



# *Collier* COMMUNITY STREETS AND INFRASTRUCTURE PROJECT (CCSIP) TIGER 2015 APPLICATION

Submitted By: Collier County Growth Management Department  
Location: Collier County, FL

Total Project Cost: \$16,145,000  
Matching Funding: \$3,229,000  
Grant Requested: \$12,916,000





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### Application Attachments

- Attachment A: Cover Letter
- Attachment B: Letters of Support
- Attachment C: Benefit-Cost Analysis Spreadsheet
- Attachment D: Federal Wage Rate Certification Letter
- Attachment E: Letter of Commitment

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

- Future Land Use Maps
- Vanderbilt Drive Bicycle and Pedestrian Safety Improvement Study
- Naples Park Walkable Community Study
- Collier Area Transit (CAT) Transit Development Plan (TDP)
- Collier MPO 2035 Long Range Transportation Plan (LRTP)
- Collier MPO Pedestrian and Bicycle Safety Study
- Collier MPO 2012 Comprehensive Pathways Plan
- Shrinking the Carbon Footprint of the Metropolitan Area

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### *Supporting Documentation*

Links to documents referred in this application may be found at: [TIGER VII LINK](#)



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Photo 2 - Delnor Wiggins Bridge Piers



Photo 3- Vanderbilt Drive Existing Corridor



Photo 1 - Shopping Plaza on Vanderbilt Drive



# 1 Executive Summary

## Project Name

Collier Community Streets and Infrastructure Project (CCSIP)

## Project Type

### Primary Project Type

Road - Highway (Urban) project that will complete a local street network and connect the community. This project includes total replacement of three bridges (Bridge No. 030177, Bridge No. 030178 on Vanderbilt Drive and Bridge No. 030149 on Bluebill Avenue), roadway reconstruction, and roadway safety improvements.

### Secondary Project Type

Bike/Ped – Complete Streets – Project will provide wide multi-use pathways, sidewalks, walkway amenities and enhance the connection to transit facilities.

## Project Location

Collier County, Florida

## Funding Approach

Collier County Public Funds

## Project Cost

Collier Community Streets and Infrastructure Project (CCSIP)	
Project Cost:	\$16,145,000
TIGER Funds Requested:	80% (\$12,916,000)
Partnership:	US DOT and Collier County

## Project Readiness

- ✓ Design Complete: **September, 2016**
- ✓ NEPA Approval: **February, 2017**
- ✓ TIGER Funds Obligated: **May, 2017**
- ✓ Construction Start: **May, 2017**
- ✓ Construction Complete: **December, 2019**

## Project Benefits

- Alleviation of congestion on local and adjacent street network
- Significantly improve access to residential communities, parks and recreational areas, commercial areas, the beach, park & ride facilities, and park & boat facilities
- Improves the **State of Good Repair** by reconstructing failing pavement and replacing three functionally obsolete bridges
- Roadway and pedestrian **Safety** improvements such as shoulders, bike lanes, pathways and sidewalks.
- **Multimodal** connectivity improvements through Bike-Ped-Transit (supports potential transit flex route) Connect Collier County with Lee County through LinC bus.
- Creates “**Ladders of Opportunity**” and promotes **Economic Competitiveness** by providing improved access to local businesses, churches, schools and recreational areas.
- Enhances **Quality of Life** by providing more mobility for non-drivers, senior citizens, and persons with disabilities
- Promotes **Environmental Sustainability** by reducing carbon emissions, reducing noxious emissions and reducing environmental impacts



## 2 Project Description

This TIGER Discretionary Grant application for the **Collier Community Streets and Infrastructure Project (CCSIP)** proposes transportation infrastructure improvements along the Vanderbilt Drive (CR 901) corridor from Vanderbilt Beach Road (Collier County) to Bonita Beach Road (Lee County). **This project will complete a local street network which will improve safety and alleviate congestion on adjacent streets while enhancing access to residential communities, commercial centers, the beach, park & ride facilities and park & boat facilities.** This project includes total replacement of three bridges (Bridge No. 030177, Bridge No. 030178 on Vanderbilt Drive and Bridge No. 030149 on Bluebill Ave.) roadway reconstruction, and roadway safety improvements, wide multi-use pathways, sidewalks, walkway amenities and enhance the connection to transit facilities. Additional information on the Collier Area Transit (CAT) Transit Development Plan (TDP) is located at: [TIGER VII LINK](#). **Right-of-way acquisition will not be required for this project.**

Vanderbilt Drive is a north-south collector roadway that runs parallel to the west of US 41 (SR 45, Tamiami Trail N.) between Vanderbilt Beach Road (CR 862) and Bonita Beach Road (CR 865). **This roadway is designated by Collier County as a hurricane evacuation route.** Vanderbilt Drive provides access to numerous residential communities and a multitude of recreational facilities.

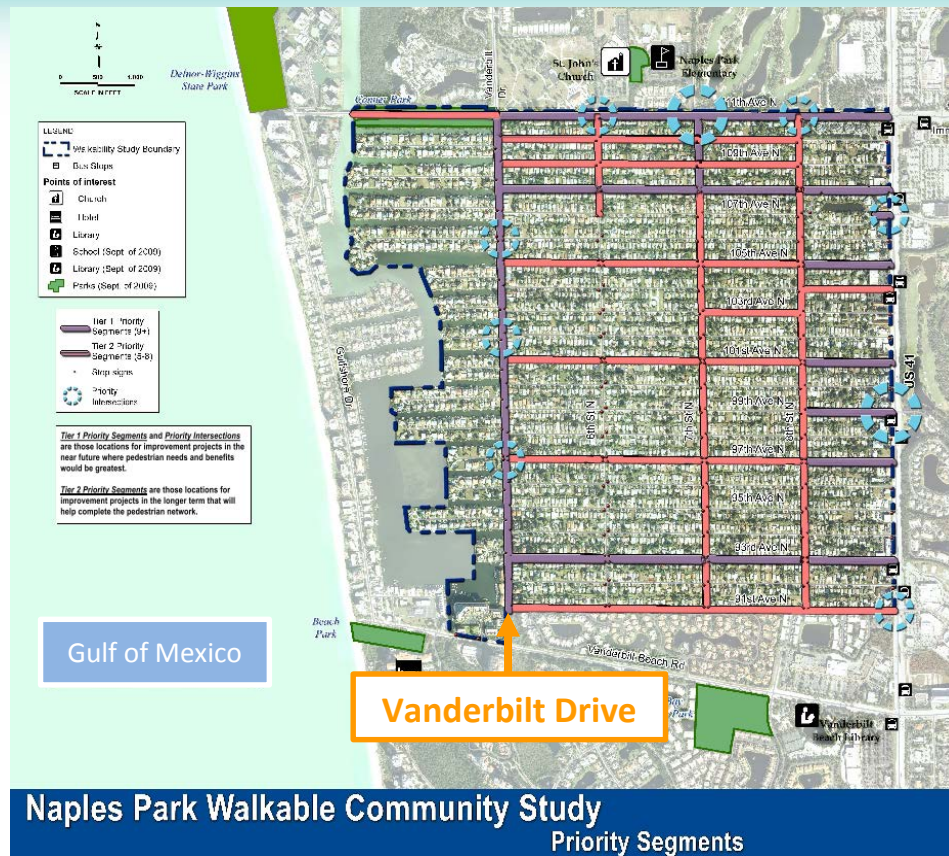
The existing bridge (Bridge No. 030177) that carries Vanderbilt Drive over Little Horse Pass was built in 1964 and currently has a posted load limit. The bridge is considered functionally obsolete due to the narrow roadway on the bridge. The existing bridge (Bridge No. 030178) that carries Vanderbilt Drive over Tidal Pass was built in 1964 and is a narrow two-lane bridge. The existing bridge (Bridge No. 030149) that carries Bluebill Avenue over the Vanderbilt Channel was built in 1969 and is a narrow two-lane bridge with inadequate pedestrian protection. The travel-ways are two-lane bridges approximately 24 feet wide with substandard railings on each side. Based on the current Bridge Inspection Reports, the Sufficiency Ratings for Bridge No. 030177, 030178 and 030149 are 56.7, 64.2 and 81.10, respectively.



**Photo 4 - Delnor Wiggins Bridge (Bridge No. 030149) that carries Bluebill Avenue over the Vanderbilt Channel was built in 1969.**

Naples Park community began developing in the 1950s. A system of roadside ditches were used as stormwater runoff collection. As units were developed, driveways were built with a culvert pipe to allow storm water to flow under and through the driveway. Most of these culverts and piping within the community are undersized, at improper elevations, and/or have reached their typical life span and are in need of replacement. Improvements to the stormwater system will be completed prior to the construction of the CCSIP improvements and will not pose any conflicts to the schedule.

Bicycle and pedestrian facilities exist throughout the county, but the existing Vanderbilt Drive facility lacks integration with other transportation modes and connectivity to destinations. The adopted 2030 Long Range Transportation Plan (LRTP) of the Collier Metropolitan Organization (MPO) identifies Vanderbilt Drive as an existing bicycle route and as a Pedestrian Priority II roadway. In addition, the County recognized a deficiency exists in the roadway cross section of the southern 1.25 miles of the corridor, a rural roadway cross section that has 10' travel lanes, and no paved shoulders or designated bike lanes.



**Figure 1: Naples Park Walkable Community Study Priority Segments Map**

Based on the amount of residential and commercial property within the project area, a safe and connected multimodal network is vital for Collier County's economic success. After numerous public meetings and community outreach, the following items were identified as stakeholder concerns and will be addressed with the CCSIP:

- Improve State of Good Repair of existing roadway and existing bridges

- Upgrade pedestrian pathway widths which are inconsistent and too narrow in many areas. Deficient segments will be brought up to the American Disability Act Standards.
- Install additional lighting to improve safety for pedestrians and bicyclists who use the facility in the early morning and evening
- Place additional warning signage for vehicles and pedestrians
- Provide landscaping improvements for erosion control and aesthetics
- Enhance pavement markings for bike lanes
- Minimize road closures/detours during construction

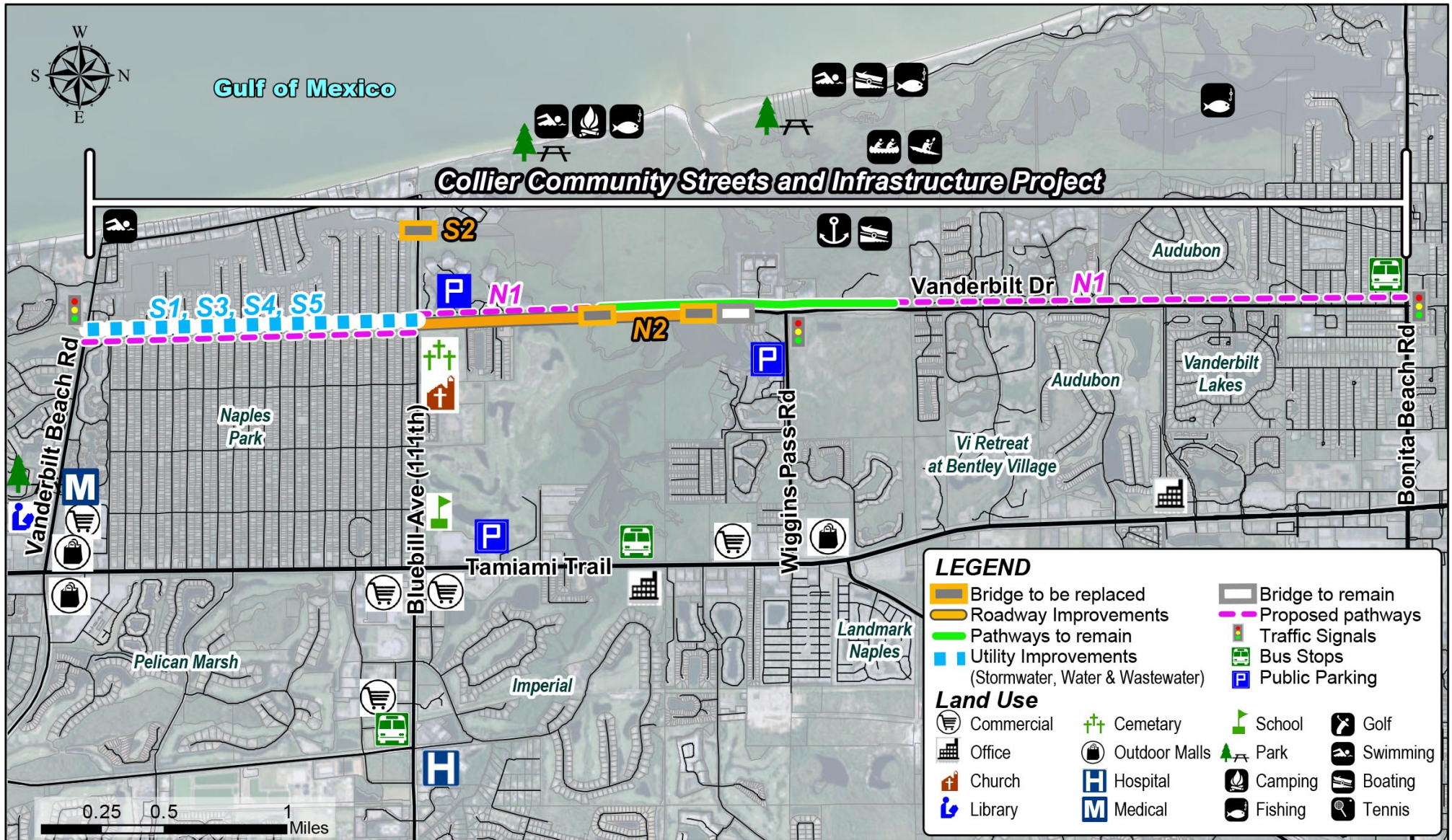
The CCSIP is comprised of two main segments, the North Segment and the South Segment. The two segments have multi-use/multi-modal improvements that are shown on **Figure 2** Project Location Map:

North Segment (111<sup>th</sup> Avenue to Bonita Beach Road):

- West side pathway and sidewalk construction (N1 on **Figure 2**). **100% plans completed**. Scheduled to advertise February 2017, with construction beginning May 2017 and ending November 2017.
- Roadway construction and replacement of existing bridges 030177 and 030178 (N2 on **Figure 2**). **60% plans completed**. Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2019.
- Widening the Vanderbilt Drive existing roadway to provide northbound left turn lanes at each intersection from 2nd Street to 9th Street. The entire length of the roadway (a total of 2,700') will be widened to a three-lane section to maintain continuity in the traffic flow on Vanderbilt Drive. Scheduled to advertise February 2017, with construction beginning May 2017 and ending August 2018.



Figure 2: Project Location Map





### South Segment (Vanderbilt Beach Road to 111<sup>th</sup> Avenue):

- Replacement of Delnor Wiggins Bridge (Bridge No. 030149) on Bluebill Avenue (S2 on **Figure 2**). **Expedited design in progress**. Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2019.
- Pathway and sidewalk construction identified by the Pathways Advisory Committee (S3 on **Figure 2**) **Expedited design in progress**. Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2018.
- Stormwater retrofit (S1 on **Figure 2**). **90% plans completed**. Scheduled to advertise October 2015, with construction beginning January 2016 and ending September 2016. The county has programed \$900,000 in its capital budget for this improvement project due to schedule needs and desire to have infrastructure in place prior to the pedestrian improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.
- Wastewater pipeline construction (S4 on **Figure 2**). **85% plans completed**. Scheduled to advertise October 2015, with construction beginning January 2016 and ending September 2016. \* The county has programed \$1.4 million in its capital budget for this improvement project due to schedule needs and desire to have infrastructure in place prior to the pedestrian improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.
- Potable water pipeline construction (S5 on **Figure 2**). 90% plans completed. Scheduled to advertise October 2015, with construction beginning January 2016 and ending September 2016. The county has programed \$4.9 million in its capital budget for this improvement project due to schedule needs and desire to have infrastructure in place prior to the pedestrian improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.

Encouraging multimodal transportation will help Collier County become a more dynamic community by invigorating the local economy while reducing environmental impacts, reducing health care costs and improving overall **Quality of Life**. This project will enhance mobility for residents and visitors, particularly non-drivers, persons with disabilities and senior citizen populations.

Recognizing that TIGER funding is limited and highly competitive, Collier County and their supporting partners have identified a plan and strategy that will dramatically improve the areas surrounding the proposed project area. **This project is estimated to cost approximately \$16.145 million with the TIGER grant share (80%) requested at approximately \$12.916 million.**

"This project will also complete an established regional bicycle and pedestrian route that connects Fort Myers Beach and Bonita Beach communities in Lee County with major commercial, residential, educational and recreational facilities in Collier County. An important benefit of this project is that it will connect Lee and Collier Counties at a point where travelers can enjoy beaches, amenities and shopping as well as gain additional access to the already established LinC bus services which connects the two counties." *Donald Scott, Lee County MPO Director*

## 2.1 Project Location

The Vanderbilt Drive corridor is located in southwest Florida within Collier County. The existing road runs parallel to Tamiami Trail N (SR 41), starting in the unincorporated community of North Naples in Collier County and ending in the City of Bonita Springs where it connects to an existing complete streets system. The proposed improvements along the Vanderbilt Drive corridor are from Vanderbilt Beach Road (Collier County) to Bonita Beach Road (Lee County) as shown in **Figure 3**, Regional Vicinity Map.

West of the project, along the Gulf Coast, is the Wiggins Pass Estuarine Area and Cocohatchee River System as well as the Delnor-Wiggins Pass State Park and Barefoot Beach Preserve. South of the project is Vanderbilt Beach Park. East of the project is Veterans Park.





Figure 3: Regional Vicinity Map



Interstate 75 interchanges are accessible from Bonita Beach Road and Immokalee Road/111<sup>th</sup> Avenue and are located approximately five miles east of the corridor.

## 2.2 Connections to Existing Transportation Systems

The proposed project runs parallel to Interstate 75 and US 41. It is located approximately five miles west of the interstate and approximately one mile west of US 41 as shown in **Figure 3**. Vanderbilt Drive experiences large volumes of traffic since it is an alternate route to US 41 and provides access to a large residential population and multiple recreational/beach facilities.



Photo 5 - Rider boards LinC bus service which connects Lee County and Collier County

and Livingston Road) to Cocohatchee River Park, Bluebill Access, and Vanderbilt Beach. They are also discussing a water shuttle from the Cocohatchee River Park location to either Delnor-Wiggins State Park or Barefoot Beach. **This unique, multimodal approach to the public's needs conveys an environmentally friendly message to residents and visitors of Collier County.** Additional information on the CAT TDP is located at: [TIGER VII LINK](#).

## 2.3 Needs Addressed

The proposed project aims to address both short-term and long-term transportation needs in the region. In the short-term, the proposed project will increase safety of the transportation system for all motorists, pedestrians and bicyclists. Vanderbilt Drive will provide a more safe, convenient, and accessible movement of people and goods through the area. This project will complete a local street network which will improve safety and alleviate congestion on adjacent streets while enhancing access to residential communities, commercial centers, the beach, park & ride facilities and park & boat facilities.

The project is in an urban area and runs parallel to the Gulf of Mexico on the west and US 41 on the east. **The Comprehensive Pathways Plan (December**

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2012) has two project priorities in the study area: Vanderbilt Drive from Bluebill Avenue to Wiggins Pass Road and Vanderbilt Drive north of Wiggins Pass Road. The pedestrian and bicycle Needs Plan from Bluebill to Wiggins are ranked as a high priority. The proposed improvements will open up beach access and reduce bicycle and pedestrian traffic on US 41. There is a



**Photo 6- Runners use multi-use pathway for exercise.**

significant amount of residential development located adjacent to the corridor which will benefit immensely from the proposed improvements. Additional information on the Comprehensive Pathways Plan is located at [TIGER VII LINK](#).



**Photo 7- Bicycle Racks Amenities.**



**Photo 8- Bicyclist arrive at Cocohatchee Park on Vanderbilt Drive.**

In the long term, the proposed roadway and bridge improvements will prepare Vanderbilt Drive for future traffic conditions. The project will reduce crash rates at intersections and minimize congestion along the corridor by improving access and multimodal connectivity. It will also increase accessibility and mobility of the public with safe intermodal transportation options. Vanderbilt Drive will support economic development and goods movement through the rural and urban project areas.

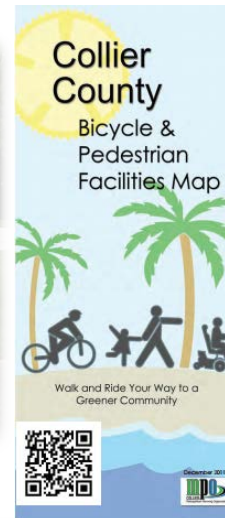
The demographics of this area are mixed. The residents within zip code 34134 are older, with more than 50% of the population over the age of 65. This demographic routinely utilizes sidewalks, multi-use pathways, transit facilities and bike lanes to get to and from commercial and recreational areas.

The southern portion of the project is located within the Naples Park Community. The 6,000 residents in this community are comprised mostly of 25-54 year olds who represent the working class. Approximately 25% of Naples



**Photo 9- Example of Multi-use paths with Amenities.**

Park is unemployed, while 13.5% of individuals are below the poverty level. (U.S. Census Bureau, 2009-2013 5-Year American Community Survey).



The 2030 LRTP adopted Jan. 12, 2006 had Vanderbilt Drive. from Vanderbilt Beach Road (VBR) to Wiggins Pass Road as Pedestrian Priority II and Wiggins Pass Road to 111th Avenue as Bike Priority I and VBR to 111th as Bike Priority II.

A similar improvement project along Vanderbilt Drive from Wiggins Pass Road to the Collier/Lee County line (Bonita Beach Road), was initially included as a needed facility in the Collier MPO's



2035 LRTP, however the proposed improvements were excluded from the LRTP's Minor Update on March 2013.

While the roadway portion of the project was removed from the LRTP during the update, the pathway and the bicycle facilities remain in the MPO's Comprehensive Pathways Plan as a high priority for pedestrian needs and as a priority for bicycle needs. It is also on the current Lee-Collier Bi-County Regional Transportation Map for Pathways. Additional information on the Collier MPO 2035 LRTP is located at: [TIGER VII LINK](#).



Photo 10- Collier Area Transit Transfer Station.

seasonal and tourist destination during the winter months between November and April when the population rises by an estimated 20%. The estimated current seasonal population is 418,048 and it is projected that the seasonal population will increase to 466,233 by the year 2021.

Collier County boasts attractions and amenities that will foster economic and community development. These include the North Collier Regional Park home to a popular water park, fitness complex, and host to nationally sanctioned sporting events; numerous recreation and educational opportunities enjoyed by visitors due to close proximity to the Everglades; frequent inclusion of recently re-nourished County and City owned beaches as some of the best in the U.S.; as well as popular upscale shopping and dining throughout the County.

Many departments within Collier County have worked together in a collaborative effort to plan and coordinate this significant project. Each of the following departments provided a project component:

- Transportation Planning
- Transportation Engineering
- Road Maintenance
- Park and Recreation
- Public Utilities
- Construction Management
- Stormwater Management
- Public Transit and Neighborhood Enhancement

Their combined efforts have resulted in a comprehensive initiative which will address the needs of an entire community. Their longstanding tradition of working collaboratively, will ensure the successful completion of this project.

### 3 Project Parties

#### 3.1 Collier County



The applicant for this grant is Collier County, Florida. Collier County is located in Southwest Florida along Florida's Gulf Coast. Per the Collier Metropolitan Planning Organization (MPO) the county is approximately 2,025 square miles. According to the Bureau of Economic and Business Research

(BEBR), in 2012, 89% of the county's population live in unincorporated areas. The County is governed by the five-member Collier County Board of County Commissioners. According to the 2010 U.S. Census, the County population is 321,520 with a median age of 46.9 years. According to the FY 14-15 Collier County Budget, the Collier County Comprehensive Planning Department indicates that the County's population will grow by 65,990 over the next decade – an average of 1.9% annually. Collier County continues to be a favorite

#### 3.2 FDOT



Collier County will partner with the Florida Department of Transportation (FDOT) District One for the Federal Highway Administration (FHWA) approvals for CCSIP. Based on the current permits and desktop research, the project is consistent with the National Environmental Policy Act (NEPA). The end goal of this partnership is to provide the documentation as required by law for NEPA compliance.



## 4 Grant Funds and Sources/Uses of Project Funds

The project funds will provide for the design and construction of the Vanderbilt Drive corridor improvements, which will help relieve congestion and dramatically improve safety for all users of the facility. The total capital costs of the project are estimated at \$16.145 million. Collier County has leveraged its existing financial capacity to facilitate project implementation and is contributing 20% of the capital costs. **Therefore, Collier County is seeking \$12.916 million (2015 dollars) in Federal TIGER grant funds for the Collier Community Streets and Infrastructure Project (CCSIP), which is 80% of the overall capital costs.** Table 1 summarizes the funding sources for the project costs including the potential TIGER grant.

**Table 1: Project Funding Sources**

Source	Percent Contribution	Funding Amount
TIGER	80%	\$ 12,916,000
Collier County	20%	\$ 3,229,000 *
TOTAL	100.0%	\$ 16,145,000

\*The county is investing an additional \$7.2 million of its capital budget for its stormwater and utility improvement projects due to schedule needs and desire to have infrastructure in place prior to the roadway/pedestrian improvements. However, it is not included as part of the project funding nor was it included in the benefit cost analysis.

No Federal funds will be used to match the requested TIGER grant funds. Collier County has committed \$3.229 million from County taxes collected for transportation infrastructure improvement projects.

Table 2 summarizes the utilization of project funds by cost category. The capital costs (2015 dollars) include roadway (milling and resurfacing, new pathways,

pedestrian crossings, etc.), structures, innovative features, and project unknowns and contingencies.

**Table 2: Uses of Project Funds**

Cost Category	Percent of Project Cost	Total Costs (2015 Dollars)
Roadway	15.9%	\$ 2,560,000
Structures	68.8%	\$ 11,100,000
Innovative Features	9.8%	\$ 1,585,000
Project Unknowns and Contingency	5.6%	\$ 900,000
TOTAL	100%	\$ 16,145,000

In summary, the requested TIGER grant fund of \$12.916 million will significantly support necessary design and construction activities for the project comprising approximately 80% of the overall project development costs. This transportation infrastructure improvement project will help Collier County connect the community and create **"Ladders of Opportunity"**.

As stated on US Department of Transportation web site: "Transportation plays a critical role in connecting Americans and communities to economic opportunity. We can help more Americans reach opportunity by ensuring that our transportation system provides reliable, safe, and affordable ways to reach jobs, education and other essential services."

*"Through transportation, we can help ensure that the rungs on the ladder of opportunity aren't so far apart—and that the American dream is still within reach for those who are willing to work for it."* – Secretary Anthony Foxx -

See more at: <http://www.dot.gov/ladders>



## 5 Selection Criteria

### 5.1 Long Term Outcomes

#### 5.1.1 State of Good Repair

The Collier Community Streets and Infrastructure Project (CCSIP) will improve the condition of the existing roads, pedestrian facilities, and bicycle lanes. Traffic diversion will directly reduce congestion on the regional network and reduce maintenance costs with pavement maintenance savings and congestion savings. Reduced maintenance costs will allow public dollars to be used for other necessary transportation projects that may not otherwise have available funding.

Providing more transit, bicycle and pedestrian opportunities also reduces maintenance cost. 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 will improve the existing transportation system so that it serves more users within the existing right-of-way while minimizing network lifecycle costs and environmental impacts.

The project is consistent with the MPO's 2035 LRTP. 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.

The LRTP includes over 693 million dollars in funding for operations and maintenance of the local transportation system. The funding used for maintenance and operations is a sustainable source of revenue over the long term that includes gas taxes, general revenue, user fees, toll funding, and Municipal Services Taxing Unit funding.

#### 5.1.2 Economic Competitiveness

According to the American Community Survey (ACS) three-year estimates in 2012, the major industries in Collier County are shown in **Figure 4**.



**Photo 11- Bicycle riders cross the newly constructed Frank Halas Bridge on Vanderbilt Drive. The county recently invested 5.6 million dollars to replace the antiquated bridge.**

Collier County's February 2015 unemployment rate is 5% according to the U.S. Bureau of Labor Statistics.

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%."

The Collier MPO *2035 Long Range Transportation Plan Minor Update Cost Feasible Plan Report* (March 2013) uses the BEBR mid-range 2035 population forecast of 504,142 and an employment forecast of 243,022.

This project includes the construction of three new bridges, roadway safety improvements, pathways, sidewalks and transit facilities. The total cost of the



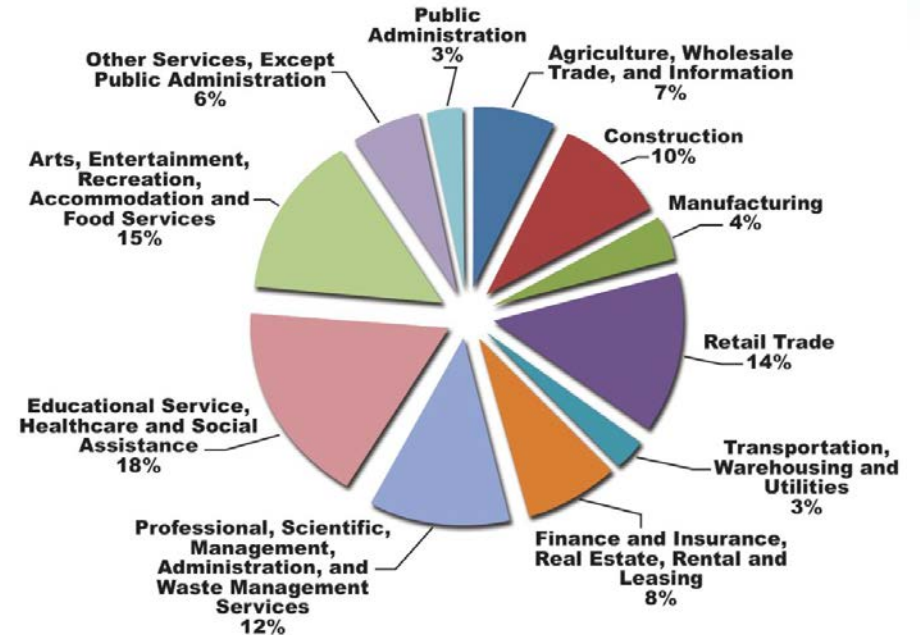
project is estimated at \$16.145 million and will support a variety of design and construction related jobs through its implementation.

The Vanderbilt Drive corridor is primarily single family and mid-rise residential in nature. It is in close proximity to the area's beaches and thus provides recreational opportunities for the county's seasonal and tourist populations. Tourism is important business for Naples, Marco Island and the Everglades and the area is known as the Paradise Coast. As the leading employer and the primary economic engine for the region, the tourism industry is responsible for over 34,000 jobs in Collier County. Over 1.7 million visitors in 2014 were responsible for a total economic impact of over \$1.8 billion for Collier County.

Residents benefit from the tourism industry through enhanced amenities in the community and through tax savings. An estimated tax savings of \$754 per resident is estimated thanks to the expenditures of visitors. Visitors leave over \$16 million in tourist development taxes in the region and they provided \$103 million in sales tax revenue in 2013. Collier County collects a 4% tax on all hotel, campground and vacation rental stays of less than six month. In 2014 it generated just under \$20 million.

Collier County has a nine member Tourist Development Council (TDC) created on March 23, 1992 to make recommendations to the Board of County Commissioners regarding a proposed plan of uses for tourist development tax revenues, for the effective operation of the special projects or uses of the tourist development tax revenues, and to review all expenditures of revenues from the tourist development trust fund. Membership consists of three elected officials from the Board of County Commissioners, City of Naples, City of Marco Island, and up to four tourism industry owner/operators. There is also a Coastal Advisory Committee (CAC) created on February 13, 2001, to assist the Board of County Commissioners with its establishment of unified beach erosion control and inlet management programs within the unincorporated and incorporated areas of Collier County. The CAC advises the Board of County Commissioners and the TDC of project priorities with respect to funding sources available to Collier County for restoration and protection of its shoreline.

Figure 4: Labor Force Distribution by Service Area, 2012



Tourist development taxes pay for extensive beach re-nourishment programs in Collier County along with museum operations and special events, destination marketing through the Convention and Visitors Bureau, and support for the tourism industry through advertising and promotion.

### 5.1.3 Quality of Life

Collier County is served by Collier Area Transit (CAT) which was named 2014 Outstanding System of the Year by the Florida Public Transit Association. In addition, Collier County provides transportation to the Transportation Disadvantaged (TD) population. According to the *Draft Transit Development Plan (TDP) Major Update for 2015* (May 2015), the service is only available to individuals who do not have access to any other means of transportation including CAT. Table 3 shows Collier County's TD Population.



According to the 2010 U.S. Census and the one year and two year American Community Survey (ACS), between 2010 and 2012, the percentage of people living below the poverty level decreased from 16.2% to 15.4% and the number of zero-car households increased from 5.2% to 5.9%. In 2012, households making less than \$25,000 annually represented 20.2% of the households in the county. The use of public transit to travel to work increased from 1.6% to 2.2% while walking to work decreased from 1.8% to 1.6%. About 16% of the population is under 15 years of age and 16.5% is 65 years of age or older. All of these are characteristics that generally contribute to usage of public transit.

In April 2014, CAT conducted a *Bus Stop Americans with Disabilities Act (ADA) Assessment* that included an evaluation of the 527 existing bus stops and two transfer centers. The study included a comprehensive inventory of the conditions at CAT's bus stops and facilities and identifies and helps prioritize improvements to address accessibility, security, operation, and passenger comfort issues. This study made recommendations for improvements, order of magnitude cost estimates, and next steps. The draft report is available at the following link:



**Photo 12 - Naples Beach.**

<http://www.colliermpo.com/index.aspx?page=182>.

**Table 3: Collier County TD Population**

Year	2008	2009	2010	2011	2012	Percent Change*
Potential TD Population	122,912	127,963	131,575	136,153	140,900	14.6%
TD Passengers Served	2,305	2,480	2,660	2,879	2,982	29.3%
Source: Annual Operations Reports						*Percent Change 2008-2012

*"Residents and visitors of Collier and Lee counties, will benefit from this project. Non-drivers, persons with disabilities and senior citizen populations will also have increased and improved opportunities for mobility."*  
 ~ Senator Garrett Richter



**Photo 13 - Collier Area Transit Transfer Facility.**

This TIGER Discretionary Grant application for the CCSIP proposes transportation infrastructure improvements along the two-lane Vanderbilt Drive corridor from Bonita Beach Road (Lee County) to Vanderbilt Beach Road (Collier County). This project will complete a local street network which will alleviate congestion on adjacent streets and enhance access to residential communities, commercial centers, the beach, park and ride facilities, and park and boat facilities. In addition, there are a number of community facilities including an emergency medical services station, churches, child care facilities, a community center, assisted living facility, and Naples Park Elementary School at the southern end of the corridor. The project includes new bridge construction, roadway safety improvements, pathways, sidewalks and transit facilities. The project will enhance mobility for residents and visitors, particularly non-drivers, persons with disabilities and senior citizen populations.



*"The school district, as well as residents and visitors of Collier and Lee Counties, will benefit from the increased mobility in all of its forms that this project provides, particularly non-drivers, persons with disabilities and senior citizens." ~ Thomas E. Conrecode, P.E., Executive Directors Support Services Collier County Public Schools*

Vanderbilt Drive is a two-lane urban collector with roadside stormwater swales. A continuous five to six foot asphalt pathway/concrete sidewalk exists along the west side of the road. Lane widths are from 10 to 11 feet and speed limits vary from 35 to 45 miles per hour. In addition, there are designated bike lanes between Bonita Beach Road and the Cocohatchee River Bridge. There are no bike lanes or paved shoulders south of the bridge.

The land adjacent to Vanderbilt Drive is a combination of existing residential and commercial development; however, there is a significant amount of vacant land remaining which has been approved for development.

Collier County has made a substantial investment in the corridor including the construction of two new pedestrian bridges, a new bridge with an integrated sidewalk over the Cocohatchee River, a preliminary design alternatives study of the two remaining bridge structures, and the planning and design of the multi-use pathway.

In 2013, Collier County initiated a public planning process for a multi-use pathway along Vanderbilt Drive from 111<sup>th</sup> Avenue/Bluebill Avenue to Bonita Beach Road. The County initiated a public involvement process for the *Vanderbilt Drive Bicycle and Pedestrian Safety Improvement Study* to define the "greenway" improvement. One issue raised was the safety of cyclists along the southern 1.25 miles (of the 4-mile corridor) where no bike lanes exist. A second concern was the safety of bicyclists and pedestrians crossing Vanderbilt Drive to access the pathway on the west side of the road from the developments along the east side of the road. After a thorough analysis and in consideration of public input, four recommendations, in priority order, were made including:

- Adding five foot bike lanes to the southern end of the corridor
- Conducting a detailed engineering study/warrant analysis to determine the location of recommended crosswalk improvements
- Implementing four enhanced crosswalks in the northern segment of the corridor
- Implementing one enhanced crosswalk with connecting sidewalks in the southern end of the corridor.

In April 2013, the County held a public workshop to present the study recommendations and 112 people attended. The most recent meetings on the Vanderbilt Drive Improvements were March 26, 2015 and Dec. 4, 2014. In general comments included:



**Photo 14- Stakeholder Meeting.**

- Pedestrian pathway widths are inconsistent and too narrow in many areas
- Additional lighting would help improve safety for pedestrians and cyclist who use the facility in the early morning and evening
- Additional signage for vehicles and pedestrians
- Improved maintenance plan and landscaping
- Enhanced pavement markings for bike lanes
- Reduce road closures during construction

One of the recommendations from the TDP is to initiate a Seasonal Beach Access Route in 2016 during the traditional tourist season from December to April. The route would operate seven days a week from 9 am to 3 pm and use a park and ride concept to shuttle people from potential overflow parking locations to five beach park destinations, four of which are in the Vanderbilt





**Drive corridor area.** In addition, a new North Naples Flex route to serve the Vanderbilt Drive area is recommended. It is believed that a new route may reduce the need for the transportation disadvantaged trips in this area. The route would operate Monday through Saturday from 7 am to 7 pm at a 60-minute frequency. Public comment on the TDP also indicated a need for additional transit service in North Naples.

The project area continues to grow bringing more residents to use the proposed Vanderbilt Drive facilities. A local news report on May 18, 2015 stated that construction started on the first building of a five building condominium complex known as Kalea Bay that is expected to be completed within two years. The complex is located just north of Wiggins Pass on Vanderbilt Drive in the northern half of the study corridor. It will take a decade to complete the entire complex.

#### 5.1.4 Environmental Sustainability

Expansive suburban development and an automobile focused culture have contributed to the high level of greenhouse gas emissions in Collier County. According to the Brookings Institute's report, *Shrinking the Carbon Footprint of the Metropolitan Area*, "Meeting the climate challenge requires adaptations and innovation in metropolitan America. With two-thirds of the U.S. population and nearly three quarters of the nation's economic activity residing in the nation's 100 largest metropolitan areas, urban centers account for much of the nation's GHG emissions." ([TIGER VII LINK](#)) Collier County has been proactively reducing their carbon foot print by providing alternative transportation needs. By adding new pathways and enhancing multimodal connectivity, the CCSIP will reduce carbon emissions, noxious emissions, and reduce environmental impacts, while allowing for population and economic growth. Based on the Benefit Cost Analysis (BCA), Summarized in Section 5.4, **the CCSIP will reduce Vehicle Miles Traveled (VMT) by 2.5%. This VMT savings will result in significant emissions benefits by preventing the emission of carbon dioxide and other noxious emissions, for a total value of \$189,884.**

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. 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:

- Reduced land needed for roads and parking facilities
- Reduced vehicle miles traveled (VMT)
- Reduced energy consumption
- Reduced heat island effects

*"This project supports the ideals and mission of ULI SW Florida, to provide leadership in the responsible use of land and in creating and sustaining thriving communities. The project is also closely aligned with ULI's building health places initiatives. For many years, ULI and its members have been active players in discussions and projects that make the link between human health and development. The ULI Building Healthy Places Initiative is building on that work with a multifaceted program to leverage the power of the Institute's global networks to shape projects and places in ways that improve the health of people and communities."* ~ Urban Land Institute

**The CCSIP is located within the existing right-of-way.** The project will add new pathways, sidewalks, and replace many existing roadway elements, but the overall environmental impact is much lower than would result from the construction of new roadways or the addition of auto travel lanes. By improving multimodal transportation, this proposal seeks to reduce the need for more roads, thus reducing future impacts to Collier County's future land use.

#### 5.1.5 Safety

Individuals who bicycle and walk in Collier County today are at risk of being injured in crashes by automobiles. 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 VII LINK](#).

The Collier Community Streets and Infrastructure Project will improve the safety of the existing facility for all modes of transportation and users. Vanderbilt Drive is a primary collector road in the unincorporated community of North Naples in Collier County receiving large volumes of traffic from Tamiami Trail N (SR 41), and other vital roadway networks that service the local community and the high demands of tourism. Currently, there are various safety issues within the project limits that will be addressed with the proposed improvements. The following items are the main safety issues:

- Lack of shoulders for bike lanes
- Lack of connections between existing pedestrian pathways
- Inconsistent pathway widths
- Limited warning signage
- Low visibility at night due to lack of lighting and pavement markings
- Structurally obsolete bridges

According to the Vanderbilt Drive Bicycle and Pedestrian Safety Improvement Study, "Due to the absence of sidewalks on the east side of the road and lack of crosswalks to facilitate safe movements across Vanderbilt Drive, these residents have no convenient and safe way to leave their communities except by motor vehicle." ([TIGER VII LINK](#)).

One of the primary safety benefits from the project is the pedestrian, bicyclists and transit flexibility created from the proposed new connections. Fewer vehicles on the road and safer options for pedestrians equates to reduced crash rates and economical savings. **The CCSIP will reduce the heartbreaking toll crashes take on lives; the value of reduced crashes is estimated to be \$17,966,547.**

### 5.1.6 Project Readiness

The CCSIP will allow US DOT to obligate TIGER funds as required. The following sections discuss the Project's Technical Feasibility, Financial Feasibility, Project Schedule and Assessment of Potential Risks and Mitigation Strategies. Collier County is committed to implementing this important project as proposed in this TIGER grant application.

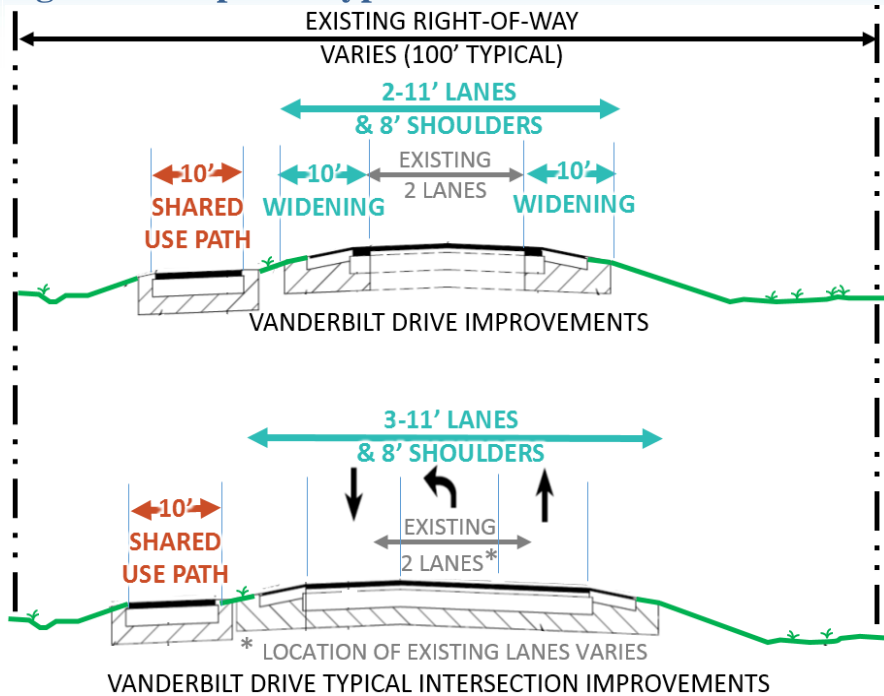
#### Technical Feasibility

The roadway, bridge, pedestrian, utility, and transit facility upgrades of the proposed CCSIP have been identified as priorities in the local transportation and transit plans (refer to Sections 2.2 and 2.3) and are technically feasible. None of the component improvements present any significant challenges and any associated engineering and constructability issues are typical to the industry. The design criteria used on this project is based on FDOT standards and specifications as well as Collier County preferences. Further the improvements are within the roadway right-of-way, as shown in the proposed typical sections (**Figure 5**), which minimizes the environmental footprint needed for the project benefits.

The approximate cost of \$16.145 million associated with this project is based on an Engineer's Estimates from the roadway, pathway and bridge plans already completed as well as estimated quantities for the remaining work to be designed. These estimates were determined using the typical method used on Florida roadway and bridge projects, which is to identify all items involved in the design, the quantity of each item, and the unit cost per item from historical cost data. Refer to Section 4 for a detailed discussion on the use of grant and project funds and the following section for a discussion of Financial Feasibility. The CCSIP presents no implementation challenges related to right-of-way acquisition as all of the project is within existing Collier County right-of-way.



**Figure 5: Proposed Typical Sections**



The specific design elements are as follows:

- Widening Vanderbilt Drive
  - ✓ Widening 2' to the outside on either side of the road so that 11' lanes can be achieved (approximately Bluebill Ave. to 1.25 miles north)
  - ✓ Add 8' shoulder (5' paved) on both sides of the road (approximately Bluebill Avenue to 1.25 miles north)
- Milling and Resurfacing
- Shared Use Paths
  - ✓ New 10' Asphalt Shared Use Path (Bluebill Avenue to 1.25 miles north). This includes the relocation of an existing pedestrian bridge (location adjacent to Bridge No. 030177)

- ✓ New 8' Asphalt Shared Use Path from north of Wiggins Pass Road to south of Bonita Beach Road
- ✓ New 10' Asphalt Shared Use Path on East Side (Vanderbilt Beach Road. to Bluebill Avenue)
- Bike Lanes: Improved bike lane striping from Bridge No. 030177 to Bonita Beach Road
- Proposed New Bridge (Existing bridge to be demolished)
  - ✓ Bridge No. 030177: Vanderbilt Drive over Little Horse Pass (approximately 0.3 miles south of Wiggins Pass Road)
  - ✓ Bridge No. 030178: Vanderbilt Drive over Tidal Pass (approximately 0.42 miles south of Bridge No. 030177)
  - ✓ Bridge No. 030149: Bluebill Avenue over Vanderbilt Channel (approximately 0.35 miles west of Vanderbilt Drive)
- New Guardrail: Approaching and departing newly constructed bridges. East and west sides of Vanderbilt Drive north and south sides of Bluebill Avenue
- Lighting along various sections of corridor
- Stormwater Improvements: Along east side of Vanderbilt Drive from Vanderbilt Beach Road to Bluebill Avenue. (Funded by Collier County CIP 2016 – not included in this TIGER Grant request)
- MSTU Underground Utility Work: Complete utility work from Bluebill Avenue to 1.25 miles north. (Funded by Collier County CIP 2016 – not included in the TIGER Grant request)

For the work to be completed within the project right-of-way, NEPA compliance and environmental permits are required. The CCSIP presents no implementation challenges based on the extensive experience with NEPA compliance and applying for the appropriate permits. Refer to Section 6.1 for more in-depth discussion on the NEPA process and the tie to environmental permitting.

Maintenance of traffic operations will utilize current FDOT standards to ensure safe passage of all travelers during construction. Access to local businesses during construction should not be adversely affected. The project will utilize



conventional construction techniques, and the design will conform to federal, state, and local standards, as well as current ADA standards.

To summarize, the project is technically feasible because:

- Design elements and design criteria are typical to the industry
- Approximate Project Cost was determined using standard engineering estimate methods
- No Right-of-Way acquisition is necessary
- NEPA compliance and environmental permitting are feasible
- Improvements are constructible

### Financial Feasibility

The County is governed by the five-member Collier County Board of County Commissioners who adopt an annual budget that includes capital and operating and maintenance cost for a variety of public services including transportation.

Collier County continues to maintain a stable 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.

According to the *Collier County FY 2015 Tentative July Budget*, the following described the FY 2015 (10/1/14 – 9/30/15) Economic Landscape:

- Countywide taxable value increase of 6.55% to \$64,611,016,632 – third consecutive year of tax base growth
- Taxable sales for Collier County rose sharply to \$732.3 million for February 2014, up 13% over February 2013

- Median home price increased from \$302,400 in April 2013 to \$375,000 in April 2014
- Sales tax and State shared revenues increasing under a positive State outlook for all sales and general revenue categories
- Peak season April 2014 visitation was up year over year by 4.4%
- Generally all categories of permitting for April 2014 continue to grow - up 13.9% year over year
- Unemployment rate dropped 1.6% from April 2013 to 5.5%.

The County is divided into eight Road Impact Fee Districts to collect fees on residential and commercial development. The local funds to support this grant include ad valorem revenues as well as Road Impact Fees and utility funds.

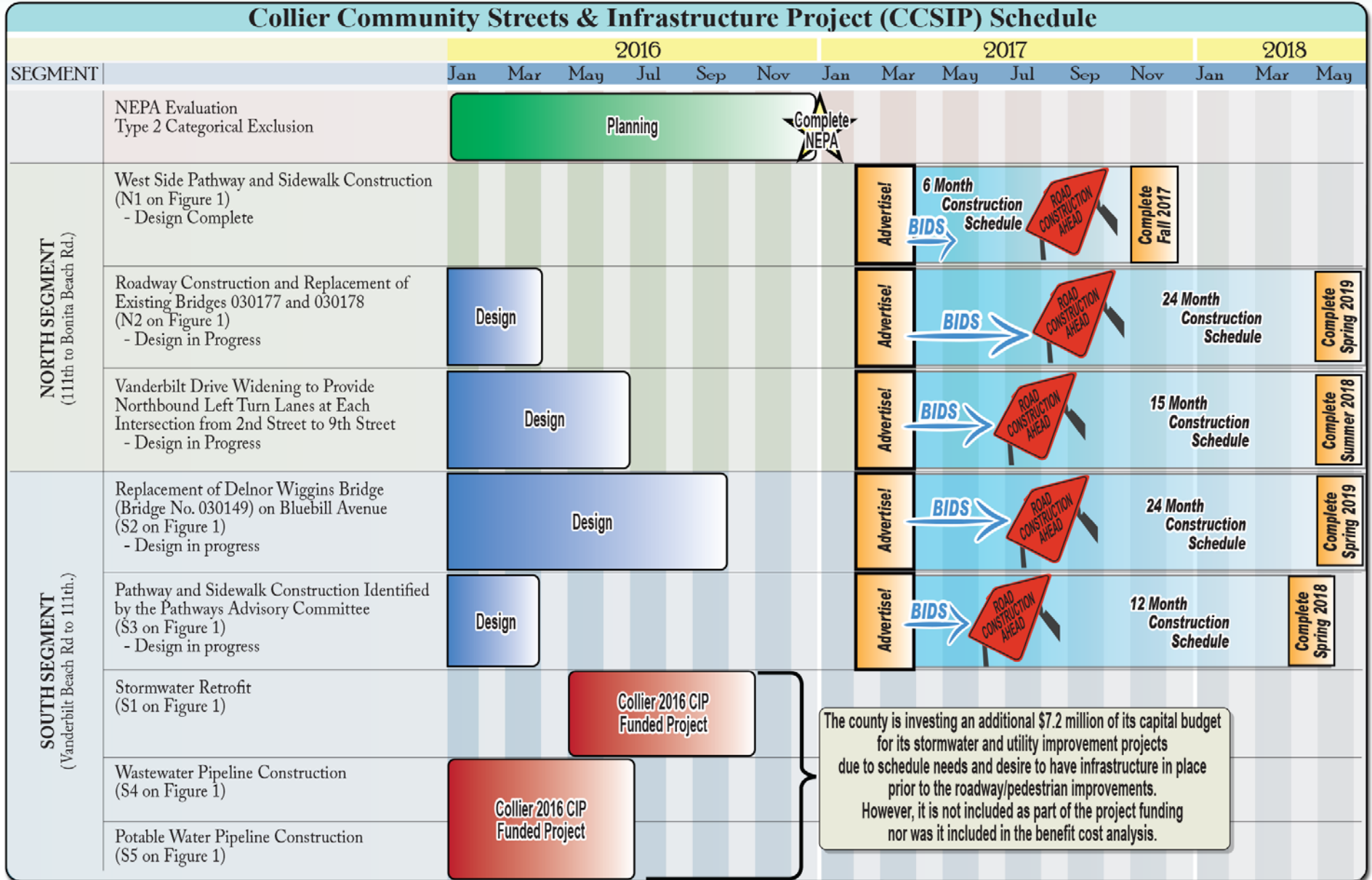
### Project Schedule

The schedule for the CCSIP improvements between Vanderbilt Beach Road and Bonita Beach Road are shown in **Figure 6**. The project is considered in two segments, north and south of 111<sup>th</sup> Avenue. While individually the components with local funding were reviewed for legal requirements, the partnership for TIGER funding requires reviewing all documents for NEPA compliance. This documentation will be in the form of a Type 2 Categorical Exclusion. The first step is the "ETDM Screening", which is the Efficient Transportation Decision Making process with environmental agencies and stakeholders.

The ETDM process uses an online GIS-based environmental screening tool to share desktop information similar to **Figure 2** in order to solicit input and streamline future permitting. This approach uses a public meeting forum for residents and business owners to have the opportunity for input. After incorporating feasible public input in conjunction with the future permit agencies, a public notice will allow the public to request a public hearing if necessary to finalize the Categorical Exclusion checklist and complete the NEPA compliance action. Due to the past Collier County design investment in this corridor, some components of the project can be advanced more quickly to construction as shown in **Figure 6**, Schedule.



Figure 6: Project Schedule



# TIGER 2015 APPLICATION



## North Segment (111<sup>th</sup> Avenue to Bonita Beach Road):

- West side pathway and sidewalk construction (N1 on **Figure 2**). **100% plans completed.** Scheduled to advertise February 2017, with construction beginning May 2017 and ending November 2017.
- Roadway construction and replacement of existing bridges 030177 and 030178 (N2 on **Figure 2**). **60% plans completed.** Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2019.
- Widening the Vanderbilt Drive existing roadway to provide northbound left turn lanes at each intersection from 2nd Street to 9th Street. The entire length of the roadway (a total of 2,700') needs to be widened to a three-lane section to maintain continuity in the traffic flow on Vanderbilt Drive.
- Replacement of Delnor Wiggins Bridge (Bridge No. 030149) on Bluebill Avenue (S2 on **Figure 2**). **Expedited design in progress.** Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2019.
- Pathway and sidewalk construction identified by the Pathways Advisory Committee (S3 on **Figure 2**) **Expedited design in progress.** Scheduled to advertise February 2017, with construction beginning May 2017 and ending May 2018.
- Stormwater retrofit (S1 on **Figure 2**). **90% plans completed.** Scheduled to advertise October 2015, with construction beginning January 2016 and ending September 2016. The county programed \$900,000 in the capital budget for this improvement due to schedule needs and desire to have infrastructure in place prior to the pedestrian/roadway improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.

## South Segment (Vanderbilt Beach Road to 111th Avenue):

- Wastewater pipeline construction (S4 on **Figure 2**). **85% plans completed.** Scheduled to advertise October 2015, with construction beginning January, 2016 and ending September 2016. The county has programed \$1.4 million

in its capital budget for this improvement project due to schedule needs and desire to have infrastructure in place prior to the pedestrian/roadway improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.

- Potable water pipeline construction (S5 on **Figure 2**). 90% plans completed. Scheduled to advertise October 2015, with construction beginning January 2016 and ending September 2016. The county has programed 4.9 million in its capital budget for this improvement project due to schedule needs and desire to have infrastructure in place prior to the pedestrian/roadway improvements. Therefore it is not considered part of the project funding nor including in the benefit cost analysis.

### **Project Risks and Mitigation**

Little risk is associated with this project. Potential issues common with similar projects have been considered and our findings are as follows:

- Funding Partner Issues: There are no funding partners. Collier County is the sole source of the remaining match funds (\$3.229 million) therefore **no potential funding partner issues are anticipated.**
- 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 and NEPA requirements have not yet been issued within the project limits (refer to Section 6.1 for more NEPA discussion). However, permitting and NEPA processes are well within the scope of work Collier County handles on a regular basis. **Little risk is associated from an environmental standpoint, and no legislative approvals are necessary.**
- Increase in real estate acquisition costs: **No real estate or right-of-way acquisition will be needed for this project.**
- 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 funded each year, 35% of which was managed by the Growth Management Division in Fiscal Year 2014. These grants included large capital grants for stormwater, airports and highway improvements in the amount of \$16 million over 21 contracts. The County also managed a number of federal and state grant funded through its Public Services Division for transportation disadvantaged programs (\$1.4 million) and transit operations and capital improvements (\$3.5 million).

Collier County may elect to use one of their qualified Consultants that are currently under contract to provide oversight of the grant as well as construction (Construction Engineering and Inspection).

## 5.2 Innovation

The Collier Community Streets and Infrastructure Project (CCSIP) incorporates various innovative strategies that aid in the pursuit of the short-term and long-term outcomes outlined in this application. Innovation in technology, safety, and funding are all part of these strategies.

**Technology Innovation:** The technology innovations for the CCSIP includes pavement rehabilitation strategies, high definition surveying (HDS0 using a terrestrial-mounted laser scanner, and subaqueous surveys with a Z-Boat, which is a small remote controlled boat as follows:

- Pavement rehabilitation strategies: Collier County is currently identifying alternative methods for repairing roadways. These include asphalt patching, chip seal, asphalt reclamation, slurry seal, construction analysis for pavement rehabilitation strategies (CA4PRS) (<http://www.fhwa.dot.gov/research/deployment/ca4prs.cfm>), and using 3D modeling for more accurate milling and overbuild quantities.
- HDS using a terrestrial-mounted laser scanner. This type of survey is ideal for roadway and intersection locations, as it is faster, non-intrusive, and safer (field personnel are not required to physically locate the various

objects within the active roadway). Topographic surveys are expedited and provide significantly more detail.

Subaqueous surveys with a Z-Boat: The small remote controlled Z-Boat (pictured below) facilitating data collection in ponds, rivers, small lakes keeping field personnel out of hazardous conditions. On board is a small computer, a long-range Bluetooth device (+/- 2000 feet), GPS antenna, a sonar system, RC communication, two electric boat motors, a servo motor to turn the motors, and three large batteries to power the system facilitating delivery of accurate underwater topographic information.



**Photo 15- Z-Boat shown surveying a local canal.**

**Safety Innovation:** Collier County performs roadway safety audits (RSAs) and pedestrian safety studies to identify and correct dangerous roadway conditions. RSAs have proven to save lives, reduce delays, reduce resources needed for motor vehicle crashes (police and fire departments, roadway repairs, etc.). Collier County's innovative approach to safety balances the traditional improvements that result from these RSAs with new technologies. For this project the use of the Glow-in-the-Dark Pathways (being evaluated) and Safety Edge (will be implemented) will be the innovative technologies.

- Glow-in-the-Dark Pathways: Glow-in-the-Dark Pathways improve safety by increasing visibility. The glow material absorbs light during the day to create a luminous glow at night which helps light the path without having to budget for additional lighting. This innovative feature, if utilized, will be a first in the area and help establish this pathway as a destination for tourists and help encourage use of the facility by residents.
- Safety Edge: The Safety Edge is a simple but effective solution that can help save lives by allowing drivers who drift off highways to return to the



**Photo 16- Netherlands Glow Path by Daan Roosegaard**

road safely. Instead of a vertical drop-off, the Safety Edge shapes the edge of the pavement to 30 degrees. Research has shown this is the optimal angle to allow drivers to re-enter the roadway safely. The asphalt Safety Edge provides a strong, durable transition for all vehicles. Even at higher speeds, vehicles can return to the paved road smoothly and easily. The FHWA's goal is to accelerate the use of the Safety Edge technology, working with States to develop specifications and adopt this pavement edge treatment as a standard practice on all new paving and resurfacing projects.

[http://safety.fhwa.dot.gov/roadway\\_dept/pavement/safedge/brochure/](http://safety.fhwa.dot.gov/roadway_dept/pavement/safedge/brochure/)

**Funding Innovation:** The Collier Community Streets and Infrastructure Project (CCSIP) is being funded by Collier County in addition to the requested TIGER grant funds. The public funds are a traditional source of funding, but the how public funds were obtained (ad valorem, roadway impact fees and utility funds) provides an innovative method for procuring project funding sources.

### 5.3 Partnership

The applicant for this grant is Collier County, Florida. All five members of the Collier County Board of County Commissioners are members of the Collier

MPO established in 1982. Additional MPO members include two from the City of Naples, one from Everglades City, and one from the City of Marco Island. FDOT is represented on the board as a non-voting member.

The Collier MPO is responsible for the development and implementation of a balanced, integrated, and multimodal program which efficiently moves traffic. The MPO's goal is to ensure that a continuing, comprehensive and cooperative approach to planning for transportation needs is maintained and properly coordinated with other MPOs, FDOT and FHWA, as well as MPO committee members and members of the public. The Collier MPO works with Collier County and other member governments to establish transportation plans and priorities including roads, aviation, transit, bicycle and pedestrian facilities.

Collier County currently coordinates with 46 Advisory Boards and Committees. They actively solicit new membership and encourage participation on the Collier County website (<http://www.colliergov.net/Index.aspx?page=1629>). The jurisdictional and stakeholder collaboration as well as the disciplinary integration of transportation needs with other projects support the public interest.

**Jurisdictional and Stakeholder Collaboration:** The Collier MPO encourages public involvement from its committees and members of the public and strives to maintain transparency in the transportation planning process and they consider public involvement to be one of their most important responsibilities.

In addition to the MPO Board there are five MPO Advisory Committees including the Technical Advisory Committee (TAC), Citizens Advisory Committee (CAC), Pathways Advisory Committee (PAC), Congestion Management System / Intelligent Transportation System Committee (CMS/ITS) and the Local Coordinating Board (LCB). The Committees range in size from 9 to 17 members and some include non-voting members. Depending on the Committee, membership may be composed of all public agency members, all citizen members, or a mix of the two. On its website, the MPO solicits candidates for vacancies on its Advisory Committees:

<http://colliermmpo.com/index.aspx?page=25&recordid=126&returnURL=%2findex.aspx%3fpage%3d1>



# TIGER 2015 APPLICATION



The PAC is a citizen's panel who advise the MPO Board on issues related to the Bicycle and Pedestrian Program. The PAC provides recommendations and information on bicycle and pedestrian plans and projects. In addition to recommending pathway projects for state and federal funding, the PAC also advises the Board for the Transportation Enhancement program and the Regional Pathways network, and assists in developing and maintaining Collier MPO's Comprehensive Pathway Plan.

In December 2012, the Collier MPO published the Comprehensive Pathways Plan with assistance from a Stakeholders Working Group that included members of the PAC as well as staff members from Collier County (alternate transportation modes), City of Naples (engineering), City of Marco Island (utilities), Naples Pathways Coalition, Conservancy of Southwest Florida, Collier County Health Department and the Bayshore Gateway Triangle Community Redevelopment Agency.

*"Bike Walk Lee was a champion of the Lee MPO's successful Tiger V grant application for its Complete Streets Initiative project, awarded in September (2014). We see this proposed Collier County project as improving the bike/ped/transit link between our two counties near the southern terminus of our TIGER project, which is beginning construction this summer."*

*~ Darla Letourneau, BikeWalkLee*

**Disciplinary Integration:** The MPO's LCB is a 17 member Board that identifies local transportation service needs and provides information, advice, and direction on the coordination of services to be provided to the transportation disadvantaged. Also, the LCB reviews the amount and quality of service being provided to the County's transportation disadvantaged population. Although focused on transportation, member agencies represent a variety of non-transportation public agencies including Public Education, Florida Department of Children and Families, Education Division of Vocational Rehabilitation Services, Florida Department of Elderly Affairs, Florida Agency for Health Care Administration, Children at Risk, and the Southwest Florida Workforce Development Board. It is an excellent example of transportation supporting non-

transportation public agencies. In addition to these partners, letters of support were received from the following individuals, government agencies, and other organizations. The actual letters are included **Attachment B: Letters of Support**.

- United States Senator Bill Nelson
- United States House of Representatives –Curt Clawson
- Florida House of Representatives –Kathleen Passidomo
- Florida House of Representatives –Matt Hudson
- Florida State Senator – Garrett Richter
- Collier County Public Services Department
- Collier MPO
- Florida Health
- Florida Bicycle Association
- Urban Land Institute
- Lee County MPO
- Collier County Public Schools
- JFCS of Southwest Florida
- Community Traffic Safety Team
- Naples Pathways Coalition (NPC)
- BikeWalkLee
- North Collier Fire Control and Rescue District
- Blue Zones Project
- Municipal Service Taxing Unit (MSTU)



## 5.4 Benefit-Cost Analysis

The Vanderbilt Drive Benefit-Cost Analysis (BCA) has been developed using the TIGER BCA Guidance<sup>1</sup> and the TIGER BCA Resource Guide<sup>2</sup>.

The Vanderbilt Drive Corridor Improvements Project will cost \$16.145 million (2015 dollars), of which \$12.916 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 travelled (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 along Vanderbilt Drive due to the scheme providing improved sidewalk and cycle routes.

In addition, by replacing three functionally obsolete bridges and failing pavement, the project will improve the state of good repair and reduce future maintenance costs. In agreement with TIGER applications guidance we have converted prices to 2013 \$ values and calculated present values using a discount rate of 3% because the funds would otherwise be used for public expenditures. The project has been appraised over a 20-year period following the end of construction.

**Table 4** summarizes the benefits and costs of the project over the appraisal period. The project delivers a Net Present Value (NPV) of \$2.3m.

<sup>1</sup> <http://www.dot.gov/sites/dot.gov/files/docs/TIGER%20BCA%20Guidance%202014.pdf>

<sup>2</sup> <http://www.dot.gov/sites/dot.gov/files/docs/TIGER%20BCA%20Resource%20Guide%202014.pdf>

**Table 4: Benefits and Costs**

Time savings (\$2013)	\$0
Vehicle operating cost savings (\$2013)	\$6,701,024
Highway maintenance savings (\$2013)	\$1,201,791
Safety benefits (\$2013)	\$17,966,547
Emissions excluding CO2 (\$2013)	\$111,285
Healthcare benefits (\$2013)	\$942,462
Capital costs (\$2013)	(\$15,657,928)
Operating and maintenance costs (\$2013)	\$1,565,793
Undiscounted net benefits (\$2013)	\$9,699,388
Discounted net benefits (NPV, 3%)	\$2,269,994
CO2 emissions benefits (NPV, 3%)	\$78,599
<b>3% NPV total benefits</b>	<b>\$2,348,594</b>

**Capital Costs:** The capital cost for the scheme is \$16.145 million expressed in 2015 dollars and disaggregated as shown in Table 2, Section 4. TIGER grant contribution of 80% or \$916 million is being sought with the remaining 20% or \$3.229 million being provided by Collier County. It is assumed for the purpose of the BCA that the capital costs are incurred equally in 2017 and 2018, with construction complete in 2019.

**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.

**Time saving benefits:** Time savings have been estimated as follows. The 2014 all day traffic volumes (ADT) for the project area have been assumed to grow at the average growth rate of the previous 4 years, i.e. 4.4% per year. The signalized delay for the build and no build scenarios has been estimated using two different methods and the average of the two methods gives the average delay saving for a given year between build and no build. These savings are converted into a total daily saving using a time of day profile. The value of this time saving is estimated using the recommended monetized values in the TIGER BCA Resource Guide, assuming a split of 95.2% autos and 4.8% trucks based on vehicle classification counts on Vanderbilt Drive, and an average vehicle occupancy of 1.285 estimated by comparing the number of registered vehicles to the total population in Collier County.

**Safety benefits:** The introduction of a segregated sidewalk and cycle route is assumed to remove all pedestrian and bicycle crashes along Vanderbilt Drive between Vanderbilt Beach Road and Bonita Beach Road. Crash data from 2000 to 2015 has been analyzed to estimate an average number of pedestrian and cycle crashes per year along this segment of the route, as shown **Table 5** and **Table 6**.

Analysis of historical crashes<sup>3</sup> provides a likelihood of a fatality or an injury per crash.

It is assumed that non-reported crashes do not cause any injuries, this may understate the safety benefits. The number of crashes is assumed to increase in line with overall growth in ADT.

**Reduction in Vehicle Miles Traveled:** The reduction in VMT drives benefits in terms of vehicle operating costs, highways maintenance costs, emissions and

healthcare costs. A reduction in VMT has been assumed based on 2.5% of trips along Vanderbilt Drive between Vanderbilt Beach Road and Bonita Beach Road being replaced by equivalent walk or cycle trips of an average 2-mile length. This is based on analysis of the shift from vehicles to bicycle (2.57%) and to walk (2.65%) for the Lee County Complete Streets Initiative TIGER application.

**Vehicle Operating Costs:** A reduction in vehicle operating costs of \$0.59 per VMT has been assumed based on the Bureau of Transportation Statistics (Cost of Owning and Operating an Automobile, 2011)<sup>4</sup>. This is assumed to appreciate at 2.12% per annum.

**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>5</sup>.

**Emissions:** Emissions benefits occur as a result of the reduction in VMT. The following emissions rates have been used, sourced from the Average annual Emissions and Fuel Consumption for Gasoline-Fuelled Passenger Cars and Light Trucks<sup>6</sup>:

- Carbon dioxide – 369g/VMT
- Hydrocarbons (Volatile Organic Compounds) – 1.36g/VMT
- Particulate Matter – PM10 0.0052g/VMT, PM2.5 0.0049g/VMT
- Nitrous Oxides – 0.95g/VMT

Economic costs associated with these emissions have been valued using the TIGER BCA Resource Guide.

<sup>3</sup> <http://www.colliermipo.com/modules/showdocument.aspx?documentid=5389>

<sup>4</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>5</sup> Development of a Pavement Maintenance Cost Allocation Model, Institute of Transportation Studies – University of California, Davis.

<sup>6</sup> EPA Report 420-F-05-022



**Table 5: Pedestrian and Bicyclists Crash Data  
2000-2015 for Vanderbilt Drive**

Bonita Beach Road to Wiggins			South of Wiggins to Vanderbilt Beach Road			Bonita Beach Road to Vanderbilt Beach Road		
Year	Bicycle	Pedestrian	Year	Bicycle	Pedestrian	Year	Bicycle	Pedestrian
2000	NA	NA	2000	NA	NA	2000	0	0
2001	NA	NA	2001	NA	NA	2001	1	0
2002	NA	NA	2002	NA	NA	2002	0	1
2003	NA	NA	2003	NA	NA	2003	3	0
2004	NA	NA	2004	NA	NA	2004	2	0
2005	0	0	2005	2	1	2005	2	1
2006	0	0	2006	0	0	2006	0	0
2007	2	1	2007	2	1	2007	4	2
2008	1	0	2008	3	1	2008	4	1
2009	0	0	2009	0	0	2009	0	0
2010	0	1	2010	1	0	2010	1	1
2011	1	0	2011	1	0	2011	2	0
2012	0	2	2012	0	1	2012	0	3
2013	0	0	2013	0	0	2013	0	0
2014	0	0	2014	0	0	2014	0	0
2015	0	0	2015	0	1	2015	0	1
Total	4	4	Total	9	5	Total	19	10
Avg. per year	0.25	0.250	Avg. per year	0.5625	0.313	Avg. per year	1.1875	0.625

**Table 6: Pedestrian and Bicyclists Crash Data**

Collier County Average		Number	Proportion
Pedestrian	Killed	6	6%
	Injured	88	94%
Bicycle	Killed	2	2%
	Injured	94	98%

**Health benefits:** The reduction in VMT will lead to an increase in the number of walking and cycle trips, thereby leading to health benefits. In Florida, the physical inactivity rate is 25.4%<sup>7</sup>. A healthcare cost saving of \$585.97 per year has been assumed<sup>8</sup> and for every 1,000 trips removed from the road it is assumed that 254 of them will involve people who are physically inactive, thereby providing a cost saving.

### 5.5 Federal Wage Rate Certification

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 2015 Appropriations Act.

<sup>7</sup> State Indicator Report on Physical Activity, 2010

<sup>8</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)



## 6 Planning Approvals

### 6.1 NEPA

Over the past few decades, growth resulted in increased demand on the Collier County street network for motorized and non-motorized vehicles as well as pedestrian use. One critical area in Collier County is the heavily congested Vanderbilt Drive (CR 901) corridor from Vanderbilt Beach Road (Collier County) north to Bonita Beach Road (Lee County). As a north-south major collector roadway that runs parallel to the west of US 41 (SR 45, Tamiami Trail North) between Vanderbilt Beach Road (CR 862) and Bonita Beach Road (CR 865), this roadway is part of the Collier County hurricane evacuation route. Vanderbilt Drive provides access to numerous residential communities and various recreational facilities. But, currently Vanderbilt Drive lacks integration with other transportation modes and connectivity to destinations.

In addition to alleviating the motorized vehicle congestions, this project will complete a local street network to:

- Increase level of service for motorized vehicles and access to residential communities, commercial centers, the beach, park & ride facilities and park & boat facilities
- Improve emergency departure conditions within this hurricane evacuation route with structurally sound bridges and wider lanes
- Alleviate local roadway flooding due to undersized stormwater facilities
- Expand safety features with separated bike/pedestrian facilities, augmented lighting, and improved warning signage
- Enhance connection to transit facilities
- Update utilities in conjunction with transportation improvements for reduced construction impacts, reduced wastewater pipe leakage potential, and improved service to the residential and business community

The adopted 2030 LRTP identifies Vanderbilt Drive as an existing bicycle route with no paved shoulders or bicycle lanes and a pedestrian priority. Compounded with the economic driver to provide connectivity with the residential and commercial properties within the project area, Collier County invested in data investigations and design/permitting efforts. As the individual project design efforts for roadway, utilities and bridge work began, the need to look at the corridor as a whole from all perspectives became clear.

To facilitate the NEPA discussion, the improvements are outlined in two main segments with the past efforts identified as follows:

- North Segment (111th Avenue to Bonita Beach Road):
  - ✓ West side pathway and sidewalk construction. 100% plans completed.
  - ✓ Roadway construction and replacement of existing bridges (Bridge No. 030177 and 030178). 60% plans completed.
- South Segment (Vanderbilt Beach Road to 111th Avenue):
  - ✓ Replacement of Delnor Wiggins Bridge (Bridge No. 030149) on Bluebill Avenue. Expedited design required.
  - ✓ Pathway and sidewalk construction identified by the Pathways Advisory Committee (PAC) Expedited design required.

Each of these efforts included outreach to the residential, business, and permit agency stakeholders.

For this multi-faceted project, the first step will be to partner with FDOT and to initiate the NEPA coordination with the FHWA. The goal will be to confirm the Type 2 Categorical Exclusion checklist. The public meetings will communicate the consolidated effort and gain input. After incorporating stakeholder input, the public notice will provide the documentation needed that the public had the opportunity to comment and expedite the completion of the NEPA action. But, no public controversy is expected.

A few of the key NEPA compliance elements documented in the permits, design plans, and Geographic Information System (GIS) desktop information are:



- There are no parks, public conservation lands, or other publicly owned lands directly impacted by the improvements, therefore no Section 4(f) or Section 6(f) involvement.
- There are no historical or archaeological resources mapped adjacent to the project area. Also, the nearby permits have no resources documented by the State Historic Preservation Officer, therefore no Section 106/4(f) involvement.
- With no right-of-way required, no residential or business relocations, therefore no disproportionate impact to disadvantaged and transit dependent populations.
- The bridge replacements will have minor impact on floodplains mapped by the Federal Emergency Management Agency and wetlands identified using the SFWMD Florida Land Use and Cover Classification system mapping. But, the work will not affect the function or quality of these mapped resources.

- Although within US Fish and Wildlife Service Consultation Areas, no significant habitat or adverse impact is expected.
- The past roadway permits in the area indicate consistency with the Florida Coastal Management Program.
- A portion is mapped as Outstanding of Florida Water designation. But, no impact is expected.

Finally, the adopted 2030 LRTP identifies Vanderbilt Drive as an existing bicycle route, a Pedestrian Priority roadway, and roadway deficiencies due to 10' travel lanes, no paved shoulders, and no designated bike lanes.



**Photo 17 -Cocohatchee River Park on Vanderbilt Drive.**



**Photo 18- Bridge Replacement.**



**Photo 19- South Project Stormwater Enclosure.**

## 6.2 Legislative Approvals

There are no requirements for state legislative approvals for the Collier Community Streets and Infrastructure Project.

# TIGER 2015 APPLICATION



## Deviation from TIGER Grant Pre-Application

The Project budget and requested funding has deviated from the data provided during the Pre-application stage of the application process.

## TIGER 2015 Grant Pre-Application

Total Project Cost: \$12,500,000  
Matching Funding: \$2,500,000  
Grant Requested: \$10,000,000

## Final TIGER 2015 Grant Application

Total Project Cost: \$16,145,000  
Matching Funding: \$3,229,000  
Grant Requested: \$12,916,000

The scope of the project remains the same. The deviation in project cost can be attributed to escalating material and labor cost in the local market. Estimates were updated based on recent bid data for projects within the corridor area.

Thank you to the U.S. Department of Transportation (DOT) for giving Collier County the opportunity to be a part of the TIGER 2015 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 Community Streets and Infrastructure Project (CCSIP).

