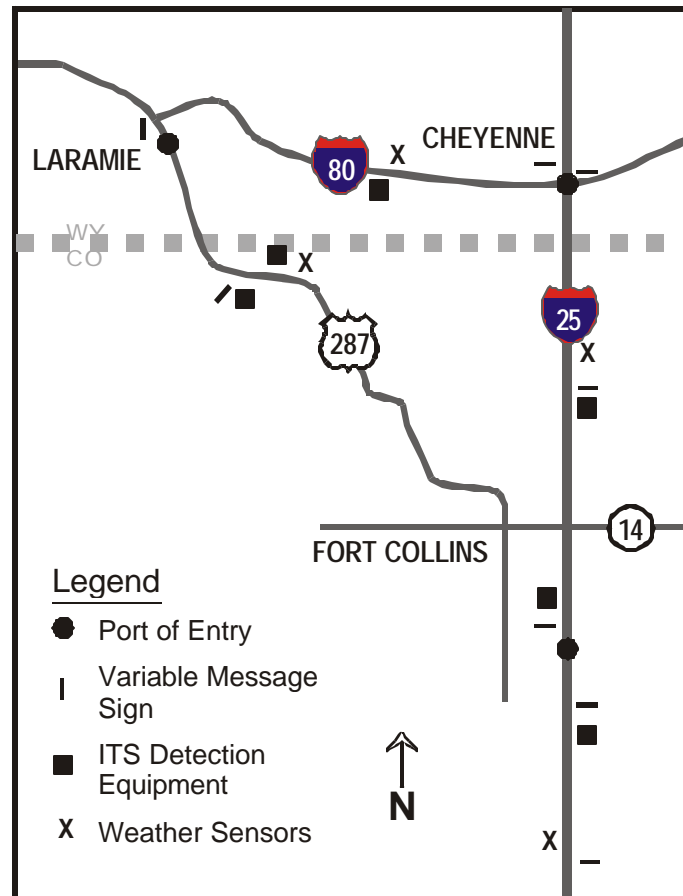


Figure 5
Triangle Project
ITS Strategy Locations



7. Fort Collins Northeast Truck Route Feasibility Study: CSU Engineering Senior Design Project

A cursory feasibility study was conducted by a group of Colorado State University (CSU) Senior Engineering students to assess three potential truck route alternatives. The students were provided direction by faculty and staff at CSU and received information from local and state agencies for their study. The students reviewed previous studies, focusing primarily on the most recent *Northeast Area Transportation Study* (NEATS), and focused on three alternative routes:

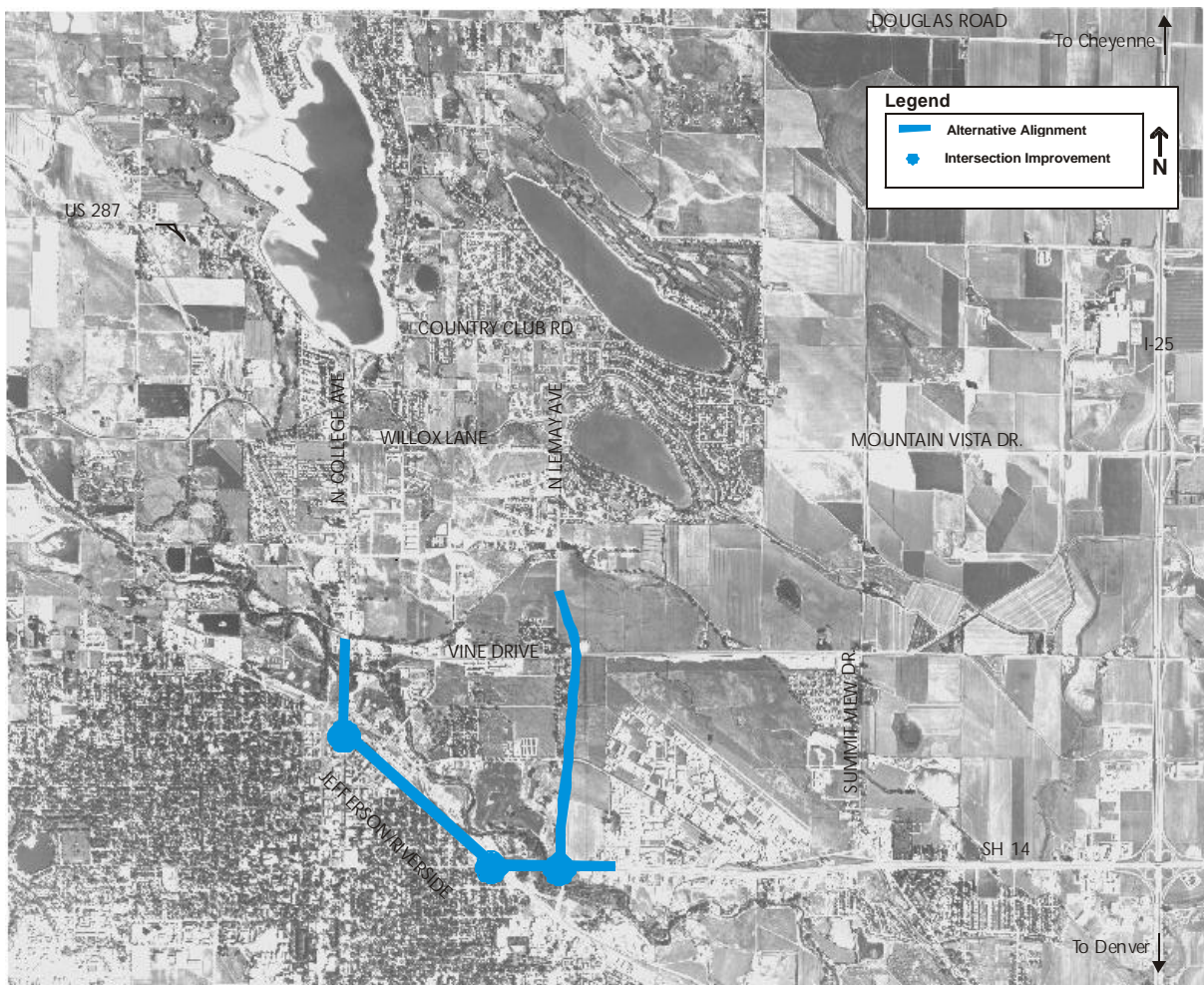
- The current SH 14/US 287 route (Mulberry Street/Jefferson Street/Riverside Avenue/North College Avenue)
- An “upgraded” alternative as initially conceived by the NEATS project. This alternative (Alternative 1) focused on key intersection improvements to the current route alternative and is shown previously in Figure 4.
- A “new” alternative alignment (Alternative 3 shown in Figure 4) as initially conceived by the NEATS project. This route began at Lemay Avenue and continued to a new alignment approximately 1,000 feet east of Lemay Avenue. The new bypass then continued over existing Vine Drive and the railroad before moving north and west on new alignment ending at the intersection of Conifer Street and US 287 (North College Avenue).

The students compared the three alignments based on seven criteria:

- Initial Cost
- Maintenance Cost
- Business Impacts
- Longevity (life expectancy)
- Public Support
- Trucker Impacts
- Residential Impacts

The group concluded that, of the three alternatives examined, the upgraded current route was most feasible due to lower cost and greater public support. This recommendation is shown in Figure 6. They also concluded that these options were short-term at best and felt the only long-term solution was to move the truck route somewhere outside of the City of Fort Collins. The students noted that this long-term solution was not probable in the near future and recommended the upgraded current route as the most economical and attractive alternative.

Figure 6
Fort Collins Northeast Truck Route Study
Recommended Alignment



8. Northeast Fort Collins Truck Route Project

In 1997, the citizens of Fort Collins voted for the relocation of the Mulberry Street/SH 14 truck route as part of the Building Community Choices projects. The Northeast Fort Collins Truck Route Project team identified and evaluated 21 different alternatives; 18 within the city and three outside of the city in northern Larimer County. Alternative routes internal to the city included a Modified Vine Alignment, upgraded “current” Vine Drive alignment, a Downtown Area one-way couplet design, and combined routes utilizing portions of Mulberry Street, Timberline Road, Lemay Avenue, and Vine Drive. Routes considered outside of the city included Douglas Road, County Road 58, and a combined route utilizing County Road 70, County Road 72, and Owl Canyon Road.

Alternatives were analyzed and processed through a three-tier evaluation system. Tier 1 involved a Fatal Flaw Analysis, Tier 2 was a Preliminary Alternatives Analysis, and Tier 3 was a Detailed Alternatives Analysis. Tier 2 Preliminary Alternatives Analysis reduced the list to 12 potential scenarios. Following the Tier 3 Detailed Alternatives Analysis Phase, those 12 alternatives were further reduced to four. Subsequent to the presentation of these four alternatives, two additional alternatives were identified for consideration, the County Road 58 Alternative and the Downtown Couplet Alternative.

Route alternatives identified north of the city were eliminated from consideration due to concerns about cost, additional length to routes, environmental impacts, and limited use by trucks and motor vehicles. Route alternatives examined during the Tier 3 Detailed Alternatives Analysis phase were evaluated based on 20 criteria that dealt with cost, performance, and impacts. Conceptual-level engineering plans were also prepared for these four alternatives.

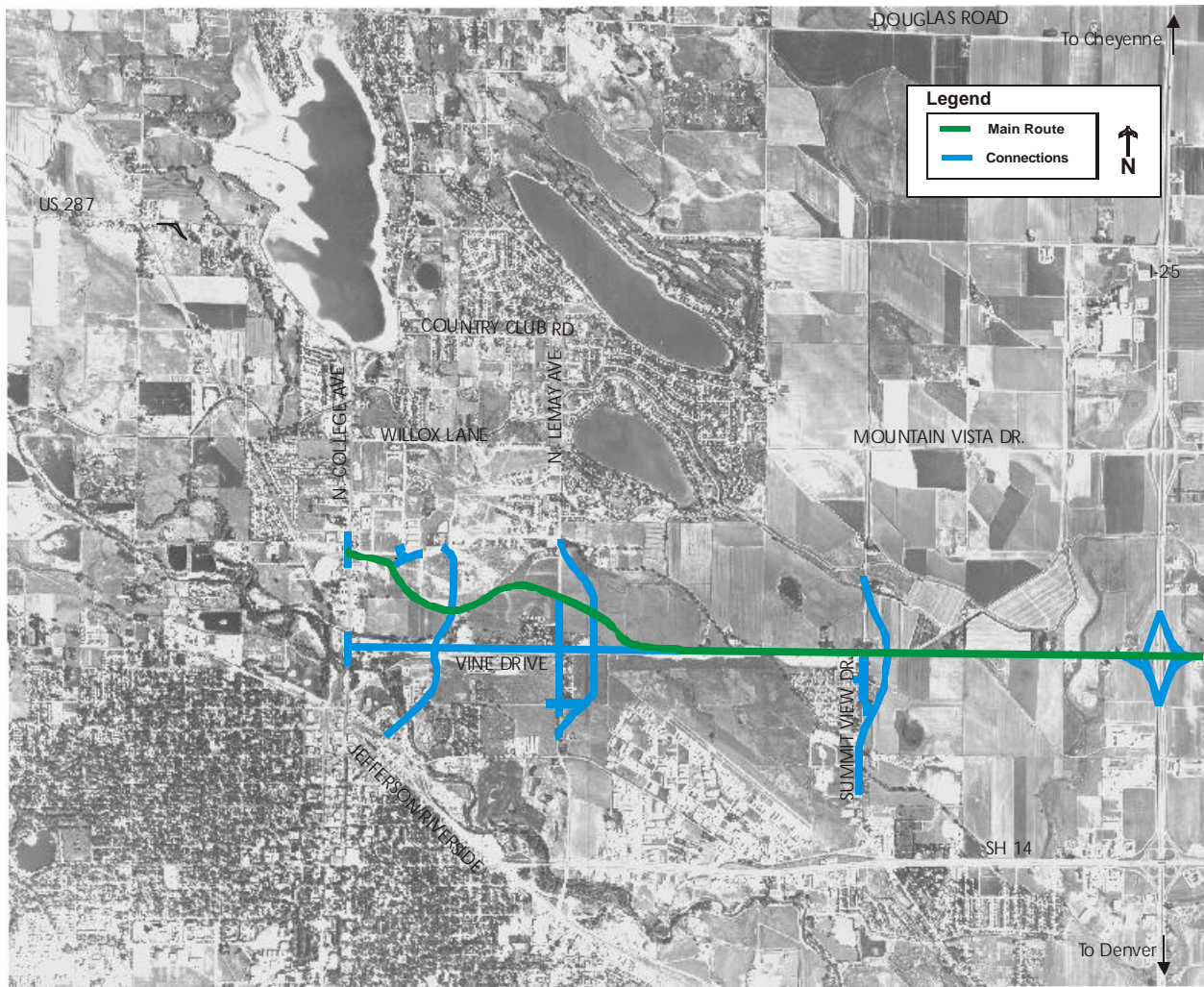
The four final alternatives presented for Tier 4 Detailed Analysis included:

- Modified Vine alignment: This alternative assumed the route would begin at a new interchange at I-25 and Vine Drive, proceed west along Vine Drive to east of Lemay Avenue, continue northwest around the Alta Vista neighborhood and connect with North College Avenue at Conifer Street.
- Mulberry/Lemay/Vine alignment: This alternative stays on existing Mulberry Street to the Lemay Avenue intersection. At this point, it proceeds north on Lemay Avenue to north of Vine Drive, and then continues west to North College Avenue at Conifer Street.
- Mulberry/Timberline/Vine alignment: This alternative begins at the Mulberry Street/I-25 Interchange, follows the existing Mulberry Street Corridor to Timberline Road. At this point it continues north on Timberline Road to Vine Drive. At Vine Drive, the route continues northwest on the new Vine Drive alignment identified in the Modified Vine alternative.
- Existing Vine Drive alignment: This alternative assumes the use of a widened Vine Drive from I-25 to North College Avenue.

Tier 4 Evaluation of these four alternatives resulted in the recommendation of the Modified Vine Route and the Existing Vine Drive Alternatives as the top two feasible alternatives. These two alternatives generated great controversy among neighborhoods near the Vine Drive area, as well as those interests who contended that the best truck route alternatives lie outside of the City of Fort Collins.

A resolution to adopt the Modified Vine Drive alignment as the preferred alternative truck route was not approved by the Fort Collins City Council by a four-to-three vote. A subsequent proposition that the Modified Vine Route be adopted not as a relocation of SH 14 but as a Major Regional Arterial was also not adopted by the Fort Collins City Council. Ultimately, the Modified Vine Alignment was amended to the city *Master Street Plan* as a future four-lane arterial roadway. The Modified Vine Alignment is shown in Figure 7.

Figure 7
Northeast Fort Collins Truck Route Project
Modified Vine Alignment



9. Ballot Initiative 200

Following the end of the Northeast Fort Collins Truck Route Project, a citizen initiative was placed on the November 1999 ballot. Initiative 200 called for the City of Fort Collins to stop examining possible alternative truck routes within the city growth boundary. It instead mandated that any future efforts only look at alternative routes located a minimum of two miles north of the current Growth Management Area boundary. It also called for the city to examine strategies to encourage through

truck traffic to utilize the existing I-25/I-80 interstate highway system, rather than the SH 14/US 287 route favored by many trucks traveling in the Fort Collins area. The ballot initiative was passed.

10. US 287/SH 14 Access Management Plan

A comprehensive Access Management Plan was completed for the SH 14/Mulberry Street, Jefferson Street/Riverside Avenue, and US 287/North College Avenue Corridors. While not a study related specifically to truck issues, the study addressed future modifications to the corridors to alleviate access concerns and improve traffic flow. These improvements included frontage roads, access consolidation, and roadway widening. This was a cooperative effort between the City of Fort Collins, Larimer County, and the Colorado Department of Transportation. This Access Management Plan was adopted by each agency, culminating in an Intergovernmental Governmental Agreement between the three participants. Short and long-term improvements were recommended as part of the Plan. Long-term recommendations include:

North College Avenue

- Construct the City of Fort Collins Arterial Street section along the entire length of North College Avenue.
- Develop a parallel street system on both the east and west sides of North College Avenue.
- The construction of raised median along North College Avenue should coincide with the opening of parallel street segments.
- Re-construct the offset “T” intersections of Hickory and Conifer Streets to create one four-legged, signalized intersection.
- Extend the southbound dual left turn lanes at Jefferson Street northward to the Cherry Street/Willow Street intersection. This improvement is necessary to service the anticipated increase in southbound left turn vehicles at Jefferson Street. As a result of this improvement, however, the northbound lane at Cherry Street would be removed.
- Install new traffic signals at the Bristlecone Drive and Pinon Street intersections when appropriate *Manual On Uniform Traffic Control Devices* (MUTCD) traffic signalization warrants are met.
- The Long-Range Access Control Plan improvements result in a reduction of approximately 100 access points along North College Avenue.

Jefferson Street/Riverside Avenue

- Develop left turn lanes at existing public street intersections (Pine Street, Linden Street, and Chestnut Street) along Jefferson Street by eliminating parking and re-striping the existing pavement. As additional off-street parking is provided, remove the existing on-street parking and replace with bike lanes.
- Upgrade Willow and Linden Streets to Collector Street Standards, and Lincoln Avenue to Arterial Street Standards as indicated in the City’s *Master Street Plan* to provide a more attractive alternate local route to using Jefferson Street.
- Construct a second left turn lane for southeast and northwest bound directions of travel along Riverside Avenue at Mulberry Street
- Construct a modified Arterial Street section along the entire length of Riverside Avenue with landscaped medians and openings for inbound left turns at some public streets.
- Restrict access with Riverside Avenue to $\frac{3}{4}$ movements (right-in, right-out, left-in) at Oak and Magnolia Streets. Full vehicle movements would remain at Olive Street.
- Eliminate access with Riverside Avenue via a cul-de-sac at Smith Street.

- Restrict access with Riverside Avenue to only inbound right turns at Whedbee and Stover Streets.
- Restrict access with Riverside Avenue to right-in, right-out (RIRO) movements at Cowan Street
- Public alleys and commercial properties would be restricted to RIRO movements except R&B Food and Gas, where only right-in movements would be permitted.

Mulberry Street

- Construct dual left turn lanes for both directions of travel on Mulberry Street at the Lemay Avenue and Timberline Road intersections.
- Relocate the frontage road intersections along both the north and south sides of Mulberry Street to a minimum of 150 feet from the state highway.
- Restrict access to $\frac{3}{4}$ movement at approximately 375 feet to the east of Lemay Avenue (12th Street), approximately midpoint between Airpark Drive and Timberline Road (includes a new access to Lincoln Avenue), and Summit View Drive (ultimately a RIRO).
- Restrict access at Airpark Drive to $\frac{3}{4}$ movements on the north side of the state highway mainline and close access to the frontage road on the south side of the state highway mainline.
- Close the Dawn Drive access with state highway mainline.
- Install new traffic signals at Greenfields Court (expected completion date: Spring, 2000) and at the re-constructed Stockton Avenue/John Deere Road intersection when appropriate MUTCD traffic signalization warrants are met.
- Replace the existing bridge over the Cache La Poudre River between Riverside Avenue and Lemay Avenue to accommodate additional lanes on SH 14 (when necessary).
- Provide a public street connection to the west side of Timberline Road approximately 475 feet to the south of Mulberry Street, thereby converting the existing “T” intersection to a four-legged intersection and providing rear access to the properties along the south side of Mulberry Street.
- Provide a grade-separated pedestrian crossing near the Canal Drive and Centro Way intersections.
- Ultimately reconstruct the I-25 interchange area to convert the interchange from cloverleaf design to a diamond interchange.
- Develop a six-lane roadway along Mulberry Street to meet the City’s *Master Street Plan* recommendation, including bike lanes and sidewalk along the frontage roads.

11. Fort Collins Truck Bypass Project: CSU Engineering Senior Design Project

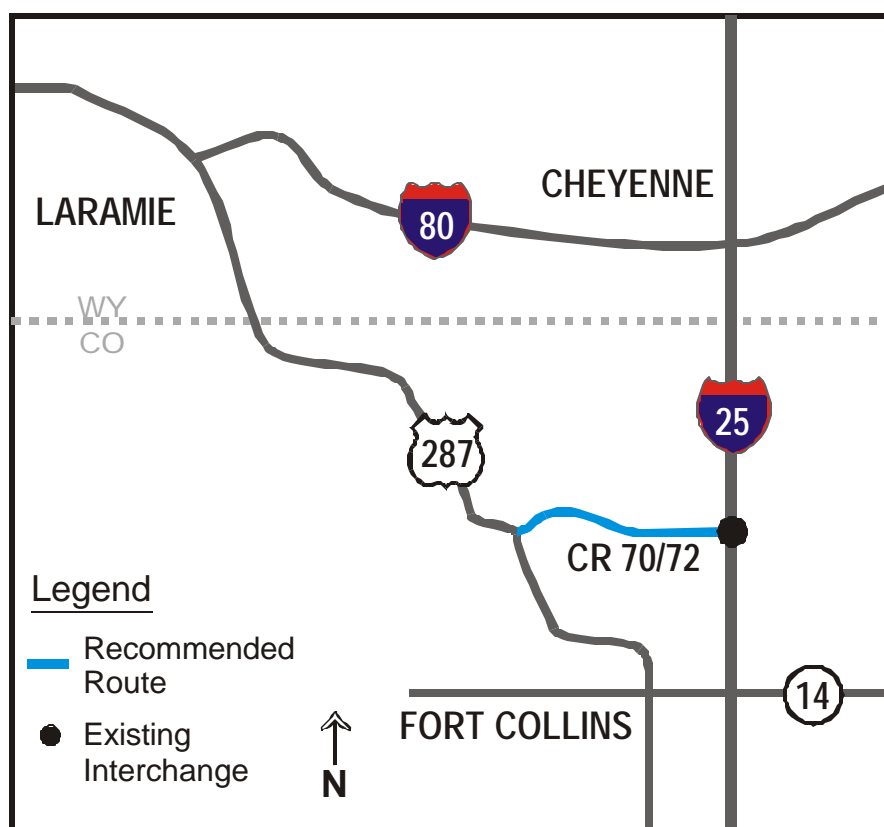
A cursory feasibility study was completed by Colorado State University (CSU) Senior Engineering students on potential truck route alternatives in the County Road 70/Owl Canyon Road area. The group focused on this area as opposed to County Road 58 options because County Road 70 would affect fewer residences and also meets I25 at an existing interchange. The students examined existing traffic counts on County Road 70 and US 287 north of LaPorte. From these counts they did a simple extrapolation to arrive at estimates of future (2020) traffic for both regular passenger vehicles as well as heavy trucks.

The students estimated likely roadway design and pavement thicknesses necessary to handle these anticipated volumes. The group recommended the construction of a two-lane roadway, comprised of two twelve-foot travel lanes with a ten-foot shoulder on each side, for a total paved width of 44 feet. They estimated an additional 24 feet of right-of-way would be necessary to construct the truck bypass. An additional 20 feet would be required on each side of the road as a clear zone. This results in a total required width of 84 feet.

The group noted several issues that would need consideration before construction of a County Road 70 bypass route, including interchange improvements on I-25, a grade-separated railroad crossing, numerous bridge and culvert crossings, and potentially significant environmental and social environmental impacts. They were in agreement that an Environmental Impact Statement process would likely be necessary for such an undertaking.

Two potential alignments were examined in the County Road 70 area. The first utilized a route over Horsethief Pass in order to save vehicles extra mileage. Topographical and gradient constraints made this option very costly with significant potential environmental impacts. The group opted instead to focus on a route further north, closer to the existing County Road 72. A schematic of the proposed alignment is shown in Figure 8. Final project cost estimates for this alignment ranged from \$50.7 million dollars for a concrete alternative to \$28 million for an asphalt roadway.

Figure 8
Fort Collins Truck Bypass Project
Recommended Alignment

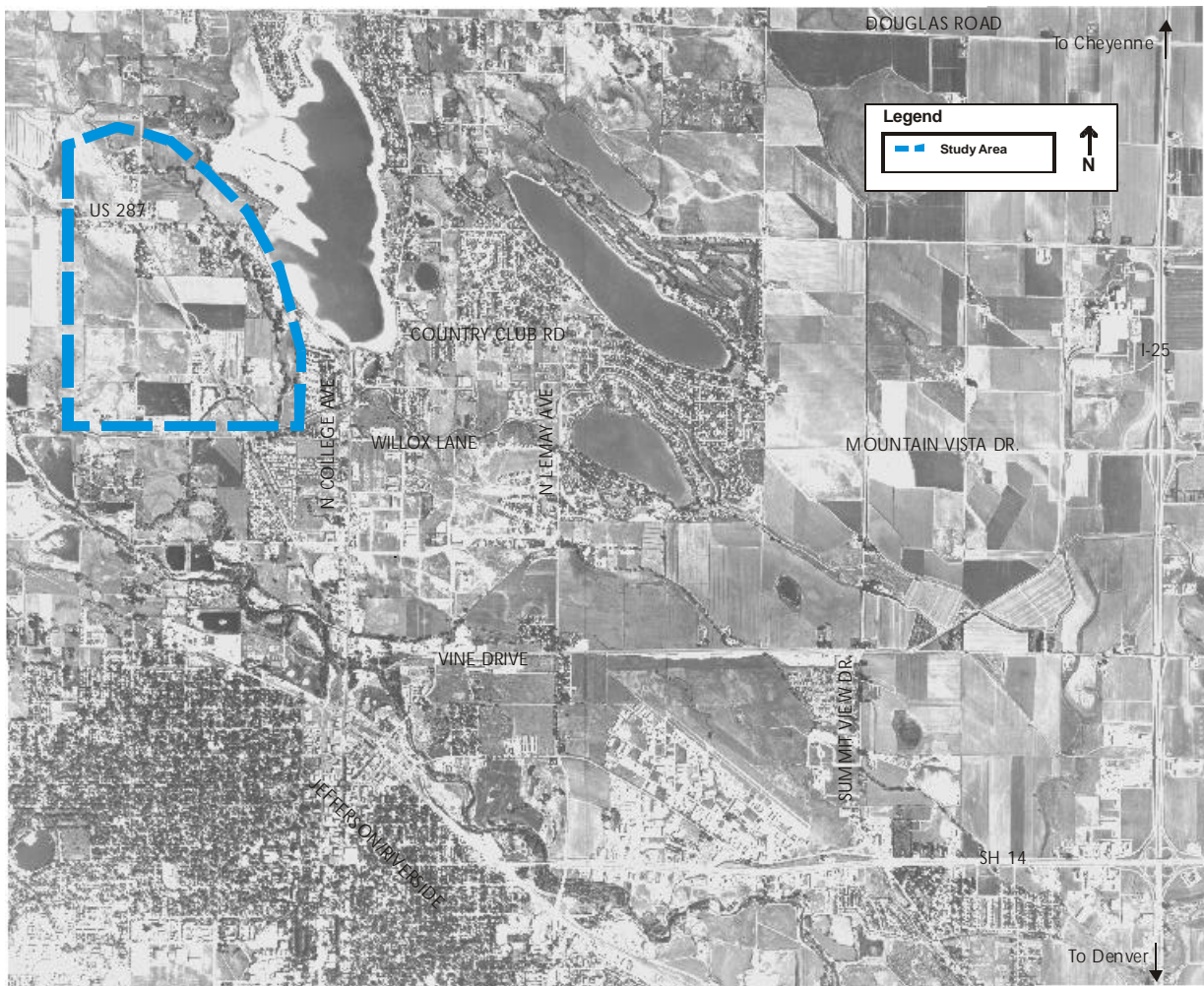


The students concluded that the recommended County Road 70 alignment is worthy of further study as it fulfilled the criteria set forth in Ballot Initiative 200, and would save truckers time and money by avoiding 15 traffic lights encountered along the existing SH 14/US 287 route. They cautioned labeling this route as the “best” alternative, since it was the only route examined. They urged the City of Fort Collins to do further study to select the most appropriate truck bypass route.

12. US 287 from SH1 to LaPorte Bypass Environmental Assessment

While not a study specifically addressing truck issues, the Colorado Department of Transportation (CDOT) has been conducting an Environmental Assessment (EA) to investigate alternatives that would improve mobility and safety on the approximately 2-mile stretch of US 287 between SH 1 and the LaPorte Bypass. The study area is shown in Figure 9. Through scoping and alternatives analysis, three alternatives, in addition to the No Action Alternative, have been carried forward into environmental analysis. The environmental analysis is expected to be completed this fall and a Finding of No significant Impact (FONSI) should be released in Spring 2001. For more information, visit the project Web site at www.us287-north-of-fort-collins.com.

Figure 9
US 287 from SH1 to LaPorte Bypass
Study Area



13. Northern Colorado Truck Mobility/SH 14 Relocation Study

The Northern Colorado Truck Mobility/SH 14 Relocation Study is a result of Ballot Initiative 200 that was passed in November 1999. The ballot initiative identifies the three distinct work elements that will be addressed in this study. They include:

Non-Route Based Strategies

Developing strategies to encourage through truck traffic to use the existing Interstate System (I-25 and I-80). Recommendations may include marketing strategies, action plans, and comprehensive involvement with the trucking industry.

Alternate Routes

Determining an alternate truck route two miles north of the City of Fort Collins Growth Management Area (GMA). The northern boundary of the GMA is currently located at Douglas Road. The southernmost alternate route that can be considered as part of the study is County Road 58. The limits of the alternate route evaluation are shown in Figure 10.

Funding and Implementation

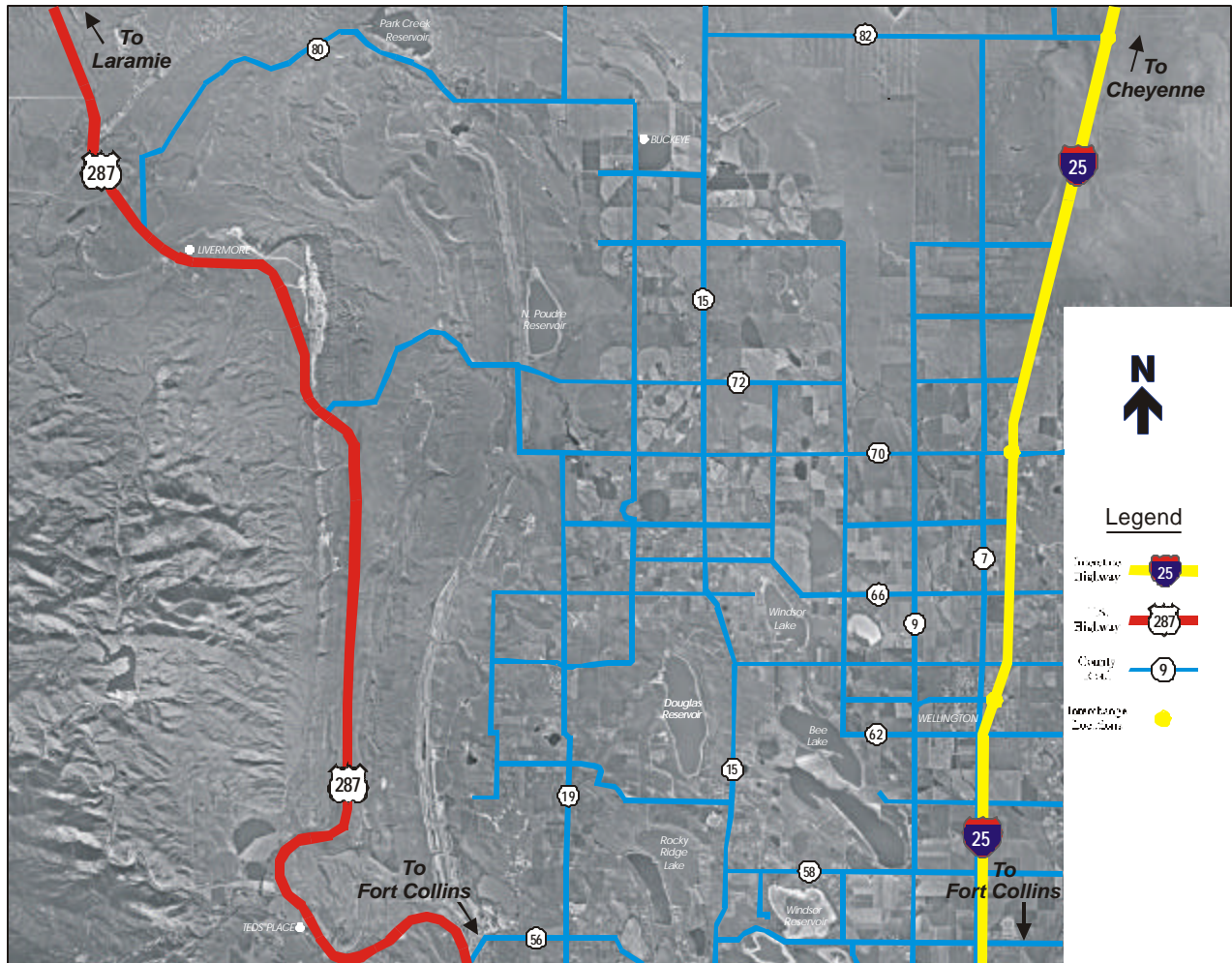
Develop a funding plan for study recommendations and evaluate next steps that need to be taken. Funding may include a combination of regional, state, Federal, and innovative sources.

The overall objectives of the Northern Colorado Truck Mobility/SH 14 Relocation Study are to:

- Balance trucking industry needs with the long-term growth and development of the region.
- Develop solutions through a fair and open process.
- Provide collaborative stakeholder and agency involvement to develop and support study goals and recommendations.

The study is scheduled to be completed in November 2001. For more information, visit the project Web site at www.sh14truckingstudy.com.

Figure 10
Northern Colorado Truck Mobility/SH 14 Relocation Study
Alternate Route Study Area



Note: Douglas Road is the limit of the GMA; therefore, CR 58 is the southernmost eligible alternate route.