TECHNICAL MEMORANDUM:
THE CITY OF TEMPLE TERRACE

December 2007
Technical Memorandum – City of Temple Terrace
S.0 EXECUTIVE SUMMARY

The City of Temple Terrace and its surrounding community members have expressed a Vision for Temple Terrace as a livable city and to a certain extent a university town with friendly conditions for walking and bicycling. Meanwhile, Florida Statute and the Department of Community Affairs (DCA), requires the City of Temple Terrace (Hillsborough County, Florida) to implement proportionate “fair share” ordinances that clearly demonstrate the financial feasibility of their Capital Improvement Element; and, update the Transportation Concurrency Exception Areas (TCEAs) to explicitly justify its size and configuration and plan for future mobility and multimodal infrastructure.

As the City of Temple Terrace reviews its level of service (LOS) standards to update its Capital Improvements Element (CIE), TCEA, and develop its proportionate fair share ordinance, it is recommended that adopted standards support the City’s vision. Current transportation LOS standards emphasize widening roads when peak hour traffic congestion and delays increase. However, with the escalating cost of roadway construction in urbanized areas, is this approach realistic in the long term? More importantly, does it place value on the characteristics that the City’s members have identified as part of their vision for their community?

Given the current provision of infrastructure and LOS, local and regional growth projections, vested development rights, revenue forecasts, infill and redevelopment objectives, and neighborhood quality of life considerations, it is anticipated that the City of Temple Terrace will need to put a greater emphasis on travel modes other than single-occupant-vehicles to fulfill mobility needs.

This technical memorandum identifies and documents questions and issues pertaining to the implementation of Senate Bill (SB) 360 mitigation requirements for the City of Temple Terrace. According to F.S. 163.3180(5)(f) for TCEAs or F.S. 163.3180(15)(a) for multimodal transportation districts (MMTDs), the purpose of this legislation is to provide guidance to local jurisdictions for use in developing community improvements that support walking, bicycling, and transit use. It also enables jurisdictions to develop transportation concurrency policies that encourage the development of a high quality multimodal environment.

The development of a MMTD strategy is defined below by Florida Department of Transportation (FDOT) Model Regulations and Plan Amendments for Multimodal Transportation Districts (April 2004):

A multimodal transportation district is an area where primary priority is placed on assuring a safe, comfortable, and attractive pedestrian environment, with convenient interconnection to transit. Communities must incorporate community design features that reduce vehicular usage while supporting an integrated multimodal transportation system. Common elements include the presence of mixed-use activity centers, connectivity of streets and land uses, transit-friendly design features, and accessibility to alternative modes of transportation. The Florida Department of Transportation has developed a Multimodal Transportation Districts and Area-wide Quality of Service Handbook (FDOT 2004) to provide guidance on the designation and planning of multimodal transportation districts as provided in Florida’s growth
management legislation. The handbook provides for multimodal transportation district designation in a downtown or urban core area, regional activity center, or traditional town or village, in accordance with certain criteria. In these areas, planning efforts would focus on enhancing multimodal elements, guiding redevelopment, and encouraging appropriate infill.

A multimodal transportation district could also be applied to a new or emerging area, where adopted plans and regulations would need to ensure the internal and external connectivity, a mix of uses, densities, and urban design features necessary to support alternative modes of transportation.

This technical memorandum evaluates multimodal policy considerations for the City of Temple Terrace. The goal of this evaluation is to identify model Comprehensive Plan amendments and regulations for MMTDs, including acceptable policy approaches and methods for addressing impacts. Specific evaluations discussed in the technical memorandum include:

- Feasibility evaluation of implementing a MMTD using multimodal area-wide Quality Level-of-Service (Q/LOS) measures identified in the Multimodal Transportation Districts and Areawide Quality of Service Handbook (MMTD Handbook), published by the FDOT Systems Planning Office;
- Summary of relevant statutes and/or policy statements and other guidance from the Department of Community Affairs (DCA) and FDOT;
- Documentation of several possible questions/issues for review by DCA and FDOT staff;
- Documentation of statewide best practices and identification of peer agencies with multimodal mitigation strategies and approaches;
- Peer agency interviews and evaluation of perceived strengths and weaknesses of each approach with regards to the intentions of the Growth Management Act/SB 360;
- Identification of a hybrid policies and/or procedural mechanisms necessary to implement the approach for the City of Temple Terrace; and
- Description of possible methodologies for calculating alternate mode mitigation for the consideration and comment by the City, DCA, and FDOT.

Understanding the City of Temple Terrace’s relationship to the University of South Florida, a regional activity center, and using information collected from the evaluation steps listed above, this report recommends that the City of Temple Terrace consider amendments to their Comprehensive Plan identifying polices, objectives, and goals to implement a MMTD with a long-term multimodal concurrency management system. This hybrid approach would identify long-term improvements to promote quality multimodal service if minimum automobile LOS standards are exceeded by proposed developments. This long-term management strategy would look beyond the five-year Capital Improvements Element of the Comprehensive Plan and would evaluate the total potential for development within the City’s proposed MMTD and corresponding sub-districts over a predetermined planning horizon.

The City of Temple Terrace is required to address its growth management needs in their CIE by December of 2008. **Section 6.0** of this technical memorandum describes in detail the methodologies and strategies required to implement the recommended hybrid approach.
1.0 STUDY BACKGROUND

In 2005, the Florida Legislature enacted SB 360, setting a deadline for local governments to develop a financially feasible Capital Improvements Element of the Comprehensive Plan, providing funding to maintain adopted LOS standards on major roadways. SB 360 also requires the municipality to update elements of its Comprehensive plan related to any areas within its political boundaries that have been designated as a TCEA. These TCEA requirements, described in detail below, stipulate that each municipality shall:

- Plan for and implement strategies to support and fund mobility including alternative modes of transportation;
- Address urban design;
- Address appropriate land use mixes, including density and intensity;
- Address network connectivity plans needed to promote urban infill, redevelopment, or downtown revitalization; and
- Provide data and analysis justifying the size and area of a given TCEA.

The TCEA requirements introduced in SB 360 are, in many ways, similar to the concepts and implementation criteria associated with MMTD, a concurrency management tool which post-dates the TCEA. In 1999, the MMTD option was introduced into the Florida Growth Management Act as an alternative method to manage the traffic impacts of growth in areas where the provision of alternate modes of travel, supported by appropriate land uses, could reasonably enable a local government to consider a multimodal LOS standard in lieu of typical roadway LOS criteria. Although a MMTD does not require explicit infill, redevelopment, or downtown revitalization strategies, consideration of converting from a TCEA to a MMTD or implementing MMTD strategies within the policy framework of a TCEA may assist municipalities in the following ways:

- Implementation of multimodal LOS standards may provide a framework for establishing multimodal mitigation requirements as part of the municipality’s Land Development Code/Concurrency Management System; and
- Introduction of multimodal LOS standards into the capital planning process and consideration of the interaction of multimodal facilities with land use density, intensity, and organization that satisfy most of the SB 360 TCEA comprehensive planning requirements listed above and stipulated by 163.3180(5)(e).

Both TCEAs and MMTDs place the same standard upon the implementing local government agency(s) with respect to Strategic Intermodal System (SIS) facilities and Transportation Regional Incentive Program (TRIP) funded roadways. According to F.S. 163.3180(5)(f) for TCEAs or F.S. 163.3180(15)(a) for MMTDs, the implementing local government must consult with their District FDOT office to assess the impacts of the exception area or multimodal district on SIS and TRIP-funded facilities, as well as coordinate with the District to develop a plan to mitigate those impacts.
2.0 MULTIMODAL DISTRICT EVALUATION

This section evaluates the existing conditions present within the City of Temple Terrace to identify the feasibility of implementing a MMTD using multimodal area-wide Q/LOS measures identified in the Multimodal Transportation Districts and Area-wide Quality of Service Handbook (MMTD Handbook), published by the FDOT Systems Planning Office. Each evaluation uses updated socioeconomic data to determine whether infrastructure planning under the MMTD framework is a feasible response to a city’s mobility needs.

2.1 Introduction

The City of Temple Terrace, located northeast and adjacent to Tampa and immediately east of the University of South Florida (USF) (Figure 2.1) has infill and redevelopment objectives associated with its Community Redevelopment Area (CRA) and anticipates significant growth along Bullard Parkway in the southeast quadrant of the City, within the Telecom Park Development of Regional Impact (DRI) north of Fowler Avenue, and within areas subject to proposed annexation. Pursuant to SB 360, the City of Temple Terrace is required to develop a financially feasible Capital Improvements Element which provides for the adopted LOS for the City’s major roadway/transportation network. SB 360 also requires Temple Terrace to update their TCEA to:

- Plan for and implement strategies to support and fund mobility… including alternative modes of transportation;
- Address urban design;
- Address appropriate land use mixes, including density and intensity;
- Address network connectivity plans needed to promote urban infill, redevelopment, or downtown revitalization; and
- Provide data and analysis justifying the size and area of the TCEA.

Provided that the City can identify a funding program which can eventually implement the necessary urban design elements required to serve the MMTD, converting from a TCEA to MMTD may provide a framework to allow developers to contribute to improvements that satisfy multimodal Q/LOS standards and can provide a clear mechanism for the planning and prioritization of multimodal investments.
2.2 Multimodal Mobility and Land Use Evaluation

The MMTD Handbook, provides an illustrated guide to evaluate the land use and transportation features necessary to establish a MMTD. Based on the direction provided by the MMTD Handbook, the following ten criteria have been evaluated for the City of Temple Terrace:

- Appropriate Scale of Development,
- Complementary Mix of Uses,
- Land Uses Promoting Multimodal Usage,
- Acceptable Separation of Land Uses,
- Appropriate Density and Intensity of Use,
- Appropriate Organization of Land Uses,
- Regional Intermodal Connectivity,
- Interconnected Multimodal Network,
- Acceptable LOS for Each Mode; and,
- Acceptable Area-wide Quality of Service for Each Mode.

Throughout this existing conditions analysis, access to the USF activity center and, to a lesser degree, access to other regional activity centers will be considered alongside mobility within the corporate limits of Temple Terrace.
2.2.1 Appropriate Scale of Development

A MMTD should have a “critical mass” of population and employment and should provide scheduled transit service when the subject district is too large to traverse on foot. The MMTD Handbook identifies a minimum threshold of 5,000 residents and a 2:1 ratio of population to employment. Based on year 2000 and year 2025 Tampa Bay Regional Planning Model (TBRPM) traffic analysis zone (TAZ) data, the City of Temple Terrace exceeds the 5,000 dwelling unit threshold as shown in Table 2.1. Temple Terrace’s population to job ratio is currently 2.2 persons per job and is expected to decrease to 1.6 persons per job.

Table 2.1: Temple Terrace Dwelling Units and Employees

<table>
<thead>
<tr>
<th>Year</th>
<th>Dwelling Units</th>
<th>Population</th>
<th>Jobs</th>
<th>Population : Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>14,020</td>
<td>37,720</td>
<td>17,060</td>
<td>2.2</td>
</tr>
<tr>
<td>2025</td>
<td>18,950</td>
<td>41,700</td>
<td>26,490</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Currently, three Hillsborough Area Regional Transit Authority (HART) local routes and one “Commuter Express” route serve Temple Terrace.

- Route 6 provides 30 minute headways and connects the University Area Transit Center along 56th Street to the Netp@rk Transfer Center and eventually to the Marion Transit Center in downtown Tampa.
- Route 57 provides hourly service along Fowler Avenue around the east side of Temple Terrace between the University Area Transit Center and Netp@rk Transfer Center.
- Route 39 provides 30 minute headways along the Busch Boulevard corridor between the Hanley/Waters Plaza, Yukon Transfer Center, and Netp@rk Transfer Center.
- Route 23X provides two AM and two PM trips from the Temple Terrace City Hall Park and ride on 56th Street through the Temple Terrace Plaza express stop and Netp@rk transfer center to the Marion Transit center in downtown Tampa. The two AM and PM trips are spaced approximately 30 minutes apart.

Figure 2.2 shows the roadways serviced by existing HART transit routes along with the generalized land use mix. The overlay of Routes 6 and 39, along 56th Street, provide ample service between the Temple Terrace CRA and the Netp@rk Transfer Center. Both Routes 6 and 57 connect parts of the City to USF, however, at present neither route provides sufficiently frequent headways to meet the LOS “C” standard identified in the MMTD Handbook.

In addition to transit service provided by HART, the USF Bull Runner shuttle bus service provides transit service parallel and immediately adjacent to the east of 50th Street/City limit between Fowler Avenue and Fletcher Avenue.

Detailed information about current fixed-route transit service is included in Appendix A.
Figure 2.2: Temple Terrace Transit Service and Generalized Land Use

Legend:
- Transit Routes
- Residential
- Non-Residential (Commercial/Office/Industrial)
- Vacant Land

Source: Tindale Oliver & Associates, Inc. (September 2007)
2.2.2 Land Use Diversity

The following three MMTD Handbook criteria provide for a qualitative evaluation of land use make up by identifying primary “anchor” land uses and evaluating the spatial relationship of these uses to one another as well as to other supporting uses.

- Complementary Mix of Uses (three or more significant land uses),
- Land Uses Promoting Multimodal Usage (land uses that are mutually supporting), and
- Acceptable Separation of Land Uses (different land uses within acceptable walking range - 1/4 to 1/2 mile).

**Figure 2.3** shows the organization of these primary and supporting uses. For the City of Temple Terrace analysis, primary uses within the corporate limits include:

- Center Office (GTE/Telecom Park Center),
- Recreational (Baseball Fields and Golf Course),
- Government (Temple Terrace City Hall),
- Medium Density Residential (8 – 15 DU/Acre; apartment complexes along 56th Street, Bullard Parkway, Fletcher Avenue and Fowler Avenue), and
- Intermodal Centers (access to port, airport, and passenger rail facilities via existing HART routes).

Nearby primary uses serviced by existing fixed-route transit service include:

- Schools/Colleges (USF),
- Regional Shopping Centers (University Center Mall), and
- Hospitals (USF Area Hospitals).

Supporting land uses include commercial and service uses located along 56th Street and Fowler Avenue as well as local shopping centers at the intersections of the City’s major arterial roadways.

The organization of medium density residential development and supporting retail and service land uses along 56th Street, particularly within the existing TCEA, provides a framework of mutually supporting land uses that promote multimodal travel options. Several of the primary uses listed above, as well as several clusters of medium density residential development, not located along this major corridor, represent a challenge to the mobility needs of the City. Because these uses are not within a reasonable 1/4 or 1/2 mile distance of the existing mixed use corridor, enhancements to the multimodal transportation system will be necessary to effectively link current and potential redevelopment areas within and adjacent to the City with existing primary activity centers along the Fletcher Avenue/Fowler Avenue corridor.

2.2.3 Appropriate Density and Intensity of Use

The MMTD Handbook indicates that marginal transit supportive densities may be realized with residential densities of 4 dwelling units per acre and employment intensities of 40 employees per acre. This density/intensity analysis is presented in terms of both total developable acreage and also acreage of residential and non-residential developable land.
Figure 2.3: Temple Terrace Area Primary and Supporting Uses

Source: Tindale Oliver & Associates, Inc. (September 2007)
In both cases, government and quasi-governmental land uses are removed from the denominator of the density evaluation. Table 2.2 shows the density and intensity of the City of Temple Terrace based on gross developable acreage and net developable acreage.

**Table 2.2: Year 2000 Residential Densities and Employment Intensities per Acre**

<table>
<thead>
<tr>
<th></th>
<th>Gross Acres</th>
<th>Net Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acres</td>
<td>Density/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intensity</td>
</tr>
<tr>
<td>Residential Density</td>
<td>14,000</td>
<td>3,400</td>
</tr>
<tr>
<td>Non-Residential Intensity</td>
<td>17,000</td>
<td>3,400</td>
</tr>
</tbody>
</table>

Figures 2.4 through 2.7 show the gross residential densities and non-residential intensities of Temple Terrace area TAZs based on year 2000 TBRPM data.

**2.2.4 Appropriate Organization of Land Uses**

The MMTD Handbook recommends activities and key land uses be organized around core areas able to support bicycle and pedestrian travel for intra-activity center trips, and these activity centers should be organized along transit corridors to facilitate inter-center trips. To evaluate this criterion, net residential and non-residential densities were calculated and estimated at the parcel level by re-allocating year 2000 TBRPM TAZ dwelling unit and employment data to the residential and non-residential properties within each City of Temple Terrace TAZ. The HART transit route system was then used to determine what percentage of TCEA dwelling units and population are currently within a 1/4 mile service area of a current transit route. This data is shown in Table 2.3 below.

**Table 2.3: Dwelling Units, Employees within 1/4 Mile of a Transit Route**

<table>
<thead>
<tr>
<th></th>
<th>Employees</th>
<th>Percent of Total</th>
<th>Dwelling Units</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within a 1/4 Mile of a Transit Route</td>
<td>10,600</td>
<td>62%</td>
<td>8,800</td>
<td>63%</td>
</tr>
<tr>
<td>If Transit Service Was Expanded Along Fletcher to Telcom Park</td>
<td>16,350</td>
<td>96%</td>
<td>9,900</td>
<td>71%</td>
</tr>
<tr>
<td>Total Dwelling Units and Employees</td>
<td>17,000</td>
<td>14,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As illustrated in Table 2.3 and Figure 2.2, the current transit route structure does not serve the Telecom Park DRI. If this area was serviced by fixed-route transit, nearly all employment land uses in Temple Terrace would be accessible by transit service.

Enhancement of existing transit routes or introduction of additional routes serving the USF activity center and other regional employment centers will improve the ability of Temple Terrace residents to commute and fulfill other trip purposes without relying on automobiles. Further intensification of residential use should consider existing or planned transit service accessibility.
Figure 2.4: Year 2000 Gross Residential Densities

Source: Tindale Oliver & Associates, Inc. (September 2007)
Figure 2.7: Existing Non-Residential Land Uses

Source: Tindale Oliver & Associates, Inc. (September 2007)
2.2.5 Regional Intermodal Connectivity

The City of Temple Terrace does not host any major intermodal centers and therefore no intermodal facilities can be easily accessed from the City without reliance on automobiles or transit service. No transit routes currently serving Temple Terrace provides direct access to Tampa International Airport, the Cruise Ship Terminal/port, Union Station, or the Greyhound bus station; these destinations can be reached by either transferring at or walking from the Marion Transit Center.

2.2.6 Interconnected Multimodal Network

To reduce walking and biking trip lengths and provide multiple alternative routes, a well-defined grid street pattern is necessary. The MMTD Handbook recommends a measure which calculates the number of blocks per square mile as a means of estimating the street network connectivity. Based on this methodology, a measure of 50 blocks per square mile is considered to be an acceptable level of grid street network refinement. For the purpose of this analysis, all roadway segments were considered to be elements of the bicycle and pedestrian network. Generally, the availability of sidewalks and bike lanes on local neighborhood streets is not a prerequisite for their consideration as bicycle and pedestrian facilities.

Figure 2.8 illustrates the block densities within the City of Temple Terrace. The City generally provides good block density south of Fowler Avenue and West of the Hillsborough River however the average of 40 blocks per square mile is less than the 50 block per mile standard established in the MMTD Handbook.

2.2.7 Acceptable Level of Service for Each Mode

Using the multimodal LOS grading system documented in the 2002 FDOT Q/LOS Manual, the Hillsborough MPO gathered bicycle and pedestrian infrastructure and transit service data and calculated Q/LOS grades for the major roadway network and several minor roadways within the existing TCEA. Appendix B includes a map series showing the current bicycle, pedestrian, and transit LOS scores for Temple Terrace.

Table 2.4 shows the roadway system miles at each LOS grade for the bicycle, pedestrian, and transit modes as well as a weighted average score for the entire network. While transit LOS is primarily determined by bus frequency and span of service, the bicycle and pedestrian modes consider the provision of sidewalks and bike lanes as well as the volumes and speed of adjacent traffic. Because of the relatively high intensity of traffic along 56th Street, a LOS score of “E” is indicated despite the fact that this roadway has adequate sidewalks along both sides of the road.

Table 2.4: Multimodal Area-wide Level of Service

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Total Miles</th>
<th>Areawide LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle LOS</td>
<td>0.1</td>
<td>1.3</td>
<td>3.0</td>
<td>3.1</td>
<td>0.8</td>
<td>0.0</td>
<td>8.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Pedestrian LOS</td>
<td>0.0</td>
<td>2.0</td>
<td>0.8</td>
<td>1.6</td>
<td>3.9</td>
<td>0.0</td>
<td>8.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Transit LOS</td>
<td>0.0</td>
<td>0.0</td>
<td>0.5</td>
<td>0.1</td>
<td>0.8</td>
<td>6.9</td>
<td>8.3</td>
<td>5.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicycle LOS</td>
<td>1.7%</td>
<td>15.3%</td>
<td>36.0%</td>
<td>37.2%</td>
<td>9.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Pedestrian LOS</td>
<td>0.0%</td>
<td>23.7%</td>
<td>9.4%</td>
<td>19.6%</td>
<td>47.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Transit LOS</td>
<td>0.0%</td>
<td>0.0%</td>
<td>6.5%</td>
<td>0.7%</td>
<td>9.6%</td>
<td>82.9%</td>
</tr>
</tbody>
</table>
Figure 2.8: Grid Street Network Connectivity (Blocks per Square Mile)

Source: Tindale Oliver & Associates, Inc. (September 2007)
Much like generalized roadway capacity; the multimodal LOS methodology may be used to indicate the general quality of an overall system, but should not be relied upon exclusively for service delivery. Just as signal optimization and auxiliary lanes can be added to a roadway to improve the LOS using a more refined “conceptual” analysis procedure, so too can pedestrian enhancements provide a greater measure of service than suggested by the baseline LOS grade. Implementation of a MMTD for Temple Terrace should consider measures to enhance the pedestrian infrastructure where sidewalks exist and construct sidewalks where none are currently in place.

2.2.8 Acceptable Area-Wide Quality of Service for Each Mode

Area-wide quality of service QOS for each mode is evaluated by calculating the percentage of population and employees served by adequate multimodal facilities. For the purpose of this analysis, adequate LOS for transit and pedestrian modes is LOS “C” and adequate LOS for the bicycle mode is LOS “D”. Net residential land use densities and non-residential land use intensities calculated from TBRPM year 2000 socioeconomic data were applied to the residential and non-residential acreage as shown in Figure 2.9. Using this methodology, the total number of dwelling units and employees likely to be situated within a 1/4 mile of roadway segments with adequate LOS scores was calculated for each mode.

Table 2.5 shows the overall percent of jobs and dwelling units served by adequate multimodal LOS for each mode for the City of Temple Terrace. Presently, the City does not meet the area-wide quality of service criteria established in the MMTD Handbook. As such, improvements to the multimodal network will be a critical part of the City’s multimodal district planning process.

Table 2.5

<table>
<thead>
<tr>
<th>Study Area Acreage:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Non-Residential Acres</td>
</tr>
<tr>
<td>60 Residential Acres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Area Control Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Employees</td>
</tr>
<tr>
<td>300 Dwelling Units</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Area Acreage Served:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Non-Residential Acres</td>
</tr>
<tr>
<td>20 Residential Acres</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dwellings and Employees Served:</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Acres X 100 Emp/20 Acres = 100</td>
</tr>
<tr>
<td>20 Acres X 300 DU/60 Acres = 100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percent DU and Employees Served:</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Emp/100 Emp Served = 100%</td>
</tr>
<tr>
<td>300 DU/100 DU Served = 33%</td>
</tr>
</tbody>
</table>
Table 2.5: Percent of Dwelling Units and Employees Served by Adequate LOS

<table>
<thead>
<tr>
<th></th>
<th>Bicycle</th>
<th>Pedestrian</th>
<th>Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employees</td>
<td>17,000</td>
<td>17,000</td>
<td>17,000</td>
</tr>
<tr>
<td>Total Dwelling Units</td>
<td>14,000</td>
<td>14,000</td>
<td>14,000</td>
</tr>
<tr>
<td>Employees Within a 1/4 Mile of Major Roadway Network</td>
<td>15,300</td>
<td>15,300</td>
<td>15,300</td>
</tr>
<tr>
<td>Dwelling Units Within a 1/4 Mile of Major Roadway Network</td>
<td>8,800</td>
<td>8,800</td>
<td>8,800</td>
</tr>
<tr>
<td>Employees Within Major Roadway Network Service Area Served by Adequate LOS</td>
<td>15,300</td>
<td>3,100</td>
<td>2,500</td>
</tr>
<tr>
<td>Percent of Employees Within Major Roadway Network Service Area Served by Adequate LOS</td>
<td>100%</td>
<td>20%</td>
<td>16%</td>
</tr>
<tr>
<td>Dwelling Units Within Major Roadway Network Service Area Served by Adequate LOS</td>
<td>8,800</td>
<td>2,400</td>
<td>900</td>
</tr>
<tr>
<td>Percent of Dwelling Units Within Major Roadway Network Service Area Served by Adequate LOS</td>
<td>100%</td>
<td>27%</td>
<td>10%</td>
</tr>
</tbody>
</table>

2.3 Multimodal System Needs

The current multimodal infrastructure does not fully support and integrate the mixture of primary and supporting uses based on the threshold criteria established in the MMTD handbook. The following sections describe potential capital improvements to Temple Terrace pedestrian and bicycle infrastructure as well as capital and operating improvements to HART routes serving Temple Terrace. Projects and costs included in this section are derived from the Hillsborough County Metropolitan Planning Organization’s (MPO’s) 2025 Long Range Transportation Plan (LRTP), adopted November 2004 and various projects identified by the City of Temple Terrace.

2.3.1 Pedestrian System Needs

The 2025 LRTP shows several major roadway facilities within and bordering the City of Temple Terrace with incomplete sidewalk facilities. These roadway segments, shown in Table 2.6, include portions of 56th Street, Fletcher Avenue, Fowler Avenue, Serena Drive, and 78th Street. Based on the 2007 FDOT District 7 Long Range Estimates sidewalk construction cost of $366,468 per linear mile of sidewalk, the combined cost of constructing sidewalks along these roadways is approximately $3.6 million dollars.
### Table 2.6: Temple Terrace Sidewalk “Gap” Needs and Estimated Construction Costs

<table>
<thead>
<tr>
<th>Street</th>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>% Need Left</th>
<th>% Need Right</th>
<th>Miles Needed</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>56th Street</td>
<td>Fowler Avenue</td>
<td>Fletcher Avenue</td>
<td>1.02</td>
<td>100%</td>
<td>100%</td>
<td>2.04</td>
<td>$748,000</td>
</tr>
<tr>
<td>Fletcher Avenue</td>
<td>50th Street</td>
<td>56th Street</td>
<td>0.48</td>
<td>100%</td>
<td>75%</td>
<td>0.84</td>
<td>$308,000</td>
</tr>
<tr>
<td>Fletcher Avenue</td>
<td>56th Street</td>
<td>Telecom Parkway</td>
<td>1.04</td>
<td>100%</td>
<td>100%</td>
<td>2.08</td>
<td>$762,000</td>
</tr>
<tr>
<td>Fletcher Avenue</td>
<td>Telecom Parkway</td>
<td>Morris Bridge Road</td>
<td>1.05</td>
<td>100%</td>
<td>100%</td>
<td>2.10</td>
<td>$770,000</td>
</tr>
<tr>
<td>Fowler Avenue</td>
<td>Riverhills Boulevard</td>
<td>I-75</td>
<td>0.93</td>
<td>100%</td>
<td>100%</td>
<td>1.86</td>
<td>$682,000</td>
</tr>
<tr>
<td>78th Street</td>
<td>Harney Road</td>
<td>Temple Terrace Hwy</td>
<td>0.64</td>
<td>0%</td>
<td>100%</td>
<td>0.64</td>
<td>$235,000</td>
</tr>
<tr>
<td>Serena Drive</td>
<td>52nd Street</td>
<td>56th Street</td>
<td>0.25</td>
<td>100%</td>
<td>0%</td>
<td>0.25</td>
<td>$92,000</td>
</tr>
</tbody>
</table>

**Totals:** 9.81 $3,597,000

**FDOT District 7 LRE Sidewalk Construction Cost/Mile:** $366,468

**Source:** Tindale Oliver & Associates, Inc. (September 2007)
Additional pedestrian improvements supportive of a multimodal transportation system include the following funded and un-funded enhancement projects:

**Funded Pedestrian Enhancements:**
- 56th Street, Hillsborough River to Busch Blvd $3.4m CIP
- 56th Street, Busch Blvd to Temple Heights $1.6m CIP
- Busch Blvd, City Limit (west) to 56th Street $1.2m CIP
- Temple Heights @ 56th Street Enhancements $0.5m CIP

**Un-Funded Pedestrian Enhancements:**
- 56th Street, Temple Heights to Fletcher Ave $14.3m¹ Not Funded
- Fowler Ave, 50th Street to Riverhills Drive $9.9m² Not Funded
- Bullard Pkwy, 56th Street to 78th Street $7.4m² Not Funded

### 2.3.2 Bicycle System Needs

Bicycle improvements supportive of a multimodal transportation system include the following funded and un-funded enhancement projects:

**Funded Bicycle Projects:**
- Temple Terrace Trail, Temple Terrace Hwy $1,620k MPO, TIP to Whiteway/Riverhills Intersection

**Un-Funded Bicycle Projects**
- Druid Hills Road Bikeway, Riverhills Drive to 50th Street $61k $30k/Mile estimate
- 50th Street Bikeway, Druid Hills Road/Serena Drive to Fowler Avenue $23k $30k/Mile estimate
- Sunnyside Rd/Ridgedale Road Bikeway, Druid Hills Road to S. Riverhills Drive $39k $30k/Mile estimate

### 2.3.3 Transit System Needs

Potential improvements to the transit system include both expanded service along existing transit routes and development of new transit service to move people through Temple Terrace and connect Temple Terrace with major regional activity centers.

---

¹ Estimate based on CIP cost of pedestrian enhancements on 56th Street, Temple Heights Road to Busch Blvd ($6.5m/mile)
² Estimate based on CIP cost of pedestrian enhancements on Busch Blvd, City Limits (west) to 56th Street ($4.9m/mile)
Funded Transit Projects:

- Existing HART Routes (6, 39, 57, and 23X) $703,400/year
- Capital improvements of I-275 North-South
  BRT Route along Fletcher Avenue from University
  Area Transit Center (UATC) to Hidden River Parkway $8,000,000

Un-Funded Transit Projects:

- Operating costs for BRT corridor from UATC to Hidden River Parkway $250,000/year
- Temple Terrace Flex Route Demand-Responsive Circulator $230,000/year
- Service Improvements to existing routes from UATC to Netp@rk $475,000/year

---

3 Ad Valorem revenues to HART from assessed property in Temple Terrace estimated based on FY06 tax roll
4 Capital costs for the entire corridor are $31m. Prorated at $2m/mile the subject segment cost is approximately $8m
5 Assumes one additional bus in service
6 Estimated based on cost of contract for seven flex routes
7 Estimated using $5.58 single allocation cost per revenue mile. Additional revenue miles based on upgrading service on Route 57 and Route 6 between UATC and Netp@rk to 3 buses/hr during 2 hours of the AM peak and 2 hours of the PM peak.
3.0 MULTIMODAL MITIGATION

This section of the technical memorandum identifies and documents questions and issues pertaining to the implementation of SB 360 mitigation requirements for the City of Temple Terrace. Acceptable policy approaches and quantitative methods for addressing SIS and non-SIS impacts have been documented and any unresolved or previously unrealized issues have been identified. A summary of policy statements and other guidance from the DCA and FDOT and several possible mitigation questions and/or issues for future review by DCA and FDOT staff have been documented.

3.1 Summary of Existing Multimodal Mitigation Policies

The following is a summary of policy statements and other guidance from the DCA and FDOT regarding the use of multimodal and mobility measures to offset SIS facility impacts.

3.1.1 TCEA and MMTD Impacts on the SIS

Florida statutes, as amended by SB 360 in 2005, stipulate new requirements for TCEAs and MMTDs with respect to the assessment and mitigation of impacts to the SIS. Additionally, the statute regarding MMTDs includes language describing the context under which development permits may be issued by local government agencies with respect to the implementation of the districts’ community design standards/capital program. This policy language is described as follows:

163.3180(5)(f) and 163.3180(15)(a) state: Prior to the designation of a concurrency exception area/multimodal transportation district, the state land planning agency and the Department of Transportation shall be consulted by the local government to assess the impact that the proposed exception area/multimodal district is expected to have on the adopted level-of-service standards established for Strategic Intermodal System facilities, as defined in s. 339.64, and roadway facilities funded in accordance with s. 339.2819. Further, the local government shall, in consultation with the state land planning agency and the Department of Transportation, develop a plan to mitigate any impacts to the Strategic Intermodal System, including, if appropriate, the development of a long-term concurrency management system pursuant to subsection (9) and s. 163.3177(3)(d).

The term “assess the impact of the proposed exception area/multimodal district is expected to have on the adopted level-of-service standards...” can be narrowly or broadly defined. A broad definition would possibly consider the impact of all development within the TCEA/MMTD on the SIS regardless of whether that development would otherwise be subject to concurrency review and/or require a concurrency certificate from the local government to proceed. A possible narrow policy definition would consider only the impact of development within the TCEA/MMTD which would be subject to concurrency review in the absence of the TCEA or MMTD policy. This narrow definition would exclude the impacts of vested development associated with approved DRIs (pursuant to the specific terms of the DRI) and developments which do not have significant impacts on SIS facilities based on the local agency’s concurrency review and/or traffic impact study procedures – assuming such procedures are consistent with professionally acceptable standards.
3.2 Multimodal Mitigation Policy Questions and Issues

Questions and/or issues related to current available policy guidance and its viability to use alternate modes of travel to offset SIS mitigation impacts have been identified below. These questions and/or issues will then be posed to both FDOT District Seven and DCA for future review and comment. Each section identifies a specific policy statement along with the corresponding question and/or issue.

3.2.1 Capital Planning in MMTDs

163.3180(15)(c) states: Local governments may establish multimodal level-of-service standards that rely primarily on non-vehicular modes of transportation within the district, when justified by an analysis demonstrating that the existing and planned community design will provide an adequate level of mobility within the district based upon professionally accepted multimodal level-of-service methodologies. The analysis must also demonstrate that the capital improvements required to promote community design are financially feasible over the development or redevelopment timeframe for the district and that community design features within the district provide convenient interconnection for a multimodal transportation system. Local governments may issue development permits in reliance upon all planned community design capital improvements that are financially feasible over the development or redevelopment timeframe for the district, without regard to the period of time between development or redevelopment and the scheduled construction of the capital improvements. A determination of financial feasibility shall be based upon currently available funding or funding sources that could reasonably be expected to become available over the planning period.

The term “community design” refers to both the design/development of public infrastructure and private property. Reference to “capital improvements” refers to public infrastructure – presumably street connectivity, public squares, appropriate traffic calming/management features, and bicycle and pedestrian facilities. While these terms could reasonably be used to describe fixed transit infrastructure (stations, bus lanes, kiosks, etc.) the paragraph does not seem to fully consider transit capital and makes no reference to the substantial operating expense associated with the provision of transit service. Nonetheless, the provision of QLOS “C” transit service is considered essential for transit-oriented multi-modal districts.

Question and/or Issue

May local governments issue development permits in a MMTD even when funding sources necessary to fund Q/LOS “C” transit operations are not currently available or reasonably expected to become available over the planning period so long as capital projects (including transit capital projects) are funded.
3.2.2 SIS Backlogs and Local Agency Responsibility

FDOT District Seven Planning staff indicated at the May 14, 2007 (See Section 4.0) meeting that FDOT was cognizant of the fact that current backlogs and future projections do not achieve the required LOS “D” standard for several SIS facilities and that development mitigation assessments within the would be insufficient to cure this backlog. Staff elaborated that FDOT would be looking for local jurisdictions to put forth a plan which addressed multi-modal solutions to reduce the impact of local trips on the SIS and that this plan should be backed by a cost-feasible Capital Improvements Element.

Funding for improvements to the SIS system shown in the current adopted Long Range Transportation Plan indicates a mix of sources including dedicated SIS funding as well as other state and federal highway monies. SIS funding is intended to service inter-regional trips (i.e. Orlando metro area to Tampa metro area) and trips to and from inter-modal centers such as Tampa International Airport and Tampa’s port facilities, other funding components being applied to the SIS roadways are intended to serve intra-regional travel demand.

Question and/or Issue

Given existing and projected backlogs on the area SIS systems and funding mixes, what component of planned SIS system expansion may be relied upon to serve new development within the City of Temple Terrace?

Question and/or Issue

Does reference to “local trips” refer to intra-TCEA trips or does this also mean trips into and out of the TCEA?

3.2.3 Transportation Supportive Land Uses

FDOT District Seven Planning staff indicated at the May 14, 2007 meeting that implementation of land development regulations and/or land use planning necessary to support mass transit corridors would be essential for success.

Many of the current rail-transit plans and some of the proposed bus rapid transit corridors are either parallel to elements of the SIS or serve development centers which are also served by the SIS. Intensification of land use along these transit corridors, regardless of the density, intensity, diversity, and design of the development will have a cumulative impact on the SIS. For example, if a 20 percent non-single occupant vehicle (SOV) mode share is assumed, then for every 100 new development trips, 80 will rely on single occupant vehicles. To the extent that development is intensified along transit corridors which are also serviced by the SIS, it is reasonable that non-transit trips generated by this development will utilize the SIS system. Further, it is likely (at least in the current comprehensive planning horizon) that more traffic generated by new development along SIS/Transit corridors will use the SIS roadway system than will use transit/non-SOV modes.
Question and/or Issue
Should local jurisdictions consider the proximity of transit corridors/station areas to SIS roadway facilities/access points to the extent that the overlay of transit corridors with existing SIS facilities may result in a greater impact to the SIS system than would occur if the intensification of transit supportive uses occurred away from SIS corridors? If so, how can Federal Transit Authority (FTA) rider-ship projection requirements be met without reliance on existing development nodes, most of which are serviced by SIS facilities?

3.2.4 Proportionate Fair Share
FDOT District Seven Planning staff indicated at the May 14, 2007 meeting that a proportionate fair share calculation had been performed for development in Plant City pursuant to anticipated impacts to I-4 and that a similar calculation could be established for impacts to SIS facilities in other jurisdictions.

Current SIS capacity projects include substantial right of way acquisition and reconstruction tasks to create an “envelope” for future roadway and rail system installation. This means that the use of the literal costs and capacity improvements of these projects would result in very high dollar value per unit of development for capacity assumptions. Also, the current SIS does not meet adopted service standards, and current financially feasible capital plans are not keeping pace with expected traffic growth.

Question and/or Issue
Can proportionate fair share contributions assessed for impacts to the SIS system (whether directed to roadway improvements or multimodal improvements) reflect unfunded service capacities or, must they reflect only currently funded service capacities?

Question and/or Issue
How would a proportionate fair share assessment be calculated when the set of sample capacity projects have very high cost to capacity ratios?

Question and/or Issue
If the above issues could be resolved, would an SIS impact proportionate fair share assessment substantively mitigate impacts of development on the SIS regardless of the ability of funds generated by that assessment to substantially advance SIS capacity projects?

Question and/or Issue
Could a proportionate share assessment based on roadway impacts to the SIS be used to fund local match requirements for rail transit capital expenses?
4.0 AGENCY COORDINATION

In attempt to coordinate the efforts of this project with responsible review agencies, two meetings were held with both the FDOT District Seven on May 14 and September 19, 2007, respectively. A third meeting was held with the Florida DCA on September 20, 2007. The purpose of these meetings was to introduce project goals and objectives, efforts completed to date, and dialogue between each agency and project team members. These meetings represent the first of several coordination meetings to discuss the issues highlighted in Section 3.2. Future coordination with each agency is anticipated and will be documented and incorporated into supplemental technical memoranda. Listed below are detailed descriptions of the major discussion points from each meeting.

4.1 May 14, 2007 with FDOT District Seven

- District Seven staff indicated that current backlogs and future projections do not achieve the required LOS “D” standard for some SIS facilities and that development mitigation assessment would be insufficient to mitigate this backlog,
- District Seven staff indicated that the District would be looking for each jurisdiction to put forth a plan which addressed multi-modal solutions to reduce the impact of local trips on the SIS and that this plan be backed by a cost-feasible Capital Improvements Element,
- District Seven staff suggested that implementation of land development regulations and/or land use planning necessary to support mass transit corridors would be needed,
- District Seven staff indicated that a proportionate fair share calculation had been performed for development in Plant City pursuant to anticipated impacts to I-4 and that a similar calculation could be established for other jurisdiction’s impacts to SIS facilities; and,
- District Seven staff indicated that mechanisms for assessing the benefits of transit service improvements to the SIS had not been defined.

4.2 September 19, 2007 with FDOT District Seven

- District Seven suggested developing a method of quantifying the effect of the proposed MMTD on trip lengths within the proposed district and along SIS facilities,
- District Seven suggested coordination between the jurisdiction proposing the MMTD and the local transit service provider in Hillsborough County (HART),
- District Seven suggested that larger MMTD may need to be broken up into more manageable sub-districts, each with its own mobility goals,
- District Seven requested that strong line of communication remain open between project team members and FDOT; and,
- District Seven has expressed support for the use of MMTD and looks forward to reviewing project findings.

4.3 September 20, 2007 with DCA

- DCA suggested that the project team continue to coordinate closely with DCA and FDOT.
- DCA expressed support for use of MMTD and looks forward to reviewing project findings.
5.0 STATEWIDE BEST PRACTICES

Project team members conducted a statewide data collection effort to identify Florida jurisdictions that have proposed or implemented a multimodal mitigation approach. All available public resources, including local Comprehensive Plans, were reviewed. As a result, ten different municipalities with relevant multimodal strategies or mechanisms were identified. These municipalities are listed below:

- City of Destin MMTD
- City of Gainesville TCEA
- City of Deland MMTD
- Broward County Transit Oriented Concurrency Districts
- City of Orlando Experimental Land Use Concept
- Miami-Dade County TCEA
- Polk County Transportation Planning Organization
- City of Boca Raton
- Martin and St. Lucie Counties
- City of Jacksonville Transition Areas

5.1 Selection of Peer Agencies

Discussion of each of the ten jurisdictions at a meeting with Hillsborough County MPO staff and consultant team members on April 19, 2007 resulted in the selection of five peer agencies. These five peer agencies were chosen using comparisons to the conditions and challenges present in Hillsborough County. Consideration was also given to jurisdictions that represented a wide range of variables, challenges faced, and strategies proposed or implemented. These peer agencies are listed below:

- City of Gainesville TCEA
- Broward County Transit Oriented Concurrency Districts
- City of Orlando Experimental Land Use Concept
- Miami-Dade County TCEA
- Polk County Transportation Planning Organization

5.2 Peer Agency Evaluations

The following section provides a summary of the peer agency evaluation interview process. Data collected from these interviews were then used to determine perceived strengths and weakness of each peer agency approach with regards to DCA and FDOT approval and effectiveness of implementing multimodal mitigation strategies under SB 360.
5.2.1 Peer Agency Interviews

Team members and MPO staff developed a list of questions to be used during telephone interviews with each of the five peer agencies. The questions were intended to identify each agency’s approach and perceived strength or weakness in several different topic areas, including ease of implementation, effectiveness, acceptance, and common obstacles. A detailed list of questions, along with various conversation points used to facilitate discussion is provided in Appendix C. Appendix D provides a detailed log of when and with whom each interview was conducted. Appendix E describes in detail the responses provided to each interview question during the peer agency interviews.

5.2.2 Evaluation Matrix

After the peer agency interviews were completed in June 2007, each agency was scored in ten categories on its approach toward developing effective multimodal mitigation policies relevant to Hillsborough County. A scoring matrix was developed to judge the perceived strengths and weaknesses of each approach. Scoring was based on a rating of 1 to 10, with 1 reflecting a perceived weakness and 10 reflecting a perceived strength. Below is a list of each scoring category with a brief description of each category’s intended goal.

**Ease of Implementation**

This scoring category evaluates the ease of developing and implementing multimodal concurrency policies and mitigation along with the amount of staff time required to develop said policies.

**Clear Guidance to Developers**

Evaluating developer guidance, this category identifies each approach’s perceived strength or weakness providing clear, understandable, and concise concurrency contribution calculations for developers applying for building certificate approval.

**Concise Multimodal Standards**

This scoring category evaluates each multimodal policy’s ability to provide clear and concise multimodal LOS standards.

**Effectiveness of Implementing Pedestrian Improvements**

Evaluating implementation strategies, this category identifies each approach’s perceived strength or weakness of implementing pedestrian improvements using multimodal standards and policies.

**Effectiveness of Implementing Bicycle Improvements**

Evaluating implementation strategies, this category identifies each approach’s perceived strength or weakness of implementing bicycle improvements using multimodal standards and policies.

**Effectiveness of Implementing Transit Improvements**

This scoring category evaluates each multimodal policy’s ability to implement both transit infrastructure improvements and increase quality/frequency of service using multimodal standards.
Ability to Stimulate Redevelopment and Infill
This scoring category evaluates each multimodal policy’s ability to stimulate redevelopment and development infill within each district using multimodal standards and policies.

Coordination between Agencies
Evaluating inter-agency coordination strategies, this category identifies each approach’s perceived strength or weakness with coordinating multimodal policies between various agencies.

FDOT and DCA Acceptance
This scoring category evaluates each multimodal policy’s ability to coordinate and develop acceptable multimodal policies using FDOT and DCA guidance.

Clear Mechanisms for Collecting and Distributing Contributions
Evaluating each approach’s perceived strength and weakness, this category identifies how clear each approach mechanism is at collecting and distributing multimodal contributions.

Using the categories above, Table 5.1 summarizes the scoring of each peer agency in comparison to one another. Appendix F provides a detailed description of each peer agency’s perceived strength and weakness by category.

Table 5.1: Peer Agency Scoring Matrix

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Peer Jurisdictions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>City of Gainesville</td>
</tr>
<tr>
<td>Ease of Implementation</td>
<td>4 5 8 6 8</td>
</tr>
<tr>
<td>Clear Guidance to Developers</td>
<td>9 8 5 7 6</td>
</tr>
<tr>
<td>Concise Multi-modal Standards</td>
<td>10 7 6 6 5</td>
</tr>
<tr>
<td>Effectiveness of Implementing Pedestrian Improvements</td>
<td>9 4 5 5 6</td>
</tr>
<tr>
<td>Effectiveness of Implementing Bicycle Improvements</td>
<td>8 4 8 5 6</td>
</tr>
<tr>
<td>Effectiveness of Implementing Transit Improvements</td>
<td>7 10 6 8 7</td>
</tr>
<tr>
<td>Ability to Stimulate Redevelopment and Infill</td>
<td>9 8 8 8 8</td>
</tr>
<tr>
<td>Coordination Between Agencies</td>
<td>8 8 3 3 3</td>
</tr>
<tr>
<td>FDOT and DCA Acceptance</td>
<td>6 6 5 5 5</td>
</tr>
<tr>
<td>Clear Mechanisms for Collecting and Distributing Contributions</td>
<td>8 7 4 4 6</td>
</tr>
<tr>
<td>Grand Total</td>
<td>78 67 58 57 60</td>
</tr>
</tbody>
</table>
5.2.3 Summary

Using the scoring results presented in Table 5.1, the peer agencies receiving the highest scores were the City of Gainesville TCEA’s multimodal standards and Broward County’s Transit Oriented Concurrency system. While other peer agency approaches received comparable scores, it was determined that these two peer agencies had the strongest perceived multimodal approach as it relates to the challenges faced by Hillsborough County. Specifically, the City of Gainesville’s approach provided clear developer guidance with qualitative multimodal standards that are effective at implementing pedestrian and bicycle improvements, whereas, the Broward County approach also provided clear developer guidance with concise quantitative multimodal standards and was effective at implementing transit improvements. The following section highlights some of the perceived advantages and disadvantages of both the City of Gainesville and Broward County approaches.

5.2.4 City of Gainesville Approach

The City of Gainesville has adopted a TCEA district with three separate sub-zones. The goal of each sub-zone is to regulate development through the use of various multimodal standards, identified in the Gainesville Comprehensive Plan. To encourage development and redevelopment, each sub-zone has outlined several various requirements. Zone A, the least restrictive, focuses on providing sidewalks and pedestrian circulation, closure of excessive curb-cuts, and the deeding of land or conveyance of easements to the City for construction of sidewalks. Zones B and C implement the same TCEA requirements as Zone A, but add additional multimodal requirements. Both Zones B and C require that development meet additional multimodal standards based on trip generation and proportional impact to roadways. Depending on the number of trips generated, each development is required to implement 12 out of 23 multimodal standards in Zone B or 18 out of 22 multimodal standards in Zone C.

Tables 5.2 and 5.3, taken directly from the Gainesville Comprehensive Plan, are the trip generation tables and number of standards required within zones B and C. The City of Gainesville Comprehensive Plan, Concurrency Management Element is provided for reference in Appendix G.

Table 5.2: Gainesville TCEA Requirements for Zone B

<table>
<thead>
<tr>
<th>Net, New Average Daily Trip Generation</th>
<th>Number of Standards That Must be Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>At least one standard</td>
</tr>
<tr>
<td>50 to less than 100</td>
<td>At least two standards</td>
</tr>
<tr>
<td>100 to 400</td>
<td>At least three standards</td>
</tr>
<tr>
<td>400 to 999</td>
<td>At least five standards</td>
</tr>
<tr>
<td>Greater than 1,000 trips, but less than 5,000 trips</td>
<td>At least eight standards</td>
</tr>
</tbody>
</table>
| Greater than 5,000 trips               | At least 12 standards and meet a. or b. below:  
  a. Be on an existing transit route  
  b. Provide funding for a new transit route. |

Source: City of Gainesville Comprehensive Plan, Concurrency Management Element, Policy 1.1.6 (Revised 2005)
Table 5.3: Gainesville TCEA Requirements for Zone C

<table>
<thead>
<tr>
<th>Net, New Average Daily Trip Generation</th>
<th>Number of Standards That Must be Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>At least one standard</td>
</tr>
<tr>
<td>50 to less than 100</td>
<td>At least 3 standards</td>
</tr>
<tr>
<td>100 to 400</td>
<td>At least 4.5 standards</td>
</tr>
<tr>
<td>400 to 999</td>
<td>At least 7.5 standards</td>
</tr>
<tr>
<td>Greater than 1,000 trips but less than 5,000 trips</td>
<td>At least 12 standards</td>
</tr>
<tr>
<td>Greater than 5,000 trips</td>
<td>At least 18 standards and meet a. or b. below:</td>
</tr>
<tr>
<td></td>
<td>a. Be on an existing transit route</td>
</tr>
<tr>
<td></td>
<td>b. Provide funding for a new transit route</td>
</tr>
</tbody>
</table>

Source: City of Gainesville Comprehensive Plan, Concurrency Management Element, Policy 1.1.7 (Revised 2005)

The clear benefit of this approach is that the City provides clear and concise guidance that identifies how many standards should be met by potential developers which are easily understandable. These standards focus on multimodal improvements that encompass requirements for pedestrian, bicycle, and transit.

A few disadvantages to this approach are that the City of Gainesville does not provide headway or LOS standards for transit or any clear mechanism for calculating developer contribution towards the operating cost of increased transit services over time. Other major disadvantages of this approach, identified by survey participant, is the considerable time required to develop the multimodal standards and that each proposed development requires additional staff resources to calculate developer contributions and negotiate the appropriateness of the standards selected, on a “case-by-case” basis.

5.2.5 Broward County Approach

Broward County has adopted a Transit Oriented Concurrency Management System which is based on five-year Transit Development Plans adopted by the County. This approach calculates total peak-hour trip generation of proposed development. These trips are then multiplied by a cost per trip or transit concurrency fee for ten individual County districts. In order to calculate a transit concurrency fee, proposed development uses a County approved peak hour trips generation rate (by land use). The total number of trips generated is then calculated by a trip length factor (again by land use). This number is then multiplied by a cost per trip by district, determining the appropriate developer contribution. Prior to application for a building permit, the proposed developer must obtain a Transportation Concurrency Satisfaction Certificate from Broward County.

Table 5.4, taken directly from the Broward County Transit Oriented Concurrency Management System, is an example of the concurrency fees per trip for each district. An expert from Broward County Land Development Code, specifically dealing with the Transit Oriented Concurrency Management System, is provided in Appendix H.
The obvious benefit of this approach is that the County provides clear and concise guidance identifying LOS standards for transit service within the TCEA and calculating the cost per trip generated by the proposed development. As a result, several improvements as well as increased transit service has been and are currently being implemented. Trip calculations are well documented and easily understood.

A few disadvantages to this approach are that Broward County Transit Oriented Concurrency Management System does not make provisions for pedestrian or bicycle improvements. Another major disadvantage of this approach was the considerable time required by the County and local transit provider to monitor transit LOS standards. The County also only collects fees from new development for three years, leaving the County to provide funding for the system after the impact fees are paid. This has resulted in an ever-increasing disparity between maintaining LOS standards and the need for collecting greater farebox recovery and increased County subsidies over time.

Table 5.4: Broward County Concurrency Fees

<table>
<thead>
<tr>
<th>Column #</th>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
<th>#6</th>
<th>#7</th>
<th>#8</th>
<th>#9</th>
<th>#10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Use</td>
<td># of Trips</td>
<td>Trip Length Factor</td>
<td>NORTH EAST DISTRICT</td>
<td>NORTH CENTRAL DISTRICT</td>
<td>SOUTH CENTRAL DISTRICT</td>
<td>CENTRAL DISTRICT</td>
<td>EASTERN CORE DISTRICT</td>
<td>SOUTH EAST DISTRICT</td>
<td>SAW GRASS DISTRICT</td>
<td>PORT AIRPORT DISTRICT</td>
</tr>
<tr>
<td>Cost per trip ----&gt;</td>
<td>$975</td>
<td>$986</td>
<td>$1,334</td>
<td>$1,430</td>
<td>$1,641</td>
<td>$1,535</td>
<td>$1,579</td>
<td>$1,219</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 Single Family Units</td>
<td>50.5</td>
<td>0.88</td>
<td>$43,320 (See example below)</td>
<td>$43,818</td>
<td>$59,283</td>
<td>$63,549</td>
<td>$72,926</td>
<td>$68,215</td>
<td>$70,171</td>
<td>$54,172</td>
</tr>
<tr>
<td>50 Garden Apts.</td>
<td>30.5</td>
<td>0.88</td>
<td>$26,169</td>
<td>$26,464</td>
<td>$35,805</td>
<td>$38,381</td>
<td>$44,044</td>
<td>$41,199</td>
<td>$42,380</td>
<td>$32,718</td>
</tr>
<tr>
<td>50,000 sq ft industrial</td>
<td>38.5</td>
<td>1.00</td>
<td>$37,538</td>
<td>$37,961</td>
<td>$51,359</td>
<td>$55,655</td>
<td>$63,179</td>
<td>$59,998</td>
<td>$60,792</td>
<td>$46,932</td>
</tr>
<tr>
<td>50,000 sq ft Office</td>
<td>111.52</td>
<td>0.77</td>
<td>$83,723</td>
<td>$84,668</td>
<td>$114,551</td>
<td>$122,794</td>
<td>$140,913</td>
<td>$131,810</td>
<td>$135,589</td>
<td>$104,676</td>
</tr>
<tr>
<td>50,000 sq ft Retail</td>
<td>397.4</td>
<td>0.65</td>
<td>$251,852</td>
<td>$254,694</td>
<td>$244,586</td>
<td>$269,383</td>
<td>$423,887</td>
<td>$396,508</td>
<td>$407,871</td>
<td>$314,880</td>
</tr>
</tbody>
</table>

Source: Broward County Transit Oriented Concurrency Management System
6.0 MULTIMODAL APPROACH FOR TEMPLE TERRACE

The following section identifies policy approaches and procedural mechanisms to formulate a hybrid strategy or the “best-fit” multimodal approach for the City of Temple Terrace. Sections 2.0 through 5.0, document the advantages, disadvantages, unknowns, and effectiveness of implementing multimodal policies and mitigation strategies under SB 360. Specifically, this approach incorporates the feasibility evaluation of implementing a MMTD, multimodal policy considerations, and example methodologies for calculating multimodal mitigation.

6.1 Multimodal District Evaluation

An evaluation was completed to determine the feasibility for implementing a MMTD using multimodal area-wide Q/LOS measures identified in the MMTD Handbook. As a result, the City of Temple Terrace was compliant, if connectivity is provided to the University of South Florida and/or Telecom Park, in the following evaluation areas:

- Appropriate Scale of Development,
- Complementary Mix of Uses, and
- Appropriate Density and Intensity of Use.

The MMTD Handbook indicates that the City of Temple Terrace currently does not meet the criteria established for the following MMTD evaluation areas:

- Land Use Promoting Multimodal Usage,
- Acceptable Separation of Land Uses,
- Appropriate Organization of Land Uses,
- Regional Intermodal Connectivity,
- Interconnected Multimodal Network,
- Acceptable LOS, and
- Appropriate Density and Intensity of Use.

However, the City of Temple Terrace could feasibly implement a MMTD by putting into practice new multimodal policies that address the above criteria and work towards the implementation of the pedestrian, bicycle, and transit improvements identified in Section 2.3.

6.2 Policy Considerations

MMTD designation may be accomplished by amending the City of Temple Terrace’s Comprehensive Plan and future land use map, as provided in Chapter 163.3184, F.S. These amendments must be reviewed and approved by DCA in consultation with FDOT. This legislation also allows Temple Terrace to use alternative approaches to concurrency determinations (Chapter 163.3180(15)(d), F.S.).
Legislation also allows the City of Temple Terrace to use alternative approaches to concurrency determinations (Chapter 163.3180(15)(d), F.S.). As a general rule, most minimum LOS standards are established solely on vehicle usage. In a MMTD, these standards may be based on multimodal performance measures that consider multimodal transportation, including walking, biking, and transit. Where minimum automobile LOS standards are exceeded by proposed developments, “local governments may issue development permits in reliance upon all planned community design capital improvements that are financially feasible over the development or redevelopment timeframe, without regard to the period of time between development or redevelopment and the scheduled construction of capital improvements” - Chapter 163.3180(15)(c)(c).

Sub-district plans within the MMTD are also recommended for the City; these sub-districts detail development plans for a specific geographic area and may focus on a particular community or high growth area. The identification of sub-districts within the MMTD provides a detailed evaluation of the characteristics of that district. FDOT Community Impact Assessment Handbook explains how to evaluate the transportation needs of an area and the potential impacts of proposed plans on the community and its quality of life (FDOT Community Impact Assessment Handbook, 2000).

6.2.1 Long Term Multimodal Concurrency Management System

A number of local governments around the state have investigated multimodal transportation improvements as an essential component of the development review process (Section 5.0). For the City of Temple Terrace, development and approval of multimodal policy initiatives and LOS standards are needed to implement future multimodal improvements to satisfy MMTD designation criteria identified in the MMTD Handbook. Development of these future multimodal policies may also consider the application of a long-term multimodal concurrency management system. This management system could involve the identification of long-term infrastructure improvements, increases in frequency, and quality of multimodal service.

This long-term management strategy represents a possible hybrid of policy initiatives that looks beyond the five-year Capital Improvements Element of the Comprehensive Plan and evaluates the total development potential within the City’s proposed MMTD districts over a predetermined planning horizon. The determination of long-term needs may be based on speculative improvements from transit development plans and long-term planning and visioning studies. These long-term needs could be determined by using future development forecasts and the affect this anticipated growth has on a set of pre-established multimodal standards. It is recommended that this long-term management system use a stepped approach which gradually replaces the existing TCEA in the City of Temple Terrace.

The development of each multimodal standard for use in this long-term multimodal concurrency management system could be partially based on the quantitative strengths of the LOS transit standards used in Broward County’s Transit Oriented Concurrency Management System. These transit LOS standards would be a viable consideration for identifying long term transit infrastructure and service needs within the proposed MMTD. The qualitative multimodal policy standards identified in the City of Gainesville’s TCEA would be another viable consideration for implementing needed pedestrian and bicycle standards. The combination of both of these approaches may reflect the “best-fit” approach to establish elements or ordinances for a long term multimodal concurrency management system for proposed MMTD within the City of Temple Terrace.
The City of Temple Terrace is required to address its growth management needs in their CIE update by December 2008. The updated CIE must demonstrate progress over the course of the term and financial feasibility at the end of the term. The benefit of using the recommended long-term multimodal concurrency management system as part of the CIE update provides greater flexibility in the City’s policies. For example, the City can apply proportionate fair share ordinances to area wide multimodal standards versus just along identified corridors. The City could also stipulate that each standard would not need to be met until the scheduled improvements are completed and identify planned funding for years 4 thru 15 that could potentially detail developer contributions.

6.2.2 Example Policies

Broward County’s Transit Oriented Concurrency System uses a total peak hour person trip generation and total trip length of trip calculation for each proposed development. These trip rates are then multiplied by a cost per trip figure which represents the future transit development plans for that particular sub-district. A similar calculation for the City of Temple Terrace could determine a cost for transit, pedestrian, and bicycle trips generated by development that correlates to proposed LOS standards. An example multimodal mitigation calculation technique is described in detail in Section 6.3. A policy example from Broward County’s Transit Oriented Concurrency System is highlighted below.

 Sec. 5-182. Development Review Requirements

An application for a development permit must comply with the requirements of this section. To determine compliance with these requirements, within municipalities, the County shall conduct an independent review; provided, however, that in conducting such review the County shall utilize and consider whatever documentation and recommendation is provided to it by the relevant municipality as a result of that municipality’s own review of such subject matters.

Levels of Service (LOS) Standards

a) LOS Standards within Transit Oriented Concurrency Districts

For the purpose of issuing development permits, the LOS Standards within Transit Oriented Concurrency Districts are as follows:

Northeast District: Achieve headways of 30 minutes or less on 90% of routes. Establish at least one neighborhood transit center. Establish at least one additional community bus route.

North Central District: Achieve headways of 30 minutes or less on 90% of routes. Establish at least one neighborhood transit center. Establish at least one additional community bus route. Expand coverage area to 53 percent.

Central District: Achieve headways of 30 minutes or less on 80% of routes. Establish at least one neighborhood transit center. Establish at least two additional community bus routes.

- Broward County Transit Oriented Concurrency District
The City of Gainesville’s multimodal development standards with the City’s TCEA identifies a predetermined list of multimodal standards with the scale of the proposed development determining how many of these standards are required to be implemented before development approval can be given. These standards provide clear developer guidance towards the implementation of improvements that may be considered more qualitative, where as a quantitative calculation method is not appropriate. This is of particular importance for the City of Temple Terrance when attempting to collect developer contributions toward pedestrian and bicycle amenities, such as bicycle racks and benches which promote alternate modes of travel. A policy example from the City of Gainesville’s Comprehensive Plan: Concurrency Management

**Policy 1.1.6**

*Within Zone B, development or redevelopment shall be required to meet the following development standards, provided at developer expense, based on the development’s (including all phases) trip generation and proportional impact on roadway facilities. The developer may sign a development agreement or contract with the City of Gainesville for the provision of these standards. The choice of standards shall be subject to the final approval of the City during the plan approval process. The standards chosen shall relate to the particular site and transportation conditions where the development is located. The developer may choose to provide one or more standards off-site with the City’s approval. In recognition of the varying costs associated with the standards, the City shall have the discretion to count some individual standards, based on cost estimates provided by the developer and verified by the City, as meeting two or more standards.*

<table>
<thead>
<tr>
<th>Net, new average daily trip generation</th>
<th>Number of standards which must be met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50</td>
<td>At least one standard</td>
</tr>
<tr>
<td>50 to less than 100</td>
<td>At least two standards</td>
</tr>
<tr>
<td>100 to 400</td>
<td>At least three standards</td>
</tr>
<tr>
<td>400 to 999</td>
<td>At least five standards</td>
</tr>
<tr>
<td>Greater than 1,000 trips but less than 5,000 trips</td>
<td>At least eight standards</td>
</tr>
<tr>
<td>Greater than 5,000 trips</td>
<td>At least 12 standards and meet a. or b. below:</td>
</tr>
<tr>
<td></td>
<td>a. Be on an existing transit route</td>
</tr>
<tr>
<td></td>
<td>b. Provide funding for a new transit route</td>
</tr>
</tbody>
</table>

**a.** Intersection and/or signalization modifications to improve LOS and safety and address congestion management. This may include, but is not limited to:

- signal timing studies,
- fiber optic inter-connection for traffic signals,
- roundabouts,
- OPTICOM signal preemption, and/or implementation of elements of the Gainesville Traffic Signalization Master Plan Update.
- Implementation of the Master Plan includes installation of Intelligent Transportation System (ITS) features such as state of the art traffic signal controllers, dynamic message signs, and traffic monitoring cameras designed
to maximize the efficiency of the roadway network by reducing congestion and delay.

b. Addition of dedicated turn lanes into and out of the development.
c. Construction of bus shelters built to City specifications or bus shelter lighting using solar technology designed and constructed to City specifications.
d. Construction of bus turn-out facilities.
e. Provision of bus pass programs provided to residents and/or employees of the development. The bus passes must be negotiated as part of a contract with the Regional Transit System.
f. Payments to the Regional Transit System, which either increase, service frequency or add additional bus service.
g. Construction of public sidewalks where they are not currently existing. Sidewalk construction required to meet the Land Development Code requirements along property frontages shall not count as meeting TCEA standards.
h. Widening of existing public sidewalks to increase pedestrian mobility and safety.
i. Deeding of land for the addition and construction of bicycle lanes, or construction of bicycle lanes to City specifications.
j. Provision of ride sharing or van pooling programs.
k. Use of joint driveways or cross-access to reduce curb cuts.
l. Provision of park and ride facilities.
m. Funding of streetscaping/landscaping (including pedestrian-scale lighting, where relevant) on public right-of-ways or medians, as coordinated with the implementation of the City’s streetscaping plans.
n. Business operations that can be proved to have limited or no peak hour roadway impact.
o. Provision of shading through awnings or canopies over public sidewalk areas to promote pedestrian traffic and provide protection from the weather so that walking is encouraged. The awning or canopy shall provide pedestrian shading for a significant length of the public sidewalk in front of the proposed or existing building.
p. Provision of additional bicycle parking over the minimum required by the Land Development Code. Additional bicycle parking may be used to substitute for the required motorized vehicle parking.
q. In order to increase the attractiveness of the streetscape and reduce visual clutter along roadways, which promotes a more walkable environment, provision of no ground-mounted signage at the site for parcels with 100 linear feet or less of property frontage. Or, removal of non-conforming signage or billboards at the site. Signage must meet all other regulations in the Land Development Code.
r. Enhancements to the City’s greenway system (as shown in the Transportation Mobility Map Series) which increase its utility as a multi-modal transportation route. Such enhancements may include, but not be limited to: 1) trail amenities such as benches, directional signage, or safety systems; 2) bicycle parking at entry points or connecting with transit lines; 3) land acquisition for expansion or better connectivity of the greenway system; 4) additional entry points to the greenway system; 5) bridges spanning creeks or wetland areas; and/or, 6) appropriate trail surfacing.
s. Participation in a transportation demand management program that provides funding or incentives for transportation modes other than single occupant vehicle. Such demand management programs shall provide annual reports of operations to the City indicating successes in reducing single occupant vehicle trips.

t. Clustering of and design of the development for maximum density, or maximum FAR, at the site which preserves open space, reduces the need for development of vacant lands, enhances multi-modal opportunities and provides transit-oriented densities or intensities.

u. Construction of new road facilities which provide alternate routes to reduce congestion.

v. Addition of lanes on existing road facilities, where acceptable to the City and/or MTPO, as relevant.

w. An innovative transportation-related modification or standard submitted by the developer, where acceptable to and approved by the City.

6.3 Multimodal Mitigation Calculation Considerations

A possible/recommended methodology for calculating and mitigating impacts using the multimodal polices and LOS standards described in Section 6.2 may be the use of a long term multimodal needs assessment analysis which evaluates the total potential development within the MMTD and each individual sub-district over a predetermined planning horizon. Using established multimodal standards and this predetermined planning horizon, the multimodal infrastructure needs required to support the forecasted development could be identified. The total cost of these needed improvements could then be divided by the total number of trips generated by the forecasted growth. This calculation would result in an individual cost per trip.

The benefit of this approach is that it considers and incorporates transit service/operational costs and bicycle and pedestrian improvements over time. Potential issues related to this approach are that this method assumes that there are existing constrained roadway facilities, which is generally the case for the City of Temple Terrace. However, multimodal improvements could not be implemented in areas where there are sufficient existing roadway capacity operating below the LOS standard to accommodate proposed development.

As described in the previously, the current multimodal infrastructure does not fully support and integrate the mixture of primary and supporting uses based on the threshold criteria established in the MMTD handbook. Pedestrian LOS on major roads is lower due to high traffic volumes, speeds, and minimal separation from the sidewalk. Table 6.1 highlights potential pedestrian infrastructure needs. Table 6.2 describes bicycle LOS constraints that are primarily related to limited right-of-way along major corridors, reflecting a need for parallel bicycle routes with way finding strategies. Potential improvements to the transit system are also needed to expanded service along existing transit routes and development of new transit service to move people through Temple Terrace and connect Temple Terrace with major regional activity centers. Table 6.3 details these potential transit infrastructure and service needs.

Figure 6.1 highlights calculation steps to identify a possible cost per trip for the City of Temple Terrace using identified multimodal needs from Tables 6.1 through 6.3. This example calculation strategy for implementing a long-term multimodal concurrency management system is for a proposed planning horizon of 2025 which is consistent with the City’s Comprehensive Plan.
Table 6.1: Pedestrian Network Improvements

<table>
<thead>
<tr>
<th>Proposed Improvement</th>
<th>Approx. Cost</th>
<th>Source Document</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56th St pedestrian enhancements, Hills. River to Busch</td>
<td>$3,400,000</td>
<td>Temple Terrace CIP</td>
</tr>
<tr>
<td>Blvd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56th St pedestrian enhancements, Busch Blvd to Temple</td>
<td>$1,600,000</td>
<td>Temple Terrace CIP</td>
</tr>
<tr>
<td>Heights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Busch Blvd pedestrian enhancements, West City Limits to</td>
<td>$1,200,000</td>
<td>Temple Terrace CIP</td>
</tr>
<tr>
<td>56th St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temple Heights/ 56th St enhancements</td>
<td>$500,000</td>
<td>Temple Terrace CIP</td>
</tr>
<tr>
<td><strong>Not Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56th Street pedestrian enhancements, Temple Heights Rd</td>
<td>$14,300,000*</td>
<td></td>
</tr>
<tr>
<td>to Fletcher Ave</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fowler Ave pedestrian enhancements, 50th St to Riverhills</td>
<td>$9,893,000**</td>
<td></td>
</tr>
<tr>
<td>Dr***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullard Pkwy pedestrian enhancements, 56th St to 78th</td>
<td>$7,359,000**</td>
<td></td>
</tr>
<tr>
<td>St</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk Gap Needs (Table 2.6)</td>
<td>$3,597,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$41,849,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

* Estimate is based on CIP cost of pedestrian enhancements on 56th Street, Temple Heights Rd to Busch Blvd ($6,499,680 per mile).  
** Estimate is based on CIP cost of pedestrian enhancements on Busch Blvd, West City Limits to 56th St ($4,873,440 per mile). 
*** Some segments are located outside city limits for connectivity to University area destinations.

Table 6.2: Bicycle Network Improvements

<table>
<thead>
<tr>
<th>Proposed Improvement</th>
<th>Approx. Cost</th>
<th>Source Document</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temple Terrace Trail, from Temple Terrace Hwy to</td>
<td>$1,620,000</td>
<td>MPO Approved TIP Priorsities, Transp. Enhancemt. Program</td>
</tr>
<tr>
<td>Whiteway/Riverhills intersection</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Not Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Druid Hills Rd Bikeway, Riverhills Dr to 50th St**</td>
<td>$60,600*</td>
<td></td>
</tr>
<tr>
<td>50th St Bikeway, Druid Hills Rd/Serena Dr to Fowler Ave**</td>
<td>$23,400*</td>
<td></td>
</tr>
<tr>
<td>Sunnyside Rd/Ridgedale Rd Bikeway, Druid Hills Rd to S.</td>
<td>$38,700*</td>
<td></td>
</tr>
<tr>
<td>Riverhills Dr</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$1,472,700</strong></td>
<td></td>
</tr>
</tbody>
</table>

* Pavement striping and stenciling, signage on and to route, to be located within existing right of way, estimated at $30,000 per mile.  
** Some segments are located outside city limits for connectivity to University area destinations.
Table 6.3: Transit Network Improvements

<table>
<thead>
<tr>
<th>Proposed Improvement</th>
<th>Approx. Cost</th>
<th>Source Document</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit Service on Busch Blvd, Fowler Ave, 56th St, and (north of Fowler Ave) 50th St (Routes 6, 39, 57, 23X)</td>
<td>$705,640/yr*</td>
<td></td>
</tr>
<tr>
<td>Capital Improvements, Fletcher Ave Transit Emphasis Corridor, Univ. Area Transit Center to Hidden River</td>
<td>$8,000,000**</td>
<td></td>
</tr>
<tr>
<td><strong>Not Funded</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service on Fletcher Ave Transit Emphasis Corridor, Univ. Area Transit Center to Hidden River Pkwy</td>
<td>$298,934/yr***</td>
<td></td>
</tr>
<tr>
<td>Temple Terrace Flex Route, Demand-Responsive Circulator Service</td>
<td>$243,079/yr****</td>
<td></td>
</tr>
</tbody>
</table>

* Ad valorem revenues to HART from assessed property in Temple Terrace FY07.
** Hillsborough Co. Transportation Task Force Recommendations, approved August 2007, include $31 million for BRT I-275 North-South Corridor; funded amount shown above is prorated for segment noted above at $2 million/mile.
*** Assumes one additional bus in service, 15 service hours/day weekdays, 12/day weekends; hourly rate is current HART marginal cost.
**** Assumes 14 hours/day, six days/week service; hourly rate, adjusted to include vehicle cost, is per April 2007 low bid to operate seven HARTflex demand-response circulator routes including the proposed Route 503–Temple Terrace.

Note: Improvements in Pedestrian LOS on 56th Street north of Temple Heights Rd will improve transit LOS.
Note: Transit improvements should be coordinated with HART and reflected in HART’s Transit Development Program as appropriate.