STATE ROAD 50 MULTI-MODAL CORRIDOR STUDY

EXECUTIVE SUMMARY

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT 5

DECEMBER 2011

A Constrained Regional Arterial

In the last two decades, the SR 50 Corridor in south Lake County has experienced some of the fastest suburban development in the Central Florida region. Though this growth has slowed down considerably during the recent economic downtown, land development has continued. The rapid development of land uses along a previously rural corridor transformed this section of SR 50 from one that served regional mobility needs, to one that would also have to provide for local access needs and function as a business address.

The Florida Department of Transportation (FDOT) has responded to this increase in traffic by widening SR 50 from four to six lanes (currently under construction). However, even with this widening, projections indicate that the traffic demand will exceed the roadway's six-lane capacity well before the road's 20 year design life, if growth patterns continue as before. Both FDOT and local communities do not consider widening SR 50 beyond six-lanes to be feasible or desirable. Through the leadership of Lake~Sumter Metropolitan Planning Organization (LSMPO), cities along the Corridor have designated SR 50 as a multi-modal corridor in its Transportation 2035 Plan (regional long range transportation plan). The multi-modal designation calls for a full range of modal options in addressing the Corridor's future mobility needs.

A New Approach

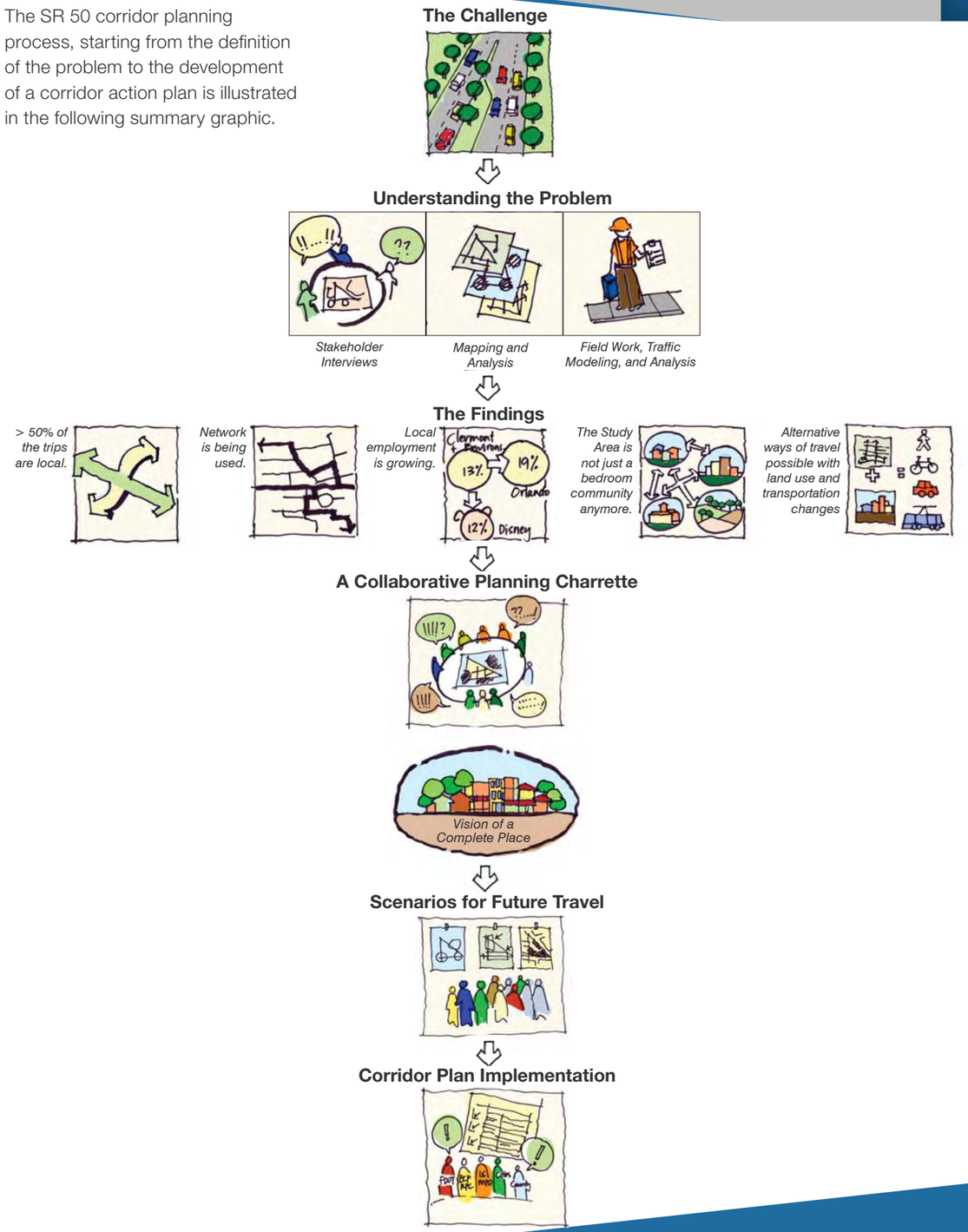
FDOT's latest investment in SR 50 cannot sustainably address the increasing traffic demand generated by growing communities that require both regional through trips and local access along the Corridor. Faced with this realization and a desire to optimize the return on the state's roadway investment, FDOT explored solutions that have a more far-reaching effect than simply solving individual and recurring symptoms of traffic congestion.

With the support of SR 50 communities (Groveland, Clermont, Minneola, Oakland, Winter Garden, and Lake and Orange Counties) and regional partners (LSMPO and the East Central Florida Regional Planning Council (ECFRPC)), FDOT is using this new approach for the SR 50 Multi-Modal Corridor pilot study.

The Study is:

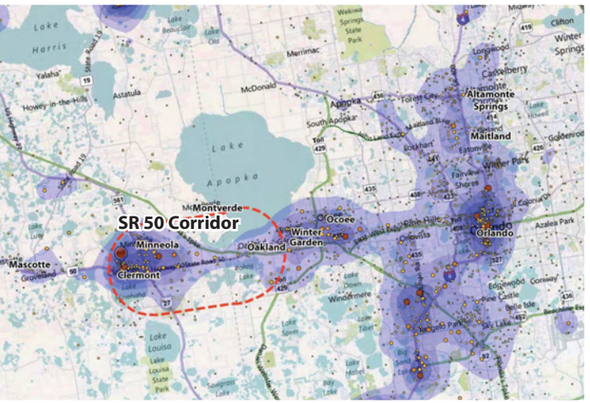
- Context-sensitive. The study looks at the broader corridor-context instead of focusing only on solutions within the right-of-way, a single roadway, or a few intersections.
- Holistic. It focuses on transportation solutions and looks at broader land use issues, demonstrating how land use and transportation decisions need to be integrated to achieve the long-term viability of SR 50, not just as a transportation conduit but as a the economic spine of communities.
- Collaborative. The study calls for true partnership among local municipalities and with regional and state agencies to arrive at and implement strategies that leverage the full value of all infrastructure investments made.
- Multi-modal. The study looks at pedestrian, transit, bicycling, automobile, and the associated land use strategies that can enable multi-modal travel.

The SR 50 corridor planning process, starting from the definition of the problem to the development of a corridor action plan is illustrated in the following summary graphic.



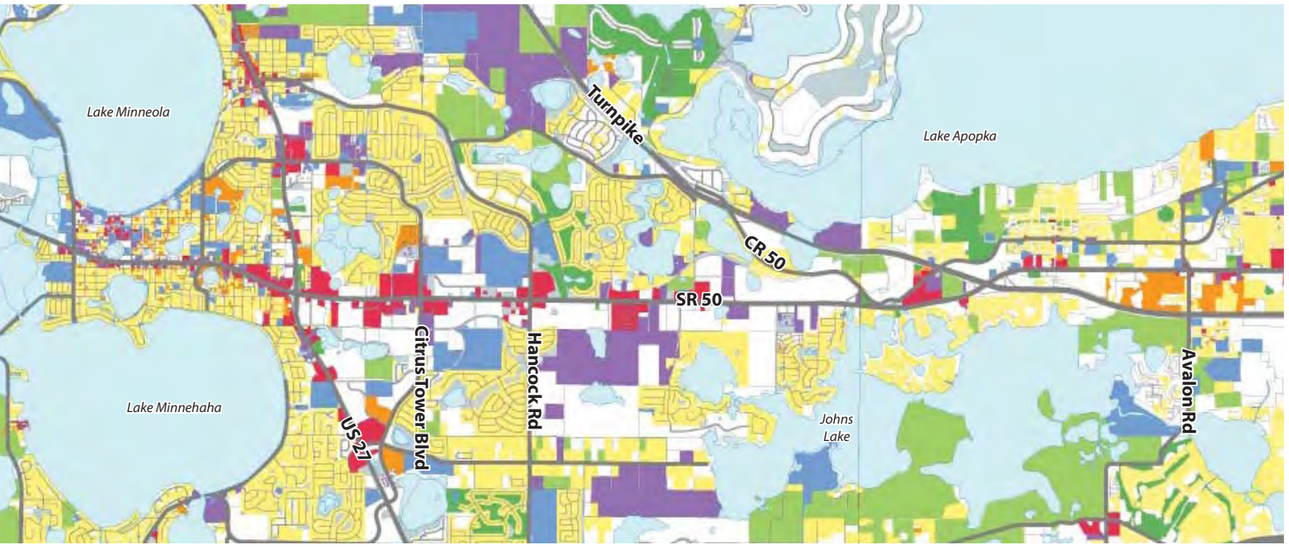
AM Peak Period Traffic Distribution

The role of SR 50 has changed. More than 50% of traffic along the Corridor is local traffic. SR 50 has transitioned from a corridor that solely served a regional commuting need to one that must now serve a large number of local trips. The traffic data showed that a large number of trips that go on SR 50, both eastbound and westbound, are not regional through trips but turn into side streets or have destinations somewhere within the Corridor.



Census LEHD map showing commute shed of workers living within the Corridor

Local employment is growing. According to the Census LEHD data, more workers work in the Clermont/Winter Garden/Ocoee area than in the Attractions Area. The local employment market is also second only to Orlando. Employment opportunities are expected to continue to grow, aligning with municipal economic development goals.



Existing Land Use Map

PM Peak Period Traffic Distribution

Street network is being used where available. Local street network provides for a substantial portion of local and regional mobility in the Corridor. Both the traffic data and inputs received from stakeholder outreach reveal that small sections of local roadway network are being used fully where they are available.

Alternative ways of moving around is possible with changes in the transportation infrastructure and land use patterns. Current densities and arrangement of land uses as well as the nature of existing transportation infrastructure do not support mobility other than through driving. A change in both land use and transportation is necessary to allow for safe and efficient transit, walking, and bicycling trips between homes, work places, school, recreational needs and other services.

The SR 50 Corridor is no longer a bedroom community. Although residential uses still comprise a majority of the area's land use, the SR 50 Corridor has increasingly changed to provide for local needs and services. Where the home to work trip used to rely solely on driving on regional arterials, this new complete community now has many more trip origins and destinations, allowing (or even requiring) travel to occur through other modes (walking, bicycling, transit) on state and non-state roadways.

Land Use Legend

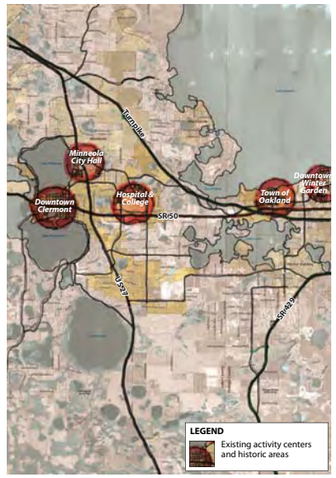
- Agricultural
- Commercial
- Industrial and Office
- Institutional
- Multi-Family Residential
- Recreational, Conservation, and Open Space
- Single Family Residential
- Utilities
- Vacant

4 Corridor Guiding Principles

During a planning charrette, area residents, business owners, elected officials and other stakeholders defined a set of guiding principles for the SR 50 corridor.

“Preserve and Celebrate Our Landscape”

1 The study area’s natural landscape including its system of water bodies, undeveloped farmlands, and wetlands should be preserved as permanent community assets. Development can front and celebrate these features. The trail system (West Orange Trail and South Lake Trail) is a unique feature of the area and future efforts should enhance this community asset.

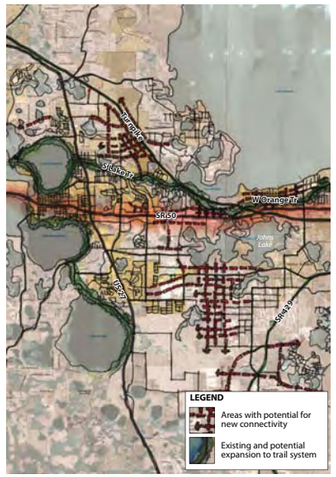


“Preserve Historic Character and Sense of Place”

2 Protect and enhance the character and sense of place of historic areas such as Downtown Clermont and the Town of Oakland. As areas in Minneola, the South Lake Hospital/LSCC Campus, and the City of Winter Garden develop, it is important to ensure that developments foster a true “sense of place.”

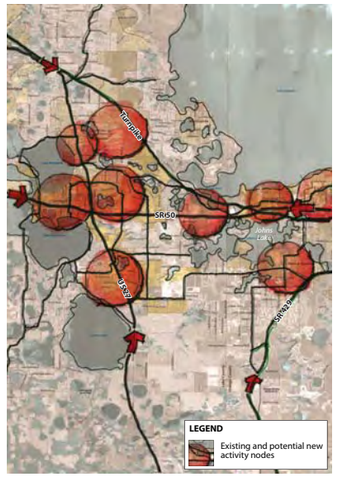
“More Play!”

3 Future plans should capitalize on and enhance the recreational assets of the area, including the Lakes, the trail systems, Lake Louisa State Park, hills, the National Training Center, and local city and neighborhood parks. New developments should incorporate park spaces that are accessible for the larger community.



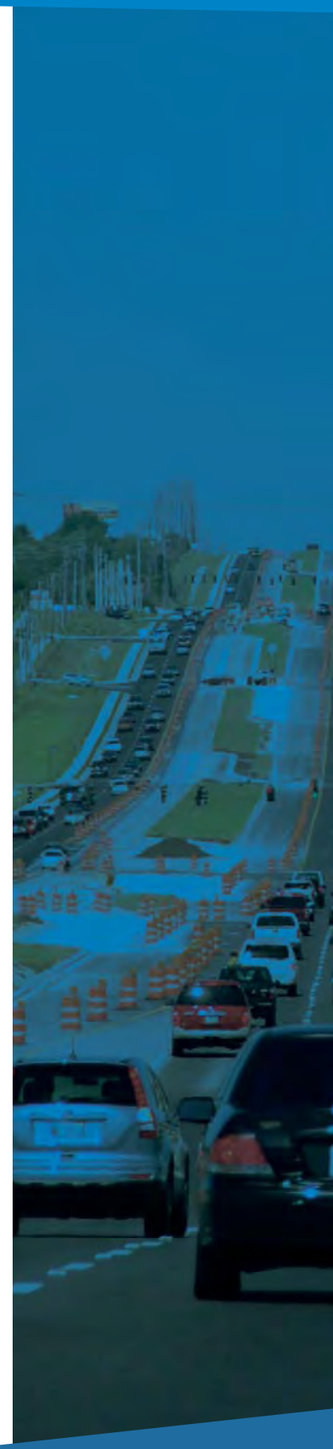
“Enhance Local Connectivity and Walkability”

4 Developing new local network linkages is important to enhancing multi-modal mobility. SR 50 should be a multi-modal corridor and new development should incorporate networks of connected multi-modal street systems.



“Turn the car around”

5 Nodes of higher density and mixed uses can help create a “complete” community with housing, jobs, recreation, and shopping. The long-term vision is for this area to be more than a bedroom community to Orlando, but a destination and a complete place. This means having a mix a land use to allow shorter distance trips that are conducive to walking or bicycling.

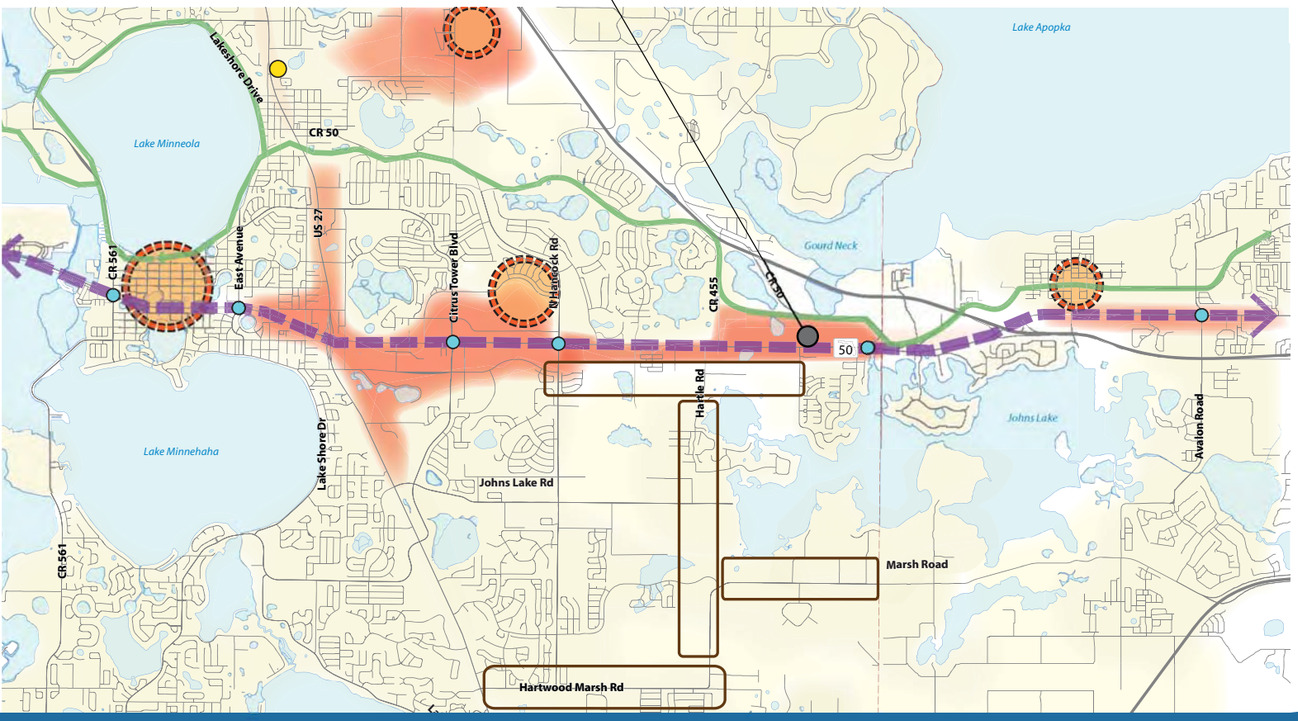


Scenarios for Future Travel Choices
Scenario A

The charrette resulted in a number of ideas for addressing future mobility needs in the SR 50 Corridor. These ideas ranged from incremental and short-term actions that can be implemented with existing development trends and longer-term strategies that would entail potential changes in existing land use and transportation policies and regulations. These ideas were synthesized into a set of illustrative scenarios developed in two "scales".

The first series of scenarios show corridor-wide strategies, and the second series show these transportation and land use strategies applied to a smaller-scale demonstration site along the Corridor.

A property along the Corridor was chosen to "demonstrate" how each of the guiding principles can be better applied to a real project and at a parcel-specific level. The site chosen has existing access to regional roadways and is currently undeveloped. The concepts shown are purely for illustrative purposes and do not reflect any approved or proposed development plans.



Corridor-wide Scenario A

Scenario A reflects the future land use proposed by local comprehensive plans and the potential transportation infrastructure response that is most closely aligned with these land use visions. This scenario serves as a baseline for comparison purposes to illustrate what the development scenario will be if existing land use plans and policies remain unchanged. This Scenario shows vacant properties immediately along the Corridor developed as commercial and office uses, similar in pattern and density as those currently found along the Corridor. Also, the majority of the remaining vacant lands within the study area will be developed as low-density single-family residential uses and previously approved large developments will be completed.

Scenario A presents a development response that relies heavily on increasing vehicular roadway capacity through widening of existing roadways and building new roadways to accommodate increased traffic demand. The modest level of transit and multi-modal strategies reflects those that can be supported by the land development patterns anticipated.

Demonstration Site Scenario A

Scenario A shows a development that is similar to those found along high-growth suburban arterial corridors similar to SR 50. The land uses include "big box" retail and office buildings set back from SR 50 and a few out-parcel commercial uses along the roadway. A portion of the property has low-density single-family residential uses accessed from Old CR 50 and separated from the commercial uses. Scenario A assumes that most of the internal mobility will occur through vehicular travel and driving along SR 50. Although there are multiple uses on the site, the linkages among these uses do not allow for easy multi-modal access.

LEGEND

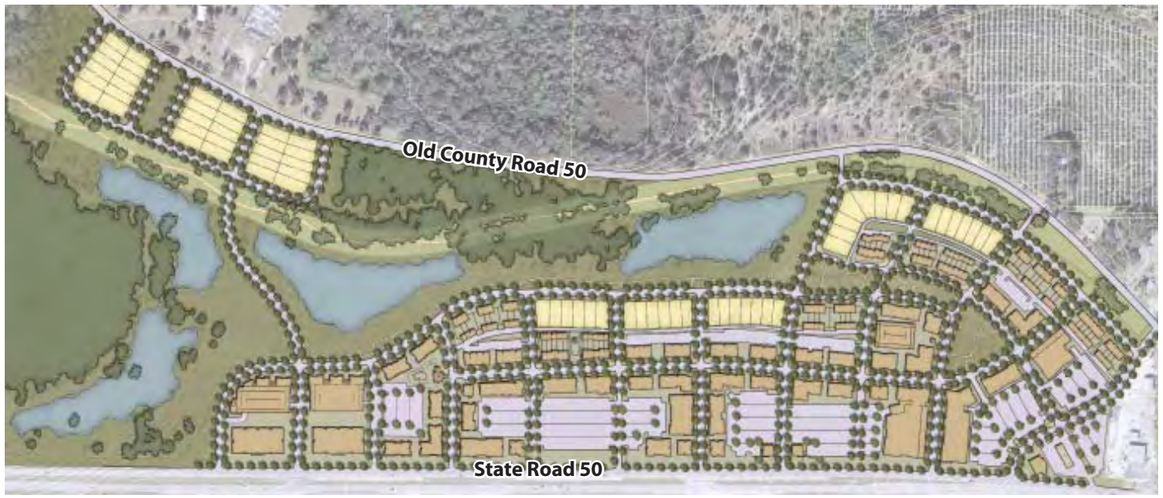
Roadway Strategies
- Widen and extend existing roadways

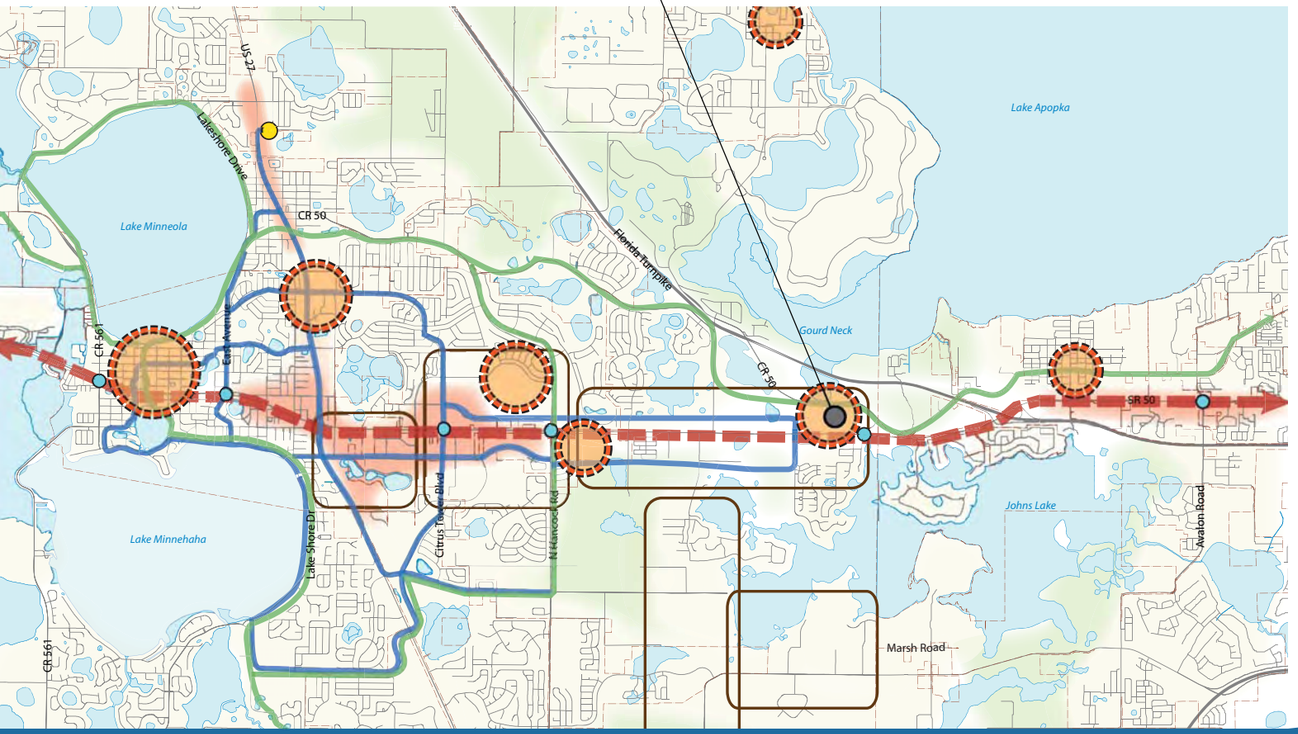
Transit Strategies
- Enhance existing bus service
- Introduce new park and ride locations

Pedestrian and Bicycling Strategies
- Enhance and expand trail system
- Improve pedestrian connections across SR 50
- Develop new streets as complete streets
- Develop pedestrian and bicycling connections to existing neighborhoods

Land Uses
- Existing and future activity centers
- Preserved open space and agricultural lane
- Existing and future residential uses
- Existing commercial uses

Scenario A Demonstration Site (view looking southwest)





Corridor-wide Scenario B

Scenario B reflects a development pattern that is different from the current development trend. It calls for concentrated nodes of mixed-use activity centers along SR 50. These nodes can occur through redevelopment or as new development, and will have intensities necessary to support transit use. While some vacant properties are developed into new residential neighborhoods, a substantial portion of the area's conservation, open space, and undeveloped lands remain undeveloped. New neighborhoods are developed in a form that incorporates other uses and have a connected system of local street network.

Scenario B shows a land use pattern and density that begin to build toward premium transit ridership (and therefore satisfying the corresponding funding requirements of premium transit) and an expanded pedestrian and bicycle network. Correspondingly, this scenario calls for a network of connected local roadways that support shorter distance travel and effective walking, bicycling, and transit trips. The provision of multi-modal and locally-oriented transportation infrastructure in turn supports the land use patterns that are in line with the Corridor vision of a "complete place".

Scenario B presents a solution that goes beyond just increasing roadway capacity. It incorporates a land use strategy that enables shorter, multi-modal travel patterns, and it also incorporates a wider, multi-modal range of transportation strategies to address future transportation needs.

Demonstration Site Scenario B

Scenario B shows the same types of uses found in the first scenario but developed in a more integrated fashion and with a mix of densities. The resulting development shows comparable yield for office/commercial and considerably more residential dwelling units. The land uses are connected by a framework of local streets and organized in smaller mixed-use urban sized blocks. Internal streets will be developed as complete streets. Land uses on the site can be accessed from various entry points along SR 50 and Old CR 50.

LEGEND

Roadway Strategies
- Develop connected network of local streets
- Implement corridor-wide access management

Transit Strategies
- Introduce new local-serving transit services (circulator/pick-up lines)
- Explore corridor-wide premium transit (BRT or enhanced bus)
- Introduce new park and ride locations
- Encourage land development patterns and densities that support transit use

Pedestrian and Bicycling Strategies
- Enhance and expand trail system
- Improve pedestrian connections across SR 50
- Develop new streets as complete streets
- Develop pedestrian and bicycling connections to existing neighborhoods
- Encourage land development patterns and densities that create a walkable environment

Land Uses
- Existing and future activity centers
- Preserved open space and agricultural lane
- Existing and future residential uses
- Existing commercial uses

Scenario B Demonstration Site (view looking southwest)

Scenario B Demonstration Site (community park surrounded by mixed use buildings)

Scenario B Demonstration Site (potential bus station near the community park)

Comparing the Corridor-wide Scenarios

GOAL	METRIC	Scenario A	Scenario B
Multi-modal mobility	Accommodation of regional mobility (pers/lane/hour)*	1,000	4,500
	New areas with high levels of local street connectivity (number)	2	4
	Feasibility for accommodating future premium transit service based on potential for increased ridership	Low	Medium
	Expansion of multi-use trail system	Medium	High
Multi-modal access to Corridor destinations	Direct/multi-modal access to community parks and open spaces	Medium	High
	Increased transit access to destinations	Low	High
Development of Complete Places	New mixed-use centers (number)	2	4
Open space Conservation	Preserved open space and agricultural land	Low	High

** This measure captures the number of throughput persons per hour per lane along SR 50. Scenario A assumes the roadway is widened from four to six lanes, and scenario B assumes these two additional lanes are used as lanes for BRT service.*

A set of performance measures were developed to gauge how well each of the scenarios achieve the five Corridor Guiding Principles. Scenario B ranks equal or higher in all of the performance measures and therefore better supports each of the Corridor Guiding Principles.

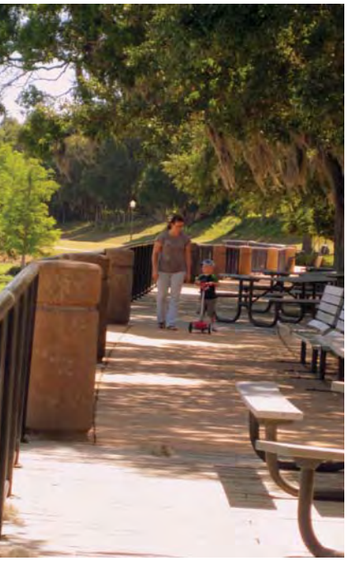
Comparing the Demonstration Site Scenarios

Goal	Objectives	Metric	Scenario A	Scenario B
Multi-Modal Mobility	**Increase mobility through alternative modes**	Streets with pedestrian/ bicycling facilities (feet)	5,750	29,590
		Linear feet of pedestrian-friendly streets (feet)	4,120	19,840
	Increase transit ridership and capture choice riders	Housing density (du/acre)	6.2	22.0
		Number of employees	1,490	1,570
		Number of housing units	77	408
		Flexibility of transit routing	Low	High
		Proximity of potential transit stop to land uses served	Low	High
	Reduce external traffic impacts	Vehicular trips generated (PM Peak Period) (vph)	4,510	2,840
		Trips captured internally (PM Peak Period)	4%	12%
Multi-Modal Access to Corridor Destinations	**Provide efficient internal vehicular mobility**	Number of public street links between state and local roads in the east-west direction	0	2
		Number of public street links between state and local roads in the north-south direction	1	4
		Overall street connectivity (inters. connect. index)	0.76	1.86
	Access to community parks and open spaces	Area of publicly-accessible parks (acres)	26	147
		Direct street or trail access to community parks (feet)	3,240	16,040
		Fronting uses along multi-use trails (feet)	1,120	7,920
Development of Complete Places	**Provide a mix of land uses**	Diversity of land use types per building	1	2
		Diversity of housing types	1	5
	Accommodate incremental changes over time	Average block size (acres)	33.2	2.9
		Ability to allow land use change	Low	High
	Preserve existing natural features	Area of disturbed hills	13.5	3.4

With almost all the demonstration site indicators, Scenario B ranks higher than Scenario A, showing that the former better supports the Corridor Guiding Principles and is better aligned with the future vision of the SR 50 Corridor communities.

Scenario B can better accomplish the goals of providing SR 50 community members multiple options for traveling along the Corridor and accessing their daily needs, while also preserving the natural assets of the area.

6 Action Plan



A Call for Continued Partnership

An Action Plan was developed for both Scenarios, and the more comprehensive Action Plan associated with Scenario B is shown here. This outlines the immediate next steps that could be taken to achieve the strategies in this Scenario. Because Scenario B reflects a land use and transportation pattern different from what is currently occurring in the Corridor, its realization requires more extensive actions from each of the partner agencies.

Incremental Steps toward the Corridor Vision

The action plan is intended to outline processes and planning actions that will bring the Corridor partners together as they make land use and transportation decisions. It is not intended to outline individual capital improvement projects. The Corridor Plan relies on identification of specific capital projects that may result from the action plans through already established regional and local planning processes such as municipal capital improvement programming and through regional TIPs and LRTPs.

The action plan strategies are in the form of a policy revision, adoption of a new plan, implementation of a new program, or continued coordination among partner agencies.

A Need to Think Beyond the Pavement

The Action Plan recognizes the limitations of roadway building and aims at achieving premium transit and more effective multi-modal travel. In addition, Scenario B's action plan has a sharp focus on programs that improve local mobility and connectivity.

A First Step in Advancing Premium Transit Change is a change in Land Use Patterns

The action plans acknowledge that to achieve a future that incorporates effective premium transit, walking, and bicycling mobility, and a change in current land development patterns is necessary. A mix of uses and more compact development form is necessary to generate the appropriate levels of ridership and make premium transit feasible, and will also enable more effective walking and bicycling travel. Scenario B's action plan is deliberately oriented towards implementing changes in policies and regulations to enable the Corridor to evolve to a more transit supportive-development pattern over time.

Action Plan Timing Legend

- **O** Ongoing work
- **1** Immediate (within the next year)
- **2** Short-term (within the next two years)
- **3** Mid-term (within the next five years)

Strategies	Action Items	Process/ Mechanism	Lead Agencies	Timing
Roadway Strategies				
Develop new local roadway connections to complement arterial roadways (network of slow, two-lane roadways)	Develop and adopt collector network plans (master transportation plans)	• Comprehensive plan update	• Municipalities	2
	Require increased street connectivity for new development (consider regulations such as those that requires cross access easement, connectivity, minimum block size, etc.)	• Land development regulations review • Development permitting	• Municipalities	3
	Require new developments to build street network according to proposed collector plan	• Development permitting	• Municipalities	2
	Continue multi-municipal coordination to align collector network plans (i.e. consider how roadways connect across municipal boundaries)	• LRTP	• LSMPO • Municipalities	O
	Coordinate with local businesses and explore retrofitting of existing driveways to allow cross-access easements	• Development permitting	• Municipalities	2
	Allow for alternative traffic impact mitigation strategies that include network improvements	• Development permitting	• Municipalities	2
	Conduct outreach/educational sessions to the development community and local municipalities on the benefits of improving local roadway network connections	• Outreach opportunities in any ongoing planning processes	• Municipalities • LSMPO	1
Implement corridor-wide access management strategy	Coordinate with FDOT to evaluate access needs and develop a phased implementation plan for managed access, incorporating strategies such as driveway consolidation, cross access easement, etc.	• New access management study	• Municipalities	3
Transit Strategies				
Introduce new local-serving transit service (circulator/pick-up lines)	Further investigate circulator/pick-up lines explored by the LakeXpress TDP by engaging local employers and other stakeholders	• New coordination effort • Development permitting	• LakeXpress	2
	Explore alternative funding mechanisms available to implement local circulators (public/ private partnerships, alternative traffic impact mitigation strategies, transit improvement district, etc.)	• New coordination effort • Development permitting	• LakeXpress • Municipalities • Employers	2
Explore premium transit (BRT or enhanced bus)	Conduct a premium transit-readiness assessment plan to identify necessary triggers for each transit improvement	• New study	• LSMPO	3
Encourage land development patterns and densities that support transit use, especially within activity nodes	Review and modify local regulations and policies to identify activity nodes and allow for mixed-use and higher density development in these areas	• Comprehensive plan update • Land development regulation review/ revision • New small area plan	• Municipalities	3
Pedestrian and Bicycling Strategies				
Develop new streets with pedestrian and bicycle facilities	Incorporate guidelines that accommodate walking and bicycling for all new streets in local land development regulations	• Land development regulations review/ revisions	• Municipalities	3
	Develop roadway design standards that matches a roadway's design to a community's desired future land use context	• New municipal street design standards (as part of land development regulations)	• Municipalities	3
Enhance and expand trail system	Work towards the implementation of South Lake Trail expansion as called for by the Lake County Trail Master Plan	• Development permitting • LRTP/TIP	• LSMPO • Municipalities	3
Develop pedestrian and bicycling connections to existing neighborhoods	Identify short segments of pedestrian and bicycling connections needed to link neighborhoods to community services.	• New study	• LSMPO • Municipalities	2
	Review (and modify if necessary) local regulations and policies to identify obstacles to pedestrian and bicycling connections.	• Land development regulations review/ revisions	• Municipalities	3
	Identify state/federal funding mechanisms that can help fund these pedestrian/bicycling improvements.	• TIP	• LSMPO	2
	Develop local programs (competitive grants, etc.) to allow neighborhoods to apply for funding to construct pedestrian and bicycle connections.	• New study/ program	• LSMPO	3
Encourage land development patterns and densities that create a walkable environment, especially within activity nodes	Modify local land development regulations and policies to require building and site design standards that support a walkable environment (building setback and orientation, parking and access, block size, building façade design, etc.)	• Land development regulation review/ revision	• Municipalities	3
	Conduct small area studies/targeted workshops to explore and illustrate activity center vision and potential to stakeholders.	• New small area plan • Opportunities in on-going processes	• ECFRPC • Municipalities	3
	Continue to share the message on how land use and transportation decisions need to be coordinated to achieve the Corridor's guiding principles	• Opportunities in on-going processes	• ECFRPC • Municipalities • LSMPO	O

** Lead agencies will coordinate with FDOT for action items that involve state facilities.*

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