Mayor David Browning, Seat 4
Vice Mayor Ronald D. Jarriel, Seat 1
Councilman Tom Goltzené, Seat 5
Councilman Ryan Liang, Seat 3
Councilman Jim Rockett, Seat 2

Town of Loxahatchee Groves

Roadway, Equestrian Trails & Greenway Advisory Committee Meeting

Wednesday, October 23, 2013 at 7:00 p.m.

At

Central Palm Beach County Chamber of Commerce
13901 Southern Boulevard, Loxahatchee Groves

Chair Nina Corning
Vice Chair Kathy Strehlow
Committee Member Keith Harris
Committee Member Dr. Bill Louda
Committee Member Jo Siciliano
Town Council Liaison Tom Goltzené

Town Manager Mark Kutney
Town Clerk Susan Eichhorn
Town Attorney Michael D. Cirullo, Jr.

TENTATIVE
SUBJECT TO REVISION

PUBLIC NOTICE/AGENDA

Vision: To Development a Recreational Greenways and Equestrian Trail Network for the Rural Town of Loxahatchee Groves.

1. **OPENING**

   a. Call to Order & Roll Call

   b. Approval of Agenda

2. **MINUTES –** Approval of Minutes of September 25, 2013

3. **PRESENTATIONS -** *None*

4. **OLD BUSINESS -** *None*

5. **NEW BUSINESS**

   a. Discussion of MREG Plan

   b. Discussion of Controlled Crossings at B and F Roads, and Okeechobee Boulevard – *Keith Harris*

   c. Rescheduling of November 27, 2013 Meeting

   d. Cancellation of December 25, 2013 Meeting

6. **ADMINISTRATIVE UPDATE -** Town Manager Kutney

7. **CLOSING COMMENTS**

   a. Public

   b. Committee Members

   c. Concluding Administrative Remarks

8. **ADJOURNMENT**

Comments Cards: Anyone from the public wishing to address this Committee must complete a Comment Card before speaking. This must be filled out completely with your full name and address and given to the Town Clerk. During the meeting, before public comments, you may only address the item on the agenda in which is being discussed at the time of your comment. During public comments, you may address any item you desire. Please remember that there is a three (3) minute time limit on all public comment. Any person who decides to appeal any decision of this Committee with respect to any matter considered at this meeting will need a record of the proceedings and for such purpose, may need to ensure that a verbatim record of the proceedings is made which included testimony and evidence upon which the appeal is to be based. Persons with disabilities requiring accommodations in order to participate should contact the Town Clerk's Office (561-793-2418), at least 48 hours in advance to request such accommodation.

Mayor David Browning, Seat 4
Vice Mayor Ronald D. Jarriel, Seat 1
Councilman Tom Goltzené, Seat 5
Councilman Ryan Liang, Seat 3
Councilman Jim Rockett, Seat 2

Town of Loxahatchee Groves

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Town Manager Mark Kutney
Town Clerk Susan Eichhorn
Town Attorney Michael D. Cirullo, Jr.

MINUTES

1. OPENING

a. Call to Order & Roll Call

The meeting was called to order at 7:00 p.m., by Chair Nina Corning. Present were Chair Corning, Vice Chair Strehlow, Committee Member Dr. Bill Louda, Committee Member Keith Harris, Committee Member Jo Siciliano, and Town Council Liaison Tom Goltzené, Town Manager Mark Kutney, Town Planning Consultant Jim Fleischmann, Town Planning Technician Braeden Garrett, and Town Clerk Susan Eichhorn.

Chair Corning welcomed the new members, Keith Harris, and Jo Siciliano. She distributed some handouts regarding past RETGAC meetings. She also addressed the manner in which the order of speaking would take place.

b. Approval of Agenda

Motion: Committee Member Louda made a motion to approve the Agenda. The motion was seconded by Vice Chair Strehlow. The motion passed 5/0.

2. MINUTES – Approval of Minutes of August 28, 2013

Chair Corning noted that there were some amendments made to pages 3 & 5. The Clerk read the amendments into the record. Vice Chair Strehlow pointed out a misspelled word.

Motion: Committee Member Louda made a motion to approve the minutes as amended. The motion was seconded by Vice Chair Strehlow. The motion passed 5/0.

3. PRESENTATIONS - *None*

4. OLD BUSINESS - *None*

5. NEW BUSINESS

a. Discussion of Capital Improvement Elements – Comprehensive Plan Amendment
- Staff Report to Local Planning agency (LPA)
- Ordinance No. 2013-04

Town Manager Kutney noted that Chair Corning had distributed a handout with a lot of talking points and corrections. He explained that the Town Council had decided to have the Management Company correct the Comprehensive Plan specifically for the purpose of providing a specific schedule of improvements to the CIE element. The 5c gas tax money was tied to the Comprehensive Plan and the Comprehensive Plan projects. This amendment had a purpose and reason behind it, and it should not be expanded to other areas.

Chair Corning replied that some of the comments in her document were wordsmithing, and some were comments regarding some of the RETGAC additions~~,~~ She explained that part of her concern was that four votes of the Town Council were needed for any text amendments, and it was important that it was done correctly and that you can achieve what you intend to achieve. It was also very important that the RETGAC budget could be utilitized properly as well as the road improvements so that one does not hinder the other. Her comments were made to speed up the process, rather than slow it down, and was so provided so that everyone could review it as the Committee was going through the amendments.

Mr. Goltzené explained that the Planning & Zoning Board was asked to look at the transportation elements, and they asked what the RETGAC had to say. Tonight you are looking at these amendments so that you can give a recommendation to the Planning & Zoning Board. They wanted to know what RETGAC thought about the Comprehensive Plan amendment. Mr. Fleischmann was looking for the RETGAC review of the things that are underlined. Process-wise the decision should be made as to whether the Committee wants to look at Chair Corning's document and say yes or no, or do you want to look at the document prepared by Mr. Fleischmann and use Chair Corning's document as a reference.

Keith Harris said that he was prepared for tonight's meeting based on the agenda, and that he needed time to evaluate what Chair Corning had handed out.

Vice Chair Strehlow commented regarding whether we need to pick this apart tonight, or do we need a general approval of how we see the Plan's fulfillment.

Mr. Goltzené replied that the Committee needed to say specifically if and how you disagree with any of the underlined language, not some general statement. The Planning & Zoning Board was asking if RETGAC approved or disapproved of this going to the Town Council.

Town Planning Consultant Jim Fleischmann stated that he would like to see the Committee concentrate on the proposals that staff has made, keeping in mind that everything that is not underlined or struck through is in the Comprehensive Plan already. He noted that one of the major items that is referenced in the Transportation element is the Master Roadway Equestrian and Greenway Plan (MREG). That document was written and approved by the Town Council many years ago, but it may not, at this time, represent the way the Town wants to go. It was very likely that the MREG Plan needs to be updated, and if that is so, it can be incorporated into the Comprehensive Plan at a later date.

Town Manager Kutney advised that the Committee could review the MREG Plan at the next meeting, and add it to the Agenda for the next meeting.

Mr. Goltzené explained that the Comprehensive Plan lists goals, policies and desires of the Town. Below that is the MREG Plan, which was developed at the beginning of the Town and needs to be updated. That plan talks about one particular trail system. We will look at the MREG Plan so that a new trail system can be added to it. There are lots of planning documents that are not consistent, and we are trying to make it consistent through this review.

The Committee proceeded to review all of the Comprehensive Plan amendments and provided recommendations to Town Planning Consultant Fleischmann, which he noted, and would include in an updated report with the recommendations of RETGAC included.

Committee Member Louda left the meeting at 9:00 p.m.

Motion: Committee Member Siciliano made a motion to accept all changes made in the Comprehensive Plan by the Committee tonight and everything else in the document

reviewed tonight would remain as it was. The motion was seconded by Committee Member Harris. The motion passed 4/0.

(Clerk's Note: A copy of the revised document is attached hereto as Attachment A)

********A break was taken at 9:05 p.m. The meeting was reconvened at 9:10 p.m.********

b. Time limitation for presentations made to the Committee and time limit for discussion following the presentations *(Vice Chair Kathy Strehlow)*

Motion: Vice Chair Strehlow made a motion to have a time limit of 10 minutes for presentations by presenters who are not part of Loxahatchee Groves, and 10 minutes for discussion. The motion was seconded by Committee Member Harris. The motion passed 4/0.

6. ADMINISTRATIVE UPDATE - Town Manager Kutney

Town Manager Kutney informed the Committee that there was a development going before the Palm Beach County Board of Commissioners – Highland Dunes, and the Town had no record of any notice coming our way except that a property owner of the Acreage called to let us know. They are going for a rezoning for a PUD, and there are some large numbers of units, housing, commercial, etc. Staff sent an email to the Town Council to make them aware of it, and Town Planning Technician Garrett will attend the County meeting to monitor this.

7. CLOSING COMMENTS

a. Public

There were none.

b. Committee Members

Committee Member Harris referred to the Town Council minutes of April 21, 2009, wherein Dr. Louda stated that the LGWCD has $40,000 that were earmarked for equestrian trails.

Motion: Motion made by Committee Member Harris for Chair Corning to ask about $40,000 at the upcoming Intergovernmental Coordination (IGC) to identify where the money is and when it will be used. The motion was seconded by Vice Chair Strehlow. The motion passed 4/0.

Chair Corning recalled that a motion had been made at the last meeting that she would go to the LGWCD meeting, and then to the IGC meeting. As it turned out, Mr. Yohe asked her not to go

to that first Board meeting, but to attend a later one. She had checked with Town Manager Kutney and Liaison Tom Goltzené. She expressed concern with the word "then" in the motion that was made at the last meeting [**Motion: Committee Member Louda made a motion for RETGAC Chair Nina Corning to go to the LGWCD meeting and then the Intergovernmental (IGC) meeting and speak with them regarding opening up the horse trails. Vice Chair Kathy Strehlow seconded the motion. The motion passed 3/0.]** Therefore, she explained that the meetings would be attended by her in reverse order.

Committee Member Harris noted that he had made a quick presentation at the last meeting of a conceptual idea to connect trails, and he then presented his document entitled "A Conceptual Study of the Connection of the E Road and North Road Equestrian Trails for The Town of Loxahatchee Groves Roadway, Equestrian Trails, and Greenways Advisory Committee," and noted that he had taken the liberty to make up a study of specifications and cost analysis for the future.

Committee Member Harris commented that everyone should know what things cost before earmarking dollars for projects. He stated that he believed that there should be a foundation of all scopes of work and associated costs before making a prudent decision.

c. Concluding Administrative Remarks

There were none.

8. ADJOURNMENT

There being no further business, the RETGAC meeting of September 25, 2013, was adjourned at 10:15 p.m.

_____ _____

Susan Eichhorn, Town Clerk Nina Corning, Chair

These minutes were approved at the October 23, 2013, RETGAC meeting.

ATTACHMENT A
COMPREHENSIVE PLAN AMENDMENT (CPA) 13-1
(Ref: Following Pages)

Words underlined are initial staff additions and words ~~struck through~~ are initial staff deletions to the current text of the Comprehensive Plan. Words underlined are proposed RETAG Advisory Committee additions and words ~~struck through~~ are proposed RETAG deletions to the current text of the Comprehensive Plan. Words underlined are proposed Local Planning Agency (LPA) additions and words ~~struck through~~ are proposed LPA deletions to the current text of the Comprehensive Plan.

1. Revision of the Transportation Element Goals, Objectives and Policies.

2. Revision of the Infrastructure Element Drainage Sub-Element Goals, Objectives and Policies.

3. Revision of the Revision of the Recreation and Open Space Element Goals, Objectives and Policies.

4. Revision of the Capital Improvements Element Goals, Objectives and Policies.

TRANSPORATION ELEMENT
GOALS, OBJECTIVES, AND POLICIES

GOAL 1

The Town of Loxahatchee Groves shall provide, maintain and improve a safe, convenient and energy efficient multi-modal transportation system that is consistent with growth management principles, and is coordinated with a regional network which balances the needs of all current and future users so as to ensure the economic vitality of the Town and the enhancement of the quality of life.

Concurrency Management

2.1 Objective

The Town shall ensure that adequate public facilities are available concurrent with the impacts of development, and shall monitor impacts resulting from new development.

2.1.1 Policy:

The Town of Loxahatchee Groves shall adopt the generalized two-way peak hour volumes for Florida's Urbanized Areas for all County urban collector roadways such as Okeechobee Boulevard at the Level of Service (LOS) "D" standard.

2.1.2 Policy:

The Town of Loxahatchee Groves shall adopt the generalized two-way peak hour volumes at the Level of Service standards established by the Florida Department of Transportation for all roadways on the State Highway System, Florida Intrastate Highway System (FIHS), and/or Strategic Intermodal System (SIS).

2.1.3 Policy:

The transportation network should be kept at the adopted Levels of Service by means of implementation of improvements to correct projected deficiencies. Projects should be listed in the Five-Year Schedule of Capital Improvements ~~or adopted by private parties to rectify deficiencies~~.

2.1.4 Policy:

The Town shall coordinate with Palm Beach County and the Florida Department of Transportation to address the deficiencies of roadways, as identified in the existing and future level of service analysis.

2.1.5 Policy:
Prior to the granting of a building permit, an applicant shall obtain transportation concurrency approval from Palm Beach County and the Town. No building permit will be issued unless documentation of the corresponding transportation concurrency approval certificate has been presented.

Intergovernmental Coordination

2.2 Objective
The Town of Loxahatchee Groves shall participate in cooperative intergovernmental plans and programs to improve the safety, efficiency ~~and convenience~~ of the transportation system, while protecting the interests of the Town.

2.2.1 Policy:
The Town of Loxahatchee Groves shall coordinate with Palm ~~Beach County Transit~~ Tran and the Palm Beach County MPO to identify programs and policies that will assist in the provision of a convenient, public transit network that will provide both local and regional connections and that will accommodate the physically disabled.

2.2.2 Policy:
The Town of Loxahatchee Groves shall participate in cooperative intergovernmental plans and programs that will improve safety for users of all modes of transportation including pedestrian, bicycle, equestrian, motor vehicle and transit.

2.2.3 Policy: Reserved.
~~The Town of Loxahatchee Groves shall provide a convenient roadway network through coordination with all affected local governments, special districts, the Loxahatchee Groves Water Control District, Florida Department of Transportation, Palm Beach County, Palm Beach County MPO and other public agencies. The Town shall accordingly protect right-of-way for future roadway projects and shall include right-of-way requirements in the Land Development Regulations~~ ~~by December 2010~~.

2.2.4 Policy:
The Town of Loxahatchee Groves will coordinate with all affected local governments, special districts, the Loxahatchee Groves Water Control District, Florida Department of Transportation, Palm Beach County, Palm Beach County MPO and other public agencies to provide input and advocate for the Town's interests regarding future roadway plans for Okeechobee Boulevard, ~~E Road/140th,~~ SR-80 and other roadways as necessary. The Town shall accordingly protect rights-of-way for future roadway projects and shall include right-of-way requirements in the Land Development Regulations.

Greenways and Equestrian Trails

2.3 Objective

The Town of Loxahatchee Groves shall develop a greenway and equestrian trail system to meet the needs and interests of the residents of Loxahatchee Groves. To assist in this effort, the Town shall maintain the Roadway Equestrian Trails and Greenways (RETAG) Advisory Committee, created by Town Resolution 2011-05.

2.3.1 Policy:
The Town shall create a map of existing equestrian riding trails.

2.3.2 Policy:
The Town shall work toward establishing equestrian trails and greenways within the existing canal maintenance easements on all Letter Roads. In addition, the ~~The~~ Town shall identify new connections to existing trails, which if acquired would greatly enhance pedestrian, and bicycle, and equestrian circulation throughout the Town.

2.3.3 Policy:
A ~~master~~ plan for a cohesive internal trail system with connections to neighboring communities shall be completed , under the direction of the Roadway, Equestrian Trails and Greenways (RETAG) Committee. ~~within one year of the adoption of this element. Further, the RETAG shall work cooperatively with the Loxahatchee Groves Water Control District to develop trail design documents.~~

2.3.4: Policy
Annually, the ~~Town~~ (RETAG) Committee shall assess whether the greenway and equestrian trail system is sufficient for the needs of the residents. As part of its annual assessment, RETAG shall recommend projects to be included in the Five-Year Schedule of Improvements.

2.3.5 Policy:
The greenway and equestrian trails system, wherever feasible, shall provide connections between residential homes, parks, recreational facilities, open spaces, and commercial facilities throughout the Town.

2.3.6 Policy:
All vehicular parking for land uses which are adjacent to the greenway and equestrian trail system should provide the parking on a side away from the trail.

2.3.7 Policy:
The Town, in cooperation with LGWCD and the RETAG, ~~will~~ shall develop minimum design standards for greenway and equestrian trails for inclusion in its Land Development Regulations. The Town shall coordinate the application of its minimum design standards with the LGWCD whenever a proposed greenway or equestrian trail falls within an LGWCD right-of-way. Further, the RETAG shall work cooperatively with the Loxahatchee Groves Water Control District to develop trail design documents.

2.3.8 Policy:
The greenway and equestrian trail system shall be maintained and improved to be consistent with the Town's ~~Minimum Design Standards adopted design documents~~.
minimum design standards.

2.3.9 Policy:
The Town shall use landscaping and signs to visually identify crossings and trail access points. Safe and controlled crossings shall be provided.

2.3.10 Policy:
The Town shall ensure sufficient right-of-way is preserved to construct and maintain the multiuse trails.

2.3.11 Policy:
The Town shall coordinate the provision of greenway and equestrian trail connections among adjoining or abutting properties during the site plan review process.

2.4 Objective:
The Town of Loxahatchee Groves' greenway and equestrian trail system shall be financially feasible.

2.4.1 Policy:
The Town shall determine which trails should be considered for public ownership.

2.4.2 Policy:
The Town shall explore the possibility of obtaining grants, gifts, contributions, funding assistance, and other financial resources for the development of equestrian riding trails.

2.4.3 Policy:
The Town should pursue joint efforts with all affected local governments, special districts, and other public agencies with respect to the acquisition, development and maintenance of trails as a means for reducing costs and pooling resources.

2.4.4 The following equestrian trails and greenways projects shall be pursued by the Town until such time that a master plan pursuant to Policy 2.3.3 is completed:

1. North/south Town-wide trail connectivity along ~~B Road and F Road~~ all Letter Roads by pursuing trail crossings of Okeechobee Boulevard and Collecting Canal at these intersections.

2. East-west Town-wide trail connectivity along ~~6th Court North and North Road.~~ easements along the south side of Collecting Canal and 6th Court North, North Road, and Okeechobee Boulevard.

3. Equestrian trail/greenway easements within future non-residential developments along Southern Boulevard.

4. Equestrian Trail easements to provide connectivity between Loxahatchee Groves Park and the existing trail on F Road.

5. Installation of fencing adjacent to canal maintenance easements along the Letter Roads to insure the safety of riders, animals and residents.

6. Additional projects as deemed appropriate by the Town Council, as the opportunity arises.

Land Use/Transportation Coordination

2.5 Objective

The Town shall coordinate the transportation system with the future land use map and ensure land uses are consistent with transportation modes and services proposed to serve those areas.

2.5.1 Policy:

The Town shall encourage connectivity among all new development and redevelopment projects so as to minimize impacts on the roadway network.

2.5.2 Policy:

The Town shall collocate where possible primary civic facilities, thereby reducing the number of vehicle trips.

2.5.3 Policy:

The Town shall coordinate the transportation system with land uses through implementation of, but not limited to, the following programs, activities or actions:

1. Transportation facilities and services shall be planned and located in a manner which minimizes the potential impacts on adjacent land uses with consideration given specially to existing residential areas.

2. Intermodal facilities shall be located so as to maximize the efficiency of the transportation system.

3. All opportunities to provide adequate bus shelters will be explored.

Right of Way Protection

2.6 Objective

The Town of Loxahatchee Groves shall ensure that future development does not encroach upon existing rights of-way.

2.6.1 Policy:

The Town shall ensure that future development does not encroach upon existing rights-of-way.

2.6.2 Policy:

Future Right-of-Way requirements for State and County roads shall be established in conformance with FDOT, the Loxahatchee Groves Water Control District and Palm Beach County Standards to meet the future needs.

2.6.3 Policy:

The Town shall continue to obtain additional survey data on the ~~Letter~~ Town Roads as the basis for implementing future road improvements.

Safety, ~~and~~ Maintenance and Improvement of Roadways

2.7 Objective

The Town shall maintain a safe local roadway network.

2.7.1 Policy:

~~The Town shall continue to coordinate with LGWCD for proper maintenance of the roadways~~. For the purpose of allocating maintenance and capital improvements projects funds, the Town's local roads shall be classified as follows:

1. Category 1 – Surfaced local public roads under the jurisdiction of the Town.

    1.A. – Paved local public roads.
    1.B. – OGEM-surfaced local public roads.

2. Category 2 – Unsurfaced local public roads.

    2.A. - Loxahatchee Groves Water Control District roads.
    2.B. – Town of Loxahatchee Groves roads

3. Category 3 – Private local roads (public access).

4. Category 4 – Private local roads (no public access).

~~Construction of new Town local roads, reconstruction or resurfacing of existing paved Town local roads, or paving or surfacing of existing graded Town local roads shall be deemed to maintain or increase existing Town local road capacity.~~

For the purposes of state funding eligibility, maintaining existing Town local road capacity shall be deemed to be construction of new Town local roads, reconstruction, resurfacing or paving of existing surfaced or paved Town local roads, or paving or surfacing of existing graded Town local roads.

2.7.2 Policy:
The Town shall continue to encourage joint use of driveways and cross access agreements among adjoining property owners to allow circulation between sites and reduce the number of vehicular trips along roadways.

2.7.3 Policy:
The Town shall ensure that proper traffic signage is provided on local roads including speed limit, warning, guide, and street name signs.

2.7.4 Policy:
The Town shall investigate and implement strategies with all affected governments, special districts, and other public agencies, including the LGWCD, to discourage cut-through traffic on local roads throughout the Town.

2.7.5 Policy:
The Town shall review roadways and intersections with frequent speeding occurrences, operational deficiencies, and/or high crash frequencies. ~~and~~ Specifically, the Town shall investigate strategies to ~~minimize crashes,~~ coordinate with the Florida Department of Transportation and Palm Beach County to:

1. Address traffic operational deficiencies at Southern Boulevard intersections.

2. Reduce speeding on Okeechobee Boulevard.

2.7.6 Policy:
The Town shall coordinate with law enforcement agencies to reduce crashes and enforce traffic codes and regulations.

2.7.7 Policy:
~~Within one year of adoption of the comprehensive plan, the~~ The Town shall ~~adopt and implement a~~ utilize the Road, Greenway, and Equestrian Trail ~~Master~~ Plan. ~~Through coordination with all affected governments, special districts, and other public agencies, the Town Road and~~

~~Equestrian Trail Master Plan will identify and evaluate existing public easements, rights-of-way, roadway characteristics, roadway deficiencies, and traffic volumes and patterns so that potential road improvements and roadway safety recommendations can be identified. The Master Plan will review the local road network comprehensively to provide recommendations that consider not only the localized traffic impacts, but area wide traffic impacts as well. In addition, public input regarding the Master Plan will be gathered through workshops and/or media outlets to help form a plan that the Town can collectively use~~ to guide future roadway and equestrian trail maintenance and safety improvements.

2.7.8 Policy:
The Town will strive to reduce greenhouse gas emissions by reducing traffic congestion and air pollution. The Town will promote alternative forms of transportation by solidifying a greenways/equestrian trail plan and cooperating with Palm Beach County for new and improved transit. The Town will also plan internal roadways and cross access between parcels that will allow for more efficient travel.

2.7.9 Policy:
The Town shall continue to coordinate with LGWCD for proper maintenance of the roadways.

2.7.10 The following general roadway programs, determined to be necessary for attaining or maintaining desired service levels, shall be pursued by the Town. Specific projects shall be included as part of the annual review and update of the Five-Year Schedule of Capital Improvements:

1. Intersection control improvements at Okeechobee Boulevard and Southern Boulevard intersections with "D" Road ~~and "F" Road~~.

2. Installation of OGEM surface treatment and/or pavement at appropriate locations on the ~~Letter~~ Town Roads.

3. Installation of OGEM surface treatment on non-~~Letter~~ Town Roads provided that public right-of-way dedications from all affected property owners are procured.

4. Construction of new Town local roads, reconstruction or resurfacing of existing paved Town local roads, or paving or surfacing of existing graded Town local roads.

Transit

2.8 Objective
The Town of Loxahatchee Groves shall support and coordinate with Palm Beach County to provide safe, efficient, and convenient accessibility and availability to Transit transit for all users.

2-21

2.8.1 Policy:
The Town shall coordinate with Palm ~~Beach County Transit~~ Tran and the MPO to provide convenient service and access to intermodal terminals and facilities, including Palm Beach International Airport and other generators and attractors.

2.8.2 Policy:
The Town of Loxahatchee Groves shall coordinate with Palm ~~Beach County Transit~~ Tran, and the MPO to identify programs and policies that will assist in the provision of a convenient, public transit network that will provide both local and regional connections and that will accommodate the physically disabled.

2.8.3 Require all applicants for site plan approval of ~~a~~ all non-residential development on a property fronting Okeechobee Boulevard or Southern Boulevard to ~~coordinate~~ conform with ~~Palm Tran to determine~~ the need for a Bus Stop Boarding and Alighting Area (BSBAA), as determined by Palm Tran.

Greenhouse Gas Reduction

2.9 Objective
The Town of Loxahatchee Groves shall support and coordinate with Palm Beach County to reduce greenhouse gas emission by promoting alternative modes of transportation.

2.9.1 Policy:
The Town will strive to reduce greenhouse gas emissions by reducing traffic congestion and air pollution. The Town will promote alternative forms of transportation by solidifying a greenways/equestrian trail plan and cooperating with Palm Beach County for new and improved transit. The Town will also plan internal roadways and cross access between parcels that will allow for more efficient travel.

2.9.2 Policy:
The Town shall ensure redevelopment is transit-ready along major transportation corridors.

Ensure the provision of high quality, healthful, effective, reliable, efficient, environmentally sound and necessary services for coordinated sanitary sewer, solid waste, drainage, potable water and natural ground water aquifer recharge to town residents and visitors.

DRAINAGE GOAL 3A

Provide high quality, healthful, effective, reliable, efficient, environmentally sound and necessary services for coordinated drainage.

3A.1. Objective:
To optimize the utilization of water resources through provision of stormwater management for the Town which reduces damage and inconvenience from flooding, promotes aquifer recharge, minimizes degradation of water quality in surface and groundwater and protects the functions of wetlands in urban areas.

3A.1.1. Policy:
Storm water management facilities shall be designed in accordance with South Florida Water Management District (SFWMD) criteria and, when applicable, with Loxahatchee Groves Water Control District (LGWCD) criteria.

3A.1.2. Policy:
The Town of Loxahatchee Groves shall implement land development regulations which implement the minimum design criteria for stormwater management, as shown below, as the level of service standard to assess adequacy of service and concurrency during the development review process:

a. Minimum roadway and parking lot elevations shall be at least at the highest elevation that may occur at the peak of the 10-yearone-day storm event;

b. Minimum site perimeter elevations shall be at least the 25-year-3-day stage. Site runoff up to such stage level may not overflow into any adjacent property, unless a permanent drainage easement is obtained;

c. Dry or wet retention/detention, stage versus storage, stage versus discharge and flood routing calculations for the 10-year-one day, 25-year-3-day and 100-year-3-day storm events for the site shall be submitted with the site development plans;

d. Building floor elevations shall be at or above the 100-year flood elevation, as determined from the Federal Flood Insurance Rate Maps or calculations following the latest SFWMD methodology, whichever is greater;

e. Off-site discharge shall be limited to pre-development runoff based on the 25-year-3-day storm event calculated by SFWMD methods;

f. All roof runoff shall be detained on site.

g. Storm sewers shall be designed to convey the 5 year – 1 day storm event.

h. Prior to discharge to surface or groundwater, BMP's of SFWMD shall be used to reduce pollutant loading from storm water runoff from non-agricultural uses.

i. Prior to discharge to surface or groundwater, BMP's of the DEP and USDA shall be used to reduce pollutant loading from storm water run-off from agricultural uses.

3A.1.3. Policy:

The Town shall support the LGWCD in considering the impact of the construction and operation of stormwater management facilities and support services on adjacent natural resources in accordance with SFWMD regulations during the installation of new stormwater management facilities and the expansion of, or increase in capacity of stormwater management facilities.

3A.1.4. Policy:

Coordinate with the SFWMD and the LGWCD to implement applicable portions of the SFWMD regional water resource projects, which intend to reduce losses of excess stormwater to tide, recharge the Surficial aquifer and Water Preserve Areas or provide additional storage surface waters.

3A.1.5. Policy:

The Town shall support the LGWCD in addressing stormwater management issues on a watershed (basin) basis in accordance with SFWMD permits as a means of providing cost effective water quality and water quantity solutions to specific watershed problems.

3A.1.6 Policy:

The Town shall support the LGWCD in managing the construction and operation of its facilities which dam, divert or otherwise alter the flow of surface waters to minimize damage from flooding, soil erosion or excessive drainage.

3A.1.7. Policy:

The Town shall support the SFWMD in maintaining and protect ground water recharge of the Surficial Aquifer system so as to maintain all of the functions of the Aquifer, including the reduction of saltwater intrusion. LGWCD capital projects shall be incorporated within the Town's Five-Year Schedule of Capital Improvements on an annual basis.

3A.1.8. Policy:

The Town shall support the LGWCD in requiring that new drainage facilities shall be designed to provide pollution control sufficient to meet criteria of all local, state and federal regulatory requirements, including but not limited to the following when applicable:

a. Retention of stormwater
b. Flow of stormwater over grassed and vegetated areas
c. Sumps
d. Grease separation baffles
e. Mosquito control
f. Infiltration and percolation prior to overflow or outfall discharge

3A.1.9. Policy:

Use Best Management Practices (BMPs) in accordance with its regulations and those of the South Florida Water Management District and the Florida Department of Environmental Protection.

3A.1.10. Policy:

The Town shall support the Lower East Coast Regional Water Supply Plan and operating procedures to increase recharge water to the Surficial Aquifer.

3A.1.11. Policy:

Utilize, preserve, restore and enhance natural water bodies and functions by encouraging non-structural and structural erosion control devices and discourage the canalization, installation of seawalls or other alteration of natural rivers, streams and lakes.

3A.1.12. Policy:

Protect the water storage and water quality enhancement functions of wetlands, floodplains and aquifer recharge areas through acquisition, enforcement of rules and the application of land and water management practices which provide for compatible uses.

3A.1.13. Policy:

Coordinate with the LGWCD, Palm Beach County and SFWMD to protect aquifers from depletion through water conservation and preservation of the functions of high recharge areas including but not limited to the water conservation areas and water preserve areas.

3A.1.14. Policy:

The Town of Loxahatchee Groves shall investigate ~~acquiring~~ the need to acquire a National Pollution Discharge Elimination System - Municipal Separate Storm Sewer System (NPDES-MS4) and the implementation of the permit conditions including monitoring of outfalls and improving stormwater management practices. ~~by December 2009~~.

3A.1.15. Policy:

The Town of Loxahatchee Groves shall investigate the creation of grading and drainage standards for residential properties.

RECREATION AND OPEN SPACE ELEMENT
GOAL, OBJECTIVES, AND POLICIES

Goal 5A **To provide safe and adequate open space and recreation facilities accessible to all Loxahatchee Groves residents.**

5A.1. Objective:
Provide a sufficient supply of park, recreation, and open space facilities to satisfy established level of service (LOS) standards.

5A.1.1. Policy:
The Town shall make available six (6) acres of park, recreation, and open space per one thousand (1,000) population.

5A.1.2. Policy:
The Town shall encourage development of a public equestrian facility at Loxahatchee Groves Park.

5A.1.3. Policy:
The Town shall continue to lobby the County to develop the Loxahatchee Groves County Park according to the intent of the original ~~Master~~ Plan and the Plan as amended in January 1991.

5A.1.4. Policy:
The Town shall explore the possibility of obtaining grants, gifts, contributions, funding assistance, and other financial resources for the purchase of land contiguous to the Park, so that the acreage of the park may be increased to its original size.

5A.2. Objective:
Maximize the utility and function of recreation facilities and open space resources. Establish strategies to effectively coordinate the retention of recreation and open space opportunities, as well as the development of future opportunities to meet public demands.

5A.2.1. Policy: Reserved.
~~Require that all land dedicated to the public for parks and recreation purposes, with the exceptions of equestrian trails and greenways, be located adjacent to arterial and/or collector roadways, pedestrian walkways and bicycle routes or be provided for in future development plans~~

5A.2.2. Policy:

All existing and future parks and recreation facilities shall comply with provisions of the Americans with Disabilities Act.

5A.3. Objective:

Establish effective methods of coordinating public and private resources to meet public demands.

5A.3.1. Policy:

Maintain cooperative relationships with agencies, groups, individuals and organizations currently providing leisure programs to the residents.

5A.3.2. Policy:

Pursue appropriate joint public and private ventures to obtain lands and/or financing necessary to provide recreation areas, <u>including equestrian trails and greenways,</u> facilities and programs.

5A.4. Objective:

Require the provision of open space in redevelopment and new development.

5A.4.1. Policy:

The provision of open space such as natural areas, vistas, land buffers, or trails, shall be required in residential and non-residential development as per the <u>Unified</u> Land Development Code <u>(ULDC)</u>.

5A.4.2. Policy:

The Town emphasizes that open space is needed in order to create vista, to provide shade, and to create and enhance the rural image and flavor of the Town.

Goal 5B **The Town of Loxahatchee Groves will strive to provide a town-wide greenway and equestrian trail system which preserves the town's rural lifestyle.**

5B.1. Objective:

The Town of Loxahatchee Groves shall develop a greenway and equestrian trail system to meet the needs and interests of the residents of Loxahatchee Groves.

5B.1.1. Policy:

The Town shall create a map of existing greenway and equestrian riding trails.

5B.1.2. Policy:

The Town, ~~based upon~~ in addition to recommendations of the Roadways, Equestrian Trails and Greenways (RETAG) Committee, shall identify new connections to existing trails, which if acquired would greatly enhance pedestrian, bicycle, and equestrian circulation throughout the Town.

5B.1.3. Policy:

~~A master plan for a cohesive trail system shall be completed within two (2) years of the adoption of this element~~ The Roadways Equestrian Trails and Greenways ~~Master~~ Plan shall be updated every Five (5) years to insure consistency with current Town policy.

5B.1.4. Policy:

Annually, the ~~Town~~ RETAG shall assess and recommend to the Town Council whether the greenway and equestrian trail system is sufficient ~~for~~ to meet the needs of the residents, and recommend needed improvements.

5B.1.5. Policy:

The greenway and equestrian trails system, wherever feasible, shall provide linkages between residential homes, parks, recreational facilities, open spaces, and commercial facilities throughout the Town.

5B.1.6. Policy:

All vehicular parking for land uses which are adjacent to the greenway and equestrian trail system should provide the parking on a side away from the trail.

5B.1.7. Policy:

The greenway and equestrian trail system shall be consistent with ~~the Town's Minimum Design Standards~~.design documents adopted by the Town and based upon RETAG ~~abd LGWCD~~ recommendations in coordination with Loxahatchee Groves Water Control District.

5B.1.8. Policy:

The Town shall use landscaping and signs to visually identify street crossings and trail access points. Safe and controlled greenway and equestrian crossings shall be constructed.

5B.1.9. Policy:

The Town shall coordinate the construction of proposed ~~multiuse~~ trails with the LGWCD whenever they fall within the LGWCD rights-of-way. Doing so shall ensure that sufficient right-of-way is preserved to construct and maintain the Town's ~~multiuse~~ trails.

5B.1.10.Policy:

The Town shall coordinate the provision of greenway and equestrian trail connections among adjoining or abutting properties during the site plan review process.

5B.2. Objective:

The Town of Loxahatchee Groves' greenway and equestrian trail system shall be financially feasible.

5B.2.1. Policy:

The Town shall determine which trails should be considered for public ownership.

5B.2.2. Policy:

The Town shall explore the possibility of obtaining grants, gifts, contributions, funding assistance, and other financial resources for the development of greenways and equestrian riding trails.

5B.2.3. Policy:

The Town should pursue joint efforts with all affected local jurisdictions, including local governments, special districts, and other public agencies in the acquisition, development and maintenance of greenways and equestrian trails as a means for reducing costs and pooling resources.

5B.3. Objective:

The Town of Loxahatchee Groves' equestrian trail system shall provide access to abutting county parks, open space, and neighboring municipalities.

5B.3.1. Policy:

The Town shall pursue direct connections and access between the Town's equestrian trail(s) and the Loxahatchee Groves County Park and the Royal Palm Beach Pines Nature Area.

5B.3.2. Policy:

The Town shall pursue direct connections and access between the Town's equestrian trails and the Village of Wellington's equestrian preserves and public trails.

5B.3.3. Policy:

The Town shall coordinate with Loxahatchee Groves Water Control District for development of greenways and equestrian trials.

CAPITAL IMPROVEMENTS ELEMENT
GOALS, OBJECTIVES, AND POLICIES

Goal 9: The Town shall ensure adequate and timely public facilities and infrastructure capacity to accommodate existing and future residents and businesses maximizing the use and value of existing facilities, and effectively managing future growth consistent with the level-of-service standards established in the Comprehensive Plan.

9.1 Objective:
Maximize fiscal resources available to the Town for public facility improvements necessary to accommodate existing development, redevelopment, and planned future growth, and to replace obsolete or deteriorated facilities.

9.1.1 Policy:
Ensure capital revenues and/or secured developer commitments are in place to maintain all public facilities at acceptable level of service standards prior to the issuance of new development orders.

The Town shall follow the following timing requirements to ensure that adequate public facilities are available to meet level of service standards with the impact of development.

(a) Sanitary sewer, solid waste, drainage, adequate water supplies, and potable water facilities shall be in place and available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent. Prior to approval of a building permit or its functional equivalent, the Town shall determine whether adequate water supplies to serve the new development will be available no later than the anticipated date of issuance by the Town of a certificate of occupancy or its functional equivalent.

(b) Parks and recreation facilities to serve new development shall be in place or under actual construction no later than 1 year after issuance by the local government of a certificate of occupancy or its functional equivalent. However, the acreage for such facilities shall be dedicated or be acquired by the Town prior to issuance of a certificate of occupancy or its functional equivalent, or funds in the amount of the developer's fair share shall be committed no later than the local government's approval to commence construction.

(c) Transportation facilities needed to serve new development shall be in place or under actual construction within 3 years after the Town approves a building permit that results in traffic generation.

~~(d) The Town shall continue to obtain additional public roadways as a means of increasing its gas tax revenues.~~

9.1.2: Policy:
Utilize a variety of funding sources to implement capital improvements, within the limitation of existing law. These methods may include ad valorem taxes, general revenues, enterprise revenues, assessments, tax increment, grants, and private contributions, including dedications and/or funds.

9.1.3: Policy:
Ensure that new development bears a proportionate cost for public facility improvements by utilizing a variety of mechanisms to assess and collect impact fees, dedications and/or contributions from private development.

9.1.4: Policy:
Aggressively seek all realistic grant opportunities to fund projects in the Five-Year Schedule of Capital Improvements.

9.1.5 Policy:
Land development regulations established by the Town shall provide for the timely completion and maintenance of the capital improvements required by the Comprehensive Plan.

9.1.6 Policy:
Each review of the Capital Improvements Element shall include a review of the assumptions, projections, needs, and consideration for appropriate and timely renewal of existing facilities according to the following criteria:

1) Emergency and post-disaster mitigation.
2) Deficiency determination by a Concurrency Management System.
3) Public involvement in Capital Improvement Program and Budget.
4) Existing land development and Town master plans.
5) Plans of local, county, state agencies including the Loxahatchee Groves Water Control District.
6) Accommodation of new development and redevelopment.
7) Financial feasibility.

9.2 Objective:

Provide the necessary capital improvements to replace worn-out or obsolete public facilities, correct service deficiencies and accommodate planned future growth consistent with the adopted level-of-service standards.

9.2.1 Policy:
Prepare and adopt a Five-Year Capital Improvement Program (CIP) as part of the Town's annual budgeting process. Amend the Five-Year Schedule of Capital Improvements ~~Capital Improvement Element~~ annually to reflect ~~these changes~~ annual CIP updates.

9.2.2 Policy:
~~Annual~~ The annual update of the ~~Capital Improvement Element~~ Five-Year Schedule of Capital Improvements shall reflect proportionate fair-share and other developer contributions.

9.2.3 Policy:
The Five-Year Schedule of Capital Improvements shall be financially feasible. ~~Sufficient revenues shall be available for the first three years or will be available from committed or planned funding sources for years 4 and 5 of a 5-year capital improvement schedule.~~

9.2.4 Policy:
The Five-Year Schedule of Capital Improvements shall be ~~based upon the Future Land Use Element and~~ consistent with ~~all other~~ objectives and policies of Comprehensive Plan elements.

9.2.5 Policy:
Coordinate proportionate fair share mitigation procedures and payments with Palm Beach County, the Florida Department of Transportation, and the Palm Beach County School District.

9.2.6 Policy:
Coordinate planning for the Town improvements with the plans of state agencies, the South Florida Water Management District (SFWMD), Palm Beach County, the Loxahatchee Groves Water Control District and adjacent municipalities when applicable.

9.2.7 Policy:
All capital improvements in the Five–Year Schedule of Capital Improvements for which the Town is responsible will be included in the ~~Five-Year Capital Improvements Program (CIP and~~ Town's Annual ~~Capital~~ Budget and Capital Improvement Fund.

9.2.8 Policy: Reserved

~~Evaluate and rank the proposed capital improvement projects listed in the Five-Year Schedule of Capital Improvements, prioritizing them according to the following guidelines:~~

- ~~Protection of public health, safety and welfare;~~
- ~~Fulfills the Town's legal commitment to provide facilities and services;~~
- ~~Corrects existing deficiencies;~~
- ~~Maintains adopted levels of service;~~
- ~~Provides for the most efficient and effective use of existing and/or future facilities;~~
- ~~Provides new capacity to accommodate future growth consistent with this Plan;~~
- ~~Prevents or reduces future improvement costs; and~~
- ~~Promotes cost-effective use of time and revenue.~~
- ~~Financial feasibility;~~
- ~~The plans of local, county and state agencies providing public facilities.~~

9.2.9 Policy:
Use the Town's Unified Land Development Code (ULDC) to ensure that all decisions regarding land use planning and the issuance of development orders and permits consider the availability of public facilities and services necessary to support such development at the adopted LOS standards concurrent with the associated impacts.

9.2.10 Policy:
Coordinate with road, utility and infrastructure service providers within the Town to ensure that necessary capital improvements are implemented to support new construction and redevelopment.

9.2.11 Policy:
Repair, rehabilitate, and replace the Town's capital facilities according to generally accepted engineering principles and guidelines and ensure that facilities and services provided by other agencies are held to the same standard.

9.2.12 Policy:
Assess new development a proportionate fair-share of the public facility costs necessary to accommodate the impacts of new development at the adopted levels-of-service through the enforcement of existing public facility funding mechanisms, conditions of development approval, and impact fees. Public facilities include potable water, sanitary sewer, solid waste, drainage, parks, including equestrian trails and greenways, schools and roadways.

9.2.13 Policy:

Capital improvements associated with the construction of educational facilities are not addressed in the Town's ~~Capital Improvement Fund~~ CIP or Five-Year Schedule of Capital Improvements, but rather are the responsibility of the Palm Beach County School District. ~~To address financial feasibility\ associated with school concurrency, the School District Five Year Plan and Capital Budget for educational facilities will be incorporated by reference into the CIE.~~

9.2.14 Policy:

The Town, in conjunction with ~~Palm Beach County and~~ the Palm Beach County School District, has the responsibility for ~~providing~~ implementing the public school concurrency program within Loxahatchee Groves. ~~related to capital improvements and should continually seek to expand funding sources available to meet those requirements.~~

9.2.15 Policy:

For public school facilities, a proportionate share mitigation agreement is subject to approval by Palm Beach County School District and the Town~~. and must be identified in the adopted School District Five Year Plan and Capital Budget.~~

9.2.16 Policy: Reserved

~~The Town shall update its Capital Improvements Element and Program annually, to include the annual update of the School District Five Year Plan and Capital Budget.~~

9.2.17 Policy: Reserved

~~The FY2009-2013 Plan & Capital Budget adopted by the School District of Palm Beach County on September 10, 2008 shall be incorporated into the Capital Improvement Element by reference.~~

9.2.18 Policy:

The public school LOS standard is the school's utilization, expressed as a percentage, which is the result of comparing the number of students with the satisfactory Florida Inventory of School Houses (FISH) capacity at a given location, e.g. an elementary facility with 1,000 students and a FISH capacity of 970, has an LOS of 103%. Also referred to as the utilization of a facility. ~~which is defined as the enrollment as a percentage of school student capacity based upon the Florida Inventory of School Houses (FISH). The level of service (LOS) standard shall be established for all schools of each type within the School District as 110 percent utilization, measured as the average for all schools of each type within each Concurrency Service Area.~~

~~110% utilization, unless the school is the subject of a School Capacity Study (SCS) undertaken by the School District, working with the Technical Advisory Group (TAG) which determines that the school can operate in excess of 110% utilization. The SCS shall be required if a school in the first student count of the second semester reaches 108 % or higher Capacity. As a result of an SCS, an individual school may operate at up to 120% utilization.~~

9.3 Objective

Develop and implement a debt management program to assist the Town in providing adequate and timely revenues for scheduled capital improvements.

9.3.1 Policy:

~~Incur~~ Provided the Town Charter allows such an activity, Loxahatchee Groves may incur debt within generally accepted municipal finance principles and guidelines, and only in relation to the Town's ability to pay for a new capital asset or to significantly extend the life expectancy of a capital asset.

9.3.2 Policy:

Ensure that any increase in operating costs for a new or additional facility is also considered when evaluating the debt to be incurred for a facility.

9.3.3 Policy:

The Town will not provide a public facility, nor accept the provision of a public facility by others, if it is unable to pay for the subsequent annual operation and maintenance costs of the facility.

9.3.4 Policy:

The Town shall adopt standards for debt management ~~by 2009~~ prior to incurring any public debt.

9.3.5 Policy:

Debt payment shall not exceed the anticipated useful life of a capital improvement and, in no case, shall exceed thirty years.

9.4 Objective:

Land use decisions shall be made based upon available or projected fiscal resources in coordination with ~~a schedule of capital improvements~~ the Five-Year Schedule of Capital Improvements which maintains adopted level of service standards and meets existing and future facility needs.

9.4.1 Policy:

The Town shall determine whether projects in the Five-Year Schedule of Capital Improvements will allow level of service standard to be maintained with a proposed land use change.

9.4.2 Policy:
The Town shall provide for the availability of public facilities and services needed to support development concurrent with the impacts of such development. ~~subsequent to the adoption of the local comprehensive plan.~~

9.4.3 Policy:
In order to coordinate land uses with available and projected fiscal resources ~~and a financially feasible schedule of capital improvements for water supply and facility projects~~, the Town shall include in its annual update of ~~its financially feasible~~ ~~five (5) year capital improvements~~ the Five-Year Schedule of Capital Improvements, any appropriate projects listed in ~~listing~~ the first five (5) years of the (10) year Water Supply Facility Work Plan (WSFWP). ~~to ensure consistency between the Potable Water Sub-Element of the Infrastructure Element and the Capital Improvements Element.~~

9.5 Objective:
The Town shall include all projects identified in the policies of the various elements of this Comprehensive Plan that are the responsibility of Loxahatchee Groves and determined to be of relatively large scale and high cost as capital improvements projects for inclusion within the Five-Year Schedule of Capital Improvements.

9.5.1 Policy:
Capital improvements shall be provided to: (1) correct existing deficiencies and extend the life expectancy; (2) ~~accommodate desired future~~ manage growth, as defined in the Future Land Use Element and the Town's Charter; and/or (3) replace worn-out or obsolete facilities, as indicated in the Five-Year Schedule of Capital Improvements of this element.

9.5.2 Policy:
The Town defines a capital improvements project or program as a major, not often-recurring, expenditure that costs or commits at least $25,000, which has an expected life of at least five (5) years, and which falls into one of the following categories:

a. Acquisition or lease of land or interests in land for public purposes.

b. Accommodation of Town growth and improvement of

infrastructure services delivery by means of the purchase, lease, construction, rehabilitation, or replacement of:

1. A public building or physical facility;
2. Public infrastructure such as roads, drainage canals, parks, trails, or similar projects;
3. Equipment supporting the maintenance of infrastructure.

c. Projects designed to bring the community into immediate compliance with state or federal law or court order. Such projects are not subject to the above cost or life expectancy limits.

A capital improvements project or program is further defined to include any planning, engineering, feasibility or appraisal studies related thereto if the total cost is at least $10,000. This shall include any studies oriented to defining the initial need for land and/or facilities.

9.5.3 Policy:
Normal maintenance activities are not included in the Five-Year Schedule of Capital Improvements.

9.5.4 Policy:
The Town shall, as a matter of priority, schedule for funding any capital improvement projects in the Five-Year Schedule of Capital Improvements which are designed to correct existing public facility deficiencies.

9.5.5 Policy:
Proposed capital improvements projects shall be evaluated and ranked in order of priority according to the following guidelines:

a. Whether the proposed project is financially feasible, in terms of its impact upon Town budget potential;

b. Whether the project is needed to protect public health and safety, to fulfill the Town's legal commitment to provide facilities and services, or to preserve, achieve full use of, or increase the efficiency of existing facilities;

c. Whether the project prevents or reduces future improvement costs or provides service to areas currently lacking such service;

d. Whether the project represents a logical extension of facilities and
services within the Town; and

e. Whether or not the proposed project is consistent with

plans of State agencies, Palm Beach County agencies and the Loxahatchee Groves Water Control District.

9.6 Objective:

The Five-Year Schedule of Capital Improvements shall be reviewed by the FAAC on an annual basis as part of the Town budget process. Any revisions and/or amendments to the Five-Year Schedule of Capital Improvements shall be made by the Town Council at that time. Annual updates to Tables 9-1 to 9-3 shall be made by Town Council Ordinance and not subject to the comprehensive plan amendment process.

9.6.1 Policy:

The annual update process shall include a review to determine that proposed Five-Year Schedule of Capital Improvements revisions are internally consistent with the Goals, Objectives and Policies of the Comprehensive Plan.

9.6.2 Policy:

All items to address an imminent danger or threat to the public health or safety shall be submitted to the Town Council for decision and appropriate action through the Town Manager. If the obligation duration exceeds one budget year, the item shall be included in the Five-Year Schedule of Capital Improvements.

9.7 Objective:

The Five-Year Schedule of Capital Improvements consists of Tables 9-1 to 9-3.

Table 9-1 - Summary of FY 2014 – 2018 Capital Improvements Projects

A. Necessary to Maintain LOS Standards: Loxahatchee Groves

Comprehensive Plan Element	Project No. and Description	Comprehensive Plan Consistency (Objective/Policy Citation)
Transportation	TRAN-1: Non-District Town Road Survey (1)	Objective 2.6 and Policies 2.2.4, 2.7.1 and 2.7.9 Transportation Element
Transportation	TRAN-2: Collecting Canal Road OGEM surface Improvements (1,2)	Policy 2.1.3 Transportation Element
Transportation	TRAN-3: Okeechobee Traffic Signal @ "D" Rd. (1)	Policies 2.1.4 and 2.2.2, Transportation Element
Transportation	TRAN-4: Town Road OGEM Projects –Specific Future Projects To Be Identified (1,2)	Policy 2.1.3 Transportation Element
Transportation	TRAN-5: Pave/OGEM Surface "D" Road from Southern Blvd. to Collecting Canal	Policy 2.1.3 Transportation Element
Transportation	TRAN-6: LGWCD to Town road transfer costs - Specific Future Projects To Be Identified	Policy 2.1.3 Transportation Element
Drainage Sub-Element	DR-1: Drainage Canal Refurbishment Program (sub to LGWCD)	Policies 3A.1.5 and 3A.1.6 Drainage Sub-Element

Key: TRAN – Transportation; DR – Drainage; LGWCD – Loxahatchee Groves Water Control District.
(1) – Existing Deficiency ; **(2)** – Replacement Project; **3)** – To Meet Future Need

B. FY 2014 to 2018 Improvements Necessary to Maintain LOS Standards: Outside Agencies

Agency	Project No. and Description	Comprehensive Plan Consistency (Objective/Policy Citation)
Lox Groves Water Control Dist	DR-2: 40-foot Long Front Backhoe lease purchase (1,3)	Objective 3.A.1 Drainage Sub-Element
Lox Groves Water Control Dist	DR-3: Long-Reach Mower lease purchase (1,3)	Objective 3.A.1 Drainage Sub-Element
Palm Beach County School District	PSF-1 Palm Beach County School District 5-Year Capital Budget (FY 2013 – 2017) By Reference (3)	Policy 8A.3-A Public School Facilities Element
Florida Department of Transportation	FDOT-1: #4282391 Bridge #930402 repair and rehab. West of "D" Road (1)*	Policy 2.2.4 Transportation Element; Policy 9.2.10 Capital Improvements Element
Florida Department of Transportation	FDOT-2: #4193452 Add lanes and reconstruct Southern Boulevard (3)*	Policies 2.2.4 and 2.6.2 Transportation Element; Policy 9.2.10 Capital Improvements Element

* - Project included in the FY 2011 – 2015 Transportation Improvement Program (TIP) of the MPO.
Key: DR – Drainage; PSF – Public School Facility; FDOT – Florida Department of Transportation
(1) – Existing Deficiency; **(2)** – Replacement Project; **(3)** – To Meet Future Need

C. FY 2014 to 2018 Non-LOS Comprehensive Plan-Directed Improvements:

Loxahatchee Groves

Comprehensive Plan Element	Project No. and Description	Comprehensive Plan Consistency (Objective/Policy Citation)
Recreation and Open Space	ROS-1: Equestrian Trails – Linear Park from "A" Road to Folsom Road (1,3)	Objective 2.3 Transportation Element
Recreation and Open Space	ROS-2: Equestrian Trails – Future Projects To Be Identified (1,3)	Objective 2.3 Transportation Element

Key: ROS – Recreation and Open Space

(1) – Existing Deficiency; **(2)** – Replacement Project; **(3)** – To Meet Future Need

D. FY 2014 to 2018 Other Infrastructure Improvements: Outside Agencies/Private Parties

Project No. and Description	Public Agency/Private Party	Comprehensive Plan Consistency (Objective/Policy Citation)
TRAN-7 "F" Road Pavement and OGEM Improvements: Southern Blvd. to Collecting Canal(1,3)	Grove Medical Plaza Site Plan Approval Condition	Policy 2.1.4 Transportation Element

Key: TRAN – Transportation.

(1) – Existing Deficiency ;**(2)** – Replacement Project; **(3)** – To Meet Future Need

Table 9-2 – FY 2014 – 2018
Schedule and Cost of Capital Improvements Projects
A. Necessary to Maintain LOS Standards

Project Number*	Fiscal Year Cost ($ 000's)					Total Cost (Dollars)
	2013/14	2014/15	2015/16	2016/17	2017/18	
TRAN-1	100	100	0	0	0	200,000
TRAN-2	944	0	0	0	0	944,000
TRAN-3	250	0	0	0	0	250,000
TRAN-4	100	0	0	0	0	100,000
TRAN 5	300	0	0	0	0	300,000
TRAN-6	29	29	29	29	29	145,000
TRAN-7	106	0	0	0	0	106,000
DR-1	150	150	150	150	150	750,000
DR-2	62	62	62	62	62	310,000
DR-3	34	34	34	34	34	170,000
FDOT #4282391	119	0	0	0	0	119,000
FDOT##4193452**	5,200	0	0	0	34,500	39,700,000
Totals	7,394	375	275	275	34,775	43,094,000

**Cost includes entire project length (Lion Country Safari to west of Crestwood Blvd).

***** - Refer to Table 9-1A , 9-1B and 9-1D.

B. Non-LOS Comprehensive Plan-Directed Improvements

Project Number*	Fiscal Year Cost ($ 000's)					Total Cost (Dollars)
	2013/14	2014/15	2015/16	2016/17	2017/18	
ROS-1	80	0	0	0	0	80,000
ROS-2	0	100	100	0	0	200,000
Totals	**80**	**100**	**100**	**0**	**0**	**280,000**
PBC School Dist.	5-Year Capital Budget (FY 2013 – 2017)Incorporated By Reference					

***** - Refer to Table 9-1C.

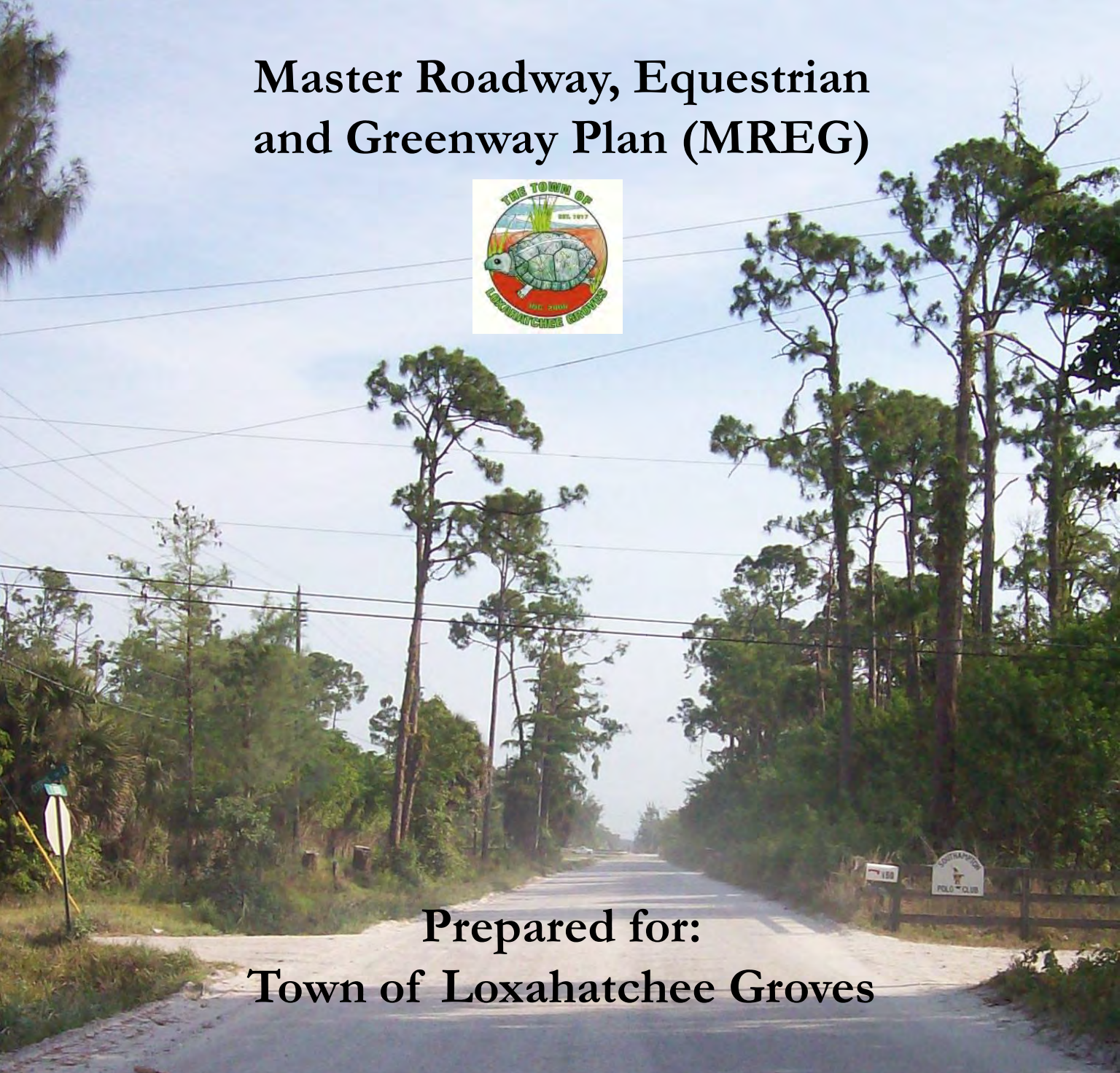
Table 9-3 – Revenue Sources for Town Directed Capital Improvements Projects

Project Number*	Revenue Source	Fiscal Year Budget ($000)					Total Cost (Dollars)
		2013/14	2014/15	2015/16	2016/17	2017/18	
TRAN-1	GF/GT	100,000	100,000	0	0	0	200,000
TRAN-2	GF/GT	944,000	0	0	0	0	944,000
TRAN-3	GF/GT	250,000	0	0	0	0	250,000
TRAN-4	GF	100,000	0	0	0	0	100,000
TRAN-5	GF	300,000	0	0	0	0	300,000
TRAN-6	GT	29,000	29,000	29,000	29,000	29,000	145,000
TRAN-7	P	106,000	0	0	0	0	106,000
DR-1	GT	150,000	150,000	150,000	150,000	150,000	750,000
ROS-1	GF	80,000	0	0	0	0	80,000
ROS-2	GF	0	100,000	100,000	0	0	200,000
Town Totals	**GF/GT/P**	**2,059,000**	**379,000**	**279,000**	**179,000**	**179,000**	**3,075,000**

***** - Refer to Tables9-1A, 9-1C and 9-1D.

Revenue Sources: GF-General Fund; GT-Gas Tax; G-Grant; P –Private Source

Master Roadway, Equestrian and Greenway Plan (MREG)



Prepared for:
Town of Loxahatchee Groves

Prepared By:

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CGA Project No. 08-2032

March, 2009

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1.0 INTRODUCTION

Calvin, Giordano & Associates, Inc. was commissioned by the Town of Loxahatchee Groves to develop a Master Roadway, Equestrian and Greenway Plan (MREG) to evaluate traffic operational characteristics of the existing and future transportation network in the Town and identify opportunities for equestrian trails and greenways.

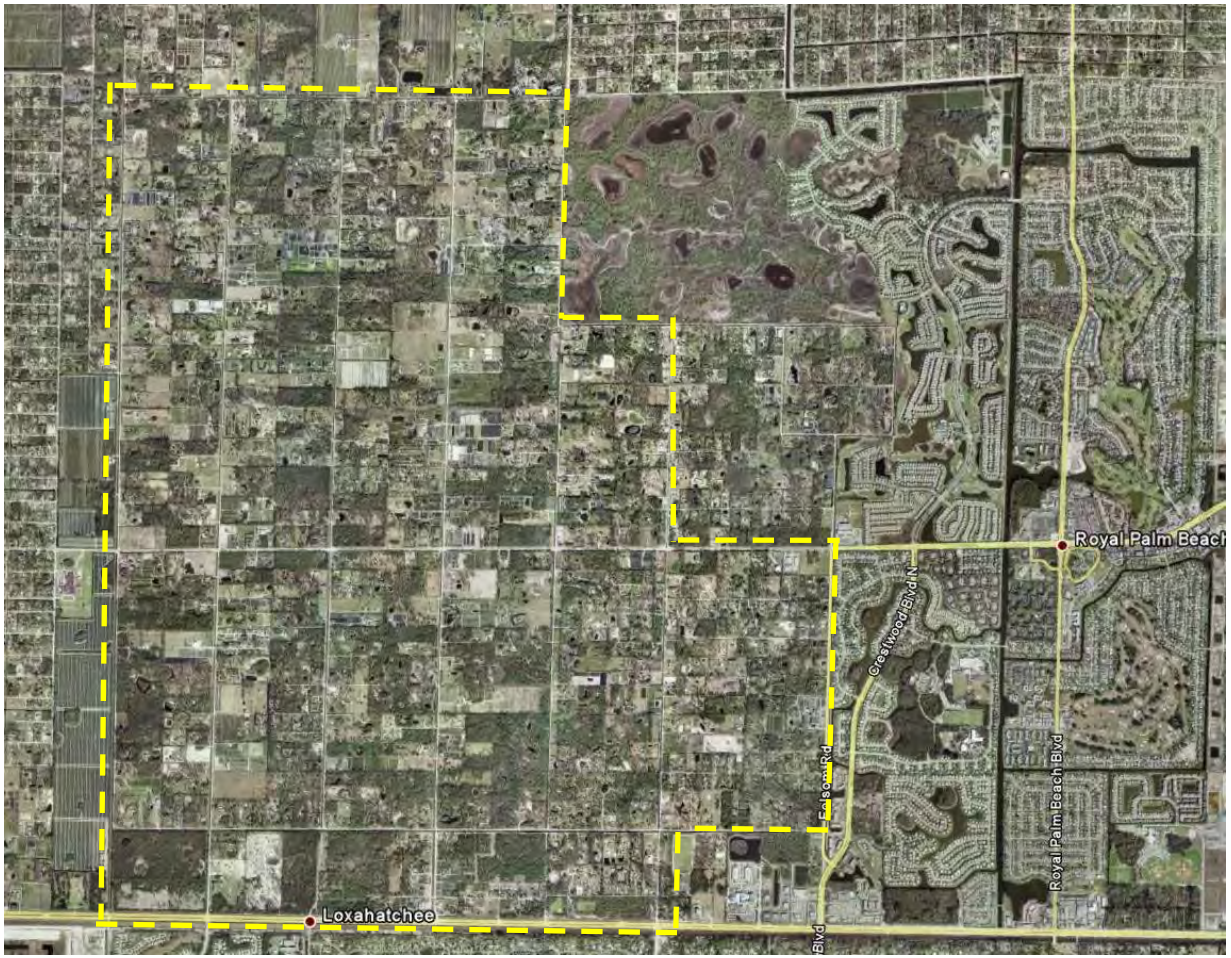
The Town of Loxahatchee Groves is a rural, residential and agricultural community encompassing approximately 12.5 square miles in Palm Beach County. Adjacent communities include the Village of Wellington to the south, the Village of Royal Palm Beach to the east, and areas of unincorporated Palm Beach County known as "The Acreage" to the north and west.

The Town is located within the Loxahatchee Groves Water Control District (LGWCD), a special district created in 1917 which maintains the roadways within the Town limits. In Year 2006, the LGWCD commissioned a report entitled the *LGWCD Districtwide Paving Analysis Report* (Erdman Anthony of Florida, Inc., October, 2006). The paving analysis report considered roadway surface treatment alternatives and typical cross section alternatives for roadways throughout the Town. A review of the findings of the paving analysis report was conducted and the recommendations of the report have been incorporated in the MREG, where appropriate.

The scope of the MREG includes traffic volume data collection, traffic operational analyses of 36 primary intersections for existing and future conditions, recommendations for traffic operational improvements, and identification of opportunities for equestrian trails and greenways. Where appropriate, the MREG incorporates historical research and current roadway practices of the LGWCD. Study boundaries are depicted in **Figure 1**.

FIGURE 1
Master Roadway, Equestrian and Greenways Plan

Study Area Location Map



Legend

Study Area Boundary

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EXCEPTIONAL SOLUTIONS

2.0 TRAFFIC OPERATIONAL ANALYSIS

2.1 Existing Roadway Network

2.1.1 Roadway Functional Classifications

In general, roadways are classified based on the purpose they serve, the speed of travel they accommodate, and adjacent access and mobility needs. The four functional classification groups common to rural and urban roadways are Major Arterials, Minor Arterials, Collectors and Local streets. Rural or urban designation is based primarily on population and the Town of Loxahatchee Groves falls under the Urban Area Boundary of Palm Beach County. Descriptions of roadway functional classifications applicable to the Town are described as follows:

Major Arterial Road

This roadway provides service primarily through high speed and high volume traffic. Major Arterials usually provide service that is relatively continuous and for longer trip lengths. Typical principal arterials include interstates, freeways, and other limited access facilities. **SR-80/Southern Boulevard**, a four-lane divided facility with 12' wide lanes, is classified as Major Arterial in the study.

Collector Road

This roadway provides both land access and traffic circulation between arterials and local roads for moderate trip length at moderate speeds. A collector street system transitions vehicular traffic from local streets onto the arterial system. **Okeechobee Boulevard**, a two-lane undivided roadway, is classified as County Collector within the Town limits.

Local Road

This roadway permits direct access to abutting property and connections to a higher order roadway such as a collector or arterial. A local road provides service for low traffic volumes and short average trip lengths or minimal through traffic movements. **The primary letter roads (A Road, B Road, C Road, D Road, E Road and F Road)** in the study area are classified as Local roads.

2.1.2 Roadway Characteristics

Most of the roadways within the Town are unpaved dirt roadways consistent with a rural lifestyle. Some exceptions to this include SR-80/Southern Boulevard and Okeechobee Boulevard, which are primary east-west roadways. The primary north-south roadways within the Town include A Road, B Road, C Road, D Road, E Road and F Road. These roadways are referred to as "The Letter Roads" in this report.

2.1.3 SR-80/Southern Boulevard Corridor

SR-80/Southern Boulevard is a designated Strategic Intermodal System (SIS) facility and part of the Florida Intrastate Highway System (FIHS). SR-80/Southern Boulevard is an east-west State highway that connects western Palm Beach County to eastern Palm Beach County. Within the Town, SR-80/Southern Boulevard consists of a four-lane divided highway with a 220-foot right-of-way and a posted speed limit of 50 mph. District IV of the Florida Department of Transportation (FDOT) has classified SR-80/Southern Boulevard as Access Class 3. The adopted Level of Service for SR-80/Southern Boulevard is D. There are currently only two traffic signals within the study area, which are located at the intersections of SR-80/Southern Boulevard & B Road and SR 80/Southern Boulevard & F Road. Intersection spacing between the two signals is approximately 2 miles. Minor approach Stop-control is provided at all the remaining intersections along SR-80/Southern Boulevard within the study area.

2.1.4 Okeechobee Boulevard

Okeechobee Boulevard is an east-west, County thoroughfare classified as a County Collector. Within the Town, Okeechobee Boulevard is a two-lane roadway with a 120-foot right-of-way and a posted speed limit of 45 mph. All intersections on Okeechobee Boulevard within the Town operate with Stop-control on the minor approaches. Okeechobee Boulevard is classified as a CRALLS facility from E Road to Seminole Pratt Whitney Road only for the Florida Research Park build out extension from 2014 to 2021.

2.1.5 Unpaved Local Roads

The primary north-south roadways in the Town; A Road, B Road, C Road, D Road, E Road and F Road (The Letter Roads), are all unpaved dirt roadways with the exception of F Road. The Loxahatchee Groves Water Control District has installed a surface treatment on F Road consisting of Open Graded Emulsion Mix (OGEM). The *LGWCD Districtwide Paving Analysis Report* (Erdman Anthony of Florida, Inc., October, 2006) concluded that OGEM provides a low-cost and low maintenance alternative to typical asphalt pavement. Traffic mitigation measures consisting of speed tables have been installed on F Road in an effort to ensure compliance with posted speed limits and discourage cut-through traffic.

The Letter Roads have an identified right-of-way of 60 feet and a speed limit of 30 mph. In general, The Letter Roads are adjacent to open drainage canals contained within the 60-foot prescribed right-of-way. Acceptable Level of Service standards have not been established for unpaved dirt roads on either a national or regional level.

2.2 Data Collection

2.2.1 Existing Traffic Volumes

To establish a baseline for the traffic operational analysis element of the MREG, traffic volume data were collected at significant intersections and corridor locations throughout the Town. Four-hour turning movement counts encompassing morning and evening peak-hours were conducted at studied intersections and twenty-four hour traffic counts were conducted on studied corridors. The counts were conducted in November and December of 2008 and complete printouts are included in Appendix A.

In addition to traffic data collected in association with the MREG, data collected in conjunction with the ongoing SR 80 Access Control Plan were incorporated for analysis purposes. These data sets were collected in April and May of 2008 and are also included in Appendix A.

Four-Hour Turning Movement Counts

Turning movement counts were collected on a typical weekday (Tuesday through Thursday) during the AM and PM peak hours at the following 36 locations:

1. B Road and SR-80
2. B Road and Collecting Canal Road
3. C Road and SR-80
4. C Road and Tangerine Drive
5. C Road and Collecting Canal Road
6. D Road and SR-80
7. D Road and Tangerine Drive
8. West D Road and Tangerine Drive
9. D Road and 6th Court North Road
10. D Road and Collecting Canal Road
11. Loxahatchee Avenue and SR-80
12. Loxahatchee Avenue and Tangerine Drive
13. Loxahatchee Avenue and Citrus Drive

14. E Road and SR-80
15. E Road and East Citrus Drive
16. E Road and Tangerine Drive
17. E Road and Citrus Drive
18. E Road and 6th Court North Road
19. E Road and Collecting Canal Road
20. F Road and SR-80
21. F Road and East Citrus Drive
22. F Road and 6th Court North Road
23. F Road and Collecting Canal Road
24. A Road and Okeechobee Boulevard
25. B Road and Okeechobee Boulevard
26. C Road and Okeechobee Boulevard
27. D Road and Okeechobee Boulevard
28. E Road and Okeechobee Boulevard
29. F Road and Okeechobee Boulevard
30. A Road and North Road
31. B Road and North Road
32. C Road and North Road
33. D Road and North Road
34. North Road and 140th Avenue
35. E Road and North Road
36. F Road and North Road

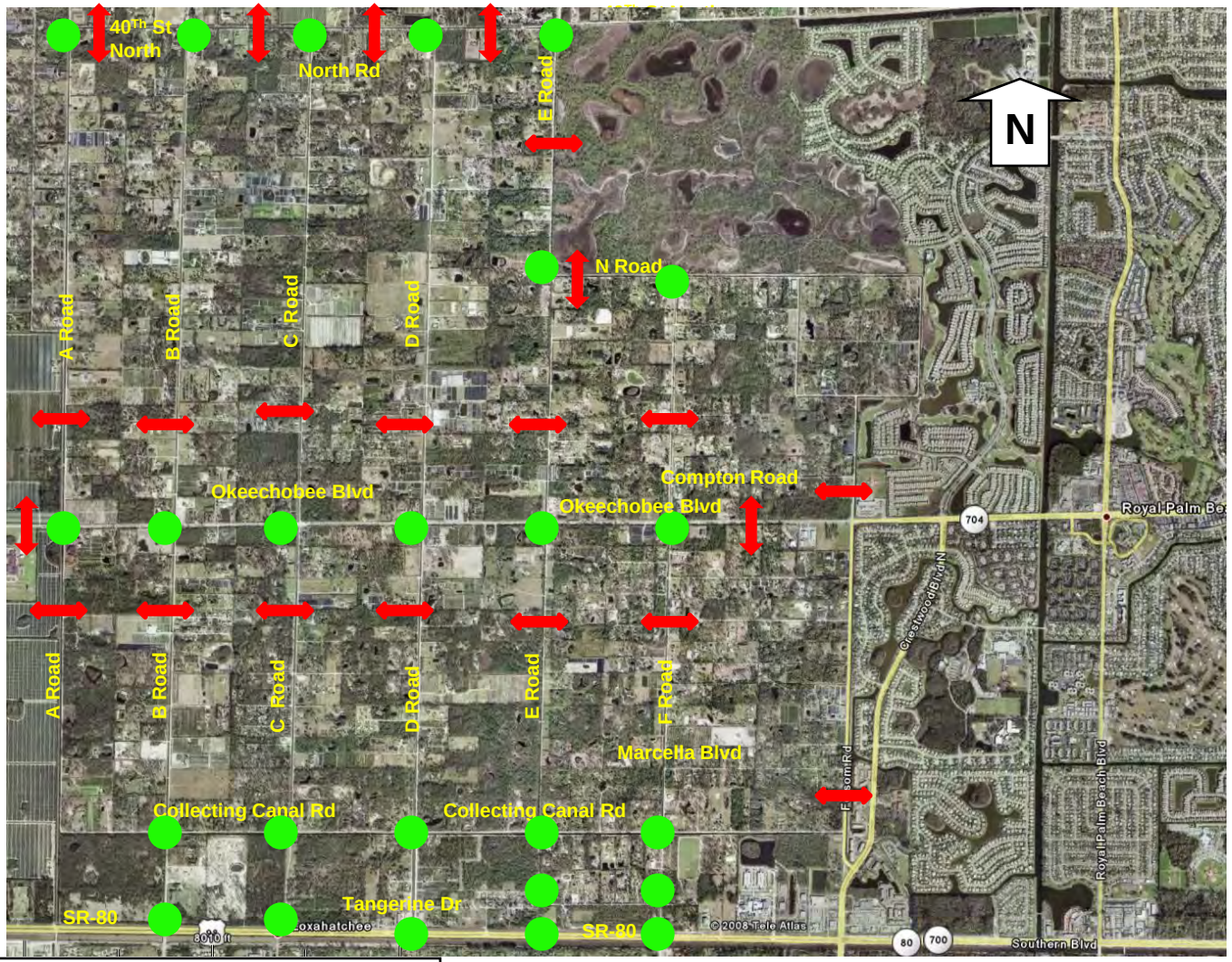
24-Hour Bi-Directional Approach Counts

In addition to turning movement counts, 24-hour bi-directional counts were also collected for the following twenty-two locations on December 11, 2008:

1. A Road, south of Okeechobee Boulevard
2. B Road, south of Okeechobee Boulevard
3. C Road, south of Okeechobee Boulevard
4. D Road, south of Okeechobee Boulevard
5. E Road, south of Okeechobee Boulevard
6. F Road, south of Okeechobee Boulevard
7. A Road, north of Okeechobee Boulevard
8. B Road, north of Okeechobee Boulevard
9. C Road, north of Okeechobee Boulevard
10. D Road, north of Okeechobee Boulevard
11. E Road, north of Okeechobee Boulevard
12. F Road,, north of Okeechobee Boulevard
13. Okeechobee Boulevard, east of F Road
14. Okeechobee Boulevard, west of A Road
15. N Road between E Road and F Road
16. E Road between N Road and North Road
17. North Road between A Road and B Road
18. North Road between B Road and C Road
19. North Road between C Road and D Road
20. North Road between D Road and 140th Avenue
21. Folsom Road between Marcella Blvd and Collecting Canal Road
22. Folsom Road between Okeechobee Boulevard and Compton Road

Figure 2 graphically depicts all the data collection locations and complete printouts of all traffic counts are included in **Appendix A**.

FIGURE 2
Master Roadway, Equestrian and Greenway Plan
Locations of Traffic Counts



Legend

Peak Hr TMC Locations

24-Hr Bi-Directional Count Locations
(for illustration purpose, not the exact location of counts)

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2.2.2 Review of Paving Analyses Report & Comparison of ADT

Average daily traffic (ADT) volumes collected in association with the *LGWCD Districtwide Paving Analysis Report* (Erdman Anthony of Florida, Inc., October, 2006) were reviewed for comparison with ADT volumes collected in 2008 in association with the MREG. The Districtwide Paving Analysis included ADT volumes both north and south of Okeechobee Boulevard on the following roadways: A Road, B Road, C Road, D Road, E Road, F Road and Folsom Road. The results of the comparison are illustrated in **Figure 3** and in **Tables 1A** and **1B**, and are graphically depicted in charts illustrated in **Figure 4**. As indicated, ADT volumes increased from Year 2006 to Year 2008 on the following roadway segments:

South of Okeechobee Boulevard:

- A Road
- B Road
- C Road
- F Road
- Folsom Road

North of Okeechobee Boulevard

- A Road
- B Road
- C Road
- D Road

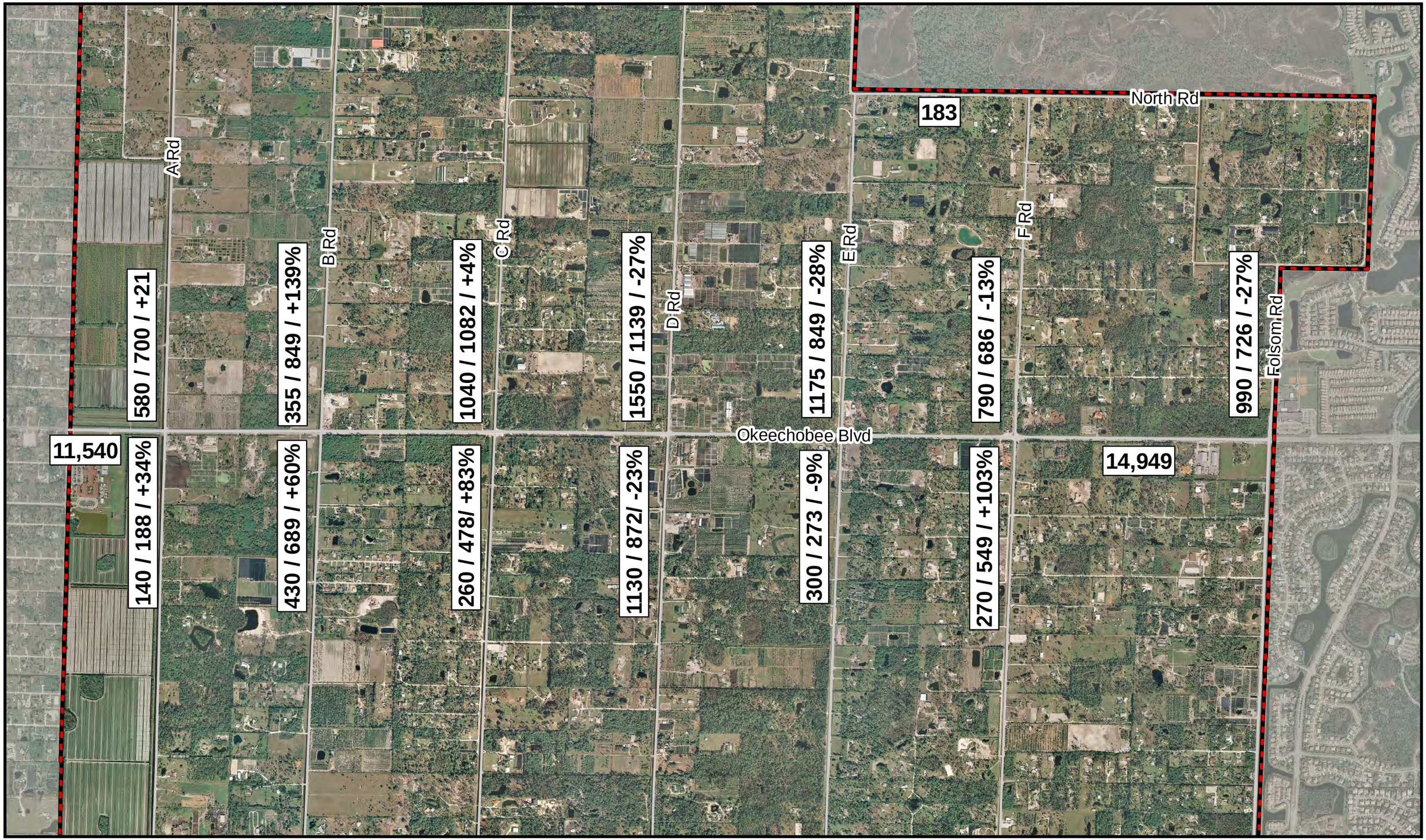
ADT volumes decreased from Year 2006 to Year 2008 on the following roadway segments:

South of Okeechobee Boulevard:

- D Road
- E Road

North of Okeechobee Boulevard

- D Road
- E Road
- F Road
- Folsom Road



Loxahatchee Groves

24 Hour Roadway Volumes

260 / 478/ +83% = 2006 Volume / 2008 Volume / % Difference

183 = 2008 Volume

0.5 Miles

N

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Table 1A
ADT Comparison Table (2006 ADT VS 2008 ADT)
ADT Collected South of Okeechobee Blvd

Roadway	From	To	ADT[1]	CGA ADT[2]	% Increase/decrease
A Road	Collecting Canal Rd	Okeechobee Rd	140	188	34%
B Road	Collecting Canal Rd	Okeechobee Rd	430	689	60%
C Road	Collecting Canal Rd	Okeechobee Rd	260	478	84%
D Road	Collecting Canal Rd	Okeechobee Rd	1130	872	-23%
E Road	Collecting Canal Rd	Okeechobee Rd	300	273	-9%
F Road	Collecting Canal Rd	Okeechobee Rd	270	549	103%

Note:

1) The ADT were directly taken from the Districtwide Paving Analysis Report, 2006 prepared by Erdman & Anthony of Florida, Inc.

2) The ADT volumes were based on twenty-four hour traffic counts performed on December 11, 2008.

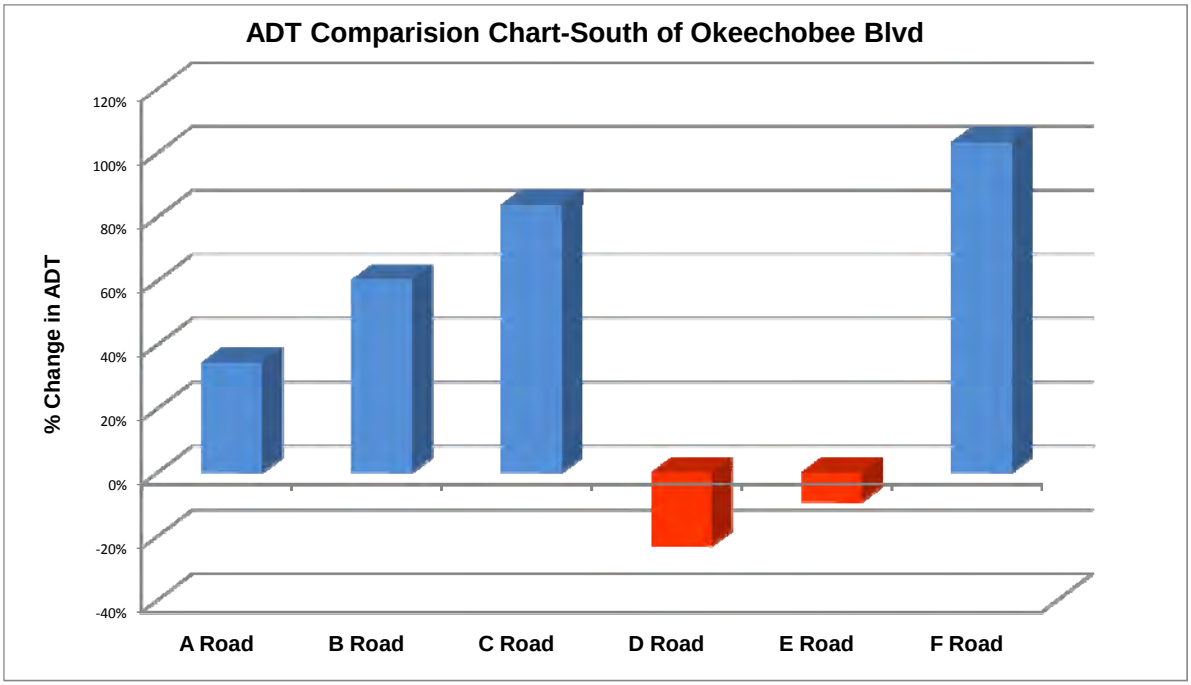
Table 1B
ADT Comparison Table (2006 ADT VS 2008 ADT)
ADT Collected North of Okeechobee Blvd

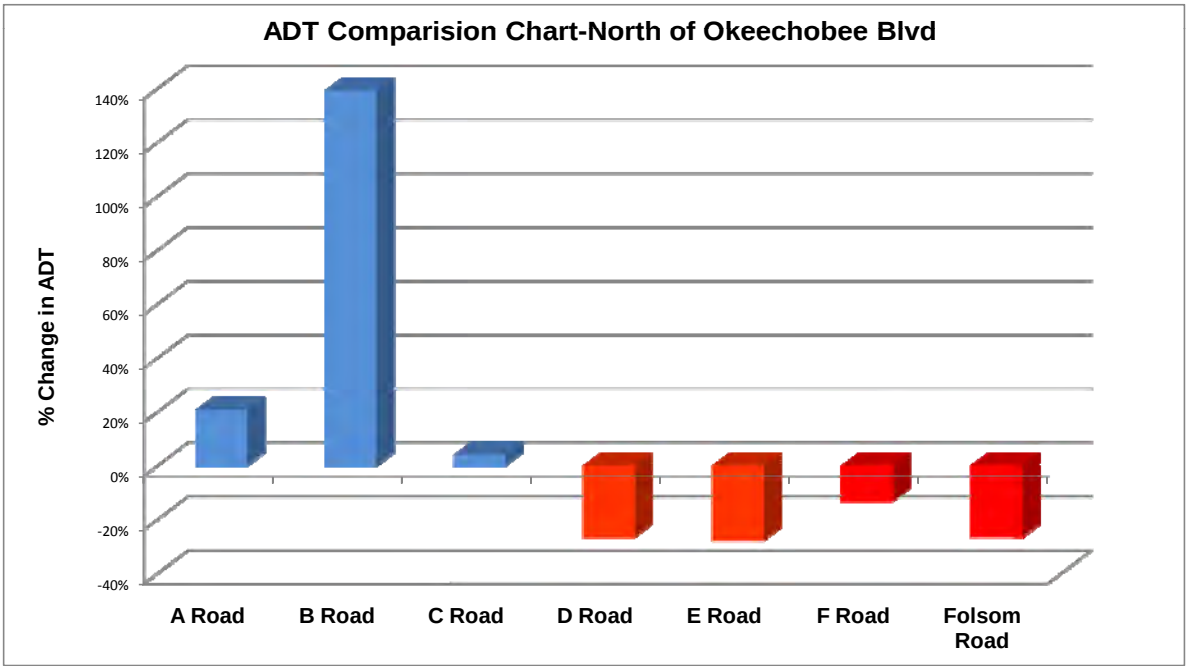
Roadway	From	To	ADT[1]	CGA ADT[2]	% Increase/decrease
A Road	Okeechobee Rd	North Rd	580	700	21%
B Road	Okeechobee Rd	North Rd	355	849	139%
C Road	Okeechobee Rd	North Rd	1040	1082	4%
D Road	Okeechobee Rd	North Rd	1550	1139	-27%
E Road	Okeechobee Rd	North Rd	1175	849	-28%
F Road	Okeechobee Rd	North Rd	790	686	-13%
Folsom Road	Okeechobee Rd	North Rd	990	726	-27%

Note:

1) The ADT were directly taken from the Districtwide Paving Analysis Report, 2006 prepared by Erdman & Anthony of Florida, Inc.

2) The ADT volumes were based on twenty-four hour traffic counts performed on December 11, 2008.


ADT Comparision Chart-South of Okeechobee Blvd
% Change in ADT
120%
100%
80%
60%
40%
20%
0%
-20%
-40%
A Road
B Road
C Road
D Road
E Road
F Road


ADT Comparision Chart-North of Okeechobee Blvd
% Change in ADT
140%
120%
100%
80%
60%
40%
20%
0%
-20%
-40%
A Road
B Road
C Road
D Road
E Road
F Road
Folsom Road

2.2.3 Traffic Growth Patterns: Cut-Through Traffic

The changes in ADT volumes tracked between the 2006 data set and the 2008 data set indicate substantial increases on B Road, C Road and F Road south of Okeechobee Boulevard (60%, 83% and 103%, respectively). It is highly unlikely and unrealistic to conclude this level of growth was attributable to the development of vacant land or the reconfiguration of existing land uses within the Town. It is more reasonable to conclude that these roadway segments were increasingly utilized as alternative routes between SR 80 and Okeechobee Boulevard by non-residents. This trend is known as cut-through traffic and is addressed in further detail in this report.

However, due to the limited number of data sets compared (One data set collected in Year 2006 and one data set collected in Year 2008), caution should be exercised when drawing conclusions regarding global traffic patterns. It is recommended that the Town continue monitoring traffic volumes on local roads to identify emerging trends and aid in future traffic analyses.

2.3 Safety Analysis

2.3.1 Speed Studies-Okeechobee Boulevard

In an MREG public workshop conducted in September 2008, Town residents expressed concerns regarding speeding on Okeechobee Boulevard and the difficulty of entering the high speed traffic stream on the roadway. A speed analysis was performed on Okeechobee Boulevard west of F Road to determine the extent of speed limit compliance on the roadway. The current posted speed limit on the subject roadway segment is 45 mph.

Speed data, collected on September, 26, 2007, was obtained from Palm Beach County Traffic Engineering Division. The results of an analysis of the data are summarized in **Table 2**. Analysis of the dataset showed that the 85th percentile speed on Okeechobee Boulevard was 54 mph, which is a 20% increase over the posted speed limit. The analysis also showed that 65.7% of vehicles on the roadway were driving at a higher speed than 45 mph.

2.3.2 Crash Data

To evaluate the existing conditions and to identify safety issues within the study area, available vehicular crash data were evaluated. Raw crash data compiled from January 2006 through May 2008 were obtained from Palm Beach County Traffic Division and are provided in **Appendix B** and summarized in **Figure 5**. The crash dataset was incorporated in traffic signal warrant analyses, as discussed in a subsequent section of this report.

TABLE 2

Speed Study Summary

Master Roadway Plan for the Town of Loxahatchee Groves

Location: Okeechobee Boulevard, West of F Road
Direction: East-West
Posted Speed Limit: 45 MPH

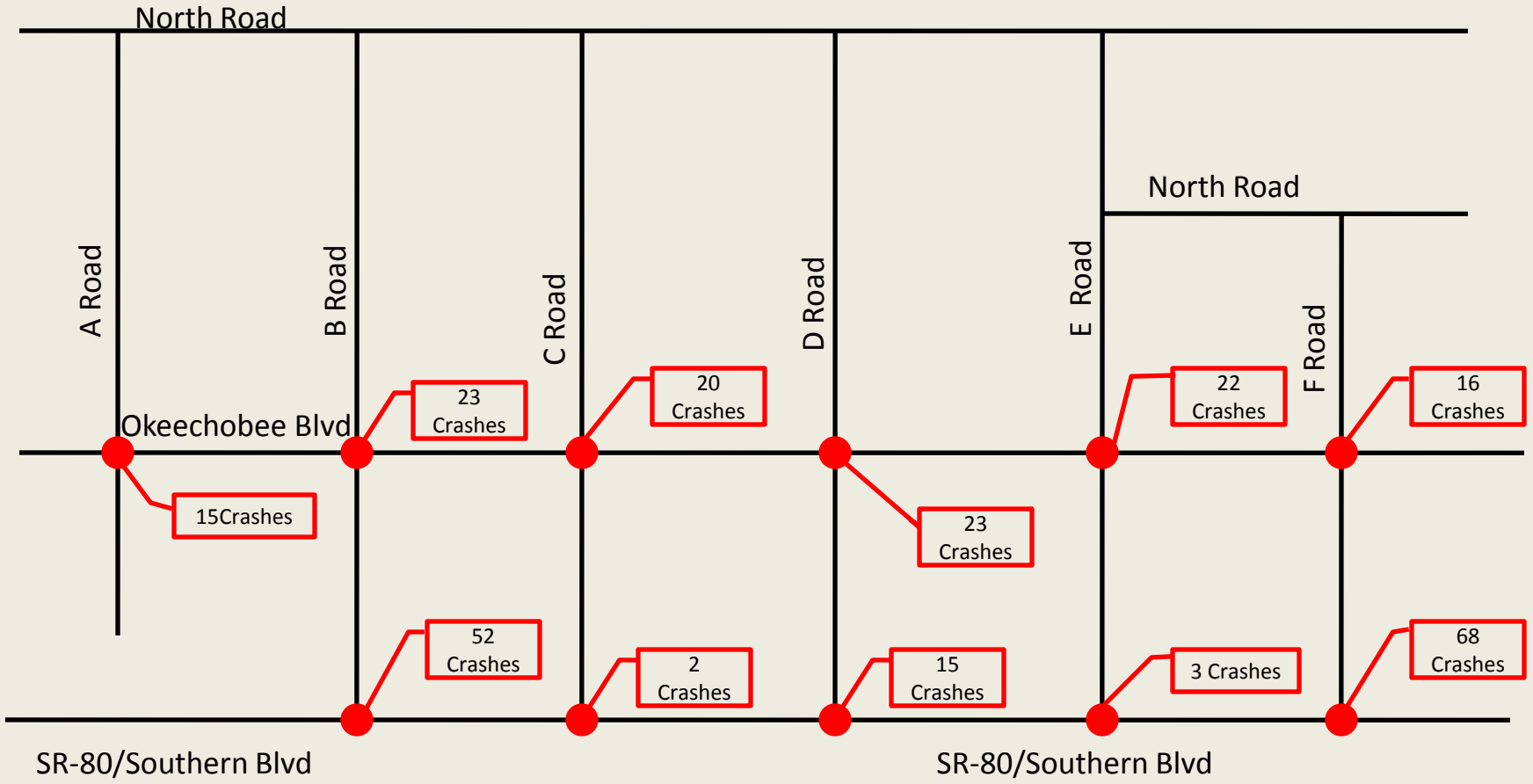
Date:	Wednesday, September 26, 2007														**Total**
Speed	0-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-9999	
Vehicles	166	32	53	84	285	835	2,884	4,406	2,796	640	132	38	27	282	12,660

Source: Palm Beach County (PBC) Traffic Division

Statistics

15th percentile	41 MPH
50th percentile	42 MPH
85th percentile	54 MPH
95th percentile	59 MPH
Mean Speed	
Number of vehicles > 45 MPH	8321
Percent of vehicles > 45 MPH	65.70%

FIGURE 5
Master Roadway, Equestrian and Greenway Plan
Intersection Crash Diagram



Legend
Intersection

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2.4 Existing Conditions (Year 2008) Operational Analyses

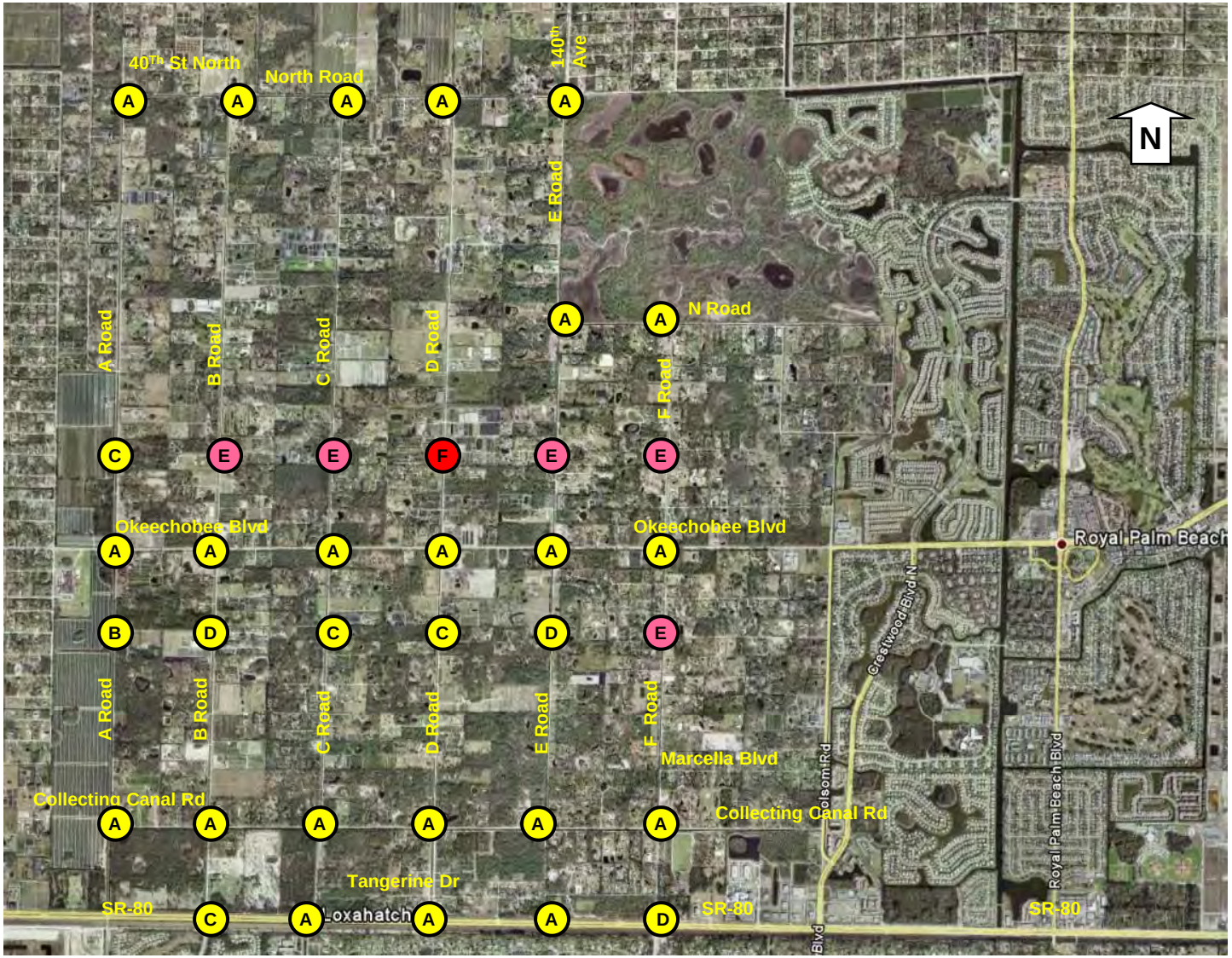
To determine the traffic operational conditions of existing intersections, the existing roadway network was modeled utilizing the analysis software packages SYNCHRO 7.0 and SimTraffic. Traffic operational analyses were performed for thirty-six intersections within the aforementioned study area limits.

Results of the analyses indicate that all studied intersections are currently operating within acceptable Levels of Service when considering overall intersection performance. However, minor approaches on intersections of The Letter Roads with Okeechobee Boulevard were shown to operate below acceptable Levels of Service. In particular, the north approaches on B Road, C Road, D Road, E Road and F Road and south approach on F Road were shown to experience substantial vehicle delay, particularly during the evening peak-hour. It is important to note that overall intersection performance is a weighted average of the delay experienced by each vehicle entering an analyzed intersection. Since the volume of traffic on the minor street approaches (The Letter Roads) is relatively low, the delay experienced by these drivers does not heavily influence the overall intersection performance. Thus substantial delay can be experienced by most if not all drivers on the minor street approach and the intersection can still reflect an acceptable overall Level of Service performance. This is the case for the analyzed intersections on Okeechobee Boulevard.

The arterial analyses of SR-80/Southern Boulevard under existing conditions revealed that the corridor in both the eastbound and westbound direction will be operating well above the adopted Level of Service standards. The results of the arterial analysis are summarized in **Table 3**.

The Levels of Service under existing conditions for intersections within study area are depicted in **Figure 6** and complete printouts are included in **Appendix C**.

Figure 6
Master Roadway, Equestrian and Greenway Plan
Existing 2008 Conditions-Intersection LOS



LEGEND

A — Intersection/Approach LOS

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TABLE 3

Existing 2008 -PM Peak Hour Arterial Analysis

Arterial Level of Service: EB SR-80

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
B Rd/Binks Forest Dr	I	55	49.4	19.1	68.5	0.75	39.7	B
F Rd/Big Blue Trace	I	55	131.1	22.6	153.7	2.00	46.9	A
Total	**I**		**180.5**	**41.7**	**222.2**	**2.75**	**44.6**	**A**

Arterial Level of Service: WB SR-81

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
F Rd/Big Blue Trace	I	55	35.5	9.4	44.9	0.46	36.5	B
B Rd/Binks Forest Dr	I	55	131.1	10.9	142	2.00	50.7	A
Total	**I**		**166.6**	**20.3**	**186.9**	**2.46**	**47.3**	**A**

2.5 Traffic Signal Warrant Analyses

During the PM peak-hour, it was observed that heavy delays were experienced on the minor street approaches of intersections of The Letter Roads with Okeechobee Boulevard. To address this condition, a traffic signal warrant analysis was performed for the intersections of Okeechobee Boulevard with B Road and with F Road. These intersections were selected due in part to significant traffic volumes on both corridors, to provide acceptable gaps in traffic at intersections between these locations, and due to the fact that signalized intersections are currently provided at the intersections of SR 80/Southern Boulevard with each of these corridors.

The signal warrant analyses were performed in accordance with standards set forth in Section 4C of the Manual on Uniform Traffic Control Devices, 2003 Edition (MUTCD). The signal warrant analyses and applicable MUTCD tables and figures are included in **Appendix D**. Applicable warrants are described below.

Warrant 1, Eight-Hour Vehicular Volume - Warrant 1 is satisfied when either Condition A or Condition B is satisfied. If neither Condition is satisfied, then the combination of Conditions A and B can be considered. Condition A is satisfied when the major and minor street volumes equal or exceed the limits given in the 100 percent or 70 percent columns in MUTCD Table 4C-1 *Condition A-Minimum Vehicular Volume*. Condition B is satisfied when the major and minor street volumes equal or exceed the limits given in the 100 percent or 70 percent columns in Table 4C-1 *Condition B-Interruption of Continuous Traffic*. Since the posted speed limit on Okeechobee Boulevard is 45 miles per hour, which exceeds 40 miles per hour, the minimum volume thresholds identified in the 70 percent columns are used as the basis for this analysis, per MUTCD 2003 guidelines.

Warrant 2, Four-Hour Vehicular Volume - Warrant 2 is considered satisfied when traffic volumes during four hours of an average day for the major street (total of both approaches) and the corresponding volume on the higher-volume

minor street exceed minimum thresholds as defined in Figure 4C-2 of the MUTCD.

Warrant 3, Peak-Hour Vehicular Volume - Warrant 3 is considered satisfied when traffic volumes recorded during one hour (any four consecutive 15-minute periods) for the major street (total of both approaches) and the corresponding volume on the higher-volume minor street (one direction only) exceed the minimum volume thresholds identified in Figure 4C-4 of the MUTCD.

2.5.1 Signal Warrant Analysis: Okeechobee Boulevard at B Road & F Road

Based on intersection characteristics, traffic signal warrants for 70% criteria were evaluated for the intersections of Okeechobee Boulevard with B Road and F Road. Twenty-four hour traffic counts were used to evaluate the signal warrants, and copies of the volume counts are included in **Appendix A.** The speed analysis conducted earlier was used to find the average weekday and weekend 85^{th} percentile speeds on Okeechobee Boulevard, in order to establish applicable volume limits for each signal warrant. Crash data at the intersections of Okeechobee Boulevard with F Road and B Road within the last three years (01/01/06-5/31/08) were also incorporated into the analyses. Based on the analyses, no warrants are currently met for signalization of either intersection. Monitoring of intersection conditions is recommended to determine if signalization warrants are met in the future.

2.6 Programmed Cost Feasible Roadway Projects

In the Palm Beach County Metropolitan Planning Organization's (MPO) 2030 Long Range Transportation Plan (LRTP), SR-80/Southern Boulevard is planned to be widened from 4 lanes to 6 lanes and Okeechobee Boulevard is planned to widen from 2 lanes to 4 lanes. Also, FDOT has a PD&E study for the widening of SR-80/Southern Boulevard programmed in their five year work program for 2011.

Bicycle and pedestrian improvements are also planned along Okeechobee Boulevard in the MPO Long Range Transportation Plan.

In the adopted 2030 Cost Feasible Plan, an east-west Palm Tran Bus Grid System is proposed on Okeechobee Boulevard and SR-80/Southern Boulevard. Also, north south routes are proposed on Folsom Road and Seminole Pratt Whitney Road.

2.7 Development of Future Traffic Volumes

2.7.1 Background Traffic Growth

According to the *Palm Beach County Traffic Division Historic Growth Table*, roadways in the vicinity of the study area including Folsom Road, Crestwood Boulevard, Forest Hills Boulevard, Orange Boulevard, Persimmon Boulevard, Seminole Pratt Whitney Road and SR-7 experienced a negative growth rate. Okeechobee Boulevard from Seminole Pratt Whitney Road to Royal Palm Beach Boulevard experienced a negative growth rate as well. However, traffic volumes collected in association with the MREG indicated instances of significant growth within the Town. Therefore, to ensure a conservative analysis, a 1.0% area wide compound annual growth rate was applied from 2008 to 2013and a 0.5% linear growth rate was applied from 2013 to 2030 to determine the background turning movement volumes for analyzed Town roadways north of Collecting Canal Road.

The growth rates obtained from the *Palm Beach County Traffic Division Historic Growth Table* are included in **Appendix E** and listed in **Table 4A**.

The traffic forecasting methodology used for each studied roadway segment south of Collecting Canal Road was chosen after reviewing applicable forecast methodologies. The forecast methodologies reviewed include the following:

- Regression analysis of 7 years of the most recent historical daily traffic volumes from Palm Beach County.
- Regression analysis of 7 years of the most recent historical daily traffic volumes from Palm Beach County along with the Palm Beach County MPO 2030 model volumes without the E Road extension.
- Growth between the validation year 2000 and the 2030 Palm Beach County MPO model without the E Road extension.
- Zonal analysis of adjacent TAZ employment data from the validation year 2000 and the 2030 Palm Beach County Model.

The regression analyses of the historical Annual Average Daily Traffic (AADT) alone and the historical AADT combined with the 2030 Palm Beach County MPO model volumes without the E Road extension were completed using the "Traffic Trends" spreadsheet for SR-80/Southern Boulevard, Big Blue Trace and Binks Forest Drive. A linear, exponential, and decaying exponential trend line was fit to the data, and the trend analysis printouts for each traffic monitoring site are provided in **Appendix E**.

Future 2030 background volumes south of Collecting Canal Road were calculated employing the preferred growth rate as compound growth rate for each roadway from 2008 to 2030. The growth rate methodology table provided in **Table 4B** details the reasoning behind the selection of each traffic forecasting methodology.

Table 4A
Historic Growth Rate Table

Roadway	From	To	Historic GR
Southern Blvd	Seminole Pratt Whitney	Binks Forest Dr/B Rd	-8.37
	Binks Forest Dr/B Rd	Big Blue Trace/F Rd	-4.2
	Big Blue Trace/F Rd	Forest Hill/Crestwood Blvd	-2.46%
Okeechobee Blvd	Seminole Pratt Whitney	140th Ave	-3.39%
	140th Ave	Crestwood Blvd	-3.62%
	Crestwood Blvd	Royal Palm Blvd	-3.52%
Folsom Blvd	Crestwood Blvd	Okeechobee Blvd	-0.11%
Crestwood Blvd	Southern Blvd	Folsom Rd	-3.00%
	Folsom Rd	Okeechobee Blvd	-3.37%
	Okeechobee Blvd	Royal Palm Blvd	-2.37%
Seminole Pratt Whitney	Southern Blvd	Okeechobee Blvd	-8.83%
	Okeechobee Blvd	Sycamore Dr E	-5.80%
Royal Palm Beach Blvd	Southern Blvd	Okeechobee Blvd	1.35%
	Okeechobee Blvd	RPB North limits	-3.51%
Forest Hill Blvd	Southern Blvd	Wellington Trace	-2.08%
Big Blue Trace	Wellington Trace	Southern Blvd	1.37%
Coconut Blvd	Persimmon Blvd	Orange Blvd	-7.77%
	Orange Blvd	Temple Blvd	-6.70%
Northlake Blvd	Seminole Pratt Whitney	Coconut Blvd	-1.71%
Orange Blvd	140th Ave N	Coconut Blvd	-5.30%
	Cocounut Blvd	Royal Palm Blvd	-6.35

TABLE 4B
Growth Rate Comparison Table
Southern Boulevard Traffic Forecast

Florida Department of Transportation District IV - Systems Planning

Location	METHOD 1 Historic Trend Analysis	METHOD 2 Historic+2030	METHOD 3 2000 - 2030 FSUTMS Forecasts			METHOD 4 2000 - 2030 FSUTMS TAZ Data	Recommended Growth Rate	Notes
			2000	2030	Compd Growth			
Southern Blvd east of F Rd	1.11% LGR	1.1% CGR	32,147	58,100	1.99%		1.00%	A growth rate of 1% was utilized since committed development along SR 80 is available.
Southern Blvd b/w B Rd and F Rd	2.84% CGR	0.95% CGR	18,832	38,967	2.45%		1.00%	
Southern Blvd b/w Seminole Pratt Whitney Rd and B Rd	3.53% CGR	1.44% CGR	19,988	44,350	2.69%		1.00%	
Binks Forest S. of Southern Blvd	0.41% CGR	1.41% CGR	7,257	14,574	2.35%		1.50%	Good Correlation between historical and model conditions.
Big Blue Trace S. of Southern Blvd	0.39% CGR	2.68% CGR	16,393	21,791	0.95%		1.00%	The 2008 data from PBC shows an AADT of 11,000. PBC 2030 model volume is unrealistically high.
D Rd N. of Southern Blvd			1,080	1,475	1.04%		1.50%	Utilized same growth rate as all roadways within Loxahatchee Groves.
Ousley Farms Rd S. of SR 80						0.15% CGR	0.50%	Minimum growth rate utilized.
All roadways within Loxahatchee Groves						1.59% CGR	1.50%	Averaged population TAZ data for all centroids within study limits north of SR 80.

2.7.2 Approved Committed Development

The Palm Beach County Traffic Performance database was utilized to determine committed development trips within the study area. Future committed developments within the Town of Loxahatchee Groves along SR-80 include the following:

- Loxahatchee Retail, between C Road and D Road.
- Southern Crossing MUPD, between E Road and D Road.
- Groves Medical Plaza, west of F Road.

Other committed developments located outside the Town of Loxahatchee Groves but within the vicinity of study area include the following:

- Crestwood Middle School Expansion
- Binks Forest Residential
- Wellington Elementary School
- Everglades Farm Equipment
- Highland Dunes
- Cypress Key
- Southern Palm Crossing
- Palms West Hospital
- Taheri

Details of the approved committed developments are provided in **Appendix E**.

2.7.3 Maximum Future Development and Projected Land use

2.7.3.1 Vacant Parcel Trips

To account for trips associated with the possible development of currently undeveloped parcels, a trip generation analysis was performed using Palm Beach County Trip Generation Rates and Equations for vacant parcels within the Town of Loxahatchee Groves. The resultant trips were assigned onto the surrounding roadway network and included in future turning movements to determine future total traffic volumes.

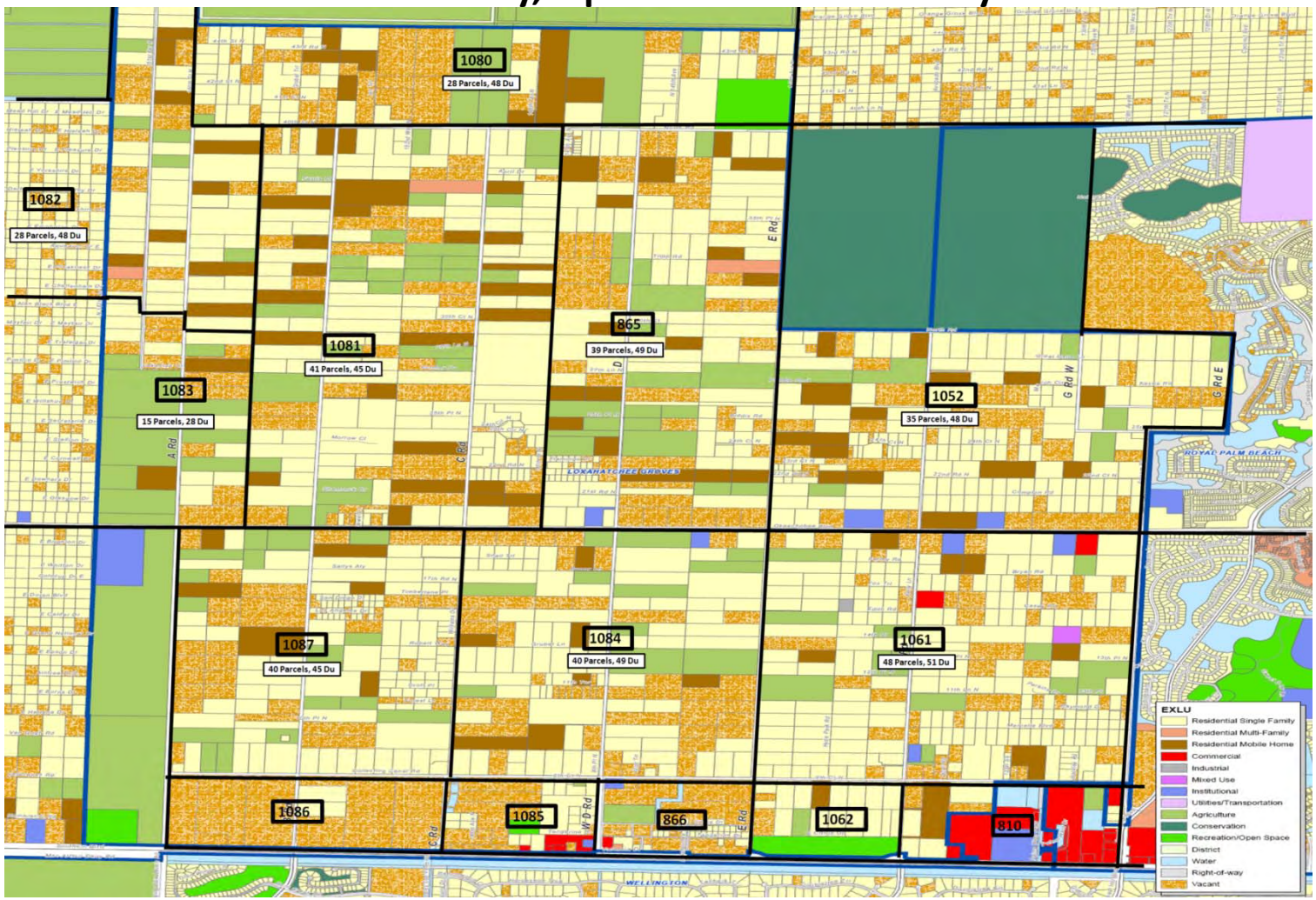
Traffic Analysis Zone (TAZ) and vacant parcel information is included in **Figure 7** and **Appendix E** and a trip generation analysis is provided in **Table 5**.

2.7.4 Year 2030 Traffic Volume Projections

Year 2030 total traffic volumes include the sum of existing 2008 traffic volumes, future background traffic volumes, Palm Beach County approved committed traffic volumes, vacant parcels trips, and traffic volumes from potential commercial developments along SR-80/Southern Boulevard. Year 2030 turning movement volumes are reflected in the Year 2030 Synchro analyses contained in **Appendix C**.

FIGURE 7

Master Roadway, Equestrian and Greenway Plan



Legend

1250 **Traffic Analysis Zone**

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EXCEPTIONAL SOLUTIONS

TABLE 5
Vacant Parcel Trip Generation Table

TAZ 1087

Landuse	ITE Code	Unit	Allowable Max Density	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	45	10	450	0%	41	10	31	52	33	19

TAZ 1084

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	49	10	490	0%	44	11	33	56	36	21

TAZ 1061

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	51	10	510	0%	45	11	34	58	37	22

TAZ 1081

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	45	10	450	0%	41	10	31	52	33	19

TAZ 865

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	49	10	490	0%	44	11	33	56	36	21

TAZ 1052

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	48	10	480	0%	43	11	32	55	35	20

TAZ 1083

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	45	10	450	0%	41	10	31	52	33	19

TAZ 1082

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	48	10	480	0%	43	11	32	55	35	20

TAZ 1080

Landuse	ITE Code	Unit	Intensity	Daily Rate Equation	Daily Trips	Pass-by	AM			PM		
							Total	In	Out	Total	In	Out
Single Family	210	Dwelling Unit	48	10	480	0%	43	11	32	55	35	20

Note:
1) Palm Beach County Trip Generation Rates & Equations.
AM
T = 0.7 (X) + 9.43
25/75
PM
Ln (T) = 0.90 Ln (X) + 0.53
63/37

2.8 Future Conditions Scenarios

Three alternate scenarios for future traffic conditions were considered and analyzed. They are as follows:

1) Alternative 1-No Build Scenario
2) Alternative 2-Proposed Roundabouts on Okeechobee Boulevard
3) Alternative 3-Proposed Signals on Okeechobee Boulevard

2.8.1 Okeechobee Intersection Control – Roundabouts or Traffic Signals

Existing and projected future traffic volumes at intersections of The Letter Roads with Okeechobee Boulevard are relatively low and therefore intersection control will not likely be warranted on all Letter Road intersections. However, providing intersection control at two strategic intersections such as B Road and F Road can dramatically improve the operational characteristics of all Letter Road intersections on Okeechobee Boulevard. Providing intersection control at B Road and F Road will result in gaps in the overall traffic stream at all intersections between B Road and F Road. Gaps in the traffic stream result when traffic is stopped or significantly slowed at the two controlled intersections. These gaps will allow minor street traffic at C Road, D Road and E Road to enter the traffic stream on Okeechobee Boulevard or cross Okeechobee Boulevard more effectively and will reduce the minor street delay identified in operational analyses. Therefore, intersection control was analyzed for the intersections of Okeechobee Boulevard with B Road and F Road.

2.8.2 Operational Analysis for Alternative 1-No Build Scenario

Alternative 1 serves as the baseline alternative. This alternative takes into consideration the future planned roadway improvements and future volumes based on existing plus committed network, background volumes, undeveloped vacant parcel trips and proposed commercial developments along SR-80/Southern Boulevard. All the intersections in the study area were analyzed using Trafficware's SYNCHRO 7.0 and SimTraffic software for Alternative 1-No Build conditions during the PM peak hour. The analyses illustrated that all the analyzed

intersections on Tangerine Drive, Collecting Canal Road, 6th Court North Road, Citrus Drive and North Road will be operating at LOS A with minimal delays. All the intersections on Okeechobee Boulevard except Okeechobee Boulevard at B Road will be operating at or above LOS B. However, most of the minor approaches on Okeechobee Boulevard will experience heavy delays and are expected to operate below acceptable Level of Service standards. The analyses demonstrated that all the intersections on SR-80/Southern Boulevard except SR-80/Southern Boulevard at Loxahatchee Avenue will be operating below acceptable Level of Service standards. However, the arterial analyses of the corridor revealed that the SR-80/Southern Boulevard corridor, both in the eastbound and westbound directions, will be operating well above the adopted Level of Service standards. The results of the arterial analysis are summarized in **Table 6**.

The Levels of Service for all analyzed intersections in the study area for No Build Conditions are depicted in **Figure 8**. The results of the Synchro analyses for all thirty-six intersections are included in **Appendix C**.

TABLE 6

2030 Future Conditions-PM Peak Hour

Arterial Analyses

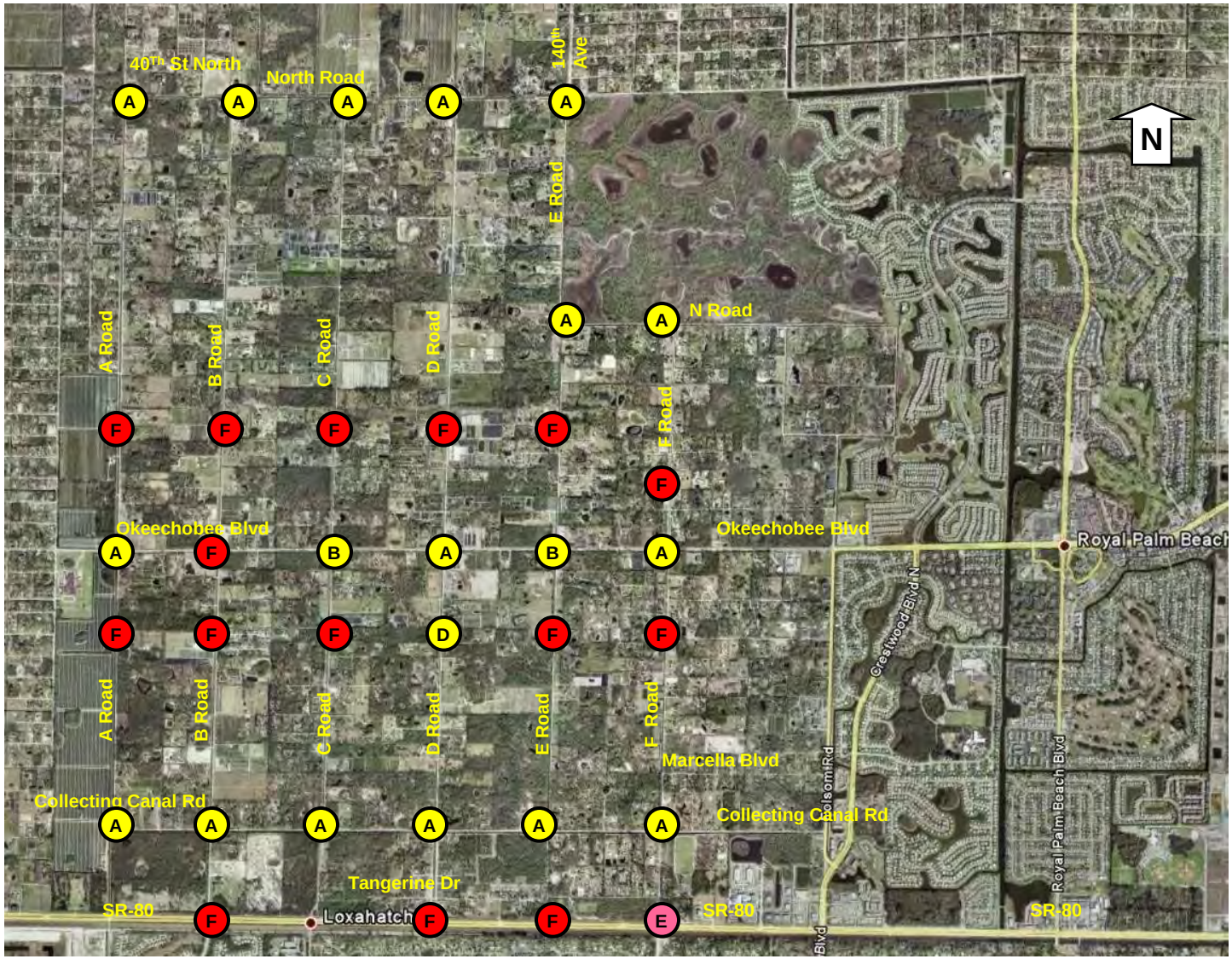
Arterial Level of Service: EB SR-80

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
B Rd/Binks Forest Dr	I	55	49.4	98.0	147.4	0.75	18.4	E
F Rd/Big Blue Trace	I	55	131.1	79.2	210.3	2.00	34.3	B
Total	**I**		**180.5**	**177.2**	**357.7**	**2.75**	**27.7**	**C**

Arterial Level of Service: WB SR-80

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
F Rd/Big Blue Trace	I	55	35.5	27.4	62.9	0.46	26.1	D
B Rd/Binks Forest Dr	I	55	131.1	24.6	155.7	2.00	46.3	A
Total	**I**		**166.6**	**52.0**	**218.6**	**2.46**	**40.5**	**B**

Figure 8
Master Roadway, Equestrian and Greenways Plan
Future 2030 Conditions-Intersection LOS



LEGEND

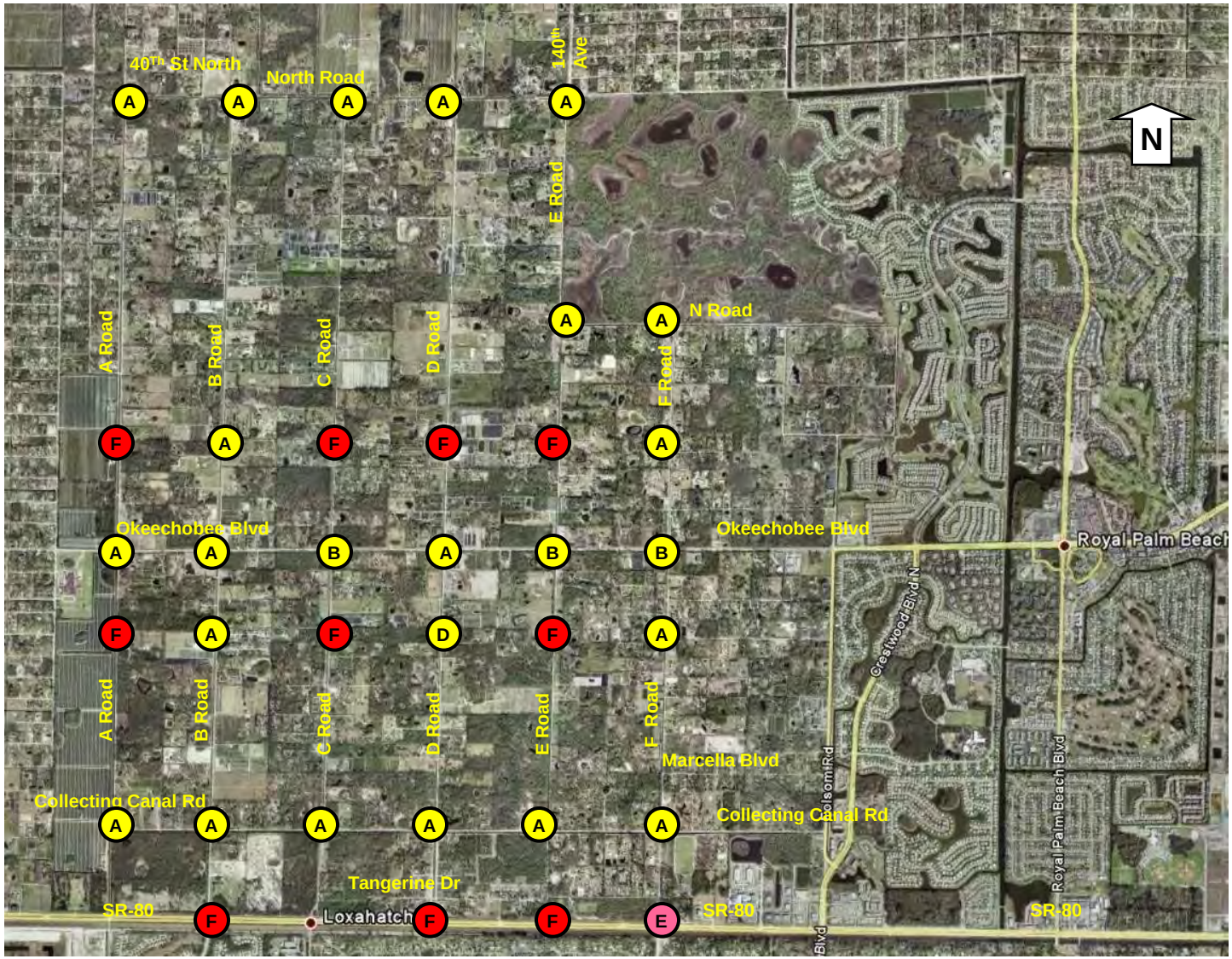
A — Intersection/Approach LOS

2.8.3 Alternative 2-Proposed Roundabouts on Okeechobee Boulevard

Existing condition and Future No-Build condition traffic analyses indicated that Okeechobee Boulevard intersections are expected to operate within acceptable Levels of Service for each overall intersection. However, individual approaches were shown to experience significant delay, particularly on side street approaches north and south of Okeechobee Boulevard. To address this problem, Alternative 2 proposes two roundabouts on Okeechobee Boulevard, one roundabout on Okeechobee Boulevard at B Road, and a second roundabout on Okeechobee Boulevard at F Road. These intersections were selected due in part to the significant growth in traffic volumes illustrated on both roadway segments south of Okeechobee Boulevard. It is apparent from the traffic count data that non-resident cut-through traffic is significant on both of these roadway segments and subsequently, at the intersection of these segments with Okeechobee Boulevard. The roundabout analysis for these two intersections was performed using Rodel software. Results of the analyses indicate that a roundabout at Okeechobee Boulevard and B Road will operate at LOS A with an average delay of 8.3 seconds per vehicle and the roundabout at Okeechobee Boulevard and F Road will operate at LOS B with an average delay of 13.2 per vehicle.

The levels of service for all the intersections in the study area for future 2030 proposed conditions are depicted in **Figure 9**. The Rodel analyses are included in **Appendix C**.

Figure 9
Master Roadway, Equestrian and Greenways Plan
Future 2030 Analyses with Improvements (Roundabouts)



LEGEND

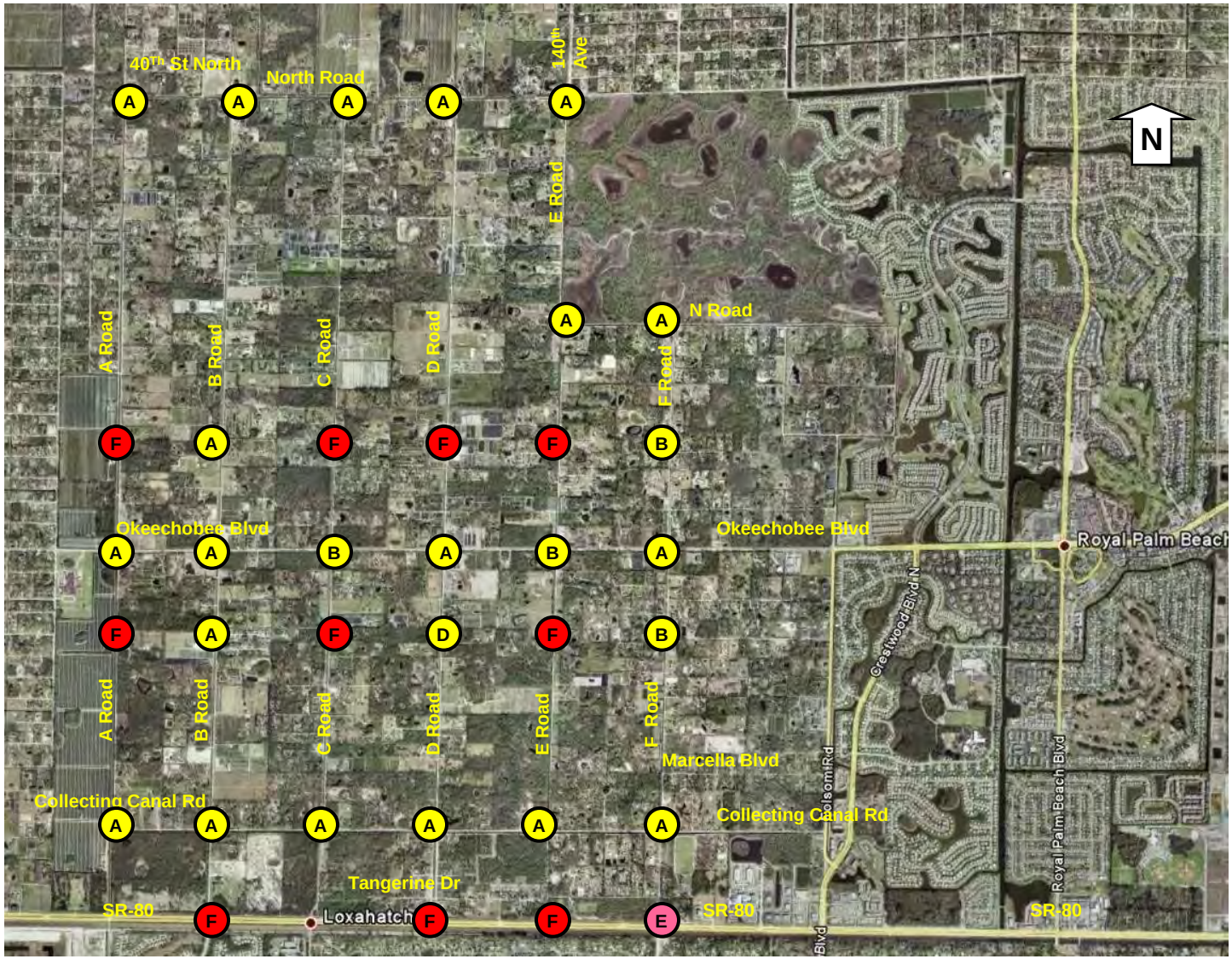
A — Intersection/Approach LOS

2.8.4 Alternative 3-Proposed Signals on Okeechobee Boulevard

Existing condition and Year 2030 No Build condition analyses revealed that although most intersections on Okeechobee Boulevard were expected to operate within adopted level of service standards, traffic on minor street approaches will experience significant delays due to lack of adequate gaps. To improve the overall operations of the corridor and provide adequate gaps in the traffic stream, Alternative 3 proposes two traffic signals on Okeechobee Boulevard, one signal at the intersection with B Road and a second signal at the intersection with F Road.

The signalized intersections were analyzed utilizing Synchro 7 software and the results of the analyses are illustrated in **Figure 10**. As indicated, the signalized intersections are expected to operate at Level of Service B or better. Complete printouts of the analyses are included in **Appendix C**.

Figure 10
Master Roadway, Equestrian and Greenway Plan
Future 2030 Analyses with Improvements (Signals)



LEGEND

A — Intersection/Approach LOS

2.9 Roadway Typical Cross-Sections

The existing unpaved roadway cross-sections on The Letter Roads are not compliant with design standards set forth in the *Manual of Minimum Uniform Standards for Design, Construction and Maintenance for Streets and Highways* (also known as the Florida Green Book), Edition 2007. The Green Book provides minimum dimensions for typical roadway cross-sections. **Figure 11** illustrates the existing unpaved roadway cross-sections on The Letter Roads.

The *LGWCD Districtwide Paving Analysis Report* (Erdman Anthony of Florida, Inc., October, 2006) included four alternatives for roadway typical cross-sections with required right-of-way widths ranging from 102.5 feet to 133 feet and the preferred alternative was entitled "Preferred Grant Typical Section" with a proposed ROW width of 111 feet. All four of the proposed alternatives are summarized in **Table 7**. The minimum width roadway typical cross-section identified in the LGWCD Districtwide Paving Analysis Report is illustrated in **Figure 12**.

2.9.1 LGWCD Roadway Surface Treatment

The *LGWCD Districtwide Paving Analysis Report* (Erdman Anthony of Florida, Inc., October, 2006), discussed the costs and benefits of the following three roadway surfacing alternatives: Standard pavement (asphalt), open graded emulsion mix (OGEM), and unpaved or dirt surfaces. The LGWCD has since proceeded with a roadway surface treatment program that includes application of OGEM on roadway segments where a majority of adjacent and affected residents vote in favor of roadway improvements. To date, OGEM has been installed on F Road north and south of Okeechobee Boulevard. In addition, the LGWCD has installed speed tables and additional warning and regulatory signage on F Road. An illustration of a typical roadway cross section of OGEM surface treatment on The Letter Roads is shown in **Figure 13**.

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Figure 11 - Existing Unpaved Conditions; Letter Roads

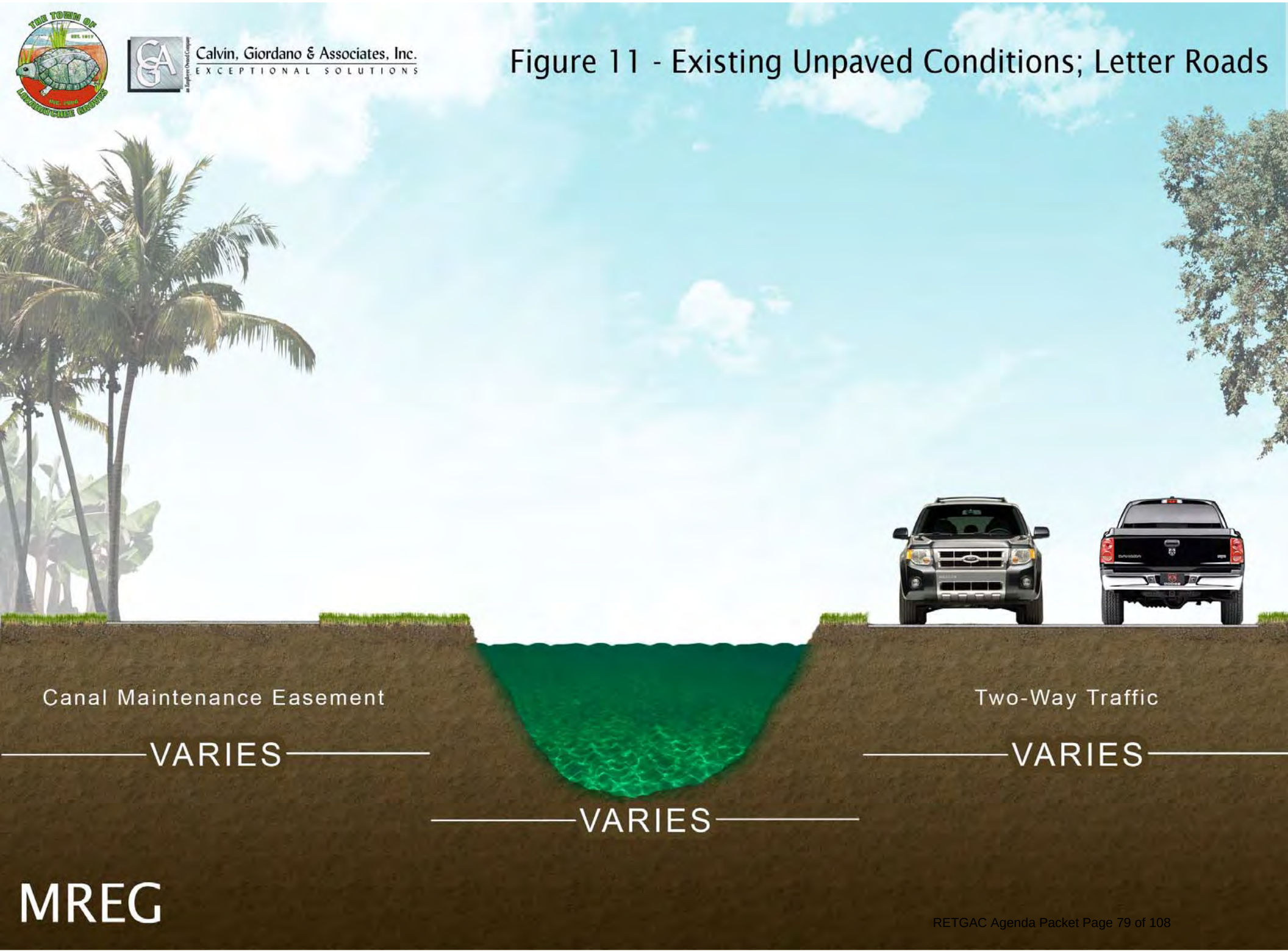

Table 7
Typical Sections
Districtwide Paving Analysis Report

Design Elements	Minimum Width Typical Section[1] (ft)	Typical Section-All Amenities[2] (ft)	Preferred Typical Section [3](ft)	Preferred Grant Typical Section [4](ft)
Canal Maintenance Rd	20	20	20	
Canal Maintenance Rd/Equestrain Trail				20
Canal Rd	41	41	41	41
Canal Buffer	5	5	5	5
Equestrian Path		12		
Curb & gutter	4.5	4.5	2	2
Maintenance Strip		2.5	3	3
Asphalt Path			8.2	8
Travel Lane	12	12	12	12
Grass Swale		8	8	8
buffer	2	2		
Sidewalk	6			
Shared Use Path		12		
Total	**102.5**	**133**	**111.2**	**111**

Note:
1) The information is directly taken from Exhibit 1-*Districtwide Paving Analysis Report* prepared by Erdman & Anthony of Florida, Inc.
2) The information is directly taken from Exhibit 2-*Districtwide Paving Analysis Report* prepared by Erdman & Anthony of Florida, Inc.
3) The information is directly taken from Exhibit 3-*Districtwide Paving Analysis Report* prepared by Erdman & Anthony of Florida, Inc.
3) The information is directly taken from Exhibit 9-*Districtwide Paving Analysis Report* prepared by Erdman & Anthony of Florida, Inc.

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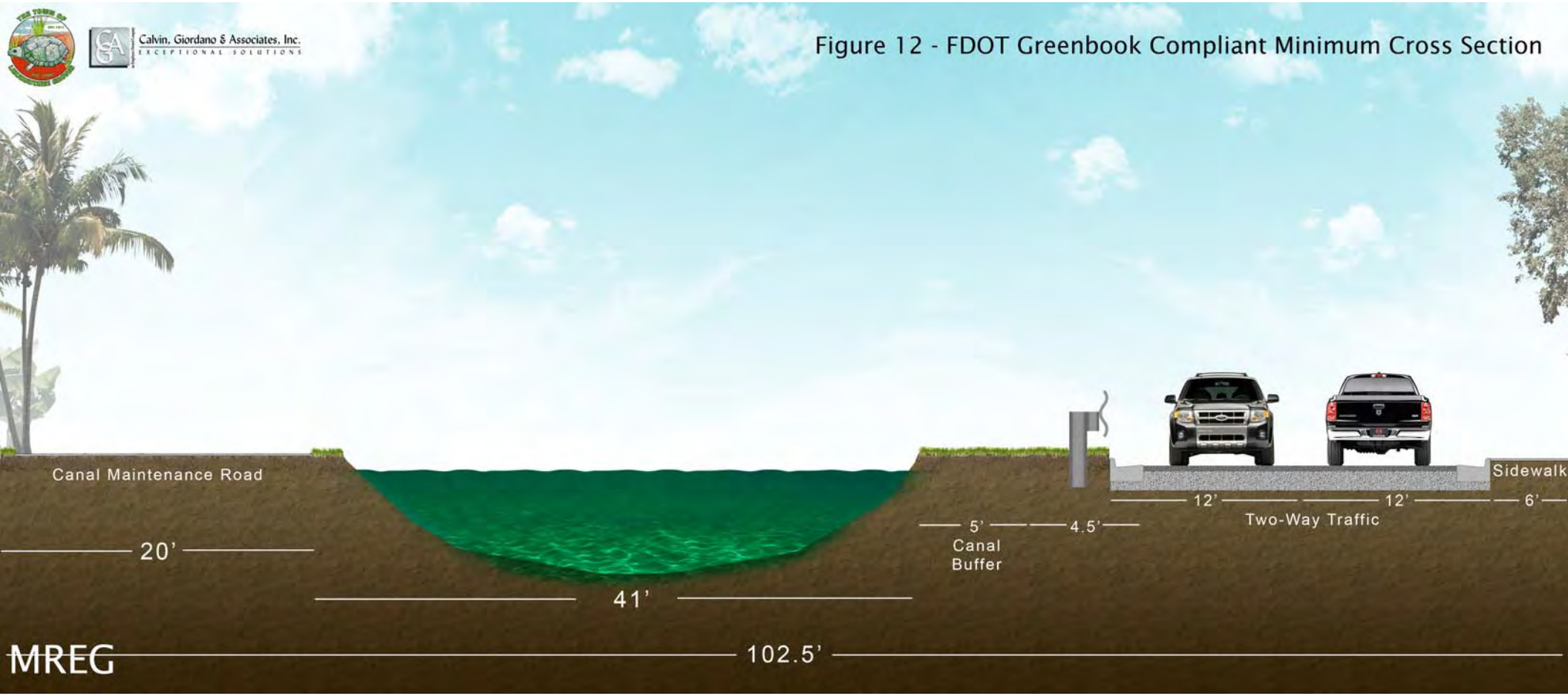
EXCEPTIONAL SOLUTIONS

Figure 12 - FDOT Greenbook Compliant Minimum Cross Section



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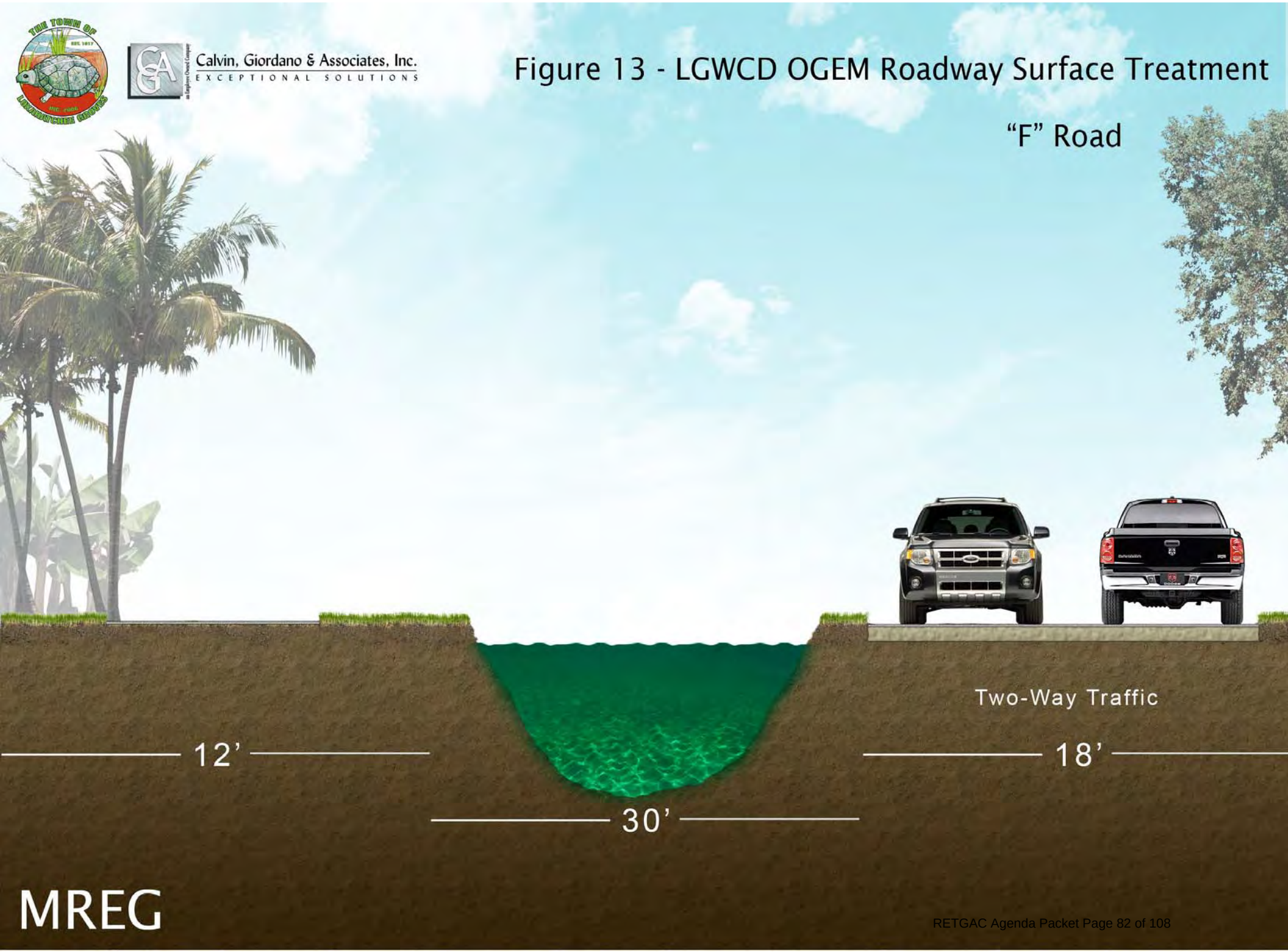
EXCEPTIONAL SOLUTIONS

Figure 13 - LGWCD OGEM Roadway Surface Treatment

"F" Road



MREG

2.9.2 Right-of-Way Information

Limited available right-of-way information, such as that contained in the LGWCD Paving Analysis Report, indicates that existing roadways may have migrated significantly beyond existing prescribed right-of-way limits. As a result, the acquisition of additional right-of-way may be required even to simply maintain the existing roadway cross-sections. Acquiring accurate roadway survey data is critical in evaluating possible roadway widening options and it is therefore recommended that the Town work to obtain updated survey data for The Letter Roads before evaluating roadway widening options. The LGWCD maintains roadway survey data for The Letter Roads, however the database may need to be supplemented with more frequent roadway cross sections taken at 50-foot or 100-foot intervals to identify any roadway migration.

3.0 Equestrian Trails and Greenways

Throughout the Visioning process associated with the development of the Comprehensive Plan, as well as in public workshops held in association with the development of the MREG, residents have consistently identified a strong desire for a comprehensive equestrian trail and greenway network within the Town. Existing facilities are limited to an equestrian trail/greenway along the canal maintenance easement (west of the canal) on F Road and an equestrian trail within the Loxahatchee Groves Park.

The Town lies within the Palm Beach County Northeast Everglades Natural Area (NENA) boundary. Palm Beach County recently revised the trail maps for NENA and the revised maps include a proposed greenway trail along North Road within the Town of Loxahatchee Groves, providing access to Royal Palm Beach Pines Natural Area. Several greenways have been established within the Royal Palm Beach Pines Natural Area as well as within the Pond Cypress Natural Area.

Florida Statutes define a greenway as a linear open space established along either a natural corridor, such as a riverfront, stream valley, or ridge-line, or over land along a railroad right-of-way converted to recreational use, a canal, a scenic road, or other route; any natural or landscaped course for pedestrian or bicycle passage; an open space connector linking parks, nature reserves, cultural features, or historic sites with each other and populated areas; or a local strip or linear park designated as a parkway or greenbelt.

The Town of Loxahatchee groves has a unique opportunity to develop a comprehensive network of greenways throughout the Town due to the availability of canal maintenance easements on The Letter Roads. These canal maintenance easements vary in width, but generally provide a width of approximately twelve feet. The incorporation of equestrian trails within a typical cross-section of The Letter Roads is illustrated in **Figure 14**.

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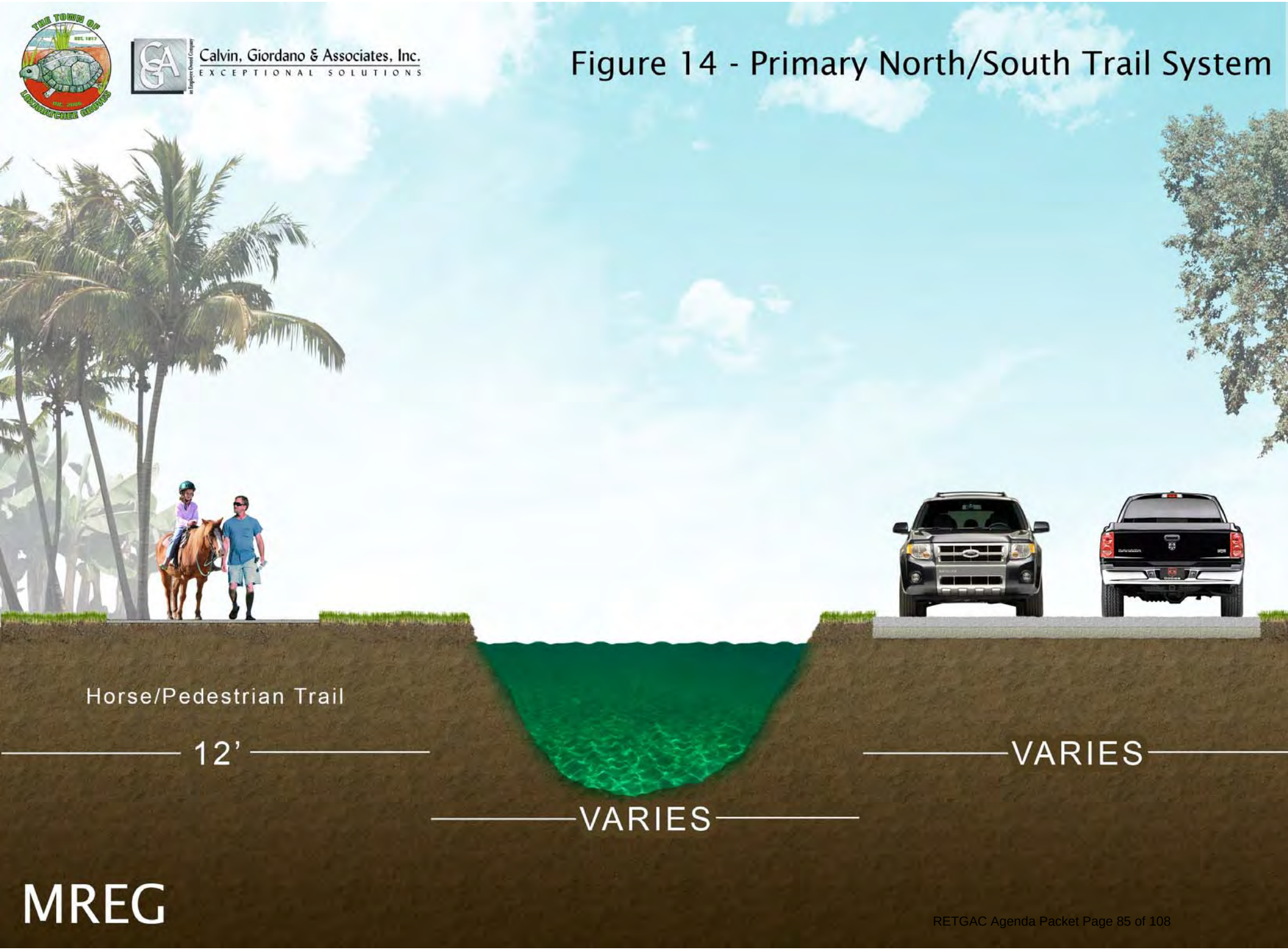
Figure 14 - Primary North/South Trail System



The establishment of dedicated equestrian trails and greenways on all Letter Roads will provide direct access to a trail network for a substantial portion of Town residents. It is recommend, however, that only trails located on B Road and F Road allow for crossing Okeechobee Boulevard to coincide with the intersection control recommended in this report. This will ensure that trail crossings of Okeechobee Boulevard occur where vehicular traffic is either already forced to come to a complete stop, in the case of intersection signalization, or where vehicular traffic speeds are substantially reduced, in the case of a roundabout.

While the canal maintenance easements provide exceptional opportunities for direct access to equestrian trails from residences, this also poses the problem of pets and livestock randomly entering the trail system and startling the horses. For this reason, it is recommended that the Town work with homeowners adjacent to the canal maintenance easements to install adequate fencing.

It is recommended that equestrian trails and greenways are pursued along 6th Court North to provide direct access to the Loxahatchee Groves Park as well as east/west connectivity to trails established on The Letter Roads. However, this corridor has physical constraints such as limited canal crossings. For this reason, it is recommended that the Town work to include trail easements on future commercial developments adjacent to SR 80/Southern Boulevard. This will help to provide east/west trail connectivity as well. It is recommended that equestrian trails and greenways are pursued along North Road to provide direct access to the Royal Palm Beach Pines Natural Area as well as east/west connectivity to trails established on The Letter Roads.

The proposed equestrian trail and greenway network is illustrated in **Figures 15** and **16**. The proposed network will connect to the Royal Palm Beach Pines Natural Area to the northeast and the Loxahatchee Groves Park to the south. The proposed network will provide a well-connected equestrian trail and greenway system to meet the needs of the community.

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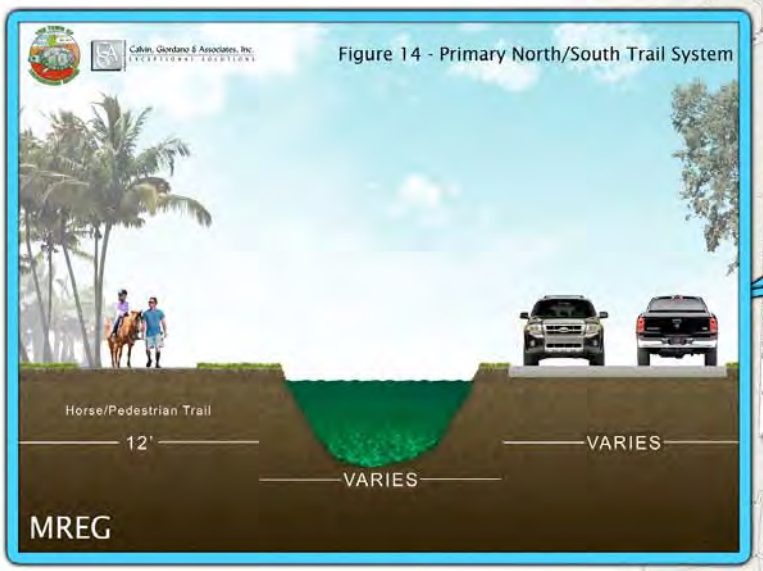
EXCEPTIONAL SOLUTIONS

Figure 15 - Primary North/South Trail System



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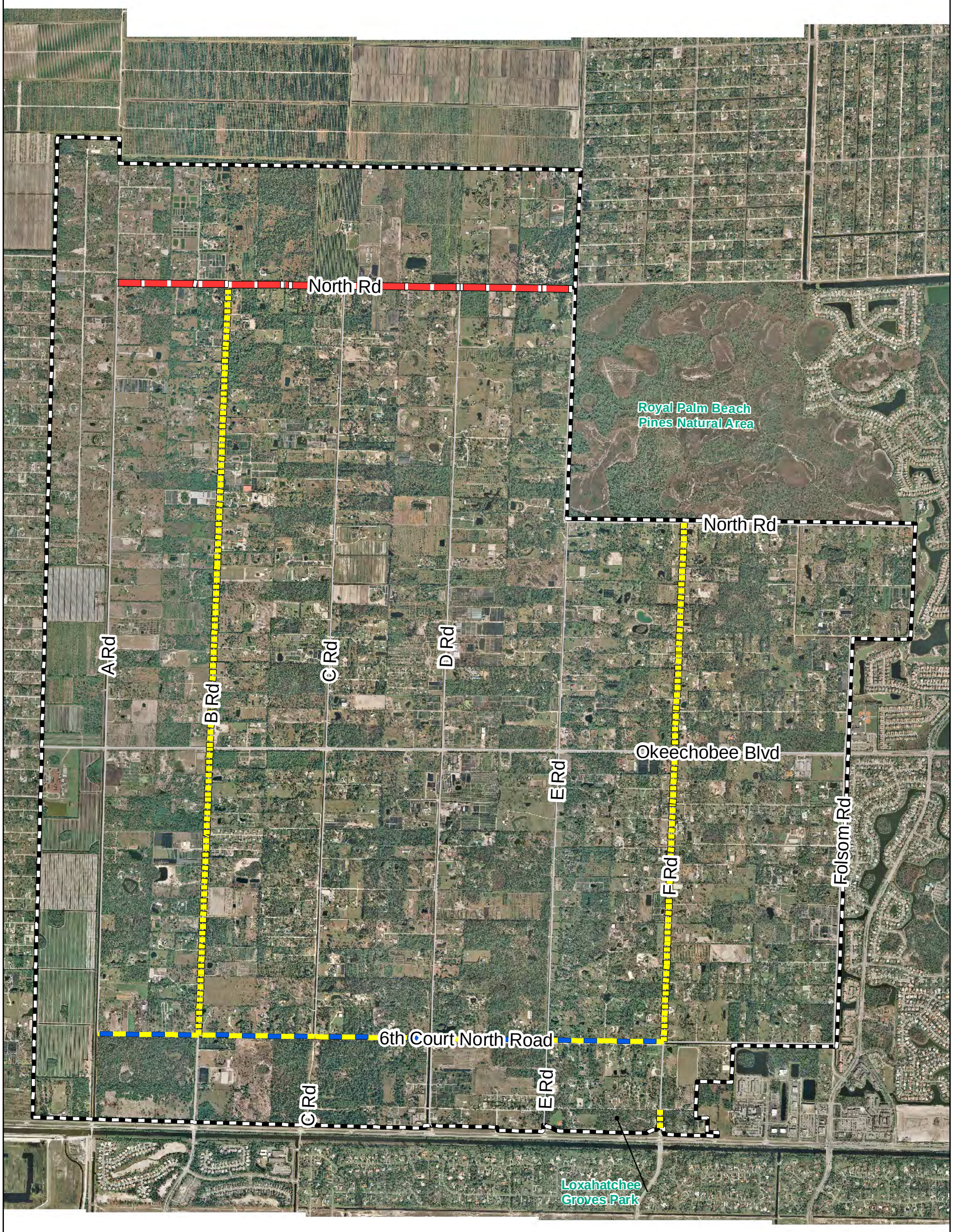


Loxahatchee Groves
Equestrian Trails and Greenways

Legend

Equestrian and Greenways

- Northern East-West Trail
- Southern East-West Trail
- Primary North-South Trail

0.5 Miles

N

Calvin, Giordano & Associates, Inc.

GIS Produced and maintained by the CGA Geographic Information Systems Services

Figure 16

4.0 RECOMMENDATIONS

4.1 Equestrian Trails and Greenways

- **Establish equestrian trails and greenways within the existing canal maintenance easements on all Letter Roads**.
- **Pursue north/south Town-wide trail connectivity along B Road and F Road by pursuing trail crossings of Okeechobee Boulevard at B Road and F Road**. Trail crossings of roadways are safer at or near controlled intersections. It is recommended in this report that full intersection control be pursued at the intersections of Okeechobee Boulevard with B Road and F Road. Therefore, trail crossings at these particular intersections are recommended as well.
- **Pursue east/west Town-wide trail connectivity along 6th Court North and North Road**.
- **Pursue equestrian trail/greenway easements within future commercial developments along SR 80/Southern Boulevard**. Due to physical constraints along 6th Court North, such as limited canal crossings, it is recommended that the Town work to include trail easements on future commercial developments adjacent to SR 80/Southern Boulevard. This will help to provide east/west trail connectivity.
- **Pursue equestrian trail/greenway easements to provide connectivity between the Loxahatchee Groves Park and the existing trail on F Road**.
- **Pursue funding options and coordinate with the Palm Beach County Greenway Program and Office of Greenway and Trail (OGT)-Department of Environmental Protection (DEP) for greenway designations and improvements**.
- **Work with homeowners adjacent to canal maintenance easements on The Letter Roads to install adequate fencing**. This will help to prevent

pets and livestock from randomly entering the equestrian trails and startling the horses.

- **Work with the LGWCD in developing trail design documents**. Design documents for the proposed trail system will likely include right-of-way and easement identification, trail cross-sections, signage, and surface treatments.

4.2 Roadways

- **Provide intersection control (roundabout or traffic signal) at Okeechobee Boulevard/B Road and Okeechobee Boulevard/F Road**. Providing intersection control at B Road and F Road will result in gaps in the overall traffic stream on Okeechobee Boulevard and will dramatically reduce delay on The Letter Roads at each of the intersections between B Road and F Road. Signalization of these intersections is recommended when MUTCD Warrants are met, or installation of roundabouts is recommended if roundabout warrants are met. It is recommended that the Town commission a roundabout warrant analysis for these intersections.
- **Obtain additional existing roadway survey data on The Letter Roads**. Understanding the actual existing right-of-way limitations on these primary corridors is critical before significant roadway improvements are considered.
- **Install roadway surface treatment on B Road in accordance with LGWCD standards or install asphalt pavement in accordance with Florida Greenbook Standards**. A hard roadway surface such as OGEM or asphalt pavement will be required on this roadway before intersection control can be installed.
- **At the discretion of the Town, allow OGEM surface treatment, asphalt pavement or unpaved roadways**. The MREG has identified the need to install either OGEM surface treatment or asphalt pavement on B Road in order to address traffic operational issues. No other traffic

operational issues were identified that would either require or prohibit the installation of roadway surface improvements.

- **Work with Palm Beach County to reduce speeding on Okeechobee Boulevard**. Installation of intersection control, as recommended above, will have the added benefit of dramatically reducing speeding on Okeechobee Boulevard. In the interim, it is recommended that the Town work with the County to address the speeding problem identified in this report.
- **Work with the Florida Department of Transportation to address traffic operational deficiencies at SR 80/Southern Boulevard intersections**. Coordination efforts will include the completion of the access control plan commissioned by the Town.
- **Improve the capacity and efficiency of B Road and F Road to ease the burden of cut-through as well as general traffic**. A comparison of traffic count data collected in Year 2006 with traffic count data collected in Year 2008 indicates an increase in traffic volumes on several corridors. While many factors may have lead to the increase in traffic, it is likely that some of the increase is attributable to cut-through traffic. MREG findings recommend improving the B Road and F Road corridors to coincide with existing traffic signals on SR 80 Southern Boulevard. Improving the efficiency and capacity of these corridors should help to ease the burden of traffic in general throughout the Town.
- **Establish and maintain a semi-annual traffic count program**
  Historical 24-hour Average Daily Traffic volume data for roadways throughout the Town are limited yet critical in determining global traffic patterns. It is recommended that the Town work with the LGWCD in collecting ADT volumes and maintaining a database of the traffic counts to track changes in motorist behavior and identify the need for roadway improvements.

A CONCEPTUAL STUDY OF CONTROLLED EQUESTRIAN CROSSINGS FOR B AND F ROADS AT OKEECHOBEE BOULEVARD

FOR

TOWN OF LOXAHATCHEE GROVES
TOWN COUNCIL

BY

KEITH HARRIS

OCTOBER 2, 2013

The reality of Okeechobee Blvd. becoming four lanes is quickly approaching. Yes, Palm Beach County has no financial planning for the project in their five year plan. However, with the news of Minto introducing its development plan of the Calvary Judge Tract, the Highland Dunes Project being in the planning process, and the fact that Palm Beach County attempted on Sept 26th to vote on the extension of Okeechobee Blvd without public notice, four laning of Okeechobee Blvd. is on the horizon.

To install the controlled crossings will require Palm Beach County Traffic Engineering approval. The County may find exception with such a crossing if application is made during or after the four lane planning process.

Town of Loxahatchee Groves Comprehensive Plan

Policy 2.3.9 The Town shall use landscaping and signs to visually identify crossing and trail access points. Safe and **controlled crossings shall be provided.**

Policy 2.7.4 The Town shall **investigate and implement strategies** with all affected governments, special districts and other public agencies, including the LGWCD, **to discourage cut-through traffic on local roads throughout the Town**.

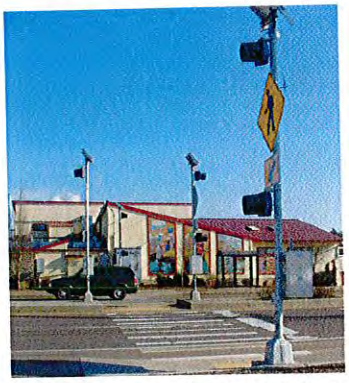
Proposed amendment Policy 2.4.4 **The following equestrian trails and greenway projects shall be pursued by the Town** until such time that a master plan pursuant to Policy 2.3.3 is completed. **North/South trail connectivity along B and F Roads by pursuing trail crossings of Okeechobee Boulevard at these intersections.**

Manufacturer Information

ELTEC Traffic and Solar Products

PEDESTRIAN CROSSING SYSTEMS

ELTEC's Pedestrian Crossing System (EPCS) is designed to alert motorists approaching a point in the road where pedestrians cross that it's occupied.



Mid-block Crossing with Island

APPLICATIONS

- Jogging/Running Paths
- Hiking Trails
- Horse Trails
- Cyclists Crossings
- Golfers including Carts
- Middle-of-the-block Crossings

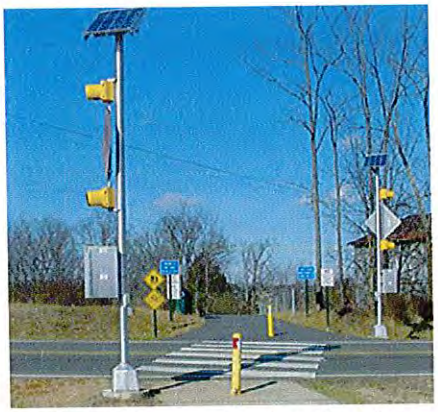
The system can provide either CAUTION (amber) blinking lights or STOP (red) lights. It can be configured with one or two flashing beacons per pole or the new Rectangular Rapid Flashing Beacon (RRFB) light bar.

The EPCS is activated on demand with a pole mounted push button or motion sensor. When activated, a radio transmitter turns on flashing signals on the opposite side of the road eliminating the need to run power lines or tear up pavement.

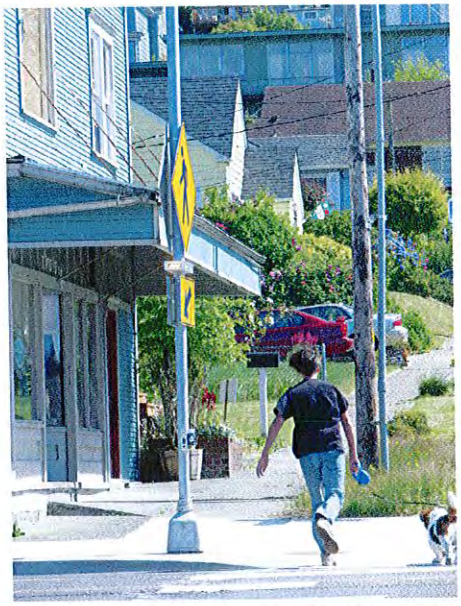
ELTEC's wireless system can turn on multiple signals with one push button. Each receiver and transmitter has an individual address code, activating only receivers with the matching code. Any number of receivers can be set to a single address code. The signal has the capability to be received miles away with line-of-sight transmission. Because of this feature in some instances the flashing beacons are positioned further down the road away from the actual crossing. Once activated, the signals remain ON for a pre-set time period (from 1 second to 100 hours.)

Because flashing light activation is WIRELESS between poles, no trenching or boring to run wires/cables or a conduit is necessary.

An ELTEC Pedestrian Crossing System may be AC or DC solar powered.



Rural Bike & Pedestrian Crossing



RRFB with Pedestrian Verification Light

A typical installation consists of two or more poles. Each pole supports a small cabinet that houses the electronic controls along with a pole mounted push button for the pedestrians. The electronics consist of a flasher, transmitter, receiver and timer. If the unit is solar powered, inside the cabinet a charge controller and battery are added, and a solar panel with a rack (either side-of-pole or top-of-pole) is mounted on each pole.

ELTEC's EPCS systems meet the Federal Highway Administration's MUTCD (Manual on Uniform Traffic Control Devices) and ITE (Institute of Transportation Engineers) standards.

STANDARD FEATURES

A standard system includes poles, flashing beacon(s) or the RRFB light bar, pedestrian push button and electronics cabinet with pre-assembled wiring for easy installation along with installation documentation.

- AC or DC solar powered
- System flexibility: tailored to meet requirements
- Programmable Timed Crossing
- RRFB Light Bar: 1 sided or 2 sided
- CAUTION (amber) or STOP (red) Alerts: no price difference
- 8" or 12" LED Signal Heads: no price difference
- No maintenance battery: sealed gel or AGM
- AC: optional battery back-up
- Solid State Flasher (FS-2 Flasher)
- Meets MUTCD and ITE Standards

When AC power is not available or practical, solar power is the solution. ELTEC's solar powered Pedestrian Crossing System is sized for geographical location, number of crossings (activation time), and electrical load for optimal effectiveness guaranteeing sufficient power for the flashing beacons—the light intensity never fades! Below are additional features for (DC) solar units.

- Self-contained
- Top or Side-of-Pole Mounting Rack
- No Power Interruption
- No Trenching or Boring Cable
- No Electrical Bills
- Electrical Contractors/Technicians Not Required for Installation
- High Efficiency Self Cleaning Solar Modules Warranted for 20 Years
- Controller with LCD display showing battery & solar array voltage, output and load current
- Solid State Flasher (FS-2)
- Sealed Gel or AGM Sealed Deep Cycle Batteries Warranted for 5 Years (pro-rated)
- Sized by Computer Program: Ensures Power Generated meets/exceeds Load Requirements
- LED Light Intensity is Not Reduced as a Function of Battery Voltage—Lights Stay Bright!
- Flash Rate is Constant at Selected Rate: Does Not Vary as a Function of Battery Voltage

Wrap-around RRFB Light Bar with Required Signage

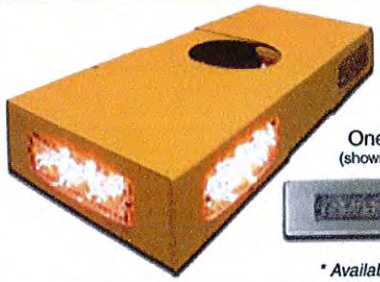
ELECTROTECHNICS CORPORATION
1310 Commerce Street
Marshall, TX 75672

800-227-1734 903-938-1901 Fax 903-938-1977

sales@elteccorp.com

ELTEC

Traffic Products and Warning Systems



Wraparound Light Bar*
(shown in federal yellow)

One-sided Light Bar
(shown in brushed aluminum)

** Available with 4, 5, or 6 Signals*

The RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEMS improves pedestrian safety at uncontrolled crosswalks.

- Significantly increases motorist compliance to yield to pedestrians (approx. 80%–95%) compared to standard beacons (15%–20% range).
- Lab certified Class 1 light intensity: 2/4-1 wig-wag strobe flash pattern
- Optional: pedestrian verification signal
- Optional: 6-stage night dimming
- Federal yellow or brushed aluminum. Custom colors available
- Initiated with push button or passive detection
- Systems available in AC or solar (DC)
- Wireless radio operation between poles. No need for trenching
- Light bar can be retrofitted to existing systems using round flashing beacons
- FHWA compliant

For more information or a quotation, contact ELTEC or your local ELTEC Dealer

www.ELTECCORP.com

ELTEC Traffic Products and Warning Systems

RECTANGULAR RAPID FLASHING BEACONS

ELTEC's Rectangular Rapid Flashing Beacon (RRFB) light bars comply with the Federal Highway Administration's (FHWA) interim approval for optional use at uncontrolled pedestrian and school crossings. Studies show using RRFB signals significantly increases motorist compliance to "yield to pedestrians" (80%-95%) compared to 15%–20% with standard flashing beacons. Systems are pedestrian activated: push button or passive detection.

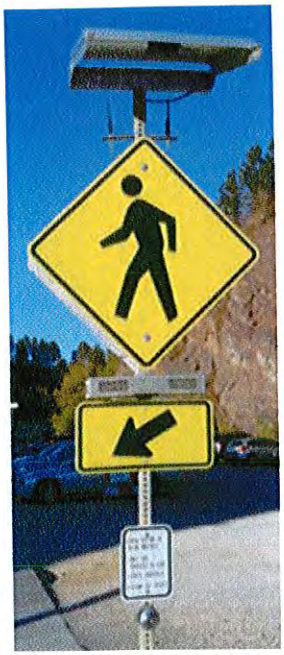
As required by the FHWA, the Class 1 RRFB (used by police & emergency vehicles) is a rectangular shaped, high intensity light head. The alternating 2/4-1 wig-wag strobe pattern provides direct, ultra bright concentration as well as wide-angle intensity.

ELTEC has designed two styles of RRFB light bars. Both styles have recessed signals to minimize vandalism and can include an end-mounted indication for system verification to pedestrians.

- One-sided with 2 RRFB's: Used with divided highways with a medium or one-way streets. Mounts to tapered, wooden, or standard 4½" O.D. pole or other diameter pole sizes where banding is appropriate.
- Two-sided wraparound with 4 RRFB's: Used with two-way streets/highways. Mounts to either a 2⅜" or 4½" O.D. pole, or 2½" Telespar. Optional: One or two end-mounted signals for pedestrian verification.

Both light bars can be retrofitted to existing pedestrian crossings currently using round flashing beacons or integrated in new systems. The RRFB light bar works with either DC (solar) or AC systems. All solar powered systems are sized for each project based on the average number of crossings per day (hours of operation) and the latitude. Duration of flash time is user defined.

Two finishes are standard: federal yellow or brushed aluminum. Custom colors available.



RRFB on Telespar Pole

One-sided/2 RRFB's with Pedestrian Verification
(shown in federal yellow)

Two-sided/4 RRFB's with Pedestrian Verification
(shown in brushed aluminum)

All light bar components are designed, manufactured and assembled in the U.S.A.

RRFB LIGHT BAR SPECIFICATIONS

Dimensions (one-sided)	3.5" H x 20" W x 2.625" D
Dimensions (wraparound)	3.25" H x 20" W x 8" D
Power required	12 VDC
SAE J595 Class 1 Certified LED's*	AMECA Accredited Laboratory
Flash rate	75 flash cycles/minute
Optional: 6 stage night dimming	Reduces light intensity by 70%

*Surface area of LED's does not determine level of brightness. Type of LED determines how many must be used to provide required Class 1 light level. The reflector used to distribute light output affects signal intensity. Ask your representative for a copy of the Class 1 lab certification.

ELECTROTECHNICS CORPORATION
1310 Commerce Street
Marshall, TX 75672

800-227-1734 903-938-1901 Fax 903-938-1977

sales@elteccorp.com

www.ELTECCORP.com

ELTEC Traffic Products and Warning Systems

EMERGENCY VEHICLE HYBRID BEACON

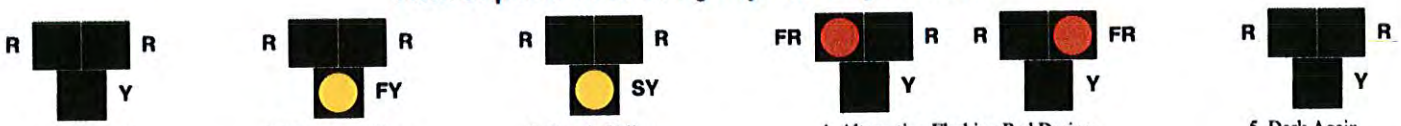
ELTEC's efficient, wireless Mikrós EIC provides a solar powered DC controller solution for Emergency Vehicle Hybrid Beacons.

An emergency vehicle hybrid beacon is a special type of beacon that assigns the right-of-way to authorized emergency vehicles. This type of beacon may be installed at a location that does not meet other traffic signal warrants such as at an intersection or other location to permit direct access from a building housing the emergency vehicle. Emergency vehicle hybrid beacons shall be used only in conjunction with signs to warn and control traffic at an unsignalized location where emergency vehicles enter or cross a street or highway.

MUTCD (2009 Chapter 4G) requires at least two emergency vehicle hybrid faces and a stop line to be installed for each approach of the major streets.

An EVHB face consists of three signal sections, with a circular yellow signal indication centered below two horizontally aligned circular red signal indications. The beacon is in a dark mode during periods between actuations. Upon activation by authorized emergency personnel, the beacon cycles through the sequence shown below.

Flash Sequence for an Emergency Vehicle Hybrid Beacon



1. Dark Until Activated
2. Flashing Yellow Upon Activation
3. Steady Yellow
4. Alternating Flashing Red During Egress of the Emergency Vehicle(s)
5. Dark Again Until Activated

FY-Flashing Yellow • **SY**-Steady Yellow • **FR**-Flashing Red OPTION: A "Steady Red" clearance interval may be used after a "Steady Yellow."

FEATURES and BENEFITS

Solar Powered

- No Power Interruption
- No Electrical Bills/Self-Contained
- Electrical Contractors/Technicians Not Required for Installation
- Maintenance-Free AGM Battery
  Performs Better in Cold Climates
  5 Year Pro-Rated Warranty

Low Voltage, Low Wattage Signal Heads and Controller

- Efficient, Low-Power DC Controller (less than 2 watts)
  10 Times Lower Power Consumption Than Comparable Products
- LEDs Consume No More Than 4 Watts
- Automatic Dusk to Dawn Night Dimming

Meets MUTCD Standards

25 Month System Warranty

State-of-the-Art Controller with Conflict Monitor

- Wireless Communication (can be hard-wired)
  Military Quality Radio: 900 MHz
  Spread Spectrum
  Trenching and Boring Not Required
- Continuous Conflict Monitor
  Communication Failure
  Signal Outputs: Current Monitor
  Absence of Signal
  Signal Conflicts
  Low Battery Voltage
  Fail Mode Stays On Until Conflict Resolved
- Adjustable Cycle Timing
- Simple User Interface for Status and Programming
- Meets and Exceeds NEMA TS5 2012 Standards

Flexible System: Tailored for Project Requirements

- Solar Panels: Site-Specific Mounting Options
- Available in AC or Solar Powered

Mikrós EIC
ELTEC Intelligent Controller
SOLAR SIMPLE

ELECTROTECHNICS CORPORATION
1310 Commerce Street
Marshall, TX 75672

800-227-1734 903-938-1901 Fax 903-938-1977

sales@elteccorp.com

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ELTEC Traffic Products and Warning Systems

PEDESTRIAN HYBRID BEACON

HAWK (Solar Powered High-Intensity Activated CrossWalK)

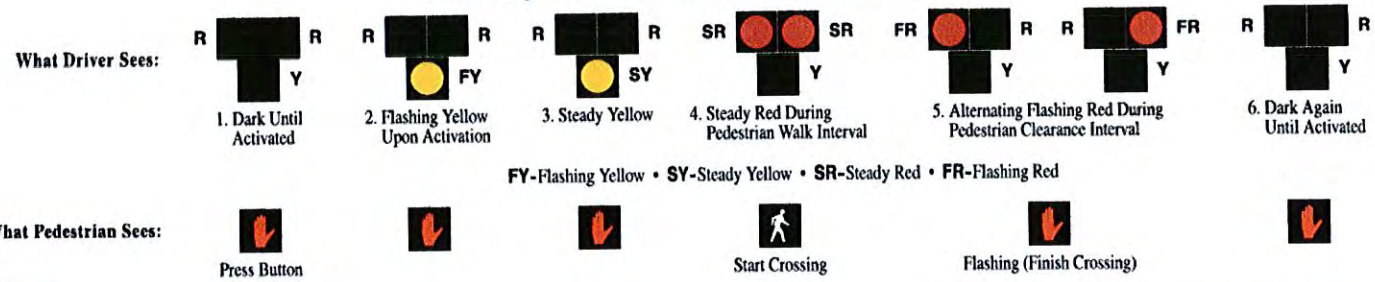
ELTEC's innovative, state-of-the-art Mikrós EIC provides a low-powered DC controller solution for solar powered hybrid beacon systems.

When a traffic signal is not justified under MUTCD signal warrants or a decision is made not to install a traffic control signal, a pedestrian hybrid beacon should be considered to facilitate pedestrian crossings. The HAWK is a special type of hybrid beacon used to warn and control traffic at marked, unsignalized crosswalks to assist pedestrians crossing a street or highway.

The MUTCD standards (Chapter 4F 2009 Edition) require:

- Two Beacon Faces for Each Approach (minimum requirement)
- Pedestrian Signal Head (WALK/DON'T WALK) at Each End of Crosswalk (countdown timer optional)
- System/Crossing Pedestrian Activated

Flash Sequence for a Pedestrian Hybrid Beacon



FEATURES and BENEFITS

Solar Powered

- Efficient MPPT Charge Controller
- Customized Solar Sizing: Ensures Sufficient Power in Winter Months
- Eliminates Electric Utility Connection and Service
- Eliminates Power Interruptions
- Virtually No Maintenance or Operational Costs

Low Voltage, Low Wattage Signal Heads

- 4 Watt Signal LEDs
- DC Pedestrian Head with Countdown Timer
  - 3.6 Watt Pedestrian Signal
  - 3.6 Watt Timer
- Automatic Night Dimming

Flexible System: Tailored for Project Requirements

- Pedestrian Push Button: Brand Flexibility
- Available in AC or Solar Powered

Meets MUTCD Standards

- MUTCD Expands Standards Allowing HAWK Crosswalk System
- Increased Public Safety

State-of-the-Art Controller with Conflict Monitor

- Efficient, Low-Power DC Controller (less than 2 watts)
- Simple User Interface for Status and Programming
- Wireless Communication (can be hard-wired)
  - Military Quality Radio
  - Trenching and Boring Not Required
- Continuous Conflict Monitor
  - Communication Failure
  - Signal Outputs: Current Monitor
  - Absence of Signal
  - Conflict Signals
  - Low Battery Voltage
  - Fail Mode Stays On Until Conflict Resolved
- Small Footprint: Controller and Batteries Can Fit in Most Existing Cabinets
- Adjustable Cycle Timing
- Pre-Emption
- Coordination
- Meets and Exceeds NEMA TS5 2012 Standards

25 Month System Warranty

www.ELTECCORP.com

Quotes from Materials Vendor Including Material Specifications

(RRFB System quote and an alternative HAWK System quote)

RAINBOW DISTRIBUTORS USA, INC.

P.O. BOX 952946
LAKE MARY, FL 32795-2946
TEL 407/330-6363 FAX 407/330-6360

QUOTE NUM...
Q100113-6

NAME / ADDRESS
PLANTATION CONSTRUCTION ATTN: KEITH HORSE CROSSING

LEAD TIME	TERMS	DATE	METHOD OF SHIPMNT	FRT TERMS	VALIDITY
4-5 WEEKS	Net 30	10/31/2013	TRUCK	PAID	14 DAYS

ITEM	DESCRIPTION	QTY	PRICE	UOM	TOTAL
NONSTKITEM	SOLAR POWERED FLASHING BEACON SYSTEMS FOR HORSE CROSSING USING 5 RRFB SYSTEM INCLUDES (1) 1 COMPARTMENT SLIM LINE CABINET WITH ELTEC FS2 FLASHER, PROSTAR 15 CONTROLLER, BACK PANEL AND ASSOCIATED WIRING, (1) 140 WATT SOLAR PANEL WITH POST TOP MOUNTING RACK FOR 4" POLE, (2) 100 AMPHERE HOUR AGM BATTERIES, (1) COUNTDOWN TIMER, (1) WIRELESS RADIO, (1) ELTEC BLACK 5 RRFB WRAP AROUND LIGHT BAR WITH (4) RRFB LIGHTS, (2) ADA COMPLIANT PEDESTRIAN PUSHBUTTONS, (2) SETS OF PEDESTRIAN SIGNS INCLUING IN EACH SET (1) W11-2 PEDESTRIAN SIGN 30"X30" AND 1 W16-7 ARROW PLACARD 24"X12" WITH MOUNTING HARDWARE AND (1) W11-7 HORSE CROSSING SIGN 24"X24" WITH MOUNTING HARDWARE. HORSE CROSSING SIGN WILL NEED TO BE MOUNTED ON A SEPARATE POLE IN FRONT OF THE RRFB SYSTEM BY MUTCD STANDARDS. THIS SIGN CANNOT BE MOUNTED ON THE POLE WITH THE RRFB'S. THE POLE IS JUST A STANDARD POLE FOR SIGNAGE.	2	3,824.00	EACH	7,648.00T
			TOTAL		

PRICES ARE GOOD FOR QUANTITIES QUOTED. CHANGES IN QUANTITY COULD REFLECT A DIFFERENCE IN PRICE.

Web Site	WWW.RAINBOWDISTRIBUTORSUSA.COM
E-mail	KYLE@RAINBOWDISTRIBUTORSUSA.COM, BECKY@RAINBOWDISTRIBUTORSUSA.COM, JOEY@RAINBOWDISTRIBUTORSUSA.COM

RAINBOW DISTRIBUTORS USA, INC.

P.O. BOX 952946
LAKE MARY, FL 32795-2946
TEL 407/330-6363 FAX 407/330-6360

QUOTE NUM...
Q100113-6

NAME / ADDRESS
PLANTATION CONSTRUCTION ATTN: KEITH HORSE CROSSING

LEAD TIME	TERMS	DATE	METHOD OF SHIPMNT	FRT TERMS	VALIDITY
4-5 WEEKS	Net 30	10/31/2013	TRUCK	PAID	14 DAYS

ITEM	DESCRIPTION	QTY	PRICE	UOM	TOTAL
PEDPOLE45	PED POLE/SIGN POLE 4.5"X1/4" ROUND TUBE MILL FINISH 6061-T6 FL DEPT OF TRANSPORTATION SPEC 3.924LB/FT---2X15'	30	18.00	FOOT	540.00T
CPIABAS1P	CPI, SQUARE ALUM BASE W/ALUM DOOR 23LB/EA	2	115.00	EACH	230.00T
CPIAB18	CPI, ANCHOR BOLT PACKAGE 3/4 X 18" HOOK ANCHOR W/DOUBLE NUT & WASHER 3LB/EA	8	8.00	EACH	64.00T
CPIRBC1	CPI, RE-INFORCING COLLAR FOR 4 1/2" OD POLE 6LB/EA	2	58.00	EACH	116.00T
POLETHREAD	THREAD POLE IN-HOUSE	2		INCLUDED W/ POLE	0.00
	Sales Tax 6%		6.00%		515.88
			TOTAL		$9,113.88

PRICES ARE GOOD FOR QUANTITIES QUOTED. CHANGES IN QUANTITY COULD REFLECT A DIFFERENCE IN PRICE.

Web Site	WWW.RAINBOWDISTRIBUTORSUSA.COM
E-mail	KYLE@RAINBOWDISTRIBUTORSUSA.COM, BECKY@RAINBOWDISTRIBUTORSUSA.COM, JOEY@RAINBOWDISTRIBUTORSUSA.COM

RAINBOW DISTRIBUTORS USA, INC.

P.O. BOX 952946
LAKE MARY, FL 32795-2946
TEL 407/330-6363 FAX 407/330-6360

QUOTE NUM...
Q100113-9

NAME / ADDRESS
PLANTATION CONSTRUCTION ATTN: KEITH HORSE CROSSING

LEAD TIME	TERMS	DATE	METHOD OF SHIPMNT	FRT TERMS	VALIDITY
4-5 WEEKS	Net 30	10/31/2013	TRUCK	PAID	14 DAYS

ITEM	DESCRIPTION	QTY	PRICE	UOM	TOTAL
NONSTKITEM	SOLAR POWERED HAWK PEDESTRIAN CROSSING SYSTEM USING (2) 3 SECTION LIGHTS MOUNTED ON 4" POLES, SYSTEM INCLUDES (1) 2 COMPARTMENT CABINET WITH MPPT CONTROLLER, BACK PANEL AND ASSOCIATED WIRING, (1) 140 WATT SOLAR PANEL WITH TOP OF POLE MOUNTING RACK, (2) 110 AMPERE HOUR AGM BATTERIES, (1) ELTEC MIKROS CONTROLLER WITH BUILT IN CONFLICT MONITOR, (6) LED LIGHTS (2 SETS OF 2 RED & 1 AMBER) WITH POLYCARBONATE HOUSING, VISOR AND MOUNTING HARDWARE FOR SIDE OF POLE, (1) PED HEAD HOUSING AND CLAMSHELL MOUNTS, (2) ADA COMPLIANT PEDESTRIAN PUSH BUTTONS WITH R10-25 SIGNS, (2) SETS OF PEDESTRIAN SIGNS INCLUDING IN EACH SET W11-2 PEDESTRIAN (30"X30") AND (2) W16-7 ARROW PLACARD (24"X12") WITH MOUNTING HARDWARE AND 1 W11-7 HORSE CROSSING SIGN WITH MOUNTING HARDWARE.	2	10,314.00	EACH	20,628.00T
PEDPOLE45	PED POLE/SIGN POLE 4.5"X1/4" ROUND TUBE MILL FINISH 6061-T6 FL DEPT OF TRANSPORTATION SPEC 3.924LB/FT---2X16'	32	18.00	FOOT	576.00T
CPIABAS1P	CPI, SQUARE ALUM BASE W/ALUM DOOR 23LB/EA	2	115.00	EACH	230.00T
			TOTAL		

PRICES ARE GOOD FOR QUANTITIES QUOTED. CHANGES IN QUANTITY COULD REFLECT A DIFFERENCE IN PRICE.

Web Site	WWW.RAINBOWDISTRIBUTORSUSA.COM
E-mail	KYLE@RAINBOWDISTRIBUTORSUSA.COM, BECKY@RAINBOWDISTRIBUTORSUSA.COM, JOEY@RAINBOWDISTRIBUTORSUSA.COM

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PLANTATION CONSTRUCTION ATTN: KEITH HORSE CROSSING

LEAD TIME	TERMS	DATE	METHOD OF SHIPMNT	FRT TERMS	VALIDITY
4-5 WEEKS	Net 30	10/31/2013	TRUCK	PAID	14 DAYS

ITEM	DESCRIPTION	QTY	PRICE	UOM	TOTAL
CPIAB18	CPI, ANCHOR BOLT PACKAGE 3/4 X 18" HOOK ANCHOR W/DOUBLE NUT & WASHER 3LB/EA	8	8.00	EACH	64.00T
CPIRBC1	CPI, RE-INFORCING COLLAR FOR 4 1/2" OD POLE 6LB/EA	2	58.00	EACH	116.00T
POLETHREAD	THREAD POLE IN-HOUSE	2	0.00	INCLUDED W/ POLE	0.00
	Sales Tax 6%		6.00%		1,296.84
			TOTAL		$22,910.84

PRICES ARE GOOD FOR QUANTITIES QUOTED. CHANGES IN QUANTITY COULD REFLECT A DIFFERENCE IN PRICE.

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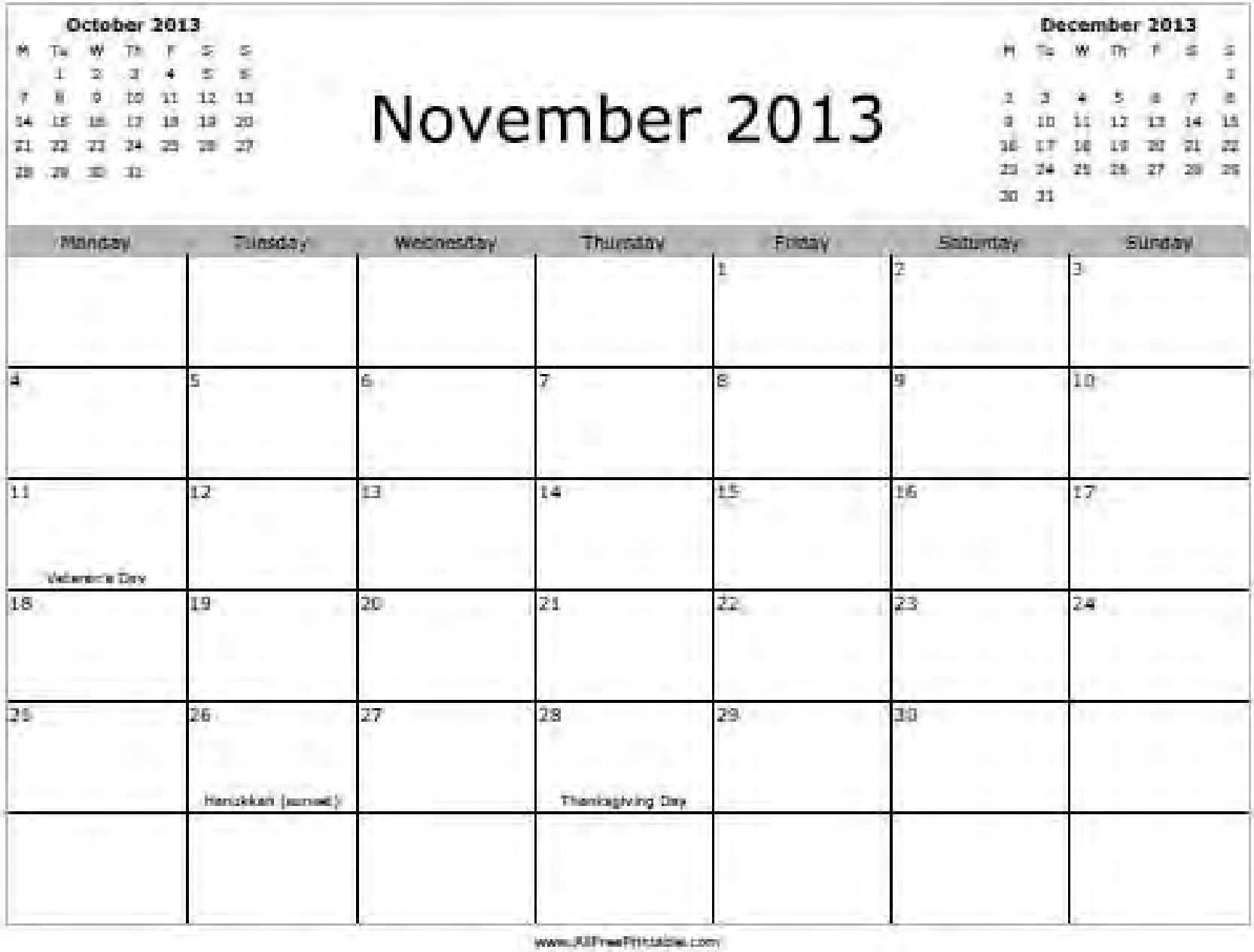
E-mail	KYLE@RAINBOWDISTRIBUTORSUSA.COM, BECKY@RAINBOWDISTRIBUTORSUSA.COM, JOEY@RAINBOWDISTRIBUTORSUSA.COM

Conceptual Cost Estimate

Schedule of values

Town Engineer	1,000
Town Management for RFP	1,000
Materials Including Freight	18,228 to 45,822
Public Works Supervision	500
Concrete Pad Material and Labor	2,000
Crossing Erection Labor	2,000
Electrician	2,500
Contingency	3,000
TOTAL	30,228 to 57,822


October 2013
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December 2013
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Veteran's Day
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26
Hanukkah (sunset)
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28
Thanksgiving Day
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30