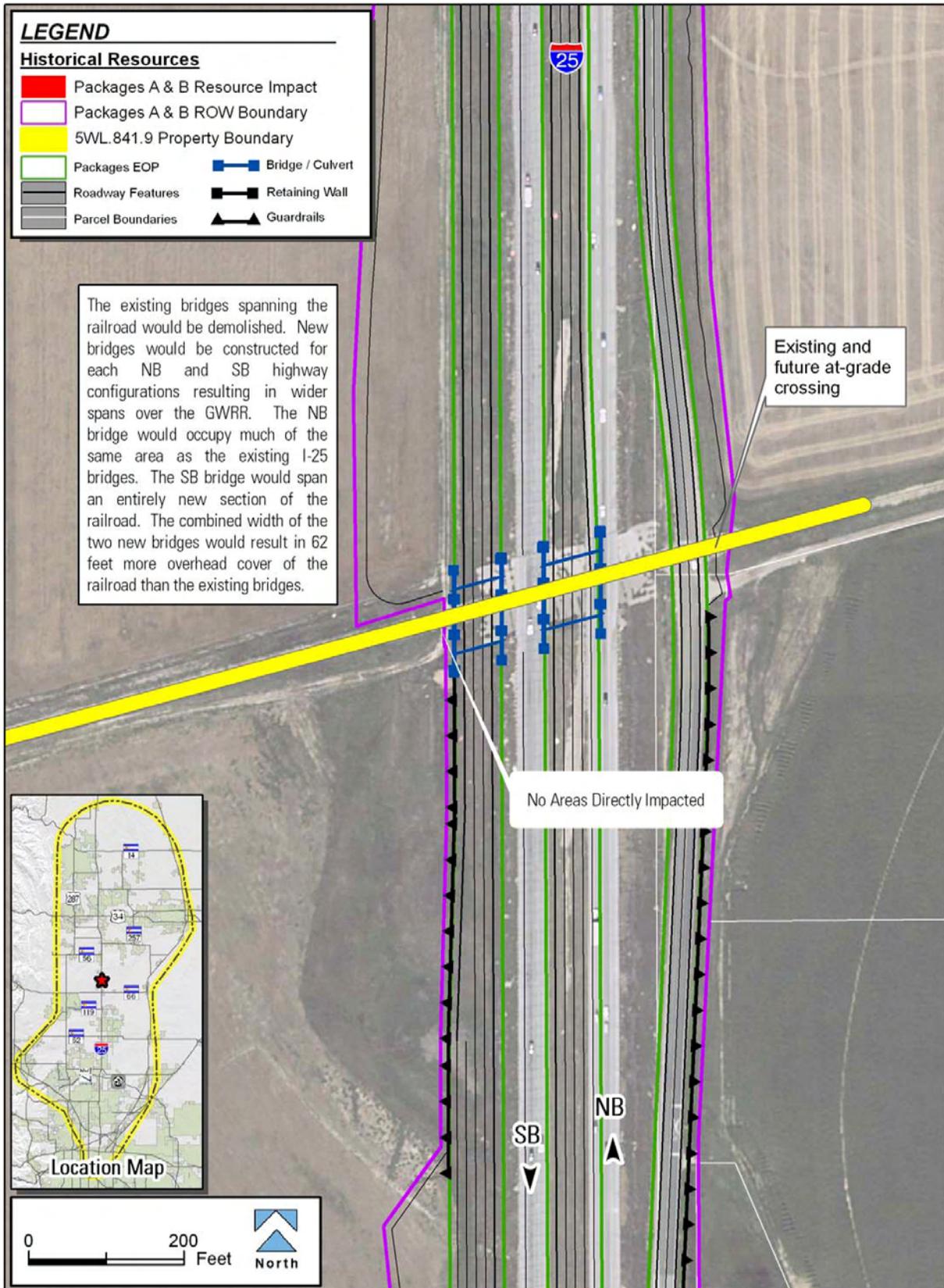


1 Figure 3.15-33 5WL.841.9 (Great Western Railway) – Packages A and B



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 setting.  
3 However, the new bridges would place an additional 140 foot long portion of the railway  
4 underneath the new bridge decks. This increased overhead cover due to wider bridge deck  
5 would be an indirect effect to the historic setting of the railway, however; this change is not  
6 expected to substantially diminish or alter the function, alignment, character, or other attributes  
7 that render the railway NRHP-eligible.

8 **Impacts to segment 5LR.850.5—Package A:** This rail line would remain in its current,  
9 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 set of tracks  
12 supporting the new commuter rail line would indirectly affect the historic setting of the historic  
13 railroad line, but would not to be expected to substantially harm the function, alignment,  
14 character, or other attributes that 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 2-through lanes to three general purpose lanes in each direction.  
18 The new northbound and southbound roadways would span the historic railway on new 82  
19 foot-long, 63 - to 75-foot wide, pre-stressed concrete girder-type bridge structures. The old  
20 (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 3.15-33**).

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 **Figure**  
45 **3.15-33**).

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  
6 bridge deck would be an indirect effect to the historic setting of the railway, however; this  
7 change is not expected to substantially diminish or alter the function, alignment, character, or  
8 other attributes that render the railway NRHP-eligible.

9 **Impacts to segment 5BL.514.1—Package A:** The commuter rail improvements in this area  
10 call for the addition of a dedicated commuter rail track parallel to this existing commercial  
11 railroad track. In all cases the existing rail line would remain in its current, historic alignment.  
12 No direct impacts to the historic railroad ballast, bed and track would occur. The installation of  
13 an adjacent set of tracks supporting the new commuter rail line would indirectly affect the  
14 historic setting of the historic railroad line, but would not expect to substantially harm the  
15 function, alignment, character, or attributes that render the railroad NRHP-eligible.

16 **Summary Effect Determination:**

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

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

1 **5LR.11408 (Zimmerman Grain Elevator)**

2 **Resource Description:** The Zimmerman Grain Elevator is located on the east side of I-25  
3 adjacent to the GWR (5LR.850), and was built in 1917. The bolted steel panel elevator  
4 structure is an intact example of a specialized agricultural building that was important to  
5 dryland farming in Larimer and Weld counties in the early 20<sup>th</sup> century. It is one of several  
6 similar steel panel grain elevators built along the railroads of the Front Range during the early  
7 20<sup>th</sup> century.

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

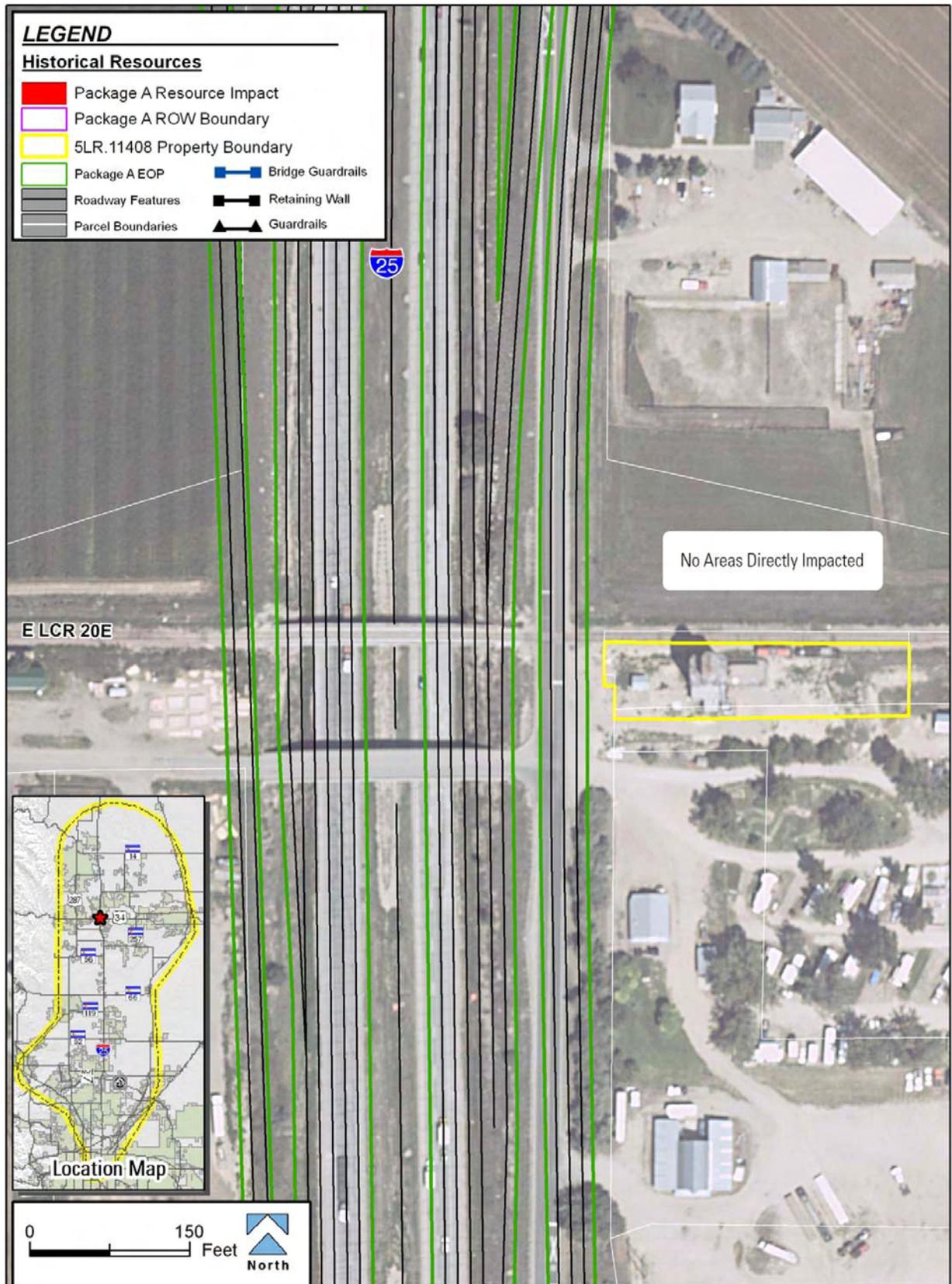
11 **Effect Determination—Package A:** I-25 is depressed in an underpass beneath the GWR to  
12 the west of the historic grain elevator. Under Package A, I-25 in this area would be  
13 substantially widened to accommodate three general purpose lanes plus one auxiliary lane in  
14 each direction. The existing east frontage road would be realigned and widened approximately  
15 21 feet to the east. A retaining wall and guardrail would be installed along the west edge of this  
16 frontage road, to protect the road and traffic from the steep slope of the highway cut. No right-  
17 of-way encroachment or other direct impacts to the parcel containing the historic grain elevator  
18 would occur under Package A, although the distance between the building and the east edge  
19 of pavement of the northbound I-25 roadway (in the underpass cut) would be reduced from  
20 approximately 223 feet to approximately 170 feet. Although I-25 would be wider and closer to  
21 the historic grain elevator, it sits depressed below the elevation of the grain elevator, and the  
22 historic agricultural setting has already been compromised to some degree by the original  
23 construction of I-25 adjacent to the property in the 1960s (see **Figure 3.15-34**).

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

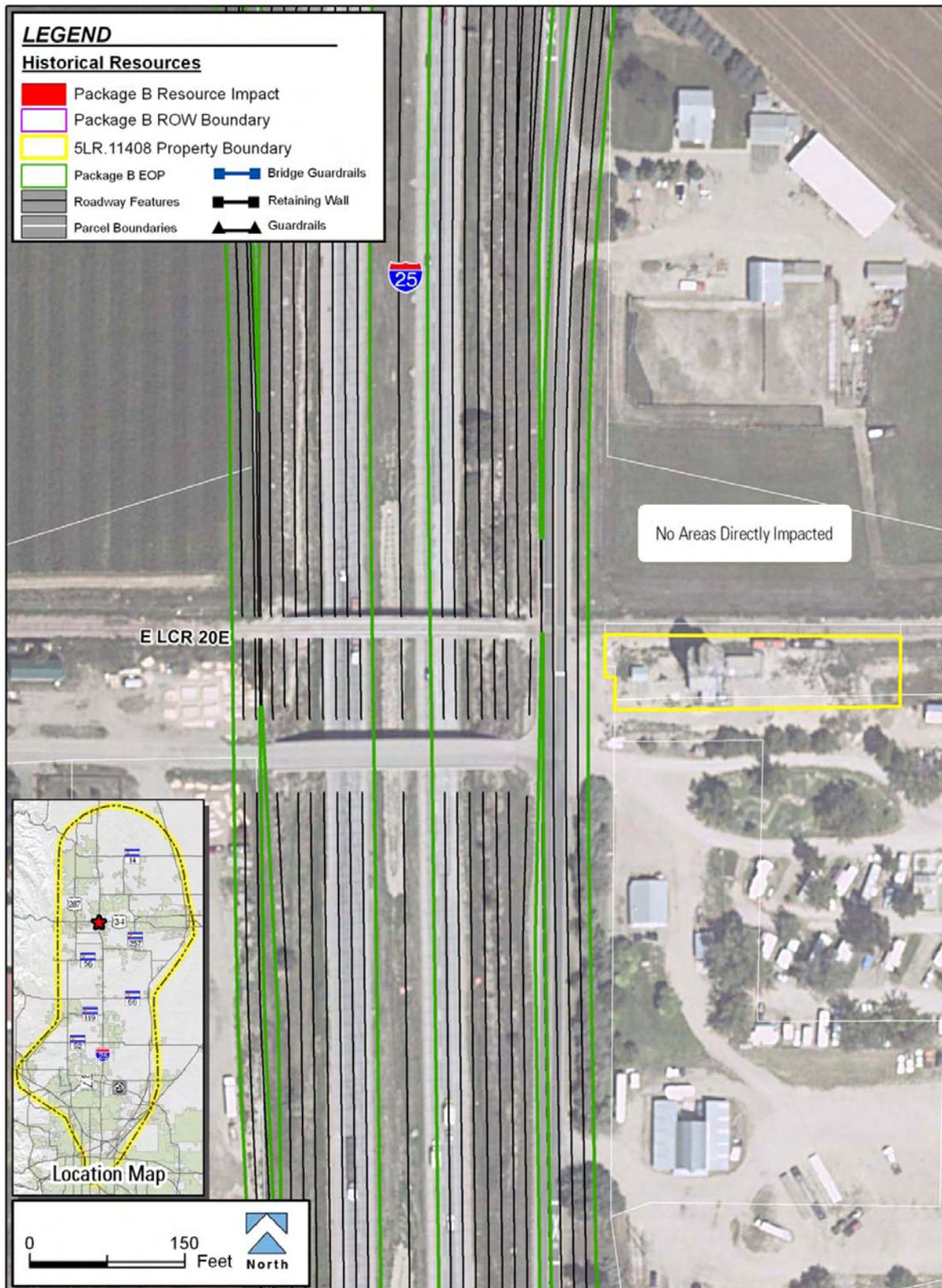
28 **Effect Determination—Package B:** Under Package B, I-25 in this vicinity would be  
29 substantially widened to accommodate two general purpose lanes plus two barrier-separated  
30 managed lanes in each direction. The existing east frontage road would be realigned and  
31 widened approximately 21 feet to the east. No right-of-way encroachment or other direct  
32 impact to the parcel containing the historic grain elevator would occur under Package B,  
33 although the distance between the building and the east edge of pavement of the northbound  
34 I-25 roadway would be reduced from approximately 223 feet to approximately 143 feet (see  
35 **Figure 3.15-35**). Although I-25 would be larger and closer to the historic grain elevator, the  
36 setting has already been compromised to some degree by the original construction of I-25  
37 adjacent to the property in the 1960s.

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

1 Figure 3.15-34 5LR.11408 (Zimmerman Grain Elevator) – Package A  
2



1 Figure 3.15-35 5LR.11408 (Zimmerman Grain Elevator) – Package B





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

2 **Resource Description:** The Hatch  
3 Farm is located at 640 Southeast  
4 Frontage Road in Larimer County. This  
5 property includes a historic balloon-  
6 framed barn, which is unique for this  
7 area. The barn was constructed circa  
8 1920. The barn is surrounded by  
9 farmland.



Hatch Barn

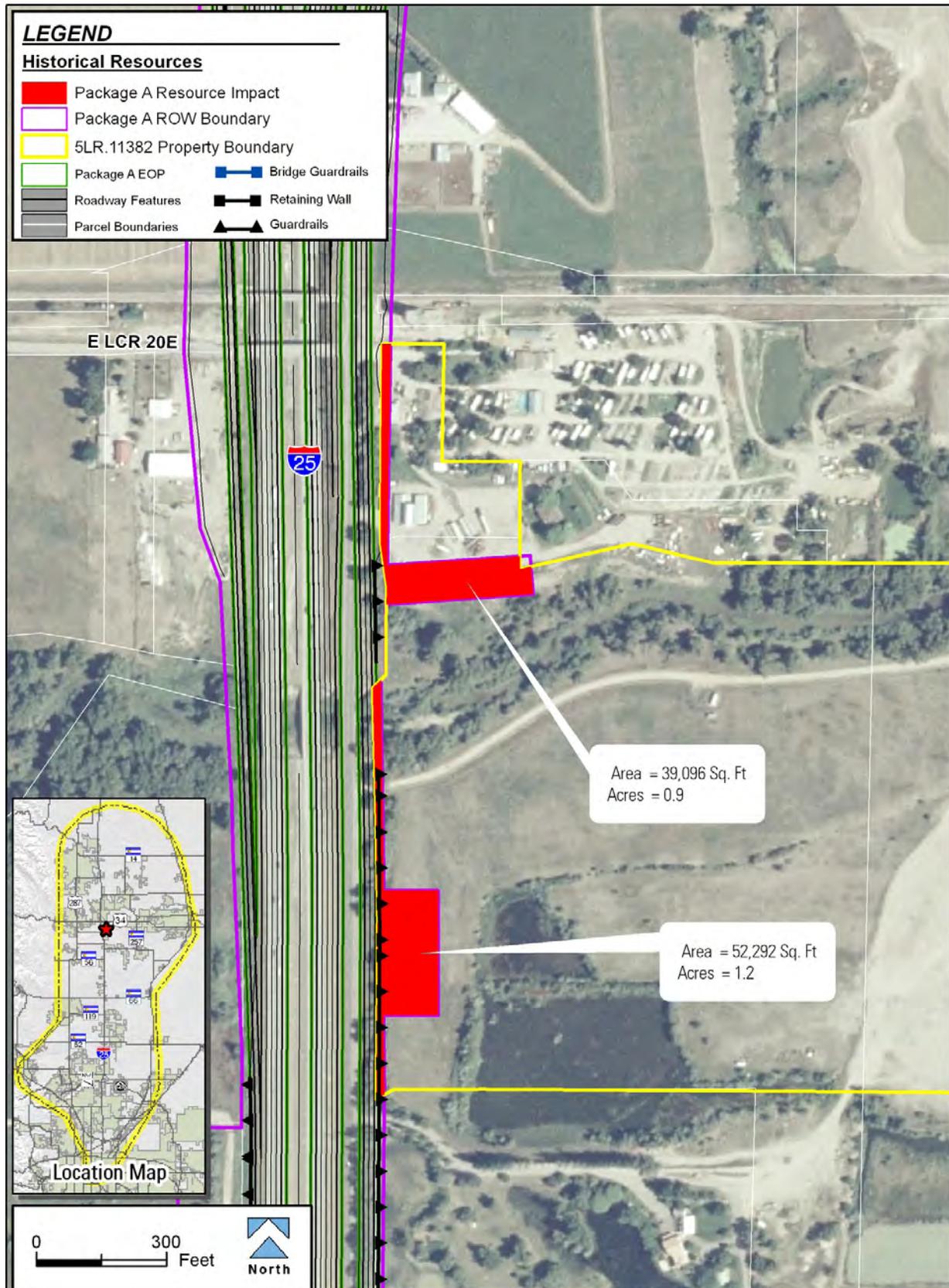
10 **Eligibility Determination:** The  
11 significance of the Hatch Farm is attributed  
12 to the architecture of the barn. The Hatch barn retains very good architectural integrity, is an  
13 excellent example of a specialized type and construction method of agricultural architecture, and  
14 has been determined to be eligible for the NRHP under Criterion C.

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

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

32 The proposed water quality ponds would be visually unobtrusive. The historic barn would not  
33 be directly or indirectly affected by development of these water quality ponds, and the  
34 transportation-related improvements associated with Package A would not diminish or alter  
35 architectural characteristics that render the property eligible for the NRHP. FHWA, FTA and  
36 CDOT therefore have determined that Package A would result in *no adverse effect* to the  
37 resource.

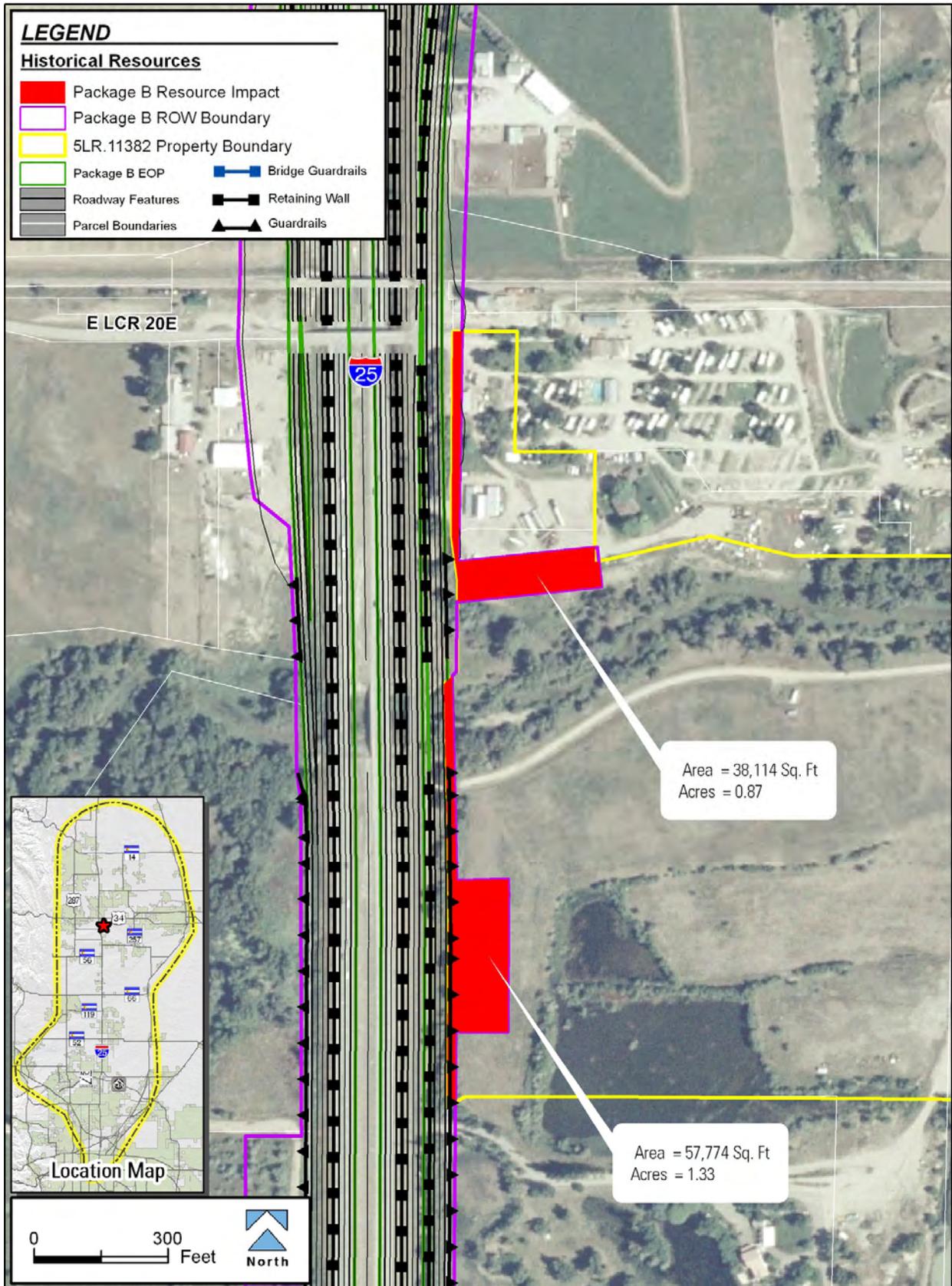
1 Figure 3.15-36 5LR.11382 (Hatch Farm) – Package A



2

- 1 **Effect Determination—Package B:** Under Package B, the existing I-25 template in this  
2 vicinity would be altered to include two general purpose lanes and two barrier-separated  
3 managed lanes in each direction. The existing east frontage road would be shifted to the east  
4 of its present alignment. In conjunction with these transportation improvements, the Package  
5 B design specifies the construction of two water quality ponds on the east side of I-25,  
6 extending into this historic site. The northernmost water quality pond would extend nearly 286  
7 feet into the historic property, and would occupy an area approximately 0.87 acre in size. The  
8 southernmost pond would extend approximately 91 feet into the historic property, and would  
9 occupy an area approximately 1.33 acres in size. Together, these ponds would impact  
10 approximately 2.2 acres of land within the site boundary, or approximately two percent of the  
11 area of the 106.78-acre historic farm property (see **Figure 3.15-37**).
- 12 The planned ROW allows for a 10 foot-wide, continuous maintenance easement along the  
13 retaining walls and southern basin, which can be accessed from the unpaved county road. The  
14 northern pond is accessible from both a 10 foot-wide easement along the toe slope and  
15 existing farm driveways.
- 16 The historic barn on the Hatch Farm property would not be directly or indirectly affected by  
17 development of these water quality ponds, and the transportation-related improvements  
18 associated with Package B would not diminish or alter architectural characteristics that render  
19 the property eligible for the NRHP. FHWA, FTA and CDOT have determined that Package B  
20 would result in *no adverse effect* to the resource.

1 Figure 3.15-37 5LR.11382 (Hatch Farm) – Package B  
2



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

2 **Resource Description:** This segment of the historic Hillsboro Ditch crosses I-25 just south of the I-  
3 25 and US 34 interchange. The irrigation ditch was constructed as one of the first cooperatively  
4 owned ditches in the area. The entire ditch (5LR.8927) is approximately 19.25 miles long. The  
5 documented segment in the project APE (5LR.8927.1) is 2,065 feet (0.4 mile) long. The ditch  
6 channel is approximately 20 feet wide. Sparse riparian growth covers both banks of the ditch in  
7 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 agriculture  
10 in Larimer County. Outside the I-25 right-of-way, this segment of the functioning ditch appears to  
11 maintain its historic alignment and its association with the rural landscape through which it runs. The  
12 segment (5LR.8927.1) within the project APE retains sufficient integrity of location, setting, feeling,  
13 and use to support the eligibility of the entire linear resource.

14 **Effect Determination – Package A:** Under Package A, I-25 would be expanded to 8-lanes,  
15 containing three general purpose lanes plus one auxiliary lane in each direction. The Hillsboro Ditch  
16 is presently conveyed beneath I-25 inside a modern CBC. The box culvert would be replaced with a  
17 new, 135-foot longer box culvert of the same cross section dimensions, 14 feet wide and 14 feet tall.  
18 That portion of the Hillsboro Ditch already inside the I-25 culvert has lost integrity. Widening of the I-  
19 25 southbound lanes, ramp and the associated slopes under Package A would require 90 feet of  
20 land west of the existing road slope edge. This requires enclosing 90 feet of open ditch on the east  
21 side of I-25 in a new culvert to allow for the expanded highway construction. Similar widening of the  
22 highway and fill slopes along the northbound lanes requires that 45 feet of open ditch be enclosed  
23 in a culvert on the east side of I-25. A total of approximately 135 feet of open ditch would be subject  
24 to direct impact from Package A transportation improvements (see **Figure 3.15-38**).

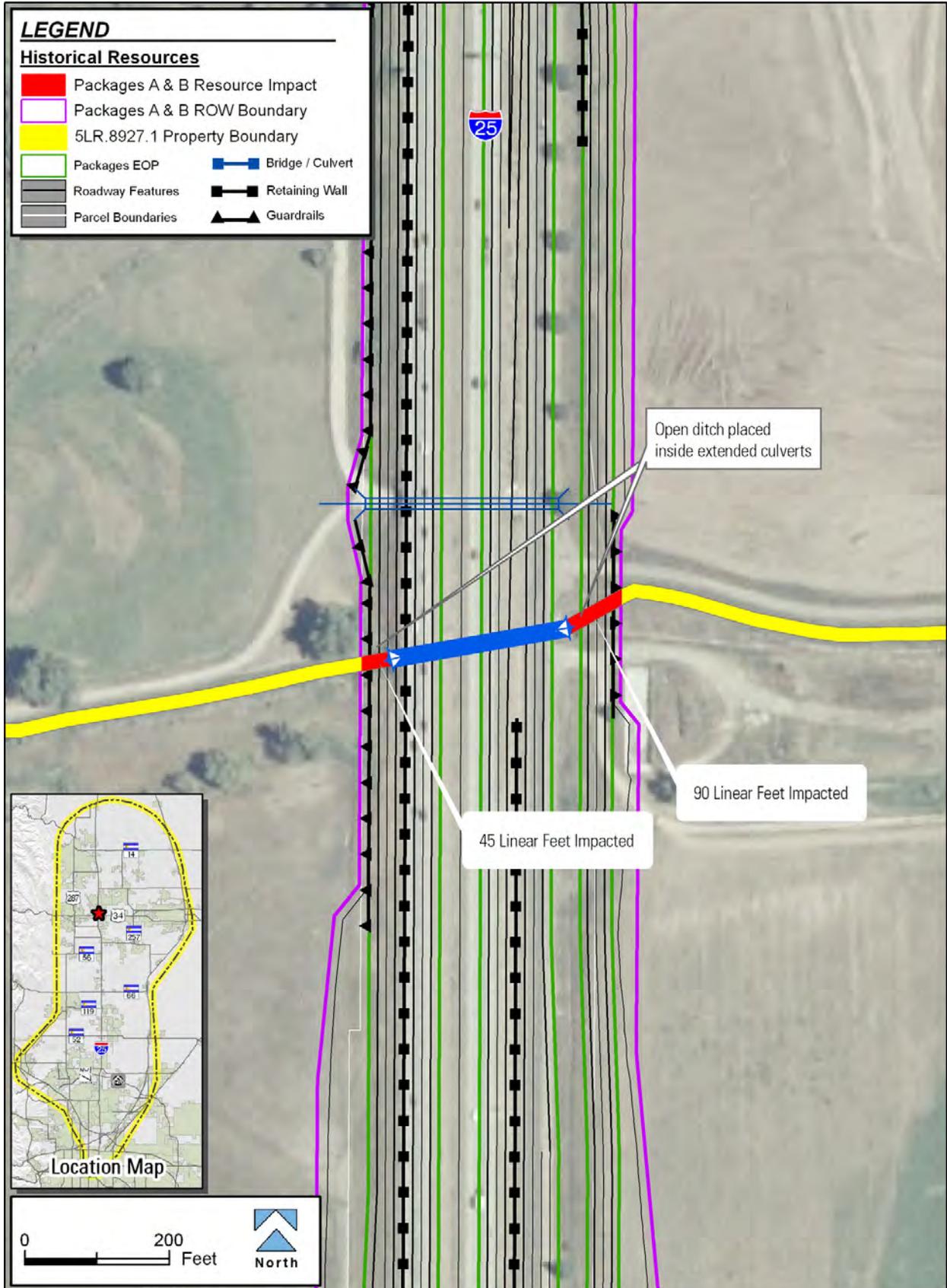
25 Construction of the concrete culverts would require temporary access to the historic property for  
26 equipment access, and would require a temporary easement. The ditch would likely be diverted  
27 during demolition of the old culvert and installation of the replacement culvert, but would remain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

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

36 **Effect Determination—Package B:** Package B specifies that the I-25 section would be improved  
37 to an eight-lane facility and would contain two general purpose lanes plus two barrier-separated  
38 managed lanes in each direction. Direct impacts to the Hillsboro Ditch associated from Package B  
39 are nearly identical in nature and extent to those associated with Package A (see **Figure 3.15-38**).

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

1 Figure 3.15-38 5LR.8927.1 (Hillsboro Ditch) – Packages A and B



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

2 **Resource Description:** The Mountain View Farm is located at 5531 SH 402, just west of the  
3 I-25 and SH 402 interchange. The farm was originally patented in 1895 and contains a  
4 farmhouse and associated farm buildings.

5 **Eligibility Determination:** This historic farm is significant for its association with early  
6 agriculture in Larimer County including sugar beet cultivation. The farmhouse and associated  
7 farm buildings retain good integrity, and are significant examples of agricultural architecture.  
8 For these reasons, the Mountain View Farm is eligible for the NRHP under Criteria A and C.

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

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

23 A total area of 4.76 acres of land would be converted from open farmland to paved roadway  
24 and fill slopes within the historic farm boundary. This area amounts to approximately 3.5  
25 percent of the 136.22 acre farm. No historic buildings would be directly impacted by these  
26 transportation improvements (see **Figure 3.15-39**). However, the presence of the existing I-25  
27 highway ramps and interchange already introduce modern elements into this agricultural  
28 setting. Under Package A, the fill slopes and ramps are moved closer to the eastern edge of  
29 the farm, and would be slightly taller than the existing slopes, ramps and overpass. Another  
30 change would be construction of a proposed new park and ride parking lot on the south side of  
31 SH 402 near the farm.

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

37 A temporary construction easement may be requested along the western edge of the property  
38 for to allow haul roads, construction access, and/or staging areas to facilitate roadway  
39 widening and slope building. No permanent impacts would be anticipated from this temporary  
40 construction activity on the farmland property, and no farm structures would be affected.  
41 Construction-related noise generated by construction equipment and trucks would be  
42 temporary in nature, but would not permanently affect the character of the farm setting. Thus,  
43 indirect effects caused by temporary construction activities are not expected to substantially  
44 diminish the function, character, or attributes that render the farm or farm buildings NRHP-  
45 eligible.

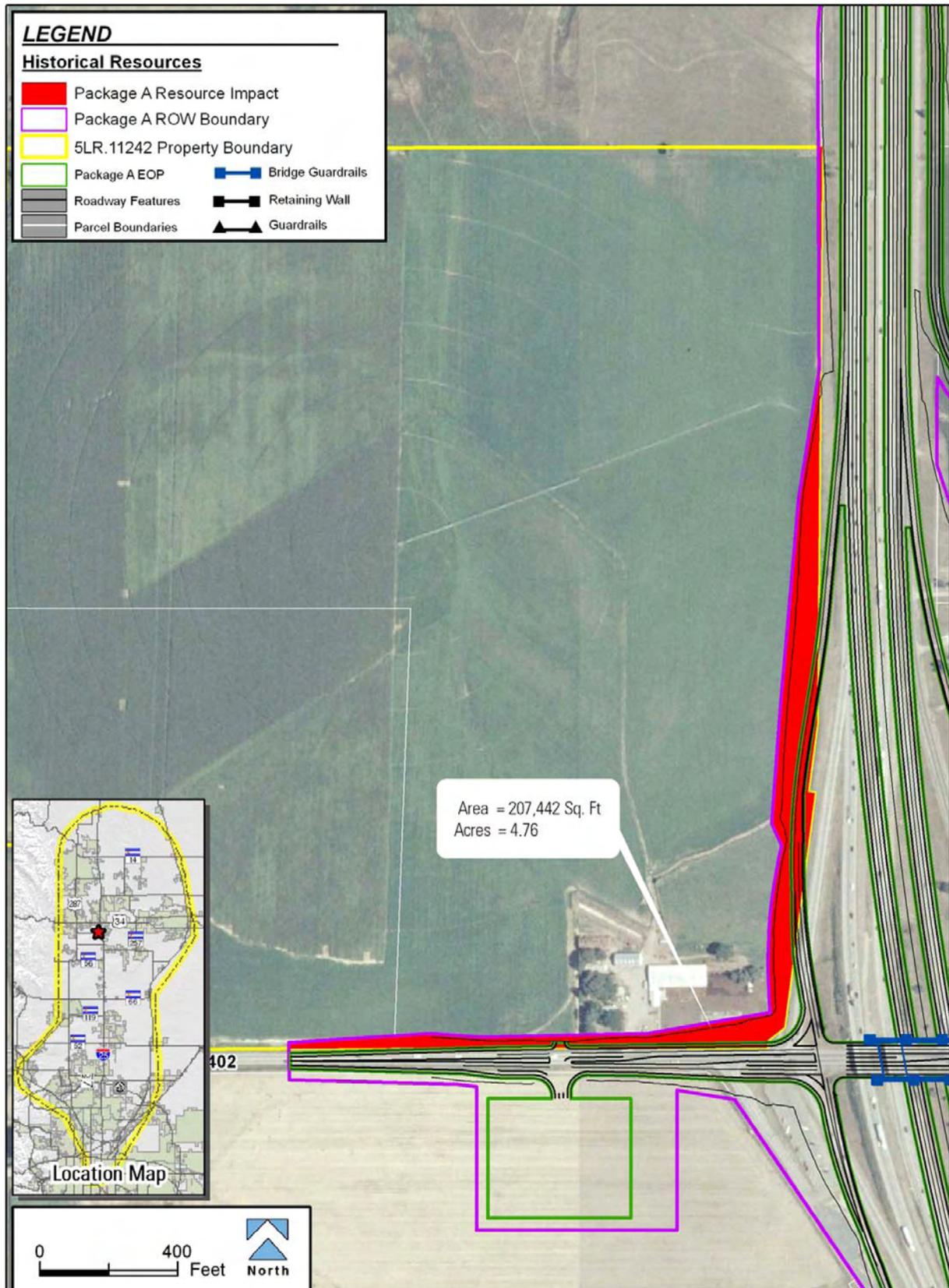
1 The proposed transportation improvements associated with Package A would not substantially  
2 diminish or alter the architectural or setting characteristics that render the property eligible for the  
3 NRHP. FHWA, FTA and CDOT have determined that Package A would result in *no adverse effect*  
4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

5 **Effect Determination—Package B:** Anticipated impacts to the property under Package B are  
6 similar in character and extent to those expected from Package A improvements. A total area of  
7 5.28 acres of land may be subject to direct impact. This area amounts to approximately four percent  
8 of the 136.22-acre farm. No historic buildings would be directly impacted by these transportation  
9 improvements.

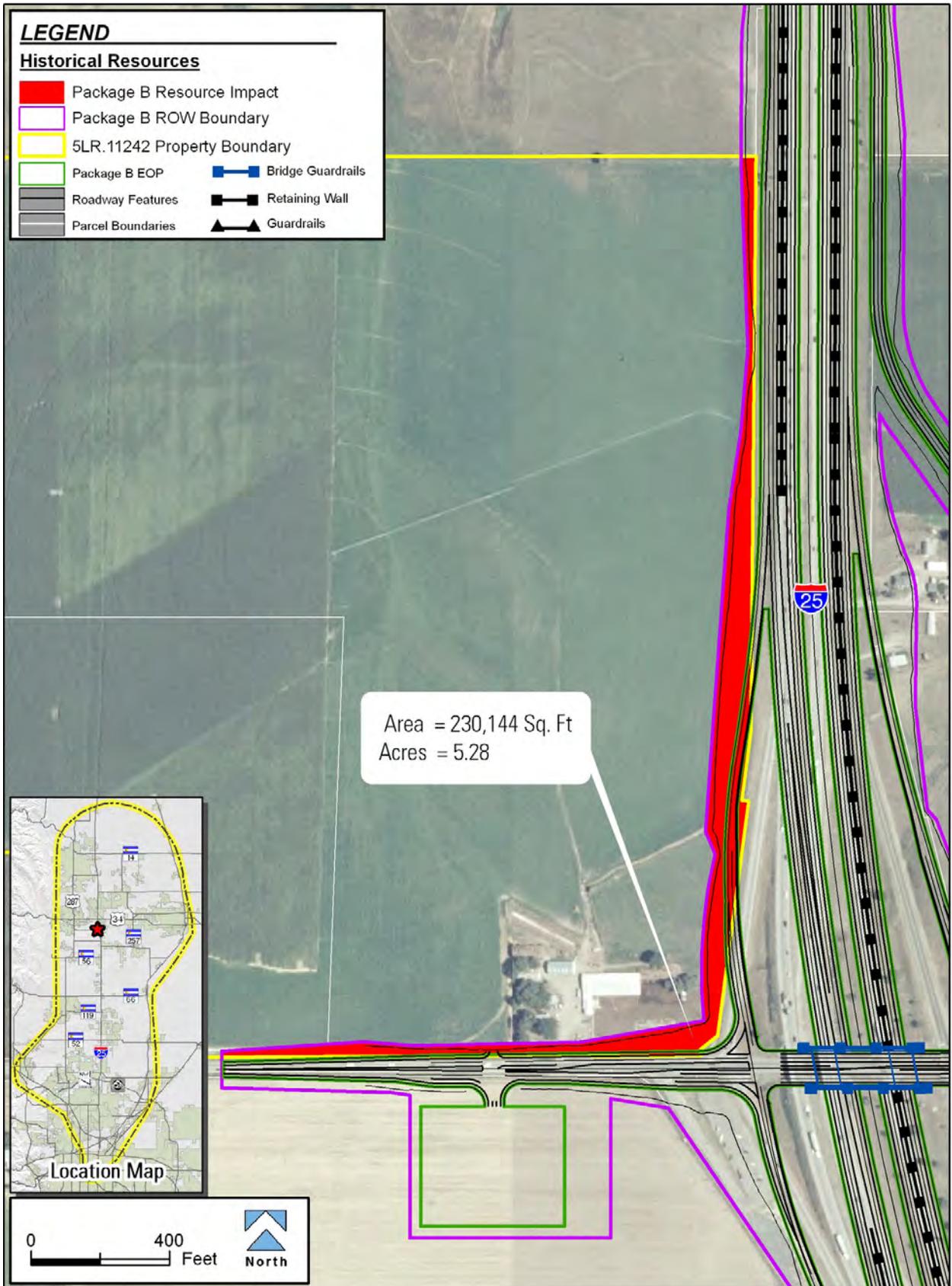
10 Indirect effects to the historic farm would be the same as with Package A (see **Figure 3.15-40**).

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

1 Figure 3.15-39 5LR.11242 (Mountain View Farm) – Package A



1 Figure 3.15-40 5LR.11242 (Mountain View Farm) – Package B  
2



1 **SH 60 TO E-470**

2 There are also five historic properties in this section of roadway.

3 **5WL.5204 (Bashor Farm)**

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

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

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

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

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

27 **5WL.5203 (Bein Farm)**

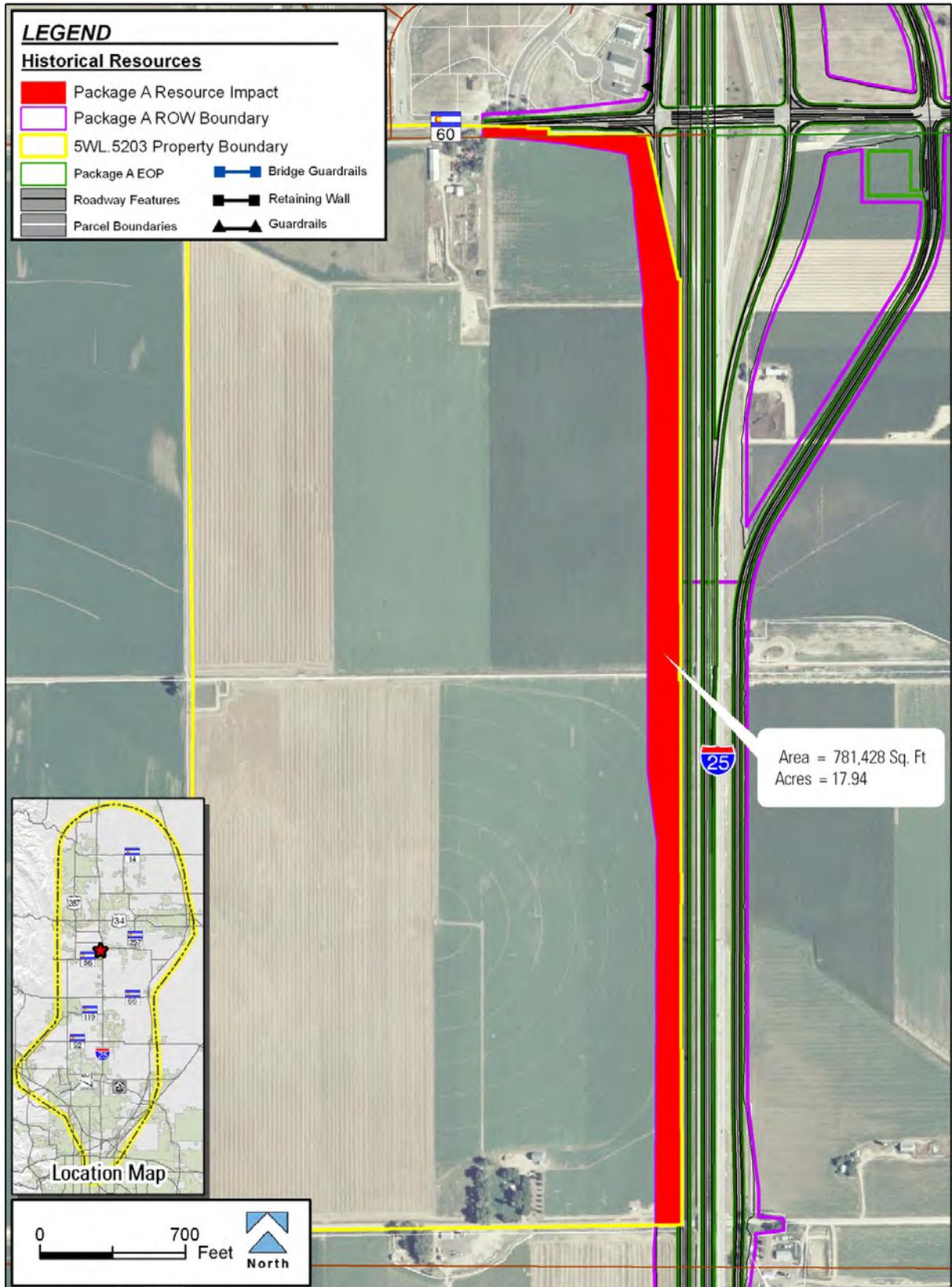
28 **Resource Description:** The Bein Farm is located at 3766 CR 48, near the I-25 and SH 60  
29 interchange. This property was owned by Fred Bein, a pioneer Berthoud stockman and farmer  
30 and one of the most widely-known residents of the Berthoud community until his death in  
31 1933. The property contains a variety of farm buildings constructed in the late 19<sup>th</sup> century.

32 **Eligibility Determination:** The Bein Farm is eligible for the NRHP under Criterion A because  
33 of its important association with early ranching and farming in the Berthoud area during the  
34 late 19<sup>th</sup> century.

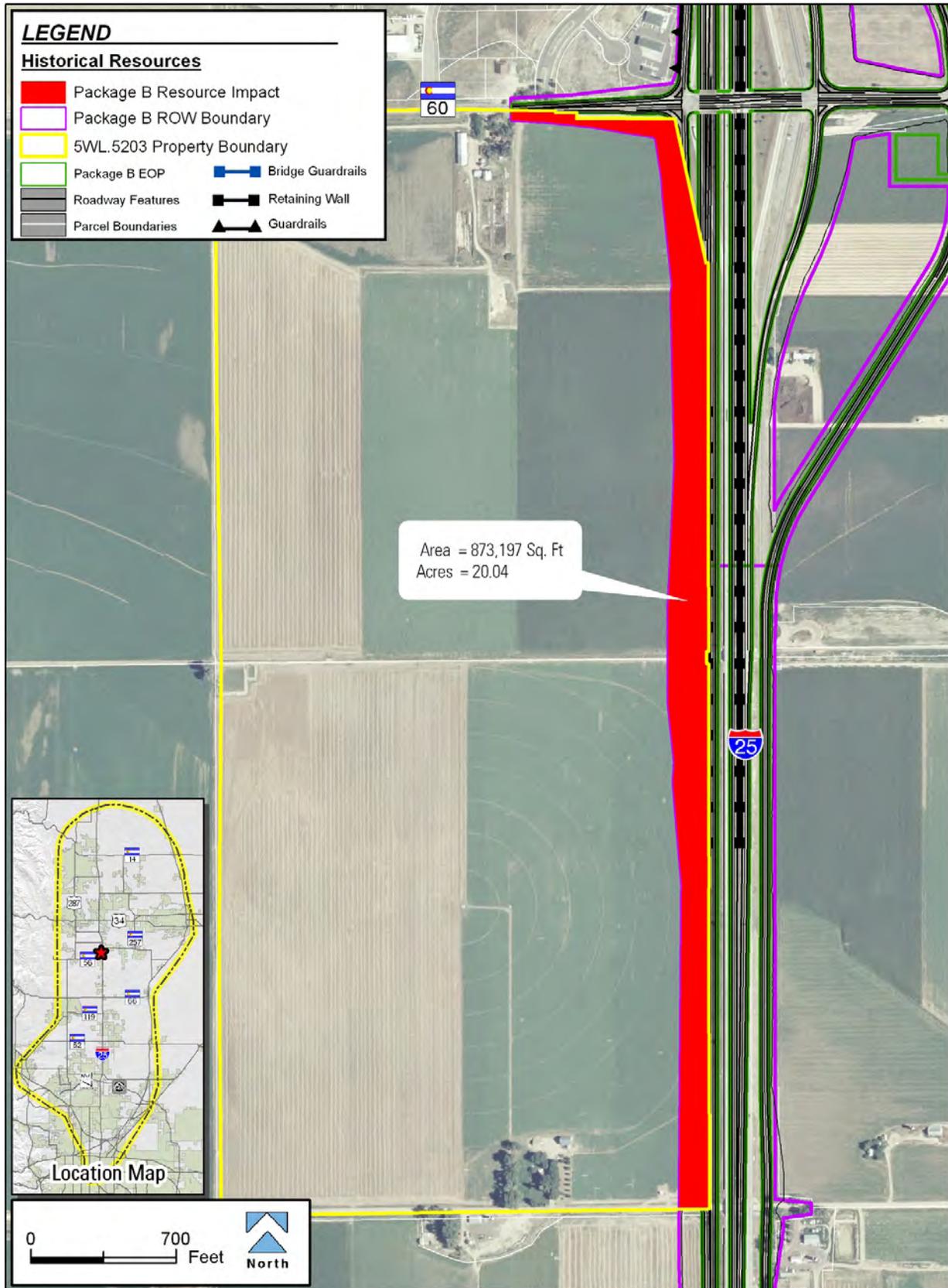
35 **Effect Determination – Package A:** This historic farm is located on the west side of the  
36 mainline of I-25, and on the southwest quadrant of the I-25/SH 60 interchange, both of which  
37 would be improved under Package A. Package A calls for the widening of I-25 in this area to  
38 accommodate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

- 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  
4 side 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 17.94 acres along the east and north edges of the property. This comprises approximately 6.2  
9 percent of the historic farm's total 288.45 acres. No farm buildings would be directly impacted  
10 (see **Figure 3.15-41**).
- 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. This would not diminish the function,  
14 alignment, attributes, or setting that contribute to the historic integrity or render the farm  
15 NRHP-eligible.
- 16 The direct and indirect impacts to the historic farm building complex along SH 60 that would  
17 occur under Package A would not substantially diminish or alter characteristics that render the  
18 site eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that Package A  
19 would result in *no adverse effect* to the resource.
- 20 **Effect Determination – Package B:** Package B calls for the widening of I-25 in this area to  
21 accommodate two general purpose lanes plus two barrier-separated managed lanes in each  
22 direction. The resulting direct impacts from widening of I-25 are similar to Package A, but  
23 require a modified southbound I-25 on-ramp to connect with the wider TEL section in Package  
24 B.
- 25 Impacts resulting from modifications to SH 60 are the same as Package A. Total direct  
26 impacts to the farm would be 20.04 acres along the east and north edges of the property,  
27 comprising approximately seven percent of the historic farm's total 288.45 acres. No farm  
28 buildings would be directly impacted (see **Figure 3.15-42**).
- 29 Indirect effects would be the same as with Package A.
- 30 The direct and indirect impacts to the historic farm building complex along SH 60 that would  
31 occur under Package B would not substantially diminish or alter characteristics that render the  
32 site eligible for the NRHP. FHWA, FTA and CDOT therefore have determined that Package B  
33 would result in *no adverse effect* to the resource.

1 Figure 3.15-41 5WL.5203 (Bein Farm) – Package A



1 Figure 3.15-42 5WL.5203 (Bein Farm) – Package B



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

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

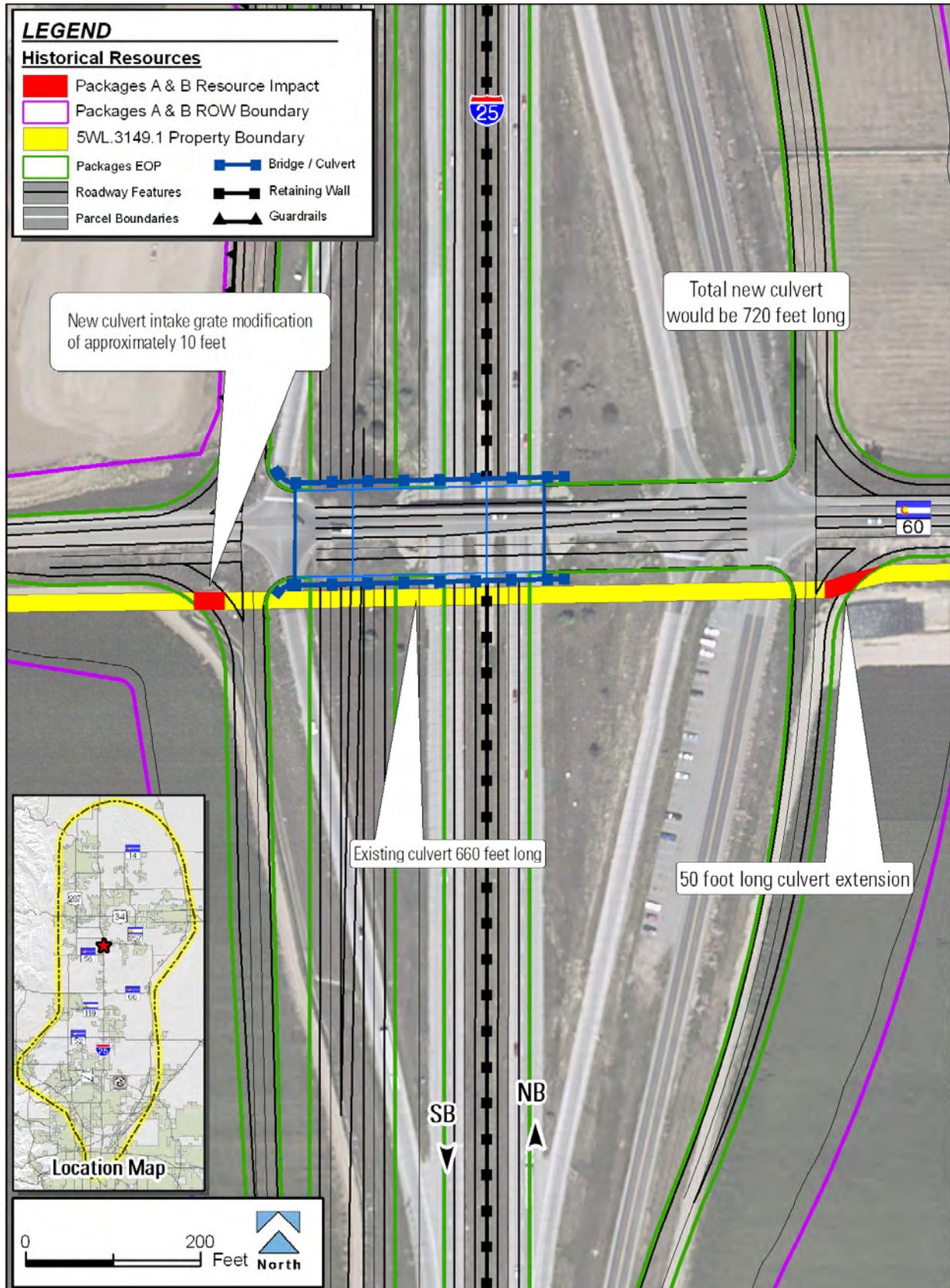
13 **Effects Determination—Package A:** Package A would require modification of the grated  
14 culvert intake located west of the current southbound on-ramp to accommodate a new  
15 frontage road and widened SH 60/CR 48 intersection turning radius (see **Figure 3.15-43**).  
16 The outfall of the 660 foot long culvert similarly would require a 50-foot extension and  
17 modification to allow the redesigned northbound ramp intersection with the widened SH 60/CR  
18 48.  
19

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

26 **Effects Determination—Package B:** Package B would require modification of the grated  
27 culvert intake located west of the current southbound on-ramp to accommodate a new  
28 frontage road and widened SH 60/CR 48 intersection turning radius (see **Figure 3.15-43**).  
29 The outfall of the 660 foot long culvert similarly would require a 50-foot extension and  
30 modification to allow the redesigned northbound ramp intersection with the widened SH 60/CR  
31 48.

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

1 Figure 3.15-43 5WL.3149.1 (Handy/Home Supply Ditch Confluence) –  
2 Package A and B



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 at Longmont and Loveland. Buda was a railroad “beet dump” or receiving and shipping station  
6 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 **5WL.2985 (Little Thompson River Bridge No. C-17-BN)**

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



Little Thompson River Bridge

27 **Eligibility Determination:** This  
28 historic bridge is an intact, early  
29 example of a common bridge type, the  
30 camelback pony truss, and was listed  
31 on the NRHP under Criterion C in  
32 2002.

33 **Effect Determination – Package A:** This historic bridge carries the existing I-25 east  
34 frontage road over the Little Thompson River. The east frontage road would remain two lanes,  
35 but would be widened to improve shoulders north and south of this bridge, up to the bridge  
36 approach slabs. The historic bridge structure would be retained and utilized, and no physical  
37 changes to the bridge abutments, decking or truss structure would occur. Because the setting  
38 and use of the bridge would remain unaffected by this minor widening, no indirect effects to  
39 the property are expected.

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

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

#### 4 **5WL.5198 (Olson Farm)**

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

12 **Eligibility Determination:** The Olson Farm is eligible for the NRHP under Criterion A  
13 because of its important association with early settlement and agriculture in Weld County.

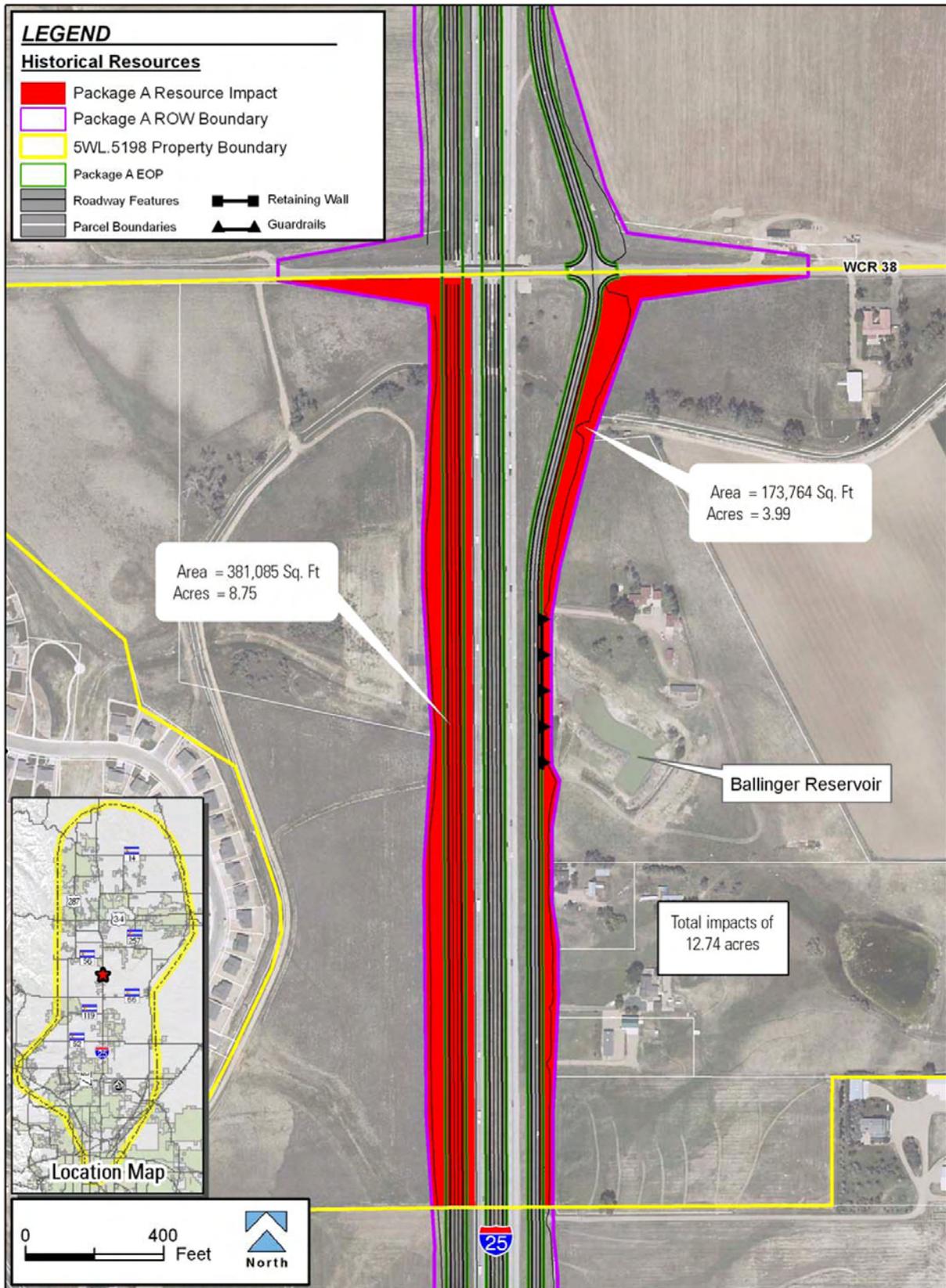
14 **Effect Determination – Package A:** Under Package A, I-25 would be re-aligned and  
15 reconfigured for three general purpose lanes in each direction. The existing I-25 east frontage  
16 road would stay in its present alignment, including its crossing of CR 38, but the area needed  
17 for the frontage road turning lanes and paved shoulders would be widened along the west  
18 edge of the eastern portion of the Olson Farm property. Direct impacts to this portion of the  
19 site would be confined to a strip of land 2,740 feet long, and approximately 110 feet wide at  
20 CR 38 at the north end of the property and 30 feet wide at the south end. This impact  
21 corresponds to the new toe of slope for the east frontage road which would bury the farmland  
22 currently located adjacent to the frontage road. A retaining wall would be installed along the  
23 edge of the frontage road to prevent direct impacts to the Ballinger Reservoir (a contributing  
24 feature of the NRHP-eligible farm) located mid-way along the east side of the frontage road. A  
25 total of 3.99 acres of the eastern portion of the site would be subject to direct impacts under  
26 Package A (see **Figure 3.15-44**).

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

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

33 Increased highway and frontage road traffic resulting from Package A improvements would  
34 generate noise levels one decibel more than the No-Action Alternative. This increase in noise  
35 is barely perceptible and would not affect the characteristics which have rendered the property  
36 NRHP-eligible. Since the 1960's when I-25 was constructed, modern transportation elements  
37 have bisected the historic farm. Modern residential subdivisions have recently been  
38 constructed adjacent to the western property boundary. The additional I-25 and frontage road  
39 widening, installation of a new retaining wall near Ballinger Reservoir, and modification of CR  
40 38 overpass would increase the amount of intrusive transportation elements within the  
41 property boundary leading to an indirect effect on the historic property, however; these  
42 transportation improvements would not substantially diminish the historic setting which renders  
43 this property NRHP-eligible.

1 Figure 3.15-44 5WL.5198 (Olson Farm) – Package A



2

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

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

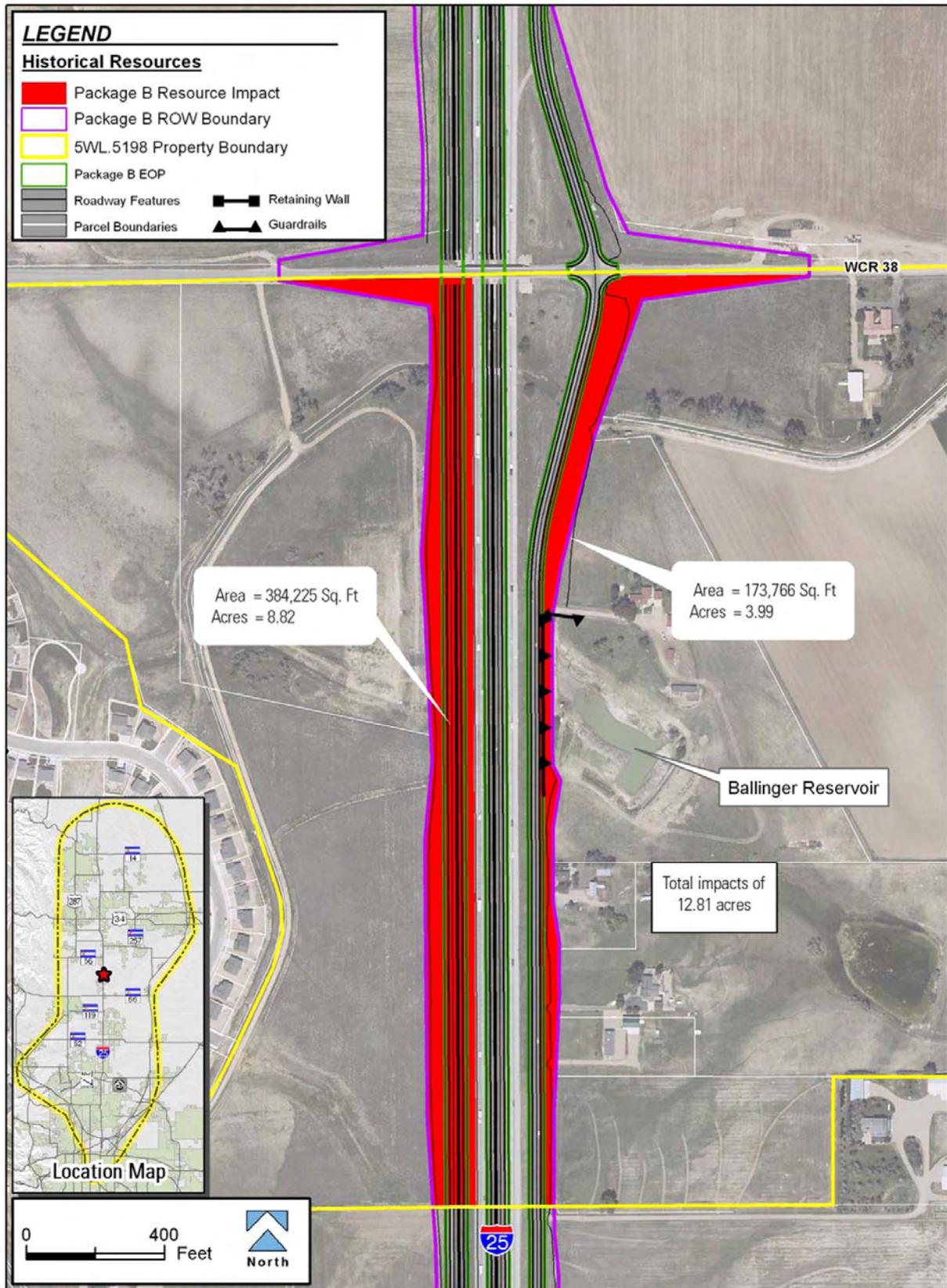
11 **Effect Determination – Package B:** Under Package B, I-25 would be re-aligned and  
12 reconfigured for two general purpose lanes plus one buffer-separated lane in each direction.  
13 Direct impacts to the site under Package B are similar in nature to those associated with  
14 Package A. Direct impacts to this portion of the site would be confined to a strip of land 2,740  
15 feet long, and approximately 120 feet wide at CR 38 at the north end of the property and 30  
16 feet wide at the south end. This impact corresponds to the new toe of slope for the east  
17 frontage road which would bury the farmland currently located adjacent to the frontage road. A  
18 retaining wall would be installed along the edge of the frontage road to prevent direct impacts  
19 to the Ballinger Reservoir. A total of 3.99 acres of the eastern portion of the site would be  
20 subject to direct impacts under Package B (see **Figure 3.15-45**).

21 A strip of farmland measuring approximately 145 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 8.82 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 B is 12.81 acres, which comprises  
26 approximately nine percent of the total site area of 141.67 acres. Indirect impacts would be the  
27 same as Package A.

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

1 Figure 3.15-45 5WL.5198 (Olson Farm) – Package B



2

1 **5WL.1978 (Rademacher/Hilgers Residence)**

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

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

7 **Effect Determination – Package A:** Under Package A, I-25 would be reconfigured for three  
8 general purpose lanes in each direction. The existing I-25 ramps would be rebuilt under a  
9 currently planned and programmed interchange project. There would be no changes to ramp  
10 widths or alignments, thus there would be no direct impacts to the historic property by future I-  
11 25 mainline improvements associated with Package A.

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

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

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

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

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

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

17 **Effect Determination – Package A:** Under Package A, the existing I-25 template would be  
18 maintained in this area. The existing box culverts would not require replacement or  
19 modification, and no direct or indirect impacts to the ditch would occur. FHWA, FTA and  
20 CDOT therefore have determined that Package A would result in *no historic properties*  
21 *affected* with respect to this historic resource.

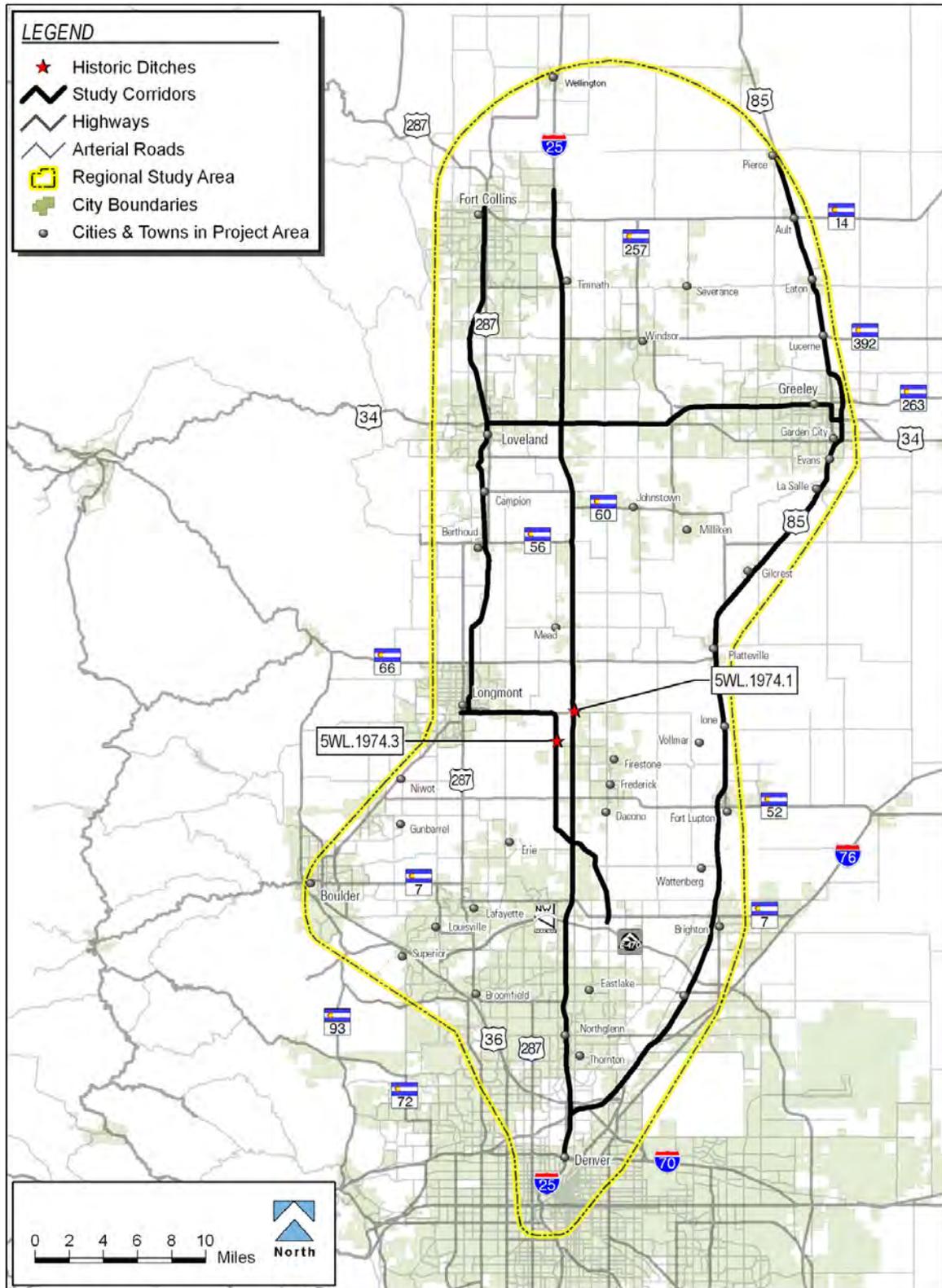
22 **Effect Determination – Package B:** In this area, I-25 would be widened to the median to  
23 contain a new template consisting of three general purpose lanes plus one buffer-separated  
24 managed lane. The existing east frontage road would be realigned to the east. The proposed  
25 transportation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

29 **5WL.1974.1 (Rural Ditch)**

30 **Resource Description:** The entire Rural Ditch is approximately 4 miles long. Two segments of  
31 the ditch are present within the APE (see **Figure 3.15-46**). Segment 5WL.1974.1 crosses  
32 I-25 diagonally from southwest to northeast immediately north of SH 119, passing under  
33 SH 119 and I-25 in two existing culverts. The segment length is 3,327 feet, and is a 10 feet wide  
34 earthen ditch.

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

1 Figure 3.15-46 5WL.1974 (Rural Ditch) – Segments intersecting project APE



1 **Eligibility Determination:** The entire ditch (5WL.1974) was determined to be not eligible in  
2 1993. The entire Rural Ditch is recommended as eligible for the NRHP under Criterion A  
3 because of its important association with the development of water rights and agriculture in  
4 northeastern Colorado. The 5WL.1974.3 follows the original historic alignment of the ditch, and  
5 therefore supports the eligibility of the entire linear resource. The segment 5WL.1974.1 is  
6 modified by adjacent development and road crossings at SH 119 and I-25 and does not  
7 support eligibility of the entire resource.

8 **Effects 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 Rural Ditch.

12 **Impacts to segment 5WL.1974.3—Package A:** The proposed new commuter rail line would  
13 pass in a northwest-southeast alignment across this historic ditch segment. Approximately 130  
14 feet of open ditch would need to be placed in a culvert beneath the new railroad embankment,  
15 ballast, bed and tracks (see **Figure 3.15-47**).

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

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

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

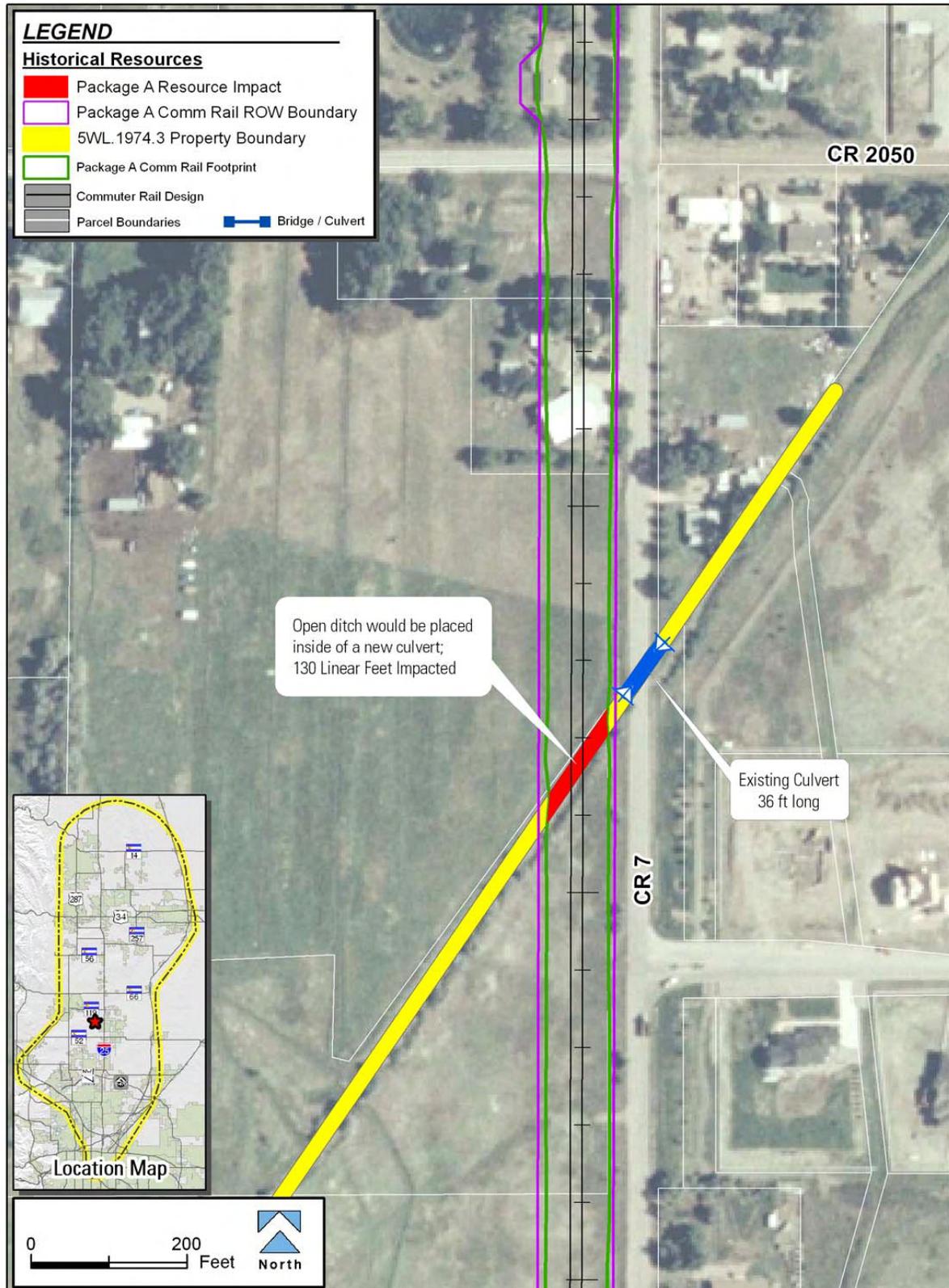
25 **Impacts to segment 5WL.1974.1—Package B:** Under Package B modifications to the center  
26 median of the highway would incorporate new BRT lanes in this area. Because the ditch is  
27 already conveyed underneath the area of highway there would be no additional impact to the  
28 ditch segment.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

30 **Summary Effects Determination:**

31 **Package A:** 130 feet of open ditch would be placed inside a culvert at one segment locality.  
32 Temporary construction impacts would occur during culvert installation and highway  
33 construction activity. Because the physical integrity of the channel of the ditch segment would  
34 be compromised by placing it in a culvert, FHWA, FTA AND CDOT have determined that the  
35 Package A improvements would result in *no adverse effect* with respect to the historic  
36 resource 5WL.1974 (Rural Ditch).

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

1 Figure 3.15-47 5WL.1974.3 (Rural Ditch) – Commuter Rail  
2



1 **5WL.3146.1 (Flume Ditch)**

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

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

6 **Effects Determination—Package A:** The ditch is in a non-improvement component of  
7 Package A and would not have impacts.

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

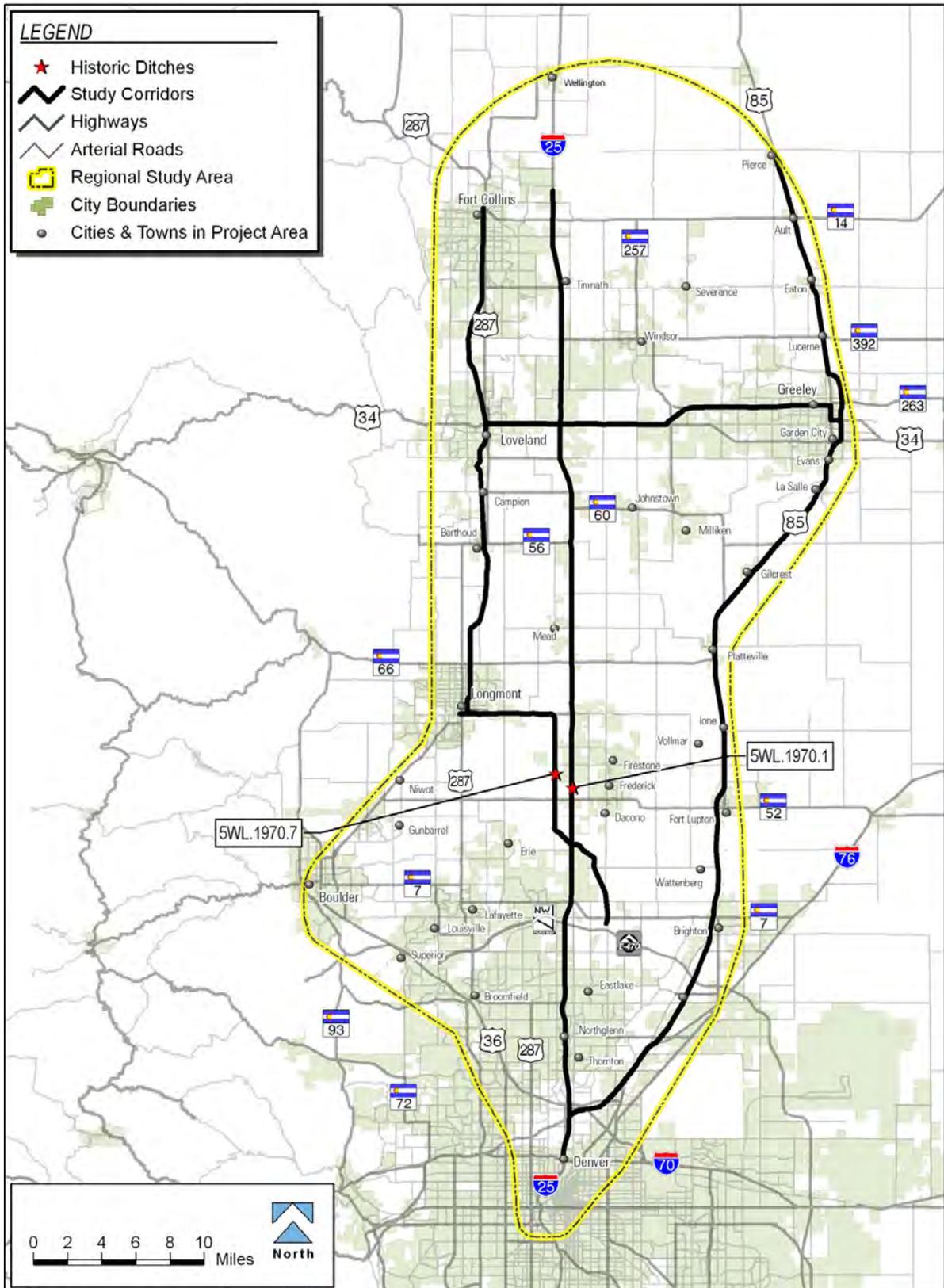
13 **5WL.1970 (Lower Boulder Ditch)**

14 **Resource Description:** The overall length of the Lower Boulder Ditch is 19 miles. It was  
15 originally built in 1859, but was widened in 1954 (see **Figure 3.15-48**). A significant portion of  
16 the ditch (5WL.1970.1) runs within the project corridor and crosses under I-25 in a 490 foot  
17 long CBC, 3,500 feet north of SH 52. The 1.3 mile long earthen ditch has steep pitched banks,  
18 is 26 feet wide and 6 feet deep. Banks are grass covered except at culvert faces where it is  
19 rip-rapped. The area has parallel access roads along both banks and several pump jacks  
20 nearby.

21 Segment 5WL.1970.7 generally runs perpendicular to and crosses under WCR 7. Segment  
22 5WL.1970.7 of the earthen irrigation ditch is approximately 31 feet wide, 12 feet deep and 574  
23 feet long. The portion of the ditch that crosses under County Road 7 conveys the ditch in a  
24 culvert. Grass and riparian growth exists along both banks of the ditch in many areas. The  
25 surrounding area is rural in character.

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

1 Figure 3.15-48 5WL.1970 (Lower Boulder Ditch) – Segments intersecting project APE



1 **Effects 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 Lower Boulder Ditch.

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

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

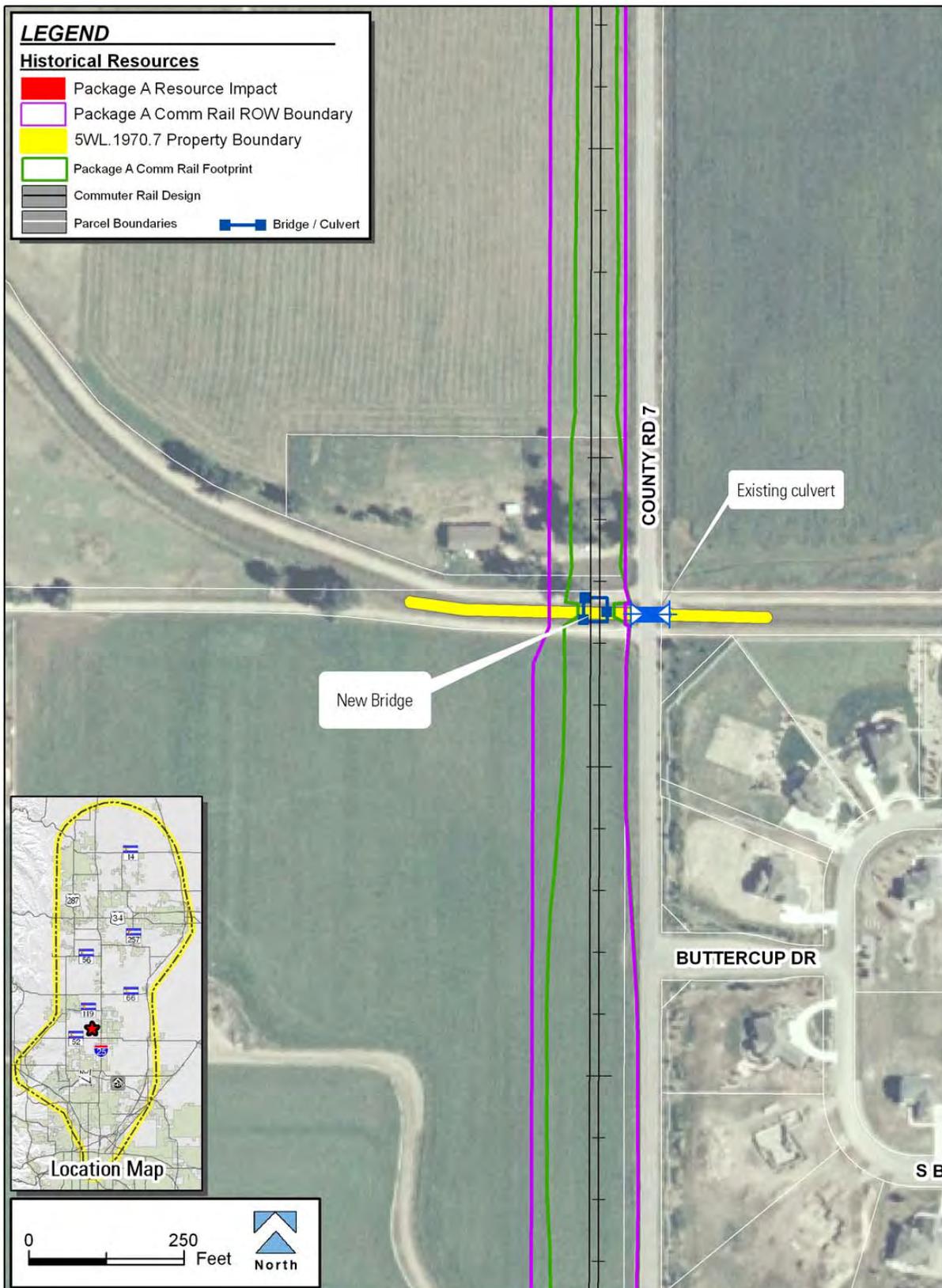
15 **Impacts 5WL.1970.7—Package A:** This historic ditch segment passes beneath Weld WCR 7  
16 via a culvert, and the proposed new commuter rail corridor closely follows the west side of this  
17 road. The new railroad line would cross the east-west trending ditch segment via a new bridge  
18 structure, the piers of which would be placed outside the limits of this irrigation channel (see  
19 **Figure 3.15-49**). The presence of the new bridge would not substantially affect the setting or  
20 attributes which render the ditch historic.

21 **Summary Effects Determination:**

22 **Package A:** A new bridge at WCR 7 would create approximately 35 feet of new overhead  
23 coverage of the ditch. Temporary construction impacts would occur during bridge construction.  
24 Because the physical integrity of the channel of the ditch segment would be compromised by  
25 placing it in a culvert, FHWA, FTA and CDOT have determined that the Package A transit  
26 improvements would result in *no adverse effect* to the historic resource 5LR.1970 (Lower  
27 Boulder Ditch).

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

1 Figure 3.15-49 5WL.1970.7 (Lower Boulder Ditch) – Package A



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 **Figure**  
5 **3.15-50**).

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

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

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

44 Segment 5AM.457.4 of the ditch is located west of I-25 and south of West136<sup>th</sup> Avenue. Most  
45 of the ditch segment has been abandoned and the ditch has been realigned at a point further  
46 west of I-25 out of the APE. A portion of the abandoned segment has been obliterated by new  
47 commercial construction at the site.