

**5LR.11391 (Gallatin Farm)**

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

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

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

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

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

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

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

**Eligibility Determination:** The Boxelder Ditch (5LR.2160) was officially determined to be NRHP-eligible by the Colorado Office of Archeology and Historic Preservation (OAHP) in 1996. The ditch was re-evaluated for the North I-25 Draft EIS as eligible for the NRHP under Criterion A because of its important association with the development of water rights and agriculture in Larimer County. The segment within the project APE retains sufficient integrity of location, design, and use to support the eligibility of the entire linear resource.

**Effect Determination—Package A:** Under Package A, the I-25/Harmony Road interchange would be modified, including widening of the on- and off-ramps. Boxelder Ditch is currently enclosed inside a pipe underneath the existing ramps, fill slopes and mainline I-25 traffic lanes. To accommodate construction of a new southbound off-ramp from I-25, which would be situated 90 feet west of the existing ramp alignment, a 75 foot-long section of the open Boxelder Ditch would need to be enclosed inside a box culvert beneath the ramp. The remainder of the ditch located within the area proposed for Package A highway improvements is already piped under I-



25, the northbound onramp to I-25, and Harmony Road, and no new direct impacts would occur in those locations (see **Figure 3.15-14**).

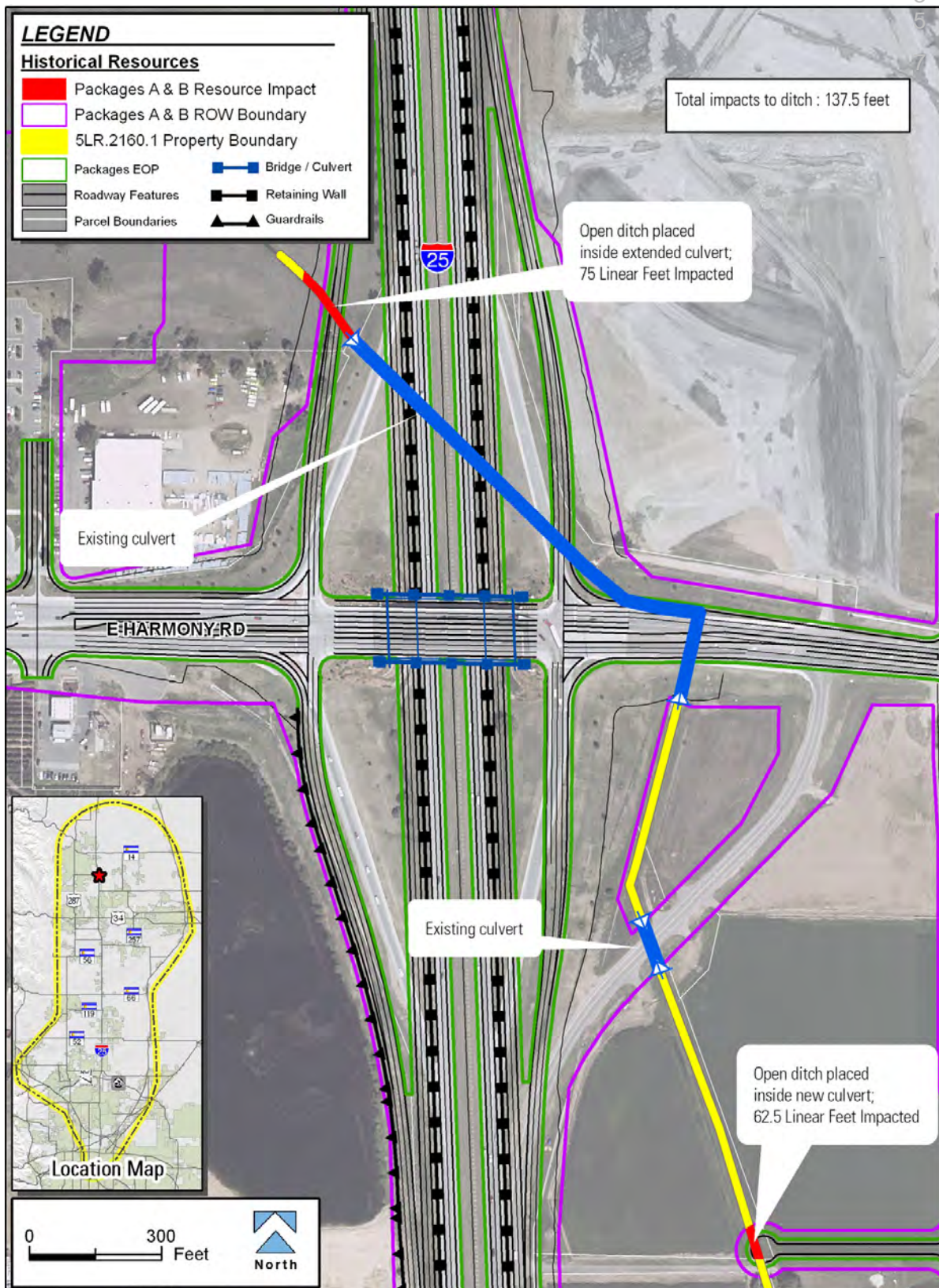
A small direct impact would occur where the ditch would pass beneath a new property access road on the southeast side of the interchange. This new access road is a cul-de-sac, required to replace the existing access from the abandoned east frontage road. A total of 62.5 feet of open ditch would have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

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

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

**Effect Determination—Package B:** Impacts are identical to Package A. FHWA, FTA and CDOT have determined that Package B would also result in *no adverse effect* to the entire Boxelder Ditch (see **Figure 3.15-14**).

1 Figure 3.15-14 5LR.2160.1 (Boxelder Ditch) – Packages A and B





**5LR.11390 (Cline Cottage)**

**Resource Description:** This historic dwelling is located on East CR 38, just east of the Cache la Poudre River. This is an intact cottage built in 1915 in a historic agricultural setting, and is owned by the descendents of Thomas Cline, an early Timnath settler in the 1860s.

**Eligibility Determination:** This historic building retains very good integrity, is an excellent example of rural residential architecture from the early 20<sup>th</sup> century, and is eligible for the NRHP under Criterion C.

**Effect Determination – Package A:** Under Package A, Harmony Road (East CR 38) would be widened approximately 20 feet to the north along the east side of I-25 to accommodate turning lanes at the interchange ramps. The widened segment of highway would taper down to the existing roadway width just west of the Cache La Poudre River. The widening of Harmony Road would not result in direct impacts to the property containing the Cline Cottage. The distance from the existing Harmony Road (East CR 38) edge to the historic cottage would remain unchanged, resulting in no direct or indirect impacts.

The Package A improvements would not diminish the architectural and other qualities which render the property NRHP-eligible, and FHWA, FTA and CDOT therefore have determined that Package A would result in *no historic properties affected* with respect to the Cline Cottage.

**Effect Determination – Package B:** Improvements proposed under Package B in the vicinity of the Cline Cottage are identical in nature and extent to those associated with Package A. No direct or indirect impacts to the historic property would occur. The improvements associated with Package B would not diminish the architectural and other qualities which make the property NRHP-eligible, and FHWA, FTA and CDOT therefore have determined that Package B would result in *no historic properties affected* with respect to the Cline Cottage.

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

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

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

**Eligibility Determination:** The entire Louden Ditch (5LR.8930) is eligible for listing on the NRHP under Criterion A for its important association with the development of water rights and agriculture in Larimer County. Both segments have experienced modifications near the highway, but much of the ditch remains in its original alignment. This ditch segment retains



sufficient integrity of location, setting, feeling, and use to support the eligibility of the entire linear resource. Both segments (5LR.8930.1 and 5LR.8930.2) were found to retain sufficient integrity of location, setting, feeling, and use to support the eligibility of the entire linear resource.

**Effect Determination:**

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

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

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



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

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

**Impacts to segment 5LR.8930.1 –Package B:** The impacts to the Loudon Ditch under Package B are the similar to those described for Package A. Re-alignment and widening of I-25 highway lanes and the east frontage road in Package B improvements would have a 45-foot wider configuration east of the existing frontage road. This results in a 45-foot longer section of open ditch on the east side of I-25 being placed inside a box culvert extension under the new roadway. The ditch impacts caused at Byrd Drive would be the similar to Package A. The total direct impacts to the Loudon Ditch caused by Package B improvements are 270 feet of open ditch to be placed in a new box culvert extension on the east side of I-25 (as opposed to 225 feet under Package A), and 87 feet of open ditch to be placed beneath the proposed Byrd Drive (same linear distance as Package A). Package B would create total combined direct impacts to 357 feet of open ditch as opposed to 316 feet of open ditch under Package A. Temporary effects from construction activities would be the same as in Package A (see **Figure 3.15-17**).

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

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

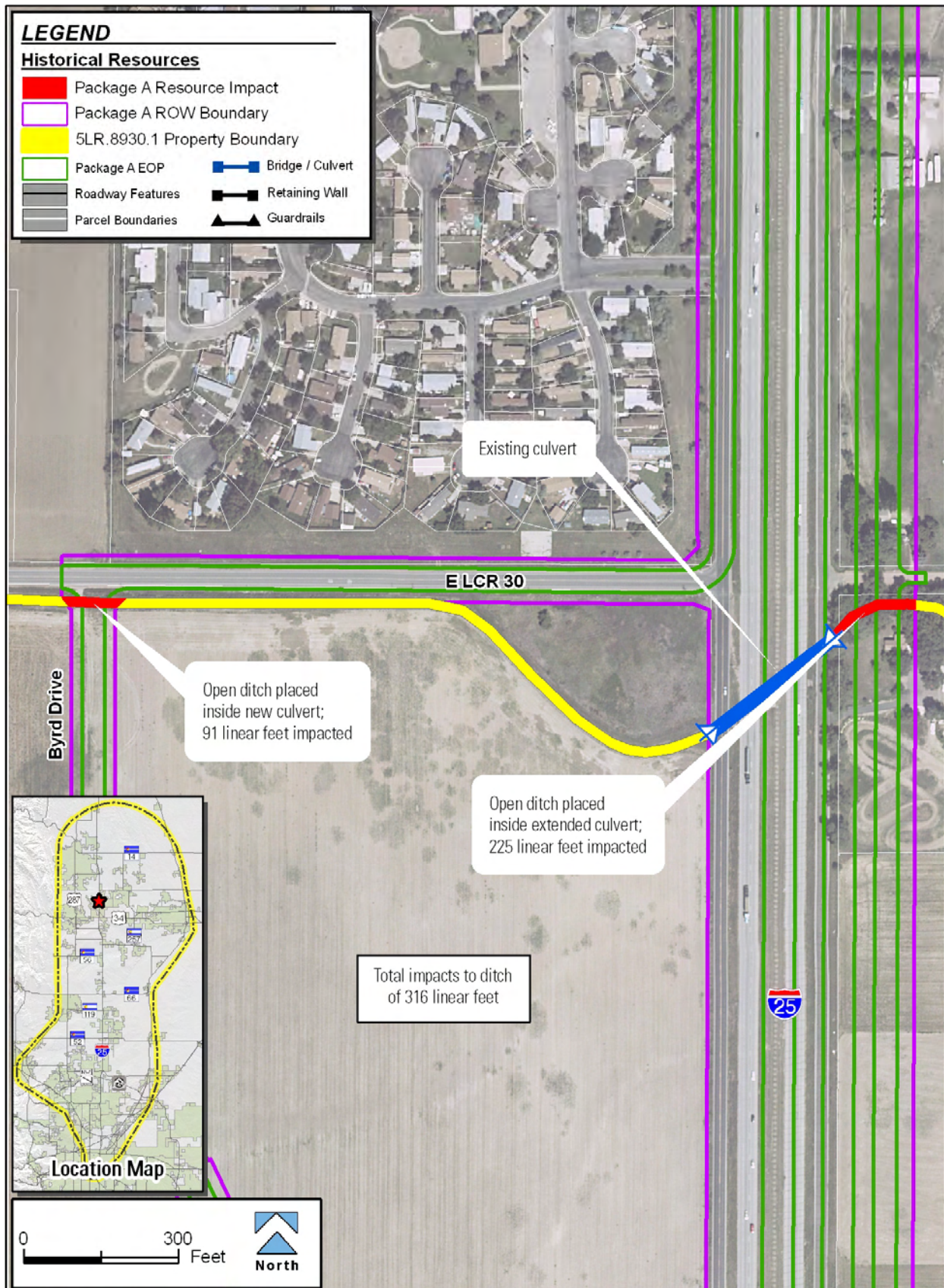
**Summary Effect Determination:**

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

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

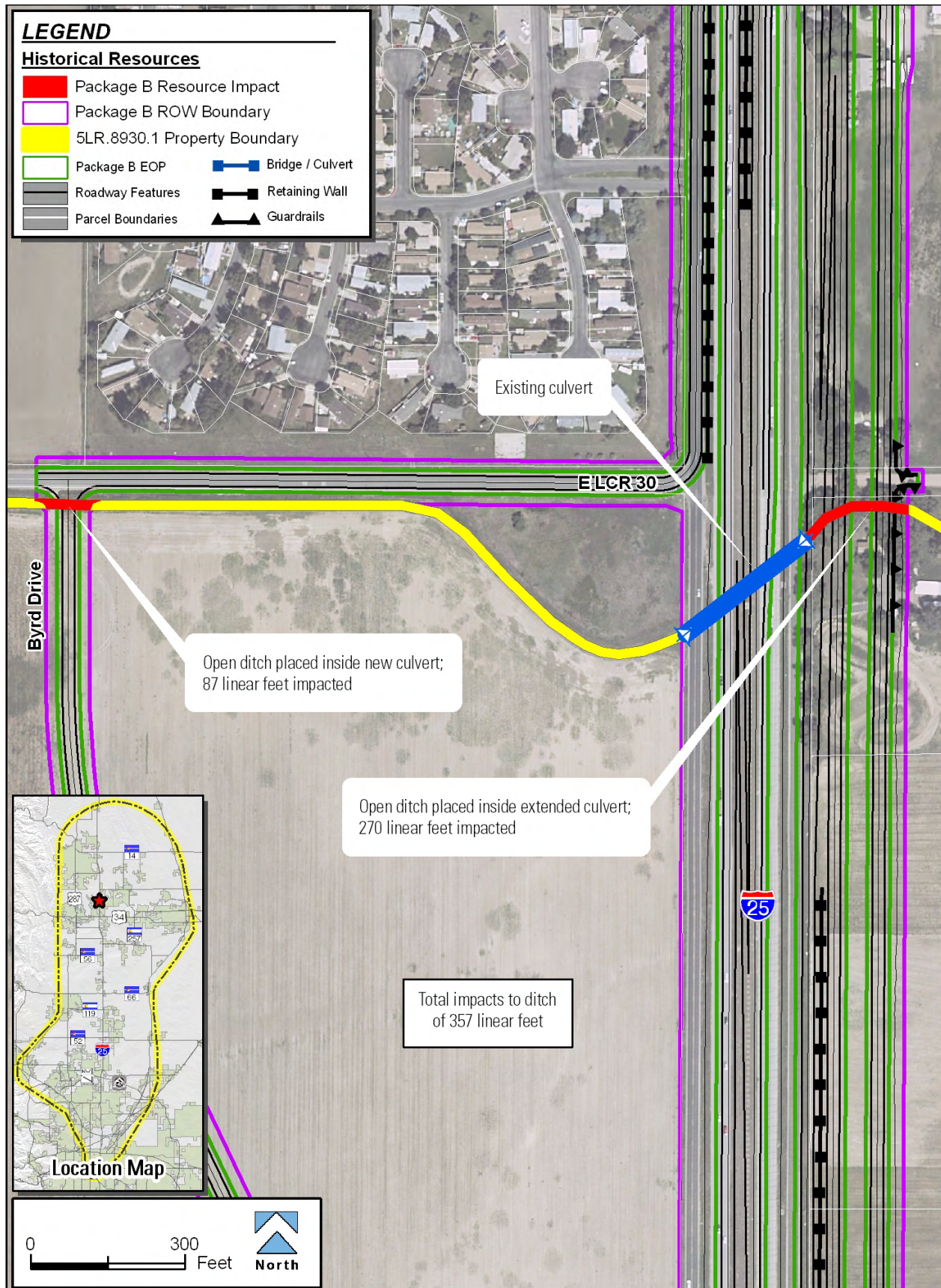


1 Figure 3.15-16 5LR.8930.1 (Louden Ditch) – Package A





1 Figure 3.15-17 5LR.8930.1 (Louden Ditch) – Package B



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

**Resource Description:** The total length of the Union Pacific Railroad (UPRR) Fort Collins Branch rail line is 25 miles. Two segments of the rail line are located within the APE (see **Figure 3.15-18**). Segment 5LR.1815.2 is a 1.81 mile long segment of the historic railroad. The I-25 alignment crosses over this segment of the railroad alignment just north of the US 34 interchange. The active railroad segment traverses open farm land throughout its length and runs parallel to the Loveland and Greeley Canal (5LR.503.2) along part of this route.

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

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

**Effect Determination:**

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

**Impacts to segment 5LR.1815.2 – Package A:** I-25 is currently bridged over the historic UPRR rail line via identical 158 foot-long, 37-foot wide concrete bridges for each of the northbound and southbound lanes. Under Package A, the I-25 template would be widened on the east side of the northbound roadway and on the west side of the southbound roadway to accommodate four general purpose lanes plus one auxiliary lane in each direction. The existing bridges would be demolished and would be replaced by two new, 174-foot long, 75-foot wide bridge structures to span the rail line at the same general position as the old bridges. The alignment and operation of the railroad would not be changed, and the new bridge piers and abutments would be placed outside the historic rail corridor, so that no direct impacts would occur to the resource (see **Figure 3.15-19**).

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

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

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



Figure 3.15-18 5LR.1815 (Union Pacific Railroad Fort Collins Branch) – Segments  
Intersecting Project APE

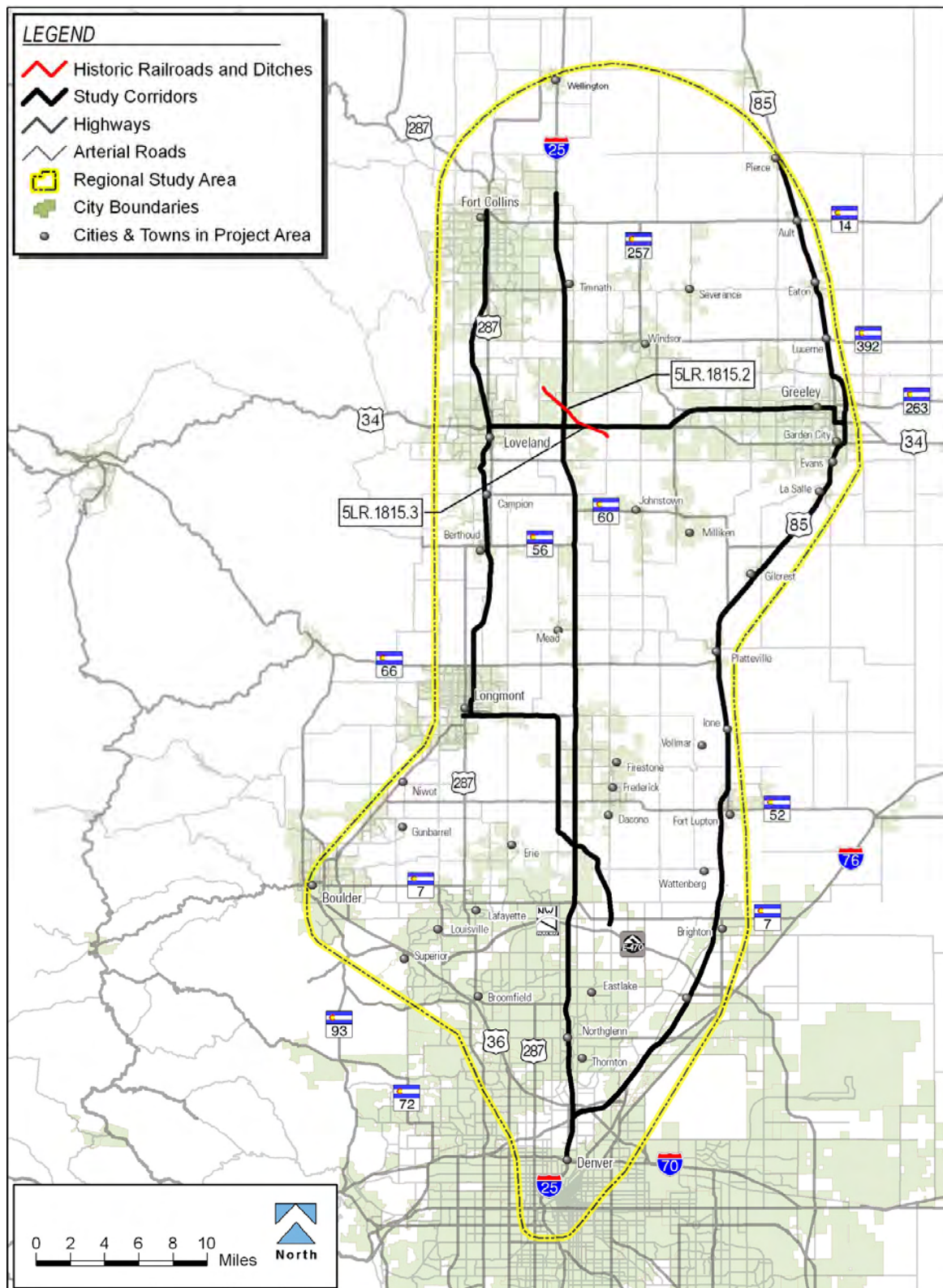
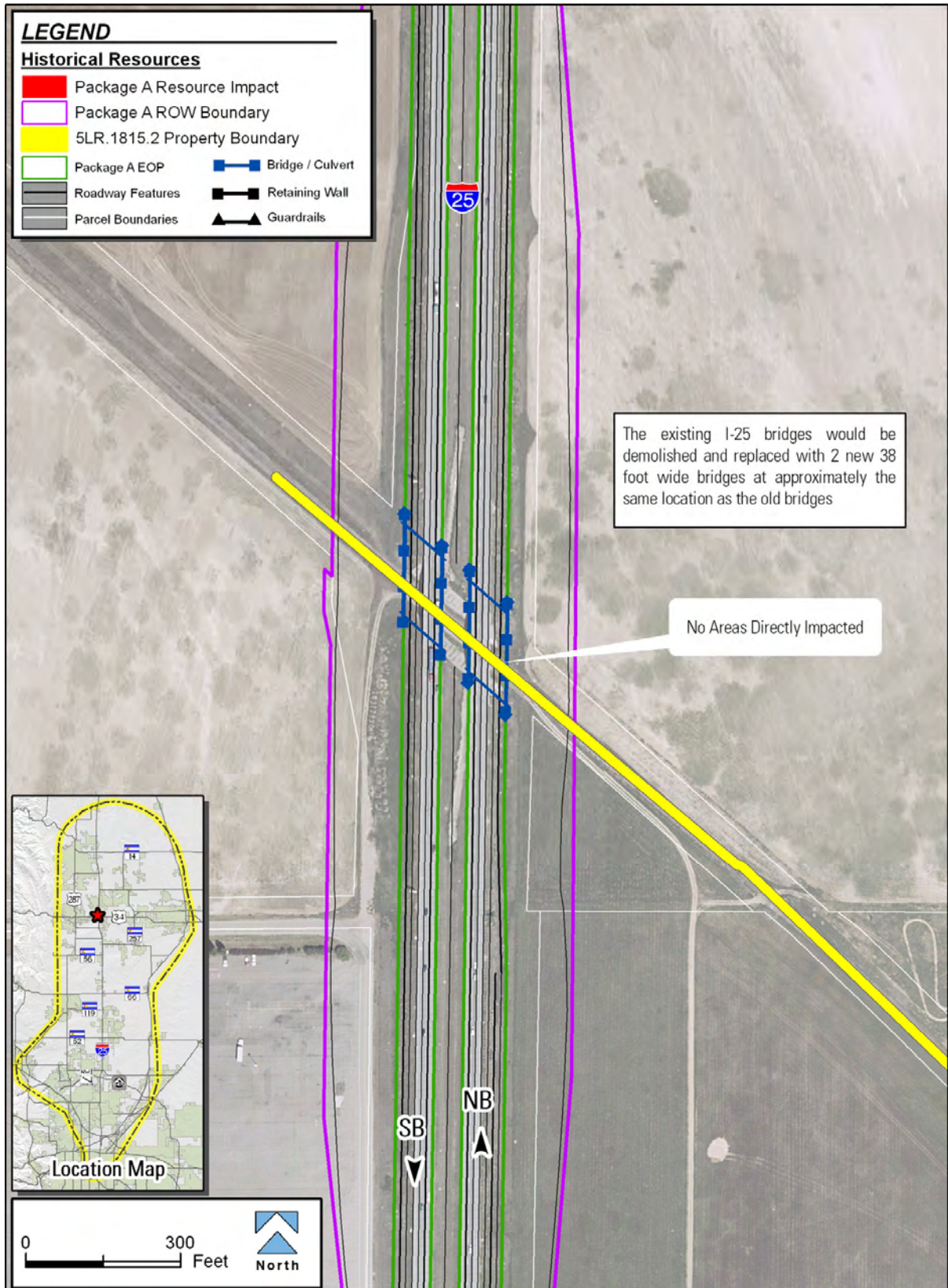




Figure 3.15-19 5LR.1815.2 (Union Pacific Railroad Fort Collins Branch) – Package A





**Impacts to segment 5LR.1815.2—Package B:** Under Package B, the northbound and southbound I-25 roadways spanning the historic railroad would be substantially widened (approximately 96 feet on the east side of the northbound roadway and 104 feet on the west side of the southbound roadway), in order to accommodate a new template containing two general purpose lanes plus two barrier-separated managed lanes in each direction. The existing bridges carrying I-25 over the railroad would be replaced with one wider and longer 174-foot long bridge structure. The alignment and operation of the railroad would not be changed, and the new bridge piers would be placed outside the historic rail corridor. No direct impacts would occur (see **Figure 3.15-20**).

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

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

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

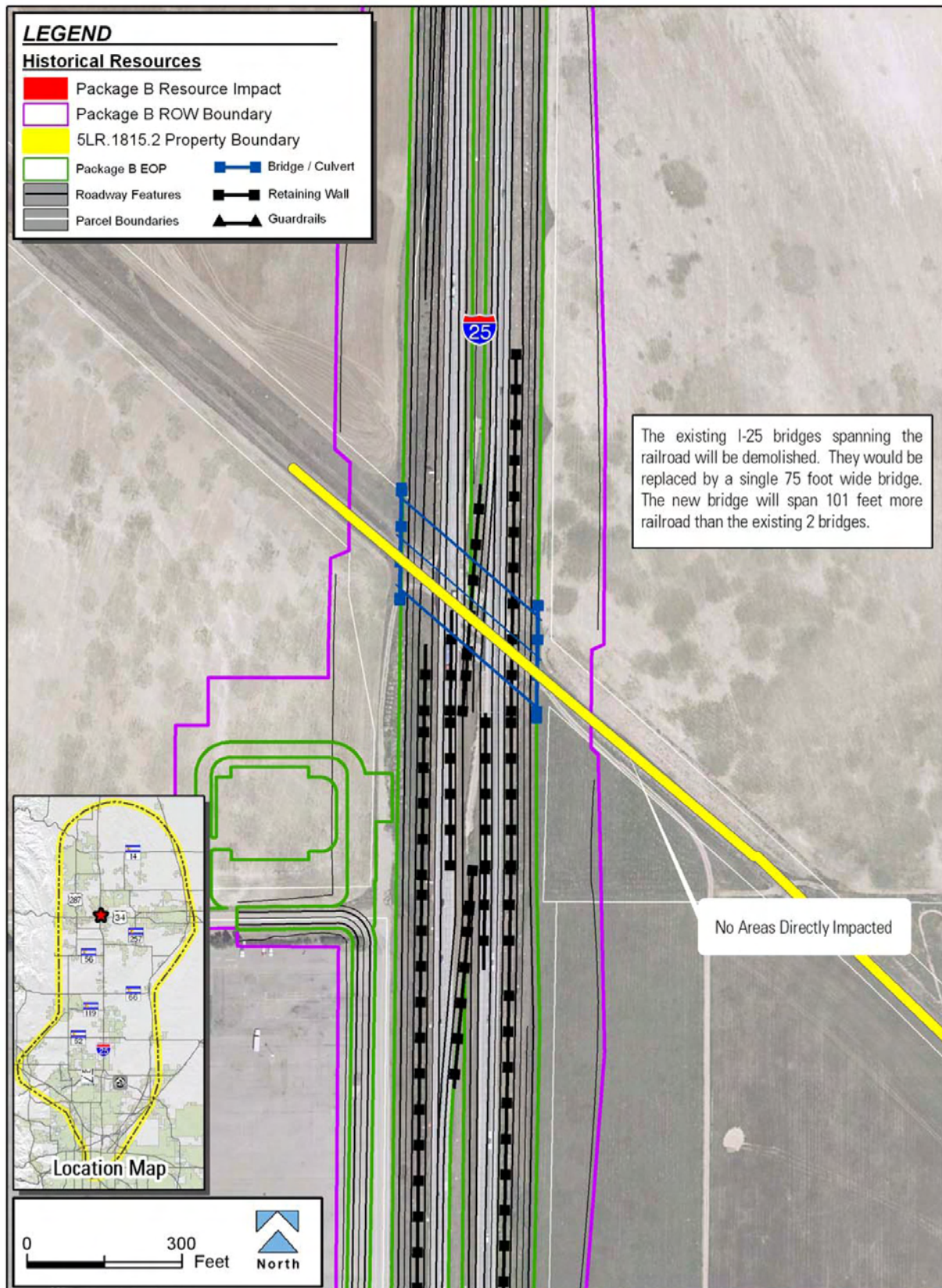
**Summary Effect Determination:**

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

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



Figure 3.15-20 5LR.1815.2 (Union Pacific Railroad Fort Collins Branch) – Package B





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

**Resource Description:** The canal was originally built in 1861. The entire canal is approximately 31 miles long. Two documented segments are in the project APE (see **Figure 3.15-21**). Segment 5LR.503.2 of the historic Loveland and Greeley Canal crosses I-25 as well as the parallel frontage road is 2.62 miles long. The canal is approximately 39 feet wide and 26 feet deep. During the construction of I-25 in the 1960s, the original canal alignment was preserved but the integrity of the canal in this location was compromised by placing it within a CBC under the highway. The three-sided, pre-cast CBC measures 23 feet wide and 402.6 feet long. Both banks of the canal are grass-covered, and riprap is used for bank stabilization in many areas. The area surrounding the canal segment includes retail and residential development.

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

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

**Effect Determination:**

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

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

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

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



The 70 foot culvert extension and temporary construction impacts required under Package A would enclose a very short section of open canal with integrity, and would not alter the canal's historic alignment. This change would affect only a small fraction of the 31 mile-long channel, and would not substantially diminish or alter characteristics that render it NRHP-eligible. FHWA, FTA and CDOT have therefore determined that Package A would result in *no adverse effect* to the entire Loveland and Greeley Canal (5LR.503).

**Impacts to segment 5LR.503.2—Package B:** This Package involves the widening of I-25 through this area, changing it from the existing configuration of two northbound and two southbound traffic lanes, to a new section containing a total of eight lanes: two managed lanes plus two general purpose lanes in each direction. Although more lanes would be constructed, they would fit within the existing CDOT right-of-way with the exception of a new US 34 to north-bound I-25 onramp. Effects to the historic canal are the same as would occur under Package A, and involves extending the existing three-sided CBC beneath I-25 an additional 70 feet to the east to accommodate the proposed new I-25 onramp. Temporary impacts due to construction of the US 34 ramp and installation of the new culvert would be the same as for Package A (see **Figure 3.15-22**).

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

#### **Summary Effect Determination:**

**Package A:** The 70 foot culvert extension and temporary construction impacts required under Package A would enclose a very short section of open canal with integrity, and would not alter the canal's historic alignment. This change would not diminish or alter characteristics that render it NRHP-eligible, and FHWA, FTA and CDOT have determined that Package A would result in *no adverse effect* to the resource.

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

Figure 3.15-21 5LR.503 (Loveland and Greeley Canal) – Segments intersecting project APE

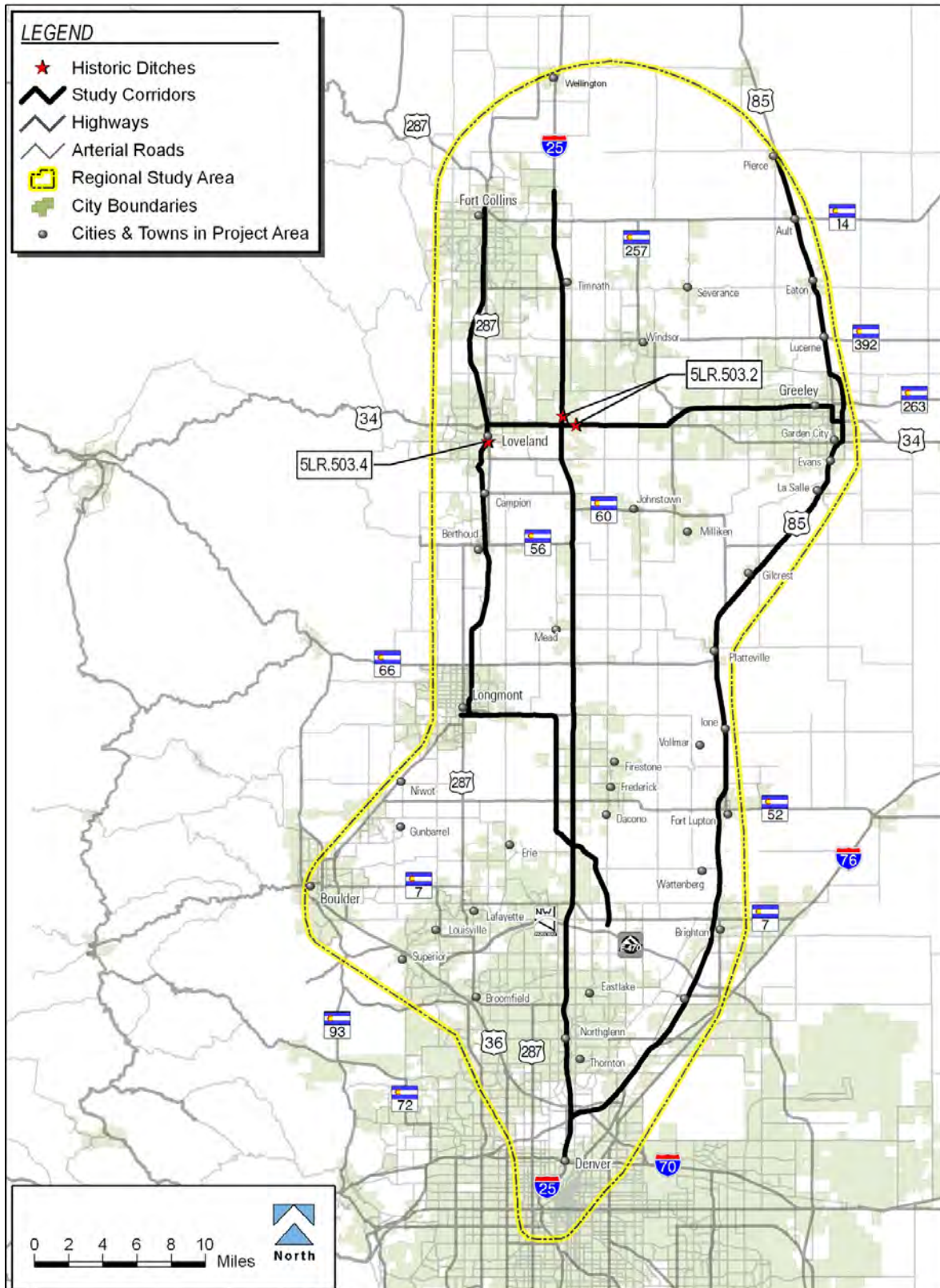
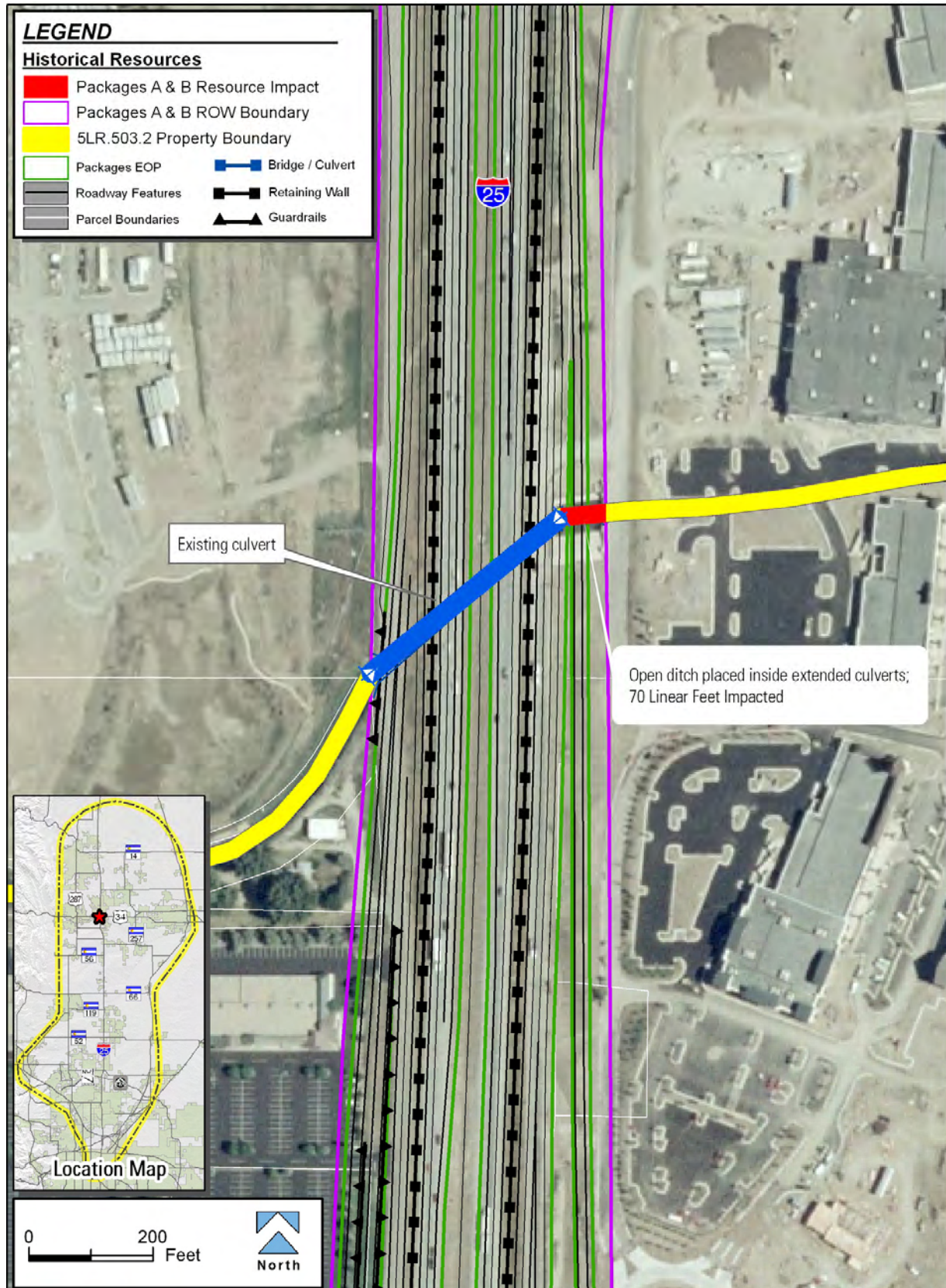






Figure 3.15-22 5LR.503.2 (Loveland and Greeley Canal) – Packages A and B



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

**Resource Description:** This irrigation ditch was originally built in 1864. The entire Farmer's Ditch is approximately 15 miles long. Three segments of the ditch are present within the APE (see **Figure 3.15-23**). Segment 5LR.8928.1 of the Farmers' Ditch crosses I-25 parallel to US 34 in the vicinity of the I-25 and US 34 interchange. Here, the earthen canal is approximately 16 feet wide and 1.5 miles long. The levees and banks along both sides of the ditch are grass-covered. The surrounding area includes retail and residential development.

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

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

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

**Effect Determination:**

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

**Impacts to segment 5LR.8928.1—Package A:** Under Package A, the Farmers Ditch segment that currently passes underneath US 34 in a CBC would be conveyed an additional 65 feet inside an extended culvert, south of US 34 to allow widening of the US 34 roadway. The new road would overlie the ditch culvert. **Figure 3.15-24** illustrates the US 34 culvert extension.

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

**Impacts to segment 5LR.8928.1—Package B:** Under Package B, the Farmers Ditch segment that currently passes underneath US 34 in a CBC would be conveyed an additional 65 feet inside an extended culvert, south of US 34 to allow widening of the US 34 roadway. The new road would overlie the ditch culvert. **Figure 3.15-24** illustrates the US 34 culvert extension. Temporary construction impacts would be the same as those for Package A.

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



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

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

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

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

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

#### **Summary Effect Determination:**

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

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



Figure 3.15-23 5LR.8928 (Farmers' Ditch) – Segments intersecting the project APE

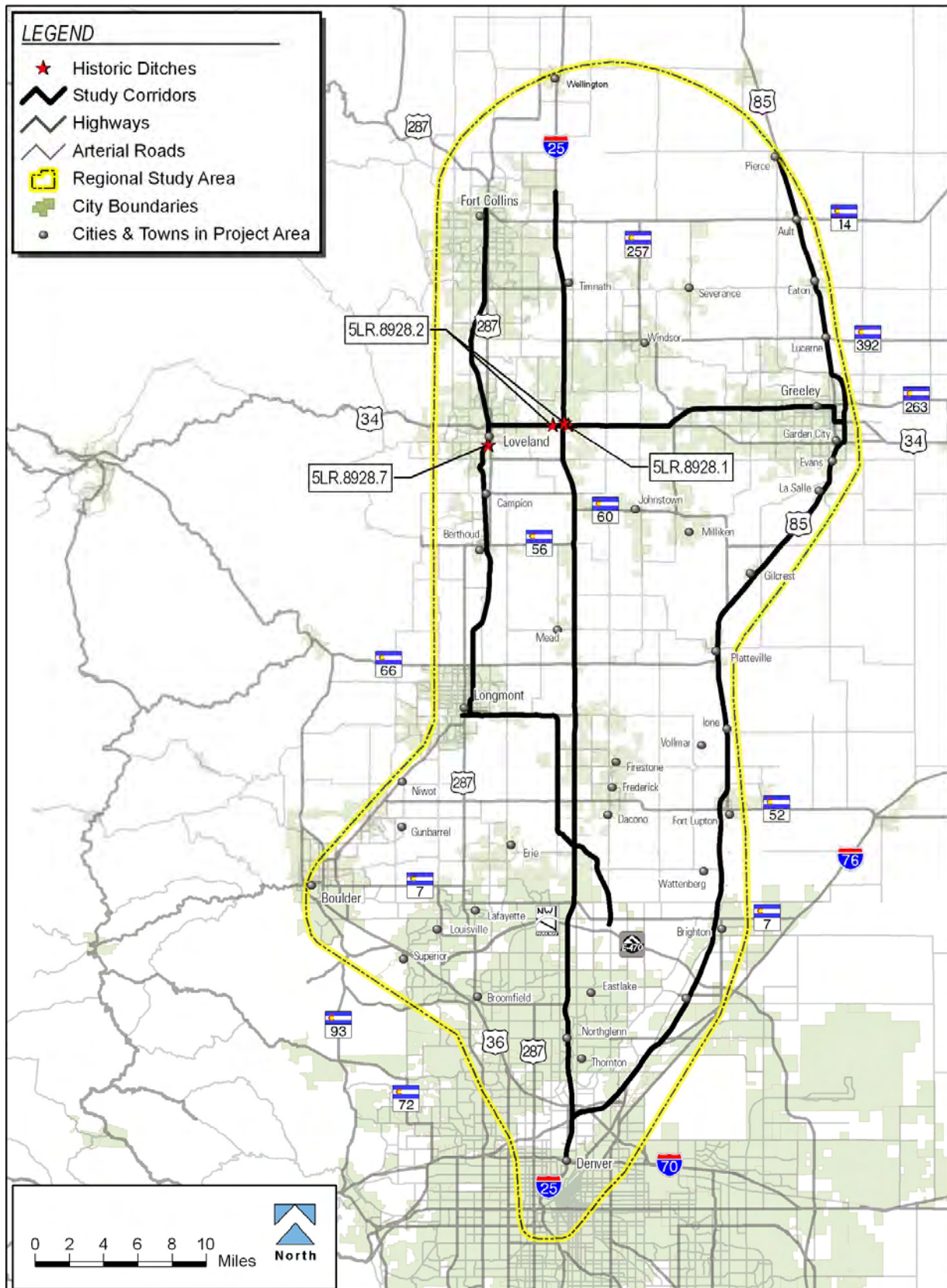
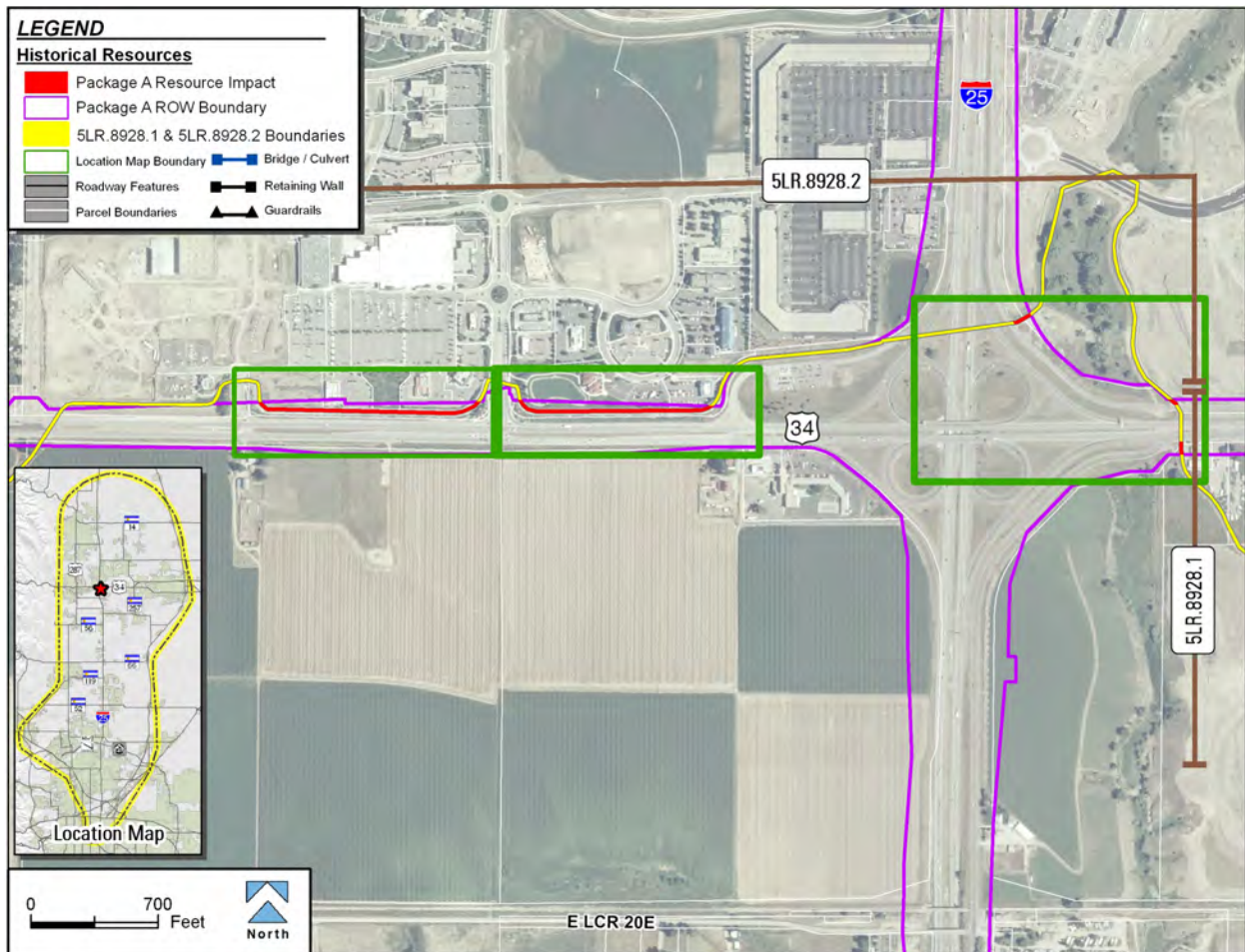


Figure 3.15-24 5LR.8928.1 and 5LR.8928.2 (Farmers' Ditch) – Location Map





1 Figure 3.15-25 5LR.8928.1 and 5LR.8928.2 (Farmers' Ditch) – Packages A and B

