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S.O EXECUTIVE SUMMARY

The Northern Colorado Truck Mobility Study Non-Route-Based Strategies (NRBSs) is an effort to fulfill the goals of Ballot Initiative 200, passed by Fort Collins voters in November 1999. Phase I, which studied both NRBSs and route alternative strategies, was concluded in December 2001, with recommendations that additional evaluations be directed at NRBSs. Phase II of the Northern Colorado Truck Mobility Study moved forward with these recommendations and investigated these strategies as possible techniques for implementation by the City.

To realize the intent of Ballot Initiative 200, Phase II was designed to:

- Encourage all non-local, through truck traffic to use the Interstate route
- Minimize the impact of the SH 14/US 287 truck route on Fort Collins area businesses, neighborhoods, and residents
- Determine the feasibility and potential sustainability of various NRBSs

Public/Agency/Industry Involvement. The NRBSs were evaluated based on extensive independent research and direct interaction and cooperation with the trucking/shipping industry and representatives from local, county, state, and federal enforcement and regulatory agencies. The project team conducted two workshops, held a focus group, met with a Marketing Advisory Committee, and sought input from members of the prior Triangle Project. These outreach efforts provided significant insight into the perspectives of the trucking industry and assessed each strategy to ascertain whether to recommend each for implementation.

Traffic Studies. Traffic studies were conducted to determine the level of commercial truck traffic in the subject corridors and to update the analysis conducted for the 2001 Phase I effort. Both a license plate survey and vehicle classification count were conducted to identify the numbers and types of trucks using each route, the numbers of non-stop through truck trips, and the average travel time for each route. These results are consistent with the Phase I traffic study results.

Existing Conditions. The SH 14/US 287 route and the interstate route were compared based on route profiles, mileage and travel times, road closures, accident rates, average daily traffic, locations of weigh stations, speed limits, and weather. Each route defines different truck mobility challenges and opportunities. Based on a general review of the existing condition of the corridors, it is understandable why many regional truck route planners and drivers prefer the SH 14/US 287 route.

Revisiting Phase I Recommendations. The original NRBSs recommended in the Phase I Study were reconsidered based on changes in the trucking industry and related local, state, and federal laws. Also, additional NRBSs were discussed within the project team for consideration in Phase II. All previously discarded strategies were again dismissed, and some additional strategies were added for consideration.

Strategy Screening and Elimination. Nineteen NRBSs were put through two levels of screening. The first screening for unrealistic strategies was intended to eliminate those strategies that could not be realistically implemented. This screening level considered each strategy based on:

- Ease of implementation
- Effect on route choice
- Feasibility
- Sustainability of the implementation and effect
- Potential impacts to local commerce, including effects on automobile route choice

The first screening of unrealistic strategies eliminated 13 strategies, leaving only marketing strategies for the second level. The second screening was an assessment by experienced marketing professionals, who considered feedback from the outreach activities.

**Table S-1
Screening Results**

	Selected	Eliminated
Physical Strategies		
Variable/Dynamic Message Signs		X
Corridor Amenities		X
Guide Sign Modification		X
Regulatory/Enforcement Strategies		
Compression Brake Law		X
Restrictions		X
Marketing Strategies		
Articles in Publications (and Public Relations)	X	
Billboards	X	
Brochures/Direct Mail	X	
Website Development/ CDOT website: Cotrip.org	X	
Highway Advisory Radio		X
Incentive Program		X
Internet Advertising		X
Kiosks at Truck Stops		X
Map Routes		X
Paycheck Mailers		X
Radio Ads	X	
Safety Meeting Reminders	X	
Trade Publication Advertising		X
Informational CD-ROM/DVD		X

Potential for Change. The number of trucks that could potentially be affected by the strategies was estimated based on current and previous studies. Results of relevant studies concluded that about 1,800 commercial trucks travel within the City of Fort Collins daily (along SH 14) and approximately 1,100 trucks travel the entire corridor (SH 14/US 287) daily. Of those trucks, approximately 600 are non-stop through trucks traveling between Laramie and Fort Collins. Also, about 190 of the trucks that travel the entire corridor are long haul through trucks traveling well beyond Fort Collins and Laramie. Based on standard marketing expectations, it was determined that if the non-route-based marketing strategies are successful, it is anticipated that they will effect a change in route choice of about 20 to 120 commercial trucks (out of 1,800 trucks on SH 14 within Fort Collins) daily. These strategies may potentially remove as many as 43,800 through truck trips a year from SH 14 and US 287.

Potential Impacts on Implementation. Another consideration related to successfully re-routing long haul trucks to the Interstate route is other planned and recently completed projects along the target corridors. It is not certain whether these projects will significantly affect commercial truck route choice; however, these projects do have that potential and could influence the results of the NRBS implementation. The evaluation of marketing techniques to relocate truck traffic must attempt to account for the impact of these outside projects.

Selected Strategies. Marketing strategies were selected as the most effective and feasible strategies for implementation and successful routing of commercial trucks to the Interstate route.

The selected techniques would be used in various ways, targeting different groups. The primary audience is long haul truck drivers, both independent owner/operators and those who drive for large trucking companies or corporate shippers. The secondary audience includes local and regional independent and company/corporate drivers, and dispatchers and management for all types of trucking/shipping organizations.

The messages would include information on the benefits of the Interstate route, as well as the restrictions in place on the SH 14/US 287 route. Some of this information will likely be contrary to existing perceptions by truck drivers or route planners. Messaging would emphasize:

- Safety on the Interstate route (safer than on SH 14/US 287)
- Ease of use of the Interstate route for through trucks, including consistent, high speeds
- Existing amenities on the Interstate route (parking, showers, food, and cheaper fuel)
- Noise ordinances in place on SH 14

Implementation Recommendations. Marketing strategies would be implemented in a one-year program. To achieve optimum results, a mix of media would be appropriate. Marketing techniques would be used differently for various messages on the benefits of the Interstate route, to focus some of these specific messages on targeted audiences.

- The **brochure** will reach long-haul and regional drivers through distribution in stop areas such as kiosks, weigh stations, and information facilities as well as direct mail distribution.
- **Billboards** will target all drivers along the corridor and are expected to affect route choice, primarily for long-haul drivers.

- **Media relations** will be used to reach local and regional, and possibly long haul, truck drivers and route planners.
- **Radio advertising** on syndicated shows will reach long haul and regional drivers, with an anticipated larger impact on long haul travelers.
- **Safety meeting presentations** will be excellent forums to reach regional drivers, route planners, and management.
- A **website** will reach regional drivers and provide them with information about safety and weather conditions on the routes.

Implementation Budget. The budget for implementation of the one-year program is \$211,000. Costs that could exceed \$200,000 would also be incurred to manage the program and conduct the evaluation. The evaluation will assess the success of the strategies and determine their effectiveness in redirecting truck traffic. Phase II will continue with the implementation and evaluation of the recommended strategies, and is anticipated to conclude in 18 months.



1.0 INTRODUCTION

The citizens of the City of Fort Collins has struggled with truck traffic along State Highway (SH) 14, or Mulberry Avenue, adjacent to Old Town Fort Collins for over 35 years. Many studies have been conducted in an ongoing effort to provide a feasible alternative that would allow through truck traffic to reach Laramie and/or Denver with minimal impact on Fort Collins and the community. Through truck traffic includes those commercial trucks that do not have destinations or stops along the SH 14/US 287 corridor.

Phase I of this study, the Northern Colorado Truck Mobility/SH 14 Relocation Study, stemmed from Ballot Initiative 200, passed by the Fort Collins voters in November 1999. This study identified, evaluated, screened, and recommended many Non-Route-Based Strategies (NRBSs). Phase I was concluded in December 2001, with recommendations that additional evaluations be directed at NRBSs. Phase II of the Northern Colorado Truck Mobility Study moves forward with these recommendations and investigates these strategies as possible techniques for implementation by the City.

1.1 STUDY GOALS AND OBJECTIVES

In moving forward with the recommendations of Phase I, Phase II identifies strategies that will encourage through truck traffic to relocate from the SH 14/US 287 corridor to the I-25/I-80 corridor when traveling between Fort Collins, Colorado and Laramie, Wyoming. From the project goals, evaluation goals, objectives, measures, and methodologies are developed to validate the intended impact of each of the strategies. Evaluation goals, objectives, measures, and methodologies are described in further detail in Section 6.3. The project goals include:

Project Goals

- Encourage all non-local, through truck traffic to use the Interstate route
- Minimize the impact of the SH 14/US 287 truck route on Fort Collins area businesses, neighborhoods, and residents
- Determine the feasibility and potential sustainability of various NRBS

These goals are consistent with goals mandated by Ballot Initiative 200.

1.2 BACKGROUND

The issue of truck traffic in Fort Collins has spawned many studies. Various solutions and alternatives for long haul truck traffic through the region have been presented throughout the years amid much controversy. Detailed information regarding past truck and corridor planning studies are contained in the *History of Fort Collins Truck Route and Bypass Planning Efforts, 1966 to Present*, City of Fort Collins, January 2001, and the *Northern Colorado Truck Mobility/SH 14 Relocation Study*, PBS&J, December 2001. Other studies conducted over the past 35 years related to this issue include:

- *Fort Collins Expressway Final Environmental Statement*, Federal Highway Administration and Colorado Division of Highways, 1977
- *The Fort Collins Parkway*, TransPlan Associates, Inc., 1980

Phase II: Non-Route-Based Strategies

- *The City of Fort Collins Northeast Transportation Study*, TransPlan Associates, Inc., 1985
- *Northeast Area Transportation Study*, HNTB, 1992
- *US 287/SH 14 Access Control Plan*, City of Fort Collins, 1994
- *US 287/SH 14 Corridor Improvement Plan*, EDAW, Inc., 1994
- *Fort Collins Truck Issues Final Report*, URS Consultants, Inc., 1995
- *Triangle Project*, Colorado Department of Transportation, 1996
- *Fort Collins Northeast Truck Route Feasibility Study*, Colorado State University Engineering Senior Design Project, 1998
- *Northeast Fort Collins Truck Route Project*, Balloffet & Associates, Inc., 1999
- Ballot Initiative 200, November 1999
- *US 287/SH 14 Access Management Plan*, Felsburg, Holt, & Ullevig; Balloffet & Associates, Inc.; Albertson Clark Associates, 2000
- *Fort Collins Truck Bypass Project*, Colorado State University Engineering Senior Design Project, 2000
- *US 287 from SH 1 to LaPorte Bypass Environmental Assessment*, J.F. Sato & Associates (pending)
- *Northern Colorado Truck Mobility/SH 14 Relocation Study*, PBS&J, December 2001

Because this issue has been evaluated from so many perspectives dating back to the 1960's, a variety of solutions have been developed, including both alternate routes and NRBSs. Many of these ideas were dismissed for a variety of reasons and some were recommended but never implemented. The following sections detail the previous studies and efforts that looked at or developed strategies to encourage through truck traffic use the existing Interstate system (I-25 and I-80 route).

1.2.1 Triangle Project

Sponsored by the Colorado Department of Transportation (CDOT), the Triangle Project proposed a public/private partnership utilizing Intelligent Transportation System (ITS) technology to encourage long haul truck traffic to use the Interstate instead of US 287 and SH 14. The idea was to develop incentive-based strategies to encourage the use of the Interstate. Some of the strategies include: Port of Entry (POE) automation, truck and traveler advisories through Variable Message Signs (VMS), fleet management strategies, and a truck weight and speed monitoring system. Subsequent to the Triangle project, POE automation has been implemented in the form of PrePass and several VMS are in place on both corridors.

1.2.2 Ballot Initiative 200

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. The initiative mandated that any future efforts only look at alternate routes located a minimum of 2 miles north of the current urban growth area boundary. It also called for the City to examine strategies to encourage through truck traffic to utilize the existing Interstate system, rather than the existing SH 14/US 287 route. The complete text of Ballot Initiative 200 is in Appendix A.

*Phase II: Non-Route-Based Strategies***1.2.3 Northern Colorado Truck Mobility/SH 14 Relocation Study**

Ballot Initiative 200 initiated the most recent study on the issue, the Northern Colorado Truck Mobility/SH 14 Relocation Study (Phase I). As specified in the initiative, this project performed the following tasks:

- Studied, planned, and developed strategies to encourage through truck traffic to use the existing Interstate system (I-25 and I-80 route). Recommendations were developed with comprehensive involvement from the trucking industry and included strategies such as marketing action plans and other technological approaches.
- Analyzed, planned, and developed possible alignments for the relocation of SH 14 to a location at least 2 miles north of the City of Fort Collins Growth Management Area (GMA). Based on the ballot initiative, this new alternate route would be redesignated as SH 14, removing the state highway designation from the existing SH 14 route and reverting it back to Mulberry Street under the City's jurisdiction. The southernmost alternate route that was considered as part of the study was County Road (CR) 58.
- Researched and identified potential funding sources, strategies, mechanisms, and issues for study recommendations and determining the next steps required. Potential funding sources included a combination of local, regional, state, Federal, and private types.

The recommendations of Phase I included elements dealing with NRBSs, alternate routes, and funding. These recommendations were as follows:

NRBS Recommendations. The range of recommendations included communicating the benefits of using the Interstate over the existing route, additional studies to reduce congestion in the downtown area, a workshop with local law enforcement, continuation of regulatory enforcement procedures, and future considerations. The NRBS recommendations included:

- **Marketing committee.** Develop a marketing committee to create messages highlighting the benefits of using the Interstate
- **Downtown truck operation study.** Conduct a study to address local and regional truck traffic to reduce congestion in the downtown area
- **Incident management study.** Conduct an incident management study to address how traffic is handled when US 287, I-25, and/or I-80 are closed during adverse weather conditions or other incidents
- **Compression brake workshop.** Conduct a workshop with local law enforcement regarding the existing compression brake law
- **Potential future redesignation.** Assess the potential for future redesignation of SH 14 if a reasonable new alternate route is constructed
- **Continued regulatory enforcement.** Continue enforcement of speed limits, random mobile weigh station inspections, and enforcement of the five-mile radius requirement for trucks to clear the POE
- **Measure of effectiveness.** Establish a mechanism to measure the effects that the NRBSs have on moving truck traffic to the Interstate

Alternate Route Recommendations. Based on the results of the screening process and funding investigation, there were some specific aspects considered for the alternate route

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recommendations. When the study began, the intent was to identify a single alternate route within the study area. To achieve that goal, an extensive evaluation of potential alternate routes was conducted to a greater level of detail than a typical feasibility study. Following the comparative screening analysis, five alternate routes remained with various advantages and disadvantages associated with them. A more detailed level of analysis is required to assess the significance of the various pros and cons. Given the likely need for funding with a Federal source and the issues with relocating a state highway, an environmental analysis based on National Environmental Policy Act (NEPA) is required.

Under the NEPA analysis, all reasonable alternatives, in addition to the five alternatives identified in the Phase I study, must be considered. These alternatives include a no-action alternative, improvements to the existing route, and potential routes south of the CR 58 boundary requirements of the study. There was also an existing conflict between the language of Ballot Initiative 200 and the requirements of NEPA that would need to be addressed by the City of Fort Collins. The NEPA requirements state that all reasonable alternatives be considered and Ballot Initiative 200 precludes the City of Fort Collins from looking at alternatives south of CR 58. There have been past cases where the conflict with local and Federal laws have not excluded certain alternatives, those south of CR 58, from evaluation under NEPA. Given these issues, either the ballot initiative would need to be amended or another agency would have to fund the study. NEPA studies for state highway improvements are typically managed by CDOT.

Funding Recommendations. A variety of issues exist with any of the funding mechanisms that were researched as part of the study. In general, the largest issue is the lack of readily available funds that have not been committed to other regional priorities or local needs. Given the recent downturn in the economy and various international issues, the availability of funding dollars is extremely limited.

- **NRBSs.** Funding options for the NRBSs require a local source based on the nature of the issue that is being addressed. Based on Ballot Initiative 200, the remaining resources in the Building Community Choices (BCC) program are available to use for the implementation of NRBSs.
- **Alternate Routes.** Funding options for the alternate routes are much more complicated. Larimer County and City of Fort Collins funds are already committed to existing priorities, so a new source of funding, most likely new taxes, would be required.

On December 18, 2001, the Fort Collins City Council approved a resolution to accept the findings of the Phase I Study and also instructed City staff to pursue implementation of the NRBSs. The resolution also directed the City Manager to meet no less than yearly with County officials to try to identify the most feasible route of the remaining alternatives that could then be recommended to CDOT.

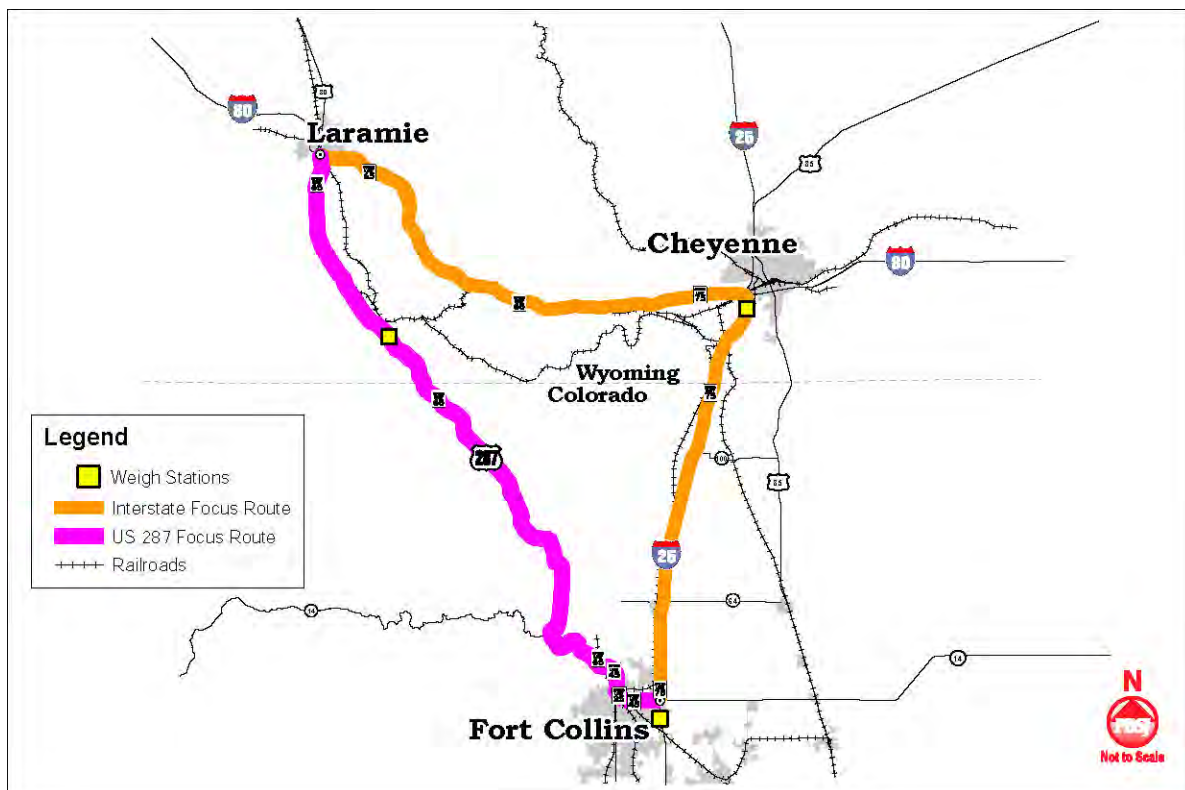
Phase I identified, evaluated, screened, and recommended many NRBSs. This phase of the project, Phase II: NRBSs, will build on the previous results and carry forward the recommendations that were adopted.

2.0 EXISTING CONDITIONS

The existing truck route through the City of Fort Collins (US 287 Route) extends along SH 14 (Mulberry Street) from I-25 to Riverside Avenue/Jefferson Street. The route then follows Riverside Avenue/Jefferson Street northwest to College Avenue. The route continues north along College Avenue (also US 287) to SH 1. Once north of SH 1 (just north of the City of Fort Collins city limit), the route follows US 287 to Laramie, Wyoming.

The Interstate system truck route starts on I-25 south and east of Fort Collins. The route extends along I-25 north to I-80 in Cheyenne, Wyoming. The route then follows I-80 west into Laramie, Wyoming. Figure 2-1 shows the regional area and the subject routes.

Figure 2-1
Base Map of SH 14/US 287 and Interstate Routes



2.1 ROUTE COMPARISONS

Both of the different routes have been compared based on route profiles, mileage and travel times, road closures, accident rates, average daily traffic, locations of weigh stations, speed limits, and typical weather. Each route creates different challenges and opportunities when dealing with truck mobility.

*Phase II: Non-Route-Based Strategies***2.1.1 Route Profiles**

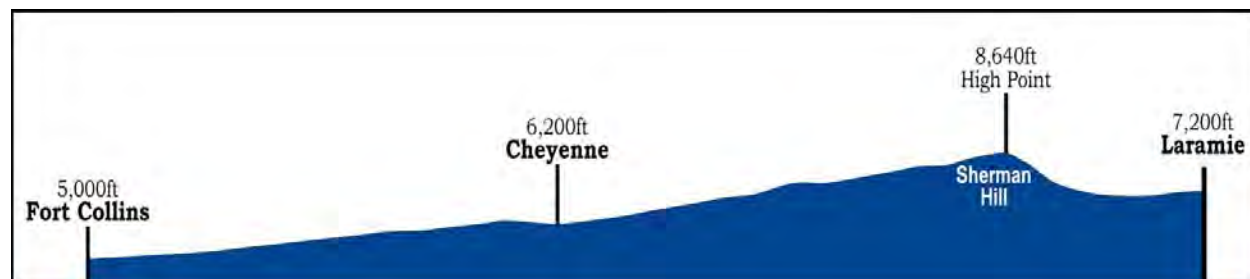
A comparison was performed to show the elevation changes or profiles of the two routes. Traveling north by northwest from Fort Collins, US 287 is a 2-lane road that gradually ascends to the summit at Pumpkin Vine Hill at 8,106 feet just north of the Colorado/Wyoming border as seen in Figure 2-2. There are several climbing lanes on US 287 at various locations. From there the route descends gradually along rolling hills into Laramie.

Figure 2-2
Profile of SH 14/ US 287 - Fort Collins to Laramie



Traveling north from Fort Collins, Colorado, I-25 remains relatively flat through the Front Range Prairie and farm lands up to Cheyenne, Wyoming. Merging onto I-80 and traveling west from Cheyenne, the roadway begins a gradual ascent to I-80's summit at the top of Sherman Hill, elevation 8,640. The roadway descends rapidly from the top of Sherman Hill into Laramie through Telephone Canyon, as seen in Figure 2-3. On this stretch of I-80, eastbound lanes have a third climbing lane for slow-moving uphill traffic. Eastbound I-80 through Telephone Canyon has a paved width of 48 feet, encompassing the three 12-foot travel lanes, an 8-foot outside shoulder, and a 4-foot inside shoulder. The westbound section measures 38 feet (two 12-foot lanes, 10-foot outside shoulder, and a 4-foot inside shoulder).

Figure 2-3
Profile of Interstate Route - Fort Collins to Laramie



2.1.2 Mileage and Travel Times

An analysis of the mileage and associated travel time of the routes was performed. Distances were determined for each corridor from the SH 14 exit on I-25 in Fort Collins to the US 287 exit on I-80 in Laramie. There is a 17 mile difference between the routes, as follows:

- SH 14/US 287 Route – 69 Miles
- Interstate Route – 86 Miles

The associated travel time for truck traffic along each corridor was also collected from a license plate survey performed in May of 2004. The license plate survey was performed from 8:00 A.M. to 4:30 P.M. during a typical work week. The average travel times are noted below:

- SH 14/US 287 Route – 1 hour and 20 minutes
- Interstate Route – 1 hour and 30 minutes

This demonstrates that on average there is only a 10-minute time savings associated with the SH 14/US 287 route. Travel time savings by taking the SH 14/US 287 corridor may be reduced during the peak hours due to the influx of traffic within the Fort Collins city limits, resulting in additional delay on that route.

2.1.3 Road Closures

Another factor in time savings is how often each corridor is closed due to an event such as an accident, weather, or road construction. Based on the review of road closure information for 2002-2003 for each corridor, the I-25/I-80 corridor had 261 hours of road closures over two years (1.5 percent of an average year the road is closed). The SH 14/US 287 corridor had 146 hours of road closures over two years (0.8 percent of an average year the road is closed). This results in a difference of 115 hours over two years, or 58 hours per year. The results show that the I-25/I-80 corridor would be closed approximately twice as much as the US 287 corridor.

2.1.4 Accident Rates

Accident information through 2001 was analyzed. Table 2-1 shows the annual average number of accidents for the different routes. This data is primarily for the years 1999 – 2001, unless otherwise noted.

Table 2-1
Annual Average Number of Accidents

Route	Accident Type			
	Property Damage Only	Injury	Fatality	Total
US 287¹	220	110	4	334
Interstate: I-25	147	81	3	231
Interstate: I-80² (MP 325-335)	N/A	N/A	N/A	138

¹ The Wyoming portion of US 287 Accident Data is an average of the time period 1-1-90 through 10-31-2001

² The I-80 Accident Data is an average of the time period 1-1996 through 08-2001

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According to the *U.S. 287 Corridor Study, Laramie, Wyoming to the Colorado State Line, July 2002*, the Wyoming portion of US 287 has a lower accident rate than other similar facilities in Wyoming; however, in the event that a vehicle is involved in an accident the chances of a fatality are much higher than on other similar facilities.

Considering that the Interstate route has approximately three to four times higher traffic volumes than the SH 14/US 287 route, the number of accidents on SH 14/US 287 represents a much higher accident rate. It can be concluded that the Interstate route is a much safer choice, by a factor of at least three.

2.1.5 Average Daily Traffic (ADT)

Traffic count information was obtained from several sources. Several previous studies collected traffic data, including the Phase I Study. Data was also obtained from CDOT and the Wyoming Department of Transportation (WYDOT) for years 1999, 2000, and 2001.

Average Annual Daily Traffic (AADT) includes:

- **US 287 Route**
AADT volume along US 287 ranges from 13,555 (1,084 trucks) in the City of Fort Collins to 3,683 (550 trucks) near the border of Colorado and Wyoming, and 4,000 (558 trucks) between Laramie and the Colorado/Wyoming border.
- **Interstate Route**
AADT volume on I-25 ranges from 19,540 (2,599 trucks) at the SH 14/I-25 interchange in Fort Collins to 13,458 (1,346 trucks) at the Colorado/Wyoming border and continuing up to Cheyenne with 16,651 (1,700 trucks). AADTs along I-80 remain consistent with approximately 12,000 vehicles (5,400 trucks) traveling between Laramie and Cheyenne.

2.1.6 Weigh Stations/Port of Entry

Both routes have designated POEs. Truck drivers are required to pass through the POEs and can not avoid the weigh stations. The POEs ensure that all local, regional, and through trucks are being adequately monitored for weight and safety violations. All trucks traveling within a 5-mile radius of the POE are required by law to pass through. POEs are found at the following locations:

- US 287 Route - Located on US 287 in Laramie, Wyoming, south of I-80
- Interstate Route – Wyoming Station located on I-25 (6 miles north of the Colorado State Line), and the Colorado Station located on I-25 south of SH-14

The Interstate POEs are equipped with the Pre-Pass system, however, the US 287 POE in Wyoming is not. The POE near Fort Collins has one of the highest Pre-pass usage rates in the state. The POEs can sometimes be a deterrent to trucks who may be overweight or who have time restrictions.

2.1.7 Speed Limits

Speed limits vary on the different routes. On SH 14/US 287 within the limits of Fort Collins, the speed limit ranges from 25 miles per hour (mph) to 45 mph, though on the majority of the

Phase II: Non-Route-Based Strategies

US 287 route, the speed limit is posted at 65 mph. On the Interstate route, the speed limit is 75 mph on I-25 and the majority of I-80. The portions of I-80 over Sherman Hill and through the narrow Telephone Canyon have a speed limit of 65 mph.

2.1.8 Weather

A Safety Improvement Study was completed in July 2002 by WYDOT for the I-80 corridor from the mile marker 325-335. Two VMSs are currently in place on I-80 to aid with severe weather. Table 2-2 shows the combined total amount of hours each route was closed due to weather for the years 2002 and 2003.

Table 2-2
Total Route Closure Time
(Years 2002 and 2003)

Route	Total Closure Time (Hours) Year 2002-2003 Combined
US 287	
US 287 NB	63
US 287 SB	78
Total	141
Interstate	
I-25 NB	48
I-25 SB	53
I-80 EB	79
I-80 WB	70
Total	250
Difference	109

2.1.9 Other Projects

Another issue that may impact route decisions include other planned and recently completed construction efforts on the corridors. A road improvement project planned for I-25 from the Colorado/Wyoming state line to Cheyenne. This project is scheduled to begin in 2005 or 2006 and last three years. A road improvement project is also anticipated for the northern portion of US 287 in Wyoming. These construction activities may temporarily create delays and road conditions that could affect truck route choice. Following the improvements, the roads may have different attributes that also affect route choice. Another project of note that may have an immediate impact on truck route choice is the recently completed Jefferson/Riverside/North College upgrades within Fort Collins.

2.2 TRAFFIC STUDIES

Traffic studies were conducted to determine the level of commercial truck traffic in the subject corridors and were intended to update analysis conducted for the 2001 Phase I effort. Both a license plate survey and vehicle classification count were conducted in order to identify number of trucks taking each route, the average travel time for each route, and confirm the axle classification of each vehicle.

2.2.1 License Plate Survey

In the license plate survey, video surveillance was used to document the license plate numbers of trucks at three locations along the I-25, US 287, and I-80 corridors. The survey was conducted May 25, 2004 from 8:00 a.m. to 4:30 p.m. by All Traffic Data Services, Inc. Due to foggy weather in the early morning hours, the video surveillance data was only accurate after 8:00 a.m. As noted earlier, the surveys were conducted in three locations in both directions; along I-25 just south of the I-25/SH 14 interchange and north of the POE along I-25; at the Wyoming POE along US 287, just south of I-80; and along I-80 just east of Laramie, Wyoming at mile marker 317. The video surveillance time stamped each occurrence when a truck passed through each survey location. The survey data was processed to identify matching license plates and determine each respective route and the approximate travel time between survey locations. The results of this study showed that there were approximately half the amount of through trucks when compared with the data collected in the Phase I study, which identified approximately 600 total through commercial vehicles traveling the SH 14/US 287 route daily. The drop in truck traffic could have been due to the weather conditions in the morning hours or differences in truck traffic during the week. Table 2-3 summarizes the number of trucks on each route, travel time for trucks that didn't stop, and number of trucks that took much longer than the average travel time.

Table 2-3
License Plate Survey Summary

Time Periods	SH 14/US 287		I-25/I-80 Route	
	Through Trips	Interrupted Trips	Through Trips	Interrupted Trips
8 A.M. - 5 P.M.	118	14	205	131
5 P.M. - 8 A.M. *	223	26	387	247
Daily Totals	341	40	592	378

**Note - For the hours between 5 p.m. and 8 a.m., the actual values were calculated based on the number of trucks recorded during the vehicle classification counts completed on the same day.*

It should be noted that the results were adjusted slightly due to the video surveillance zone along southbound I-25 not capturing trucks that did not stay in the right lane as posted. It was observed that approximately 40 percent of truck traffic was omitted at this location. Furthermore, the data was not collected for a full 24-hour time period and therefore was extrapolated based on the volumes collected for the vehicle classification counts to obtain an approximate 24-hour time period. Also, due to the foggy conditions during the earlier morning

hours, some truck drivers may have changed their route choice to avoid the fog which might have affected the results. Due to this anomaly, conclusions regarding the number of trucks that typically take each route cannot be made.

2.2.2 Vehicle Classification

The vehicle classification count used traffic count tubes to collect data regarding the number of trucks and respective number of axles on the corridor and verify the accuracy of the license plate survey. The vehicle classification count was also conducted for 24 hours during May 25, 2004, by All Traffic Data Services, Inc. The counts were conducted in two locations in both directions; along SH 14 just west of I-25 and along US 287 just north of Owl Canyon. Table 2-4 summarizes the vehicle classification count for each location, while the actual vehicle classification counts are included within Appendix B.

Table 2-4
Vehicle Classification Summary

Location	Passenger Vehicles		Larger Two-Axle Vehicles ¹		Multiple-Axle Vehicles ²		Larger Two-Axle & Multiple Axle Vehicles		Total
	Average Weekday Volume	Percent of Total	Average Weekday Volume	Percent of Total	Average Weekday Volume	Percent of Total	Average Weekday Volume	Percent of Total	
SH 14 West of I-25 (2000) ³	20,090	84.1%	2,085	8.7%	1,725	7.2%	3,810	15.9%	23,900
SH 14 West of I-25 (2004) ⁴	24,000	87.4%	2,143	7.8%	1,326	4.8%	3,469	12.6%	27,469
US 287 at the Forks at Livermore (2000) ³	4,195	75.6%	320	5.8%	1,035	18.6%	1,355	24.4%	5,550
US 287 at the Forks at Livermore (2004) ⁴	4,490	74.9%	698	11.6%	810	13.5%	1,508	25.1%	5,998

¹ Larger Two-Axle vehicles include buses, delivery trucks, motor homes, and large step vans.

² Multiple-Axle vehicles include all vehicles consisting of two units, of which the pulling unit is a tractor or single unit truck, or a single unit truck with three or more axles.

³ Year 2000 counts have been factored by six percent to reflect summer counts.

⁴ Poor weather conditions during the data collection period may have affected truck route choice.

The percent of trucks on US 287 increased slightly with the total number of vehicles on the road. The number of trucks on SH 14 west of I-25 decreased nine percent between 2000 and 2004, while the total number of vehicles increased approximately fifteen percent for the same time period. The total number of trucks on US 287 increased approximately eleven percent between 2000 and 2004, while the total number of vehicles increased approximately eight percent for the same time period.



3.0 PUBLIC/AGENCY/INDUSTRY INVOLVEMENT

NRBSs were evaluated based on extensive independent research and direct interaction and cooperation with the trucking/shipping industry as well as representatives from local, county, state, and Federal enforcement and regulatory agencies. The project team conducted two workshops, a focus group, and additional individual and group outreach to assist in evaluating the marketing, regulatory/enforcement, and physical strategies.

3.1 TRUCK WORKSHOP #1

The project team conducted a workshop in Fort Collins on May 13, 2004, with eight representatives from the trucking industry as well as staff from CDOT, WYDOT, and Colorado and Wyoming law enforcement agencies. The roundtable discussion generated significant insight into industry operations, particularly such relevant topics as who makes and what drives route decisions. Participants also gave preliminary feedback on the types of marketing strategies and tactics that might be effective in altering truck driver behavior. It should be noted that the general perception of the participants was that the effort to encourage use of the Interstate over the SH 14/US 287 route was going to be extremely difficult. The results of this workshop allowed the project team to focus on those strategies that were the least discouraged by the participants. A list of attendees, meeting exhibits, and participant comments are available in Appendix C.

3.2 FOCUS GROUP

The team conducted additional research and tested specific marketing strategies, messages, and visuals at an industry focus group held in Denver on June 3, 2004. Participants included seven individuals holding various job titles and representing different types of companies within the trucking industry. Among the group were drivers for both a large national grocery chain and a smaller local trucking company, an operations manager, a safety manager, a fleet manager, and a division director for local shippers. None of the participants worked together or knew each other prior to the focus group. None were involved in the prior trucking workshop or briefed on the subject matter ahead of time, though all were recruited because they work for companies that operate in and around the North Front Range area. The focus group responses plainly illustrated the dedication of regional truck route planners and drivers to use of the SH 14/US 287 route over the Interstate route and heightened the awareness of the challenge of convincing any drivers or route planners to use the Interstate route. The discussion also helped identify the target audience for marketing strategies as long haul through truck drivers who have little knowledge of the regional area and alternative routes. The Trucking Industry Discussion Guide and other exhibits used to facilitate the focus group and meeting summary are available in Appendix D.

3.3 MARKETING ADVISORY COMMITTEE

The marketing strategies were shared on June 11, 2004, with the project's Marketing Advisory Committee (MAC), an ad-hoc group of Fort Collins professionals with particular business and marketing experience. Convened to provide a local and non-trucking industry perspective on the marketing approach and its possible impacts on the City, the MAC included local business leaders and representatives from city government as well as the Chamber of Commerce,

Downtown Business Association, Downtown Development Authority, Northeast Business Association, and Northern Colorado Economic Development Corporation. The MAC concurred on the target audience of long haul through truck traffic as the group most likely to be affected by the implementation of marketing strategies. They also noted that the impact to Fort Collins commerce would likely be minimal if trucks used another route, but encouraged that the advertising should focus on truck drivers rather than automobiles. The Chamber of Commerce mentioned that some calls had been received by the Chamber on the truck mobility study progress; subsequently, the project team provided additional information to relay in the event of such inquiries. A MAC Meeting Summary is available in Appendix E.

3.4 TRIANGLE PROJECT PERSPECTIVE

A meeting was held on June 11, 2004, with the project managers and a member of the 1995 Triangle Project, a similar effort in conjunction with Fort Collins to move truck traffic to the Interstate. The Triangle Project, as discussed in Section 1.2.1, focused on implementing ITS technology, such as VMS and weigh-in-motion (PrePass) to encourage truck traffic to use the Interstate route. The June 11 meeting demonstrated that a different perspective existed in the trucking industry on the benefits of the Interstate route; specifically, that the Interstate is the best route. Suggestions and comments from this discussion emphasized marketing the existing benefits of the Interstate route, and attempting to dispel perceptions that were incorrect about the benefits of both corridors. These recommendations were used to continue to refine strategies.

3.5 TRUCK WORKSHOP #2

The refined strategies were discussed on June 16, 2004, in a second workshop that included many of the same participants from the May 13 session. At this session, an exercise was conducted to allow input from all attendees on considerations for each strategy, including who the strategy would reach, how effective it might be at effecting a decision change, and other potential impacts. Continued verbal discussion focused on the strategies that the team had put forward. The responses from the group were consistent with those at previous forums; that the best way to move trucks from the SH 14/US 287 route was to build a bypass in the area.

3.6 PUBLIC/AGENCY/INDUSTRY INVOLVEMENT SUMMARY

The dialogue from the forums and internal research and discussion led to the concepts and strategies presented in this report.

3.7 OTHER INPUT

Phase II focused on the NRBS aspect of this study. At each forum where members of the trucking industry were involved, the focus was on NRBSs; however, the attendees were invited to make recommendations on how to best encourage truck traffic to use an alternate route to Laramie. The most frequent response for moving truck traffic off the route was to create an alternate bypass from I-25 to US 287.

The construction of an alternate route was highly and consistently recommended as the best way to encourage truck drivers who are familiar with the area to stop taking SH 14 on their way to US 287. Industry representatives indicated that they would be willing to pay tolls up to \$5.00

Phase II: Non-Route-Based Strategies

each way to access US 287 from I-25 and avoid the traffic and lower speed limits of SH 14. All regional drivers and route planners familiar with area roads clearly stated that attempts to route drivers to the I-25/I-80 route would have a very insignificant effect on the route choice because of the perceived benefits of higher safety, better driving conditions in all weather, reliability, less fuel consumption due to shorter mileage, and time savings.

Route-based alternatives are not a part of the Phase II study; however, because this issue was continually recommended it may merit further consideration in the future. Route-based alternatives were thoroughly studied in the Phase I study and were also recommended through that study as a valuable and potentially effective approach. One of the key reasons that further consideration of this approach has been limited is the specific language of Ballot Initiative 200. The language of the Ballot Initiative contradicts requirements for Federal funding and approval that would likely be necessary for construction of such a road. Therefore, further consideration of a new bypass route has been suspended.



4.0 SCREENING PROCESS

NRBS considerations for Phase II include physical, regulatory/enforcement, and marketing strategies recommended from Phase I of this study and additional recommendations from project participants. The process for screening the strategies involved a screening for unrealistic options and a comparative screening.

The screening for unrealistic options began with objectively defining each strategy based on screening criteria designed to eliminate those strategies that were not feasible, would have an extremely minimal or negative effect on route choice, or would have a significant and negative potential impact. The screening criteria are defined in Section 4.1. Those strategies that remained following the screening for unrealistic options were then carried forward to the comparative screening.

The comparative screening process involved further evaluation of the strategy by experts in the field that considered comments and perceptions of those representatives of the trucking industry that participated in the project workshop or focus groups. This screening was done by those members of the project team who have experience with the strategy in other applications. For example, those members of the project team experienced in marketing and media relations made determinations on the realistic strategies based on their interpretation of the industry feedback and realistic application.

These combined screening processes allowed those strategies most highly regarded by the trucking industry participants and the project team to be moved forward, while eliminating those that were not realistic and therefore determined unfeasible for implementation.

4.1 SCREENING CRITERIA

The criteria for screening out unrealistic options were selected to eliminate those alternatives that were either unfeasible or would likely be the least effective at encouraging the use of the Interstate. The areas discussed in this screening of each strategy are implementation, effect on route choice, feasibility, sustainability, and potential impacts.

For all strategies considered, the strategy was thoroughly defined, focusing on how it would be used to either encourage truck traffic to use the Interstate route or how it would be used to improve the quality or perception of the truck traffic on the SH 14/US 287 route. The implementation of the strategy was documented, particularly noting the ease of the implementation. The effect on the route choice was evaluated on two levels: by specifying whether the strategy would reach a truck driver or a route planner, and determining how effectively the strategy would effect a change in route choice by that person or group. The feasibility of implementing the strategy was evaluated, considering legal and regulatory requirements as well as cost. The sustainability of both the continued implementation of the strategy monetarily and feasibly were assessed, as well as the ability of that strategy to continue to effect change over the long-term. Finally, related potential impacts were considered, including impacts to the City of Fort Collins business community, to the trucking industry, and on route choices by automobile drivers.

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The results of the screening for unrealistic options provided insight into the complexity of some of the strategies and the difficulty with effecting a significant change. Detailed descriptions of each strategy assessment are documented thoroughly in Section 4.2. The matrix in Table 4-1 provides an overview of the initial screening for unrealistic strategies. For those strategies that were not pushed forward for comparative screening, the fatal flaw is highlighted with gray shading. The comparative screening yielded recommendations for implementation, which are discussed in Section 5.3. Table 4-2 shows the final screening results along with a general assessment of each strategy.

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Table 4-1
Screening for Unrealistic Strategies Matrix

NRBS	Ease of Implementation	Effect on route choice of long haul through trucks	Effect on route choice of other trucks	Level of Feasibility	Sustainability of Effectiveness	Level of Positive Related Impacts	Recommended for Comparative Screening
Variable Message Signs	High	Low	Low	High	High	Low	No
Corridor Amenities	Low	Medium	Low	Medium	High	Medium	No
Guide Sign Modification	Low	High	Low	Low	Medium	Medium	No
Compression Brake Law	High	Low	Low	High	High	High	No
Restrictions	Low	High	Medium	Low	High	Medium	No
Articles in Publications (and Public Relations)	High	Medium	Low	High	High	High	Yes
Billboards	Medium	Medium	Low	Medium	High	Medium	Yes
Brochures	Medium	Medium	Low	High	Medium	High	Yes
Website Development/Cotrip.org	High	High	High	High	High	High	Yes
Highway Advisory Radio	Medium	Medium	Low	Low	High	Medium	No
Incentive Program	Low	High	High	Low	High	Low	No
Internet Advertising	High	Low	Low	Low	High	Medium	No
Kiosks at Truck Stops	Medium	Medium	Medium	Low	Medium	High	No
Map Routes	Low	Medium	Medium	Low	High	High	No
Paycheck Mailer	Medium	Medium	Medium	Low	High	Medium	No
Radio Ads	High	High	Medium	Medium	High	Medium	Yes
Safety Meeting Reminders	Medium	Medium	Medium	Medium	Medium	High	Yes
Trade Publication Advertising	High	Low	Low	Low	High	Medium	No
Informational CD-ROM/DVD	Medium	Low	Low	Medium	Medium	Medium	No

Table 4-2
Results of NRBS Screening

Strategy	Explanation	Assessment	Recommended
Corridor Amenities	Enhancing amenities on one corridor to make it preferable	The Interstate currently has significantly more amenities than the SH 14/US 287 route	NO
Variable Message Signs	Allows drivers to make up-to-date, informed decisions based on road/weather conditions, accidents, travel times, and construction alerts	Providing information about weather and safety would have an adverse effect, routing more trucks to SH 14	NO
Guide Sign Modification	Change destination signage on I-25 to indicate that SH 14 leads to Fort Collins instead of Laramie	CDOT indicated that the destinations on the subject signs are correct and will not be changed	NO
Compression Brake Law	Enforcement of requirement that commercial vehicles with engine compression brake devices have mufflers	Additional enforcement would minimally improve quality and not decrease the quantity of trucks	NO
Restrictions	Used to reduce or eliminate the travel of vehicles on roads or portions of the road. Restrictions to be placed on the road or vehicle would be based on weight, "time of day", vehicle use/purpose, and noise	All restrictions examined were found to be either not feasible, not beneficial to the local business owners, or possibly resulting in trucks using local roads such as Lemay, Vine, and Timberline	NO
Articles in Publications (and Public Relations)	Place articles in local news media and trade publications, provide press releases for radio	An effective means of reaching the industry	YES
Billboards	Outdoor advertising designed to deliver a quick reminder to drivers passing through the region and aid in the decision making process	An effective way to reach all drivers	YES

**Table 4-2 (cont'd.)
Results of NRBS Screening**

Strategy	Explanation	Assessment	Recommended
Brochures	Development of a brochure explaining and designating truck routes for the Fort Collins area	An effective way to affect local travel within the community and encourage travel on the Interstate	YES
Website Development/Cotrip.org	A link to the CDOT website which provides a variety of information; including road conditions, routes, and construction information	Easily implemented, this strategy could become a staple for regional drivers	YES
Highway Advisory Radio	Use of the special radio bandwidth at 530 A.M. advising trucks of weather, construction, and road condition information to reinforce the benefits of using the Interstate route	Not appropriate for marketing messages	NO
Incentive Programs	Reward truck drivers who choose the Interstate route over SH14/US 287 with items ranging from discounts on food and fuel to vouchers for shower or other essential travel facilities	Could be very effective; but logistically very difficult and costly	NO
Internet Advertising	Banner advertisements used on trucking industry and association websites used by managers and route planners	Limited decision-makers viewing the ads makes them not cost-effective	NO
Kiosks at Truck Stops	Provide information at truck stops to encourage the use of the Interstate, and information on current weather conditions, construction delays, and detours	Considered an effective means of reaching drivers; however, not feasible for a pilot program. Should be reconsidered if NRBS implementation continues for several years	NO

**Table 4-2 (cont'd.)
Results of NRBS Screening**

Strategy	Explanation	Assessment	Recommended
Map Routes	Coordination with map route truck guide publishers to change the recommended route	Routing software companies will not make the changes to a longer, less logical, route	NO
Paycheck Mailers	Advertisement attached to paychecks reminding drivers to use the interstate route, the ad could be a coupon redeemable only at a location on the interstate route	With trucking company cooperation, this strategy would reach drivers; however, complex logistics and cost exceed potential impact on route choice	NO
Private Trucking Company Outreach	A combination of other strategies including direct mail, article reprints, or safety meeting reminders	Each separate strategy identified under this title is explored individually under its own title (see Safety Meeting Reminders and Brochures)	N/A
Radio Ads	Advertisements on popular syndicated A.M. radio shows	A great way to reach a "captured" audience	YES
Safety Meeting Reminders	Information provided to emphasize the Interstate route at regular meetings held by and within regional and statewide trucking companies and trucking associations	A good way to reach route planners and drivers; can be implemented locally	YES
Trade Publication Advertising	Print advertising in trucking/shipping magazines and newspapers targeted towards independent owner/operators and corporate drivers	Low success rate with target audience for the cost	NO
Informational CD-ROM/DVD	A production piece providing information about northern Colorado preferred truck routes distributed to state trucking associations, private trucking companies and independent owner/operators	Small chance of reaching target audience at the right time to effect change	NO

4.2 DESCRIPTION OF STRATEGIES CONSIDERED

In addition to the NRBSs recommended for further study in Phase I, strategies were included based on suggestions from industry participants, the project team, and the City of Fort Collins. The physical, regulatory/enforcement, and marketing strategies were assessed based on the screening for unrealistic options criteria.

4.2.1 Physical Strategies

Physical strategies recommended by the Phase I study included increasing the number of VMS or providing an emergency bypass that would be used in I-80 closure situations. The emergency bypass strategy was eliminated from consideration for Phase II as it would not address the predominant issue of daily truck traffic displacement and was determined to be contrary to the mandates of Ballot Initiative 200. Two additional strategies were added to those considered: corridor amenities and CDOT destination signage.

4.2.1.1 Variable/Dynamic Message Signs

VMSs could be utilized to provide traveler information regarding road/weather conditions, construction alerts, travel time, and accident alerts to truck drivers and automobiles. This would help drivers to make an informed decision on which route to take.

Implementation

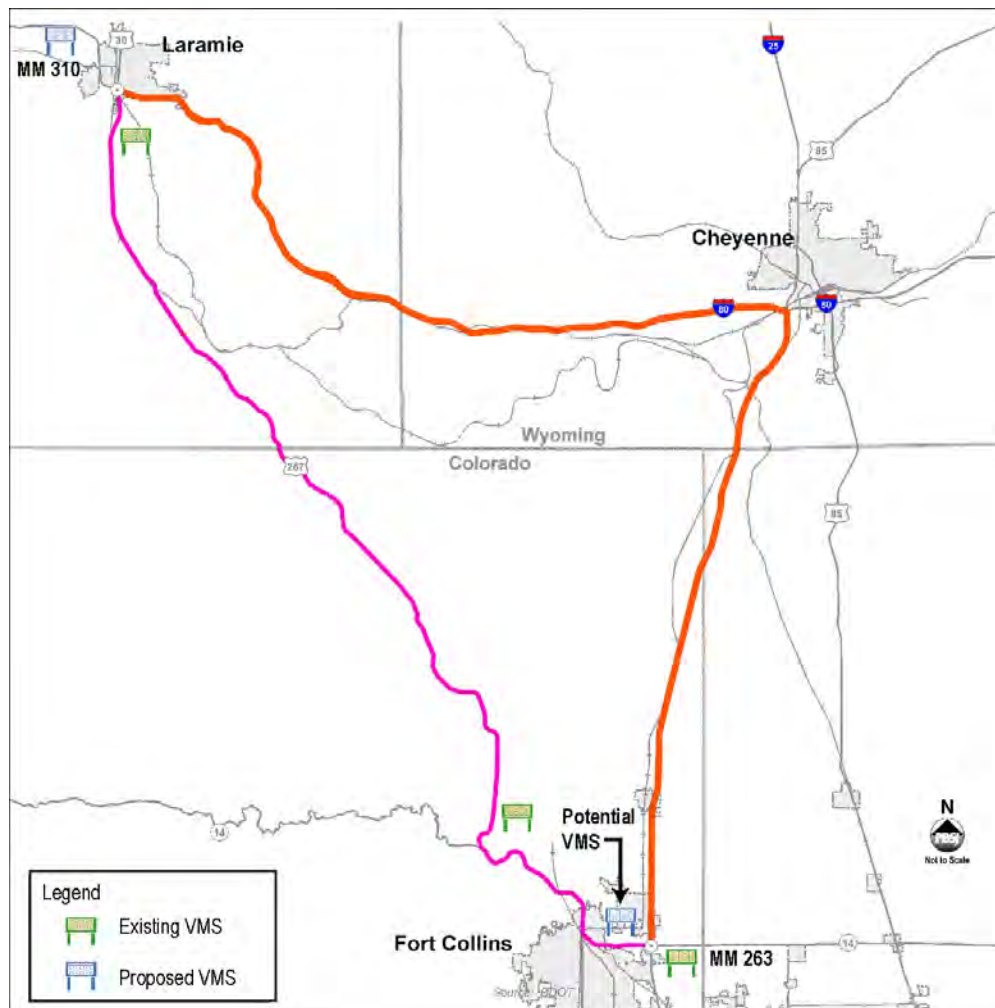
The VMSs would be installed at predetermined locations along the I-80 and I-25 corridors prior to the US 287 and SH 14 interchanges. They would display messages to inform drivers of current road conditions and allow them to make an educated decision on which route would be the best choice. The SH 14/US 287 corridors were also considered for VMS installation with the possibility of capturing traffic already on those corridors that missed the previous VMS's on their route.

It is assumed that the VMS would be controlled through dial-up modem. Consideration should be given to coordination between CDOT and WYDOT and to how information regarding road conditions and road closures is currently handled to ensure that an open line of communication is in place.

To avoid the additional purchases of VMSs, an investigation of existing VMS locations was completed to determine the possibility of using the existing signs for displaying the traveler information regarding the two corridors. Several signs were located within the study area along all three corridors; however, only one location that was identified that would provide advanced warning to drivers approaching the decision point. This VMS is located along northbound I-25 at mile marker 263 just south of Harmony Road. Another VMS was identified along the I-80 corridor in Wyoming; however, it was east of the US 287 interchange, and thus would not allow drivers to make an informed route decision based on road conditions along the two routes. A VMS was also identified along the US 287 corridor at the intersection with SH 14 (Ted's Place). This sign was determined to be too far into the corridor to alter traveler's route choice and thus not considered.

Based on the existing VMS locations, two additional locations for VMS installations were determined. Along the I-80 corridor, a preferred VMS location is near mile marker 310, approximately 3 miles west of the US 287 interchange. Another potential installation location is along SH 14, west of the I-25 interchange. This location would capture traffic that may have missed the VMS along northbound I-25. If implemented, additional considerations would include identifying a route on which truckers could turn around if US 287 was closed. No location was proposed on US 287 north of I-80 due to the minimal amount of truck traffic on that portion of the route. Furthermore, if there was an incident, it would be assumed that the Wyoming POE along US 287, south of I-80 in Wyoming, would notify the truckers of the upcoming road conditions. Figure 4-1 displays the existing and proposed locations of the VMS's on both corridors.

Figure 4-1
Existing and Proposed VMS Locations



With a proposed new VMS installation in Wyoming, close coordination between WYDOT, CDOT, and the City of Fort Collins must occur to ensure the correct procedures are followed and determine if there is potential for some cost sharing between the three agencies.

Effect on Route Choice

The two main factors that would affect travel time savings or safety advantage are average travel times under normal operating conditions for each route and amount of time that each corridor would be closed due to an accident, weather conditions, or roadway construction.

In order to affect the route choice of drivers, the VMSs must display information that would correlate to a time savings of choosing one route over the other. Since the VMSs would be posted on the side of the roadway, the information would be available to both cars and trucks, thus affecting the route choice of all drivers. Furthermore, since truck drivers have access to radios within their vehicles, they have an additional means to communicate the current road conditions to fellow truck drivers and route planners for the trucking industry.

The information presented in Section 2.1 demonstrated that SH 14/US 287 experiences approximately 58 fewer hours of road closures due to weather, construction, or accidents and is 10 minutes faster than the I-25/I-80 segments. If the VMSs presented this information, they would be promoting US 287 as a better alternative. Therefore, the level of effectiveness of rerouting truck traffic to I-25/I-80 from SH 14/US 287 is projected to be minimal, even negative.

Feasibility

In order to determine the economic feasibility, the price for purchasing and installing each VMS unit has been established. Based on recent CDOT contractor bid prices the unit cost for a permanent VMS is:

- Ground Mounted - \$130,000
- Overhead (Cantilever-Monotube/Sign Bridge) - \$200,000

It is envisioned that the signs along the Interstate would be overhead signs. Based on documentation noted above, the only location that would benefit from an additional VMS would be west of the US 287 exit along I-80. The installed price for that sign would be approximately \$200,000. Though not required, if a ground mounted VMS were to be used along SH 14 east of Fort Collins, the total cost of the two signs would be approximately \$330,000.

When compared to the other considered alternatives, this cost is relatively low and therefore would be deemed to be economically feasible.

Sustainability

The costs associated with implementing the VMSs are comprised of the cost for purchasing and installing the equipment and operating and maintaining it.

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Based on documented operation and maintenance (O&M) costs from the Federal Highway Administration (FHWA), the annual O&M costs for VMSs range from \$2,400 to \$6,000 per installation. An average value of \$4,200 is used in the analysis.

If the existing conditions (i.e. speed limit, number of lanes, corridor amenities) remain the same, the strategy would continue to be effective over the long-term.

Potential Impacts

The VMS's would likely indicate Interstate closures, increasing traffic along SH 14/US 287. The increase in traffic would increase volume, noise, and other effects associated with a high traffic count. A possible benefit from the increased traffic may be an increase in commerce from automobile traffic.

Recommendation

Based on the information provided above, the implementation of VMSs on the corridors would have little benefit in rerouting truck traffic from the SH 14/US 287 corridor to the Interstate corridor. With the existing travel time, travel distance, and typical number of annual road closures all showing a benefit to taking the SH 14/US 287, installing VMSs along the corridors would only increase the number of trucks traveling the corridor. **VMSs are considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.1.2 Corridor Amenities

This strategy involves creating additional amenities along the Interstate 25/80 corridor. Amenities are usually available at locations such as truck stops or travel centers, parking areas, and rest area/roadside parks. Corridor amenities are those benefits that add to the comfort and/or convenience of travel and therefore, may attract truck drivers and other motorists to the preferred route. These amenities include:

- Diesel Fuel Islands
- Full Service Fuel
- Discount Gas Programs
- Scales
- Repair Shops
- Truck Parking
- Showers
- Phones
- Restaurant Seating
- Driver's Lounge
- Game Room
- Convenience Store
- Washers & Dryers
- Business Services
- Emergency Road Service
- Good Food
- TripPak Scanning
- Internet Kiosks
- Driver Movie Theater
- Adequate Parking Spaces

Implementation

An assessment of existing amenities was performed to determine whether creating additional amenities on the route would be beneficial. The existing amenities for the discussed routes include:

- SH 14/US 287 - one rest area/roadside park south of the Wyoming border
- Interstate - three truck stops with 260 truck parking spaces as follows:
 - Flying J Travel Plaza with 180 truck parking spaces at I-80 exit 7
 - Love's #220, with 20 truck parking spaces at I-80 exit 7
 - Little America, with 30 truck parking spaces at I-80 exit 8b/
I-25 exit 358
 - Three parking areas with 21 truck parking spaces
 - One rest area with 24 truck parking spaces
 - Commercial areas at Buford and Cheyenne, Wyoming and Wellington, Colorado

Additionally, there are amenities in close proximity but not directly on either of the routes in question, including:

- West of Laramie on I-80 – three truck stops with 354 truck parking spaces
- East of Cheyenne on I-80 – one truck stop with 180 truck parking spaces
- South of Fort Collins on I-25 – one truck stop with minimal truck parking spaces

The assessment of the existing services demonstrated that there are significantly more amenities already existing on the I-25/I-80 route. However, the addition of more parking spaces and quality amenities at a stop between Fort Collins and Cheyenne was also considered.

This location may attract trucking business from cities from around nine to eleven hours away from this location, based on current per day driving time restrictions. Table 4-3 and Figure 4-2 list the cities within the nine to eleven hour range from the selected location at a mid-point between Fort Collins and Cheyenne, according to the State Farm Mileage and Driving Times Map.

Table 4-3
Time between Prominent Cities and Potential Truck Stop

Boise, ID	11:37
Clovis, NM	9:49
Des Moines, IA	10:44
Durango, CO	9:59
Ely, NV	10:48
Flagstaff, AZ	10:25
Helena MT	11:32
Kansas City, KS	10:57
Livingston, MT	11:37
Lubbock, TX	11:01
Pierre, ND	9:35
Salina, UT	8:44
Winnemucca, NV	11:28

Figure 4-2
Location and Time Distance between Prominent Cities and Potential Truck Stop



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Implementing the creation of a new truck stop would involve location, coordination, and funding. A specific piece of land must be located and purchased along I-25 at least 10 miles north of the SH 14/I-25 interchange at Fort Collins. The appropriate location will likely be in Weld County, thereby involving another government entity. If the City of Fort Collins were to subsidize the construction of the travel center in Weld County, an Inter-Governmental Agreement would be necessary for the City to receive tax revenues. A detailed business plan would be created and must show that revenue generation can be positive. Estimates show start-up costs to be in the vicinity of \$3.1 million dollars. Alternative approaches might include subsidizing the initial costs for an existing travel center company to build by the City purchasing the land up front. Once the truck stop is built and operational, additional marketing efforts would be necessary to actively promote the center to trucks passing through the area.

Feasibility

The construction of a new travel plaza/truck stop is legally feasible; however, the cost of purchasing land appropriately located and start-up costs for construction and staffing may be prohibitive. If the City purchased the land, then opened it up for other companies to bid on for construction of a truck stop, then this option may be more economically feasible.

A further aspect of the feasibility of this option is potential negative public perception. Providing incentives that attract business away from Fort Collins may be politically unattractive at a time when economic growth in the City is an issue.

Effect on Route Choice

The construction of a new travel center will likely have a minimal effect on route choice for long haul trucks. This strategy is designed to influence those drivers looking for clean facilities and quality amenities. Regional travelers are moving within the region daily and do not generally require stops at a truck stop in the area, though they may be enticed by specific preferred amenities at this location that are unavailable elsewhere in the area. The location was selected to be at least 10 miles north of the SH 14/I-25 interchange so that a truck driver will not “backtrack” after the effort to reach this specific destination has been achieved.

Currently, there are existing amenities in the Cheyenne area. It is understood that while amenities are available, the access is sometimes difficult and congested for drivers. The gas prices in Cheyenne are significantly less than in Colorado, so it is not likely that a new truck stop only 10 minutes from the Cheyenne area will pull consumers from the Cheyenne stops.

This strategy would likely not outweigh industry costs or sway experienced driver's preference, as they tend to have set travel patterns and preferences that contribute to their route decision.

Sustainability

The costs associated with implementing the construction of a new travel center would be comprised of the cost to purchase a site, construction and installation of services, and the operations and maintenance. Initial start-up cost estimates are near \$3.1 million for a new

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high quality and high amenity travel center. Once completed, the ability to continue to effect route choice of the Interstate would be high.

Potential Impacts

A new truck stop developed in coordination with other relevant agencies could increase tax revenues for the City of Fort Collins, thereby benefiting the local community. A potential negative issue may involve the enactment of NEPA or the 1601 process in order to access the truck stop if interchange modifications are required. As mentioned above, the 1601 process is required when a major modification to an existing interchange or a new interchange is proposed on the state highway system. The 1601 “Interchange Approval Process” requires among other things that the interchange (1) be part of the Transportation Planning Region’s approved fiscally-constrained Regional Transportation Plan, State Transportation Improvement Program and Statewide Transportation Plan; (2) be the subject of an approved intergovernmental agreement which addresses a funding plan to cover construction and maintenance of the interchange; and (3) have sufficient environmental studies performed consistent with FHWA environmental regulations and NEPA requirements. These processes would increase the time to develop and implement this strategy, reducing the feasibility or delaying results of this option. Due to the nature of fuel stations, there would also be an increased risk of fuel spill or leakage in an area that previously did not have a risk.

Another potential impact to be considered is that consumers currently stopping in Fort Collins, either taking the US 287 or the I-25 route north, may choose to go to the truck stop, thereby reducing commerce in Fort Collins. This impact to local business may be more significant than the decrease of truck traffic from the community.

Recommendation

The implementation of a corridor amenity-related strategy, either introducing additional corridor amenities or improving upon existing ones, would provide little benefit when compared to the capital costs to implement this strategy. This strategy appeals most to the long haul truck drivers, who are looking for these types of facilities. The regional truck drivers who routinely make several trips along the corridor on a weekly or daily basis typically do not plan their travel around these types of facilities. Based on the NRBS Phase I report, the regional truck drivers make up the largest percentage of trucks along the SH 14/US 287 corridor. **Corridor amenities are considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.1.3 Guide Sign Modification

The modification of existing guide signs along the I-25/I-80 corridors would entail removing the Laramie, Wyoming designation from the guide signs for SH 14 in Fort Collins as a means to redirect truck traffic to the I-25/I-80 corridor. A similar method was considered in Phase I, and eliminated from future consideration; however, it is reexamined in this Phase.

Implementation

The guide signs located on I-25 which identify SH 14 as the route to access Laramie, Wyoming via US 287 would be removed and replaced with signs identifying Fort Collins as

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the destination. This idea was presented to the CDOT Region 4 Traffic department to determine if the modification of a destination on a guide sign would be allowed. CDOT Region 4 staff noted that it would not be allowed because Laramie, Wyoming is a key destination and US 287 provides direct access to that City. With SH 14 intersecting directly with US 287 after a short distance, the next major destination along US 287 (Laramie) needs to be identified to ensure proper mobility between destinations is maintained.

Effect on Route Choice

The re-signing of the destination on the guide signs would have little impact on professional truck drivers who are typically adept at way finding. A potential negative impact would come from inadvertently diverting automobile drivers who are unfamiliar with the area and the SH 14/US 287 route.

Feasibility

The cost of replacing the guide signs and posts would be approximately \$7,000 per sign installation. Although implementation of modifying the guide sign is economically feasible, the modification of a guide sign for the purpose of re-directing truck traffic goes against CDOT policy for signing state and US routes.

Sustainability

The effectiveness level might decrease over time due to the powerful nature of word of mouth within the trucking industry, which may be used to alert repeat drivers to the benefits of the SH 14/US 287 route.

Potential Impacts

There would be minimal impacts to traffic with the City of Fort Collins with the re-signing of the guide sign because it affects such a small proportion of the overall truck traffic along SH 14/US 287. Automobile traffic could be reduced a small amount, providing a slight benefit to traffic conditions and a minor negative impact on economic conditions.

Recommendation

Based on the information provided above, the implementation of modifying the existing guide signs along I-25/I-80 corridors would not be feasible because it contradicts CDOT's policy of signing key destinations and providing mobility along state and U.S. Highways. **Guide sign modification is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.2 Regulatory/Enforcement Strategies

Regulatory and enforcement strategies focus on enforcing existing or creating new requirements for roads or specific locations. The Compression Brake Muffler Law requires the use of a muffler on engine compression brakes, commonly used by large trucks to enhance a truck's stopping ability. These brakes are used by trucks for safety reasons, but when used without a muffler can be very loud. Other restrictions were investigated for use as a strategy, including restrictions on weight, vehicle use/purpose, time of day, and noise.

*Phase II: Non-Route-Based Strategies***4.2.2.1 Compression Brake Law**

Additional enforcement of the Compression Brake Law may result in reduced noise levels from trucks within the Fort Collins City limits for those using engine compression brake devices without a muffler. This strategy would be aimed at improving the quality of the existing truck traffic on SH 14/US 287 by reducing the noise associated with a high quantity of trucks.

Implementation

The enforcement of the compression brake law would be increased at predetermined locations along portions of the truck route within the City of Fort Collins. The portions of SH 14/US 287 that are within city limits have shared jurisdiction between the City of Fort Collins and CDOT, and the responsibility for the enforcement would fall to the City of Fort Collins.

Additional resources, including staffing, would be necessary to enforce the restrictions. To increase the possible impact of this strategy, enforcement of the law could be performed in conjunction with signing along I-25, SH 14, and US 287 that is designed to warn commercial vehicle drivers about strict enforcement of the law within city limits. Additional information regarding the strict enforcement of the law could be relayed through other strategies such as the highway advisory radio, advertising, kiosk information, radio ads, and outreach programs.

To alleviate concerns with profiling of through trucks and less enforcement on local or regional trucks or other vehicles, strict guidelines would be required to provide direction to local law enforcement regarding the parameters of the enforcement. A workshop involving the trucking industry to train officers on appropriate methods would be important.

Effect on Route Choice

It is unlikely that increased enforcement of the compression brake muffler law alone would significantly affect the route choice of drivers. It is possible that if the enforcement is done in conjunction with signing or through other media related strategies those drivers without mufflers on their compression brakes may choose to avoid this route and remain on the Interstate. However, as more commercial vehicles become equipped with compression brake mufflers, the number of potential vehicles that could be diverted will dwindle and eventually become insignificant in the future. Even with the use of other media related strategies in conjunction with stricter enforcement, this approach is expected to have an insignificant impact on the route choice of drivers.

Feasibility

It is legally and physically feasible to implement this strategy. Based on the information from the Fort Collins Police Department, the first time cost of training and purchasing equipment for three additional officers would be about \$372,000. Maintenance costs include an additional \$306,000 annually for salary and equipment.

Phase II: Non-Route-Based Strategies**Sustainability**

As stated, the one-time cost is \$372,000 and it would require about \$306,000 annually to maintain the operation of this strategy assuming that the additional officers would solely focus on enforcing this law. The potential effectiveness of this strategy to decrease the noise level and improve the quality of the truck traffic would remain constant as long as enforcement was maintained. However, as industry-wide compliance improves, the impact of this additional enforcement will be reduced.

Potential Impacts

The quantity of trucks would not significantly decrease due to increased enforcement of the existing compression brake muffler laws. The potential impact of this strategy may be increased if the stricter enforcement is implemented in conjunction with other media strategies, such as additional signing, radio ads, etc. The perceived quality of life experienced by businesses and residents on the corridor may increase due to the lowered noise levels.

Another important aspect of this strategy is the method of enforcement. The enforcement would have to be uniformly applied to all trucks to avoid profiling of through truck traffic. In fact, this strategy may have to be applied as an overall noise enforcement effort, with automobiles and motorcycles coming under greater scrutiny as well. A workshop with the local law enforcement agency regarding the existing compression brake muffler law would serve to increase awareness of the specifics of the ordinances, the fines assessed, and what to look for in terms of trucks violating the ordinance.

Recommendation

Overall, this strategy is expected to have insignificant impact to the actual number of trucks using the SH 14/US 287 route through the City of Fort Collins. High initial and maintenance costs and an expected diminishment in results as more and more commercial vehicles become equipped with compression brake mufflers do not favor this strategy. **Increased enforcement of the Compression Brake Law is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.2.2 Restrictions

Road restrictions would be used to reduce or eliminate the travel of trucks on roads or portions of the road. If restrictions were to be applied, they would come under the following categories:

- Weight restrictions would limit the allowable weight on a road or portion of road. Only those trucks weighing less than the specified weight would be permitted to travel on that road.
- “Time of day” restrictions would limit hours during which specific vehicles could travel in the area. This restriction may be used on local roads, for example, to limit delivery trucks to certain hours.
- Vehicle use/purpose restrictions would restrict the types of vehicles that could use a road or portion of a road. This restriction is usually used for local roads to restrict truck traffic to those trucks with a local destination (e.g. Local Deliveries Only).

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- Noise restrictions would specify sounds or sound levels that could not be exceeded. The compression brake law is an example of this law, where the loud noise of compression brakes is prohibited in city limits. This option is explored more thoroughly in the previous section.

The City of Fort Collins' policy is to not discourage truck traffic on arterial roads.

Implementation

The restrictions would be enforced by the agency with jurisdiction on the specific road.

To encourage truck traffic transporting loads with significant weight to use the Interstate route, the weight limits on the Interstate could be increased. Since the Interstate falls under FHWA's jurisdiction and the process by which those limits could be increased is complex and lengthy, this strategy would be a long-range goal implemented by the City of Fort Collins participating in and supporting the effort over a period of years. The enforcement responsibilities of the weight restriction would continue to fall under FHWA's jurisdiction. Although non-interstate haulers may carry up to 85,000 pounds on non-interstate state highways; that extra weight advantage is not pertinent because the study area does involve interstate travel.

Another weight limit restriction would involve decreasing weight limits on SH 14/US 287. The weight limits on state highways in Colorado are set by CDOT, which determines the limits based on the road's ability to safely allow the travel of moving weight. To implement this strategy, the City of Fort Collins would request that CDOT reassess the state highway's ability to handle weight. CDOT or the City of Fort Collins would provide enforcement on this restriction.

The "time of day" restriction would be used to limit trucks on SH 14/US 287 during specific hours of the day. Directed at delivery trucks, this restriction would not change the number of delivery trucks, instead requiring the trucks to only deliver during times of minimal impact on the residents of the City of Fort Collins. For example, delivery times may be set for between 11 p.m. and 5 a.m. The enforcement of this restriction would be the responsibility of the City. Because the implementation of delivery restrictions would also affect local business owners in a way that may be perceived negatively, this implementation would also necessitate significant public involvement/information efforts with the business community. During the recently completed Downtown Strategic Plan, strong concerns about "time of day" restrictions were emphasized by the local residents and business community.

Limiting the travel of trucks to local deliveries is a restriction that applies to local roads only. State highways and national routes cannot add this restriction. Since there is very little travel by through trucks on local roads, the implementation of this strategy would only impact those through trucks that stop in the City to conduct business that are not making a delivery.

Noise restrictions have been set by the City of Fort Collins by defining the allowable noise levels. The City is responsible for enforcement of the restrictions; however, additional

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training may be required to teach local law enforcement officers how to accurately identify noise levels.

Effect on Route Decision

These restrictions would affect both the route planners and the drivers. Road use restrictions would be incorporated into travel planning and routing software used by route planners for large and independent trucking companies prior to truck travel. These include weight restrictions, time of day restrictions, and vehicle purpose/use restrictions.

Weight restrictions could be used as a strategy to reduce the quantity of truck travel in two ways. If weight limits on I-25 and I-80 were increased, it would likely encourage route planners to direct trucks with overweight loads to these routes. This would only affect route planners for those trucks with weights that exceeded the state highway limit. Alternatively, decreasing weight restrictions on SH 14 would limit travel to those trucks with weight limits below the designated amount, also encouraging route planners to direct trucks with more weight to the Interstate route. In both of these cases, these strategies would have a significant effect on the route planner determining the route of trucks with overweight loads.

Time of day restrictions would also affect decisions made by route planners. Limiting hours that trucks could deliver may significantly affect through truck travel usually occurring during the restricted hours. Those trucks with a stop in the community would not be visible during the restricted hours, but would still travel through Fort Collins at other times.

Restrictions on through truck traffic would significantly affect the decisions made by route planners, eliminating all trucks with no stops on the route from legal travel on the route. Additional enforcement would be necessary to ensure that through trucks did not use the route.

As there are already noise restrictions in place for the area within the city limits, additional enforcement of these restrictions would not affect the route choice of route planners or drivers. Enforcement may affect those trucks that typically use brakes that create significant noise. The likely effect would be a reduction in brake usage and not in the driver choosing a different route.

Feasibility

Restrictions can be determined to be feasible if it is reasonable to enact the desired restriction, if the restriction will affect the truck traffic or quality of traffic positively without significant negative impact on the community, and if the costs are not prohibitive.

Weight restrictions already exist on the Interstate and SH 14. It is not possible for the City of Fort Collins to change the weight limits on these roads, since they fall under the jurisdiction of the federal and state governments. It is reasonable that the City could proactively support such weight limits being reassessed, but this is a long-range goal to be undertaken by the local government in collaboration with State and formal transportation agencies. Changing weight limits is not considered to be feasible.

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Another strategy would be to place time of day restrictions on SH 14. This restriction would be aimed at improving the quality of truck traffic positively; however, this restriction would also have a significant negative impact on the business owners in the community. This strategy would require their acceptance, as it would force business owners or staff to be at work to receive deliveries at hours when the majority of businesses are usually closed. Because of the negative impact to the community and the resistance to such an idea encountered during the recently completed Downtown Strategic Plan, this strategy is not considered to be feasible.

The City can place through truck traffic restrictions on local roads, but such restrictions are not legal on state or national routes. This strategy is not considered to be feasible.

Sustainability

Based on the information from the Fort Collins Police Department, the first time cost of training and purchasing equipment for three additional officers would be about \$372,000. Maintenance costs include an additional \$306,000 annually for salary and equipment. The effectiveness of these strategies would be sustained for the long-term if enforcement was continued.

Potential Impacts

Each restriction is explored for the ability to impact either the quantity or quality of truck traffic.

Increased weight limits on the Interstate would have minimal impact on the quantity of truck traffic, as it would only apply to those few trucks with excessive weight. Decreased weight limits on the SH 14 route may impact the quantity of truck travel moderately, depending on how much the weight limit is reduced.

Time of day restrictions would impact the quality of the truck traffic, significantly reducing the truck traffic visible to Fort Collins residents during the day or the time period that the restrictions are applicable. The quantity of through trucks would also be significantly reduced during the restricted hours. However, delivery trucks would all travel in town during the late night or off-peak hours resulting in a significant impact to the local business community.

Through truck traffic restrictions would impact quantity significantly by eliminating all trucks with no stops on the route. However, this is only allowed on local streets and would not result in any impact to the SH 14/US 287 route.

Noise restriction enforcement would most likely have little impact to the quality of the traffic, as discussed previously.

In addition to impacts to the trucking industry, impacts to the community have also been considered. Fort Collins commerce may be minimally impacted by weight limit restrictions and vehicle use/purpose restrictions, which may remove some trucks from the area and reduce driver business. Time of day restrictions would have a significant negative impact to

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business owners who would have to be at work very early or very late to accommodate the delivery hours. Noise restrictions would have no impact on the business community.

Automobile route decisions would not be impacted by any restrictions.

Recommendation

Some of the restrictions show promise toward improving the quality and quantity of truck traffic on the SH 14/US 287 route. However, due to costs, difficulty to implement, enforcement issues, applicability issues, and opposition from the local business community, this strategy would be difficult at best to implement. **All restrictions are considered unrealistic as potential successful strategies for routing truck traffic to the Interstate.**

4.2.3 Marketing Strategies

As with the other Phase I strategies, all marketing strategies from the Phase I study were assessed. Where there was significant natural overlap of strategies, they were combined. In other cases, additional strategies were included based on the experience of the marketing specialists as well as suggestions from industry participants.

As with all marketing concepts, these strategies were considered in relation to the target audience for each strategy. The workshops and focus group helped identify the primary and secondary audience for marketing strategies as:

- Primary audience - long haul truck drivers
- Secondary audience - local and regional drivers and dispatchers, operations managers and other management personnel at trucking companies nationwide

The target audiences are referenced through the marketing strategy assessment and discussed further in Section 5.2.1.

4.2.3.1 Articles in Publications (and Public Relations)

This strategy would focus on a public relations outreach program, designed to place highly messaged articles and news releases in trucking industry trade publications such as *The Trucker*, *Overdrive*, and *Landline*, local media, and on the radio as appropriate. Where possible, articles would be placed in the same publications as any NRBS advertising so as to repeat and reinforce the messaging that reaches the readership.

Implementation

This strategy can be implemented immediately upon approval of messages, identification of spokespeople, and refinement of a targeted trade and local media list. Bylined articles would be prepared and submitted on a quarterly basis for placement primarily in trade publications or in sections of local media reserved for submitted articles. News releases and public service announcements promoting the use of the Interstate corridor would be offered on a monthly basis to news agencies and radio stations to generate news coverage (articles written independently by reporters and editors).

*Phase II: Non-Route-Based Strategies***Effect on Route Decision**

This strategy would reach both the primary audience (long haul truck drivers) and the secondary audience (local and regional drivers and dispatchers, operations managers, and other management personnel at trucking companies nationwide). A sustained effort would be tailored toward building relationships with key media players and generating favorable media coverage that complements messages being delivered through marketing strategies. This could have a moderate impact on the route choices made by both audiences. However, this strategy is likely to be more effective with the long haul drivers, since local and regional drivers may already have preferred routes through the area.

Feasibility

There are no restrictions on the ability to generate and distribute articles and news releases – assuming there is available content and expert spokespeople to perform media interviews and contribute input to bylined articles and news releases. Placement of submissions is ultimately at the discretion of the media; however, if the articles and news releases are well written and based on fresh, relevant information, it increases the likelihood that they will be used and helps build productive, long-term working relationships with reporters and editors. Positive coverage can be further leveraged through the use of article reprints as direct mail.

Sustainability

A media relations program such as this is typically priced on either a per-hour or monthly retainer basis and often cycles through periods of higher and lower activity that can impact the cost. Such programs grow more effective as they are sustained over time. A reasonable estimate for these purposes is approximately \$36,000 annually.

Potential Impact

An effective long-term media relations program that directs a significant number of trucks to the Interstate route may have a positive impact on the Fort Collins business community. As the MAC indicated, through truck drivers with no business in Fort Collins do not tend to spend money in the city while passing through, so their absence would have a minimal impact on purveyors of food, gas, lodging, and entertainment. In addition, a reduction of truck traffic could make the city, particularly the downtown area, more attractive to auto traffic and other visitors. The general public is unlikely to read articles run in trucking industry publications and therefore unlikely be swayed by this strategy to avoid the city for the Interstate route.

Recommendation

Articles in publications, news releases, and public service announcements provided to television, newspapers, and radio stations would impact long haul drivers, other drivers, and route planners. With the appropriate people and material for inclusion in articles, this strategy is very feasible. The sustainability of such a strategy is significant, as continued media awareness reaches more and more people. Other impacts to the community are likely to be positive. **Articles in publications (and public relations) are considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

*Phase II: Non-Route-Based Strategies***4.2.3.2 Billboards**

Large outdoor display advertising will be placed on billboards south of Fort Collins on I-25 and west of Laramie on I-80 encouraging drivers passing through northern Colorado and southern Wyoming to use the Interstate corridor. The advertising would be highly visual and would focus on time savings, safety, convenience, and amenities available on the Interstate route.

Implementation

Billboard advertising could be generated immediately, using materials and resources currently available. However, there is limited billboard space available in the corridor, and many have been contracted for extended use. When space becomes available, the focus would be on strategic locations south of the SH 14/I-25 interchange and west of the US 287/I-80 interchange. Billboards are more prevalent along the I-25 corridor, although additional inventory will be available on I-80 west of Laramie in the near future.

Effect on Route Decision

This strategy will reach all truck drivers, both those in the primary and secondary audiences, who travel along the route. It is expected to have a moderate impact on the long haul drivers who have more flexibility in their route decisions and seek local guidance on route options as they enter new areas. This approach may effect long-term change as well if the message from the long haul drivers is communicated back to their dispatchers. This is likely to be a less effective strategy with local drivers who already have preferred routes through the area.

Feasibility

This is a feasible strategy because truck drivers are well accustomed to reading, and are often responsive to, billboard advertising. The strategy is conducive for short, straightforward messages that have immediate relevancy to drivers. The strategy is somewhat limited logistically in that billboard space is at a premium on I-25, with many current advertisers are locked in long-term contracts that limit the availability of desired ad space. Planning and reservations will have to be made months in advance to secure space. Long-term contracts are available for one or two years.

Sustainability

Design and production of each billboard ad would cost approximately \$5,000, while placement of two billboards would cost \$30,000 for one year. Billboards can be displayed for months or years at a time and updated with fresh content, providing sustained communication of a desired message or messages. Given that word of mouth is a powerful force in the trucking industry, this approach could further effect long-term change if long haul drivers relay the message to other drivers and back to their dispatchers.

Potential Impacts

In addition to directing at least a moderate percentage of long haul truck traffic out of the city, billboards could inadvertently cause some automobile traffic to choose the Interstate route and bypass Fort Collins as well. In addition, they could generate opposition from

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interests generally opposed to outdoor advertising for aesthetic reasons, but such opposition is expected to be minimal.

Recommendation

Based on the information provided above, the implementation of billboards along the Interstate corridor would have a moderate impact on long haul truck drivers who are less familiar with the area and more flexible in their route decision. There is potential for long-term benefits with implementing this strategy through word of mouth between the truck drivers and their dispatchers. It is expected that the billboards would have little impact on changing the route of regional truckers. Based on an annual cost of \$30,000 per billboard, it appears that this strategy would be financially feasible. **Billboards are considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.3 Brochures/Direct Mail

This strategy would involve the development of a brochure explaining and designating truck routes for the Fort Collins area. The brochure would indicate primary truck routes for trips with no origin or destination in Fort Collins, secondary truck routes designating preferred roads to use until close to final destination, and hazardous material routes in cases of emergencies. The brochure would include a map with preferred routes designated in color-coding.

Implementation

The brochure would be distributed in information racks at chambers of commerce, tourist information facilities, truck and rest stops, weigh stations, and other viable locations. It would also be used for direct mailings and could be distributed locally through the Colorado Motor Carriers Association (CMCA). Nationally, the brochure could be mailed with an explanatory cover letter to other state trucking associations and private trucking companies for distribution to their respective members or employees via paycheck inserts, safety meeting handouts, or other methods each company feels appropriate. It would take moderate effort to create a mailing/distribution list of the recipients.

Effect on Route Decision

This strategy targets both primary and secondary target audiences. It could be very effective, because it provides important information well in advance of the point when a decision would be necessary. The impact of the brochure would be focused on encouraging long haul truck drivers not familiar with northern Colorado to choose the Interstate as their primary route to travel between Fort Collins and Laramie. It would be a moderately effective strategy with long haul drivers, who have more flexibility in determining their routes and can keep the brochure in the cab as a convenient resource to be consulted as necessary. The brochure could be expected to have minimal impact on local/regional drivers, who are less likely to consult a map since they are familiar with the area and already have preferred routes of their own.

*Phase II: Non-Route-Based Strategies***Feasibility**

This strategy can be implemented relatively easily, using information and resources readily available. Because the distribution can be carefully targeted through a selection of mailing lists and trucking association member rolls, this is one of the more feasible alternatives. Neither costs nor logistics would be prohibitive. The City of Fort Collins and possibly CDOT and law enforcement officials would provide guidance on design.

Sustainability

Design and production of 20,000 brochures would cost \$20,000 and mail distribution an additional \$10,000. This is a relatively cost effective strategy in that the brochure would not become dated unless and until there is a major realignment of roadways in the region. Life cycle costs would be significantly less once the initial design and coordination was finalized, an estimated \$20,000 per year, anticipating bi-annual mailings.

The strategy will remain effective for new long haul drivers. Since there is a significant turnover in the trucking industry, this audience may remain a large portion of long haul truck drivers. Regional truck drivers may return to or choose to take the SH 14/US 287 route once they are aware of the benefits of the road, so that audience will likely only minimally sustain effect from this strategy in the long-term.

Potential Impacts

In addition to directing at least a moderate percentage of long haul truck traffic out of the city, the brochure could prove positive with local businesses in that it will also direct local truck traffic to make deliveries using preferred routes within Fort Collins. The city could lose some automobile traffic if car drivers choose the Interstate after reviewing the brochure, but that impact should be minimal since the brochure would not be targeted to a non-trucking audience.

Recommendation

Based on the information provided above, the implementation of providing brochures and direct mail to various agencies throughout the state and region would have a moderate impact on long haul truck drivers who are less familiar with the area and more flexible in their route decision. The brochure would be available at informational kiosks, at tourist information centers, truck and rest stops, weight stations, and other viable locations. The brochure would also be sent via mail to various motor carrier associations and trucking companies for distribution to their members. The effect on long haul truckers should remain consistent due to the large turnover within the trucking industry. Based on an annual cost of \$40,000 for design, production and distribution, this strategy would be financially feasible.

Brochures/direct mail is considered realistic as a potential successful strategy for routing truck traffic to the Interstate.

4.2.3.4 Website Development/CDOT website: Cotrip.org

A website would be developed by the City of Fort Collins that is dedicated to the northern Colorado routes. This site would include maps, construction/congestion information, and real-

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time weather information. The site would communicate the benefits of the Interstate route by emphasizing safety, emergency response time, accident rates, and other information. The road condition, travel time, and weather conditions would be provided through a direct link to CDOT's Cotrip.org website.

Implementation

Development of a website would take approximately one month. The site address would be incorporated in all marketing materials, such as brochures, billboards, and radio ads. The website would also be linked from key trucking and transportation industry sites such as CDOT, WYDOT, and CMCA.

Effect on Route Decisions

The information available on the website would affect route decisions for those drivers with Internet access who are concerned about impending weather delays or construction delays. This may affect routing for the regional drivers, as they frequently consult the CDOT site for information. The site is also likely to be viewed by the secondary market of routing managers, schedulers, and safety managers. As with other strategies that involve the dissemination of weather and road condition information, the website could also have the effect of steering traffic to the SH 14/US 287 route when conditions are worse on the Interstate corridor.

Feasibility

While the creation and launch of a website of this nature is feasible, the site will need time to generate awareness and develop a sense of credibility. Other marketing strategies would need to be developed to raise awareness of the site. As noted previously, the address could be included on materials such as brochures, other direct mail pieces, or billboards. Providing a link to the CDOT site or other related sites from a newly-developed project website is a relatively simple task.

Sustainability

The website would be cost-effective and could be sustained for a long period of time. Development would cost \$5,000, and a budget would be necessary to make frequent updates and changes. The site could potentially be designed and maintained by City staff. Linking the site to other key industry websites is a courtesy of the transportation departments and associations. Some coordination would be necessary with the CDOT site manager if anything changes with the link to the project website.

Potential Impacts

The website will likely have positive impacts on the trucking industry and the drivers. Because the Internet is an open system, automobile drivers or other leisure travelers could consult the website as well and possibly find information that causes them to stay on the Interstate and bypass Fort Collins. This impact would be minimal in that the site would not be actively marketed to such an audience.

*Phase II: Non-Route-Based Strategies***Recommendation**

The implementation of project website combined with information on the CDOT Cotrip.org website may reach a significant portion of the target audiences. The information on the website at times may promote the use of the SH 14/US 287 corridor due to traffic, weather, or construction closures along the I-25/I-80 corridor; however, it will also serve as a good source to promote the benefits of using the I-25/I-80 corridor. Furthermore, the implementation fee is relatively inexpensive at \$5,000 to design the website and a \$50 monthly maintenance fee to maintain the site. As long as the content of the website is constantly refreshed and identified as providing reliable real time information, the website would be able to provide a long-term benefit. It could prove as invaluable resource for both truck drivers and dispatchers in choosing their travel route. **Website development (including links to CDOT and other related sites) is considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.5 Highway Advisory Radio

Highway Advisory Radio (HAR) is a special radio bandwidth at 530 A.M. that advises trucks of weather, construction, and road condition information.

Implementation

Public service announcements (PSAs) would be produced and submitted to the HAR broadcasting service to relay messages about safety issues and other advantages to using the Interstate route. Signage on the highway would encourage drivers to access the HAR, which would then provide updated information as well as messaging.

Effect on Route Decisions

HAR reaches all truck drivers who tune in, including drivers in both the primary and secondary audience groups. As with the CDOT website, if announcements on the radio indicate that conditions are preferable on the SH 14/US 287 route, the results could work against the goals of this project, even if the NRBS PSAs air as well.

Feasibility

This is not feasible as a stand-alone strategy but could be included as part of a media outreach program that delivers refined messages to a wider variety of media. Developing a PSA script is not difficult, but its acceptance by the HAR broadcaster is at the discretion of the program manager.

Sustainability

Cost to produce a PSA would be relatively minor and would be incorporated in the media relations program retainer. It would be feasible to update and refine PSA scripts and pitch them to broadcasters over a long period of time. Since safety information is continually used by truck drivers, the effectiveness of this strategy would continue over the long-term.

*Phase II: Non-Route-Based Strategies***Potential Impacts**

Placement of a PSA on HAR could reach traffic aside from truck traffic but is not expected to have a significant negative impact on Fort Collins businesses.

Recommendation

The implementation of using the HAR to announce conditions that would encourage use of the I-25/I-80 corridor may not be plausible. Similar to the VMS application, the HAR might end up promoting the use of SH 14/US 287 corridor based on the typical number of annual road closures all showing a benefit to taking the SH 14/US 287. **HAR use is not considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.6 Incentive Program

An incentive program would be developed to reward truck drivers who choose the Interstate route over SH 14/US 287. Incentives could range from discounts on food and fuel to vouchers for showers or other essential travel facilities.

Implementation

Using several truck stops or a chain, a punch card or coupon would be created that offers drivers discounted or free items, perhaps on a frequent user basis. The incentive would have to be Cheyenne-based to capture traffic from I-25 and I-80 and to exclude those who travel SH 14/US 287 between Fort Collins and Laramie.

Effect on Route Decision

The incentive program could reach all drivers passing through its range of operation, including drivers in both our primary and secondary audiences. In our qualitative research, drivers indicated that they would go out of their way to save money. Drivers, especially independent owner/operators, are largely responsible for their own meals and showers and are therefore very budget conscious. An incentive program could be very effective in persuading a driver in either target audience to change his or her route on a single occasion; however, that driver may go back to his or her previous route if the incentive is not sustained. Moreover, the incentive would have to be significant enough to encourage the behavior change.

Feasibility

Although qualitative research indicated that incentives are likely to affect drivers' behavior, the logistics of such a program may limit its viability. For example, it would be difficult to limit distribution of a Cheyenne-based incentive to those who are opting for the Interstate over the SH 14/US 287 route. Any driver passing through Cheyenne could take advantage of the offer, even if Laramie and Fort Collins are not on their itinerary. A passport-type system in which a driver would get a card stamped in Laramie and again in Cheyenne in order to redeem an incentive in Fort Collins (or vice versa) would verify a trip on the desired route but require a truck to stop three times over a short span of time.

*Phase II: Non-Route-Based Strategies***Sustainability**

As noted above, a one-time incentive would be less likely to change long-term behavior, but continued incentives would have long-term effectiveness. Therefore, a significant commitment of budget would be necessary in order to sustain a program of this nature. An incentive would have to be worth a minimum of \$15 in order to encourage drivers to take a longer route, and the city would likely end up providing the incentive to three trucks with no plans to pass through the relevant corridor for every one truck that would be choosing between SH 14/US 287 and I-25/I-80. Therefore, to incent 200 trucks per day (with the goal of moving 50 out of Fort Collins) with a \$15 incentive for one year it would cost \$1,095,000. Production and distribution of the incentive and general administration of the program could cost an additional \$25,000-\$50,000.

Potential Impacts

A negative impact could be felt on the Fort Collins and northern Colorado businesses that are bypassed for the retailer with the incentive in Cheyenne. It could also be politically problematic to use Fort Collins taxpayer money to underwrite incentive programs for Cheyenne businesses.

Recommendation

Based on the information provided above, the implementation of using an incentive program to entice truck drivers to choose the Interstate route over the SH 14/US 287 corridor would potentially have success with the long haul truck drivers. Based on truck drivers' input, the proposal to offer them discounts to different establishments is very appealing. It should be noted that the City of Fort Collins would have to subsidize the discounts and could potentially remove tax revenue from the City by encouraging trucks to stay on the Interstate system. However, based on discussion with Fort Collins business leaders, they are not worried about the loss in revenue from this source since truck drivers rarely stop to purchase anything. The feasibility of implementing such a program is very low, with many complexities given the multiple routes into the existing amenity locations. **The use of incentives is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.7 Internet Advertising

Advertising is available on trucking industry and association websites. These sites are used by management and some independent owner/operators to check news and weather updates. Advertising could include banner ads appearing along the top and sides of the website.

Implementation

It would take approximately one month to purchase space and design an ad for one of the Internet sites. Ads can be purchased for one month to one year, and can be changed frequently.

*Phase II: Non-Route-Based Strategies***Effect on Route Decision**

It is unlikely this strategy would affect route decisions in any significant manner. The target audience of long haul drivers is not likely to consult these sites, particularly when traveling through the region and making on-the-fly route decisions. Some dispatchers and route managers may view the websites, but they are generally looking for updated news on legislative issues or other factors affecting the trucking industry.

Feasibility

This strategy is not feasible because the Internet sites reach many more people than would actually be traveling in northern Colorado. Although a few drivers may view the sites, they are not seeking immediately relevant route information. Many of these sites are operated by state trucking associations and are available for viewing by members only, further limiting the ability to reach the long haul driver. The program message or messages could be overlooked, as these sites have a large number of ads appearing in a small space. In addition, some sites rotate the ads, so messages would not appear each time the site is accessed.

Sustainability

The cost of advertising on websites is fairly reasonable. Costs can range from \$200 per month to \$1,000 per month, depending on the site. The effect of the advertising in the long-term would remain constant, as different people will be continually reading the ad.

Potential Impacts

Advertisements on trucking industry websites are highly unlikely to reach a non-trucking audience, so the impact on automobile drivers or other members of the general public planning to visit Fort Collins would be minimal.

Recommendation

The implementation of internet advertising on trucking association websites would have minimal benefits. These sites typically are operated by state trucking associations and have limited viewing outside of those associations. Dispatchers and truck drivers would not typically consult these websites due to lack of current roadway condition information. Furthermore, these websites are typically for regional trucking agencies and therefore advertising to truck drivers that potentially would not be traveling in northern Colorado. **The use of internet advertising is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.8 Kiosks at Truck Stops

Kiosks at truck stops provide interactive, electronic information on current weather conditions, construction delays, and detours and also incorporate messages about the advantages of the Interstate route.

*Phase II: Non-Route-Based Strategies***Implementation**

Kiosk machines would be purchased by the City of Fort Collins and strategically placed at truck stops, weigh stations, or other possible locations. The machines would be programmed with the appropriate information and maintained to ensure updated information is available. They could be updated via modem to ensure the information is current.

Effect on Route Decisions

The kiosks could conceivably reach drivers in both the primary and secondary audiences, though their use may be considered unnecessary by drivers who have already received current road and weather conditions via radio, VMS signs, or other means while on the road. Static route data would be similar to that provided by brochures; however, the effect on route choice is difficult to predict. Kiosks provide a level of interactivity that can not be duplicated by brochures; however, they require greater effort on the driver's part to obtain the information.

Feasibility

The purchase, placement, and maintenance of several electronic kiosks would be feasible but would require a fairly significant amount of time to develop software and make arrangements for long-term use. They are not feasible for a short-term program; however, if NRBSs are continued for a period of years, the kiosks could be effectively built into a long-term program.

Sustainability

If implemented, the program would be sustainable. It is not a strategy that would likely grow more or less effective over time, but rather one that would vary with weather and road conditions. A reasonable pilot program would involve the purchase and placement of 10 electronic kiosks at various locations within a pre-determined radius of Fort Collins. Assuming a cost of \$5,000 per machine and \$100 per machine per month for maintenance, this strategy would cost approximately \$62,000 to operate for one year. Costs could possibly be offset by selling advertising space on the kiosk, but advertisers could not be Fort Collins-based or it could counter any messages aimed at directing trucks away from the city.

Potential Impacts

Travelers other than truck drivers could access the kiosks if placed at public rest stops; however, the machines are likely to have a minimal impact on these travelers decisions to visit or spend money in Fort Collins.

Recommendation

The implementation of informational kiosks at truck stops along the I-25/I-80 corridor would aid in the viewing of several of the recommended strategies. The brochure could be posted as well as having an internet station with the website being available through an interactive computer. This would allow truck drivers to get current traveler information and see the benefits of the Interstate route. This method of displaying several of the various marking strategies should be effective. While kiosks may be effective, they are not feasible for a one-

Phase II: Non-Route-Based Strategies

year program. Kiosks have very high initial costs, and are a very high maintenance item. Assessing the success of other marketing strategies is recommended as an indicator of the potential for the success of kiosks. **The use of kiosks at truck stops is considered realistic as a potential successful strategy for routing truck traffic to the Interstate, but not realistic for a one year program.**

4.2.3.9 Map Routes

Rand McNally publishes a truck route guide that currently lists SH 14/US 287 as the recommended route for travel between Fort Collins and Laramie. There are also software companies who develop routing software for the trucking industry that typically make the same recommendation.

Implementation

The City of Fort Collins could reach out to Rand McNally and the software producers with messages about why the Interstate corridors comprise a more logical route for truck drivers. The purpose would be to determine if it is possible to amend their recommendations so that the Interstate corridor becomes the route of choice.

Effect on Route Decisions

If the City's recommendations were indeed accepted and incorporated into the standard truck guides and routing software, the impact on drivers and route planners nationwide could be significant. Local drivers who are familiar with the region might continue to stay on SH 14/US 287 because they know both corridors well enough to make up their own minds.

Feasibility

This strategy is not likely to succeed. The various mapping software packages are designed to provide optimal route choices based on the needs of the shipper and trucking company. The route choice is a complex process that is based on the attributes of the various potential route links. Changing the programs so that they don't recommend the certain routes would require eliminating certain links from consideration or falsifying the attributes of those links, neither of which is like to ever be done knowingly.

Sustainability

In the long-term, these companies would be contacted each time an update is scheduled to occur to ensure that the changes remain in place. Also, as new products were created these changes would need to be communicated to these new product manufacturers. If the changes are not kept in these products, then the truck drivers and route planners would most likely revert back to the shortest route. If the routing software did exclude SH 14/US 287 as a route, any effects on route choice would be sustained for the long-term.

Potential Impacts

This strategy has the potential to produce significant improvement to the quality of truck traffic by significantly reducing the quantity of trucks within the city. The route choice of automobile drivers would not be impacted by the alternative.

Phase II: Non-Route-Based Strategies**Recommendation**

The implementation of map route software changes would be very effective, if it could be implemented. The routing software frequently bases the routes on shortest distance and similar factors, and the companies would not be likely to modify the software based on a request from a community. If the software were changed, the route planners would also change their routes and the impact would be considerable. However, due to the difficulty in having the products changed, this strategy would most likely result in very little change in the existing quantity and quality of truck traffic on the SH 14/US 287 route. **The map route alternative is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.10 Paycheck Mailers

Paycheck distribution is a direct way for trucking companies to deliver additional information to their drivers and other personnel. It is unclear whether all trucking companies follow similar procedures in delivering paychecks, i.e., some may pay biweekly and some monthly, and some may mail checks while others hand them out in person or use a direct deposit system.

Implementation

The City of Fort Collins could provide trucking company management with printed inserts that encourage the use of the Interstate route for those traveling between Fort Collins and Laramie. A cover letter with the inserts would encourage managers to include them in the paycheck envelopes of the drivers, route planners, or any other relevant personnel. It is also possible that the brochure discussed in Section 4.2.3.3 or any article reprints used as direct mail (as discussed in Section 4.2.3.1) could be used as paycheck inserts.

Effect on Route Decisions

This strategy would reach both audiences. Because the desired messaging would be reaching the drivers and route planners directly from their employers, it would have greater credibility and likely impact on route decisions. However, if the messaging in the inserts contradicts route recommendations made in truck guides and software and established route preferences in the minds of local drivers, this strategy's effectiveness would be compromised.

Feasibility

This strategy would require the private companies to agree to add this information to their employees' pay envelopes. Extensive coordination and contact lists would need to be created to cover all the trucking companies in the United States. Also, printed paychecks mailed or distributed in envelopes are becoming obsolete, as many employees are choosing direct deposit of their paychecks.

Sustainability

This paycheck mailer would need to be done at least four times each year. This can prove costly with coordination, printing and distribution. If sustained, the effectivity is likely to continue.

Phase II: Non-Route-Based Strategies**Potential Impacts**

This strategy would not reach non-trucking audiences and would not have any impact on the City of Fort Collins business community unless it somehow did direct a significant amount of truck traffic to the Interstate route.

Recommendation

The implementation of paycheck mailers would involve the City providing inserts to the trucking companies. The strategy would reach both the primary and secondary audiences. This strategy would require quarterly implementation, and can be costly. There would be no potential impacts to the community. **The paycheck mailer alternative is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.11 Private Trucking Company Outreach

This strategy was identified as having potential in Phase I. On further investigation, a number of individual methods were found that fall under this category. For the purposes of the Phase II study, each of the newly identified strategies were studied separately. For example, direct mail approaches such as the brochure was discussed in Section 4.2.3.3. Article reprints are discussed in Section 4.2.3.1. A more hands-on outreach strategy, however, is the safety meeting program discussed in Section 4.2.3.13. These strategies are discussed in their respective sections, and this strategy is not discussed further under this title.

4.2.3.12 Radio Ads on Syndicated Shows

Research has found that many truck drivers listen to the radio throughout the day and night. Satellite and highway advisory radio channels do not accept advertising. However, preliminary research suggests that there are several nationally syndicated A.M. radio shows that are particularly popular with truck drivers and therefore fertile ground for strategic advertising. The ads would be designed to inform the route planners and drivers about the improved safety, ease of travel, and availability of amenities along the Interstate route in an effort to have this route used as the primary choice.

Implementation

Radio spots will be produced in a 30-second format. The information will be consistent with other media so as to reinforce the desired messages. Approximately two months would be required to produce each ad and reserve air space. Some additional research would be required to identify those programs with the greatest reach. Overall the implementation of such a strategy could be done fairly easily.

Effect on Route Decision

This strategy will reach both long haul drivers as well as regional drivers. The level of effectiveness will be greater when mixed with other media such as billboards but, as with other mediums, the effectiveness will also vary with factors such as weather. For example, a radio spot touting the safety advantages of the Interstate route will have little impact during a February snowstorm that closes I-80 between Laramie and Cheyenne. For that reason, messages may have to be adapted seasonally to coincide with construction projects or other

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foreseeable causes of congestion. Depending on the tone and overall content of the messages, this strategy has the potential to be very effective, especially with the drivers that are not local.

Feasibility

Drivers are essentially a “captured” audience in that they spend the bulk of their time in their cabs listening to the radio. That makes radio advertising a highly feasible medium for reaching the target audience. Ads would be purchased during nationally syndicated programs but only to air in regional markets surrounding the relevant corridors.

Sustainability

Production and placement of two radio advertisements over the course of a one year program would cost approximately \$60,000. This would purchase five ads per day to run during two distinct, 90-day campaigns. Beyond the one-year program, the strategy is sustainable and could grow more effective over time with the constant repetition of messages. In addition, costs per advertisement could go down over time as ongoing relationships are developed with individual stations.

Potential Impacts

Depending on the degree to which the targeted programs reach an audience beyond truck drivers, radio advertisements could inadvertently cause some automobile traffic to choose the Interstate route and bypass Fort Collins. At the same time, the ads could raise general awareness of the city among automobile travelers and paint a positive portrait of a community that is working to reduce congestion on its streets.

Recommendation

Advertising on syndicated radio shows is easily implemented, and would reach a large driving audience. The message may need modification seasonally so as not to contradict other messages on the radio, like a road closure on I-80. However, as the driver is a “captured” audience, the reach of the message would be significant. The ads may also be heard by automobile traffic and affect their route choice. Overall, the strategy is feasible and reasonable. **Radio advertising on syndicated shows is considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.13 Safety Meeting Reminders

Regular safety meetings are held within trucking companies, as well as regionally and within state trucking associations, to remind and inform drivers of potential safety hazards. Industry research indicates these meetings would be an effective way to disseminate information about the safety benefits of the Interstate route.

Implementation

A one-year program would be developed in which City of Fort Collins staff or a representative would attend safety meetings sponsored by a limited number of regional trucking companies and give a briefing on the northern Colorado preferred trucking routes.

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In addition, the program could be repeated at regional safety meetings or those sponsored by the CMCA and other state trucking organizations.

Effect on Route Decision

The messages imparted at safety meetings would reach not only drivers but safety managers at trucking companies and other office personnel. Industry research indicates this could be a highly effective method for affecting drivers' route decisions. If the information imparted is substantive, fact-based, and of significant benefit to driver safety and the bottom line, this method would also secure support for those decisions among trucking company management. As noted below, this strategy would be most effective in reaching local and regional drivers, dispatchers, and management.

Feasibility

This strategy is feasible for reaching local and regional trucking companies. It is neither logistically feasible nor cost-effective for a City representative to regularly attend safety meetings hosted by companies, associations, and regions on a nationwide basis.

Sustainability

Meetings and travel would have to be scheduled and coordinated to be most effective for the budget. Costs would primarily be for travel and time and could run \$25,000. These costs would cover a representative reaching 60 companies annually.

Potential Impacts

There would be no negative impact on automobile traffic to Fort Collins. Because of the direct human contact this strategy would require between the City and local trucking interests, a likely benefit could be ongoing goodwill that helps minimize adversity on future transportation issues of all kinds.

Recommendation

Safety meetings are an excellent way to reach regional drivers and route-planners, but the message must be strong, clear, correct, and consistent. Because of the direct contact with the trucking industry and the decision makers, this strategy has the potential to be successful in improving the quantity of truck traffic in the city. The strategy is feasible in a regional area, though too costly for a national campaign. Once the message regarding the safety benefits is delivered, it is likely that route planners and drivers would make the decision to change their route of choice from the SH 14/US 287 corridor to the Interstate route. **Safety meetings are considered realistic as a potential successful strategy for routing truck traffic to the Interstate.**

4.2.3.14 Trade Publication Advertising

A variety of trucking/shipping magazines and newspapers are available for advertising. Research recommends that any print advertising target those publications that are geared toward independent owner/operators and corporate drivers, as opposed to trucking company

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management and office personnel. Among the leading candidates for print advertising are *The Trucker*, *Overdrive*, and *Landline*.

Implementation

Ad schedules in the trade publications can span from 3 months to 12 months. The ad message and design would be determined based on the subject. It may take two months to implement the advertising strategy.

Effect on Route Decision

The print ads would reach long haul drivers, owner/operators, and dispatchers. The level of effectiveness is expected to be low. The circulation of such publications reaches many drivers who do not frequently travel through northern Colorado, in which case the message would be quickly forgotten. A steady repetition of ads in publications that reach dispatchers and management could at least raise awareness of routing issues in the northern Colorado region, though it would likely have minimal impact on their routing decisions unless the benefits of the Interstate corridor are also relayed by the drivers themselves.

Feasibility

As a general rule, trade publication advertising is a predictable and feasible way to reach a specific audience because readership demographics are well defined, and ads can be designed and timed as desired. However, as noted, this is somewhat of a “shotgun” strategy in that it will ultimately reach a large number of readers for whom the message about travel in northern Colorado is irrelevant or at least not immediately relevant.

Sustainability

For a six-month pilot program, design and production of a quarter-page ad would cost \$5,000, and its placement in six editions of *The Trucker* would cost \$10,000. To design an ad and run it for a full year in *The Trucker* (12 issues), *Overdrive* (6) and *Landline* (9) would cost a total of \$90,000. To truly effect the desired behavioral change, an advertising campaign must be sustained over a long period. As with other strategies, advertising can trigger long-term behavioral change if it encourages those who have a good experience on the Interstate route pass the word along to others.

Potential Impacts

Because the advertising would be limited to one industry’s particular trade publications, this strategy would not adversely impact automobile or other general public visits to Fort Collins.

Recommendation

While the effort of implementation is not considerable, the effect on the audience is low enough to make this strategy not realistic. The message would be received by a large number of readers, for most of whom it would have little or no relevance. The costs for continued implementation are fairly large. Since this strategy is viewed as having a very low success rate and would most likely have very little or no impact on the quality and quantity of truck traffic, it is not recommended for implementation or evaluation. **Trade publication**

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advertising is considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.

4.2.3.15 Informational CD-ROM/DVD

A CD-ROM, DVD, or videotape would be produced to include information about northern Colorado preferred truck routes. This would be distributed to state trucking associations, private trucking companies and independent owner/operators for use in the home, office or even on-board equipment if available.

Implementation

The production of a CD-ROM, DVD or video can take several months. Once the master is generated, however, it is relatively simple and cost-effective to make thousands of copies for mass distribution.

Effect on Route Choice

This strategy is not likely to affect route decisions. Most of the research indicated that management would spend little time viewing such information or passing it along to drivers since a dispatch and route determination system is already in places. In addition, most drivers are not equipped with the necessary viewing equipment in their cabs and are therefore unable to view the presentation on the road when it would be most relevant.

Feasibility

Production and distribution of a CD-ROM, DVD, or video is feasible in concept, though mailing costs would be high.

Sustainability

The cost of producing a CD-ROM or video could run as much as \$20,000, plus reproduction and mailing costs. The information on the CD-ROM could also become dated over time and require updating.

Potential Impacts

This strategy would be carefully targeted to the trucking industry and therefore highly unlikely to reach a non-trucking audience, so the impact on automobile drivers or other members of the general public planning to visit Fort Collins would be minimal.

Recommendation

While the effort of implementation reasonable, like the previous strategy, the effectiveness for route choice change by audience is low. Most drivers are not equipped for viewing the information in the cab, and it is unlikely that the message would be effectively relayed by viewing the video elsewhere. The implementation would require continued updates and mailings. **Informational CD-ROM/DVDs are considered unrealistic as a potential successful strategy for routing truck traffic to the Interstate.**

Table 4-4
Realistic vs. Unrealistic Strategies

	Realistic	Unrealistic
Physical Strategies		
Variable/Dynamic Message Signs		X
Corridor Amenities		X
Guide Sign Modification		X
Regulatory/Enforcement Strategies		
Compression Brake Law		X
Restrictions		X
Marketing Strategies		
Articles in Publications (and Public Relations)	X	
Billboards	X	
Brochures/Direct Mail	X	
Website Development/CDOT website: Cotrip.org	X	
Highway Advisory Radio		X
Incentive Program		X
Internet Advertising		X
Kiosks at Truck Stops		X
Map Routes		X
Paycheck Mailers		X
Radio Ads	X	
Safety Meeting Reminders	X	
Trade Publication Advertising		X
Informational CD-ROM/DVD		X



5.0 RECOMMENDATIONS

After evaluating all NRBSs recommended in Phase I and considering additional recommendations from the trucking industry representatives involved in the process, some strategies have been selected as likely to yield the most promising results. To put these strategies in perspective, it is important to consider the results of previous studies and the potential for change.

5.1 POTENTIAL FOR CHANGE

There have been many studies on truck travel in the area and the potential for changing the behavior of those trucks using the SH 14/US 287 corridor. To determine the audience for NRBSs, relevant data compiled through previous studies has been combined. The knowledge of the size, origination and destination, values, and behaviors of this target group will allow the most appropriate NRBSs to be selected to effect the most possible change.

A Western Highway Institute (WHI) Assessment in 1999 found that there are three groups of truck traffic on SH 14 and US 287. They grouped the truck traffic into three groups: Local (33 percent), Regional (50 percent), and Long Haul (17 percent). For the purposes of that study, these groups were defined as:

- Local – non-through truck traffic with a delivery or stop in the City of Fort Collins (not in northern Larimer County)
- Regional – through and non-through truck traffic that originate or terminate in the regional area and regularly travel in and provide services within the region, possibly stopping along the route in northern Larimer County)
- Long Haul – through truck traffic that originate and terminate outside the region (no stops along route)

The information about the long haul truck traffic group is most valuable for this study. The results of all forums with industry participation demonstrated that the target audience for the marketing strategies should be those long haul trucks with no stops along the corridor.

The knowledge that 17 percent of truck traffic is long haul through trucks is essential; however, it is equally important to know how many trucks are traveling through the corridor to determine the number of trucks with the potential to change. The number of long haul through trucks is the number of trucks that could be significantly affected by the NRBS strategies and therefore have the most potential to change routes.

The number of trucks with the potential to be affected by the strategies was found based on current and previous studies. Results from the Western Highway Institute study and an Origin and Destination Study (Carter & Burgess, June 2001), are consistent with the current study in finding that about 1800 commercial trucks travel within the City of Fort Collins daily (along SH 14) and approximately 1,100 trucks travel the entire corridor (SH 14/US 287) daily. Of those trucks approximately 600 are non-stop through trucks traveling between Laramie and Fort Collins. Further, about 190 of the trucks that travel the entire corridor are long haul through trucks traveling beyond both Fort Collins and Laramie.

The number of long haul through trucks that travel along SH 14 in Fort Collins is important as this group is the focus of the majority of the strategies. The strategies primarily selected for implementation are marketing techniques aimed at affecting the route choice of the long haul truck driver. A rule of thumb in marketing is that if a marketing program impacts ten percent of the target audience, it is a successful program. Ten to 20 percent of the primary daily target audience number of 190 is about 20 to 40 trucks. Ten to 20 percent of the total daily target audience of 600 trucks is 60 to 120 trucks.

For obvious reasons, local truck traffic with stops in Fort Collins or any point along US 287 between Fort Collins and Laramie cannot change their route choice. Trucks with no business in Fort Collins or along 287 could take the Interstate route between Fort Collins and Laramie. However, industry participants in the workshops and focus group described various advantages of the SH 14/US 287 corridor and felt strongly that moving trucks to the Interstate route, particularly those trucks operated by local or regional drivers who know the area well, would be a significant challenge. There was further sentiment among the participants that long haul truck drivers who pass through the region less frequently could be more amenable to messages promoting the Interstate route. Based on the combined results of the discussed studies, this target group is estimated to include about 190 trucks daily. It is worth noting that the comments of the focus group participants, in particular, seemed to be based on misperceptions about the mileage difference between and safety/incident records of the two routes; any campaign that corrects these perceptions could have an impact on both local/regional and long-haul drivers.

To restate, if the non-route-based marketing strategies are successful, it is anticipated that they will effect a change in route choice of about 20 to 120 commercial trucks (out of 1800 trucks on SH 14 within Fort Collins), daily.

5.2 SELECTED STRATEGIES

Following comparative screening by experienced marketing professionals, the following strategies were selected for implementation. The recommended course of action is to utilize, on a one-year basis, a combination of select, integrated marketing strategies.

5.2.1 Audience

These techniques would be focused on a primary audience of non-Colorado-based long haul truck drivers, both independent owner/operators and those who drive for larger trucking companies or corporate shippers. The secondary audience will be comprised of local and regional independent and company/corporate drivers as well as dispatchers and management for all types of trucking/shipping organizations.

The rationale for this targeting is two-fold. First, focus group and workshop participants indicated that, while dispatchers generally set routes for company/corporate drivers, the drivers themselves do have discretion to make adjustments on route segments as dictated by congestion, construction, weather or other local factors. Drivers are also more likely than dispatchers or other management personnel to respond to a marketing campaign that discusses local road

conditions in a particular region. Independent owner/operators are likely to respond to messages emphasizing route alternatives that save time and money.

Second, non-Colorado long haulers are being targeted because research indicates that marketing efforts will likely be more effective with out-of-state drivers who pass through Colorado only periodically. These drivers are not as familiar with characteristics of the SH 14/US 287 and I-25/I-80 corridors. The mileage difference between the two routes is likely to be less critical because it represents a smaller percentage of their overall trip. The focus group participants were very clear that it will be difficult to convince experienced, local drivers who know the area well to switch from the preferred SH 14/US 287 route to the Interstate route.

5.2.2 Media and Message

The marketing media selected to relay information include the use of a preferred trucking routes brochure, billboards, media relations, radio, safety meetings, trade publications, and a website. These media will be utilized in different ways, targeting different groups. The messages will include information about the benefits of the Interstate route, as well as the restrictions in place on the SH 14/US 287 route. Some of this information may be counter to existing perceptions by truck drivers or route-planners. Messaging will emphasize:

- Safety on the Interstate route – more safe than SH 14/US 287
- Ease of use of the Interstate route for through trucks
- Existing amenities on the Interstate route – parking, showers, food, less expensive fuel
- Noise ordinances in place on SH 14

The range of media sources will be used differently for various messages, to focus some of these specific messages on targeted audiences.

- The brochure would reach long haul and regional drivers through distribution in stop areas like truck stops, weigh stations, and information facilities as well as direct mail distribution.
- The billboards target all drivers along the corridor, and are expected to affect route choice primarily for long haul drivers.
- Articles in publications, and related public relations efforts, will be used to reach local and regional, and possibly long haul truck drivers and route planners.
- Radio advertising on syndicated shows will reach long haul and regional drivers, with an anticipated impact more on the long haul travelers.
- Safety meetings have been noted as an excellent means to reach regional drivers, route-planners, and management.
- A website would reach regional drivers, providing them with information about the safety and weather conditions on the routes.

In order to achieve the greatest results from a marketing campaign, a mix of media must be used. Implementing just one of the strategies will not provide enough frequency to all of the target audiences to net results. Based on the strategies researched, it is recommended that a one-year pilot program be implemented.

5.3 STRATEGY IMPLEMENTATION

Strategy implementation includes details on each strategy, a timeline, and a budget.

5.3.1 Website Development

The development of a website specifically for this project will be one of the first strategies to be completed, because it will be referenced in the print ads, billboards, brochures, and other marketing/public relations strategies.

A website address will be determined. The site will be hosted by the City of Fort Collins as part of their current site. Content may include the preferred route map that will be in the brochure, safety statistics, road construction information, availability of amenities, and other information. The content including text, graphics, photos, and charts will be developed and approved by the City of Fort Collins before the page is posted to the site.

The webpage will be linked to the CDOT website and other trucking industry associations. These groups will also post the link on their sites to refer people with specific interest in the Fort Collins area.

It is expected the website will take four weeks to produce and upload. Ongoing maintenance of the website will need to be addressed monthly, or when new information becomes available.

5.3.2 Billboards

Contact will be made with the billboard companies to determine available locations. It will be determined if these sites are viable locations for our message. If some locations are not currently available, space can be reserved when the billboard becomes available.

Once the billboards are determined, the message will be developed. This will include layout and design of the billboard itself. Once the client approves the artwork, the billboards will be completed and in place in approximately three weeks. The billboard companies handle the production of the boards, based on their exact sizes.

The message should be changed at least twice each year. It is recommended that there be fall/winter and spring/summer messages. A sample billboard design is shown in Figure 5-1.

Figure 5-1
Sample Billboard



5.3.3 Brochure

A brochure will be developed to emphasize the preferred truck routes through and around Fort Collins. The map and routes for the brochure will be determined with assistance from the City of Fort Collins. Routes will include those for through truck traffic, as well as preferred routes for trucks making stops in Fort Collins. The final map will be approved by the City of Fort Collins.

The map artwork will then be placed into a design/layout of the brochure. A draft of the brochure will be approved by the City of Fort Collins before printing. The printing will be done in a quantity of 20,000 to allow enough for distribution for one year.

The brochure will be a four-color process, 11 x 17, folded down to 8-1/2 x 3-1/2. The size of the brochure will allow for it to be mailed alone, in an envelope with a cover letter, and to be displayed in existing brochure racks at major distribution points.

The design and production of the brochure will take approximately six to eight weeks.

An initial mailing of approximately 10,000 brochures will be sent to long haul trucking firms in the United States. The balance of the brochures will be distributed to truck stops, associations, rest stops, and weigh stations for display in their existing informational racks. A sample brochure cover design is shown in Figure 5-2.

Figure 5-2
Sample Brochure



*Phase II: Non-Route-Based Strategies***5.3.4 Radio Advertising**

Radio stations in the region will be researched to determine the demographics of the listeners, programming, and pricing. Stations will be considered in Colorado, Wyoming, and Utah. Radio stations will be selected based on these criteria.

An advertising schedule will be determined based on time of year and availability of space. The radio ads will run in two, three-month intervals to focus the message to spring/summer driving and fall/winter driving conditions.

Radio copy/text will be developed and approved by the City of Fort Collins. Production of the radio ads will include writing, and other audio effects such as music, background noise, etc. Production of the spots will take place at a studio in Denver and be distributed to the radio stations. It is expected to take four to six weeks to produce the radio ads.

5.3.5 Articles in Publication (and Public Relations)**Articles in Publications**

Four articles advocating use of the Interstate route will be written under the byline of the project spokesperson, trucking industry leaders, drivers who prefer the Interstate route, and other relevant authors. After approval from the City of Fort Collins, they will be submitted to media outlets that accept bylined articles for publication. The project team will coordinate with editors to advocate publication. Published articles will be reprinted for marketing distribution, and referenced on the web page.

Public Relations

A detailed list of media contacts will be developed, focusing on trade media for the trucking industry, as well as local media outlets proximate to I-25 and I-80 in Utah, southern Wyoming and central/northern Colorado. The team will confirm each contact, establish a relationship, and provide an initial media kit. The contacts then will receive news releases on a bi-monthly basis and bylined articles on a quarterly basis.

News Releases

Six news releases will be developed, incorporating project messaging and fresh data. After approval from the City of Fort Collins, the news releases will be circulated to the media list, and the team will follow up with pitch calls. A project spokesperson from the City of Fort Collins will be available for interviews to be included in stories generated by the news releases. Positive coverage generated by the news releases will be reprinted for marketing purposes, and referred to on the web page.

Satellite Radio

A contact list will be developed identifying satellite radio shows that are demographically appropriate, or specifically target truck drivers. Quarterly Public Service Announcements will be scripted for on-air personnel to read during broadcasts after the script has been approved, it will be distributed to the contact list, and the team will follow up with calls.

*Phase II: Non-Route-Based Strategies***5.3.6 Safety Meeting Reminders**

A list of private companies and key contacts from the regional area will be developed. Personal contact will be made with the companies to determine their schedules for safety meetings. A list of area industry associations will also be developed and schedules for conferences, seminars, and meetings determined. From those lists, approximately 40 companies will be selected to target the message. Approximately three meetings per month can be attended by a project representative to further educate the drivers and route managers about the benefits of the Interstate route.

A presentation will be developed for the safety meetings. This may be a Power Point presentation, or display boards and speaking points. Handouts will also be developed to leave behind after the presentation.

5.3.7 Time Line

The Implementation Timeline in Table 5-1 demonstrates the schedule for strategy development and rollout. All strategies are anticipated to be in place within the first three months.

Table 5-1
Implementation Timeline

	Months 1-2 (1-60 days)								Month 3 (61-90 days)				Months 4–6 (91-180 days)				Months 7-12 (181-360 days)					
Website	Outline content	Confirm URL address	Establish site link system	Finalize site design	Post site on internet				Updates				Updates				Updates					
Billboards	Reserve space	Finalize 1st design and layout	Produce						Post 1st design *								Finalize 2nd design/layout	Produce	Post 2nd design *			
Brochure	Finalize route map	Finalize design and layout	Send brochure to printer						Finalize mailing list	Distribute brochure												
Articles in Publication (and Public Relations)	Develop contact list	Develop media kit	Initiate contact, distribute kit	Outline message/release schedule	Finalize initial news releases/articles	Place 1/4 bylines	Place 1/4 radio PSAs	Place 1/6 news releases	Place 2/6 news releases				Place 2/4 bylines	Place 2/4 radio PSAs	Place 3/6 news releases	Place 4/6 news releases	Place 3/4 bylines	Place 4/4 bylines	Place 3/4 radio PSAs	Place 4/4 radio PSAs	Place 5/6 news releases	Place 6/6 news releases
Truck Company Outreach	Develop contact list	Outline presentation	Begin scheduling meetings						Finalize presentation/materials	Hold 10 meetings	Develop contact list of map route software comp	Research routes					Hold 30 meetings	Follow up with map route software comp				
Radio Advertising									Develop contact list	Develop schedule	Finalize and produce st radio ad	Place 1st radio ad					Produce 2nd radio ad	Place 2nd radio ad				

* Billboard posting is ultimately dependant on space availability

*Phase II: Non-Route-Based Strategies***Budget**

The budget is developed as a one-year program. Results will be measured and evaluated at the end of this period of time to determine effectiveness of the strategies.

Table 5-2
NRBS Strategy Implementation Costs

	Advertising	Cost
Brochure	Design and Production of 20,000	\$13,500.00
	Mail Distribution	\$15,000.00
Billboard Advertising	Design	\$5,000.00
	Production, Placement of 2 billboards	\$37,000.00
Safety Meeting Reminders	Develop presentation, attend safety meetings	\$23,500.00
Articles in Publications (and Public Relations)	Public Relations, news releases, articles, satellite radio	\$43,000.00
Radio Advertising	Design	\$6,000.00
	Production and placement of two ads	\$56,000.00
Website Development	Content, Writing, Design, Updates	\$12,000.00
	TOTAL	\$211,000.00



6.0 PRELIMINARY EVALUATION PLAN

The Northern Colorado Truck Mobility Study stemmed from Ballot Initiative 200, passed by the City of Fort Collins in November 1999. As discussed in the background section of the report, Phase I included recommendations that additional evaluations be directed at NRBSs. Phase II begins with an investigation of these strategies as possible techniques for implementation. The marketing strategies recommended will be implemented for one year. This evaluation plan provides a systematic means to assess the effectiveness of each NRBS developed to encourage truck traffic that have no business stops in Fort Collins, Colorado, to travel between Fort Collins and Laramie, Wyoming using the I-25/I-80 route instead of the SH 14/US 287 route.

The overall approach to the evaluation process for the NRBSs was to first identify the goals and objectives, and then determine the measurable parameters that validate the intended impact of each of the strategies. Assessing the quantity and quality of through truck traffic that would be affected by each NRBS is the focus of this evaluation plan.

6.1 METHOD

A key part of this project is to develop an evaluation plan that can serve as an assessment tool capable of assisting decision-makers in the selection of the most appropriate strategy or combination of strategies for the corridor. Another purpose of the evaluation plan is to provide decision makers with a tool to answer basic questions that will allow them to judge the merit of each strategy in specific applications. Examples of some basic questions include:

- Who is the primary audience for each strategy?
- What are the costs associated with each strategy?
- What are the benefits associated with each strategy?
- How well does each strategy work under different conditions?
- How does one strategy compare to another?

6.2 RESEARCH CONDUCTED

The goals and objectives were developed following close team discussion and review of the previous studies on this issue. Preliminary feedback on the types of marketing strategies and tactics that might be effective in altering truck driver behavior resulted from the discussion forums discussed in the Section 3.0.

6.3 EVALUATION PLAN

An effective evaluation plan begins with the development of goals, which are high-level, broad statements of the purpose of the evaluation. The goals are further refined into objectives which are then evaluated for their ability to accomplish the goals. Measures of effectiveness, performance, and suitability are utilized to determine how well an objective meets a goal. Different methods are developed that allow the measures data to be collected and analyzed such as interviews and questionnaires.

Phase II: Non-Route-Based Strategies**6.3.1 Goals and Objectives**

The goals for the evaluation of the strategies were identified to determine the overall effectiveness of combined NRBSs. These goals focus on the abilities of NRBSs to encourage through truck traffic to use the I-25/I-80 route and to increase the quality of life in the downtown area as a result of reduced truck traffic. Guiding the development of this evaluation plan, these goals include:

- Assess the change in truck traffic volume on the SH 14/US 287 truck route
- Assess the impacts to affected highway systems
- Assess the environmental changes on the SH 14/US 287 truck route
- Assess the impacts to safety along the affected corridors
- Assess the economic impacts to corridor business
- Assess the cost of providing ongoing efforts to sustain the measured or anticipated results

These goals were developed early in the project to assist with the evaluation of the selected strategies.

Objectives are detailed features of a goal that can be quantified or qualified to identify to what extent a goal has been met. The ability of a strategy to achieve the goals can then be ranked to provide a relative comparison between NRBSs. Objectives were determined for each goal.

Further descriptions of the evaluation goals and objectives are provided as follows.

6.3.1.1 Assess the Change in Truck Traffic Volume on the SH 14/US 287 Truck Route

This goal is the crux of the project and is the cornerstone of Ballot Initiative 200. The primary focus of the project is to develop strategies that would reduce the truck traffic volume. This goal will assess the implemented strategies' ability to affect truck traffic volumes. Supporting objectives include determining the change in volume on a daily basis, hourly basis, and determining changes in time-of-day travel patterns.

6.3.1.2 Assess the Impacts to Affected Highway Systems

This goal addresses the secondary impacts that may be caused by the change in truck and automobile traffic volumes on the affected roadways. This includes impacts to both the SH 14/US 287 route and the Interstate route, as well as other parallel local roadways that may be carrying non-local trucks. The impacts being addressed are expressed in the objectives that include determining changes in operation and maintenance costs, changes in traffic congestion and delay conditions, and changes in the safety characteristics of the corridors.

6.3.1.3 Assess the Environmental Changes on the SH 14/US 287 Truck Route

This goal addresses another secondary impact of the NRBSs related to how the environment along the route may change. However, this goal is not limited to changes resulting from changes in volumes on the affected routes. Changes in noise levels and vehicle emissions, the two objectives included to support this evaluation goal, may result from either volumetric changes or changes in the operating characteristics of the vehicles. This goal is focused on the SH 14/US 287 route.

*Phase II: Non-Route-Based Strategies***6.3.1.4 Assess the Impacts to Safety Along the Affected Corridors**

This goal addresses the safety impacts that may be caused by the change in truck and automobile traffic patterns on the affected roadways. This includes impacts to both the SH 14/US 287 route and the Interstate route. The impacts being addressed are expressed in the objectives that include determining changes in vehicle crashes and pedestrian conflicts.

6.3.1.5 Assess the Economic Impacts to Corridor Business

This goal addresses a critical secondary impact of the NRBSs related to how the business economy along the route may change. Whereas the other goals focus on the potential positive impacts of the strategies, this goal addresses a key potential negative impact, particularly the loss of business and tax revenues due to the shifting of traffic away from SH 14/US 287. The potential increase in business and tax revenue along the Interstate corridor is another objective that is considered.

6.3.1.6 Assess the Cost of Providing Ongoing Efforts to Sustain the Measured or Anticipated Results

This goal addresses the combined positive and negative impacts of the NRBSs with the cost associated with implementing those strategies to assess the long-term viability and sustainability of the strategies. Individual and collective strategy costs will be determined and extrapolated to determine costs if the strategy is continued beyond the demonstration period. A cost/benefit comparison will also be addressed to help provide an understanding of the relative effectiveness of each strategy.

6.3.2 Measures

Measures provide a means to assess how well an objective meets the goals of a plan. Measures also provide a comparison of how well each strategy performs under established objectives. The evaluation plan includes three types of measures: measures of effectiveness (MOE), measures of performance (MOP), and measures of suitability (MOS).

Once the project goals have been identified and the objectives established, it is necessary to determine to what extent an objective has successfully been achieved. MOEs (measures of effectiveness) provide a quantifiable gauge for knowing when an objective has been met. MOEs are parameters that can be directly measured to quantify the benefits of one NRBS to another. This may include the collection and analysis of operational parameters such as the reduction of through truck traffic and reduced truck noise.

MOPs (measures of performance) are parameters that verify that the strategies are performing as they were designed to do during the development phase. For NRBS, an example of an MOP would be to determine if a strategy effects route selection of the I-25/I-80 route instead of the SH 14/US 287 route. MOPs will be identified and verified through traffic modeling and field data collection and observation.

MOSs (measures of suitability) are parameters that deal with user attitudes, support, and perspective. These measures are frequently determined through verbal or written documentation by affected parties. Methods include interviews, discussions, and workshops, or comment forms and questionnaires. The first part of Phase II strongly relied on MOS measures to arrive at the

Phase II: Non-Route-Based Strategies

conclusions presented for implementation and evaluation. Further MOSs to be considered for the evaluation includes a questionnaire or interviews. The focus of these MOSs would be on issues such as the perception of the number of trucks that stay on the I-25/I-80 routes, the perceived reduction in noise levels, and the number of drivers that report altering their route after the implementation of a strategy.

6.3.3 Methods

The general methods considered to measure the effectiveness, performance or suitability of an objective to achieve a goal include vehicle classification counts, traffic modeling before and after implementation, field testing and monitoring, comparing accident and crash data, and cost/benefit calculations. The ability to affect route decision, feasibility, sustainability, and potential impacts of each strategy will also be assessed.

6.3.4 Recommendations

The recommended marketing strategies passed the unrealistic screening and were selected in the comparative screening to move forward for evaluation in the second phase of the study are:

- Brochure
- Billboards
- Articles in Publications (and Public Relations)
- Radio Advertising
- Safety Meeting Reminders
- Website Development

Table 6-1 identifies the goals, the objectives for each goal, the measures to be collected, and the method that may be used to collect data.

Table 6-1
Evaluation Matrix

Goal	Objectives	Measures	Method
GOAL A Assess the change in truck traffic volume on the SH 14/US 287 truck route	Determine change in daily traffic volumes on SH 14/US 287	Average Traffic Count	Vehicle Classification Counts
	Determine change in Peak hour truck traffic volumes on SH 14/US 287	Hourly Traffic Count	Vehicle Classification Counts
	Determine change in time of day travel patterns of truck traffic on SH 14/US 287	Hourly Traffic Count	Vehicle Classification Counts
GOAL B Assess the impacts to affected highway systems	Project changes in operations and maintenance costs due to changes in truck volumes on SH 14/US 287 (City and CDOT), I-25/I-80 (CDOT and WYDOT), and other local roads	O/M Budgets	Maintenance Personnel Questionnaires
	Determine changes in delay and congestion due to changes in volumes on SH 14/US 287, I-25/I-80, and other local roads	Queues, Delays, Travel Times, Stops, Fuel Consumption	Traffic Modeling
	Determine changes in safety characteristics due to changes in volumes on SH 14/US 287, I-25/I-80, and other local roads	Accident Rates	Research Fort Collins, CDOT and WYDOT Accident Information
GOAL C Assess the environmental changes on the SH 14/US 287 truck route	Assess the change in noise levels on the SH 14/US 287 truck route	Decibels	Field Testing/Monitoring, Traffic Modeling
	Assess the change in vehicle emissions on the SH 14/US 287 truck route	Emissions	Field Testing/Monitoring, Traffic Modeling

Phase II: Non-Route-Based Strategies

**Table 6-1 (cont'd.)
Evaluation Matrix**

Goal	Objectives	Measures	Method
Goal D Assess the impacts to safety along the affected corridors	Determine actual or potential change in numbers of crashes along SH 14/US 287 and I-25/I-80 resulting from the implemented NRBS	Accident Rates	Research Fort Collins, CDOT and WYDOT Accident Information
	Determine impacts to pedestrian safety resulting from the implemented NRBS	Accident Rates, Pedestrian Near-Misses	Research Fort Collins, CDOT and WYDOT Accident Information, Pedestrian/Vehicle conflict counts
GOAL E Assess the economic impacts to corridor business	Determine (potential) loss of business and tax revenue due to shifting traffic away from SH 14/US 287	Revenue of businesses along the SH14/US287 truck route	Interviews/Questionnaires
	Determine (potential) gain of business and tax revenue due to shifting traffic to I-25/I-80	Revenue of businesses along the I-25/I-80 truck route	Interviews/Questionnaires
GOAL F Assess the cost of providing on-going efforts to sustain the (measured or anticipated) results	Determine the costs of providing each tested NRBS method	Strategy implementation costs, City administrative costs	Phase II Study Results, Interviews/Questionnaires
	Compare NRBS costs with measured benefits	Implementation and administrative cost, Summary of NRBS benefits	Cost/Benefit Calculation

A final evaluation plan should be prepared prior to implementation to develop evaluation methods for comparing the selected strategies' effectiveness when compared with the other strategies. This plan will evaluate the ability of NRBSs to reach the goals identified by Ballot Initiative 200.



7.0 TASK ORDER II (NEXT STEPS)

The next step in the NRBS effort is to use these recommendations to meet the project and Ballot Initiative goals. Task Order II involves not only the implementation of recommended marketing strategies and evaluation of the strategies' effectiveness, but also updating the public on the project progress using outreach methods and general project management.

7.1 MARKETING PLAN

The implementation of marketing strategies will follow a Marketing Plan, which will document the design, approval process, and implementation/placement of a website, billboards, brochures, public relations, radio advertising, and safety meeting reminders. The approval process will include appropriate city officers of the City of Fort Collins.

The initial products for each strategy will be in place no later than the end of the third month of the project. At key milestones the strategies will be assessed for effectiveness. If a strategy is found to be ineffective or produce unanticipated negative results, that strategy may be discontinued. If continued, the strategies may remain in place until month 15 of the project life.

The marketing plan includes the activities described below.

Website Development Information and general layout for web pages will be provided to the City, who will host and maintain the site as part of their current site. Content may include the preferred route map that will be in the brochure, safety statistics, road construction information, availability of amenities, and other applicable information. CDOT and other trucking industry associations will be asked to provide a link to these web pages from their existing sites. The web pages will be updated regularly and will include a virtual binder containing current project information.

7.1.1 Billboards

Two billboards will be used, one on I-25 just south of the I-25/SH 14 interchange at Fort Collins, Colorado, and one on I-80 just west of the I-80/US 287 interchange at Laramie, Wyoming, as soon as they are available. Fall/winter and spring/summer messages will be designed and placed accordingly on these billboards.

7.1.2 Brochure

A brochure will be developed to emphasize the preferred truck routes through and around Fort Collins. Routes will include those for through truck traffic, as well as preferred routes for trucks stopping in Fort Collins. Twenty thousand brochures, enough for distribution for one year, will be produced in a full-color 11-inch by 17-inch format, folded down to 8-1/2 inches by 3-1/2 inches. An initial mailing of approximately 10,000 brochures will be sent to long haul trucking firms in the United States. The balance of the brochures will be distributed to truck stops, associations, rest stops, and weigh stations for display in their existing informational racks.

7.1.3 Radio Advertising

Radio stations in Colorado, Wyoming, and Utah will be selected based on demographics and other criteria. An advertising schedule will be determined based on time of year and space availability. The radio ads will run in two three-month intervals to focus messages to spring/summer and fall/winter driving conditions. Radio ads will include dialogue and audio effects and will be produced at a studio in Denver.

7.1.4 Public Relations

Public relations will include articles in publications, media relations, news releases, and public service announcements for satellite radio stations.

Articles in Publications

Four articles advocating the use of the Interstate route will be submitted to appropriate media outlets. Published articles will be reprinted for marketing distribution and referenced on the web page.

Media Relations

A detailed list of media contacts will be focused on trade media for the trucking industry and local media outlets proximate to I-25 and I-80 in Utah, southern Wyoming, and central/northern Colorado. Relationships with these contacts will begin with an initial media kit that will encourage the promotion of positive media. The contacts will then receive news releases bi-monthly and bylined articles quarterly.

News Releases

Six news releases incorporating project messaging and fresh data will be circulated to the media list and followed up with pitch calls. Positive coverage generated by the news releases will be reprinted for marketing purposes and referenced on the web page.

Satellite Radio

A contact list for satellite radio shows that are demographically appropriate or that specifically target truck drivers will be targeted. On-air personnel from these radio shows will be provided public service announcements for reading during broadcasts. Four scripts will be designed and provided to the radio shows and followed up with calls.

7.1.5 Safety Meeting Reminders

Personal contact will be made with key trucking companies and contacts from the regional area to determine their schedules for safety meetings. A list of area industry associations and their conferences, seminars, and meetings will be used to identify approximately 40 companies to target. Approximately three meetings per month will be attended by a City of Fort Collins representative to educate drivers and route managers about the benefits of the Interstate route. Handouts will be left behind after the presentation.

7.2 OUTREACH

Outreach will be important to keep the public and previously involved individuals and organizations updated on the progress of the project and NRBSs. The Outreach Program will be designed to update affected interests, including the Citizens for a True Bypass (CFTB), MAC, past trucking industry participants, City Council, Transportation Board, and others as they are identified.

The outreach program will include:

- A public open house near the end of the project,
- Letter correspondence to the MAC, CFTB, and past trucking industry participants to thank them for previous participation and provide a project update,
- Individual stakeholder meetings as needed (two assumed),
- One City Council update, and
- One Transportation Board update.

7.3 EVALUATION OF NRBS RESULTS

This report will be used to develop a comprehensive evaluation plan, including both quantitative measures and qualitative assessments, and to establish baseline levels for each area of evaluation. Traffic volume counts will include the main subject corridors (SH 14/US 287 and I-25/I-80), as well as other corridors in Fort Collins that may be affected by truck traffic.

The evaluation plan will be rolled out before implementation of the marketing plan to determine baseline measures. The evaluations will continue during the NRBS implementation, and conclude after the NRBS program to determine final measures. A final evaluation and long-term NRBS report will document the implementation. The report will provide documentation of the strategy implementation, evaluation methodology and results, and recommendations on the continuation of NRBSs as a means to fulfill Ballot Initiative 200 goals.

7.4 PROJECT MANAGEMENT

A program of such a large scale will require a level of oversight and management that will to include management of staff, communication, products, and general responses to issues and concerns. Monthly team and/or management meetings will be used to keep the team coordinated.

7.5 PROJECT SCHEDULE AND COSTS

The evaluation plan will begin taking baseline levels immediately, and all NRBS initial products will be in place by the end of the project's third month. Table 7-1 provides an implementation timeline; the project is anticipated to extend no more than 18 months.

The project costs include all aspects of Task Order II as described and total \$487,000. Table 7-2 shows a detailed breakdown of project costs.

Table 7-1
Implementation Timeline

	Months 1-2		Month 3	Months 4-6	Months 7-12
Website	Design and approve site	Coordinate with City webmasters	Post site on internet	Updates	Updates
Billboards	Design, approve, and produce billboard		Post 1st design *	Design, approve, and produce billboard	Post 2nd design *
Brochure	Develop mailing list	Design, approve, and produce brochure	Distribute brochure		
Articles in Publications (and Public Relations)	Develop contact list	Place byline, radio PSA, news release	Place news release	Place byline, radio PSA, two news releases	Place two bylines, two radio PSAs, two news releases
Safety Meeting Reminders	Develop contact list	Design, approve, and produce presentation and materials	Attend safety meetings	Attend safety meetings	Attend safety meetings
Radio Advertising	Develop contact list and schedule	Design, approve, and produce radio ad	Place first radio ad		Place second radio ad

* Billboard posting is ultimately dependant on space availability

Table 7-2
Cost Breakdown by Task

PROJECT WORK ELEMENTS		PROJECT COSTS	
NRBS Implementation			
Brochure		\$	28,500.00
Billboards		\$	42,000.00
Public Relations		\$	43,000.00
Radio Advertising		\$	62,000.00
Safety Meeting Reminders		\$	23,500.00
Website		\$	18,000.00
	Subtotal	\$	217,000.00
NRBS Evaluation			
	Subtotal	\$	152,000.00
Outreach Activities			
	Subtotal	\$	36,000.00
Project Management			
	Subtotal	\$	82,000.00
Project Total		\$	487,000.00



APPENDIX A

Ballot Initiative 200

**ORDINANCE NO. 142, 1999
OF THE CITY OF FORT COLLINS
APPROVING THE RELOCATION
OF COLORADO HIGHWAY 14 TRUCK ROUTE OUTSIDE THE CITY
OF FORT COLLINS CURRENT URBAN GROWTH AREA AND
APPROVING CERTAIN MEASURES IN SUPPORT THEREOF**

WHEREAS, for many years the City of Fort Collins (the “City”) and City staff have investigated the possibility of relocating the Colorado Highway 14 truck route (the “Truck Route”) from its current location that utilizes roadways in the City known as Mulberry, Riverside, Jefferson, and College in such a manner so as to minimize the impact of the Truck Route on businesses, neighborhoods and residents of Fort Collins; and

WHEREAS, as a part of the “Building Community Choices” Capital Improvement Program, in 1997 the City’s electorate authorized capital expenditures of \$3 million (the “Funds”) to be used for the planning, design, right-of-way acquisition and/or other project costs associated with road improvements for an alternate northeast Truck Route; and

WHEREAS, the City has expended a portion of the Funds in pursuit of an alternative Truck Route and wishes to continue to use the remaining Funds to relocate the Truck Route so as to avoid the adverse impacts associated with the Truck Route on business, neighborhoods, and residents in the City’s Urban Growth Area; and

WHEREAS, prior City Councils and the current City Council have previously rejected relocating the Truck Route in the vicinity of East Vine Drive in the City due to the materially adverse environmental health and social impacts on residents that a relocation in the vicinity of East Vine Drive would necessarily cause; and

WHEREAS, the City desires to relocate the Truck Route outside the City’s current UGA and, until such location occurs, to encourage and cause truck traffic without local business to use the U.S. Interstate Highway System; and

WHEREAS, a petition for initiative signed by registered elements of the City has been filed with the City which requires, under Article X, Section 1(e) of the Charter, that the City Council either adopt this Ordinance or submit it to the registered electors of the City as a special election.

NOW, THEREFORE, BE IT ORDAINED AS FOLLOWS:

Section 1. That, working with appropriate Federal, State, and County governmental entities, agencies, and department, the City and its staff shall pursue with all deliberate effort and speed the relocation of the Truck Route to a location outside the City’s current Urban Growth Area.

Section 2. That until such time as the relocation of the Truck Route, described in Section 1 occurs, the City shall encourage and cause by all reasonably available legal means all truck traffic without local business in the City to use the existing U.S. Interstate Highway System, including, without limitation, pursuit by the City of appropriate State and Federal legislation and regulations that would cause all truck traffic without local business to remain on the U.S. Interstate Highway System.

Section 3. That the City and its staff shall devise and diligently pursue the implementation of a funding plan to cause the relocation of the Truck Route outside the City's current Urban Growth Area to be funded by a combination of City, County, State, and/or Federal funding sources.

Section 4. That the remaining Funds from the "Building Community Choices" Capital Improvement Program shall be used in furtherance of the purposes set forth in Sections 1, 2, and 3 of this Ordinance.

Section 5. That relocating the Truck Route in the vicinity of East Vine Drive is permanently abandoned and that locating a new or alternate Truck Route between the currently existing Truck Route and two miles North of Douglas Road shall not be further considered by the City.

Section 6. That all resolutions and ordinances of the City Council that are inconsistent with the foregoing Sections 1, 2, 3, 4, and 5 are hereby reversed and superseded in their entirety by the provisions of this ordinance.

Section 7. This Ordinance shall be effective upon the earlier of (i) approval of this Ordinance by the City Council in accordance with Article X Section 1(e) of the Charter or (ii) upon certification of the election results that a majority of the registered electors voted in favor of this Ordinance in accordance with Article X Section 6(a) of this Charter.



APPENDIX B

Vehicle Classification Counts

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 1

Station ID: 1

SH14 W/O I-25 (RIGHT LANE)

EB	Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
	05/25/04	1	29	10	0	1	0	0	0	13	0	0	1	0	55
	01:00	0	28	7	0	2	0	0	1	5	0	0	1	0	44
	02:00	0	15	4	2	1	0	0	0	7	0	2	0	0	31
	03:00	0	21	2	0	1	2	0	1	10	0	0	1	0	38
	04:00	0	40	9	1	8	1	0	2	10	0	1	2	0	74
	05:00	0	85	35	2	14	1	0	3	12	1	1	1	0	155
	06:00	1	224	58	3	28	5	0	1	8	0	0	1	1	330
	07:00	1	379	55	7	19	2	0	13	8	0	2	0	0	486
	08:00	2	394	45	7	36	1	0	7	1	0	0	0	0	493
	09:00	0	375	24	0	18	3	0	11	2	0	0	1	0	434
	10:00	0	303	21	0	11	0	0	5	0	0	0	0	0	340
	11:00	0	249	89	4	38	1	0	21	20	1	0	0	0	423
	12 PM	2	331	102	9	35	6	0	10	35	0	0	1	0	531
	13:00	1	338	103	5	50	6	0	11	27	0	0	1	0	542
	14:00	1	352	109	6	49	4	0	11	15	0	0	1	0	548
	15:00	1	460	145	5	41	4	0	7	25	1	1	1	0	691
	16:00	3	468	115	1	41	4	0	10	24	1	3	0	0	670
	17:00	4	544	115	1	53	0	0	15	13	1	2	0	0	748
	18:00	4	301	62	6	18	1	0	5	18	1	1	1	1	419
	19:00	1	215	48	0	12	0	0	3	13	0	0	1	0	293
	20:00	0	178	46	4	17	0	0	3	11	1	0	1	0	261
	21:00	1	168	23	2	9	0	0	2	9	0	0	0	0	214
	22:00	0	119	19	0	8	0	0	1	9	0	0	1	0	157
	23:00	0	66	8	0	4	1	0	3	12	0	1	0	0	95
	Day Total	23	5682	1254	65	514	42	0	146	307	7	14	16	2	8072
	Percent	0.3%	70.4%	15.5%	0.8%	6.4%	0.5%	0.0%	1.8%	3.8%	0.1%	0.2%	0.2%	0.0%	
	AM Peak	08:00	08:00	11:00	07:00	11:00	06:00		11:00	11:00	05:00	02:00	04:00	06:00	08:00
	Vol.	2	394	89	7	38	5		21	20	1	2	2	1	493
	PM Peak	17:00	17:00	15:00	12:00	17:00	12:00		17:00	12:00	15:00	16:00	12:00	18:00	17:00
	Vol.	4	544	145	9	53	6		15	35	1	3	1	1	748
	Grand Total	23	5682	1254	65	514	42	0	146	307	7	14	16	2	8072
	Percent	0.3%	70.4%	15.5%	0.8%	6.4%	0.5%	0.0%	1.8%	3.8%	0.1%	0.2%	0.2%	0.0%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 2

Station ID: 2

SH14 W/O I-25 (LEFT LANE)

EB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/25/04	0	29	4	1	2	0	0	0	1	0	0	0	0	37
01:00	0	11	0	0	1	0	0	0	2	0	0	0	0	14
02:00	0	10	2	0	0	0	0	0	2	0	0	0	0	14
03:00	0	6	0	0	1	0	0	0	3	0	0	0	0	10
04:00	0	11	3	0	2	0	0	0	1	0	0	0	0	17
05:00	0	30	28	0	4	0	0	0	1	0	0	0	0	63
06:00	0	106	46	2	14	5	0	0	4	0	0	0	0	177
07:00	0	182	60	2	16	2	0	1	3	0	0	0	0	266
08:00	0	141	85	5	31	5	0	5	6	0	0	0	0	278
09:00	0	150	59	1	26	5	0	4	2	0	0	0	0	247
10:00	0	119	58	3	30	1	0	6	8	0	0	0	0	225
11:00	1	184	75	2	31	6	0	4	2	0	0	0	0	305
12 PM	2	213	86	0	29	2	0	5	4	0	0	0	0	341
13:00	2	200	80	2	43	6	0	9	6	0	0	0	0	348
14:00	3	225	85	3	39	4	0	4	2	0	0	0	0	365
15:00	1	314	103	1	50	3	0	5	2	0	0	0	0	479
16:00	5	376	137	2	34	2	0	4	2	0	0	0	0	562
17:00	2	456	146	0	50	0	0	3	1	0	1	0	0	659
18:00	2	262	82	0	29	0	0	3	2	0	0	0	0	380
19:00	1	143	46	1	7	0	0	1	2	0	0	0	0	201
20:00	1	147	36	1	16	0	0	0	1	0	0	0	0	202
21:00	1	119	19	0	13	0	0	0	3	0	1	0	0	156
22:00	1	90	23	0	8	0	0	1	1	0	0	0	0	124
23:00	1	37	9	0	1	0	0	0	3	0	0	0	0	51
Day Total	23	3561	1272	26	477	41	0	55	64	0	2	0	0	5521
Percent	0.4%	64.5%	23.0%	0.5%	8.6%	0.7%	0.0%	1.0%	1.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	11:00	08:00	08:00	08:00	11:00		10:00	10:00					11:00
Vol.	1	184	85	5	31	6		6	8					305
PM Peak	16:00	17:00	17:00	14:00	15:00	13:00		13:00	13:00		17:00			17:00
Vol.	5	456	146	3	50	6		9	6		1			659
Grand Total	23	3561	1272	26	477	41	0	55	64	0	2	0	0	5521
Percent	0.4%	64.5%	23.0%	0.5%	8.6%	0.7%	0.0%	1.0%	1.2%	0.0%	0.0%	0.0%	0.0%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 3

Station ID: 3

SH14 W/O I-25 (LEFT LANE)

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/25/04	0	12	1	0	0	0	0	0	0	0	0	0	0	13
01:00	0	16	0	0	0	0	0	0	0	0	0	0	0	16
02:00	0	6	1	0	2	0	0	0	0	0	0	0	0	9
03:00	0	13	3	0	1	0	0	0	0	0	0	0	0	17
04:00	0	14	11	0	1	0	0	1	0	0	0	0	0	27
05:00	0	38	18	0	9	0	0	1	0	0	0	1	0	67
06:00	0	171	74	1	22	0	0	0	1	0	0	0	0	269
07:00	0	472	119	0	45	1	0	2	2	0	0	0	0	641
08:00	0	332	102	0	27	1	0	1	1	0	0	0	0	464
09:00	0	284	75	0	10	0	0	1	2	0	0	0	0	372
10:00	0	182	82	1	16	3	0	3	3	0	1	0	0	291
11:00	1	237	108	3	32	2	0	7	9	0	0	0	0	399
12 PM	3	265	104	4	29	2	0	6	6	0	1	0	0	420
13:00	1	196	93	3	24	4	0	3	3	0	0	0	0	327
14:00	1	222	102	2	27	3	0	5	4	0	0	0	0	366
15:00	3	291	124	0	32	8	0	6	1	0	0	0	0	465
16:00	2	268	103	3	34	0	0	1	1	0	0	0	0	412
17:00	0	259	90	3	30	0	0	3	5	0	0	0	0	390
18:00	3	183	64	0	19	0	0	1	1	0	0	0	0	271
19:00	1	118	28	0	7	0	0	0	0	0	0	0	0	154
20:00	0	88	15	1	2	0	0	0	0	0	0	0	0	106
21:00	0	84	20	0	3	0	0	2	1	0	0	0	0	110
22:00	0	53	11	0	6	0	0	2	2	0	0	0	0	74
23:00	0	29	3	0	2	1	0	0	2	0	1	0	0	38
Day Total	15	3833	1351	21	380	25	0	45	44	0	3	1	0	5718
Percent	0.3%	67.0%	23.6%	0.4%	6.6%	0.4%	0.0%	0.8%	0.8%	0.0%	0.1%	0.0%	0.0%	
AM Peak	11:00	07:00	07:00	11:00	07:00	10:00		11:00	11:00		10:00	05:00		07:00
Vol.	1	472	119	3	45	3		7	9		1	1		641
PM Peak	12:00	15:00	15:00	12:00	16:00	15:00		12:00	12:00		12:00			15:00
Vol.	3	291	124	4	34	8		6	6		1			465
Grand Total	15	3833	1351	21	380	25	0	45	44	0	3	1	0	5718
Percent	0.3%	67.0%	23.6%	0.4%	6.6%	0.4%	0.0%	0.8%	0.8%	0.0%	0.1%	0.0%	0.0%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 4

Station ID: 4

SH14 W/O I-25 RIGHT LANE

WB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/25/04	0	70	8	2	1	0	0	0	2	0	0	0	0	83
01:00	0	41	9	0	1	0	0	2	1	0	0	0	0	54
02:00	0	51	13	3	1	1	0	2	1	0	1	0	0	73
03:00	0	20	21	0	1	0	0	1	2	0	0	0	0	45
04:00	0	62	12	0	2	0	0	2	4	0	0	0	0	82
05:00	0	101	42	1	11	1	0	1	8	0	0	0	0	165
06:00	0	197	99	2	15	0	0	5	9	1	0	0	0	328
07:00	0	513	224	4	32	0	0	7	6	0	0	0	0	786
08:00	0	451	123	4	25	4	0	8	14	0	0	0	0	629
09:00	1	328	142	5	33	1	0	15	15	0	0	0	0	540
10:00	0	287	125	7	42	2	0	12	21	0	0	0	0	496
11:00	0	235	124	15	42	2	0	17	29	1	0	0	0	465
12 PM	4	215	95	13	53	4	0	14	29	1	1	0	0	429
13:00	1	233	106	7	31	6	0	15	26	0	0	0	0	425
14:00	2	231	131	6	40	12	0	12	31	0	0	2	0	467
15:00	3	308	144	9	64	6	0	16	16	2	0	0	0	568
16:00	3	339	143	11	37	6	0	8	17	1	1	0	0	566
17:00	1	322	130	15	33	1	0	7	17	0	1	0	0	527
18:00	2	268	78	7	23	3	0	5	14	1	0	0	0	401
19:00	0	190	61	4	23	0	0	5	7	0	0	0	0	290
20:00	1	199	32	2	12	1	0	1	4	0	0	1	0	253
21:00	1	172	21	1	11	0	0	1	5	1	0	2	0	215
22:00	0	122	14	2	2	0	0	2	4	0	1	0	0	147
23:00	0	103	12	1	4	0	0	1	1	0	2	0	0	124
Day Total	19	5058	1909	121	539	50	0	159	283	8	7	5	0	8158
Percent AM Peak	0.2%	62.0%	23.4%	1.5%	6.6%	0.6%	0.0%	1.9%	3.5%	0.1%	0.1%	0.1%	0.0%	
Vol.	09:00	07:00	07:00	11:00	10:00	08:00		11:00	11:00	06:00	02:00			07:00
PM Peak	1	513	224	15	42	4		17	29	1	1			786
Vol.	12:00	16:00	15:00	17:00	15:00	14:00		15:00	14:00	15:00	23:00	14:00		15:00
Vol.	4	339	144	15	64	12		16	31	2	2	2		568
Grand Total	19	5058	1909	121	539	50	0	159	283	8	7	5	0	8158
Percent	0.2%	62.0%	23.4%	1.5%	6.6%	0.6%	0.0%	1.9%	3.5%	0.1%	0.1%	0.1%	0.0%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 7

Station ID: 7

US 287 NORTH OF OWL CANYON

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/25/04	0	0	0	0	1	0	0	0	3	0	0	0	0	4
01:00	0	3	1	0	0	0	0	0	10	0	2	0	0	16
02:00	0	3	1	2	0	0	0	0	6	0	0	1	0	13
03:00	0	5	0	0	0	0	0	0	5	1	0	0	0	11
04:00	0	9	4	2	6	0	0	1	6	0	1	2	0	31
05:00	1	33	16	0	4	2	0	1	6	2	2	1	0	68
06:00	0	89	53	0	18	1	0	2	16	0	1	0	1	181
07:00	0	152	38	1	23	0	0	1	11	2	4	2	0	234
08:00	0	110	33	1	17	2	1	4	10	0	2	2	0	182
09:00	1	95	30	1	18	4	0	2	15	1	0	1	0	168
10:00	1	103	32	0	14	4	0	5	20	1	2	0	0	182
11:00	1	106	39	4	14	2	0	6	9	0	0	1	0	182
12 PM	2	140	37	2	12	4	0	3	14	0	0	1	0	215
13:00	2	124	45	3	13	1	1	6	14	0	0	1	0	210
14:00	1	142	47	1	31	3	0	8	19	1	0	1	0	254
15:00	4	130	46	5	21	4	0	8	13	0	1	1	0	233
16:00	3	115	59	2	39	3	0	11	18	0	2	0	0	252
17:00	8	114	24	3	19	2	0	9	12	1	0	1	1	194
18:00	1	80	21	1	9	1	0	3	18	0	0	1	0	135
19:00	0	56	16	3	9	1	0	4	15	0	1	1	0	106
20:00	1	41	18	3	5	0	0	3	13	1	0	0	0	85
21:00	0	25	11	0	4	0	0	1	7	0	0	0	0	48
22:00	0	22	6	1	0	1	0	0	5	0	1	0	0	36
23:00	0	18	3	0	1	0	0	0	13	0	0	1	0	36
Day Total	26	1715	580	35	278	35	2	78	278	10	19	18	2	3076
Percent	0.8%	55.8%	18.9%	1.1%	9.0%	1.1%	0.1%	2.5%	9.0%	0.3%	0.6%	0.6%	0.1%	
AM Peak	05:00	07:00	06:00	11:00	07:00	09:00	08:00	11:00	10:00	05:00	07:00	04:00	06:00	07:00
Vol.	1	152	53	4	23	4	1	6	20	2	4	2	1	234
PM Peak	17:00	14:00	16:00	15:00	16:00	12:00	13:00	16:00	14:00	14:00	16:00	12:00	17:00	14:00
Vol.	8	142	59	5	39	4	1	11	19	1	2	1	1	254
Grand Total	26	1715	580	35	278	35	2	78	278	10	19	18	2	3076
Percent	0.8%	55.8%	18.9%	1.1%	9.0%	1.1%	0.1%	2.5%	9.0%	0.3%	0.6%	0.6%	0.1%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 7

Station ID: 7

US 287 NORTH OF OWL CANYON

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/25/04	1	12	2	3	1	1	0	0	3	0	2	0	0	25
01:00	0	5	3	2	2	0	0	2	1	0	2	1	0	18
02:00	0	11	0	0	1	1	0	2	0	0	0	2	0	17
03:00	0	7	2	2	2	0	0	0	1	0	1	1	0	16
04:00	0	5	1	2	1	0	0	1	3	0	0	0	0	13
05:00	0	24	11	6	7	1	0	5	2	0	1	3	0	60
06:00	1	41	15	3	12	0	0	7	6	0	0	0	0	85
07:00	3	77	28	6	14	4	0	8	5	0	0	1	0	146
08:00	0	58	44	10	24	3	0	4	9	1	0	1	0	154
09:00	0	89	34	5	17	2	0	7	10	0	1	1	0	166
10:00	0	89	37	4	13	1	0	6	14	0	0	2	0	166
11:00	1	82	20	3	14	4	0	10	15	0	1	0	0	150
12 PM	1	116	12	13	16	2	0	11	15	0	1	1	0	188
13:00	2	108	26	8	16	4	0	7	12	0	0	0	0	183
14:00	1	118	21	13	24	3	0	13	13	0	0	0	0	206
15:00	3	137	23	2	15	0	0	10	18	0	0	2	0	210
16:00	5	157	28	5	21	1	1	6	7	0	0	1	1	233
17:00	2	183	41	10	19	2	0	3	12	0	0	0	0	272
18:00	0	129	20	6	10	2	0	6	6	0	0	0	0	179
19:00	5	100	14	2	13	0	0	3	12	0	0	0	0	149
20:00	1	58	16	5	13	0	0	2	5	0	0	0	0	100
21:00	1	53	13	3	3	2	0	3	3	0	1	1	0	83
22:00	1	31	9	5	3	1	0	1	5	0	1	1	0	58
23:00	0	26	5	4	2	1	0	4	3	0	0	0	0	45
Day Total	28	1716	425	122	263	35	1	121	180	1	11	18	1	2922
Percent	1.0%	58.7%	14.5%	4.2%	9.0%	1.2%	0.0%	4.1%	6.2%	0.0%	0.4%	0.6%	0.0%	
AM Peak	07:00	09:00	08:00	08:00	08:00	07:00		11:00	11:00	08:00	00:00	05:00		09:00
Vol.	3	89	44	10	24	4		10	15	1	2	3		166
PM Peak	16:00	17:00	17:00	12:00	14:00	13:00	16:00	14:00	15:00		12:00	15:00	16:00	17:00
Vol.	5	183	41	13	24	4	1	13	18		1	2	1	272
Grand Total	28	1716	425	122	263	35	1	121	180	1	11	18	1	2922
Percent	1.0%	58.7%	14.5%	4.2%	9.0%	1.2%	0.0%	4.1%	6.2%	0.0%	0.4%	0.6%	0.0%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 1

Site Code: 5
Station ID: 5
VINE EAST OF US287

EB	Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
	05/25/04	0	7	4	0	1	0	0	0	1	0	1	1	0	15
	01:00	0	7	1	0	0	1	0	0	0	0	0	0	0	9
	02:00	0	7	0	1	0	0	0	0	1	0	0	1	0	10
	03:00	0	5	1	0	1	5	0	0	3	0	0	0	0	15
	04:00	2	7	2	1	0	1	0	0	4	0	0	0	0	17
	05:00	1	19	7	2	4	3	0	1	6	0	0	0	0	43
	06:00	0	63	23	1	11	4	0	0	10	0	0	0	0	112
	07:00	4	94	27	2	6	8	0	3	7	3	0	1	0	155
	08:00	3	97	44	1	6	3	1	2	14	1	0	0	0	172
	09:00	2	81	38	2	17	6	0	3	12	0	0	0	0	161
	10:00	9	88	39	2	15	5	0	3	13	1	0	3	0	178
	11:00	8	101	42	1	12	4	0	2	15	0	0	0	0	185
	12 PM	6	135	46	6	14	6	0	2	12	1	0	0	1	229
	13:00	3	112	28	0	22	4	1	4	12	2	0	0	0	188
	14:00	4	95	42	1	14	3	0	2	5	0	0	0	0	166
	15:00	5	144	38	2	19	10	1	3	9	0	0	0	0	231
	16:00	5	173	52	2	16	5	0	4	4	0	0	0	0	261
	17:00	5	149	50	0	16	5	0	1	10	0	0	0	1	237
	18:00	4	106	29	1	11	1	0	1	4	0	0	0	0	157
	19:00	4	75	18	0	9	0	0	1	6	0	0	0	0	113
	20:00	1	52	13	1	6	1	0	2	6	0	0	0	0	82
	21:00	0	47	14	0	0	0	0	1	2	0	0	0	0	64
	22:00	1	32	7	0	0	0	0	0	1	0	0	2	0	43
	23:00	0	7	3	1	0	0	0	0	3	0	0	0	0	14
	Day Total	67	1703	568	27	200	75	3	35	160	8	1	8	2	2857
	Percent	2.3%	59.6%	19.9%	0.9%	7.0%	2.6%	0.1%	1.2%	5.6%	0.3%	0.0%	0.3%	0.1%	
	AM Peak	10:00	11:00	08:00	05:00	09:00	07:00	08:00	07:00	11:00	07:00	00:00	10:00		11:00
	Vol.	9	101	44	2	17	8	1	3	15	3	1	3		185
	PM Peak	12:00	16:00	16:00	12:00	13:00	15:00	13:00	13:00	12:00	13:00		22:00	12:00	16:00
	Vol.	6	173	52	6	22	10	1	4	12	2		2	1	261
	Grand Total	67	1703	568	27	200	75	3	35	160	8	1	8	2	2857
	Percent	2.3%	59.6%	19.9%	0.9%	7.0%	2.6%	0.1%	1.2%	5.6%	0.3%	0.0%	0.3%	0.1%	

Phase II: Non-Route-Based Strategies

All Traffic Data Services, Inc.
6214 Secrest Street
Arvada, CO 80403

Page 2

Site Code: 5
Station ID: 5
VINE EAST OF US287

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	05/25/04	0	7	1	1	1	0	0	0	0	0	0	0	0	10
	01:00	0	7	1	0	0	0	0	0	3	0	0	0	0	11
	02:00	1	7	3	0	1	0	1	0	1	0	0	0	0	14
	03:00	0	7	0	0	0	0	0	0	3	0	0	0	0	10
	04:00	0	22	7	1	1	0	0	0	3	1	0	0	0	35
	05:00	0	56	30	3	5	1	1	0	6	1	0	1	0	104
	06:00	2	124	59	3	26	2	0	1	4	0	2	0	0	223
	07:00	4	155	56	5	22	1	0	4	8	0	1	2	1	259
	08:00	4	102	39	2	11	1	0	4	6	2	1	0	0	172
	09:00	2	85	41	3	23	1	0	2	12	1	0	0	1	171
	10:00	0	88	59	3	17	0	0	4	10	0	1	0	0	182
	11:00	3	116	55	7	16	1	0	1	12	2	0	1	1	215
	12 PM	3	129	41	3	18	5	0	6	15	1	0	0	0	221
	13:00	2	122	65	4	20	5	0	2	13	0	0	1	1	235
	14:00	3	94	49	3	16	3	0	0	15	2	0	0	0	185
	15:00	2	115	57	4	26	3	0	3	14	1	0	1	0	226
	16:00	4	158	51	4	18	19	1	4	8	1	1	0	0	269
	17:00	1	160	52	2	19	4	1	3	4	1	0	0	0	247
	18:00	1	105	38	3	10	3	0	1	2	1	0	0	0	164
	19:00	0	65	20	3	1	0	1	0	4	0	1	0	0	95
	20:00	0	51	19	2	2	0	0	1	0	0	0	0	0	75
	21:00	3	49	15	1	2	0	0	1	2	0	0	0	0	73
	22:00	0	29	6	0	2	0	0	0	0	0	0	0	0	37
	23:00	0	11	4	0	3	0	0	0	2	0	0	0	0	20
Day Total		35	1864	768	57	260	49	5	37	147	14	7	6	4	3253
Percent		1.1%	57.3%	23.6%	1.8%	8.0%	1.5%	0.2%	1.1%	4.5%	0.4%	0.2%	0.2%	0.1%	
AM Peak	07:00	07:00	06:00	11:00	06:00	06:00	06:00	02:00	07:00	09:00	08:00	06:00	07:00	07:00	07:00
Vol.	4	155	59	7	26	2	1	4	12	2	2	2	1	1	259
PM Peak	16:00	17:00	13:00	13:00	15:00	16:00	16:00	12:00	12:00	14:00	16:00	13:00	13:00	16:00	16:00
Vol.	4	160	65	4	26	19	1	6	15	2	1	1	1	1	269
Grand Total		35	1864	768	57	260	49	5	37	147	14	7	6	4	3253
Percent		1.1%	57.3%	23.6%	1.8%	8.0%	1.5%	0.2%	1.1%	4.5%	0.4%	0.2%	0.2%	0.1%	



APPENDIX C

Truck Workshop I – May 13, 2004

Memorandum – Invitation Letter

Distribution List

Attendee List

Workshop Boards

Memorandum - Participant Comments

Truck Workshop II – June 16, 2004

Memorandum – Invitation Letter

Distribution List

Attendee List

Workshop Boards

Comment Form

Comment Form Results

Memorandum - Participant Comments

Memorandum

TO: See Distribution List

FROM: Dave Millar, Project Manager, PBS&J
Greg Fulton, President, Colorado Motor Carriers Association

RE: **Trucking Industry Issues Workshop**

DATE: April 29, 2004

The City of Fort Collins is currently developing non-route based strategies to encourage through truck traffic to use the Interstate system (I-25 and I-80) instead of the current route along SH 14 and US 287 through downtown Fort Collins. These strategies were developed as part of the Northern Colorado Truck Mobility/SH 14 Relocation Study that was completed in 2001.

As part of this effort, a series of trucking industry workshops are planned. The purpose of these workshops is to provide a forum to discuss different strategies and to address truck mobility with representatives from the trucking industry (CMCA), users (drivers), and regulatory agencies (Departments of Transportation, Revenue, and Regulatory Agencies).

There are two separate workshops planned for Spring 2004. **The first workshop is scheduled for May 13, 2004 from 9:00 a.m. to 12:00 p.m. at the Holiday Inn Hotel, 425 W. Prospect Road (US 287 and University Park) in Fort Collins, Colorado.** The phone number at Holiday Inn Hotel is (970) 482-2626 if you need directions. The second workshop is tentatively planned for June 16; we will send more information closer to that date.

In the past, these workshops have provided a clearer understanding of the issues based on diverse input from the range of interests involved in the trucking industry. We hope to continue this dialogue as we look at implementation options. **Please respond to Alysia Rainess at (303) 221-7275 or (800) 497-5529 regarding your availability for the workshop.** Also, feel free to contact Karen Amrhein Price at (303) 221-7275 or (800) 497-5529 with any other questions you may have about these workshops or the study in general.

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Rick	Eshe	Cast Transportation	Henderson	CO
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Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

WELCOME

**... to the Northern Colorado Truck Mobility Study,
Phase II**

Trucking Industry Workshop

Phase II of the Northern Colorado Truck Mobility Study is the next step in a process resulting from Ballot Initiative 200 passed in November 1999. Phase I of the study found that **non-route-based strategies** provided the best potential for addressing through truck traffic in the City of Fort Collins with the least amount of community impact.

Non-Route-Based Strategies (NRBS) encourage through truck traffic to use the Interstate Highway System (I-25 and I-80) without constructing a new roadway. Through traffic is classified as trucks that use the SH 14/US 287 route to travel between I-25 in Colorado to I-80 in Wyoming with no business stops in-between. Recommendations developed through comprehensive involvement with the trucking industry are being explored. These strategies include marketing action plans and other technological approaches.





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Workshop Agenda

- 1. Welcome**
- 2. Phase I Summary**
- 3. Next Steps**
- 4. NRBS Strategies**
- 5. Existing Conditions**
- 6. Discussion Goals**
- 7. Round Table Discussion
of NRBS Strategies**
- 8. Contact Information**
- 9. Close**





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

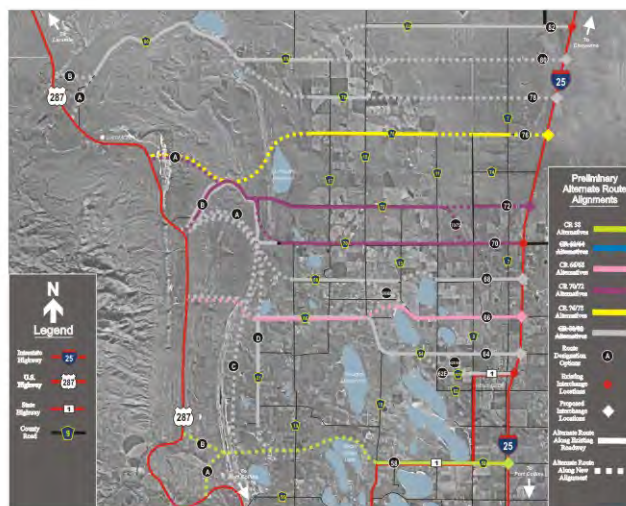
Phase I Summary

As a result of Ballot Initiative 200, Phase I investigated:

- Alternate Routes, including funding options
- Non-Route-Based Strategies (NRBS)

Alternate routes were considered and eliminated based on:

- Safety
- Route length
- Impact
- Conflict with NEPA requirements





Northern Colorado Truck Mobility Study

PHASE II: NON-ROUTE-BASED STRATEGIES

Phase I Summary *(continued)*

Many NRBS were considered and eliminated based on unrealistic and comparative screenings.

Financial Strategies

- City contribution
- Driver tax credit
- Shippers to pay additional cost

Physical Strategies

- Bypass in Cheyenne
- Emergency bypass
- Port of Entry relocation
- Pre-pass in Laramie
- Signage on I-25
- Traffic control devices
- Variable message signs
- Weather stations
- Wind socks

Marketing/ Informational Strategies

- Articles in publications
- Billboards
- Brochures
- CDOT website: Cotrip.org
- Highway advisory radio
- Internet advertising
- Kiosks at truck stops
- Map routes
- Paycheck mailers
- Private trucking company outreach
- Radio ads
- Safety meeting reminders
- Variable message signs
- Video

Regulatory Enforcement Strategies

- Compression brake law
- Differential speed limits
- Five-mile radius from Port of Entry
- Inspections on US 287
- Mobile weigh stations
- Profiling
- Redesignation
- Reduced speed limits on US 287
- Restrictions
- Scenic byway
- Speed limit enforcement
- Weight limits

The remaining NRBS were recommended for further consideration and possible implementation.





Northern Colorado Truck Mobility Study PHASE II: NON-ROUTE-BASED STRATEGIES

Next Steps: The Phase II Process



**Northern Colorado Truck Mobility Study**
PHASE II: NON-ROUTE-BASED STRATEGIES

NRBS Strategies Under Consideration

Marketing/Informational Strategies

- Articles in publications
- Billboards
- Brochures
- CDOT website: Cotrip.org
- Highway Advisory Radio (HAR)
- Internet advertising
- Kiosks at truck stops
- Map routes
- Paycheck mailers
- Private trucking company outreach
- Radio ads
- Safety meeting reminders
- Variable Message Signs (VMS)
- Video

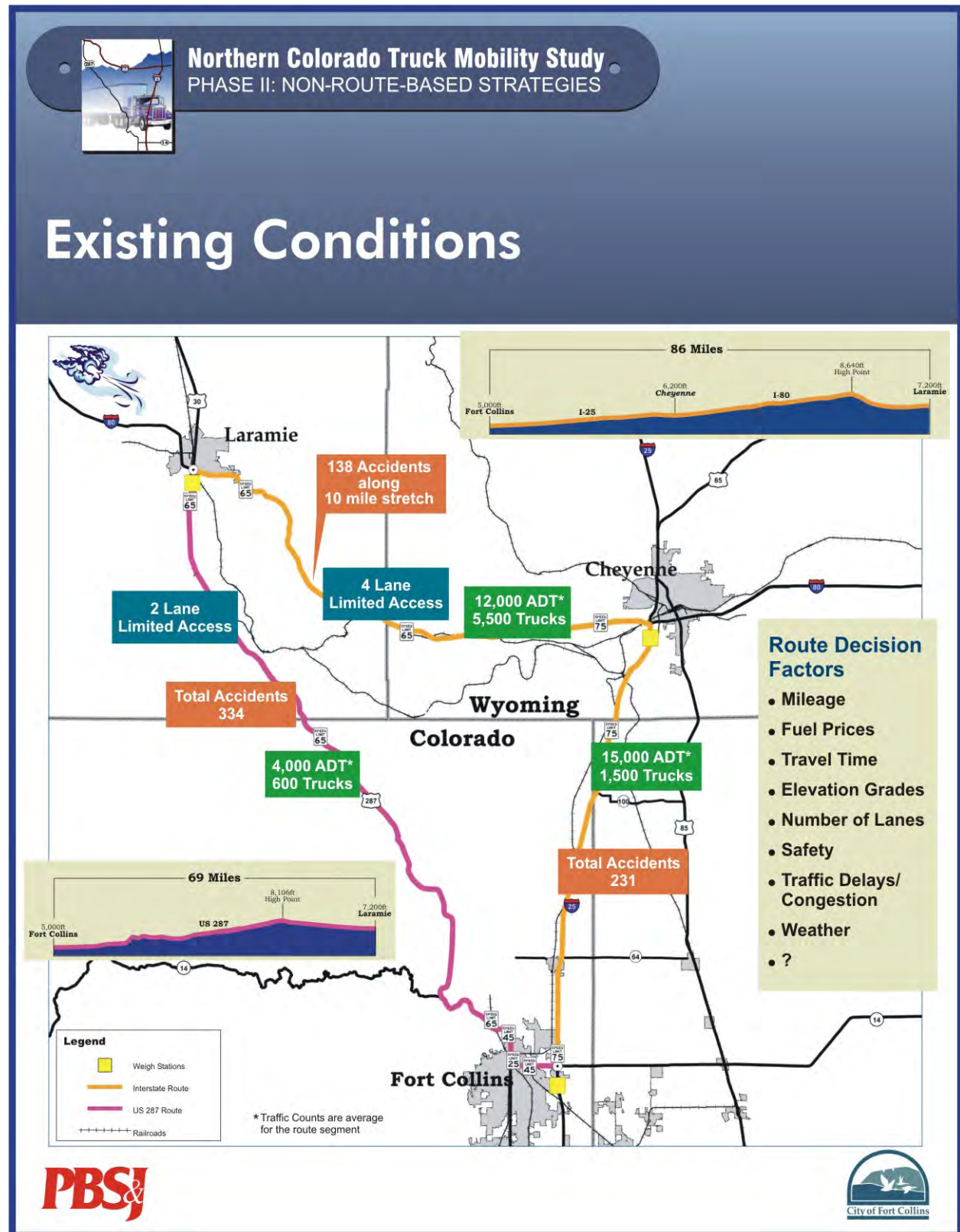
Regulatory Enforcement Strategies

- Compression brake law
- Redesignation
- Restrictions

Physical Strategies

- Variable Message Signs (VMS)







Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Discussion Points

During the interactive discussion, please provide your insight on:

- Who are the decision makers as to route choice?
- What are the key route decision factors?
- How would each NRBS affect route choice?
- How should the NRBS be implemented?
- What are the negative aspects of the NRBS?
- Can you suggest any other strategies?
- What do you recommend?





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Thank you for your time!

For more information or questions, please contact us:

Dave Millar

PBS&J

303-221-7275

5500 Greenwood Plaza Blvd.
Greenwood Village, CO 80111

dmillar@pbsj.com

Mark Jackson

City of Ft. Collins

970-416-2029

P.O. Box 580
Ft. Collins, CO 80522
mjackson@fcgov.com

**We hope to continue this dialogue on implementation at
upcoming meetings tentatively planned for:**

June 3rd

Focus Group

June 16th

Trucking Workshop #2

**We will be contacting you with dates and times in the
near future.**

Thank you!



Memorandum - Participant Comments

I. Decision-Makers

Large Companies

- Operations Manager / Division Director make route choice decisions
- Driver has some choice (but may cost them)
- Usually for drivers with GPS units the route is pre-determined

Independent Truckers

- Make own route choice; frequently using route software
- May be dependant on shipper, who will pay for shortest route only
- Frequently based on a mix of mileage and time
- Technology – owner/operators are high-tech with internet in the cab

II. Affecting Route Choice

- Time of Day – congestion will push driver to longer route to meet available hours of service
- For independent truckers, mainly weather in winter and spring that determines choice of 287; for summer driving, 4-lane (I-80) is preferred
- “Good Samaritan” – not a factor, \$ is bottom line
- “Road courtesy” for other drivers may be limited factor
- Drivers that haven’t been through 287 may choose it for the scenic qualities
- Oversize underweight restrictions
- Construction on the road
- Services (favorite restaurant)
- Level of enforcement
- Brochure may help – only if it provided very clear, honest travel times, weather
- Amenities may affect travel south of Laramie
- Restrictions – eliminate because it will backfire in less cooperative people and companies, and unanticipated results (like travel in other undesirable locations)

III. Marketing Ideas

Perspective – don’t paint drivers as “bad,” won’t get as much cooperation

Publications

- Drivers – Trucking Overdrive, Land Line, CCJ
- Company – Transport Topics Weekly

Website

- I-net Ads – on weather conditions and truck stop locations/amenities may be effective

Memorandum - Participant Comments (continued)

- E-trucker, Truckline.org, DOT.gov (for office people), CMCA hot sheet (weekly - good info)

(Grand Junction) Brochure:

- Easy to read handout – good for location because of confusing streets (may not be as effective for this project) because in Grand Junction, signage may be lacking
- Distribute at ports
- CMCA distributed the Grand Junction one, and will know truck companies using the area

Radio

- Independent Satellite radio – specifically the stations dedicated to truckers
- RoadStar

IV. Potential Strategy – Truck Stop

Preferred Amenities

- Lots of Parking
- Showers
- Comfort – clean!
- Safe – good lighting!
- Diesel fuel availability
- Good food (“\$6.99 Steak & Eggs”)
- Many truckers have one card/company they use, so note the fuel provider
- Casinos
- Generally, just check with a large, high-quality, truck stop provider
- Word of mouth spreads info on quality stops well

V. General

- Federal land available for extra parking nearby
- Tax incentive – can make tons of money and can pay for itself then provide money to the city
- Johnson’s Corridor is limited right now
- Location only 30 miles to I-80
- Ft. Collins purchase land just north of I-25/SH14
- People go out of their way for a good truck stop

VI. General and Miscellaneous Thoughts

Wind – a safety issue – need to provide safety information regardless of resulting route choice

Noise – be aware that noise is frequently attributed to trucks, even when sometimes actually from other sources.

Phase II: Non-Route-Based Strategies

Memorandum - Participant Comments (continued)

Signage - good signage can be helpful as it keeps truckers on the right route

- Fort Collins signage on construction lacking for truckers
- Poor availability of parking/delivery space may increase visibility of trucks in downtown

Gas - Cheyenne has cheaper gas prices and better amenities than Fort Collins

Weather

- From Laramie to Ft. Collins – less time on I-80, but weather is deterrent
- 287 is used in heavy weather and when I-80 is closed – Fort Collins should set up an Emergency Bypass/Incident Management Program for trucks in these situations, though it increases the visibility of truckers in town

Issues on I-25, 5-10 miles south of state line (Cpt. Parish)

- High volume at all hours
- Enforcement needed
- Less appealing to truck drivers
- More truckers there – more incidents possibly and more congestion

Safety - best to not advertise “I-80 is safer;” may lose tourists in addition to truckers

Memorandum

TO: See Distribution List

FROM: Mark Jackson, Transportation Planning Manager,
City of Fort Collins
Dave Millar, Project Manager, PBS&J
Greg Fulton, President, Colorado Motor Carriers Assoc.

RE: **Trucking Industry Issues Workshop**

DATE: June 8, 2004

The City of Fort Collins is currently developing non-route based strategies to encourage through truck traffic to use the Interstate system (I-25 and I-80) instead of the route along SH 14 and US 287 through downtown Fort Collins. These strategies were developed as part of the Northern Colorado Truck Mobility/SH 14 Relocation Study that was completed in 2001.

As part of this effort, the second in a series of trucking industry workshops is being held. The purpose of this workshop is to provide a forum to discuss non-route-based strategies (NRBS) that are being considered for implementation with regard to truck mobility through the Fort Collins area. We would like your insight on these strategies. The comments received at this workshop may be incorporated into recommendations made to the Fort Collins City Council.

The workshop is scheduled for June 16th, 2004 from 9:00 a.m. to 11:00 a.m. at the Holiday Inn Hotel, 425 W. Prospect Road (US 287 and University Park) in Fort Collins, Colorado. The phone number at Holiday Inn Hotel is (970) 482-2626 if you need directions.

In the past, these workshops have provided a clearer understanding of the issues based on diverse input from the range of interests involved in the trucking industry. We hope to continue this dialogue as we look at implementation options. **Please respond to Alysia Rainess at (303) 221-7275 or (800) 497-5529 regarding your availability for the workshop.** Also, feel free to contact Karen Amrhein Price at (303) 221-7275 or (800) 497-5529 with any other questions you may have about these workshops or the study in general.

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Greg	Miller	HVH Transportation	Denver	CO
Jay	Miller	Pitcher Trucking Co.	Ft. Collins	CO
Brian	O'Leary	Independent Trucking Company	Ft. Collins	CO

Phase II: Non-Route-Based Strategies

Name	Organization	City	State	Name
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Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

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Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Workshop Agenda

1. Welcome
2. Phase II Schedule
3. Strategy Considerations
4. NRBS Strategy Review and Comment
5. Focused Strategy Discussion
6. Contact Information
7. Close







Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Focused Strategy Discussion

Media

- Brochure/direct mail
- Billboards
- Trucking industry magazine advertising
- Radio ads on syndicated shows
- Safety meetings

Message

- Benefits including safety, amenities, and convenience
- Noise education
- Incentive programs





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

NRBS Strategy Review and Comment

Marketing/Informational Strategies

- Articles in publications
- Billboards
- Brochures/direct mail
- CDOT website: Cotrip.org
- Highway Advisory Radio (HAR)
- Trucking industry magazine advertising
- Incentive programs
- Internet advertising
- Kiosks at truck stops
- Map routes
- Paycheck mailers
- Private trucking company outreach
- Radio ads on syndicated shows
- Safety meeting reminders
- Variable Message Signs (VMS)
- Video

Regulatory Enforcement Strategies

- Compression brake law
- Redesignation
- Restrictions

Physical Strategies

- Variable Message Signs (VMS)
- Emergency bypass
- Corridor amenities





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Strategy Considerations

Who will this reach?

- Drivers, route planners, or “other”
- Local, regional and/or long haul

How effective will this be?

1	2	3	4	5	6	7
Not Effective						Very Effective

Other Impacts?

- Trucking industry
- Fort Collins commerce
- Perceptions





Northern Colorado Truck Mobility Study
PHASE II: NON-ROUTE-BASED STRATEGIES

Thank you for your time!

For more information or questions, please contact us:

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Thank you!



Truck Workshop II - Non-Route-Based Strategies Comment Form

Please provide your input on these strategy considerations.

Instructions: In the boxes provided for each strategy, please circle all that apply and rate the strategy.

- Definitions:**
- Local -** Commercial trucks with stops in Fort Collins or along the SH 14 / US 287 route.
 - Regional -** Commercial trucks **without** stops on the SH 14 / US 287 route, originating or terminating in the area encompassed by Larimer, Weld, Boulder and Grand Counties in Colorado, and Laramie and Albany Counties in Wyoming.
 - Long Haul -** Commercial trucks **without** stops on the SH 14 / US 287 route, originating and terminating outside of the regional area described above.

Example

Who will this reach?	Drivers Local	Route Planners Regional	Other: Long Haul	_____		
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?	Trucking Industry	Fort Collins Commerce	Perceptions			

Comment Form 1 of 11

Phase II: Non-Route-Based Strategies

Articles in Publications

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Billboards

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Comment Form 2 of 11

Phase II: Non-Route-Based Strategies

Brochures/Direct Mail

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

CDOT website: Cotrip.org

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Comment Form 3 of 11

Highway Advisory Radio (HAR)

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Trucking Industry Magazine Advertising

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Comment Form 4 of 11

Phase II: Non-Route-Based Strategies

Incentive Programs

Who will this reach?	Drivers	Route Planners	Other:	_____		
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?	Trucking Industry	Fort Collins Commerce	Perceptions			

Internet Advertising

Who will this reach?	Drivers	Route Planners	Other:	_____		
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?	Trucking Industry	Fort Collins Commerce	Perceptions			

Comment Form 5 of 11

Phase II: Non-Route-Based Strategies

Kiosks at Truck Stops

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Map Routes

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Comment Form 6 of 11

Phase II: Non-Route-Based Strategies

Paycheck Mailers

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Private Trucking Company Outreach

Who will this reach?	Drivers	Route Planners	Other:				
	Local	Regional	Long Haul				
How effective will this be?							
	1	2	3	4	5	6	7
	Not Effective						Very Effective
Other Impacts?	Trucking Industry		Fort Collins Commerce		Perceptions		

Comment Form 7 of 11

Radio Ads on Syndicated Shows

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Safety Meeting Reminders

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Comment Form 8 of 11

Variable Message Signs (VMS)

Who will this reach?	Drivers	Route Planners	Other: _____
	Local	Regional	Long Haul
How effective will this be?			
1	2	3	4
Not Effective			
5	6	7	
		Very Effective	
Other Impacts?			
	Trucking Industry	Fort Collins Commerce	Perceptions

Video

Who will this reach?	Drivers	Route Planners	Other: _____
	Local	Regional	Long Haul
How effective will this be?			
1	2	3	4
Not Effective			
5	6	7	
		Very Effective	
Other Impacts?			
	Trucking Industry	Fort Collins Commerce	Perceptions

Comment Form 9 of 11

Compression Brake Law

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Restrictions

Who will this reach?	Drivers	Route Planners	Other:			
	Local	Regional	Long Haul			
How effective will this be?						
1	2	3	4	5	6	7
Not Effective						Very Effective
Other Impacts?						
	Trucking Industry		Fort Collins Commerce		Perceptions	

Comment Form 10 of 11

Variable Message Signs (VMS)

Who will this reach?	Drivers	Route Planners	Other: _____
	Local	Regional	Long Haul
How effective will this be?			
1	2	3	4
Not Effective			
5	6	7	
		Very Effective	
Other Impacts?			
	Trucking Industry	Fort Collins Commerce	Perceptions

Corridor Amenities

Who will this reach?	Drivers	Route Planners	Other: _____
	Local	Regional	Long Haul
How effective will this be?			
1	2	3	4
Not Effective			
5	6	7	
		Very Effective	
Other Impacts?			
	Trucking Industry	Fort Collins Commerce	Perceptions

Comment Form 11 of 11

Truck Workshop II - Non-Route-Based Strategies Comment Response Summary

NRBS Comment Form Summary	Who will this reach?						Effectiveness Rating	Other impacts?			Comments
	Drivers	Route Planners	Other	Local	Regional	Long Haul		Trucking Industry	Fort Collins Commerce	Perceptions	
Kiosks at Truck Stops	9	0	0	3	5	9	4.67	2	0	0	Electronic would work best.
Variable Message Signs (message)	9	0	0	5	6	9	4.56	2	1	0	Signage is good - if not changed frequently it will be ignored. Limit to highway conditions only. People will follow advice for trucks and will avoid Fort Collins.
Radio Ads	9	0	0	5	5	8	3.89	2	0	1	Who will pay for ads?
Billboards	9	1	1	4	5	7	4.33	3	3	1	General public may spot heavy truck traffic.
Highway Advisory Radio	9	0	0	6	8	7	4.17	3	0	0	Should be used for emergency, road conditions, weather advisory only. Could be very effective in limited circumstances.
Compression Brake Law	9	1	0	6	6	6	3.44	2	2	1	It's the law, profiling would leave a bad image for Colorado, not just Ft. Collins. Need to be sure signs are put up correctly [with regard to] muffler law. There is already a law, [just] no enforcement. [This will succeed] depending on community enforcement policies and funding - do the communities have the manpower and funds to enforce? [Is there a] statewide mandate that trucks must be equipped with mufflers?
Corridor Amenities	8	1	0	3	7	9	4.89	3	2	0	Effective for very limited segments. Need more truck stops and rest areas for truckers.
Incentive Programs	8	2	0	6	5	7	4.33	2	3	0	Who will pay for incentives (2x)? Effective for local drivers. This is good, drivers like to receive something for going out of their way.
Paycheck Mailers	8	1	0	5	4	6	3.78	2	1	0	Not sure how many people read extra mailers. Difficult to administer. Expensive.
Restrictions	7	7	0	7	7	7	3.44	4	1	1	Restrictions could cause problems, FHWA FMCSA may get negative impact. Expensive for industry, negative unintended consequences, will increase congestion in non-restricted routes & times. Bad idea. Hard to impose restrictions on a federal highway.
Variable Message Signs (more)	7	0	0	5	5	7	4.22	1	1	0	Can be negative, put more truckers into town due to bad weather. This will help all motorists.
Articles in Publications	7	6	2	3	6	6	4.11	4	0	1	Industry management. All depending upon publication.
Safety Meeting Reminders	6	4	2	6	6	3	4.33	0	0	1	Management. Depends on how company management supports. Probably most effective strategy, but expensive and labor intensive. Company owners.
Brochures / Direct Mail	5	5	0	5	5	5	3.44	2	0	0	Who will maintain supply and publications? Expensive. Not effective.
Private Trucking Company Outreach	5	7	1	4	4	4	4.67	2	0	0	Depends on how much support from company management puts into outreach program. Very effective if properly done, expensive and labor intensive. Owners. Very hard to get to independent truckers. Will reach owners.
Video	5	4	1	4	5	4	3.00	0	0	0	Depends on how company presents to drivers, planners, etc. Who is going to spend the time to watch it? How are you going to distribute? Safety managers.
Map Routes	4	8	0	4	4	9	5.00	4	3	0	Cost/benefit to driver and company especially if paid by the mile (household movers). General public will avoid Fort Collins.
Trucking Industry Magazine	4	8	1	7	8	8	3.78	2	0	1	Industry Management. May generate interest at first, but too long in magazines and it will get ignored. Expensive, limited effectiveness.
CDOT Website	4	9	0	1	2	3	3.61	3	1	1	General public views this site. Very effective for very limited segment of industry.
Internet Advertising	3	7	0	3	3	5	3.44	1	0	1	Pop-ups are ignored, as are many online ads. Who will this reach?

Memorandum - Participant Comments

I. Billboards

- Good at first, get stale if not replaced; for the consistent viewers
- Some counties don't allow billboards
- For one year, seasonal change serve as reminder
- Good idea but in winter time, road closures may contradict goals
- Expect minimal percent of time

II. Safety Meetings

- Art Ballah – Absolutely most effective
- Small, medium and large sized carriers have monthly meetings
- Attendance is encouraged
- New topics are good
- Opportunity for dialogue
- 60 to 80% of mid to large carriers have monthly meetings
- Usually held in Jackson, WY, there is a regional conference (WY, MT, ID, UT, CO) – could make a presentation about regional safety issues (could be a very effective topic)
- CMCA Safety Management Council - 1st thursday of month, meetings have high attendance, can address regulatory enforcement through the industry (it's likely that Wyoming has a similar association)
- Don't you need management and dispatch buy-in to push this? Even to drivers? They would have to offer an invitation
- Goal audience is long haul management and drivers - also depends on who we are talking to - 90% of US 287 traffic is to/from Salt Lake City, 1/1000 trucks on US 287 is long haul
- This is a good way to communicate, but need to refine to determine message
- Strategies – focus on local, regular, and long haul (expect a difference b/n small response and long haul response)
- Need something major to say to be invited
- Likely require continual effort, continuing meetings
- Address emergency response times on US 287 - could be a good topic for management, easier faster on interstate
- Best way to relay information?
- Personal presentation - mailers not effective
- Sell the benefits for the driver
- Perception management
 - I-25 south of Fort Collins is unsafe
 - I-25 north of Fort Collins is safe

III. Variable Message Signs

- Drivers pay attention a lot because of real time information

IV. Faxes

- T-REX project provides faxes each Friday night to carriers
- Michele Moyer (Public Information Office at CDOT) faxes go to Colorado carriers and possibly to others with local terminal; works pretty good
- Method good, may apply to regular messages
- Also ok to get link from CDOT to site we create

V. Brochures

- Bang for buck? No
- Not for direct mail
- Maybe

VI. Incentives

- Good to include “free showers”
- Why direct mail instead of paycheck mailers?
- Includes both incentive program
- (Renee) Driver pays for shower, meal, etc.
- Has to be in Cheyenne
- Okay with Fort Collins business owners
- Funding? Currently the CFTB program
- Sustainability – don’t know at this point
- If incentive program stops, may push drivers to head back into Fort Collins
- How to get two stops in short period of time
- Rest area existing will move and is not easy access
- Cheyenne not considered super great very congested access
- WYDOT looking to improve
- How to reach target audience – tough

VII. Amenities

- Most traffic is I-80 east/west
- Existing amenities good, but congestion is bad
- Some changes upcoming on I-80 and safety improvements on US 287 may impact ability to move traffic
- WYDOT – ITS program along I-80 improved VMS messaging and lighting
- There is not a POE on I-25 Southbound, so one way to avoid POE is to come south
- New truck stop - tough placement with out losing business to cheap gas in Cheyenne
- New stop would be good

VIII. Radio Ads

- Long haul drivers only listen to satellite radio the won't hit local shows
- What do drivers listen to?
- If they listen, it's probably a late night show and then doesn't matter
- Media buy because PSA late at night
- May have benefit of letting communication know that effort being made
- Almost just as good may change perception of communication
- KOA AM in this area
- Other opinions - don't ever listen to AM, people do listen to radio though

IX. Noise Education

- Message is out there of fines for lack of muffler
- Issue is that safety comes first, "If need them then people should use them"
- Truck industry and regular enforcement
- Safety number one, so use with muffler is encouraged
- Would anger truck industry to say "don't use Jake brake"
- In Fort Collins, with speeds of 40 MPH drivers may need "Jake Brake"
- Would the message "No muffler = \$700 fine" work? (NO)
- Need to check city ordinance on decibel levels
- Make sure enforcement doesn't profile

X. Perceptions

- Community should be educated that noise is not trucks
- "TRUCKS" perceived as commercial when usually are 4-wheelers
- 5% -ish of truck accident are big commercial trucks
- 95% are 4-wheel trucks
- Build your own Road!
- Possible but city buying open space land not in favor of purchase for road building
- Who is complaining in Fort Collins?
- Doesn't seem to be many trucks
- One to two mile stretch skirting old town boundary
- Old town looking to expand north now some change to west instead
- Safety meeting may help if convince safety manager
- But \$2 per mile makes \$24 and that is \$24 of someone's money
- Tough game - weather comes into play 42 weeks out of year – winter snow, summer wind
- Word of mouth advisories tell people no empties allowed

XI. Focus on Reality

- T & T in Fort Collins for 35 Years
- Suggestion for City Council – Re-approach this project, state that these methods won't work
- Weather!
- Get back to creating an expressway (not a truck bypass- an all vehicle road)
- There will be increased traffic on Lemay Avenue and others
- Folks have found US 287 to be a better route
- BACKLASH – Media exposure of issue could highlight US 287 to those who aren't aware of it and increase traffic.

XII. Other Issues

- I-25 reconstruction project - anticipated for 2005 or 2006-ish, lasting 3 years - will increase congestion just south of Cheyenne
- At Laramie open at 287 to avoid take Interstate coming south
- Message that focuses on directing truckers, but communication with community indicated the City is ok with a slight loss of others (automobile traffic), it won't be a big surprise



APPENDIX D

Trucking Industry Focus Group

Trucking Industry Discussion Guide

Trucking Industry Discussion Booklet

Meeting Summary

Trucking Industry Discussion Guide

June 3, 2004

I. INTRODUCTION/GUIDELINES (10 minutes)

- ❖ Introduction of moderator and explanation of focus group guidelines:
 - One person speaks at a time
 - There are no wrong answers
 - Everyone gets a chance to speak (I may call on you)
 - Only one person at a time to the rest room
 - Comments are confidential, never associated with name
 - Please turn off cell phones, pagers
- ❖ Disclosure of video and audio taping and observers
- ❖ I'm going to pass out a booklet we'll use during our discussion. It's important not to read ahead, so please don't open it until I ask you.
- ❖ Ice breaker Q's:
 - How long have you been involved in the industry, what is your role?
 - What do you do when you're not working?

II. TRUCKING INDUSTRY OVERVIEW (10 minutes)

- ❖ Looking back over your years of experience in the trucking industry, what are the most important changes you've seen in recent years?
 - Positive changes?
 - Negative changes?
 - Who is responsible?
 - What do you see over the next five years?>PROBE: Which affect you the most? How?
- ❖ Generally, what are the factors that drive decisions at your company most, in terms of operations? How has that changed recently? Which are the most important factors?
 - >PROBE: What role do fuel costs play?
 - >PROBE: What role does delivery time play – and is it different for different “types” of operations? Why?

III. DECISION-MAKING (15 minutes)

Let's focus now on an important part of your operations: deciding what routes you'll use for different destinations:

- ❖ Who decides which route is chosen? How does that differ between shippers, commercial companies and owner/operators?
 - >PROBE: Do truck drivers themselves have any say? Can they alter the route on the road, if conditions change? When would they make that change?
 - >PROBE: For those of you who are owner/operators, do you ever change routes once you have started driving? Why? How likely is it you'll change?
- ❖ What are the main factors you consider when choosing a route?
 - What roles do the following play: weather, time, distance, cost of fuel, amenities/truck stops?
 - >PROBE: How has the "11-hour" rule affected your decision making?
 - Do you use routing software? If so, which one? Do you ever alter routes it recommends? If so, why?

IV. MAP EXERCISE (10 minutes)

We're going to do something just a little bit different, kind of role play. If you'll open your discussion booklet to Page 1, you'll see we've provided a regional map showing major highways.

I'd like you to consider how you would route a full-trailer shipment from Salt Lake City to Albuquerque. Please consider all the route alternatives you have and select one in your mind. Feel free to note on the map anything that might affect your decision, like traffic, weather, facilities, time – anything that might cause you to pick one road over another.

OK, using the marker I've given you, please mark your route on this larger map?

OK, that's very interesting. Why did you pick the route you did?

>PROBE: Where you had two or more choices, what factors drove your decision?

- ❖ Let's focus on the Northern Colorado segment, between Laramie and Fort Collins. Why did you pick the route you did? Do you route shipments through this corridor often – and do you always choose that route? Why/not?
- ❖ For those of you who choose the US 287 route, what would have to change for you to route traffic over I-25 through Cheyenne to I-80 instead?

V. NON ROUTE-BASED STRATEGY TEST (30 minutes)

As you probably figured out, we're focusing on that corridor. The City of Fort Collins is exploring different ways to encourage through commercial shipping traffic to use the I-25/I-80 route instead of US 287. They'd like your help tonight.

- ❖ First of all, do you think it's realistic?
 - Could you use either route? Why/not?
 - For those of you who don't think it's realistic, what makes US 287 so much better?
 - And why not I-25/I-80?
- ❖ Fort Collins is considering a number of different ways to persuade you to use the 25/80 route. Please open your discussion booklet to page 2, we have listed a number of concepts. Please consider them and note your thoughts on each. (Give them 10 minutes)
 - Which of these concepts would change your mind?>PROBE: If none, why not. Any others you would suggest?
- ❖ Now, let me pass around a number of magazines. Which, if any, do you read regularly? Which would you find most compelling?
>PROBE: Have we missed any?
- ❖ If you'll open your booklet to page 3, we have listed several reasons you to might routes. Please rank them 1-10 with 1 as the best reason.
 - What did you pick as the best reason? Worst? Why?
- ❖ OK, now for some more fun. We've created several mock advertisements for you to look at. I'm going to pass them around. Please spend a few minutes looking at each. (Give them 2-3 minutes)
 - Which of these would be most likely to catch your attention?
 - Which is the most convincing – it would be most likely to convince you to use the 25/80 route? Why?
 - Which is least convincing? Why?
 - Which advertising line is best/worst?
 - What phrases jump out at you?
 - These were your ads, what would you tell the ad agency to do to make them better?>PROBE: If none, why not. Any others you would suggest?

VI. CLOSING

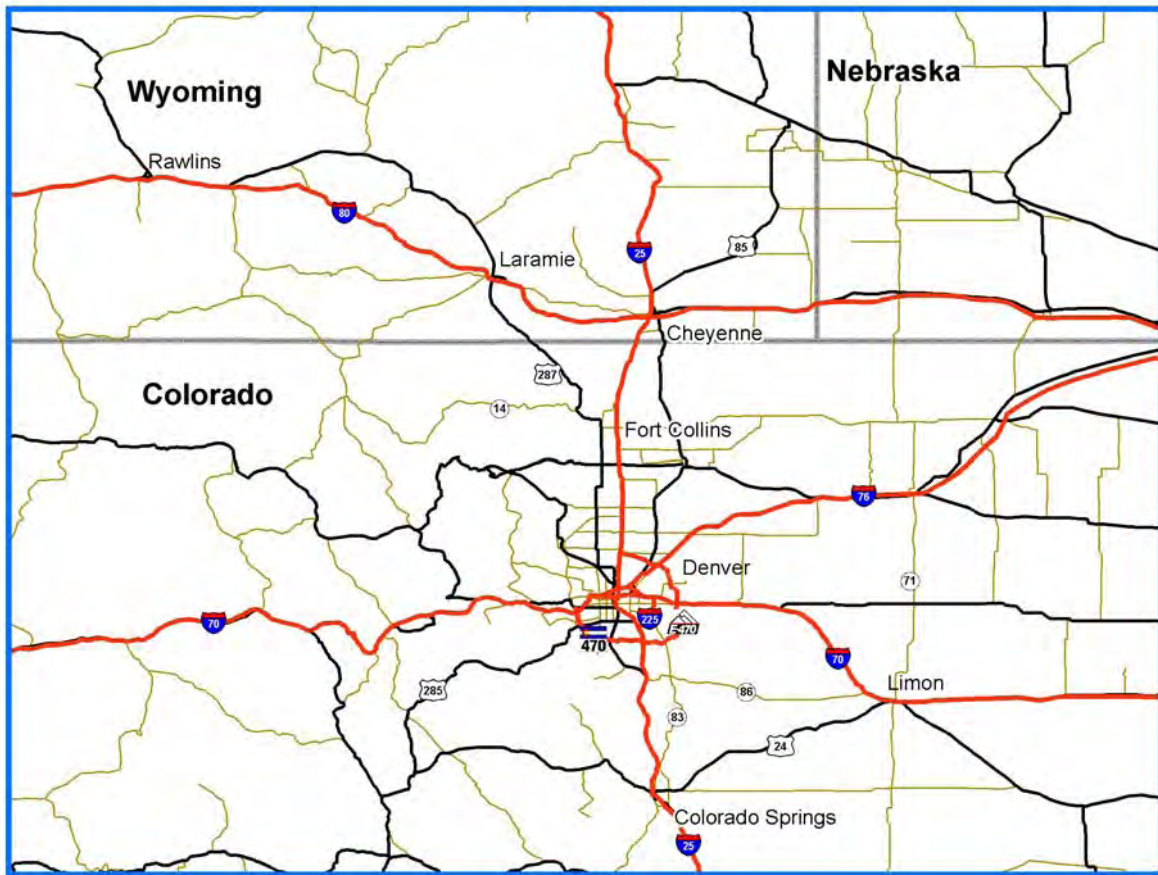
OK, we have one final exercise people always enjoy. If you'll turn to the last page in your discussion booklet, you'll find a "post card" to the City of Fort Collins. Please write them a short note on how they could best convince you and others in trucking to use a different route, and include any specific thoughts about whether you think this idea will work.

Please give me your booklet when you're done. Thanks.

TRUCKING INDUSTRY DISCUSSION BOOKLET

PLEASE DO NOT OPEN UNTIL INSTRUCTED

IT'S IMPORTANT NOT TO READ AHEAD



PAGE 2

Please consider each of these ideas for convincing the trucking industry to use the I-25/I-80 route between Fort Collins and Laramie. Please write down your thoughts on each.

- 1) City of Fort Collins brochure showing preferred trucking routes through the Northern Colorado region.
- 2) Billboard advertising.
- 3) Variable message roadside signs indicating I-25/I-80 as the preferred route.
- 4) Advertising in trucking magazines.
- 5) Advertising on trucking Web sites.
- 6) Satellite radio spots.
- 7) Mailings
- 8) Weather information at truck stops, rest areas and weigh stations
- 9) Informational CD-ROM/DVD.
- 10) New truck stop/service facilities between Fort Collins and Cheyenne

PAGE 3

- _____ The Interstate 25/80 route has wider shoulders
- _____ The Interstate 25/80 route has better maintenance
- _____ The Interstate 25/80 route has four lanes for the entire route
- _____ The Interstate 25/80 route has State Patrol presence
- _____ The Interstate 25/80 route has quicker response for emergency services
- _____ The Interstate 25/80 route saves time
- _____ Speed limits remain consistent on Interstate 25/80
- _____ Drivers are more considerate on Interstate 25/80
- _____ There is better road condition information available on Interstate 25/80
- _____ There are more rest areas and truck stops on Interstate 25/80

Others?

To:

Transportation Planners
City of Fort Collins
Fort Collins, Colorado

MEETING SUMMARY

MEMORANDUM

October 22, 2004

TO: MARK JACKSON, TRANSPORTATION PLANNING MANAGER
City Of Fort Collins

FROM: THOMAS R. SCHILLING, DREW KRAMER
InterMountain Corporate Affairs

**SUBJECT: KEY FINDINGS FROM QUALITATIVE RESEARCH WITH THE
TRUCKING INDUSTRY REGARDING SH 14 TRUCK ROUTE
RELOCATION PROJECT, PHASE II: NON ROUTE-BASED
STRATEGIES**

Overview

On June 3, 2004, InterMountain Corporate Affairs conducted a focus group with representatives from the trucking/shipping industry to discuss the SH 14 Truck Route Relocation Project, Phase II: Non Route-Based Strategies. The session was held at the Denver Research Center facilities from 5:00-7:30 p.m. in Aurora, Colorado.

Participants included seven individuals, all male, holding various job titles and representing different types of companies. Among the group were drivers for both a large national grocery chain and a smaller local trucking company, as well as operations managers and a safety manager, fleet manager and division director for local shippers.

None of the participants worked together or knew each other prior to the focus group. None were briefed on the subject matter ahead of time, though all were recruited because they work for companies that operate in and around the North Front Range area. Tom Schilling of InterMountain Corporate Affairs, a member of the Phase II project team, facilitated the session.

Highlights

Among the most important findings of the focus group were the following:

- Due to its own numerous advantages and the shortcomings of the I-25/I-80 corridor, the SH 14/U.S. 287 route is easily the preferred way for trucks to travel between Fort Collins and Laramie. Trucking/shipping industry representatives are highly skeptical that any marketing program will be able to convince a significant number of drivers to opt for the Interstate route when given a choice.
- If a marketing program is to be undertaken, it should be targeted at drivers rather than dispatchers or other office/management personnel. Messaging should focus on those aspects of the Interstate route – four lanes, consistent speeds, etc. – that produce time savings, and the program should offer incentives such as food and diesel discounts. Those most likely to respond to such a program are not locally-based drivers but rather out-of-state, long-haul drivers who do not know the territory as well or travel it as often.
- Drivers are somewhat perplexed by the City’s concern over truck traffic, as drivers don’t feel the SH 14/U.S. 287 route really brings them through the heart of Fort Collins but rather directs them around the edges of the downtown area. Nevertheless, there was consensus among the participants that the best solution for reducing the truck presence would be to build a bypass around the city north of State Highway 14. There also seemed to be consensus that a toll on such a road would be acceptable if priced reasonably (around \$5).

General Findings

Route Selection – General

- Though mileage is a key driver of route decisions, the shortest route will sometimes be disregarded in favor of a longer but more “logical” route that incorporates better roads, fewer hills, favorable weather, more gas stations, etc. For example, one participant noted that his drivers would travel an additional 80 miles to take the I-70/I-35 route from Denver to Dallas rather than travel U.S. Highway 287 through southeastern Colorado and other more direct roads that have fewer facilities, narrower shoulders and other disadvantages. Each company has its own philosophy about whether traveling those extra 80 miles is worth whatever other efficiencies may come from the longer route.
- Route selections are generally determined by a dispatcher or group of dispatchers, though drivers have some discretion to make adjustments on the fly as dictated by congestion, construction, weather or other factors. Dispatchers will also tinker with their standard routes over time based on driver feedback.

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- The 11-hour rule is factored into route decisions, but it has little impact for less-than-truck-load (LTL) and other short-range haulers whose trips often run less than 10 hours. Shippers are also working more closely with carriers to adjust scheduling so trucks don't sit idle too long.
- Large companies often have designated fuel stops for their trucks, so drivers are forced to plan routes around those locations.
- Routing software is used, but products get mixed reviews. There was group consensus that Prophecy is widely used with positive results, and PC Miler was also mentioned. One participant called Roadshow "a joke" because it doesn't always show the most "logical" route.
- Time of day may determine a particular route – i.e., adjustments may be made to avoid rush hour traffic or other predictably busy periods – but for many companies delivery times are set to accommodate customers and cannot vary so they're always driving at the same time of day.
- Routes are often set to accommodate top shippers and better customers first. Factors here include which shippers pay most reliably and which load and unload trucks most efficiently and with the best equipment.

Route Selection – Fort Collins-Laramie Corridor

- All drivers familiar with the route prefer SH 14/U.S. 287 to I-25/I-80.
- The stretch of I-25 in question was called the "most dangerous stretch of road in Colorado," most notably because of its high volume.
- Weather is also a factor – particularly the wind and snow on I-80 – but it can be bad on both routes.
- One advantage cited for SH 14/U.S. 287 is that its truck scale facility isn't open 24 hours like the one on I-25 is. Also worth noting that PrePass is well-received as a time-saver where it applies.
- Passing through Cheyenne was seen as a negative for those with a choice because it has rough weather. One participant also called the city's streets "messy."
- Nobody in the group was certain of the exact mileage distance between the two, but it didn't seem to matter if it was 20 miles or 60.
- At least one participant referred to the more scenic nature of SH 14/U.S. 287, though this doesn't appear to be a major factor – just an added benefit of that route.

Marketing Tools

- Participants were shown a list of ideas for convincing drivers to use the Interstate route and asked to comment both in writing and orally. The results were as follows:
 - **Route Brochure** – Having been shown a sample brochure being used by Grand Junction, participants were lukewarm on the concept. Most thought it was a decent idea but were skeptical about its effectiveness, particularly for drivers who know the area well and don't find Fort Collins complicated enough to consult a route map. ("We're not in Chicago," said one.) One person thought the brochure was "too anti-trucking."
 - **Billboard Advertising** – One participant was particularly enthusiastic about billboards as the most effective way to catch drivers' eyes – especially independent owner/operators – particularly if they ads offer incentives such as good meals, hot showers, diesel fuel discounts, etc. In written comments, however, one thought the ads would only be 15% effective, while another said they weren't possible.
 - **Variable Message Signs** – Signs directing trucks to the Interstate route might have an impact on long-haul and out-of-state drivers not familiar with SH 14/U.S. 287, but otherwise wouldn't be enough to convince experienced local drivers who already prefer to avoid the Interstate. Providing information on weather and congestion is always useful but will backfire if signs show conditions are worse on I-25/I-80.
 - **Truck Magazine Advertising** – Participants were shown a variety of trade publications and had a mixed response to each. In general, there was skepticism that magazines would reach drivers, other than the independent owner/operators. In written comments, some referred to the ads as "not a good idea," a "waste of money," "5% effective" and likely to reach "a fraction of people who use" the route.
 - **Truck Website Advertising** – This received less comment, though one thought it might work if ads offer good incentives and another said it would work for some. Another participant said that, like magazine ads, this would reach only management and not drivers themselves.
 - **Satellite Radio Spots** – Radio got a low rating for effectiveness, though one participant gave positive endorsement to a few nationwide AM shows that do address such topics as congested routes and construction spots for trucks to avoid. Again, this was seen as a solution likely to be more effective with long-haul and out-of-state drivers.

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- **Direct Mailings** – This prompted little discussion, other than skepticism that materials would be seen as junk mail and quickly thrown away.
 - **Weather Information at Truck Stops, Weigh Stations, Rest Areas** – Like the VMS option, this idea was considered a helpful way to get pertinent information directly to drivers but also seen as backfiring when conditions are worse on the Interstate route.
 - **Informational CD-ROM** – Written comment ranged from “possible” to “good idea” to “junk mail.” One driver mentioned aloud that he liked the idea if the CD included congestion information.
 - **New Truck Stop between Fort Collins and Cheyenne** – A nice, new facility would be a plus but not a guaranteed solution for directing trucks to the I-25/I-80 route. Location is the trickiest factor – it would have to be far enough north of Fort Collins so that drivers were discouraged from backtracking to SH 14/U.S. 287 after a stop. However, if it’s too far north drivers may choose to continue on to existing, well-regarded facilities in Cheyenne. Also, if it’s too close to Fort Collins drivers may simply bypass it and instead go into town to explore a greater variety of dining, lodging and entertainment options.
- There was consensus that any marketing that is done should be geared toward drivers, not management or “office guys.” Though dispatchers largely set routes, they tend to be fairly set in their decisions and are less likely to respond to a marketing program. In addition, as noted, drivers do have some discretion on route segments.
 - There was also consensus that experienced, locally-based drivers who know the corridor well simply cannot be convinced to make the switch from SH 14/U.S. 287 to the Interstate route. Marketing efforts might have an impact on long-haul drivers from out-of-state who pass through Colorado only periodically. It might be possible to direct inexperienced local drivers to I-25/I-80, but they will eventually realize the advantages of SH 14/U.S. 287 and make the switch. In addition, participants noted that one of the leading problems facing the industry is a shortage of younger drivers and difficulty in recruiting new drivers of any age.
 - When shown specific advertising concepts, participants expressed particular fondness for clock imagery that indicated time savings and for photographs of trucks moving fast on an uncongested roadway. Photographs of socializing drivers received a negative response because they implied trucks were sitting idle and not making money. With regard to taglines, participants similarly liked verbiage that underscored time savings and thought “Stay on the Big Road” might be effective for selling the safety factor of the Interstate. The term “North Forty” was not recognized by any participants.

Postcards to Fort Collins

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Drivers were asked to address their overall thoughts on the project to City of Fort Collins transportation planners on a makeshift “postcard” in their focus group booklets. Following are the verbatim responses:

- “Dear Fort Collins: My personal opinion is to divert to a alternative route around Fort Collins.”
- “To Fort Collins: I think the only way this will work well I would build a toll road around Fort Collins north side of the city – charge trucks and cars both.”
- “Dear Fort Collins: I feel that in order to persuade trucks to re-route you would have to provide some type of incentive... the type of incentive is the big question ... meal vouchers would go a long way!”
- “To Fort Collins: Thank you for the opportunity to participate in this discussion. My thoughts to improve this problem would be to build a road other than 14 that trucks can access 287 and not go through Main Street or an incentive such as discounted fuel costs to everyone drive to use I-25.”
- “I suggest if City of Fort Collins wants to keep trucking off the north end of city, it is not possible to add the extra mileage on the trucks needing to use this highway. Should build bypass around city to eliminate truck traffic.”
- “To Planners: We understand your concern. A bypass, toll road, may be the only way to make or take trucks from going 287.”
- “Dear Fort Collins: I believe you have your work cut out for you but I believe your approach is a step in the right direction. I have seen some good ideas and hope that our comments help.”



APPENDIX E

Marketing Advisory Committee Meeting Summary

MEETING SUMMARY

TO: Dave Millar, Project Manager
FROM: Drew Kramer
DATE: June 17, 2004

Following is a synopsis of a meeting held in conjunction with the Northern Colorado Truck Mobility Study, Phase II: Non Route-based Strategies:

Date: June 11, 2004

Location: Fort Collins Chamber of Commerce

Attendees: Mark Jackson, City of Fort Collins Transportation Planning (Project Mgr)
Tom Schilling, InterMountain Corporate Affairs (PMT)
Drew Kramer, InterMountain Corporate Affairs (PMT)
Renee Rinehart, Rinehart Advertising (PMT)
Linda Dowlen, Director, Smart Trips, City of Fort Collins
Bruce Biggi, Economic Advisor, City of Fort Collins
Ann Hutchison, President, Fort Collins Chamber of Commerce
Chip Steiner, Executive Director, Downtown Development Authority
Ed Stoner, President/Broker, Old Town Square Properties, Inc.
Kimberly Stenberg, Northern Colorado Economic Development Corp.

Summary: This was the first gathering of the Marketing Advisory Committee (MAC), a group convened by the project management team (PMT) to provide a local and non-trucking industry perspective on our marketing approach and its possible impacts on the city and its business community.

The meeting began with an overview by Mark Jackson of the 1999 ballot initiative, the results of Phase I of this study and the goals and methodology of the project team for Phase II. He stressed the need to prevent any negative economic impacts on the City of Fort Collins and answered MAC member questions about various historical matters surrounding the project. The PMT then offered a summary of the target audiences and messages for the proposed marketing program and described the workshops and focus groups conducted to date. The marketing strategies were then reviewed in more detail.

Following is a summary of key points made by MAC members:

- ❖ The PMT's designation of long-haul truck drivers as the program's primary audience is reasonable. MAC members are not concerned that the marketing program might

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- hurt the Fort Collins economy by directing these drivers out of the city, since the drivers without business in the city do not stop in town to spend a significant amount of money on food, lodging or entertainment.
- ❖ It was suggested that any efforts to minimize truck traffic in the city could, in fact, help economic development in and around downtown by making it a more pleasant place for others to visit.
 - ❖ Economic development activity in the city is generally moving north of Jefferson Avenue.
 - ❖ Billboard messages should call attention to trucks and not have an adverse impact on automobile traffic to Fort Collins.
 - ❖ The incentive program was well received. Some concerns were raised about the fact that incentives might be focused around businesses in Cheyenne, but MAC members felt the impact would be minimal on Fort Collins since the targeted drivers are not likely to spend money in Fort Collins anyway. It was suggested to contact truck stops and retailers for co-op advertising around an incentive program.
 - ❖ Future realignment of U.S. 287 is likely for a proposed reservoir. The work will likely be several years away but could have a major impact on trucking route decisions.
 - ❖ MAC members asked about the feasibility of a bypass road north of Highway 14 and were in favor of the idea.
 - ❖ Ann Hutchison indicated that the Chamber had received a handful of questions from the public regarding the status of the City's effort to comply with the ballot initiative. (The PMT subsequently provided her with talking points to use in response to such calls and encouraged her to direct any callers to Mark Jackson's office.)