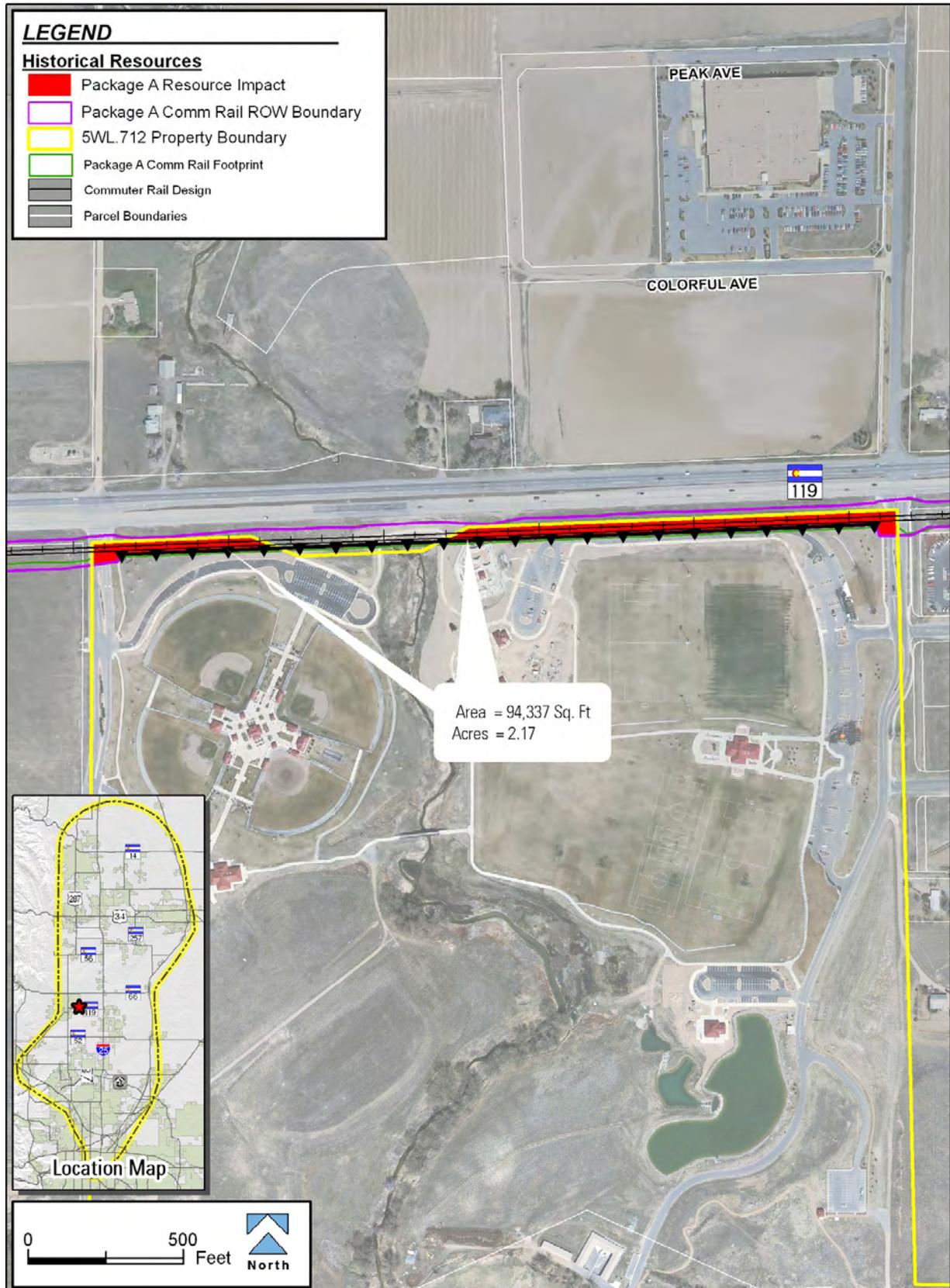


1 Figure 3.15-66 5WL.712 (Sandstone Ranch) – Package A



2

1 **5WL.5461.1 (Boulder and Weld County Ditch)**

2 **Resource Description:** The entire Boulder and Weld County Ditch is approximately five miles  
3 long and draws water from a head gate on Boulder Creek. The ditch was constructed in 1871 and  
4 remains in use supplying irrigation water for agricultural use. The segment of the earthen irrigation  
5 ditch passing through the APE is approximately 684 feet (0.13 mile) long, 20 feet wide, and 6.5  
6 feet deep. The surrounding land is rural in character.

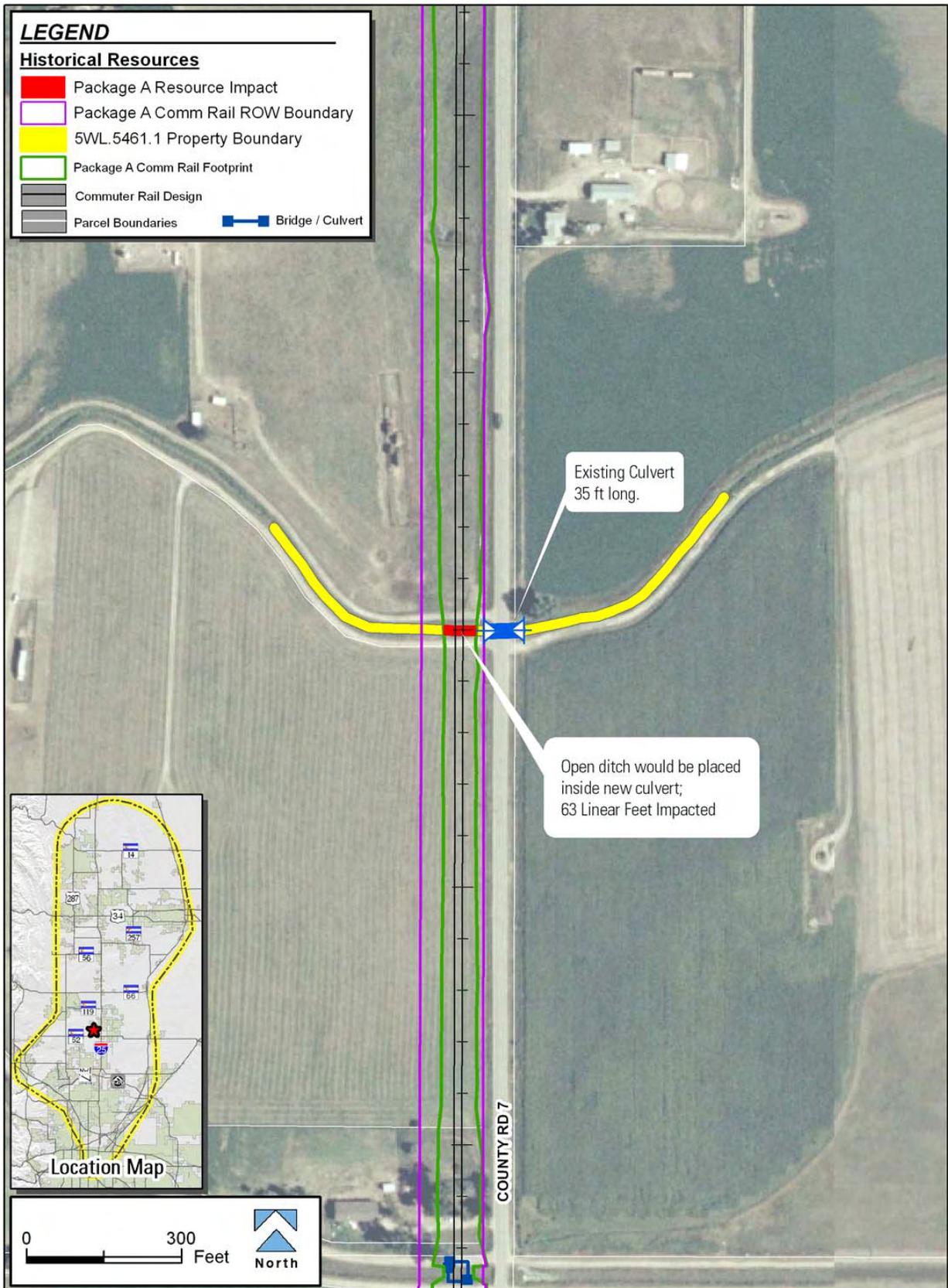
7 **Eligibility Determination:** The Boulder and Weld County Ditch is eligible for the NRHP under  
8 Criterion A because of its important association with the early development of agriculture in Weld  
9 County. The segment of the ditch within the APE retains sufficient integrity of location, setting,  
10 feeling, and use to support the eligibility of the entire linear resource.

11 **Effect Determination:** In the vicinity of the Boulder and Weld County Ditch, the commuter rail  
12 alignment closely parallels WCR 7, beneath which the ditch crosses in a culvert. The  
13 commuter rail design would include a new CBC to accommodate the historic ditch.  
14 Approximately 63 linear feet of the ditch would be directly impacted by being placed in a  
15 culvert beneath the commuter rail facility (see **Figure 3.15-67**).

16 Construction of the concrete culvert structure would likely require temporary access to the  
17 historic property for equipment access and culvert installation activities. The ditch would likely  
18 be 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 encroachment by  
20 construction. All disturbance caused by construction equipment or activities would be  
21 temporary in nature and affected areas would be restored to their original condition and  
22 appearance.

23 Although a portion of the open ditch would be placed in a culvert, this change affects only a  
24 very small percentage of the entire linear resource. FHWA, FTA and CDOT have determined  
25 that Package A commuter rail improvements would result in *no adverse effect* to the entire  
26 Boulder and Weld County Ditch.

1 Figure 3.15-67 5WL.5461.1 (Boulder and Weld County Ditch) – Commuter Rail



1 **5WL.5263 (Hingley Farm)**

2 **Resource Description:** The farmstead is located at 7523 WCR 7 in Erie. This farm is a very  
3 intact example of a historic agricultural operation in Weld County. Built in 1900, the hipped roof  
4 farmhouse is an intact example of the Classic Cottage domestic architectural style in a rural  
5 context.

6 **Eligibility Determination:** This farmstead is eligible for the NRHP under Criterion A because  
7 of its important association with early settlement and agricultural development in Weld County  
8 and under Criterion C for its significance as an intact early farmhouse and farmstead.

9 **Effect Determination:** Proposed development of a new commuter rail alignment within a 125  
10 foot-wide right-of-way corridor parallel to WCR 7 would cause direct impacts to this historic  
11 farm. A strip of land within the historic property, measuring 2,585 feet long and 125 feet wide,  
12 would be acquired and converted from agricultural to transportation use, placing a new railroad  
13 embankment, ballast and tracks over the acquired farmland. The area to be acquired  
14 comprises 7.34 acres, or approximately nine percent of the entire 81.35-acre historic property.  
15 An entirely new transportation feature would be introduced into the rural, agricultural setting.  
16 The proposed rail corridor passes through the original farmstead complex at the southeast  
17 corner of the property, and would require removal of the contributing, architecturally significant  
18 farmhouse (see **Figure 3.15-68**).

19 These direct and indirect effects would result in the major reduction or loss of integrity of this  
20 resource, and FHWA, FTA and CDOT therefore have determined that an *adverse effect* would  
21 result. Details of mitigation for this effect are discussed under **Section 3.15.3**.

1 Figure 3.15-68 5WL.5263 (Hingley Farm) – Commuter Rail



1 **5WL.2247.11 (Community Ditch)**

2 **Resource Description:** The Community Ditch is an irrigation lateral ditch that generally runs  
3 east to west across the area south of SH 52 near Erie. The ditch was originally built in 1885.  
4 The entire Community Ditch is approximately 30 miles long. Within the project APE the  
5 earthen irrigation ditch is approximately 714 feet long and 16 feet wide. Both banks of the ditch  
6 are lined with grassy vegetation. The surrounding area is devoted to agriculture.

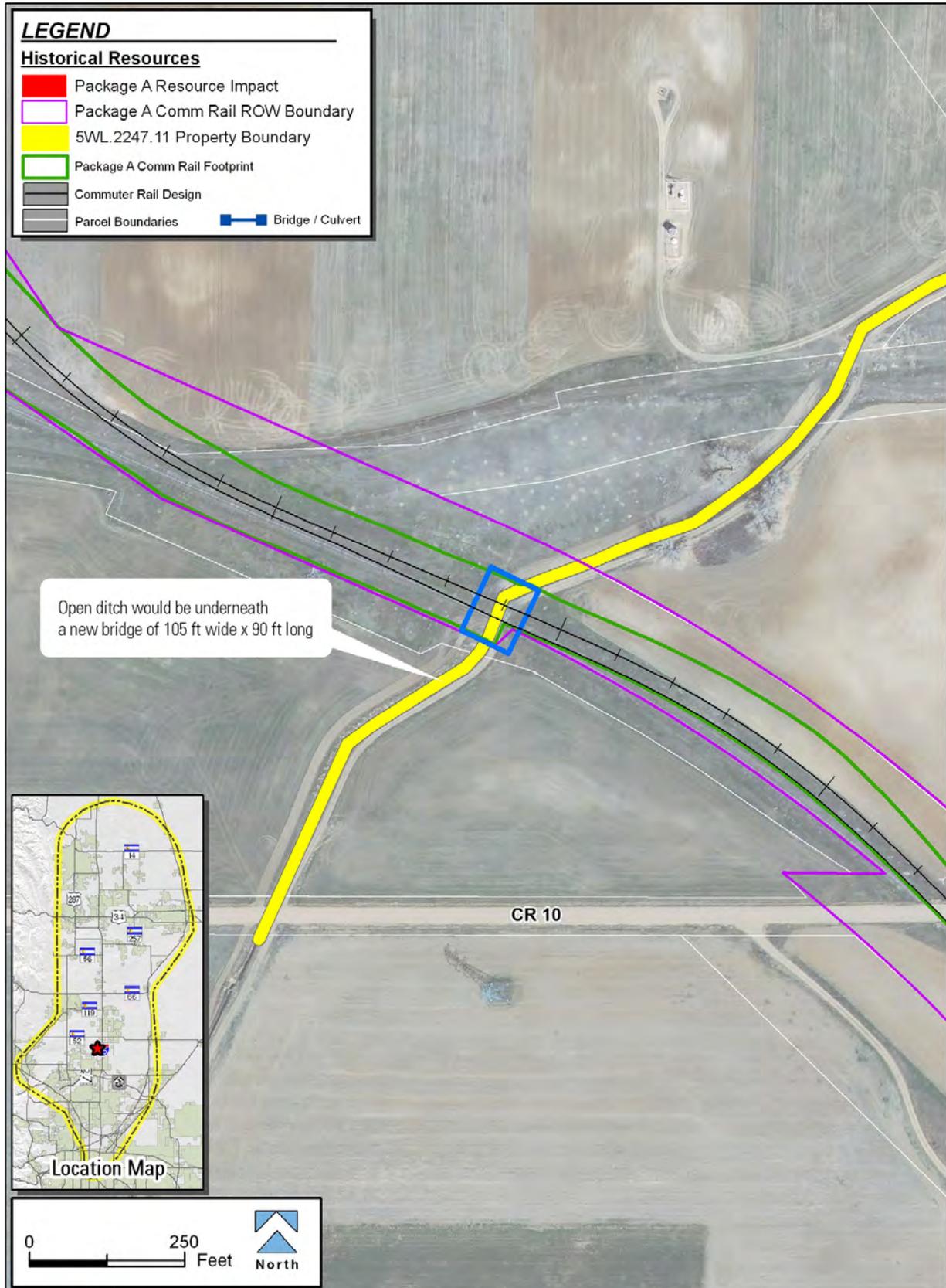
7 **Eligibility Determination:** The entire Community Ditch (5WL.2247) is eligible for inclusion on  
8 the NRHP under Criterion A for its important association with the development of water rights  
9 and agriculture in Weld County. The segment (5WL.2247.11) within the project APE retains  
10 sufficient integrity of location and setting to support the eligibility of the entire linear resource.

11 **Effect Determination:** The proposed new double-track commuter rail line would pass in a  
12 northwest-southeast alignment across the historic ditch segment, and would span the ditch at the  
13 same location as the abandoned UPRR Boulder Valley Branch bridge, creating an additional 60  
14 feet of cover over the ditch. A new bridge structure would replace the abandoned non-contributing  
15 UPRR Boulder Valley Branch bridge. Approximately 105 feet of open ditch would flow underneath  
16 the new bridge beneath the new railroad bed and tracks (see **Figure 3.15-69**). The new bridge  
17 would be approximately 90 feet long and 105 feet wide. Associated bridge support structures, such  
18 as piers and abutments, would be placed outside the historic property. There would be no resulting  
19 direct impact to the historic resource.

20  
21 Installation of the new bridge would likely require temporary occupancy of the historic property  
22 for equipment access and minor construction activities. The ditch would remain operational  
23 and irrigation water would be protected from contamination by construction. All disturbance  
24 caused by construction equipment or construction activities would be temporary in nature and  
25 affected areas would be restored to their original condition and appearance.

26 Although a portion of the open ditch would be placed underneath a bridge, this change affects  
27 only a very small percentage of the overall linear resource. FHWA, FTA and CDOT have  
28 determined that Package A would result in *no adverse effect* to the entire Community Ditch.

1 Figure 3.15-69 5WL.2247.11 (Community Ditch) – Commuter Rail



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 3.15-70**). 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 wye  
7 once consisted of a multiple-track complex. South of that bypass, the track reverts to a single  
8 track alignment. Segment 5AM.472.1 is a 1.9 mile long railway segment that follows the original  
9 single-track alignment in Adams County. Most of this segment has been abandoned. The  
10 surrounding area is rural in character.

11 **Eligibility Determination:** The OAHF has officially declared the UPRR-Dent Branch eligible for  
12 the NRHP under Criterion A for its important role in the development of the agricultural economy  
13 of the Front Range of Colorado. Although abandoned, these two railway segments retain integrity  
14 of location and association and therefore support the eligibility of the entire linear resource.  
15

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-Dent  
19 Branch in Weld and Adams counties (5WL.1317, 5AM.472).  
20

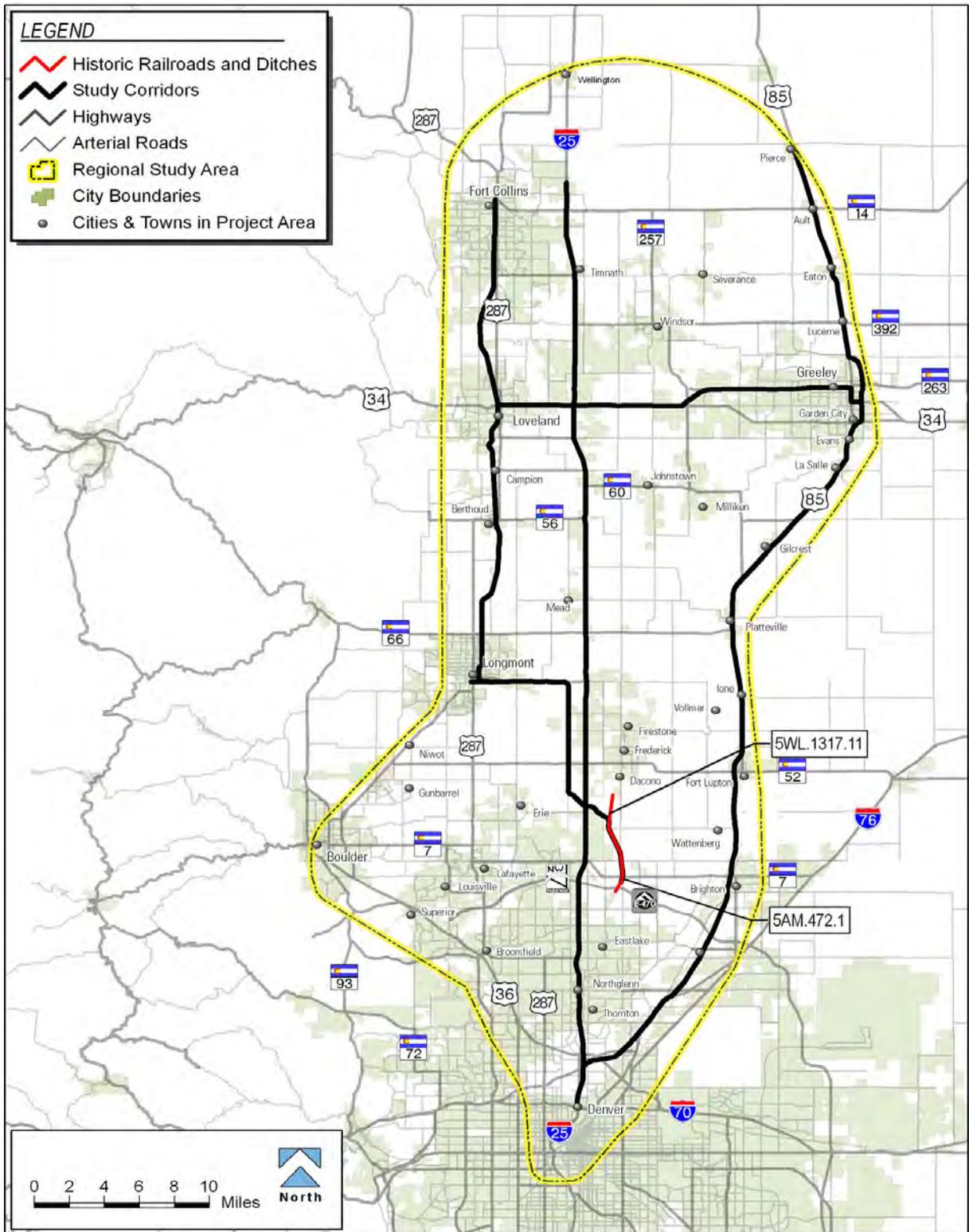
21 **Impacts to segment 5WL.1317.11—Package A:** The proposed new commuter rail line would  
22 join this existing historic rail line by approaching from the northwest, then crossing over to the east  
23 side of the historic railroad, which it would closely parallel and follow southward. The commuter  
24 rail would utilize a double-track configuration, using the existing track alignment and adding a  
25 parallel track alignment following the historic UPRR-Dent Branch from the wye at St. Vrain  
26 junction southward. Where the new commuter rail line crosses the Dent Branch, there would be  
27 direct impacts to as many as 200 feet of track by the replacement of existing “through rail” with  
28 switching tracks and associated apparatus (see **Figure 3.15-71**). Although one of the new  
29 commuter rail tracks would run along the historic alignment, the existing historic bed, ballast and  
30 grade along the entire affected extent of the historic railway would be preserved. Deteriorated ties  
31 and abandoned rail would be replaced as required to meet safety and design standards.

32 **Impacts to segment 5AM.472.1—Package A:** The new double-track commuter rail would lay  
33 new track on the existing bed, ballast, and grade of the UPRR-Dent Branch and a new set of  
34 tracks parallel to the original alignment as described in segment 5WL.1317.11. The historic  
35 railroad bed, ballast, and grade would remain intact. The installation of new sets of tracks would  
36 be compatible with the historic use of the railroad line, but would not substantially diminish or alter  
37 the function, alignment, character, or other attributes that render the railroad NRHP-eligible.

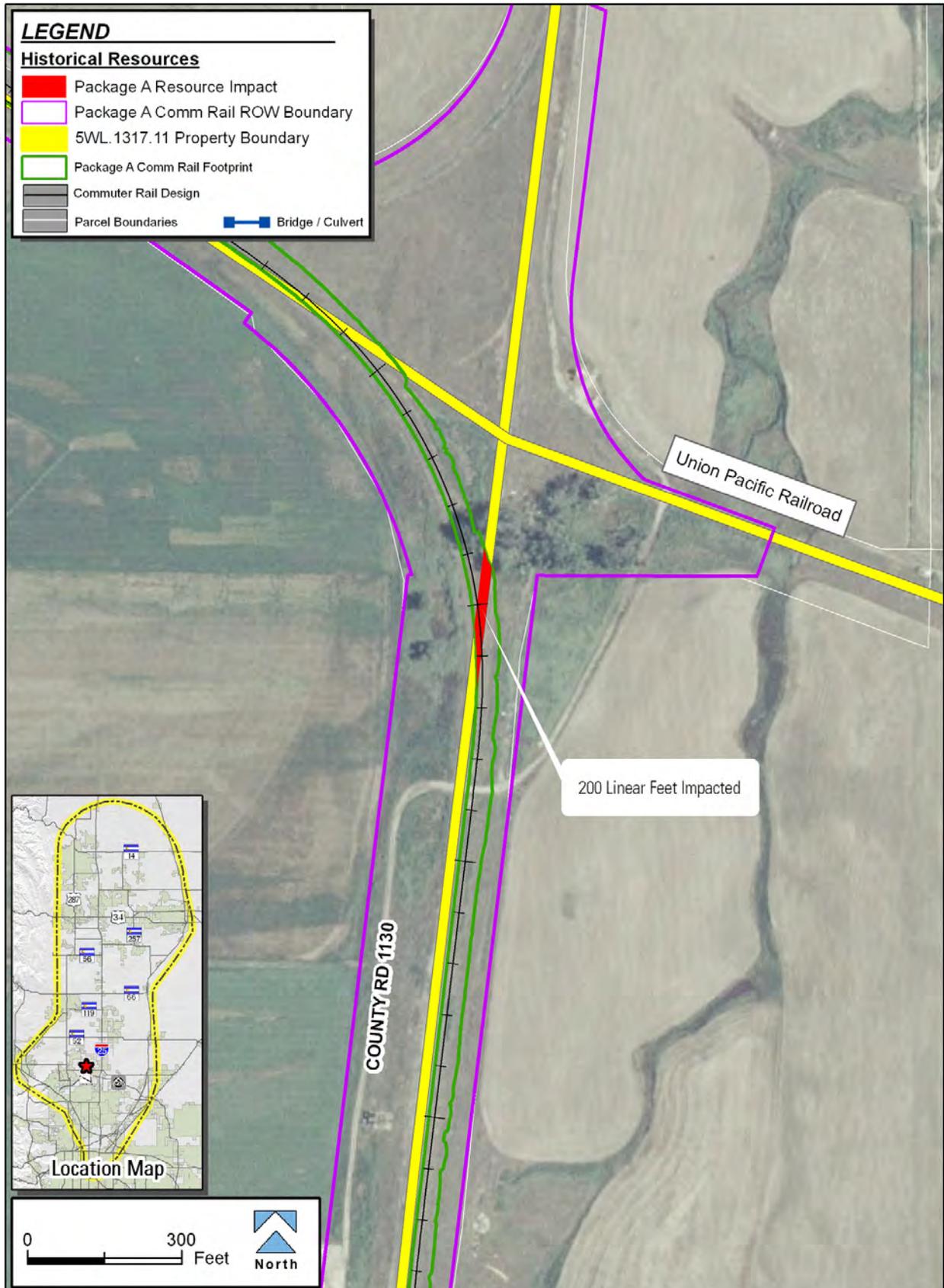
38 **Summary Effect Determination:**

39 **Package A:** A 200 foot section of existing rails would be replaced with modern switching track.  
40 A continuous 4.89 miles or approximately 12 percent of the entire linear resource would be  
41 reoccupied with new track on the existing bed, ballast and grade, and an additional new track,  
42 15 feet away and parallel to the existing historic alignment. New commuter rail tracks along the  
43 transportation corridor would introduce new, but compatible rail use and infrastructural  
44 elements to the historic setting. The proposed transportation improvements associated with  
45 Package A would not substantially diminish or alter characteristics that render the property  
46 eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that the Package A  
47 commuter rail improvements would result in *no adverse effect* to the historic UPRR-Dent  
48 Branch (5WL.1317 and 5AM.472).

1 Figure 3.15-70 5WL.1317, 5AM.472 (UPRR-Dent Branch) – Segments Intersecting  
2 Project APE



1 Figure 3.15-71 5WL.1317.11 (UPRR-Dent Branch) – Commuter Rail



2

1 **Package B:** No direct or indirect impacts would occur at any segment locality. FHWA, FTA and  
2 CDOT therefore have determined that the Package A commuter rail improvements would result  
3 in *no historic properties affected* with respect to the historic UPRR-Dent Branch (5WL.1317  
4 and 5AM.472).

5 **5WL.1969, 5BF.130 (Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver &**  
6 **Boulder Valley Branch)**

7 **Resource Description:** This linear historic resource is the abandoned Denver Pacific/Kansas  
8 Pacific/Union Pacific, Denver & Boulder Valley Branch (UPD&BVB) that ran a distance of 26  
9 miles from Boulder to Brighton. The rail line was originally built in 1870. Two segments of this  
10 rail line in Weld County enter the project APE, including 2,310 foot (0.44 mile) long segment  
11 5WL.1969.41, and 11,620 feet (2.2 mile) long segment 5WL.1969.1, both of which follow the  
12 original alignment (see **Figure 3.15-72**). Both segments are in a deteriorated state. One 2,083  
13 feet (0.39 mile) long segment of the same rail line in Broomfield County is designated  
14 5BF.130.1, and includes a contributing wooden trestle bridge carrying the rails over Little Dry  
15 Creek.

16 Segment 5WL.1969.1 runs east-west 2,000 feet north of CR 8. This segment is a 2.2 mile long  
17 part of the abandoned UPD&BVB between Boulder and Brighton. Construction started in  
18 1870. Rails and ties have been removed near I-25 and parts have been paved over by county  
19 roads. This abandoned portion of the railroad includes a wooden trestle bridge located east of  
20 WCR 7 and west of I-25. The railroad bridge crossing I-25 was removed soon after 1999.

21 **Eligibility Determination:** The OAHP has officially determined that the UPD&BVB is eligible  
22 for the NRHP under Criterion A because of its important role in the development of the  
23 agricultural economy of the Front Range of Colorado. Segments 5WL.1969.41 and 5BF. 130.1  
24 retain sufficient integrity of location and association to support the eligibility of the entire linear  
25 resource. Segment 1969.1 does not retain enough integrity to support the eligibility of the  
26 entire resource.

27  
28 **Effect Determination:**

29 In order to determine the effect to the entire linear resource, impacts to each of the segments  
30 passing through the project APE were assessed. These impact assessments are presented  
31 below, followed by a determination of effect to the entire Denver Pacific/Kansas  
32 Pacific/UPD&BVB railroad in Weld and Broomfield counties (5WL.1969 and 5BF.130).

33 **Impacts to segment 5WL.1969.41—Package A:** The proposed new commuter rail would  
34 utilize the existing track alignment and add a parallel track alignment following the historic  
35 UPD&BVB in this area before joining the Dent Branch (5WL.1317.11) wye and turning  
36 southward. Where the new commuter rail line crosses onto the Dent Branch, there would be  
37 direct impacts to as many as 260 feet of track by the replacement of existing “through rail” with  
38 switching tracks and associated apparatus (see **Figure 3.15-73**). The existing historic bed,  
39 ballast and grade along the entire affected extent of the historic railway would be preserved.  
40 Deteriorated ties and abandoned rail would be replaced as required to meet safety and design  
41 standards.

42 **Impacts to segment 5WL.1969.1—Package A:** The commuter rail would require a new  
43 bridge at the location of the wooden trestle bridge and a new 470 foot long bridge spanning I-  
44 25 . The original railroad bridge was demolished during a previous I-25 highway widening  
45 project. A new bridge crossing would not be expected to negatively affect the historic setting  
46 beyond its already diminished integrity at this location.

1  
2 The new double-track commuter rail would lay new track on the existing bed, ballast, and  
3 grade of the abandoned Boulder Valley Branch and a new set of tracks parallel to the original  
4 alignment as described in segment 5WL.1969.41 (see **Figure 3.15-74**).

5  
6 Additionally, the new double-track rail alignments would require a new supporting structure  
7 over an unnamed drainage at the historic wooden timber and log footer bridge (5WL.1969.1  
8 Feature 1). This 47 foot long by 17 foot wide historic bridge would be demolished to make  
9 way for a new railroad bridge measuring approximately 60 feet long and 70 feet wide.

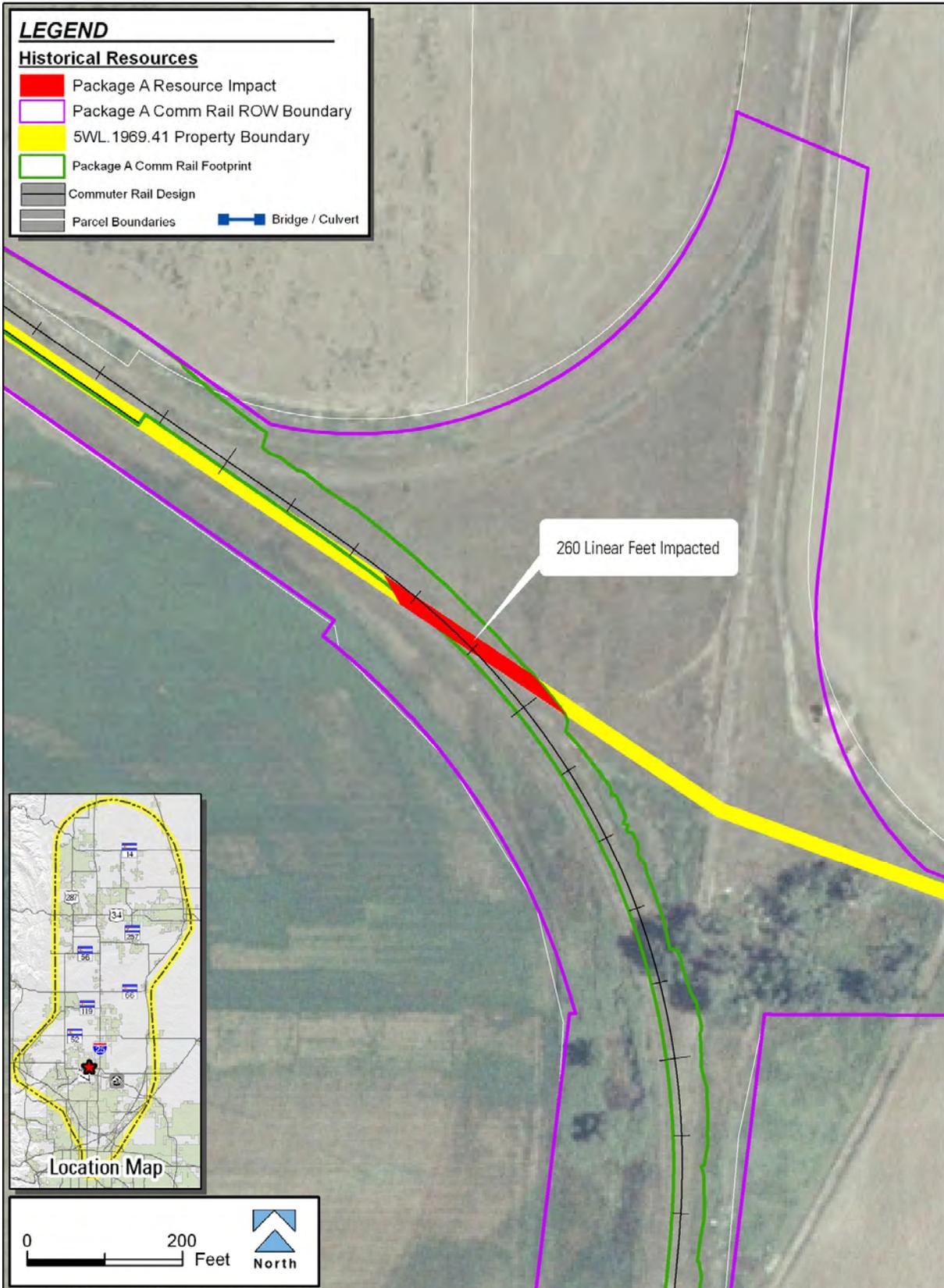
10  
11 **Impacts to segment 5WL.1969.1 - Package B:** This segment originally bridged over I-25, but  
12 the structure has been removed. Because Package B improvements occur at ground level  
13 within the span of the original bridge, there would be no direct or indirect impacts to the  
14 railroad segment by improvements associated with Package B.

15 **Impacts to segment 5BF.130.1—Package A:** The new double-track commuter rail would lay  
16 new track on the existing bed, ballast, and grade of the Boulder Valley Branch and a new set  
17 of tracks parallel to the original alignment as described in segment 5WL.1969.41 (see **Figure**  
18 **3.15-75**). This historic rail line would remain in its current, historic alignment. The new rail line  
19 would run along the north side of the historic railroad grade.

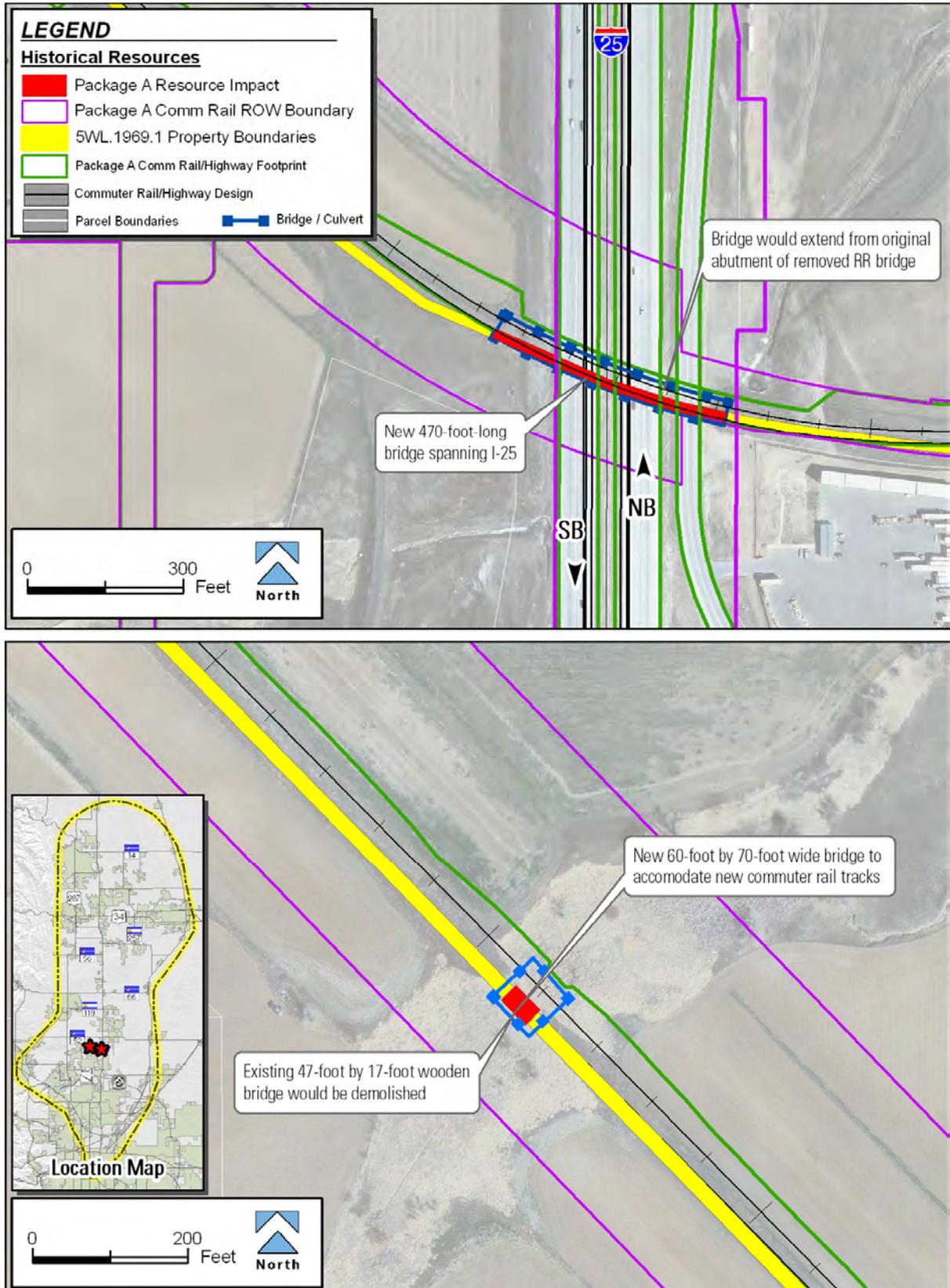
20 The installation of the double-track configuration for the commuter rail would also require a  
21 new supporting structure over Little Dry Creek. The existing 69 foot long by 27 foot wide,  
22 wooden trestle bridge (5BF.130.1 Feature 1) would be demolished and a new bridge  
23 measuring approximately 75 feet long and 70 feet wide would be constructed at that site.  
24 Although new rail would be placed upon existing bed, ballast and grade and a new track  
25 placed adjacent to the historic alignment, this is a compatible affect to the historic use and  
26 setting of the historic railroad line, and would be expected to preserve an otherwise  
27 deteriorating resource.



1 Figure 3.15-73 5WL.1969.41 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,  
2 Denver & Boulder Valley Branch) – Commuter Rail

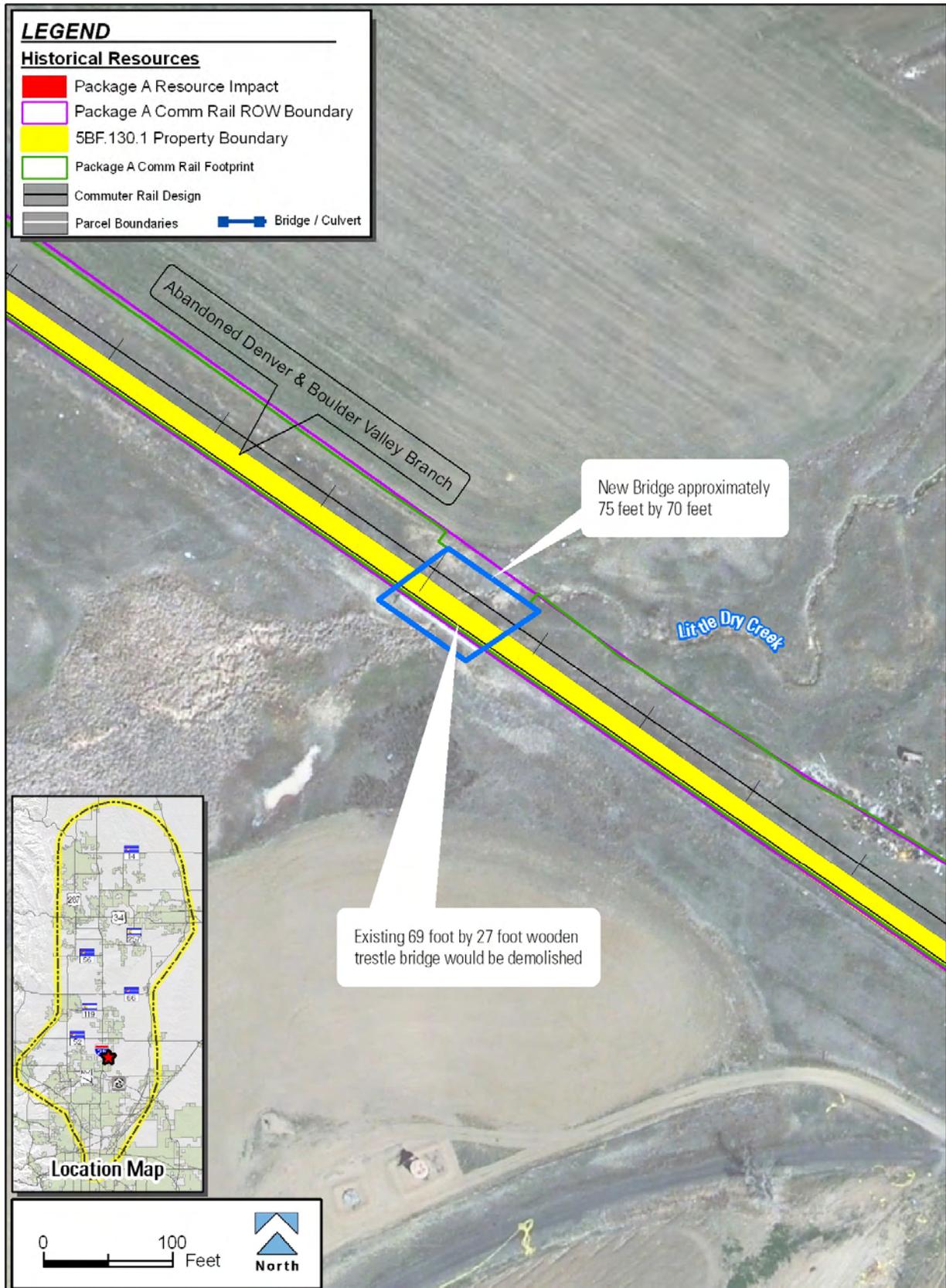


1 Figure 3.15-74 5WL.1969.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad,  
2 Denver & Boulder Valley Branch) – Commuter Rail



1  
2  
3

Figure 3.15-75 5BF.130.1 (Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch) – Commuter Rail



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 an *adverse effect* would  
10 result to the historic Denver Pacific/Kansas Pacific/UPD&BVB railroad line (5WL.1969 and  
11 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 **COMMUTER RAIL STATIONS**

17 **5LR.488 (Colorado & Southern Railroad Depot, Loveland)**

18 **Resource Description:** The Colorado & Southern (C&S) Railroad Depot is located at 409  
19 Railroad Avenue in Loveland. This depot was designed by architect Charles B. Martin in the  
20 Romanesque Revival style, and was built in 1902 in response to transportation needs and  
21 created the sugar beet processing plant that opened in Loveland the previous year.

22 **Eligibility Determination:** The C&S depot building was placed on the NRHP in 1982. It  
23 qualified for the NRHP under Criterion A because of its association with regional railroad  
24 development, and under Criterion C as an excellent and well-preserved example of masonry  
25 railroad depot architecture in Colorado.

26 **Effect Determination:** While this property lies within the project construction disturbance  
27 footprint, the historic station building would be retained and utilized as a commuter rail station.  
28 Therefore, no direct impacts would occur, and the building's prospects for long-term  
29 preservation would be enhanced. Possible indirect effects due to upgrades to achieve platform  
30 safety and meet current design standards would not substantially diminish or alter the function,  
31 alignment, character, or attributes that render the depot NRHP-eligible. These features are  
32 identified as preliminary design needs only and have not yet been architecturally incorporated  
33 into a station design.

34 There would be additional train traffic on the nearby railway tracks under Package A, creating  
35 minor noise and vibration increases over current levels, but no impacts. This situation would  
36 not be a new or heightened condition from the historic period when the depot was operational  
37 and serviced many more trains per day.

38 FHWA, FTA and CDOT have determined that the proposed commuter rail station would result  
39 in *no adverse effect* to this historic resource.

1 **5LR.530 (Bimson Blacksmith Shop—Little Thompson Valley Pioneer Museum)**

2 **Resource Description:** This building is located at 228 Mountain Avenue in downtown  
3 Berthoud. This small, one story stone commercial building was erected in 1893, and served  
4 as the shop of blacksmith A.G. Bimson prior to its use as a historical museum.

5 **Eligibility Determination:** The Bimson Blacksmith Shop is listed on the NRHP and is eligible  
6 under Criterion A.

7 **Effect Determination:** This historic property lies just outside the project construction  
8 disturbance footprint. There would be additional train traffic on the nearby railway tracks  
9 creating minor noise and vibration increases over current levels, but no impacts. This situation  
10 would not be a new or heightened condition from the historic period when train traffic was  
11 heavier. Local increased vehicular traffic to the adjacent commuter rail parking lot would not  
12 result in discernable indirect impact affecting the operation of the museum, or altering the  
13 function, setting, and other attributes that rendered the property NRHP-eligible.

14 No direct or incompatible indirect impacts would occur, and FHWA, FTA and CDOT have  
15 determined that Package A commuter rail improvements would result in *no adverse effect* to  
16 this historic resource.

17 **QUEUE JUMPS ALONG US 85**

18 **5WL.5296 (Flagstone Residence—Goetzel)**

19 **Resource Description:** The historic Goetzel Residence is located at 3611 Idaho Street in  
20 Evans. This house is constructed of rusticated flagstone and was built in 1943.

21 **Eligibility Determination:** The house is eligible for the NRHP under Criterion C, as an  
22 excellent example of a Bungalow-style house made of an unusual building material.

23 **Effect Determination:** The creation of a queue jump in the vicinity of this historic dwelling  
24 involves reconfiguration of traffic lanes and markings within the existing US 85 roadway  
25 footprint. The queue jump consists of a modification to an existing signal light to allow buses to  
26 proceed through an intersection ahead of regular traffic on a separately timed green light. A  
27 short right-turn/bus-only lane is striped onto the existing outside lane of the highway to  
28 facilitate this bus movement. No new noise or intrusive transportation elements not already  
29 present along US 85 would occur with these improvements, and therefore no indirect effects  
30 are expected.

31 These proposed changes would not result in any direct or indirect impacts. FHWA, FTA and  
32 CDOT therefore have determined that the proposed queue jump would result in *no historic*  
33 *properties affected* with respect to this historic resource.

1 **5WL.568 (Fort Vasquez)**

2 **Resource Description:** Fort Vasquez (5WL.568) is located in Platteville. Fort Vasquez  
3 Trading Post was built in 1835 and was the first permanent structure built along the South  
4 Platte River. This adobe outpost was near the Trapper's Trail and was built to be near the  
5 Cheyenne and Arapaho Indians, who provided buffalo robes to the trading post in trade for  
6 kettles, knives, guns, ammunition, blankets, beads and other items. After falling into a ruinous  
7 condition, Fort Vasquez was reconstructed in the 1930s by the Works Progress Administration  
8 (WPA), and the site is now operated as public museum.

9 **Eligibility Determination:** Fort Vasquez is listed on the NRHP. The site is significant under  
10 Criterion A for its role in the trapper and trader period (1800-1870) prior to the "Pikes Peak  
11 Gold Rush," when riverside trails between trading posts were the main conduits for  
12 communication and early settlement along the Colorado Front Range.

13 **Effect Determination:** The creation of a queue jump in the vicinity of Fort Vasquez involves  
14 reconfiguration of traffic lanes and markings within the existing US 85 roadway, and these  
15 proposed changes would not produce any direct impacts. The fort has been in close proximity  
16 to the modern highway for many decades. The queue jump consists of a modification to an  
17 existing signal light to allow buses to proceed through an intersection ahead of regular traffic  
18 on a separately timed green light. A short right-turn/bus-only lane is striped onto the existing  
19 outside lane of the highway to facilitate this bus movement. No noise or intrusive  
20 transportation elements not already present along US 85 would occur with these  
21 improvements, and therefore no indirect effects are expected. FHWA, FTA and CDOT  
22 therefore have determined that the proposed queue jump would result in *no historic properties*  
23 *affected* with respect to this historic resource.

24 **COMMUTER BUS STATIONS: GREELEY TO DENVER**

25 There would be no impacts to any historic properties for this component.

26 **COMMUTER BUS STATIONS: GREELEY TO DIA**

27 There would be no impacts to any historic properties for this component.

28 **MAINTENANCE FACILITIES**

29 There would be no impacts to historic properties on any of the maintenance facility sites or  
30 carpool lots for Package A.

1 **3.15.2.5 PACKAGE B TRANSIT COMPONENTS**

2 The transit components of Package B would potentially affect historic resources due to the  
3 placement of BRT station and park and ride locations. Specific consequences related to each  
4 transit component would be as follows.

5 **BRT: FORT COLLINS/GREELEY TO DENVER**

6 There would be no impacts to any historic properties for this component.

7 **BRT: FORT COLLINS/GREELEY TO DIA**

8 There would be no impacts to any historic properties for this component.

9 **BRT Stations**

10 There would be no impacts to any historic properties for this component.

11 **MAINTENANCE FACILITIES**

12 There would be no impacts to historic properties on any of the maintenance facility sites or  
13 carpool lots for Package B.

14 **Table 3.15-3** provides a summary of historic properties affected by component and also  
15 indicates how these impacts are treated from a Section 4(f) perspective. Detailed information  
16 about Section 4(f) is contained in **Chapter 5.0** of this Draft EIS.

17

18

1  
2

**Table 3.15-3 Summary of Historic Properties Affected by Component**

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b><i>Package A Highway Components</i></b>				<b><i>Package B Highway Components</i></b>		
SH 1 to SH 14 (A-H1)	5LR.8932.1 Larimer County Ditch	Yes	No adverse effect*	SH 1 to SH 14 (B-H1)	Yes	No adverse effect*
SH 1 to SH 14 (A-H1)	5LR.11396 Einarsen Farm	Yes	No adverse effect*	SH 1 to SH 14 (B-H1)	Yes	No adverse effect*
SH 1 to SH 14 (A-H1)	5LR.863.2 Larimer and Weld Canal	No	No adverse effect	SH 1 to SH 14 (B-H1)	No	No adverse effect
SH 1 to SH 14 (A-H1)	5LR.1731.2 Colorado & Southern Railroad, Black Hollow Branch	No	No adverse effect	SH 1 to SH 14 (B-H1)	No	No adverse effect
SH 14 to SH 60 (A-H2)	5LR.1327.6 Colorado & Southern Railroad	No	No adverse effect	SH 14 to SH 60 (B-H2)	No	No adverse effect
<b><i>Package A Transit Components</i></b>				<b><i>Package B Transit Components</i></b>		
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.1731.11 Colorado & Southern Railroad	No	No adverse effect			
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.1731.1 Colorado & Southern Railroad	No	No adverse effect			
Commuter Rail: Fort Collins to Longmont (A-T1)	5BL.400.3 Colorado & Southern Railroad	No	No adverse effect			

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b><i>Package A Highway Components</i></b>				<b><i>Package B Highway Components</i></b>		
SH 14 to SH 60 (A-H2)	5LR.11393 Rudolf Farm	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.11409.1 Cache la Poudre Reservoir Inlet	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR. 995.4 Lake Canal	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.2160.1 Boxelder Ditch	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.8930.1 Louden Ditch	Yes	Adverse effect	SH 14 to SH 60 (B-H2)	Yes	Adverse effect
SH 14 to SH 60 (A-H2)	5LR.1815.2 Union Pacific Railroad, Fort Collins Branch	No	No adverse effect	SH 14 to SH 60 (B-H2)	No	No adverse effect
SH 14 to SH 60 (A-H2)	5LR.503.2 Loveland and Greeley Canal	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b><i>Package A Highway Components (cont'd)</i></b>				<b><i>Package B Highway Components (cont'd)</i></b>		
SH 14 to SH 60 (A-H2)	5LR.8928.1 Farmers' Ditch	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.8928.2 Farmers' Ditch	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.11209 Schmer Farm	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR850.1 Great Western Railway	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
GP Highway Widening: SH 60 to E-470 (A3)	5WL.841.11 Great Western Railway	No	No adverse effect	TEL Highway Widening: SH 60 to E-470 (B-H3)	No	No adverse effect
SH 60 to E-470 (A-H3)	5WL.841.9 Great Western Railway	No	No adverse effect	SH 60 to E-470 (B-H3)	No	No adverse effect
SH 60 to E-470 (A-H3)	Handy/Home Supply Ditch Confluence	Yes	No adverse effect*	SH 60 to E-470 (B-H3)	Yes	No adverse effect*

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b><i>Package A Transit Components</i></b>				<b><i>Package B Transit Components</i></b>		
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.850.5 Great Western Railway	No	No adverse effect			
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5LBL.514.1 Great Western Railway	No	No adverse effect			
<b><i>Package A Highway Components</i></b>				<b><i>Package B Highway Components</i></b>		
SH 14 to SH 60 (A-H2)	5LR.11408 Zimmerman Grain Elevator	No direct impacts	No adverse effect	SH 14 to SH 60 (B-H2)	No direct impacts	No adverse effect
SH 14 to SH 60 (A-H2)	5LR.11382 Hatch Farm	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 14 to SH 60 (A-H2)	5LR.8927.1 Hillsboro Ditch	Yes	No adverse effect*	SH 14 to SH 60 (B-H2)	Yes	No adverse effect*
SH 60 to E-470 (A-H3)	5LR.11242 Mountain View Farm	Yes	No adverse effect*	SH 60 to E-470 (B-H3)	Yes	No adverse effect*
SH 60 to E-470 (A-H3)	5WL.5203 Bein Farm	Yes	No adverse effect*	SH 60 to E-470 (B-H3)	Yes	No adverse effect*

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b>Package A Highway Components (cont'd)</b>				<b>Package B Highway Components (cont'd)</b>		
SH 60 to E-470 (A-H3)	5WL.5198 Olson Farm	Yes	No adverse effect*	SH 60 to E-470 (B-H3)	Yes	No adverse effect*
GP Highway Widening: SH 60 to E-470 (A-H3)	5BF.76.2 Bull Canal/Standley Ditch	Yes	No adverse effect*	TEL Highway Widening: SH 60 to E-470 (B-H3)	Yes	No adverse effect*
SH 60 to E-470 (A-H3)	5AM.457.3 Bull Canal/Standley Ditch	Yes	No adverse effect*	TEL Highway Widening: SH 60 to E-470 (B-H3)	Yes	No adverse effect*
<b>Package A Transit Components</b>				<b>Package B Transit Components</b>		
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1966.8 Bull Canal/Standley Ditch	Yes	No adverse effect*			
<b>Package A Highway Components</b>				<b>Package B Highway Components</b>		
Structural Upgrades: E-470 to US 36 (A-H4)	5AM.2073 North Glenn First Filing	No	No adverse effect	E-470 to US 36 (B-H4)	No	No adverse effect
Structural Upgrades: E-470 to US 36 (A-H4)	5AM.2074 North Glenn Second Filing	No	No adverse effect	E-470 to US 36 (B-H4)	No	No adverse effect

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

PACKAGE A				PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus				Tolled <i>Express</i> Lanes + Bus Rapid Transit		
Component	Historic Property	Direct Impacts?	Effect	Component	Direct Impacts?	Effect
<b><i>Package A Transit Components</i></b>				<b><i>Package B Transit Components</i></b>		
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.11330 Public Service Company of Colorado – Fort Collins Substation	No	No adverse effect			
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.10819.2 Larimer County Canal No 2	No	No adverse effect			

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

Component	Historic Property	Direct Impacts?	Effect
<b>Package A Transit Components (cont'd)</b>			
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.1729.2 Big Thompson Ditch	Yes	No adverse effect*
Commuter Rail: Fort Collins to Longmont (A-T1)	5BL.10636 Boggs Residence	No	No adverse effect
Commuter Rail: Fort Collins to Longmont	5LR.1731.1 Colorado Central/Colorado & Southern/Burlington Northern & Santa Fe Railroad	No	No Adverse effect
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.850.5 Great Western Railway	No	No adverse effect
Commuter Rail: Fort Collins to Longmont (A-T1)	5LBL.400.3 Colorado Central/ Colorado & Southern/ Burlington Northern & Santa Fe Railroad	No	No adverse effect
Commuter Rail: Fort Collins to Longmont (A-T1)	5BL.3449.2 Supply Ditch	Yes	No adverse effect*
Commuter Rail: Fort Collins to Longmont (A-T1)	5BL.3113.67 Rough & Ready Ditch	Yes	No adverse effect*
Commuter Rail: Fort Collins to Longmont to FasTracks North Metro (A-T12)	5BL.4832.28 Oligarchy Ditch	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.4832.26 Oligarchy Ditch	No	No adverse effect

1 Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)

Component	Historic Property	Direct Impacts?	Effect
<b>Package A Transit Components (cont'd)</b>			
Commuter Rail: Fort Collins to Longmont (A-T1)	5LR.488 Colorado and Southern Railway Depot / Loveland Depot	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.1245 Old City Electric Building	Yes	Adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL1244 Colorado & Southern /BNSF Depot	Yes	Adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5LBL.514.1 Great Western Railway	No	No adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.513 Great Western Sugar Factory	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BL.7606 Novartis Seeds/Syngenta Seeds	No	No adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.712 Sandstone Ranch	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.5461.1 Boulder and Weld County Ditch	Yes	No adverse effect*

1 **Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)**

Component	Historic Property	Direct Impacts?	Effect
<b><i>Package A Transit Components (cont'd)</i></b>			
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.5263 Hingley Farm	Yes	Adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1974.3 Rural Ditch	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.2247.11 Community Ditch	No	No adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1970.7 Lower Boulder Ditch	No	No adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL1317.11 UPRR-Dent Branch	Yes	No adverse effect*
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5AM.472.1 Union Pacific Railroad, Dent Branch	No	No adverse effect

1 **Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)**

Component	Historic Property	Direct Impacts?	Effect
<b><i>Package A Transit Components</i></b>			
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL1969.41 Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch	Yes	Adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5WL.1969.1 Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch	Yes	Adverse effect
Commuter Rail: Longmont to FasTracks North Metro (A-T2)	5BF.130.1 Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver & Boulder Valley Branch	Yes	Adverse effect
Commuter Rail Stations (A-T1/A-T2)	5LR.488 Colorado & Southern Railroad Depot, Loveland	No	No adverse effect
(A-T1/A-T2)	5LR.530 Bimson Blacksmith Shop	No	No adverse effect
Queue Jumps Along US 85	5WL.5296 Flagstone Residence – Goetzl	No	No historic properties affected
Queue Jumps Along US 85	5WL.568 Fort Vasquez	No	No historic properties affected

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1 **Table 3.15-3 Summary of Historic Properties Affected by Component (cont'd)**

PACKAGE A			PACKAGE B		
General Purpose Lanes + Commuter Rail and Bus			Tolled Express Lanes + Bus Rapid Transit		
Component	Direct Impact	Effect	Component	Direct Impact	Effect
Summary Package A	37 properties directly impacted	5 adverse effects to properties, 45 no adverse effects to properties	Summary Package B	20 properties directly impacted	1 adverse effect, 26 no adverse effects to properties

\*Properties would be considered for de minimis Section 4(f) status

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### 3.15.3 Mitigation Measures

During the development of all build packages, modifications were employed to avoid and minimize effects to historic properties and resources whenever possible. These modifications included shifting the roadway alignment to avoid direct contact with historic boundaries and resources, consolidating roadway templates to minimize space needed for roadway improvements, and bridging of linear features.

Possible mitigation measures for historic property impacts are summarized in **Table 3.15-4**. Mitigation measures for adverse effects will be part of an MOA among CDOT, FHWA, FTA, and SHPO and will be specific to those resources for which the project results in an adverse effect. Actual mitigation measures will be refined after selection of the preferred package, consultation with SHPO, and preparation of the Final EIS.

#### 3.15.3.1 NO-ACTION ALTERNATIVE

There are no adverse effects to historic properties, therefore no mitigation is needed.

#### 3.15.3.2 PACKAGE A

During the design phase of this project, designs were altered to avoid historic structures where possible. The commuter rail alignment was moved to avoid the historic Dickens Farm on SH 119 as an example. There were, however, three historic buildings that will be acquired and demolished or relocated to a different site to provide space necessary to construct improvements for Package A. Adverse impacts will occur for two historic buildings in Longmont—the Old City Electric Building, 5BL.1245 ,the Colorado & Southern / BNSF Depot, 5BL.1244, and for one historic building in Erie, the Hingley farmhouse, 5WL.5263, on WCR 7. All three of these buildings will be removed for development of Package A. Detailed recording, in accordance with the Colorado Historical Society's Standards for Level II Documentation, is recommended pending SHPO concurrence.

An adverse effect will result from placing 316 feet of the Loudon Ditch in new and extended culverts. Detailed recording, in accordance with the Colorado Historical Society's Standards for Level II Documentation, is recommended pending SHPO concurrence.

An adverse effect to the Denver Pacific/Kansas Pacific/Union Pacific Railroad, Denver and Boulder Valley Branch (5WL.1969) will result from the demolition of two wooden trestle bridges. Detailed recording, in accordance with the Colorado Historical Society's Standards for Level II Documentation, is recommended pending SHPO concurrence.

#### 3.15.3.3 PACKAGE B

An adverse effect will result from placing 357 feet of the Loudon Ditch in new and extended culverts. Detailed recording, in accordance with the Colorado Historical Society's Standards for Level II Documentation, is recommended pending SHPO concurrence.

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> <li>▪ Relocation of the structure if possible.</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>▪ Avoidance and minimization will be addressed first.</li> <li>▪ Data recovery (excavation and analysis) will be undertaken.</li> <li>▪ Construction monitoring will be undertaken as necessary in areas with archaeological resources.</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>

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### 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 will 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  
3 2004, a CDOT representative placed a series of telephone calls to the remaining non-  
4 responsive tribes, and a second invitation letter was sent out to several tribes upon their  
5 request, in an effort to answer questions about the project and facilitate additional tribal  
6 participation. Five tribes responded positively to this follow up contact (Cheyenne and  
7 Arapaho Tribes of Oklahoma, Comanche Tribe of Oklahoma, Northern Arapaho Tribe,  
8 Northern Cheyenne Tribe, and Southern Ute Indian Tribe), for a total of seven consulting  
9 tribes. Documentation related to the consultation process is located in **Appendix B**.

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.  
13 In response to this concern, FHWA, FTA, and CDOT will specify clear procedures to be  
14 followed should archaeological resources and/or human remains be unexpectedly  
15 encountered during construction, to include notification of the consulting tribes. Additionally,  
16 FHWA, FTA, and CDOT committed to keeping the consulting tribes apprised of progress as  
17 the project developed, and to include them in the project planning and development  
18 process, at the tribes' discretion. As a result of these actions, FHWA and FTA have fulfilled  
19 their joint legal obligations for tribal consultation under federal law.