

**Collier County, Florida**  
*Collier Boulevard Corridor Strengthening Project*  
**TIGER 2016 Application**

Submitted By: Collier County Growth Management  
 Location: Collier County, Florida  
 FY 16 TIGER Grant Requested: \$ 26,720,000 (80%)  
 Non-Federal Match: \$ 6,680,000 (20%)  
 Total Project Cost: \$ 33,400,000



# Collier Blvd CORRIDOR STRENGTHENING PROJECT

## TIGER 2016 APPLICATION

### Executive Summary

**Project Name:** Collier County Boulevard Corridor Strengthening Project  
**Project Sponsor:** Collier County, FL

**Primary Project Type:** Road-Highway (URBAN) Tiger funds will be used for widening 2 mile Collier Blvd from four to six lanes completing a 15-year, \$220 million major roadway capacity improvement project that also includes roadway safety improvements and multimodal community improvements.

**Secondary Project Type:** Bike/Ped-Complete Streets – Project will provide bicycle lanes, pathway sidewalks, bus shelters and amenities, and will connect to the ongoing Golden Gate City Pedestrian / Walkability / Storm Water Master Plan Improvement Project.

**Project Cost:**

Collier Boulevard Corridor Strengthening Project	
TOTAL COST	\$ 33,400,000
TIGER FUNDS	\$ 26,720,000
NON-FEDERAL MATCH	\$ 6,680,000

**Project Readiness:**

- ✓ Environmental Resource Permit: **Approved**
- ✓ Army Corp of Engineers Permit: **Approved**
- ✓ Final Design & NEPA Re-evaluation Complete: **2018**
- ✓ TIGER Funds Obligated: **2018**
- ✓ Construction Start: **2018**
- ✓ Construction Complete: **2020**

The **Collier Boulevard Corridor Strengthening Project** is a surface transportation improvement project that will improve two miles of Collier Blvd from Main Golden Gate Canal (north of Interstate 75) to Green Boulevard. It is the final “missing link” between two existing six-lane roadway segments. The project also completes the pedestrian and bicycle network as well as a gap along a regional shared use pathway. The lack of existing pedestrian and bicycle facilities is the contributing cause to a high

cyclist fatality rate within the project limits. The requested TIGER funds will be used to make the following improvements:

- ✓ Reconstruct an existing four-lane roadway to six lanes; consistent with the roadway segments to the north and south
- ✓ Add a 10-foot multi-use pathway
- ✓ Add on-road bike lanes,
- ✓ Add sidewalk
- ✓ Add street lighting
- ✓ Add bus shelters with benches
- ✓ Replace the structurally deficient 25<sup>th</sup> Avenue bridge with a new bridge at Golden Gate Parkway
- ✓ Replace the Main Golden Gate Canal Bridge.

This project is estimated to cost \$33.4 million with the TIGER grant share requested at \$26.72 million (80%), and the Collier County share (funded by impact fee revenue) at \$6.68 million (20%).



Regional Location Map





An important benefit of this project is the multimodal **safety** improvements. There were 14 bike and pedestrian crashes within the project area in the last ten years (2006-2015). Two of the bicycle crashes were fatal. The addition of bike lanes reduces conflicts between motor vehicles and cyclists while alerting drivers to the potential for cyclists in the roadway. The addition of a sidewalk and a pathway will make the corridor safer for pedestrians and transit riders walking to/from bus stops.

The proposed improvements will provide transportation alternatives by closing the gaps in the pedestrian and bicycle networks. Active transportation is lower cost, healthier, and contributes to people's **quality of life**.



Bicycle and Pedestrian Improvements Will Benefit Local Residents

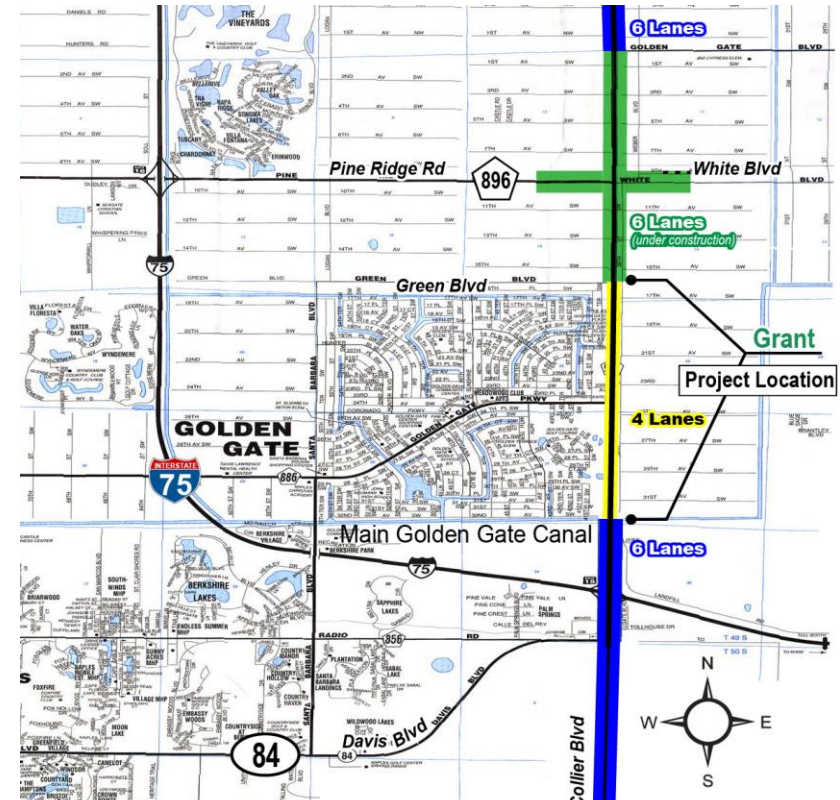
The proposed project supports **economic competitiveness** and **ladders of opportunity** by serving an area with above average transit reliance and minority population. The multimodal improvements will provide safe accessibility to education, jobs, and essential services. Transit along Collier Boulevard supports the movement of people from both urban and rural areas, and connects neighborhoods to commercial and employment areas.

This project promotes **environmental sustainability** through a shift to more efficient modes of transportation. This modal shift to active transportation or transit will reduce vehicle miles traveled, carbon emissions, noxious emissions and environmental impacts.

A Benefit-Cost Analysis was completed that considered a 20-year analysis period. The principal source of economic benefit is the reduction of a high cyclist fatality rate in the project area. The addition of bike lanes, sidewalks, crosswalks, and a shared-use path will help reduce bike/pedestrian crashes by 90% to meet the project target. The multimodal improvements will also reduce vehicle miles traveled by supporting modal shift. The analysis demonstrates that the project offers good value for the money with a Benefit-Cost Ratio (BCR) of 1.23 at a 7% discount rate and a BCR of 1.88 at 3%.

60% design plans were completed and permits acquired from the US Army Core of Engineers (USACE) and state agencies. These plans will be updated and the USACE **environmental assessment/compliance with 404 (b)(1) guidelines will be**

**reevaluated prior to construction.** The anticipated schedule durations are one year for design updates and NEPA reevaluation, and 2.5 years for construction. No right-of-way is required.



Project Location Map

## Primary Point of Contact:

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- Attachment B: Letters of Support
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- Attachment E: Letter of Commitment

## Other Supporting Documents ([TIGER VIII LINK](#))

- Collier Area Transit (CAT) Transit Development Plan (TDP)
- 2040 Long Range Transportation Plan (LRTP)
- Collier MPO Pedestrian and Bicycle Safety Study
- Collier MPO 2012 Comprehensive Pathways Plan







## Project Description

The TIGER Discretionary Grant application for the **Collier Boulevard Corridor Strengthening Project** will provide a *missing link* between two existing six-lane roadway segments along the Collier Boulevard Corridor and complete a 15-year, \$220 million (to date) reconstruction effort to upgrade 15 miles of roadway. The project will construct transportation infrastructure improvements along the Collier Boulevard Corridor from just north of Interstate 75 to Green Boulevard. **This critical corridor supports the movement of goods through both urban and rural areas by connecting neighborhoods to commercial and employment areas in a county whose population of 357,000 swells by more than 100,000 people in the winter months.** This project includes roadway capacity improvements, roadway safety improvements, and multimodal connectivity improvements.



Pedestrians Enjoying Completed Pathway



Completed Collier Blvd II Segment

Over the past 15 years, the exponential population growth has resulted in an increased demand on Collier Boulevard from US 41/Tamiami Trail in the south to Immokalee Road (SR 846) in the north. The local transportation investment to widen Collier Boulevard to six lanes has totaled more than \$220 Million (Table 1B) to date and has resulted in the following ten projects shown on Table 1A.

**Table 1A: Collier Blvd Capital Improvements Projects**

PROJECT No.	PROJECT NAME	LIMITS
<b>PROJECTS COMPLETED</b>		
1	Collier Blvd I	Golden Gate Blvd to Immokalee
2	Collier Blvd II	US 41 to Davis Blvd
3	Collier Blvd II Extension	Davis Blvd to Main Golden Gate Canal
4	Davis Blvd	Collier to Radio
5	Collier Blvd/US 41 Intersection	Intersection Improvements
<b>PROJECTS UNDER CONSTRUCTION</b>		
6	Collier/Immokalee Intersection	Intersection Improvement
7	Collier Blvd III - Phase I	Green Blvd to Golden Gate Blvd
<b>PROJECTS UNDER DESIGN/CONSTRUCTION</b>		
8	Golden Gate City Sidewalk/Stormwater Improvements	4 Sq. Miles of Golden Gate City
<b>PROJECTS UNDER DESIGN</b>		
9	Collier/I-75 Interchange (FDOT)	FDOT: Interchange Improvements
<b>2016 TIGER GRANT APPLICATION</b>		
10	Collier Blvd III - Phase II	Main Golden Gate Canal to Green Boulevard



In addition to the six lane capacity improvements, the past widening projects included intersection operational improvements, transit facilities, bike lanes, pathways and sidewalks that meet American Disabilities Act (ADA) compliance as well as improving local, residential and business access. In contrast, the remaining two mile segment of Collier Boulevard between Golden Gate Main Canal and Green Blvd, remains four lanes with no bike lanes and no sidewalk facilities along the east side of the corridor. This limits the safe and efficient mobility of motorized vehicles, non-motorized vehicles and pedestrians.

Canal and Green Blvd, remains four lanes with no bike lanes and no sidewalk facilities along the east side of the corridor. This limits the safe and efficient mobility of motorized vehicles, non-motorized vehicles and pedestrians.

Recently, the Florida Department of Transportation (FDOT) completed a Project Development and Environment Study (PD&E) for the interchange area (Davis Boulevard to the Golden Gate Canal) which will result in a reconfigured interchange to improve vehicular operations while maintaining the six-lane Collier Boulevard through lanes, bike lanes, sidewalks and trails. The follow-on interchange design efforts, which began in 2015, will result in an additional \$60 million to this critical transportation corridor (**Note:** Investment not included in overall project cost or BCA.).



The two-mile segment of Collier Boulevard from Green Boulevard to Golden Gate Boulevard began construction in February 2015. It will improve this section of roadway to a six-lane section with bike lanes, sidewalks and pathway along the east side of the CR 951 canal.

Funds provided by this grant will complete the remaining two mile, six-lane segment of Collier Boulevard between the Golden Gate Main Canal and Green Boulevard. Collier County has already invested funds to complete the 60% design plans, and has obtained permits for the project from SFWMD and ACOE.



Figure 1: Project Rendering with 6 Lane Typical

**Construction activities have already been completed or are in progress on thirteen of the fifteen miles of Collier Boulevard, as well as the major intersection on the north and south project limits to address capacity and safety issues. The past, present, and future projects for this corridor are shown in Figure 2**



Construction on Collier III - Phase I



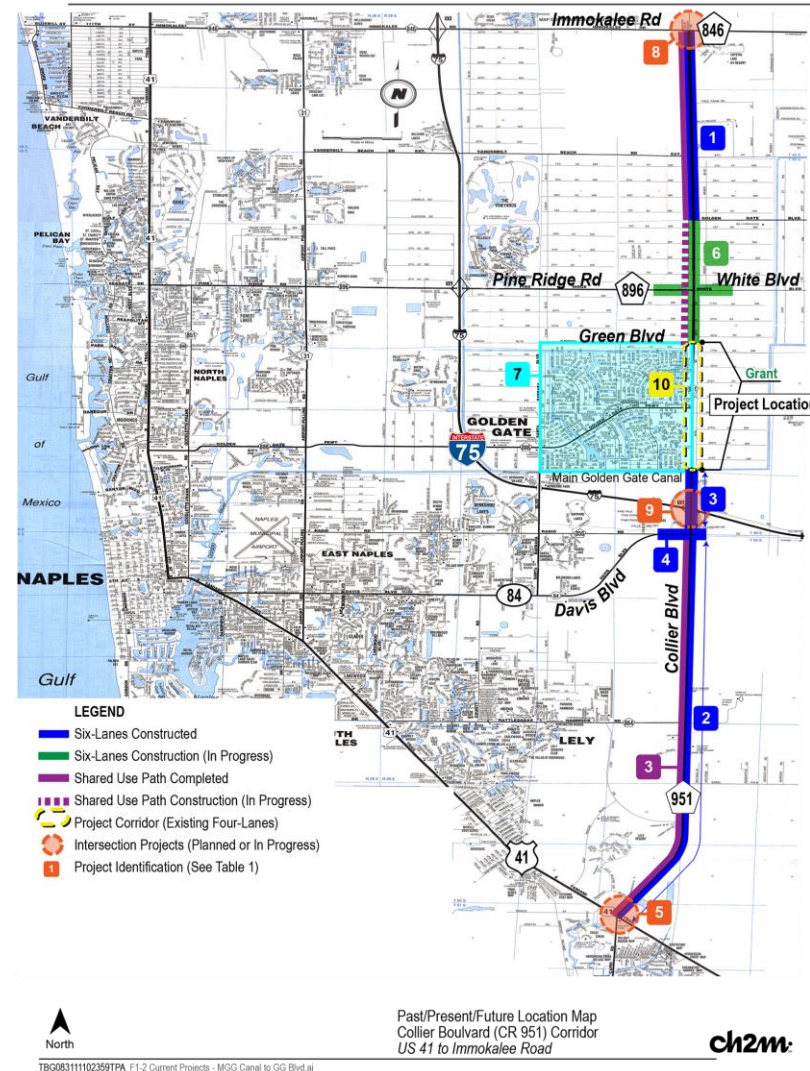
# Collier Blvd CORRIDOR STRENGTHENING PROJECT

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**Table 1B: Corridor Area Reconstruction Efforts**

Location (Figure 3)	Section	Cost Incurred & Projected	Designed	Constructed
1	Collier Blvd I	\$55,685,853	✓	✓
2	Collier Blvd II	\$37,161,003	✓	✓
3	Collier Blvd II Extension	\$18,622,041	✓	✓
4	Davis Blvd	\$11,112,406	✓	✓
5	Collier Blvd / US 41 Intersection	\$40,680,132	✓	✓
6	Collier Blvd III - Phase I	\$31,339,753	✓	✓
7	Golden Gate City Sidewalk/ Stormwater Improvements	\$18,000,000	IN PROGRESS	IN PROGRESS
8	Collier / Immokalee Intersection	\$4,350,000	✓	IN PROGRESS
9	Collier / I-75 Interchange	\$67,500,000	IN PROGRESS (FDOT)	N/A
10	<b>TIGER PROJECT: GOLDEN GATE MAIN CANAL TO GREEN BLVD (2 MILES)</b>	\$33,400,000		<b>THIS GRANT APPLICATION</b>
<b>Total Investment</b>		<b>\$318,851,188</b>		



**Figure 2: Past/Present/Future Project Location Map**



### Project Location

This project is located in southwest Florida within Collier County as shown in project location map. The project resides in the unincorporated portion of Collier County, east of the City of Naples. The proposed project is bordered by a highly dense neighborhood known as Golden Gate City to the west and Golden Gates Estates to the east.

The Collier Boulevard Corridor is a significant north-south link in the County roadway network. It is the longest north-south roadway in a heavily urbanized area of the county. It is a **designated emergency evacuation route** that provides **direct access to Interstate 75 (I-75)**. I-75 is Florida’s main freeway along the west coast of Florida that also facilitates east-west traffic across the state from Naples to Fort Lauderdale. Collier Boulevard intersects with I-75 just south of the proposed project.

The project is located in a high density area that has numerous businesses within walking distance from the eastern side of the Golden Gate area (hotels, restaurants, a hardware store, a post office, banks, pharmacies, animal

hospitals, etc.). A majority of these businesses are located along Collier Boulevard within the proposed project location. The proposed project is also close to community centers, parks, churches and schools within the Golden Gate community. The entire project is within approximately one mile of eight schools (five elementary schools, one middle school and two high schools). Promoting safe access to intermodal transportation opportunities on a central road, which splits the urban and rural areas of Collier County, will decrease traffic and promote safer conditions. Overall, the regional facility will enhance the quality of life by completing a much needed link in the transportation infrastructure.

### Existing Conditions

The proposed project is currently a four-lane roadway segment in the middle of a six-lane corridor. The remaining two mile segment of Collier Boulevard between Main Golden Gate Canal and Green Boulevard, remains four lanes with no bike lanes and no sidewalk facilities along most of the segment. This missing link limits the safe and efficient mobility of motorized vehicles, non-motorized vehicles and pedestrians. Photo 5 shows where the six-lane section and shared use path ends along Collier Boulevard. The proposed improvements along Collier Boulevard will be from Main Golden Gate Canal (just north of Interstate 75) to Green Boulevard.

The Golden Gate area (zip code 34116) is a highly dense, residential community primarily comprised of single family homes. The rural area to the east of Collier Boulevard (zip code 34117) is mostly residential, single family homes on large land plots.

Table 2 presents community demographics. The table compares greater Collier County demographics to the Golden Gate neighborhood and the rural area east of Collier Boulevard demographics. These two areas combined, make up almost 14 percent of the Collier County population. Both areas have a higher Hispanic or Latino population when compared to Collier County. The Hispanic/Latino population in Golden Gate makes up over 50% of the population. Additionally, both areas have a higher percentage of households with children when compared to Collier County. **Almost 25% of the Golden**



Collier Boulevard Project adjacent to TIGER project, under construction (Collier III, Phase I)





**Gate population is below the poverty level.** The Golden Gate community poverty level is considerably higher than the poverty rate of Collier County and the rural area east of Collier Boulevard. The 2012 Collier MPO Comprehensive Pathways Plan<sup>1</sup> determined that the **Golden Gate community was in a High Transit Reliance Area**. A high percentage of children and low income families in a community (such as the Golden Gate neighborhood) can indicate a potential for populations with limited transportation mobility capacity and options. Additionally, communities with higher levels of poverty benefit from safe, walkable communities with access to public transportation. Providing facilities in areas where a large proportion of population has to walk, bike and use transit to meet basic transportation needs, expands mobility options for user groups such as the young, elderly, and tourists who may not have a car they can use.



End of Sidewalk at Main Golden Gate Canal

Table 2: Community ( Zip Code 34116) Demographics

Description	Measure	Source
Population		
Census 2010 Total Population	30,005	<a href="#">2010 Demographic Profile</a>
2013 ACS 5-Year Population Estimate	33,537	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Median Age	31.6	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Educational Attainment: Percent high school graduate or higher	70.5%	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Total housing units	10,102	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Median Household Income	42,467	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Foreign Born Population	14,926	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Individuals below poverty level	22.8%	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>



<sup>1</sup> Collier County MPO



Description	Measure	Source
Race and Hispanic Origin		
White alone	24,747	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Black or African American alone	4,587	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
American Indian and Alaska Native alone	108	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Asian alone	697	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Native Hawaiian and Other Pacific Islander alone	18	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Some Other Race alone	2,968	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Two or More Races	412	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Hispanic or Latino (of any race)	18,856	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
White alone, Not Hispanic or Latino	9,355	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>
Veterans	1,181	<a href="#">2009-2013 American Community Survey 5-Year Estimates</a>

Source: [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml#one](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml#one)



Large proportion of population has to walk/bike and use transit to meet basic transportation needs.



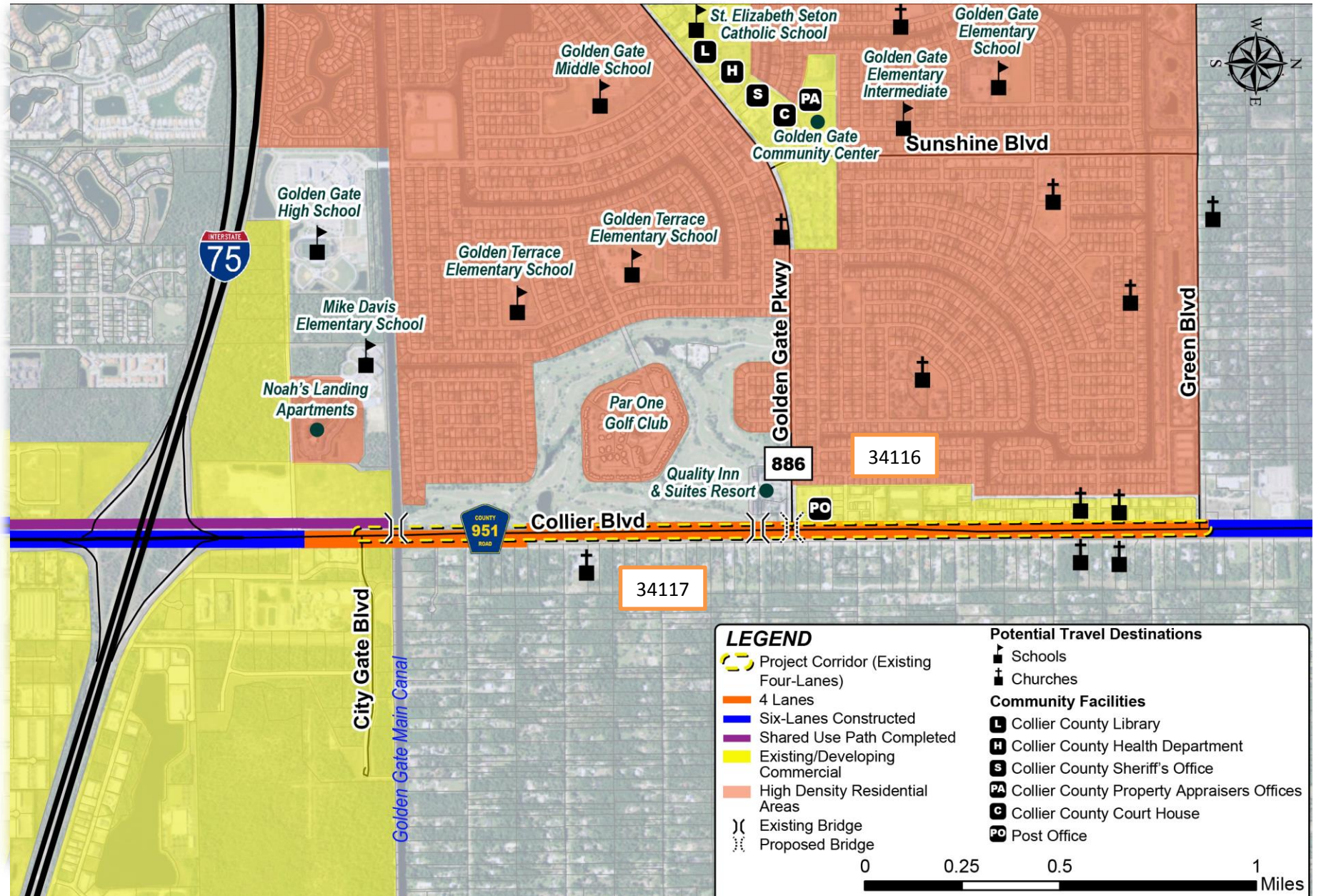


# Collier Blvd CORRIDOR STRENGTHENING PROJECT

## TIGER 2016 APPLICATION



Figure 3: Collier Boulevard Corridor Features





### Collier Boulevard Corridor Improvements

The Collier Boulevard Capital Improvements Program resulted in the ten projects shown on Table 1A. Most of the improvement projects have been completed over the last 15 years.

In the long-term, the projects have prepared Collier Boulevard for future traffic conditions. The projects have/will reduce crash rates at intersections and minimize congestion along the corridor by conveying traffic through at a more efficient rate. They will also increase the mobility of the public by providing safe, accessible intermodal transportation options. Completion of the Collier Boulevard Corridor projects will improve the safety of all users of the facility, economic health of the community, the physical health of the residents and the general quality of life for all in the region. This project completes the 15 mile Collier Boulevard corridor connecting to Interstate 75.

The Collier Boulevard intersection with I-75 is included in the Collier County MPO 2040 Long Range Transportation Plan (LRTP) as a “Critical Needs Intersection” as the eighth priority on the Needs Plan (although it is unfunded for construction). The plan can be found at [2040 LRTP](#).

Recently, the Florida Department of Transportation (FDOT) completed a Project Development and Environment Study (PD&E) for the interchange area near the proposed project (Davis Boulevard to the Golden Gate Canal; FDOT Financial ID: 425843-2-22-01). The preferred alternative from the PD&E study was a reconfigured interchange to improve vehicular operations while maintaining the six-lane Collier Boulevard through lanes, bike lanes, sidewalks and trails.

### Needs Addressed

This project is one of the highest priority (Ranked 5<sup>th</sup>) projects in Collier County’s MPO’s 2040 LRTP. This indicates that there is a considerable need for transportation infrastructure improvements in this area. The proposed project aims to address both short-term and long-term transportation needs in the region. The specific design elements of the improvements are as follows:

1. Widening Collier Boulevard from 4 lanes to 6 lanes (from Main Golden Gate Canal to Green Boulevard)
2. Widening primarily in existing median and east side of Collier Boulevard from Main Golden Gate Canal Bridge north to 20th PI SW
3. Widening in existing median and west side of Collier Boulevard from south of 20th PI SW to end of project.
4. Replacement of Main Golden Gate Canal Bridge
5. Replacement of 25th St SW Bridge
6. New 6’ Concrete Sidewalks
7. New 10’ Shared-use path
8. Re-alignment of the canal on the east side of Collier Boulevard from the Main Golden Gate Canal to south of 21st Ave SW
9. Bike Lanes (entire project)
10. New Driveways and buffer areas along the west side of Collier Boulevard (entire project).

The proposed project will increase the overall safety of the corridor for all users. By providing additional roadway capacity, bike lanes, pathways, transit system improvements and sidewalks, the improvements will provide for a safer, more convenient and easily accessible movement of people and goods through the area. The widening of the road will minimize potential congestion on I-75, Livingston Road and Airport Road and provide efficient and safe truck routes. Relocating the existing bridge over the CR 951 canal at 25th Avenue to a location such as the Golden Gate Parkway Intersection, will provide a pedestrian connection that does not exist today and could improve transit ridership. Bridge replacement over the Main Golden Gate Canal provides a pedestrian and cyclist connection that does not exist today and could also improve transit ridership. Creating sidewalk extensions along the west side of





Collier Boulevard as well as a shared use pathway along the east side will also enhance safety and improve accessibility for transit riders.



Figure 4: Rendering of Shared Use Path

## Connections to Existing Transportation Systems

This project will improve the existing transportation system so that it serves more users within existing right-of-way and maximizes the transit and pedestrian network. The project is approximately one mile north and three miles east of I-75. There are four interchanges with I-75 in Collier County: Immokalee Road, Pine Ridge Road, Golden Gate Parkway, and Collier Boulevard.

Since Collier Boulevard is the first interchange heading west from Ft. Lauderdale/Miami as well as the eastern-most major north-south arterial, it receives a heavy amount of traffic.

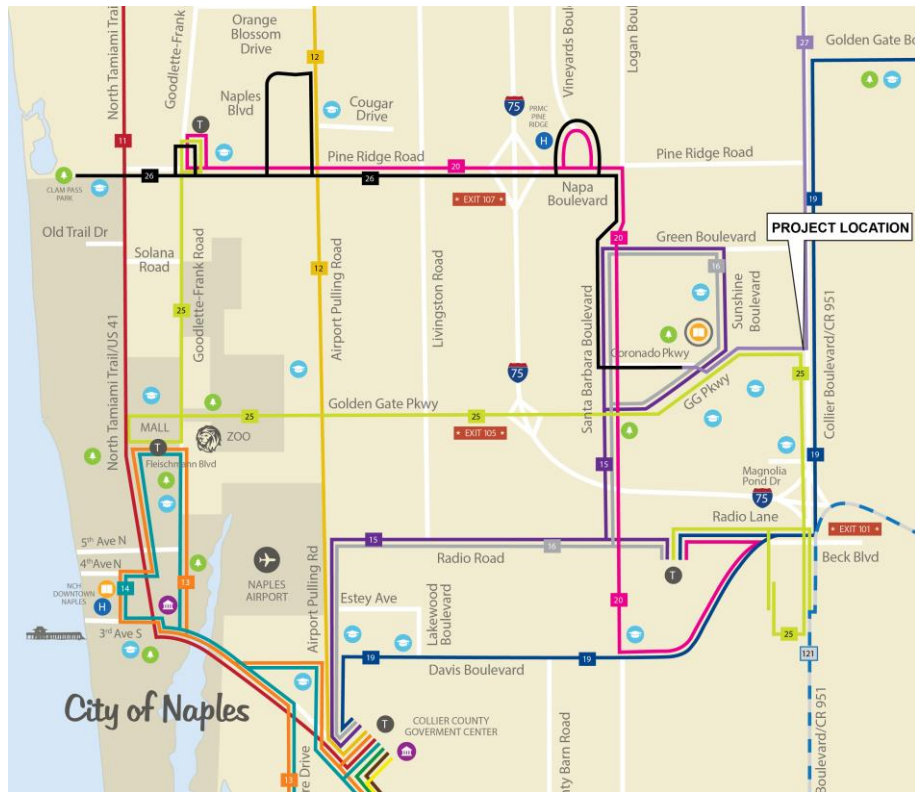
- 2014 AADT – 42,800
- 2016 AADT – 44,700
- 2036 AADT – 57,600
- 9.28% Trucks



CAT bus with bike rack

## Transit Operations

Route 19 provides direct transit connections from *Immokalee (2<sup>nd</sup> Rural Area of Economic Concern Executive Order 11-81)* to this corridor. The project area is also served by Routes 25 and 27. Route 27 provides connections to the Creekside Transfer Station, which is the only transfer point with Collier County's regional transit partner, LeeTran (Lee County, FL Transit System). Figure 5 presents a portion of the Collier Area Transit (CAT) map around the project area.



**Figure 5: Collier Area Transit Map**

The CAT Comprehensive Operation Analysis<sup>2</sup> performed in January 2013, recommended route changes/modifications to increase the overall performance of the transit system. Some of the recommended modifications will benefit the proposed project area if pedestrian access was available on Collier Blvd. Recommendations include changing the Yellow Route to operate from the Golden Gate Library (instead of the CAT Operations Center). Additionally, it is recommended that the Yellow Route be extended to US 41 via Florida SouthWestern State College. This route would provide an additional connector

service from Golden Gate to the southern end of Collier Boulevard with direct connections to Marco Island. It's also recommended to change the beginning service to the Golden Gate Library and continue the existing route through the Golden Gate Parkway for direct east-west connection to Naples.

CAT buses have bike racks mounted on the front of every bus. The racks are easy and safe to use and encourage intermodal connections.

Collier County has approximately 442 linear miles of Major Roads that were evaluated as part of the 2012 Collier MPO Comprehensive Pathways Plan. It is estimated that approximately 65% of those contain bicycle facilities in the form of bike lanes, paved shoulders or shared use paths; and that 51% contain pedestrian facilities in the form of sidewalks. Collier County's existing bicycle and pedestrian network is a reflection of its roadway network and land development patterns. The Comprehensive Pathways Plan stated that over the last 30 years of significant growth much of the new development occurred within the Golden Gate community, leaving the area in need of bicycle/pedestrian connectivity. The majority of the county's existing bicycle and pedestrian network is located on arterial and collector roadways due to the design of the roadway network. The Comprehensive Pathways Plan states that in order to develop a county-wide interconnected pathways network, much of the new pedestrian/bicycle facilities will be planned for construction along the existing roadways. Note that Project Number 7 of Table 1A, Collier Boulevard Capital Improvement Projects, is the Golden Gate City Sidewalk/Stormwater Improvement project. This project is currently under construction and provides sidewalks around the 4 square miles of the Golden Gate area improving the area's safety and walkability. The proposed project's pedestrian crossings and bike lanes will connect to this project (currently under construction) providing infrastructure that supports intermodal transportation.

<sup>2</sup> <http://www.colliermop.com/index.aspx?page=71>



# Collier Blvd CORRIDOR STRENGTHENING PROJECT

## TIGER 2016 APPLICATION



The Collier Boulevard Capital Improvement Projects presented in Table 1A not only added six-lane capacity improvements along the corridor, they added:

- Intersection operational improvements
- Transit facilities
- Bike lanes, pathways and sidewalks that comply with the American Disabilities Act (ADA)
- Improved local, residential and business access

The two-mile segment of Collier Boulevard from Green Boulevard to Golden Gate Boulevard (north of the proposed project) will be completed in June 2017 and will improve that section of roadway to a six-lane section with bike lanes, sidewalks and pathways along the east side of the Collier Boulevard/CR 951 Canal. This area is progressing towards a well-connected system. This project will strengthen what was started and transform the area by completing a multimodal network.

This proposed project will provide a pedestrian crossing and bike lanes over the Main Golden Gate Canal where none exist today. It will connect pathways and bike lanes to the north and south on Collier Boulevard to complete the bicycle/pedestrian facility gap on Collier Boulevard. Gaps in bicycle and pedestrian facilities can create hazardous conditions and discourage people from walking or biking to their destination. Filling in gaps can improve connectivity and facility continuity, improve safety conditions, and promote greater walking and cycling activity. The county's existing bicycle/pedestrian facilities are presented on Figure 6.

This project will also provide the missing link to a continuous 23 mile pathway and bicycle corridor along Collier Boulevard from Immokalee Road to Marco Island. Continuous, cross-county facilities enhance county-wide mobility options, connect neighborhoods and activity nodes, and provide safe and convenient facilities to most urbanized areas. Additional information on the Comprehensive Pathways Plan is located at: [TIGER VIII LINK](#)



Figure 6: Existing bike/pedestrian facilities



## Selection Criteria

### Primary

#### State of Good Repair

The improved transit, bicycle and pedestrian facilities will encourage a modal shift away from cars. Reducing the number of cars on the road not only lowers road maintenance, it also constructs a more safe intermodal transportation system. The proposed project serves more users within the existing right-of-way while minimizing network lifecycle costs and environmental impacts.

In addition, the Collier Boulevard Corridor Strengthening Project will reconstruct two structurally deficient bridges. These bridges will include pedestrian and bicycle facilities. The new bridges will reduce maintenance costs which allow public dollars to be used for other necessary transportation projects.

This project is consistent with Collier MPO's 2040 LRTP and has been listed as a cost feasible project for the last 15 years. The Collier MPO, the State of Florida, and the local jurisdictions plan for and set aside funds to ensure that the infrastructure remains in a state of good repair.

#### Economic Competitiveness

The Collier MPO 2040 LRTP uses the BEBR mid-range 2040 population forecast of 497,700 and an employment forecast of 241,000.

The major industries in Collier County are predominately service based (Figure 7), with only 24 percent employed in agriculture, construction, manufacturing or transportation. Thus, this project has important short term economic benefits to support jobs in the construction industry and long term benefits through the more efficient movement of people in the service jobs industry. Additionally long term benefits include:

- Efficient movement of people to/from I-75
- Decreased transportation costs through modal shift to walk-bike transit

- Improved reliability of transit service during peak periods

According to the *Collier County Freight and Goods Mobility Analysis (June 2008)*, the U.S. Census Bureau and the Florida Office of Economic and Demographic Research:

- “Adding 56,000 jobs, Collier County accounted for almost one-third of Southwest Florida’s net job growth between 1995 and 2005. The County’s growth rate, 65%, was the fastest in Southwest Florida.”
- “Florida’s population is expected to grow by 65% from 2000 to 2030, or twice as fast as the United States (more than 29%). During the same time period, Collier County is expected to grow by over 145%.”

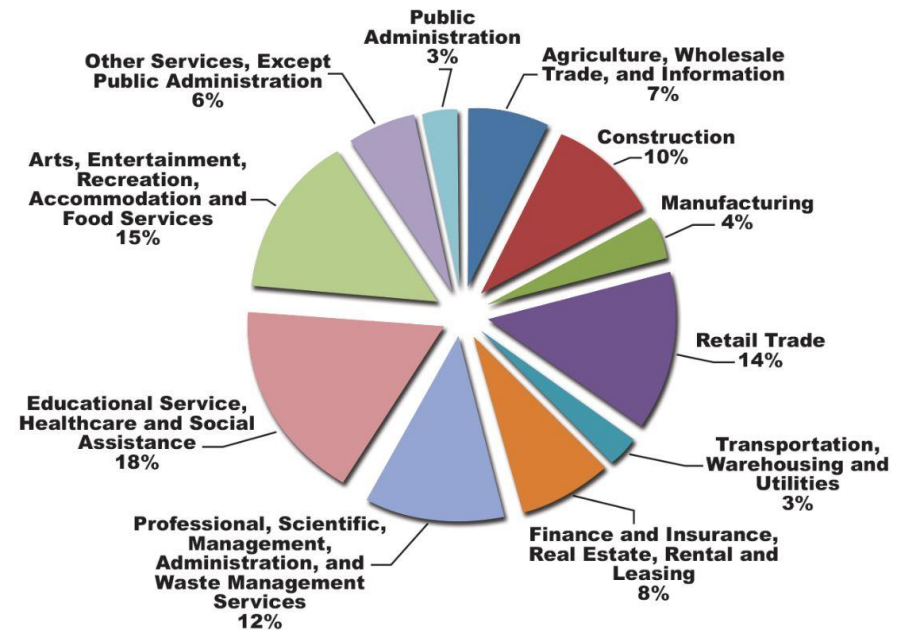


Figure 7: Work Force Labor





### Collier Blvd Area Land Use

The west side of Collier Boulevard is heavily developed residential (Golden Gate City) with some commercial and community uses. The intersection with Golden Gate Parkway includes a post office, realty office, and churches. The east side of Collier Boulevard is sparsely developed residential until just north of the I-75 interchange where there is some industrial and warehouse usage.

The County's Future Land Use Map<sup>3</sup> for the Golden Gate Area include:

- Residential Estates Subdistrict Conditional Uses Subdistrict (in and around project)
- Neighborhood Center Subdistrict on both sides of Collier Boulevard at White Boulevard (along project corridor)
- Downtown Center Commercial Subdistrict (west and along of project corridor)
- Golden Gate Estates Commercial Infill Subdistrict (along project corridor)
- Golden Gate Parkway Professional Office Commercial Subdistrict (west of project)
- Golden Gate Urban Commercial Infill Subdistrict (west of project)
- Urban Residential Subdistrict (west of project)
- Mixed use activity center Subdistrict (west of project)
- Residential Density Band (west of project)
- Estates Shopping Center District (west of project)
- Collier Boulevard Commercial Subdistrict at the intersection with Golden Gate Parkway (project area)
- Golden Gate Parkway Institutional Subdistrict (west of project)

- Santa Barbara Commercial Subdistrict (west of project)
- Pine Ridge Road Mixed Use Subdistrict (north of project)
- Interchange Activity Center Subdistrict (north of project)
- Southern Golden Gate Estates Natural Resource Protection Area Overlay (southeast of project)

**The County has plans to increase commercial intensity around the project area that when constructed, will stimulate economic development in the area.**

### Quality of Life

Collier County's transit service is named Collier Area Transit (CAT). Collier County provides transportation to the Transportation Disadvantaged (TD) population. The Paratransit Service Demand Estimation Tool, used by CAT Staff, assists with the development of TD population and travel demand estimates. The tool defines categories of TD population in the State of Florida. General TD Population includes all disabled, elderly and low-income persons and children who are "high-risk" or "at-risk". Table 3 presents the County's TD Population Forecast. The General TD Population will make up 41.8% of Collier County's total population. The Critical Need TD Population is 4.0 percent of the total population and 9.7 percent of the General TD Population.

As presented earlier on Table 2, the Golden Gate area has almost twice the poverty rate than that of the county. **Approximately 25 percent of the Golden Gate area population lives below the poverty level.** This project, which will improve those individual's quality of life by closing the gaps in bicycle/pedestrian/transit infrastructure, will give them the confidence to use active transportation modes.

**Sidewalks will provide them to access to transit and transform their lives by giving the ability to use a new mode of transportation which was previously not available to them because of the lack of sidewalks.**

<sup>3</sup> <http://www.colliergov.net/home/showdocument?id=17956>



**Table 3: Collier County Population Forecast**

Year	2014	2015	2016	2017	2018	2019
Total Population	344,032	351,254	358,627	366,156	377,842	381,690
General TD Population	144,078	147,102	153,343	153,343	156,562	159,848

**Table 4: 2013/14 Transit Ridership**

Location	Direction	Boardings	Alightings	Total Ridership	Bicycles
Collier Boulevard and City Gate Boulevard	NB	320	322	642	70
Collier Boulevard and 17 <sup>th</sup> Ave. SW	NB	8,997	3,220	12,217	610
Collier Boulevard and Green Boulevard	SB	1,820	4,132	5,952	153
Collier Boulevard and 20 <sup>th</sup> PL. SW	SB	441	1,002	1,443	29



Collier County Bus Shelter



Table 4 shows the 2013/2014 ridership in the area. The canal (CR 951 Canal) along the east side of the project corridor limits connectivity for pedestrian access to Collier Boulevard. This project provides several improvements to support multi-modal transportation choices including:

- Relocating the structurally deficient bridge at 25th Avenue (over the CR 951 Canal) to align with the Golden Gate Parkway
- Replacing the bridge over Golden Gate Main Canal adding pedestrian and cyclist connection



- Adding a pathway on the east side of the 951 canal where no bicycle/pedestrian facilities exist
- Closing the gaps in sidewalks along the west side of Collier Boulevard
- Closing the gaps in bike lanes on Collier Boulevard by connecting bike lanes to the north and south

### Environmental Sustainability

According to the Florida Department of Economic Opportunity (DEO), over 40% of greenhouse gas emissions in Florida are transportation-related. Of these emissions, over 80% are from motor vehicles. Collier County has been proactively reducing their carbon footprint by providing alternative transportation needs. By adding new pathways and enhancing multimodal connectivity, the Collier Boulevard Corridor Strengthening Project will reduce carbon emissions, noxious emissions, and reduce environmental impacts, while accommodating for population and economic growth.

During the planning and design phase, this project received **environmental assessment/compliance with 404 (b) (1) guidelines** from the USACE. The impacts to the surrounding natural and social environments was determined to be minimal. This project is located within the existing right-of-way. It will add new pathways, sidewalks, and update many existing roadway safety elements. The impact of widening this roadway along with the increased social environment benefits, is much lower than if a new roadway were constructed.

Based on the Benefit Cost Analysis (BCA) presented later in this document, the Collier Boulevard Corridor Strengthening Project will reduce Vehicle Miles Traveled (VMT) by 21 million over 20 years. This VMT savings will result in significant emissions benefits by preventing the emission of over 8,000 tons of carbon dioxide and other noxious emissions.

Today in Collier County, there exists the potential for an integrated network of bicycle, pedestrian, and transit facilities that will provide a safe, clean, healthy, and efficient opportunity for travel throughout the urban area. Improving the available transportation options in Collier County will help reduce greenhouse gas emissions and lead to numerous other environmental impacts such as:

- Increased resource efficiency in fossil fuels
- Air pollution reduction
- Water quality improvements through the installation of an improved stormwater collection system
- Retaining natural habitat of common species by optimizing an existing corridor
- Increased biodiversity with installation of native Florida plants
- Reduced land needed for roads and parking facilities
- Reduced need for new roadways

### Safety

The State of Florida roadways in general have a safety problem caused by a lack of context sensitive streets with bicycle/pedestrian facilities. People bicycling and walking in Collier County are at greater risk of being injured in crashes with automobiles than in most other parts of the country. According to the Collier MPO Pedestrian and Safety Study, the average number of bicyclists killed in Collier County (0.62 per 100,000) ranks above the Florida average (0.57 per 100,000). In addition, the average number of bicyclists injured in Collier County (29.24 per 100,000) ranks above the Florida average (23.71 per 100,000). Additional information on the Collier MPO Pedestrian and Bicycle Safety Study is located at: [TIGER VIII LINK](#)

Currently, there are various safety issues within the project limits that will be addressed with the proposed improvements. The main safety issues include:

- No bike lanes
- Gaps in existing pedestrian pathways
- No crosswalks for transit stops
- Transit stops constrained by canal barrier on northbound side



This project will provide safety benefits to all modes by connecting bike lanes, closing sidewalk gaps, increasing access to transit, and reducing traffic congestion. Eleven foot travel lanes are context sensitive to urban conditions and will discourage speeding. Fewer vehicles on the road and safer options for pedestrians equates to reduced crash rates and economic savings. Based on the BCA, this project is anticipated to reduce fatalities and injuries combined by 2.5 incidents per year, for a savings of \$48 million over 20 years.

## Secondary

### Innovation

This project incorporates various innovative strategies that aid in the pursuit of the short-term and long-term outcomes outlined in this application. Accelerated Bridge Construction (ABC) methods for the new bridge over the Golden Gate Canal and replacement of existing bridges/culvert will be reviewed as well as innovative roadway construction methods:

- Prefabricated Bridge Elements and Systems (PBES) which are structural components of a bridge that are built offsite, or adjacent to the alignment. This bridge construction method includes features that reduce the onsite construction time and mobility impact time that occurs during conventional construction. Staging areas for bridge construction can be reduced and roadway improvements can proceed in these areas that would have otherwise been delayed until the bridge was constructed.
- Slide-In Bridge Construction (SIBC). This technique is cost-effective when used for deploying PBES, or quickly replacing an existing bridge. A new bridge is built on temporary supports parallel to an existing bridge. Once construction is complete, the road is closed and the existing bridge structure is demolished or slid out of the way. The new bridge is slid into place, tied in to the approaches and paved within 48 to 72 hours.

- Intelligent compactions. Compaction rollers equipped with sensors (accelerometers) that can determine the relative stiffness of the soil to map the embankment as it is constructed. The rollers also use Global Positioning System technology that can determine the coverage of the rollers over the embankment area. This technology enhances long-lasting pavement performance.
- High performance concrete can cut concrete roadbed repair costs by reducing the cost and improving the performance of concrete pavement. In the past, concrete slabs occasionally curled and warped after installation due to temperature variations. This curling impacts pavement performance and leads to premature mid-slab cracking. Conventional design solutions to this problem called for the installation of thicker pavement to reduce mid-slab cracks. Further research discovered that shorter joint spacing can be used to reduce stresses in concrete slabs and prevent the occurrence of transverse cracks. Reducing slab joint spacing resolves curling and premature cracking, allowing for a reduction in thickness of the concrete roadbed.
- Alternatives to nuclear testing equipment. Nuclear gauges are used to perform soil compaction tests to measure soil density and water content, the primary criteria in determining soil compaction quality. These devices, however, are considered hazardous as they emit a beam of radiation particles. As a result, nuclear gauges require licensing, regulatory permitting and considerable training when used to measure soil density. For this reason, other test methods: Dynamic Cone Penetration Test (DCPT), Light Weight Deflectometer (LWD), Clegg Impact Hammer (CLM), Soil Stiffness Gauge (Geo-gauge), Briard Compaction Device (BCD) and Seismic Pavement Analyzer (D-SPA) were developed. These methods are effective at measuring density and water content of soils without the use of nuclear density gauges in soil compaction. Furthermore, these technologies are often found to be faster, easier to operate, and able to take deeper measurements than nuclear density gauges.



- Warm-Mix Asphalt (WMA). WMA is produced and installed at lower temperatures than traditional hot-mix asphalt. By producing a product that is of equal or greater quality while using less energy, pavement surfaces can be constructed in a more environmentally sound manner. In addition, the ability to haul WMA for longer distances has increased pavement quality for rural areas and has improved the density of the asphalt mix, leading to more durable pavements.

## Project Parties

### Collier County

The applicant for this grant is Collier County, Florida. Collier County is located in Southwest Florida along Florida's Gulf Coast. At 2,025 square miles, it is the largest county in Florida. Collier County's landscape includes a variety of urban, suburban and rural areas.

The Collier County Transportation Planning Section addresses the primary needs for major transportation improvements including corridor evaluations and studies, land use, concurrency management, development review, long range transportation planning, traffic calming and coordinates closely with the MPO which operates as an independent planning agency. The Transportation Planning Section is committed to this project and played a major role in the project's development. Collier County is the only applicant. It has a large array of department dedicated to administering and maintaining the grant and subsequent maintenance of the constructed facilities.

The Collier County Transportation Engineering Division's focus is to maintain safe traffic operation on county roads, implement capital improvements for the transportation network and to acquire needed property for capital programs. The Transportation Engineering staff works in project management teams that are made up of well-trained, highly motivated professionals who uphold the efficient use of public funds as their highest priority. Within the Transportation Engineering Division there are four sections that work in conjunction, but within their distinct disciplines, to promote the quality, safety and the efficiency of the

county's road network through sound engineering principles, quality construction, diligent oversight and effective maintenance.

- Traffic Operations
- Roadway and Bridge Project Management
- Right of Way Acquisition
- Road Construction/CEI

Collier County has a network of canals and water level control structures that are operated and maintained by the County in partnership with Florida's Big Cypress Basin Board. The County's stormwater management mission is to meet the growth management goals of flood prevention, groundwater recharge, wetland preservation, and water quality protection. The network of roadside drainage facilities within County transportation easements are operated and maintained as part of the storm water collection system.

In order to provide for the safe and efficient movement of all modes of traffic, it is essential to maintain all aspects of the road and right-of-way at the highest reasonable level of safety. Collier County Road and Bridge Maintenance is responsible for physically maintaining roads, bridges, sidewalks, roadside ditches, drainage culverts, storm drain system curb inlets, curb and gutter along county maintained roads, and handles accident clean up and traffic control when needed. Collier County's routine maintenance operations are preventive or corrective in nature and conducted on a regularly scheduled basis using standard procedures. Once complete, this project including the drainage canals, will be maintained by the Collier County Road and Bridge Maintenance staff.

The Right-of-Way Acquisition Section of Collier County's Transportation Engineering Division is responsible for acquiring the land and/or easements (right-of-way) that are necessary for Collier County to construct roadway, sidewalk and drainage facilities. No right-of-way is required as part of this project.

During the construction of improvements to the county's roadways, intersections, bridges and stormwater management systems, the Road Construction/Construction Engineering Inspection (CEI) team is in place to



confirm that construction work is done in conformance with applicable permits, design plans and specifications. CEI team members are experienced professionals with construction backgrounds who oversee road construction projects, but who are also responsible for administering road construction contracts.

The CEI staff has stringent requirements for administration of projects that receive state or federal funding through grants or other agreements. The staff is responsible for understanding the protocol of the governmental agency and the required documentation needed for each project. The CEI staff will be responsible for overseeing the construction activities associated with this project.

## MPO

Due to its large size, Collier County has its own metropolitan planning organization, Collier MPO. The MPO is responsible for the development and implementation of a balanced, integrated, and multimodal program which efficiently moves traffic. The MPO is committed to making Collier County a bicycle/pedestrian friendly community to improve access and connectivity to local businesses and help the local economic activity. This project is one of the highest priority (Ranked 5<sup>th</sup>) projects in Collier County’s MPO’s LRTP.

## FDOT

Collier County will partner with the FDOT District One for the FHWA approvals for Collier Boulevard. Based on the current permits, the project has no social, cultural, or physical impacts and has minimal natural environmental impacts for which mitigation has been approved by the state (South Florida Water Management District) and the USACE. The USACE Individual Permit demonstrates the project’s compliance with the NEPA as required by law.

FDOT and Collier County work together frequently. There are currently 42 active FDOT projects in Collier County. Partnering with an agency such as the FDOT is invaluable in delivering successful, on-budget and on-schedule projects.

## Grant Funds and Sources/Uses of Project Funds

The grant will fund the design and construction of this critical corridor. Collier County is seeking \$26.72 million (2016 dollars) in Federal TIGER grant funds for this project, which is approximately 80% of the overall capital costs. The total capital costs of the project are estimated at approximately \$33.4 million. Collier County has leveraged its existing financial capacity to facilitate project implementation and is contributing 20% of the capital costs. Collier County has already invested to improve Collier Boulevard and the proposed project represents a critical segment of an overall \$317 Million investment along this corridor. Additionally, Collier County has committed \$18 Million to the Golden Gate City Sidewalk/Stormwater Improvement project, which is adjacent to this segment of Collier Boulevard (Not included in requested funding or BCA).

Table 5 summarizes the funding sources for the project costs including the potential TIGER grant.

**Table 5: Proposed Project Funding Sources**

Source	Percent Contribution	Funding Amount
TIGER	80%	\$ 26,720,000
Collier County	20%	\$ 6,680,000
<b>TOTAL</b>	<b>100.0%</b>	<b>\$ 33,400,000</b>

Collier Boulevard is a County maintained roadway making it ineligible for most other sources of state or federal funding. No Federal funds will be used to match the requested TIGER grant funds. Collier County has committed \$6.68 million from County taxes collected for transportation infrastructure improvement projects. Collier County and the Collier MPO is committed to this project





corridor. The following represents some of the planning efforts in place to improve the livability within the project area:

- Golden Gate Walkable Community Study
- Golden Gate Area Master Plan Study
- Golden Gate Beautification Advisory Committee
- Golden Gate Community Center Advisory Board
- Golden Gate Estate Land Trust Advisory Board

## Benefit-Cost Analysis

The Collier BCA has been developed using the TIGER BCA Guidance<sup>4</sup> and the TIGER BCA Resource Guide<sup>5</sup>. The Collier Boulevard Corridor Improvements Project will cost \$33.4 million (2016 dollars), of which \$26.72 million or 80% is being requested as a TIGER grant with the remainder being provided through Collier County public funds.

The following economic benefits of the scheme have been estimated:

- Reduced delays (travel time) due to the improved road layout
- A reduction in vehicle miles traveled (VMT) through encouraging more cycling and walking trips, leading to:
  - Reduced vehicle operating costs
  - Reduced highway maintenance expenditure
  - Reduced vehicle emissions
  - Reduced healthcare costs
- Benefits from reducing the number of pedestrian and bicycle crashes by 90% along Collier Boulevard due to the scheme providing segregated sidewalk and bicycle routes to meet the project target

<sup>4</sup> <http://www.dot.gov/sites/dot.gov/files/docs/TIGER%20BCA%20Guidance%202014.pdf>

<sup>5</sup> <http://www.dot.gov/sites/dot.gov/files/docs/TIGER%20BCA%20Resource%20Guide%202014.pdf>

In addition, by replacing the two structurally deficient bridges, the project will improve the state of good repair and reduce future maintenance costs, although this has not been quantified as part of the BCA.

Table 6 summarizes the benefits and costs of the project over the appraisal period. The Net Present Value (NPV) and Benefit Cost Ratio (BCR) were discounted over a 20-year analysis period. The principal source of benefit is the reduction of a high cyclist fatality rate in the project area. The addition of bike lanes, sidewalks, crosswalks, and a shared-use path would help reduce bike/pedestrian crashes by 90% to meet the project target. The multimodal improvements will also reduce vehicle miles traveled by supporting a modal shift.

**Capital Costs:** The capital cost of \$33,400,000 for the proposed improvements were calculated from preliminary quantities and historic unit cost data from similar projects. Additional percentages were included for professional services and contingency. While the project introduces additional infrastructure, it is replacing an old bridge which will lower the future maintenance costs compared with the baseline.

**Operating and Maintenance Costs:** The additional infrastructure being introduced as part of the project will incur an incremental operating and maintenance cost compared with the No Build alternative. This is assumed to be 0.5% of the capital expenditure. Note that while the project introduces additional infrastructure, it is replacing an old bridge which will lower the future maintenance costs compared with the No Build.





**Table 6 - Benefits and Costs**

Vehicle Operation Benefit	\$ 12,627,914
Highway Maintenance Benefit	\$ 3,265,840
Emissions Benefits (excluding CO2)	\$ 239,495
Crash Reduction Benefits	\$ 48,427,152
Health Benefits	\$ 7,196,080
Capital Cost	\$ (32,362,000)
Operation and Maintenance Cost	\$ (3,236,200)
7% NPV	\$ 6,570,410
7% BCR	1.23
3% NPV	\$ 26,314,691
3% BCR	1.88

Over the 20-year analysis period, the project will take 21 million vehicle miles off the road, resulting in the avoidance of over 8,000 tons of CO2 from vehicle emissions.

**Safety benefits:** There were 14 bike and pedestrian crashes within the project area in the last ten years (2006-2015, see Table 7). Two of the bicycle crashes were fatal. Unreported property damage-only crashes were assumed to be equal to the number of injury/fatality crashes. The lack of pedestrian and bicycle facilities reduces drivers awareness to any person walking or cycling. By adding bicycle lanes and sidewalks, drivers will be better able to avoid collisions with vulnerable road users. The calculation assumed a 90% pedestrian and bicycle

crash reduction target. The value (Table 8) of this benefit is from the TIGER BCA Resource Guide values.

**Table 7 - Pedestrian and Bicycle Crash Data**

Year	Collier Boulevard	
	Bicycle	Pedestrian
2006	2	0
2007	1	1
2008	2*	1
2009	1	0
2010	0	0
2011	0	1
2012	0	1
2013	1	0
2014	1	1
2015	1	0
Total	9	8
Avg. per year	0.9	0.8

\*includes one fatality



Multi-use pathways provides safe access for bicycles and pedestrians





**Table 8 - Pedestrian and Bicycle Crash Data Proportions**

Crash Type	Value per Occurrence	Baseline Annual Rate	Target Rate
Fatality	\$9,600,000 (2015 \$)	0.2	0.0
Injury	\$451,200 (2015 \$)	1.2	0.1
Property Damage Only	\$4,198 (2015 \$)	1.4	0.2

**Vehicle Operating Costs:** A reduction in vehicle operating costs of \$0.58 per VMT has been assumed based on the Bureau of Transportation Statistics (Cost of Owning and Operating an Automobile, 2011)<sup>6</sup>.

**Highway Maintenance:** Highway maintenance costs will also be reduced as a result of a reduction in VMT. A rate of \$0.15 per VMT saved has been applied<sup>7</sup>. In addition, by replacing a bridge over the Main Golden Gate Canal, the project will improve the state of good repair and reduce future maintenance costs.

**Emissions:** Emissions benefits occur as a result of the reduction in VMT. Emission rates used to calculate savings presented on Table 6, shows the CO2 benefit from the Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks<sup>8</sup>. Economic costs associated with these emissions used the TIGER BCA Resource Guide values. The CO2 benefit values are discounted at 3% Social Cost of Carbon.

**Health benefits:** The increased walkability proposed will generate more people walking, and walking farther as compared to the baseline scenario. The mode split data used to estimate reduced VMT was also used to calculate the number of people who would shift mode from private auto to walk/bike/transit once the

<sup>6</sup>[http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national\\_transportation\\_statistics/html/table\\_03\\_17.html](http://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/national_transportation_statistics/html/table_03_17.html)

<sup>7</sup> Development of a Pavement Maintenance Cost Allocation Model, Institute of Transportation Studies – University of California, Davis.

improvements are completed (20,462 population\*0.06 short driving trips\*0.5 mode shift=614 people). The valuation of increased walking was \$586 per person per year as reported by NCHRP Report 552.<sup>9</sup>

More detail has been provided in the Benefit-Cost Analysis Method and Results document. [TIGER VIII LINK](#)

## Project Readiness

Collier County is committed to implementing this important project on time and on budget. The following sections discuss the project's readiness including Technical Feasibility, Financial Feasibility, Project Schedule, Required Approvals, Assessment of Potential Risks and Mitigation Strategies and Federal Wage Certification.

### Technical Feasibility

This project has similar challenges as the other segments of Collier Boulevard reconstructions that Collier County has already completed. The design criteria used on this project is based on FDOT standards and completed specifications as well as Collier County best practices. Lessons learned from past projects influence Collier County's Best Practices and will ensure this project is as successful as the others before it.



<sup>8</sup> EPA Report 420-F-05-022

<sup>9</sup> Relationship of Body Mass Index and Physical Activity to Health Care Costs Among Employees; Guidelines for Analysis of investments in Bicycle Facilities (NCHRP Report 552, Transportation Research Board, 2006)

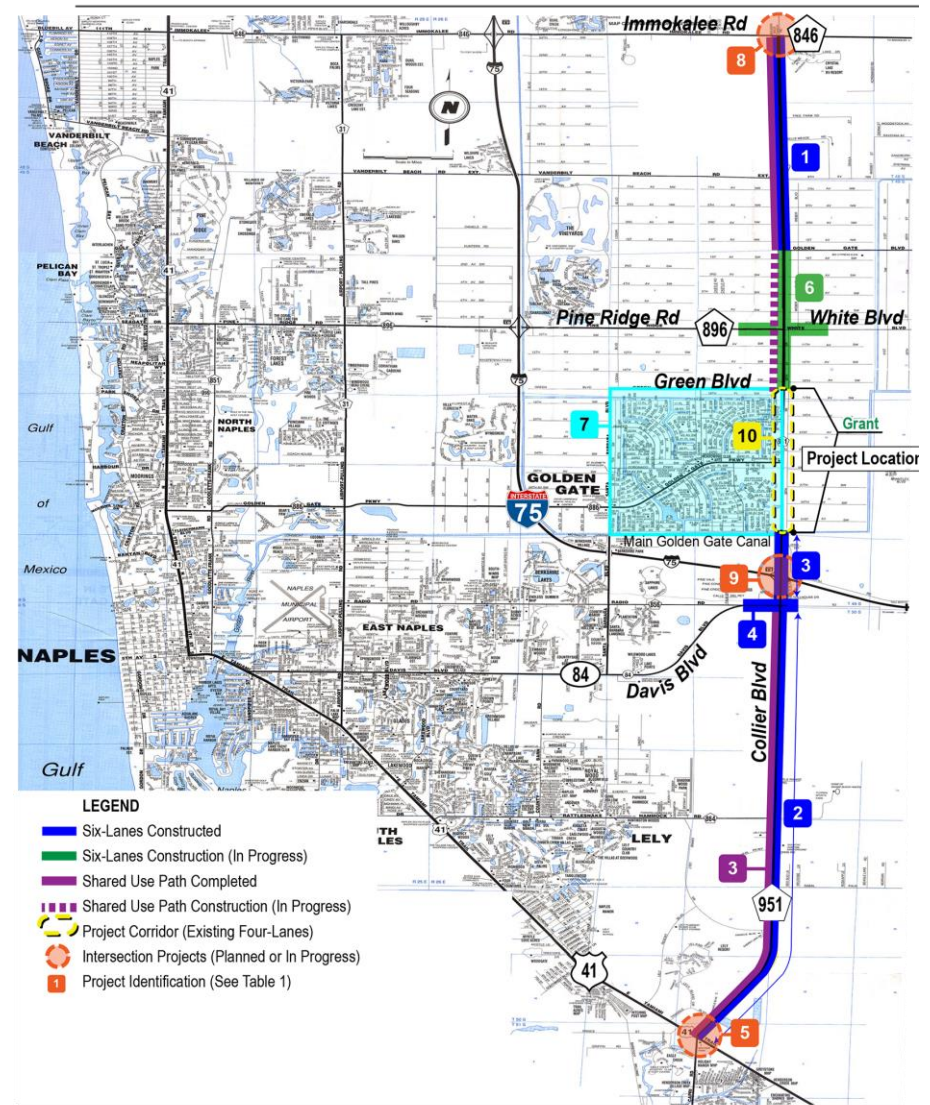


The Scope of this project includes:

- Widening Collier Boulevard from 4 lanes to 6 lanes
  - Widening primarily in existing median and east side of Collier Boulevard from Main Golden Gate Canal Bridge north to 20th PI SW
  - Widening in existing median and west side of Collier Boulevard from south of 20th PI SW to end of project.
- Replacement of Main Golden Gate Canal Bridge
- Replacement of 17th St SW Bridge
- New 6' concrete sidewalk along west side of Collier Boulevard
- New 10' multi-use path along west side of CR 951 Canal
- Re-alignment of the CR 951 Canal from the Main Golden Gate Canal to south of 21st Ave SW
- New bike Lanes
- New driveways
- Guardrail along east side of Collier Boulevard
- Replace closed drainage system
- New traffic signals and pedestrian signals

The cost estimate of \$33.4 million associated with this project is based on the 60% roadway and bridge plans. The unit cost per item is from FDOT historical cost data. Proposed improvements have already been designed to 60% plan level and permits have been obtained. Thus, all technical challenges have been identified and mitigated. Constructability challenges with the project have been anticipated and addressed. Traffic will be maintained throughout the construction according to a FDOT Standard Traffic Control Plan. This includes business access for bikes and

pedestrians. Canal reconstruction will be typical. Temporary construction easements will be required.



TBG08311102359TPA F1-2 Current Projects - MGG Canal to GG Blvd.ai

Past/Present/Future Location Map  
Collier Boulevard (CR 951) Corridor  
US 41 to Immokalee Road





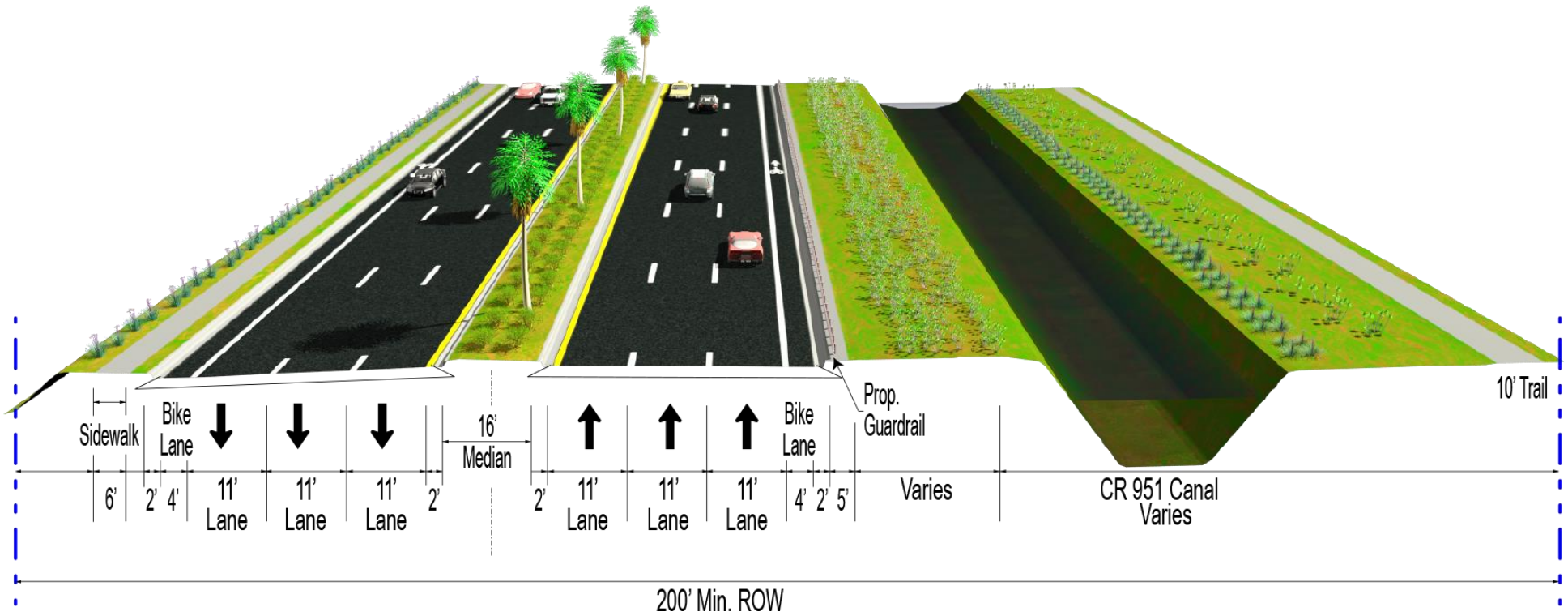


Figure 9: Proposed Typical Section



Figure 10: Project Rendering with 6 Lane Typical





### Financial Feasibility

Collier County continues to maintain a strong investment quality credit rating from all three major rating agencies. In November 2014, Standard and Poor’s (S&P) upgraded the County’s issuer credit rating to AAA and increased the County’s Special Obligation Non Ad Valorem Bond Rating to AA+. S&P cited in its ratings report that “the stable outlook reflects our view of Collier County’s strong financial position and what we consider its flexible and strong management conditions, which have enabled it to make adjustments to maintain strength throughout economic cycles.” The County is now one of only a handful of local governments in the State of Florida that have an issuer credit rating of AAA.

The County is divided into eight Road Impact Fee Districts to collect fees on residential and commercial development. The local funds to support the county’s share of the cost include ad valorem revenues as well as Road Impact Fees and utility funds.

Table 9 summarizes the utilization of project funds by cost category. The capital costs include roadway, structures, signing and pavement markings (SAPM), signals, lighting, utilities, landscaping and amenities, maintenance of traffic (MOT), mobilization, construction engineering and inspection, professional services (design), and project unknowns and contingencies.

### Project Schedule



**Figure 8: Project Schedule**

The project schedule (Figure 8) includes design, NEPA revaluation and construction. The project has no social, cultural, or physical impacts and has minimal natural environment impacts for which mitigation has already been approved by the South Florida Water Management District (SFWMD) and the USACE and permits have been issued.

Collier County will partner with the FDOT District One to coordinate a FHWA NEPA re-evaluation. This re-evaluation will allow the FHWA to take over as the lead agency from the previous NEPA decision. Further, the permits will be updated and extended as needed for the construction schedule that is expected to extend into early 2020. With a 4-month bid period after advertisement, the construction will be approximately 24 months. The total timeframe easily meets the TIGER requirement for completion prior to 2022.

**Table 9 - Use of Project Funds\***

Cost Category	Percent of Project Cost	Total Costs (2015 Dollars)
Roadway	43.1%	\$ 14,383,940
Structures (Two Bridges)	24.3%	\$ 8,100,000
SAPM, Signals, Lighting and Utilities	7.3%	\$ 2,436,000
Landscaping and Amenities	3.0%	\$ 1,000,000
Maintenance of Traffic (MOT)	3.0%	\$ 1,000,000
Mobilization	3.0%	\$ 1,000,000
Construction Engineering and Inspection	5.2%	\$ 1,750,000
Professional Services	3.0%	\$ 1,000,000
Project Unknowns and Contingency	8.2%	\$ 2,730,060
<b>TOTAL</b>	<b>100%</b>	<b>\$ 33,400,000</b>

\*Collier County will provide 20% of each cost category.

### Required Approvals

Two segments of the Collier Boulevard Corridor, the proposed project (Golden Gate Main Canal to Green Boulevard) and the segment currently under construction (Green Boulevard to Golden Gate Boulevard), were permitted together.



Initially all of the Collier Boulevard projects (listed on Table 1A) except the I-75 interchange were to be 100% funded with local funds. Therefore, the FHWA was not consulted as a lead agency or cooperating agency for NEPA compliance. Due to impacts to wetlands and surface waters connected to the CR 951 Canal, and to the canal itself, a USACE permit was required. Since no other federal agencies were involved, the USACE became the lead agency for NEPA compliance and approval. Two permits for the roadway segments (which includes this project) have been issued:

- USACE Individual Permit (#SAJ-2007-04904) was issued on July 31, 2013. Construction is authorized through July 31, 2018. **Permit states that USACE will generally grant time extensions upon request.**
- State Environmental Resources Permit (#11-03184-P) was issued by SFWMD November 19, 2012. Construction is authorized through November 19, 2017. **SFWMD generally grants extensions upon request.**

The permit concluded the USACE environmental assessment/compliance with 404 (b)(1) guidelines.

Once funding is received for this project, the first step will be for Collier County to partner with FDOT to re-evaluate the project with FHWA as the lead agency. The difference from the previous permit is the replacement of the bridge over the Golden Gate Main Canal. This bridge could be replaced as a maintenance item, which can be done through a permit modification. This project is on the Collier County MPO 2040 LRTP Cost Feasible List, which provides the planning consistency that the FHWA requires. Based on planning consistency and the previous NEPA decision, this project is anticipated to be a straight-forward NEPA re-evaluation. Since notifications were mailed to nearby property owners during the USACE permitting process, no public controversy is expected. Figure 19 outlines the re-evaluation process. The USACE Permit SAJ-2007-04904 (SP-WDD) is located under [TIGER VIII LINK](#).

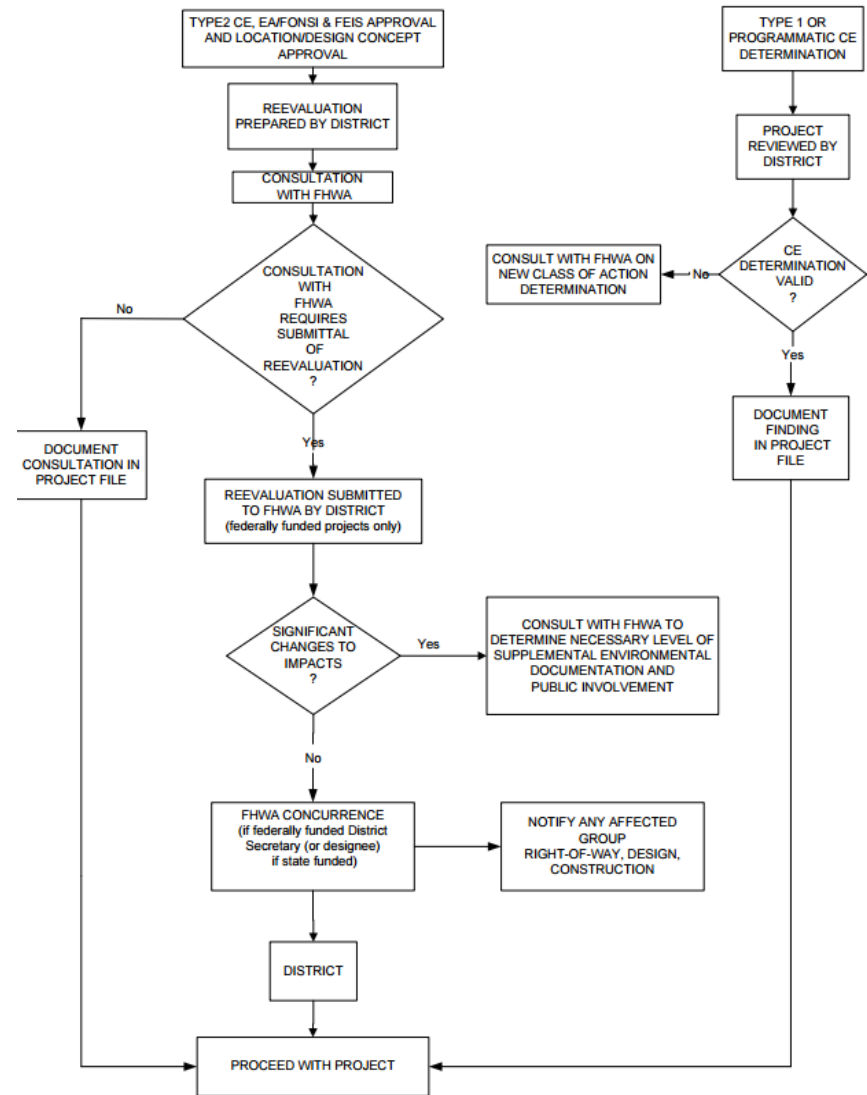


Figure 11: Florida PD&E Manual Reevaluation Process





In addition, the widened roadway with bike lanes and pedestrian facilities will provide benefits, such as:

- Enhanced emergency access due to improved traffic level of service.
- Improved safety with upgraded bike and ADA compliant pedestrian facilities.
- Improved transportation options with the completed multi-use path for pedestrians and non-motorized vehicles.
- Better connectivity between the residences and the commercial facilities along Collier Boulevard.

There are no requirements for state legislative approvals for the Collier Boulevard Corridor Strengthening Project.

#### Project Risks and Mitigation

Little risk is associated with this project. Collier County has analyzed the following areas of risk:

- Funding Issues: There are no funding partners. Collier County is the sole source of the remaining funds (\$6.68 million) and is financially sound.
- Procurement Delays: The size and scale of the work is well within the range handled on a routine basis by Collier County, and as such, procurement is not considered unusual in any way for this project. No procurement delays are anticipated.
- Environmental Uncertainties: Permits have already been issued within the project limits.
- Increase in real estate acquisition costs: No right-of-way required and does not displace any businesses or residences. Temporary construction easements will required. No complications are anticipated.
- Grant Management: Collier County has a well-established procedure and plan for managing grant funds, designed to ensure good oversight and formal documenting processes. Collier County successfully

administers an average of \$50 million in federal and state grant funding each year, 42% of which is managed by the Transportation Division. These grants include large operational and capital grants for stormwater improvement, capital improvements, transit development, and transportation disadvantaged programs. Transportation grants over the last several years specifically include \$4 million in stormwater improvements, \$2 million for a transportation disadvantaged program, \$4 million in transit development, \$3.5 million in Recovery Act transit funding, and \$10 million in transportation capital improvements. Collier County may elect to use one of their qualified consultants that are currently under contract to provide oversight of the grant and possibly for Construction Engineering and Inspection.

#### Federal Wage Rate Certification



*Thank you to the US Department of Transportation (DOT) for giving Collier County the opportunity to be a part of the TIGER 2016 discretionary grant application process. With the support of the U.S. DOT, the community of Collier County and its visitors will greatly benefit from the Collier Boulevard Corridor Strengthening Project.*

Attachment D contains certification that Collier County will comply with the requirements of subchapter IV of chapter 31 of title 40, United States Code (Federal wage rate requirements), as required by the FY 2016 Appropriations Act.