



# REAL CHOICES WHEN NOT DRIVING NEEDS ASSESSMENT



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# REAL CHOICES WHEN NOT DRIVING NEEDS ASSESSMENT

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## Program Overview

The goal of the Real Choices When Not Driving investment program is to expand mobility options in the form of bus services, paratransit services for the Transportation Disadvantaged (TD), and walk/bike facilities that are separated from motorized vehicle traffic.

### Bus Service

This portion of the program evaluates the bus service that could be provided by Hillsborough Area Regional Transit (HART) under different levels of funding through 2045. The bus service analysis demonstrates how increased transit funding may improve the amount and quality of access to jobs and homes in the future.

### Transportation Disadvantaged Services

This portion of the program evaluates the amount and cost of paratransit service that could be provided through the Sunshine Line to county residents who cannot transport themselves to life-sustaining activities due to age, disability, income, and/or lack of access to bus services. The amount of service needed in the future will vary in part with changes in the size and reach of the countywide bus network.

### Trail and Sidepath Network

This portion of the program evaluates the availability of trails and sidepaths to the county population, based on varying levels of funding through 2045. Trails and sidepaths are paved facilities, typically eight to 12 feet wide, that allow for pedestrians and cyclists to pass each other in opposite directions. Sidepaths are located adjacent to a road but separated from motor vehicle lanes by a boulevard strip and/or a barrier, while trails typically are not located in road rights-of-way.



## Bus Service

### Data Collection

The primary source for this analysis was the most recent HART Transit Development Plan (TDP), dated September 2017. The TDP details the expansion of transit service by year and type of service through the horizon year of 2027, as well as the capital and operating costs by project, for a “Status Quo” funding scenario as well as a “Vision Plan” with expanded funding. In addition, HART staff identified potential transit improvements and associated costs for the fiscal years beyond the TDP time horizon, 2028-2045.

### Performance Measures Methodology

The performance measure used in this analysis is Transit Level of Service (TLOS), a measure of the quality of service from the passenger’s perspective, based on the frequency with which buses travel each road. The thresholds for the A (best) through F (worst) letter grade are consistent with the ARTPLAN methodology used by the Florida Department of Transportation (FDOT). For this analysis, the TLOS score for each road segment is based on the total number of buses of any route which travel that road each hour. Since HART typically is able to provide only a few trips per day on its express bus routes, the express routes were not included in this analysis. The TLOS score is determined based on the following definition:

- **LOS A:** >6 buses per hour < 10 min. – Passengers don’t need schedules
- **LOS B:** 4.01-6 buses per hour 10-14 min. – Frequent service, passengers consult schedules
- **LOS C:** 3-4 buses per hour 15-20 min. – Maximum desirable time to wait if missed bus
- **LOS D:** <3 buses per hour 21-30 min. – Service unattractive to choice riders
- **LOS E:** <2 buses per hour 31-60 min. – Service available during hour
- **LOS F:** <1 bus per hour >60 min. – Service unattractive to all riders

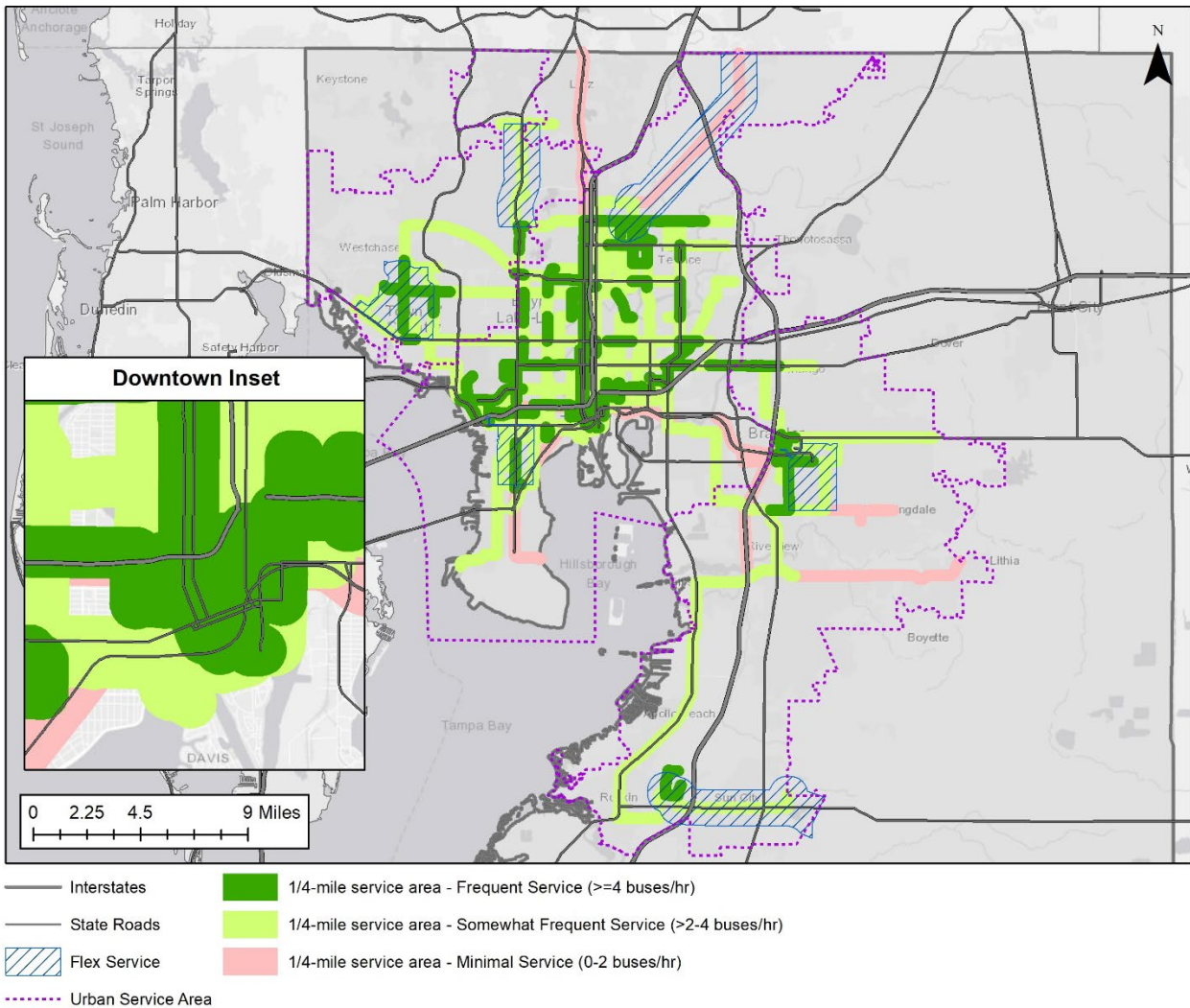
Using Geographic Information Systems (GIS), the existing and proposed bus routes were overlaid onto the roadway network, and the frequencies of the routes were summed to calculate the total number of buses per hour on each road. Each road was subsequently assigned a TLOS score, or no score if bus service was not provided.

### Investment Levels Methodology

Two potential levels of investment were developed for the Long Range Transportation Plan (LRTP). A detailed list of the improvements in each investment level, including capital and operating costs, is provided in **Appendix A**.

- **Trend Investment:** The trend investment level is based a “Status Quo” Plan developed by HART. The “Status Quo” is a financially constrained plan extrapolating today’s funding levels into the future. Service improvements are limited to those which can be implemented without increasing the number of buses needed at peak hour, since HART’s existing vehicle maintenance facility is very close to capacity. Therefore, the proposed improvements primarily include adding evening or weekend hours to existing routes and some higher frequencies. A map of the TLOS that would be provided under the trend investment level is shown in **Figure 1**. The bus service areas shown in the map are a ¼-mile buffer (about a 10-minute walk) around each route.

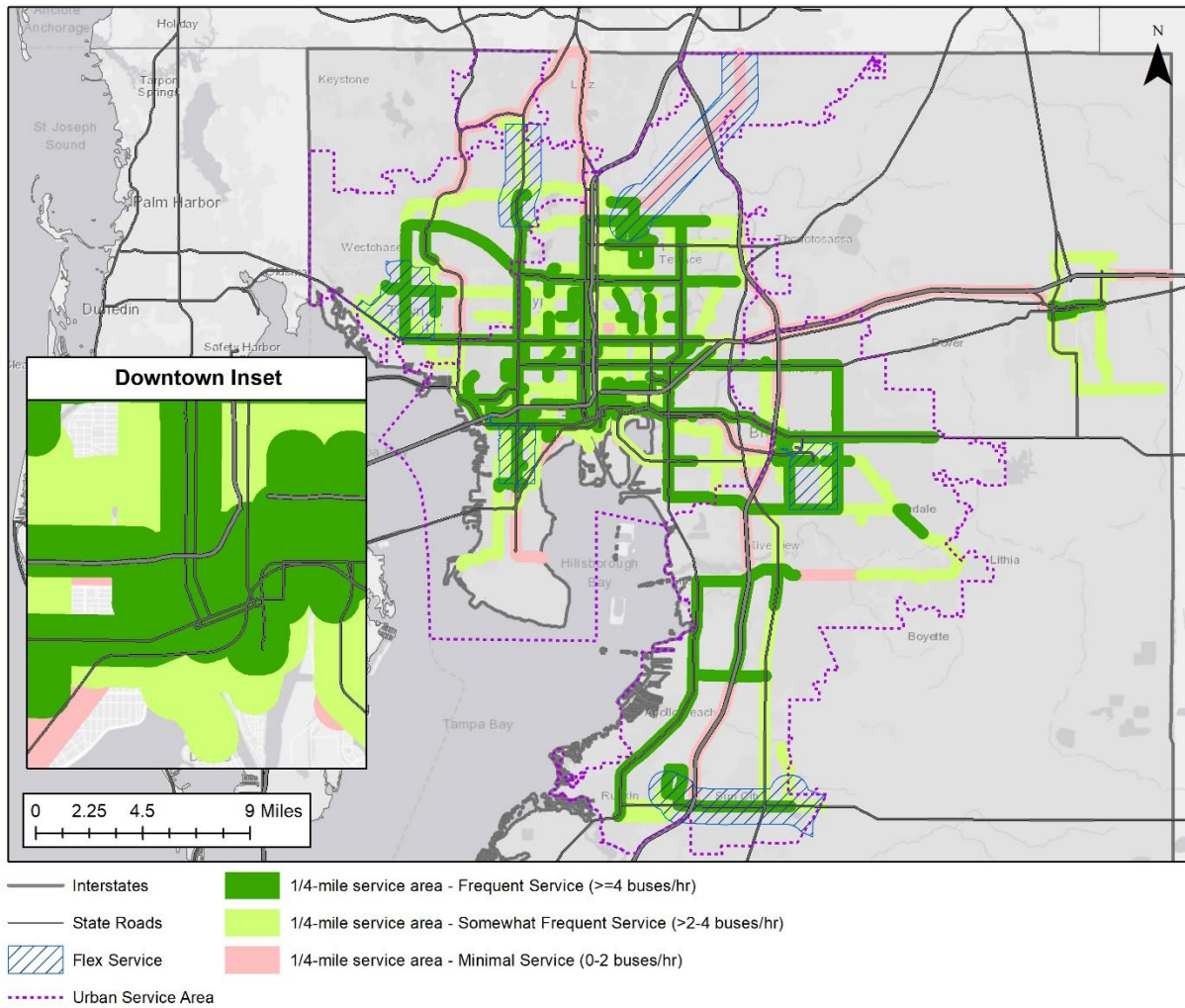
Figure 1: Transit Level of Service – Trend Investment



- Trend + Sales Tax Revenue Investment:** the trend + sales tax revenue investment level is based on HART’s Vision Plan. It adds the remaining service improvements identified as needed by HART, including 12 new or improved BRT/express bus routes, and at least 9 local or circulator route improvements. These express and flex/circulator routes expand the bus service area and provide cost-effective service to lower density communities. A map of the TLOS that would be provided under the trend + sales tax revenue investment level is shown in **Figure 2**.



Figure 2: Transit Level of Service – Trend + Sales Tax Revenue Investment



## Benefits Analysis Results

The benefits of service improvements vary across scenarios; higher investments improve residential and employment access to transit service, both countywide and within the Urban Service Boundary (USB) (Table 1). The statistics for the investment scenarios are also compared the existing transit network. Please see Appendix A for further details and cost calculations.

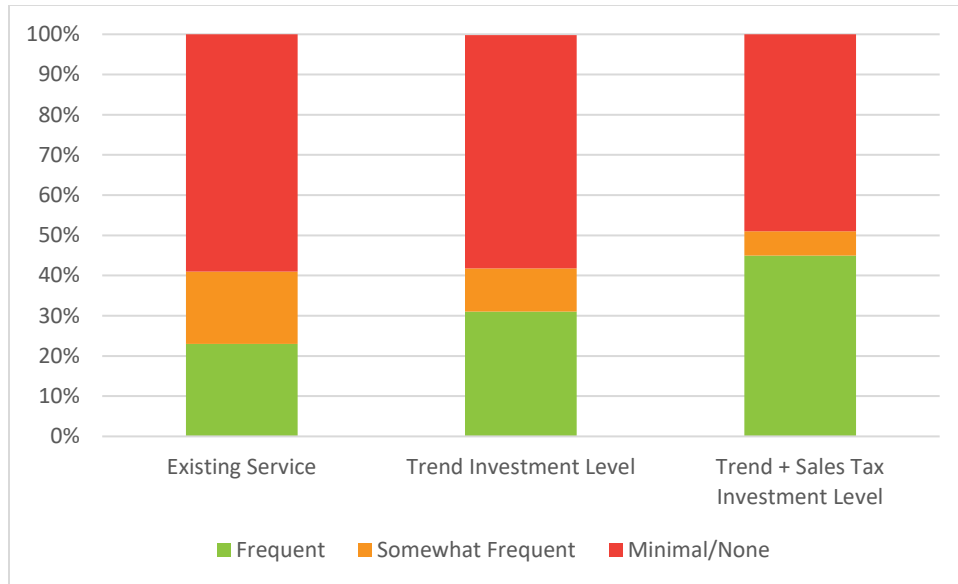
Table 1: Benefits and Cost by Investment Level

Investment Level		Statistics			
		<b>Costs</b>			
		<b>Total Cost (Capital and O&amp;M over 20 years)</b>		<b>\$2,091,728,820</b>	
		<b>Performance Measures</b>			
		<b>Frequent</b>	<b>Somewhat Frequent</b>	<b>Basic</b>	<b>Minimal / None</b>
		LOS A-B	LOS C-D	LOS E	LOS F
<b>Trend</b>	<b>2045 Countywide Population &amp; Jobs within 1/4 Mile of Transit</b>	31%	11%	0%	58%
	<b>2045 Urban Service Boundary Population &amp; Jobs within 1/4 Mile of Transit</b>	35%	12%	0%	53%
	<b>Roadway Centerline Miles</b>	96	220	0	59
		<b>Costs</b>			
		<b>Total Cost (Capital and O&amp;M over 20 years)</b>		<b>\$3,208,679,654</b>	
		<b>Performance Measures</b>			
		<b>Frequent</b>	<b>Somewhat Frequent</b>	<b>Basic</b>	<b>Minimal / None</b>
		LOS A-B	LOS C-D	LOS E	LOS F
<b>Trend + Sales Tax Revenue</b>	<b>2045 Countywide Population &amp; Jobs within 1/4 Mile of Transit</b>	45%	6%	0%	49%
	<b>2045 Urban Service Boundary Population &amp; Jobs within 1/4 Mile of Transit</b>	51%	6%	0%	43%
	<b>Roadway Centerline Miles</b>	306	470	0	280
		<b>Performance Measures</b>			
		<b>Frequent</b>	<b>Somewhat Frequent</b>	<b>Basic</b>	<b>Minimal / None</b>
		LOS A-B	LOS C-D	LOS E	LOS F
<b>Existing Service (2019)</b>	<b>2015 Countywide Population &amp; Jobs within 1/4 Mile of Transit</b>	21%	16%	3%	60%
	<b>2015 Urban Service Boundary Population &amp; Jobs within 1/4 Mile of Transit</b>	23%	18%	4%	56%
	<b>Roadway Centerline Miles</b>	52	192	69	87

“Frequent” transit service is defined as a minimum of 15-minute headways, “somewhat frequent” transit service is between 15- and 30-minute headways, “basic” transit service is between 30- and 60-

minute headways, and “minimal/none” is 60-minutes or greater during the peak periods. Roadway system miles without transit service are not included in these tallies. The percentage of people and jobs that would be served at each investment is shown in **Figure 3**.

*Figure 3: Percentage of countywide population & jobs within ¼-mile of transit in 2045*



## Transportation Disadvantaged Services

Persons who may be considered transportation disadvantaged include the elderly, disabled, low-income, or children considered “high risk” or “at-risk.” A fraction of each of these demographic groups is unable to transport themselves or to purchase transportation and may be eligible for transportation provided by social service agencies.

As the Baby Boom generation moves into its golden years, the potential TD population in Hillsborough County is expected to increase from approximately 468,111 in 2019 to an estimated 644,665 by 2045.

Currently, Hillsborough County’s Sunshine Line provides door-to-door transportation and bus passes for elderly, low-income, and disabled persons without their own transportation. Transportation is provided primarily to medical appointments and Hillsborough County’s Aging Services day care and nutrition sites, but non-medical trips are provided on a space-available basis.

### Data Collection and Review

Door-to-door transportation services are primarily provided to persons who are unable to use HART’s transit or paratransit services. To estimate the future population without access to HART, transit population coverage was calculated using GIS and placing a  $\frac{3}{4}$ -mile buffer, as required by the American’s with Disabilities Act, around local bus routes. Persons within this buffer who cannot use the bus system due to a disability are eligible for HART’s paratransit service. Data on future population came from the 2045 Socioeconomic Data Forecasts of the Planning Commission and MPO. Data on local bus routes came from HART. The  $\frac{3}{4}$ -mile buffers that were calculated around the routes were intersected with the Traffic Analysis Zones to determine how much of the population was covered by the route service areas, and the analysis assumed an even distribution of population within the zones. For HART Flex routes, the Flex zone was used instead of the buffer.

### Forecast of Transportation Disadvantaged Population

The Florida Commission for the Transportation Disadvantaged (CTD) commissioned the Center for Urban Transportation Research (CUTR) to develop a new methodology to forecast paratransit services demand. The Forecasting Paratransit Services Demand – Review and Recommendations report was adopted by the CTD in 2013, and all counties were directed to use this methodology when forecasting TD populations and demand. The methodology uses several data sources to determine the current and projected TD population. The main source of data is the American Community Survey (ACS). ACS data is collected annually and is reported in one-year, three-year, and five-year datasets. The five-year estimate from 2013-2017 was used for this analysis. Other data sources included the 2009 National Household Transportation Survey (NHTS) and the 2010 Survey of Income and Program Participation (SIPP).

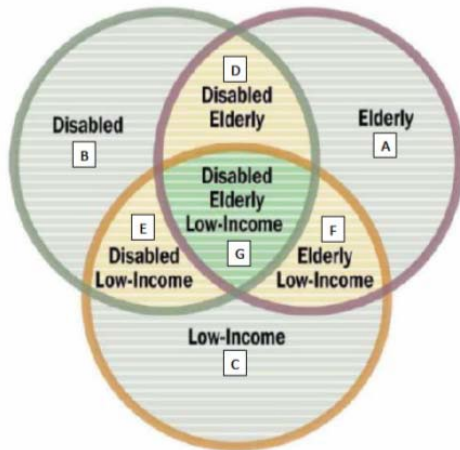
CUTR developed a spreadsheet model to forecast TD populations and trip demand. This model is available on the CTD website for download and was utilized in this analysis. There are required inputs to this model. First, utilizing the ACS five-year dataset for 2013-2017, the following basic population characteristics were input into the model:

- Total population by age
- Population below poverty level by age
- Total population with a disability by age
- Total population with a disability and below poverty level by age

Additional information entered into the model included the MPO population projections for 2020, 2025, 2030, 2035, 2040 and 2045, as well as the percent of transit coverage, based on the population within the HART service area divided by the total population of the county.

As shown in **Figure 4**, overlaps in the population characteristics make it necessary to eliminate duplications. Utilizing the inputs, the CUTR model eliminated duplicate populations. Using CUTR’s method, the estimated TD population for 2019 was 468,111 or 33 percent of the population. The TD population in 2045 is forecast to grow to 644,665, as shown in **Table 2**. See **Appendix B** for more detail.

*Figure 4: Overlap of Transportation Disadvantaged Population Characteristics*



**Overlapping Circle Component Description**

- A -Elderly / non-disabled / not low-income
- B - Non-elderly / disabled / not low-income
- C - Low income / not elderly / not disabled
- D- Elderly / disabled / not low-income
- E - Non-elderly /disabled / low-income
- F – Elderly / non-disabled / low-income
- G – Elderly / disabled / low-income

*Table 2: Projected TD Population*

Population	2019	2020	2025	2030	2035	2040	2045
<b>Overlapping Circle Component</b>							
<b>A</b>	116,766	118,230	129,461	139,092	146,880	154,065	160,806
<b>B</b>	71,588	72,485	79,371	85,275	90,050	94,455	98,588
<b>C</b>	169,775	171,903	188,233	202,236	213,560	224,007	233,808
<b>D</b>	58,726	59,461	65,110	69,954	73,871	77,484	80,875
<b>E</b>	27,726	28,073	30,740	33,027	34,876	36,583	38,183
<b>F</b>	14,364	14,544	15,926	17,111	18,069	18,953	19,782
<b>G</b>	9,165	9,280	10,162	10,918	11,529	12,093	12,622
<b>General TD Population</b>	468,111	473,977	519,004	557,612	588,835	617,640	644,665
<b>Total Population</b>	1,417,808	1,435,575	1,571,953	1,688,889	1,783,456	1,870,699	1,952,553



## Investment Levels Methodology

Of the projected TD population mentioned previously, a portion do not have access to HART bus service and are particularly in need of paratransit for transportation to medical and other life-sustaining activities. Therefore, as the bus system expands, the percent of the population lacking access to transit declines, as does the need for last-resort transportation services like Sunshine Line.

The population with access to bus service was defined as those living within ¼-mile of any non-express bus route. Total costs for these future paratransit trip needs were estimated using today's costs per trip (\$23.37) and trips per vehicle (2,710) that were calculated from data presented in the 2018 CTD Annual Operating Report (AOR) for Hillsborough County. **Table 3** below summarizes the costs for each investment level. Total capital and operating costs for TD services will be greater in the trend investment scenario due to a higher portion of the population unserved by transit. **Appendix C** includes a detailed breakdown of the supporting data.

*Table 3: Transportation Disadvantaged Services Needed Based on Bus Service Investment Levels*

Investment Level	TD Population Unserved by Transit in 2045	Annual Paratransit Trips Needed in 2045	Annual Operating Cost in 2045	Fleet Needed in 2045	Total Capital + Operating Cost, 2024-2045
<b>Trend Investment</b>	263,604	1,087,026	\$25,403,793	401	\$504,329,707
<b>Trend + Sales Tax Revenue Investment</b>	174,833	720,962	\$16,848,884	266	\$390,181,094

## Trail and Sidepath Network

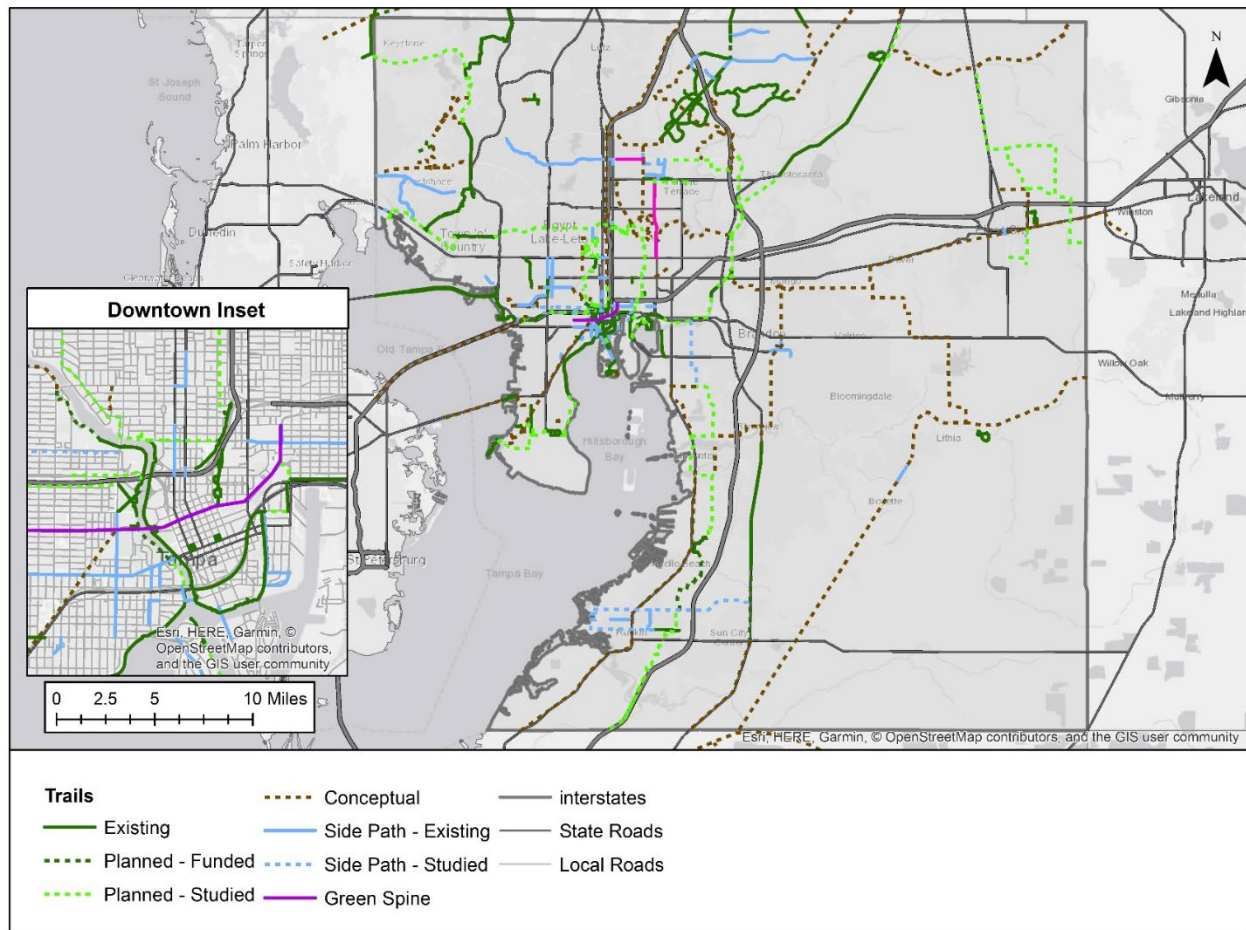
Considerable progress has been made throughout Hillsborough County in providing trails/sidepaths, and other shared-use facilities. Over the past decade, as Hillsborough County has continued to grow, the demand for protected, separated from traffic, shared-use facilities has grown. These separations could be a curb, flexible posts, green space, planters, and other means.

This analysis focuses on two types of protected, shared-use facilities: paved multi-use trails and paved sidepaths. Trails are typically completely separated from roads, often using utility and drainage easements or abandoned rail right-of-way, while sidepaths are located within the road right-of-way, typically along one side, and sometimes buffered by green space or a median.

### Data Collection and Review

The Hillsborough MPO completed a Greenways and Trails Master Plan in 2016. The Hillsborough-Tampa Greenways and Trails Master Plan focused on connecting past and programmed trail investments in Hillsborough County and its cities to activate longer, more contiguous routes for recreational and non-recreational trip making. These existing and proposed trails/sidepaths were used as the basis for the needs analysis and are displayed in **Figure 5**.

*Figure 5: Hillsborough-Tampa Greenways and Trails Master Plan Facilities*



## Performance Measure Methodology

The 2045 trail/sidepath needs analysis expands upon the analysis and performance evaluation conducted for the 2040 LRTP. In addition to examining population and employment density, measures examining trail/sidepath access to and from Communities of Concern and characteristics of adjacent roadways, including levels of traffic stress, were integrated into the prioritization process. It is important to note that the priorities reflected through this methodology are not necessarily reflective of the priorities of individual jurisdictions of Hillsborough County– which are ultimately decided by an elected council or commission.

All existing and proposed trails and sidepaths were given a score between 1 and 5 for each of the following performance measures.

### *Population and Employment Density*

Using the 2045 population and employment projections, densities were calculated by traffic analysis zone (TAZ). Population and employment densities were categorized on a scale of 1 – 5 based on a geometrical interval method, with 5 being the highest density. A percentage of each trail/sidepath length within a high population or employment density zone of 4 or 5 was calculated. Based on the percentage of the trail/sidepath length in a high-density employment or population TAZ, a score of 1 – 5 was assigned to that facility. Facilities with 80% or more of their total length within a high-density employment or population TAZ were given a score of 5, 60% or more a score of 4, 40% or more of its length a 3, 20% or more of its length a 2, and 1 if under 20% of its total length. **Figure 6** shows the overlap of the trail facilities and the population densities and **Figure 7** shows the same for employment.

Figure 6: 2045 Population Densities and Trails/Sidepaths

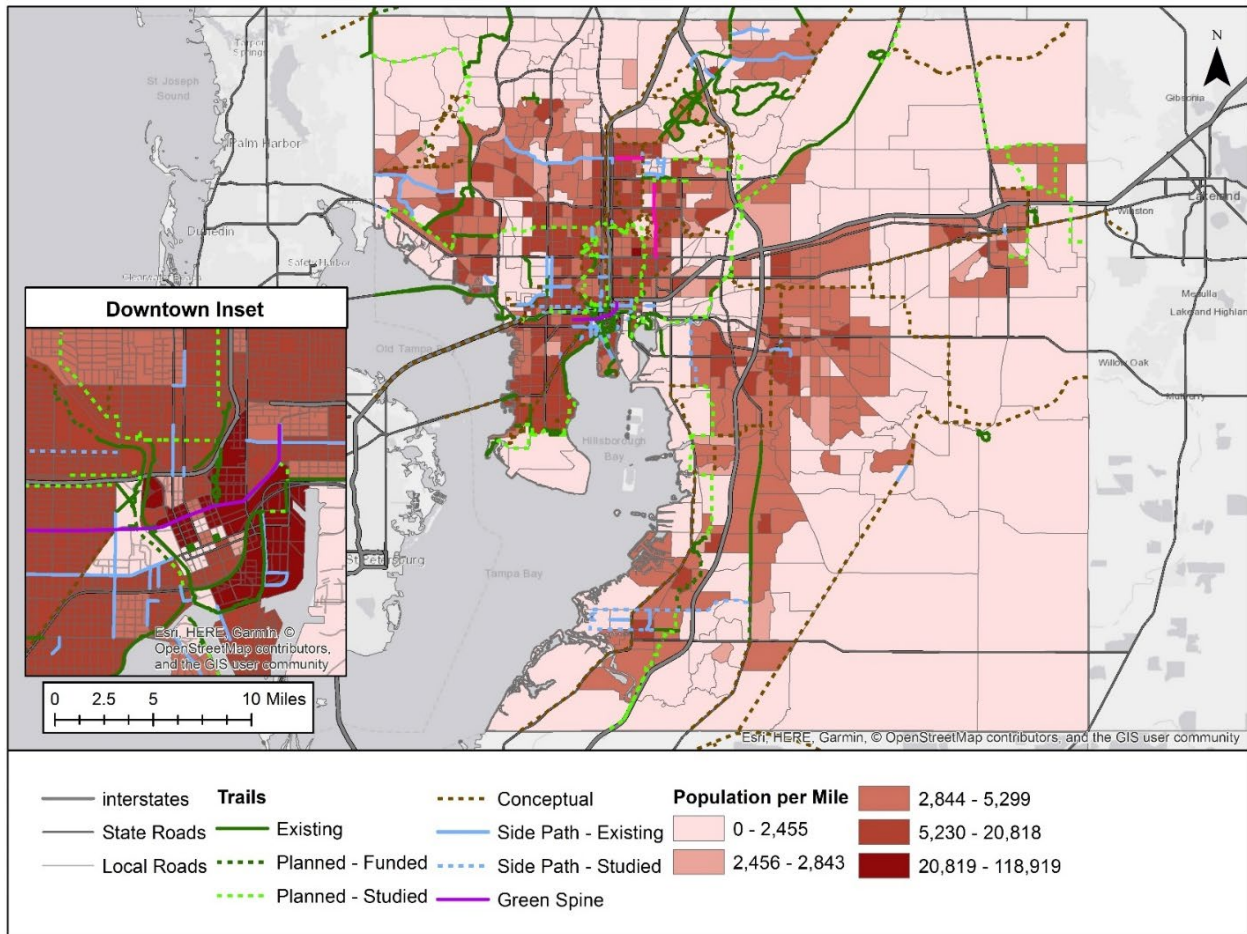
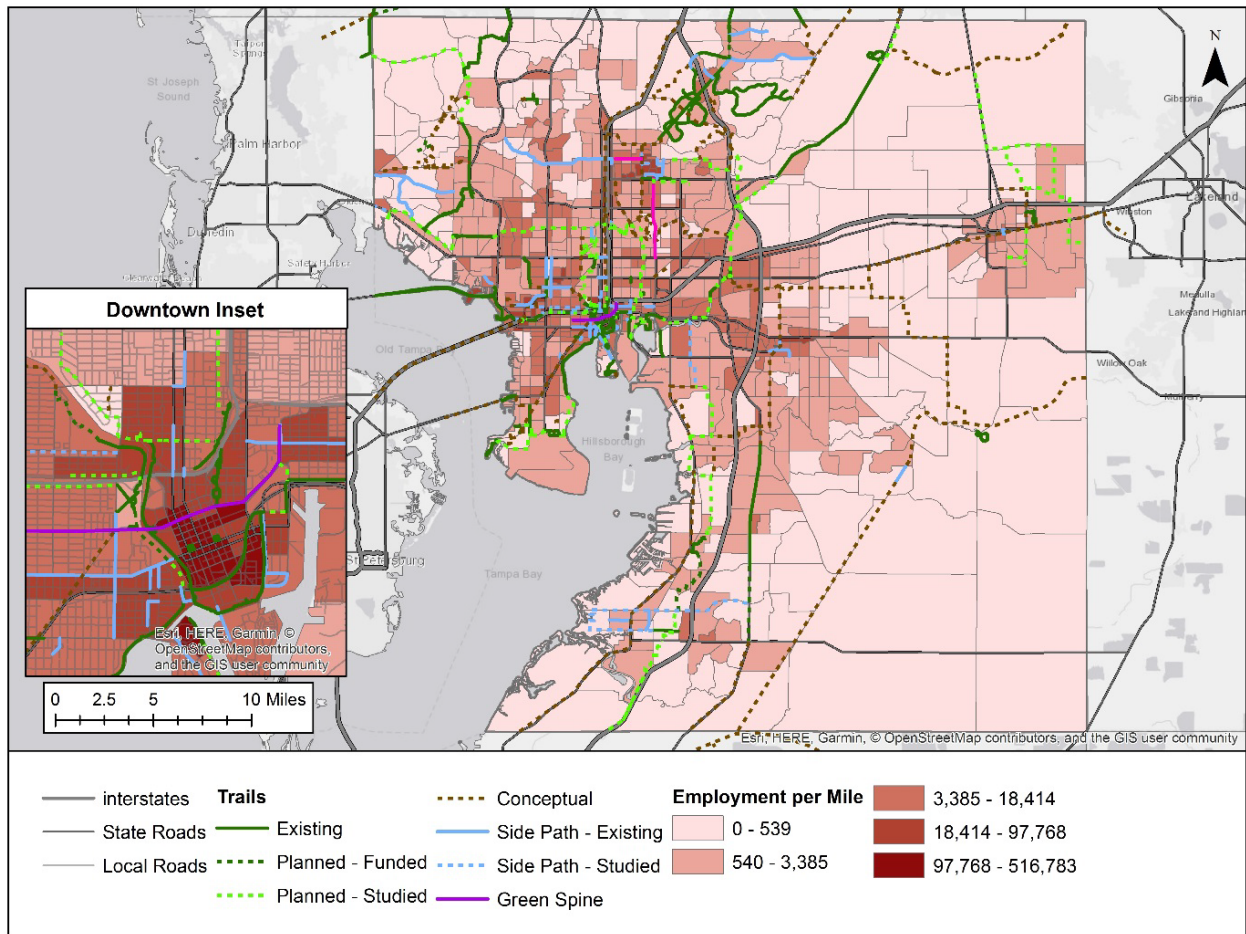




Figure 7: 2045 Employment Densities and Trails/Sidepaths





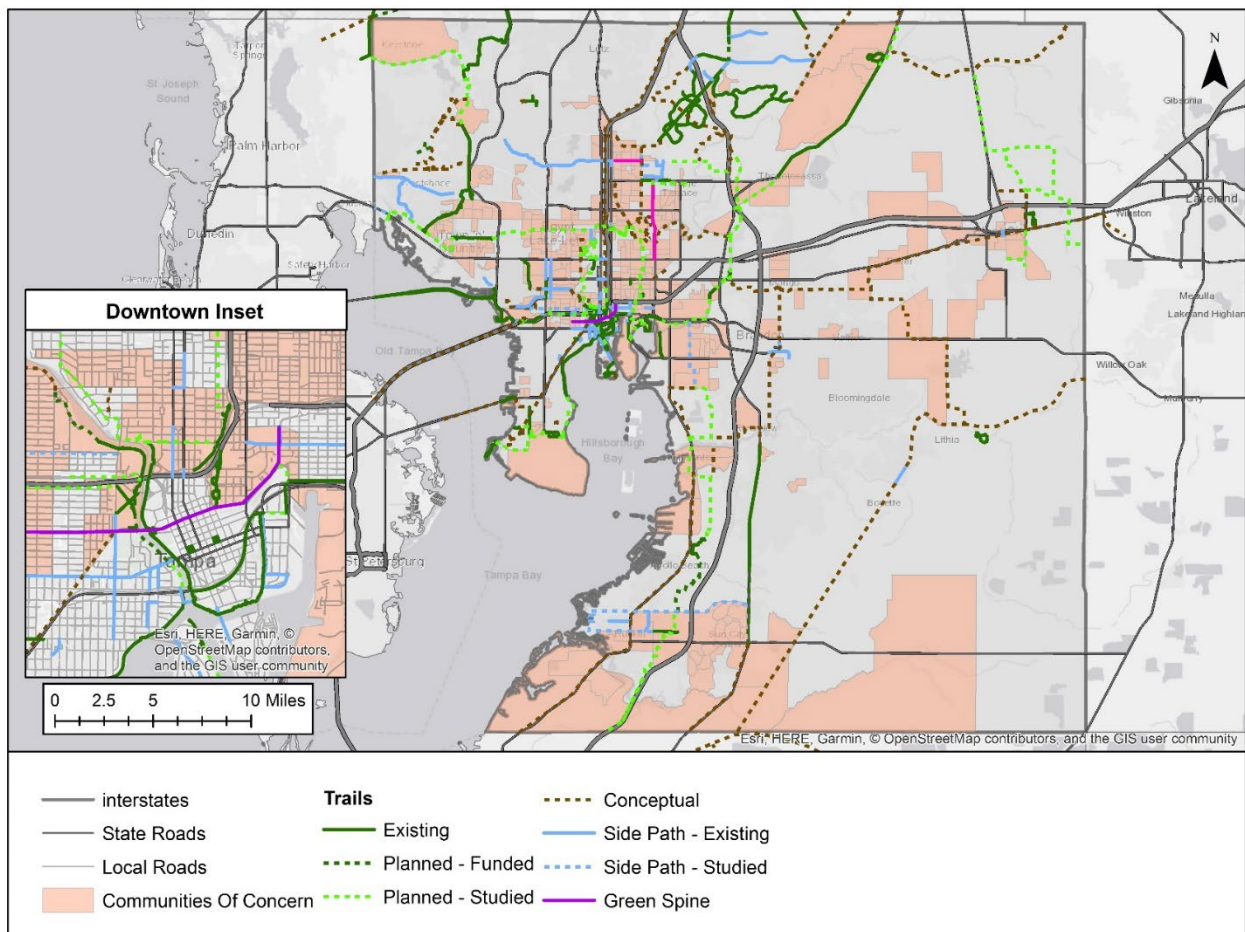
*Access to and from Communities of Concern*

The Hillsborough MPO updated its Title VI Non-Discrimination Plan in 2018. This update contains a new set of indicators called Communities of Concern, which identifies populations that may face significant or disproportionate burden with regard to accessing transportation and transportation services. As part of the Health in All Policies program, the miles of trails and sidepaths near these identified populations has been identified as a performance metric for evaluating MPO plans and projects.

For purposes of prioritizing trails/sidepaths, the number of miles of these facilities that traverse Communities of Concern was calculated as a percentage of the total length of the facility. Facilities with greater than 80% of their total length in a Community of Concern were given a score of 5, 60% a score of 4, 40% or more of its length a 3, 20% or more of its length a 2, and 1 if under 20% of its total length.

**Figure 8** illustrates the overlap of trail and sidepath facilities with the Communities of Concern.

*Figure 8: Communities of Concern and Trails/Sidepaths*



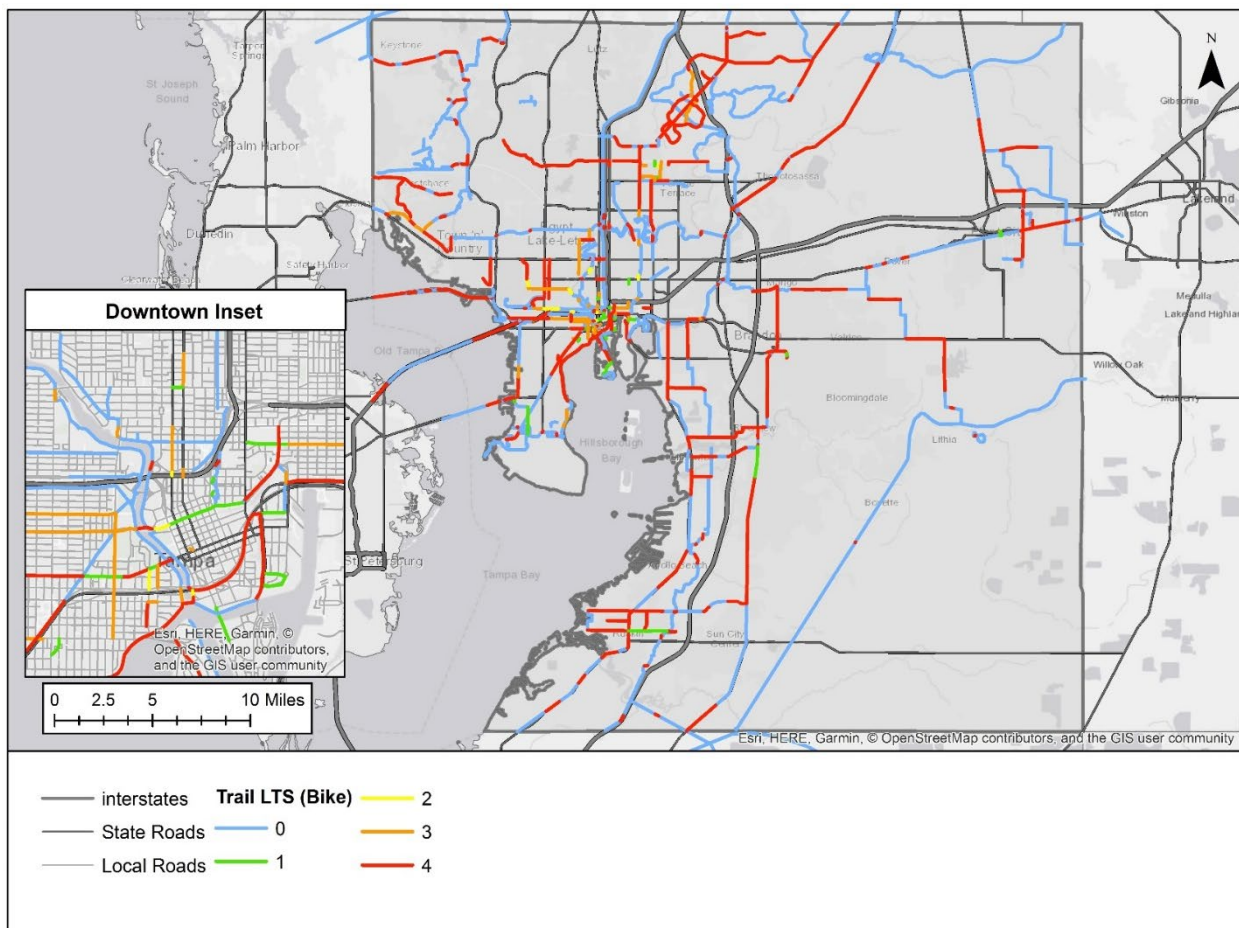
*Adjacent Roadways – Level of Traffic Stress*

The Level of Traffic Stress (LTS) methodology was adopted by the MPO in March 2019 to better evaluate and predict how bicyclists will experience the roadway – replacing the previously used Bicycle Level of Service (LOS) methodology. Unlike the Bicycle LOS methodology, the LTS method examines user tolerance for different types of facilities and traffic conditions. The methodology uses a weighted compilation of traffic volume, traffic speed, number of travel lanes, roadway and lane width, and presence of parking to determine an LTS classification of 1 through 4 – with LTS 1 meant to be a level that most children can tolerate, and LTS 4 tolerated only by those characterized as “strong and fearless” riders.

The trails/sidepaths were assigned a score based on the LTS score of adjacent roadways (within 100 ft.). Facilities outside the 100 ft. buffer of a roadway with an assigned LTS score were assigned a score of 0 and assumed to be completely or mostly separated from the right-of-way.

The percentage of the total facility length that fell into each LTS category was calculated – and the percentage sum of LTS 0, 1, and 2 was used to give a performance indicator score. Facilities with 80% or more of its total length in LTS 0, 1, or 2 were given a score of 5, 60% or more of its total length a 4, 40% or more of its length a 3, 20% or more of its length a 2, and 1 if under 20% of its total length. **Figure 9** shows the roadway LTS values that were used in calculating this measure.

*Figure 9: Level of Traffic Stress and Trails/Sidepaths*

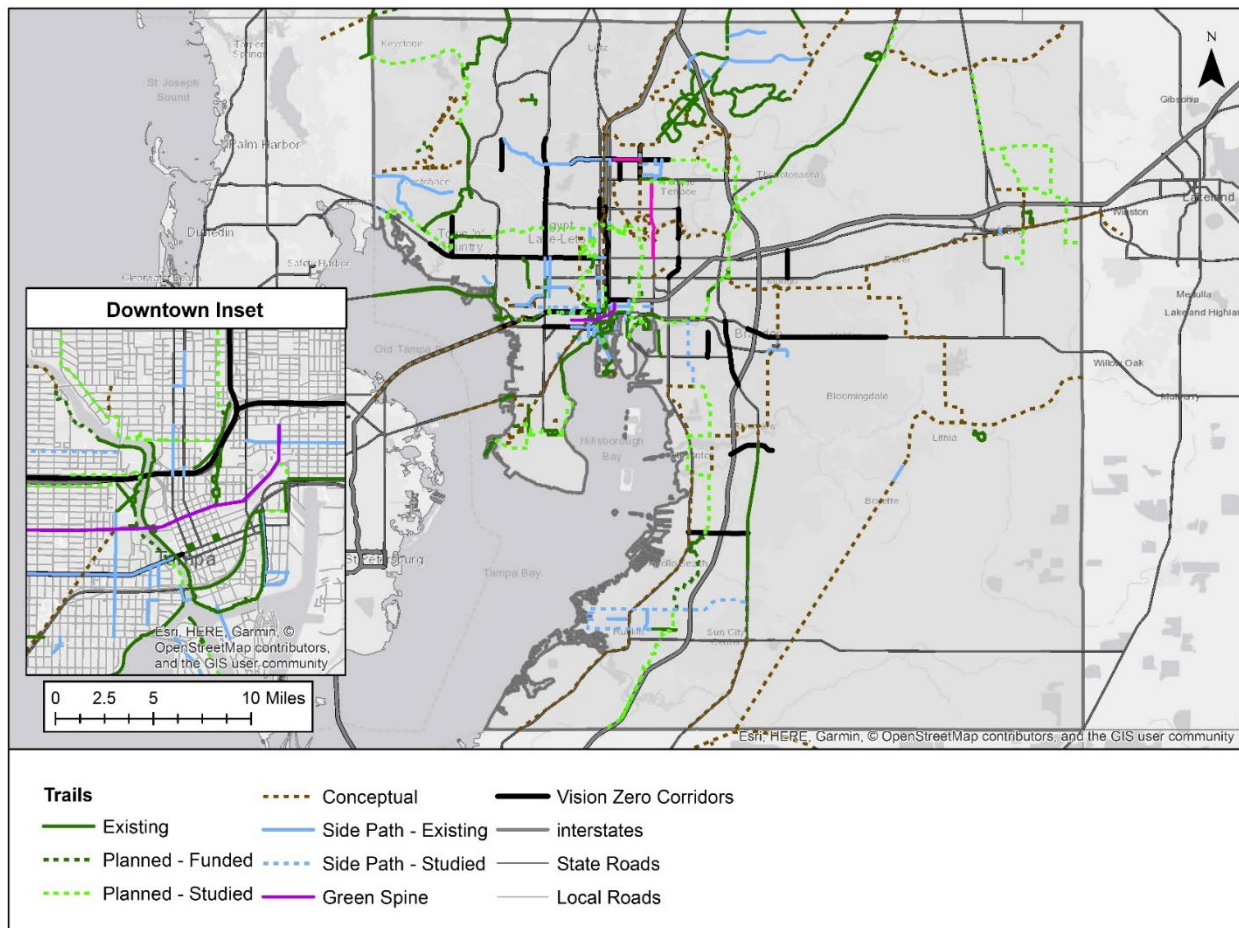


*Adjacent Roadways – Vision Zero Corridors*

The Hillsborough MPO, Hillsborough County, City of Tampa, City of Temple Terrace, City of Plant City, and Hillsborough Area Regional Transit (HART) have, through resolution, committed to incorporating the Vision Zero Action Plan into their operations. At the core of this international movement is the belief that traffic related deaths and injuries are preventable – that traffic crashes aren’t accidents, but the result of poor behavior combined with unforgiving roadway design. The Vision Zero policy establishes a goal of reducing traffic fatalities and serious injuries to zero. The Vision Zero Action Plan identified the top high fatality and injury corridors.

Using the MPO’s most recently updated Vision Zero Corridors, as shown in **Figure 10**, trail/sidepath facilities adjacent to these corridors were identified and the total length along these corridors calculated. The percentage of the total trail/sidepath facility length that is adjacent to a Vision Zero Corridor was calculated. Facilities with 80% or more of their total length adjacent to a Vision Zero Corridor were given a score of 5, with 60% or more of their length along a Vision Zero Corridor a 4, 40% or more of its length a 3, 20% or more of its length a 2, and 1 if under 20% of its total length.

*Figure 10: Vision Zero Corridors and Trails/Sidepaths*





## Investment Levels Methodology

The Hillsborough-Tampa Greenways and Trails Master Plan identified appropriate locations for new trails and sidepaths. Typical per-mile costs for trail/sidepath construction were estimated based on recent local project costs and applied to the needed corridors, giving each a preliminary cost estimate. The per-mile cost used for these facilities is \$945,081 as documented in **Table 4**.

*Table 4: Sampled Trails for Preliminary Cost Estimates*

Trails	Cost per Mile	Project Cost	Miles	Source
<b>South Coast County Greenway</b>	\$1,454,706	\$2,473,000	1.7	Hillsborough County 2019 CIP
<b>Sarasota County Legacy Trail Extension</b>	\$936,560	\$7,024,200	7.5	Legacy Trail Extension Feasibility Study
<b>Starkey Gap /Tri-County Trail</b>	\$1,089,583	\$2,615,000	2.4	FDOT Fact Sheet
<b>Tampa Bypass Canal Trail</b>	\$1,175,000	\$23,500,000	20	TBARTA Trail Priorities 2016
<b>Duke Energy Trail</b>	\$1,000,000	\$22,000,000	22	TBARTA Trail Priorities 2016
<b>Anclote Coastal Trail</b>	\$708,222	3,187,000	4.5	TBARTA Trail Priorities 2016
<b>Tenoroc Trail Phase I</b>	\$761,118	1,674,460	2.2	TBARTA Trail Priorities 2018
<b>Average:</b>	<b>\$945,081</b>			

## Benefits Analysis Results

The trend investment level scenario is assumed to maintain existing funding for trails and sidepaths at \$2 million per year<sup>1</sup> for the next 25 years, while the trend + sales tax revenue investment level scenario assumes full funding of all future trail needs through 2045.

For the trend investment level scenario, trails/sidepaths are funded based on the prioritization methodology described above until the budget for trails and sidepaths are exhausted. The benefits (in miles meeting each criteria) associated with these investment levels are shown in **Table 5**. The 2045 people and jobs served under the existing network, trend investment, and trend + sales tax revenue investment scenarios are shown in **Table 6**. Note that miles can overlap in the benefits summary shown

<sup>1</sup> Based on review of current funding in the FDOT Work Program, local agency Capital Improvement Programs for FY 2019-2023, and the list of federally obligated funds for FY 2017/2018.

below – the same mile of trail/sidepath can be both in a Community of Concern and along a Vision Zero corridor, for example. **Appendix D** includes a full listing of the trail/sidepath facilities prioritized for inclusion in the trend and trend + sales tax revenue investment scenarios.

Under the trend investment scenario, shown in **Figure 11**, over 51 miles of new trails and sidepaths would be constructed, with over 31 miles of these within or adjacent to the MPO’s identified communities of concern. Over 45 miles would be adjacent to roadways with a Level of Traffic Stress of 0, 1, or 2 and over 22 miles would be within or adjacent to high population density areas. An additional 109,164 people and 67,706 jobs would be served under the trend investment scenario, in addition to the existing network.

Under the trend + sales tax revenue investment scenario, shown in **Figure 12**, , nearly 150 miles of new trails and sidepaths would be constructed, with nearly 70 miles of those within or adjacent to the MPO’s identified communities of concern. Over 100 miles would be adjacent to roadways with a Level of Traffic Stress of 0, 1, or 2 and over 26 miles would be within or adjacent to high population density areas. An additional 495,943 people and 248,271 jobs would be served under the trend + sales tax revenue investment scenario, in addition to the existing network and trend investment scenario.

*Table 5: Trail/Sidepath Summary Based on Investment Levels*

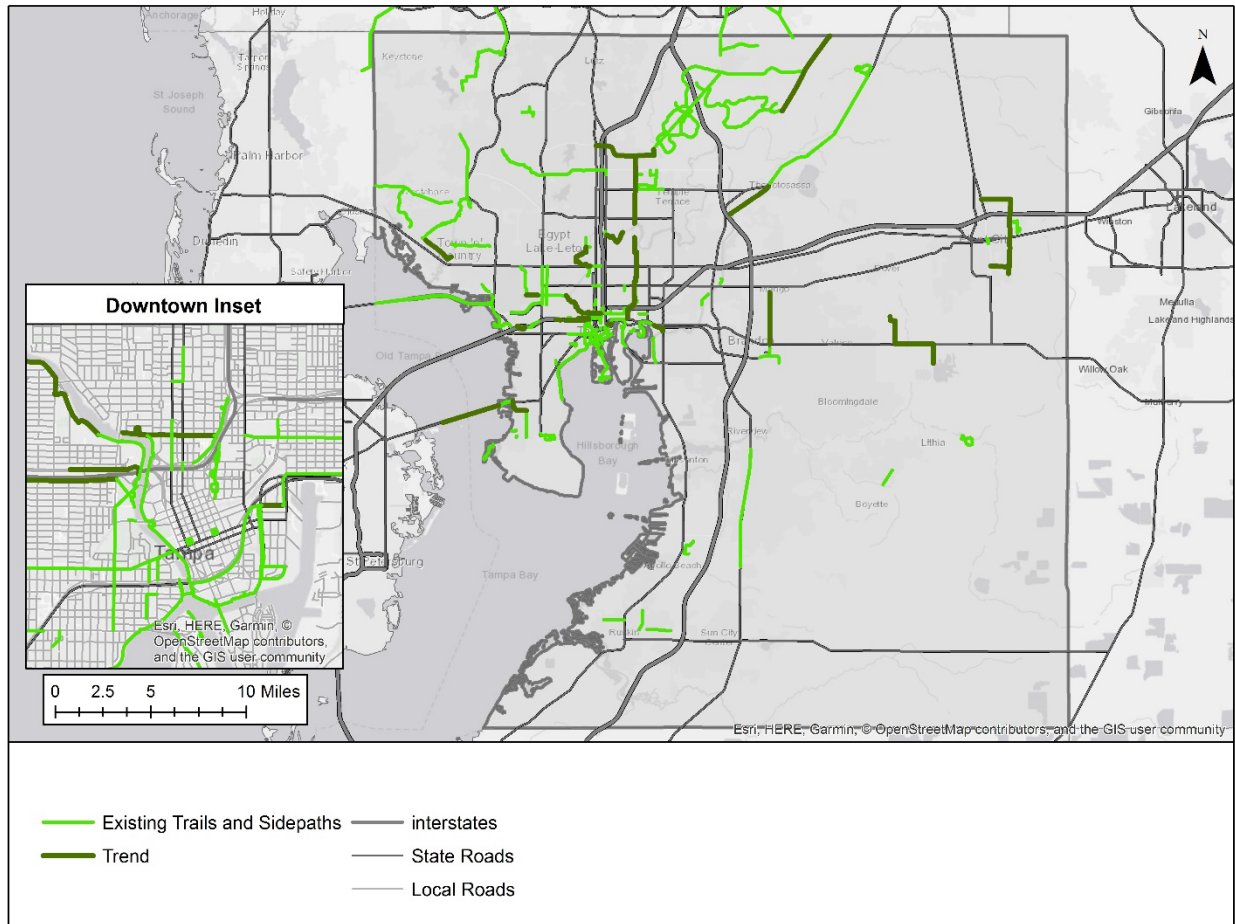
Investment Level	Total Miles					
	Total Trails / Sidepaths	Communities of Concern	Level of Traffic Stress 0, 1, or 2	Vision Zero Corridors	High Pop Density	High Emp Density
<b>Trend</b>	51.26	31.15	45.46	0.14	22.12	3.17
<b>Trend + Sales Tax Revenues</b>	149.29	68.96	105.45	1.92	26.33	5.20

*Table 6: 2045 Population and Jobs Served*

Investment Level	2045 Population Served	2045 Jobs Served
<b>Existing Network</b>	509,668	379,353
<b>Trend</b>	+ 109,164	+ 67,706
<b>Trend + Sales Tax Revenues</b>	+ 495,943	+ 248,271

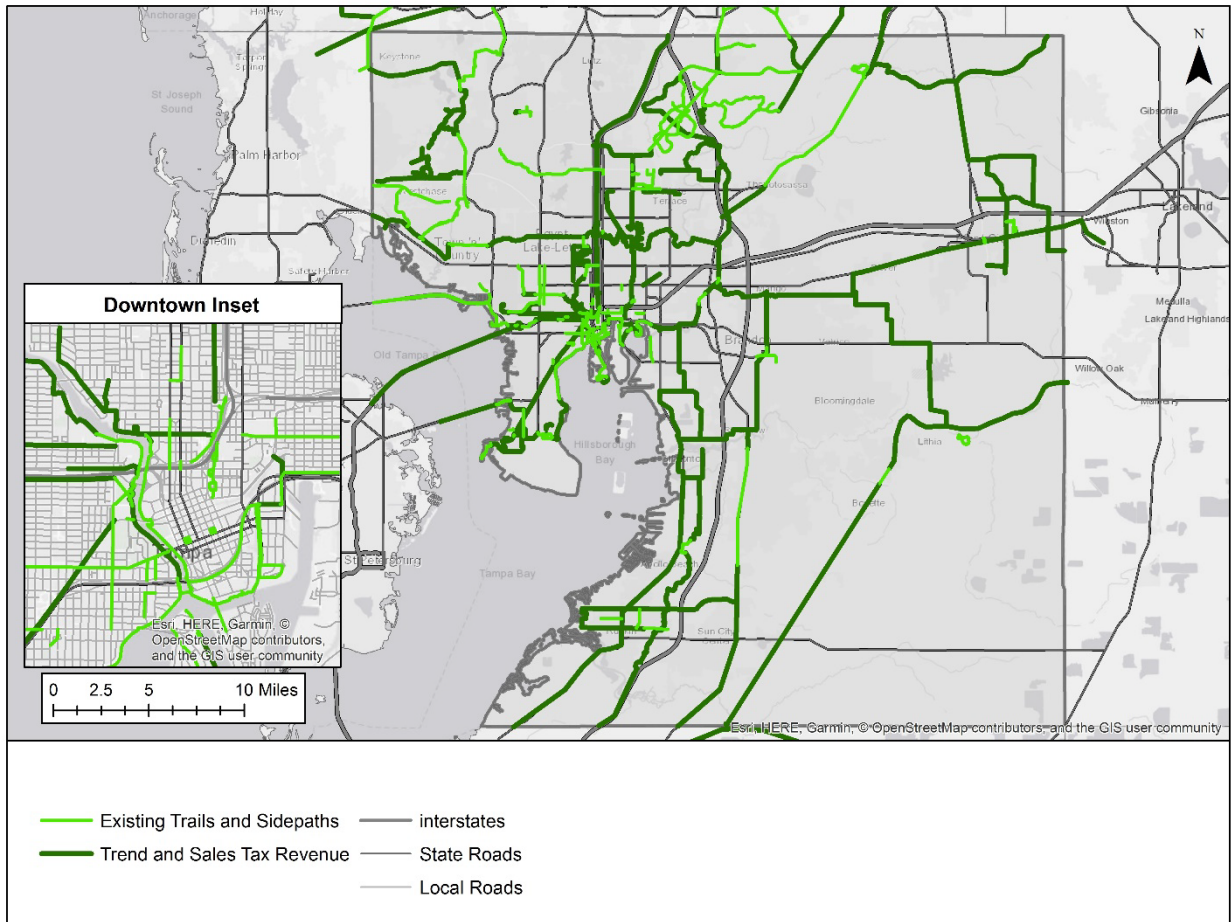


Figure 11: Trend Investment Level Trails



[blob:https://teams.microsoft.com/e6c2e5cd-99c6-4a53-9f28-e32bc70331e9](https://teams.microsoft.com/e6c2e5cd-99c6-4a53-9f28-e32bc70331e9)

Figure 12: Trend + Sales Tax Revenue Investment Level Trails



## Appendix A: Transit Performance Measures, Investment Impacts and Costs

### Countywide Statistics

Transit LOS	Population within ¼ mile	Jobs within ¼ mile	People & Jobs within ¼ mile	% of countywide population	% of countywide jobs	% of countywide population & jobs	Roadway Centerline Miles*
<b>Existing Service</b>							
A	121,527	186,456	307,983	10%	22%	15%	35
B	66,545	61,681	128,226	5%	7%	6%	17
<b>A-B</b>	<b>188,072</b>	<b>248,137</b>	<b>436,209</b>	<b>15%</b>	<b>30%</b>	<b>21%</b>	<b>52</b>
C	93,290	83,515	176,806	7%	10%	8%	60
D	84,958	73,290	158,248	7%	9%	8%	132
<b>C-D</b>	<b>178,249</b>	<b>156,805</b>	<b>335,054</b>	<b>14%</b>	<b>19%</b>	<b>16%</b>	<b>192</b>
E	46,465	25,670	72,135	4%	3%	3%	69
F	858,828	401,688	1,260,516	68%	48%	60%	87
<b>Trend Investment</b>							
A	438,166	513,989	952,155	22%	42%	30%	83
B	24,817	17,675	42,492	1%	1%	1%	13
<b>A-B</b>	<b>462,983</b>	<b>531,664</b>	<b>994,647</b>	<b>23%</b>	<b>43%</b>	<b>31%</b>	<b>96</b>
C	160,195	119,734	279,929	8%	10%	9%	176
D	43,357	22,479	65,836	2%	2%	2%	44
<b>C-D</b>	<b>203,552</b>	<b>142,213</b>	<b>345,765</b>	<b>10%</b>	<b>12%</b>	<b>11%</b>	<b>220</b>
E	0	0	0	0%	0%	0%	0
F	1,304,447	562,273	1,866,720	66%	45%	58%	59
<b>Trend + Sales Tax Revenue Investment</b>							
A	701,574	688,676	1,390,247	36%	56%	43%	258
B	25,205	27,391	52,596	1%	2%	2%	48
<b>A-B</b>	<b>726,779</b>	<b>716,064</b>	<b>1,442,843</b>	<b>37%</b>	<b>58%</b>	<b>45%</b>	<b>306</b>
C	95,317	66,380	161,697	5%	5%	5%	393
D	14,209	8,287	22,496	1%	1%	1%	77
<b>C-D</b>	<b>109,526</b>	<b>74,667</b>	<b>184,193</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>470</b>
E	0	0	0	0%	0%	0%	0
F	1,134,677	445,419	1,580,096	58%	36%	49%	280

\*Number of miles in LOS F does not include roadways without bus service

2015 Countywide Population: 1,271,613

2015 Countywide Employment: 1,112,573

2045 Countywide Population: 1,970,982

2045 Countywide Employment: 1,236,150

### Urban Service Boundary Statistics

Transit LOS	Population within ¼ mile	Jobs within ¼ mile	People & Jobs within ¼ mile	% of USB population	% of USB jobs	% of USB population & jobs	Roadway Centerline Miles*
<b>Existing Service</b>							
<b>A</b>	121,527	186,456	307,983	11%	24%	16%	35
<b>B</b>	66,545	61,681	128,226	6%	8%	7%	17
<b>A-B</b>	<b>188,072</b>	<b>248,137</b>	<b>436,209</b>	<b>17%</b>	<b>31%</b>	<b>23%</b>	<b>52</b>
<b>C</b>	93,278	93,287	186,565	8%	11%	9%	60
<b>D</b>	84,946	84,955	169,901	8%	9%	8%	132
<b>C-D</b>	<b>178,224</b>	<b>156,799</b>	<b>335,023</b>	<b>16%</b>	<b>20%</b>	<b>18%</b>	<b>192</b>
<b>E</b>	45,175	25,254	70,429	4%	3%	4%	69
<b>F</b>	701,102	359,675	1,060,778	63%	46%	56%	87
<b>Trend Investment</b>							
<b>A</b>	438,166	513,989	952,155	27%	44%	34%	83
<b>B</b>	24,817	17,675	42,492	1%	2%	2%	13
<b>A-B</b>	<b>462,983</b>	<b>531,664</b>	<b>994,647</b>	<b>28%</b>	<b>45%</b>	<b>35%</b>	<b>96</b>
<b>C</b>	160,014	119,698	279,711	10%	10%	10%	176
<b>D</b>	42,170	22,215	64,385	2%	2%	2%	44
<b>C-D</b>	<b>202,184</b>	<b>141,913</b>	<b>344,097</b>	<b>12%</b>	<b>12%</b>	<b>12%</b>	<b>220</b>
<b>E</b>	0	0	0	0%	0%	0%	0
<b>F</b>	971,972	496,020	1,467,992	59%	42%	53%	59
<b>Trend + Sales Tax Revenue Investment</b>							
<b>A</b>	701,378	688,634	1,390,012	43%	59%	49%	258
<b>B</b>	24,864	27,382	52,245	2%	2%	2%	48
<b>A-B</b>	<b>726,242</b>	<b>716,016</b>	<b>1,442,258</b>	<b>44%</b>	<b>61%</b>	<b>51%</b>	<b>306</b>
<b>C</b>	81,009	60,248	141,257	5%	5%	5%	393
<b>D</b>	12,850	8,047	20,897	1%	1%	1%	77
<b>C-D</b>	<b>92,859</b>	<b>68,295</b>	<b>162,154</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>470</b>
<b>E</b>	0	0	0	0%	0%	0%	0
<b>F</b>	817,038	385,286	1,202,325	50%	33%	43%	280

\*Number of miles in LOS F does not include roadways without bus service

2015 USB Population: 1,112,573

2015 USB Employment: 789,865

2045 USB Population: 1,637,139

2045 USB Employment: 1,169,597

*Trend Investment Level: Bus System Improvements*

Year	Project	Capital Cost	Hours/Yr.	Annual Operating Cost	Op. cost Net of 20% Farebox
2020-2024	12 Increased Span of Service and Frequency	\$0	54,470	3,812,900	3,050,320
	42 Increased Span of Service and Frequency	\$0	29,906	2,093,420	1,674,736
	32 Increased Span of Service and Frequency	\$0	40,416	2,829,120	2,263,296
	15 Increased Span of Service and Frequency	\$0	49,514	3,465,980	2,772,784
	30 Increased Span of Service and Frequency	\$0	33,269	2,328,830	1,863,064
	9 Increases Span of Service and Frequency	\$0	47,298	3,310,860	2,648,688
	31 Increases Span of Service and Frequency	\$0	68,374	4,786,180	3,828,944
	Innovation District Circulator - New Service	\$25,000	41,555	2,908,850	2,327,080
	ADA Compliance	\$5,000,000			
	ITS/Flamingo	\$10,200,000			
	Marion Transit Center	\$7,000,000			
	University Area Transit Center	\$50,000,000			
	AV Infrastructure	\$2,000,000			
Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000				
2025-2029	36 Increased Span of Service and Frequency	\$0	56,107	3,927,490	3,141,992
	39 Increased Span of Service and Frequency	\$0	63,857	4,469,990	3,575,992
	8 Increased Span of Service and Frequency	\$0	70,613	4,942,910	3,954,328
	38 Increased Span of Service and Frequency	\$0	24,831	1,738,170	1,390,536
	17 Increased Span of Service and Frequency	\$0	21,175	1,482,250	1,185,800
	48 Increased Span of Service and Frequency	\$0	34,007	2,380,490	1,904,392
	5 Increased Span of Service and Frequency	\$0	49,275	3,449,250	2,759,400
	ADA Compliance	\$10,000,000			
	Brandon Transit Center	\$4,000,000			
	Netpark Transit Center	\$2,000,000			
	NW Transit Center	\$2,000,000			
Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000				
2030-2045	1 Increased Span of Service and Frequency	\$0	45,775	3,204,250	2,563,400
	6 Increased Span of Service and Frequency	\$0	27,640	1,934,800	1,547,840
	14 Increased Span of Service and Frequency	\$0	36,654	2,565,780	2,052,624
	45 Increased Span and Frequency of Service	\$0	41,475	2,903,250	2,322,600
	60 Increased Span and Frequency of Service	\$0	8,952	626,640	501,312
	275 Increased Span and Frequency of Service	\$0	9,134	639,380	511,504
	360 Increased Span and Frequency of Service	\$0	8,469	592,830	474,264



Hillsborough MPO 2045 LRTP – Needs Analysis

Year	Project	Capital Cost	Hours/Yr.	Annual Operating Cost	Op. cost Net of 20% Farebox
	400 Increased Span and Frequency of Service	\$0	47,788	3,345,160	2,676,128
	ADA Compliance	\$25,000,000		0	0
	Riverview Transit Center	\$2,500,000		0	0
	South County Transit Center	\$2,500,000		0	0
	South Tampa Transit Center	\$2,500,000		0	0
	Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000		0	0
		<b>\$554,225,000</b>		<b>69,033,227</b>	<b>55,226,581</b>
*Assumes FTA Funding					
	Capital Cost	Annual Operating Cost Net of 20% Farebox	Average Number of Years Operated	Total Net Operating Cost for Period	Total
2025-2029	\$24,000,000	\$17,912,440	18	\$322,423,920	\$346,423,920
2030-2045	\$38,500,000	\$16,885,229	7.5	\$126,639,220	\$165,139,220
Value of Improvements afforded by HART revenue stream natural growth over period					\$511,563,140
Typical HART Annual Budget (average FY17, FY18, FY19)					\$104,586,441
Continuation of Existing HART Bus System for 20 years					\$2,091,728,820

**Trend + Sales Tax Revenue Investment Level: Bus System Improvements**

Year	Project	Capital Cost	Hours/Yr.	Annual Operating Cost	Op. cost Net of 20% Farebox
2020-2024	12 Increased Span of Service and Frequency	\$0	54,470	\$3,812,900	\$3,050,320
	42 Increased Span of Service and Frequency	\$0	29,906	\$2,093,420	\$1,674,736
	32 Increased Span of Service and Frequency	\$0	40,416	\$2,829,120	\$2,263,296
	15 Increased Span of Service and Frequency	\$0	49,514	\$3,465,980	\$2,772,784
	30 Increased Span of Service and Frequency	\$0	33,269	\$2,328,830	\$1,863,064
	9 Increases Span of Service and Frequency	\$0	47,298	\$3,310,860	\$2,648,688
	31 Increases Span of Service and Frequency	\$0	68,374	\$4,786,180	\$3,828,944
	Innovation District Circulator - New Service	\$25,000	41,555	\$2,908,850	\$2,327,080
	ADA Compliance	\$5,000,000			
	ITS/Flamingo	\$10,200,000			
	Marion Transit Center	\$7,000,000			
	University Area Transit Center	\$50,000,000			
	AV Infrastructure	\$2,000,000			
	Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000			
2025-2029	36 Increased Span of Service and Frequency	\$0	56,107	\$3,927,490	\$3,141,992
	39 Increased Span of Service and Frequency	\$0	63,857	\$4,469,990	\$3,575,992
	8 Increased Span of Service and Frequency	\$0	70,613	\$4,942,910	\$3,954,328
	38 Increased Span of Service and Frequency	\$0	24,831	\$1,738,170	\$1,390,536
	17 Increased Span of Service and Frequency	\$0	21,175	\$1,482,250	\$1,185,800
	48 Increased Span of Service and Frequency	\$0	34,007	\$2,380,490	\$1,904,392
	5 Increased Span of Service and Frequency	\$0	49,275	\$3,449,250	\$2,759,400
	ADA Compliance	\$10,000,000			
	Brandon Transit Center	\$4,000,000			
	Netpark Transit Center	\$2,000,000			
	NW Transit Center	\$2,000,000			
	Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000			
2030-2045	7 Increased Span of Service and Frequency	\$0	31,734	\$2,221,380	\$1,777,104
	1 Increased Span of Service and Frequency	\$0	45,775	\$3,204,250	\$2,563,400
	6 Increased Span of Service and Frequency	\$0	27,640	\$1,934,800	\$1,547,840
	14 Increased Span of Service and Frequency	\$0	36,654	\$2,565,780	\$2,052,624
	16 Increased Span of Service and Frequency	\$0	40,127	\$2,808,890	\$2,247,112
	800 Increased Span and Frequency of Service	\$0	23,746	\$1,662,220	\$1,329,776
	19 Increased Span of Service and Frequency	\$0	36,115	\$2,528,050	\$2,022,440
	20 Increased Span of Service and Frequency	\$0	8,809	\$616,630	\$493,304

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Year	Project	Capital Cost	Hours/Yr.	Annual Operating Cost	Op. cost Net of 20% Farebox
	574 Increased Span and Frequency of Service	\$0	13,492	\$944,440	\$755,552
	24 Increased Span of Service and Frequency	\$0	10,775	\$754,250	\$603,400
	25 Increased Span of Service and Frequency	\$0	49,182	\$3,442,740	\$2,754,192
	33 Increased Span of Service and Frequency	\$0	21,126	\$1,478,820	\$1,183,056
	34 Increased Span of Service and Frequency	\$0	60,224	\$4,215,680	\$3,372,544
	35 Increased Span of Service and Frequency	\$0	30,916	\$2,164,120	\$1,731,296
	37 Increased Span and Frequency of Service	\$0	37,402	\$2,618,140	\$2,094,512
	45 Increased Span and Frequency of Service	\$0	41,475	\$2,903,250	\$2,322,600
	46 Increased Span and Frequency of Service	\$0	25,248	\$1,767,360	\$1,413,888
	60 Increased Span and Frequency of Service	\$0	8,952	\$626,640	\$501,312
	275 Increased Span and Frequency of Service	\$0	9,134	\$639,380	\$511,504
	360 Increased Span and Frequency of Service	\$0	8,469	\$592,830	\$474,264
	400 Increased Span and Frequency of Service	\$0	47,788	\$3,345,160	\$2,676,128
	570 Increased Span and Frequency of Service	\$0	12,813	\$896,910	\$717,528
	571 Increased Span and Frequency of Service	\$0	13,603	\$952,210	\$761,768
	572 Increased Span and Frequency of Service	\$0	11,912	\$833,840	\$667,072
	573 Increased Span and Frequency of Service	\$0	8,150	\$570,500	\$456,400
	Local Bloomingdale/Fishhawk -New Service	\$1,000,000	96,962	\$6,787,358	\$5,429,886
	Local Causeway/Lumsden -New Service	\$1,000,000	98,501	\$6,895,093	\$5,516,075
	Local Ehrlich/Bearss -New Service	\$1,000,000	92,345	\$6,464,150	\$5,171,320
	Local Route 11 -New Service	\$1,000,000	16,930	\$1,185,094	\$948,075
	Local Route 49 - Sligh Ave -New Service	\$1,000,000	11,222	\$785,535	\$628,428
	LX 75LX -New Service	\$1,000,000	89,267	\$6,248,678	\$4,998,943
	LX 175LX -New Service	\$1,000,000	183,151	\$12,820,564	\$10,256,451
	LX 589LX PASCO -New Service	\$1,000,000	153,908	\$10,773,583	\$8,618,867
	South County S2 -New Service	\$1,000,000	121,588	\$8,511,131	\$6,808,905
	South County S1 -New Service	\$1,000,000	119,279	\$8,349,527	\$6,679,622
	Plant City - Lakeland Express	\$1,000,000	9,395	\$657,657	\$526,126
	Plant City Circulator North	\$1,000,000	36,068	\$2,524,766	\$2,019,813
	Plant City Circulator South	\$1,000,000	56,163	\$3,931,421	\$3,145,137
	Plant City Express	\$25,000,000	16,180	\$1,132,632	\$906,105
	ADA Compliance	\$25,000,000			
	Riverview Transit Center	\$2,500,000			
	South County Transit Center	\$2,500,000			
	South Tampa Transit Center	\$2,500,000			
	Satellite Maintenance Facility	\$75,500,000			
	Innovative Projects (AV, TNC, MaaS, Microtransit)	\$6,000,000			

Hillsborough MPO 2045 LRTP – Needs Analysis

Year	Project	Capital Cost	Hours/Yr.	Annual Operating Cost	Op. cost Net of 20% Farebox
		<b>\$7,350,275,000</b>		<b>\$221,744,782</b>	<b>\$189,020,026</b>
	Existing Service Changes	New Service	Capital Projects	Rail Projects	
	Capital Cost	Annual Operating Cost Net of 20% Farebox	Average Number of Years Operated	Total Net Operating Cost for Period	Total
2025-2029	\$24,000,000	\$17,912,440	18	\$322,423,920	\$346,423,920
2030-2045	\$152,000,000	\$150,678,674	7.5	\$1,130,090,054	\$1,282,090,054
Adjustments to 2019 costs (value of improvements afforded by HART revenue stream natural growth)					-\$511,563,140
Continuation of Existing HART Bus System for 20 years					\$2,091,728,820
Total cost for Trend + Sales Tax Revenue Investment Level, 2025-2045, in present day dollars					\$3,208,679,654

## Appendix B: Countywide Transportation Disadvantaged Service

### Transit Trend Investment Level

TD Population Forecast	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Overlapping Circle Component</b>														
E	27,383	27,726	28,073	28,588	29,111	29,645	30,187	30,740	31,185	31,635	32,093	32,557	33,027	33,389
B	70,702	71,588	72,485	73,813	75,165	76,541	77,943	79,371	80,518	81,682	82,863	84,060	85,275	86,210
G	9,052	9,165	9,280	9,450	9,623	9,800	9,979	10,162	10,309	10,458	10,609	10,762	10,918	11,037
D	57,999	58,726	59,461	60,551	61,660	62,789	63,939	65,110	66,051	67,006	67,975	68,957	69,954	70,720
F	14,187	14,364	14,544	14,811	15,082	15,358	15,640	15,926	16,156	16,390	16,627	16,867	17,111	17,298
A	115,321	116,766	118,230	120,395	122,600	124,846	127,133	129,461	131,332	133,231	135,156	137,110	139,092	140,616
C	167,674	169,775	171,903	175,051	178,258	181,523	184,848	188,233	190,954	193,714	196,514	199,354	202,236	204,451
<b>TOTAL TD POPULATION</b>	<b>462,318</b>	<b>468,111</b>	<b>473,977</b>	<b>482,658</b>	<b>491,499</b>	<b>500,501</b>	<b>509,669</b>	<b>519,004</b>	<b>526,506</b>	<b>534,116</b>	<b>541,836</b>	<b>549,667</b>	<b>557,612</b>	<b>563,721</b>
<b>TD Population Not Served by Transit</b>	<b>180,304</b>	<b>182,891</b>	<b>185,515</b>	<b>189,250</b>	<b>193,061</b>	<b>196,947</b>	<b>200,911</b>	<b>204,955</b>	<b>208,286</b>	<b>211,670</b>	<b>215,109</b>	<b>218,603</b>	<b>222,153</b>	<b>224,981</b>
<b>Percent Served by Transit</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>61%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>
<b>Trips Needed by Year*</b>	<b>734,320</b>	<b>754,190.17</b>	<b>765,009</b>	<b>780,415</b>	<b>796,128</b>	<b>812,155</b>	<b>828,502</b>	<b>845,175</b>	<b>858,911</b>	<b>872,867</b>	<b>887,048</b>	<b>901,455</b>	<b>916,095</b>	<b>927,759</b>
<b>Total Vehicles Required*</b>	<b>271</b>	<b>278</b>	<b>282</b>	<b>288</b>	<b>294</b>	<b>300</b>	<b>306</b>	<b>312</b>	<b>317</b>	<b>322</b>	<b>327</b>	<b>333</b>	<b>338</b>	<b>342</b>
<b>O&amp;M Cost Projected present day dollars*</b>	<b>\$17,162,838</b>	<b>\$17,625,424</b>	<b>\$17,878,264</b>	<b>\$18,238,289</b>	<b>\$18,605,505</b>	<b>\$18,980,055</b>	<b>\$19,362,083</b>	<b>\$19,751,738</b>	<b>\$20,072,745</b>	<b>\$20,398,905</b>	<b>\$20,730,300</b>	<b>\$21,067,013</b>	<b>\$21,409,129</b>	<b>\$21,681,716</b>
<b>Capital Cost required for vehicles (present day \$)</b>		<b>\$571,979</b>	<b>\$311,433</b>	<b>\$443,458</b>	<b>\$452,316</b>	<b>\$461,348</b>	<b>\$470,560</b>	<b>\$479,955</b>	<b>\$395,398</b>	<b>\$401,745</b>	<b>\$408,193</b>	<b>\$414,744</b>	<b>\$421,399</b>	<b>\$335,757</b>

TD Population Forecast	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
<b>Overlapping Circle Component</b>														
E	33,755	34,125	34,498	34,876	35,211	35,549	35,890	36,235	36,583	36,897	37,215	37,535	37,858	38,183
B	87,154	88,109	89,074	90,050	90,915	91,787	92,668	93,557	94,455	95,268	96,087	96,914	97,747	98,588
G	11,158	11,281	11,404	11,529	11,640	11,752	11,864	11,978	12,093	12,197	12,302	12,408	12,515	12,622
D	71,495	72,278	73,070	73,871	74,580	75,295	76,018	76,748	77,484	78,151	78,823	79,501	80,185	80,875
F	17,488	17,679	17,873	18,069	18,242	18,417	18,594	18,773	18,953	19,116	19,280	19,446	19,613	19,782
A	142,156	143,714	145,288	146,880	148,290	149,713	151,150	152,600	154,065	155,390	156,727	158,075	159,435	160,806
C	206,691	208,956	211,245	213,560	215,609	217,679	219,768	221,877	224,007	225,933	227,877	229,837	231,814	233,808
<b>TOTAL TD POPULATION</b>	<b>569,898</b>	<b>576,141</b>	<b>582,454</b>	<b>588,835</b>	<b>594,486</b>	<b>600,192</b>	<b>605,952</b>	<b>611,768</b>	<b>617,640</b>	<b>622,953</b>	<b>628,311</b>	<b>633,716</b>	<b>639,167</b>	<b>644,665</b>
<b>TD Population Not Served by Transit</b>	<b>227,845</b>	<b>230,745</b>	<b>233,680</b>	<b>236,653</b>	<b>239,340</b>	<b>242,057</b>	<b>244,805</b>	<b>247,583</b>	<b>250,391</b>	<b>252,981</b>	<b>255,597</b>	<b>258,239</b>	<b>260,908</b>	<b>263,604</b>
<b>Percent Served by Transit</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>60%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>	<b>59%</b>
<b>Trips Needed by Year*</b>	<b>939,568</b>	<b>951,525</b>	<b>963,631</b>	<b>975,889</b>	<b>986,971</b>	<b>998,176</b>	<b>1,009,505</b>	<b>1,020,960</b>	<b>1,032,542</b>	<b>1,043,222</b>	<b>1,054,009</b>	<b>1,064,905</b>	<b>1,075,910</b>	<b>1,087,026</b>
<b>Total Vehicles Required*</b>	<b>347</b>	<b>351</b>	<b>356</b>	<b>360</b>	<b>364</b>	<b>368</b>	<b>373</b>	<b>377</b>	<b>381</b>	<b>385</b>	<b>389</b>	<b>393</b>	<b>397</b>	<b>401</b>
<b>O&amp;M Cost Projected present day dollars*</b>	<b>\$21,957,706</b>	<b>\$22,237,141</b>	<b>\$22,520,064</b>	<b>\$22,806,516</b>	<b>\$23,065,508</b>	<b>\$23,327,371</b>	<b>\$23,592,136</b>	<b>\$23,859,834</b>	<b>\$24,130,497</b>	<b>\$24,380,089</b>	<b>\$24,632,191</b>	<b>\$24,886,825</b>	<b>\$25,144,017</b>	<b>\$25,403,793</b>
<b>Capital Cost required for vehicles (present day \$)</b>	<b>\$339,949</b>	<b>\$344,192</b>	<b>\$348,487</b>	<b>\$352,836</b>	<b>\$319,011</b>	<b>\$322,547</b>	<b>\$326,122</b>	<b>\$329,735</b>	<b>\$333,387</b>	<b>\$307,434</b>	<b>\$310,524</b>	<b>\$313,644</b>	<b>\$316,795</b>	<b>\$319,976</b>

\*Based on 2018 AOR

<b>Total Cost (2024-2045)</b>	<b>\$504,329,707</b>
<b>Average Annual Cost</b>	<b>\$22,924,078</b>



**Transit Trend + Sales Tax Revenue Investment Level**

TD Population Forecast	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<i>Overlapping Circle Component</i>														
E	27,383	27,726	28,073	28,588	29,111	29,645	30,187	30,740	31,185	31,635	32,093	32,557	33,027	33,389
B	70,702	71,588	72,485	73,813	75,165	76,541	77,943	79,371	80,518	81,682	82,863	84,060	85,275	86,210
G	9,052	9,165	9,280	9,450	9,623	9,800	9,979	10,162	10,309	10,458	10,609	10,762	10,918	11,037
D	57,999	58,726	59,461	60,551	61,660	62,789	63,939	65,110	66,051	67,006	67,975	68,957	69,954	70,720
F	14,187	14,364	14,544	14,811	15,082	15,358	15,640	15,926	16,156	16,390	16,627	16,867	17,111	17,298
A	115,321	116,766	118,230	120,395	122,600	124,846	127,133	129,461	131,332	133,231	135,156	137,110	139,092	140,616
C	167,674	169,775	171,903	175,051	178,258	181,523	184,848	188,233	190,954	193,714	196,514	199,354	202,236	204,451
<b>TOTAL TD POPULATION</b>	462,318	468,111	473,977	482,658	491,499	500,501	509,669	519,004	526,506	534,116	541,836	549,667	557,612	563,721
<b>TD Population Not Served by Transit</b>	180,304	180,504	180,680	181,866	183,034	184,185	185,316	186,426	186,804	187,154	187,475	187,766	188,027	187,607
<b>Percent Served by Transit</b>	61%	61%	62%	62%	63%	63%	64%	64%	65%	65%	65%	66%	66%	67%
<b>Trips Needed by Year*</b>	734,320	744,345.35	745,073	749,962	754,781	759,525	764,189	768,769	770,327	771,770	773,094	774,295	775,369	773,636
<b>Total Vehicles Required*</b>	271	275	275	277	279	280	282	284	284	285	285	286	286	286
<b>O&amp;M Cost Projected present day dollars*</b>	\$17,162,838	\$17,395,351	\$17,412,351	\$17,526,619	\$17,639,232	\$17,750,089	\$17,859,090	\$17,966,129	\$18,002,553	\$18,036,276	\$18,067,214	\$18,095,277	\$18,120,378	\$18,079,868
<b>Capital Cost required for vehicles (present day \$)</b>		\$288,588	\$20,940	\$140,749	\$138,709	\$136,548	\$134,261	\$131,844	\$44,865	\$41,539	\$38,107	\$34,567	\$30,917	\$0

TD Population Forecast	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
<i>Overlapping Circle Component</i>														
E	33,755	34,125	34,498	34,876	35,211	35,549	35,890	36,235	36,583	36,897	37,215	37,535	37,858	38,183
B	87,154	88,109	89,074	90,050	90,915	91,787	92,668	93,557	94,455	95,268	96,087	96,914	97,747	98,588
G	11,158	11,281	11,404	11,529	11,640	11,752	11,864	11,978	12,093	12,197	12,302	12,408	12,515	12,622
D	71,495	72,278	73,070	73,871	74,580	75,295	76,018	76,748	77,484	78,151	78,823	79,501	80,185	80,875
F	17,488	17,679	17,873	18,069	18,242	18,417	18,594	18,773	18,953	19,116	19,280	19,446	19,613	19,782
A	142,156	143,714	145,288	146,880	148,290	149,713	151,150	152,600	154,065	155,390	156,727	158,075	159,435	160,806
C	206,691	208,956	211,245	213,560	215,609	217,679	219,768	221,877	224,007	225,933	227,877	229,837	231,814	233,808
<b>TOTAL TD POPULATION</b>	569,898	576,141	582,454	588,835	594,486	600,192	605,952	611,768	617,640	622,953	628,311	633,716	639,167	644,665
<b>TD Population Not Served by Transit</b>	187,154	186,670	186,152	185,601	184,766	183,899	182,998	182,062	181,092	179,909	178,692	177,440	176,154	174,833
<b>Percent Served by Transit</b>	67%	68%	68%	68%	69%	69%	70%	70%	71%	71%	72%	72%	72%	73%
<b>Trips Needed by Year*</b>	771,771	769,773	767,639	765,365	761,924	758,346	754,630	750,773	746,772	741,892	736,874	731,714	726,411	720,962
<b>Total Vehicles Required*</b>	285	284	283	282	281	280	278	277	276	274	272	270	268	266
<b>O&amp;M Cost Projected present day dollars*</b>	\$18,036,295	\$17,989,598	\$17,939,712	\$17,886,574	\$17,806,160	\$17,722,555	\$17,635,705	\$17,545,556	\$17,452,052	\$17,338,020	\$17,220,735	\$17,100,150	\$16,976,215	\$16,848,884
<b>Capital Cost required for vehicles (present day \$)</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0

\*Based on 2018 AOR

<b>Total Cost (2024-2045)</b>	<b>\$390,181,094</b>
<b>Average Annual Cost</b>	<b>\$17,735,504</b>

## Appendix C: Supporting Transit Data

Data from 2018 Annual Operating Report of the Hillsborough County Community Transportation Coordinator	
Trips performed in 2018	734,320
Total Vehicles	271
Trips per Vehicle	2,710
Trips per TD pop	1.59
Vehicle Cost per Sunshine Line	\$78,000
Total Expenses	\$17,162,838
Cost per Trip	23.37
Data Based on FTA National Transit Database	
HART Service Area Pop, 2017	875,598
% Coverage of County Population	61%
TD Population unserved by Transit	178,072
Total Trips per TD Pop unserved by transit	4

## Appendix D: Future Trails Priorities

It is important to note that the priorities reflected through this methodology are not necessarily reflective of the priorities of the individual jurisdictions in Hillsborough County – which are ultimately decided by an elected council or commission.

Trail Name	Total Miles	COC Score	LTS Score	VO Score	Pop Score	Emp Score	Total Score	Cost Estimate
<i>Riverwalk</i>	0.31	5	5	1	5	5	21	\$292,975
<i>Stetson Law Trail</i>	0.55	5	5	1	5	3	19	\$519,795
<i>I-275 Greenway</i>	2.49	3	5	1	5	3	17	\$2,353,252
<i>West River Greenway</i>	1.45	5	5	1	5	1	17	\$1,370,367
<i>Sulphur Springs Rowlett Park Connector</i>	1.38	5	5	1	5	1	17	\$1,304,212
<i>Twiggs St Trail</i>	0.18	1	5	1	5	5	17	\$170,115
<i>Green Artery East</i>	4.89	5	5	1	4	1	16	\$4,621,446
<i>Gandy-Manhattan Connector Trail</i>	1.07	3	5	1	5	1	15	\$1,011,237
<i>Green Artery Trail Northwest</i>	2.02	4	5	1	3	1	14	\$1,909,064
<i>Desoto Park-Mckay Bay Connector</i>	0.45	5	5	1	1	1	13	\$425,286
<i>Kirby Canal Trail</i>	5	3	5	1	3	1	13	\$4,725,405
<i>Upper Tampa Bay Trail</i>	1.51	5	5	1	1	1	13	\$1,427,072
<i>Green Spine</i>	2.66	3	2	1	4	2	12	\$2,513,915
<i>Green Artery Trail North</i>	3.52	3	5	1	2	1	12	\$3,326,685
<i>Green Artery Trail West</i>	1.13	2	5	1	3	1	12	\$1,067,942
<i>Friendship Trail</i>	0.01	1	4	1	5	1	12	\$9,451
<i>South Tampa Trail</i>	4.66	3	5	1	2	1	12	\$4,404,077
<i>Gibsonton Community Trail</i>	1.63	4	5	1	1	1	12	\$1,540,482
<i>Future Trail</i>	0.65	5	4	1	1	1	12	\$614,303
<i>Town N' Country West</i>	1.73	4	1	1	5	1	12	\$1,634,990
<i>Ehrlich / Bearss Trail</i>	3.64	3	4	1	3	1	12	\$3,440,095
<i>Tampa Bypass Canal Trail</i>	10.33	3	5	1	1	1	11	\$9,762,687
<b>Subtotal Cost (Trend Investment)</b>								<b>\$48,444,853</b>
<i>Strawberry Stadium Trail</i>	2.81	5	3	1	1	1	11	\$2,655,678
<i>Hillsborough River Trail</i>	8.83	3	5	1	1	1	11	\$8,345,065

Hillsborough MPO 2045 LRTP – Needs Analysis

Trail Name	Total Miles	COC Score	LTS Score	VO Score	Pop Score	Emp Score	Total Score	Cost Estimate
CSX Trail	7.12	3	5	1	1	1	11	\$6,728,977
South Coast Greenway	18.38	2	5	1	1	1	10	\$17,370,589
30th Street Trail	3.48	2	1	3	2	2	10	\$3,288,882
Sydney Dover Medard Park Connector	4.67	5	2	1	1	1	10	\$4,413,528
Gulf Coast Trail	0.47	5	1	1	1	1	9	\$444,188
Drew Park Community Trail	0.59	5	1	1	1	1	9	\$557,598
Sydney Dover Trail Connector	3.95	3	3	1	1	1	9	\$3,733,070
Future Sligh Trail Connector	0.23	1	5	1	1	1	9	\$217,369
George Road Trail	2.35	3	3	1	1	1	9	\$2,220,940
Trout Creek Park	1.22	1	5	1	1	1	9	\$1,152,999
Pebble Creek Trail	1.95	1	5	1	1	1	9	\$1,842,908
Us Hwy 301 Trail	2.3	1	5	1	1	1	9	\$2,173,686
Morris Bridge Rd Trail	4.67	5	1	1	1	1	9	\$4,413,528
Airport Trail	1	1	5	1	1	1	9	\$945,081
Rivercrest Trail	2.19	1	5	1	1	1	9	\$2,069,727
Blackwater Creek Connector	3.05	1	5	1	1	1	9	\$2,882,497
Northdale Lake Park Trail	0.28	1	5	1	1	1	9	\$264,623
Polk County Connector	0.01	1	5	1	1	1	9	\$9,451
Davis Island Park	0.44	1	5	1	1	1	9	\$415,836
Westshore Boulevard Trail	3.75	1	3	1	3	1	9	\$3,544,054
NWRWF Trail	1.46	1	5	1	1	1	9	\$1,379,818
Harney Road Trail	2.46	4	1	1	1	1	8	\$2,324,899
Brandon Community Trail	4.75	2	3	1	1	1	8	\$4,489,135
Upper Tampa Bay Trail Phase IV	1.31	1	4	1	1	1	8	\$1,238,056
Sam Allen Rd Park Rd Connector	3.52	2	1	1	1	1	6	\$3,326,685
Future Us 92 Trail	4.18	1	2	1	1	1	6	\$3,950,439
Future Lakewood Trail	2.68	2	1	1	1	1	6	\$2,532,817
Gibson Riverview Connector	2.93	2	1	1	1	1	6	\$2,769,087

Hillsborough MPO 2045 LRTP – Needs Analysis

Trail Name	Total Miles	COC Score	LTS Score	V0 Score	Pop Score	Emp Score	Total Score	Cost Estimate
S US Highway 301 Trail	1.00	1	2	1	1	1	6	\$945,081
<b>Total Cost (Trend + Sales Tax Revenues Investment)</b>								<b>\$141,091,142</b>

*\*Italics are Trails that can be funded at Trend Investment Scenario over 25 Years.*



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**Hillsborough MPO**  
Metropolitan Planning  
for Transportation

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