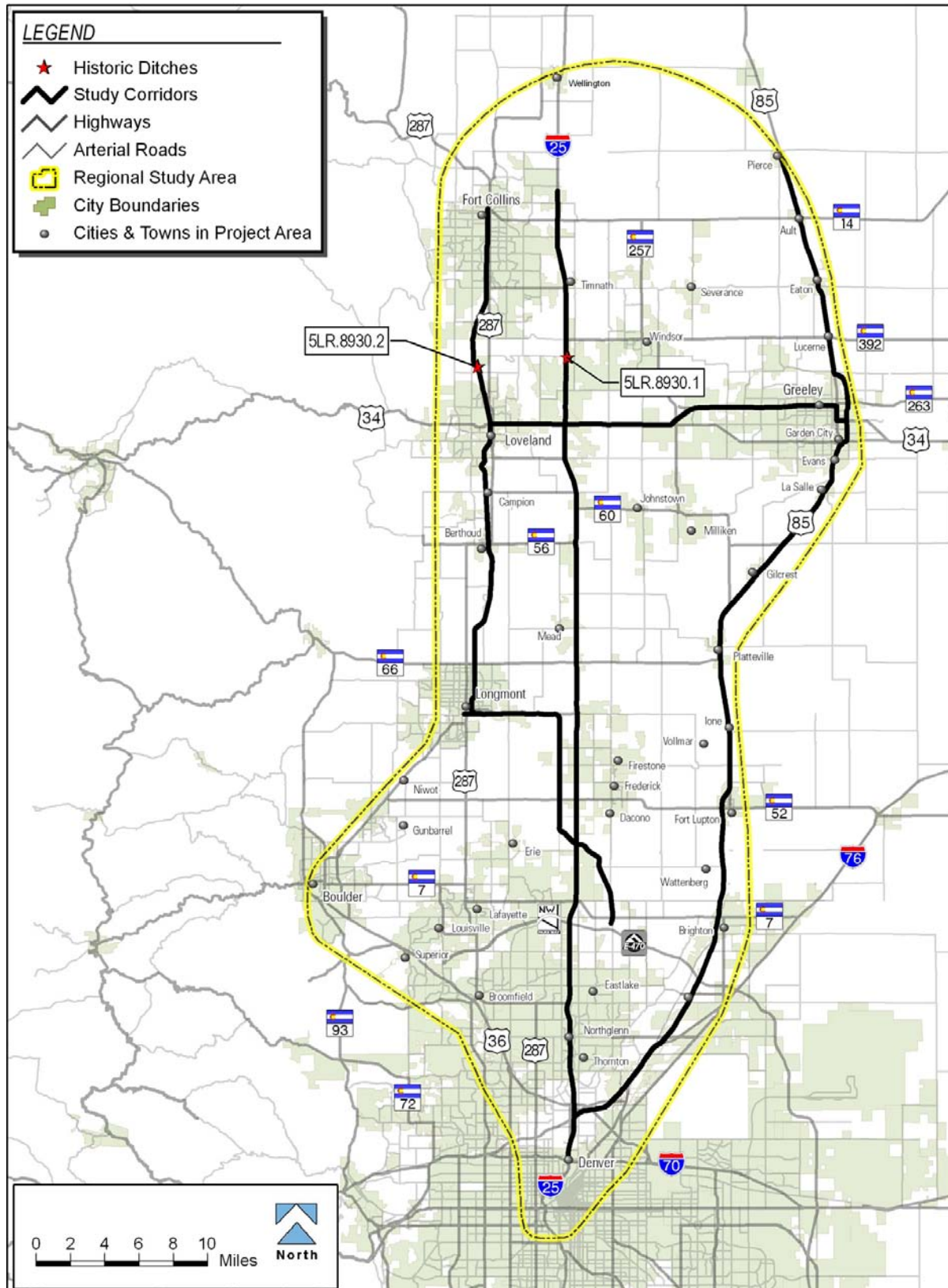
29 **Eligibility Determination:** The entire Louden Ditch (5LR.8930) is eligible for listing on the  
30 NRHP under Criterion A for its important association with the development of water rights and  
31 agriculture in Larimer County. Both segments have experienced modifications near the  
32 highway, but much of the ditch remains in its original alignment. This ditch segment retains  
33 sufficient integrity of location, setting, feeling, and use to support the eligibility of the entire  
34 linear resource. Both segments (5LR.8930.1 and 5LR.8930.2) were found to retain sufficient  
35 integrity of location, setting, feeling, and use to support the eligibility of the entire linear  
36 resource.

### 37 **Effect Determination:**

38 In order to determine the effect to the entire linear resource, impacts to each of the segments  
39 passing through the project APE were assessed. These impact assessments are presented  
40 below, followed by a determination of effect to the entire Louden Ditch in Larimer County.

41

1 Figure 3.15-20 5LR.8930 (Louden Ditch) – Segments intersecting project APE



2  
3

1 **Impacts to segment 5LR.8930.1 – Package A:** This segment of the Loudon Ditch is  
2 presently conveyed beneath I-25 inside a box culvert approximately 260 feet long. At this  
3 location, Package A involves re-alignment of the I-25 northbound and southbound lanes  
4 approximately 90 feet to the east of existing highway and widening each direction from two  
5 lanes to three lanes. The new corridor footprint would include relocating the east frontage road  
6 farther east of the current alignment. To provide adequate space for the re-aligned northbound  
7 lanes and east frontage road, an additional 225 feet of open ditch would be enclosed inside a  
8 box culvert underneath the new roadways. The new culvert would be extended from the end of  
9 the existing box culvert located on the east flank of the existing east frontage road.

10 LCR 30 on the west side of I-25 would be rebuilt along the same alignment, although the template  
11 would be widened slightly to the north. The west frontage road would be abandoned south of the  
12 interchange. A new road (Byrd Drive) would run south from LCR 30 and is functionally intended to  
13 replace the west frontage road. At this location the historic ditch follows a parallel course close to  
14 the south edge of existing LCR 30. A 91-foot-long segment of open ditch would be enclosed inside  
15 a new box culvert to pass beneath the new Byrd Drive connection to LCR Road 30 (see  
16 **Figure 3.15-21**).

17 Construction of the new culverts would likely require a temporary use of the historic property for  
18 equipment access and culvert installation activities. The ditch would possibly be temporarily  
19 diverted during construction, but would remain operational. Ditch waters would be protected from  
20 all sediment and physical encroachment by construction. All disturbances caused by construction  
21 equipment or construction activities would be temporary and affected areas would be restored to  
22 their original condition and appearance.

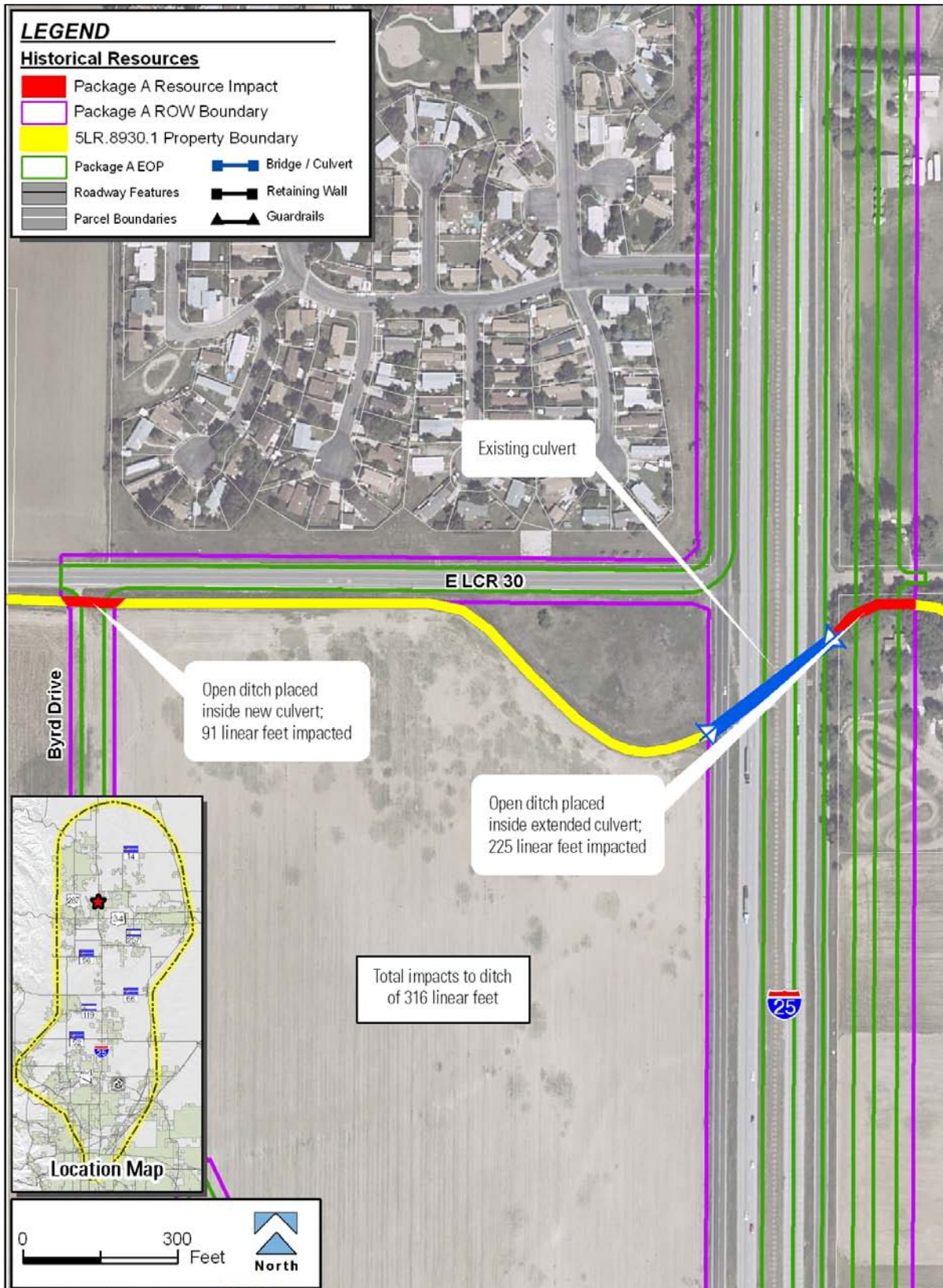
23 The direct and temporary impacts caused by placing a total of 316 feet of open ditch into a new  
24 box culvert extension on the east side of I-25 and a short culvert beneath Byrd Road do not affect  
25 its historic alignment or function.

26 **Impacts to segment 5LR.8930.1 – Package B:** The impacts to the Loudon Ditch under  
27 Package B are the similar to those described for Package A. Re-alignment and widening of I-25  
28 highway lanes and the east frontage road in Package B improvements would have a 45-foot-wider  
29 configuration east of the existing frontage road. This results in a 45-foot-longer section of open  
30 ditch on the east side of I-25 being placed inside a box culvert extension under the new roadway.  
31 The ditch impacts caused at Byrd Road would be the similar to Package A. The total direct  
32 impacts to the Loudon Ditch caused by Package B improvements are 270 feet of open ditch to be  
33 placed in a new box culvert extension on the east side of I-25 (as opposed to 225 feet under  
34 Package A), and 87 feet of open ditch to be placed beneath the proposed Byrd Road (same linear  
35 distance as Package A). Package B would create total combined direct impacts to 357 feet of  
36 open ditch as opposed to 316 feet of open ditch under Package A. Temporary effects from  
37 construction activities would be the same as in Package A (see **Figure 3.15-22**).

38 The direct and temporary impacts resulting from Package B are similar in nature but slightly  
39 greater than those resulting from Package A, and do not affect the ditch's historic alignment or  
40 function.

41

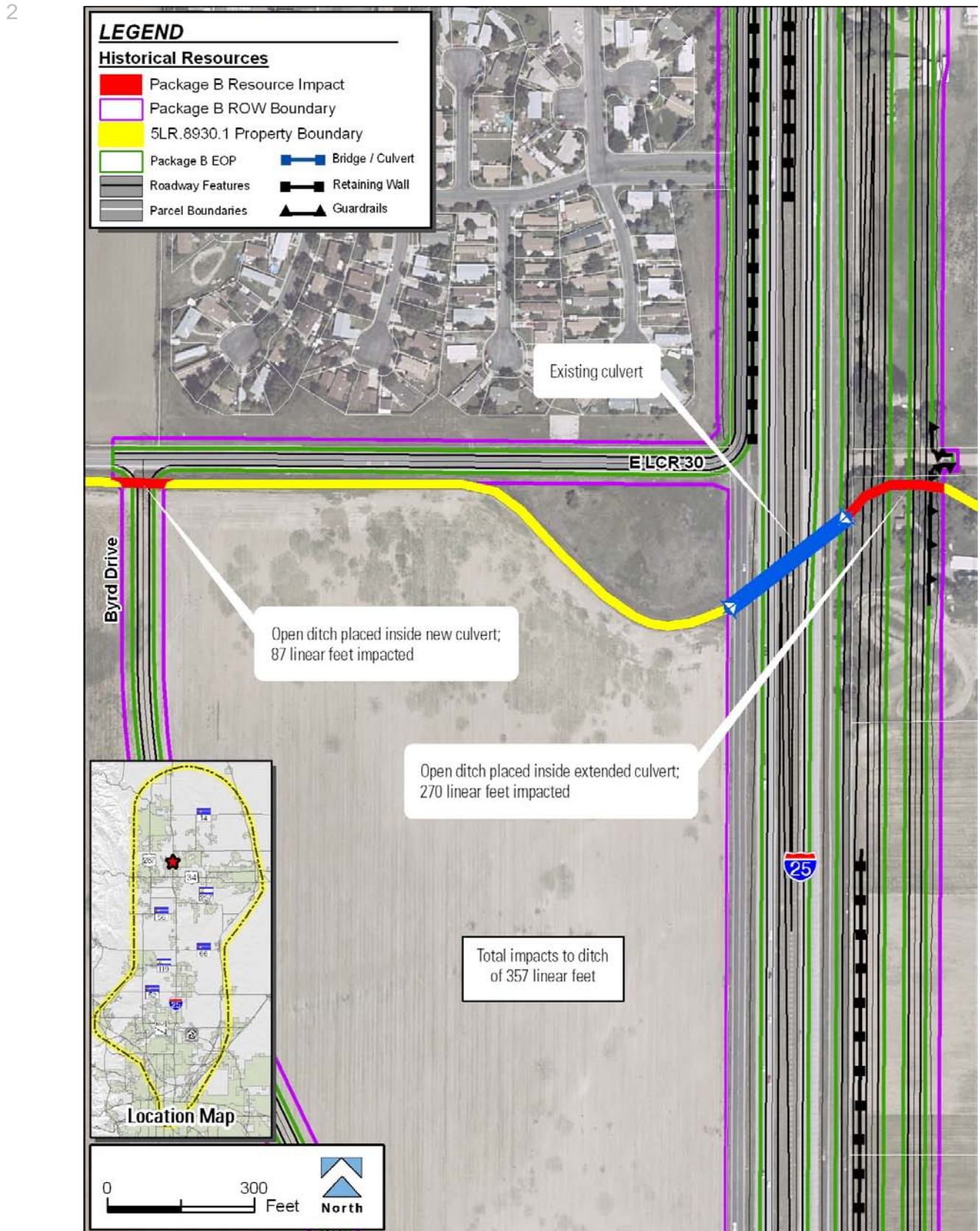
1 Figure 3.15-21 5LR.8930.1 (Louden Ditch) – Package A



2



1 Figure 3.15-22 5LR.8930.1 (Louden Ditch) – Package B



1 **Impacts to segment 5LR.8930.1 – Preferred Alternative:** This segment of the Loudon Ditch  
2 is presently conveyed beneath I-25 inside a box culvert approximately 260 feet long. At this  
3 location, the Preferred Alternative involves re-alignment of the I-25 northbound and  
4 southbound lanes approximately 90 feet to the east of existing highway and widening each  
5 direction to add one general purpose lane and one TEL. The new corridor footprint would  
6 include relocating the east frontage road farther east of the current alignment. To provide  
7 adequate space for the re-aligned northbound lanes and east frontage road, an additional  
8 173 feet of open ditch would be enclosed inside a box culvert underneath the new roadways.  
9 The new culvert would be extended from the end of the existing box culvert located on the east  
10 flank of the existing east frontage road.

11 The historic ditch follows a parallel course close to the south edge of the existing LCR 30 on the  
12 west side of I-25 which would be rebuilt along the same alignment, however, the template would  
13 be widened slightly which would encroach into the ditch on the south side of the roadway. This  
14 would result in an additional 524 linear feet of impacts to the ditch. The west frontage road would  
15 be abandoned south of the interchange. A new road (Byrd Drive) would run south from LCR 30  
16 and is functionally intended to replace the west frontage road. A 91-foot-long segment of open  
17 ditch would be enclosed inside a new box culvert to pass beneath the new Byrd Drive connection  
18 to LCR Road 30 (see **Figure 3.15-23**).

19 Construction of the new culverts would likely require a temporary use of the historic property for  
20 equipment access and culvert installation activities. The ditch would possibly be temporarily  
21 diverted during construction, but would remain operational. Ditch waters would be protected from  
22 all sediment and physical encroachment by construction. All disturbances caused by construction  
23 equipment or construction activities would be temporary and affected areas would be restored to  
24 their original condition and appearance.

25 The direct and temporary impacts caused by placing a total of 524 feet of open ditch into a new  
26 box culvert extension on the east side of I-25 and a short culvert beneath Byrd Drive do not affect  
27 its historic alignment or function.

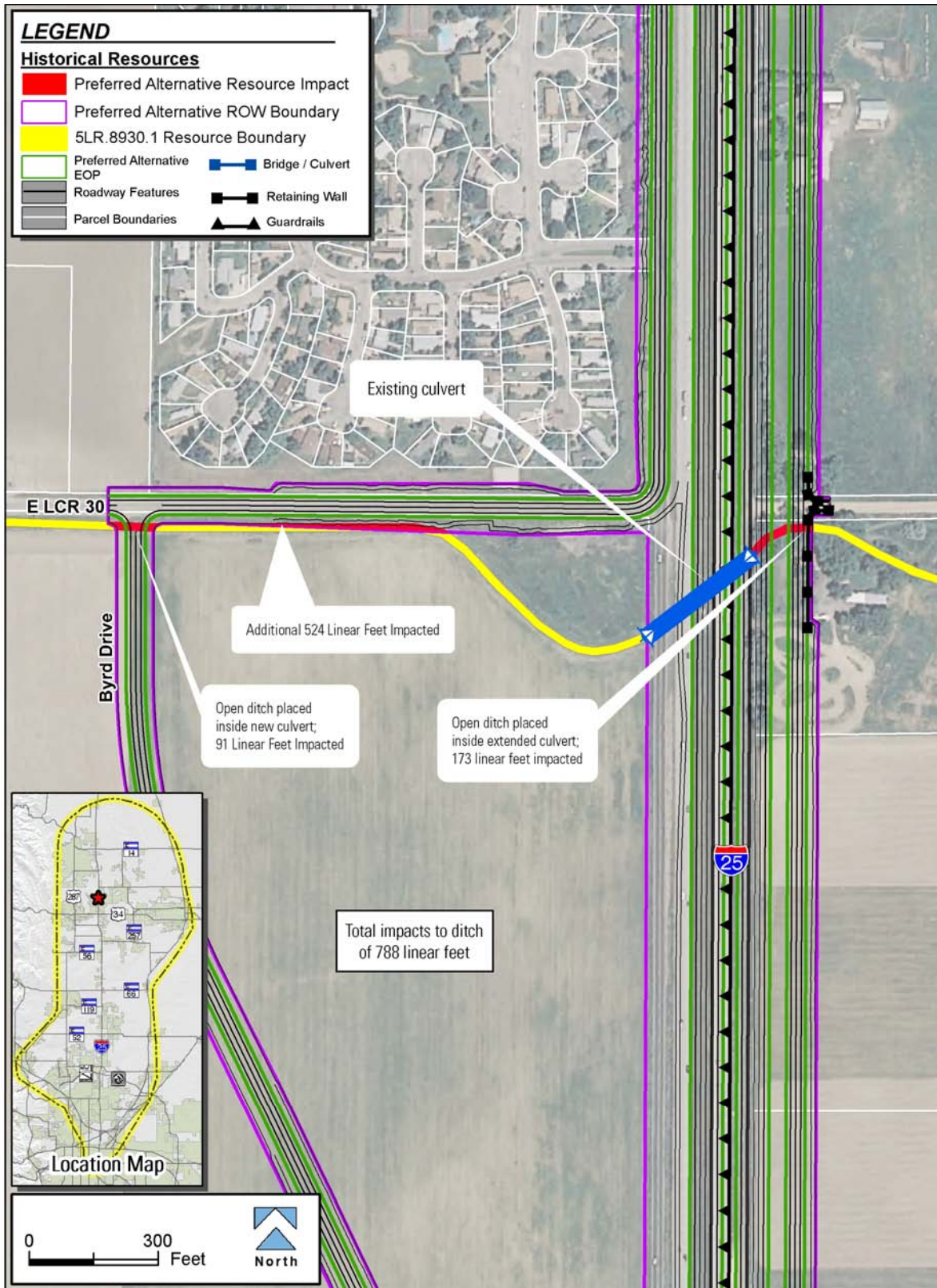
28 **Impacts to segment 5LR.8930.2 – Package A:** None of the proposed Package A commuter rail  
29 improvements would cause changes to this historic property.

30 **Impacts to segment 5LR.8930.2 – Preferred Alternative:** The Preferred Alternative commuter  
31 rail improvements include construction of a parallel maintenance road adjacent to the existing rail  
32 line. The historic ditch is currently culverted where it passes beneath the rail line at this location.  
33 The maintenance road would be located on the west side existing rail line and would require an  
34 extension to the existing culvert. A total of 296 linear feet of this historic ditch would be impacted  
35 by the Preferred Alternative in this area (see **Figure 3.15-24**).

36 Construction of this new culvert would likely require a temporary use of the historic property for  
37 equipment access and culvert installation activities. The ditch would possibly be temporarily  
38 diverted during construction, but would remain operational. Ditch waters would be protected from  
39 all sediment and physical encroachment by construction. All disturbances caused by construction  
40 equipment or construction activities would be temporary in nature and affected areas would be  
41 restored to their original condition and appearance.

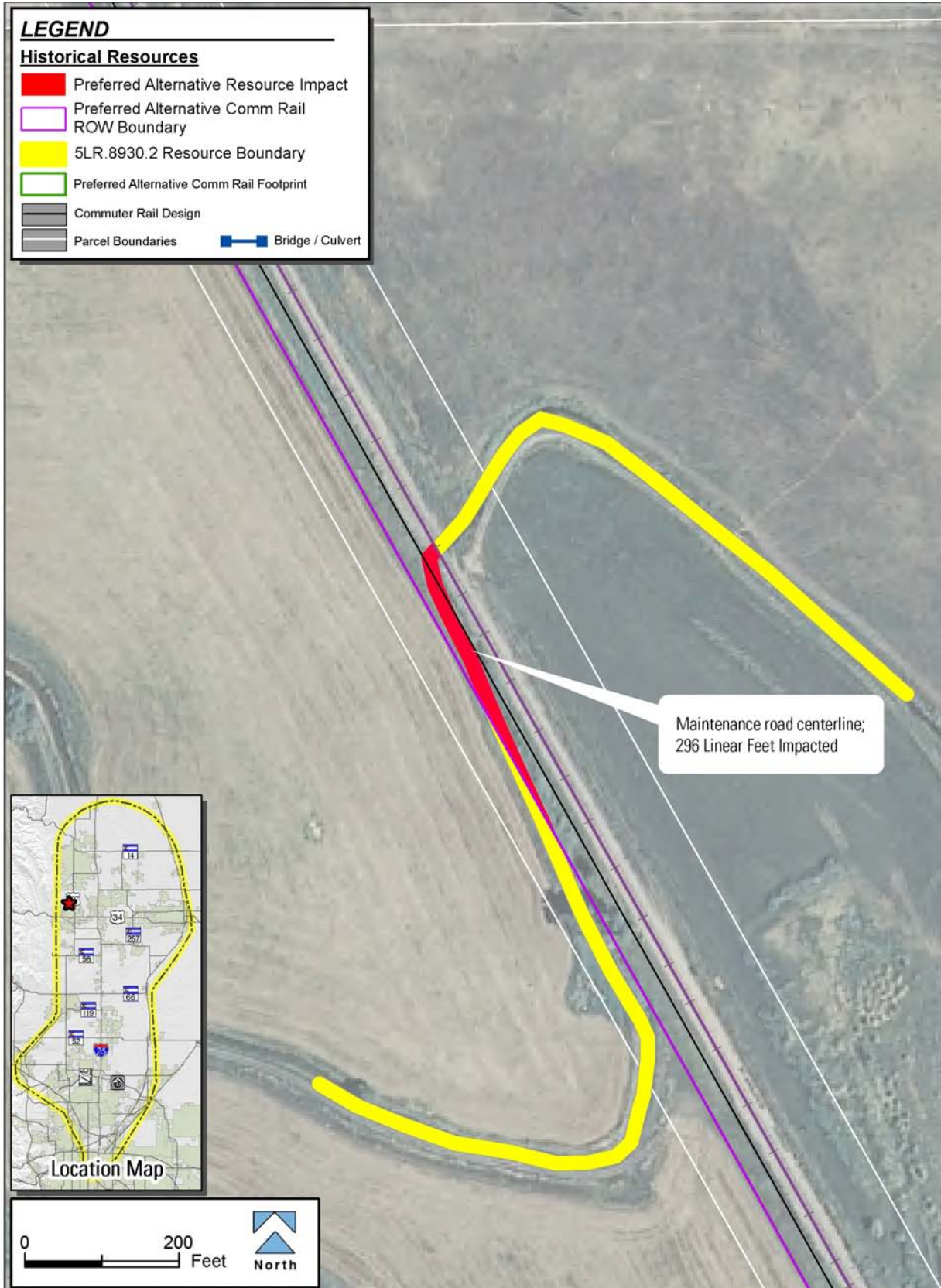
42

1 Figure 3.15-23 5LR.8930.1 (Louden Ditch) – Preferred Alternative



2

1 Figure 3.15-24 LR.8930.2 (Louden Ditch – Preferred Alternative



2

1 **Summary Effect Determination:**

2 **Package A:** No impacts to segment 5LR.8930.2 from proposed commuter rail improvements;  
3 however, 316 feet of open ditch would be placed inside a culvert in segment 5LR.8930.1.  
4 Temporary construction impacts would occur during culvert installation and highway construction  
5 activity. Because the physical integrity of the channel of the ditch segment would be permanently  
6 compromised by placing it in a culvert, FHWA, FTA and CDOT have determined that the  
7 Package A transit improvements would result in an *adverse effect* to the entire Loudon Ditch  
8 (5LR.8930).

9 **Package B:** 361 feet of open ditch would be placed inside a culvert in segment 5LR.8930.1.  
10 Temporary construction impacts would occur during culvert installation and highway construction  
11 activity. Because the physical integrity of the channel of the ditch segment would be permanently  
12 compromised by placing it in a culvert, FHWA, FTA and CDOT have determined that the Package  
13 B transit improvements would result in an *adverse effect* to the entire Loudon Ditch (5LR.8930).

14 **Preferred Alternative:** Impacts to segment 5LR.8930 from the Preferred Alternative include  
15 788 feet of open ditch open ditch placed inside a culvert in segment 5LR.8930.1 for highway  
16 improvements and of 296 linear feet from segment 5LR.8930.2 placed inside a culvert as a  
17 result of proposed commuter rail improvements. Temporary construction impacts would occur  
18 during culvert installation and highway construction activity. Because the physical integrity of  
19 the channel of the ditch segment would be permanently compromised by placing it in a culvert,  
20 FHWA, FTA and CDOT have determined that the Preferred Alternative improvements would  
21 result in an *adverse effect* to the entire Loudon Ditch (5LR.8930).

22 **5LR.1815 (Union Pacific Railroad Fort Collins Branch)**

23 **Resource Description:** The total length of the Union Pacific Railroad (UPRR) Fort Collins  
24 Branch rail line is 25 miles. Two segments of the rail line are located within the APE (see  
25 **Figure 3.15-25**). Segment 5LR.1815.2 is a 1.81-mile long segment of the historic railroad.  
26 The I-25 alignment crosses over this segment of the railroad alignment just north of the US 34  
27 interchange. The active railroad segment traverses open farm land throughout its length and  
28 runs parallel to the Loveland and Greeley Canal (5LR.503.2) along part of this route.

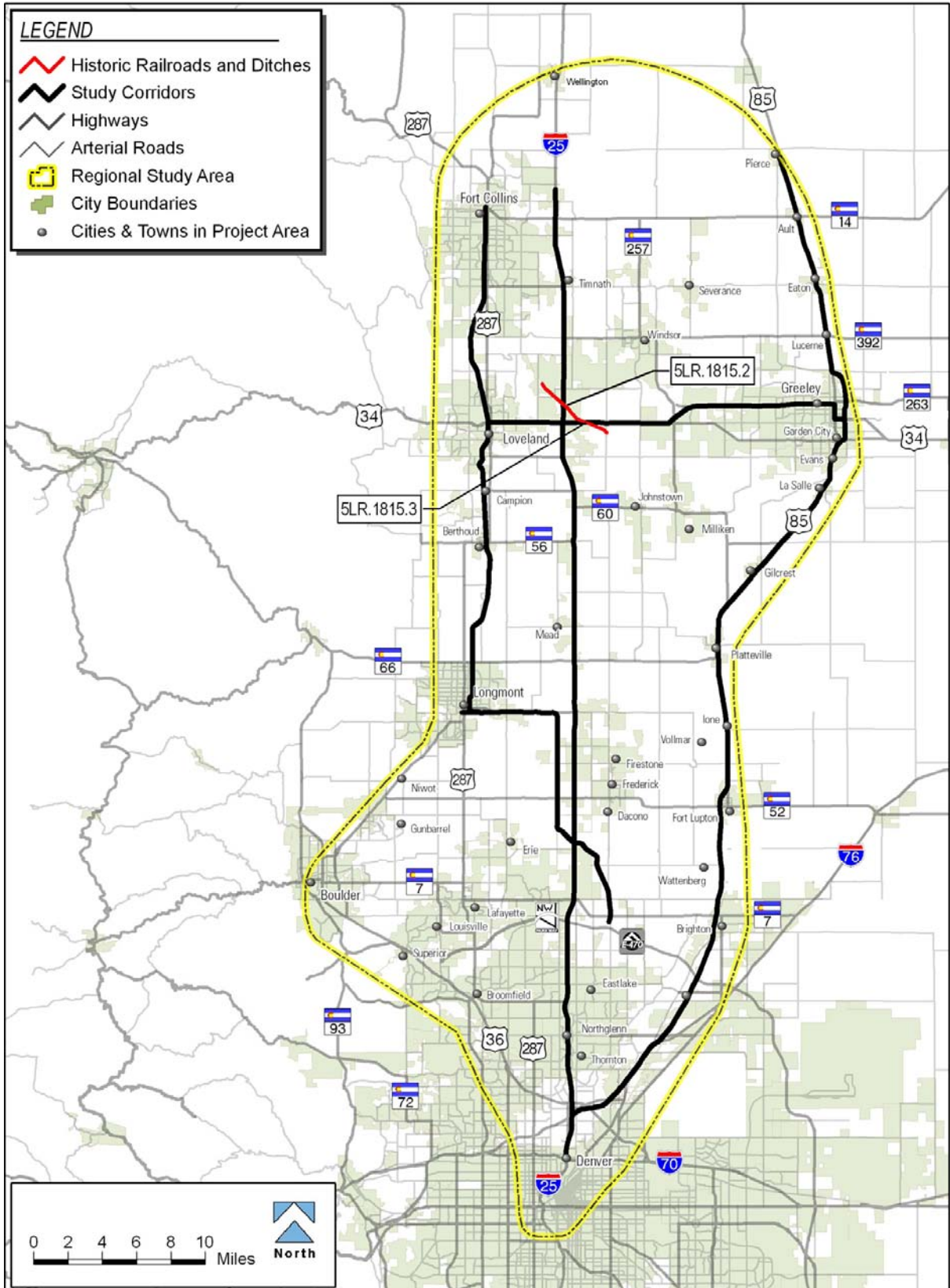
29 Segment 5LR.1815.3 is a 1,053-foot-long segment of the historic UPRR Fort Collins Branch.  
30 US 34 crosses over the railroad alignment just east of the I-25 interchange.

31 **Eligibility Determination:** In 2001, the UPRR Fort Collins Branch (5LR.1815) in Larimer  
32 County was officially determined by OAHF to be NRHP-eligible under Criterion A for its  
33 important association with the development of railway transportation, which facilitated the  
34 settlement and economic development of Colorado. Both railroad segments in the North I-25  
35 APE (5LR.1815.2 and 5LR.1815.3) retain sufficient integrity of original location, design, and  
36 function to support the eligibility of the entire linear resource.

37 **Effect Determination:**

38 In order to determine the effect to the entire linear resource, impacts to each of the segments  
39 passing through the project APE were assessed. These impact assessments are presented  
40 below, followed by a determination of effect to the entire UPRR Fort Collins Branch  
41 (5LR.1815).

1 **Figure 3.15-25 5LR.1815 (Union Pacific Railroad Fort Collins Branch) – Segments**  
2 **Intersecting Project APE**  
3



1 **Impacts to segment 5LR.1815.2 – Package A:** I-25 is currently bridged over the historic  
2 UPRR rail line via identical 158-foot-long, 37-foot-wide concrete bridges for each of the  
3 northbound and southbound lanes. Under Package A, the I-25 template would be widened on  
4 the east side of the northbound roadway and on the west side of the southbound roadway to  
5 accommodate four general purpose lanes plus one auxiliary lane in each direction. The  
6 existing bridges would be demolished and would be replaced by two new, 174-foot-long,  
7 75-foot-wide bridge structures to span the rail line at the same general position as the old  
8 bridges. The alignment and operation of the railroad would not be changed, and the new  
9 bridge piers and abutments would be placed outside the historic rail corridor, so that no direct  
10 impacts would occur to the resource (see **Figure 3.15-26**).

11 The larger bridges would increase the amount of railway located underneath the bridge deck.  
12 Because these bridges replace existing modern bridges within the I-25 transportation corridor,  
13 the indirect effect to the historic setting of the railway is not expected to further diminish or alter  
14 the function, alignment, character, or attributes that render the railway NRHP-eligible.

15 Installation of the new bridge piers and deck structures would likely require temporary use of  
16 the historic property for equipment access and minor construction activities. The railroad would  
17 remain operational. All disturbances caused by construction equipment or construction  
18 activities would be temporary in nature and affected areas would be restored to their original  
19 condition and appearance.

20 The proposed transportation improvements associated with Package A would not substantially  
21 diminish or alter characteristics that render the property eligible for the NRHP.

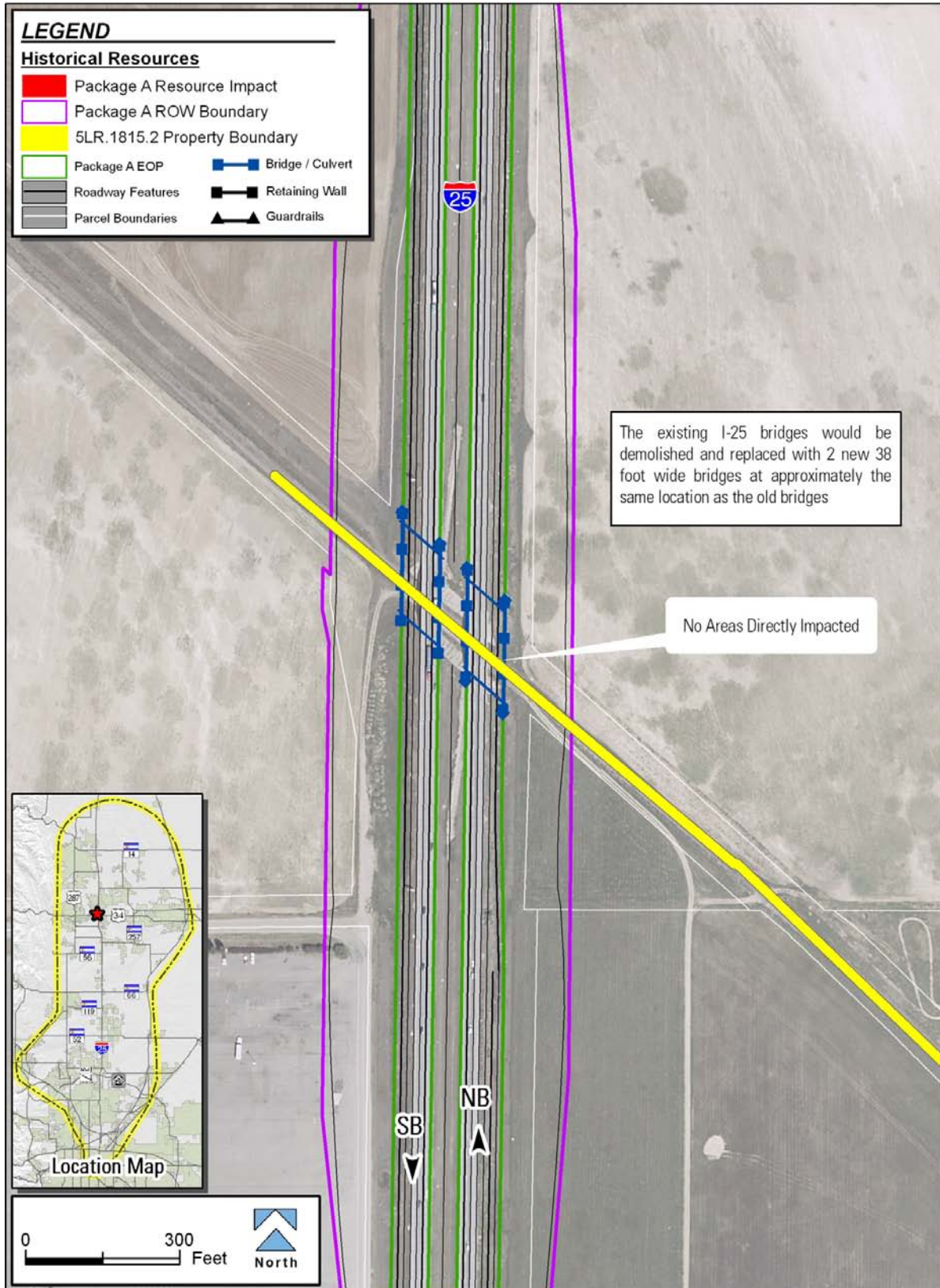
22 **Impacts to segment 5LR.1815.2 – Package B:** Under Package B, the northbound and  
23 southbound I-25 roadways spanning the historic railroad would be substantially widened  
24 (approximately 96 feet on the east side of the northbound roadway and 104 feet on the west  
25 side of the southbound roadway), to accommodate a new template containing two general  
26 purpose lanes plus two barrier-separated managed lanes in each direction. The existing  
27 bridges carrying I-25 over the railroad would be replaced with one wider and longer 174-foot-  
28 long bridge structure. The alignment and operation of the railroad would not be changed, and  
29 the new bridge piers would be placed outside the historic rail corridor. No direct impacts would  
30 occur (see **Figure 3.15-27**).

31 Indirect and temporary construction effects would be the same as in Package A. The proposed  
32 transportation improvements associated with Package B would not substantially diminish or  
33 alter characteristics that render the property eligible for the NRHP.

34 **Impacts to segment 5LR.1815.2 – Preferred Alternative:** Under the Preferred Alternative,  
35 the northbound and southbound I-25 roadways spanning the historic railroad would be  
36 substantially widened to accommodate a new template containing three general purpose lanes  
37 plus one barrier-separated TEL in each direction. The existing bridges carrying I-25 over the  
38 railroad would be replaced with two new bridges (120 and 160-foot-wide) to span the rail line  
39 at the same general position as the old bridges. The alignment and operation of the railroad  
40 would not be changed, and the new bridge piers would be placed outside the historic rail  
41 corridor. No direct impacts would occur (see **Figure 3.15-28**).

42 Indirect and temporary construction effects would be the same as in Package A. The proposed  
43 transportation improvements associated with the Preferred Alternative would not substantially  
44 diminish or alter characteristics that render the property eligible for the NRHP.

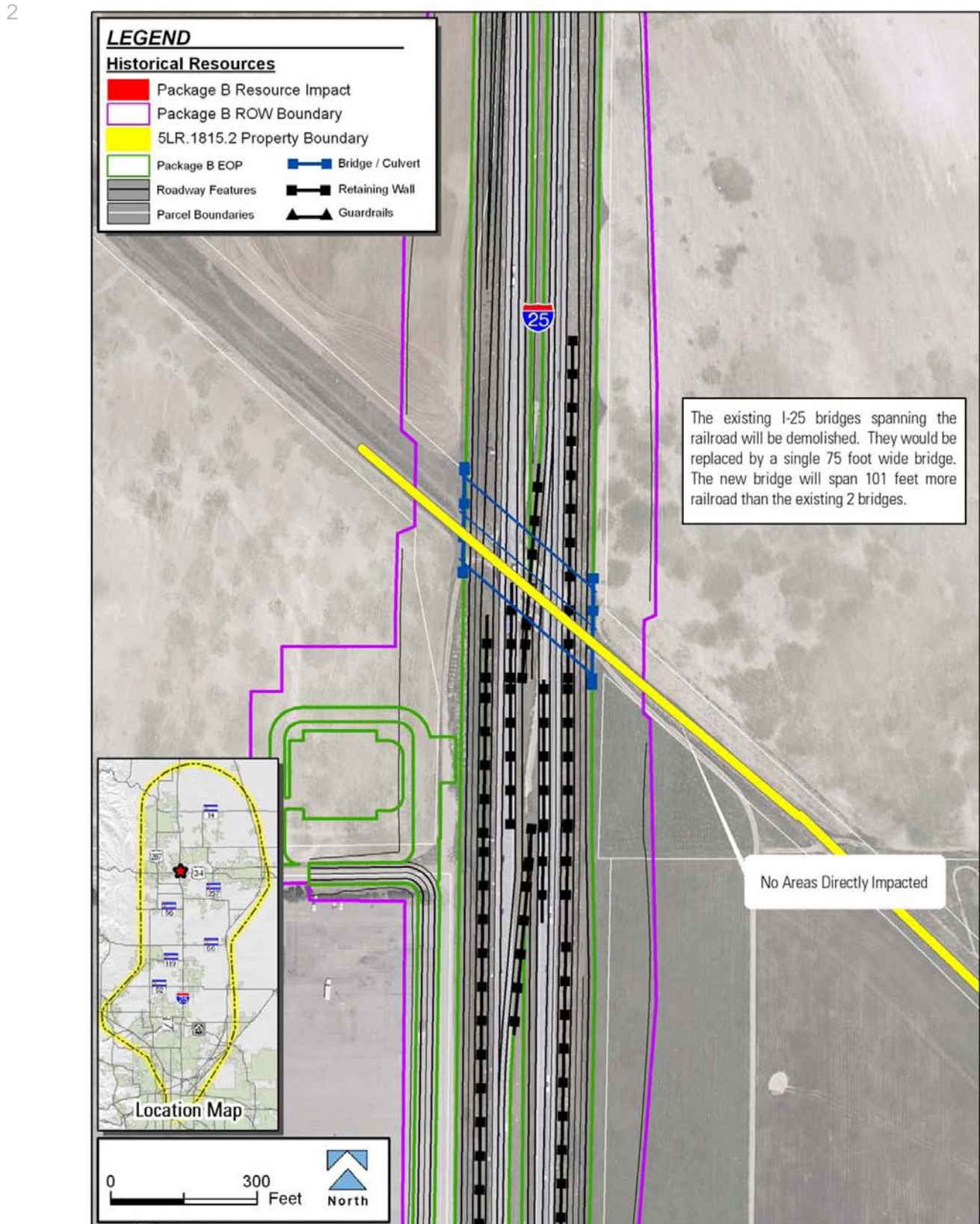
1 Figure 3.15-26 5LR.1815.2 (Union Pacific Railroad Fort Collins Branch) – Package A



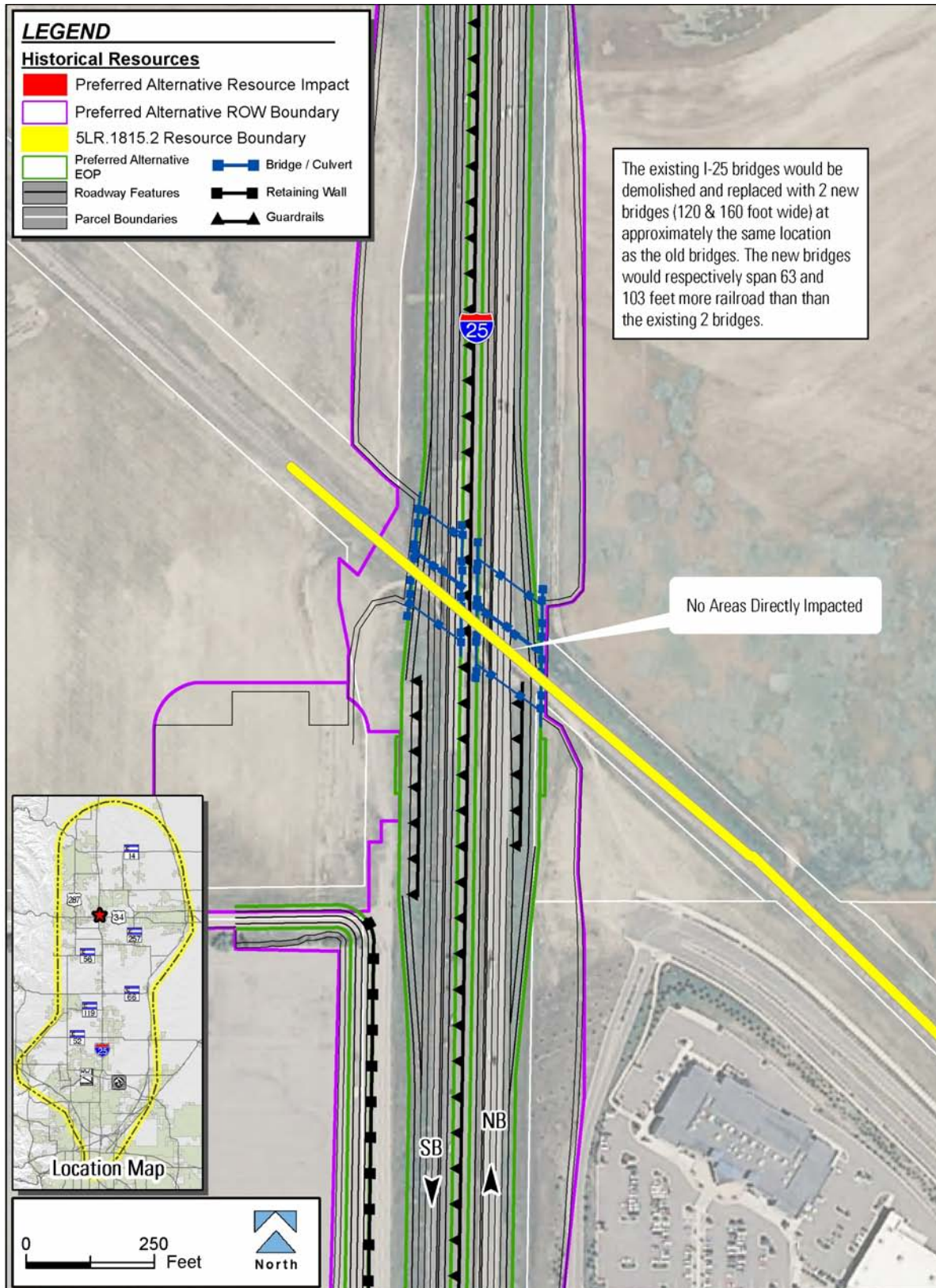
2



1 Figure 3.15-27 5LR.1815.2 (Union Pacific Railroad Fort Collins Branch) – Package B



1 **Figure 3.15-28 5LR.1815.2 (Union Pacific Railroad Fort Collins Branch) – Preferred**  
2 **Alternative**



3

1 **Impacts to segment 5LR.1815.3 – Package A:** This historic resource crosses US 34 over  
2 700 feet outside the construction limits of the proposed Package A improvements. No direct or  
3 indirect impacts would occur to the historic property.

4 **Impacts to segment 5LR.1815.3 – Package B:** The (lack of) effects to the historic segment  
5 of the UPRR under Package B are the same as Package A.

6 **Impacts to segment 5LR.1815.3 – Preferred Alternative:** The (lack of) effects to the historic  
7 segment of the UPRR under the Preferred Alternative are the same as Package A.

8 **Summary Effect Determination:**

9 **Package A:** No direct impacts would occur at any segment locality within the North I-25 APE.  
10 Temporary construction impacts and indirect effects due to expanded overhead coverage by  
11 the highway bridges would occur at segment 5LR.1815.2. The proposed transportation  
12 improvements associated with Package A would not substantially diminish or alter  
13 characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT  
14 therefore have determined that the Package A improvements would result in *no adverse effect*  
15 to the entire UPRR Fort Collins Branch (5LR.1815).

16 **Package B:** No direct impacts would occur at any segment locality within the North I-25 APE.  
17 Temporary construction impacts and indirect effects due to expanded overhead coverage by  
18 the highway bridges would occur at segment 5LR.1815.2. The proposed transportation  
19 improvements associated with Package A would not substantially diminish or alter  
20 characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT  
21 therefore have determined that the Package B improvements would result in *no adverse effect*  
22 to the entire UPRR Fort Collins Branch (5LR.1815).

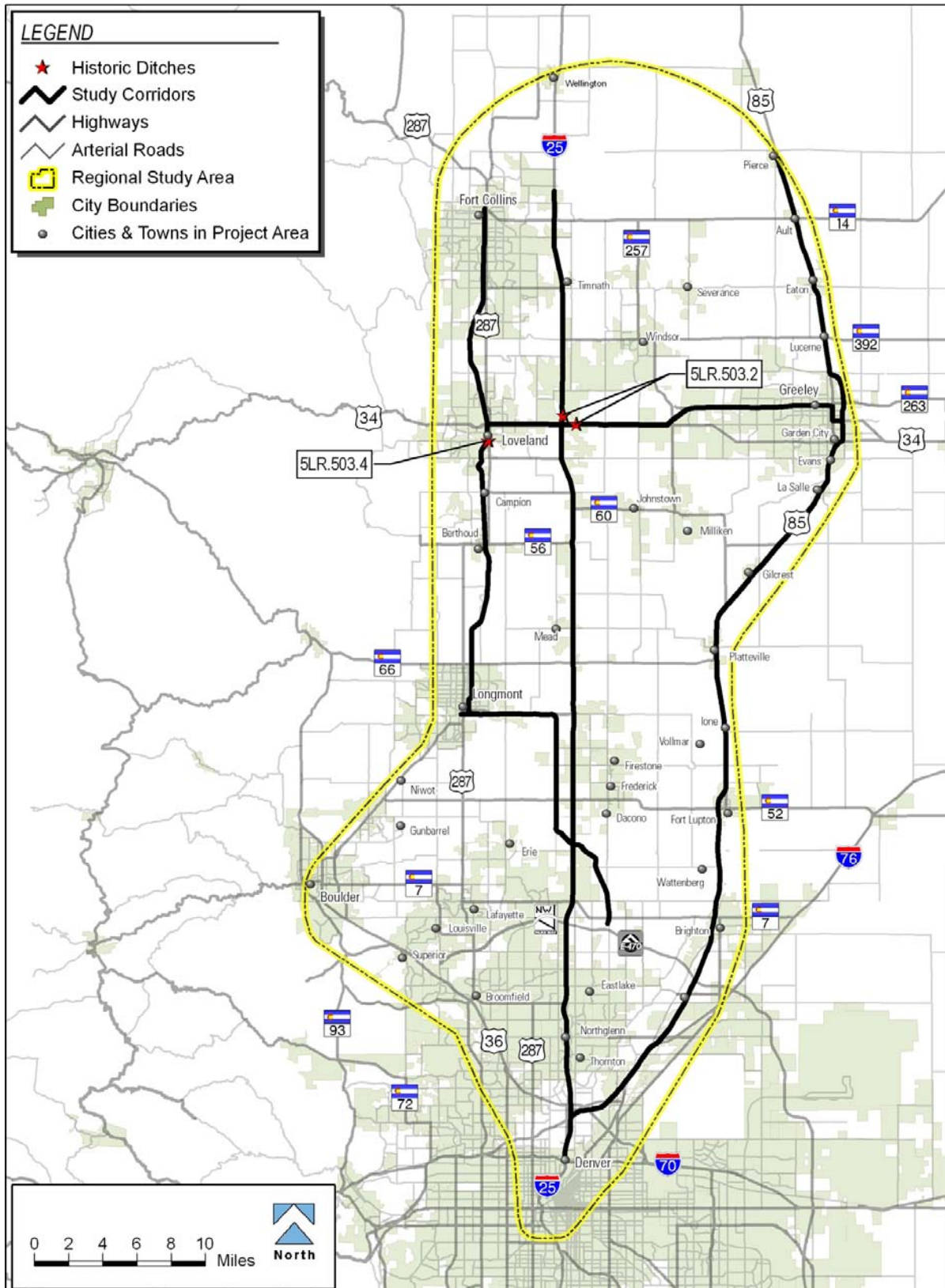
23 **Preferred Alternative:** No direct impacts would occur at any segment locality within the North  
24 I-25 APE. Temporary construction impacts and indirect effects due to expanded overhead  
25 coverage by the highway bridges would occur at segment 5LR.1815.2. The proposed  
26 transportation improvements associated with the Preferred Alternative would not substantially  
27 diminish or alter characteristics that render the property eligible for the NRHP. FHWA, FTA  
28 and CDOT therefore have determined that the Preferred Alternative improvements would  
29 result in *no adverse effect* to the entire UPRR Fort Collins Branch (5LR.1815).

30 **5LR.503 (Loveland and Greeley Canal)**

31 **Resource Description:** The canal was originally built in 1861. The entire canal is  
32 approximately 31 miles long. Two documented segments are in the project APE (**see**  
33 **Figure 3.15-29**). Segment 5LR.503.2 of the historic Loveland and Greeley Canal crosses I-25  
34 as well as the parallel frontage road is 2.62 miles long. The canal is approximately 39 feet wide  
35 and 26 feet deep. During the construction of I-25 in the 1960s, the original canal alignment  
36 was preserved but the integrity of the canal in this location was compromised by placing it  
37 within a CBC under the highway. The three-sided, pre-cast CBC measures 23 feet wide and  
38 402.6 feet long. Both banks of the canal are grass-covered, and riprap is used for bank  
39 stabilization in many areas. The area surrounding the canal segment includes retail and  
40 residential development.

41 The earthen ditch segment 5LR.503.4 follows the historic channel alignment through the old  
42 town area of Loveland. The surrounding area includes retail and residential development.

1 **Figure 3.15-29 5LR.503 (Loveland and Greeley Canal) – Segments Intersecting Project**  
2 **APE**



3

1 **Eligibility Determination:** In 1984, the Loveland & Greeley Canal was evaluated by OAH  
2 as NRHP-eligible under Criterion A for its important contribution to agricultural development in  
3 the Loveland area. The Loveland and Greeley Canal is nearly 150 years old and evokes the  
4 historic agricultural era and conveys the important contribution that irrigation canals made to  
5 local history. Segment 503.2 retains physical integrity except where it was placed in a culvert  
6 beneath I-25. Segment (5LR.503.4) retains sufficient integrity of location, setting, feeling, and  
7 use to support the eligibility of the entire linear resource.

8 **Effect Determination:**

9 In order to determine the effect to the entire linear resource, impacts to each of the segments  
10 passing through the project APE were assessed. These impact assessments are presented  
11 below, followed by a determination of effect to the entire Loveland and Greeley Canal in  
12 Larimer County.

13 **Impacts to segment 5LR.503.2 – Package A:** Package A involves the widening of I-25  
14 through this area, changing it from the existing configuration of two northbound and two  
15 southbound traffic lanes, to a new section containing three general purpose lanes in each  
16 direction for a total of six traffic lanes. Although more mainline travel lanes would be  
17 constructed on I-25, they would fit within the existing CDOT right-of-way without affecting the  
18 existing culvert conveying the canal underneath the highway.

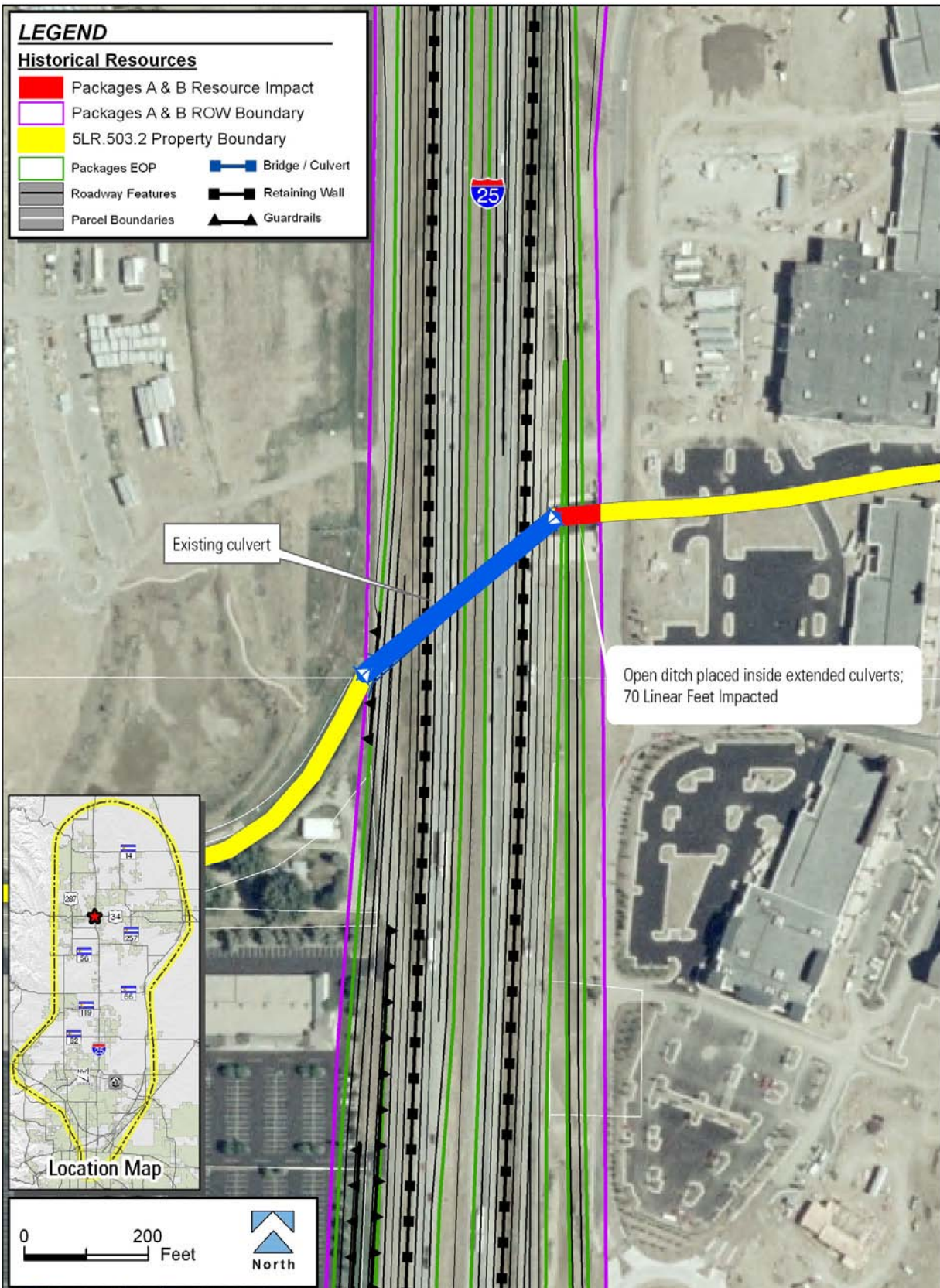
19 A new US 34 interchange northbound I-25 on-ramp would be constructed outside the existing  
20 highway right-of-way and would cross the Loveland and Greeley Canal east of the existing  
21 culvert opening. The existing box culvert must be extended an additional 70 feet on the east  
22 side of I-25 and the north-bound I-25 on-ramp would be built over the top of the new extended  
23 culvert (see **Figure 3.15-30**).

24 Construction of the new culvert would likely require temporary use of the historic property for  
25 equipment access. The ditch would likely be diverted temporarily during culvert construction  
26 but would remain operational, and irrigation water would be protected from construction-  
27 related sedimentation. All disturbance caused by construction equipment or construction  
28 activities would be temporary in nature and affected areas would be restored to their original  
29 condition and appearance.

30 **Impacts to segment 5LR.503.2 – Package B:** This Package involves the widening of I-25  
31 through this area, changing it from the existing configuration of two northbound and two  
32 southbound traffic lanes, to a new section containing a total of eight lanes: two managed lanes  
33 plus two general purpose lanes in each direction. Although more lanes would be constructed,  
34 they would fit within the existing CDOT right-of-way with the exception of a new US 34 to  
35 north-bound I-25 onramp. Effects to the historic canal are the same as would occur under  
36 Package A, and involves extending the existing three-sided CBC beneath I-25 an additional  
37 70 feet to the east to accommodate the proposed new I-25 onramp. Temporary impacts due to  
38 construction of the US 34 ramp and installation of the new culvert would be the same as for  
39 Package A (see **Figure 3.15-30**).

40 **Impacts to segment 5LR.503.2 – Preferred Alternative:** The Preferred Alternative involves  
41 the widening of I-25 through this area, changing it from the existing configuration of two  
42 northbound and two southbound traffic lanes, to a new section containing three general  
43 purpose lanes and a barrier-separated TEL in each direction for a total of eight traffic lanes.  
44 Although more mainline travel lanes would be constructed on I-25, they would fit within the  
45 existing CDOT right-of-way without affecting the existing culvert conveying the canal  
46 underneath the highway.

1 Figure 3.15-30 5LR.503.2 (Loveland and Greeley Canal) – Packages A and B



2

1 A new US 34 interchange northbound I-25 on-ramp would be constructed outside the existing  
2 highway right-of-way and would cross the Loveland and Greeley Canal east of the existing  
3 culvert opening. The existing box culvert must be extended an additional 65 feet on the east  
4 side of I-25 and the north-bound I-25 on-ramp would be built over the top of the new extended  
5 culvert (see **Figure 3.15-31**).

6 Construction of the new culvert would likely require temporary use of the historic property for  
7 equipment access. The ditch would likely be diverted temporarily during culvert construction  
8 but would remain operational, and irrigation water would be protected from construction-  
9 related sedimentation. All disturbance caused by construction equipment or construction  
10 activities would be temporary in nature and affected areas would be restored to their original  
11 condition and appearance.

12 **Impacts to segment 5LR.503.4 – Package A:** None of the proposed commuter rail  
13 improvements under Package A would cause changes to this historic property.

14 **Impacts to segment 5LR.503.4 – Preferred Alternative:** None of the proposed commuter rail  
15 improvements under the Preferred Alternative would cause changes to this historic property.

16 **Summary Effect Determination:**

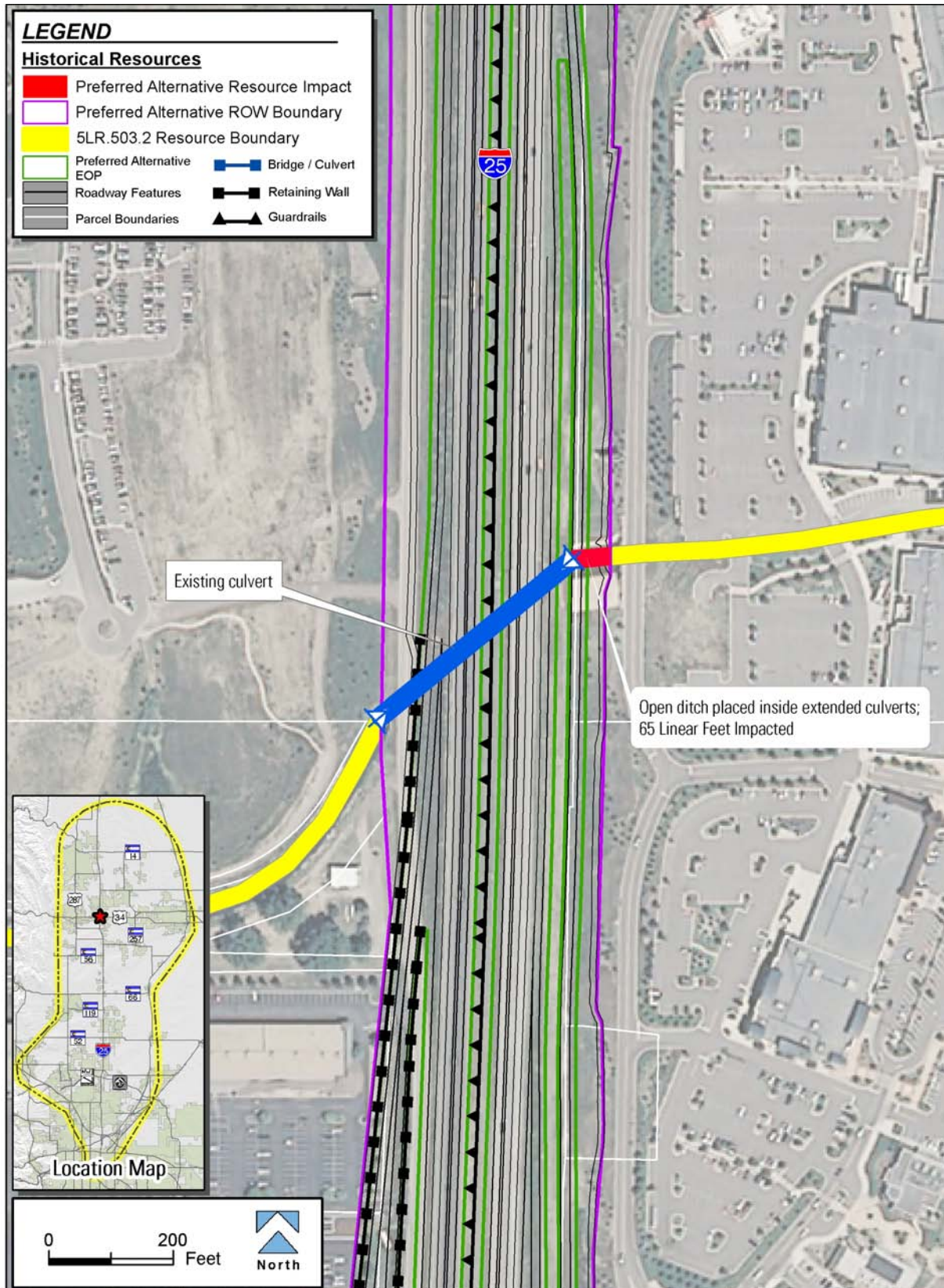
17 **Package A:** The 70-foot culvert extension and temporary construction impacts required under  
18 Package A would enclose a very short section of open canal with integrity, and would not alter  
19 the canal's historic alignment. This change would not diminish or alter characteristics that  
20 render it NRHP-eligible, and FHWA, FTA and CDOT have determined that Package A would  
21 result in *no adverse effect* to the entire Loveland and Greeley Canal (5LR.503).

22 **Package B:** Although 70 feet of canal with integrity on the east side of I-25 would be placed in  
23 a culvert extension, this change would not diminish or alter characteristics that render the  
24 canal eligible for the NRHP, and FHWA, FTA and CDOT have determined that Package B  
25 would result in no adverse effect to the resource.

26 **Preferred Alternative:** The 65-foot culvert extension and temporary construction impacts  
27 required under the Preferred Alternative would enclose a very short section of open canal with  
28 integrity, and would not alter the canal's historic alignment. This change would not diminish or  
29 alter characteristics that render it NRHP-eligible, and FHWA, FTA and CDOT have determined  
30 that the Preferred Alternative would result in *no adverse effect* to the entire Loveland and  
31 Greeley Canal (5LR.503).

32

1 Figure 3.15-31 5LR.503.2 (Loveland and Greeley Canal) – Preferred Alternative



2



1 **5LR.8928 (Farmers' Ditch)**

2 **Resource Description:** This irrigation ditch was originally built in 1864. The entire Farmer's  
3 Ditch is approximately 15 miles long. Three segments of the ditch are present within the APE  
4 (see **Figures 3.15-32 and -33**). Segment 5LR.8928.1 of the Farmers' Ditch crosses I-25  
5 parallel to US 34 in the vicinity of the I-25 and US 34 interchange. Here, the earthen canal is  
6 approximately 16 feet wide and 1.5 miles long. The levees and banks along both sides of the  
7 ditch are grass-covered. The surrounding area includes retail and residential development.

8 Segment 5LR.8928.2 is the portion of the irrigation ditch west of I-25 and within the northeast  
9 quadrant of the interchange to where Farmers' Ditch crosses US 34. The ditch has been lined  
10 with concrete, realigned and modified by commercial development and the construction of I-25  
11 and US 34. The segment is 1.8 miles long.

12 Segment 5LR.8928.7 of the historic Farmers' Ditch generally runs perpendicular to I-25 and  
13 crosses the proposed Package A commuter railway alignment. The earthen ditch is 151 feet  
14 long and 9 feet wide. Grassy vegetation lines both banks of the ditch in many areas. The  
15 surrounding area includes industrial and residential development.

16 **Eligibility Determination:** The entire Farmers' Ditch (5LR.8928) is eligible for listing on the  
17 NRHP under Criterion A because of its important association with the development of water  
18 rights and agriculture in Larimer County. Segments 5LR.8928.1 and 5LR.8928.7 retain visual  
19 and structural integrity within a semi-rural setting, and both segments support the eligibility of  
20 the entire linear resource. Segment 5LR.8928.2 of Farmers' Ditch has been modified to the  
21 point that its remaining features no longer support the eligibility of the entire resource.

22 **Effect Determination:**

23 In order to determine the effect to the entire linear resource, impacts to each of the segments  
24 passing through the project APE were assessed. These impact assessments are presented  
25 below, followed by a determination of effect to the entire Farmers' Ditch (5LR.8928).

26 **Impacts to segment 5LR.8928.1 – Package A:** Under Package A, the Farmers Ditch  
27 segment that currently passes underneath US 34 in a CBC would be conveyed an additional  
28 65 feet inside an extended culvert, south of US 34 to allow widening of the US 34 roadway.  
29 The new road would overly the ditch culvert. **Figure 3.15-34** illustrates the US 34 culvert  
30 extension.

31 Temporary construction activities associated with installation of new ditch culverts and nearby  
32 highway improvements would result in temporary impacts to the ditch. A temporary  
33 construction easement may be acquired.

34 **Impacts to segment 5LR.8928.1 – Package B:** Under Package B, the Farmers Ditch  
35 segment that currently passes underneath US 34 in a CBC would be conveyed an additional  
36 65 feet inside an extended culvert, south of US 34 to allow widening of the US 34 roadway.  
37 The new road would overly the ditch culvert. **Figure 3.15-34** illustrates the US 34 culvert  
38 extension. Temporary construction impacts would be the same as those for Package A.

39 **Impacts to segment 5LR.8928.1 – Preferred Alternative:** Under the Preferred Alternative, the  
40 Farmers Ditch segment that currently passes underneath US 34 in a CBC would be conveyed an  
41 additional 78 feet inside an extended culvert, south of US 34 to allow widening of the US 34  
42 roadway. The new road would overlay the ditch culvert. **Figure 3.15-35** illustrates the US 34  
43 culvert extension.

1 Temporary construction activities associated with installation of new ditch culverts and nearby  
2 highway improvements would result in temporary impacts to the ditch. A temporary  
3 construction easement may be acquired.

4 **Impacts to segment 5LR.8928.2 – Package A:** The Farmers' Ditch segment 5LR.8928.2  
5 runs parallel to the north side of US 34 until it reaches the west frontage road of I-25 where it  
6 flanks the north side of that roadway as an open ditch for several hundred feet. The ditch  
7 enters a pipe where it crosses underneath the west frontage road, I-25, and I-25 ramps. The  
8 ditch remains underground, inside a culvert pipe, until it daylights at the east frontage road.

9 Under the Package A improvements, direct impacts to the ditch would occur in four places  
10 along this ditch segment. Direct impact would occur at two locations on the west side of I-25  
11 where this historic ditch parallels the north side of US 34. Approximately 1,225 feet of open  
12 ditch west of, and an 1,090-foot-long stretch of open ditch east of Rocky Mountain Avenue, lies  
13 within the proposed wider US 34 roadway template. The open ditch would be encased inside  
14 an underground pipe to allow construction of the wider pavement and side slope.

15 Two direct impacts would occur on the east side of I-25. These include a 115-foot-long portion  
16 of open ditch on the northeast quadrant of the I-25/US 34 interchange, which would require the  
17 ditch to be encased inside a culvert beneath the proposed new northbound I-25 on-ramps. A  
18 short distance farther to the east, the same ditch flows under US 34 inside a CBC. Proposed  
19 widening of the US 34 roadway in this location would require culvert extensions of  
20 approximately 44 feet on the north side of US 34 and 65 feet on the south side (5LR.8928.1) of  
21 US 34, totaling 109 feet more open ditch that would be conveyed inside a concrete culvert  
22 (see **Figure 3.15-34**).

23 Temporary construction activities associated with installation of new ditch culverts and nearby  
24 highway improvements would result in temporary impacts to the ditch. A temporary  
25 construction easement may be acquired.

26 **Impacts to segment 5LR.8928.2 – Package B:** Package B improvements to the I-25 /US 34  
27 interchange as well as US 34 and the Rocky Mountain Avenue intersection would result in very  
28 similar direct impacts to the historic Farmers' Ditch as Package A (see **Figure 3.15-34**).

29 **Impacts to segment 5LR.8928.2 – Preferred Alternative:** The Farmers' Ditch segment  
30 5LR.8928.2 runs parallel to the north side of US 34 until it reaches the west frontage road of  
31 I-25 where it flanks the north side of that roadway as an open ditch for several hundred feet.  
32 The ditch enters a pipe where it crosses underneath the west frontage road, I-25, and I-25  
33 ramps. The ditch remains underground, inside a culvert pipe, until it daylights at the east  
34 frontage road.

35 Under the Preferred Alternative improvements, direct impacts to the ditch would occur in four  
36 places along this ditch segment. Direct impact would occur at two locations on the west side of  
37 I-25 where this historic ditch parallels the north side of US 34. Approximately 1,225 feet of open  
38 ditch west of, and a 1,090-foot-long stretch of open ditch east of Rocky Mountain Avenue, lies  
39 within the proposed wider US 34 roadway template. The open ditch would be encased inside  
40 an underground pipe to allow construction of the wider pavement and side slope.

41

1 Two direct impacts would occur on the east side of I-25. These include a 95-foot-long portion  
2 of open ditch on the northeast quadrant of the I-25/US 34 interchange, which would require the  
3 ditch to be encased inside a culvert beneath the proposed new northbound I-25 on-ramps. A  
4 short distance farther to the east, the same ditch flows under US 34 inside a CBC. Proposed  
5 widening of the US 34 roadway in this location would require culvert extensions of  
6 approximately 44 feet on the north side of US 34 and 78 feet on the south side (5LR.8928.1) of  
7 US 34, totaling 109 feet more open ditch that would be conveyed inside a concrete culvert  
8 (see **Figure 3.15-35**).

9 Temporary construction activities associated with installation of new ditch culverts and nearby  
10 highway improvements would result in temporary impacts to the ditch. A temporary  
11 construction easement may be acquired.

12 **Impacts to segment 5LR.8928.7—Package A:** None of the proposed commuter rail  
13 improvements would cause changes to this historic property.

14 **Impacts to segment 5LR.8928.7 – Preferred Alternative:** None of the proposed commuter  
15 rail improvements under the Preferred Alternative would cause changes to this historic  
16 property.

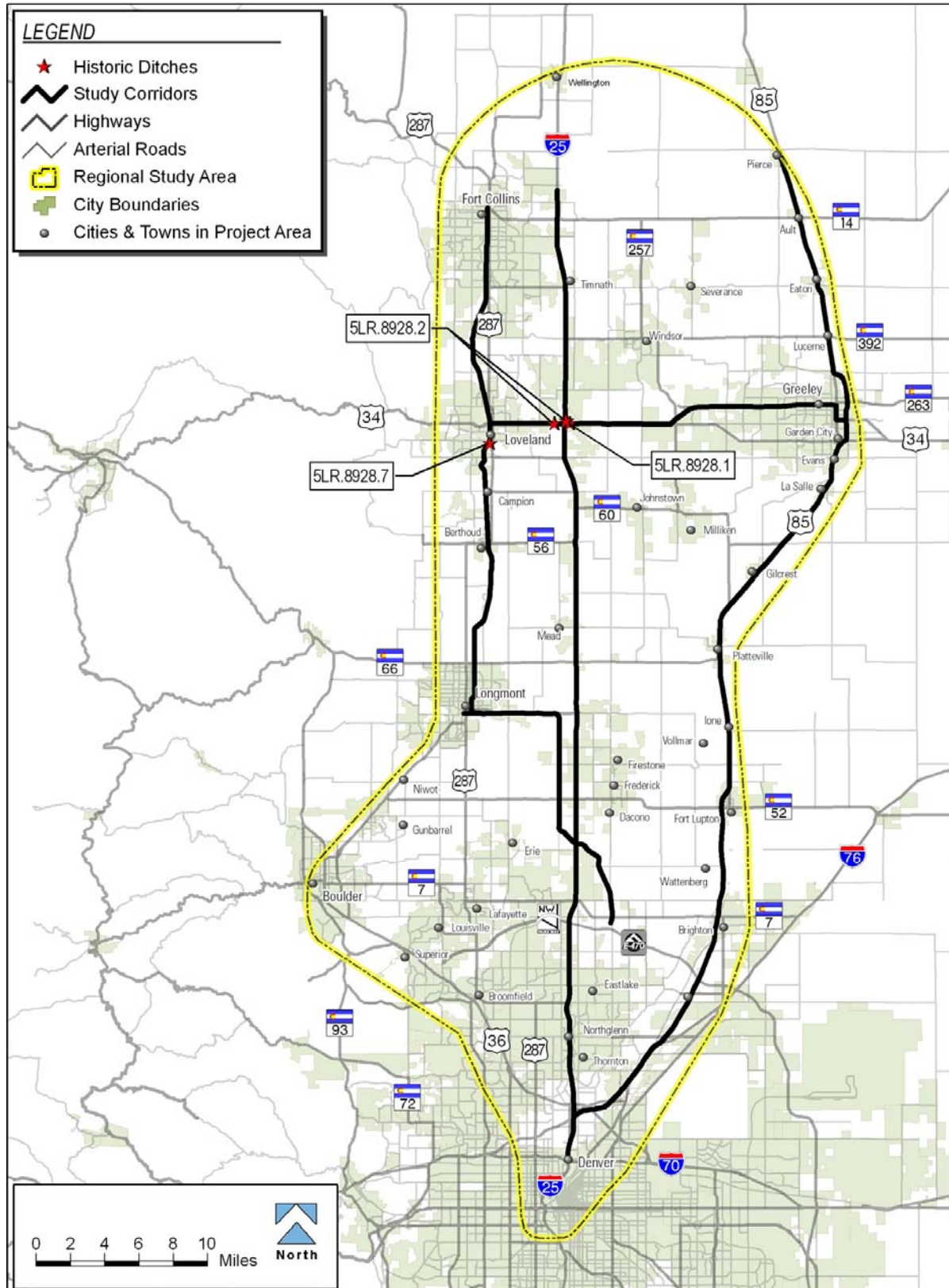
17 **Summary Effect Determination:**

18 **Package A:** Ditch segments 5LR.8928.1 and 5LR.8928.2 would experience temporary  
19 construction impacts during culvert installation and highway construction activity. The direct  
20 impacts to these same segments cumulatively amount to 2,539 linear feet or 0.48 mile of open  
21 ditch requiring placement inside underground pipes and box culvert extensions. Because the  
22 physical integrity of the channel of the ditch segment in much of the I-25 /US 34 interchange  
23 area has already been compromised by numerous culvert installations, realignments and other  
24 modifications and no longer supports the qualities that make the entire ditch NRHP-eligible,  
25 FHWA, FTA and CDOT have determined that the Package A improvements would result in *no*  
26 *adverse effect* with respect to the entire Farmers' Ditch (5LR.8928).

27 **Package B:** The proposed transportation improvements would result in temporary and direct  
28 impacts identical to those associated with Package A. FHWA, FTA and CDOT have  
29 determined that the Package B transportation improvements would result in *no adverse effect*  
30 with respect to the entire Farmers' Ditch (5LR.8928).

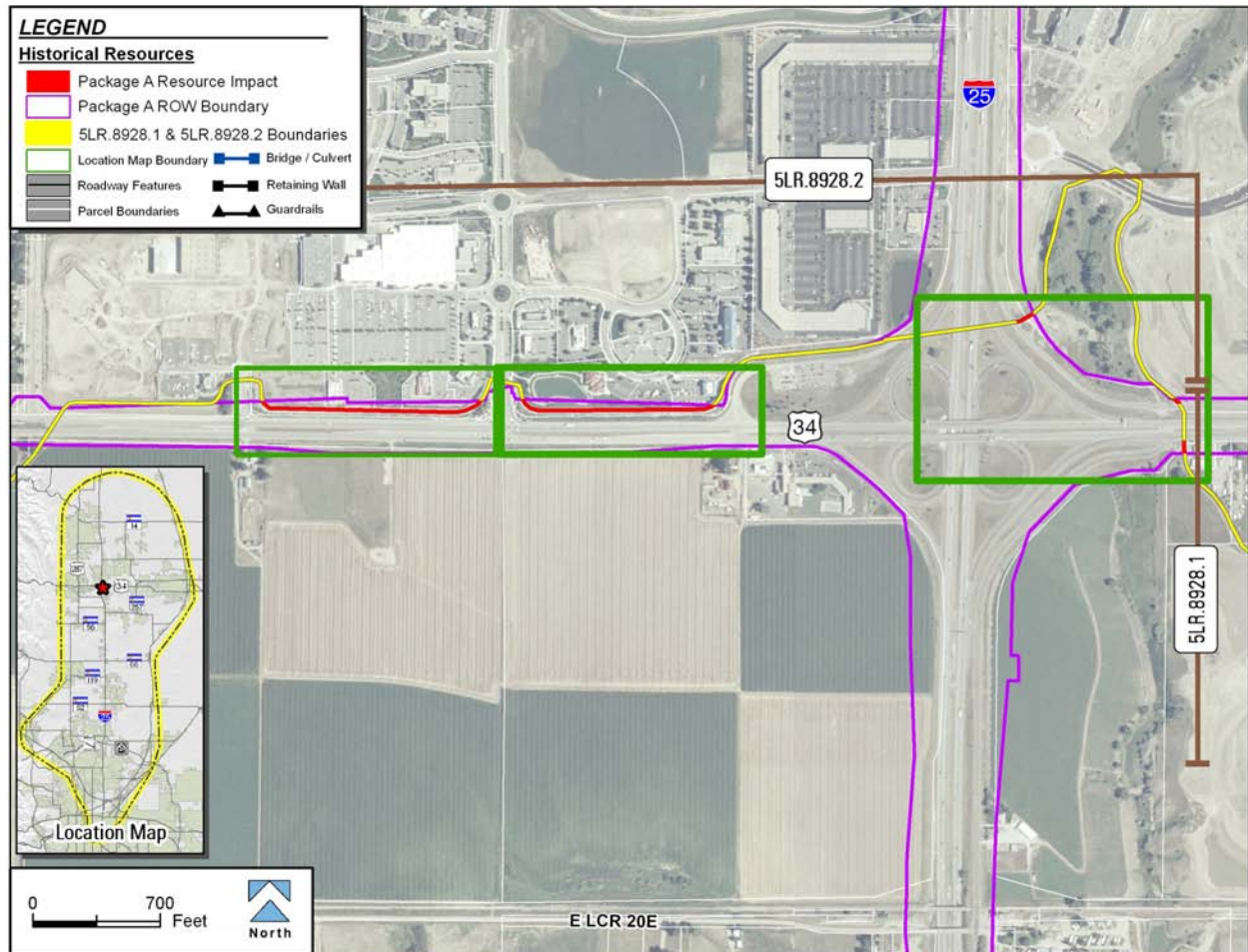
31 **Preferred Alternative:** Ditch segments 5LR.8928.1 and 5LR.8928.2 would experience  
32 temporary construction impacts during culvert installation and highway construction activity.  
33 The direct impacts to these same segments cumulatively amount to 2,532 linear feet or  
34 0.48 mile of open ditch requiring placement inside underground pipes and box culvert  
35 extensions. Because the physical integrity of the channel of the ditch segment in much of the  
36 I-25/US 34 interchange area has already been compromised by numerous culvert installations,  
37 realignments and other modifications and no longer supports the qualities that make the entire  
38 ditch NRHP-eligible, FHWA, FTA and CDOT have determined that the Preferred Alternative  
39 improvements would result in *no adverse effect* with respect to the entire Farmers' Ditch  
40 (5LR.8928).

1 Figure 3.15-32 5LR.8928 (Farmers' Ditch) – Segments intersecting the project APE



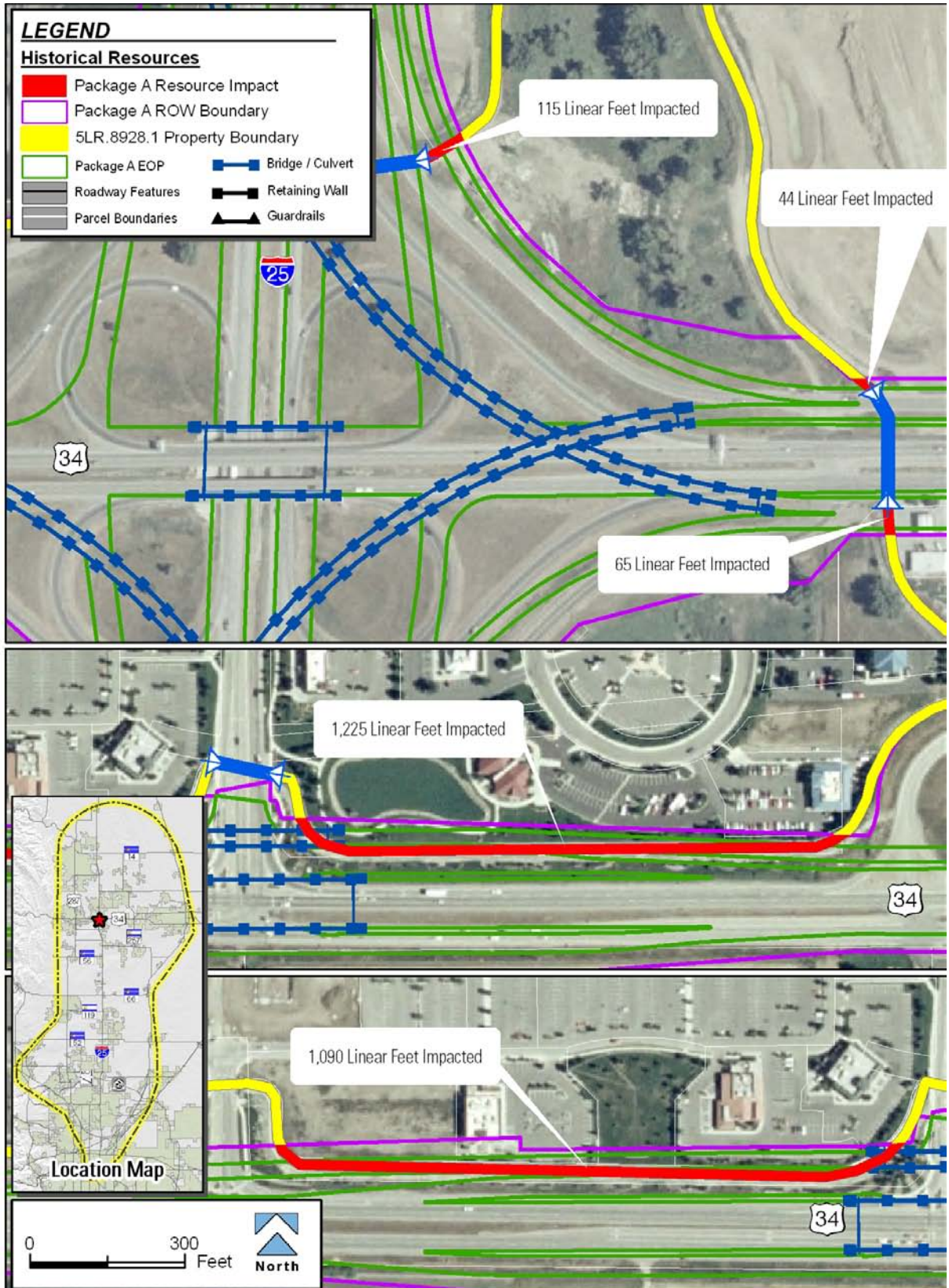
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1 Figure 3.15-33 5LR.8928.1 and 5LR.8928.2 (Farmers' Ditch) – Location Map

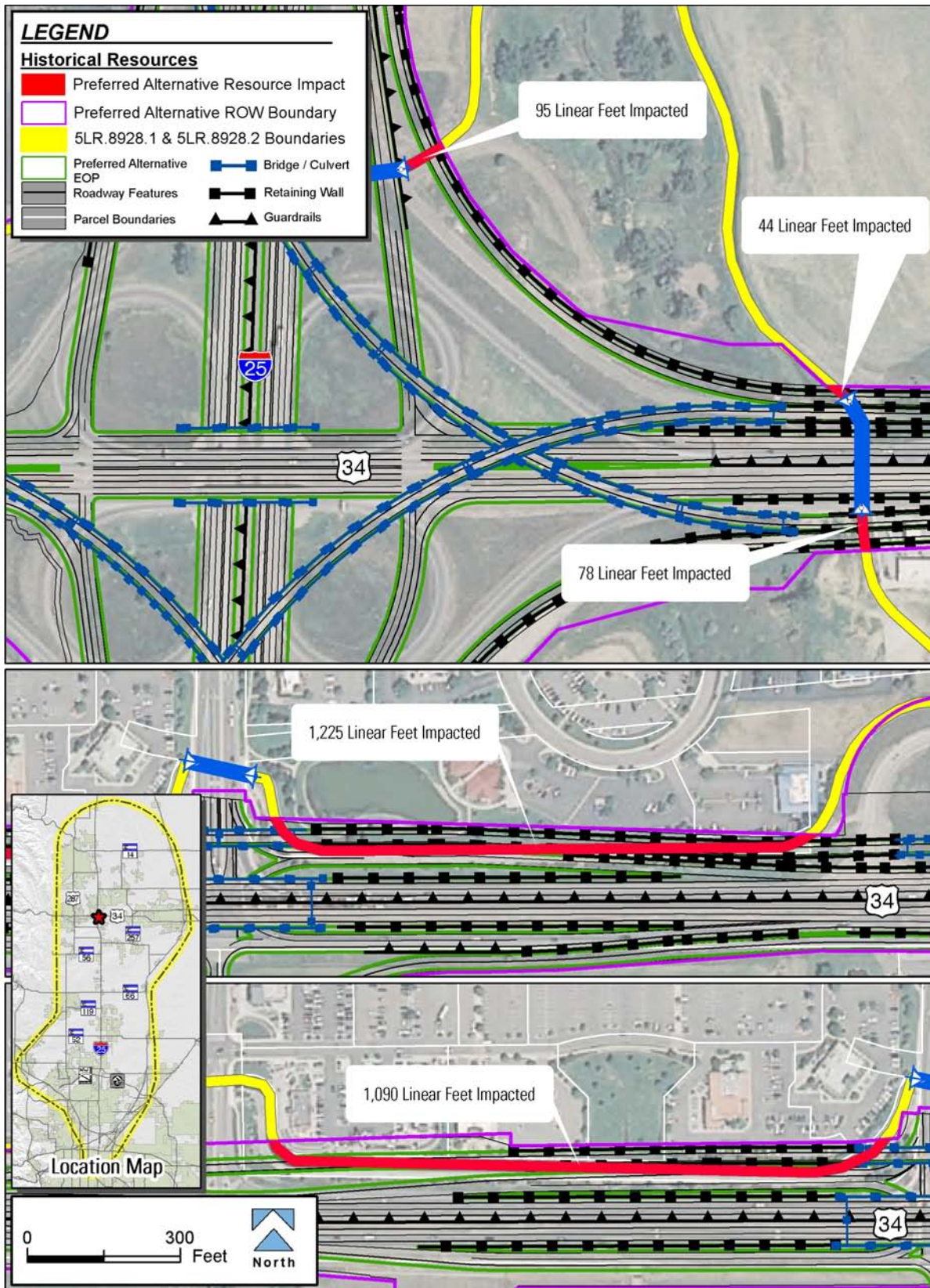


2

1 Figure 3.15-34 5LR.8928.1 and 5LR.8928.2 (Farmers' Ditch) – Packages A and B



1 Figure 3.15-35 5LR.8928.1 and 5LR.8928.2 (Farmers' Ditch) – Preferred Alternative



2

1 **5LR.11209 (Schmer Farm)**

2 **Resource Description:** The Schmer  
3 Farm is located at 5464 East US 34 on  
4 the southwest corner of I-25 and US  
5 34. Dating to the early 1900s, the farm  
6 remains a fairly complete example of a  
7 Larimer County farm from that time  
8 period. The farm continues to have a  
9 land base, and it is still currently used  
10 for farming. At one time, it was used for  
11 growing of sugar beets but now it is  
12 used for growing corn and grains. The  
13 original size of the farm was 160 acres.  
14 The farm's size has been reduced 25  
15 percent from the original 160 acres and is currently 119.5 acres. Twenty-eight acres at the  
16 northeast corner of the property were sold by the owners in 1962 for commercial development  
17 at the I-25 entry ramp from US 34 and another twelve acres have been sold since that time.



**Schmer Farm**

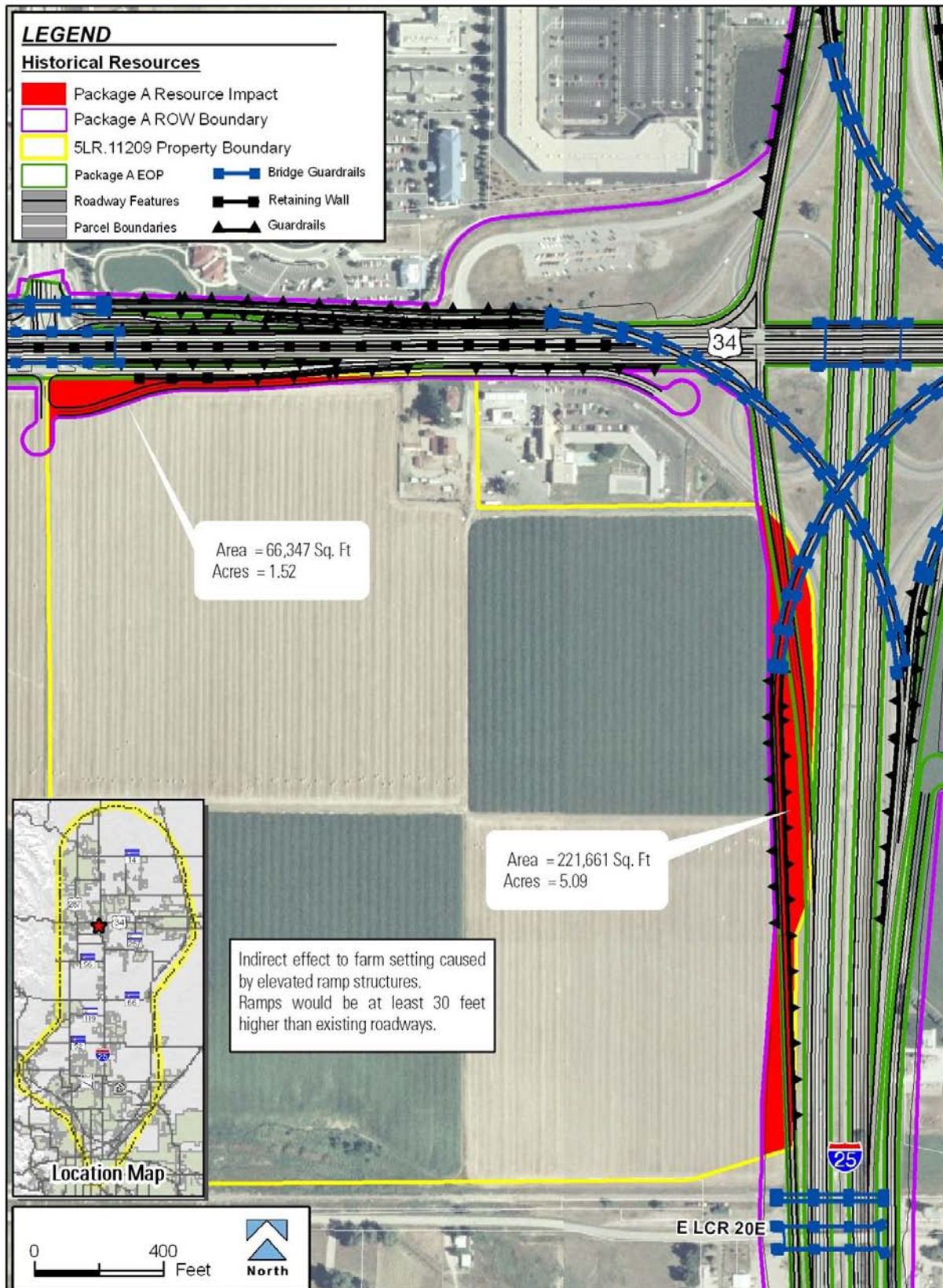
18 **Eligibility Determination:** On August 17, 2006, CDOT determined, and the SHPO concurred,  
19 that the Schmer Farm was officially eligible for the NRHP under Criterion A for its associations  
20 with 20th century farming, including sugar beet growing. It is also eligible under Criterion C as  
21 representative of the architecture typically associated with Loveland and Larimer County farms  
22 during the first half of the 20th century.

23 **Effect Determination – Package A:** This historic farm would be directly impacted by proposed  
24 improvements to the I-25/US 34 interchange associated with Package A. Direct impacts to the site  
25 would result from the construction of new interchange ramps, including long curving, elevated ramps  
26 from westbound US 34 to southbound I-25, and a new southbound on-ramp from eastbound US 34  
27 on the southwest quadrant of the interchange, replacing the existing loop ramp. Land taken from the  
28 farm would be necessary to provide a foundation for support piers for the new elevated flyover  
29 ramps between US 34 and I-25. Additionally, land would be needed from the farm to allow  
30 construction of fill slopes used to support the widened highway lanes and near-grade ramps, located  
31 just west of the existing southbound on-ramp. Construction of these new ramps would create direct  
32 impacts to as many as 5.09 acres of land along the east edge of the property. Another small area of  
33 direct impact would occur west of the farmhouse, where a new access would be constructed from  
34 US 34 to the frontage road leading to the Schmer farmhouse, gas station, and hotel on the  
35 southwest corner of the interchange. A total of 1.52 acres of farmland would be directly impacted in  
36 this location. The combined 6.61 acres of open farmland subject to direct impacts under Package A  
37 amounts to approximately 5.3 percent of the total 124-acre occupied by this historic farm. No direct  
38 impacts to the historic farm building complex along US 34 would occur under Package A (see  
39 **Figure 3.15-36**).

40 Under Package A, traffic noise is expected to decrease approximately four decibels from the No-  
41 Action Alternative levels in the vicinity of the Schmer farmhouse due to shielding of highway traffic  
42 noise by the new on-ramp in the I-25 interchange. The on-ramp which brings westbound US 34  
43 traffic directly to southbound I-25 is elevated 30 feet higher than the existing highway feature in the  
44 area and introduces an additional transportation element into the setting of the Schmer Farm.  
45 Transportation features have been part of the rural atmosphere and setting of the Schmer Farm  
46 since the 1960s, when I-25 and US 34 were completed.



1 Figure 3.15-36 5LR.11209 (Schmer Farm) – Package A



2

1 The new indirect effects to the farm setting would not substantially impair the function, setting,  
2 or architectural qualities that render the farm NRHP-eligible. The farm would remain  
3 operational and would be protected from encroachment during construction. Please see the  
4 Effect Determination discussion under the Preferred Alternative for information regarding the  
5 projects effects to character-defining features associated with the farm.

6 The transportation improvements associated with Package A would not substantially diminish  
7 or alter characteristics that render the site eligible for the NRHP. FHWA, FTA and CDOT  
8 therefore have determined that Package A would result in *no adverse effect* to the resource.

9 **Effect Determination – Package B:** Impacts from Package B are similar in nature to those  
10 expected under Package A. This historic farm would be directly impacted by proposed  
11 improvements to the I-25/US 34 interchange associated with Package B. Direct impacts to the  
12 site would be slightly larger than in Package A due to the additional managed lanes on I-25  
13 creating a slightly wider highway footprint. Construction of these new ramps would cause  
14 direct impacts to as many as 5.48 acres of land along the east edge of the property. Another  
15 small area of direct impact would occur west of the farmhouse, where a new access would be  
16 constructed from US 34 to the frontage road leading to the Schmer farmhouse, gas station,  
17 and hotel on the southwest corner of the interchange. A total of 1.52 acres of farmland would  
18 be directly impacted in this location. The combined 7.0 acres of open farmland subject to direct  
19 impacts under Package B amounts to approximately 5.6 percent of the total 124 acres  
20 occupied by this historic farm. Indirect effects would be the same as for Package A (see  
21 **Figure 3.15-37**). Please see the Effect Determination discussion under the Preferred  
22 Alternative for information regarding the projects effects to character-defining features  
23 associated with the farm.

24 The transportation improvements associated with Package B would not substantially diminish  
25 or alter characteristics that render the site eligible for the NRHP. FHWA, FTA and CDOT  
26 therefore have determined that Package B would result in *no adverse effect* to the resource.

27 **Effect Determination – Preferred Alternative:** This historic farm would be directly impacted  
28 by proposed improvements to the I-25/US 34 interchange associated with the Preferred  
29 Alternative. Direct impacts to the site would result from the construction of new interchange  
30 ramps, including long curving, elevated ramps from westbound US 34 to southbound I-25, and  
31 a new southbound on-ramp from eastbound US 34 on the southwest quadrant of the  
32 interchange, replacing the existing loop ramp. Land taken from the farm would be necessary to  
33 provide a foundation for support piers for the new elevated flyover ramps between US 34 and  
34 I-25. Additionally, land would be needed from the farm to allow construction of fill slopes used  
35 to support the widened highway lanes and near-grade ramps, located just west of the existing  
36 southbound on-ramp. Construction of these new ramps would create direct impacts to as  
37 many as 3.86 acres of land along the east edge of the property.

38 One of the new elevated westbound US 34 to southbound I-25 ramp would begin on US 34  
39 slightly east of the current I-25 interchange. The ramp would rise to a height of approximately  
40 63 feet over I-25 and curve to the southwest on an alignment slightly west of existing I-25. The  
41 curve will begin to encroach on the Schmer farmland at a point approximately 700 feet south of  
42 the centerline of US 34 which is approximately 200 feet south and 1100 feet east of the  
43 existing farm buildings. The existing commercial development of a hotel, restaurant and gas  
44 station separates the farm property from this ramp at the northeast corner of the farm. As the  
45 elevated ramp gradually curves into southbound I-25 it would attain a height of 60 feet due  
46 east of the farm buildings and would be at a height of approximately 30 feet above ground and

1 supported on retaining walls when it is approximately 1200 feet southeast of the farm  
2 buildings. The ramp would be below ground level near Larimer County Road 20E at the south  
3 boundary of the Schmer Farm.

4 Another new elevated ramp would bring northbound traffic from I-25 to westbound US 34. This  
5 ramp would be built on the east side of I-25 and would not be adjacent to the Schmer farm but  
6 would elevate to height of approximately 40 feet due east of the farm. The ramp would be  
7 located about 150 feet north of the farm.

8 Two retaining walls would be built adjacent to the Schmer Farm. One retaining wall would be  
9 located on the east side of the farm extending along the ramp described above. The wall  
10 would not extend above the existing farmland at the south boundary of the farm. It would then  
11 rise to a height of 30 feet midway between the north and south boundaries of the farm. From  
12 that point, the ramp would be a bridge and not supported by retaining walls. The other  
13 retaining wall would be located along most of the north border of the farm on the south side of  
14 US 34. This wall would be approximately 70 feet from the existing farm house and would  
15 extend approximately 1300 feet. It would be at a height of approximately four feet directly in  
16 front of the existing farm house and at heights ranging from four to nine feet in other segments  
17 of the wall.

18 Both of these ramps would result in indirect effects as new elevated structures introduced into  
19 the visual element of the Schmer farm. The retaining walls under the ramp and along the north  
20 side of the property are similar visual indirect effects.

21 Another new ramp would be built on the east side of I-25 that would carry northbound I-25  
22 traffic to eastbound US 34 traffic. This additional new ramp would be located on the east side  
23 of I-25 and not elevated, it is not expected to effect any elements of the Schmer farm as it is.

24 Another small area of direct impact would occur west of the farmhouse, where a new access  
25 would be constructed from US 34 to the frontage road leading to the Schmer farmhouse, gas  
26 station, and hotel on the southwest corner of the interchange. A total of 1.52 acres of farmland  
27 would be directly impacted in this location. The combined 5.38 acres of open farmland subject  
28 to direct impacts under Preferred Alternative amounts to approximately 4.3 percent of the total  
29 124 acres occupied by this historic farm. No direct impacts to the historic farm building  
30 complex along US 34 would occur under the Preferred Alternative (see **Figure 3.15-38**). The  
31 grade of US 34 directly in front of the house would be three feet higher than the current grade  
32 of US 34. The grade of I-25 on the east would be between 5 to 15 feet below existing ground.

33 Guidelines for assessing historic integrity of agricultural properties are set forth in the National  
34 Register Bulletin, "Guidelines for Evaluating and Documenting Rural Historic Landscapes",  
35 U. S. Department of the Interior, National Park Service. According to those guidelines, "historic  
36 integrity requires that the various characteristics that shaped the land during the historic  
37 periods be present today in much the same way they were historically (page 21)." The  
38 integrity of the agricultural setting of the Schmer farm was first compromised in the 1960s  
39 when I-25 was built adjacent to its eastern border. The subsequent development of a hotel and  
40 gas station on the property's northeast corner during the early 1970s resulted in a direct loss to  
41 the farm site's integrity. The losses of integrity associated with the development of the highway  
42 and the associated commercial development at the US 34/ I-25 interchange have occurred  
43 over 40 years ago. Those impacts were evident when the property was determined eligible for

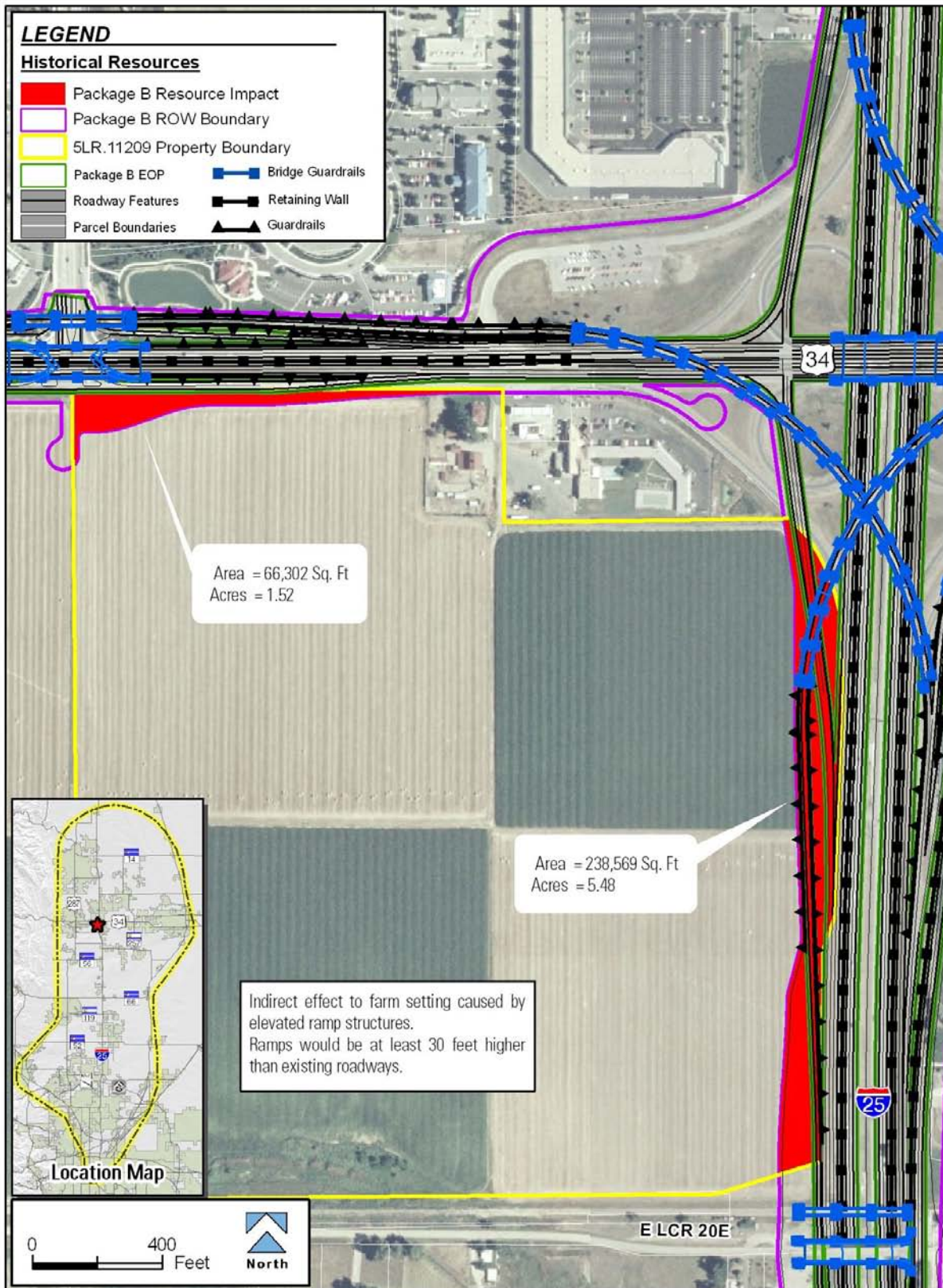
1 the NRHP in 2006. In spite of the loss of these agricultural components, the farm buildings and  
2 remaining farm land still had enough integrity to convey significance in 2006 when the farm  
3 was determined eligible for the NRHP under Criteria A and C.

4 The production of sugar beets was the main reason the Schmer Farm and many others in  
5 northern Colorado developed and this association is an important part of its agricultural history.  
6 Sugar beet production in Larimer County started in 1901 with the opening of Great Western's  
7 first sugar beet processing facility in northern Colorado at Loveland. Sugar beet production in  
8 northern Colorado was strong for over 80 years, but declined significantly after the closure of  
9 the Great Western sugar plants in 1985. Since that time, much of the farmland in northern  
10 Colorado has been used to produce other crops. The Schmer farm has been producing corn  
11 and grains. The continued association of the Schmer farm with the sugar beet industry was  
12 lost in the mid-1980s when the Great Western sugar plants closed. In order for farms to  
13 continue their existence, they had to make modifications to adjust to many changing factors  
14 including weather, the agricultural markets and changes in surrounding land use. The Schmer  
15 Farm, like most others, has undertaken many modifications to keep it in operation over the  
16 decades. Specifically, the Schmer Farm has changed the crops it produces and has sold off  
17 part of the land for commercial development in order to infuse cash to keep the farm viable.  
18 Because of these modifications over the decades, the farm still continues in production and is  
19 able to convey significance under Criteria A and C.

20 The impacts associated with this project would occur along the eastern edge of the farm  
21 adjacent to I-25 where the original integrity of the farm was compromised with the highway's  
22 intrusion on the visual landscape some 40 years ago and where a portion of the land was  
23 developed in the 1960s. There would be no materially different visual perception of the farm  
24 from this project. The farm buildings would not be directly affected, agricultural production  
25 would continue and the farm would continue to convey significance in terms of its association  
26 with agricultural development in Larimer County. The farm would continue on as it was in  
27 2006, when determined eligible for the NRHP, except for the removal of 5.38 acres for the  
28 Preferred Alternative in a thin strip of land along portions of the north and east borders of the  
29 farm as shown on **Figure 3.15-38**. In recent growing seasons, the Schmer farm land was  
30 planted with about half the acreage in corn and the other half in grain. The land was planted to  
31 the edge of their property which abuts the I-25 ROW on the east and the US 34 ROW on the  
32 north. All of the 5.38 acres that are to be taken for the Preferred Alternative are currently used  
33 as agricultural land. The northern portion of the take strip on the east edge of the property has  
34 recently been planted in corn. The remainder of the agricultural land that would be taken has  
35 been planted in grains. In spite of a loss of these 5.38 acres of land for the improvement of  
36 I-25, the Schmer Farm would still continue on as a working farm as it has since the loss of a  
37 market for sugar beets and as it has since selling off part of its land for commercial  
38 development. It would remain a working farm that conveys significance under Criteria A and C.

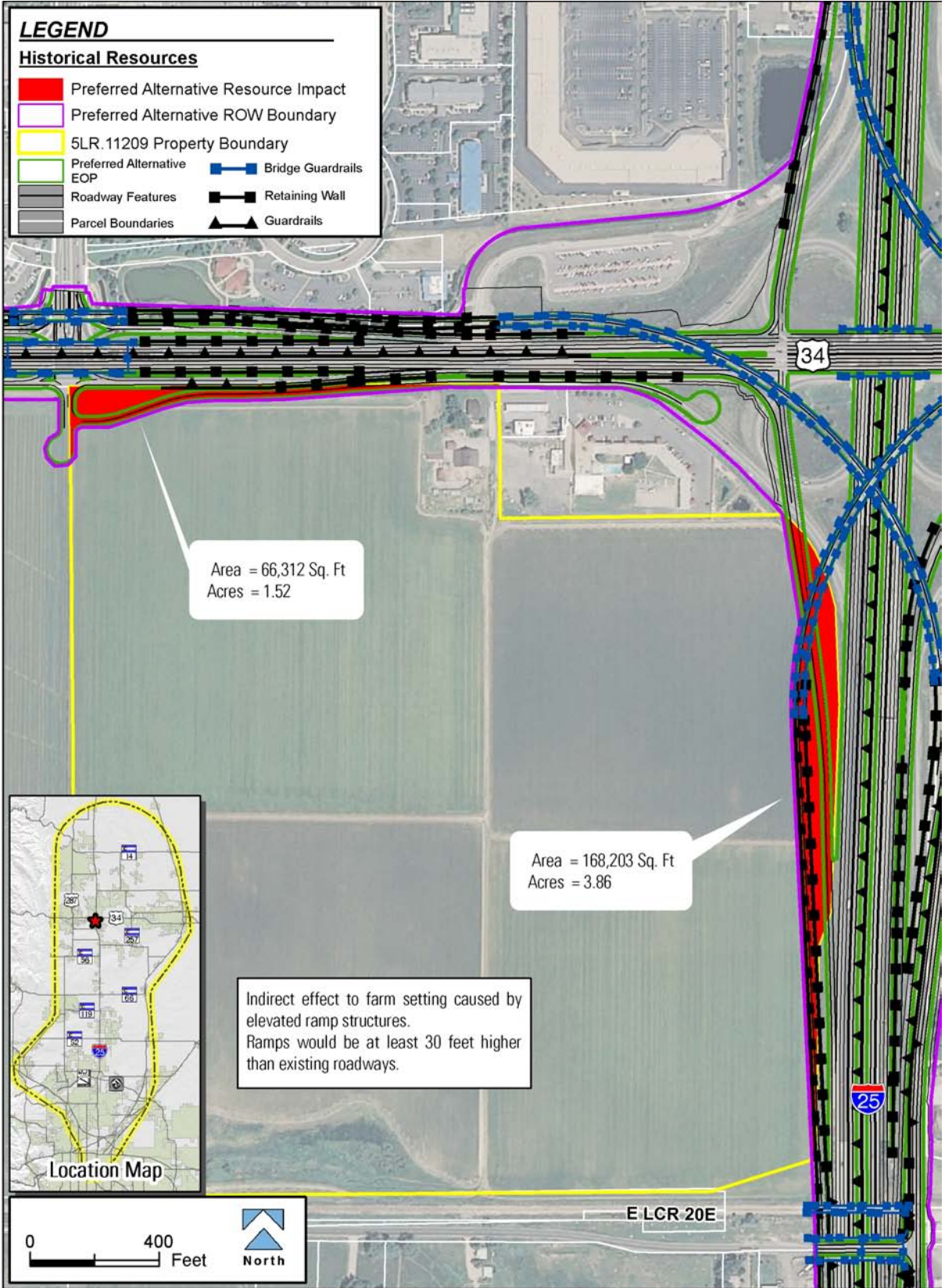
39

1 Figure 3.15-37 5LR.11209 (Schmer Farm) – Package B



1 Figure 3.15-38 5LR.11209 (Schmer Farm – Preferred Alternative

2  
3



1 Under the Preferred Alternative, traffic noise is expected to decrease approximately ten  
2 decibels from the No-Action Alternative levels in the vicinity of the Schmer farmhouse due to  
3 shielding of highway traffic noise by the new on-ramp in the I-25 interchange. The on-ramp  
4 which brings westbound US 34 traffic directly to southbound I-25 is elevated 30 feet higher  
5 than the existing highway feature in the area and introduces an additional transportation  
6 element into the setting of the Schmer Farm. Transportation features have been part of the  
7 rural atmosphere and setting of the Schmer Farm since the 1960s, when I-25 and US 34 were  
8 completed. The new indirect effects to the farm setting would not substantially impair the  
9 function, setting, or architectural qualities that render the farm NRHP-eligible. The farm would  
10 remain operational and would be protected from encroachment during construction.

11 The character of this area has changed drastically over the past two decades. The area is now  
12 mainly characterized by urban commercial development. The changes to the I-25/US 34  
13 interchange as a result of this project will not be the driving force for indirect or cumulative  
14 effects in this area. These indirect impacts are not the kind that would not have occurred but  
15 for this proposed project. The change from predominantly agriculture to predominately  
16 commercial development has already occurred. There has been an interstate interchange  
17 providing access to this area for about 50 years. This change in land use has occurred over  
18 many decades with most of the change occurring in the last two decades.

19 The visual representations presented on the following two pages illustrate the existing setting  
20 of the farm and the change with the Preferred Alternative.

21 FHWA, FTA and CDOT have determined that the loss of an additional 5.38 acres of land for  
22 construction of the Preferred Alternative would result in no adverse effect to this farm because  
23 the characteristics that define the integrity of the rural landscape would not be compromised.  
24 The location, design, materials and workmanship of the farm would remain the same. The  
25 Preferred Alternative would not affect any of the farm buildings. The setting would not be  
26 affected by the Preferred Alternative. The mountains to the west of the farm continue to be a  
27 key element of its historic setting. The setting of the land to the north of the Schmer farm has  
28 changed significantly. What was once all agricultural land has been developed over the last  
29 decades into commercial development with the Loveland Outlet Stores and other retail  
30 businesses directly north of the Schmer Farm and the large Promenade Shops at Centerra to  
31 the northeast of the farm. The highways on both the north and east have been there for over  
32 forty years and were a part of the setting when the property was determined eligible for the  
33 NRHP. The feeling would remain one of an active farm established in the early part of the  
34 20th century. The association is still strong as it is clear that this is still an active farm. The  
35 Schmer Farm was determined eligible under Criterion A for its association with 20th century  
36 Loveland area farming, including its history of sugar beet growing. That association would not  
37 change as a result of this project.

## Schmer Farm Looking North



Schmer Farm – view looking north showing existing setting with barn and house visible in left center of photo.



Schmer Farm – view looking north with visual representation of Preferred Alternative improvements.



1

## Schmer Farm Looking Southeast



Schmer Farm – view looking southeast showing existing setting with house and barn in foreground.



Schmer Farm – view looking southeast with visual representation of the Preferred Alternative improvements (in background, indicated by arrow).

2

1 **5LR.11210 (McDonough Farm)**

2 **Resource Description:** This property is located east of Loveland on the south side of US 34  
3 approximately one mile west of I-25. The farm is historically important because of the  
4 architectural significance of its barn. The barn is a good example of early 20th century barn  
5 architecture in the Loveland and Larimer County area. The farm still continues in production  
6 and the barn continues to convey significance under Criterion C.

7 **Eligibility Determination:** In August 2006, the McDonough Farm was determined officially  
8 eligible for inclusion on the NRHP under Criterion C because of the architectural significance  
9 of its barn.

10 **Effect Determination – Package A:** The impacts associated with Package A would occur  
11 along the northern edge of the farm adjacent to US 34 where 1.64 acres would be removed in  
12 a thin strip of land along portions of the north and east borders of the farm. It appears that a  
13 pumphouse adjacent to US 34 would be removed. On the 2006 survey of this property, the  
14 pumphouse was evaluated as not unique, utilitarian in nature, and not adequately representing  
15 the architecture typically associated with Loveland area farms during the first half of the  
16 20th century. This farm would remain a working farm whose barn conveys significance under  
17 Criterion C. The barn and other farm buildings would not be directly affected, agricultural  
18 production would continue and the barn would continue to convey architectural significance.

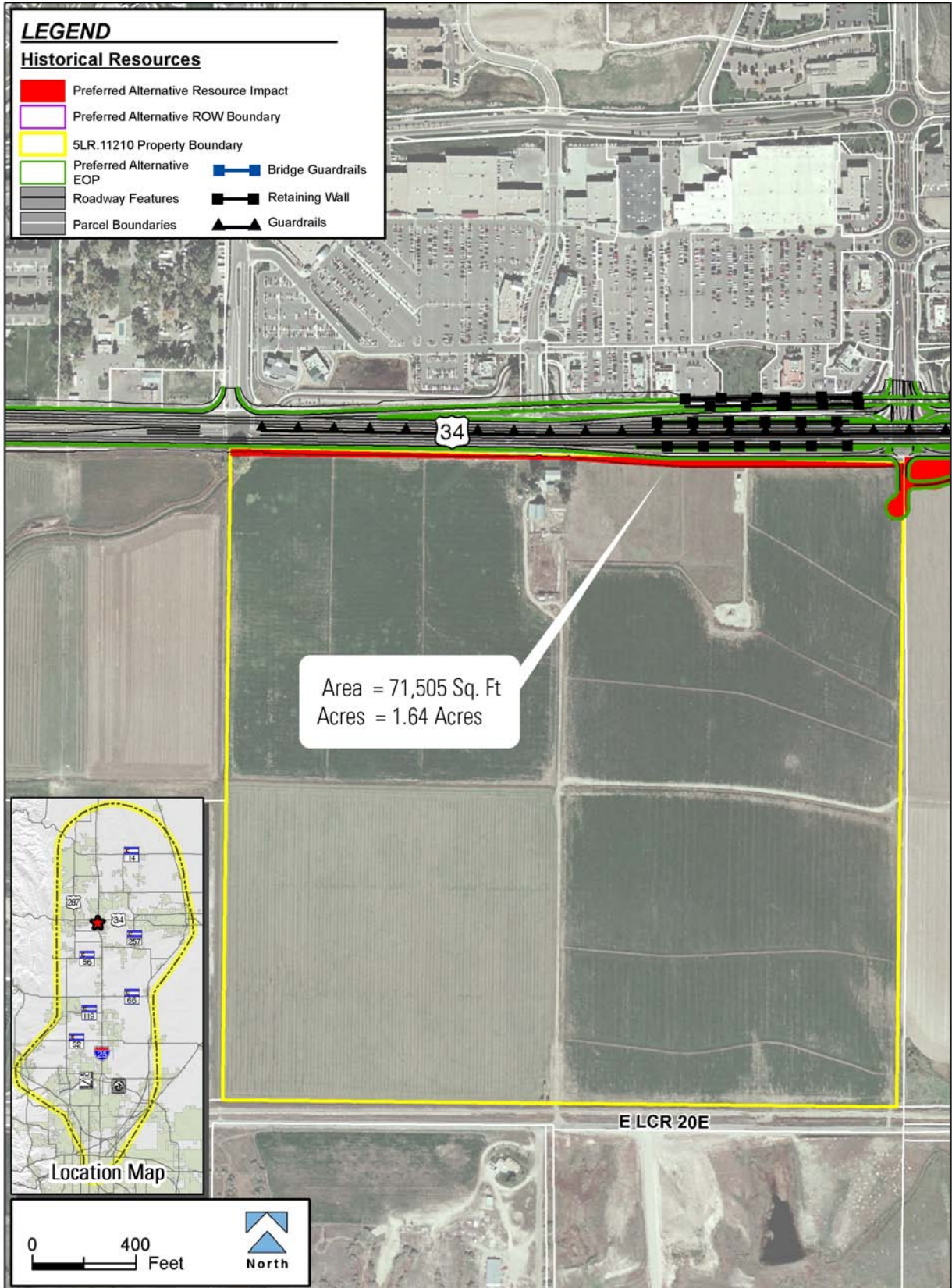
19 The material, workmanship, location and design of the barn would retain integrity and not be  
20 affected by a loss of land from the site. Due to the fact that there would be no direct impact to  
21 the barn, FHWA, FTA and CDOT have determined that Package A would result in *no adverse*  
22 *effect* to the resource.

23 **Effect Determination – Package B:** The impacts associated with Package B are identical to  
24 those described under Package A. This farm would remain a working farm whose barn  
25 conveys significance under Criterion C. The barn and other farm buildings would not be  
26 directly affected, agricultural production would continue and the barn would continue to convey  
27 architectural significance. The material, workmanship, location and design of the barn would  
28 retain integrity and not be affected by a loss of land from the site. Due to the fact that there  
29 would be no direct impact to the barn, FHWA, FTA and CDOT have determined that Package  
30 B would result in *no adverse effect* to the resource.

31 **Effect Determination – Preferred Alternative:** The impacts associated with the Preferred  
32 Alternative would occur along the northern edge of the farm adjacent to US 34 where  
33 1.64 acres would be removed in a thin strip of land along portions of the north and east  
34 borders of the farm (see **Figure 3.15-39**). It appears that a pumphouse adjacent to US 34  
35 would be removed. On the 2006 survey of this property, the pumphouse was evaluated as not  
36 unique, utilitarian in nature, and not adequately representing the architecture typically  
37 associated with Loveland area farms during the first half of the 20th century. This farm would  
38 remain a working farm whose barn conveys significance under Criterion C. The barn and other  
39 farm buildings would not be directly affected, agricultural production would continue and the  
40 barn would continue to convey architectural significance.

41 The material, workmanship, location and design of the barn would retain integrity and not be  
42 affected by a loss of land from the site. Due to the fact that there would be no direct impact to  
43 the barn, FHWA, FTA and CDOT have determined that the Preferred Alternative would result  
44 in *no adverse effect* to the resource.

1 Figure 3.15-39 5LR.11210 (McDonough Farm) – Preferred Alternative



1 **5LR.850, 5WL.841, 5BL.514 (Great Western Railway)**

2 **Resource Description:** The total length of the entire historic Great Western Railway (GWR)  
3 is 110 miles. Six segments of the GWR resource in Larimer, Weld, and Boulder counties pass  
4 through the North I-25 Draft EIS APE (see **Figure 3.15-40**).

5 The 15.7 mile-long GWR Loveland to Buda section (5LR850) was built in 1902-03 by the  
6 Loveland Construction Company and contains Larimer County segments 5LR.850.1 and  
7 5LR.850.5 as well as Weld County segment 5WL.841.11. Segment 5LR.850.1 is  
8 approximately 1,241 feet long. The GWR is conveyed over I-25 in this portion of the APE by a  
9 non-historic bridge. Segment 5LR.850.5 is approximately 551 feet long. Segment 5WL.841.11  
10 is the first end-of-track point for the Loveland to Buda section, and the portion within the  
11 project APE is 784 feet long.

12 The GWR Johnstown to Liberty section was built in 1905-1906 and is 12 miles long. Within the  
13 APE in Weld and Boulder Counties this section contains segments 5WL.841.9 and 5BL.841.1.  
14 Segment 5WL.841.9 is 1,241 feet long, and segment 5WL.841.1 is 784 feet in length. The  
15 Boulder County segment (5BL.514.1) of the GWR Johnstown to Longmont section was  
16 constructed in 1903, and is approximately 2.1 miles long.

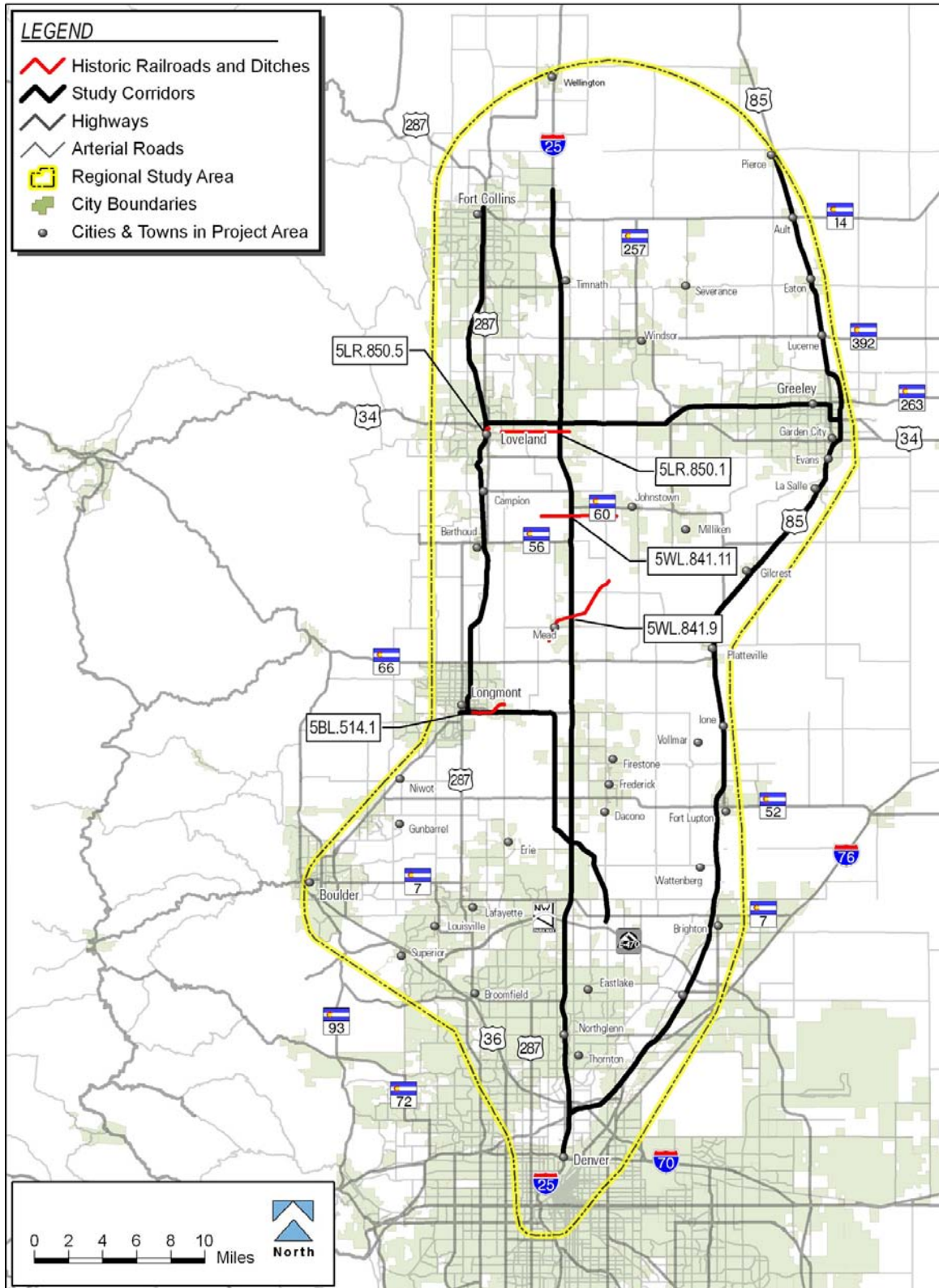
17 **Eligibility Determination:** The entire GWR, in Larimer County (5LR.850), Weld County  
18 (5WL841), and Boulder County (5BL.514), is eligible for the NRHP under Criterion A because  
19 of its important role in the economic development of the Colorado Front Range. All of the  
20 segments passing through the APE (5LR.850.1, 5LR.850.5, 5WL.841.11, 5WL.841.9,  
21 5WL.841.1 and 5BL.514.1) retain sufficient integrity of location and association to support the  
22 eligibility of the entire linear resource; however, those portions of the railroad spanning I-25  
23 have been modified and have lost integrity of design and workmanship by being placed on a  
24 bridge during the 1960s.

25 **Effect Determination:**

26 In order to determine the effect to the entire linear resource, impacts to each of the segments  
27 passing through the project APE were assessed. These impact assessments are presented  
28 below, followed by a determination of effect to the entire GWR (5LR.850, 5WL.841, 5BL.514).

29 **Impacts to segment 5LR.850.1 – Package A:** Presently, this historic railroad segment spans  
30 I-25 via a non-historic 210-foot-long steel girder railroad bridge. Package A involves the  
31 widening of I-25 through this area, changing it from the existing configuration of two  
32 northbound and two southbound traffic lanes, to a new section containing three general  
33 purpose lanes in each direction or a total of six traffic lanes. To accommodate this wider  
34 section, it would be necessary to replace the existing bridge carrying the GWR over I-25 with a  
35 295-foot-long bridge structure. The new bridge would be 85 feet longer than the existing  
36 structure spanning I-25. The proposed new bridge would be either of post-tensioned concrete  
37 or steel plate girder construction, and would remain at the same vertical height as the existing  
38 railroad bridge (see **Figure 3.15-41**).

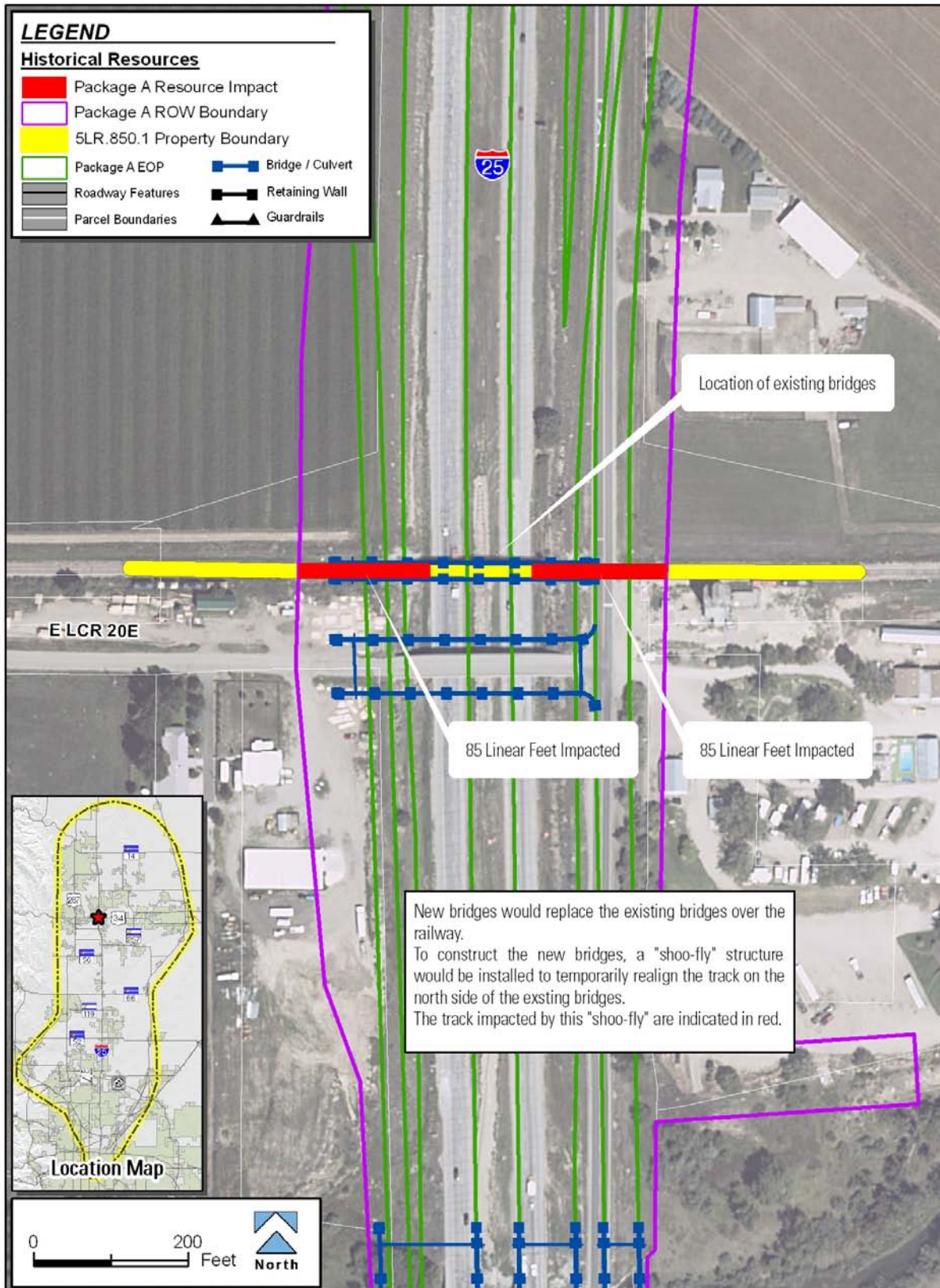
1 **Figure 3.15-40 5LR.850, 5WL.841, 5BL.514 (Great Western Railway) – Segments**  
2 **Intersecting Project APE**



3

1 Figure 3.15-41 5LR.850.1 (Great Western Railway) – Package A

2



1 In order to replace the existing bridge with a longer structure, it would be necessary to  
2 construct a temporary “shoo-fly” structure, whereby a section of railroad would be temporarily  
3 re-aligned to cross I-25 on the north side of the existing railroad bridge. This measure would  
4 prevent a disruption in rail service, while the old bridge is demolished and the new bridge  
5 structure is being constructed in its place. A new rail crossing would be constructed north of  
6 the existing bridge. The shoo-fly structure would require altering the existing historic railroad  
7 grade at either end of the existing bridge (approximately 85 feet at each end to provide a  
8 smooth transition to the new alignment), curving to form the bypass of the existing bridge.  
9 Once the latter step has been completed, the shoo-fly would be removed, and rail traffic would  
10 be restored to its historic east-west alignment.

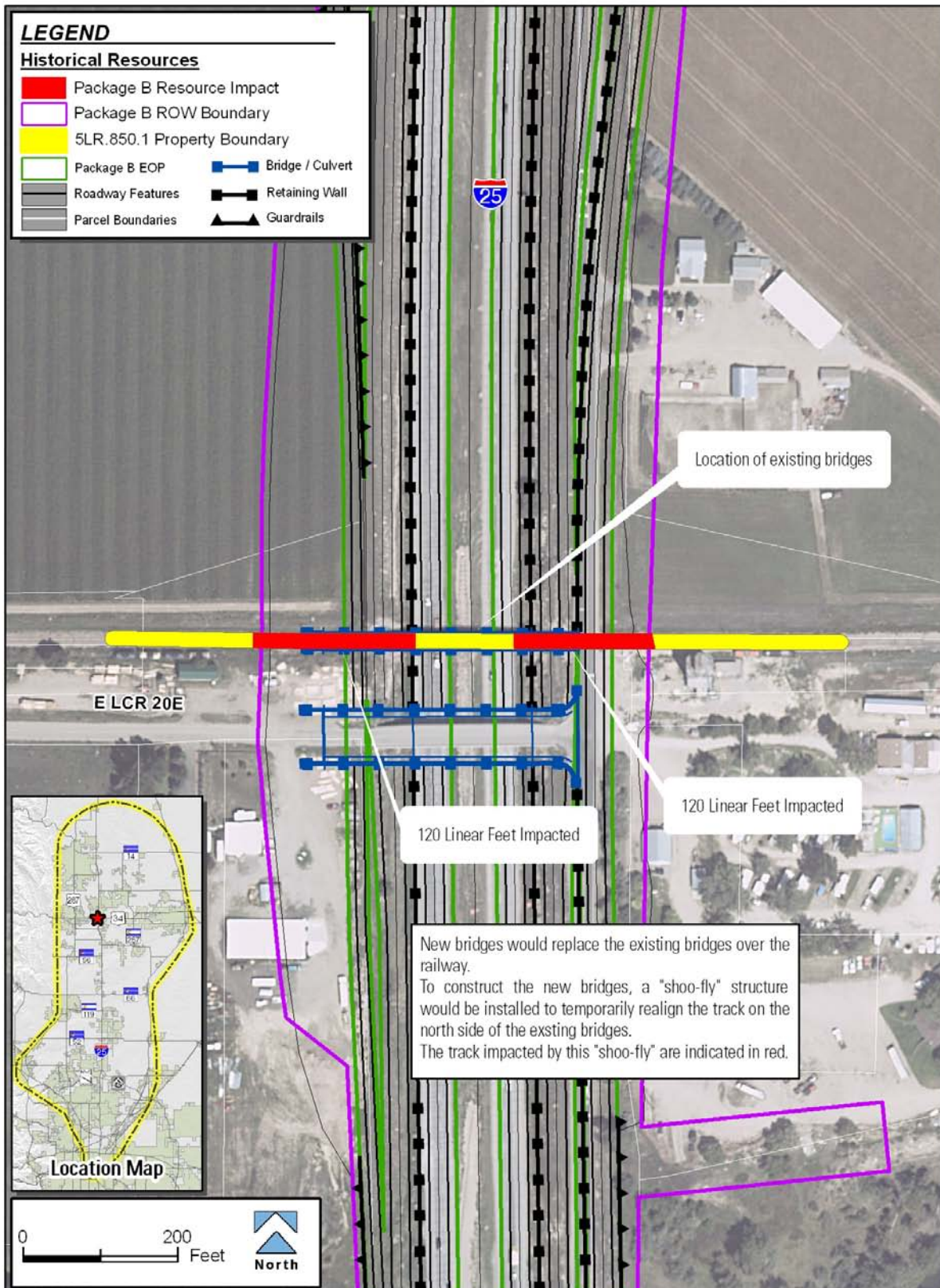
11 The bridge replacement under Package A would place an additional 85 feet of historic railroad  
12 line on a bridge structure similar to its current configuration. By placing that portion of the  
13 railroad already modified by the original construction of I-25 on a bridge, only 85 feet of the  
14 railroad retaining good physical integrity would be altered by placement on a longer bridge  
15 structure. The new bridge would be similar in terms of elevation and the location where it  
16 spans I-25, and thus would not introduce a new and different visual element into the railroad’s  
17 setting. This change would not substantially diminish or alter characteristics that render it  
18 eligible for the NRHP.

19 **Impacts to segment 5LR.850.1 –Package B:** Presently, this historic railroad segment spans  
20 I-25 via a (non-historic) 210-foot-long steel girder railroad bridge. Package B involves widening  
21 of I-25 through this area, changing it from the existing configuration of two northbound and two  
22 southbound traffic lanes, to a new section containing a total of eight lanes: two managed lanes  
23 plus two general purpose lanes in each direction. To accommodate this much wider section, it  
24 would be necessary to replace the existing bridge carrying the GWR over I-25 with a 330-foot-  
25 long bridge structure. The new bridge would be 120 feet longer than the existing structure  
26 spanning I-25. The proposed new bridge would be either of post-tensioned concrete or steel  
27 plate girder construction, and would remain at the same vertical height as the existing railroad  
28 bridge.

29 Similar to Package A, construction of a shoo-fly would be needed during construction (see  
30 **Figure 3.15-42**).

31 The bridge replacement under Package B would place an additional 120 feet of historic  
32 railroad line on a bridge structure relatively similar to its current configuration. By placing that  
33 portion of the railroad already modified by the original construction of I-25 on a bridge, only  
34 120 feet of the railroad retaining good physical integrity would be altered by placement on a  
35 longer bridge structure. The new bridge would be similar in terms of elevation and the location  
36 where it spans I-25, and thus would not introduce a new and different visual element into the  
37 railroad’s setting. This change would not substantially diminish or alter characteristics that  
38 render it eligible for the NRHP

1 Figure 3.15-42 5LR.850.1 (Great Western Railway) – Package B



2  
3



1 **Impacts to segment 5LR.850.1 – Preferred Alternative:** Presently, this historic railroad  
2 segment spans I-25 via a non-historic 210-foot-long steel girder railroad bridge. The Preferred  
3 Alternative involves the widening of I-25 through this area, changing it from the existing  
4 configuration of two northbound and two southbound traffic lanes, to a new section containing  
5 three general purpose lanes and one TEL in each direction or a total of eight traffic lanes. To  
6 accommodate this wider section, it would be necessary to replace the existing bridge carrying  
7 the GWR over I-25 with a 295-foot-long bridge structure. The new bridge would be 85 feet  
8 longer than the existing structure spanning I-25. The proposed new bridge would be either of  
9 post-tensioned concrete or steel plate girder construction, and would remain at the same  
10 vertical height as the existing railroad bridge (see **Figure 3.15-43**).

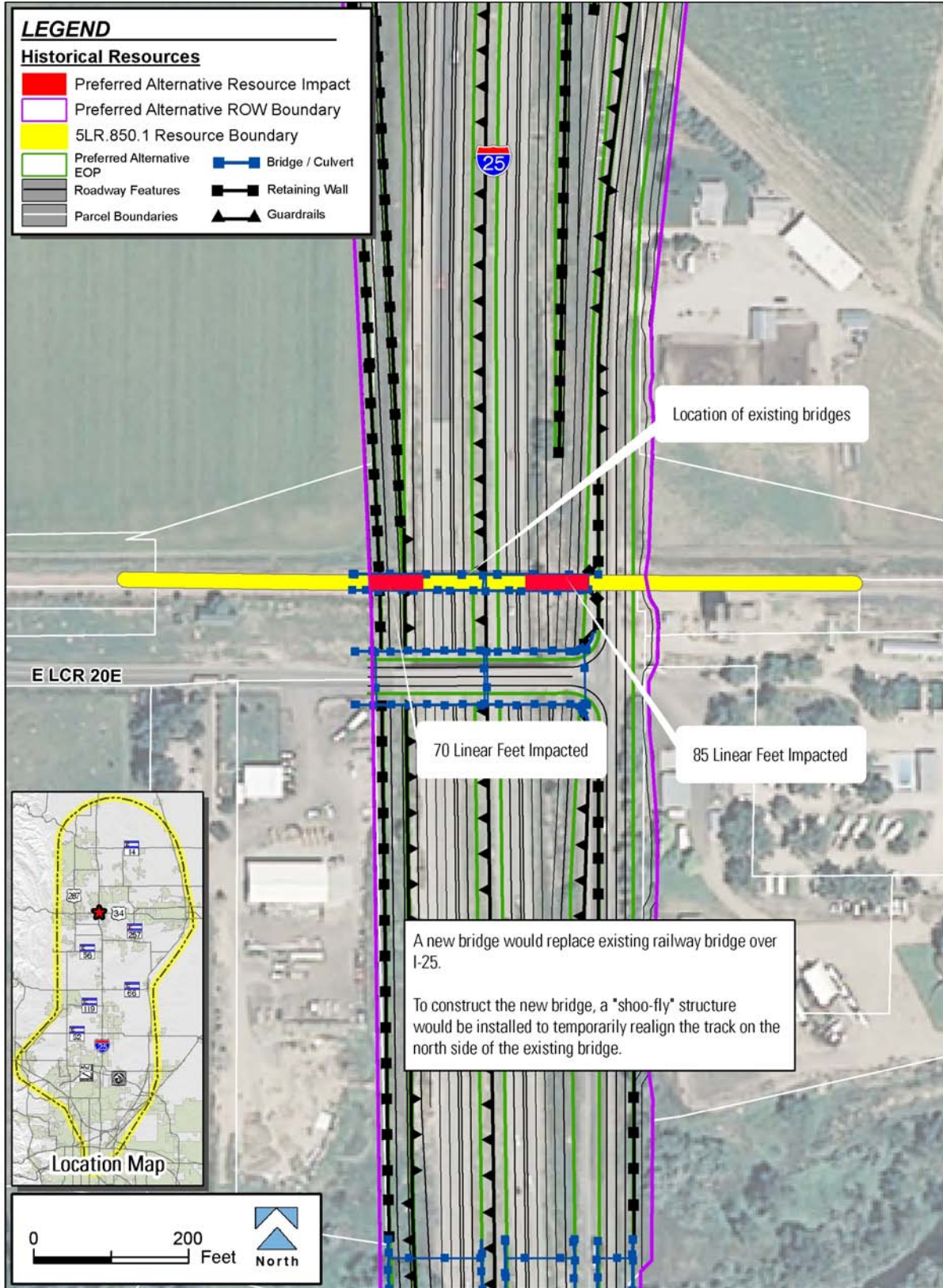
11 To replace the existing bridge with a longer structure, it would be necessary to construct a  
12 temporary “shoo-fly” structure, whereby a section of railroad would be temporarily re-aligned to  
13 cross I-25 on the north side of the existing railroad bridge. This measure would prevent a  
14 disruption in rail service, while the old bridge is demolished and the new bridge structure is  
15 being constructed in its place. A new rail crossing would be constructed north of the existing  
16 bridge. The shoo-fly structure would require altering the existing historic railroad grade at  
17 either end of the existing bridge (approximately 70 feet on the west end and 85 feet at the east  
18 end to provide a smooth transition to the new alignment), curving to form the bypass of the  
19 existing bridge. Once the latter step has been completed, the shoo-fly would be removed, and  
20 rail traffic would be restored to its historic east-west alignment.

21 The bridge replacement under the Preferred Alternative would place an additional 85 feet of  
22 historic railroad line on a bridge structure similar to its current configuration. By placing that  
23 portion of the railroad already modified by the original construction of I-25 on a bridge, only 85  
24 feet of the railroad retaining good physical integrity would be altered by placement on a longer  
25 bridge structure. The new bridge would be similar in terms of elevation and the location where  
26 it spans I-25, and thus would not introduce a new and different visual element into the  
27 railroad’s setting. This change would not substantially diminish or alter characteristics that  
28 render it eligible for the NRHP.

29 **Impacts to segment 5WL.841.11 – Package A:** At this location, the existing I-25 northbound  
30 and southbound roadways span this historic railroad with twin 82-foot-long, 38-foot-wide  
31 concrete slab bridges. Neither bridge is historic. Under Package A, the northbound and  
32 southbound roadways would be re-aligned to the west of their current alignments, and would  
33 be wider, containing three general purpose lanes in each direction. The new northbound and  
34 southbound roadways would span the historic railway on new, approximately 24-foot-wider,  
35 79-foot-long pre-stressed concrete girder-type bridge structures. The old bridges would be  
36 demolished. The new bridge piers would be placed outside the limits of this historic railway, so  
37 that no direct impacts would occur. The existing east frontage road would be slightly widened  
38 but would remain in its existing alignment, and the existing at-grade railroad crossing would be  
39 maintained (see **Figure 3.15-44**).

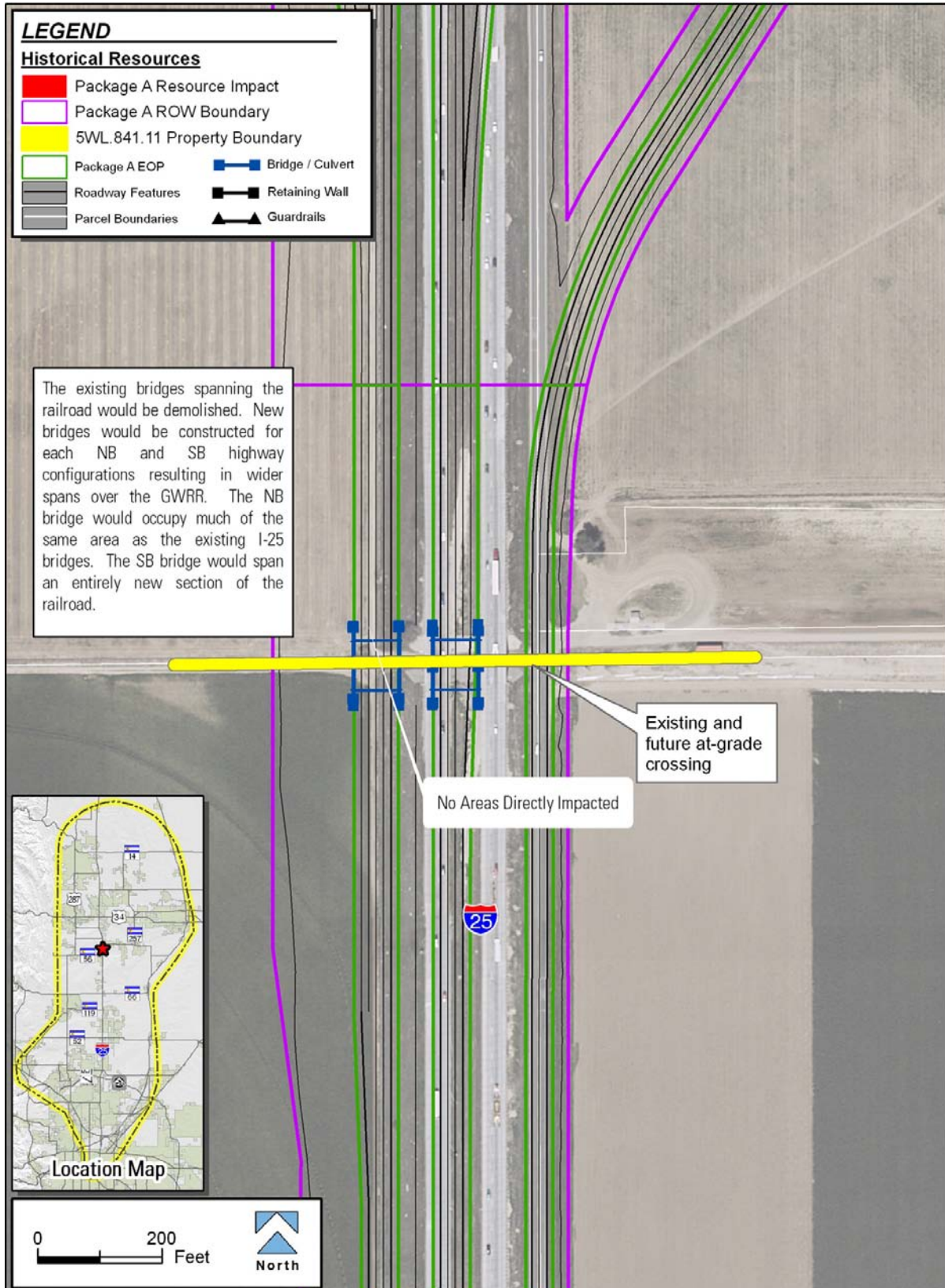
40 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
41 terrain shape and elevation would partially restore the historic landscape of the railway setting.  
42 A temporary construction easement would be necessary to demolish and re-grade slopes  
43 within the railroad right-of-way. The new bridges would place a portion of the railway  
44 underneath the bridge deck. This increased 48 feet of overhead cover due to a wider bridge  
45 decks would be an indirect effect to the historic setting of the railway; however, would not  
46 substantially diminish or alter the function, alignment, character, or other attributes that render  
47 the railway NRHP-eligible.

1 Figure 3.15-43 5LR.850.1 (Great Western Railway) – Preferred Alternative



2

1 Figure 3.15-44 5WL.841.11 (Great Western Railroad) – Package A



2  
3

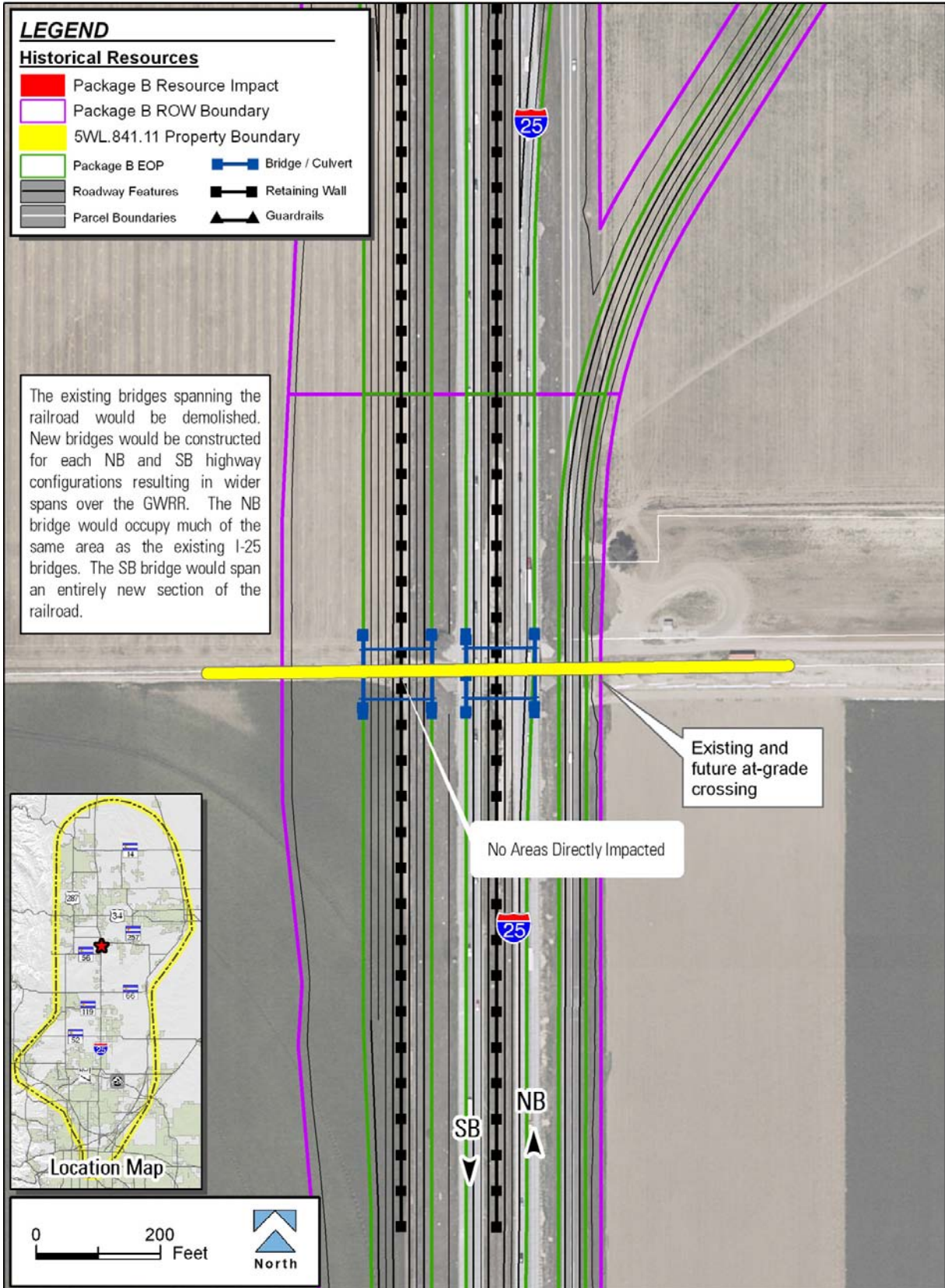
1 **Impacts to segment 5WL.841.11 – Package B:** Under Package B, this section of I-25 is in  
2 the transition zone between a highway section containing two general purpose lanes with one  
3 buffer-separated managed lane in each direction, to a wider section containing two general  
4 purpose lanes plus two barrier-separated managed lanes in each direction (see  
5 **Figure 3.15-45**). The northbound and southbound roadways would be re-aligned to the west of  
6 their current alignments, and these new roadways would span the historic railway on two new,  
7 approximately 70-foot-wider, 79-foot-long pre-stressed concrete girder-type bridge structures  
8 similar to those proposed for Package A. The bridge piers would be placed outside the limits of  
9 this historic railway, and no direct impacts would occur. The old bridges would be demolished.  
10 The existing east frontage road would be slightly widened but would remain in its existing  
11 alignment, and the existing at-grade railroad crossing would be maintained (see  
12 **Figure 3.15-45**).

13 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
14 terrain shape and elevation would partially restore the historic landscape of the railway setting.  
15 However, the new bridges would place an additional 140-foot-long portion of the railway  
16 underneath the new bridge decks. This increased overhead cover due to wider bridge deck  
17 would be an indirect effect to the historic setting of the railway, however; this change is not  
18 expected to substantially diminish or alter the function, alignment, character, or other attributes  
19 that render the railway NRHP-eligible.

20 **Impacts to segment 5WL.841.11 – Preferred Alternative:** At this location, the existing I-25  
21 northbound and southbound roadways span this historic railroad with twin 82-foot-long,  
22 338-foot-wide concrete slab bridges. Neither bridge is historic. Under the Preferred Alternative,  
23 the northbound and southbound roadways would be re-aligned to the west of their current  
24 alignments, and would be wider, containing three general purpose lanes and a TEL in each  
25 direction. The new northbound and southbound roadways would span the historic railway on  
26 new, approximately 24-foot-wider, 79-foot-long pre-stressed concrete girder-type bridge  
27 structures. The old bridges would be demolished. The new bridge piers would be placed  
28 outside the limits of this historic railway, so that no direct impacts would occur. The existing  
29 east frontage road would be slightly widened but would remain in its existing alignment, and  
30 the existing at-grade railroad crossing would be maintained (see **Figure 3.15-46**).

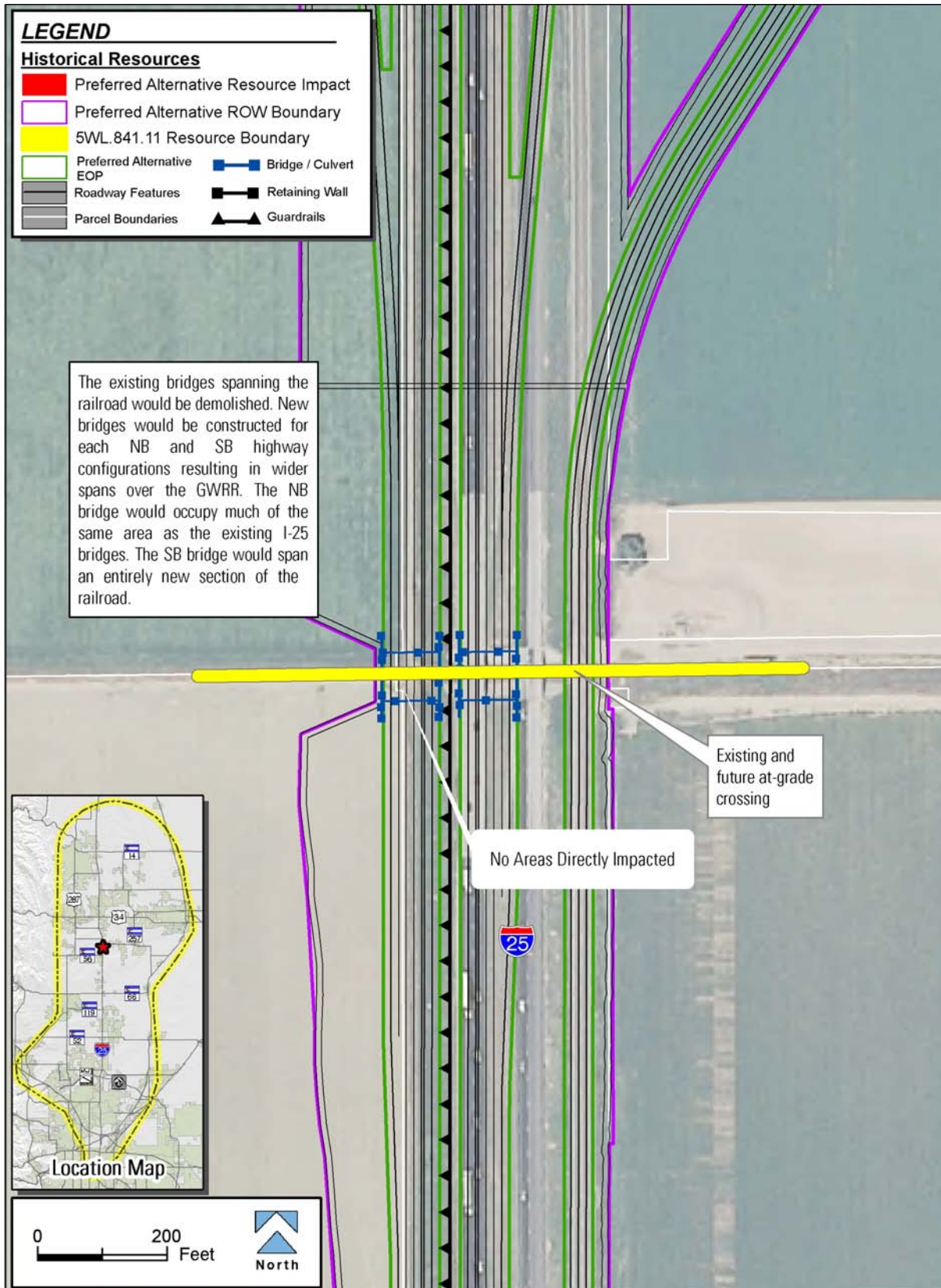
31 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
32 terrain shape and elevation would partially restore the historic landscape of the railway setting.  
33 A temporary construction easement would be necessary to demolish and re-grade slopes  
34 within the railroad right-of-way. The new bridges would place a portion of the railway  
35 underneath the bridge deck. This increased 48 feet of overhead cover due to a wider bridge  
36 decks would be an indirect effect to the historic setting of the railway; however, would not  
37 substantially diminish or alter the function, alignment, character, or other attributes that render  
38 the railway NRHP-eligible.

1 Figure 3.15-45 5WL.841.11 (Great Western Railway) – Package B



2  
3

1 Figure 3.15-46 5WL.841.11 (Great Western Railway) – Preferred Alternative



2

1 **Impacts to segment 5LR.850.5 – Package A:** This rail line would remain in its current,  
2 historic alignment, and would continue to tie into the railroad mainline corridor west of  
3 Cleveland Avenue that would contain the proposed commuter rail line. No direct impacts to the  
4 historic railroad ballast, bed and track would occur. The installation of an adjacent set of tracks  
5 supporting the new commuter rail line would indirectly affect the historic setting of the historic  
6 railroad line, but would not to be expected to substantially harm the function, alignment,  
7 character, or other attributes that render the railroad NRHP-eligible.

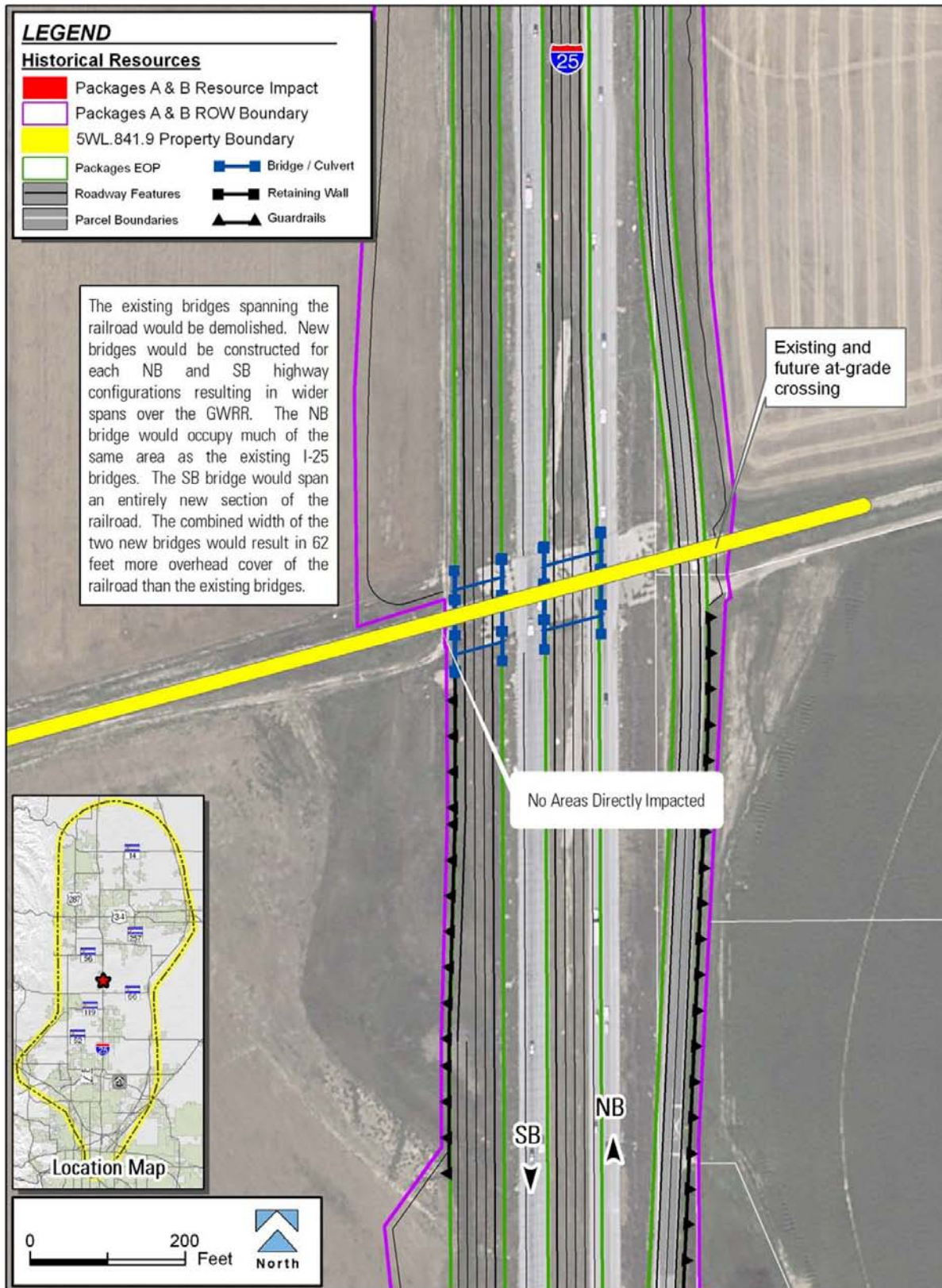
8 **Impacts to segment 5LR.850.5 – Preferred Alternative:** This rail line would remain in its  
9 current, historic alignment, and would continue to tie into the railroad mainline corridor west of  
10 Cleveland Avenue that would contain the proposed commuter rail line. No direct impacts to the  
11 historic railroad ballast, bed and track would occur. The installation of an adjacent passing  
12 track would indirectly affect the historic setting of the historic railroad line, but would not be  
13 expected to substantially harm the function, alignment, character, or other attributes that  
14 render the railroad NRHP-eligible.

15 **Impacts 5WL.841.9 – Package A:** Under Package A, the I-25 northbound and southbound  
16 roadways would be re-aligned approximately 50 to 60 feet west of their current alignments,  
17 and would be widened from two through lanes to three general purpose lanes in each  
18 direction. The new northbound and southbound roadways would span the historic railway on  
19 new 82-foot-long, 63 to 75-foot-wide, pre-stressed concrete girder-type bridge structures. The  
20 old (but non-historic) 103-foot-long, 38-foot-wide, rolled I-beam bridges, which spanned the  
21 railroad, would be demolished. The new bridge piers would be placed outside the limits of this  
22 historic railway, so that no direct impacts would occur. The two new bridges would be a  
23 combined 62 feet wider than the existing bridges, thus the railroad would have 62 feet more  
24 overhead cover. The existing east frontage road would be slightly widened but would remain in  
25 its existing alignment, and the existing at-grade railroad crossing would be maintained (see  
26 **Figure 3.15-47**).

27 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
28 terrain shape and elevation would partially restore the historic landscape of the railway's  
29 setting. A temporary construction easement would be necessary to demolish and re-grade  
30 slopes within the railroad right-of-way. The new bridges would place a portion of the railway  
31 underneath the highway bridges. This increased overhead cover due to the new bridge decks  
32 would indirectly affect the historic setting of the railway, however; this change is not expected  
33 to substantially diminish or alter the function, alignment, character, or other attributes that  
34 render the railway NRHP-eligible.

35 **Impacts to segment 5WL.841.9 – Package B:** Under Package B, the northbound and  
36 southbound roadways would be re-aligned approximately 50 to 60 feet west of their current  
37 alignments, and would be wider, containing two general purpose lanes plus one buffer-  
38 separated managed lane in each direction. The new northbound and southbound roadway  
39 alignments would span the historic railway on new 82-foot-long pre-stressed concrete girder-  
40 type bridge structures. The two new bridges would be a combined 62 feet wider than the  
41 existing bridges, thus the railroads would have 62 feet more overhead cover. The bridge piers  
42 would be placed outside the limits of this historic railway, and no direct impacts would occur.  
43 The existing east frontage road would be slightly widened but would remain in its existing  
44 alignment, and the existing at-grade railroad crossing would be maintained (see  
45 **Figure 3.15-47**).

1 Figure 3.15-47 5WL.841.9 (Great Western Railway) – Packages A and B



2



1 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
2 terrain shape and elevation would partially restore the historic landscape of the railway's  
3 setting. A temporary construction easement would be necessary to demolish and re-grade  
4 slopes within the railroad right-of-way. The new bridges would place an additional portion of  
5 the railway underneath the bridge deck. This increased overhead cover due to the wider bridge  
6 deck would be an indirect effect to the historic setting of the railway, however; this change is  
7 not expected to substantially diminish or alter the function, alignment, character, or other  
8 attributes that render the railway NRHP-eligible.

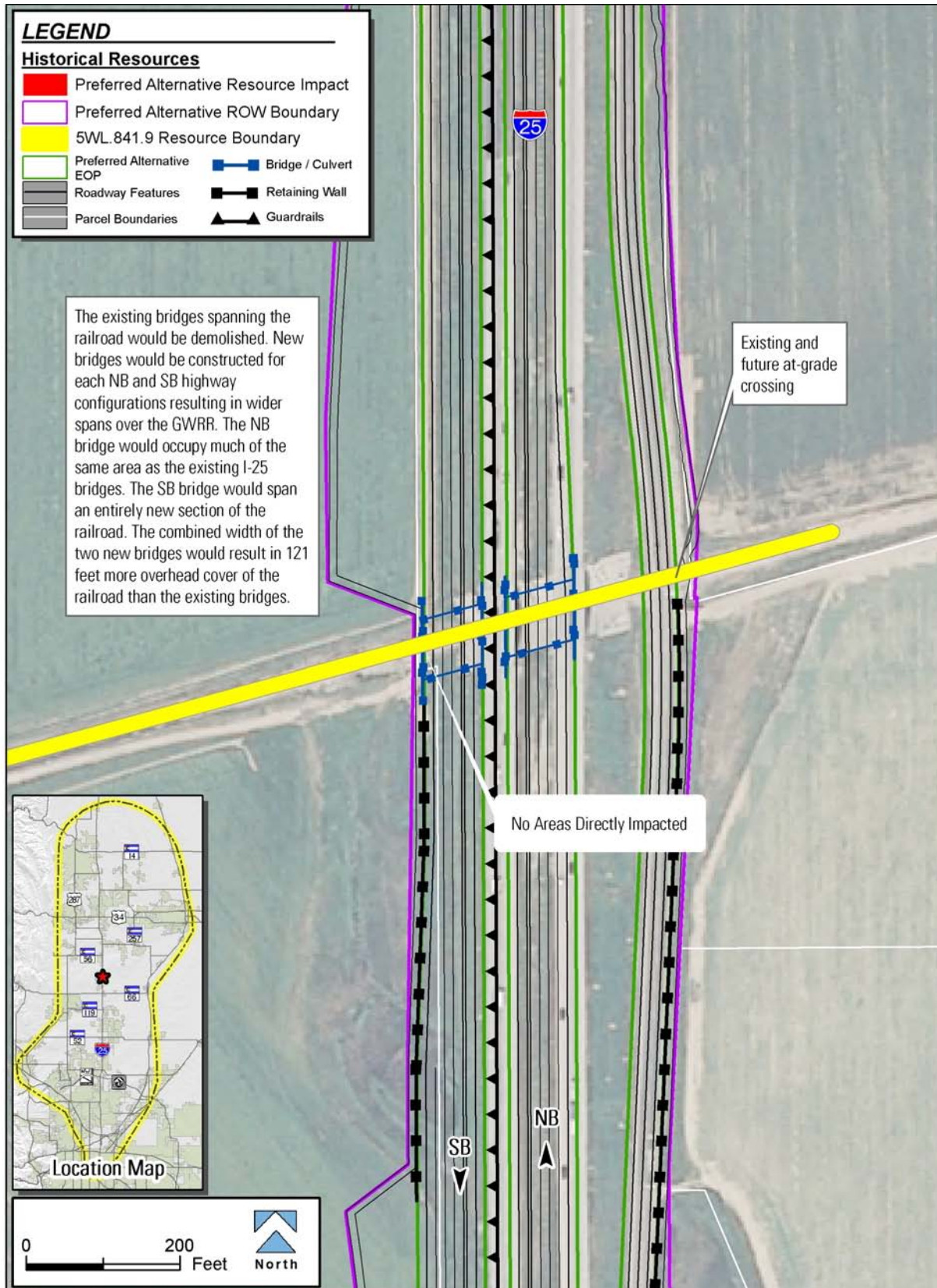
9 **Impacts 5WL.841.9 – Preferred Alternative:** Under the Preferred Alternative, the I-25  
10 northbound and southbound roadways would be re-aligned approximately 50 to 60 feet west of  
11 their current alignments, and would be widened from two through lanes to three general  
12 purpose lanes and TEL in each direction. The new northbound and southbound roadways  
13 would span the historic railway on new 82-foot-long, 63 to 75-foot-wide, pre-stressed concrete  
14 girder-type bridge structures. The old (but non-historic) 103-foot-long, 38-foot-wide, rolled  
15 I-beam bridges, which spanned the railroad, would be demolished. The new bridge piers would  
16 be placed outside the limits of this historic railway, so no direct impacts would occur. The two  
17 new bridges would be a combined 62 feet wider than the existing bridges, thus the railroad  
18 would have 62 feet more overhead cover. The existing east frontage road would be slightly  
19 widened but would remain in its existing alignment, and the existing at-grade railroad crossing  
20 would be maintained (see **Figure 3.15-48**).

21 Removal of the old bridges and returning most of the associated fill slopes to a more natural  
22 terrain shape and elevation would partially restore the historic landscape of the railway's  
23 setting. A temporary construction easement would be necessary to demolish and re-grade  
24 slopes within the railroad right-of-way. The new bridges would place a portion of the railway  
25 underneath the highway bridges. This increased overhead cover due to the new bridge decks  
26 would indirectly affect the historic setting of the railway, however; this change is not expected  
27 to substantially diminish or alter the function, alignment, character, or other attributes that  
28 render the railway NRHP-eligible.

29 **Impacts to segment 5BL.514.1 – Package A:** The commuter rail improvements in this area  
30 call for the addition of a dedicated commuter rail track parallel to this existing freight railroad  
31 track. In all cases the existing rail line would remain in its current, historic alignment. No direct  
32 impacts to the historic railroad ballast, bed and track would occur. The installation of an  
33 adjacent set of tracks supporting the new commuter rail line would indirectly affect the historic  
34 setting of the historic railroad line, but would not expect to substantially harm the function,  
35 alignment, character, or attributes that render the railroad NRHP-eligible.

36 **Impacts to segment 5BL.514.1 – Preferred Alternative:** The commuter rail improvements  
37 associated with the Preferred Alternative in this area call for the commuter rail to run on the  
38 existing freight railroad track. The existing rail line would remain in its current, historic  
39 alignment. No direct impacts to the historic railroad ballast, bed and track would occur. The  
40 addition of the commuter rail would indirectly affect the historic setting of the historic railroad  
41 line, but would not expect to substantially harm the function, alignment, character, or attributes  
42 that render the railroad NRHP-eligible.

1 Figure 3.15-48 5WL.841.9 (Great Western Railway) – Preferred Alternative



2

1 **Summary Effect Determination:**

2 **Package A:** 170 feet of railroad track at segment 5LR.850.1 would be directly impacted as a  
3 result of new bridge construction. Temporary construction impacts and indirect effects due to  
4 expanded overhead coverage by the highway bridges would affect two segments of the  
5 railroad (5WL.841.11 and 5WL.841.9). New commuter rail track along the transportation  
6 corridor would contribute to modern, but compatible rail infrastructure elements to the historic  
7 setting at two localities (5BL.514.1 and 5LR.850.5). The impacts to these segments associated  
8 with the proposed Package A transportation improvements would not substantially diminish the  
9 integrity of the resource or the characteristics that render the property eligible for the NRHP.  
10 FHWA, FTA and CDOT therefore have determined that the Package A transit improvements  
11 would result in no adverse effect with respect to the entire GWR in Larimer, Weld and Boulder  
12 counties (5LR.850, 5WL.841, and 5BL.514).

13 **Package B:** 240 feet of railroad track at segment 5LR.850.1 would be directly impacted as a  
14 result of new bridge construction. Temporary construction impacts and indirect effects due to  
15 expanded overhead coverage by the highway bridges would affect two segments of the  
16 railroad (5WL.841.11 and 5WL.841.9). The impacts to these segments associated with the  
17 proposed Package B transportation improvements would not substantially diminish the  
18 integrity of the resource or the characteristics that render the property eligible for the NRHP.  
19 FHWA, FTA and CDOT have determined that Package B would result in no adverse effect with  
20 respect to the entire GWR in Larimer and Weld counties (5LR.850 and 5WL.841).

21 **Preferred Alternative:** 155 feet of railroad track at segment 5LR.850.1 would be directly  
22 impacted as a result of new bridge construction. Temporary construction impacts and indirect  
23 effects due to expanded overhead coverage by the highway bridges would affect two  
24 segments of the railroad (5WL.841.11 and 5WL.841.9). Commuter rail traffic, along the  
25 transportation corridor would contribute to modern, but compatible rail elements to the historic  
26 setting at two localities (5BL.514.1 and 5LR.850.5). The impacts to these segments associated  
27 with the Preferred Alternative would not substantially diminish the integrity of the resource or  
28 the characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT  
29 therefore have determined that the Preferred Alternative would result in no adverse effect with  
30 respect to the entire GWR in Larimer, Weld and Boulder counties (5LR.850, 5WL.841, and  
31 5BL.514).

32 **5LR.11408 (Zimmerman Grain Elevator)**

33 Resource Description: The Zimmerman Grain Elevator is located on the east side of I-25  
34 adjacent to the GWR (5LR.850), and was built in 1917. The bolted steel panel elevator  
35 structure is an intact example of a specialized agricultural building that was important to  
36 dryland farming in Larimer and Weld counties in the early 20th century. It is one of several  
37 similar steel panel grain elevators built along the railroads of the Front Range during the early  
38 20th century.

39 **Eligibility Determination:** Based on its important association with Larimer County agriculture  
40 and as a well-preserved example of a pre-fabricated early twentieth grain elevator, this  
41 property is eligible for the NRHP under Criteria A and C.

42 **Effect Determination – Package A:** I-25 is depressed in an underpass beneath the GWR to  
43 the west of the historic grain elevator. Under Package A, I-25 in this area would be  
44 substantially widened to accommodate three general purpose lanes plus one auxiliary lane in  
45 each direction. The existing east frontage road would be realigned and widened approximately  
46 21 feet to the east. A retaining wall and guardrail would be installed along the west edge of this

1 frontage road, to protect the road and traffic from the steep slope of the highway cut. No right-  
2 of-way encroachment or other direct impacts to the parcel containing the historic grain elevator  
3 would occur under Package A, although the distance between the building and the east edge  
4 of pavement of the northbound I-25 roadway (in the underpass cut) would be reduced from  
5 approximately 223 feet to approximately 170 feet. Although I-25 would be wider and closer to  
6 the historic grain elevator, it sits depressed below the elevation of the grain elevator, and the  
7 historic agricultural setting has already been compromised to some degree by the original  
8 construction of I-25 adjacent to the property in the 1960s (see **Figure 3.15-49**).

9 The improvements associated with Package A would not substantially diminish the historical  
10 and architectural characteristics which render the property eligible. FHWA, FTA and CDOT  
11 have determined that Package A would result in no adverse effect to the Zimmerman Grain  
12 Elevator.

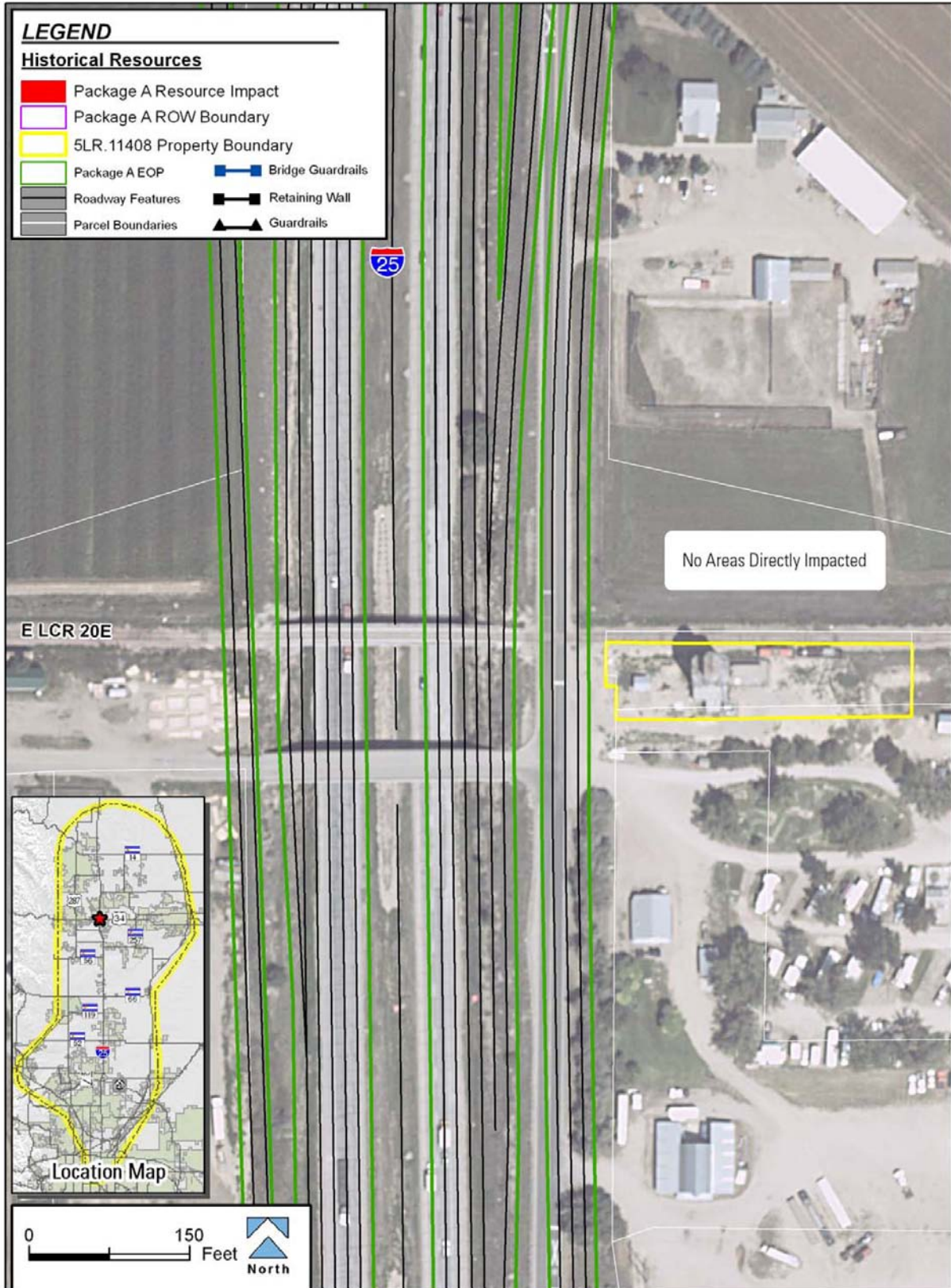
13 **Effect Determination – Package B:** Under Package B, I-25 in this vicinity would be  
14 substantially widened to accommodate two general purpose lanes plus two barrier-separated  
15 managed lanes in each direction. The existing east frontage road would be realigned and  
16 widened approximately 21 feet to the east. No right-of-way encroachment or other direct  
17 impact to the parcel containing the historic grain elevator would occur under Package B,  
18 although the distance between the building and the east edge of pavement of the northbound  
19 I-25 roadway would be reduced from approximately 223 feet to approximately 143 feet (see  
20 **Figure 3.15-50**). Although I-25 would be larger and closer to the historic grain elevator, the  
21 setting has already been compromised to some degree by the original construction of I-25  
22 adjacent to the property in the 1960s.

23 The improvements associated with Package B would not substantially diminish the  
24 architectural characteristics which render the property NRHP-eligible. FHWA, FTA and CDOT  
25 therefore have determined that Package B would result in no adverse effect to the Zimmerman  
26 Grain Elevator.

27 **Effect Determination – Preferred Alternative:** I-25 is depressed in an underpass beneath  
28 the GWR to the west of the historic grain elevator. Under the Preferred Alternative, I-25 in this  
29 area would be substantially widened to accommodate three general purpose lanes plus one  
30 TEL in each direction. The existing east frontage road would be realigned and widened  
31 approximately 21 feet to the east. A retaining wall and guardrail would be installed along the  
32 west edge of this frontage road, to protect the road and traffic from the steep slope of the  
33 highway cut. Direct impacts to the parcel containing the historic grain elevator would occur as  
34 a result of the wider footprint and associated fill slopes on the east side of the frontage road. A  
35 total of 0.03 acre of land would be incorporated into the transportation infrastructure under the  
36 Preferred Alternative. There would be no impacts to any structures including the historic grain  
37 elevators within the property boundary, although the distance between the building and the  
38 east edge of pavement of the northbound I-25 roadway (in the underpass cut) would be  
39 reduced from approximately 223 feet to approximately 170 feet. Although I-25 would be wider  
40 and closer to the historic grain elevator, it sits depressed below the elevation of the grain  
41 elevator, and the historic agricultural setting has already been compromised to some degree  
42 by the original construction of I-25 adjacent to the property in the 1960s (see **Figure 3.15-51**).

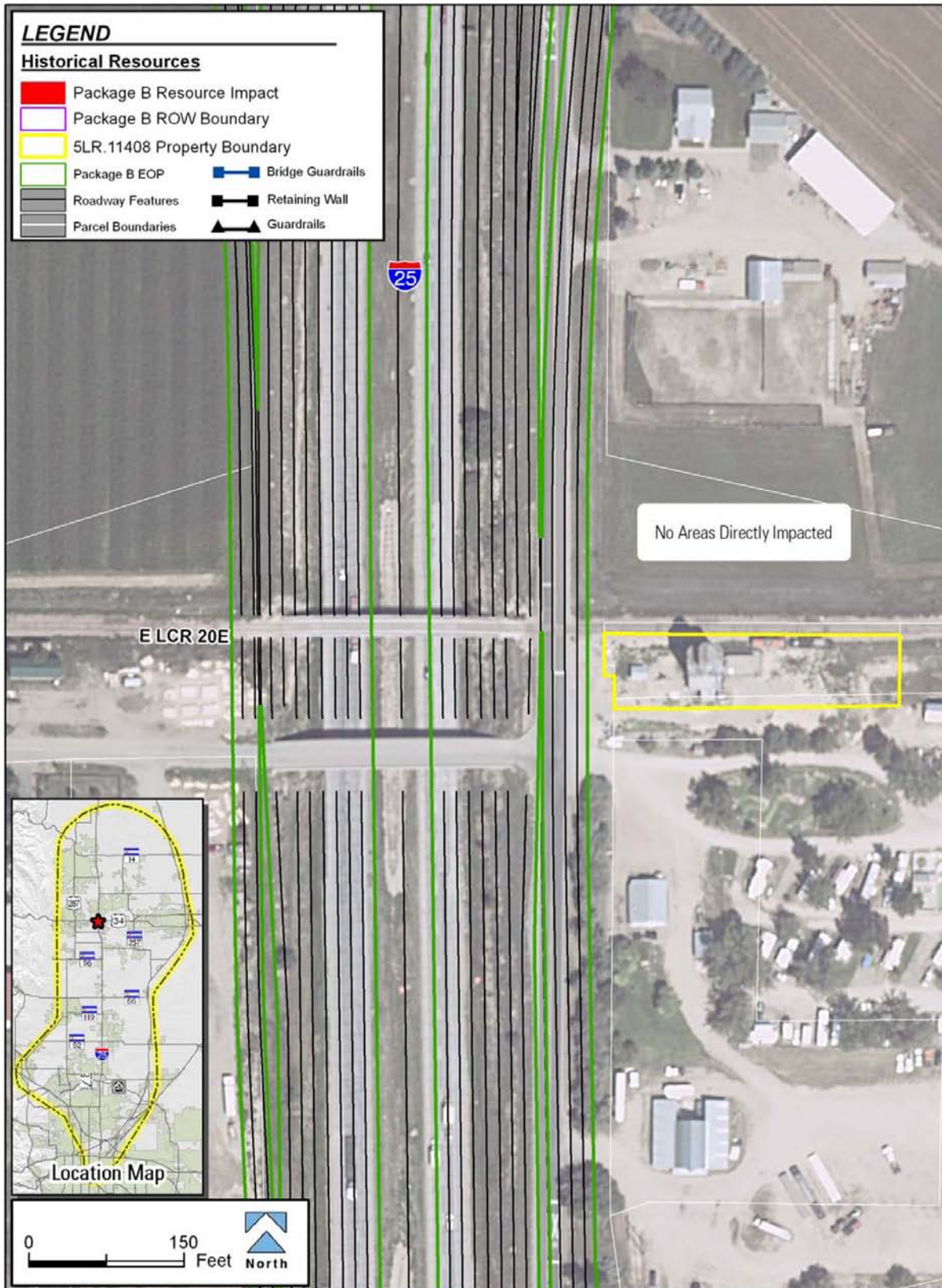
43 The improvements associated with the Preferred Alternative would not substantially diminish  
44 the historical and architectural characteristics which render the property eligible. FHWA, FTA  
45 and CDOT have determined that the Preferred Alternative would result in no adverse effect to  
46 the Zimmerman Grain Elevator.

1 Figure 3.15-49 5LR.11408 (Zimmerman Grain Elevator) – Package A



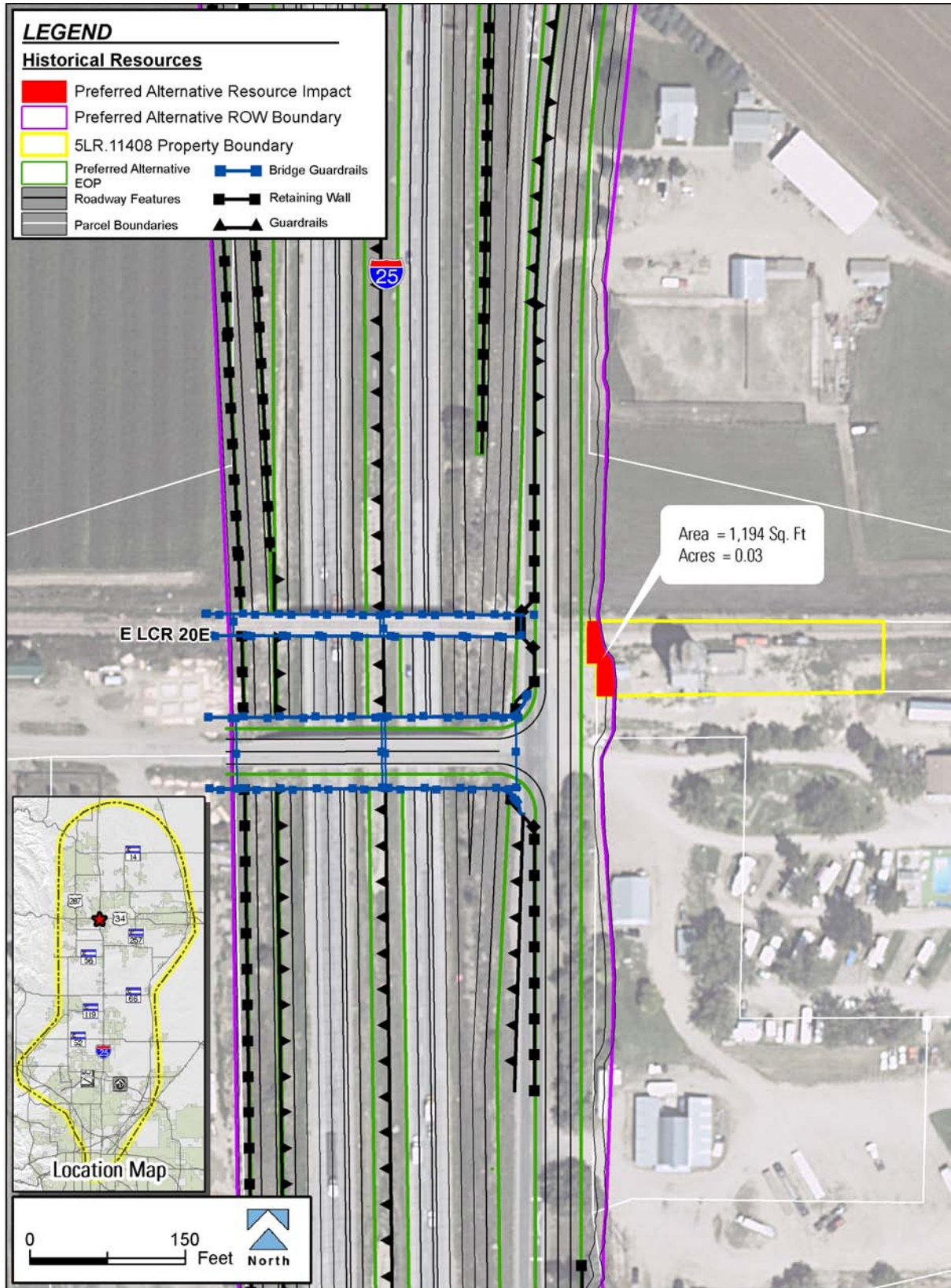
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1 Figure 3.15-50 5LR.11408 (Zimmerman Grain Elevator) – Package B



2

1 Figure 3.15-51 5LR.11408 (Zimmerman Grain Elevator) – Preferred Alternative



2

1 **5LR.11382 (Hatch Farm)**

2 **Resource Description:** The Hatch  
3 Farm is located at 640 Southeast  
4 Frontage Road in Larimer County on the  
5 east side of I-25, slightly more than one  
6 mile south of US 34, southeast of  
7 Loveland. An examination of historical  
8 maps and directories shows that the land  
9 where this barn is situated in Section 15  
10 of Township 5N, Range 68W was  
11 originally a 160-acre parcel owned by  
12 T.R. Norcross in 1915 and 1940. It was  
13 owned by E.A. & Katherine Gooch in  
14 1956 and 1959 and by Katherine Gooch in 1968. According to the Larimer County Assessor's  
15 card file, it was owned by Moffat & Sons around 1974. This property includes a historic  
16 balloon-framed barn, constructed circa 1920. The barn is surrounded by farmland.



Hatch Barn

17 The current owner of the property, Mr. James R. Hatch, was contacted for additional  
18 information. He has owned the property for about 30 years. He indicated that the barn that is  
19 on the site had been built in approximately 1904 on the Frank farm which is located east of  
20 I-25 on US 34. The barn was moved to this site in 1968. The original part of the barn is the  
21 center part below the hay loft. The wings of the barn were added on in 1968 after it was moved  
22 to this property. From the time of its move to this property, it has always been used as storage  
23 space. It has not been associated with agricultural uses since its move to this property.

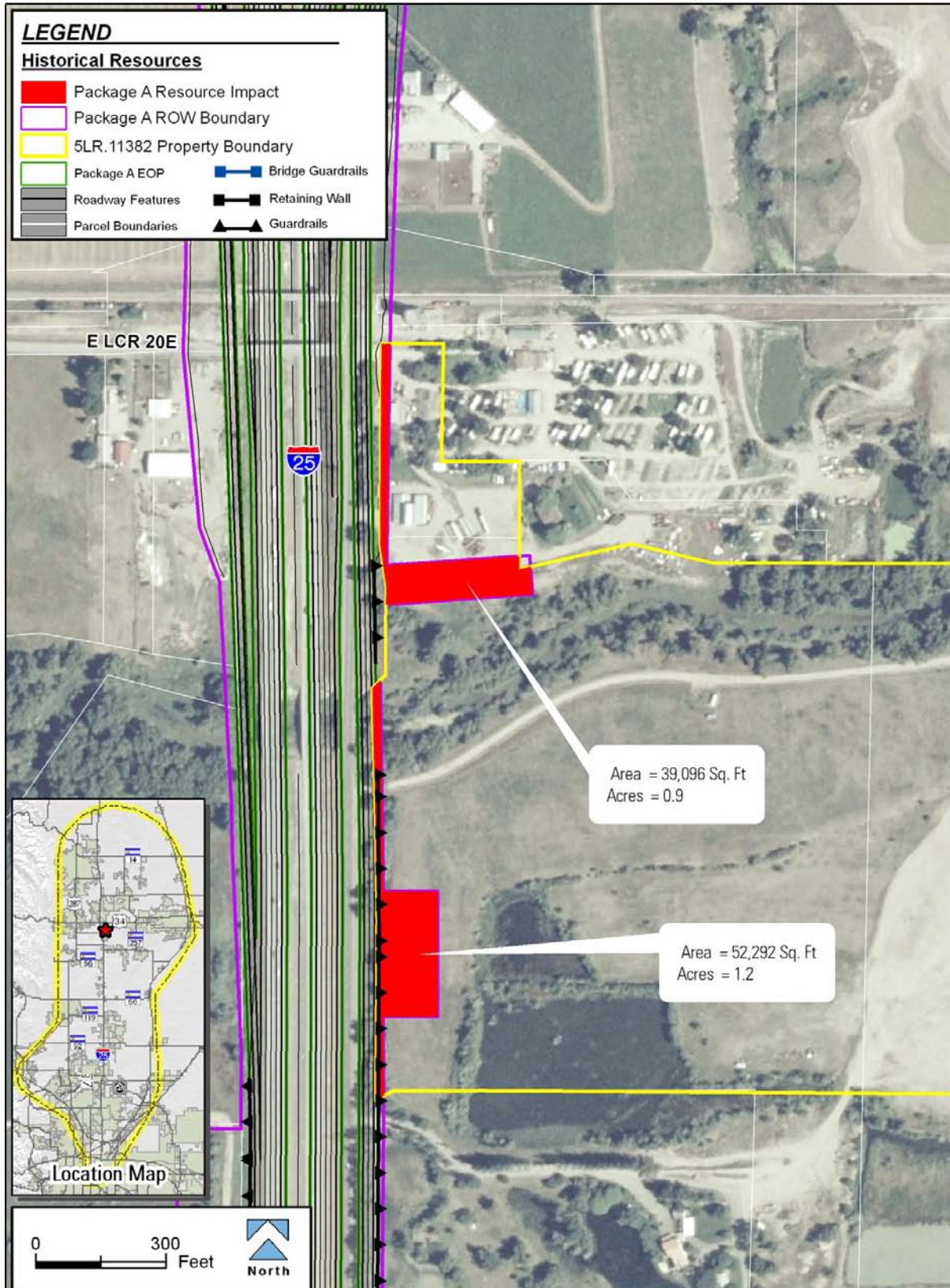
24 **Eligibility Determination:** The significance of the Hatch Farm is attributed to the architecture  
25 of the barn. The Hatch barn retains very good architectural integrity, is an excellent example of  
26 a specialized type and construction method of agricultural architecture, and was determined to  
27 be officially eligible for the NRHP on August 9, 2007 under Criterion C.

28 **Effect Determination – Package A:** Under Package A, the existing I-25 template in this  
29 vicinity would be changed from the existing two general purpose lanes in each direction, to a  
30 wider footprint containing three general purpose lanes plus one auxiliary lane in each direction.  
31 The existing east frontage road would be shifted to the east of its present alignment. In  
32 conjunction with these transportation improvements, the Package A design calls for the  
33 construction of two water quality ponds on the east side of I-25, extending into this historic  
34 property. Ponds in this area were placed to avoid wetlands and Section 4(f) protected parkland  
35 along the Big Thompson River. The northernmost water quality pond would extend nearly  
36 300 feet into the historic property, and would occupy an area approximately 0.9 acre in size.  
37 The southernmost pond would extend approximately 104 feet into the historic property, and  
38 would occupy an area approximately 1.2 acres in size. Together, these ponds would impact  
39 approximately 2.1 acres of land within the site boundary, or approximately two percent of the  
40 area of the 106.78-acre historic farm property (see **Figure 3.15-52**).

41 The planned ROW allows for a 10-foot-wide, continuous maintenance easement along the  
42 retaining walls and southern basin, which can be accessed from the unpaved county road. The  
43 northern pond is accessible from both a 10-foot-wide easement along the toe slope and  
44 existing farm driveways.



1 Figure 3.15-52 5LR.11382 (Hatch Farm) – Package A



2

1 The proposed water quality ponds would be visually unobtrusive. The historic barn would not  
2 be directly or indirectly affected by development of these water quality ponds, and the  
3 transportation-related improvements associated with Package A would not diminish or alter  
4 architectural characteristics that render the property eligible for the NRHP. Please see the  
5 Effect Determination discussion under the Preferred Alternative for information regarding the  
6 projects effects to character-defining features associated with the farm. FHWA, FTA and  
7 CDOT therefore have determined that Package A would result in *no adverse effect* to the  
8 resource.

9 **Effect Determination – Package B:** Under Package B, the existing I-25 template in this  
10 vicinity would be altered to include two general purpose lanes and two barrier-separated  
11 managed lanes in each direction. The existing east frontage road would be shifted to the east  
12 of its present alignment. In conjunction with these transportation improvements, the  
13 Package B design specifies the construction of two water quality ponds on the east side of  
14 I-25, extending into this historic site. The northernmost water quality pond would extend  
15 nearly 286 feet into the historic property, and would occupy an area approximately 0.87 acre  
16 in size. The southernmost pond would extend approximately 91 feet into the historic property,  
17 and would occupy an area approximately 1.33 acres in size. Together, these ponds would  
18 impact approximately 2.2 acres of land within the site boundary, or approximately two percent  
19 of the area of the 106.78-acre historic farm property (see **Figure 3.15-53**).

20 The planned ROW allows for a 10-foot-wide, continuous maintenance easement along the  
21 retaining walls and southern basin, which can be accessed from the unpaved county road. The  
22 northern pond is accessible from both a 10-foot-wide easement along the toe slope and  
23 existing farm driveways.

24 The historic barn on the Hatch Farm property would not be directly or indirectly affected by  
25 development of these water quality ponds, and the transportation-related improvements  
26 associated with Package B would not diminish or alter architectural characteristics that render  
27 the property eligible for the NRHP. Please see the Effect Determination discussion under the  
28 Preferred Alternative for information regarding the projects effects to character-defining  
29 features associated with the farm. FHWA, FTA and CDOT have determined that Package B  
30 would result in *no adverse effect* to the resource.

31 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, the existing  
32 I-25 template in this vicinity would be changed from the existing two general purpose lanes in  
33 each direction, to a wider footprint containing three general purpose lanes plus one TEL in  
34 each direction. The existing east frontage road would be shifted to the east of its present  
35 alignment. In conjunction with these transportation improvements, the Preferred Alternative  
36 design calls for the construction of a water quality pond on the east side of I-25, extending into  
37 this historic property. The pond was placed in this area to avoid wetlands and Section 4(f)  
38 protected parkland along the Big Thompson River. The pond would extend approximately  
39 104 feet into the historic property, and would occupy an area approximately 1.18 acres in size.  
40 Together, this pond and the widened footprint of the transportation infrastructure would impact  
41 approximately 1.33 acres of land within the site boundary, or approximately one percent of the  
42 area of the 106.78-acre historic farm property (see **Figure 3.15-54**).

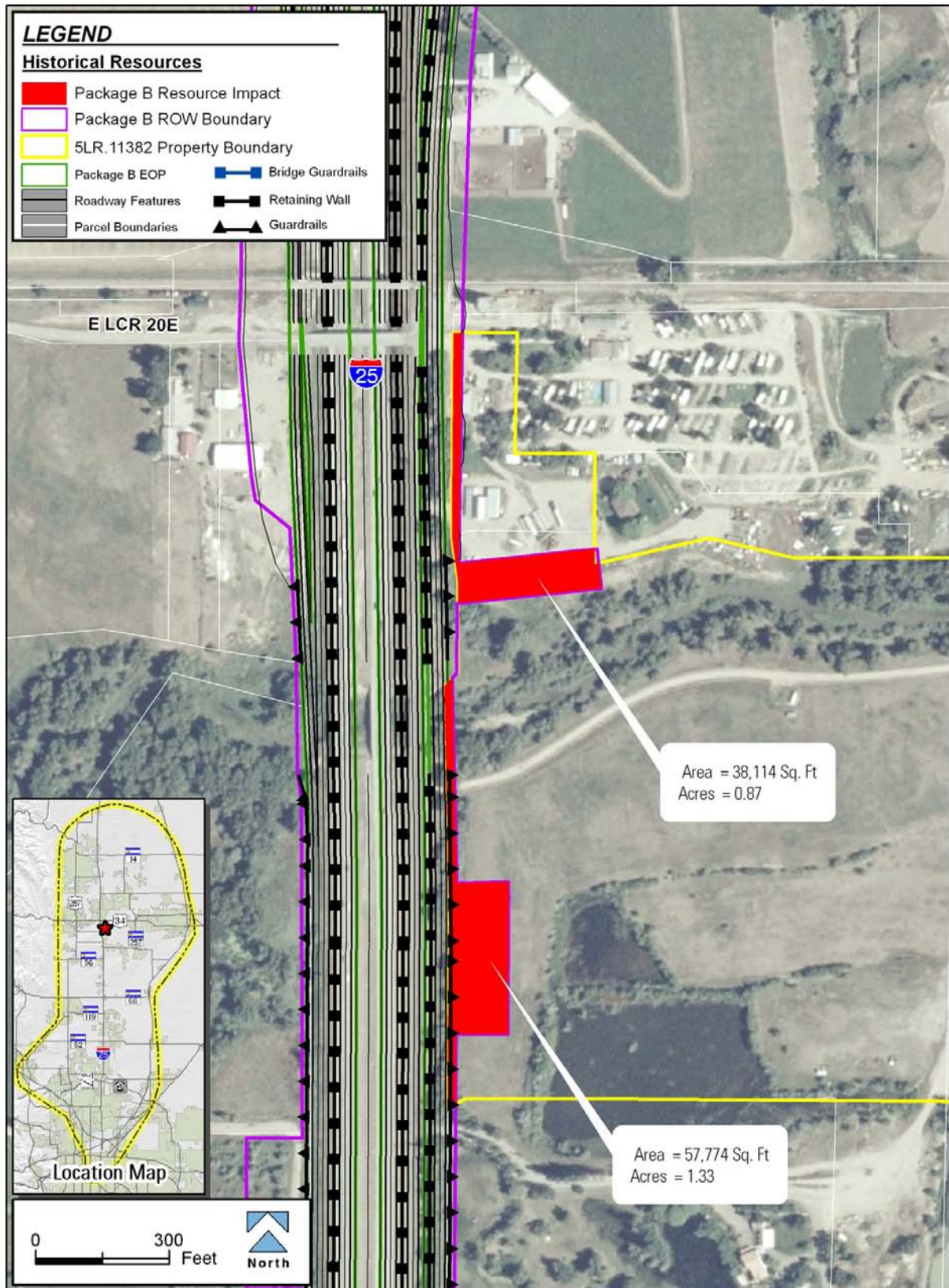
43 The planned ROW allows for a 10-foot-wide, continuous maintenance easement along the  
44 retaining walls and southern basin, which can be accessed from the unpaved county road.

1 Very little of the original 160-acre farm is still used for agriculture. There are no farm buildings  
2 on the Hatch property except for the barn and that no longer has any association with  
3 agriculture. Mr. Hatch said that his 8-acre parcel has not been used as cropland since the  
4 1940s. It was used as a wrecking yard in the 1950s. The Big Thompson River flows through  
5 the northern portion of the original farm. The property has been divided and sold and is now in  
6 a variety of uses. There is a campground on 12 acres in the northwest part of the original farm.  
7 Mr. Hatch has 8 acres with about 4 acres used for his trucking business and the other 4 acres  
8 used for residential uses. The land to the south of the Big Thompson River has been a large  
9 gravel pit for the last 15 years. The only remaining agricultural use of the land is for pasture on  
10 the land surrounding the gravel pit operation. The barn is eligible under Criterion C, but the site  
11 has lost integrity in terms of setting as there are no other buildings on site that were  
12 associated with agricultural uses.

13 The proposed water quality pond would be visually unobtrusive. The historic barn would not be  
14 directly or indirectly affected by development of these water quality ponds, and the  
15 transportation-related improvements associated with the Preferred Alternative would not  
16 diminish or alter architectural characteristics that render the property eligible for the NRHP.  
17 The loss of the land from the site is not adverse because the setting and feeling of this  
18 property have been changed with the development of the campground, the service garage, the  
19 trucking business and the gradual reduction of agricultural use of the property. The  
20 approximate 1.33 acres of land that would be taken for this project is mainly vacant land with  
21 some portions of the land being used as an area to park trucks for the trucking business. The  
22 barn was not used for agricultural purposes on this property. The association for this property  
23 is now commercial rather than agricultural. The material, workmanship, location and design of  
24 the barn would retain integrity and not be affected by a loss of land from the site. Due to the  
25 prior loss of the agricultural setting of this property and the fact that there would be no direct  
26 impact to the barn which is the reason for the property's eligibility, FHWA, FTA and CDOT  
27 have determined that the Preferred Alternative would result in no adverse effect to the  
28 resource.

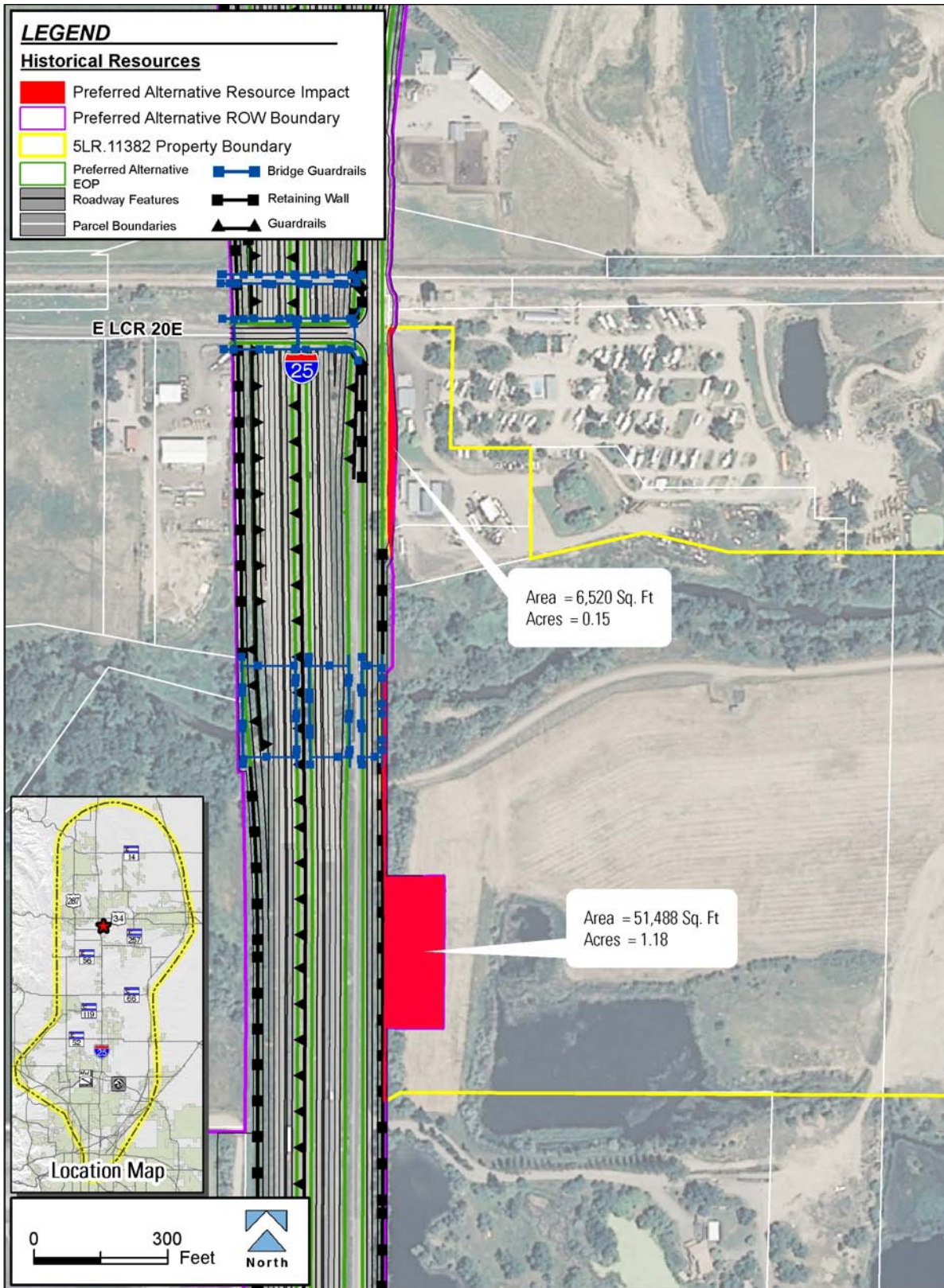
29

1 Figure 3.15-53 5LR.11382 (Hatch Farm) – Package B



2

1 Figure 3.15-54 5LR.11382 (Hatch Farm) – Preferred Alternative



2

1 **5LR.8927.1 (Hillsboro Ditch)**

2 **Resource Description:** This segment of the historic Hillsboro Ditch crosses I-25 just south of  
3 the I-25 and US 34 interchange. The irrigation ditch was constructed as one of the first  
4 cooperatively owned ditches in the area. The entire ditch (5LR.8927) is approximately  
5 19.25 miles long. The documented segment in the project APE (5LR.8927.1) is 2,065 feet  
6 (0.4 mile) long. The ditch channel is approximately 20 feet wide. Sparse riparian growth covers  
7 both banks of the ditch in many areas. The surrounding area is primarily rural in character.

8 **Eligibility Determination:** The entire Hillsboro Ditch is eligible for listing on the NRHP under  
9 Criterion A because of its important association with the development of water rights and  
10 agriculture in Larimer County. Outside the I-25 right-of-way, this segment of the functioning  
11 ditch appears to maintain its historic alignment and its association with the rural landscape  
12 through which it runs. The segment (5LR.8927.1) within the project APE retains sufficient  
13 integrity of location, setting, feeling, and use to support the eligibility of the entire linear  
14 resource.

15 **Effect Determination – Package A:** Under Package A, I-25 would be expanded to 8 lanes,  
16 containing three general purpose lanes plus one auxiliary lane in each direction. The Hillsboro  
17 Ditch is presently conveyed beneath I-25 inside a modern CBC. The box culvert would be  
18 replaced with a new, 135-foot-longer box culvert of the same cross section dimensions, 14 feet  
19 wide and 14 feet tall. That portion of the Hillsboro Ditch already inside the I-25 culvert has lost  
20 integrity. Widening of the I-25 southbound lanes, ramp and the associated slopes under  
21 Package A would require 90 feet of land west of the existing road slope edge. This requires  
22 enclosing 90 feet of open ditch on the east side of I-25 in a new culvert to allow for the  
23 expanded highway construction. Similar widening of the highway and fill slopes along the  
24 northbound lanes requires that 45 feet of open ditch be enclosed in a culvert on the east side  
25 of I-25. A total of approximately 135 feet of open ditch would be subject to direct impact from  
26 Package A transportation improvements (see **Figure 3.15-55**).

27 Construction of the concrete culverts would require temporary access to the historic property  
28 for equipment access, and would require a temporary easement. The ditch would likely be  
29 diverted during demolition of the old culvert and installation of the replacement culvert, but  
30 would remain operational and irrigation water would be protected from construction-related  
31 sedimentation. All disturbances caused by construction equipment or construction activities  
32 would be temporary in nature and affected areas would be restored to their original condition  
33 and appearance.

34 Placing additional short sections of open ditch in new culverts in proximity to the preexisting  
35 culverts would not substantially diminish the qualities that render this resource NRHP-eligible.  
36 The proposed modifications affect a very small portion of the entire 19.25-mile linear resource.  
37 FHWA, FTA and CDOT have determined that Package A would result in no adverse effect to  
38 the entire Hillsboro Ditch (5LR.8927).

39 **Effect Determination – Package B:** Package B specifies that the I-25 section would be  
40 improved to an eight-lane facility and would contain two general purpose lanes plus two  
41 barrier-separated managed lanes in each direction. Direct impacts to the Hillsboro Ditch  
42 associated from Package B are nearly identical in nature and extent to those associated with  
43 Package A (see **Figure 3.15-55**).

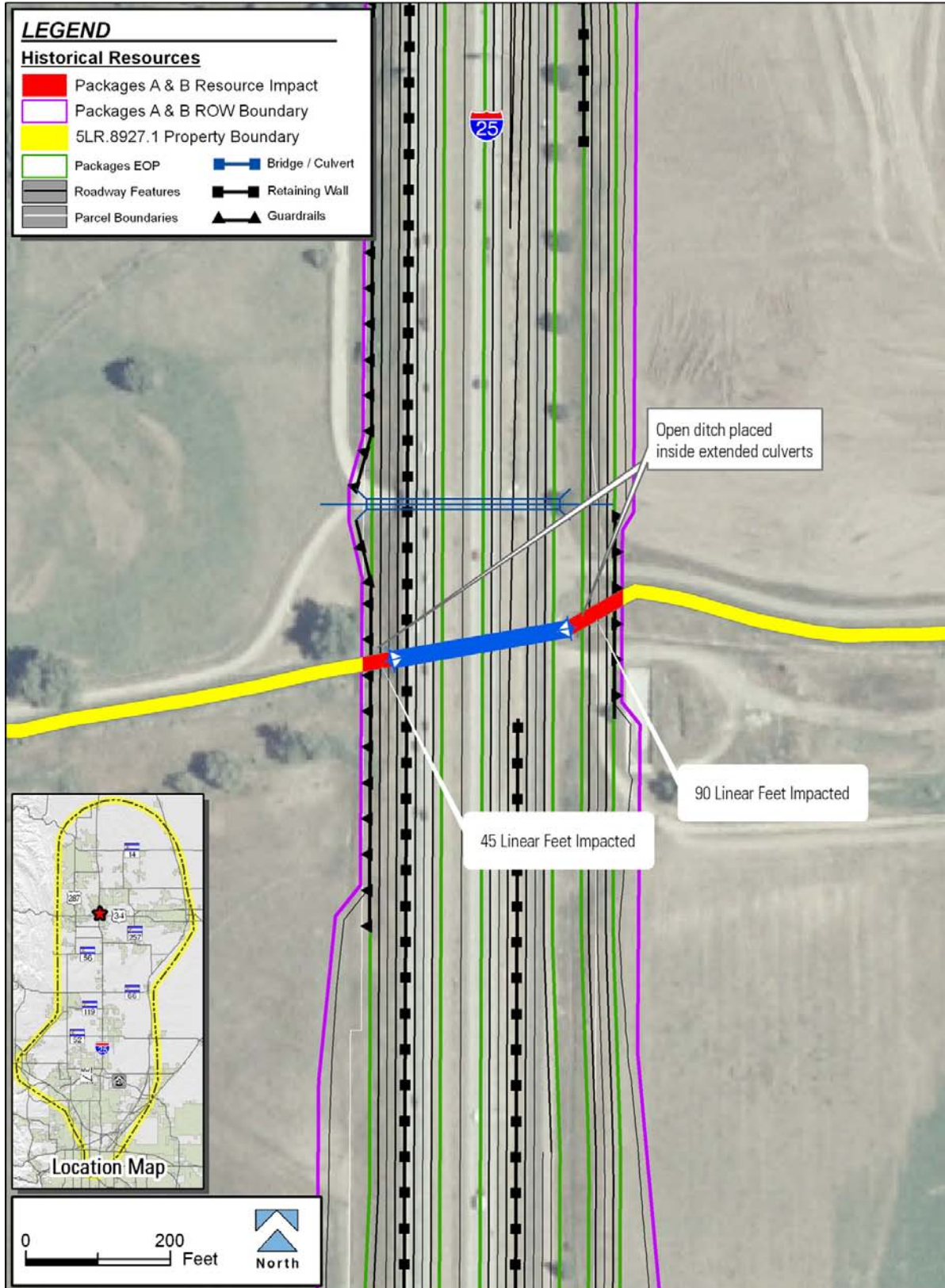
1 Placing additional short sections of open ditch in new culverts in proximity to the pre-existing  
2 culverts would not substantially diminish the qualities that render this resource NRHP-eligible.  
3 The proposed modifications affect a very small portion of the entire 19.25-mile linear resource.  
4 FHWA, FTA and CDOT have determined that Package B would result in no adverse effect to  
5 the entire Hillsboro Ditch (5LR.8927).

6 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, I-25 would  
7 be expanded to 8 lanes, containing three general purpose lanes plus one TEL in each  
8 direction. The Hillsboro Ditch is presently conveyed beneath I-25 inside a modern CBC. The  
9 box culvert would be replaced with a new, 55-foot-longer box culvert of the same cross section  
10 dimensions, 14 feet wide and 14 feet tall. That portion of the Hillsboro Ditch already inside the  
11 I-25 culvert has lost integrity. Widening of the I-25 southbound lanes, ramp and the associated  
12 slopes under the Preferred Alternative would require 90 feet of land west of the existing road  
13 slope edge. This requires that 55 feet of open ditch be enclosed in a culvert on the east side of  
14 I-25. A total of approximately 55 feet of open ditch would be subject to direct impact from the  
15 Preferred Alternative transportation improvements (see **Figure 3.15-56**).

16 Construction of the concrete culverts would require temporary access to the historic property  
17 for equipment access, and would require a temporary easement. The ditch would likely be  
18 diverted during demolition of the old culvert and installation of the replacement culvert, but  
19 would remain operational and irrigation water would be protected from construction-related  
20 sedimentation. All disturbances caused by construction equipment or construction activities  
21 would be temporary in nature and affected areas would be restored to their original condition  
22 and appearance.

23 Placing additional short sections of open ditch in new culverts in proximity to the pre-existing  
24 culverts would not substantially diminish the qualities that render this resource NRHP-eligible.  
25 The proposed modifications affect a very small portion of the entire 19.25-mile linear resource.  
26 FHWA, FTA and CDOT have determined that the Preferred Alternative would result in no  
27 adverse effect to the entire Hillsboro Ditch (5LR.8927).

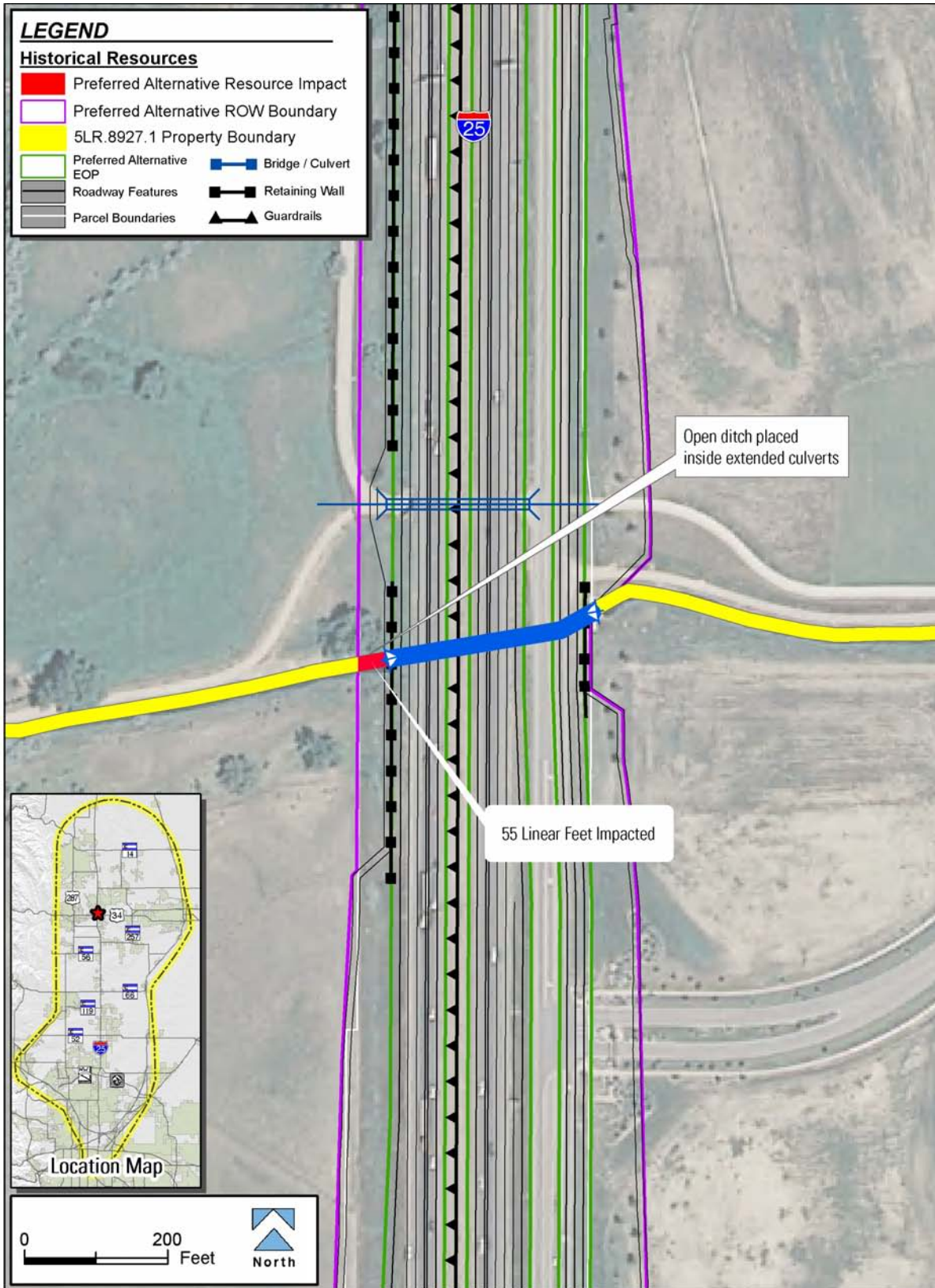
1 Figure 3.15-55 5LR.8927.1 (Hillsboro Ditch) – Packages A and B



2



1 Figure 3.15-56 5LR.8927.1 (Hillsboro Ditch) – Preferred Alternative



2

1 **5LR.11242 (Mountain View Farm)**

2 **Resource Description:** The Mountain View Farm is located at 5531 SH 402, at the northwest  
3 corner of I-25 and SH 402 several miles southeast of Loveland. The farm appears to date to  
4 the mid-1970s with lands being acquired from other landowners along SH 402 including  
5 Kenneth Wolfe, the Kelly's and Masts. The current farm boundaries came from at least two  
6 previous ownerships. Through the 1970s and 1980s lands were bought and sold by Mountain  
7 View Farms, Inc. as they established their land base, including a major addition to the land  
8 base in 1986 from Kenneth Wolfe. The current owners, Arlo and Barbara Johnston, have been  
9 involved in real estate speculation elsewhere in the Loveland area. The Johnstons do not live  
10 on the property; rather they rent the house and use the other buildings for their farming  
11 operations. The original farm located in this area (160 acres in SW ¼ of Section 22) was  
12 patented on June 1895 by William A. Bean under the Timber Culture Act. In the past, the farm  
13 has been used for growing of sugar beets, hay, grain and for dairy operations. In the 1950s  
14 and 1960s the farm was rented to Carl Rieckle. He grew barley, corn, sweet corn and raised  
15 cattle on the farm.

16 In 1915, this site was a 160-acre farm but it is currently 136 acres. Some of the land at the  
17 southeast corner of the farm was developed into the I-25 / SH 402 Interchange. The  
18 farmhouse, which was built in 1923, was moved onto this site after the construction of I-25 and  
19 then remodeled in 1964. There are five historic buildings on the site, six modern buildings and  
20 nine modern features. The historic buildings include the farmhouse, a milking parlor built in the  
21 1950s, a calving shed, a feedlot shed and another shed all dating to the 1930s.

22 **Eligibility Determination:** On July 24, 2006, the CDOT determined, and the SHPO  
23 concurred, that the Mountain View Farm was officially eligible for the NRHP under Criterion A  
24 for its association with 20th century farming. The integrity of the historic agricultural setting was  
25 compromised in the 1960s when I-25 was built adjacent to its eastern border. However, the  
26 land that is now owned and used by Mountain View Farms was not assembled until after the  
27 construction of I-25. The introduction of the interstate highway adjacent to the farm in the  
28 1960s also affected the feeling and association by the introduction of the highway as a modern  
29 non-agricultural element. Those impacts were evident when the property was determined  
30 eligible for the NRHP in 2006.

31 **Effect Determination – Package A:** This historic farm would experience direct impacts  
32 associated with proposed improvement of the I-25/SH 402 interchange. Package A would re-  
33 align the I-25 southbound off-ramp west of the existing off-ramp, and would require the  
34 acquisition of a 60 to 100-foot-wide strip of cultivated farmland at the east edge of the historic  
35 farm property to accommodate the proposed new off-ramp from southbound I-25 to SH 402.

36 Another direct impact would occur near the farmhouse as a result of widening along the north  
37 edge of SH 402 to add turn and through lanes at the off-ramp. The new width of roadway  
38 along SH 402 would convert a maximum of 100 feet of farm property at the intersection with  
39 the southbound off-ramp, tapering to a 20-foot-wide strip of new transportation right-of-way  
40 near the driveway to the farmhouse. The highway overpass and ramp intersections would be  
41 approximately 22 feet above the highway at the bridge similar to the existing interchange  
42 configuration. However, the Package A design necessitates extending the slope from the  
43 elevated overpass and ramp intersections westward to the existing grade of SH 402 much  
44 closer to the historic farm house than is the case with the existing interchange configuration.

1 A total area of 4.76 acres of land would be converted from open farmland to paved roadway  
2 and fill slopes within the historic farm boundary. This area amounts to approximately  
3 3.5 percent of the 136.22 acre farm. No historic buildings would be directly impacted by these  
4 transportation improvements (see **Figure 3.15-57**). However, the presence of the existing I-25  
5 highway ramps and interchange already introduce modern elements into this agricultural  
6 setting. Under Package A, the fill slopes and ramps are moved closer to the eastern edge of  
7 the farm, and would be slightly taller than the existing slopes, ramps and overpass. Another  
8 change would be construction of a proposed new park and ride parking lot on the south side of  
9 SH 402 near the farm.

10 Traffic noise generated by I-25 would decrease two decibels because the highway would be  
11 re-aligned to the east, away from the farmhouse. Although the new southbound off-ramp would  
12 be built on a new alignment closer and elevated relative to the farmhouse, noise from existing  
13 traffic and the closer ramp would not substantially alter the agricultural setting or diminish the  
14 architectural characteristics that render the property NRHP-eligible.

15 A temporary construction easement may be requested along the eastern edge of the property  
16 for to allow haul roads, construction access, and/or staging areas to facilitate roadway  
17 widening and slope building. No permanent impacts would be anticipated from this temporary  
18 construction activity on the farmland property, and no farm structures would be affected.  
19 Construction-related noise generated by construction equipment and trucks would be  
20 temporary in nature, but would not permanently affect the character of the farm setting. Thus,  
21 indirect effects caused by temporary construction activities are not expected to substantially  
22 diminish the function, character, or attributes that render the farm or farm buildings NRHP-  
23 eligible.

24 The proposed transportation improvements associated with Package A would not substantially  
25 diminish or alter the architectural or setting characteristics that render the property eligible for  
26 the NRHP. Please see the Effect Determination discussion under the Preferred Alternative for  
27 information regarding the projects effects to character-defining features associated with the  
28 farm. FHWA, FTA and CDOT have determined that Package A would result in no adverse  
29 effect to the resource.

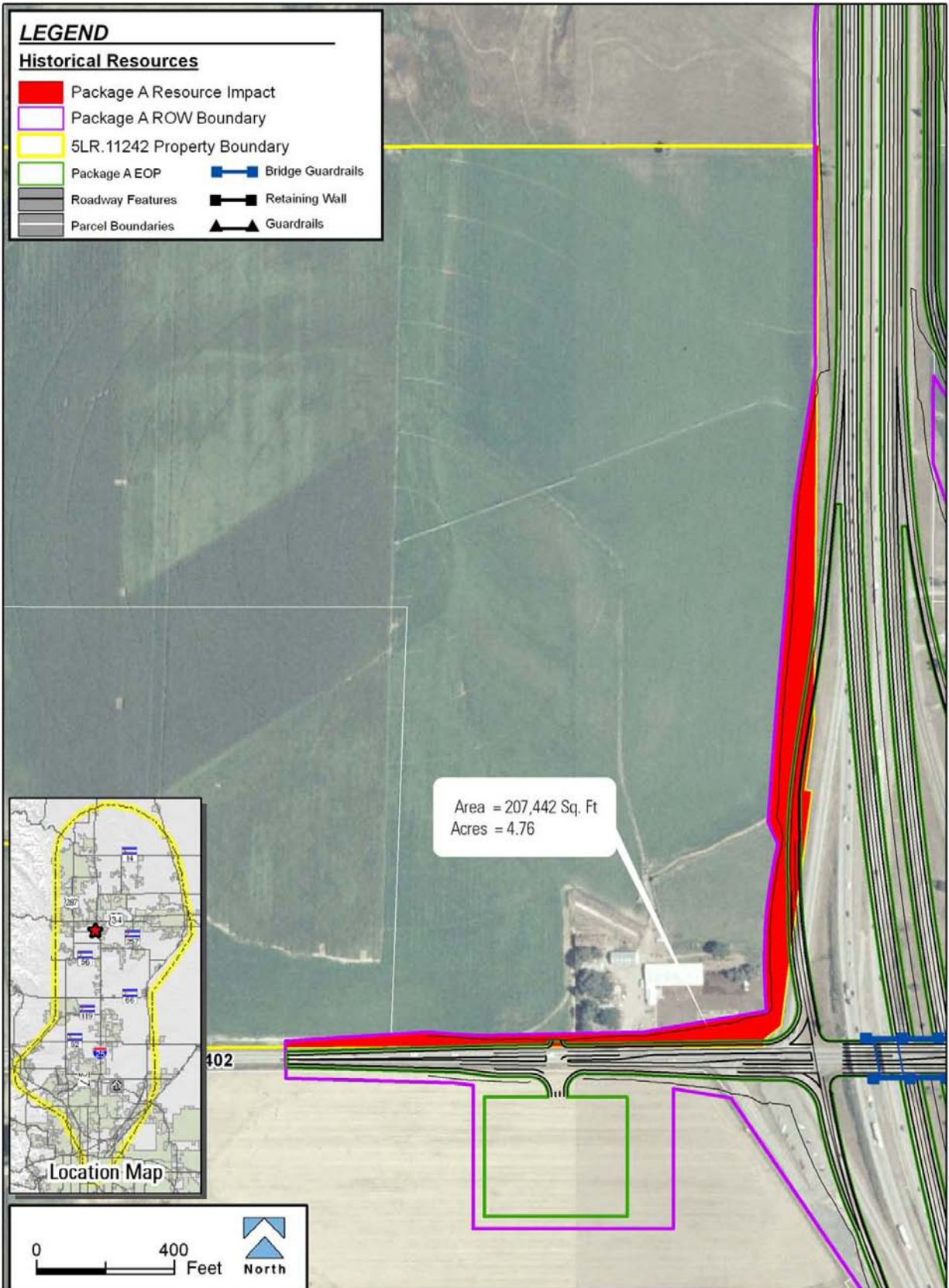
30 **Effect Determination – Package B:** Anticipated impacts to the property under Package B are  
31 similar in character and extent to those expected from Package A improvements. A total area  
32 of 5.28 acres of land may be subject to direct impact. This area amounts to approximately four  
33 percent of the 136.22-acre farm. No historic buildings would be directly impacted by these  
34 transportation improvements. Please see the Effect Determination discussion under the  
35 Preferred Alternative for information regarding the projects effects to character-defining  
36 features associated with the farm.

37 Indirect effects to the historic farm would be the same as with Package A (see  
38 **Figure 3.15-58**).

39 The proposed transportation improvements associated with Package B would not substantially  
40 diminish or alter architectural or setting characteristics that render the property eligible for the  
41 NRHP. FHWA, FTA and CDOT have determined that Package B would result in no adverse  
42 effect to the resource.

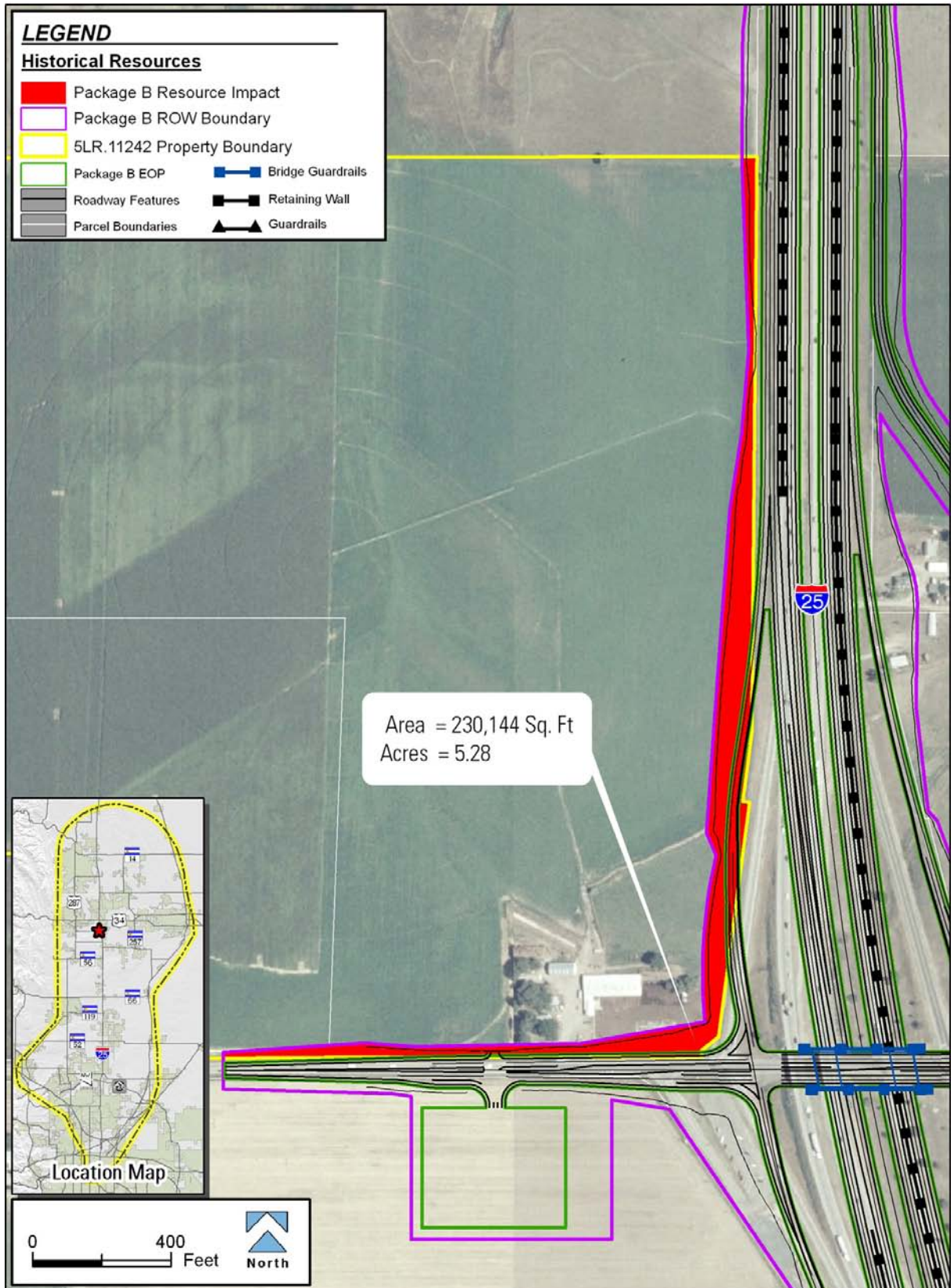
43

1 Figure 3.15-57 5LR.11242 (Mountain View Farm) – Package A



2  
3

1 Figure 3.15-58 5LR.11242 (Mountain View Farm) – Package B



2

1 **Effect Determination – Preferred Alternative:** This historic farm would experience direct  
2 impacts associated with proposed improvement of the I-25 /SH 402 interchange. The  
3 Preferred Alternative would re-align the I-25 southbound off-ramp west of the existing off-ramp,  
4 and would require the acquisition of a strip of cultivated farmland that includes an irrigation  
5 canal at the east edge of the historic farm property to accommodate the proposed new off-  
6 ramp from southbound I-25 to SH 402.

7 The grade of the new off-ramp would be higher than the existing off-ramp. The first 400 feet of  
8 the new ramp exiting I-25 would be up to 5.5 feet higher than the existing ground. The next  
9 900 feet would be up to 7 feet lower than the existing ground and the remaining 850 feet would  
10 be up to 26.5 feet higher than the existing ground.

11 Currently, SH 402 is located under I-25. The Preferred Alternative would modify this grade  
12 separation so that SH 402 would be located over I-25. The grade of SH 402 directly in front of  
13 the Mountain View farm buildings would vary from 0 to 6 feet higher than the current grade of  
14 SH 402. As the road continues east, it would climb to a height of 22 feet at the intersection with  
15 the southbound off-ramp and the northbound on-ramp. The grade of I-25 on the east side of  
16 the Mountain View Farm would be a maximum of 10 feet higher than existing ground level  
17 along the northern third of the farm property and a maximum of 25 feet lower than existing  
18 ground level for the remainder of the property.

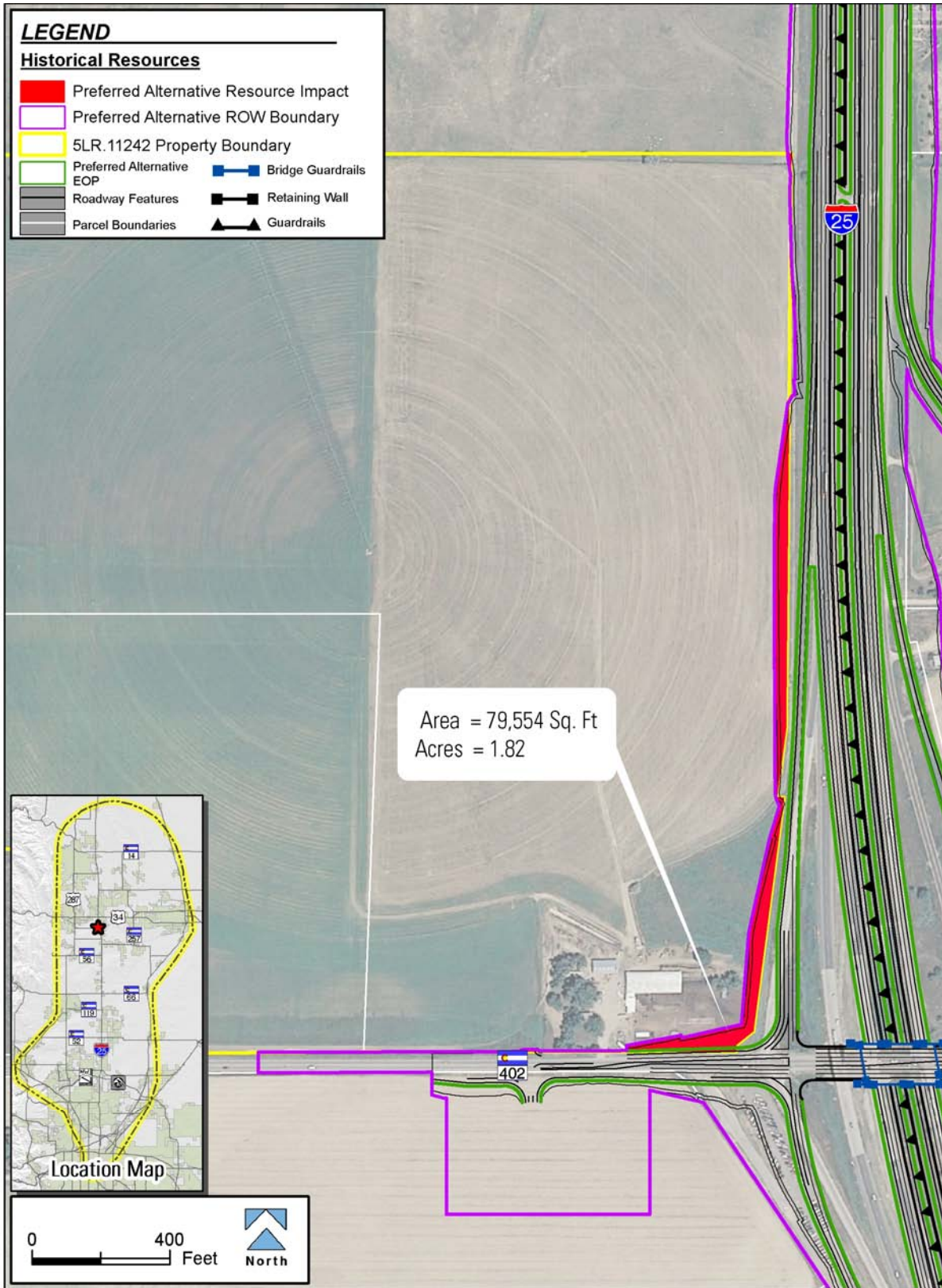
19 Another direct impact would occur near the farmhouse as a result of widening along the north  
20 edge of SH 402 to add turn and through lanes at the off-ramp. The new width of roadway  
21 along SH 402 would convert a maximum of 100 feet of farm property at the intersection with  
22 the southbound off-ramp, tapering off near the driveway to the farmhouse. The highway  
23 overpass and ramp intersections would be approximately 22 feet above the highway at the  
24 bridge similar to the existing interchange configuration. However, the Preferred Alternative  
25 design necessitates extending the slope from the elevated overpass and ramp intersections  
26 westward to the existing grade of SH 402 closer to the historic farm house than is the case  
27 with the existing interchange configuration.

28 A total area of 1.82 acres of land would be converted from open farmland to paved roadway  
29 and fill slopes within the historic farm boundary. This area amounts to approximately  
30 1.3 percent of the 136.22-acre farm. No historic buildings would be directly impacted by these  
31 transportation improvements (see **Figure 3.15-59**). However, the presence of the existing I-25  
32 highway ramps and interchange already introduce modern elements into this agricultural  
33 setting. Under the Preferred Alternative, the fill slopes and ramps would be moved closer to  
34 the eastern edge of the farm, and would be slightly taller than the existing slopes, ramps and  
35 overpass. Another change would be construction of a proposed new park and ride parking lot  
36 on the south side of SH 402 near the farm.

37 A small informal parking area currently exists on the west side of the southbound I-25 access  
38 from SH 402. This parking area would be replaced with a park and ride lot on the south side of  
39 SH 402 directly south of the Mountain View Farm. This would be an indirect effect in the visual  
40 landscape.

41 Traffic noise generated by I-25 would decrease three decibels because the highway would be  
42 re-aligned to the east, away from the farmhouse. Although the new southbound off-ramp would  
43 be built on a new alignment closer to and elevated above the farmhouse, noise from existing  
44 traffic and the closer ramp would not substantially alter the agricultural setting or diminish the  
45 architectural characteristics that render the property NRHP-eligible.

1 Figure 3.15-59 5LR.11242 (Mountain View Farm) – Preferred Alternative



2

1 A temporary construction easement may be required along the eastern edge of the property  
2 for to allow haul roads, construction access, and/or staging areas to facilitate roadway  
3 widening and slope building. No permanent impacts would be anticipated from this temporary  
4 construction activity on the farmland property, and no farm structures would be affected.  
5 Construction-related noise generated by construction equipment and trucks would be  
6 temporary in nature and would not permanently affect the character of the farm setting. Thus,  
7 indirect effects caused by temporary construction activities are not expected to substantially  
8 diminish the function, character, or attributes that render the farm or farm buildings  
9 NRHP-eligible.

10 The impacts associated with the Preferred Alternative would occur along the eastern edge of  
11 the farm adjacent to I-25 where the original integrity of the farm was compromised with the  
12 highway's intrusion on the visual landscape some 40 years ago. There would be no materially  
13 different visual perception of the farm from the Preferred Alternative. The farm buildings would  
14 not be directly affected, agricultural production would continue and the farm would continue to  
15 convey significance in terms of the lands' association with early agricultural development in  
16 Larimer County. CDOT's determination is that the farm was still significant in 2006, in spite of  
17 the changes to the setting, feeling and association. The farm would continue on as it was in  
18 2006 except for the removal of 1.82 acres in a thin strip of land along portions of the east and  
19 south borders of the farm. The land in the far southeast corner of the property is being used as  
20 a cattle feed lot and pasture. To the north of the pasture, the land is being used to produce  
21 grain. Air photos from previous years show that parts of the land on this farm have been  
22 irrigated with center pivot irrigation. A concrete-lined irrigation ditch lateral is located along the  
23 east side of the property in the take strip. The land that would be taken along the south  
24 property has recently been cropped with grains.

25 The visual representations presented on the following two pages illustrate the existing settings  
26 on the farm and the change with the Preferred Alternative.

27 Modifications to the I-25/SH 402 interchange as a result of this project will not be the driving  
28 force for indirect or cumulative effects in this area. The indirect effects from the visual changes  
29 resulting from SH 402 over vs. under I-25 would not spur development of this area but for this  
30 proposed project. There has been an interstate interchange providing access to this area for  
31 about 50 years. The character of the area has remained agricultural over these past five  
32 decades. Moving an off-ramp slightly west and changing the crossing of SH 402 from over the  
33 highway to under the highway would not force change the character of this area.

34 FHWA, FTA and CDOT have determined that the loss of an additional 1.82 acres of land for  
35 construction of the Preferred Alternative would result in no adverse effect to this farm because  
36 the characteristics that define the integrity of the rural landscape would not be compromised.  
37 The location, design, materials and workmanship of the farm would remain the same. The  
38 Preferred Alternative would not affect any of the farm buildings nor would the setting be  
39 affected. The mountains to the west of the farm continue to be a key element of its historic  
40 setting. The interstate highway on the east has been there for over forty years and was a part  
41 of the setting when the property was determined eligible for the NRHP. The feeling would  
42 remain one of an active farm. The association is still strong as it is clear that this is still an  
43 active farm. The Mountain View Farm was determined eligible under Criterion A for its  
44 association with 20th century Larimer County farming. That association would not change as a  
45 result of implementation of the Preferred Alternative.



1

## Mountain View Farm Looking South



Mountain View Farm – view looking south showing existing setting along eastern property boundary with barn of right side of photo (house is west of barn, out of frame).



Mountain View Farm – view looking south with visual representation of the Preferred Alternative. (Slope shown in brown to be revegetated with native grass).

2

## Mountain View Farm Looking Northeast



Mountain View Farm – view looking northeast showing existing setting along southern property boundary.



Mountain View Farm – view looking northeast with visual representation of the Preferred Alternative.

1 **SH 60 TO E-470**

2 **5WL.5204 (Bashor Barn)**

3 **Resource Description:** This property is located at 3807 Weld CR 48 and contains an historic  
4 barn that was owned by the Bashor family for nearly 50 years, from 1928 to 1977. Belva  
5 Bashor was the granddaughter of Peter Turner, whose homestead became the town of  
6 Berthoud.

7 **Eligibility Determination:** The historic Bashor barn retains very good integrity and is an  
8 important example of agricultural architecture. The Bashor barn therefore qualifies for inclusion  
9 on the NRHP under Criterion C.

10 **Effect Determination – Package A:** Under Package A, CR 48 would be widened 20 feet  
11 west of I-25 to allow construction of extra pavement and slopes and would taper to the existing  
12 roadway width near the Bashor property. The new roadway would be raised in elevation at the  
13 I-25 crossing, but would drop from an elevation of approximately 22 feet above the highway  
14 down to the existing roadway elevation within the vicinity of the historic Bashor barn.

15 No direct impacts would occur to the historic property. The change in width and elevation of  
16 CR 48 would not diminish or alter the architectural qualities which render the property NRHP-  
17 eligible. FHWA, FTA and CDOT have determined that the Package A improvements would  
18 result in *no historic properties affected* with respect to the Bashor barn.

19 **Effect Determination – Package B:** Impacts in this area under Package B are virtually  
20 identical to those associated with Package A. Under Package B, CR 48 is widened on the west  
21 side of I-25 and the elevation and roadway width tapers down to the elevation and width of the  
22 existing roadway in the vicinity of the historic Bashor barn. No direct or indirect impacts would  
23 occur to the historic property. FHWA, FTA and CDOT have determined that the Package B  
24 improvements would result in *no historic properties affected* with respect to the Bashor barn.

25 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, CR 48 would  
26 be widened 20 feet west of I-25 to allow construction of extra pavement and slopes and would  
27 taper to the existing roadway width near the Bashor barn. The new roadway would be raised in  
28 elevation at the I-25 crossing, but would drop from an elevation of approximately 22 feet above  
29 the highway down to the existing roadway elevation within the vicinity of the historic Bashor  
30 barn.

31 No direct impacts would occur to the historic property. The change in width and elevation of  
32 CR 48 would not diminish or alter the architectural qualities which render the property NRHP-  
33 eligible. FHWA, FTA and CDOT have determined that the Preferred Alternative improvements  
34 would result in *no historic properties affected* with respect to the Bashor barn.

35 **5WL.5203 (Bein Farm)**

36 **Resource Description:** The Bein Farm is located at 3766 CR 48, near the I-25 and SH 60  
37 interchange. This property was owned by Fred Bein, a pioneer Berthoud stockman and farmer  
38 and one of the most widely-known residents of the Berthoud community until his death in  
39 1933. The property contains a variety of farm buildings constructed in the late 19th century.  
40 The 1915 Map of Irrigated Farms of Northern Colorado showed that the Bein family owned  
41 320 acres. The historic property boundary of this parcel was the land in the east half of  
42 Section 10, Township 4N, Range W68. An examination of additional historical maps and

1 directories shows that the land was still owned by Bein through 1956. Fred Bein was active in  
2 farming and stock- raising in northern Colorado. The current size of the remaining historic farm  
3 is 288 acres and it is still used for farming.

4 The production of sugar beets was the main reason this farm and many others in northern  
5 Colorado developed and this association is an important part of its agricultural history. Sugar  
6 beet production in this region started in 1901 with the opening of Great Western's first sugar  
7 beet processing facility in northern Colorado at Loveland. Sugar beet production in northern  
8 Colorado was strong for over 80 years, but declined significantly after the closure of the Great  
9 Western sugar plants in 1985. Since that time, much of the farmland in northern Colorado has  
10 been used to produce other crops. The Bein Farm has been producing irrigated crops. The  
11 continued association of the Bein farm with the sugar beet industry was lost in the mid-1980s  
12 when the Great Western sugar plants closed. In order for farms to continue their existence,  
13 they have to make modifications to adjust to many changing factors including weather, the  
14 agricultural markets and changes in surrounding land use. The Bein Farm, like most others,  
15 has undertaken many modifications including changes in crops produced to keep it in  
16 operation over the decades. In spite of these modifications over the decades, the farm still  
17 continues in production and is able to convey significance under Criterion A.

18 **Eligibility Determination:** The Bein Farm is eligible for the NRHP under Criterion A because  
19 of its important association with early ranching and farming in the Berthoud area during the  
20 late 19th century. The integrity of the agricultural setting of the Bein farm was compromised in  
21 the 1960s when I-25 was built adjacent to its eastern border. This alteration has affected the  
22 feeling and association by the introduction of an interstate highway as a modern non-  
23 agricultural element. The loss of integrity associated with the development of the highway  
24 occurred over 40 years ago. Those impacts were evident when the property was determined  
25 eligible for the NRHP on August 19, 2007. At that time, the assessment was that the farm  
26 buildings and associated farm land still had enough integrity to convey significance under  
27 Criterion A.

28 **Effect Determination – Package A:** This historic farm is located on the west side of the  
29 mainline of I-25, and on the southwest quadrant of the I-25/SH 60 interchange, both of which  
30 would be improved under Package A. Package A calls for the widening of I I-25 in this area to  
31 accommodate three general purpose lanes in each direction. The proposed wider highway  
32 template would require the acquisition and permanent conversion of a 120-foot-wide,  
33 5,600 foot-long strip of cultivated farmland west of the existing southbound I-25 lanes into new  
34 highway and slopes.

35 West of I-25, SH 60 would be widened to provide for a safe transition from the interchange  
36 ramps to the existing roadway section. The new SH 60 roadway would consist of four general  
37 lanes and turning lanes at the interchange, tapering back to two general lanes on the west side  
38 of the existing driveway to the farm building complex.

39 The combined I-25 widening along the length of the Bein Farm, re-alignment of the  
40 southbound on-ramp from the SH 60 interchange, and the widening and reconfiguring of a  
41 tapered section of SH 60 on the west side of this interchange would cause direct impacts to  
42 17.94 acres along the east and north edges of the property. This comprises approximately  
43 6.2 percent of the historic farm's total 288.45 acres. No farm buildings would be directly  
44 impacted (see **Figure 3.15-60**).

1 There would be no change to the historic access to this property. The retaining wall along the  
2 southbound off-ramp is located on the opposite side of the interchange from the historic farm  
3 and would not result in an indirect impact to the property. This would not diminish the function,  
4 alignment, attributes, or setting that contribute to the historic integrity or render the farm  
5 NRHP-eligible. Please see the Effect Determination discussion under the Preferred Alternative  
6 for information regarding the projects effects to character-defining features associated with the  
7 farm.

8 The direct and indirect impacts to the historic farm building complex along SH 60 that would  
9 occur under Package A would not substantially diminish or alter characteristics that render the  
10 site eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that Package A  
11 would result in *no adverse effect* to the resource.

12 **Effect Determination – Package B:** Package B calls for the widening of I-25 in this area to  
13 accommodate two general purpose lanes plus two barrier-separated managed lanes in each  
14 direction. The resulting direct impacts from widening of I-25 are similar to Package A, but  
15 require a modified southbound I-25 on-ramp to connect with the wider TEL section in  
16 Package B.

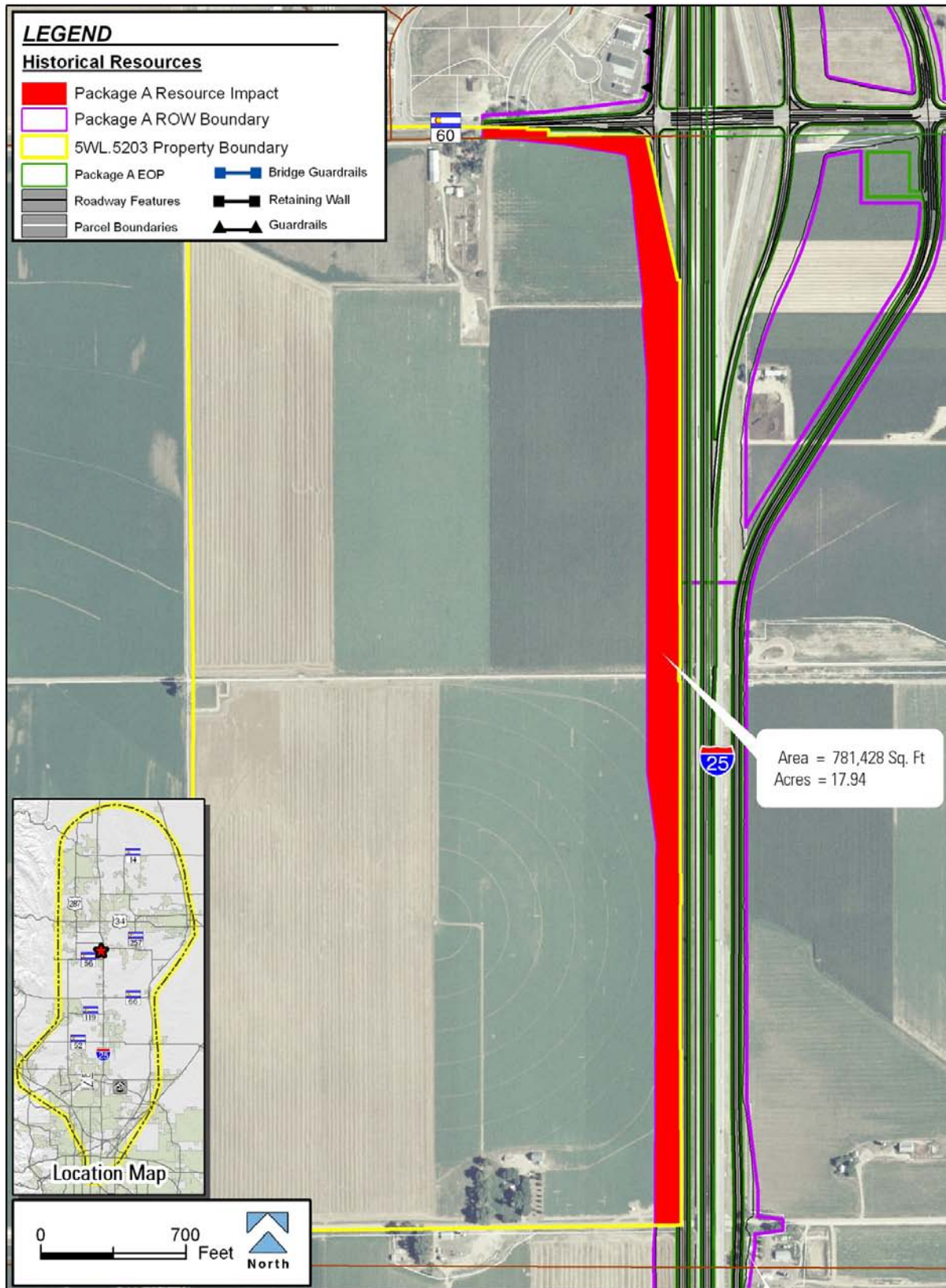
17 Impacts resulting from modifications to SH 60 are the same as Package A. Total direct impacts  
18 to the farm would be 20.04 acres along the east and north edges of the property, comprising  
19 approximately seven percent of the historic farm's total 288.45 acres. No farm buildings would  
20 be directly impacted (see **Figure 3.15-61**). Please see the Effect Determination discussion  
21 under the Preferred Alternative for information regarding the projects effects to character-  
22 defining features associated with the farm.

23 Indirect effects would be the same as with Package A.

24 The direct and indirect impacts to the historic farm building complex along SH 60 that would  
25 occur under Package B would not substantially diminish or alter characteristics that render the  
26 site eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that Package B  
27 would result in *no adverse effect* to the resource.

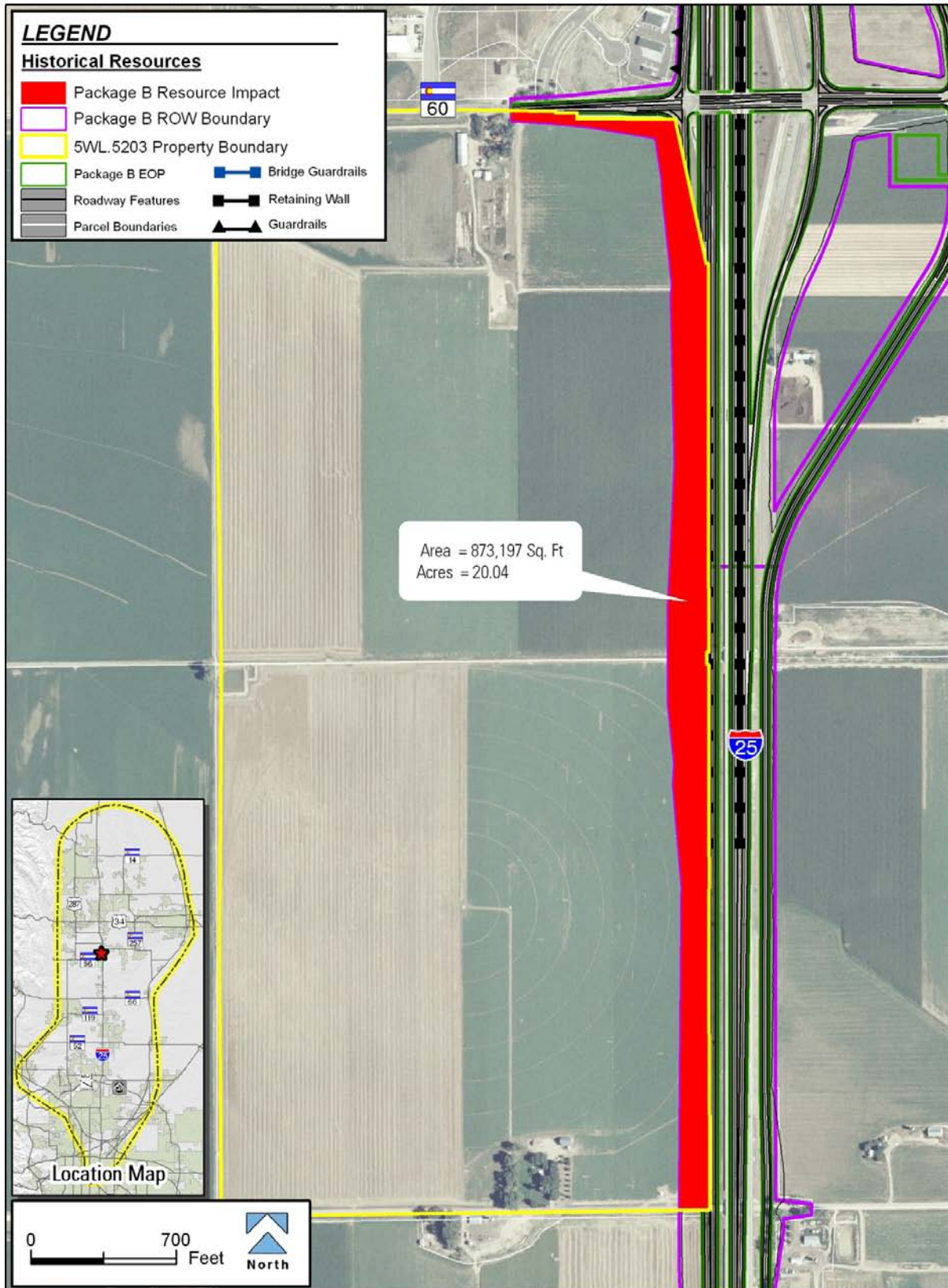
28 **Effect Determination – Preferred Alternative:** This historic farm is located on the west side  
29 of the mainline of I-25, and on the southwest quadrant of the I-25/SH 60 interchange, both of  
30 which would be improved under the Preferred Alternative. The Preferred Alternative calls for  
31 the widening of I-25 in this area to accommodate three general purpose lanes and one TEL in  
32 each direction. The proposed wider highway template would require the acquisition and  
33 permanent conversion of a strip of cultivated farmland west of the existing southbound I-25  
34 lanes into the transportation infrastructure.

1 Figure 3.15-60 5WL.5203 (Bein Farm) – Package A



2

1 Figure 3.15-61 5WL.5203 (Bein Farm) – Package B



2

1 West of I-25, SH 60 would be widened to provide for a safe transition from the interchange  
2 ramps to the existing roadway section. The new SH 60 roadway would consist of four general  
3 lanes and turning lanes at the interchange, tapering back to two general lanes on the west side  
4 of the existing driveway to the farm building complex.

5 The combined I-25 widening along the length of the Bein Farm, re-alignment of the  
6 southbound on-ramp from the SH 60 interchange, and the widening and reconfiguring of a  
7 tapered section of SH 60 on the west side of this interchange would cause direct impacts to  
8 16.10 acres along the east and north edges of the property. This comprises approximately  
9 5.6 percent of the farm's total 288.45 acres. No farm buildings would be directly impacted (see  
10 **Figure 3.15-62**).

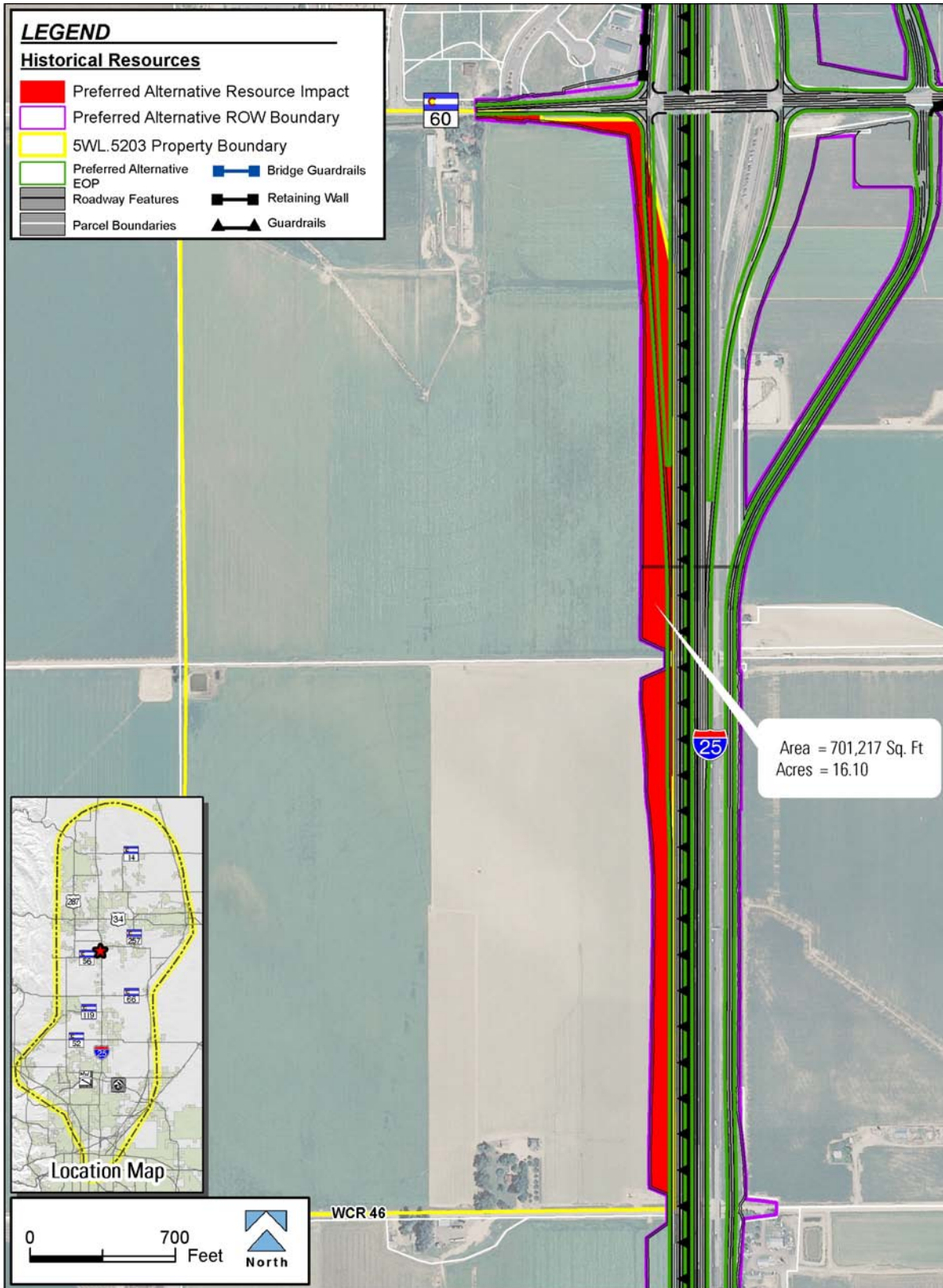
11 There would be no change to the historic access to this property. The retaining wall along the  
12 southbound off-ramp is located on the opposite side of the interchange from the historic farm  
13 and would not result in an indirect impact to the property.

14 The impacts associated with the Preferred Alternative would occur along the eastern edge of  
15 the farm adjacent to I-25 where the original integrity of the farm was compromised with the  
16 highway's intrusion on the visual landscape some 40 years ago. There would be no materially  
17 different visual perception of the farm from the Preferred Alternative. The farm buildings would  
18 not be directly affected, agricultural production would continue and the farm would continue to  
19 convey significance in terms of its association with early agricultural development in Weld  
20 County. The farm would continue on as it was in 2007 when determined eligible for the NRHP  
21 except for the removal of approximately 16.10 acres in a strip of land along portions of the  
22 north and east borders of the farm. In recent growing seasons, the Bein farm land was  
23 irrigated cropland. The center pivot irrigation system sits on the property today. The land was  
24 planted to the edge of their property which abuts the I-25 right-of-way on the east and the  
25 CR 38 right-of-way on the north. All of the 16.10 acres that are to be taken for the Preferred  
26 Alternative are currently used as irrigated cropland. The Bein Farm, in spite of a loss of these  
27 16.10 acres of land for the improvement of I-25, would still convey significance under  
28 Criterion A.

29 FHWA, FTA and CDOT have determined that the loss of an additional 16.10 acres of land for  
30 construction of this project would result in *no adverse effect* to this farm because the  
31 characteristics that define the integrity of the rural landscape would not be compromised. The  
32 location, design, materials and workmanship of the farm would remain the same. The  
33 Preferred Alternative would not affect any of the farm buildings. The setting would not be  
34 affected by the Preferred Alternative. The mountains to the west of the farm continue to be a  
35 key element of its historic setting. The setting of the land to the north of the Bein farm has  
36 changed. What was once all agricultural land has been developed over the last decades into  
37 commercial and industrial development. The interstate highway on the east has been there for  
38 over forty years and was a part of the setting when the property was determined eligible for the  
39 NRHP. The feeling would remain one of an active farm established in the early part of the  
40 20th century. The association is still strong as it is clear that this is still an active farm. The  
41 Bein Farm was determined eligible under Criterion A for its association with 20th century Weld  
42 County farming. That association would not change as a result of the Preferred Alternative.



1 Figure 3.15-62 5WL.5203 (Bein Farm) – Preferred Alternative



2

1 **5WL.3149.1 (Handy/Home Supply Ditch Confluence)**

2 **Resource Description:** The ditch crosses I-25 along the south edge of CR 48/SH 60 and is  
3 conveyed underneath the I-25 ramps and mainline highway lanes inside a 660-foot-long  
4 concrete culvert. The ditch segment is 2,456 feet long, 20 feet wide, earthen, 5 feet deep and  
5 has rip-rapped banks. Handy and Home Supply ditches combine to flow into a concrete  
6 diversion gate that funnels water under SH 60, west of I-25. The grade drops off steeply  
7 eastward from I-25 into 3 drop boxes.

8 **Eligibility Determination:** The entire Handy/Home Supply Ditch Confluence is NRHP-eligible  
9 under Criterion A for its important association with the development of water rights and agriculture  
10 in Weld County. Segment 5WL.3149.1 fails to support the integrity of the greater site because it  
11 has been modified by recent development.

12 **Effects Determination – Package A:** Package A would require modification of the grated  
13 culvert intake located west of the current southbound on-ramp to accommodate a new  
14 frontage road and widened SH 60/CR 48 intersection turning radius (see **Figure 3.15-63**). The  
15 outfall of the 660-foot-long culvert similarly would require a 50-foot-extension and modification  
16 to allow the redesigned northbound ramp intersection with the widened SH 60/CR 48.

17 Because the qualities that make the entire resource NRHP-eligible have already been  
18 compromised by modifications associated with construction of the I-25 and frontage road and  
19 Package A improvements are minor in relative extent, FHWA, FTA and CDOT therefore have  
20 determined that Package A would result in *no adverse effect* to the Handy/Home Supply Ditch  
21 Confluence.

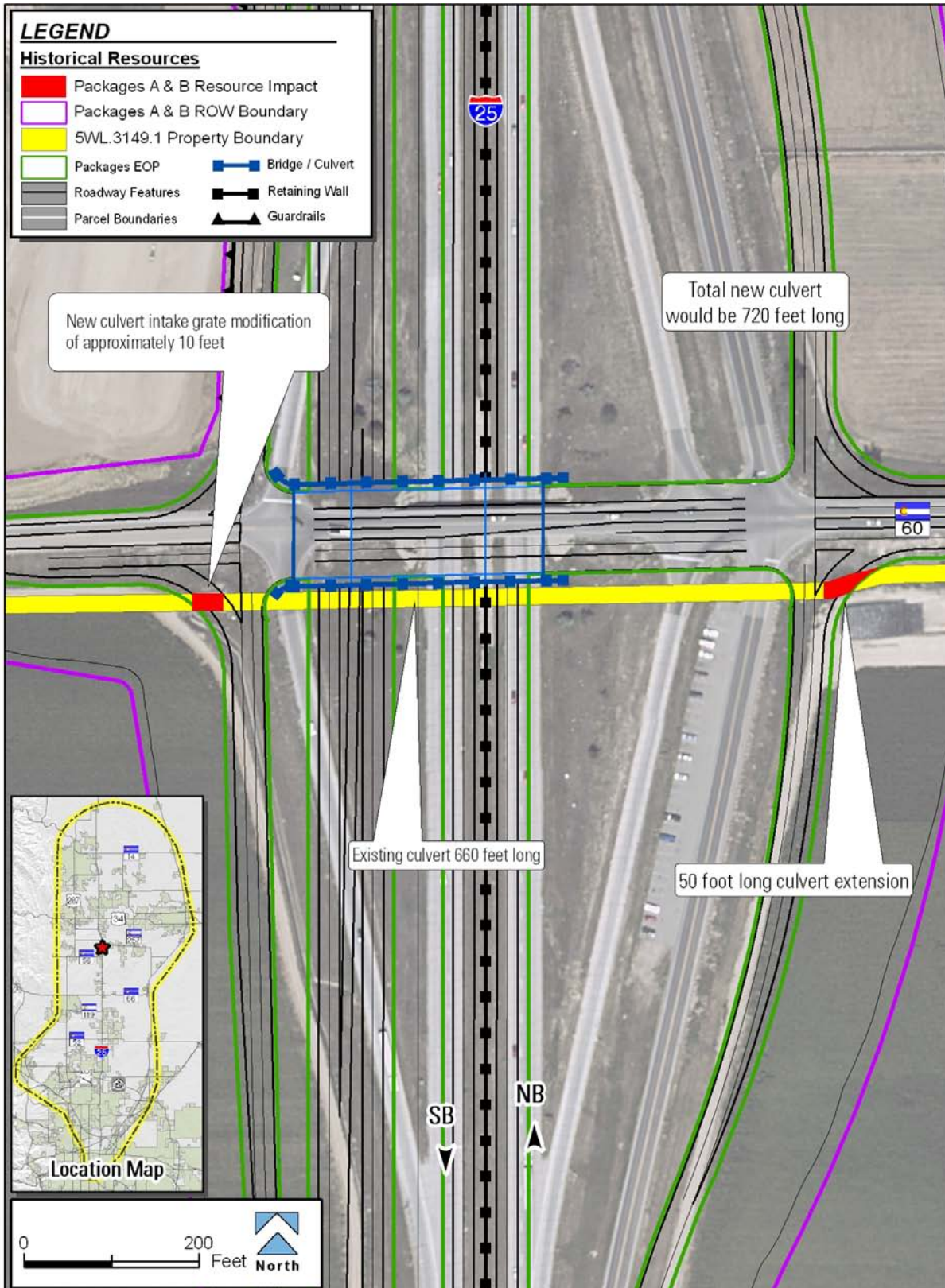
22 **Effects Determination – Package B:** Package B would require modification of the grated  
23 culvert intake located west of the current southbound on-ramp to accommodate a new  
24 frontage road and widened SH 60/CR 48 intersection turning radius (see **Figure 3.15-63**). The  
25 outfall of the 660-foot-long culvert similarly would require a 50-foot-extension and modification  
26 to allow the redesigned northbound ramp intersection with the widened SH 60/CR 48.

27 Because the qualities that make the entire resource NRHP-eligible have already been  
28 compromised by modifications associated with construction of I-25 and the frontage road and  
29 Package B improvements are minor in relative extent, FHWA, FTA and CDOT therefore have  
30 determined that Package B would result in *no adverse effect* to the Handy/Home Supply Ditch  
31 Confluence.

32 **Effects Determination – Preferred Alternative:** The Preferred Alternative would require  
33 modification of the grated culvert intake located west of the current southbound on-ramp to  
34 accommodate a new frontage road and widened SH 60/CR 48 intersection turning radius (see  
35 **Figure 3.15-64**). The outfall of the 660-foot-long culvert similarly would require a 60-foot-  
36 extension and modification to allow the redesigned northbound ramp intersection with the  
37 widened SH 60/CR 48.

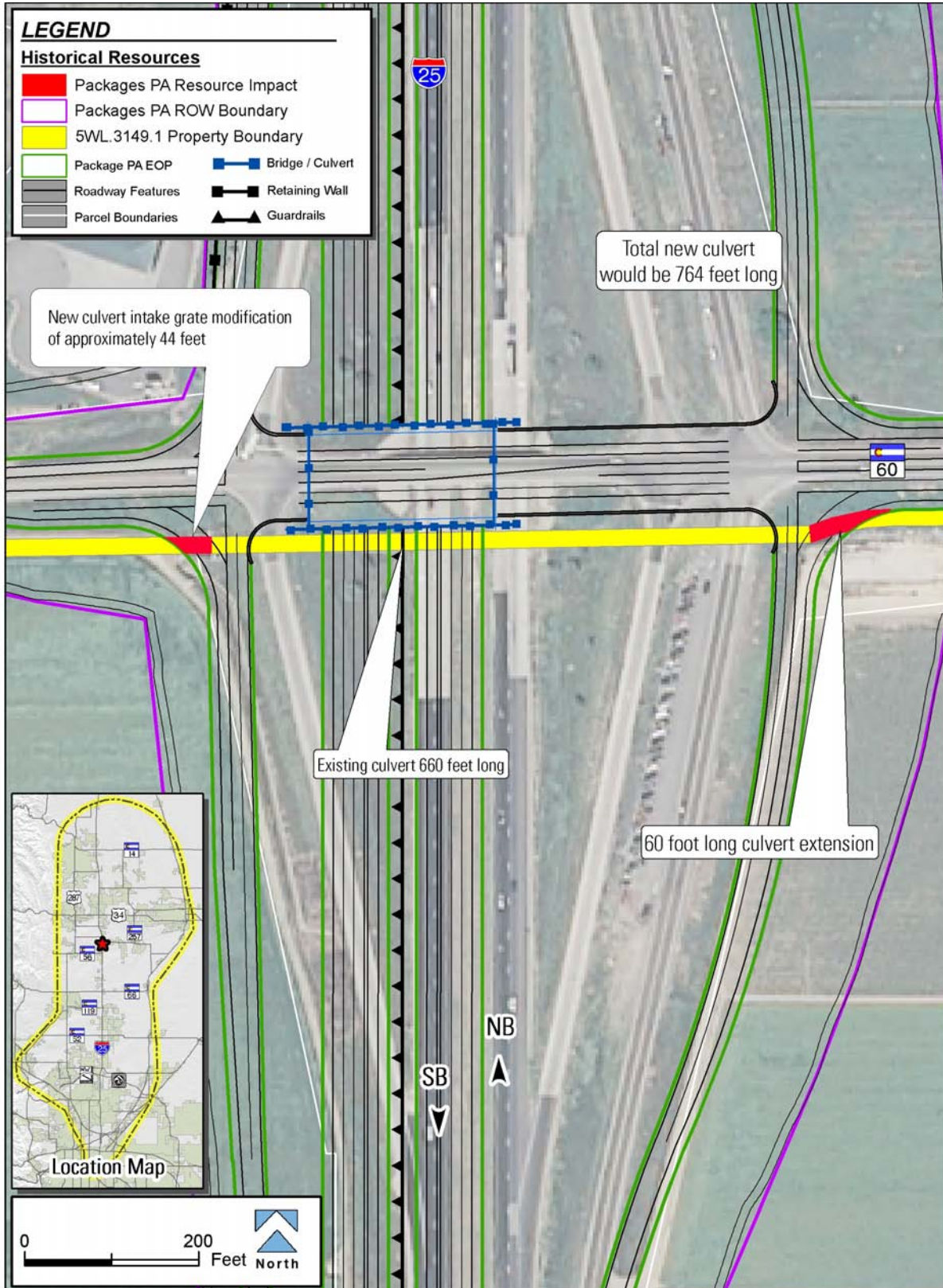
38 Because the qualities that make the entire resource NRHP-eligible have already been  
39 compromised by modifications associated with construction of the I-25 and frontage road and  
40 because the Preferred Alternative improvements are minor in relative extent, FHWA, FTA and  
41 CDOT have determined that the Preferred Alternative would result in *no adverse effect* to the  
42 Handy/Home Supply Ditch Confluence.

1 Figure 3.15-63 5WL.3149.1 (Handy/Home Supply Ditch Confluence) – Package A  
2 and B



3

1 Figure 3.15-64 5WL.3149.1 (Handy/Home Supply Ditch Confluence) – Preferred  
2 Alternative



3

1 **5WL.864 (Great Western Railway Buda Siding)**

2 **Resource Description:** Buda Siding consists of the original beet scale house and platform  
3 scale that was built by the Great Western Railway (GWR) in 1903. The GWR was associated  
4 with the Great Western Sugar Company, which owned sugar factories in Colorado, including  
5 ones at Longmont and Loveland. Buda was a railroad “beet dump” or receiving and shipping  
6 station for the local farming community. It also served as a passenger ticket office.

7 **Eligibility Determination:** This site is eligible for the NRHP under Criterion A for its important  
8 association with the historic GWR and the sugar beet industry in Colorado.

9 **Effect Determination – Package A:** This site lies well outside the I-25 corridor improvements  
10 planned under Package A, and would not experience any direct or indirect impacts either to  
11 the rail siding or the associated sugar beet weigh station. FHWA, FTA and CDOT therefore  
12 have determined that Package A would result in *no historic properties affected* with respect to  
13 this historic resource.

14 **Effect Determination – Package B:** This site lies well outside the I-25 corridor improvements  
15 planned under Package B, and would not experience any direct or indirect impacts either to  
16 the rail siding or the associated sugar beet weigh station. FHWA, FTA and CDOT therefore  
17 have determined that Package B would result in *no historic properties affected* with respect to  
18 this historic resource.

19 **Effect Determination – Preferred Alternative:** This site lies well outside the I-25 corridor  
20 improvements planned under the Preferred Alternative, and would not experience any direct or  
21 indirect impacts either to the rail siding or the associated sugar beet weigh station. FHWA,  
22 FTA and CDOT therefore have determined that the Preferred Alternative would result in *no*  
23 *historic properties affected* with respect to this historic resource.

24 **5WL.2985 (Little Thompson River Bridge No. C-17-BN)**

25 **Resource Description:** The historic Little Thompson River Bridge (CDOT Structure No.  
26 No.C-17-BN) is a steel, rigid connected camelback pony truss structure located on the  
27 frontage road adjacent to I-25 near the  
28 SH 56 and I-25 interchange. The  
29 structure was built across the Little  
30 Thompson River in 1938, prior to  
31 construction of I-25.



Little Thompson River Bridge

32 **Eligibility Determination:** This historic  
33 bridge is an intact, early example of a  
34 common bridge type, the camelback  
35 pony truss, and was listed on the NRHP  
36 under Criterion C in 2002.

37 **Effect Determination – Package A:**

38 This historic bridge carries the existing I-25 east frontage road over the Little Thompson River.  
39 The east frontage road would remain two lanes, but would be widened to improve shoulders  
40 north and south of this bridge, up to the bridge approach slabs. The historic bridge structure  
41 would be retained and utilized, and no physical changes to the bridge abutments, decking or  
42 truss structure would occur. Because the setting and use of the bridge would remain  
43 unaffected by this minor widening, no indirect effects to the property are expected.

1 FHWA, FTA and CDOT have determined that Package A would result in a finding of *no historic*  
2 *properties affected* with respect to this historic resource.

3 **Effect Determination – Package B:** Same as Package A. FHWA, FTA and CDOT have  
4 determined that Package B would result in *no historic properties affected* with respect to this  
5 historic resource.

6 **Effect Determination – Preferred Alternative:** Same as Package A. FHWA, FTA and CDOT  
7 have determined that the Preferred Alternative would result in *no historic properties affected*  
8 with respect to this historic resource.

### 9 **5WL.5198 (Olson Farm)**

10 **Resource Description:** This historic farm is located at 17820 East I-25 Frontage Road, near  
11 CR 38. The site contains various farm buildings, a reservoir, and farmland used by the Olson  
12 family who were early settlers in this area. The Ballinger Reservoir has an early water  
13 appropriation date from 1887 making it one of the early irrigation features in the area. The site  
14 boundary is based upon the historic boundary of the Olson Farm, and spans I-25. The  
15 boundary encompasses 155.37 acres, although 13.7 acres comprising the existing CDOT I-25  
16 right-of-way is considered a noncontributing portion of the site.

17 The home was built in the early 1940s by Emil and Ethel Olson on a site just north of the  
18 Ballinger Reservoir, which is over 100 years old and has historically been used for irrigation  
19 and livestock watering. Emil and his parents came to the area on adjoining lands over  
20 100 years ago where they engaged in farming. The family partnership raised wheat on  
21 approximately 6000 acres in the Frederick—Erie area during World War II as well as  
22 continuing to farm the family acreage (wheat, corn, beets, alfalfa, as well as feeding cattle)  
23 near Mead.

24 After the 1950's drought and devastating prices, Emil and Ethel's son, Gilman, mortgaged the  
25 farm, invested in his good friend's road building business, and went to work full-time for that  
26 construction company. After that time Gilman's sons Gary and Roger managed and worked  
27 the farm summers, weekends and after school. I-25 was constructed alongside the farm in  
28 1960-61. This was a major event since the freeway actually passed through and displaced the  
29 entire family farm headquarters where Emil and Ethel lived on the southwest corner of the  
30 intersection of Hwy 87 (I-25) and WCR 38. The farm buildings that were of value were moved  
31 to various other farms and Emil and Ethel moved to Longmont in 1958, as retired farmers  
32 traditionally did in those days. Their house was moved, one mile south and half mile east,  
33 where it was again remodeled and still stands today. Their barn was moved to the farmstead  
34 at 17820 I-25 Access Road.

35 Gilman and his wife Margaret subsequently acquired adjacent lands on the west side of I-25  
36 which have been developed into a residential subdivision. Their sons, Roger and Gary Olson,  
37 followed business career paths. They have stayed involved in the farms, through not actively  
38 farming, as the farms are now rented to others.

39 The integrity of the agricultural setting of the Olson Farm was compromised in the 1960s when  
40 I-25 was built through the center of the historic farm boundaries. This alteration has affected  
41 the feeling and association by the introduction of an interstate highway as a modern non-  
42 agricultural element.

43

1 **Eligibility Determination:** The loss of integrity associated with the development of the  
2 highway occurred over 40 years ago. Those impacts were evident when the property was  
3 determined eligible for the NRHP on August 19, 2007. At that time, the assessment was that  
4 the farm was significant for the Ballinger Reservoir on the property which has an early water  
5 appropriation date making it one of the early water/irrigation features in the area. The farm was  
6 assessed as significant under Criterion A for its role in the agricultural development of Weld  
7 County.

8 **Effect Determination – Package A:** Under Package A, I-25 would be re-aligned and  
9 reconfigured for three general purpose lanes in each direction. The existing I-25 east frontage  
10 road would stay in its present alignment, including its crossing of CR 38, but the area needed  
11 for the frontage road turning lanes and paved shoulders would be widened along the west  
12 edge of the eastern portion of the Olson Farm property. Direct impacts to this portion of the  
13 site would be confined to a strip of land 2,740 feet long, and approximately 110 feet wide at  
14 CR 38 at the north end of the property and 30 feet wide at the south end. This impact  
15 corresponds to the new toe of slope for the east frontage road which would bury the farmland  
16 currently located adjacent to the frontage road. A retaining wall would be installed along the  
17 edge of the frontage road to prevent direct impacts to the Ballinger Reservoir (a contributing  
18 feature of the NRHP-eligible farm) located mid-way along the east side of the frontage road. A  
19 total of 3.99 acres of the eastern portion of the site would be subject to direct impacts under  
20 Package A (see **Figure 3.15-65**).

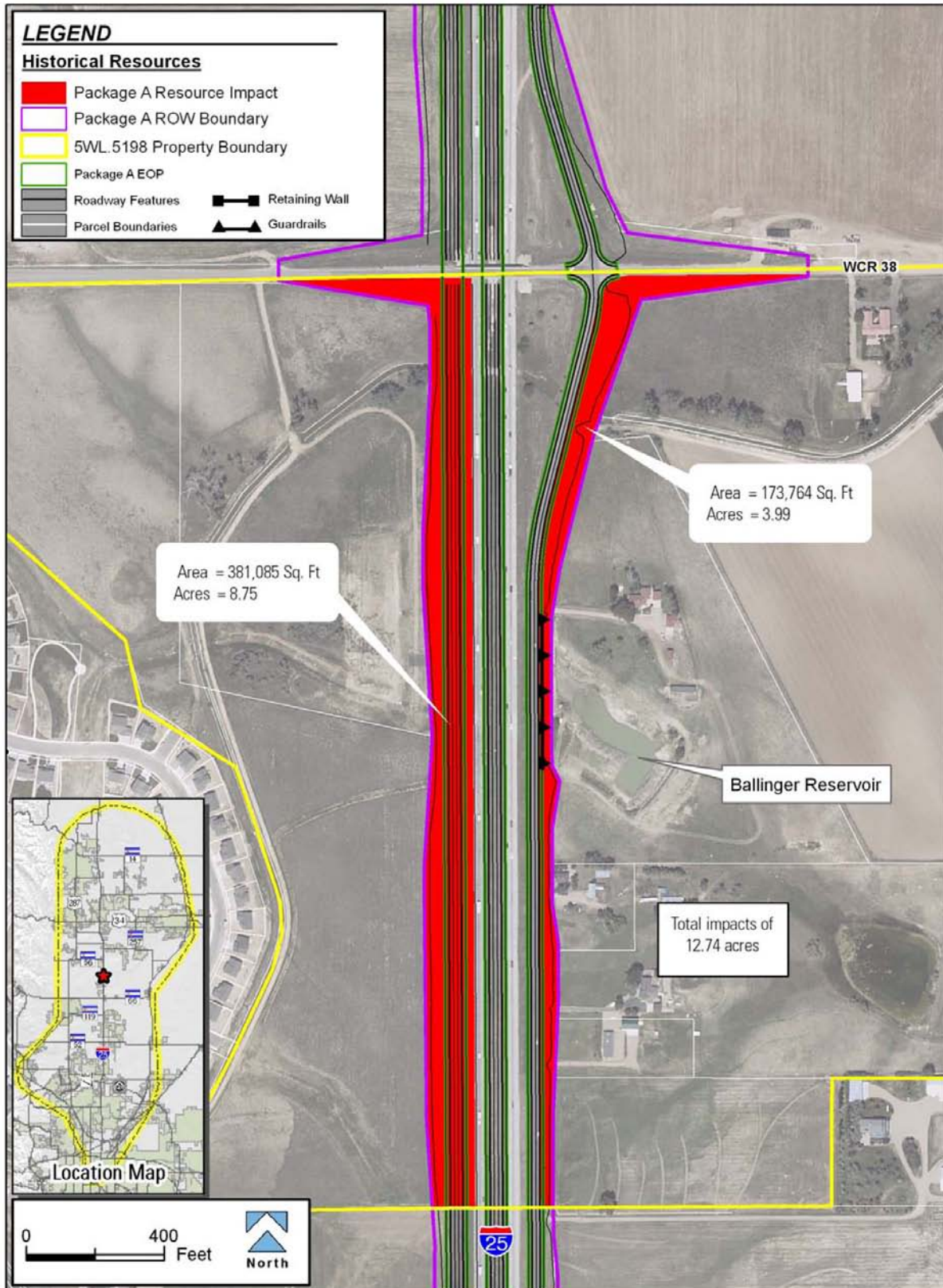
21 A strip of farmland measuring approximately 140 feet wide and 2,740 feet long located west of  
22 I-25, would be buried below pavement and fill slopes for the widened southbound I-25 lanes.  
23 This would result in 8.75 acres impacted due to the western re-alignment and widening of the  
24 I-25 roadways.

25 The total area subject to direct impacts under Package A is 12.74 acres, which comprises  
26 approximately nine percent of the total site area of 141.67 acres.

27 Increased highway and frontage road traffic resulting from Package A improvements would  
28 generate noise levels one decibel more than the No-Action Alternative. This increase in noise  
29 is barely perceptible and would not affect the characteristics which have rendered the property  
30 NRHP-eligible. Since the 1960's when I-25 was constructed, modern transportation elements  
31 have bisected the historic farm. Modern residential subdivisions have recently been  
32 constructed adjacent to the western property boundary. The additional I-25 and frontage road  
33 widening, installation of a new retaining wall near Ballinger Reservoir, and modification of  
34 CR 38 overpass would increase the amount of intrusive transportation elements within the  
35 property boundary leading to an indirect effect on the historic property, however; these  
36 transportation improvements would not substantially diminish the historic setting which renders  
37 this property NRHP-eligible.

38 Temporary effects due to installation of the new bridge across I-25, roadway widening and the  
39 retaining wall at Ballinger Reservoir would likely require a temporary easement on portions of  
40 the historic property for equipment access, haul roads and other construction activities. The  
41 farm would remain operational and measures to protect the property from erosion, dust and  
42 water-borne sediment dispersal would be implemented. All disturbances caused by  
43 construction equipment or construction activities would be temporary in nature and affected  
44 areas would be restored to their original condition and appearance. Please see the Effect  
45 Determination discussion under the Preferred Alternative for information regarding the projects  
46 effects to character-defining features associated with the farm.

1 Figure 3.15-65 5WL.5198 (Olson Farm) – Package A



2



1 Due to the site's existing bisection by the wide I-25 corridor, and the lack of direct impacts to  
2 the contributing historic farm buildings and reservoir, FHWA, FTA and CDOT have determined  
3 that Package A would result in *no adverse effect* to the Olson Farm.

4 **Effect Determination – Package B:** Under Package B, I-25 would be re-aligned and  
5 reconfigured for two general purpose lanes plus one buffer-separated lane in each direction.  
6 Direct impacts to the site under Package B are similar in nature to those associated with  
7 Package A. Direct impacts to this portion of the site would be confined to a strip of land 2,740  
8 feet long, and approximately 120 feet wide at CR 38 at the north end of the property and  
9 30 feet wide at the south end. This impact corresponds to the new toe-of-slope for the east  
10 frontage road which would bury the farmland currently located adjacent to the frontage road.  
11 A retaining wall would be installed along the edge of the frontage road to prevent direct  
12 impacts to the Ballinger Reservoir. A total of 3.99 acres of the eastern portion of the site would  
13 be subject to direct impacts under Package B (see **Figure 3.15-66**).

14 A strip of farmland measuring approximately 145 feet wide and 2,740 feet long located west of  
15 I-25, would be buried below pavement and fill slopes for the widened southbound I-25 lanes.  
16 This would result in 8.82 acres impacted due to the western re-alignment and widening of the  
17 I-25 roadways.

18 The total area subject to direct impacts under Package B is 12.81 acres, which comprises  
19 approximately nine percent of the total site area of 141.67 acres. Indirect impacts would be the  
20 same as Package A. Please see the Effect Determination discussion under the Preferred  
21 Alternative for information regarding the projects effects to character-defining features  
22 associated with the farm. Due to the site's existing bisection by the wide I-25 corridor, and the  
23 lack of direct impacts to the contributing historic farm buildings and reservoir, FHWA, FTA and  
24 CDOT have determined that Package B would result in *no adverse effect* to the Olson Farm.

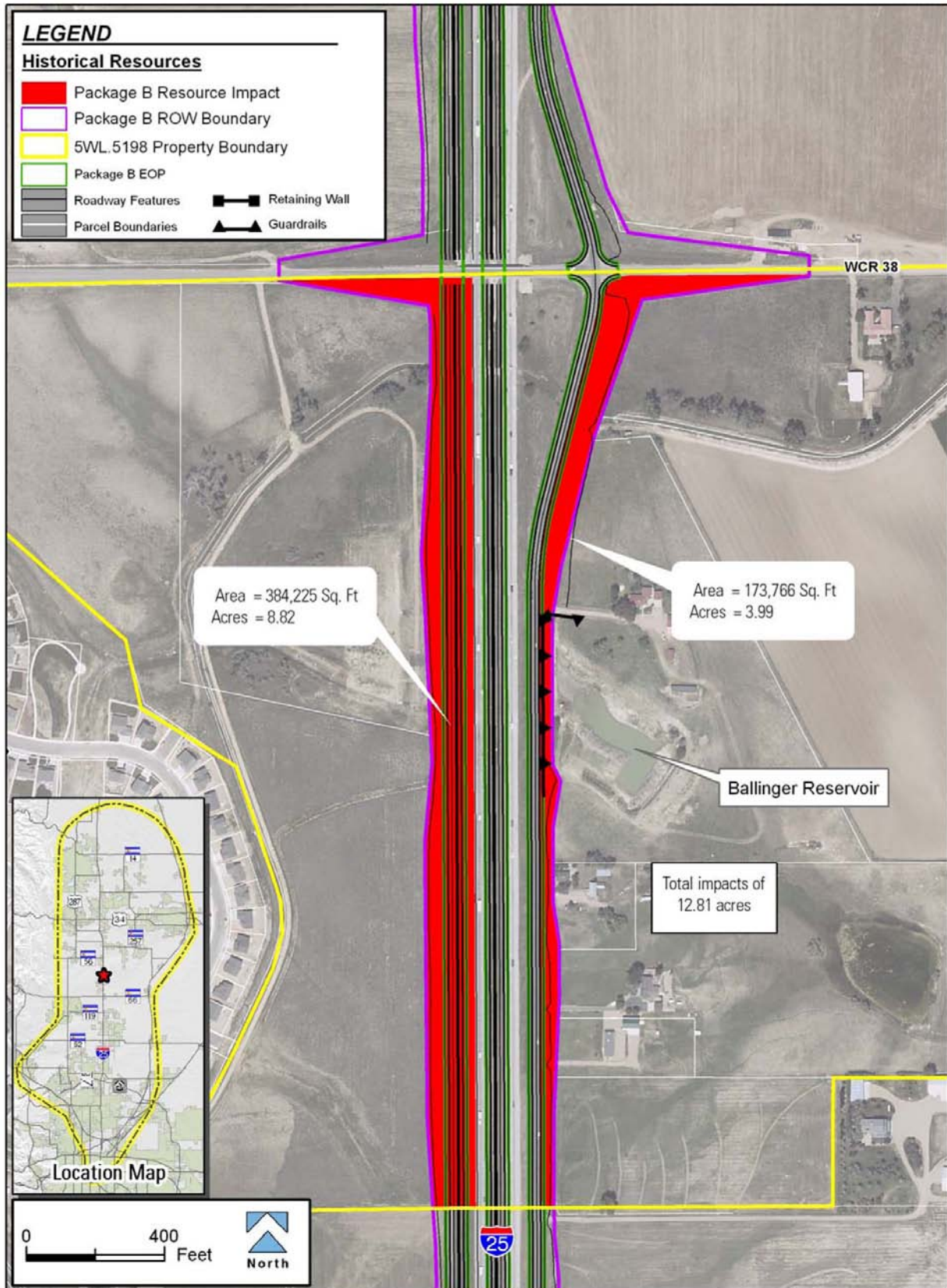
25 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, I-25 would  
26 be re-aligned and reconfigured for three general purpose lanes and one TEL in each direction.  
27 The existing I-25 east frontage road would stay in its present alignment, including its crossing  
28 of CR 38, but the area needed for the frontage road turning lanes and paved shoulders would  
29 be widened along the west edge of the eastern portion of the Olson Farm property. Direct  
30 impacts to this portion of the site would be confined to a small strip of land at WCR 38 at the  
31 north end of the property. This impact corresponds to the new toe of slope for the east  
32 frontage road which would bury the land currently located adjacent to this portion of the  
33 frontage road. A retaining wall would be installed along the edge of the frontage road to  
34 prevent direct impacts to the Ballinger Reservoir (a contributing feature of the NRHP-eligible  
35 farm) located mid-way along the east side of the frontage road. A total of 0.66 acre of the  
36 eastern portion of the site would be subject to direct impacts under the Preferred Alternative  
37 (see **Figure 3.15-67**).

38 A strip of farmland located west of I-25, would be buried below pavement and fill slopes for the  
39 widened southbound I-25 lanes. This would result in 3.97 acres impacted due to the western  
40 re-alignment and widening of the I-25 roadways.

41 The total area subject to direct impacts under the Preferred Alternative is 4.63 acres, which  
42 comprises approximately three percent of the total site area of 141.67 acres. These 4.63 acres  
43 are not a character-defining part of this farm. The strip of land on the west boundary of the  
44 property is land adjacent to the I-25 frontage road. That land is currently used for hay  
45 production. It is part of a small plot of land that separates the subdivision developed by the

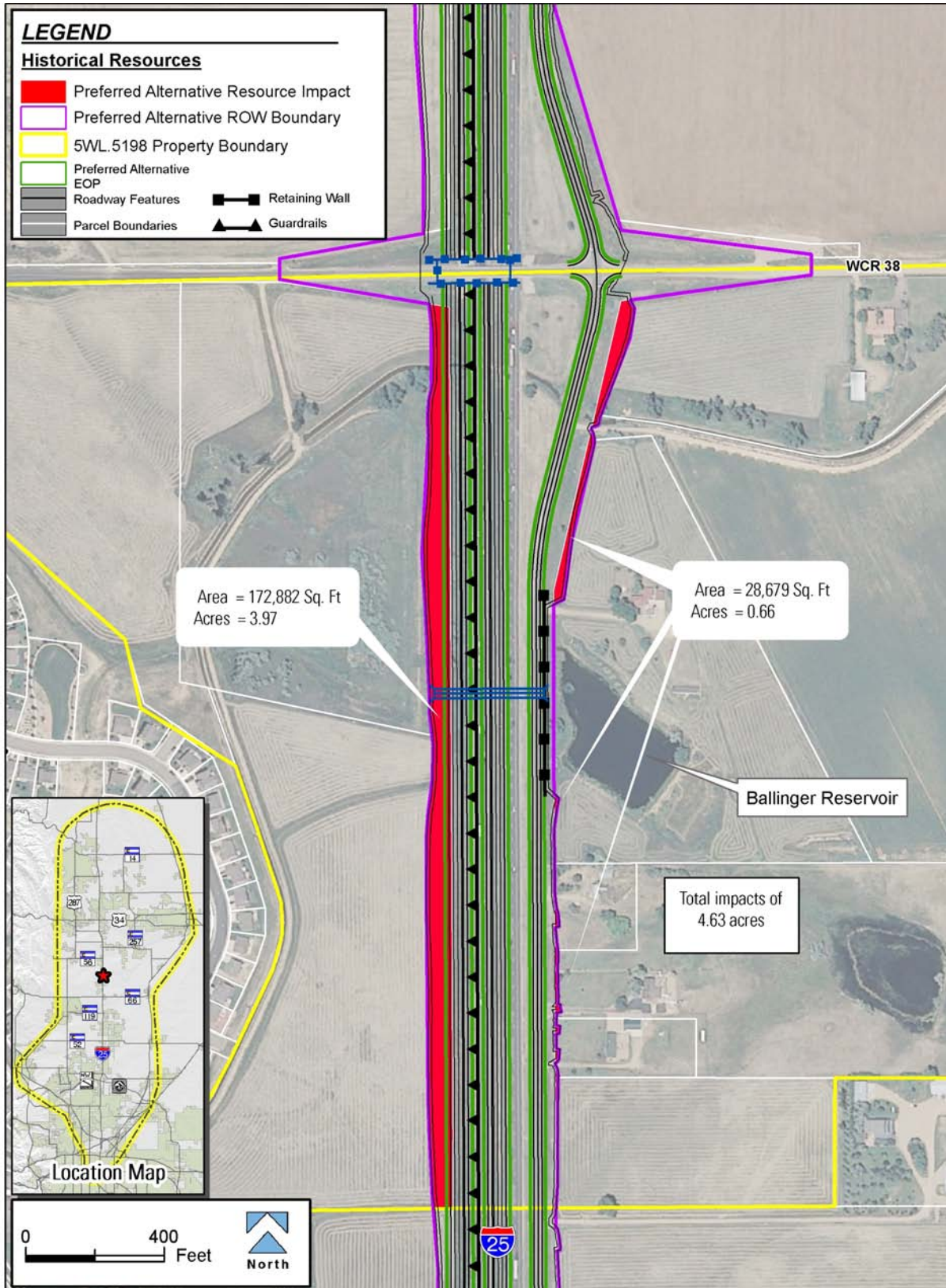
1 Figure 3.15-66 5WL.5198 (Olson Farm) – Package B

2



1 Figure 3.15-67 5WL.5198 (Olson Farm) – Preferred Alternative

2



1 Olson's from I-25. The strip of land on the east side of the East I-25 Frontage Road, north of  
2 the Olson house, is currently vacant. It appears it was a pasture at one time. The remaining  
3 strip of land on the east side of I-25 is part of the front lawns of several non-historic rural  
4 residences.

5 Increased highway and frontage road traffic resulting from the Preferred Alternative  
6 improvements would generate noise levels two decibels more than the No-Action Alternative.  
7 This increase in noise is barely perceptible and would not affect the characteristics which have  
8 rendered the property NRHP-eligible. Since the 1960's when I-25 was constructed, modern  
9 transportation elements have bisected the historic farm. The Olson's have developed modern  
10 residential subdivisions adjacent to the existing western property boundary. The additional I-25  
11 and frontage road widening, installation of a new retaining wall near Ballinger Reservoir, and  
12 modification of CR 38 overpass would increase the amount of intrusive transportation  
13 elements within the property boundary leading to an indirect effect on the historic property,  
14 however; these transportation improvements would not affect the historic association of this  
15 property with the agricultural development of Weld County which renders this property NRHP-  
16 eligible.

17 Temporary effects due to installation of the new bridge across I-25, roadway widening and the  
18 retaining wall at Ballinger Reservoir would likely require a temporary easement on portions of  
19 the historic property for equipment access, haul roads and other construction activities. The  
20 farm would remain operational and measures to protect the property from erosion, dust and  
21 water-borne sediment dispersal would be implemented. All disturbances caused by  
22 construction equipment or construction activities would be temporary in nature and affected  
23 areas would be restored to their original condition and appearance.

24 The setting and feeling of this property have been changed with the 1960s development of I-25  
25 through the center of the farm's historic boundary. The association with agriculture still exists.  
26 FHWA, FTA and CDOT have determined that the Preferred Alternative would result in no  
27 adverse effect to the resource because the land to be taken on the east side of I-25 is not  
28 being used for agricultural purposes and there would be no direct effect to the Ballinger  
29 Reservoir. The land on the west side of I-25 is serving as a buffer between a subdivision and  
30 the Interstate. In addition, the Olson family has developed a subdivision on part of the farmland  
31 and hopes to develop more in the future and they are now renting their land out to others for  
32 farming.

### 33 **5WL.1978 (Rademacher/Hilgers Residence)**

34 **Resource Description:** The Rademacher/Hilgers residence is located at 3865 SH 66. This  
35 property contains a Craftsman Style house built in 1920 that remains largely intact.

36 **Eligibility Determination:** This early 20th century farmhouse retains very good integrity, and  
37 is an important example of Craftsman Style residential architecture in a rural setting in Weld  
38 County. The property qualifies for the NRHP under Criterion C.

39 **Effect Determination – Package A:** Under Package A, I-25 would be reconfigured for three  
40 general purpose lanes in each direction. The existing I-25 ramps would be rebuilt under a  
41 currently planned and programmed interchange project. There would be no changes to ramp  
42 widths or alignments, thus there would be no direct impacts to the historic property by future  
43 I-25 mainline improvements associated with Package A.

1 Due to the lack of direct and indirect impacts to the historic farmhouse and the qualities that  
2 render it NRHP-eligible, FHWA, FTA and CDOT have determined that Package A would result  
3 in *no historic properties affected* with respect to the Rademacher/Hilgers Residence.

4 **Effect Determination – Package B:** Under Package B, I-25 would be re-aligned and  
5 reconfigured for two general purpose lanes plus one buffer-separated lane in each direction.  
6 All widening and lane additions would be constructed within the center median of the existing  
7 I-25 footprint. The existing I-25 ramps would be rebuilt under a currently planned and  
8 programmed interchange project. There would be no changes to ramp widths or alignments,  
9 thus there would be no direct impacts to the historic property by future I-25 mainline  
10 improvements associated with Package B.

11 Due to the lack of direct and indirect impacts to the historic farmhouse and the qualities that  
12 render it NRHP-eligible, FHWA, FTA and CDOT have determined that Package B would result  
13 in *no historic properties affected* with respect to the Rademacher/Hilgers Residence.

14 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, I-25 would  
15 be re-aligned and reconfigured for three general purpose lanes plus one buffer-separated TEL  
16 in each direction. All widening and lane additions would be constructed within the center  
17 median of the existing I-25 footprint. The existing I-25 ramps would be rebuilt under a currently  
18 planned and programmed interchange project. There would be no changes to ramp widths or  
19 alignments, thus there would be no direct impacts to the historic property by future I-25  
20 mainline improvements associated with the Preferred Alternative.

21 Due to the lack of direct and indirect impacts to the historic farmhouse and the qualities that  
22 render it NRHP-eligible, FHWA, FTA and CDOT have determined that the Preferred  
23 Alternative would result in *no historic properties affected* with respect to the  
24 Rademacher/Hilgers Residence.

### 25 **5WL1975.1 (Last Chance Ditch)**

26 **Resource Description:** This 1.04 mile-long segment of the Last Chance Ditch generally runs  
27 perpendicular to I-25 and crosses the frontage road and highway. The entire earthen ditch is  
28 approximately five miles long. Its channel is approximately 10 feet wide. This historic ditch is  
29 currently conveyed beneath I-25 and the east frontage road in CBCs. Recently, the original  
30 ditch east of I-25 was realigned. The levees and banks along both sides of the ditch areas are  
31 covered with grass and sparse riparian vegetation. The surrounding area includes agricultural  
32 and residential development.

33 **Eligibility Determination:** The Last Chance Ditch was officially determined eligible for the  
34 NRHP by OAHP in 2003. The entire ditch (5WL.1975) is eligible under Criterion A for its  
35 important association with the development of water rights and agriculture in Weld County.  
36 Although this ditch segment (5WL.1975.1) has recently been realigned east of I-25, the  
37 integrity of location and design remains pristine within the protected rural setting of St. Vrain  
38 State Park on the west side of I-25. The segment within the project APE (5WL.1975.1) retains  
39 sufficient integrity of location, setting, feeling, and use to support the eligibility of the entire  
40 linear resource.

41 **Effect Determination – Package A:** Under Package A, the existing I-25 template would be  
42 maintained in this area. The existing box culverts would not require replacement or  
43 modification, and no direct or indirect impacts to the ditch would occur. FHWA, FTA and CDOT

1 therefore have determined that Package A would result in *no historic properties affected* with  
2 respect to this historic resource.

3 **Effect Determination – Package B:** In this area, I-25 would be widened to the median to  
4 contain a new template consisting of three general purpose lanes plus one buffer-separated  
5 managed lane. The existing east frontage road would be realigned to the east. The proposed  
6 transportation improvements in this area would not require replacement or modification of the  
7 existing box culverts, and no direct or indirect impacts to the ditch would occur under  
8 Package B. FHWA, FTA and CDOT therefore have determined that Package B would result in  
9 *no historic properties affected* with respect to this historic resource.

10 **Effect Determination – Preferred Alternative:** In this area, I-25 would be widened to the  
11 middle to contain a new template consisting of three general purpose lanes plus one buffer-  
12 separated TEL. The existing east frontage road would be realigned to the east. The proposed  
13 transportation improvements in this area would not require replacement or modification of the  
14 existing box culverts, and no direct or indirect impacts to the ditch would occur under the  
15 Preferred Alternative. FHWA, FTA and CDOT therefore have determined that the Preferred  
16 Alternative would result in *no historic properties affected* with respect to this historic resource.

#### 17 **5WL.1974.1 (Rural Ditch)**

18 **Resource Description:** The entire Rural Ditch is approximately 4 miles long. Two segments of  
19 the ditch are present within the APE (see **Figure 3.15-68**). Segment 5WL.1974.1 crosses I-25  
20 diagonally from southwest to northeast immediately north of SH 119, passing under SH 119 and  
21 I-25 in two existing culverts. The segment length is 3,327 feet, and is a 10 feet wide earthen  
22 ditch.

23 Segment 5WL.1974.3 of the historic Rural Ditch crosses northwest to southeast within the  
24 project area. This segment (5WL.1974.3) intercepts waters of Idaho Creek at the southwest  
25 edge of the APE. The excavated 5-foot-deep, earthen ditch segment is 1,253 feet long and  
26 20 feet wide. Both banks of the ditch areas are covered with grass. The surrounding area is  
27 rural in character.

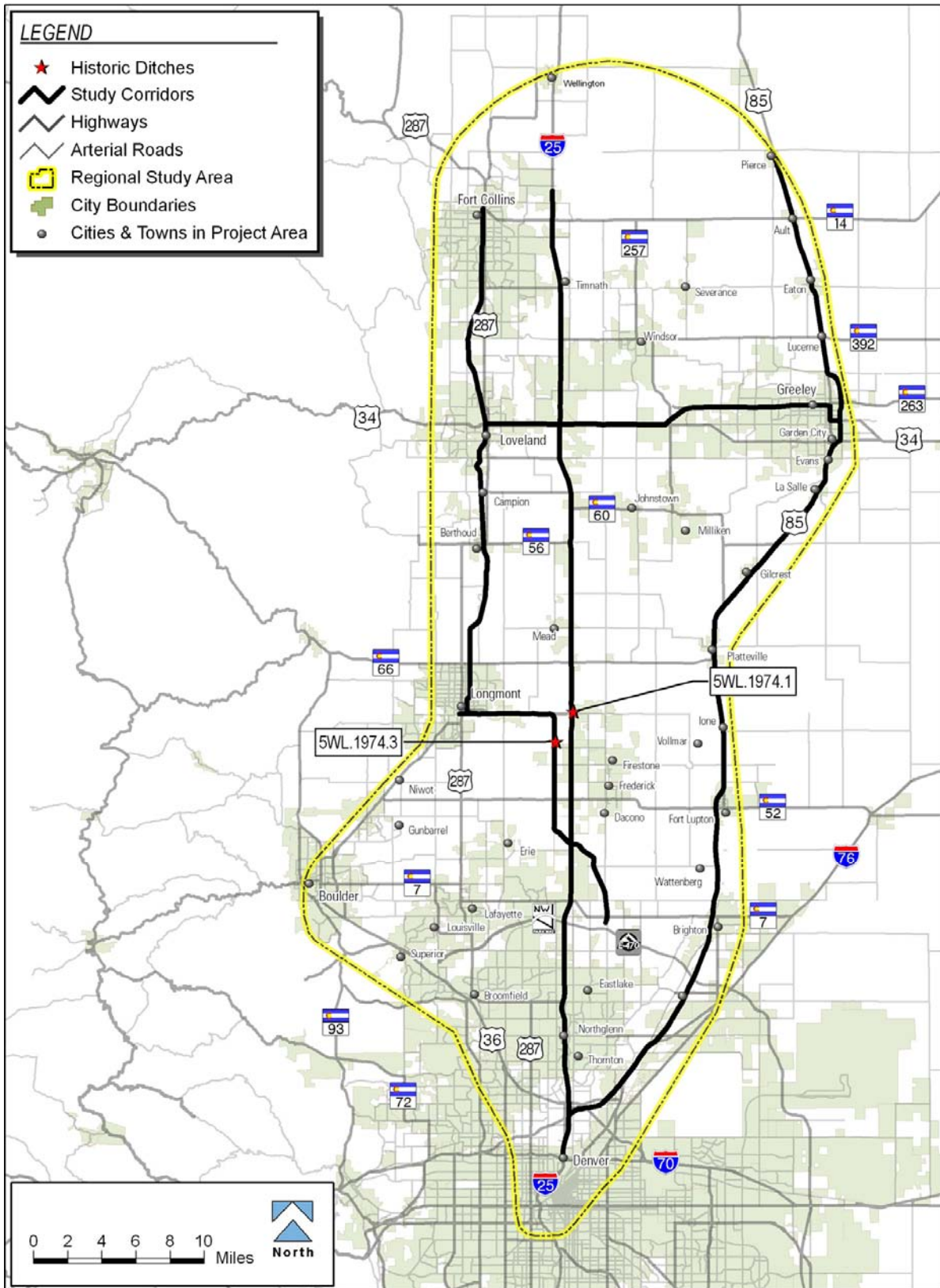
28 **Eligibility Determination:** The entire ditch (5WL.1974) was determined to be not eligible in  
29 1993. The entire Rural Ditch is recommended as eligible for the NRHP under Criterion A  
30 because of its important association with the development of water rights and agriculture in  
31 northeastern Colorado. The 5WL.1974.3 follows the original historic alignment of the ditch, and  
32 therefore supports the eligibility of the entire linear resource. The segment 5WL.1974.1 is  
33 modified by adjacent development and road crossings at SH 119 and I-25 and does not  
34 support eligibility of the entire resource.

#### 35 **Effects Determination:**

36 In order to determine the effect to the entire linear resource, impacts to each of the segments  
37 passing through the project APE were assessed. These impact assessments are presented  
38 below, followed by a determination of effect to the entire Rural Ditch.

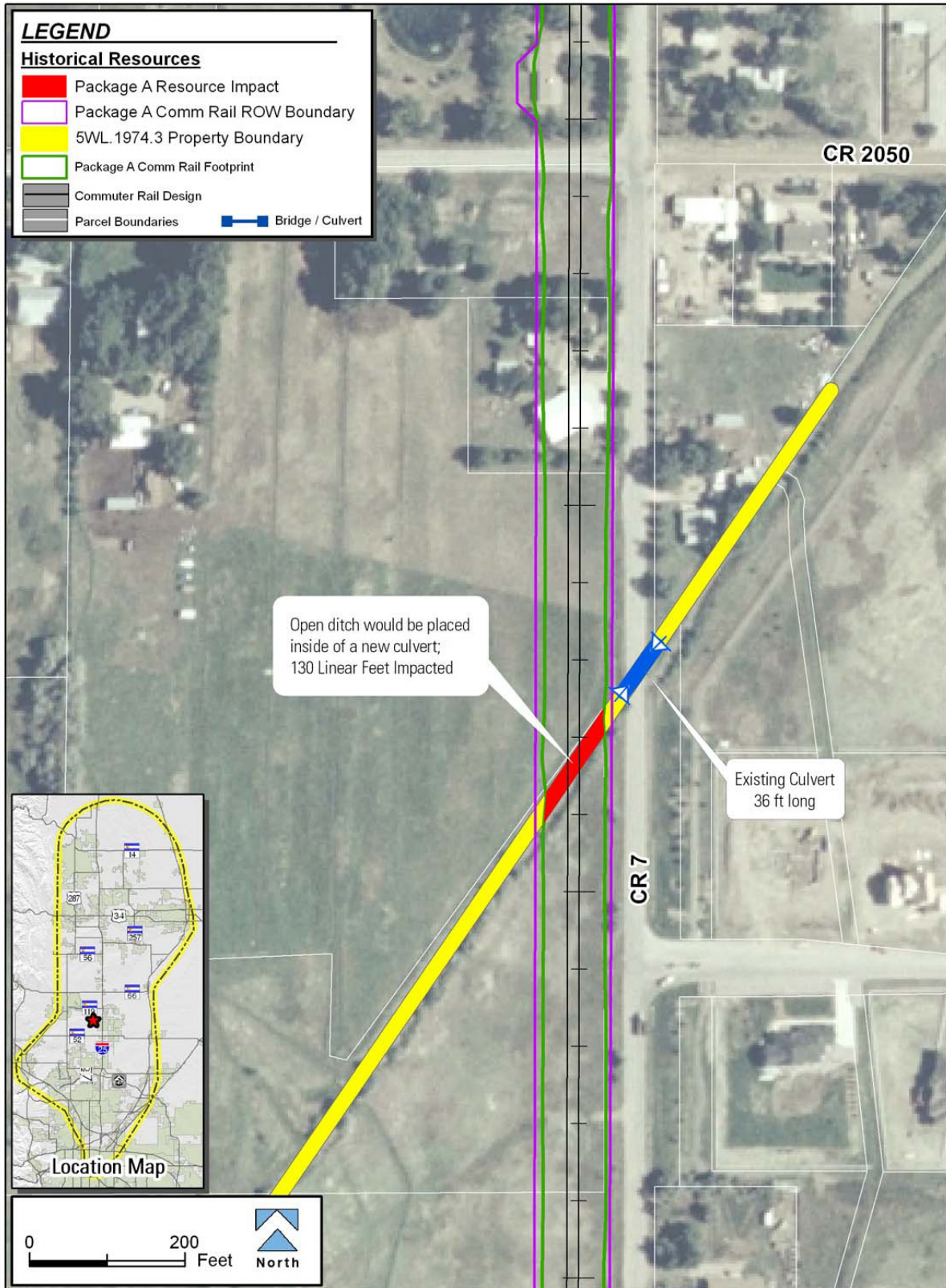
39 **Impacts to segment 5WL.1974.3 – Package A:** The proposed new commuter rail line would  
40 pass in a northwest-southeast alignment across this historic ditch segment. Approximately  
41 130 feet of open ditch would need to be placed in a culvert beneath the new railroad  
42 embankment, ballast, bed and tracks (see **Figure 3.15-69**).

1 Figure 3.15-68 5WL.1974 (Rural Ditch) – Segments Intersecting Project APE



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3

1 Figure 3.15-69 5WL.1974.3 (Rural Ditch) – Package A



2  
3



1 Installation of the new culvert would likely require temporary use of the historic property for  
2 equipment access and minor construction activities. The ditch would remain operational and  
3 irrigation water would be protected from encroachment by construction. All disturbances  
4 caused by construction equipment or construction activities would be temporary in nature and  
5 affected areas would be restored to their original condition and appearance.

6 Installation of the new culvert would likely require temporary use of the historic property for  
7 equipment access and minor construction activities. The ditch would remain operational and  
8 irrigation water would be protected from encroachment by construction. All disturbances  
9 caused by construction equipment or construction activities would be temporary in nature and  
10 affected areas would be restored to their original condition and appearance. Although the  
11 segment of open ditch would be placed in a culvert, this change affects only a very small  
12 percentage of the overall linear resource.

13 **Impacts to segment 5WL.1974.3 – Preferred Alternative:** The proposed new commuter rail  
14 line would pass in a northwest-southeast alignment across this historic ditch segment.  
15 Approximately 108 feet of open ditch would need to be placed in a culvert beneath the new  
16 railroad embankment, ballast, bed and tracks (see **Figure 3.15-70**).

17 Installation of the new culvert would likely require temporary use of the historic property for  
18 equipment access and minor construction activities. The ditch would remain operational and  
19 irrigation water would be protected from encroachment by construction. All disturbances  
20 caused by construction equipment or construction activities would be temporary in nature and  
21 affected areas would be restored to their original condition and appearance.

22 Although the segment of open ditch would be placed in a culvert, this change affects only a  
23 very small percentage of the overall linear resource.

24 **Impacts to segment 5WL.1974.1 – Package A:** The ditch is in a non-improvement  
25 component of Package A and results in no impacts.

26 **Impacts to segment 5WL.1974.1 – Package B:** Under Package B modifications to the  
27 center median of the highway would incorporate new BRT lanes in this area. Because the  
28 ditch is already conveyed underneath the area of highway there would be no additional impact  
29 to the ditch segment. Because the ditch already lacks integrity of alignment and setting, no  
30 additional indirect impacts are expected to result from the installations planned by Package B.

31 **Impacts to segment 5WL.1974.1 – Preferred Alternative:** Under the Preferred Alternative  
32 modifications to the center median of the highway would incorporate new TELs in this area.  
33 Because the ditch is already conveyed underneath the area of highway there would be no  
34 additional impact to the ditch segment. Because the ditch already lacks integrity of alignment  
35 and setting, no additional indirect impacts are expected to result from the installations planned  
36 by Preferred Alternative.

37 **Summary Effects Determination:**

38 **Package A:** Under Package A 130 feet of open ditch would be placed inside a culvert at one  
39 segment locality. Temporary construction impacts would occur during culvert installation and  
40 highway construction activity. Because the physical integrity of the channel of the ditch  
41 segment has previously been compromised by placing it in a culvert, FHWA, FTA and CDOT  
42 have determined that the Package A improvements would result in *no adverse effect* with  
43 respect to the historic resource 5WL.1974 (Rural Ditch).

1 **Package B:** Because no direct or indirect impacts are expected to result from the installations  
2 planned by Package B, FHWA, FTA and CDOT have determined that the Package B  
3 improvements would result in *no historic properties affected* with respect to the historic  
4 resource 5WL.1974 (Rural Ditch).

5 **Preferred Alternative:** Under the Preferred Alternative 108 feet of open ditch would be placed  
6 inside a culvert at one segment locality. Temporary construction impacts would occur during  
7 culvert installation and highway construction activity. Because the physical integrity of the  
8 channel of the ditch segment has been previously compromised by placing it in a culvert,  
9 FHWA, FTA and CDOT have determined that the the Preferred Alternative improvements  
10 would result in *no adverse effect* with respect to the historic resource 5WL.1974 (Rural Ditch).

11 **5WL.3146.1 (Flume Ditch)**

12 **Resource Description:** The ditch crosses under I-25 in a CBC at MP 239.15, about 1 mile  
13 south of SH 119. The earthen ditch runs through a business park and has been recently  
14 dredged and banks burned. The segment is 1,371-foot-long and 10 feet wide.

15 **Eligibility Determination:** In 2001 SHPO agreed that the Rural Ditch is not NRHP-eligible.

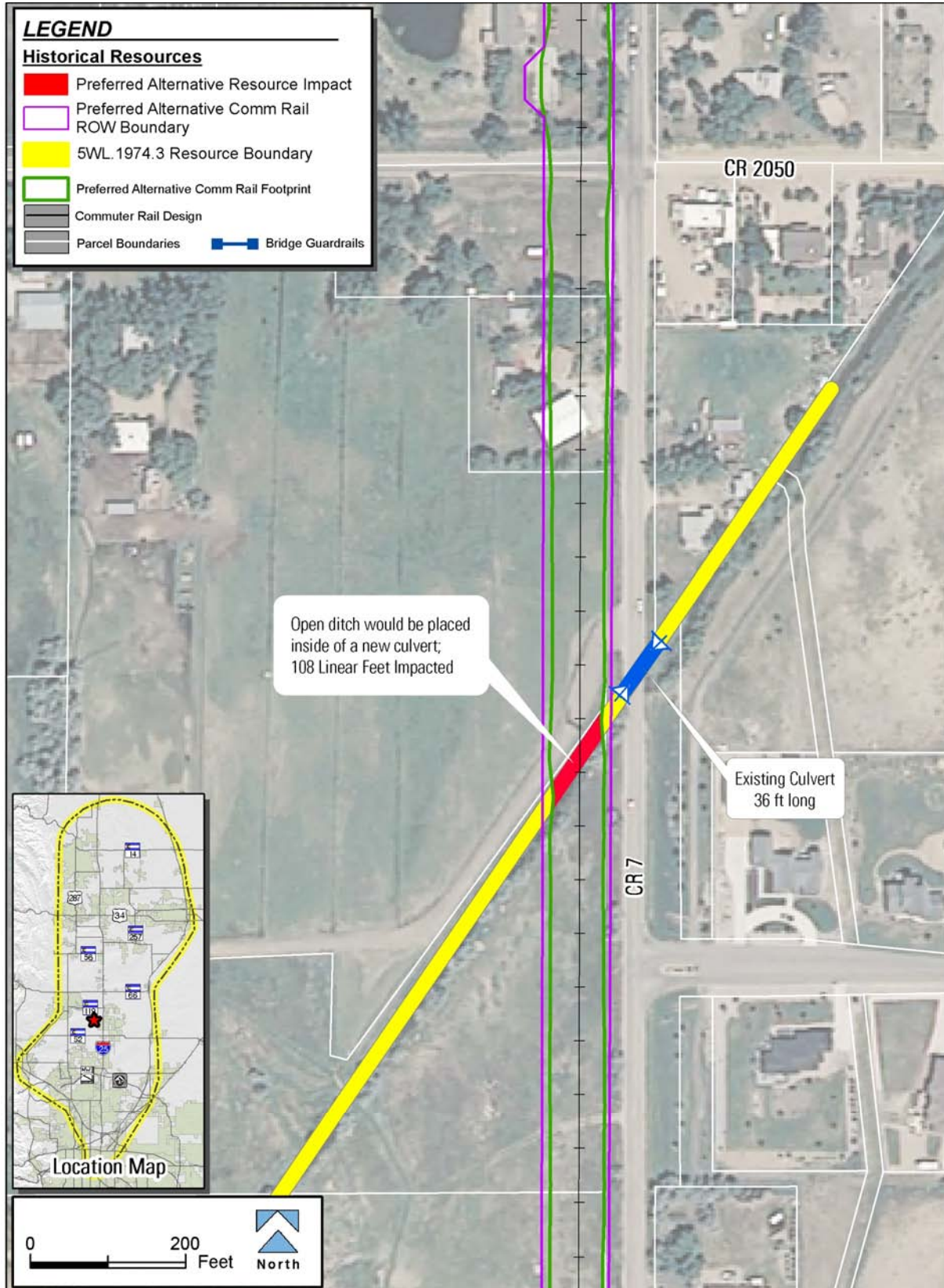
16 **Effects Determination – Package A:** The ditch is in a non-improvement component of  
17 Package A and would not have impacts.

18 **Effects Determination – Package B:** Under Package B modifications to the center median of  
19 the highway would incorporate new BRT lanes in this area. Because the ditch is already  
20 conveyed underneath the area of highway there would be no additional impact to the ditch  
21 segment. Because the ditch already lacks integrity of alignment and setting, no additional  
22 indirect impacts are expected to result from the installations planned by Package B.

23 **Effects Determination – Preferred Alternative:** Under the Preferred Alternative  
24 modifications to the center median of the highway would incorporate new TELs in this area.  
25 Because the ditch is already conveyed underneath the area of highway there would be no  
26 additional impact to the ditch segment. Because the ditch already lacks integrity of alignment  
27 and setting, no additional indirect impacts are expected to result from the installations planned  
28 by the Preferred Alternative.

29

1 Figure 3.15-70 5WL.1974.3 (Rural Ditch) – Preferred Alternative



2  
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1 **5WL.1970 (Lower Boulder Ditch)**

2 Resource Description: The overall length of the Lower Boulder Ditch is 19 miles. It was  
3 originally built in 1859, but was widened in 1954 (see **Figure 3.15-71**). A significant portion of  
4 the ditch (5WL.1970.1) runs within the project corridor and crosses under I-25 in a 490-foot-  
5 long CBC, 3,500 feet north of SH 52. The 1.3 mile long earthen ditch has steep pitched banks,  
6 is 26 feet wide and 6 feet deep. Banks are grass covered except at culvert faces where it is  
7 rip-rapped. The area has parallel access roads along both banks and several pump jacks  
8 nearby.

9 Segment 5WL.1970.7 generally runs perpendicular to and crosses under WCR 7.

10 Segment 5WL.1970.7 of the earthen irrigation ditch is approximately 31 feet wide, 12 feet deep  
11 and 574 feet long. The portion of the ditch that crosses under County Road 7 conveys the  
12 ditch in a culvert. Grass and riparian growth exists along both banks of the ditch in many  
13 areas. The surrounding area is rural in character.

14 Eligibility Determination: The Lower Boulder Ditch (5WL.1970) was determined to be eligible  
15 for the NRHP in 1993 under Criterion A for its important association with the development of  
16 water rights and agriculture in Weld County. Segment 1970.7 of the ditch within the APE  
17 retains sufficient integrity of location, setting, feeling, and use to support the eligibility of the  
18 entire linear resource. Segment 5WL.1970.1 has been modified and no longer retains the  
19 qualities that support the eligibility of the entire resource.

20 **Effects Determination:**

21 In order to determine the effect to the entire linear resource, impacts to each of the segments  
22 passing through the project APE were assessed. These impact assessments are presented  
23 below, followed by a determination of effect to the entire Lower Boulder Ditch.

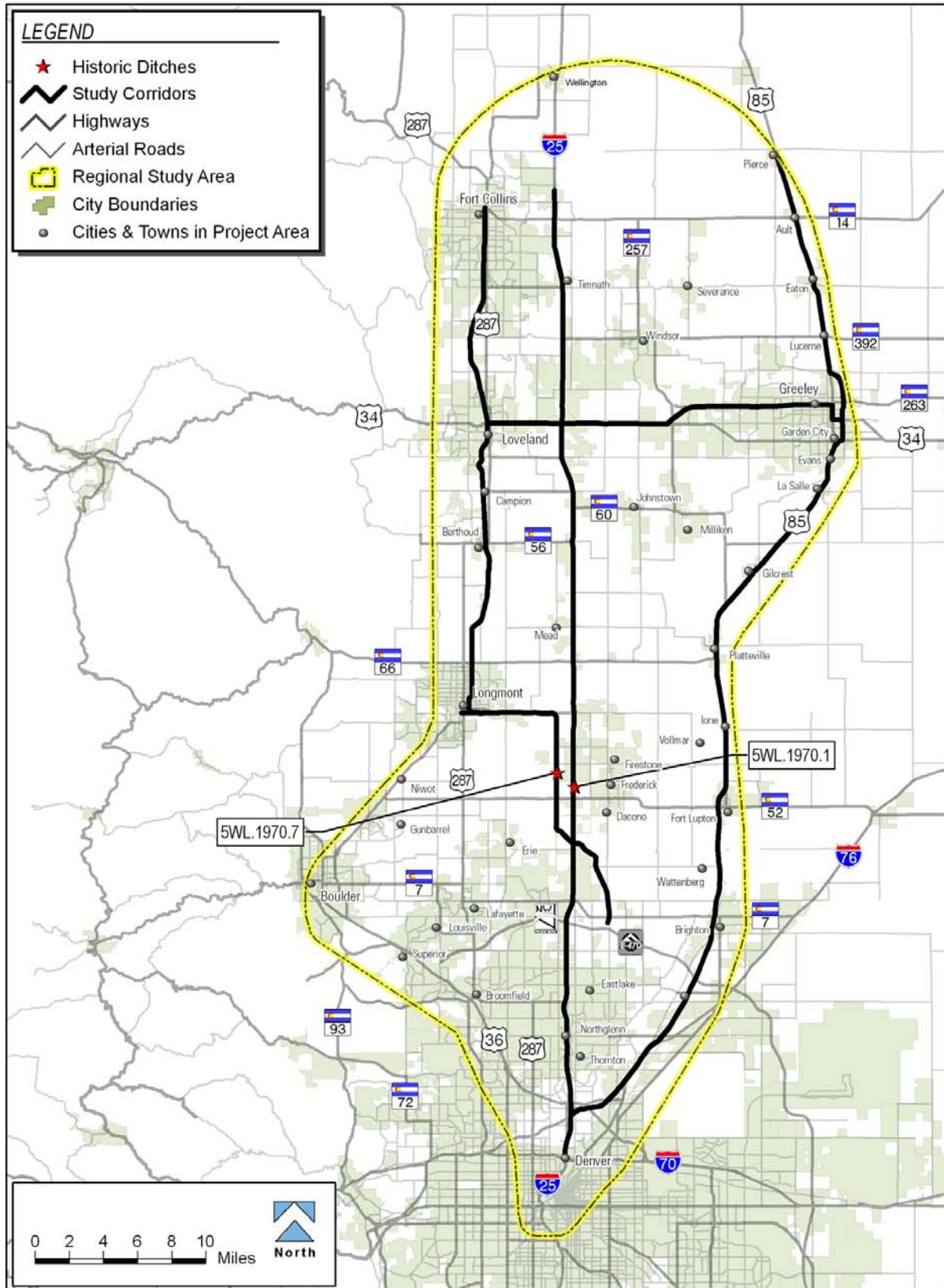
24 **Impacts 5WL.1970.1 – Package A:** The ditch is in a non-improvement component of  
25 Package A and results in no impact.

26 **Impacts 5WL.1970.1 – Package B:** Under Package B, modifications to the center median of  
27 the highway would incorporate new BRT lanes and a transit station and parking facility in this  
28 area. Because the ditch is already conveyed underneath the area of highway and station  
29 improvements, there would be no additional impact to the ditch segment. A parking facility and  
30 water quality basin would be located south of the existing ditch alignment and would not cause  
31 any direct impact. Because the ditch already lacks integrity of alignment and setting, no  
32 additional indirect impacts are expected to result from the installations planned by Package B.

33 **Impacts 5WL.1970.1 – Preferred Alternative:** Under the Preferred Alternative, modifications  
34 to the center median of the highway would incorporate new TELs. Because the ditch is already  
35 conveyed underneath the area of highway improvements, there would be no additional impact  
36 to the ditch segment. A water quality basin would be located south of the existing ditch  
37 alignment and would not cause any direct impact. Because the ditch already lacks integrity of  
38 alignment and setting, no additional indirect impacts are expected to result from the  
39 installations planned by the Preferred Alternative.

1 Figure 3.15-71 5WL.1970 (Lower Boulder Ditch) – Segments Intersecting Project APE

2



1 **Impacts 5WL.1970.7 – Package A:** This historic ditch segment passes beneath WCR 7 via a  
2 culvert, and the proposed new commuter rail corridor closely follows the west side of this road.  
3 The new railroad line would cross the east-west trending ditch segment via a new bridge  
4 structure, the piers of which would be placed outside the limits of this irrigation channel (see  
5 **Figure 3.15-72**). The presence of the new bridge would not substantially affect the setting or  
6 attributes which render the ditch historic.

7 **Impacts 5WL.1970.7 – Preferred Alternative:** This historic ditch segment passes beneath  
8 WCR 7 via a culvert, and the proposed new commuter rail corridor closely follows the west  
9 side of this road. The new railroad line would cross the east-west trending ditch segment via a  
10 new bridge structure, the piers of which would be placed outside the limits of this irrigation  
11 channel (see **Figure 3.15-73**). The presence of the new bridge would not substantially affect  
12 the setting or attributes which render the ditch historic.

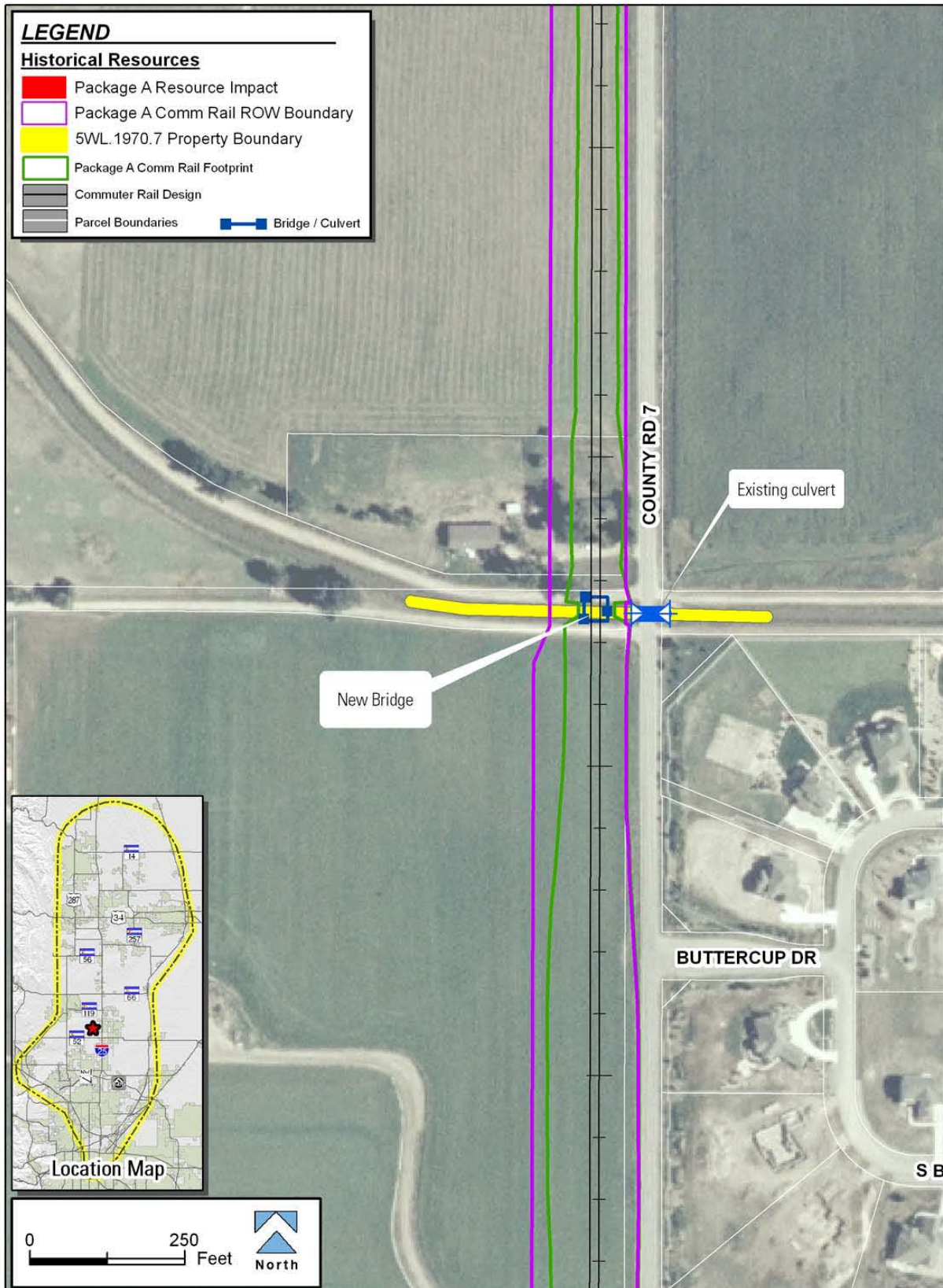
13 **Summary Effects Determination:**

14 **Package A:** A new bridge at WCR 7 would create approximately 35 feet of new overhead  
15 coverage of the ditch. Temporary construction impacts would occur during bridge construction.  
16 Because the physical integrity of the channel of the ditch segment would not be compromised  
17 by construction of the bridge, FHWA, FTA and CDOT have determined that the Package A  
18 transit improvements would result in *no adverse effect* to the historic resource 5LR.1970  
19 (Lower Boulder Ditch).

20 **Package B:** There would be no direct or indirect impacts resulting from Package B  
21 improvements. FHWA, FTA and CDOT have determined that Package B would result in *no*  
22 *historic properties affected* with respect to the Lower Boulder Ditch (5WL.1970).

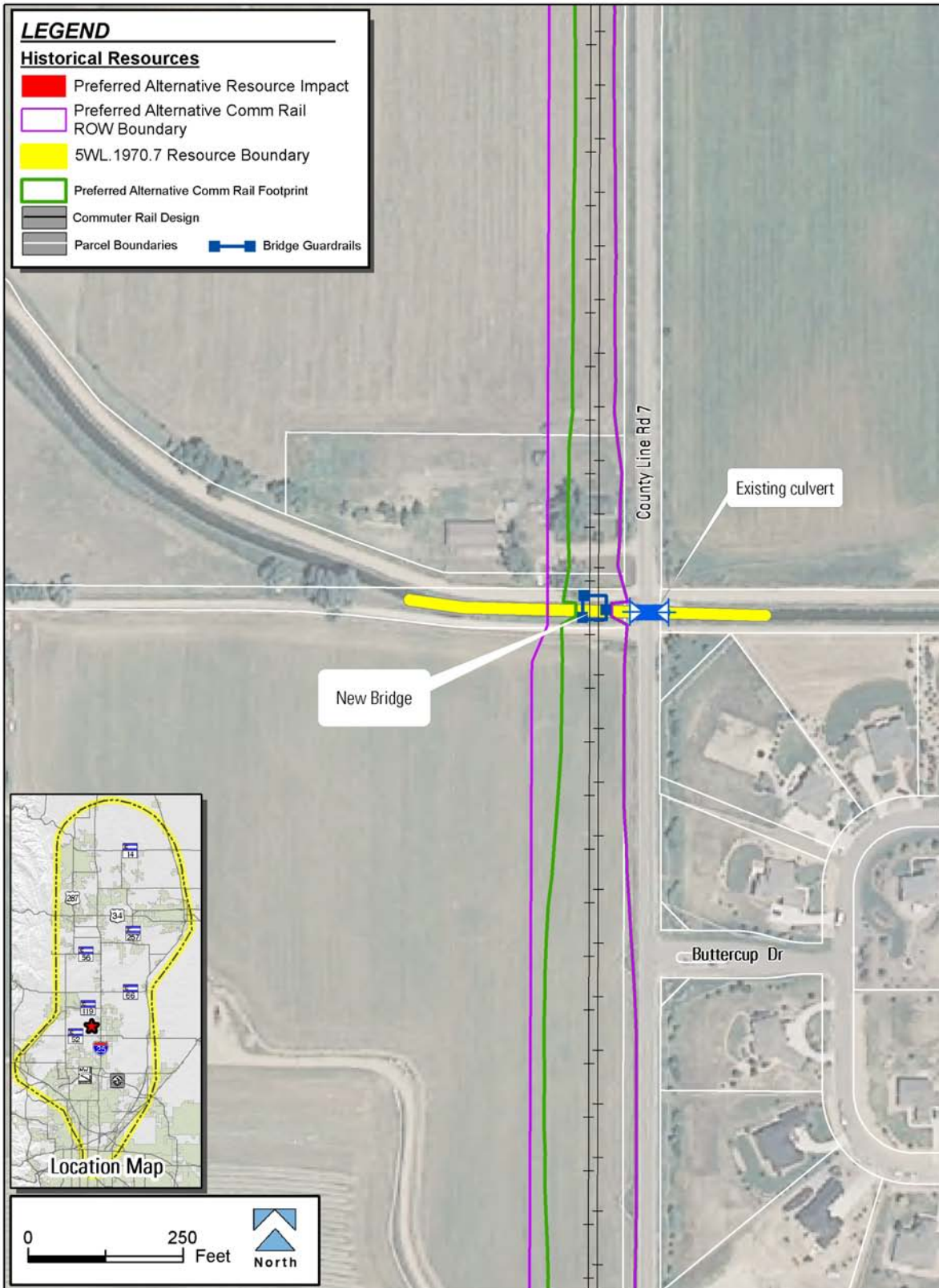
23 **Preferred Alternative:** A new bridge at WCR 7 would create approximately 35 feet of new  
24 overhead coverage of the ditch. Temporary construction impacts would occur during bridge  
25 construction. Because the physical integrity of the channel of the ditch segment would not be  
26 compromised by construction of the bridge, FHWA, FTA and CDOT have determined that the  
27 Preferred Alternative transit improvements would result in *no adverse effect* to the historic  
28 resource 5LR.1970 (Lower Boulder Ditch).

1 Figure 3.15-72 5WL.1970.7 (Lower Boulder Ditch) – Package A



2

1 Figure 3.15-73 5WL.1970.7 (Lower Boulder Ditch) – Preferred Alternative



2



1 **5WL.1966, 5BF.72, 5BF.76, 5AM.457 (Bull Canal/Standley Ditch)**

2 **Resource Description:** The entire Bull Canal/Standley Ditch is approximately 44 miles long  
3 and runs through Adams, Broomfield, and Weld Counties. The ditch was originally built in  
4 1907. Several segments of the Bull Canal/Standley Ditch are within the APE (see  
5 **Figure 3.15-74**).

6 Segment 5WL.1966.1 generally follows a serpentine course adjacent to the east side of I-25  
7 and crosses the highway and the frontage road in multiple locations. The concrete-lined ditch  
8 is approximately 20 feet wide. The portion of the ditch that crosses under I-25 and the frontage  
9 road was altered and conveyed under the roadways in CBCs when the highway was  
10 constructed in the 1960s. Segment (5WL.1966.1) is 3,524 feet (0.67 miles) long. Well-  
11 developed willow growth exists along the south levee of the ditch in some areas. The  
12 surrounding area includes industrial and residential development. Weld County segments  
13 5WL.1966.11 and 5WL.1966.8 cross the APE at the proposed commuter rail alignment. These  
14 segments each contain the 60-foot-wide concrete lined channel running through a rural setting.  
15 Segment 5WL.1966.8 is a 607-foot-long segment of the Bull Ditch that follows a gently curving  
16 alignment from west to northeast through the project area.

17 The Broomfield County portion of ditch within the APE includes 20-foot-wide segments  
18 5BF.72.1, 5BF.72.2, 5BF.72.3, and 5BF.76.2. Each concrete-lined segment crosses under  
19 existing I-25 and the frontage road through modern CBCs. Segment 5BF.72.1 is 1,439 feet  
20 (0.27 mile) long. Sparse riparian growth of large mature trees exists along both banks of the  
21 ditch in many areas. The surrounding area includes agricultural and residential development.  
22 Segment 5BF.72.2 is 1,023 feet (0.2 mile) long with grassy vegetation lining the ditch levees.  
23 Segment 5BF.72.3 is 3,392 feet (0.64 mile) long. The latter two segments traverse areas  
24 characterized by industrial and residential development.

25 Segment 5BF.76.2 is 2,172 feet long and approaches SH 7, then turns south crossing both  
26 SH 7 and I-25. The ditch where exposed is earthen with rip-rapped banks and is about 15 feet  
27 wide. The ditch has been extensively realigned by recent commercial development to remove  
28 the entire ditch loop north of SH 7 and is now buried in a pipe for its length parallel to SH 7 and  
29 crosses south underneath SH 7 via a bridge. This segment of the ditch ends at the foot of the  
30 I-25 southbound on-ramp. The Broomfield segments traverse areas characterized by industrial  
31 and residential development.

32 The Adams County segments include 5AM.457.2, 5AM.457.3, 5AM.457.4, and 5AM.457.8.  
33 Segment 5AM.457.2 is approximately 35-foot wide and 3,685 feet (0.7 mile) long. This  
34 segment crosses under existing I-25 and the frontage road via modern CBCs. Heavy riparian  
35 growth exists along both banks of the ditch in many areas. The surrounding land now supports  
36 mixed development. Remaining segments 5AM.457.3, 5AM.457.4, and 5AM.457.8 cross I-25  
37 and the frontage roads inside culverts installed when I-25 was constructed in the 1960s.

38 Segment 5AM.457.3 runs east of I-25 near the base of the northbound off-ramp for SH 7. The  
39 ditch runs underneath I-25 in a 330-foot-long CBC. The segment appears briefly on the  
40 surface at the opening of the CBC directly east of I-25 and immediately disappears below  
41 ground to cross underneath the Larkridge Shopping Center.

42 Segment 5AM.457.4 of the ditch is located west of I-25 and south of West136th Avenue. Most  
43 of the ditch segment has been abandoned and the ditch has been realigned at a point further  
44 west of I-25 out of the APE. A portion of the abandoned segment has been obliterated by new  
45 commercial construction at the site.



1 Segment 457.8 is no longer functional and has been abandoned. This segment is located east  
2 of I-25 near MP 226.8. This 1,585-foot-long, 26-foot-wide concrete lined looping ditch segment  
3 has been abandoned and no longer functions for irrigation. Weeds and rushes fill the  
4 abandoned channel floor and the concrete lining of the bank is cracked and settled in many  
5 places.

6 **Eligibility Determination:** The entire Bull Canal/Standley Ditch was a part of the ambitious,  
7 corporate-developed Standley Lake Irrigation System developed in the early 20th Century. The  
8 canal is eligible for listing on the NRHP under Criterion A because of its important association  
9 with the development of water rights and agriculture in northeastern Colorado, and under  
10 Criterion C as an important example of irrigation engineering in the region. Segments  
11 5WL.1966.11 and 5WL.1966.8 also include good examples of concrete siphons which  
12 represent a distinctive method of hydraulic engineering that add to the canal's significance  
13 under Criterion C. Segments 5WL.1966.1, 5WL.1966.11, 5BF72.1, 5BF.72.2, 5BF.72.3, and  
14 5AM457.1 within the project APE retain sufficient integrity of location, setting, feeling, and use  
15 to support the eligibility of the entire linear resource. Resources 5BF.76.2, 5AM.457.3,  
16 5AM.457.4, and 5AM.457.8 were found to lack sufficient integrity to support the eligibility of the  
17 entire linear resource.

18 **Effect Determination:**

19 In order to determine the effect to the entire linear resource, impacts to each of the segments  
20 passing through the project APE were assessed. These impact assessments are presented  
21 below, followed by a determination of effect to the entire Bull Canal/Standley Ditch.

22 **Impacts to segment 5WL.1966.1 – Package A:** This historic canal is currently conveyed  
23 beneath I-25 and the east frontage road in two places through modern CBCs. Under Package A,  
24 the existing I-25 template would be maintained in this area. The existing box culverts would not  
25 require replacement or modification, and no direct or indirect impacts to the canal would occur.

26 **Impacts to segment 5WL.1966.1 – Package B:** In this area, I-25 would be widened to the  
27 median to contain a new template consisting of three general purpose lanes plus one buffer-  
28 separated managed lane in each direction. The existing east frontage road would be realigned  
29 farther to the east. The proposed transportation improvements in this area would not require  
30 replacement or modification of the existing box culverts, and no direct or indirect impacts to the  
31 canal would occur under Package B.

32 **Impacts to segment 5WL.1966.1 – Preferred Alternative:** In this area, I-25 would be  
33 widened to the median to contain a new template consisting of three general purpose lanes  
34 plus one TEL in each direction. The proposed transportation improvements in this area would  
35 not require replacement or modification of the existing box culverts, and no direct or indirect  
36 impacts to the canal would occur under the Preferred Alternative.

37 **Impacts to segment 5BF.72.1 – Package A:** This historic canal is conveyed beneath I-25 and  
38 the east frontage road through modern CBCs. Under Package A, the I-25 template would be  
39 reconfigured to provide four general purpose lanes in each direction. The proposed  
40 transportation improvements in this area would not require replacement or modification of the  
41 existing box culverts, and no direct or indirect impacts to the canal would occur under  
42 Package A.

43 **Impacts to segment 5BF.72.1 – Package B:** This historic canal is conveyed beneath I-25 and  
44 the east frontage road through modern CBCs. In this area, I-25 would be widened to the median

1 to provide a new template consisting of three general purpose lanes plus one buffer-separated  
2 managed lane in each direction. The existing east frontage road would be retained. The  
3 proposed transportation improvements in this area would not require replacement or  
4 modification of the existing box culverts, and no direct or indirect impacts to the canal would  
5 occur under Package B.

6 **Impacts to segment 5BF.72.1 – Preferred Alternative:** This historic canal is conveyed  
7 beneath I-25 and the east frontage road through modern CBCs. In this area, I-25 would be  
8 widened to the median to provide a new template consisting of three general purpose lanes plus  
9 one TEL in each direction. The existing east frontage road would be retained. The proposed  
10 transportation improvements in this area would not require replacement or modification of the  
11 existing box culverts, and no direct or indirect impacts to the canal would occur under the  
12 Preferred Alternative.

13 **Impacts to segment 5BF.72.2 – Package A:** This historic canal is conveyed beneath I-25 and  
14 the east frontage road through modern CBCs. Under Package A, the existing I-25 template  
15 would be maintained in this area. The existing box culverts would not require replacement or  
16 modification, and no direct or indirect impacts to the canal would occur.

17 **Impacts to segment 5BF.72.2 – Package B:** This historic canal is conveyed beneath I-25 and  
18 the east frontage road through modern CBCs. In this area, I-25 would be widened to the median  
19 to provide a new template consisting of three general purpose lanes plus one buffer-separated  
20 managed lane in each direction. The existing east frontage road would be retained. The  
21 proposed transportation improvements in this area would not require replacement or  
22 modification of the existing box culverts, and no direct or indirect impacts to the canal would  
23 occur under Package B.

24 **Impacts to segment 5BF.72.2 – Preferred Alternative:** This historic canal is conveyed  
25 beneath I-25 and the east frontage road through modern CBCs. In this area, I-25 would be  
26 widened to the median to provide a new template consisting of three general purpose lanes plus  
27 one TEL in each direction. The existing east frontage road would be retained. The proposed  
28 transportation improvements in this area would not require replacement or modification of the  
29 existing box culverts, and no direct or indirect impacts to the canal would occur under the  
30 Preferred Alternative.

31 **Impacts to segment 5BF.72.3—Package A:** This historic canal is conveyed beneath I-25 and  
32 the east frontage road through modern CBCs. In this area, I-25 would be widened to the median  
33 to provide a new template consisting of four general purpose lanes in each direction. The  
34 existing east frontage road would be retained. The proposed transportation improvements in this  
35 area would not require replacement or modification of the existing box culverts, and no direct or  
36 indirect impacts to the canal would occur under Package A.

37 **Impacts to segment 5BF.72.3—Package B:** This historic canal is conveyed beneath I-25  
38 and the east frontage road through modern CBCs. In this area, I-25 would be widened to the  
39 median to provide a new template consisting of four general purpose lanes in each direction.  
40 The existing east frontage road would be retained. The proposed transportation improvements  
41 in this area would not require replacement or modification of the existing box culverts, and no  
42 direct or indirect impacts to the canal would occur under Package B.

43 **Impacts to segment 5BF.72.3 – Preferred Alternative:** This historic canal is conveyed  
44 beneath I-25 and the east frontage road through modern CBCs. In this area, I-25 would be

1 widened to the median to provide a new template consisting of three general purpose lanes  
2 plus one TEL in each direction. The existing east frontage road would be retained. The  
3 proposed transportation improvements in this area would not require replacement or  
4 modification of the existing box culverts, and no direct or indirect impacts to the canal would  
5 occur under the Preferred Alternative.

6 **Impacts to segment 5BF.76.2 – Package A:** Package A would require putting the 750-foot-  
7 long remainder of the ditch located between the SH 7 pipe outfall and the existing I-25 CBC in  
8 a buried culvert (see **Figure 3.15-75**).

9 **Impacts to segment 5BF.76.2 – Package B:** Package B would require putting the 750-foot-  
10 long remainder of the ditch located between the SH 7 pipe outfall and the existing I-25 CBC in  
11 a buried culvert (see **Figure 3.15-75**).

12 **Impacts to segment 5BF.76.2 – Preferred Alternative:** The Preferred Alternative would  
13 require putting 615 feet of the ditch located between the SH 7 pipe outfall and the existing I-25  
14 CBC in a buried culvert. West of the SH 7 outfall the ditch would be capped for a short  
15 distance where it runs adjacent to SH 7 (see **Figure 3.15-76**).

16 **Impacts to segment 5AM.457.2 – Package A:** This historic canal is conveyed beneath I-25  
17 and the east frontage road through modern CBCs. Under Package A, the existing I-25  
18 template would be maintained in this area. The existing box culverts would not require  
19 replacement or modification, and no direct or indirect impacts to the canal would occur.

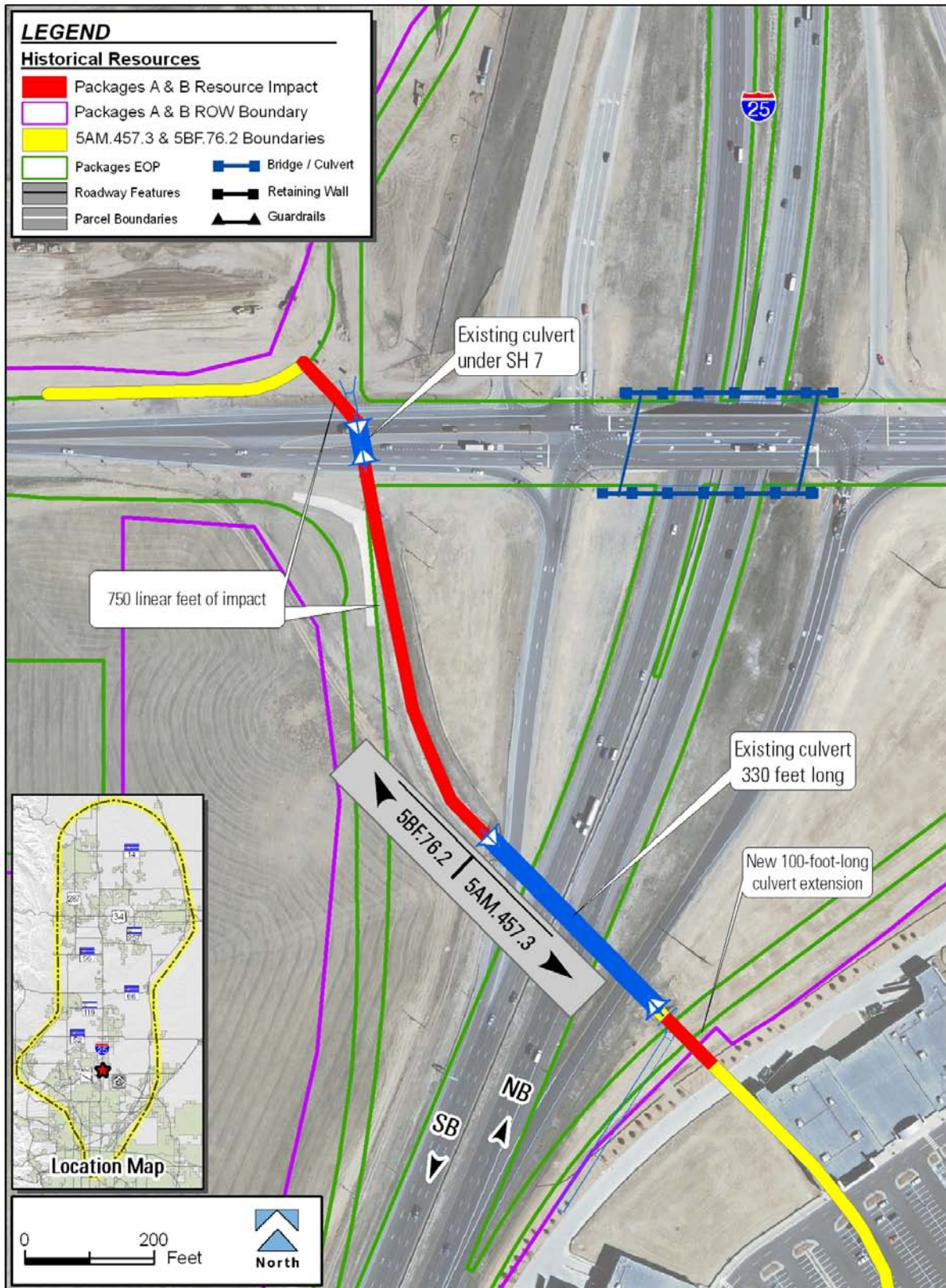
20 **Impacts to segment 5AM.457.2 – Package B:** This historic canal is conveyed beneath I-25  
21 and the east frontage road through modern CBCs. Under Package B, the I-25 template would  
22 consist of three general purpose lanes plus one buffer-separated managed lane. The portion  
23 of the ditch that currently crosses under the highway and frontage roads is conveyed inside a  
24 CBC. The new roadway would be contained within the current roadway template and no new  
25 disturbance would occur to areas of the ditch located outside the existing culverts. The  
26 integrity of that portion of the historic canal to be placed in a culvert has already been  
27 compromised by original construction of I-25 in the 1960s, and no new direct or indirect  
28 impacts would occur.

29 **Impacts to segment 5AM.457.2 – Preferred Alternative:** This historic canal is conveyed  
30 beneath I-25 and the east frontage road through modern CBCs. Under the Preferred  
31 Alternative, the I-25 template would consist of three general purpose lanes plus one TEL in  
32 each direction. The portion of the ditch that currently crosses under the highway and frontage  
33 roads is conveyed inside a CBC. The new roadway would be contained within the current  
34 roadway template and no new disturbance would occur to areas of the ditch located outside  
35 the existing culverts. The integrity of that portion of the historic canal to be placed in a culvert  
36 has already been compromised by original construction of I-25 in the 1960s, and no new direct  
37 or indirect impacts would occur under the Preferred Alternative.

38 **Impacts to segment 5AM.457.3 – Package A:** Package A would result in placing an  
39 additional 100 feet of open ditch into a culvert extension east of the I-25 northbound  
40 off-ramp (see **Figure 3.15-75**).

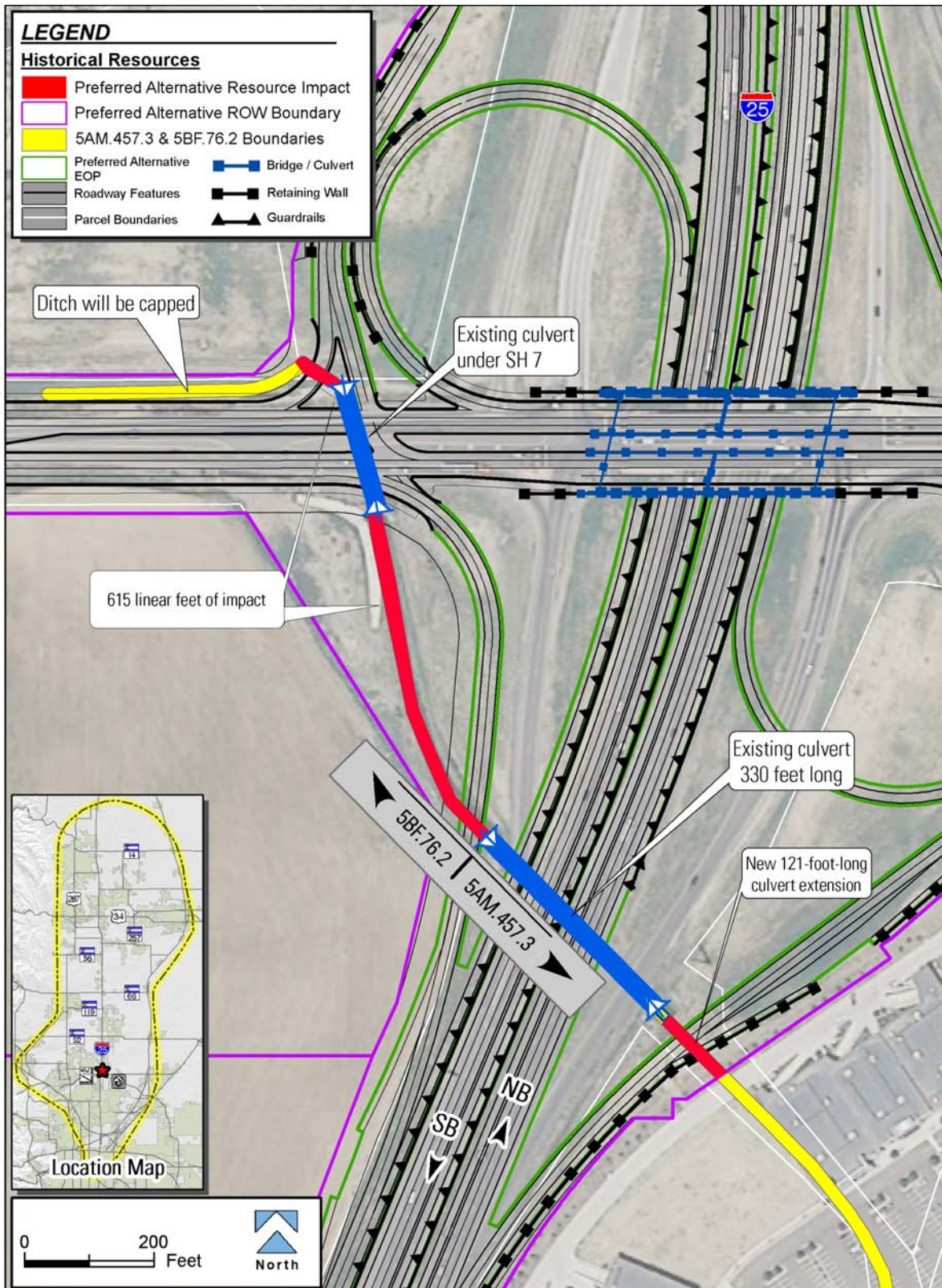
41 **Impacts to segment 5AM.457.3 – Package B:** Package B would result in placing an  
42 additional 100 feet of open ditch into a culvert extension east of the I-25 northbound  
43 off-ramp (see **Figure 3.15-75**).

1 Figure 3.15-75 5BF.76.2 and 5AM.457.3 (Bull Canal/Standley Ditch) – Packages A & B



2

1 Figure 3.15-76 5BF.76.2 and 5AM.457.3 (Bull Canal/Standley Ditch) – Preferred  
2 Alternative

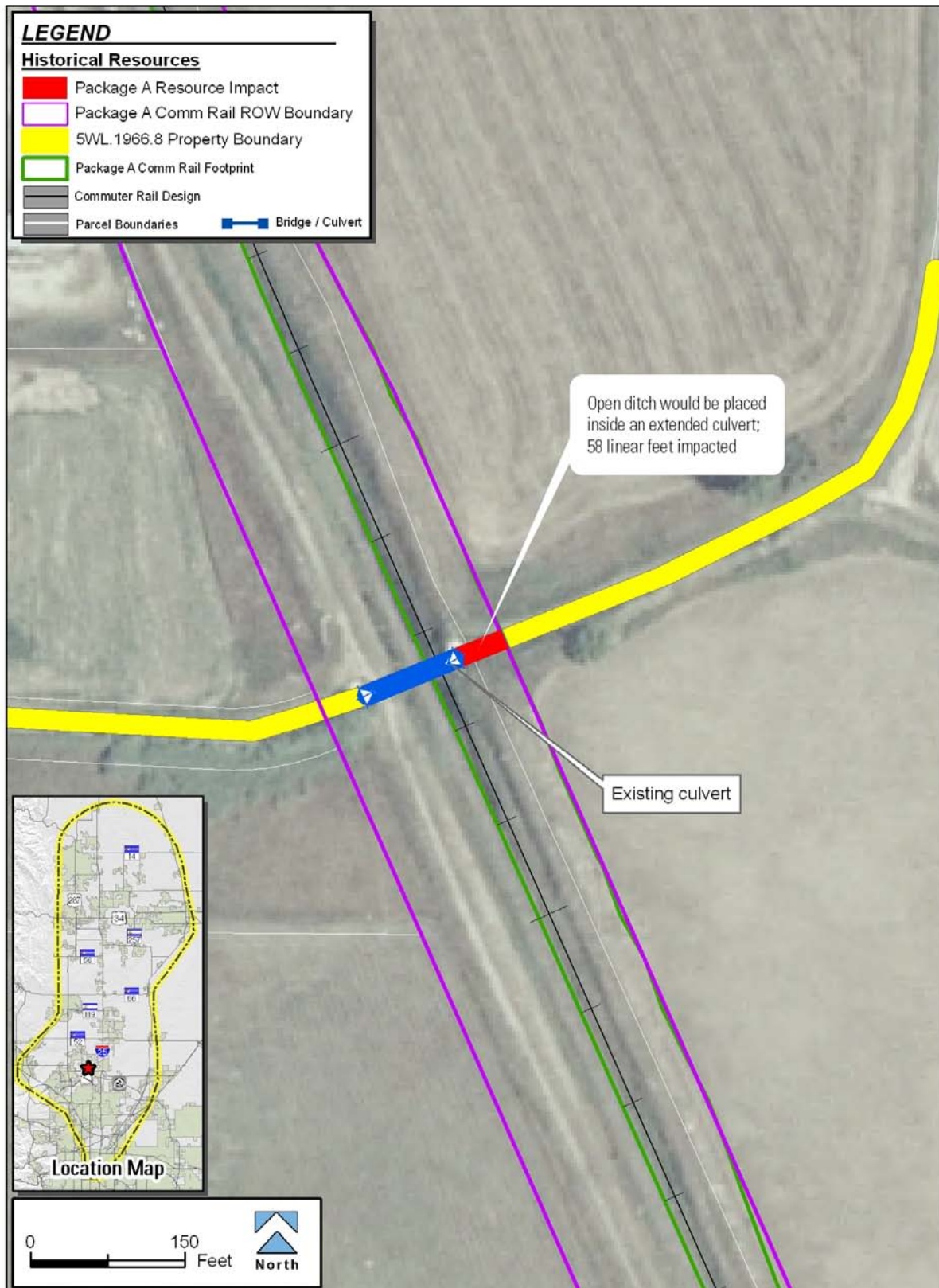


3  
4

- 1 **Impacts to segment 5AM.457.3 – Preferred Alternative:** The Preferred Alternative would  
2 result in placing an additional 121 feet of open ditch into a culvert extension east of the I-25  
3 northbound off-ramp (see **Figure 3.15-76**).
- 4 **Impacts to segment 5AM.457.4 – Package A:** The ditch is in an area where no  
5 improvements are planned on I-25 in Package A. A permanent water quality basin is planned  
6 in proximity to the ditch but would not result in a direct impact to this feature.
- 7 **Impacts to segment 5AM.457.4 – Package B:** Highway widening of I-25 resulting from  
8 Package B would not result in direct impacts to this ditch. A permanent water quality basin is  
9 planned in proximity to the ditch but would not result in a direct impact to this feature. There  
10 would be no temporary construction impacts to this feature.
- 11 **Impacts to segment 5AM.457.4 – Preferred Alternative:** Highway widening of I-25 resulting  
12 from the Preferred Alternative would not result in direct impacts to this ditch. A permanent  
13 water quality basin is planned in proximity to the ditch but would not result in a direct impact to  
14 this feature. There would be no temporary construction impacts to this feature as a result of  
15 the Preferred Alternative.
- 16 **Impacts to segment 5AM.457.8 – Package A:** The ditch is in a non-improvement component  
17 of Package A and results in no impacts to the ditch.
- 18 **Impacts to segment 5AM.457.8 – Package B:** Package B improvements do not encroach on  
19 the ditch. Temporary construction impacts would be avoided at this site.
- 20 **Impacts to segment 5AM.457.8 – Preferred Alternative:** The Preferred Alternative  
21 improvements do not encroach on the ditch. Temporary construction impacts would be  
22 avoided under the Preferred Alternative at this site.
- 23 **Impacts to segment 5WL.1966.11 – Package A:** The proposed new commuter rail line  
24 would pass in a northwest-southeast alignment across this historic ditch segment. The new rail  
25 line would closely parallel an existing active rail line through this area. The historic ditch has  
26 already been placed in a culvert beneath the existing railroad grade. The existing culvert would  
27 be left in place and no culvert extension should be necessary to accommodate the new  
28 additional rail line. No direct or indirect impacts would therefore occur.
- 29 **Impacts to segment 5WL.1966.11 – Preferred Alternative:** The proposed new commuter  
30 rail line would pass in a northwest-southeast alignment across this historic ditch segment. The  
31 new rail line would be constructed on an existing railroad grade through this area. The historic  
32 ditch has already been placed in a culvert beneath the existing railroad grade. The existing  
33 culvert would be left in place and no culvert extension should be necessary to accommodate  
34 the new rail line. Therefore, no direct or indirect impacts would occur as a result of the  
35 Preferred Alternative.
- 36 **Impacts to segment 5WL.1966.8 – Package A:** In the vicinity of this historic ditch, the  
37 proposed new commuter rail line would run closely parallel to the east side of an existing  
38 active rail line. The historic ditch has already been placed in a culvert beneath the existing  
39 railroad grade. The existing culvert would be left in place and approximately 58 feet of open  
40 ditch would be placed in a new culvert extending beneath the proposed new commuter rail line  
41 (see **Figure 3.15-77**). Although a small segment of open ditch would be placed in a culvert,  
42 this change affects only a very small percentage of the entire linear resource.



1 Figure 3.15-77 5WL.1966.8 (Bull Ditch segment of the Bull Canal/Standley Ditch) –  
2 Package A  
3



1 **Impacts to segment 5WL.1966.8 –Preferred Alternative:** In the vicinity of this historic ditch,  
2 the proposed new commuter rail line would be constructed on an existing railroad grade. The  
3 historic ditch has already been placed in a culvert beneath the existing railroad grade. The  
4 existing culvert would be left in place and no culvert extension should be necessary to  
5 accommodate the new rail line. Therefore, no direct or indirect impacts would occur as a result  
6 of the Preferred Alternative (see **Figure 3.15-78**).

7 **Summary Effect Determination:**

8 Package A: A total of 908 linear feet of open ditch would be impacted. Approximately 850 feet  
9 of ditch would be placed inside two culverts at the I-25 and SH 7 interchange where much of  
10 the ditch has already been realigned and runs through existing culverts (BF.76.2 and  
11 5AM.457.3). An additional 58 feet of open ditch (5WL.1966.85) would be placed inside an  
12 extended culvert along the commuter rail. Temporary construction impacts would occur during  
13 culvert installation and highway construction activity at that location. No other direct or indirect  
14 impacts would occur to the remaining seven segments. FHWA, FTA and CDOT have  
15 determined that the Package A improvements would result in no adverse effect to the historic  
16 Bull Canal/Standley Ditch (5WL.1966, 5BF.72, 5BF.76, and 5AM.457).

17 **Package B:** A total of 850 feet of open ditch would be placed inside a culvert at one segment  
18 locality (5BF.76.2 and 5AM.457.3). Impacts would be identical to Package A. Temporary  
19 construction impacts would occur during culvert installation and highway construction activity  
20 at that location. No other direct or indirect impacts would occur to the remaining seven  
21 segments. FHWA, FTA and CDOT have determined that Package B improvements would  
22 result in no adverse effect to the historic Bull Canal/Standley Ditch (5WL.1966, 5BF.72,  
23 5BF.76, and 5AM.457).

24 **Preferred Alternative:** A total of 908 linear feet of open ditch would be impacted.  
25 Approximately 736 feet of ditch would be placed inside two culverts at the I-25 and SH 7  
26 interchange. West of these culverts another section of the ditch would be capped as it runs  
27 adjacent to SH 7 on the north side of the roadway. In this area much of the ditch has already  
28 been realigned and it currently runs through existing culverts beneath I-25 and its ramps as  
29 well as SH 7. As a result of these previous alterations, segment 5BF.76.2, was found to lack  
30 sufficient integrity to support the eligibility of the entire linear resource. Temporary construction  
31 impacts would occur during culvert installation and highway construction activity at that  
32 location. No other direct or indirect impacts would occur to the remaining seven segments. As  
33 a result of the impacted segments lack of integrity to support the eligibility of the entire  
34 resource, FHWA, FTA and CDOT have determined that the Preferred Alternative  
35 improvements would result in no adverse effect to the historic Bull Canal/Standley Ditch  
36 (5WL.1966, 5BF.72, 5BF.76, and 5AM.457).

1 **Figure 3.15-78 5WL.1966.8 (Bull Ditch Segment of the Bull Canal/Standley Ditch) –**  
2 **Preferred Alternative**



3

1 **5AM.1291.3 (Farmers Highline Canal/Niver Canal)**

2 **Resource Description:** This historic canal segment runs perpendicular to, and crosses, I-25.  
3 The earthen ditch is approximately 20 feet wide. The portion of the ditch that crosses under the  
4 highway was altered when I-25 was built in the 1960s, when the canal channel was placed  
5 under a 38-foot-long bridge. The entire ditch is approximately 40 miles long. The documented  
6 segment in the project APE (5AM.1291.3) is 2,234 feet long. Grassy vegetation with sparse  
7 riparian growth exists along both banks of the ditch in many areas. The surrounding area  
8 includes residential development.

9 **Eligibility Determination:** The entire length of the canal (5AM.1291) in Adams County is  
10 eligible for the NRHP under Criterion A for its important association with the development of  
11 water rights and agriculture in Adams County. The canal has been in operation for over  
12 100 years. The segment within the project APE (5AM.1291.3) retains sufficient integrity of  
13 location, setting, feeling, and use to support the eligibility of the entire linear resource.

14 **Effect Determination – Package A:** I-25 currently passes over this historic canal via an  
15 existing 123-foot-wide by 38-foot-long bridge structure. Under Package A, the existing I-25  
16 template would be maintained in this area. The existing bridge would not require replacement  
17 or modification, and no direct or indirect impacts to the canal would occur. FHWA, FTA and  
18 CDOT therefore have determined that Package A would result in *no historic properties*  
19 *affected* with respect to this historic resource.

20 **Effect Determination – Package B:** Under Package B, the existing bridge over the historic  
21 canal would be replaced with a new 73-foot-long, 210-foot-wide pre-cast pre-stressed girder  
22 bridge, to carry a new template consisting of three general purpose lanes plus one buffer-  
23 separated managed lane. The bridge piers would be placed outside the limits of the historic  
24 canal, and no direct or indirect impacts would occur. FHWA, FTA and CDOT therefore have  
25 determined that Package B would result in *no historic properties affected* with respect to this  
26 historic resource.

27 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, the existing  
28 bridge over the historic canal would be replaced with a new 73-foot-long, 210-foot-wide pre-  
29 cast pre-stressed girder bridge, to carry a new template consisting of three general purpose  
30 lanes plus one buffer-separated TEL in each direction. The bridge piers would be placed  
31 outside the limits of the historic canal, and no direct or indirect impacts would occur. FHWA,  
32 FTA and CDOT therefore have determined that the Preferred Alternative would result in *no*  
33 *historic properties affected* with respect to this historic resource.

34 **5WL.322 (White-Plumb Farm)**

35 **Resource Description:** The White-Plumb Farm was established in the late 1800s. It is  
36 located at 955 39th Avenue in Greeley. The homestead was originally part of a 160-acres  
37 Timber Culture Act claim acquired in 1881 by Civil War veteran Charles White. The Plumb  
38 family moved to the farm in 1923 and lived there until 1997. This farm has been designated a  
39 Centennial Farm by the Colorado Historical Society.

40 **Eligibility Determination:** Based on its important association with agriculture in Weld County  
41 during the 19th century, this homestead is eligible for listing on the NRHP under Criterion A.

42 **Effect Determination – Package A:** None of the proposed improvements associated with  
43 Package A are close to this historic property, and no direct or indirect impacts would occur.

1 FHWA, FTA and CDOT therefore have determined that Package A would result in *no historic*  
2 *properties affected* with respect to this historic resource.

3 **Effect Determination – Package B:** None of the proposed improvements associated with  
4 Package B are close to this historic property, and no direct or indirect impacts would occur.  
5 FHWA, FTA and CDOT therefore have determined that Package B would result in *no historic*  
6 *properties affected* with respect to this historic resource.

7 **Effect Determination – Preferred Alternative:** None of the proposed improvements  
8 associated with the Preferred Alternative are close to this historic property, and no direct or  
9 indirect impacts would occur. FHWA, FTA and CDOT therefore have determined that the  
10 Preferred Alternative would result in *no historic properties affected* with respect to this historic  
11 resource.

## 12 E-470 to US 36

### 13 **5AM.2073 (North Glenn First Filing)**

14 **Resource Description:** This historic post-World War II residential subdivision (5AM.2073) is  
15 located on the east side of I-25. It is bounded on the south by East 104<sup>th</sup> Avenue and on the  
16 east by Washington Street. It is significant as an integral and important element of the master  
17 planned community of Northglenn. North Glenn was developed by the Perl-Mack Construction  
18 Company, aided by the Denver-based planning firm of Harman, O'Donnell, Henninger and  
19 Associates, and was envisioned as serving a population of 15,000 with balanced areas for  
20 housing, school, parks, churches, shopping centers, municipal facilities, and light industry. The  
21 original plan for Northglenn included five interconnected neighborhoods containing single-  
22 family dwellings on 1,526 acres. The residential neighborhoods featured winding streets  
23 designed for privacy and child safety. The North Glenn First Filing was the first of the  
24 neighborhood areas to be laid out and filled with houses. Homes in the North Glenn  
25 development were recognized in the late 1950s and the early 1960s with awards for quality  
26 design, planning, and comfort. The North Glenn First Filing contains approximately 183 single  
27 family dwellings constructed shortly after the subdivision was platted in April 1959. The  
28 majority of these dwellings are single story brick or brick veneer-clad Ranch-style houses with  
29 attached garages.

30 **Eligibility Determination:** The North Glenn First Filing subdivision is considered eligible for  
31 the NRHP under Criterion A as a major element in the award winning, master planned self-  
32 sufficient community of Northglenn (Note: the 1959 subdivision plat identifies the development  
33 as “North Glenn” even though the entire community was originally called “Northglenn”). This  
34 subdivision is also associated with a historically significant trend of post-World War II urban  
35 growth in the Denver metropolitan area.  
36

37 **Effect Determination – Package A:** Under Package A, no changes are planned through this  
38 portion of I-25. No direct impacts would therefore occur.

39 Noise levels caused by I-25 highway traffic would increase one to two decibels in the future but  
40 would not reach impact levels. Much of the subdivision is located away from the mainline  
41 highway lanes, closer to I-25 entrance ramps associated with the interchange at  
42 104th Avenue. The subdivision would experience lower noise levels than areas located  
43 immediately adjacent to the I-25 travel lanes. An existing noise wall extends south from  
44

1 112th Avenue to almost 104th Avenue into the First Filing area and ends at the end of the  
2 northbound entrance ramp. Noise impacts would not be great enough to diminish the qualities  
3 that make the subdivision historically significant.

4 FHWA, FTA and CDOT therefore have determined that the Package A improvements would  
5 result in *no adverse effect* to this historic resource.

6 **Effect Determination – Package B:** Under Package B, managed lanes would be  
7 incorporated within the center of a widened I-25 highway footprint within the existing CDOT  
8 right-of-way. To accommodate stormwater and municipal separate stormwater sewer system  
9 (MS4) requirements, a sediment pond would be placed between the I-25 pavement and the  
10 subdivision boundary. No direct impacts would result from these improvements. Indirect effects  
11 (primarily noise) are the same as with Package A.

12 FHWA, FTA and CDOT have determined that the Package B improvements would result in *no*  
13 *adverse effect* to this historic resource.

14 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, managed  
15 lanes would be incorporated within the center of a widened I-25 highway footprint within the  
16 existing CDOT right-of-way. No direct impacts would result from these improvements.

17 Noise levels caused by I-25 highway traffic would increase two decibels in the future but would  
18 not reach impact levels. Much of the subdivision is located away from the mainline highway  
19 lanes, closer to I-25 entrance ramps associated with the interchange at 104th Avenue. The  
20 subdivision would experience lower noise levels than areas located immediately adjacent to  
21 the I-25 travel lanes. An existing noise wall extends south from 112th Avenue to almost  
22 104th Avenue into the First Filing area and ends at the end of the northbound entrance ramp.  
23 Noise impacts would not be great enough to diminish the qualities that make the subdivision  
24 historically significant.

25 FHWA, FTA and CDOT therefore have determined that the Preferred Alternative  
26 improvements would result in *no adverse effect* to this historic resource.

### 27 **5AM.2074 (North Glenn Second Filing)**

28 **Resource Description:** This historic post-World War II residential subdivision (5AM.2074) is  
29 located on the east side of I-25 and lies directly north of the North Glenn First Filing subdivision.  
30 The Second Filing subdivision is bounded on the east by Washington Street and on the north by  
31 East 112th Avenue. It is significant as an integral and important element of the master planned  
32 community of Northglenn, developed in 1959 by the Perl-Mack Construction Company, aided by  
33 the Denver-based planning firm of Harman, O'Donnell, Henninger and Associates, and was  
34 envisioned as serving a population of 15,000 with balanced areas for housing, school, parks,  
35 churches, shopping centers, municipal facilities, and light industry. The original plan for Northglenn  
36 included five interconnected neighborhoods containing single-family dwellings on 1,526 acres. The  
37 residential neighborhoods featured winding streets designed for privacy and child safety. The North  
38 Glenn First Filing was the first of the neighborhood areas to be laid out and filled with houses.  
39 Homes in the North Glenn development were recognized in the late 1950s and the early 1960s with  
40 awards for quality design, planning, and comfort. The North Glenn Second Filing contains  
41 approximately 882 single family dwellings constructed shortly after the subdivision was platted in  
42 June, 1959.

1 **Eligibility Determination:** The North Glenn First Filing subdivision is considered eligible for  
2 the NRHP under Criterion A as a major element in the award winning, master planned self-  
3 sufficient community of Northglenn (Note: the 1959 subdivision plat identifies the development  
4 as “North Glenn” even though the entire community was originally called “Northglenn”). This  
5 subdivision is also associated with a historically significant trend of post-World War II urban  
6 growth in the Denver metropolitan area.

7 **Effect Determination – Package A:** Under Package A, improvements are planned through this  
8 portion of I-25. No direct impacts would therefore occur.

9 Noise levels caused by I-25 highway traffic would increase one to two decibels in the future and  
10 would reach impact levels in the No-Action Alternative as well as Package A; however, the Second  
11 Filing area is currently protected from excessive noise by noise barriers located along I-25.  
12 Additionally, a new noise wall is recommended to extend north of the Second Filing area.

13 FHWA, FTA and CDOT have determined that the Package A improvements would result in *no*  
14 *adverse affect* to this historic resource.

15 **Effect Determination – Package B:** Under Package B, managed lanes would be incorporated  
16 within the center of a widened I-25 highway footprint within the existing CDOT right-of-way. To  
17 accommodate stormwater and MS4 requirements, sediment ponds would be placed selectively in  
18 areas situated between I-25 pavement and the subdivision boundary. No direct impacts would  
19 occur.

20 Noise levels caused by I-25 highway traffic would increase one to two decibels in the future and  
21 would reach impact levels in the No Action Alternative as well as Package B; however, the Second  
22 Filing area is currently protected from excess noise by noise barriers located along I-25.  
23 Additionally, a new noise wall is recommended farther north of the Second Filing area. These noise  
24 impacts would not substantially diminish the qualities that make the subdivision NRHP-eligible. The  
25 visual impact of the sediment ponds would not indirectly affect neighboring homes enough to  
26 diminish the qualities that render this subdivision NRHP-eligible.

27 FHWA, FTA and CDOT have determined that the Package B improvements would result in *no*  
28 *adverse affect* to this historic resource.

29 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, managed lanes  
30 would be incorporated within the center of a widened I-25 highway footprint within the existing  
31 CDOT right-of-way. To accommodate stormwater and MS4 requirements, sediment ponds would  
32 be placed selectively in areas situated between I-25 pavement and the subdivision boundary. No  
33 direct impacts would occur.

34 Noise levels caused by I-25 highway traffic would increase one to two decibels in the future and  
35 would reach impact levels in the No-Action Alternative as well as the Preferred Alternative;  
36 however, the Second Filing area is currently protected from excess noise by noise barriers located  
37 along I-25. Additionally, a new noise wall is recommended farther north of the Second Filing area.  
38 These noise impacts would not substantially diminish the qualities that make the subdivision  
39 NRHP-eligible. The visual impact of the sediment ponds would not indirectly affect neighboring  
40 homes enough to diminish the qualities that render this subdivision NRHP-eligible.

41 FHWA, FTA and CDOT have determined that the Preferred Alternative improvements would  
42 result in *no adverse affect* to this historic resource.

### 3.15.2.4 PACKAGE A AND PREFERRED ALTERNATIVE TRANSIT COMPONENTS

The transit components of Package A and the Preferred Alternative would generally affect historic resources due to the location of commuter rail improvements. Specific consequences related to each transit component are described below.

#### **COMMUTER RAIL: FORT COLLINS TO LONGMONT**

Within this segment the alignment follows the existing BNSF Railroad alignment. Between the north end of the regional study area and the Colorado State University (CSU) station, the existing track would be used. Under Package A, there would be one additional set of tracks to the east within the existing railroad right-of-way from CSU in Fort Collins south to North Longmont. Under the Preferred Alternative, there would be four areas where passing track would be constructed adjacent to the existing track totaling approximately 10.5 miles. Additionally, a maintenance road would be constructed adjacent to the rail line in areas where there is no existing parallel road. There are 15 historic properties in this component of commuter rail.

#### **5LR.11330 (Public Service Company of Colorado – Fort Collins Substation)**

**Resource Description:** This structure, located at 128 W. Prospect Road in Fort Collins, was built in the 1920s. It represents the first generation of power facility construction after Public Service Company consolidated their control over delivery and transmission across Colorado.

**Eligibility Determination:** This structure is significant under Criterion A for its role in distribution of electrical power to Fort Collins and the Colorado State University campus. It is also architecturally significant (Criterion C) as a good example of an early twentieth century power facility.

**Effect Determination – Package A:** There would be no direct effect to this property (see **Figure 3.15-79**). Indirect effects include a change the visual environment due to the construction of a retaining wall that would be built on the adjacent railroad right-of-way. There would also be additional train traffic on the nearby railway tracks under Package A, creating minor noise and vibration increases over current levels, but not to a level that would impair the architectural qualities of this commercial/industrial building. Noise levels are expected to increase 1dBA over existing conditions.

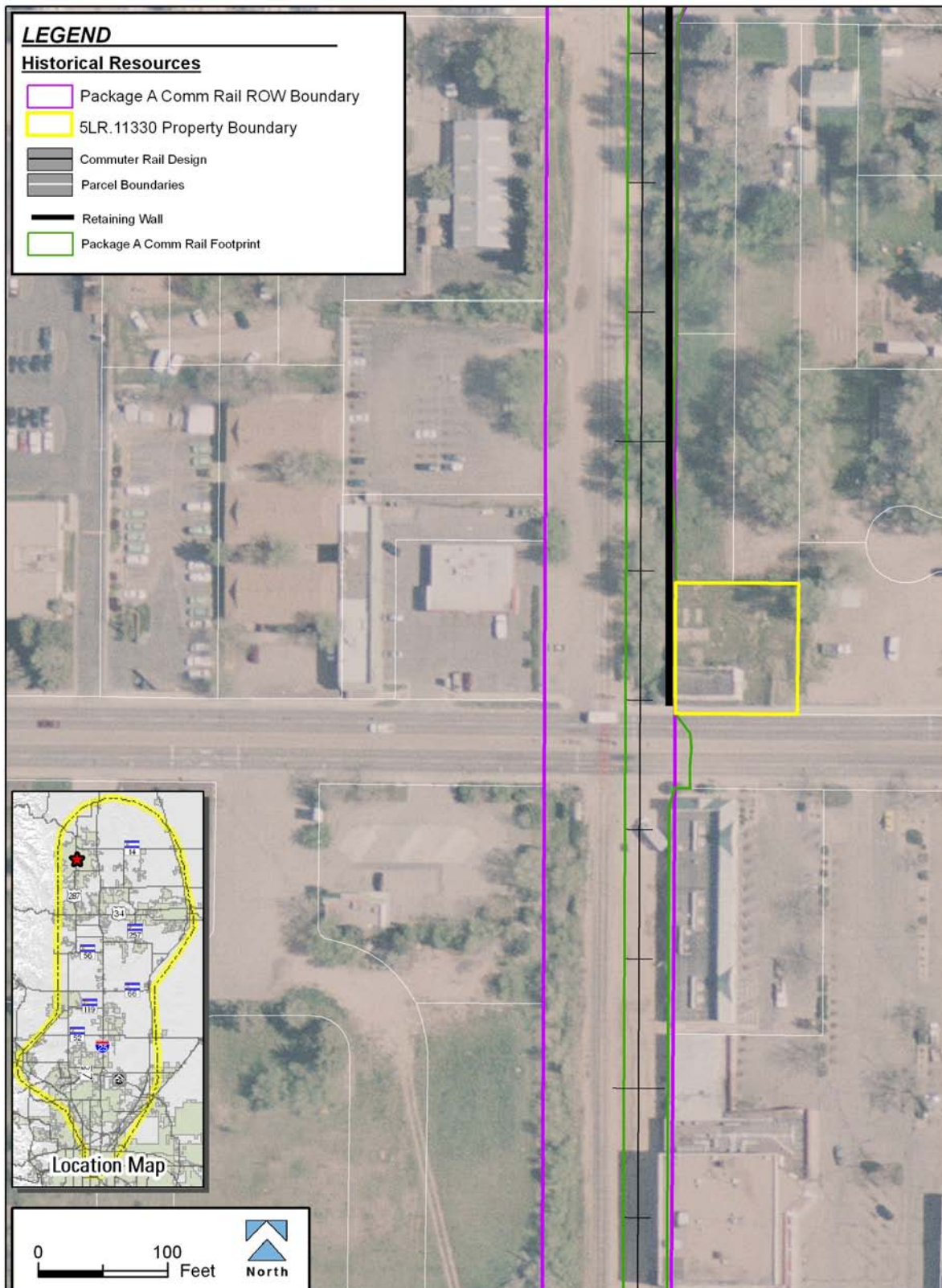
The proposed transportation improvements would not substantially diminish or alter the architectural or setting characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that Package A commuter rail improvements would result in *no adverse effect* to the resource.

**Effect Determination – Preferred Alternative:** There would be no direct effect to this property (see **Figure 3.15-80**). Indirect effects include additional train traffic on the nearby railway tracks under the Preferred Alternative, creating minor noise and vibration increases over current levels, but not to a level that would impair the architectural qualities of this commercial/industrial building. Noise levels are expected to increase 1 dBA over existing conditions.

The proposed transportation improvements would not substantially diminish or alter the architectural or setting characteristics that render the property eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that the Preferred Alternative commuter rail improvements would result in *no adverse effect* to the resource

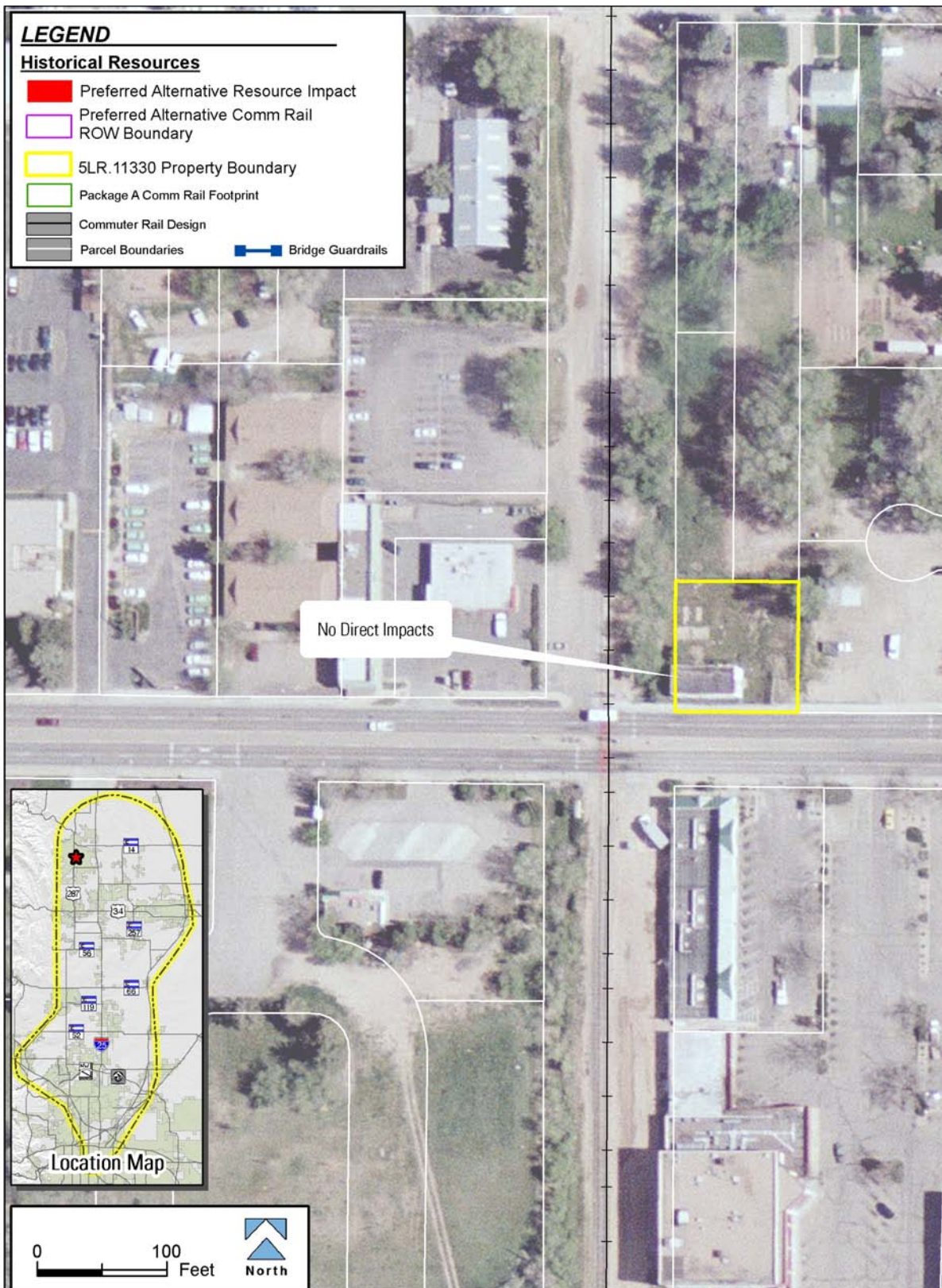


1 **Figure 3.15-79 5LR.11330 (Public Service Company of Colorado-Fort Collins Sub-**  
2 **Station) – Package A**



3  
4

1 **Figure 3.15-80 5LR.11330 (Public Service Company of Colorado-Fort Collins Sub-**  
2 **station) – Preferred Alternative**



3

1 **5LR.10819.2 (Larimer County Canal No. 2)**

2 **Resource Description:** The Larimer County Canal No.2 was constructed in 1873. The 3,204-  
3 foot segment crosses underneath the existing BNSF railroad south of Drake Road in Fort  
4 Collins. The ditch then turns south, parallel to the railroad for a distance of 2,731 feet before  
5 returning to an easterly course. The ditch is in part concrete lined, and has been extensively  
6 realigned and portions placed inside a pipe along the railway.

7 **Eligibility Determination:** The ditch segment 5LR.10819.2 no longer retains its integrity of  
8 location and therefore does not support the eligibility of the entire linear resource.

9 **Effect Determination – Package A:** The existing 25-foot-wide bridge would be extended east  
10 approximately 15 feet over open ditch to accommodate new track for Package A commuter rail  
11 (see **Figure 3.15-81**). Because the qualities that make the entire resource NRHP-eligible have  
12 already been compromised by construction of the BNSF railroad and Package A modifications  
13 are minor in relative extent, FHWA, FTA and CDOT therefore have determined that Package  
14 A would result in no adverse effect to the Larimer County Canal No.2.

15 **Effect Determination—Preferred Alternative:** The Preferred Alternative in this location  
16 would include the commuter rail service to be added and carried over the historic ditch on the  
17 existing 25-foot-wide bridge (see **Figure 3.15-82**). FHWA, FTA and CDOT therefore have  
18 determined that the Preferred Alternative would result in *no adverse effect* to the Larimer  
19 County Canal No. 2.

20 **5LR.10681.1 (New Mercer Ditch)**

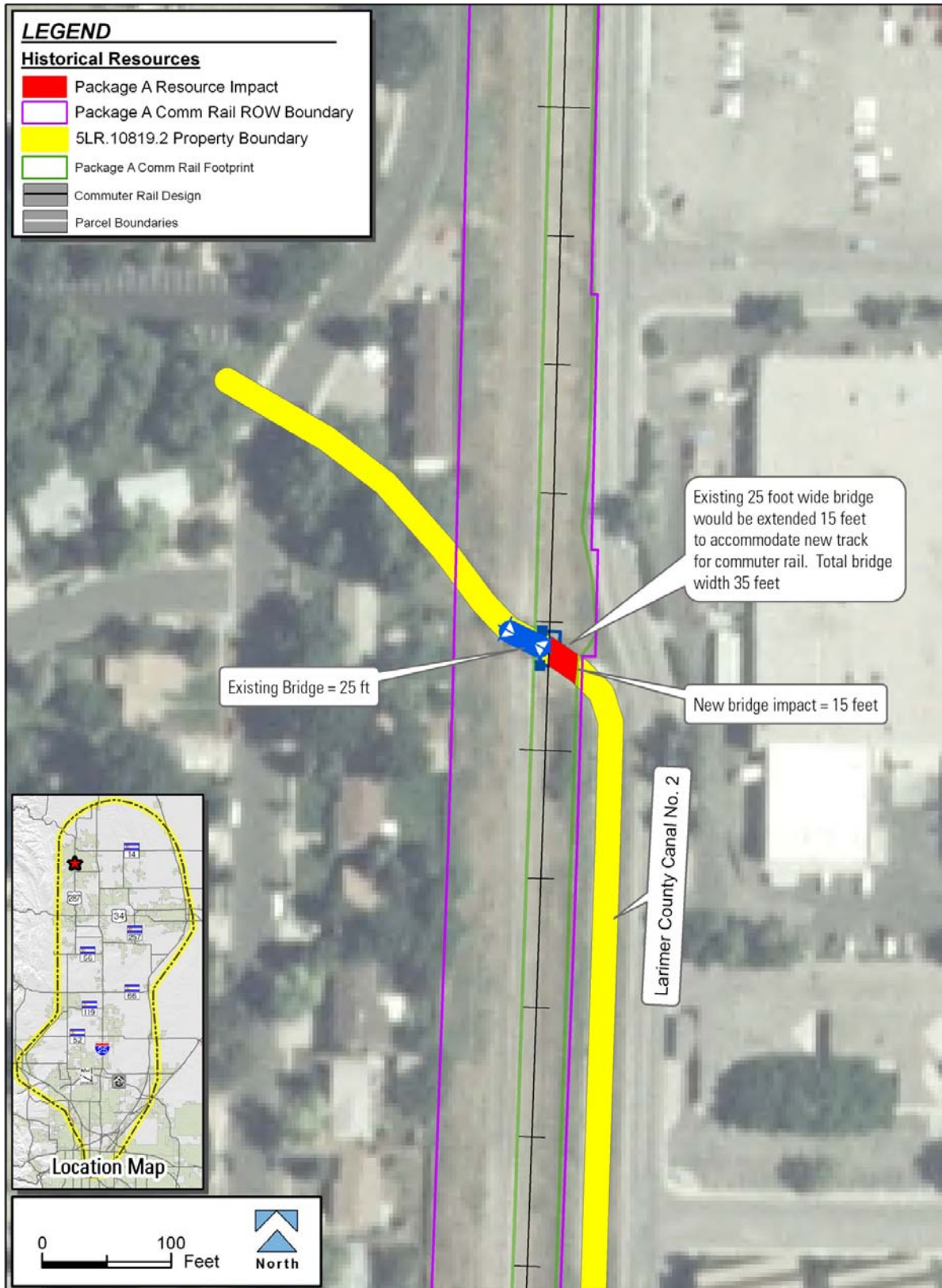
21 **Resource Description:** The New Mercer Ditch (5LR.10681) was constructed in 1870 and is  
22 one of the oldest ditches in the Fort Collins area. The entire ditch is 15.6 miles long. This  
23 segment is a 1.1 mile long unlined ditch. Where intact, the ditch is 26 feet wide and 10 feet  
24 deep. The original ditch crossed under the railroad but in the mid 1980s it was realigned to run  
25 west of the BNSF Railroad between Horsetooth and Harmony Roads. The ditch now crosses  
26 underneath the railroad in a corrugated steel pipe south of Harmony Road and discharges into  
27 Mail Creek

28 **Eligibility Determination:** The entire ditch is NRHP-eligible under Criterion A because of its  
29 important role in the irrigation and agricultural history of the area and remains in use today.  
30 Segment 10681.1 has been realigned and modified by culverts so that it no longer retains  
31 qualities that support the eligibility of the entire resource.

32 **Effects Determination – Package A:** No portion of the ditch would be impacted by the  
33 commuter rail improvements in Package A, therefore, FHWA, FTA and CDOT have  
34 determined that Package A would result in *no historic properties affected*.

35 **Effects Determination – Preferred Alternative:** No portion of the ditch would be impacted by  
36 the commuter rail improvements in the Preferred Alternative, therefore, FHWA, FTA and  
37 CDOT have determined that the Preferred Alternative would result in *no historic properties*  
38 *affected*.

1 Figure 3.15-81 5LR.10819.2 (Larimer County Canal No.2) – Package A



2

1 Figure 3.15-82 5LR.10819.2 (Larimer County No. 2) – Preferred Alternative



2

1 **5LR.488 (Colorado and Southern Railway Depot / Loveland Depot)**

2 **Resource Description:** The Loveland Depot is located at 405 – 409 Railroad Ave. in  
3 Loveland. It was built in 1902 by the Colorado and Southern Railway Company which was the  
4 successor, in 1898, to the Colorado Central Railroad which originally laid tracks through  
5 Loveland in 1877. Loveland, an agricultural community, was dependent on the railroad for its  
6 economic survival and the depot was critical for efficient movement of freight and passengers.

7 **Eligibility Determination:** This structure is significant under Criterion A for its role in rail  
8 transportation in northern Colorado. It is also architecturally significant under Criterion C as a  
9 good example of an turn-of-the-century depot.

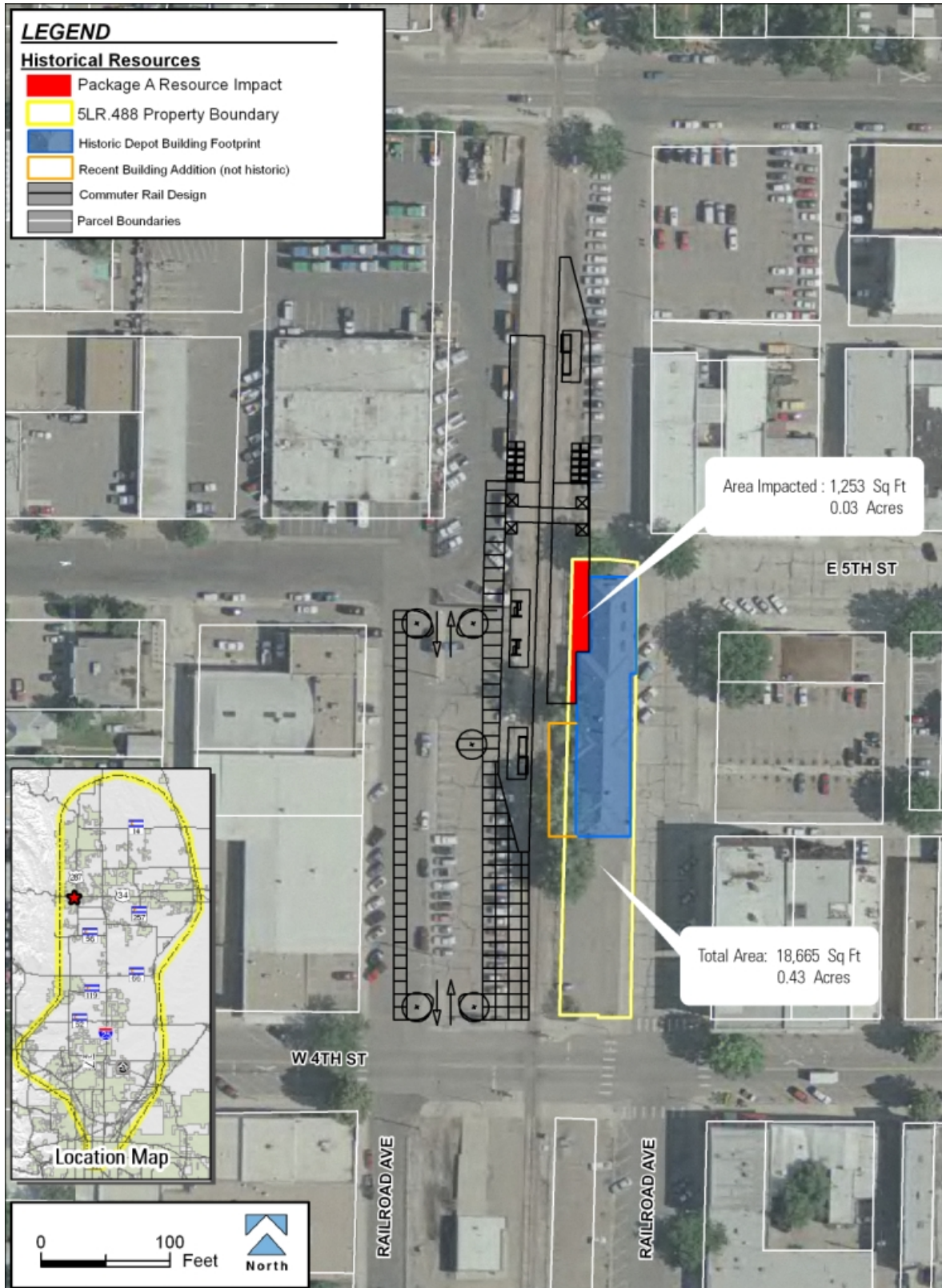
10 **Effect Determination – Package A:** Although there would be direct effect to the property,  
11 there would be no direct effect to the structure (see **Figure 3.15-83**). A concrete platform  
12 would be built between the station and the tracks. The platform's dimension would be 27-foot  
13 wide by 350-foot long. This platform would encroach onto the depot parcel and would be  
14 located adjacent to the west side of the depot affecting 0.3 acre of the historic property. The  
15 construction of this platform adjacent to the depot is consistent with the historic use of the train  
16 depot and would provide a direct transition from the depot to the arriving and departing trains.  
17 This positioning of the platform would provide impetus for recapturing the original use of the  
18 structure as a train depot. The depot is currently used as a restaurant. Other indirect impacts  
19 would be additional train traffic on the nearby railway tracks under Package A, creating minor  
20 noise and vibration increases over current levels, but not to a level that would impair the  
21 architectural qualities of this handsome historic depot. Noise levels are expected to increase  
22 5 dBA over existing conditions. This would not be a new or heightened condition from the  
23 historic times when the depot was operational and trains were frequently arriving and  
24 departing from this station.

25 The proposed transportation improvements would not substantially diminish or alter the  
26 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
27 FTA and CDOT therefore have determined that Package A commuter rail improvements would  
28 result in *no adverse effect* to the resource.

29 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative there would  
30 be no direct effect to the property or to the structure (see **Figure 3.15-84**). All station  
31 construction would occur on the west side of the tracks opposite the existing depot, currently  
32 used as a restaurant. Indirect impacts would be additional train traffic on the nearby railway  
33 tracks under the Preferred Alternative, creating minor noise and vibration increases over  
34 current levels, but not to a level that would impair the architectural qualities of this historic  
35 depot. Noise levels are expected to increase 5 dBA over existing conditions. This would not be  
36 a new or heightened condition from the historic times when the depot was operational and  
37 trains were frequently arriving and departing from this station.

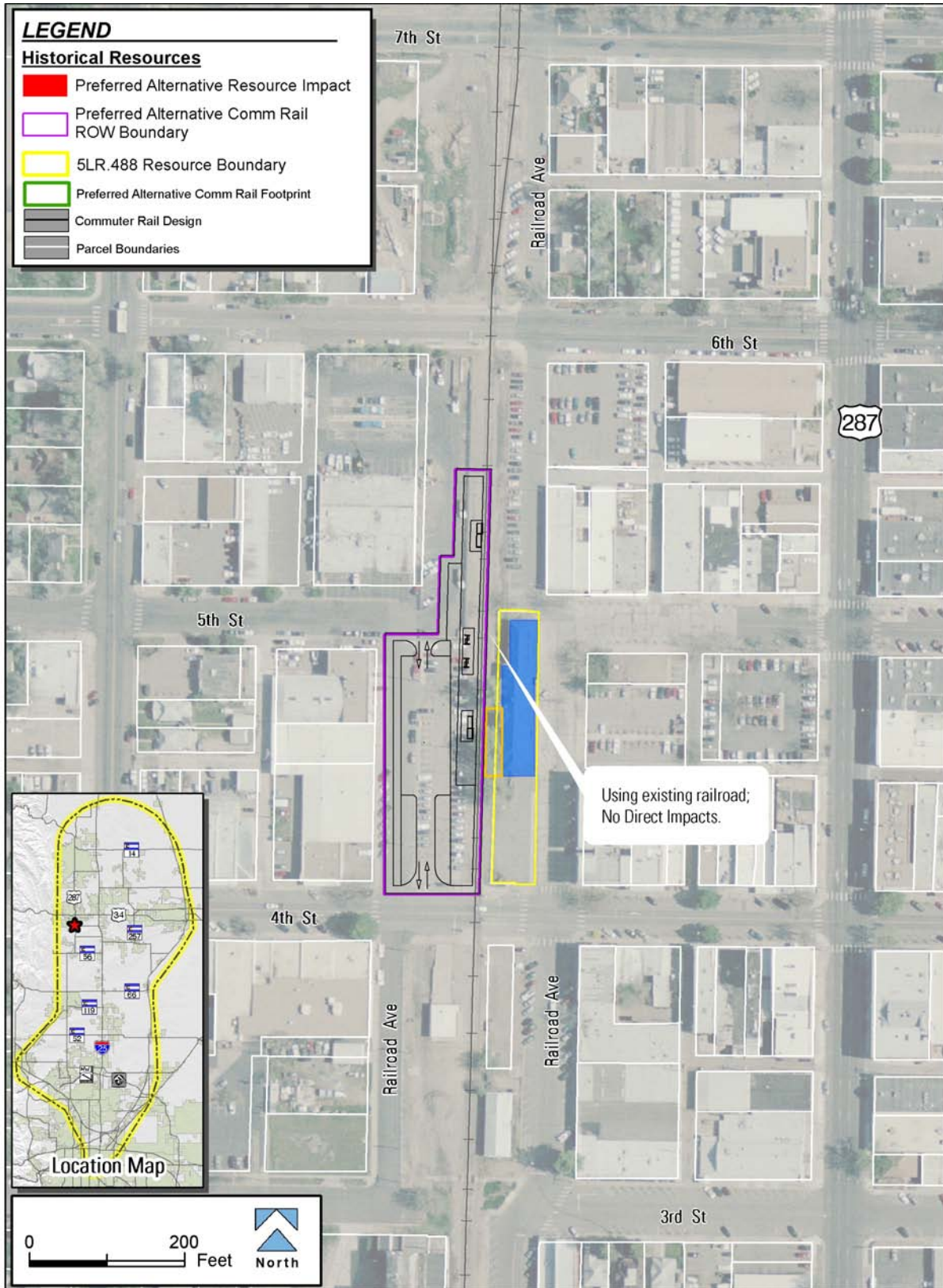
38 The Preferred Alternative improvements would not substantially diminish or alter the  
39 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
40 FTA and CDOT therefore have determined that the Preferred Alternative would result in *no*  
41 *adverse effect* to the resource.

1 **Figure 3.15-83 5LR.488 (Colorado and Southern Railway Depot/Loveland Depot)**  
2 **Package A**



3

1 **Figure 3.15-84 5LR.488 (Colorado and Southern Railway Depot/Loveland Depot)**  
2 **Preferred Alternative**



3



1 **5LR.1729.2 (Big Thompson Ditch)**

2 **Resource Description:** The entire ditch (5LR.1729) is 10 miles long and is one of the oldest  
3 in the area. The 2,216-foot-long segment crosses the BNSF Railroad just north of SH 402 in  
4 Loveland. The ditch parallels the railroad for 485 feet before turning east and passing under  
5 the railroad in a CBC. The 6-foot-wide ditch is concrete lined and west of the railroad and  
6 unlined east of the BNSF.

7 **Eligibility Determination:** The ditch is NRHP-eligible due to its ties to the town of Loveland  
8 and the successful development of high plains irrigation under Criterion A. The ditch has been  
9 realigned and concrete-lined, compromising the historic integrity within the setting, and is non-  
10 supportive of the greater site.

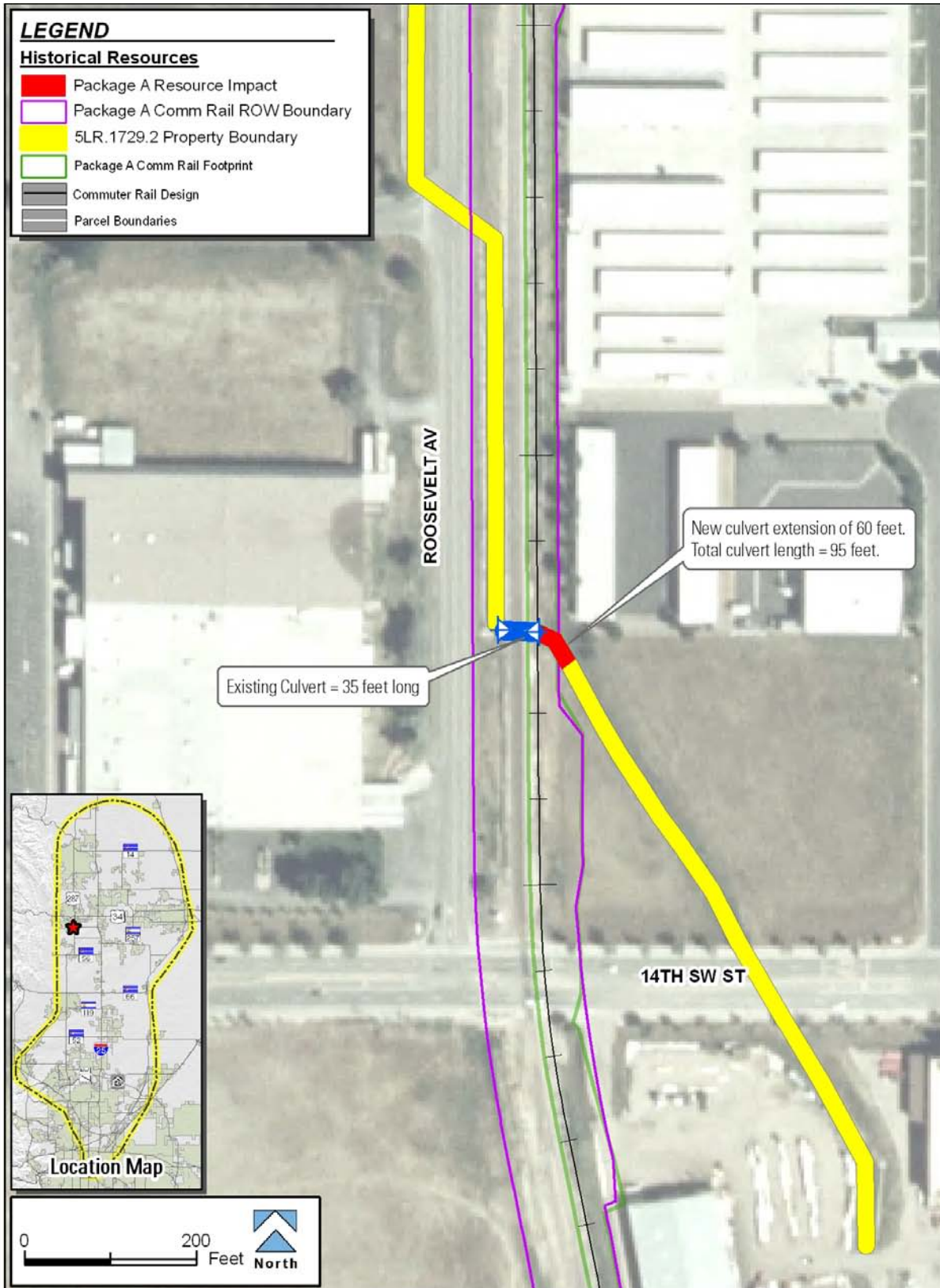
11 **Effects Determination – Package A:** Under Package A, the new commuter rail track would  
12 be placed east and adjacent to the existing track (see **Figure 3.15-85**). At the existing BNSF  
13 crossing the ditch is conveyed underneath the railway in a 35-foot-long culvert pipe. This pipe  
14 would be extended 60 feet and the ditch would be realigned to accommodate the new track.  
15 Part of this length is to alter the ditch outfall from a perpendicular bend as it exits the railroad  
16 crossing to a smoother angled alignment, for the purpose of preventing ditch erosion during  
17 higher flows.

18 Because the qualities that make the entire resource NRHP-eligible have already been  
19 compromised by modifications associated with construction of the BNSF Railroad and  
20 Package A improvements are minor in relative extent, FHWA, FTA and CDOT therefore have  
21 determined that Package A would result in no adverse effect to the entire Big Thompson Ditch  
22 (5LR.1729).

23 **Effects Determination—Preferred Alternative:** Under the Preferred Alternative, a new  
24 maintenance road would be constructed east and adjacent to the existing track (see  
25 **Figure 3.15-86**). At the existing BNSF railroad crossing the ditch is currently conveyed  
26 underneath the railway in a 35-foot-long culvert pipe. The maintenance road would be  
27 constructed over this existing culvert and no extension to that culvert would be required.  
28 During construction of the maintenance road the ditch would remain operational and irrigation  
29 water would be protected from all sediment and physical encroachment by construction. All  
30 disturbances caused by construction equipment or construction activities would be temporary  
31 in nature and affected areas would be restored to the original condition and appearance

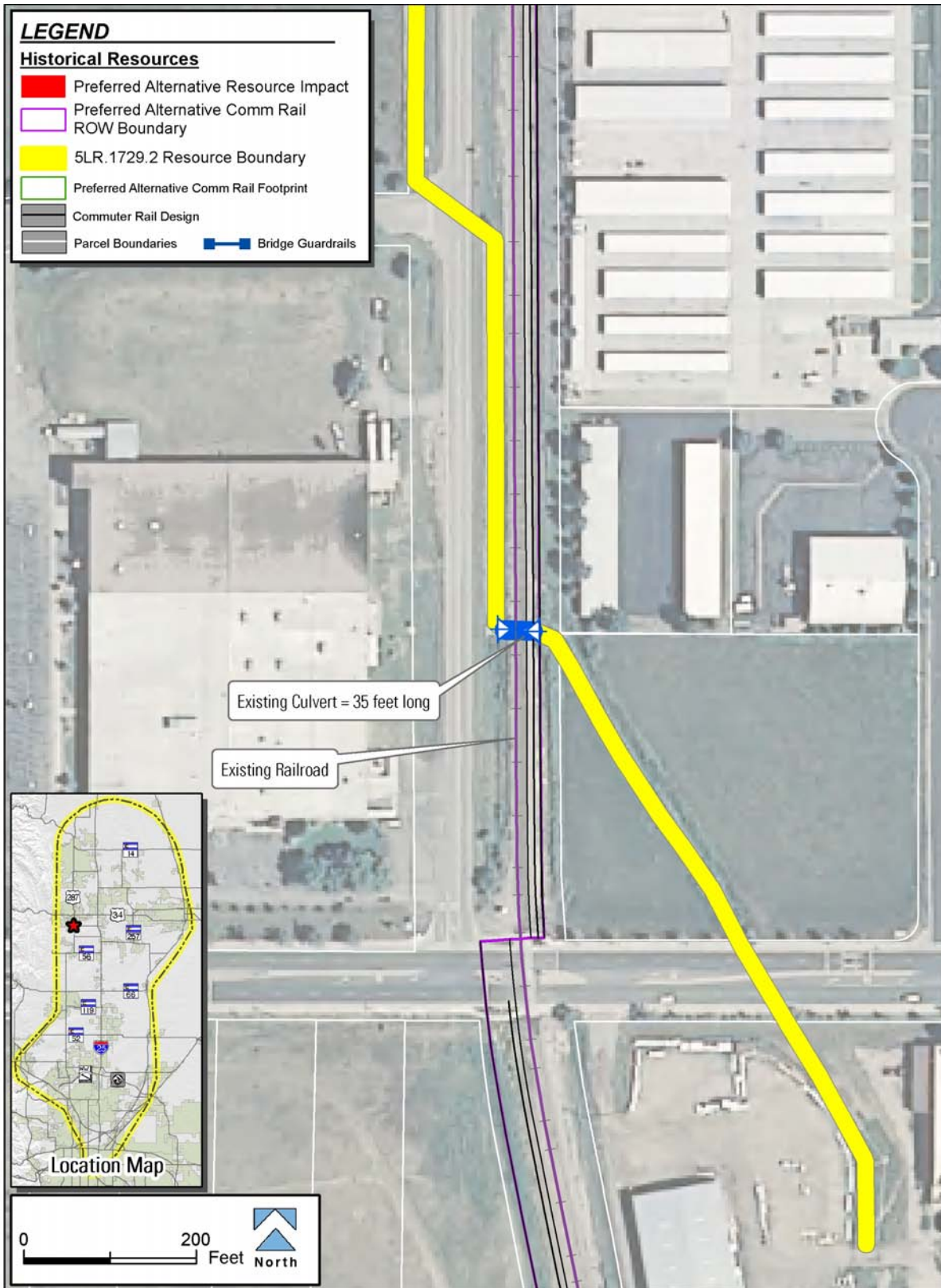
32 Because the qualities that make the entire resource NRHP-eligible have already been  
33 compromised by modifications associated with construction of the BNSF Railroad and the  
34 Preferred Alternative improvements are minor in relative extent, FHWA, FTA and CDOT have  
35 determined that the Preferred Alternative would result in *no adverse effect* to the entire Big  
36 Thompson Ditch (5LR.1729).

1 Figure 3.15-85 5LR.1729.2 (Big Thompson Ditch) – Package A



2

1 Figure 3.15-86 5LR.1729.2 (Big Thompson Ditch) – Preferred Alternative



2

1 **5LR.12552 (Ludlow Brothers Property)**

2 **Resource Description:** The Ludlow Brothers residence and commercial property is located  
3 at 205-207 S. 1st St. in Berthoud. The house on the property was built in 1904 and is a good  
4 representative example of vernacular construction built around the turn of the 20th century.

5 **Eligibility Determination:** In the summer of 2010, the Ludlow Brothers Residence was field  
6 assessed as eligible for inclusion on the NRHP under Criterion C as a representative example  
7 of vernacular construction built around the turn of the 20th century.

8 **Effect Determination – Package A:** Under Package A in the vicinity of the Ludlow Brothers  
9 Property the proposed commuter rail line would run on the existing rail alignment located on  
10 the western boundary of the property. A second rail line would be added to the east of the  
11 existing line however, a retaining wall will be constructed in order to prevent additional right-of-  
12 way from being acquired from the property. The house is located 500 feet to the east of the  
13 proposed additional rail line and therefore it would be subject to any direct or indirect effects  
14 that could diminish the architectural or setting characteristics that render this property eligible  
15 for the NRHP. FHWA, FTA and CDOT have determined that the Package A would result in *no*  
16 *historic properties affected* as it relates to the Ludlow Brothers property.

17 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative in the vicinity  
18 of the Ludlow Brothers Property the proposed commuter rail service would run on the existing  
19 rail alignment located on the western boundary of the property. A second passing track would  
20 be constructed to the east of the existing line however; a retaining wall will be constructed in  
21 order to prevent additional right-of-way from being acquired from the property (see  
22 **Figure 3.15-87**). The house is located 500 feet to the east of the proposed additional rail line  
23 and therefore it would be subject to any direct or indirect effects that could diminish the  
24 architectural or setting characteristics that render this property eligible for the NRHP. FHWA,  
25 FTA and CDOT have determined that the Preferred Alternative would result in *no historic*  
26 *properties affected* as it relates to the Ludlow Brothers property.

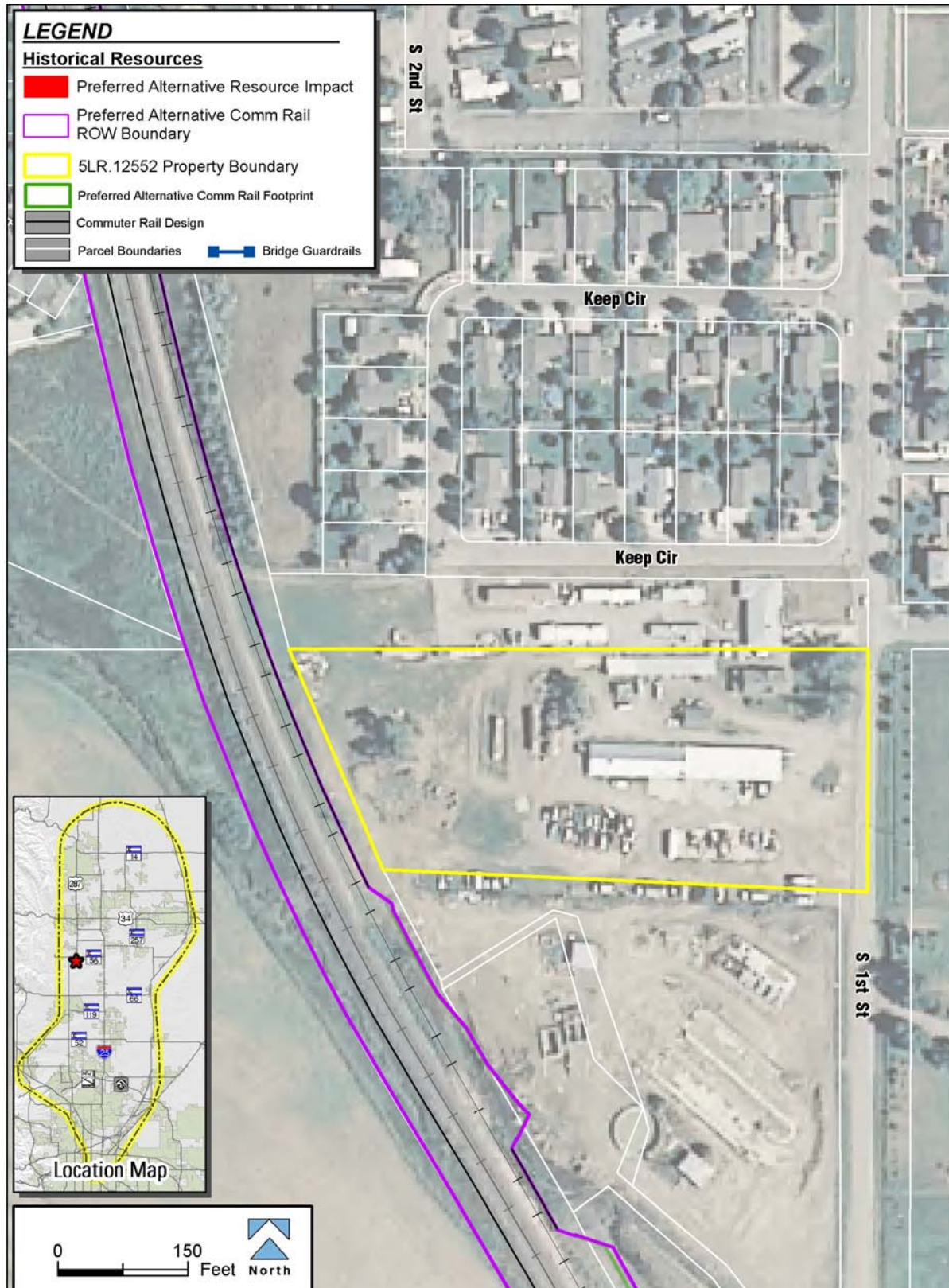
27 **5LR.1710.1 (Handy Ditch)**

28 **Resource Description:** This segment of the Handy Ditch crosses under the railway  
29 alignment. The entire ditch is approximately 24 miles long. The segment within the project APE  
30 (5LR.1710.1) is 2.9 miles long and 24 feet wide from bank to bank. Both banks are covered by  
31 heavy riparian growth in many areas. The surrounding area includes residential development.

32 **Eligibility Determination:** In 1993, the OAHF officially determined the Handy Ditch to be  
33 NRHP-eligible. The ditch is eligible under Criteria A for its important association with the  
34 development of water rights and agriculture in Larimer County. This segment (5LR.1730.1)  
35 retains sufficient integrity to support the eligibility of the entire linear resource.

36 **Effect Determination – Package A:** None of the proposed commuter rail improvements  
37 associated with Package A would cause changes to this historic property. Due to the lack of  
38 direct and indirect impacts, FHWA, FTA and CDOT have determined that the Package A  
39 transit improvements would result in *no historic properties affected* with respect to this historic  
40 resource.

1 Figure 3.15-87 5LR.2552 (Ludlow Brothers Property) – Preferred Alternative



2

1 **Effect Determination—Preferred Alternative:** Under the Preferred Alternative construction  
2 of the passing track and the required maintenance road would have a direct impact to the ditch  
3 (see **Figure 3.15-88**). Currently the historic ditch is carried beneath the existing track in a  
4 culvert. In order to construct the additional features a 55-foot-culvert extension would be  
5 required on the west side of the existing culvert and a 60-foot-culvert extension would be  
6 required on the east side. The portion of the ditch subject to direct impact by the Preferred  
7 Alternative commuter rail line is adjacent to a preexisting impacted section (crossing under the  
8 active rail line). This additional impact would not substantially diminish the qualities that make  
9 this resource NRHP eligible. Therefore FHWA, FTA and CDOT have determined that the  
10 Preferred Alternative transit improvements would result in *no adverse effect* to the Handy  
11 Ditch.

### 12 **5BL.3449.2 (Supply Ditch)**

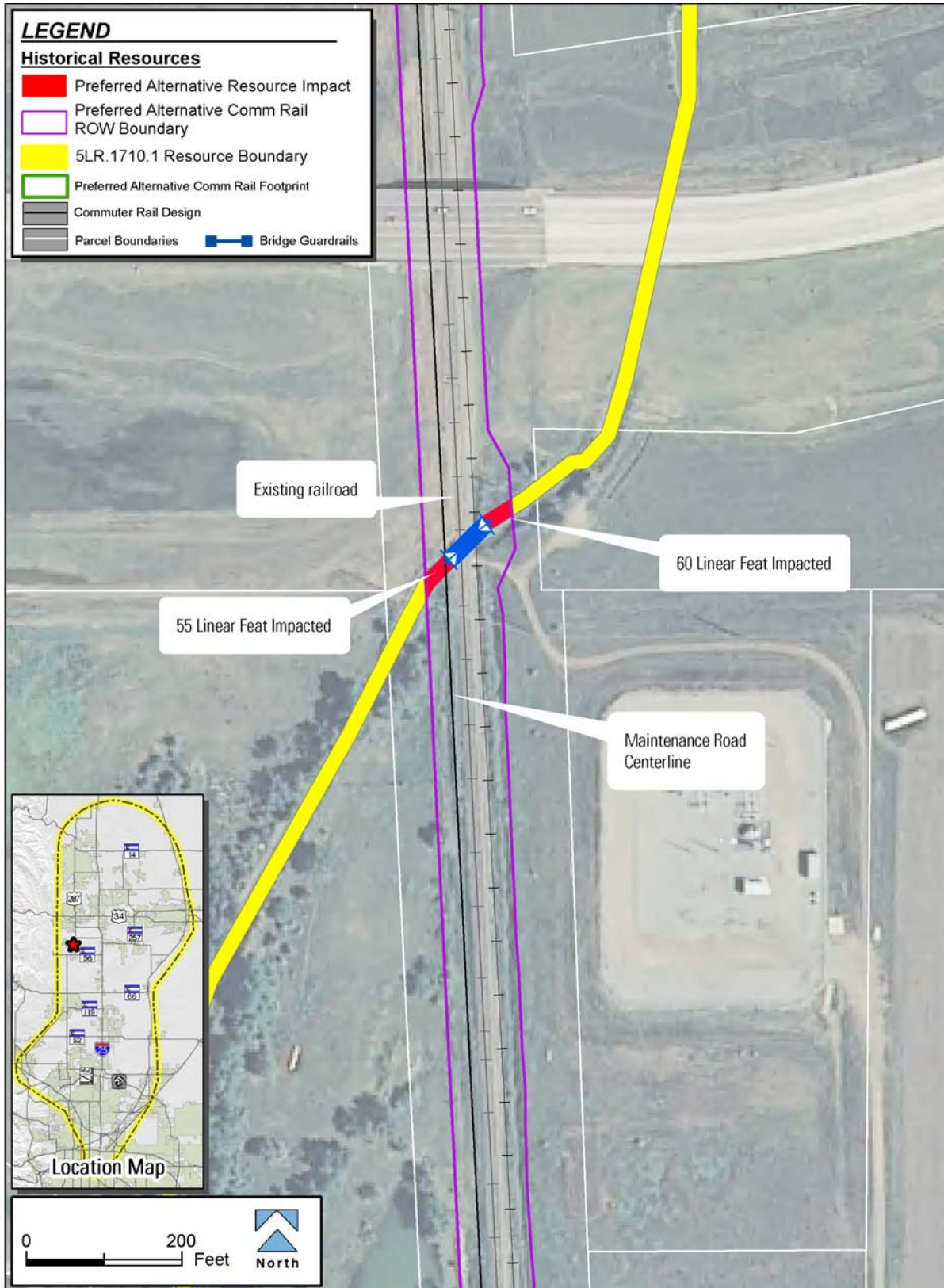
13 **Resource Description:** The entire earthen ditch was constructed in 1861 and is  
14 approximately 22 miles long. The segment within the project APE (5LR.3449.2) is 100 feet  
15 long and follows its original historic alignment through the project area and is in good  
16 functional condition. This segment of the Supply Ditch crosses an active rail line in a culvert.  
17 Both banks are covered by heavy riparian growth in many areas. The surrounding area  
18 supports industrial and residential development.

19 **Eligibility Determination:** The Supply Ditch was determined to be NRHP-eligible by OAH in  
20 1992. The ditch is eligible under Criterion A for its important association with the development  
21 of water rights and agriculture in Boulder County. This segment (5BL.3449.2) retains sufficient  
22 integrity to support the eligibility of the entire linear resource.

23 **Effect Determination – Package A:** The historic Supply Ditch currently crosses an active  
24 railroad line via a culvert. Under Package A, the proposed commuter rail line would be aligned  
25 20 feet north and parallel to the existing railroad. The elevated embankment carrying the new  
26 tracks and ballast would require an area approximately 65 feet wide. Thus, 65 feet of the open  
27 ditch would have to be placed in a new culvert beneath the new commuter rail line on the  
28 south side of the existing rail line (see **Figure 3.15-89**). The portion of the ditch subject to  
29 direct impact by the commuter rail line is in close proximity to a preexisting impacted section  
30 (crossing under the active rail line). This additional impact would not substantially diminish the  
31 qualities that make this resource NRHP eligible. The proposed modifications affect a relatively  
32 small section of the 22 mile-long linear resource. FHWA, FTA and CDOT have determined that  
33 the Package A transit improvements would result in *no adverse effect* to the entire Supply  
34 Ditch.

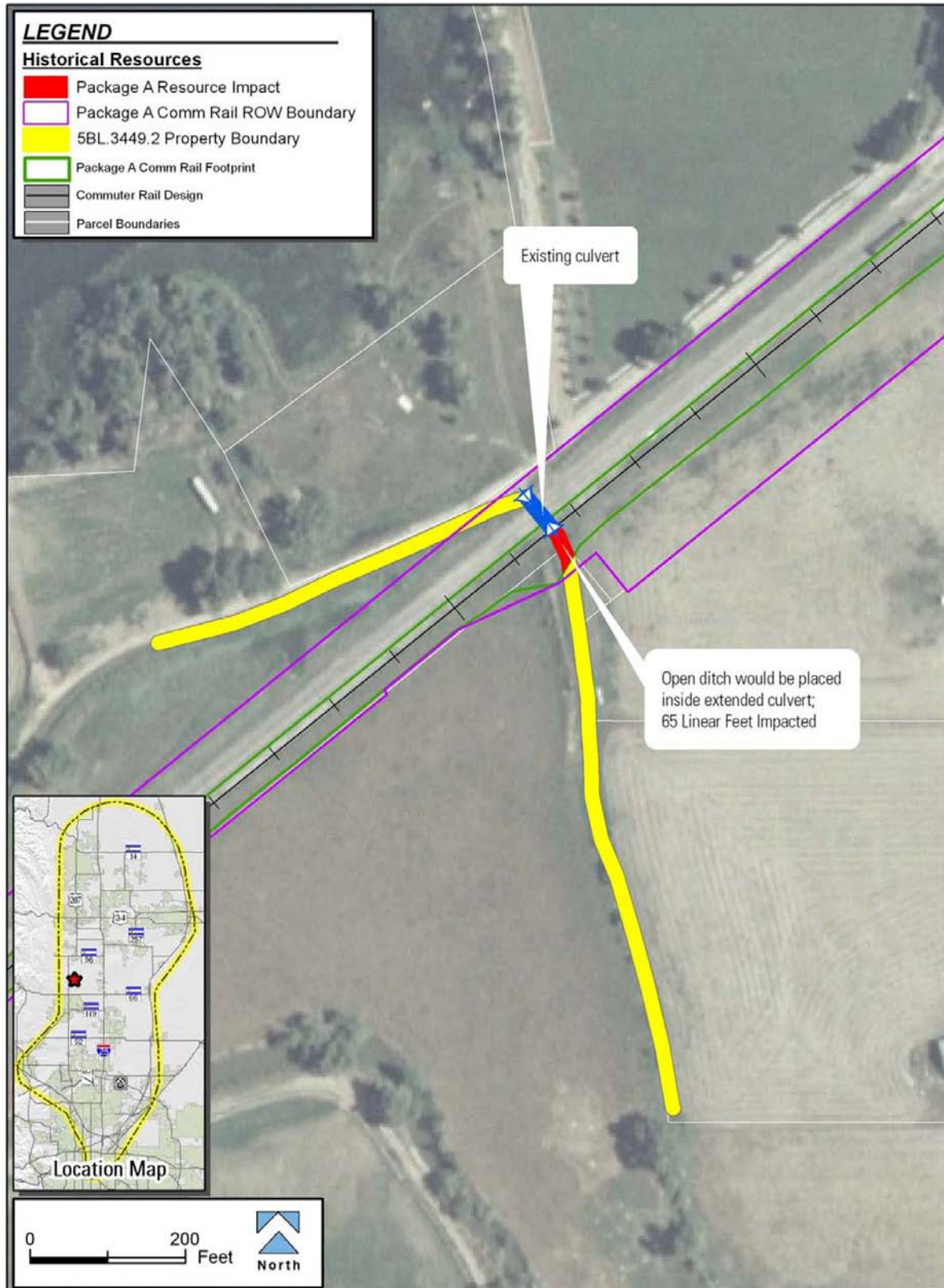
35 **Effect Determination – Preferred Alternative:** The historic Supply Ditch currently crosses  
36 an active railroad line via a culvert. Under the Preferred Alternative, the proposed commuter  
37 rail service would be added to the active rail line. However, a required maintenance road  
38 would be constructed on the north side of the existing rail line with fill slopes impacting  
39 approximately 46 linear feet of the historic ditch (see **Figure 3.15-90**). The portion of the ditch  
40 subject to direct impact by the maintenance road is in close proximity to a preexisting impacted  
41 section (crossing under the active freight rail line). This additional impact would not  
42 substantially diminish the qualities that make this resource NRHP eligible. The proposed  
43 modifications affect a relatively small section of the 22 mile-long linear resource. FHWA, FTA  
44 and CDOT have determined that the Preferred Alternative transit improvements would result in  
45 *no adverse effect* to the entire Supply Ditch.

1 Figure 3.15-88 5LR.1710.1 (Handy Ditch) – Preferred Alternative



2

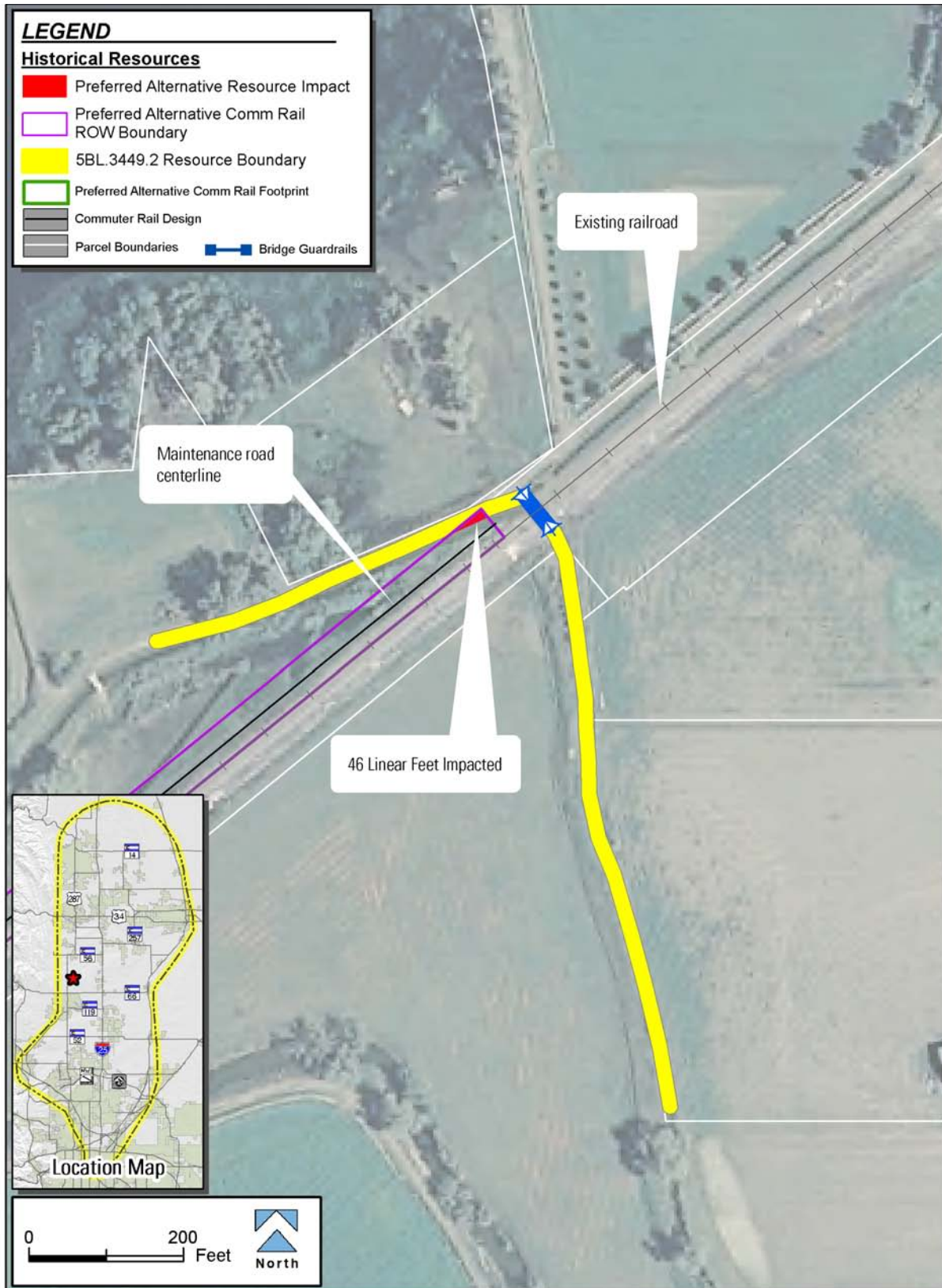
1 Figure 3.15-89 5BL.3449.2 (Supply Ditch) – Package A



2



1 Figure 3.15-90 5BL.3449.2 (Supply Ditch) – Preferred Alternative



2

1 **5BL.3114.28 (Highland Ditch)**

2 **Resource Description:** This segment of the historic earthen Highland Ditch passes beneath  
3 the UPRR railway alignment via a bridge. The entire ditch is approximately 24.2 miles long.  
4 The segment within the project APE (5BL.3114.28) is 100 feet long. Both banks of the ditch  
5 are covered by riprap in many areas. Grass and riparian growth cover the ditch levees. The  
6 surrounding area supports rural residential development.

7 **Eligibility Determination:** In 1991, the OAHF officially determined the Highland Ditch to be  
8 NRHP-eligible under Criterion A for its important association with the development of water  
9 rights and agriculture in Boulder County. This segment (5BL.3114.28) retains sufficient  
10 integrity to support the eligibility of the entire linear resource.

11 **Effect Determination – Package A:** None of the proposed commuter rail improvements  
12 under Package A would cause changes to this historic property. Due to the lack of direct and  
13 indirect impacts, FHWA, FTA and CDOT have determined that the Package A transit  
14 improvements would result in *no historic properties affected* with respect to this historic  
15 resource.

16 **Effect Determination—Preferred Alternative:** None of the proposed commuter rail  
17 improvements under the Preferred Alternative would cause changes to this historic property.  
18 Due to the lack of direct and indirect impacts, FHWA, FTA and CDOT have determined that  
19 the Preferred Alternative transit improvements would result in *no historic properties affected*  
20 with respect to this historic resource.

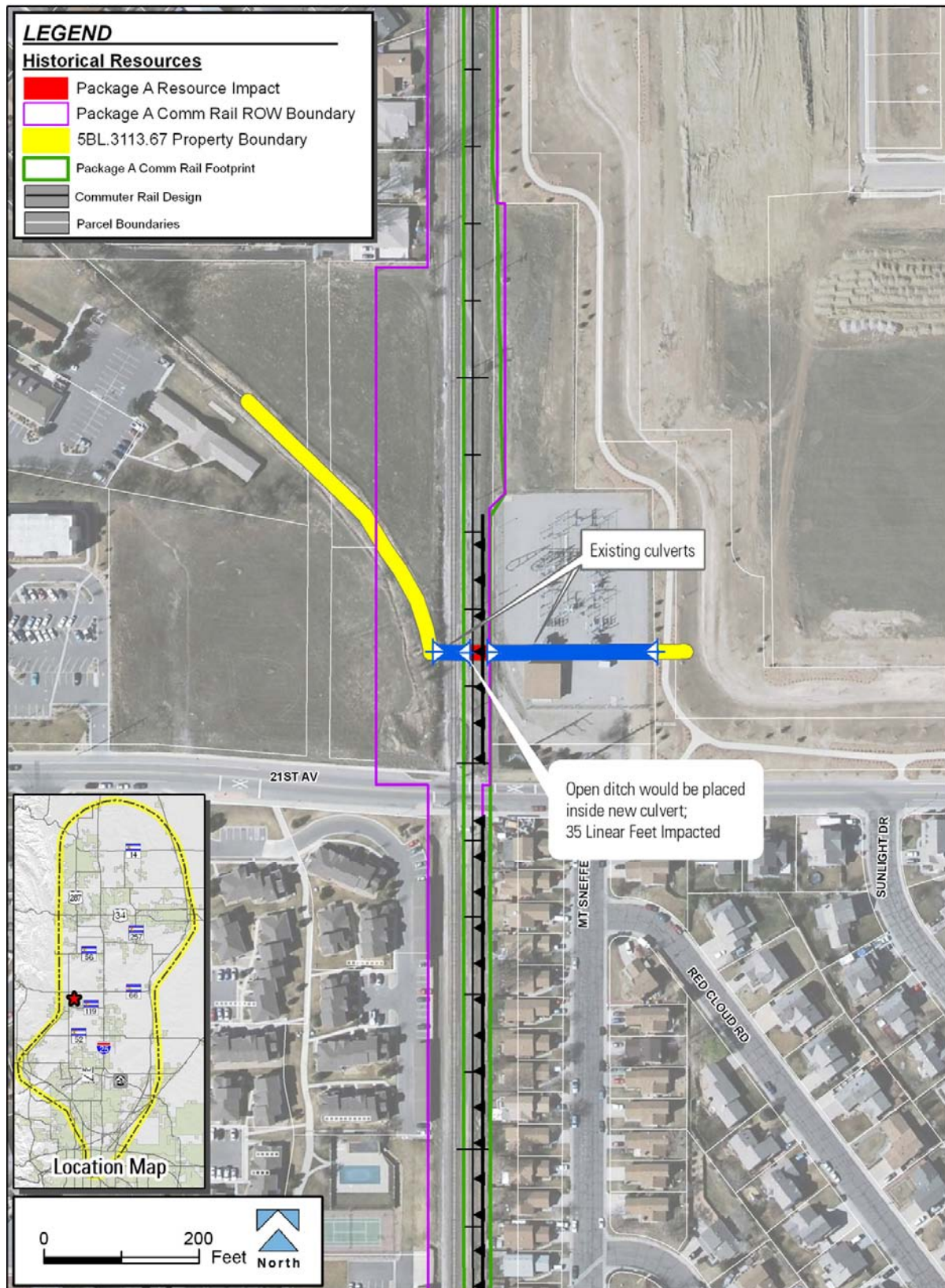
21 **5BL.3113.67 (Rough & Ready Ditch)**

22 **Resource Description:** This segment of the historic earthen Rough & Ready Ditch crosses  
23 under the active UPRR railway alignment via a concrete culvert. The entire ditch is  
24 approximately 16.5 miles long. The segment within the project APE (5BL.3113.67) is 100 feet  
25 long. This segment is the oldest portion of the ditch, with water appropriated in 1869. The ditch  
26 is 20 feet wide and 6 feet deep, is in good condition, and much of its length follows the historic  
27 alignment. At the east side of the railway crossing, the ditch is piped underground beneath a  
28 power substation. Well developed riparian growth exists along both banks of the ditch in many  
29 areas. The surrounding area supports rural residential development.

30 **Eligibility Determination:** In 1991, the OAHF officially determined the entire Rough & Ready  
31 Ditch (5BL.3113) to be NRHP-eligible under Criterion A for its important association with the  
32 development of water rights and agriculture in Boulder County. The segment within the project  
33 APE (5BL.3113.67) retains sufficient integrity to support the eligibility of the entire linear  
34 resource.

35 **Effect Determination – Package A:** The historic Rough & Ready Ditch currently crosses the  
36 active railroad line inside a modern concrete culvert. The proposed commuter rail line would be  
37 aligned 20 feet northeast and parallel to the existing railroad. The elevated embankment  
38 supporting the new tracks and ballast would require an area approximately 35 feet wide. Thus, 35  
39 feet of the open ditch would have to be placed in a new culvert beneath the new commuter rail  
40 track and ballast on the south side of the existing rail line (see **Figure 3.15-91**).

1 Figure 3.15-91 5BL.3113.67 (Rough & Ready Ditch) – Package A



2

1 The portion of the ditch subject to direct impact by the commuter rail line is in close proximity  
2 to a preexisting impacted section (crossing under the active rail line). This additional impact  
3 would not substantially diminish the qualities that make this resource NRHP eligible. The  
4 proposed modifications affect a relatively small section of the 16.5 mile-long linear resource.  
5 FHWA, FTA and CDOT have determined that the Package A transit improvements would  
6 result in *no adverse effect* to the entire Rough & Ready Ditch.

7 **Effect Determination – Preferred Alternative:** The historic Rough & Ready Ditch currently  
8 crosses the active railroad line inside a modern concrete culvert. The proposed maintenance  
9 road associated with the commuter rail line would be aligned east and parallel to the existing  
10 railroad. The elevated embankment supporting the road would require an area approximately  
11 35-feet wide. Thus, 35 feet of the open ditch would have to be placed in a new culvert beneath  
12 the maintenance road on the east side of the existing rail line (see **Figure 3.15-92**).

13 The portion of the ditch subject to direct impact by the Preferred Alternative is in close  
14 proximity to a preexisting impacted section (crossing under the active freight rail line). This  
15 additional impact would not substantially diminish the qualities that make this resource NRHP  
16 eligible. The proposed modifications affect a relatively small section of the 16.5 mile-long linear  
17 resource. FHWA, FTA and CDOT have determined that the Preferred Alternative transit  
18 improvements would result in *no adverse effect* to the entire Rough & Ready Ditch.

### 19 **5BL.4832 (Oligarchy Ditch)**

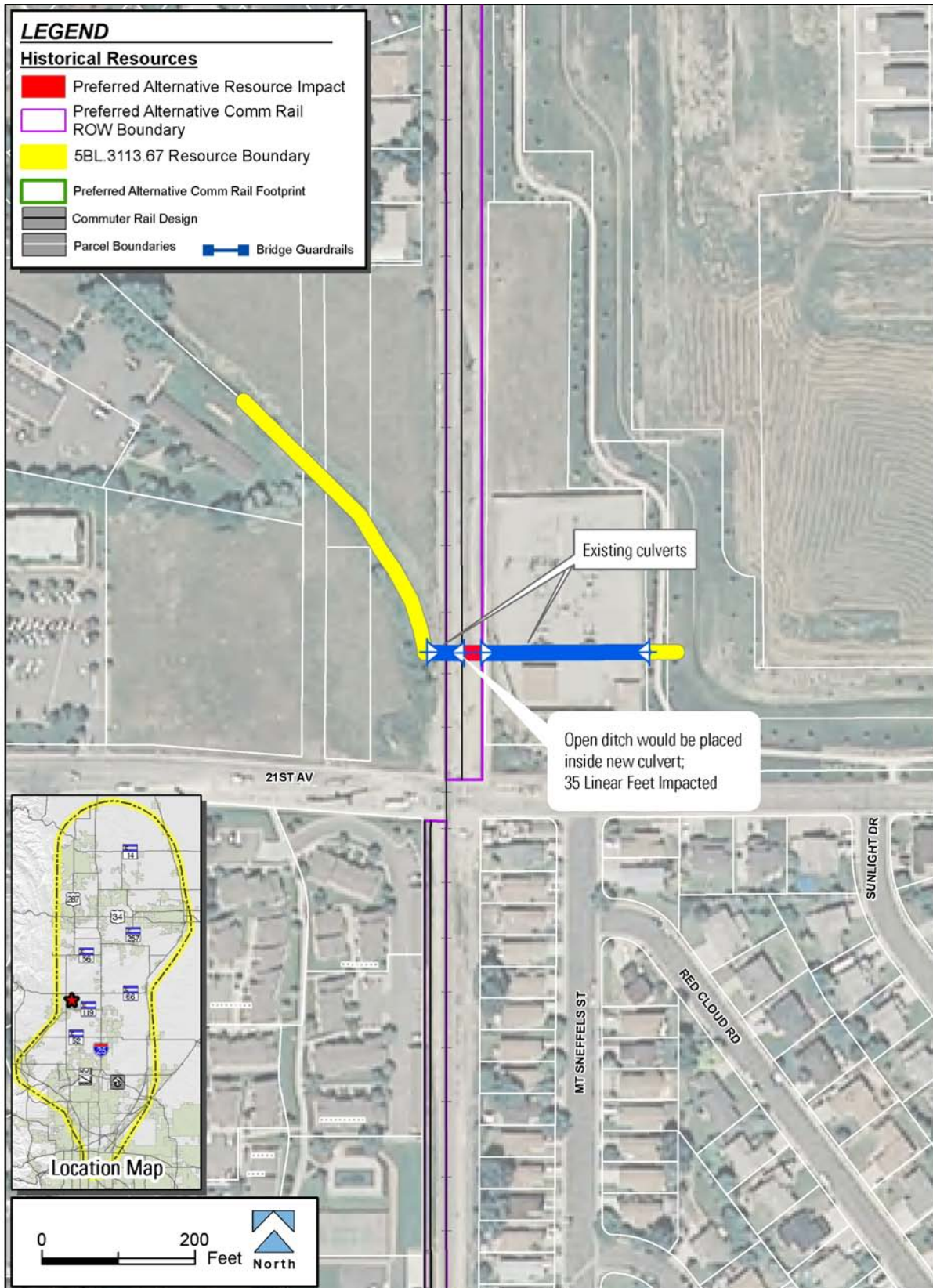
20 **Resource Description:** The entire earthen ditch is approximately 15.6 miles long. The ditch  
21 has been associated with Boulder County irrigation since its first appropriation date of 1861,  
22 which is among the oldest in the county. Two segments of the ditch cross the APE (see  
23 **Figure 3.15-93**). Segment 5BL.4832.28 crosses the active railway alignment in a culvert. This  
24 segment is 100 feet long, 21 feet wide and 6 feet deep. Both banks of the ditch are covered by  
25 heavy riparian growth in many areas. The surrounding area supports rural residential  
26 development.

27 A second Oligarchy Ditch segment (5BL.4832.26) follows a meandering course through the  
28 proposed commuter rail alignment. This segment in the project APE is one mile long. Well  
29 developed riparian growth exists along both banks of the ditch in some areas. The surrounding  
30 area supports semi-rural residential development.

31 **Eligibility Determination:** The Oligarchy Ditch is NRHP-eligible under Criterion A for its  
32 important association with the development of water rights and agriculture in Boulder County.  
33 The two segments located within the APE retain sufficient integrity to support the eligibility of  
34 the entire linear resource.

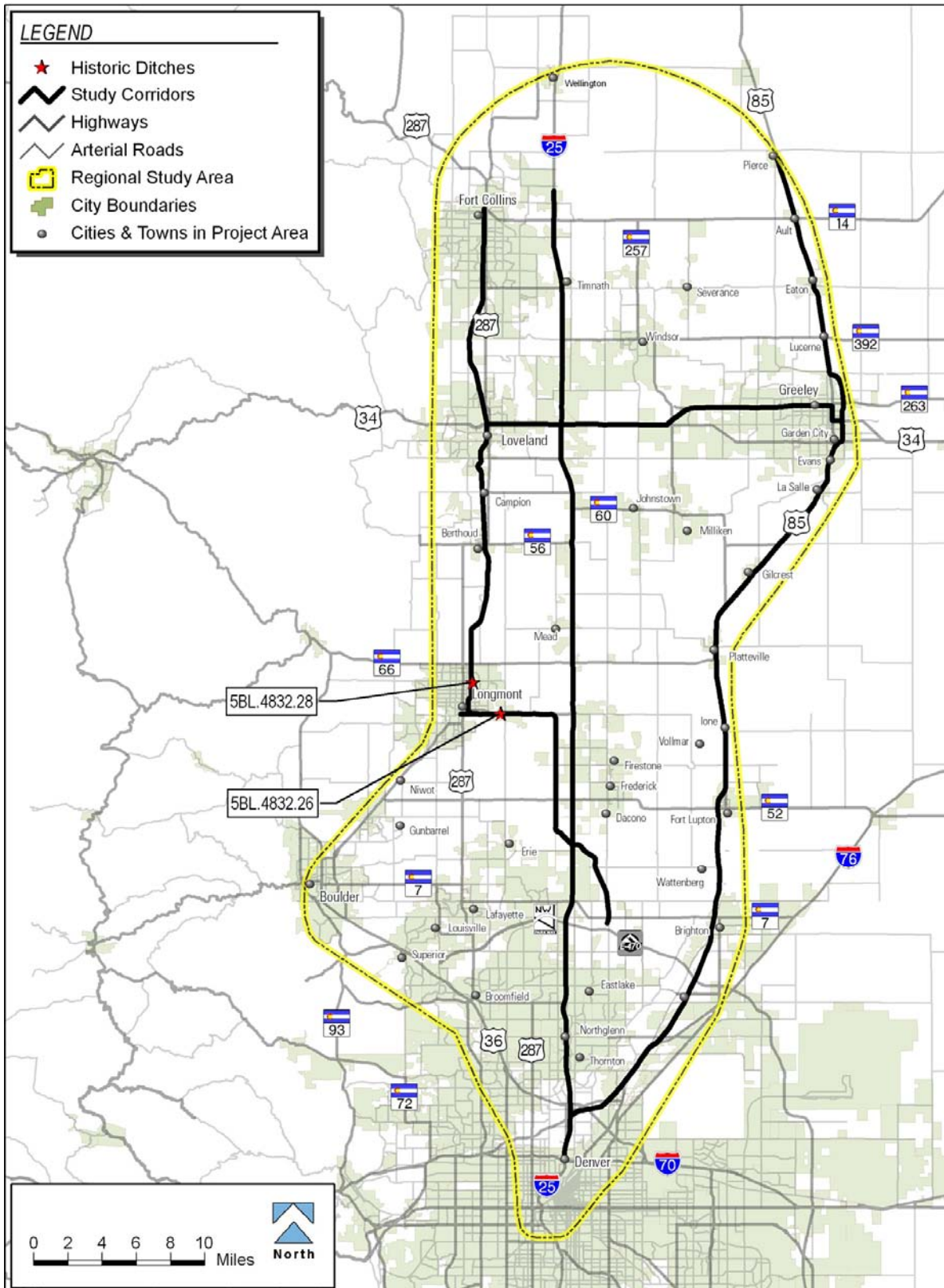
35 **Effect Determination:** In order to determine the effect to the entire linear resource, impacts to  
36 each of the segments passing through the project APE were assessed. These impact  
37 assessments are presented below, followed by a determination of effect to the entire Oligarchy  
38 Ditch (5LR.4832).

1 Figure 3.15-92 5BL.3113.67 (Rough & Ready Ditch) – Preferred Alternative



2

1 Figure 3.15-93 5BL.4832 (Oligarchy Ditch) – Segment Intersecting Project APE



2

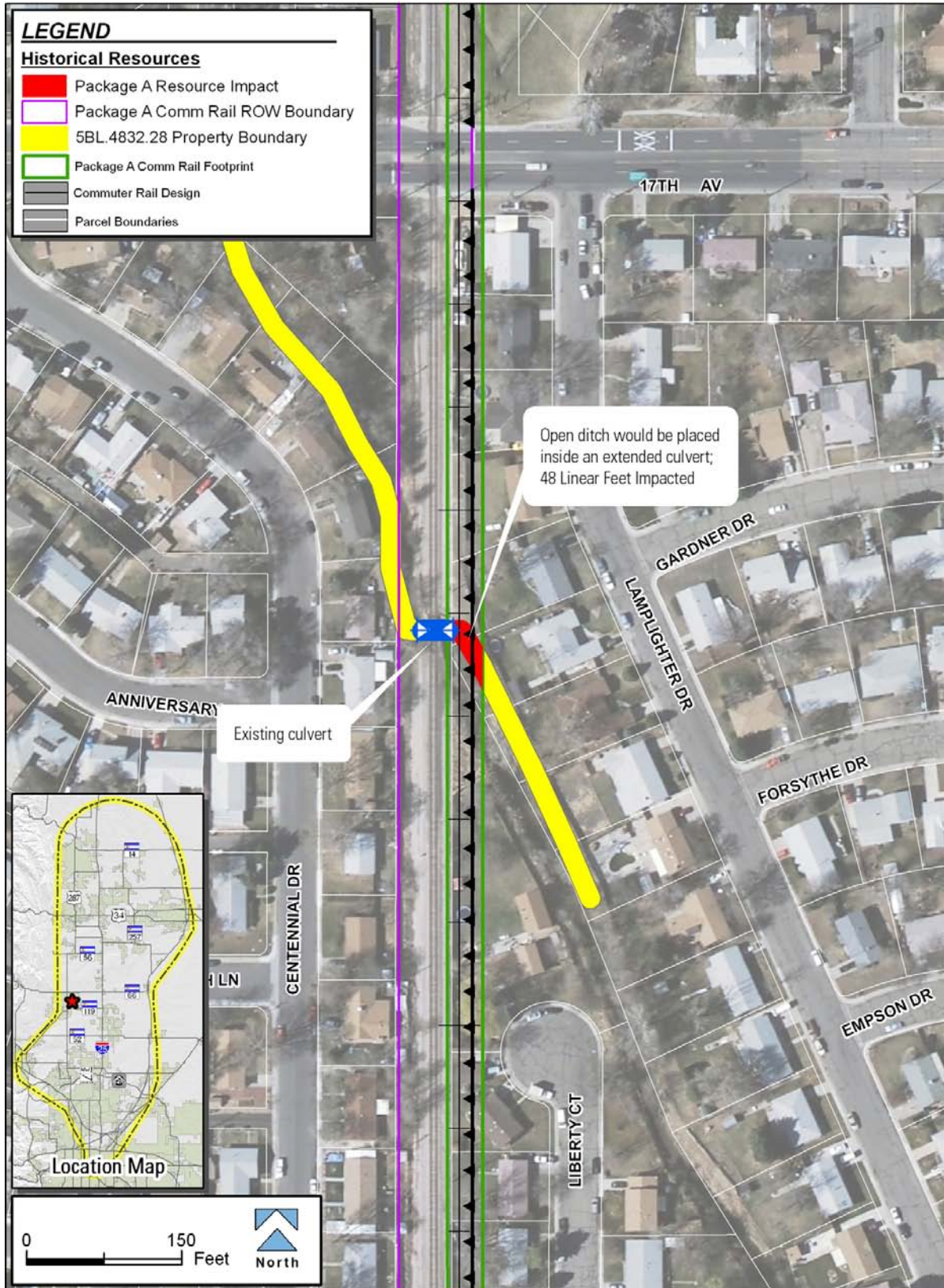
1 **Impacts to segment 5BL.4832.28 – Package A:** The proposed commuter rail line under  
2 Package A would be aligned 20 feet northeast and parallel to the existing railroad. The new  
3 embankment supporting the tracks and ballast and ballast would require an area  
4 approximately 48 feet wide. Thus, the existing culvert that carries Oligarchy Ditch underneath  
5 the railway would be extended; impacting 48 feet of the open ditch that would have to be  
6 placed in a new culvert beneath the new commuter rail line on the south side of the existing  
7 rail line (see **Figure 3.15-94**). Although the physical integrity of the ditch segment would be  
8 compromised by placing a portion of it into a culvert, this change affects only a very small  
9 percentage of the overall linear resource.

10 **Impacts to segment 5BL.4832.28 – Preferred Alternative:** The proposed commuter rail line  
11 under the Preferred Alternative would include the addition of a passing track on the east side  
12 of the existing rail line and a maintenance road on the west side in this area. The new  
13 embankment supporting the tracks and ballast would require an area approximately 48 feet  
14 wide to the east and the embankment supporting the new roadbed would require an area  
15 approximately 16 feet on the west. Thus, the existing culvert that carries Oligarchy Ditch  
16 underneath the railway would be extended; impacting 64 linear feet of the open ditch that  
17 would have to be placed in a new culvert (see **Figure 3.15-95**). Although the physical integrity  
18 of the ditch segment would be compromised by placing a portion of it into a culvert, this  
19 change affects only a very small percentage of the overall linear resource.

20 **Impacts to segment 5BL.4832.26 – Package A:** Portions of this segment of the historic  
21 Oligarchy Ditch would pass through the proposed route of the new commuter rail line under  
22 Package A. The ditch meanders across this area, often running parallel to the planned railroad  
23 alignment. A segment of the ditch was realigned during construction of Ken Pratt Boulevard.  
24 (SH 119), with the old channel being covered up and a 1,200-foot-long portion of the ditch  
25 placed in a 1,200-foot-long culvert underneath 3rd Avenue and SH 119. The railway alignment  
26 follows a broad sweeping curve, and intersects the irregular course of the ditch west of 3rd  
27 Avenue. Because the ditch and railroad alignments generally run parallel, a 210-foot-long  
28 stretch of the open ditch would have to be bridged by a new railroad structure. A total length of  
29 210 feet of open ditch would be spanned by a new bridge (see **Figure 3.15-96**). The resulting  
30 overhead cover would shade the portion of the ditch located underneath the bridge, but all  
31 structural support elements such as piers or abutments, would be placed outside of the historic  
32 boundary and would not result in a direct impact to the ditch. The physical setting of the ditch  
33 segment would not be substantially compromised by placing a portion of it underneath a bridge  
34 structure.

35 **Impacts to segment 5BL.4832.26 – Preferred Alternative:** Portions of this segment of the  
36 historic Oligarchy Ditch would pass through the proposed route of the new commuter rail line  
37 under the Preferred Alternative. The ditch meanders across this area, often running parallel to  
38 the planned railroad alignment. A segment of the ditch was realigned during construction of  
39 Ken Pratt Boulevard. (SH 119), with the old channel being covered up and a 1,200-foot-long  
40 portion of the ditch placed in a 1,200-foot-long culvert underneath 3rd Avenue and SH 119.  
41 The railway alignment follows a broad sweeping curve, and intersects the irregular course of  
42 the ditch west of 3rd Avenue. As a result a 61-foot-long stretch of the open ditch would have to  
43 be bridged by a new railroad structure. A total length of 61 feet of open ditch would be  
44 spanned by a new bridge (see **Figure 3.15-97**). The resulting overhead cover would shade the  
45 portion of the ditch located underneath the bridge, but all structural support elements such as  
46 piers or abutments, would be placed outside of the historic boundary and would not result in a  
47 direct impact to the ditch. The physical setting of the ditch segment would not be substantially  
48 compromised by placing a portion of it underneath a bridge structure.

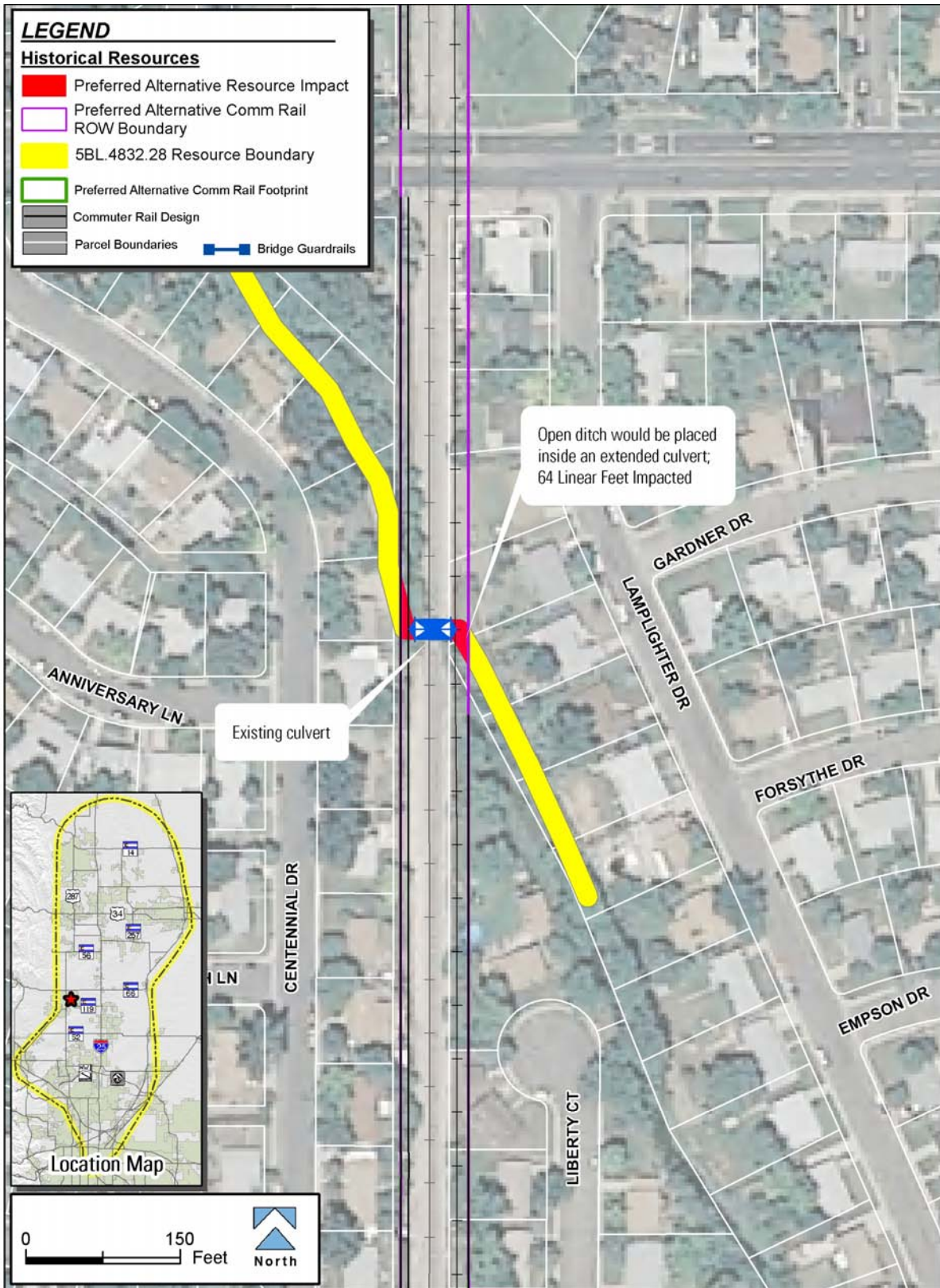
1 Figure 3.15-94 5BL.4832.28 (Oligarchy Ditch) – Package A Commuter Rail



2  
3

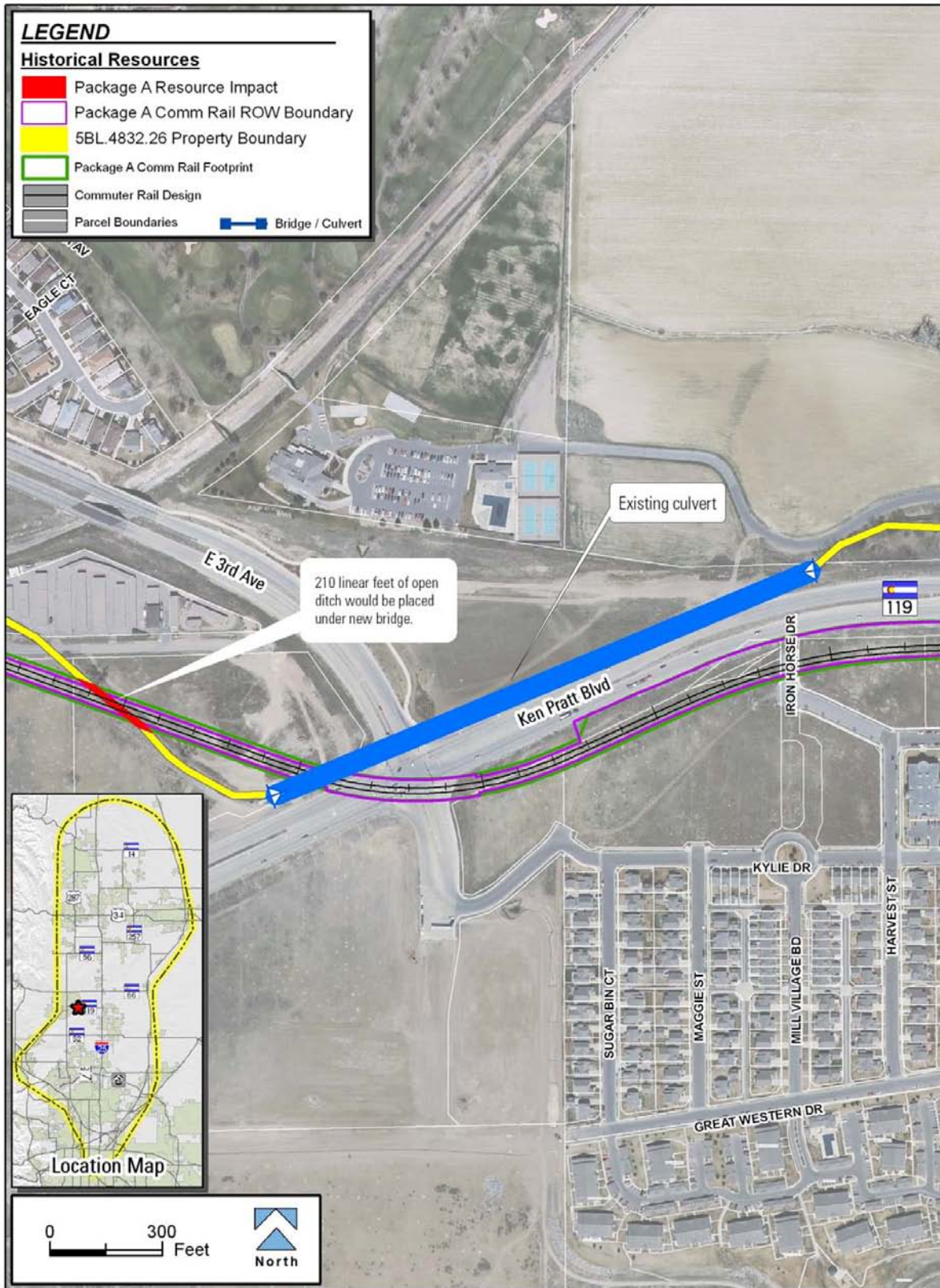


1 Figure 3.15-95 5BL.4832.28 (Oligarchy Ditch) – Preferred Alternative



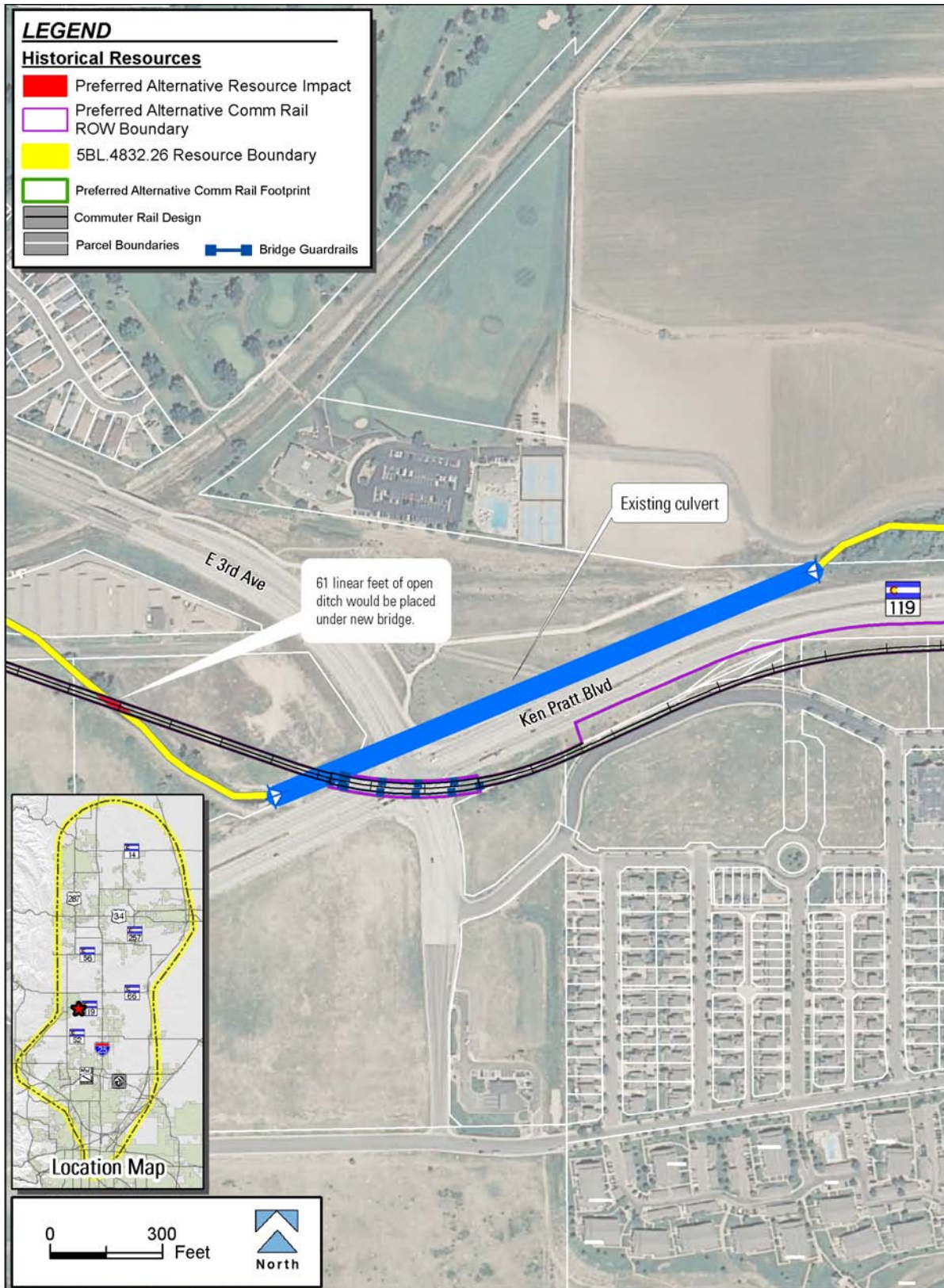
2

1 Figure 3.15-96 5BL.4832.26 (Oligarchy Ditch) – Package A Commuter Rail



2

1 Figure 3.15-97 5BL.4832.26 (Oligarchy Ditch) – Preferred Alternative



2

1 **Summary Effect Determination:**

2 **Package A:** A cumulative total of 48 feet of open ditch would be placed inside a new culvert  
3 (5BL.4832.26) and 210 feet of open ditch would flow underneath a new bridge (5BL.4832.28).  
4 Temporary construction impacts would occur during culvert installation. Because the physical  
5 integrity of the ditch segment would not be substantially compromised by placing a portion of it  
6 inside a culvert and underneath a bridge structure, and these changes affect only a very small  
7 percentage of the overall linear resource, FHWA, FTA and CDOT have determined that the  
8 Package A commuter rail improvements would result in *no adverse effect* to the entire  
9 Oligarchy Ditch (5LR.4832).

10 **Package B:** There are no direct or indirect impacts to the resource resulting from  
11 improvements associated with Package B, therefore FHWA, FTA and CDOT have determined  
12 that Package B would result in *no historic properties affected* with respect to the entire  
13 Oligarchy Ditch.

14 **Preferred Alternative:** A cumulative total of 64 feet of open ditch would be placed inside a  
15 new culvert (5BL.4832.26) and 61 feet of open ditch would flow underneath a new bridge  
16 (5BL.4832.28). Temporary construction impacts would occur during culvert installation.  
17 Because the physical integrity of the ditch segment would not be substantially compromised by  
18 placing a portion of it inside a culvert and underneath a bridge structure, and these changes  
19 affect only a very small percentage of the overall linear resource, FHWA, FTA and CDOT have  
20 determined that the Preferred Alternative commuter rail improvements would result in *no*  
21 *adverse effect* to the entire Oligarchy Ditch (5LR.4832).

22 **5BL.9163 (Kitely House)**

23 **Resource Description:** The Kitely House is located at 846 Atwood Street in Longmont. The  
24 property was the home of Rae and Mary Kitely, who both made significant contributions to  
25 Longmont's history. Rae was the son of early Longmont pioneers and one of Longmont's most  
26 influential citizens. He was a lawyer, and a banker and served for 10 years as mayor of  
27 Longmont. The house is also significant for its association with Longmont's residential  
28 development from the early to mid 20th century. The house is architecturally notable as a good  
29 example of the Craftsman style of architecture.

30 **Eligibility Determination:** The property was initially surveyed in March 2003 and field  
31 assessed as eligible for inclusion on the NRHP under Criterion A for its association with  
32 Longmont's residential development, under Criterion B for its association with the Kitely's and  
33 under Criterion C as a good example of Craftsman architecture. It was re-evaluated in August  
34 2010 and assessed as eligible under those same three criteria.

35 **Effect Determination – Package A:** The impacts associated with commuter rail under  
36 Package A would occur along the eastern edge of the property where a very small strip of land  
37 totaling 385 sq. ft. (0.01 acre) on the east edge of the property adjacent to the west side of the  
38 existing railroad tracks would be acquired for construction of a retaining wall that would  
39 prevent a more extensive acquisition from occurring. Removal of this strip of property would  
40 not have any impact on the historic association or architectural qualities of the house that  
41 make this property historic. Removal of this strip of land would not diminish the architectural or  
42 setting characteristics that render this property eligible for the NRHP. Therefore FHWA, FTA  
43 and CDOT have determined that the Package A improvements would result in no adverse  
44 effect to the resource.

1 **Effect Determination – Preferred Alternative:** The impacts associated with commuter rail  
2 under the Preferred Alternative would occur along the eastern edge of the property where a  
3 very small strip of land totaling 385 sq. ft. (0.01 acre) on the east edge of the property adjacent  
4 to the west side of the existing railroad tracks would be acquired for construction of a retaining  
5 wall that would prevent a more extensive acquisition from occurring. (see **Figure 3.15-98**).  
6 Removal of this strip of property would not have any impact on the historic association or  
7 architectural qualities of the house that make this property historic. Removal of this strip of  
8 land would not diminish the architectural or setting characteristics that render this property  
9 eligible for the NRHP. Therefore FHWA, FTA and CDOT have determined that the Preferred  
10 Alternative would result in *no adverse effect* to the resource.

### 11 **5BL.10636 (Boggs Residence)**

12 **Resource Description:** This residence, located at 122 8th Ave. in Longmont, was built in  
13 1939. It was the home of a local carpenter, Joe Boggs and displays elements of the  
14 Mediterranean style including stucco walls and an arcaded porch.

15 **Eligibility Determination:** This structure is significant under Criterion C as a good example of  
16 an early twentieth century vernacular home with some Mediterranean style elements including  
17 an arcaded porch.

18 **Effect Determination – Package A:** There would be no direct effect to this property. The  
19 commuter rail alignment would stay on the existing single-track rail through this segment.  
20 Indirect effects include additional train traffic on the railway tracks under Package A, creating  
21 minor vibration increases over current levels, but not to a level that would impair the  
22 architectural qualities of this residential building. Noise levels are expected to be the same as  
23 existing conditions.

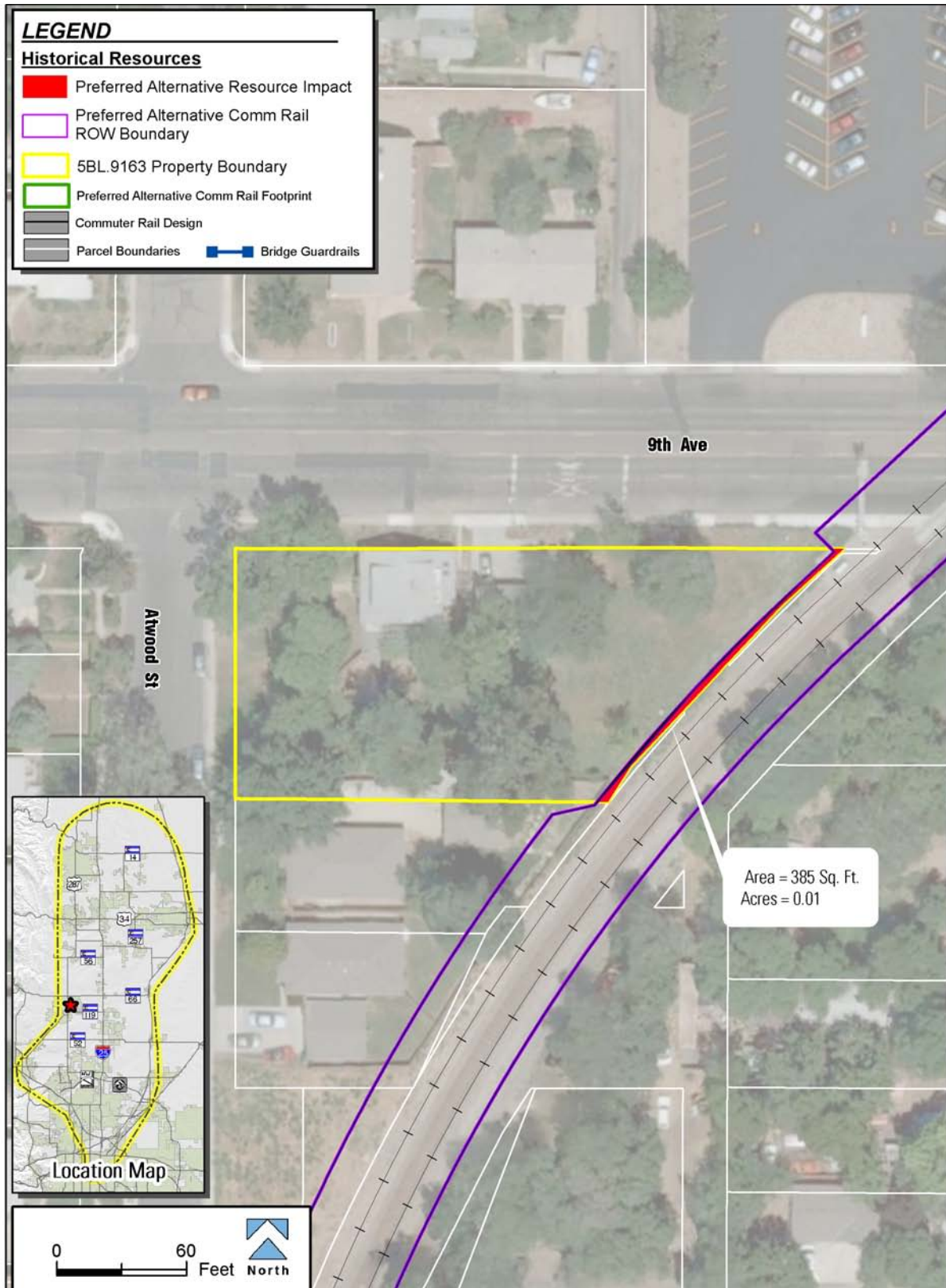
24 The proposed transportation improvements would not substantially diminish or alter the  
25 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
26 FTA and CDOT therefore have determined that Package A commuter rail improvements would  
27 result in *no adverse effect* to the resource.

28 **Effect Determination – Preferred Alternative:** There would be no direct effect to this  
29 property. The commuter rail alignment would remain within the existing rail right-of-way  
30 through this segment (see **Figure 3.15-99**). Indirect effects include additional train traffic on  
31 the railway tracks under the Preferred Alternative, creating minor vibration increases over  
32 current levels, but not to a level that would impair the architectural qualities of this residential  
33 building. Noise levels are expected to be the same as existing conditions.

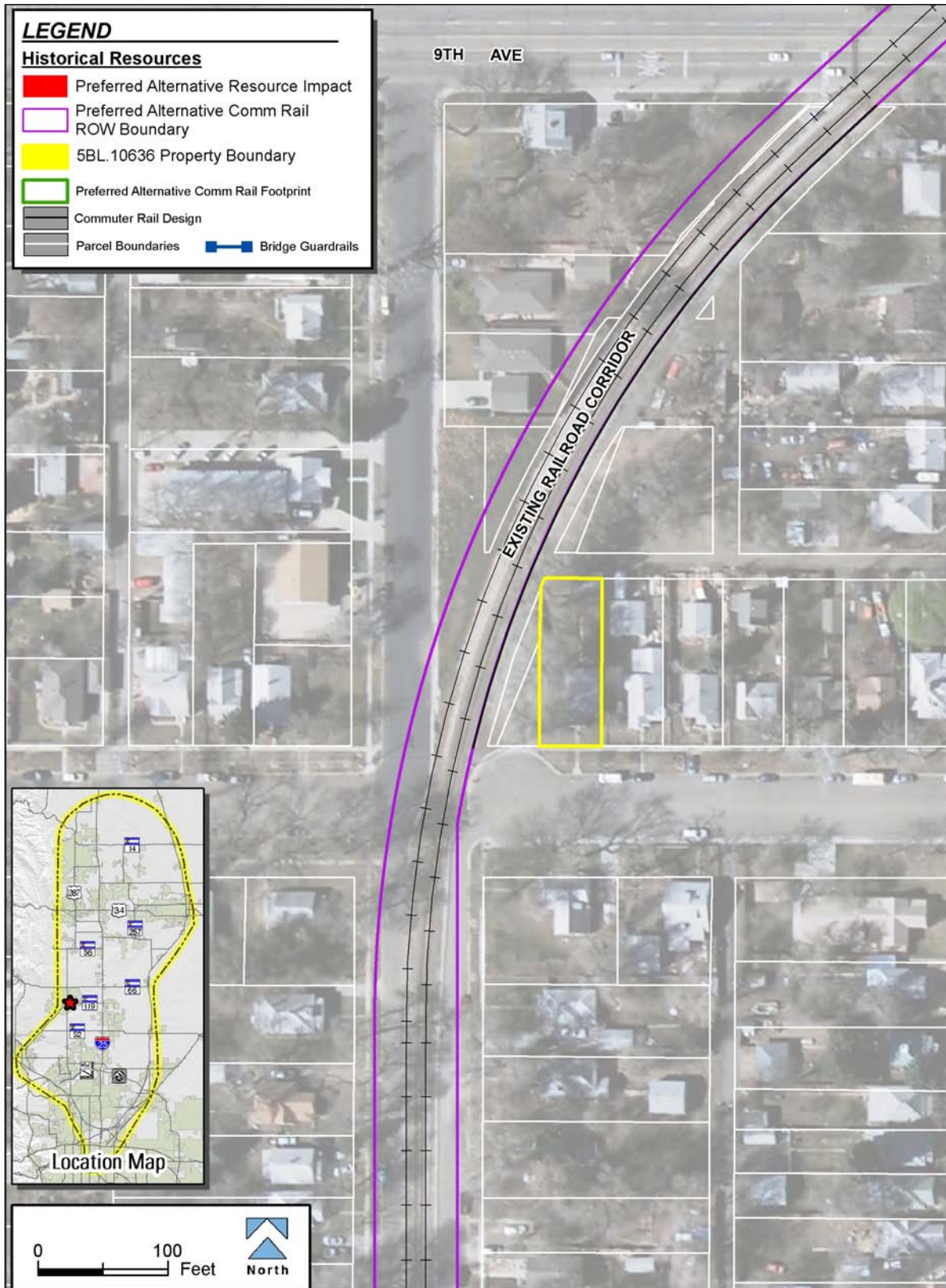
34 The proposed transportation improvements would not substantially diminish or alter the  
35 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
36 FTA and CDOT therefore have determined that the Preferred Alternative commuter rail  
37 improvements would result in *no adverse effect* to the resource.

1 Figure 3.15-98 5BL.9163 (Kitley House) – Preferred Alternative

2



1 Figure 3.15-99 5BL.10636 (Boggs Residence) – Preferred Alternative



2

1 **COMMUTER RAIL: LONGMONT TO FASTRACKS NORTH METRO**

2 This segment uses the existing track in the area between downtown Longmont to SH 119.  
3 From that point for Package A, a new double-track rail alignment continues to the east along  
4 SH 119 and then south along the west side of WCR 7, then southeast along UPRR right-of-  
5 way to FasTracks North Metro. For the Preferred Alternative, the rail would be largely  
6 single-track with 5.2 miles of passing track located immediately west of I-25. There are  
7 12 historic properties in this component of commuter rail.

8 **5BL.1245 (Old City Electric Building)**

9 **Resource Description:** The Old City Electric Building (5BL.1245) is located at 103 Main  
10 Street in Longmont. It is an excellent example of 1930s industrial architecture featuring large  
11 windows, an open plan and solid brick construction. This building served the city's power  
12 needs from 1931 to 1969. Longmont was one of the first cities in Colorado to develop a  
13 municipally owned electric generation plant.

14 **Eligibility Determination:** The Old City Electric Building is eligible for the NRHP under  
15 Criterion A for its significant role in the development of Longmont, and under Criterion C as an  
16 excellent, intact example of industrial architecture. This early power generation plant has also  
17 been designated as a Local Landmark by the City of Longmont.

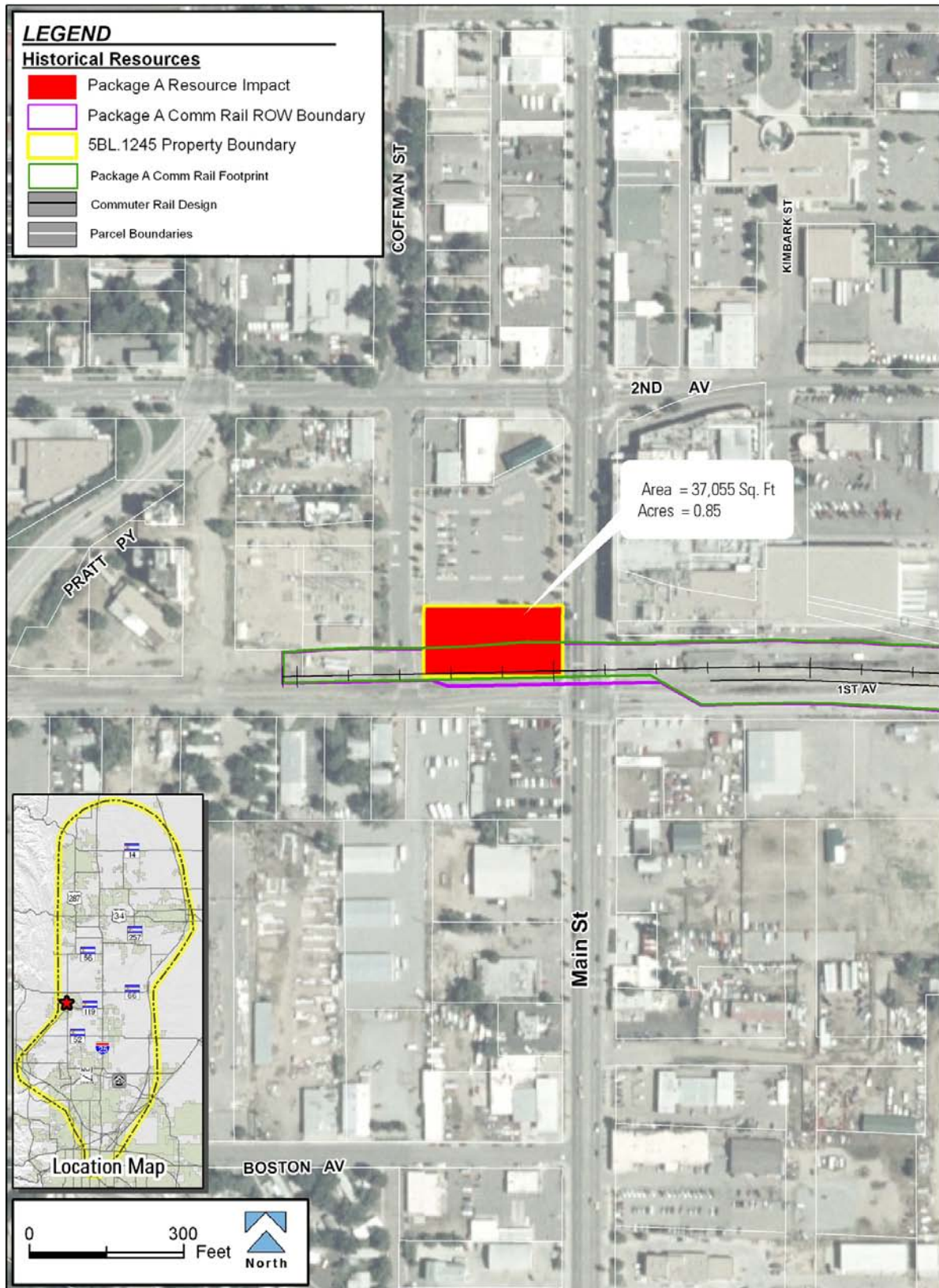
18 **Effect Determination – Package A:** Construction of a new commuter railroad line alongside  
19 the existing freight rail line on the north side of 1st Avenue in Longmont would require  
20 acquisition of new right-of-way, including 0.85 acres of land containing this historic building.  
21 The building would need to be demolished or moved to a new location to accommodate the  
22 new commuter rail line tracks and associated construction activities (see **Figure 3.15-100**).  
23 This direct effect would result in the major reduction or loss of integrity of this resource, and  
24 FHWA, FTA and CDOT therefore have determined that an *adverse effect* to this resource  
25 would result. Details of mitigation for this effect are discussed under **Section 3.15.3**.

26 **Effect Determination—Preferred Alternative:** Since the Preferred Alternative would be  
27 single tracked through this area; there would be no direct impacts to the Old City Electric  
28 Building (see **Figure 3.15-101**). Indirect effects include additional train traffic on the railway  
29 tracks under the Preferred Alternative, creating minor vibration increases over current levels,  
30 but not to a level that would impair the architectural qualities of this residential building. Noise  
31 levels are expected to be the same as existing conditions.

32 The proposed transportation improvements would not substantially diminish or alter the  
33 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
34 FTA and CDOT therefore have determined that the Preferred Alternative commuter rail  
35 improvements would result in *no adverse effect* to the resource.

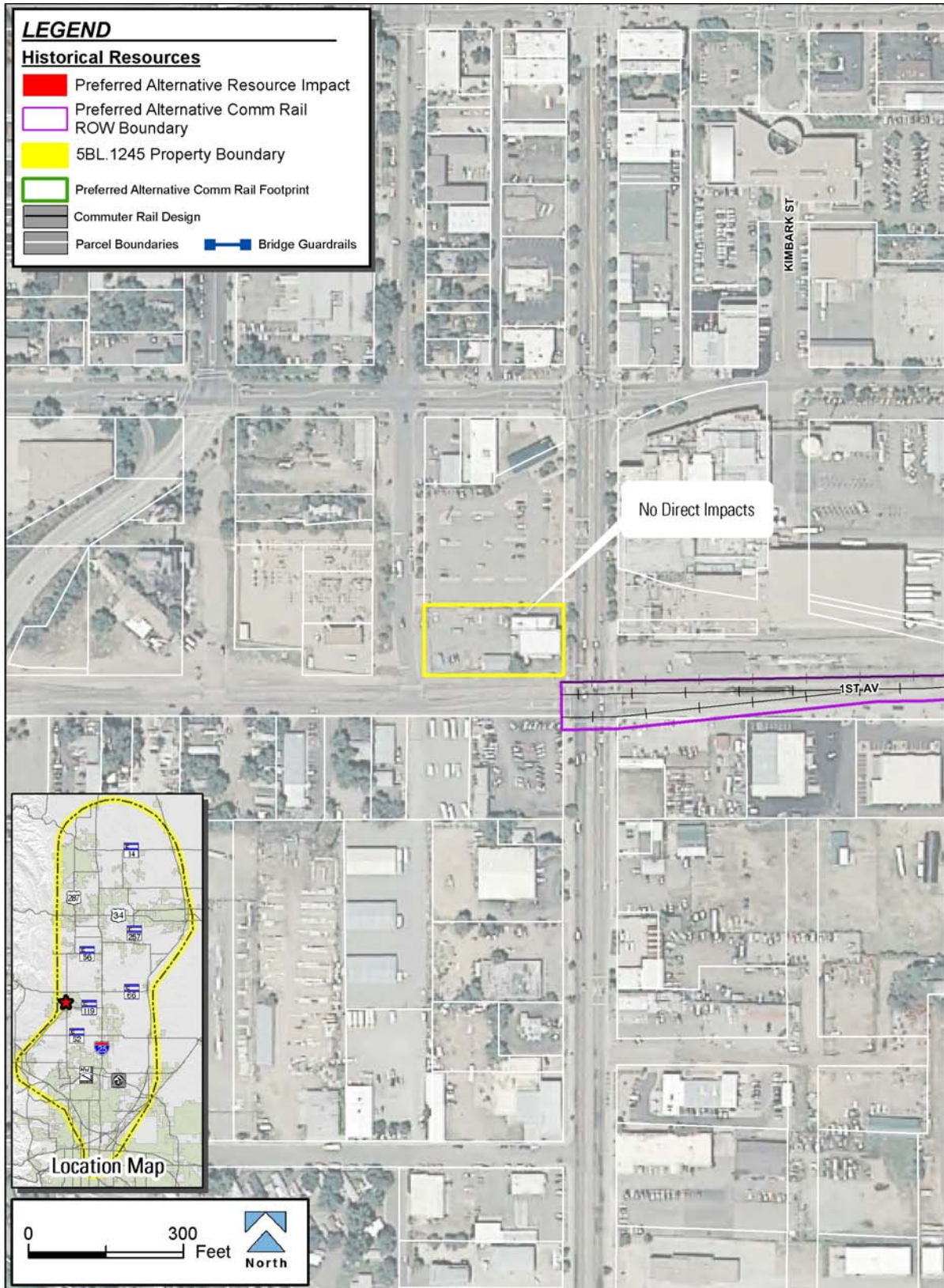


1 Figure 3.15-100 5BL.1245 (Old City Electric Building) – Package A Commuter Rail



2  
3

1 Figure 3.15-101 5BL.1245 (Old City Electric Building) – Preferred Alternative



2

1 **5BL.1244 (Colorado & Southern/BNSF Depot)**

2 **Resource Description:** The  
3 historic Colorado &  
4 Southern/BNSF Depot (5BL.1244)  
5 is located at 100 Main Street in  
6 Longmont. The depot was built in  
7 1905. It is one of the two early  
8 railroad depots in Longmont and  
9 is one of the finest small masonry  
10 depots in the state. The depot is  
11 the only extant Richardsonian  
12 Romanesque style building in  
13 Longmont.



Colorado & Southern/BNSF Depot

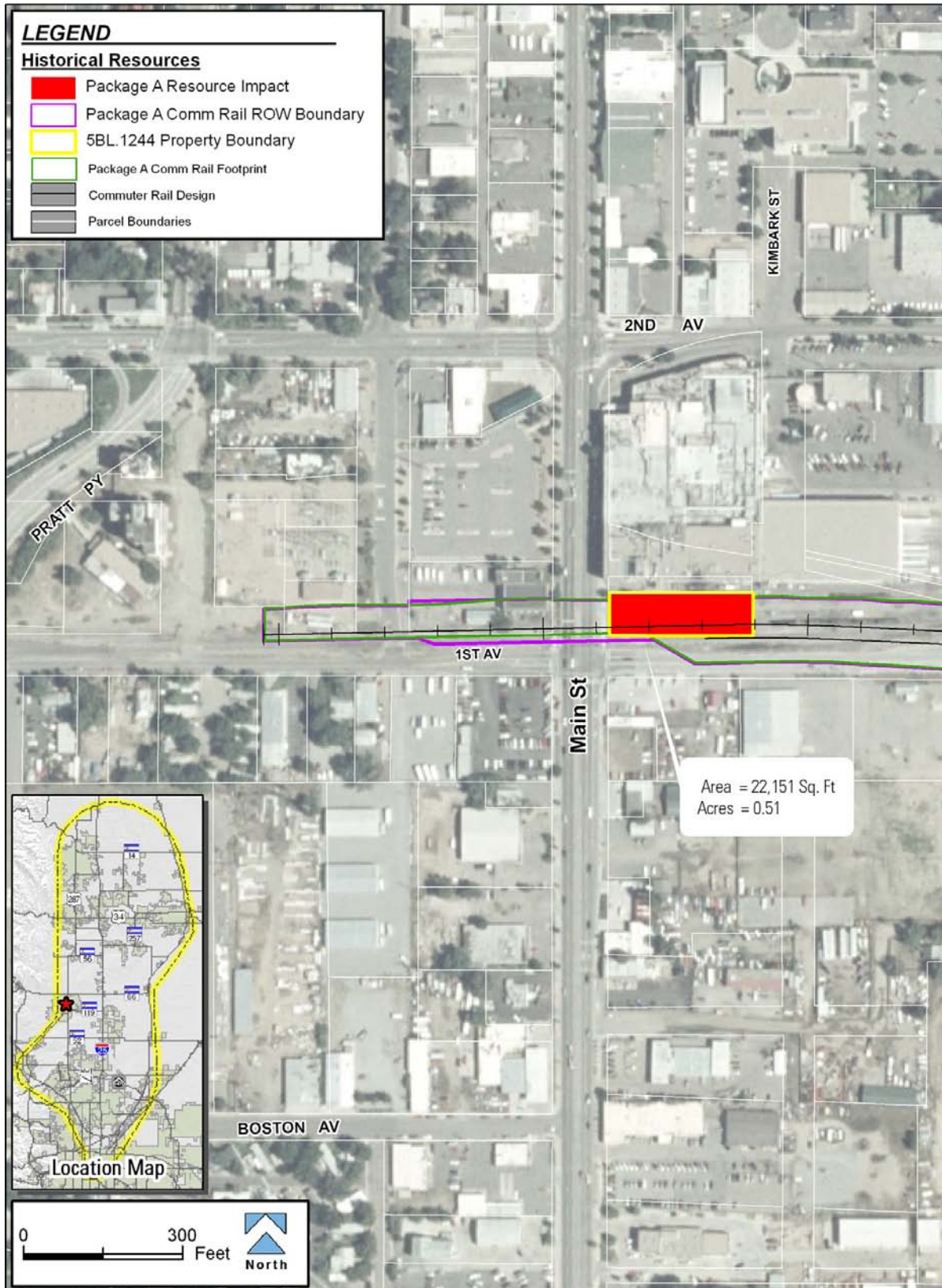
14 **Eligibility Determination:** This depot (5BL.1244) is NRHP-eligible under Criterion A for its  
15 association with railroad transportation and its contribution to the development of Longmont.  
16 The building is also NRHP-eligible under Criterion C as an excellent and well preserved  
17 example of masonry railroad depot architecture in Colorado.

18 **Effect Determination – Package A:** Construction of a new commuter railroad line alongside  
19 the existing commercial rail line on the north side of First Avenue in Longmont would require  
20 acquisition of new right-of-way, including the 0.51 acre of land occupied by this historic  
21 building (see **Figure 3.15-102**). The building would need to be demolished or moved to  
22 another location to accommodate the new commuter rail tracks and associated construction  
23 activities. This direct effect would result in the major reduction or loss of integrity of this  
24 resource, and FHWA, FTA and CDOT therefore have determined that an *adverse effect* to this  
25 resource would result. Details of mitigation for this effect are discussed under **Section 3.15.3**.

26 **Effect Determination – Preferred Alternative:** Since the Preferred Alternative would be  
27 single tracked through this area; there would be no direct impacts to the Colorado &  
28 Southern/BNSF Depot (see **Figure 3.15-103**). Indirect effects include additional train traffic on  
29 the railway tracks under the Preferred Alternative, creating minor vibration increases over  
30 current levels, but not to a level that would impair the architectural qualities of this residential  
31 building. Noise levels are expected to be the same as existing conditions.

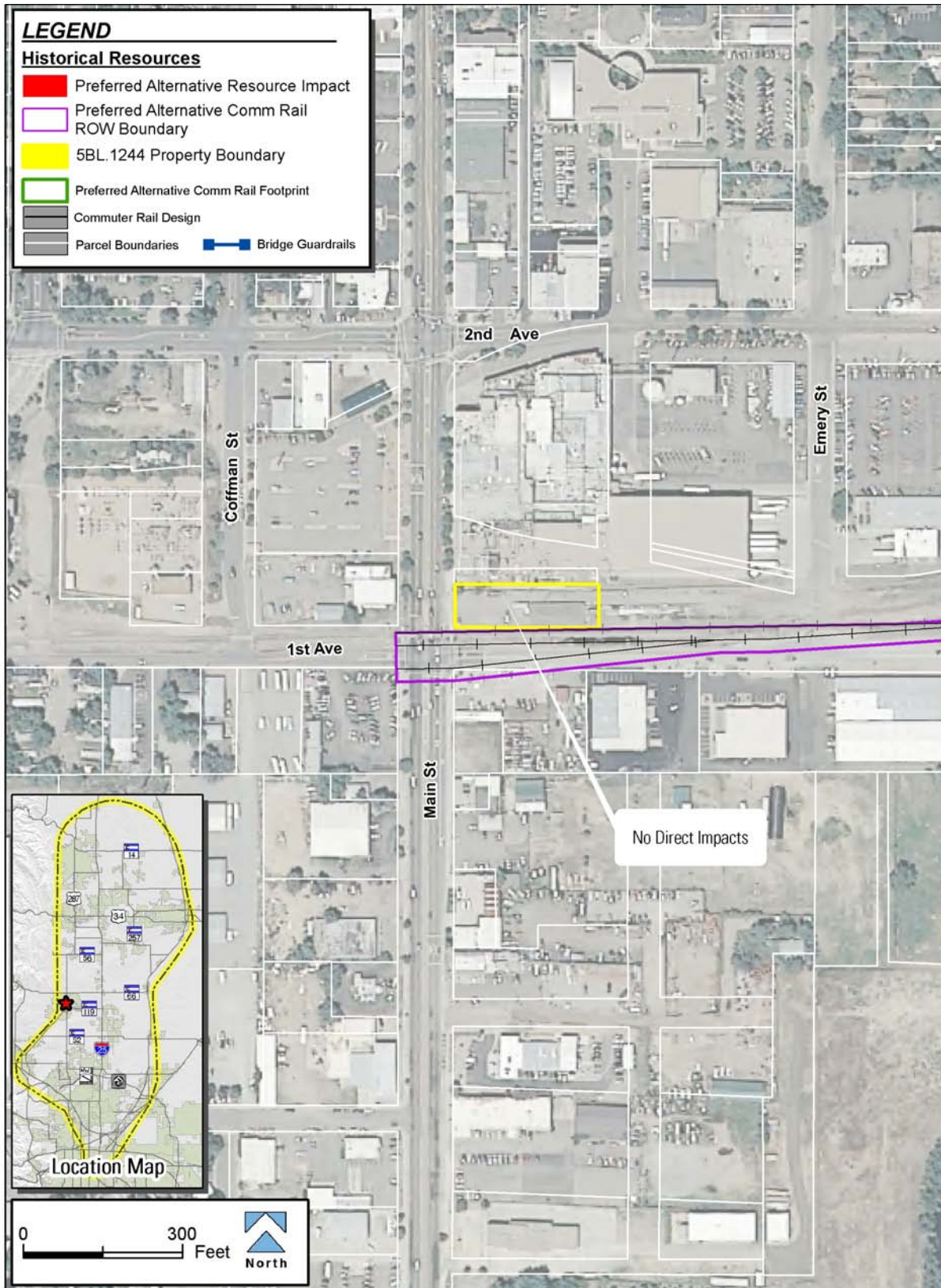
32 The proposed transportation improvements would not substantially diminish or alter the  
33 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
34 FTA and CDOT therefore have determined that the Preferred Alternative commuter rail  
35 improvements would result in *no adverse effect* to the resource.

1 Figure 3.15-102 5BL.1244 (Colorado & Southern/BNSF Depot) – Package A



2

1 Figure 3.15-103 5BL.1244 (Colorado & Southern/BNSF Depot) – Preferred Alternative



2

1 **5BL.513 (Great Western Sugar Factory)**

2 **Resource Description:** The Great Western Sugar Factory is located at 11939 and 11801  
3 Sugarmill Road in Longmont. This sugar beet processing factory was built in 1903 and  
4 operated into the 1970s. The 3.72 acre factory site contains several beet processing buildings  
5 as well as industrial features including storage silos located north of Sugarmill Road.

6 **Eligibility Determination:** The Great Western Sugar Factory (5BL.513) is eligible for the  
7 NRHP under Criterion A for its significant role in the very important sugar beet industry in  
8 Colorado, as well as its major contribution to the economic development of the Longmont area.

9 **Effect Determination – Package A:** Under Package A, proposed commuter rail  
10 improvements in the vicinity of the Great Western Sugar factory site include a station platform,  
11 park-and-ride lots, and a pedestrian walkway from the station platform to the south parking lot.  
12 The station platform intrudes slightly into the north edge of the sugar factory site, and the  
13 proposed pedestrian walkway extends from the platform through the northwestern corner of  
14 the property to access a proposed parking lot that would be located just west of the factory  
15 site. The design and cross-section of a typical commuter rail station is depicted in  
16 **Figure 3.15-15**. These direct impacts amount to 0.33 acre, or approximately nine percent of  
17 the 3.72-acre property. None of the buildings or other standing industrial features that  
18 contribute to the property's significance would be affected by these commuter rail facilities (see  
19 **Figure 3.15-104**).

20 There would be additional train traffic on the nearby railway tracks under Package A, creating  
21 minor noise and vibration increases over current levels, but no impacts. This would not be a  
22 new or heightened condition from the historic times when the factory was operational and  
23 relied on frequent train transport of beets and lime for sugar production, and shipment of  
24 finished sugar.

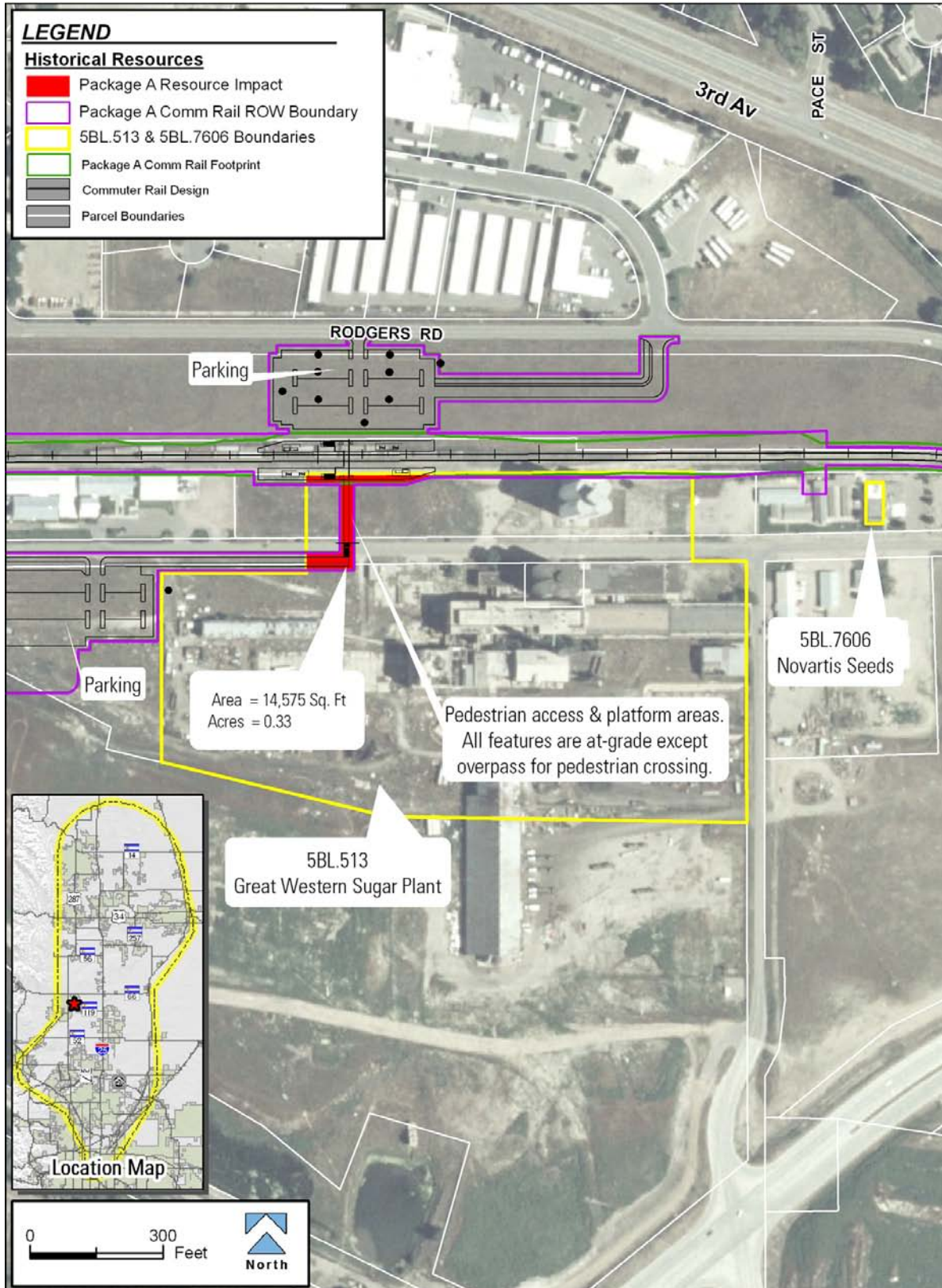
25 The proposed transportation improvements would not substantially diminish or alter the  
26 architectural or setting characteristics that render the property eligible for the NRHP. FHWA,  
27 FTA and CDOT therefore have determined that Package A commuter rail improvements would  
28 result in *no adverse effect* to the resource.

29 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, proposed  
30 commuter rail improvements in the vicinity of the Great Western Sugar factory site include a  
31 station platform, and a park-and-ride lot all located on the north side of the existing rail line. As  
32 a result there would be no direct impacts to the Great Western Sugar factory historic site (see  
33 **Figure 3.15-105**).

34 There would be additional train traffic on the nearby railway tracks under the Preferred  
35 Alternative, creating minor noise and vibration increases over current levels, but no impacts.  
36 This would not be a new or heightened condition from the historic times when the factory was  
37 operational and relied on frequent train transport of beets and lime for sugar production, and  
38 shipment of finished sugar.

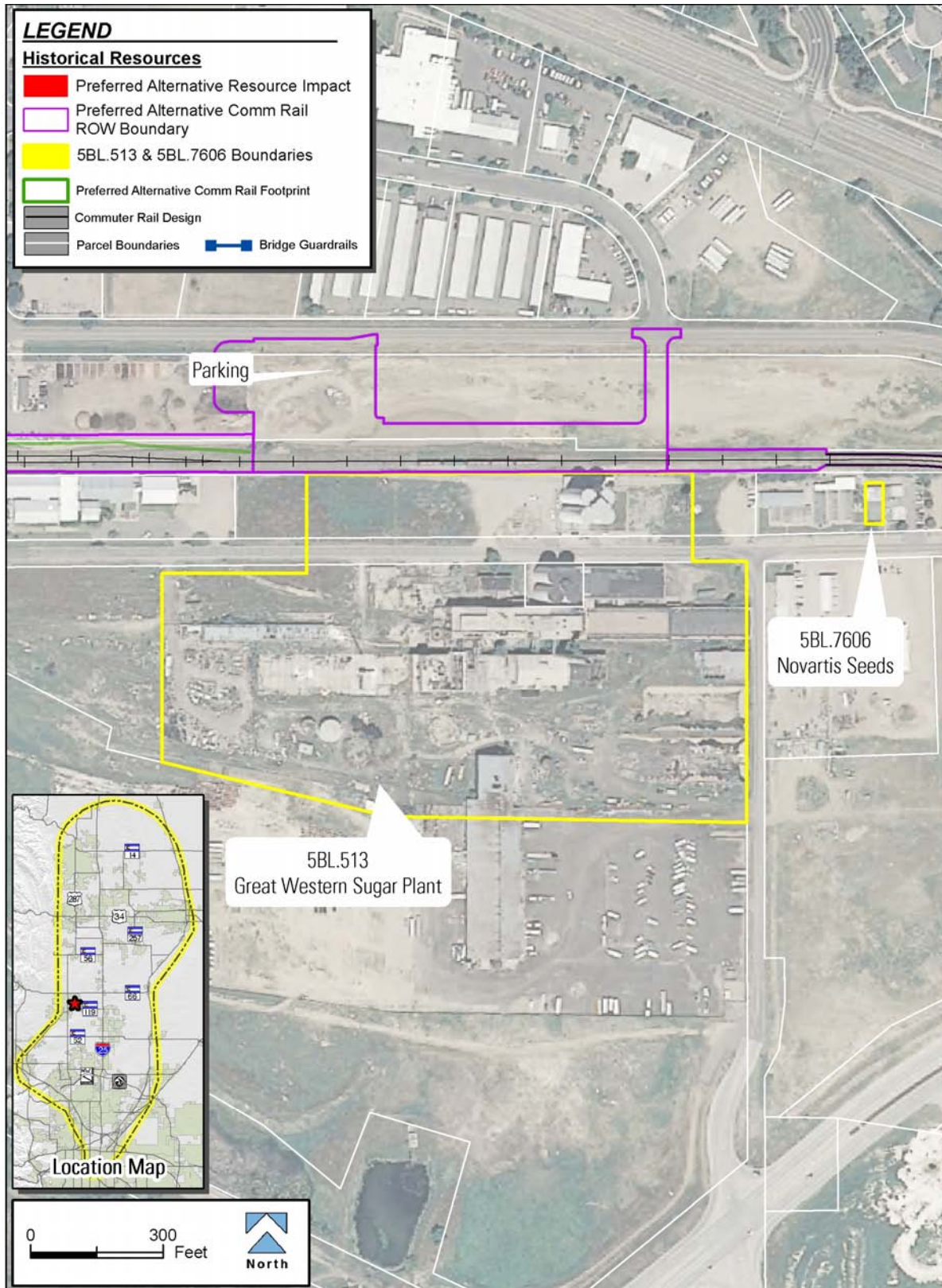
39 The proposed transportation improvements under the Preferred Alternative would not  
40 substantially diminish or alter the architectural or setting characteristics that render the  
41 property eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that the  
42 Preferred Alternative commuter rail improvements would result in *no adverse effect* to the  
43 resource.

1 **Figure 3.15-104 5BL.513 (Great Western Sugar Plant and Novartis Seeds/Syngenta**  
2 **Seeds) – Package A**



3

1 Figure 3.15-105 5BL.513 (Great Western Sugar Plant and Novartis Seeds/Syngenta  
2 Seeds) – Preferred Alternative





1 **5BL.7606 (Novartis Seeds/Syngenta Seeds)**

2 **Resource Description:** This large, one-story brick office building was constructed in 1951  
3 near the Great Western Sugar factory in Longmont. The building is covered by a flat roof with  
4 wide overhanging eaves. Its façade is symmetrically arranged, with a central entry flanked by  
5 banks of nine casement windows. The building appears unaltered, and is a good example of  
6 International Style commercial architecture. The building is currently occupied by Novartis  
7 Seeds/Syngenta Seeds. Syngenta Seeds is a global leader in the agribusiness industry.

8 **Eligibility Determination:** The Novartis Seeds/Syngenta Seeds office in Longmont  
9 (5BL.7606) is eligible for the NRHP under Criterion C as a well preserved specimen of  
10 International Style commercial architecture in Colorado.

11 **Effect Determination – Package A:** Under Package A, proposed commuter rail  
12 improvements in the vicinity of the Novartis Seeds/Syngenta Seeds office building southwest  
13 of Longmont are limited to construction of a second, dedicated commuter rail track parallel to  
14 the existing standard gauge commercial rail line that runs in an east-west alignment a short  
15 distance north of the property. A passenger station with park-and-ride lot and platform would  
16 be located a short distance to the west, in the vicinity of the historic Longmont sugar factory  
17 (5BL.513). The 0.08 acre Novartis Seeds/Syngenta Seeds building site would not be directly  
18 impacted by the alternative (see **Figure 3.15-104**).

19 There would be additional train traffic on the nearby railway tracks under Package A, creating  
20 minor noise and vibration increases over current levels, but not to a level that would impair the  
21 architectural qualities of this commercial/industrial building. FHWA, FTA and CDOT therefore  
22 have determined that Package A would result in *no adverse effect* to the resource.

23 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative, proposed  
24 commuter rail improvements in the vicinity of the Novartis Seeds/Syngenta Seeds office  
25 building southwest of Longmont are limited to adding train service to the existing standard  
26 gauge commercial rail line that runs in an east-west alignment a short distance north of the  
27 property. A passenger station with park-and-ride lot and platform would be located a short  
28 distance to the west, in the vicinity of the historic Longmont sugar factory (5BL.513). The 0.08  
29 acre Novartis Seeds/Syngenta Seeds building site would not be directly impacted by the  
30 alternative (see **Figure 3.15-105**).

31 There would be additional train traffic on the nearby railway tracks under the Preferred  
32 Alternative, creating minor noise and vibration increases over current levels, but not to a level  
33 that would impair the architectural qualities of this commercial/industrial building. FHWA, FTA  
34 and CDOT therefore have determined that the Preferred Alternative would result in *no adverse*  
35 *effect* to the resource.

36 **5WL.5278 (William H. Dickens Farm)**

37 **Resource Description:** The William H. Dickens farm (5WL.5278) is located at 545 SH 119 in  
38 Longmont. This farm is associated with one of the earliest settlers in the St. Vrain Valley,  
39 William H. Dickens. Dickens became a prominent area farmer and businessman, and was  
40 responsible for building the Dickens Opera House in Longmont. Dickens's step-father, Alonzo  
41 N. Allen, was the first Euro-American to settle in the St. Vrain drainage. The 155 acre farm  
42 includes a farmhouse, large barn and five outbuildings. The historic boundary includes land  
43 originally within the 1915 land boundary which is still being used for agriculture.

1 **Eligibility Determination:** This farm (5WL.5278) is NRHP-eligible under Criterion B for its  
2 association with the early St. Vrain Valley settler William H. Dickens. Additionally, the farm  
3 contains an intact example of a large wood frame barn with distinctive architectural features  
4 including a gabled front rain hood, narrow horizontal siding, which is eligible for the NRHP  
5 under Criterion C.

6 **Effect Determination—Package A:** Under Package A, none of the proposed commuter rail  
7 improvements along SH 119 would cause changes to this historic property. Due to the lack of  
8 direct and indirect impacts, FHWA, FTA and CDOT have determined that the Package A  
9 commuter rail improvements would result in *no historic properties affected* with respect to this  
10 historic resource.

11 **Effect Determination—Preferred Alternative:** Under the Preferred Alternative, none of the  
12 proposed commuter rail improvements along SH 119 would cause changes to this historic  
13 property. Due to the lack of direct and indirect impacts, FHWA, FTA and CDOT have  
14 determined that the Preferred Alternative commuter rail improvements would result in *no*  
15 *historic properties affected* with respect to this historic resource.

#### 16 **5WL.2877.1 (Union Reservoir Outlet Ditch/Coffin Spring Gulch Ditch)**

17 **Resource Description:** The entire ditch is approximately 1.8 miles long. This segment of the  
18 ditch (5WL.2877.1) crosses the railroad along the south edge of SH 119. The portion of the  
19 ditch that crosses under the railway is placed in a culvert. The segment occurring within the  
20 project APE (5WL.2877.1) is 5,042 feet (0.95 mile) long. Both banks are covered by heavy  
21 riparian growth in many areas. The surrounding area supports semi-rural residential  
22 development.

23 **Eligibility Determination:** The Union Reservoir Ditch (5WL.2877.1) south of SH 119 was  
24 previously recorded in association with the Sandstone Ranch (5WL.712). The ditch was  
25 officially declared NRHP-eligible by OAH in 1998 under Criterion A for its important  
26 association with the development of water rights and agriculture in Weld County. When re-  
27 evaluated for the North I-25 Draft EIS, the length of the ditch segment was extended northward  
28 across SH 119 to the northern edge of the North I-25 project corridor.

29 **Effect Determination – Package A:** Although a new dedicated commuter rail line would be  
30 constructed along the south edge of existing SH 119 in this area under Package A  
31 improvements, this historic ditch is already placed within a culvert beneath the proposed rail  
32 corridor where it is conveyed across SH 119 and thus would not be subject to additional direct  
33 impacts. The ditch exits the culvert at the south edge of the proposed new rail corridor. The  
34 proposed improvements along SH 119 would not cause changes to this historic property. Due  
35 to the lack of direct and indirect impacts, FHWA, FTA and CDOT have determined that  
36 Package A would result in *no historic properties affected* with respect to this historic resource.

37 **Effect Determination – Preferred Alternative:** Although a new dedicated commuter rail line  
38 would be constructed along the south edge of existing SH 119 in this area under the Preferred  
39 Alternative, this historic ditch is already placed within a culvert beneath the proposed rail  
40 corridor where it is conveyed across SH 119 and thus would not be subject to additional direct  
41 impacts. The ditch exits the culvert at the south edge of the proposed new rail corridor. The  
42 proposed improvements along SH 119 would not cause changes to this historic property. Due  
43 to the lack of direct and indirect impacts, FHWA, FTA and CDOT have determined that the  
44 Preferred Alternative would result in *no historic properties affected* with respect to this historic  
45 resource.

1 **5WL.712 (Sandstone Ranch)**

2 **Resource Description:** The Sandstone Ranch is located on SH 119 just east of Longmont.  
3 The ranch is associated with Morse Coffin, one of the early settlers in this area. Morse Coffin  
4 settled in Boulder County in 1859 and became a preeminent agriculturalist and co-founder of  
5 the first public school district in Colorado. The City of Longmont now owns the ranch property,  
6 which is now designated Sandstone Ranch Park. Portions of the former ranch have been  
7 altered recently by gravel mining, post-mining reclamation, and multi-use recreational  
8 development by the City of Longmont. The only intact ranchland in the northern portion of the  
9 property is a riparian corridor surrounding the Union Reservoir Outlet Ditch/ Coffin Spring  
10 Gulch Ditch (5WL.2877.1).

11 **Eligibility Determination:** The ranch was NRHP-listed in 1984 under Criteria A, B, and C.  
12 The Sandstone Ranch is eligible under Criterion A because of its important association with  
13 early settlement and agricultural development in Weld County. It is also eligible under Criterion  
14 B because of its direct association with Morse H. Coffin, an important historical figure, and  
15 under Criterion C because of the architectural significance of the Coffin farmhouse. The  
16 historic district boundary is currently being evaluated for re-definition to exclude the areas  
17 modified by construction of public recreational facilities and areas modified by gravel mining.

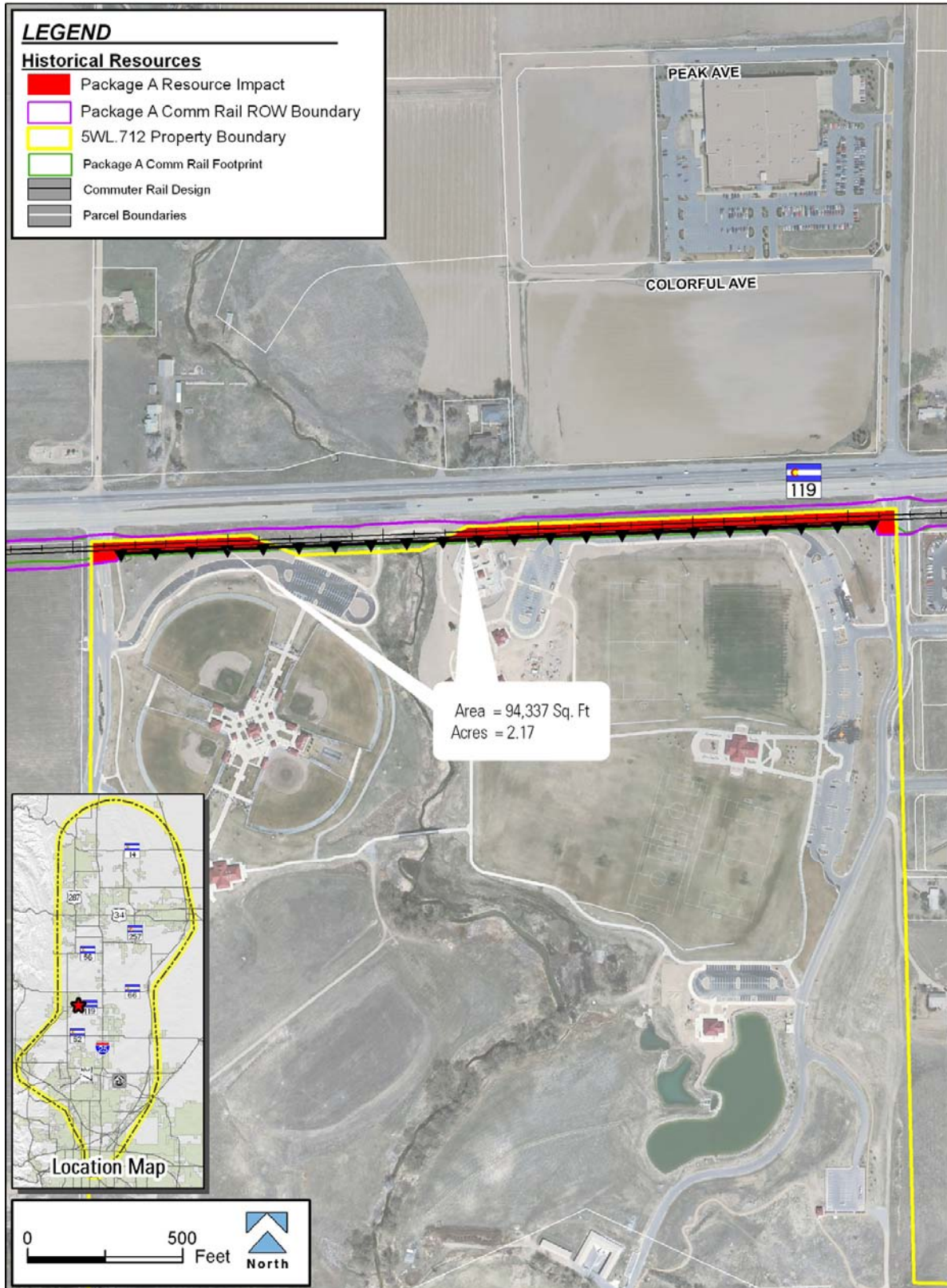
18 **Effect Determination – Package A:** Under Package A widening of SH 119 to accommodate  
19 the proposed commuter rail facilities would necessitate acquisition of new right-of-way within  
20 the extreme northern edge of the Sandstone Ranch. This land would be needed to provide  
21 space for the new commuter rail bed, tracks, and ballast. The area subject to direct impacts  
22 comprises 2.17 acres, or less than one percent of the entire 337.22-acre historic district. In  
23 addition to the small size of the impacted area, the northern portion of the site has lost most of  
24 its integrity due to recent development of sports fields by the City of Longmont (see  
25 **Figure 3.15-106**).

26 The historic ranch buildings are located too far away to be affected by noise and vibration  
27 impacts from passing trains. The commuter rail tracks would run along the edge of the  
28 northern portion of the site that has lost nearly all integrity. No indirect effects are expected  
29 which would harm the function, setting, atmosphere, or attributes that render this district  
30 NRHP-eligible.

31 The proposed transportation improvements would not substantially diminish or alter  
32 characteristics that render the property eligible for the NRHP. For all of these reasons, FHWA,  
33 FTA and CDOT have determined that Package A would result in *no adverse effect* to the  
34 resource.

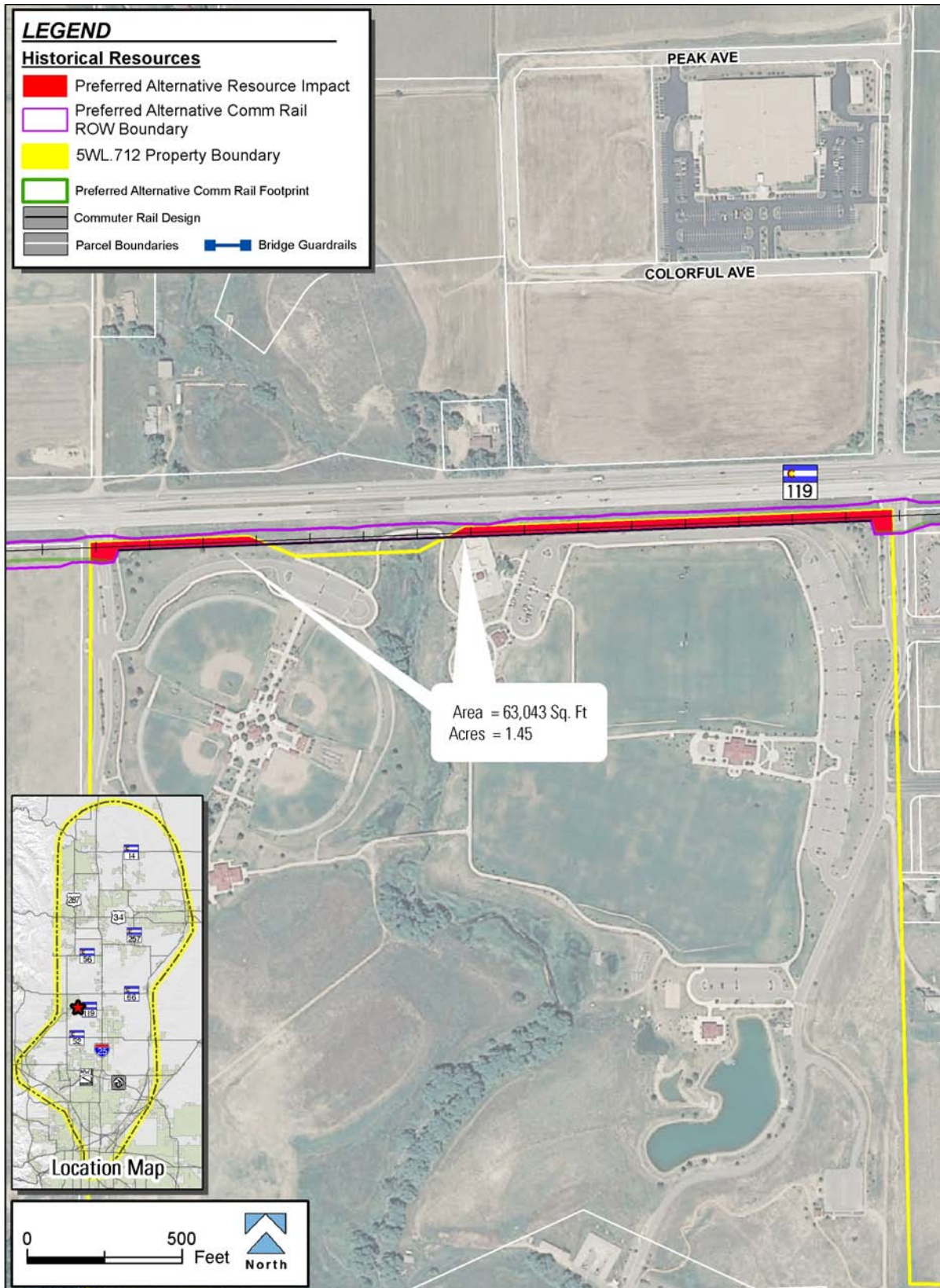
35 **Effect Determination – Preferred Alternative:** Under the Preferred Alternative widening of  
36 SH 119 to accommodate one commuter rail track would necessitate acquisition of new right-of-  
37 way within the extreme northern edge of the Sandstone Ranch. This land would be needed to  
38 provide space for the new commuter rail bed, tracks, and ballast. The area subject to direct  
39 impacts comprises 1.45 acres, or less than one percent of the entire 337.22-acre site. In  
40 addition to the small size of the impacted area, the northern portion of the site has lost most of  
41 its integrity due to recent development of sports fields by the City of Longmont (see  
42 **Figure 3.15-107**).

1 Figure 3.15-106 5WL.712 (Sandstone Ranch) – Package A



2

1 Figure 3.15-107 5WL.712 (Sandstone Ranch) – Preferred Alternative



2

1 The historic ranch buildings are located too far away to be affected by noise and vibration  
2 impacts from passing trains. The commuter rail tracks would run along the edge of the  
3 northern portion of the historic district that has lost nearly all integrity. No indirect effects are  
4 expected which would harm the function, setting, atmosphere, or attributes that render this  
5 district NRHP-eligible.

6 The proposed transportation improvements would not substantially diminish or alter  
7 characteristics that render the property eligible for the NRHP. For all of these reasons, FHWA,  
8 FTA and CDOT have determined that the Preferred Alternative would result in *no adverse*  
9 *effect* to the resource.

#### 10 **5WL.5461.1 (Boulder and Weld County Ditch)**

11 **Resource Description:** The entire Boulder and Weld County Ditch is approximately five miles  
12 long and draws water from a head gate on Boulder Creek. The ditch was constructed in  
13 1871 and remains in use supplying irrigation water for agricultural use. The segment of the  
14 earthen irrigation ditch passing through the APE is approximately 684 feet (0.13 mile) long,  
15 20-feet wide, and 6.5 feet deep. The surrounding land is rural in character.

16 **Eligibility Determination:** The Boulder and Weld County Ditch is eligible for the NRHP under  
17 Criterion A because of its important association with the early development of agriculture in  
18 Weld County. The segment of the ditch within the APE retains sufficient integrity of location,  
19 setting, feeling, and use to support the eligibility of the entire linear resource.

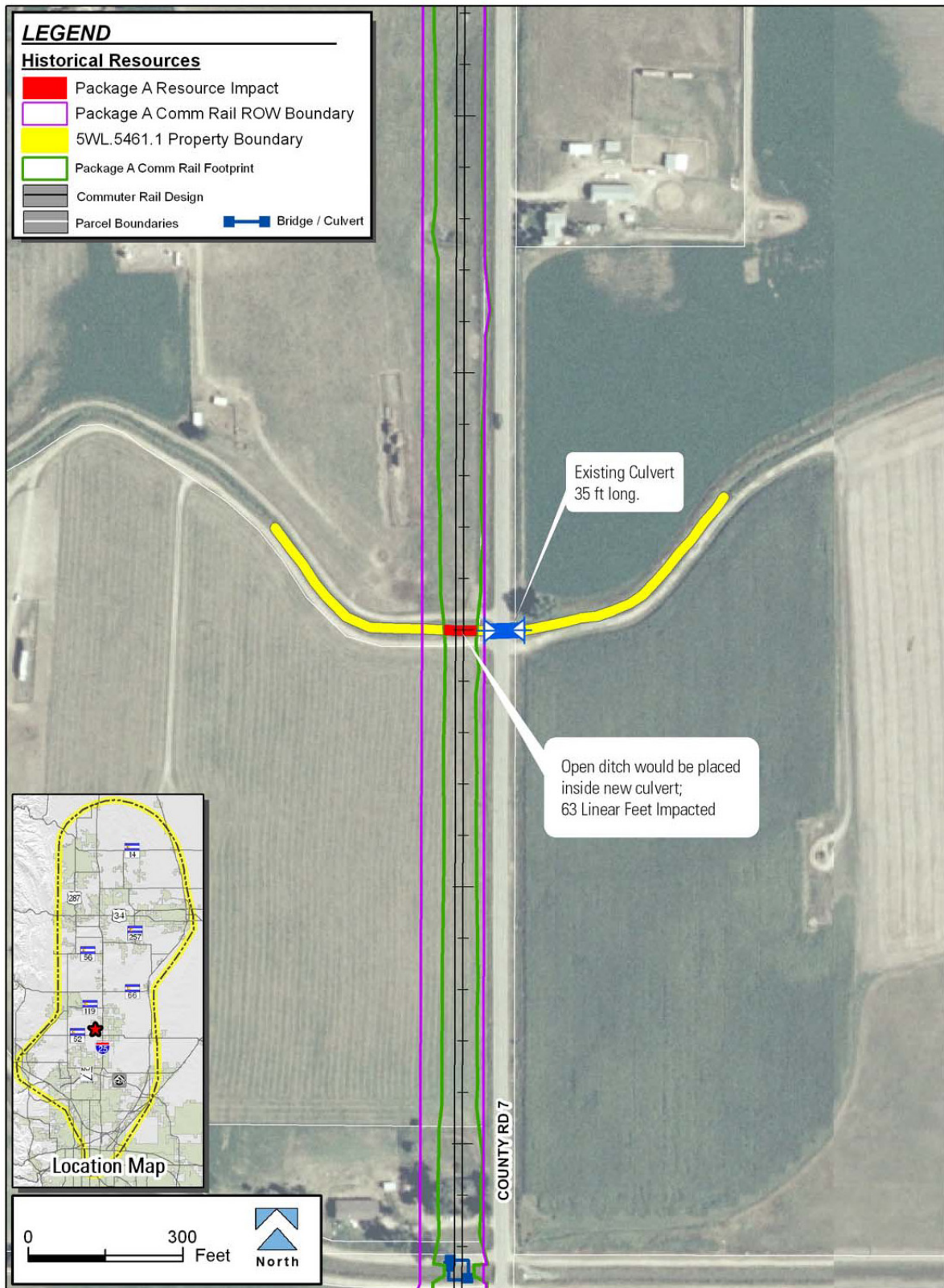
20 **Effect Determination – Package A:** In the vicinity of the Boulder and Weld County Ditch, the  
21 Package A commuter rail alignment closely parallels WCR 7, beneath which the ditch crosses  
22 in a culvert. The commuter rail design would include a new CBC to accommodate the historic  
23 ditch. Approximately 63 linear feet of the ditch would be directly impacted by being placed in a  
24 culvert beneath the commuter rail facility (see **Figure 3.15-108**).

25 Construction of the concrete culvert structure would likely require temporary access to the  
26 historic property for equipment access and culvert installation activities. The ditch would likely  
27 be diverted during demolition of the old culvert and installation of the replacement culvert, but  
28 would remain operational and irrigation water would be protected from encroachment by  
29 construction. All disturbance caused by construction equipment or activities would be  
30 temporary in nature and affected areas would be restored to their original condition and  
31 appearance.

32 Although a portion of the open ditch would be placed in a culvert, this change affects only a  
33 very small percentage of the entire linear resource. FHWA, FTA and CDOT have determined  
34 that Package A commuter rail improvements would result in *no adverse effect* to the entire  
35 Boulder and Weld County Ditch.

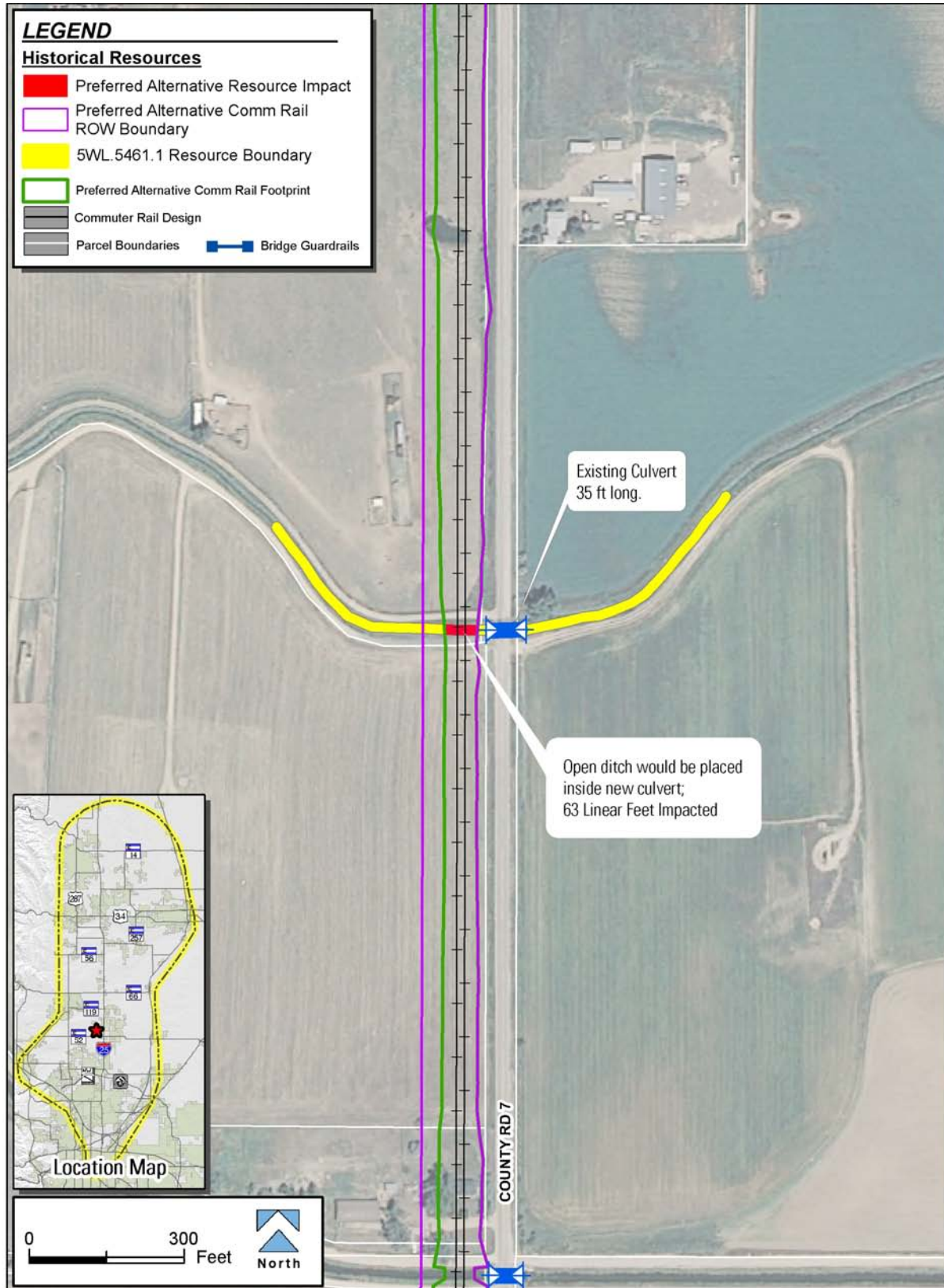
36 **Effect Determination – Preferred Alternative:** In the vicinity of the Boulder and Weld County  
37 Ditch, the Preferred Alternative commuter rail alignment closely parallels WCR 7, beneath  
38 which the ditch crosses in a culvert. The commuter rail design would include a new CBC to  
39 accommodate the historic ditch. Approximately 63 linear feet of the ditch would be directly  
40 impacted by being placed in a culvert beneath the commuter rail facility (see **Figure 3.15-109**).

1 Figure 3.15-108 5WL.5461.1 (Boulder and Weld County Ditch) – Package A



2  
3

1 Figure 3.15-109 5WL.5461.1 (Boulder and Weld County Ditch) – Preferred Alternative



2



1 Construction of the concrete culvert structure would likely require temporary access to the  
2 historic property for equipment access and culvert installation activities. The ditch would likely  
3 be diverted during demolition of the old culvert and installation of the replacement culvert, but  
4 would remain operational and irrigation water would be protected from encroachment by  
5 construction. All disturbance caused by construction equipment or activities would be  
6 temporary in nature and affected areas would be restored to their original condition and  
7 appearance.

8 Although a portion of the open ditch would be placed in a culvert, this change affects only a  
9 very small percentage of the entire linear resource. FHWA, FTA and CDOT have determined  
10 that the Preferred Alternative commuter rail improvements would result in no adverse effect to  
11 the entire Boulder and Weld County Ditch.

### 12 **5WL.5263 (Hingley Farm)**

13 **Resource Description:** The farmstead is located at 7523 WCR 7 in Erie. This farm is a very  
14 intact example of a historic agricultural operation in Weld County. Built in 1900, the hipped roof  
15 farmhouse is an intact example of the Classic Cottage domestic architectural style in a rural  
16 context.

17 **Eligibility Determination:** This farmstead is eligible for the NRHP under Criterion A because  
18 of its important association with early settlement and agricultural development in Weld County  
19 and under Criterion C for its significance as an intact early farmhouse and farmstead.

20 **Effect Determination – Package A:** Proposed development of a new commuter rail  
21 alignment within a 125-foot-wide right-of-way corridor parallel to WCR 7 under Package A  
22 would cause direct impacts to this historic farm. A strip of land within the historic property,  
23 measuring 2,585 feet long and 125 feet wide, would be acquired and converted from  
24 agricultural to transportation use, placing a new railroad embankment, ballast and tracks over  
25 the acquired farmland. The area to be acquired comprises 7.34 acres, or approximately nine  
26 percent of the entire 81.35-acre historic property. An entirely new transportation feature would  
27 be introduced into the rural, agricultural setting. The proposed rail corridor passes through the  
28 original farmstead complex at the southeast corner of the property, and would require removal  
29 of the contributing, architecturally significant farmhouse (see **Figure 3.15-110**).

30 These direct and indirect effects would result in the major reduction or loss of integrity of this  
31 resource, and FHWA, FTA and CDOT therefore have determined that under Package A an  
32 *adverse effect* would result. Details of mitigation for this effect are discussed under  
33 **Section 3.15.3.**



1 **Effect Determination – Preferred Alternative:** Proposed development of a new commuter  
2 rail alignment within a 125-foot-wide right-of-way corridor parallel to WCR 7 under the  
3 Preferred Alternative would cause direct impacts to this historic farm. A strip of land within the  
4 historic property would be acquired and converted from agricultural to transportation use,  
5 placing a new railroad embankment, ballast and tracks over the acquired farmland. Impacts  
6 are similar to those under Package A because of the need to construct passing track in this  
7 segment of the commuter rail line. The area to be acquired comprises 7.4 acres, or  
8 approximately nine percent of the entire 81.35-acre historic property. An entirely new  
9 transportation feature would be introduced into the rural, agricultural setting. The proposed rail  
10 corridor passes through the original farmstead complex at the southeast corner of the property,  
11 and would require removal of the contributing, architecturally significant farmhouse (see  
12 **Figure 3.15-111**).

13 These direct and indirect effects would result in the major reduction or loss of integrity of this  
14 resource, and FHWA, FTA and CDOT therefore have determined that under the Preferred  
15 Alternative an adverse effect would result. Details of mitigation for this effect are discussed  
16 under **Section 3.15.3**.

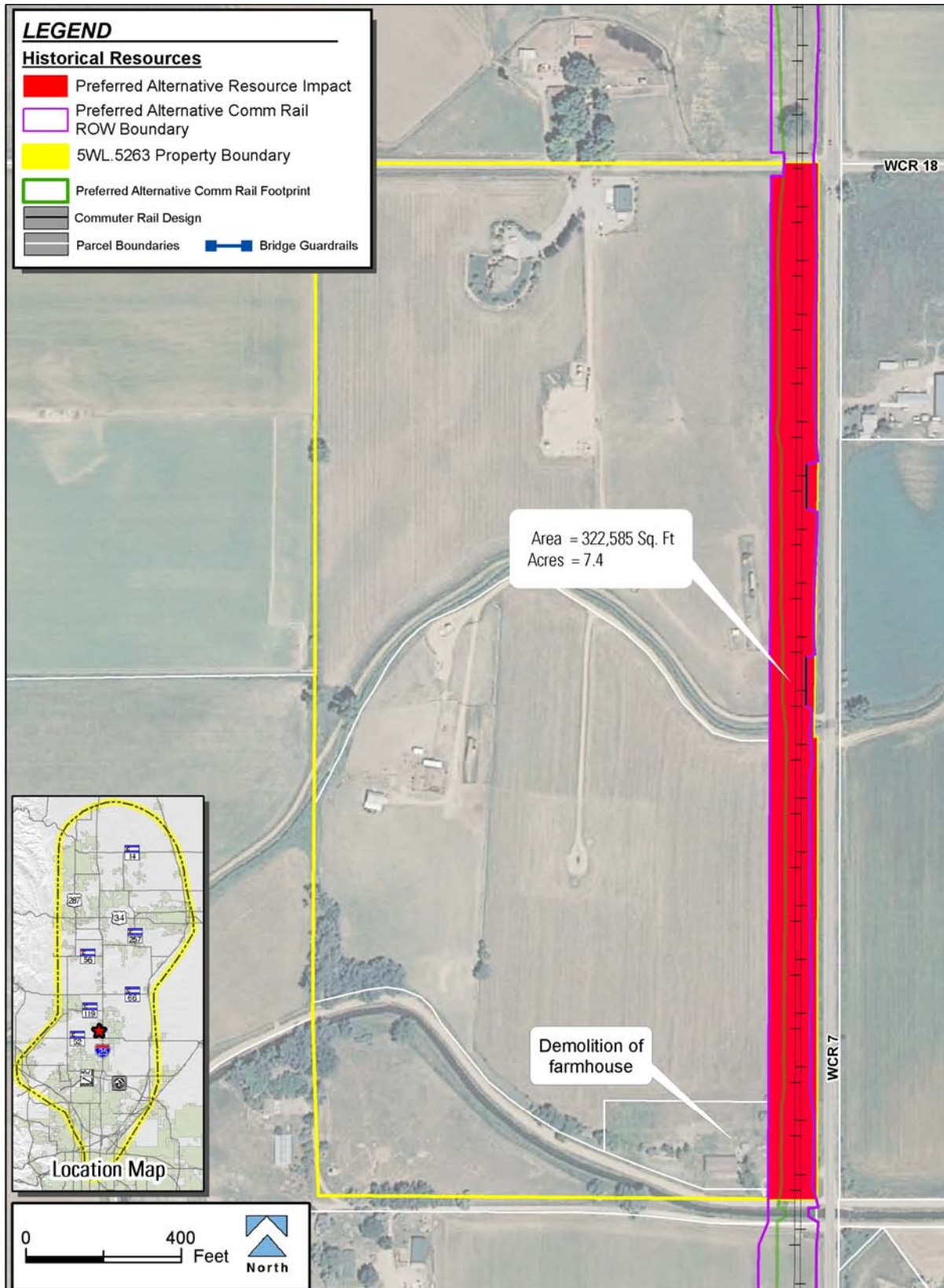
#### 17 **5WL.6564 (Jillson Farm)**

18 **Resource Description:** The Jillson Farm is located at the intersection of WCR 7 and WCR 18  
19 approximately one mile west of I-25 and three miles south of SH 119. The farm is significant as  
20 an important example of one of the northern Colorado farms from the late 19th century. It  
21 played an important role in the agricultural development and settlement of the region. The farm  
22 remains in the Jillson family after more than 120 years of continuous production. The house on  
23 the property is also architecturally significant as an excellent intact example of the Craftsman  
24 style with a wide, recessed porch, tapered supports and bracketed eaves.

25 The production of sugar beets was the main reason for the profitability of this farm and many  
26 others in northern Colorado and this association is an important part of its agricultural history.  
27 Sugar beet production in this region started in the early 1900s with the opening of Great  
28 Western's sugar beet processing facility in Longmont. Sugar beet production in northern  
29 Colorado was strong for over 80 years, but declined significantly after the closure of the Great  
30 Western sugar plants in 1985. Since that time, much of the farmland in northern Colorado has  
31 been used to produce other crops. The Jillson Farm, however, has continued to produce sugar  
32 beets. After Great Western closed its plants in 1985, Tate and Lyle, a British sugar company  
33 purchased Great Western's assets. They operated as Western Sugar Company until the late-  
34 1990s when they began to seek a buyer for their United States operations. In 2002, over 1000  
35 sugar beet growers from Colorado, Wyoming, Nebraska and Montana pulled together and  
36 formed the Western Sugar Cooperative. The cooperative bought the Western Sugar Company  
37 from Tate and Lyle. They have five processing plants in the large four-state region of the sugar  
38 cooperative - - with two in Colorado at Greeley and Fort Morgan. The Jillson Farm is a part of  
39 the Western Sugar Cooperative and continues to produce sugar beets. They have produced  
40 sugar beets for over 100 years.

41 **Eligibility Determination:** In the summer of 2010, the Jillson Farm was field assessed as  
42 eligible for inclusion on the NRHP under Criterion A for its importance in the agricultural  
43 development and settlement of the region for more than 120 years. It was also assessed as  
44 eligible under Criterion C as a good intact example of a Craftsman style house.

1 Figure 3.15-111 5WL.5263 (Hingley Farm) – Preferred Alternative



2

1 **Effect Determination – Package A:** The Jillson farm includes 153 acres on the west side of  
2 WCR 7 and 80 acres on the east side. The impacts associated with Package A would occur  
3 along the western edge of WCR 7. A strip of 7.34 acres adjacent to the roadway would be  
4 needed for construction of the rail alignment. This strip of land goes roughly through the center  
5 of the farm which is currently bisected by the roadway. This part of the farm is currently used  
6 as pasture for the Jillson herd of about 70 cattle. The farm buildings would not be directly  
7 affected by this project as they are located approximately 500 feet west of WCR 7.

8 FHWA, FTA and CDOT have determined that the loss of 7.34 acres of land for construction of  
9 Package A would result in an adverse effect to this farm because of the introduction of railroad  
10 tracks and train traffic to a historic farm setting. Railroad tracks and trains have never been a  
11 part of the agricultural setting of the Jillson Farm. Not only would they provide a visual  
12 intrusion, but they would bring noise and train activity on a regular schedule to the farm. This  
13 would adversely affect the setting and feeling of the Jillson Farm. This project would not affect  
14 any of the farm buildings. The architecture of the house and the characteristics that define the  
15 integrity of the farm buildings would not be compromised. The location, design, materials and  
16 workmanship of the Craftsman style house and other farm buildings would remain the same.  
17 The association would still be strong as it is clear that this is still an active farm.

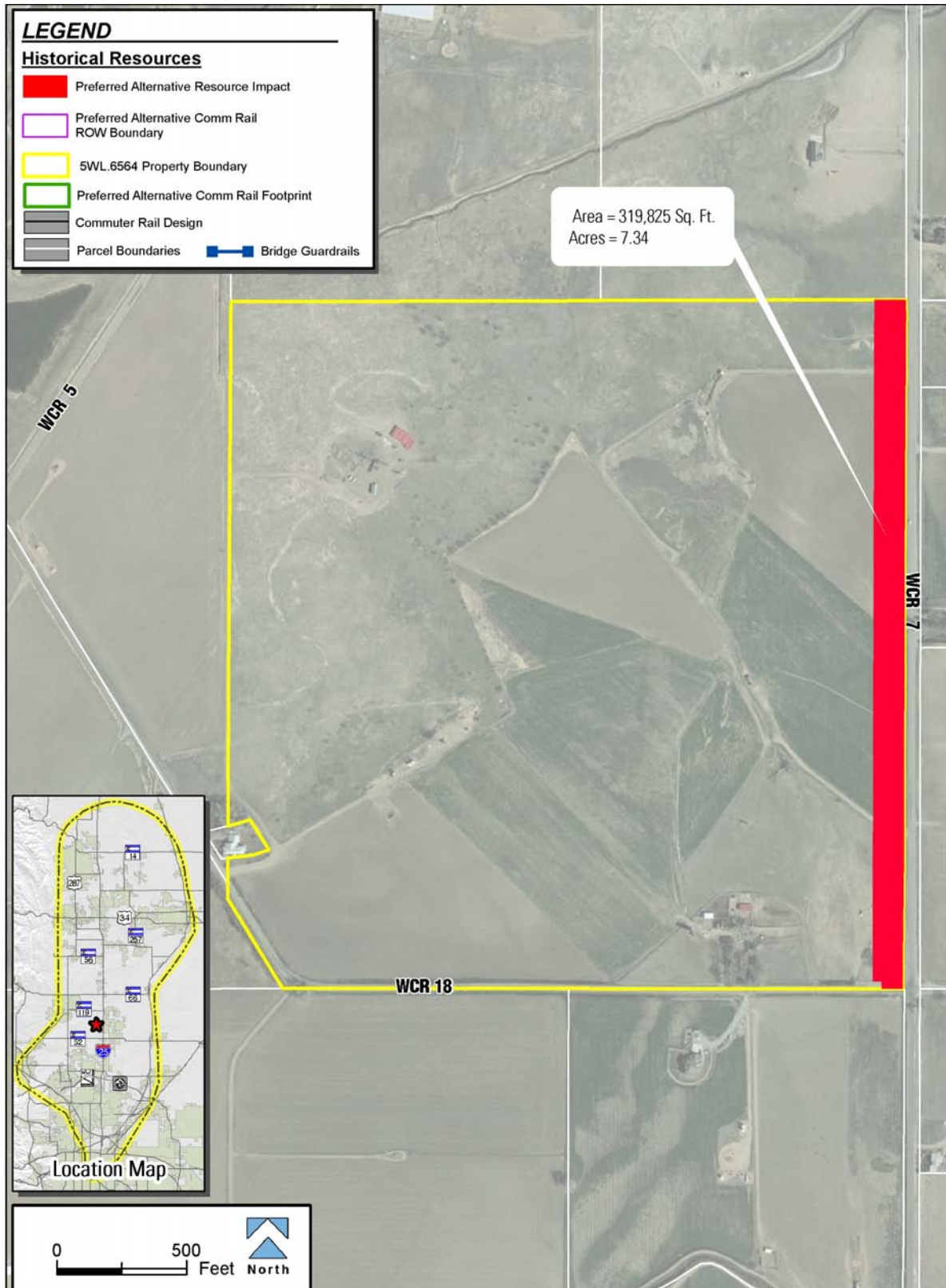
18 **Effect Determination – Preferred Alternative:** The Jillson farm includes 153 acres on the  
19 west side of WCR 7 and 80 acres on the east side. The impacts associated with the Preferred  
20 Alternative would occur along the western edge of WCR 7. A strip of 7.34 acres adjacent to the  
21 west side of the roadway would be needed for construction of the rail alignment including  
22 passing track, resulting in similar impacts as described under Package A (see  
23 **Figure 3.15-112**). This strip of land goes roughly through the center of the farm which is  
24 currently bisected by the roadway. This part of the farm is currently used as pasture for the  
25 Jillson herd of about 70 cattle. The farm buildings would not be directly affected by this project  
26 as they are located approximately 500 feet west of WCR7.

27 FHWA, FTA and CDOT have determined that the loss of 7.34 acres of land for construction of  
28 the Preferred Alternative would result in an adverse effect to this farm because of the  
29 introduction of railroad tracks and train traffic to a historic farm setting. Railroad tracks and  
30 trains have never been a part of the agricultural setting of the Jillson Farm. Not only would they  
31 provide a visual intrusion, but they would bring noise and train activity on a regular schedule to  
32 the farm. This would adversely affect the setting and feeling of the Jillson Farm. This project  
33 would not affect any of the farm buildings. The architecture of the house and the  
34 characteristics that define the integrity of the farm buildings would not be compromised. The  
35 location, design, materials and workmanship of the Craftsman style house and other farm  
36 buildings would remain the same. The association would still be strong as it is clear that this is  
37 still an active farm.

### 38 **5WL.2247.11 (Community Ditch)**

39 **Resource Description:** The Community Ditch is an irrigation lateral ditch that generally runs  
40 east to west across the area south of SH 52 near Erie. The ditch was originally built in 1885.  
41 The entire Community Ditch is approximately 30 miles long. Within the project APE the  
42 earthen irrigation ditch is approximately 714 feet long and 16 feet wide. Both banks of the ditch  
43 are lined with grassy vegetation. The surrounding area is devoted to agriculture.

1 Figure 3.15-112 5WL.6564 (Jillson Farm) – Preferred Alternative



2

1 **Eligibility Determination:** The entire Community Ditch (5WL.2247) is eligible for inclusion on  
2 the NRHP under Criterion A for its important association with the development of water rights  
3 and agriculture in Weld County. The segment (5WL.2247.11) within the project APE retains  
4 sufficient integrity of location and setting to support the eligibility of the entire linear resource.

5 **Effect Determination – Package A:** The proposed new double-track commuter rail line under  
6 Package A would pass in a northwest-southeast alignment across the historic ditch segment,  
7 and would span the ditch at the same location as the abandoned UPRR Boulder Valley Branch  
8 bridge, creating an additional 60 feet of cover over the ditch. A new bridge structure would  
9 replace the abandoned non-contributing UPRR Boulder Valley Branch bridge. Approximately  
10 105 feet of open ditch would flow underneath the new bridge beneath the new railroad bed and  
11 tracks (see **Figure 3.15-113**). The new bridge would be approximately 90 feet long and 105  
12 feet wide. Associated bridge support structures, such as piers and abutments, would be placed  
13 outside the historic property. There would be no resulting direct impact to the historic resource.

14 Installation of the new bridge would likely require temporary occupancy of the historic property  
15 for equipment access and minor construction activities. The ditch would remain operational  
16 and irrigation water would be protected from contamination by construction. All disturbance  
17 caused by construction equipment or construction activities would be temporary in nature and  
18 affected areas would be restored to their original condition and appearance.

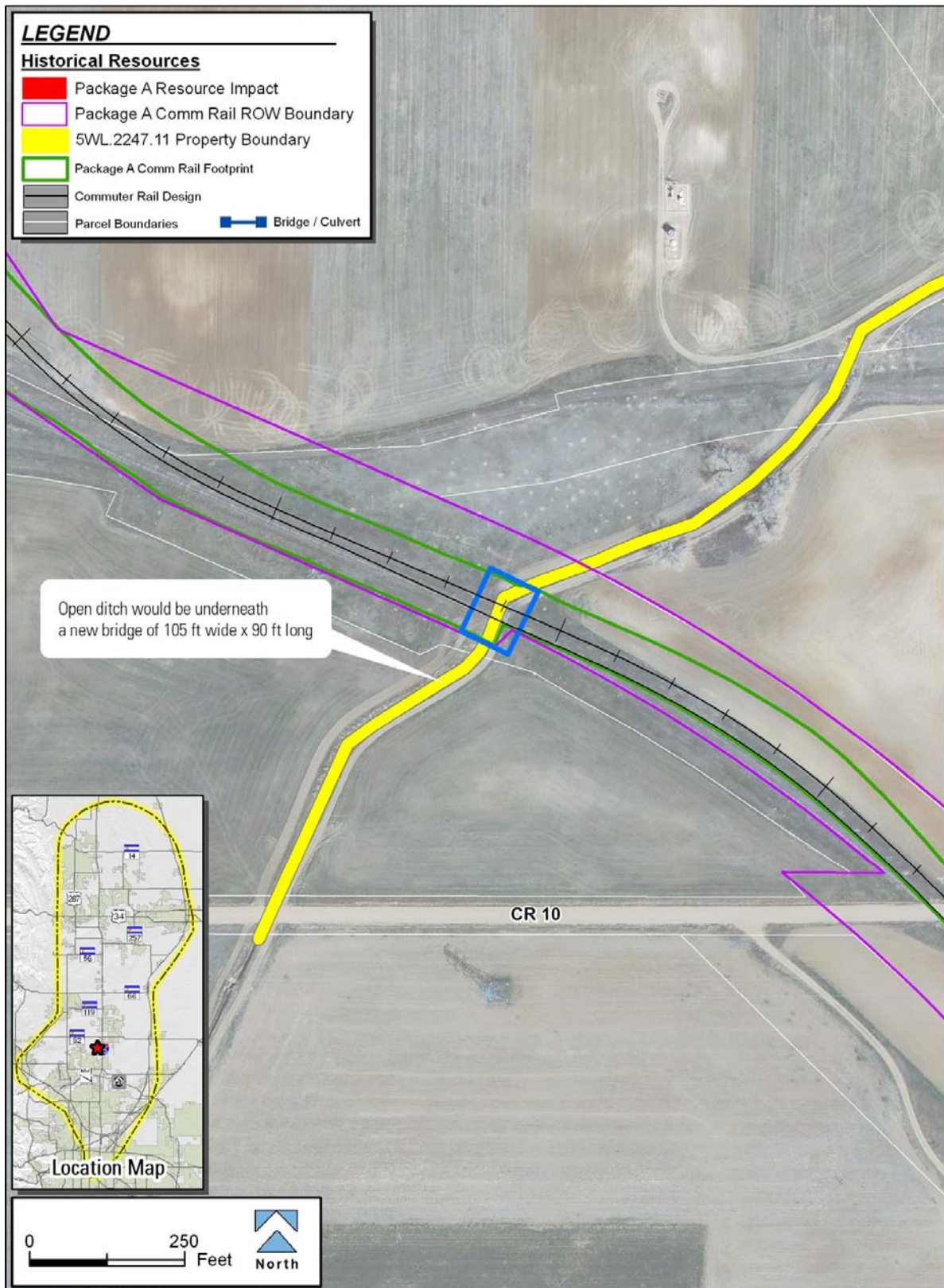
19 Although a portion of the open ditch would be placed underneath a bridge, this change affects  
20 only a very small percentage of the overall linear resource. FHWA, FTA and CDOT have  
21 determined that Package A would result in *no adverse effect* to the entire Community Ditch.

22 **Effect Determination – Preferred Alternative:** The proposed new commuter rail line under  
23 the Preferred Alternative would pass in a northwest-southeast alignment across the historic  
24 ditch segment, and would span the ditch at the same location as the abandoned UPRR  
25 Boulder Valley Branch bridge, creating an additional 60 feet of cover over the ditch. A new  
26 bridge structure would replace the abandoned non-contributing UPRR Boulder Valley Branch  
27 bridge. Approximately 105 feet of open ditch would flow underneath the new bridge beneath  
28 the new railroad bed and tracks (see **Figure 3.15-114**). The new bridge would be  
29 approximately 90 feet long and 105 feet wide. Associated bridge support structures, such as  
30 piers and abutments, would be placed outside the historic property. There would be no  
31 resulting direct impact to the historic resource.

32 Installation of the new bridge would likely require temporary occupancy of the historic property  
33 for equipment access and minor construction activities. The ditch would remain operational  
34 and irrigation water would be protected from contamination by construction. All disturbance  
35 caused by construction equipment or construction activities would be temporary in nature and  
36 affected areas would be restored to their original condition and appearance.

37 Although a portion of the open ditch would be placed underneath a bridge, this change affects  
38 only a very small percentage of the overall linear resource. FHWA, FTA and CDOT have  
39 determined that the Preferred Alternative would result in *no adverse effect* to the entire  
40 Community Ditch.

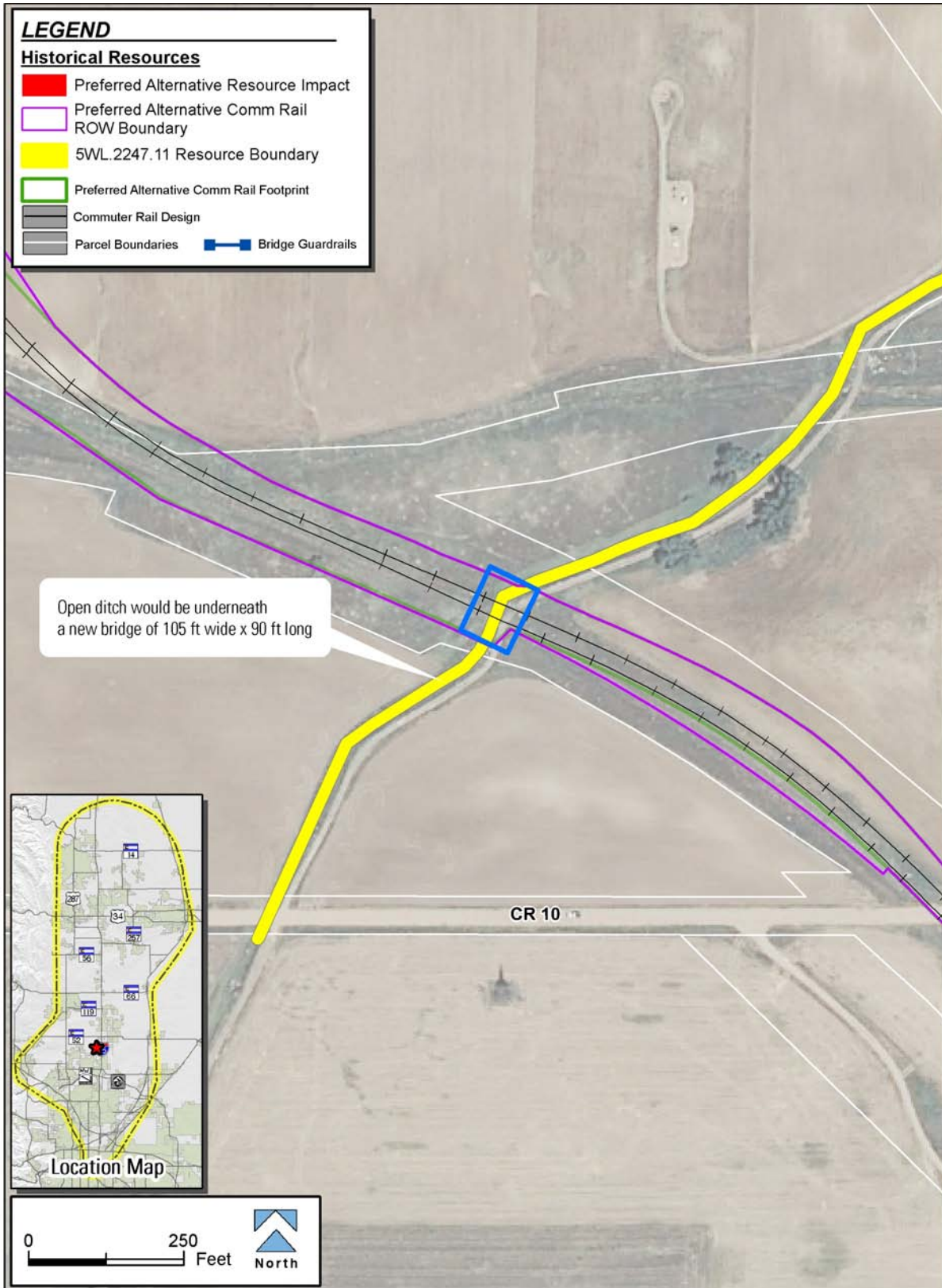
1 Figure 3.15-113 5WL.2247.11 (Community Ditch) – Package A



2  
3



1 Figure 3.15-114 5WL.2247.11 (Community Ditch) – Preferred Alternative



2

1 **5WL.1317, 5AM.472 (UPRR-Dent Branch)**

2 **Resource Description:** The Dent Branch is a 39 mile long section of the Union Pacific Railroad  
3 (UPRR) that ran through Weld and Adams Counties. The Weld County segment 5WL.1317.11 of  
4 the Dent Branch runs 2.9 miles within the APE (see **Figure 3.15-115**). The railway segment is  
5 abandoned, but rails, ties, and the ballasted roadbed remain in relatively good condition. A 3,500-  
6 foot freight bypass on the Dent Branch, located south of the Boulder Valley-Dent Branch once  
7 consisted of a multiple-track complex. South of that bypass, the track reverts to a single track  
8 alignment. Segment 5AM.472.1 is a 1.9-mile-long railway segment that follows the original single-  
9 track alignment in Adams County. Most of this segment has been abandoned. The surrounding  
10 area is rural in character.

11 **Eligibility Determination:** The OAHP has officially declared the UPRR-Dent Branch eligible  
12 for the NRHP under Criterion A for its important role in the development of the agricultural  
13 economy of the Front Range of Colorado. Although abandoned, these two railway segments  
14 retain integrity of location and association and therefore support the eligibility of the entire  
15 linear resource.

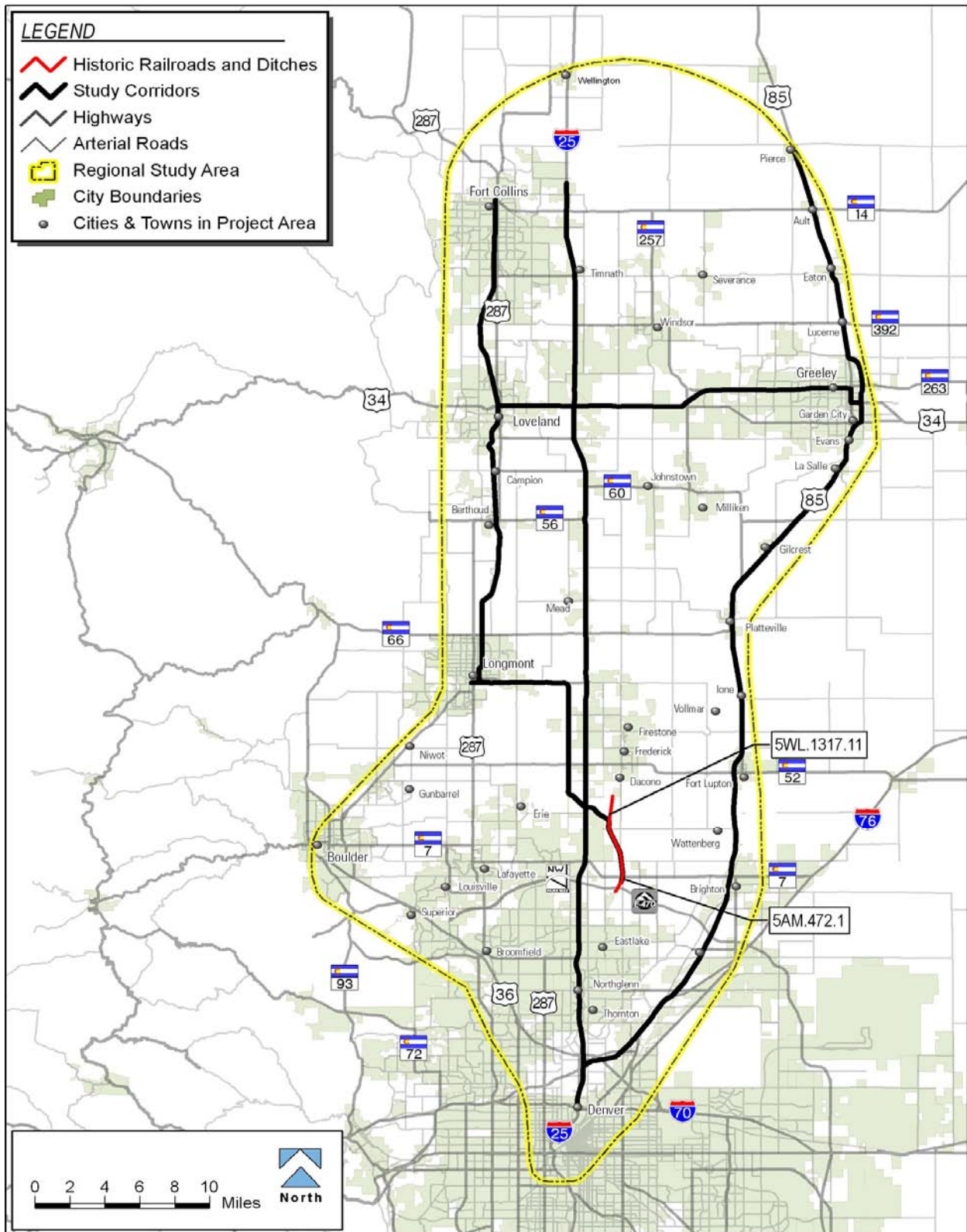
16 **Effect Determination:** In order to determine the effect to the entire linear resource, impacts to  
17 each of the segments passing through the project APE were assessed. These impact  
18 assessments are presented below, followed by a determination of effect to the entire UPRR-  
19 Dent Branch in Weld and Adams counties (5WL.1317, 5AM.472).

20 **Impacts to segment 5WL.1317.11 – Package A:** The proposed new commuter rail line would  
21 join this existing historic rail line by approaching from the northwest, then crossing over to the east  
22 side of the historic railroad, which it would closely parallel and follow southward. The commuter  
23 rail would utilize a double-track configuration, using the existing track alignment and adding a  
24 parallel track alignment following the historic UPRR-Dent Branch from the wye at St. Vrains  
25 junction southward. Where the new commuter rail line crosses the Dent Branch, there would be  
26 direct impacts to as many as 200 feet of track by the replacement of existing “through rail” with  
27 switching tracks and associated apparatus (see **Figure 3.15-116**). Although one of the new  
28 commuter rail tracks would run along the historic alignment, the existing historic bed, ballast and  
29 grade along the entire affected extent of the historic railway would be preserved. Deteriorated ties  
30 and abandoned rail would be replaced as required to meet safety and design standards.

31 **Impacts to segment 5WL.1317.11 – Preferred Alternative:** The proposed new commuter rail  
32 line would join this existing historic rail line by approaching from the northwest. The commuter rail  
33 would utilize the existing track alignment following the historic UPRR-Dent Branch from the wye at  
34 St. Vrains junction southward. There would be no direct impacts as a result of the Preferred  
35 Alternative (see **Figure 3.15-117**). Although the new commuter rail would run along the historic  
36 alignment, the existing historic bed, ballast and grade along the entire affected extent of the  
37 historic railway would be preserved. Deteriorated ties and abandoned rail would be replaced as  
38 required to meet safety and design standards.

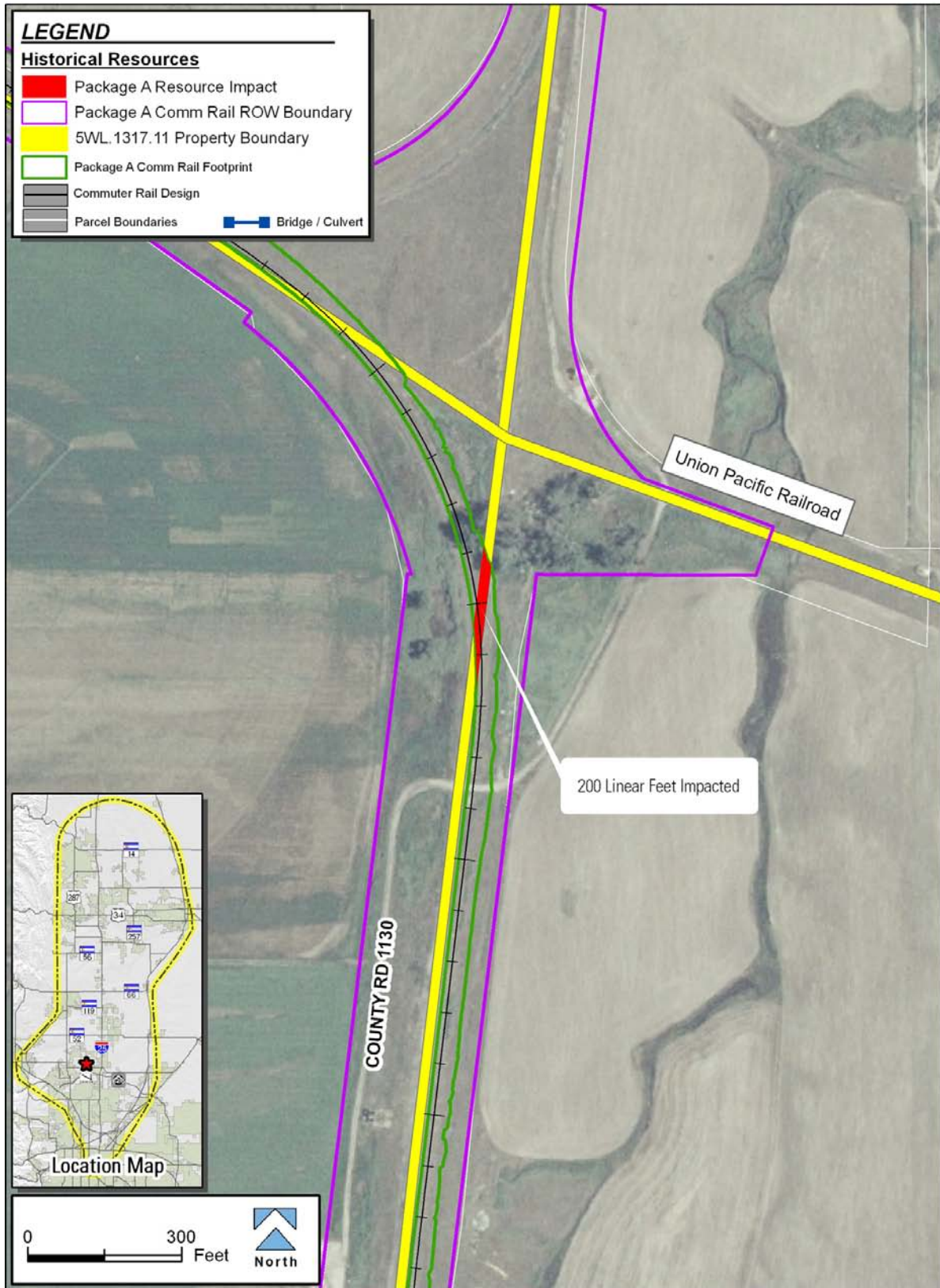
39 **Impacts to segment 5AM.472.1 – Package A:** The new double-track commuter rail would lay  
40 new track on the existing bed, ballast, and grade of the UPRR-Dent Branch and a new set of  
41 tracks parallel to the original alignment as described in segment 5WL.1317.11. The historic  
42 railroad bed, ballast, and grade would remain intact. The installation of new sets of tracks would  
43 be compatible with the historic use of the railroad line, but would not substantially diminish or alter  
44 the function, alignment, character, or other attributes that render the railroad NRHP-eligible.

1 **Figure 3.15-115 5WL.1317, 5AM.472 (UPRR-Dent Branch) – Segments Intersecting**  
2 **Project APE**



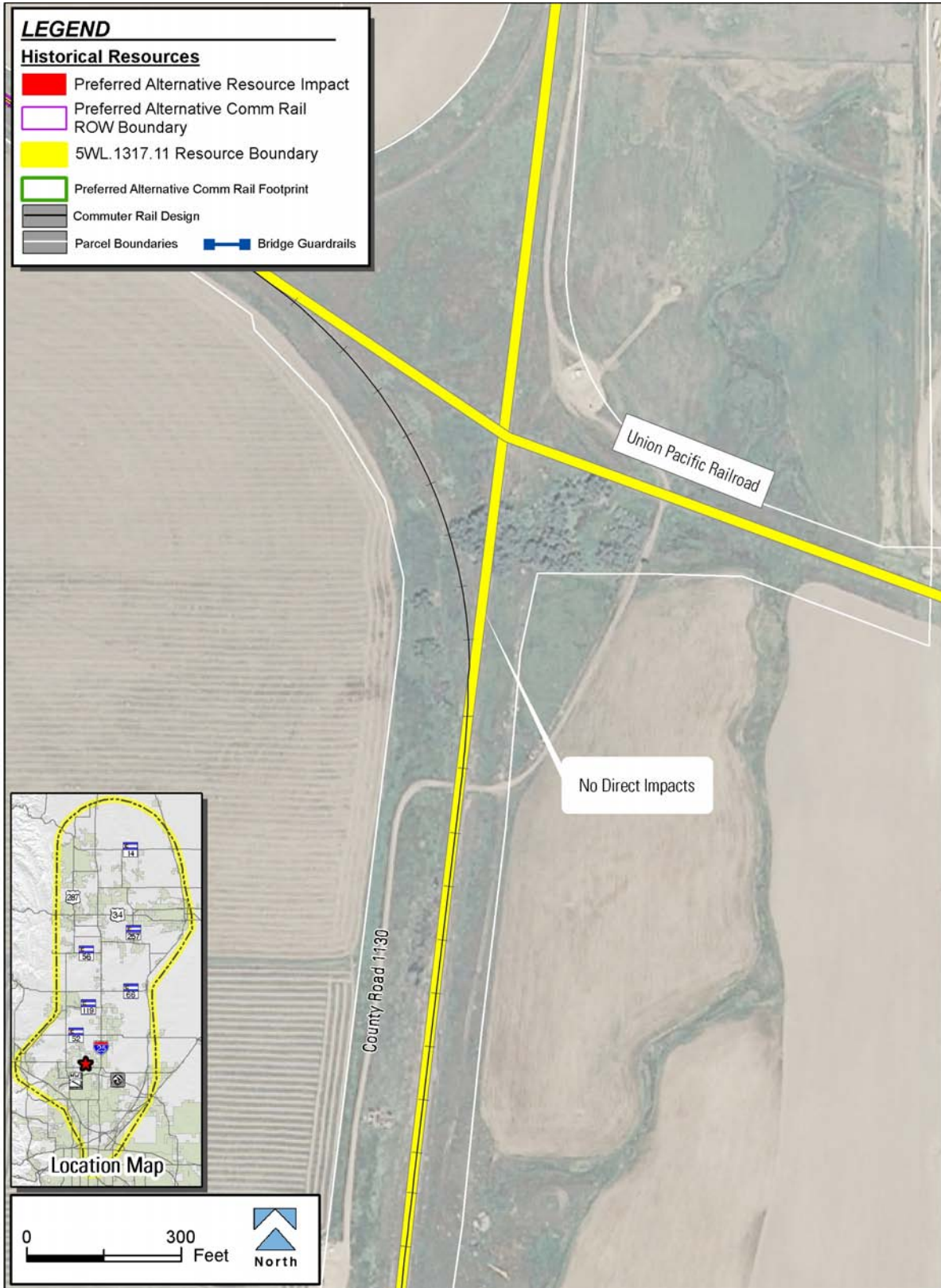
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1 Figure 3.15-116 5WL.1317.11 (UPRR-Dent Branch) – Package A



2

1 Figure 3.15-117 5WL.1317.11 (UPRR-Dent Branch) – Preferred Alternative



2

1 **Impacts to segment 5AM.472.1 – Preferred Alternative:** The Preferred Alternative would lay  
2 new track on the existing bed, ballast, and grade of the UPRR-Dent Branch as described in  
3 segment 5WL.1317.11. The historic railroad bed, ballast, and grade would remain intact. The  
4 installation of new sets of tracks would be compatible with the historic use of the railroad line, and  
5 would not substantially diminish or alter the function, alignment, character, or other attributes that  
6 render the railroad NRHP-eligible.

7 **Summary Effect Determination:**

8 **Package A:** A 200-foot-section of existing rails would be replaced with modern switching track.  
9 A continuous 4.89 miles or approximately 12 percent of the entire linear resource would be  
10 reoccupied with new track on the existing bed, ballast and grade, and an additional new track,  
11 15-feet away and parallel to the existing historic alignment. New commuter rail tracks along the  
12 transportation corridor would introduce new, but compatible rail use and infrastructural elements  
13 to the historic setting. The proposed transportation improvements associated with Package A  
14 would not substantially diminish or alter characteristics that render the property eligible for the  
15 NRHP. FHWA, FTA and CDOT therefore have determined that the Package A commuter rail  
16 improvements would result in *no adverse effect* to the historic UPRR-Dent Branch (5WL.1317  
17 and 5AM.472).

18 **Package B:** No direct or indirect impacts would occur at any segment locality. FHWA, FTA and  
19 CDOT therefore have determined that the Package B would result in *no historic properties*  
20 *affected* with respect to the historic UPRR-Dent Branch (5WL.1317  
21 and 5AM.472).

22 **Preferred Alternative:** A continuous 4.89 miles or approximately 12 percent of the entire linear  
23 resource would be reoccupied with new track on the existing bed, ballast and grade of the historic  
24 alignment. New commuter rail tracks along the transportation corridor would introduce new, but  
25 compatible rail use and infrastructural elements to the historic setting. The proposed  
26 transportation improvements associated with the Preferred Alternative would not substantially  
27 diminish or alter characteristics that render the property eligible for the NRHP. FHWA, FTA and  
28 CDOT therefore have determined that the Preferred Alternative commuter rail improvements  
29 would result in *no adverse effect* to the historic UPRR-Dent Branch (5WL.1317 and 5AM.472).

30 **5WL.1969, 5BF.130 (Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver &**  
31 **Boulder Valley Branch)**

32 **Resource Description:** This linear historic resource is the abandoned Denver Pacific/Kansas  
33 Pacific/Union Pacific, Denver & Boulder Valley Branch (UPD&BVB) that ran a distance of  
34 26-miles from Boulder to Brighton. The rail line was originally built in 1870. Two segments of  
35 this rail line in Weld County enter the project APE, including 2,310-foot (0.44 mile) long  
36 segment 5WL.1969.41, and 11,620 feet (2.2 mile) long segment 5WL.1969.1, both of which  
37 follow the original alignment (see **Figure 3.15-118**). Both segments are in a deteriorated state.  
38 One 2,083 feet (0.39 mile) long segment of the same rail line in Broomfield County is  
39 designated 5BF.130.1, and includes a contributing wooden trestle bridge carrying the rails over  
40 Little Dry Creek.

41 Segment 5WL.1969.1 runs east-west 2,000 feet north of CR 8. This segment is a 2.2-mile long  
42 part of the abandoned UPD&BVB between Boulder and Brighton. Construction started in 1870.  
43 Rails and ties have been removed near I-25 and parts have been paved over by county roads.  
44 This abandoned portion of the railroad includes a wooden trestle bridge located east of WCR 7  
45 and west of I-25. The railroad bridge crossing I-25 was removed soon after 1999.



1 **Eligibility Determination:** The OAHF has officially determined that the UPD&BVB is eligible  
2 for the NRHP under Criterion A because of its important role in the development of the  
3 agricultural economy of the Front Range of Colorado. Segments 5WL.1969.41 and 5BF. 130.1  
4 retain sufficient integrity of location and association to support the eligibility of the entire linear  
5 resource. Segment 5WL.1969.1 does not retain enough integrity to support the eligibility of the  
6 entire resource.

7 **Effect Determination:**

8 In order to determine the effect to the entire linear resource, impacts to each of the segments  
9 passing through the project APE were assessed. These impact assessments are presented  
10 below, followed by a determination of effect to the entire Denver Pacific/Kansas  
11 Pacific/UPD&BVB railroad in Weld and Broomfield counties (5WL.1969 and 5BF.130).

12 **Impacts to segment 5WL.1969.41 – Package A:** The proposed new commuter rail under  
13 Package A would utilize the existing track alignment and add a parallel track alignment  
14 following the historic UPD&BVB in this area before joining the Dent Branch (5WL.1317.11)  
15 wye and turning southward. Where the new commuter rail line crosses onto the Dent Branch,  
16 there would be direct impacts to as many as 260 feet of track by the replacement of existing  
17 “through rail” with switching tracks and associated apparatus (see **Figure 3.15-119**). The  
18 existing historic bed, ballast and grade along the entire affected extent of the historic railway  
19 would be preserved. Deteriorated ties and abandoned rail would be replaced as required to  
20 meet safety and design standards.

21 **Impacts to segment 5WL.1969.41 – Preferred Alternative:** The proposed new commuter  
22 rail under the Preferred Alternative would utilize the existing track alignment following the  
23 historic UPD&BVB in this area before joining the Dent Branch (5WL.1317.11) wye and turning  
24 southward (see **Figure 3.15-120**). The existing historic bed, ballast and grade along the entire  
25 extent of the historic railway would be preserved. Deteriorated ties and abandoned rail would  
26 be replaced as required to meet safety and design standards.

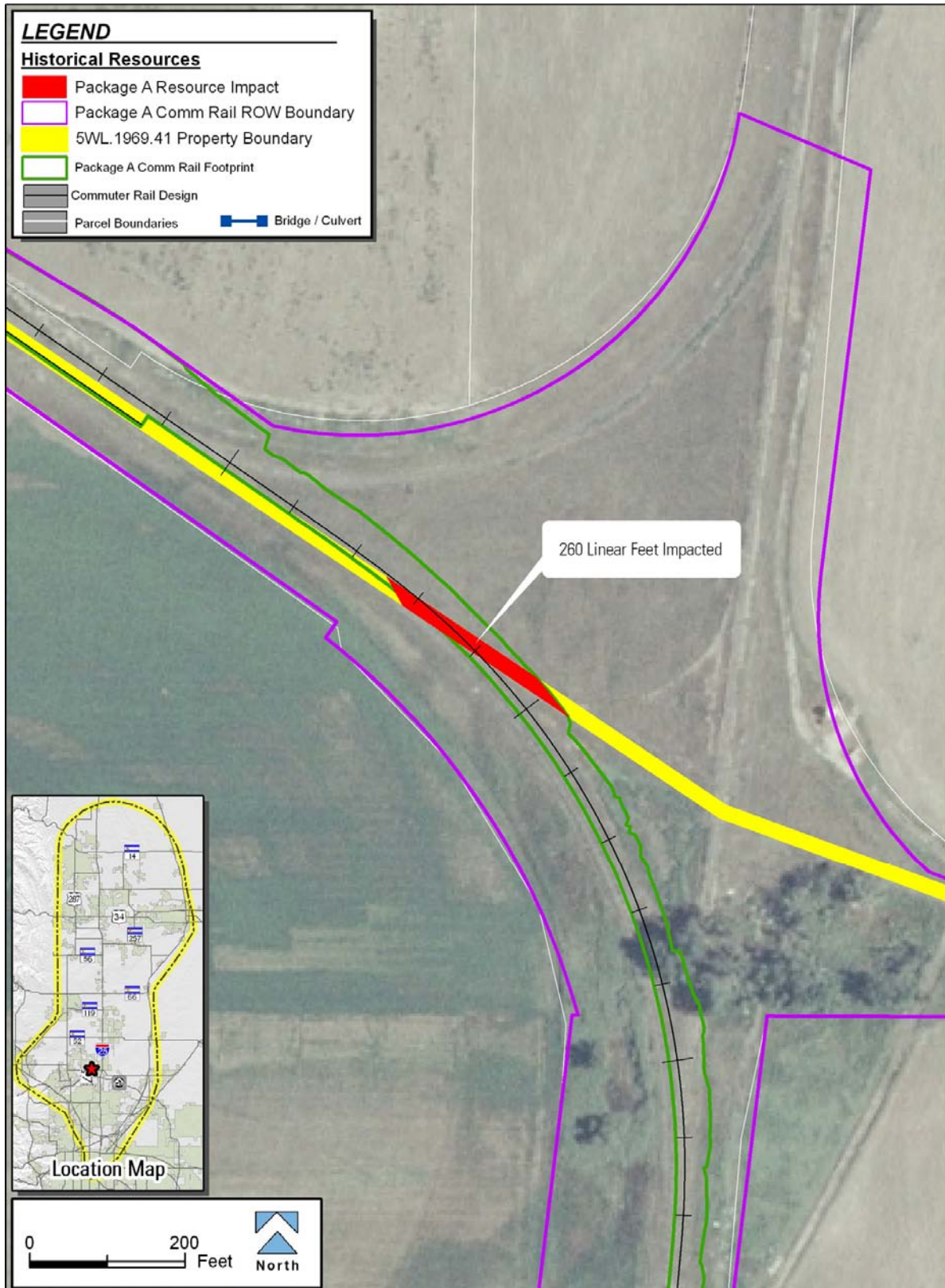
27 **Impacts to segment 5WL.1969.1 – Package A:** The commuter rail would require a new  
28 bridge at the location of the wooden trestle bridge and a new 470-foot-long bridge spanning  
29 I-25 .The original railroad bridge was demolished during a previous I-25 highway widening  
30 project. A new bridge crossing would not be expected to negatively affect the historic setting  
31 beyond its already diminished integrity at this location.

32 The new double-track commuter rail would lay new track on the existing bed, ballast, and  
33 grade of the abandoned Boulder Valley Branch and a new set of tracks parallel to the original  
34 alignment as described in segment 5WL.1969.41 (see **Figure 3.15-121**).

35 Additionally, the new double-track rail alignments would require a new supporting structure  
36 over an unnamed drainage at the historic wooden timber and log footer bridge  
37 (5WL.1969.1 Feature 1). This 47-foot-long by 17-foot-wide historic bridge would be  
38 demolished to make way for a new railroad bridge measuring approximately 60 feet long and  
39 70 feet wide.

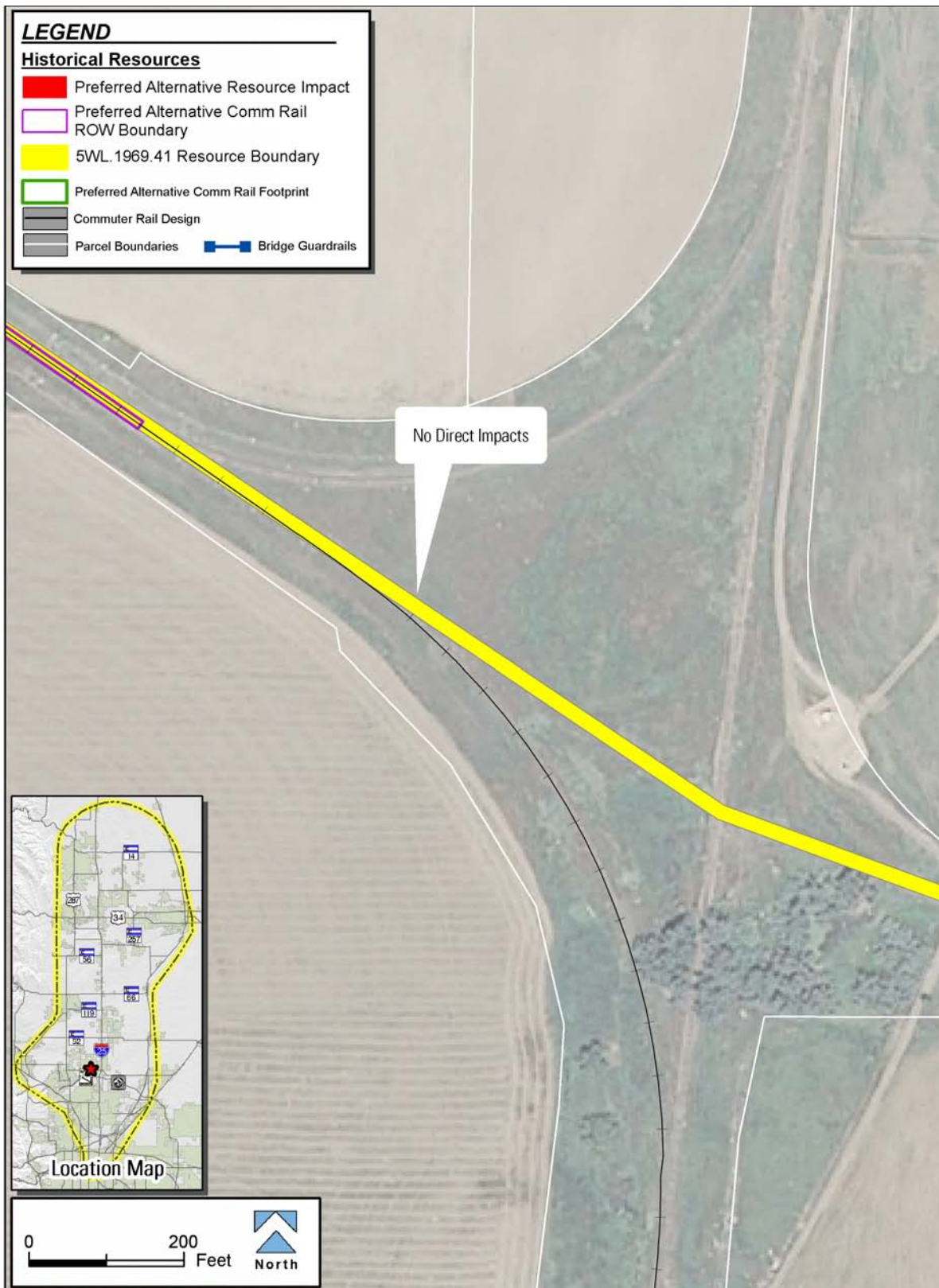


1 **Figure 3.15-119 5WL.1969.41 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,**  
2 **Denver & Boulder Valley Branch) – Package A**



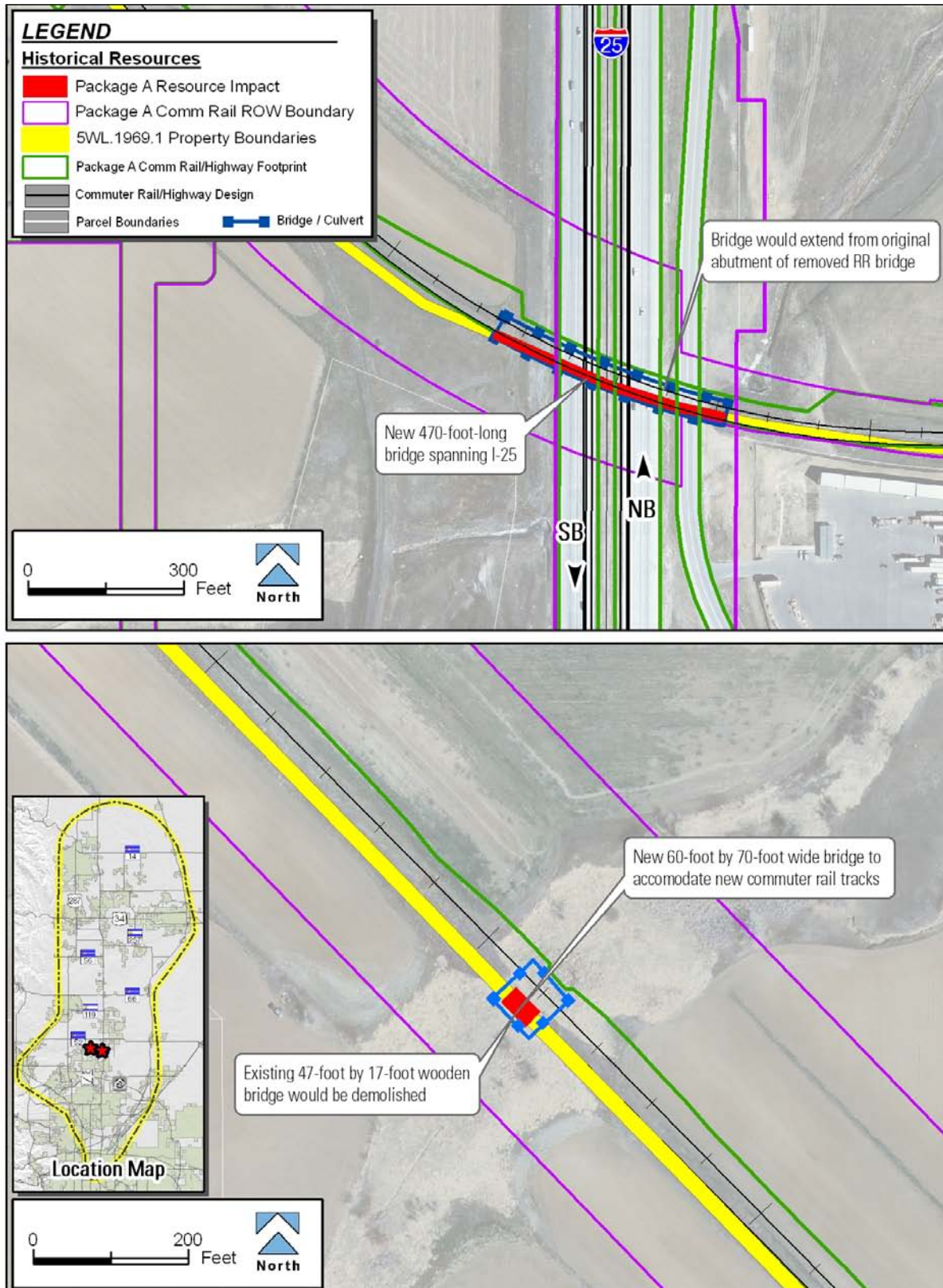
3

1 **Figure 3.15-120 5WL.1969.41 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,**  
2 **Denver & Boulder Valley Branch) – Preferred Alternative**



3

1 **Figure 3.15-121 5WL.1969.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,**  
2 **Denver & Boulder Valley Branch) – Package A.**  
3



1 **Impacts to segment 5WL.1969.1 – Package B:** This segment originally bridged over I-25, but  
2 the structure has been removed. Because Package B improvements occur at ground level  
3 within the span of the original bridge, there would be no direct or indirect impacts to the  
4 railroad segment by improvements associated with Package B.

5 **Impacts to segment 5WL.1969.1 – Preferred Alternative:** The commuter rail would require a  
6 new bridge at the location of the wooden trestle bridge and a new 470-foot-long bridge  
7 spanning I-25 . The original railroad bridge was demolished during a previous I-25 highway  
8 widening project. A new bridge crossing would not be expected to negatively affect the historic  
9 setting beyond its already diminished integrity at this location.

10 The new commuter rail would lay new track on the existing bed, ballast, and grade of the  
11 abandoned Boulder Valley Branch original alignment as described in segment 5WL.1969.41  
12 (see **Figure 3.15-122**).

13 Additionally, the new rail alignment would require a new supporting structure over an unnamed  
14 drainage at the historic wooden timber and log footer bridge (5WL.1969.1 Feature 1). This  
15 47-foot-long by 17-foot-wide historic bridge would be demolished to make way for a new  
16 railroad bridge.

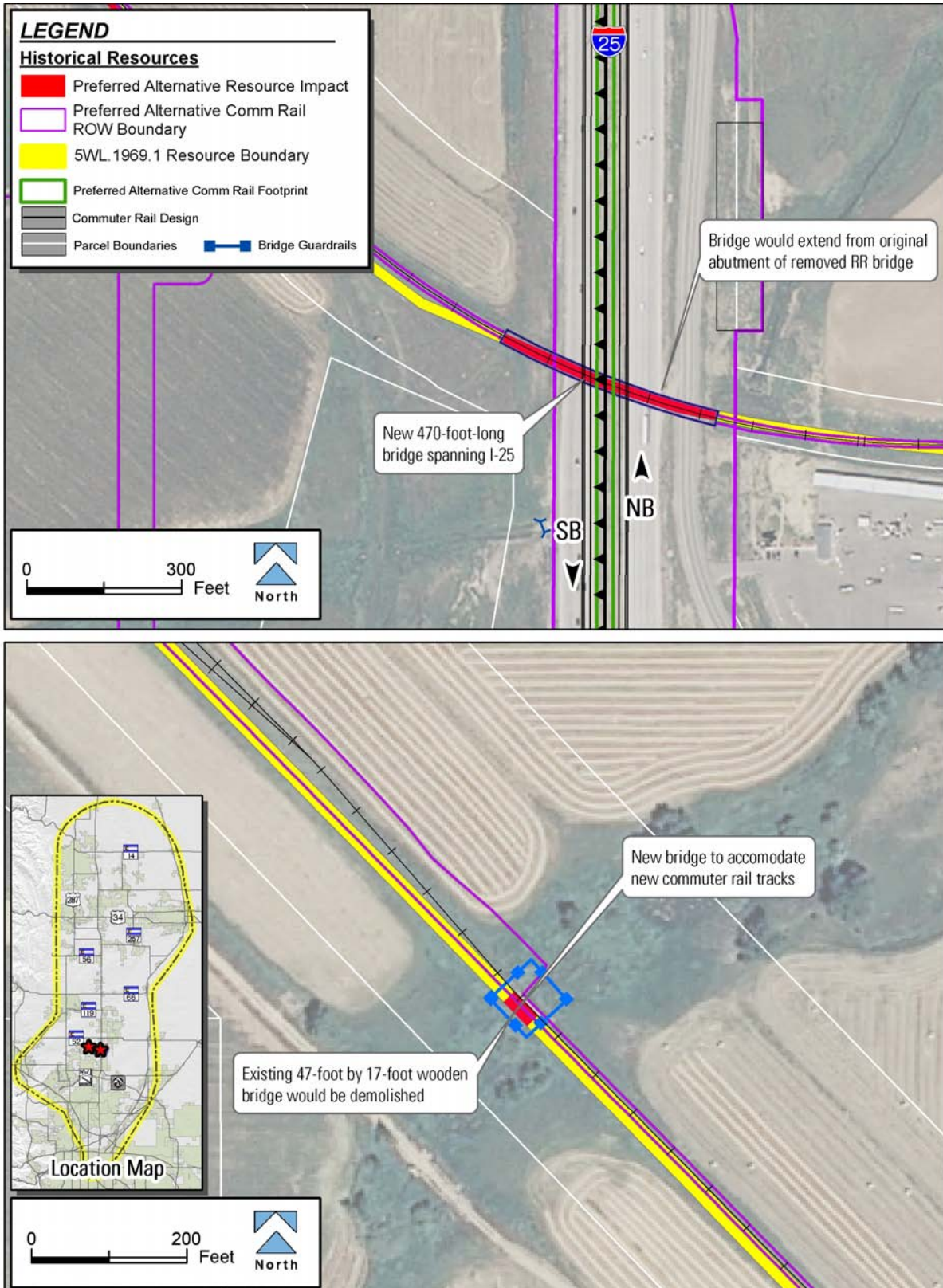
17 **Impacts to segment 5BF.130.1 – Package A:** The new double-track commuter rail would lay  
18 new track on the existing bed, ballast, and grade of the Boulder Valley Branch and a new set  
19 of tracks parallel to the original alignment as described in segment 5WL.1969.41 (see  
20 **Figure 3.15-123**). This historic rail line would remain in its current, historic alignment. The new  
21 rail line would run along the north side of the historic railroad grade.

22 The installation of the double-track configuration for the commuter rail would also require a  
23 new supporting structure over Little Dry Creek. The existing 69-foot-long by 27-foot-wide  
24 wooden trestle bridge (5BF.130.1 Feature 1) would be demolished and a new bridge  
25 measuring approximately 75 feet long and 70 feet wide would be constructed at that site.  
26 Although new rail would be placed upon existing bed, ballast and grade and a new track  
27 placed adjacent to the historic alignment, this is a compatible affect to the historic use and  
28 setting of the historic railroad line, and would be expected to preserve an otherwise  
29 deteriorating resource.

30 **Impacts to segment 5BF.130.1 – Preferred Alternative:** The new commuter rail would lay  
31 new track on the existing bed, ballast, and grade of the Boulder Valley Branch original  
32 alignment as described in segment 5WL.1969.41 (see **Figure 3.15-124**). This historic rail line  
33 would remain in its current, historic alignment.

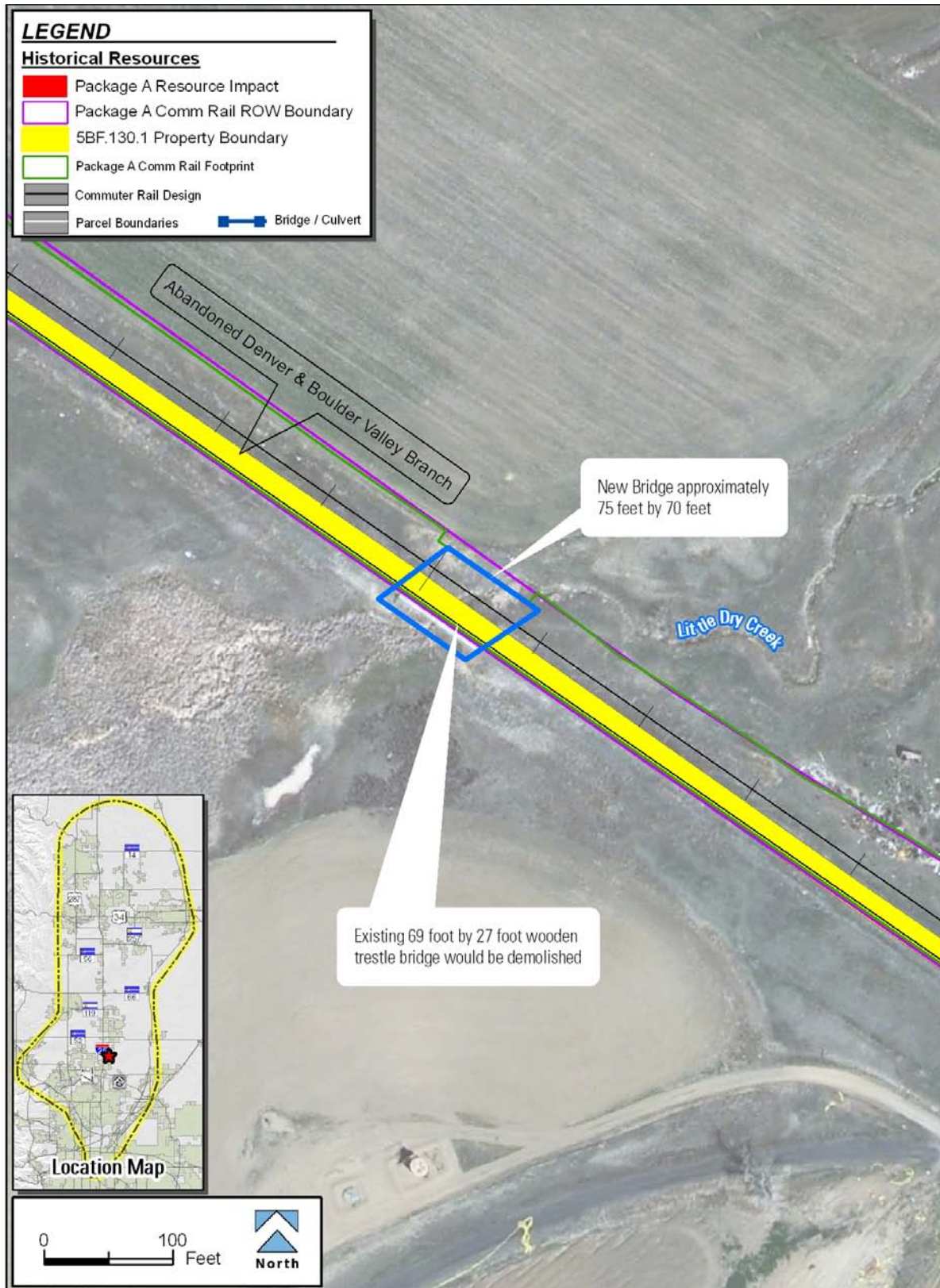
34 The installation of the commuter rail would also require a new supporting structure over Little  
35 Dry Creek. The existing 69-foot-long by 27-foot-wide, wooden trestle bridge  
36 (5BF.130.1 Feature 1) would be demolished and a new bridge would be constructed at that  
37 site. Although new rail would be placed upon existing bed, ballast and grade, this effect is  
38 compatible with the historic use and setting of the historic railroad line, and would be expected  
39 to preserve an otherwise deteriorating resource.

1 **Figure 3.15-122 5WL.1969.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,**  
2 **Denver & Boulder Valley Branch) Preferred Alternative**



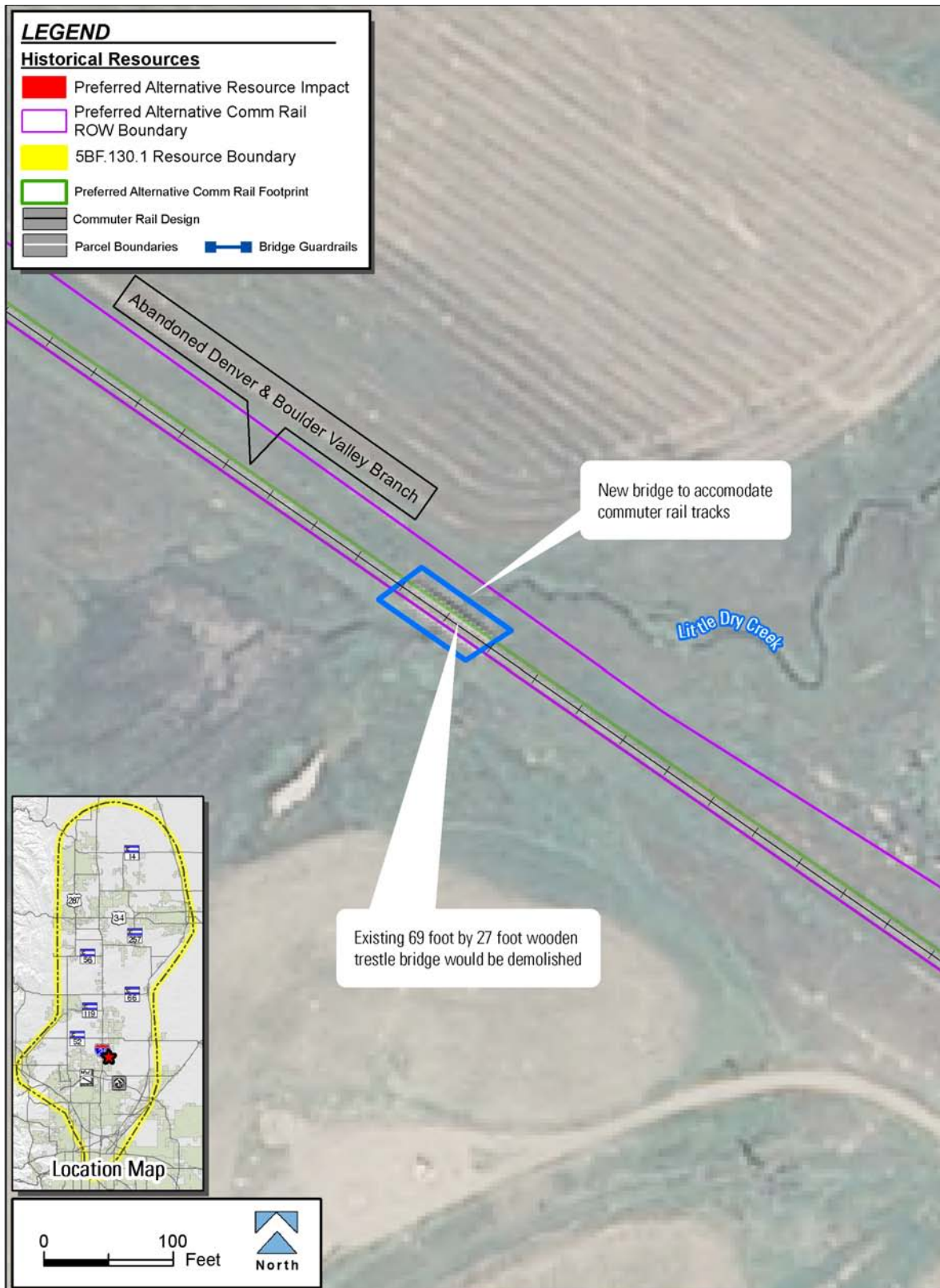
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1 Figure 3.15-1235BF.130.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver  
2 & Boulder Valley Branch) – Package A



3

1 **Figure 3.15-124 5BF.130.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,**  
2 **Denver & Boulder Valley Branch) – Preferred Alternative**



1 **Summary Effect Determination:**

2 **Package A:** A continuous 2.9 miles or approximately 11 percent of the entire linear resource  
3 would be reoccupied with new track on the existing bed, grade and ballast and an additional  
4 new track, 15 feet away and parallel to the existing historic alignment. New commuter rail  
5 tracks along the transportation corridor would introduce new, but compatible rail infrastructural  
6 elements to the historic setting. Demolition of two historic bridge features along the Boulder  
7 Valley Branch would result in direct impacts to the resource.

8 These direct and indirect effects would result in the major reduction or loss of integrity of this  
9 resource, and FHWA, FTA and CDOT therefore have determined that Package A would result  
10 in an *adverse effect* to the historic Denver Pacific/Kansas Pacific/UPD&BVB railroad line  
11 (5WL.1969 and 5BF.130).

12 **Package B:** No direct or indirect impacts would occur at any segment locality. FHWA, FTA  
13 and CDOT therefore have determined that the Package B improvements would result in *no*  
14 *historic properties affected* with respect to the historic Denver Pacific/Kansas  
15 Pacific/UPD&BVB railroad line (5WL.1969 and 5BF.130).

16 **Preferred Alternative:** A continuous 2.9 miles or approximately 11 percent of the entire linear  
17 resource would be reoccupied with new track on the existing bed, grade and ballast of the  
18 existing historic alignment. New commuter rail tracks along the transportation corridor would  
19 introduce new, but compatible rail infrastructural elements to the historic setting. Demolition of  
20 two historic bridge features along the Boulder Valley Branch would result in direct impacts to  
21 the resource.

22 These direct and indirect effects would result in the major reduction or loss of integrity of this  
23 resource, and FHWA, FTA and CDOT therefore have determined that the Preferred Alternative  
24 would result in an *adverse effect* to the historic Denver Pacific/Kansas Pacific/UPD&BVB  
25 railroad line (5WL.1969 and 5BF.130).

26 *Commuter Rail Stations*

27 **5LR.530 (Bimson Blacksmith Shop—Little Thompson Valley Pioneer Museum)**

28 **Resource Description:** This building is located at 228 Mountain Avenue in downtown  
29 Berthoud. This small, one story stone commercial building was erected in 1893, and served as  
30 the shop of blacksmith A.G. Bimson prior to its use as a historical museum.

31 **Eligibility Determination:** The Bimson Blacksmith Shop is listed on the NRHP and is eligible  
32 under Criterion A.

33 **Effect Determination – Package A:** This historic property lies just outside the project  
34 construction disturbance footprint under Package A. There would be additional train traffic on  
35 the nearby railway tracks creating minor noise and vibration increases over current levels, but  
36 no impacts. This situation would not be a new or heightened condition from the historic period  
37 when train traffic was heavier. Local increased vehicular traffic to the adjacent commuter rail  
38 parking lot would not result in discernable indirect impact affecting the operation of the  
39 museum, or altering the function, setting, and other attributes that rendered the property  
40 NRHP-eligible.



1 No direct or incompatible indirect impacts would occur, and FHWA, FTA and CDOT have  
2 determined that Package A commuter rail improvements would result in *no adverse effect* to  
3 this historic resource.

4 **Effect Determination – Preferred Alternative:** This historic property lies just outside the  
5 project construction disturbance footprint under the Preferred Alternative. There would be  
6 additional train traffic on the nearby railway tracks creating minor noise and vibration increases  
7 over current levels, but no impacts. This situation would not be a new or heightened condition  
8 from the historic period when train traffic was heavier. Local increased vehicular traffic to the  
9 adjacent commuter rail parking lot would not result in discernable indirect impacts affecting the  
10 operation of the museum, or altering the function, setting, and other attributes that rendered  
11 the property NRHP-eligible.

12 No direct or incompatible indirect impacts would occur, and FHWA, FTA and CDOT have  
13 determined that the Preferred Alternative commuter rail improvements would result in *no*  
14 *adverse effect* to this historic resource.

### 15 *Queue Jumps Along US 85*

#### 16 **5WL.5296 (Flagstone Residence—Goetzel)**

17 **Resource Description:** The historic Goetzel Residence is located at 3611 Idaho Street in  
18 Evans. This house is constructed of rusticated flagstone and was built in 1943.

19 **Eligibility Determination:** The house is eligible for the NRHP under Criterion C, as an  
20 excellent example of a Bungalow-style house made of an unusual building material.

21 **Effect Determination:** The creation of a queue jump in the vicinity of this historic dwelling  
22 involves reconfiguration of traffic lanes and markings within the existing US 85 roadway  
23 footprint. The queue jump consists of a modification to an existing signal light to allow buses to  
24 proceed through an intersection ahead of regular traffic on a separately timed green light. A  
25 short right-turn/bus-only lane is striped onto the existing outside lane of the highway to  
26 facilitate this bus movement. No new noise or intrusive transportation elements not already  
27 present along US 85 would occur with these improvements, and therefore no indirect effects  
28 are expected.

29 These proposed changes would not result in any direct or indirect impacts. FHWA, FTA and  
30 CDOT therefore have determined that the proposed queue jump would result in *no historic*  
31 *properties affected* with respect to this historic resource.

#### 32 **5WL.568 (Fort Vasquez)**

33 **Resource Description:** Fort Vasquez (5WL.568) is located in Platteville. Fort Vasquez  
34 Trading Post was built in 1835 and was the first permanent structure built along the South  
35 Platte River. This adobe outpost was near the Trapper's Trail and was built to be near the  
36 Cheyenne and Arapaho Indians, who provided buffalo robes to the trading post in trade for  
37 kettles, knives, guns, ammunition, blankets, beads and other items. After falling into a ruinous  
38 condition, Fort Vasquez was reconstructed in the 1930s by the Works Progress Administration  
39 (WPA), and the site is now operated as public museum.

40 **Eligibility Determination:** Fort Vasquez is listed on the NRHP. The site is significant under  
41 Criterion A for its role in the trapper and trader period (1800-1870) prior to the "Pikes Peak

1 Gold Rush,” when riverside trails between trading posts were the main conduits for  
2 communication and early settlement along the Colorado Front Range.

3 **Effect Determination:** The creation of a queue jump in the vicinity of Fort Vasquez involves  
4 reconfiguration of traffic lanes and markings within the existing US 85 roadway, and these  
5 proposed changes would not produce any direct impacts. The fort has been in close proximity  
6 to the modern highway for many decades. The queue jump consists of a modification to an  
7 existing signal light to allow buses to proceed through an intersection ahead of regular traffic  
8 on a separately timed green light. A short right-turn/bus-only lane is striped onto the existing  
9 outside lane of the highway to facilitate this bus movement. No noise or intrusive transportation  
10 elements not already present along US 85 would occur with these improvements, and  
11 therefore no indirect effects are expected. FHWA, FTA and CDOT therefore have determined  
12 that the proposed queue jump would result in *no historic properties affected* with respect to this  
13 historic resource.

14 **COMMUTER BUS STATIONS: GREELEY TO DENVER**

15 There would be no impacts to any historic properties for this component.

16 **COMMUTER BUS STATIONS: GREELEY TO DIA**

17 There would be no impacts to any historic properties for this component.

18 **MAINTENANCE FACILITIES**

19 There would be no impacts to historic properties on any of the maintenance facility sites or  
20 carpool lots for Package A.

21 **3.15.2.5 PACKAGE B TRANSIT COMPONENTS**

22 The transit components of Package B would potentially affect historic resources due to the  
23 placement of BRT station and park and ride locations. Specific consequences related to each  
24 transit component would be as follows.

25 **BRT: FORT COLLINS/GREELEY TO DENVER**

26 There would be no impacts to any historic properties for this component.

27 **BRT: FORT COLLINS/GREELEY TO DIA**

28 There would be no impacts to any historic properties for this component.

29 **BRT Stations**

30 There would be no impacts to any historic properties for this component.

31 **MAINTENANCE FACILITIES**

32 There would be no impacts to historic properties on any of the maintenance facility sites or  
33 carpool lots for Package B.

34 **Table 3.15-3** provides a summary of historic properties affected by component and also  
35 indicates how these impacts are treated from a Section 4(f) perspective. Detailed information  
36 about Section 4(f) is contained in **Chapter 5.0 Section 4(f) Evaluation** of this Draft EIS.

1 Table 3.15-3 Summary of Historic Properties Affected by Component

Component	Historic Property	PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
		Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<i>Package A Highway Components</i>		<i>Package B Highway Components</i>		<i>Preferred Alternative Highway Components</i>	
SH 1 to SH 14 (A-H1),(B-H1)	5LR.1917 Bee Farm	No	No historic properties affected	No	No historic properties affected	No	No historic properties affected
	5LR.8932.1 Larimer County Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.11396 Einarsen Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.863.2 Larimer and Weld Canal	No	No adverse effect	No	No adverse effect	No	No adverse effect
	5LR.1731.2 Colorado & Southern Railroad, Black Hollow Branch	No	No adverse effect	No	No adverse effect	No	No adverse effect
	5LR.1327.6 Colorado & Southern Railroad	No	No adverse effect	No	No adverse effect	No	No adverse effect

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

		PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled <i>Express</i> Lanes + Commuter Rail and Bus	
Component	Historic Property	Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<i>Package A Transit Components</i>		<i>Package B Transit Components</i>		<i>Preferred Alternative Transit Components</i>	
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.1731.11 Colorado & Southern Railroad	No	No adverse effect			No	No adverse effect
	5LR.1731.1 Colorado & Southern Railroad	No	No adverse effect			No	No adverse effect
	5BL.400.3 Colorado & Southern Railroad	No	No adverse effect			No	No adverse effect

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

Component	Historic Property	PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled <i>Express</i> Lanes + Commuter Rail and Bus	
		<i>Package A Highway Components</i>		<i>Package B Highway Components</i>		<i>Preferred Alternative Highway Components</i>	
SH 14 to SH 60 (A-H2) (B-H2)	5LR.11409.1 Cache la Poudre Reservoir Inlet	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.11391 Gallatin Residence	No	No historic properties affected	No	No historic properties affected	No	No historic properties affected
	5LR.2160.1 Boxelder Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.8930 Louden Ditch	Yes	Adverse effect	Yes	Adverse effect	Yes	Adverse effect
	5LR.1815 Union Pacific Railroad, Fort Collins Branch	No	No adverse effect	No	No adverse effect	No	No adverse effect
SH 14 to SH 60 (A-H2) (B-H2)	5LR.503 Loveland and Greeley Canal	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.8928 Farmers' Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.11209 Schmer Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.11210 McDonough Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR850.1 Great Western Railway	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

		PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		General Purpose Lanes + Commuter Rail and Bus		Tolled Express Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
Component	Historic Property	Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<b>Package A Highway Components</b>		<b>Package B Highway Components</b>		<b>Preferred Alternative Highway Components</b>	
GP/TEL Highway Widening: SH 60 to E-470 (A-H3) (B-H3)	5WL.841 Great Western Railway	No	No adverse effect	No	No adverse effect	No	No adverse effect
	Handy/Home Supply Ditch Confluence	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
		<b>Package A Transit Components</b>		<b>Package B Transit Components</b>		<b>Preferred Alternative Transit Components</b>	
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.850.5 Great Western Railway	No	No adverse effect			No	No adverse effect
	5LBL.514.1 Great Western Railway	No	No adverse effect			No	No adverse effect
		<b>Package A Highway Components</b>		<b>Package B Highway Components</b>		<b>Preferred Alternative Highway Components</b>	
SH 14 to SH 60 (A-H2) (B-H2)	5LR.11408 Zimmerman Grain Elevator	No	No adverse effect	No	No adverse effect	Yes	No adverse effect
	5LR.11382 Hatch Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5LR.8927.1 Hillsboro Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

Component	Historic Property	PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<b>Package A Highway Components</b>		<b>Package B Highway Components</b>		<b>Preferred Alternative Highway Components</b>	
SH 60 to E-470 (A-H3) (B-H3)	5LR.11242 Mountain View Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5WL.5204 Bashor Farm	No	No historic properties affected	No	No historic properties affected	No	No historic properties affected
	5WL.5203 Bein Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5WL.5198 Olson Farm	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
GP/TEL Highway Widening: SH 60 to E-470 (A-H3) (B-H3)	5BF.76.2 Bull Canal/Standley Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
	5AM.457.3 Bull Canal/Standley Ditch	Yes	No adverse effect*	Yes	No adverse effect*	Yes	No adverse effect*
		<b>Package A Transit Components</b>		<b>Package B Transit Components</b>		<b>Preferred Alternative Transit Components</b>	
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1966.8 Bull Canal/Standley Ditch	Yes	No adverse effect*			No	No adverse effect

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

		PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		General Purpose Lanes + Commuter Rail and Bus		Tolled Express Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
Component	Historic Property	Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<b>Package A Highway Components</b>		<b>Package B Highway Components</b>		<b>Preferred Alternative Highway Components</b>	
Structural Upgrades: E-470 to US 36 (A-H4) (B-H4)	5AM.2073 North Glenn First Filing	No	No adverse effect	No	No adverse effect	No	No adverse effect
	5AM.2074 North Glenn Second Filing	No	No adverse effect	No	No adverse effect	No	No adverse effect
		<b>Package A Transit Components</b>		<b>Package B Transit Components</b>		<b>Preferred Alternative Transit Components</b>	
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.11330 Public Service Company of Colorado – Fort Collins Substation	No	No adverse effect			No	No adverse effect
	5LR.10819.2 Larimer County Canal No 2	Yes	No adverse effect			No	No adverse effect
	5LR.1729.2 Big Thompson Ditch	Yes	No adverse effect*			Yes	No adverse effect*
Commuter Rail: Fort Collins to Longmont (A-T1)	5BL.9163 Kitley House	Yes	No adverse effect*			Yes	No adverse effect*
	5BL.10636 Boggs Residence	No	No adverse effect			No	No adverse effect
	5BL.3449.2 Supply Ditch	Yes	No adverse effect*			Yes	No adverse effect*
	5BL.3113.67 Rough & Ready Ditch	Yes	No adverse effect*			Yes	No adverse effect*
	5LR.488 Colorado and Southern Railway Depot / Loveland Depot	Yes	No adverse effect*			No	No adverse effect



1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

		PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
Component	Historic Property	Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<i>Package A Transit Components</i>		<i>Package B Transit Components</i>		<i>Preferred Alternative Transit Components</i>	
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.4832 Oligarchy Ditch	Yes	No adverse effect*			Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.1245 Old City Electric Building	Yes	Adverse effect			No	No Adverse Effect
	5BL1244 Colorado & Southern /BNSF Depot	Yes	Adverse effect			No	No Adverse Effect
	5BL.513 Great Western Sugar Factory	Yes	No adverse effect*			No	No Adverse Effect
	5BL.7606 Novartis Seeds/Syngenta Seeds	No	No adverse effect			No	No Adverse Effect
	5WL.712 Sandstone Ranch	Yes	No adverse effect*			Yes	No adverse effect*
	5WL.5461.1 Boulder and Weld County Ditch	Yes	No adverse effect*			Yes	No adverse effect*
	5WL.5263 Hingley Farm	Yes	Adverse effect			Yes	Adverse effect
	5WL.6564 Jillson Farm	Yes	Adverse effect			Yes	Adverse effect

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

Component	Historic Property	PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		General Purpose Lanes + Commuter Rail and Bus		Tolled Express Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
		<i>Package A Transit Components</i>		<i>Package B Transit Components</i>		<i>Preferred Alternative Transit Components</i>	
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1974.3 Rural Ditch	Yes	No adverse effect*			Yes	No adverse effect*
	5WL.2247.11 Community Ditch	No	No adverse effect			No	No adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1970.7 Lower Boulder Ditch	No	No adverse effect			No	No adverse effect
	5WL1317.11 UPRR-Dent Branch	Yes	No adverse effect*			Yes	No adverse effect
	5AM.472.1 Union Pacific Railroad, Dent Branch	No	No adverse effect			No	No adverse effect
	5WL1969. Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch	Yes	Adverse effect			Yes	Adverse effect
	5BF.130.1 Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch	Yes	Adverse effect			Yes	Adverse effect

2

1 Table 3.15.3 Summary of Historic Properties Affected by Component (cont'd)

		PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE	
		General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus	
Component	Historic Property	Direct Impacts?	Effect	Direct Impacts?	Effect	Direct Impacts?	Effect
		<i>Package A Transit Components</i>		<i>Package B Transit Components</i>		<i>Preferred Alternative Transit Components</i>	
Commuter Rail Stations (A-T1/A-T2)	5LR.488 Colorado & Southern Railroad Depot, Loveland	No	No adverse effect			No	No adverse effect
	5LR.530 Bimson Blacksmith Shop	No	No adverse effect			No	No adverse effect
Queue Jumps Along US 85	5WL.5296 Flagstone Residence – Goetzel	No	No historic properties affected			No	No historic properties affected
	5WL.568 Fort Vasquez	No	No historic properties affected			No	No historic properties affected
Alternative Totals							
PACKAGE A		PACKAGE B		PREFERRED ALTERNATIVE			
General Purpose Lanes + Commuter Rail and Bus		Tolled <i>Express</i> Lanes + Bus Rapid Transit		General Purpose and Tolled Express Lanes + Commuter Rail and Bus			
Direct Impact	Effect	Direct Impact	Effect	Direct Impact	Effect		
37 properties directly impacted	7 adverse effects to properties  51 no adverse effects to properties	18 properties directly impacted	1 adverse effect  25 no adverse effects to properties	31 properties directly effected	4 adverse effect s  54 no adverse effects to properties		

\*Properties would be considered for *de minimis* Section 4(f) status.

2

### 1 3.15.3 Mitigation Measures

2 During the development of all build packages, modifications were employed to avoid and  
3 minimize effects to historic properties and resources whenever possible. These modifications  
4 included shifting the roadway alignment to avoid direct contact with historic boundaries and  
5 resources, consolidating roadway templates to minimize space needed for roadway  
6 improvements, and bridging of linear features.

7 Possible mitigation measures for historic property impacts are summarized in **Table 3.15-4**.  
8 Mitigation measures for adverse effects will be part of an MOA among CDOT, FHWA, FTA,  
9 and SHPO and will be specific to those resources for which the project results in an adverse  
10 effect. Actual mitigation measures will be refined after identification of the preferred package,  
11 consultation with SHPO, and preparation of the Final EIS.

#### 12 3.15.3.1 NO-ACTION ALTERNATIVE

13 There are no adverse effects to historic properties, therefore no mitigation is needed.

#### 14 3.15.3.2 PACKAGE A

15 During the design phase of this project, designs were altered to avoid historic structures where  
16 possible. The commuter rail alignment was moved to avoid the historic Dickens Farm on SH  
17 119 as an example. There were, however, three historic buildings that would be acquired and  
18 demolished or relocated to a different site to provide space necessary to construct  
19 improvements for Package A. Adverse impacts would occur for two historic buildings in  
20 Longmont—the Old City Electric Building, 5BL.1245 ,the Colorado & Southern / BNSF Depot,  
21 5BL.1244, and for one historic building in Erie, the Hingley farmhouse, 5WL.5263, on WCR 7.  
22 All three of these buildings would be removed for development of Package A. Detailed  
23 recording, in accordance with the Colorado Historical Society's Standards for Level II  
24 Documentation, is recommended pending SHPO concurrence.

25 An adverse effect would occur to the Jillson Farm where 7.34 acres would be acquired for  
26 construction of new commuter rail infrastructure. This is considered an adverse impact  
27 because of the introduction of railroad tracks and train traffic to the historic farm setting where  
28 it has never been a part of the setting. Detailed recording, in accordance with the Colorado  
29 Historical Society's Standards for Level II Documentation, is recommended pending SHPO  
30 concurrence.

31 An adverse effect would result from placing 316 feet of the Loudon Ditch in new and extended  
32 culverts. Detailed recording, in accordance with the Colorado Historical Society's Standards for  
33 Level II Documentation, is recommended pending SHPO concurrence.

34 An adverse effect to the Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver and  
35 Boulder Valley Branch (5WL.1969) would result from the demolition of two wooden trestle  
36 bridges. Detailed recording, in accordance with the Colorado Historical Society's Standards for  
37 Level II Documentation, is recommended pending SHPO concurrence.

1 **3.15.3.3 PACKAGE B**

2 An adverse effect would result from placing 357 feet of the Louden Ditch in new and extended  
3 culverts. Detailed recording, in accordance with the Colorado Historical Society's Standards for  
4 Level II Documentation, is recommended pending SHPO concurrence.

5 **3.15.3.4 PREFERRED ALTERNATIVE**

6 During the design phase of this project, designs were modified to avoid or minimize impacts to  
7 historic structures where possible. The commuter rail alignment was moved to avoid the  
8 historic Dickens Farm on SH 119 as an example. In addition, the Old City Electric Building and  
9 the Colorado and Southern/BNSF Depot were avoided through the design technique of single-  
10 tracking the commuter rail corridor. There was, however, one historic building that would be  
11 acquired and demolished or relocated to a different site to provide space necessary to  
12 construct improvements for the Preferred Alternative. Adverse impacts would occur for a  
13 historic building in Erie, the Hingley farmhouse, 5WL.5263, on WCR 7. Detailed recording, in  
14 accordance with the Colorado Historical Society's Standards for Level II Documentation, is  
15 recommended pending SHPO concurrence.

16 An adverse effect would occur to the Jillson Farm where 7.34 acres would be acquired for  
17 construction of new commuter rail infrastructure. This is considered an adverse impact  
18 because of the introduction of railroad tracks and train traffic to the historic farm setting where  
19 it has never been a part of the setting. Detailed recording, in accordance with the Colorado  
20 Historical Society's Standards for Level II Documentation, is recommended pending SHPO  
21 concurrence.

22 An adverse effect would result from placing 316 feet of the Louden Ditch in new and extended  
23 culverts. Detailed recording, in accordance with the Colorado Historical Society's Standards for  
24 Level II Documentation, is recommended pending SHPO concurrence.

25 An adverse effect to the Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver and  
26 Boulder Valley Branch (5WL.1969) would result from the demolition of two wooden trestle  
27 bridges. Detailed recording, in accordance with the Colorado Historical Society's Standards for  
28 Level II Documentation, is recommended pending SHPO concurrence.  
29  
30

1 **Table 3.15-4 Mitigation Measures – Historic and Archaeological Preservation**

Impact	Impact Type	Mitigation Measures
Removal or impact to historic structure	Permanent	<ul style="list-style-type: none"> <li>▶ Avoidance and minimization will be addressed first.</li> <li>▶ Memorandum of Agreement with parties will be established.</li> <li>▶ Colorado Historical Society Standards Level II Documentation will be provided.</li> </ul>
Impact to a portion of a historic property	Permanent	<ul style="list-style-type: none"> <li>▶ Avoidance and minimization will be addressed first.</li> <li>▶ Colorado Historical Society Standards Level II Documentation will be provided.</li> <li>▶ Memorandum of Agreement with parties will be established.</li> </ul>
Impact to archaeological resource	Permanent	<ul style="list-style-type: none"> <li>▶ If subsurface archaeological remains are exposed during any phase of construction, all activities in the vicinity of the discovery will cease and the CDOT Senior Staff Archaeologist will be contacted. Consultation with the SHPO and any pertinent consulting parties will be conducted, as necessary. Work will not proceed until authorization from the CDOT Archaeologist has been provided.</li> </ul>
Indirect effects from construction activities	Temporary/ Construction	<ul style="list-style-type: none"> <li>▶ Construction disturbances will be controlled and minimized.</li> <li>▶ All disturbed areas will be returned to their original configuration to the extent possible.</li> </ul>
Indirect effects to some or all resources: Dust and debris	Temporary/ Construction	<ul style="list-style-type: none"> <li>▶ Precautionary measures, such as applied palliatives to reduce impact of dust will be implemented.</li> <li>▶ Contractor training to prevent flying debris effects will be implemented.</li> </ul>
Indirect effects to some or all resources: visual, auditory, accessibility	Temporary/ Construction	<ul style="list-style-type: none"> <li>▶ Planned construction staging will be provided to avoid these effects whenever possible.</li> <li>▶ Signage and well marked alternate routes for access will be provided.</li> <li>▶ Landscape context sensitive design will be employed to minimize intrusive effects of transportation features.</li> <li>▶ Noise barriers will be constructed as warranted.</li> </ul>

2

### 3.15.4 Native American Consultation

Section 106 of the National Historic Preservation Act (as amended) and the Advisory Council on Historic Preservation regulations (36 CFR 800.2[c][2][ii]) mandate that federal agencies coordinate with interested Native American tribes in the planning process for federal undertakings. Consultation with Native American tribes recognizes the government-to-government relationship between the United States government and sovereign tribal groups. In that context, federal agencies must acknowledge that historic properties of religious and cultural significance to one or more tribes may be located on ancestral, aboriginal, or ceded lands beyond modern reservation boundaries.

Consulting tribes are offered the opportunity to identify concerns about cultural resources and comment on how the project might affect them. If it is found that the project would impact properties that are eligible for the National Register of Historic Places and are of religious or cultural significance to one or more consulting tribes, their role in the consultation process may also include participation in resolving how best to avoid, minimize, or mitigate those impacts. By describing the proposed undertaking and the nature of any known cultural sites, and consulting with the interested Native American community, FHWA, FTA and CDOT strive to effectively protect areas important to American Indian people.

In April 2004, FHWA and FTA sent letters jointly to fifteen federally recognized tribes with an established interest in Adams, Boulder, Broomfield, Denver, Jefferson, Larimer and/or Weld Counties, Colorado, with an invitation to participate as consulting parties:

- ▶ Cheyenne and Arapaho Tribes of Oklahoma (two tribes administered by a unified tribal government)
- ▶ Cheyenne River Sioux Tribe (South Dakota)
- ▶ Comanche Nation of Oklahoma
- ▶ Crow Creek Sioux Tribe (South Dakota)
- ▶ Kiowa Tribe of Oklahoma
- ▶ Northern Arapaho Tribe (Wyoming)
- ▶ Northern Cheyenne Tribe (Montana)
- ▶ Oglala Sioux Tribe (South Dakota)
- ▶ Pawnee Nation of Oklahoma
- ▶ Rosebud Sioux Tribe (South Dakota)
- ▶ Southern Ute Indian Tribe (Colorado)
- ▶ Standing Rock Sioux Tribe (North Dakota)
- ▶ Ute Mountain Ute Tribe (Colorado)
- ▶ Ute Tribe of the Uintah and Ouray Agency (Utah)
- ▶ White Mesa Ute Tribe (Utah)

1 The Kiowa Tribe and Pawnee Nation responded in writing to the initial solicitation, each  
2 indicating a desire to be a consulting party for the undertaking. In June, July and August 2004,  
3 a CDOT representative placed a series of telephone calls to the remaining non-responsive  
4 tribes, and a second invitation letter was sent out to several tribes upon their request, in an  
5 effort to answer questions about the project and facilitate additional tribal participation. Five  
6 tribes responded positively to this follow up contact (Cheyenne and Arapaho Tribes of  
7 Oklahoma, Comanche Tribe of Oklahoma, Northern Arapaho Tribe, Northern Cheyenne Tribe,  
8 and Southern Ute Indian Tribe), for a total of seven consulting tribes. Documentation related to  
9 the consultation process is located in **Appendix E**.

10 None of the tribes raised specific concerns or issues beyond an acknowledgement that their  
11 ancestors were residents of northeastern Colorado, and that sites of religious and cultural  
12 significance, including human remains, could possibly be located within the North I-25 APE. In  
13 response to this concern, FHWA, FTA, and CDOT will specify clear procedures to be followed  
14 should archaeological resources and/or human remains be unexpectedly encountered during  
15 construction, to include notification of the consulting tribes. Additionally, FHWA, FTA, and  
16 CDOT committed to keeping the consulting tribes apprised of progress as the project  
17 developed, and to include them in the project planning and development process, at the tribes'  
18 discretion. As a result of these actions, FHWA and FTA have fulfilled their joint legal  
19 obligations for tribal consultation under federal law.