

I. INTRODUCTION

In August of 2004, the City of Fort Collins Transportation Services Area (City) and the Colorado Department of Transportation (CDOT) began the “US 287/South College Avenue Bicycle Lane Project”. This project developed a Vision Plan and Conceptual Design for bicycling facilities along US 287/South College Avenue that includes the design and construction of bike lanes and trail connections between Carpenter Road (LCR 32) and Harmony Road (SH 68), an approximate three-mile segment of state highway. The main goals of the project were to provide facilities for both commuter and recreational cyclists and to provide a safe and user-friendly addition to the City’s and the region’s integrated system of on-street bike lanes and off-street trails. This project will also result in improved bicyclist access to transit routes along US 287/South College Avenue.

I.1 Project Purpose

The City of Fort Collins obtained Federal-aid funding through CDOT and the North Front Range Metropolitan Planning Organization (NFRMPO) for the planning, design and initial construction of this project, a project that will provide a safer traveling experience for bicyclists along a busy state highway.

This project has created a Vision Plan and Conceptual Design for bicycle facilities along the US 287/South College Avenue corridor from Carpenter Road to Harmony Road that includes a prioritized, phased implementation program for the plan to come to fruition, one that establishes a functional and cost-effective Phase 1 project.

This report summarizes the goals, objectives and results of the Vision Plan and Conceptual Design for installing bike lanes and off-street trail connections. The entire project provides the Vision Plan for the corridor, as well as the conceptual design and first phase of project construction. There are six primary tasks associated with the entire project:

1. **Vision Plan** – Develop a plan that incorporates the goals and objectives for the corridor.
2. **Conceptual Design Plan** – Provide detailed information for the short-term bicycle lane improvements.
3. **Project Prioritization** – Prioritize elements of the plan that provide the greatest system continuity and that can be constructed within the available budget; maximizing the design elements to achieve the greatest return on investment; prioritizing the remaining pieces of the puzzle for future construction.
4. **Preliminary and Final Engineering** – Prepare construction plans and specifications that meet with City and CDOT design criteria for the first construction phase.
5. **Public Involvement Program** – Develop and implement a program that identifies and addresses the issues and concerns of the bicycling community, the traveling public, and of the City and CDOT.
6. **Construction** – Build the first phase of project improvements.

I.2 Project Goals and Objectives

At the start of the project, City and CDOT staff were queried in regards to the goals and objectives for the project, i.e., Who is to be served? What are the needs? And what is to be done to address these needs? A lengthy discussion on these issues resulted in the following summary of the goals and objectives for the project:

- ▶ Accommodate bicyclists of varied experience levels.
 - On-street bike lanes for experienced/commuter cyclists
 - Off-street multi-use paths for less experienced/recreational cyclists
- ▶ Provide convenient connections to the local and regional bikeway system and other modes of transportation.
- ▶ Establish a safe facility for all users.
- ▶ Develop a consistent and integrated bicycling system that links to other bike facilities and FoxTrot stops, and fits with existing turn lanes and access points.
- ▶ Develop an understandable and functional planning document.
- ▶ Identify a Phase 1 construction project that is tangible, functional, and constructible within the allotted funds.
- ▶ Identify future agency coordination required to maintain the bike lane corridor.

I.3 Steps Taken to Achieve the Project Goals and Objectives

The following steps were taken to achieve the project goals:

- ▶ **Data Collection** – A summary of existing corridor conditions was prepared that included identifying existing pavement markings and traffic signing, and recording existing traffic volumes, access locations and the length of acceleration and deceleration lanes. Research was conducted to compile local and national studies that evaluated various bicycle lane treatment options.
- ▶ **Open Houses** – Three public open house events were conducted to present the project and to gain resident, business and cycling community input on the goals and objectives of the project, bicycle lane treatment options, and trail connection opportunities.
- ▶ **Development of a Vision Plan** – A Draft Vision Plan was created that incorporates public comments and Technical Advisory Committee input including the identification of bicycle lane treatment options along the project corridor.

- ▶ **Conceptual Design Opinion of Probable Construction Cost** – A Conceptual Design Plan and construction cost estimates were developed to provide detailed information for short-term project improvements.
- ▶ **Construction Prioritization** – Using the construction cost opinions and recognizing the available project budget, the project features were prioritized to meet the project budgetary limitations.

I.4 Report Format

This report summarizes the efforts to complete the Vision Plan for the corridor. The remainder of this report is divided into eight sections. **Section II** is a summary of the existing physical and operational conditions of the corridor. The Vision Plan for the corridor is described in **Section III**. Differing types of bike lane treatments that were used as the starting point for identifying bike lane design are contained in **Section IV**, while the Conceptual Design Plan for the corridor is documented in **Section V**. **Section VI** provides a description of the public involvement process and the main issues and concerns that were identified by the Open House attendees. The prioritization of construction sequences can be found in **Section VII** and additional project issues and requirements are included in **Section VIII**. The Phase 1 construction project can be found in **Section IX**, while next steps for the project are identified in **Section X**.

II. EXISTING CONDITIONS

US 287 / South College Avenue is a main access route between the City of Fort Collins and the City of Loveland that carries a large number of vehicles, while serving numerous residential and commercial properties. Currently, very few bicycle facilities exist along the corridor, but it is used by bicyclists as a commuter route and also by recreational bicyclists.

Section II is divided into four sub-sections. **Section II.1** provides a description of the typical roadway cross-section for the corridor. A general description of the access points, signalized intersections, and acceleration and deceleration lanes is found in **Section II.2**. The bicycle facility connections are described in **Section II.3**, while **Section II.4** describes the transit facilities along the corridor.

II.1 Roadway Cross-Section

The typical cross-section for this three-mile section of state highway consists of four through-lanes (48') with a center striped median (15') that is used as either a two-way left turn lane or as a designated left-turn lane. Wide shoulders ($\pm 13'$) on either side are also used as designated right turn lanes. **Figure 1** shows the existing typical cross-section for US 287/ South College Avenue. US 287 / South College Avenue was recently widened for the construction of a designated bicycle lane in front of a new commercial development (formerly Eckhart Drug) just to the north of Trilby Road and on the west side of US 287 / South College Avenue. The roadway is also being widened in the southeast corner at Fossil Creek Parkway as a result of new development (Discount Tire).

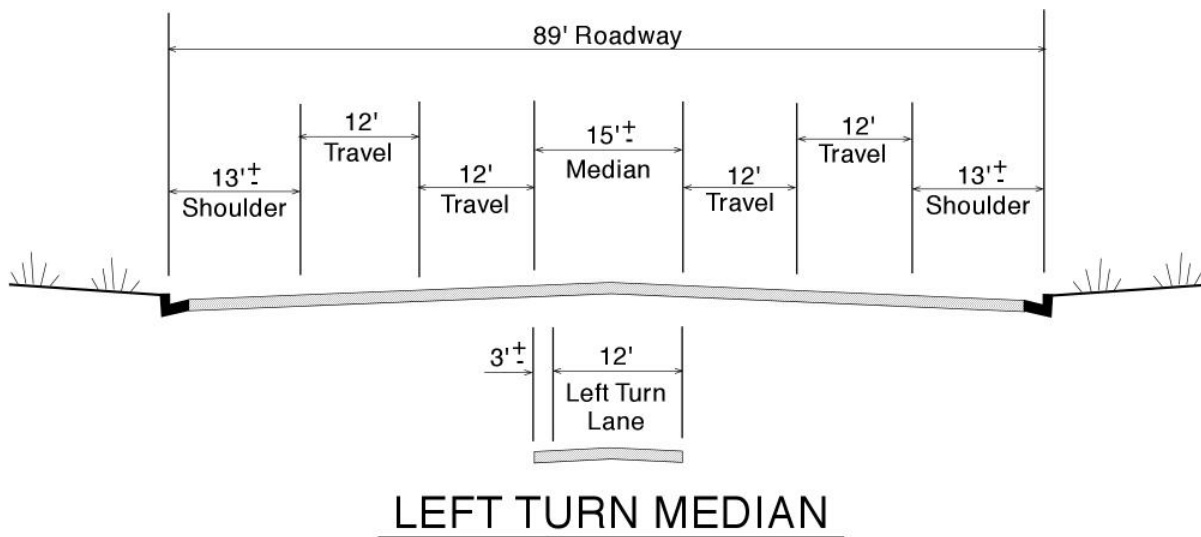


Figure 1. US 287/South College Avenue Existing Typical Section

There are a few locations along the corridor where detached sidewalks exist:

- ▶ West side of the highway between Triangle Drive and Fossil Creek Nursery's north property line,
- ▶ West side between Trilby Road and the new commercial development's (formerly Eckhart Drug) north property line,
- ▶ East side between Fossil Creek Parkway and Fairway Lane,
- ▶ West side in front of Woodley's Fine Furniture, and
- ▶ West side from Spradley- Barr Ford to Harmony Road.

In the future, the sidewalk system will be completed as additional development/redevelopment occurs and/or with future City and CDOT capital improvement projects.

II.2 Access

The project corridor along US 287/ South College Avenue provides several types of existing public and private access points between Carpenter Road and Harmony Road. Future access points with the state highway will be determined based on the South College Avenue (US 287) Access Control Plan.

In order to describe the corridor's existing access points in more detail, it is divided into seven segments. A description of each segment follows.

Carpenter Road (LCR 32) to Trilby Road

The segment of US 287/ South College Avenue between Carpenter Road and Trilby Road consists primarily of residential accesses with a few business access points. Traffic signals exist at Carpenter Road and at Trilby Road. A traffic signal is planned at Triangle Drive and should be constructed in 2007. Fossil Creek Nursery and 7-Eleven experience higher traffic volumes and currently have designated right turn lanes at their access. Acceleration and deceleration lanes also exist at Carpenter Road, Victoria Drive, Triangle Drive, and at Trilby Road.

Trilby Road to Skyway Drive

Between Trilby Road and Skyway Drive, US 287/ South College Avenue consists primarily of commercial activity, particularly on the east side of the roadway. Traffic signals exist at Trilby Road and Skyway Drive. There are several access points for the commercial properties on the east side of the highway but there are no designated acceleration or deceleration lanes at those access points. Gaps have been placed in the shoulder pavement markings in order to allow vehicular traffic to the businesses. A designated deceleration lane exists on southbound US 287/ South College Avenue at Trilby Road. A frontage road parallels US 287 / South College Avenue on the east side of the highway.

Skyway Drive to Bueno Drive

The segment of US 287 / South College Avenue between Skyway Drive and Bueno Drive also consists of business establishments. A traffic signal exists only at Skyway Drive. Most of the businesses are accessed by the frontage road system, with a few exceptions. Acceleration and deceleration lanes currently exist at Skyway Drive, Saturn Drive, East Smokey Street, and Crestridge Street. The frontage roads exist on both the east and west sides of US 287/ South College Avenue from Skyway Drive to Saturn Drive, and on the east side of the roadway from East Smokey Street to Bueno Drive.

Bueno Drive to Fossil Creek Parkway / Cameron Drive

The highway between Bueno Drive and Fossil Creek Parkway fronts the Redtail Grove Natural Area on the west, while green space/buffer zone fronts single-family homes on the east. A traffic signal exists at Fossil Creek Parkway / Cameron Drive. No access points exist along this segment. A northbound deceleration lane exists at Fossil Creek Parkway.

Fossil Creek Parkway / Cameron Drive to Fairway Lane

US 287 / South College Avenue between Fossil Creek Parkway / Cameron Drive and Fairway Lane contains several businesses. A traffic signal exists at Fossil Creek Parkway / Cameron Drive. A right in / right out access with acceleration and deceleration lanes exists on the east side of the roadway for the Carpet Exchange and its neighboring businesses. A driveway also exists on the west side that serves a private parcel. Acceleration and deceleration lanes exist at Fossil Creek Parkway / Cameron Drive and at Fairway Lane.

Fairway Lane to Mason Street / Palmer Drive

The segment of US 287 / South College Avenue between Fairway Lane and Mason Street / Palmer Drive also consists of several businesses. No traffic signals exist within this segment. A right in / right out / left in access with a deceleration lane exists at Spradley-Barr Ford. The businesses on the east side of the roadway are accessed via a frontage road that runs parallel to US 287 / South College Avenue from Fairway Lane to Palmer Drive. Acceleration and deceleration lanes exist both at Fairway Lane and Mason Street / Palmer Drive.

Mason Street / Palmer Drive to Harmony Road (SH 68)

The last segment of the corridor is between Mason Street / Palmer Drive and Harmony Road. The intersection of US 287/South College Avenue and Harmony Road is signalized. There are no access points along this segment. Acceleration and deceleration lanes exist at Mason Street/Palmer Drive and at Harmony Road.

II.3 Bicycle Facility Connections

Currently, several bicycle facility cross-connections exist or are planned for the future along the US 287 / South College Avenue project corridor. There are three types of cross-connections: 1) existing streets with bike lanes, 2) streets with planned bike lanes, and 3) planned multi-use, off-street paths. These cross-connections to the bicycle lanes and paths proposed for US 287 / South College Avenue will help move the Fort Collins bikeway system one step closer to greater bicycle facility interconnectivity.

Existing Streets with Bike Lanes

- ▶ Carpenter Road – eastbound (at the intersection),
- ▶ Triangle Drive – eastbound and westbound,
- ▶ Trilby Road - eastbound and westbound, both sides of US 287/South College Avenue,
- ▶ Skyway Drive – eastbound and westbound, east side of US 287/South College Avenue,
- ▶ Fossil Creek Parkway – eastbound and westbound, and
- ▶ Harmony Road – eastbound and westbound, east side of US 287/South College Avenue.

Streets with Planned Bike Lanes

- ▶ Carpenter Road – eastbound (beyond intersection)
- ▶ Carpenter Road – westbound, east of US 287/South College Avenue
- ▶ Carpenter Road west extension – eastbound and westbound,
- ▶ Skyway Drive – eastbound and westbound, west side of US 287/South College Avenue,
- ▶ Fairway Lane – connection to the Mason Transportation Corridor Trail (west of US 287/South College Avenue), and
- ▶ Harmony Road – eastbound and westbound, western side of US 287/South College Avenue including connection to the Mason Transportation Corridor Trail.

Planned Multi-Use, Off-Street Paths

- ▶ Fossil Creek Trail (2005 construction) that will connect to the planned Mason Trail.

II.4 Transit Facilities

The FoxTrot Bus Service (Loveland/Fort Collins regional bus service provided by Transfort) runs along US 287 / South College Avenue between 8th Street in Loveland and Horsetooth Road in Fort Collins. The buses allow bicycle storage on the front of the buses. This route currently experiences some of the highest bike storage usage within the Transfort system. Currently, there are four designated bus stops traveling northbound and four bus stops traveling southbound on US 287 / South College Avenue between Carpenter Road and Harmony Road. This bus service helps promote bicycle use and provides important connections to the US 287/ South College Avenue bicycle lane project and Fort Collins bikeway system.

III. VISION PLAN

Traffic volumes along US 287/South College Avenue will continue to grow as the surrounding area develops and the population of Fort Collins and Larimer County increases. Future plans for US 287/South College Avenue include the widening of the state highway to include six through lanes and turn lanes where necessary, with exclusive eight-foot bike lanes along its entire length. Off-street sidewalks and a landscaped parkway are also included in the proposed street cross-section (see **Figure 2**).

However, the implementation of this level of roadway improvements is beyond the scope and budget of this project. As such, the following sections summarize the research and decisions that were made to develop a Conceptual Design Plan, a plan that maximizes the available roadway width while limiting locations where roadway widening is required. As development/redevelopment and public agency capital improvement projects occur, the ultimate roadway cross-section will be achieved.

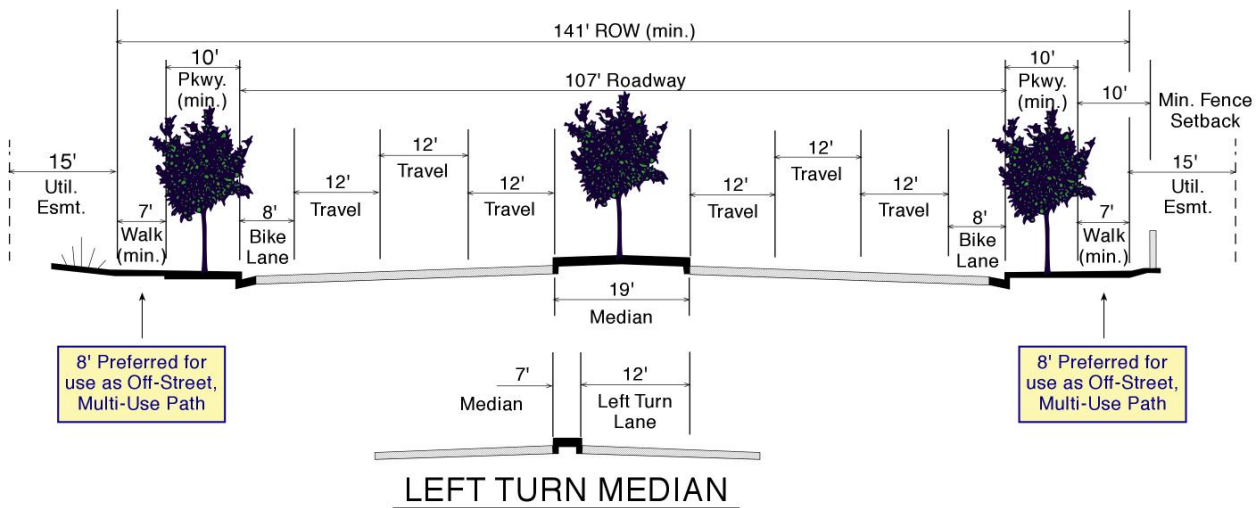


Figure 2. 6-Lane Arterial Cross-Section
(Source: Larimer County Urban Area Street Standards)

Ideally, the Vision Plan for the corridor will provide not only designated bicycle lanes within the roadway cross-section, but would also include wider (8') detached, multi-use paths paralleling US 287/South College Avenue rather than the standard 7' sidewalk. These improvements are necessary to serve experienced commuter cyclists as well as less-experienced recreational cyclists who may prefer to ride off-street.

IV. BICYCLE LANE TREATMENTS

Ultimately, the Vision Plan for US 287/South College Avenue will be implemented, but for the interim condition, other creative and innovative solutions are necessary to minimize roadway widening impacts and to fit within available funding. Therefore, the project Technical Advisory Committee evaluated several alternative bike lane treatments to limit impacts and to meet the financial constraints of this project.

A description of the evaluated treatments, its general application, and the advantages and disadvantages of each are incorporated into **Section IV.1**. In **Section IV.2**, the applications of the alternative bike lane treatments used for this corridor are defined as well as the reasoning for the use of those treatments. **Section IV.3** discusses the special pavement marking identified for use in the shared lane condition along the corridor.

IV.1 Bicycle Lane Treatment Alternatives

Several bicycle lane treatments were compiled from national studies that evaluated treatment options and pavement markings for bicycle lane facilities. Possible treatments were then presented at the first open house and feedback was solicited from the public and the Technical Advisory Committee also evaluated the alternative treatments in order to determine the best options to use for the US 287 / South College Avenue corridor. Descriptions of selected treatments are discussed in more detail below.

Two treatments were eliminated from the pool of alternative, however: 1) colored bike lanes for high-risk conflict locations, and 2) a 10' – 12' combined bike and right turn lane. The colored bike lanes were eliminated because of maintenance problems for the colored pavement, confusion about what the colored pavement means, and possibly creating a false sense of security for bicyclists. The combination bike and right turn lane option was eliminated because of safety concerns due to high traffic speed and volume and inadequate lane widths for the combined movement. Providing a striped area for both a bike lane and a vehicle travel lane within the width typically only provided for vehicle traffic was not considered a viable alternative along the state highway system.

Appendix A provides more detail of each of the evaluated treatments.

Eliminated Alternatives:



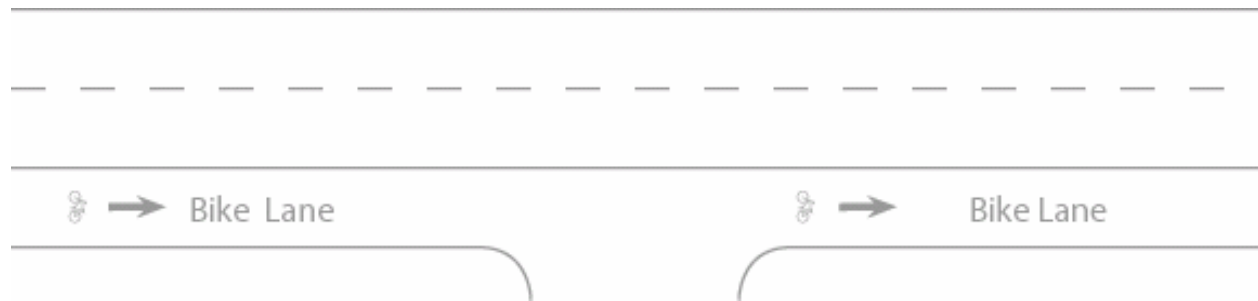
Colored Bike Lanes for High-Risk Conflict Locations



10' – 12' Combined Bike/ Right Turn Lane

8' – 10' Bike Lane

The **8' to 10' Bike Lane** is primarily used on roadway segments with few or minor access conflicts in locations where acceleration and deceleration lanes are not required and are designated for bikes only. It is installed to the right of the travel lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. Solid white striping, signage, and pavement markings help discourage motorists from using the lane. For use along the US 287 / South College Avenue the bike lane may be up to 13' wide which is the existing shoulder width.



Advantages

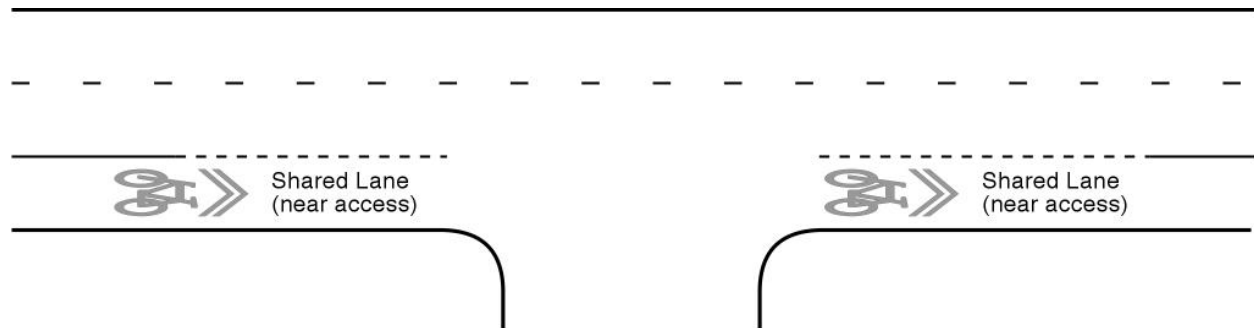
- ▶ Wider lane provides greater separation from motorists,
- ▶ Greater separation reduces affects of “blow-by” at high speeds, i.e., wind force from a passing vehicle pushing a bicyclist sideways,
- ▶ Encourages motorists to make turning maneuvers directly at the access point,
- ▶ Reduces overtaking conflicts,
- ▶ Conflict points are at an expected location for cyclists and motorists, and
- ▶ Defines the maximum amount of space and separation for cyclists.

Disadvantages

- ▶ Motorists encroach into the lane as they slow down to make right turns, and
- ▶ Not suitable for locations with high volumes of right-turn movements.

10' – 12' Shared Bike Lane

The **10' – 12' Shared Bike Lane** is used on segments with moderate to high volume access locations where acceleration and deceleration lanes may be required. The shared bike lane is installed to the right of the travel lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. A dashed stripe replaces the solid edge line in locations with higher right turn volumes and provides a transition area for motorists and cyclists and it is also placed at bus stops. Special signing and pavement markings are applied to help instruct motorists and cyclists how to share the facility. A greater discussion regarding the special shared lane pavement marking is located in **Section IV.3**. A special shared lane pavement marking is necessary to help distinguish to both the bicyclist and motorist that they must share the same space.



Advantages

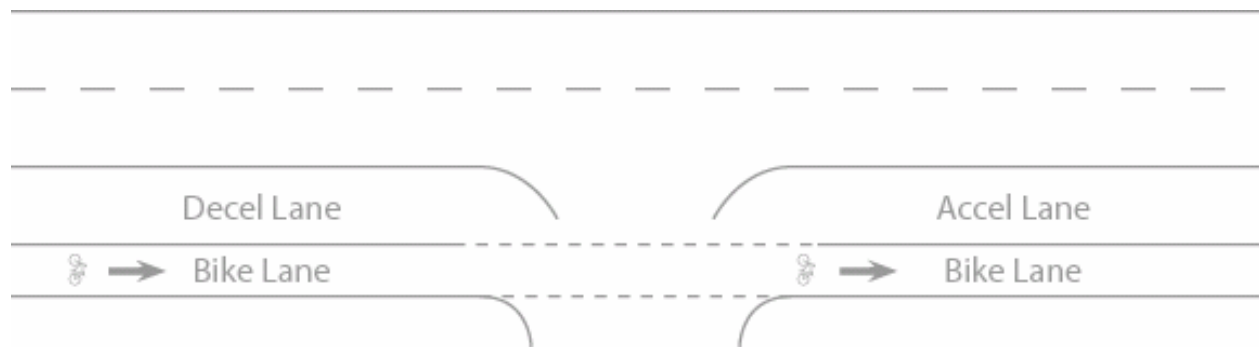
- ▶ Wider lane provides greater separation from motorists,
- ▶ Requires motorists to slow down more to make their turn when cyclists are present, thus bringing their speed closer to that of cyclists,
- ▶ Encourages motorists maneuvering into the shared lane to look for and yield to cyclists, and
- ▶ Defines the merge or transition point for both cyclists and motorists.

Disadvantages

- ▶ With a wide lane, motorists may attempt to overtake cyclists riding in the far right portion of the lane, and
- ▶ On high-speed facilities, a long transition area is needed, increasing the length of the potential conflict area.

6'-8' Bike Lane with 12' Auxiliary Lane

Segments with moderate to high volume access locations where acceleration and deceleration lanes may be required are ideal for the **6'-8' Bike Lane with 12' Auxiliary Lane**. This bicycle lane treatment is installed to the right of a 12' auxiliary lane with a break in the striping to accommodate turning vehicles at unsignalized intersections. A dashed stripe is installed to define a transition area for higher vehicle volumes and at bus stops. For the US 287 / South College Avenue bicycle lanes, this application is used primarily in high volume acceleration areas along the corridor. Appropriate signing and pavement marking defines the bike lane.



Advantages

- ▶ Long transition areas and conflicts are avoided,
- ▶ Conflict points are at an expected location for cyclists and motorists, and
- ▶ Provides additional separation between cyclists and motorists when the auxiliary lane is not heavily used.

Disadvantages

- ▶ May require additional pavement width, increasing construction and maintenance costs.

5' – 6' Bike Lane with Separate Right Turn Lane

The **5' Bike Lane with Separate Right Turn Lane** is used in segments where there is enough space to implement both a standard width bike lane and a standard width dedicated right turn lane at a signalized intersection. With this application, the bike lane transitions to a 5 – 6 foot lane installed between the through travel lane and the dedicated right turn lane. A dashed stripe is installed to define the transition area. Signing and pavement markings are installed to instruct motorists and bicyclists how to use the facility.



Advantages

- ▶ Guides cyclists to the correct position at intersections with a dedicated right turn lane,
- ▶ Encourages motorists maneuvering into the dedicated right turn lane to look for and yield to cyclists, and
- ▶ Defines the merge or transition point for both cyclists and motorists.
- ▶ Minimizes conflicts between right turn vehicles and through movement cyclists.

Disadvantages

- ▶ For long right turn lanes, cyclists may be overtaken on both sides by motorists, and
- ▶ On high-speed facilities, a long transition area is needed, increasing the length of the potential conflict area.

Off-Street Multi-Use Path

An **Off-Street Multi-Use Path** can serve as a connection to other off-street paths or as an alternative to on-street facilities in uniquely constrained locations. This bicycle lane treatment is shared by bicyclists, pedestrians, and equestrians with minimal cross flow by vehicles and is best used as a supplement to an on-street bike lane system.

Advantages

- ▶ Physically separates cyclists from motorists,
- ▶ Provides a learning ground for inexperienced cyclists away from high speed traffic associated with on street bike lanes, and
- ▶ Can attract experienced cyclists preferring an aesthetic ride.



Disadvantages

- ▶ When parallel to a roadway, it requires one direction of cyclist traffic to ride against motor traffic, leading to wrong-way riding at the end of the path,
- ▶ Motorists crossing the path at intersections do not expect cyclist traffic approaching in both directions,
- ▶ Many cyclists will still choose to use the roadway because it may provide more convenience or better maintenance. This may lead to harassment by motorists who expect cyclists to use only the adjacent path,
- ▶ Motorists falsely expect cyclists to stop or yield at all cross-streets and driveways, but efforts to require or encourage cyclists to yield or stop at these locations are inappropriate and frequently ignored, and
- ▶ Stopped cross-street motorists may block the path crossing.

IV.2 US 287 / South College Avenue Bicycle Lane Treatment Applications

Once the various bicycle lane treatments were evaluated, the project advisory committee took a step-by-step approach to assigning a treatment to each portion of the US 287 / South College Avenue corridor.

Several factors were taken into consideration: vehicle turning movements, existing acceleration and deceleration lanes, and signalization of intersections. In areas of high vehicle turning movements at intersections, the modal separation options were used. The **5' – 6' Bike Lane with Separate Right Turn Lane** was selected for locations with signalized intersections where possible and at locations with deceleration lanes, while the **6'-8' Bike Lane with 12' Auxiliary Lane** was used for acceleration lane locations. In locations of lower vehicle turning volumes and at both signalized and unsignalized intersections or at some commercial business access, the **10'-12' Shared Bike Lane** option was used. The **Off-Street Multi-Use Path** was selected for connections to the Fossil Creek Trail and for the northbound connection to the Harmony Road bicycle lanes. By applying the off-street path at Harmony Road, it may deter cyclists from traveling on the roadway north of Harmony Road and will provide safer crossing points when connecting to the Harmony Road bicycle lanes. In all other areas along US 287 / South College Avenue the **8'-10' Bike Lane** was selected.

There are some areas along the corridor that require a modification of the designated **8'-10' Bike Lane** option. These modifications are located:

- ▶ On the east side of US 287 / South College Avenue between Trilby Road and Skyway Drive, and just between Saturn Drive and Smokey Street, and
- ▶ On the west side of the roadway from Saturn Drive to Crestridge Street.

These particular locations are designated as bike lanes but there are several business access points within these segments. Therefore, a double solid white line and regulatory signing will be placed to reinforce the bike only lane to the motorists. Skip stripes on both sides of the bike lanes will be placed directly in front of the business accesses. To serve less experienced or recreational cyclists, the recommendation is to widen the standard sidewalk width to 8' in order for it to serve as an off-street multi use path. This off-street system will need to be established in the future due to the limited resources of this project.

IV.3 Shared Lane Pavement Marking and Signing

The shared lane pavement markings and signs are intended to inform cyclists and motorists where an acceleration or deceleration lane is shared by both modes. It has been shown to be helpful in situations where motorists may squeeze cyclists against the curb, where it may not be obvious where cyclists should be riding, such as at intersections with multiple turn lanes, or where cyclists commonly ride too close to parked cars. It is proposed to apply a new pavement marking in the shared lane locations. Since this a new pavement marking, it is essential to supplement the marking with signing to help inform both cyclists and motorists about its purpose.

Shared Lane Pavement Marking

In locations where motorists and bicyclists share acceleration and deceleration lanes, it was believed that the typical bicycle lane markings documented in the Manual on Uniform Traffic Control Devices (MUTCD) would not convey the message that both motorists and bicyclists should share these lanes.

Recently, research was conducted for the City of San Francisco, California, Department of Parking & Traffic to identify other pavement marking options that would convey the shared lane concept. The research led to a report entitled San Francisco's Shared Lane Pavement Markings: Improving Bicycle Safety, by Alta Planning + Design, February 2004. This report compared two shared lane pavement marking symbols after researching shared vehicle / bike lane applications of other governing agencies across the United States and abroad. This study found that the "bike and chevron" pavement marking symbol (**Figure 3**) provided the most benefit to system uses. Subsequent to that study, the California Traffic Control Devices Committee adopted this symbol on August 12, 2004 for use on all California roads. It is also understood that this symbol is being considered for adoption by the MUTCD and may be included in the next edition of this publication as a national standard for shared lanes. Considering these factors, the "Shared Lane Marking" will be used in each shared acceleration and deceleration lane for this project in order to convey the message that both motorists and bicyclists should share these lanes.

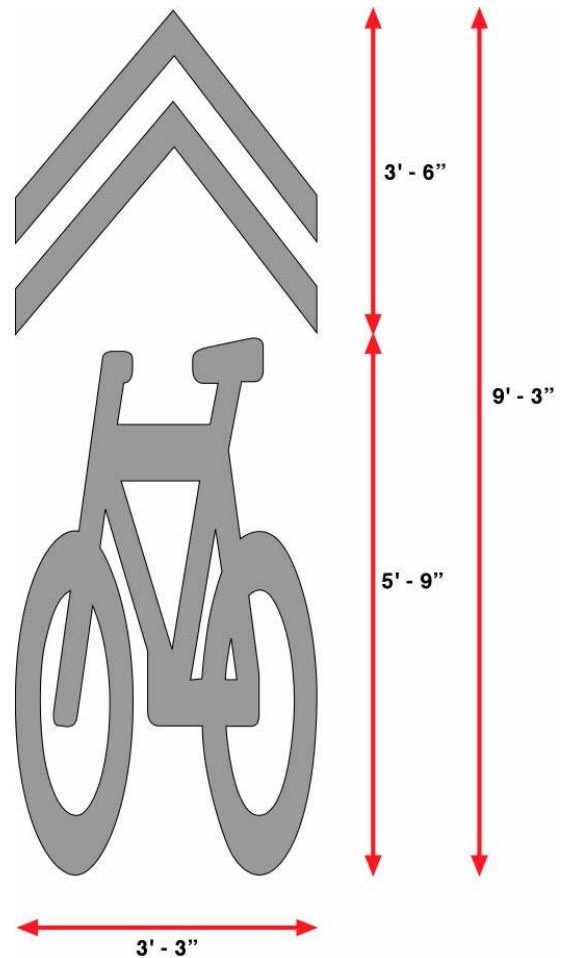


Figure 3. Shared Lane Pavement Marking

A formal application to experiment with the Shared Lane Marking on this project has been forwarded to the Federal Highway Administration for approval.

As part of the public education program, the following sign will be placed at the beginning of the corridor (from both directions) to provide direction in the use of the shared lane and on what the new pavement markings mean.







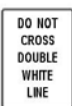


Figure 4. Experimental Sign

V. CONCEPTUAL DESIGN PLAN

A Conceptual Design Plan was developed for the entire US 287 / South College Avenue corridor from Carpenter Road to Harmony Road. The Conceptual Design Plan incorporates all of the bicycle lane treatments and appropriate applications for each of those treatments. It includes, but is not limited to, signing and striping additions, roadway widening at Carpenter Road and Mason Street, and the construction of off-street paths at Fossil Creek Parkway and Harmony Road. **Figures 5 through 16** represent the Conceptual Design Plan for the corridor.

The message and intent of some of the Conceptual Design Plan signs are included in Table 1.

Table 1. Sign Messages and Intent

Sign	Intent Description
	Fort Collins designation for bicycle lanes and for emergency parking only. Placed where the right lane is designated for bicycles only, typically in a shoulder.
	Warning sign identifying where a bike lane crosses driveways and entrances that intersect US 287 / South College Avenue.
	Indicates that both motorists and bicyclists are sharing a lane. Located at acceleration and deceleration lanes.
	Regulatory sign identifying that motorists should yield to bicyclists crossing from the right-most lane to a designated bicycle lane. Placed at beginning of all separately designated deceleration and bicycle lanes at signalized intersections.
	Regulatory sign indicating that motorists should not be using the shoulder for acceleration or deceleration. Placed in areas where numerous access points exist, specifically, along the east side of US 287 / South College Avenue between Trilby Road and Smokey Street.
	Directs bicyclists to the trail connection to the Fossil Creek Trail.
	Directs bicyclists to the off-street path connection to Harmony Road. Placed on the east side of US 287 / South College Avenue between Palmer Drive and Harmony Road.