

Estero Boulevard Analysis & Design: Phase I Report

Executive Summary

June 6, 2008



Prepared for:



Town of Fort Myers Beach



Lee County DOT

Prepared by:



McMahon Project No.: H07283.01



EXECUTIVE SUMMARY

Study Area

SR-865/Estero Boulevard, which runs southeast-northwest, is the only major arterial in the Town of Fort Myers Beach. Estero Boulevard is a seven-mile corridor that traverses the Estero Island and extends from Matanzas Pass Sky Bridge to Bonita Beach Causeway/Hickory Boulevard, in the Town of Fort Myers Beach, located in Lee County, Florida. Numerous private and commercial driveways currently exist along the Estero Boulevard corridor. Paved sidewalks for pedestrians are present along most of the corridor, although they are often only available along one side of the roadway. Exclusive bicycle lanes are not provided on this corridor. More than 35 beach-access connections and approximately 73 bus stops also exist along the corridor. Pedestrian travel throughout the corridor is high, but is generally viewed as unsafe and unpleasant.

Background

In 1999, the Town of Fort Myers Beach adopted a Comprehensive Plan establishing goals and policies to control the redevelopment and future new development in the Town. In June 2000, in support of the Comprehensive Plan, the Estero Boulevard Streetscape Master Plan was developed in accordance with the Comprehensive Plan and following the vision of Town residents. Both plans divided the island into six geographical areas. These

include the following: North End, Core Area, Civic Complex, Quiet Center, High-Rise Resort and South End. Pedestrian, bicycle, and vehicle design elements were proposed for each of the areas. Improvements for the North End are currently under design, with construction anticipated to begin in late 2008.

Purpose

The purpose of the Estero Boulevard Analysis and Design project was to select a pilot design section (Phase 1) and develop the necessary engineering design plans (Phase 2) for construction following the design elements outlined in the Estero Boulevard Streetscape Master Plan. The Estero Boulevard Analysis and Design project will be part of an overall solution to improve the entire corridor for Town residents and tourists. This report summarizes the selection of the section to be used for the pilot project, Phase 1.

Evaluation Criteria for Selection of Pilot Section

The project assignment included the selection of a pilot roadway segment for analysis and design. In order to complete the project assignment, the SR-865/Estero Boulevard corridor was divided into six, one-mile, roadway sections. It is worth noting that these six roadway sections did not coincide with the six geographical areas outlined in the Estero Boulevard Streetscape Master Plan. Further, it should also be

noted that an approximate one-mile section at the northern end of the island, referred to as the “North End” by the Estero Boulevard Streetscape Master Plan, was excluded from consideration as a pilot section, since a project is currently underway at this location. **Figure A** shows the location of the six roadway sections for analysis and design consideration relative to the six geographical areas from the Estero Boulevard Streetscape Master Plan.

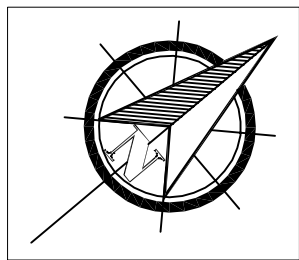
Several preliminary evaluation criteria were developed in an effort to provide a reasonable evaluation of the six roadway sections and determine the most appropriate pilot section for analysis and design. The criteria included the following: safety, mobility, design issues, utilities, landscape features, right-of-way, permitting, constructability and community.

Data Collection and Analysis

Information was collected and analyzed in order to determine the most appropriate pilot section for analysis and design. The data included the following:

- **Roadway Characteristics:** It was determined that SR-865/Estero Boulevard on the island currently contains approximately 0.3 miles of bike and walking paths along the south side and approximately 6.3 miles along the north side.

- **Aerial Photography:** The project site location was flown on two occasions to obtain the most current aerial photography.
- **Traffic Volume Data:** From the 2008 data, it was determined that daily traffic, along Estero Boulevard ranges between approximately 9,200 and 19,200 vehicles per day. The traffic volumes are much higher in the Town Center then they are near the quieter south end of the island.
- **Traffic Projections:** Future (2030) traffic projections were determined from a review of various sources. From the analysis, minimal growth, of approximately one (1) percent or less, is anticipated throughout the corridor for future traffic conditions.
- **License-Plate Survey:** It is suspected that a considerable number of vehicles from north of the Estero Island use Estero Boulevard to access I-75 via Bonita Beach Road. Results of the analysis indicated that the majority of the traffic in the Estero Island is primarily local-based and only a small percentage of it, ranging between 5 and 10 percent, is “cut-through” traffic. The locally based traffic includes town residents, businesses, and tourist traffic.

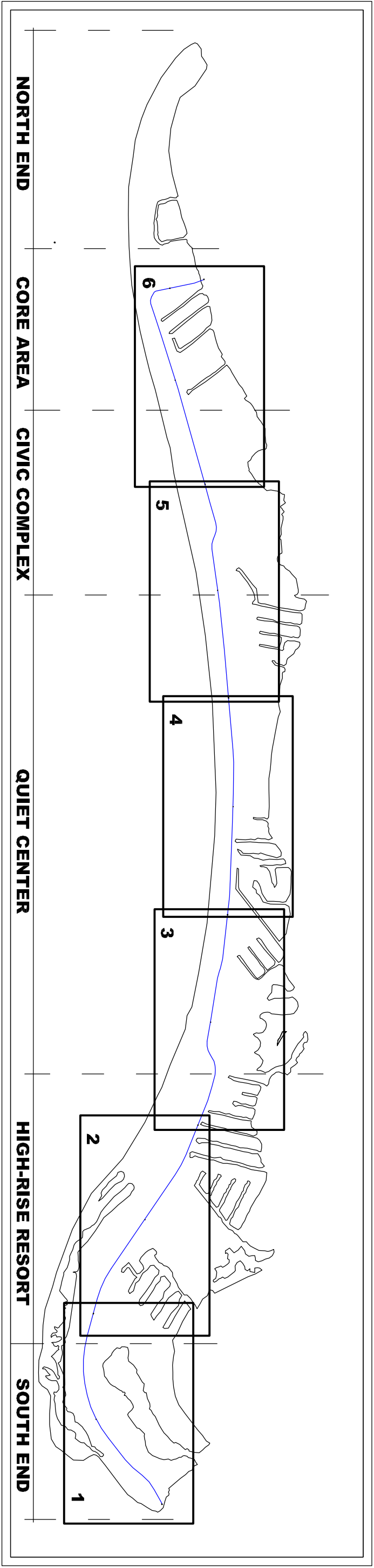


NORTH END

CORE AREA

CIVIC COMPLEX

QUIET CENTER



QUIET CENTER

HIGH-RISE RESORT

SOUTH END

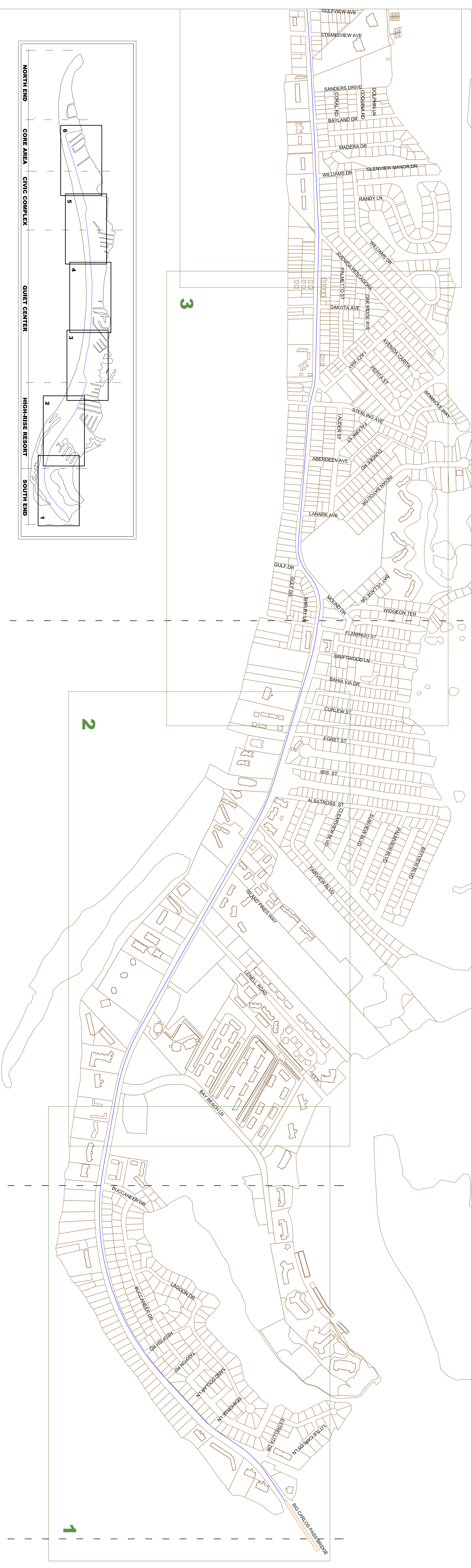


Figure A
Corridor Sections
Estero Boulevard Corridor Analysis and Design
Lee County, FL



- **Accident Information:** A review of the previous three years of crash data revealed that a greater number of accidents have occurred along the northern portion of the corridor, where pedestrian and vehicle volumes are significantly higher than other segments of the corridor. While the number of crashes, and crash rate, are lower than statewide average rates, the increasing number of accidents between motorists and pedestrians/bicycles indicates degradation in the safety along the corridor.
- **Transit:** Public transportation on Estero Boulevard is limited to a fixed-route bus service and an on-call service for disabled persons. From field observations, numerous bus stops currently exist along the corridor.
- **Right-of-Way (ROW):** The ROW widths, along the corridor, range between 50 feet and 100 feet, with several transition areas of unknown widths. These widths were determined by reviewing existing plat information. No ROW survey for the corridor could be located and one was not conducted as part of Phase I. A ROW survey will be conducted for the final pilot segment as part of Phase II.
- **Utilities:** Results of the evaluation indicated that, while a water system currently exists

throughout the corridor, upgrades to the system are necessary and are, therefore, proposed throughout the corridor. The water system review was based on a recent study conducted by the Town.

- **Transportation Plans:** Design elements proposed throughout the corridor, for this project, were based on the Estero Boulevard Streetscape Master Plan.
- **Construction Challenges:** Several construction challenges were identified during the project analysis. Some of the challenges include the maintenance of two-way travel at all times and the integration of the reconstruction with the City Utility Improvement Program.

Public Involvement

Ongoing coordination has occurred between government agencies, local engineering firms, developers, local business owners, homeowner associations, Fort Myers Beach Chamber of Commerce and Town residents throughout the project process. During Phase I of the project, the following meetings were conducted:

- Town Council Kick-Off Meeting.
- First Public Workshop.
- Community Meeting #1 – Greater Fort Myers Beach Chamber of Commerce.
- Bike and Pedestrian Action Committee (BPAC) Meeting.

- Community Meeting #2 – Representatives of Homeowner Groups in Fort Myers Beach.
- Community Meeting #3 – Representatives of Fort Myers Beach Civic Organizations.
- Bike and Pedestrian Coordination Committee (BPCC) Meeting.
- Town Council Workshop.
- Second Public Meeting.

Input from these entities was crucial in the selection of the pilot section and the design elements for the same. While the public input did not concentrate on a specific corridor section, it was generally agreed that a pilot section in the northern area, which carries the most pedestrian and vehicle traffic, would provide the biggest benefit. Many comments were received about creating a safe corridor for bicycles and pedestrians.

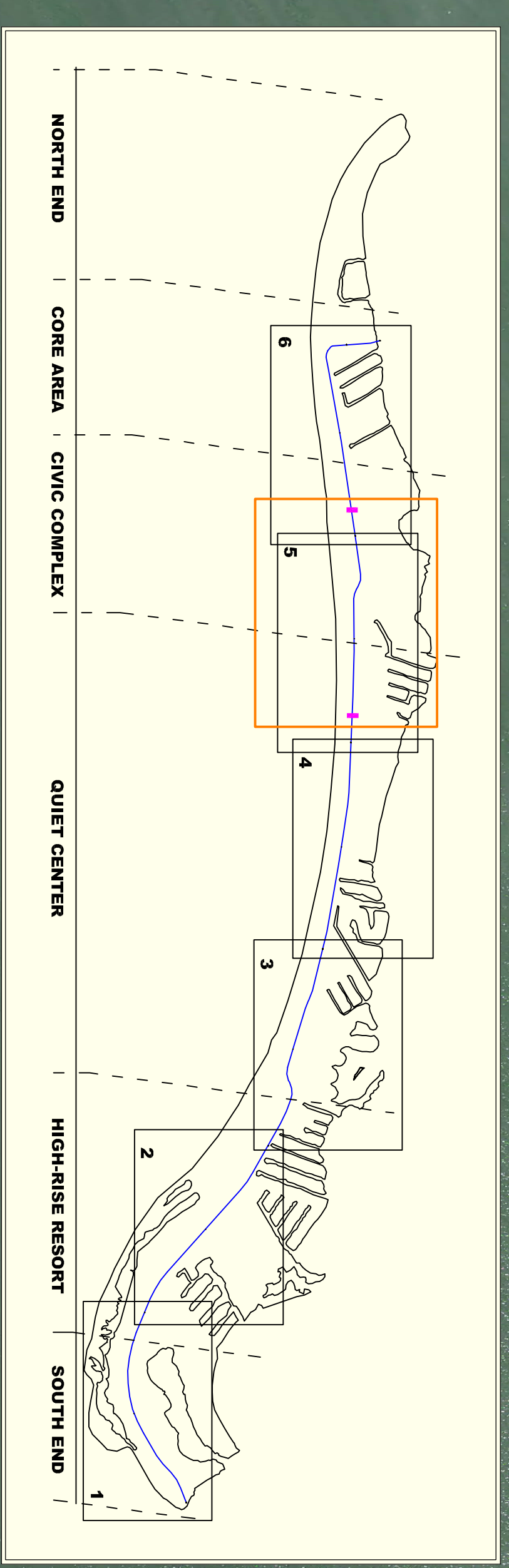
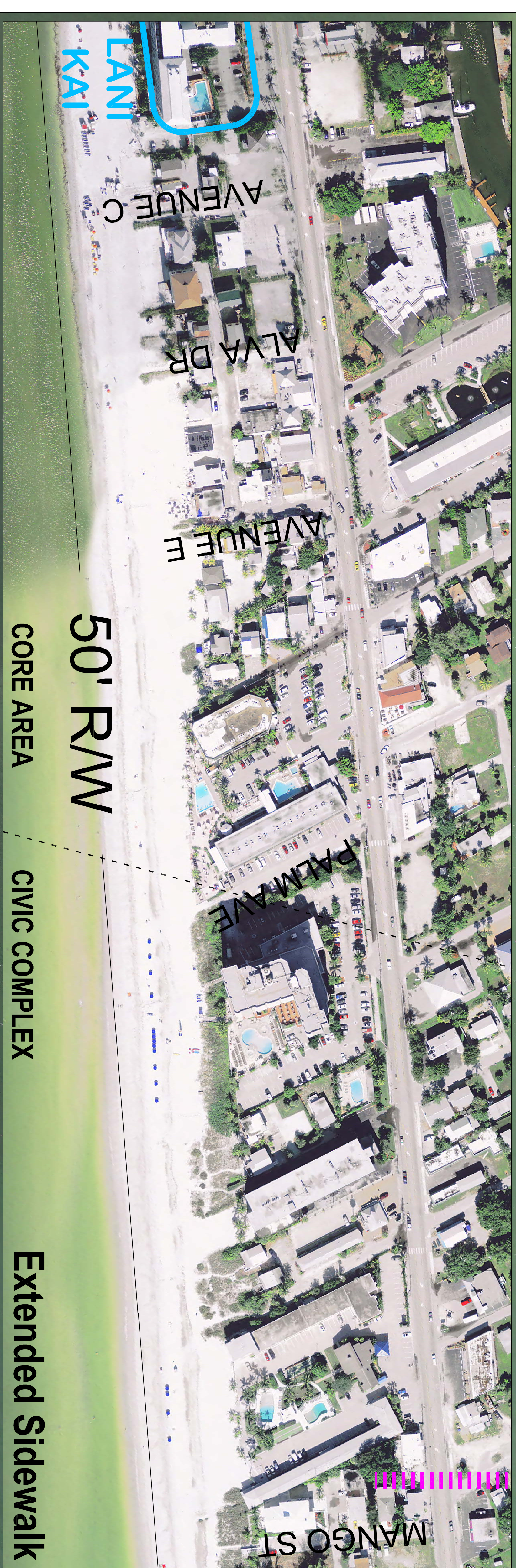
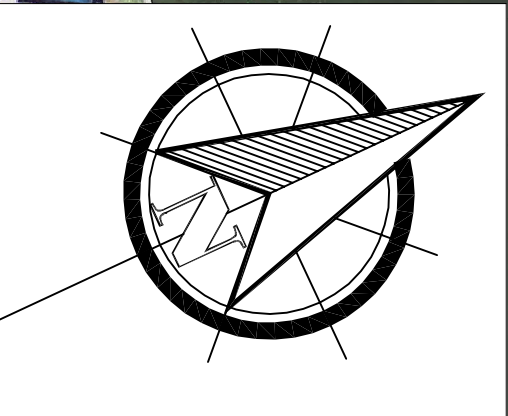
Selection of the Recommended Pilot Section

In order to assist in determining the pilot section for analysis and design, an evaluation matrix was performed. Results of the evaluation criteria were considered, as well as previous public and agencies' comments in determining the recommended pilot section for analysis and design.

After review of all the available information, the recommended pilot section was a combination of Sections 5 and 6, which included portions of the Civic Complex and Quiet Center, as described in the

Estero Boulevard Streetscape Master Plan. The recommended pilot section is graphically depicted in **Figure B**. This new section was selected since it was determined to represent the most critical section along the corridor given numerous factors. These include the following:

- Analysis and design of transition areas, since various ROW widths exist within the pilot section.
- Maximum ROW constraints with widths ranging between 50 feet and 65 feet.
- Presence of the Beach Elementary School could provide increased safety for the students.
- Insufficient pedestrian and bicycle facilities.
- Significant number of utility poles, a number of which are located near ROW lines.
- Existing drainage problems could be addressed – area ponds after rain.
- Inadequate drainage system – no presence of curb and gutters.
- No presence of landscape areas.
- No lighting – perception of unsafe and uncomfortable area to travel through.
- Excessive number of trolley stops.
- Minimal shaded areas for pedestrians.
- High traffic volumes.
- High pedestrian-traffic zone.
- High crash rate relative to the corridor.



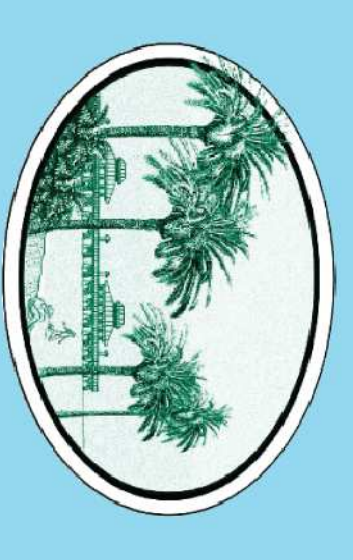
NOTE:
- LEE County 2007 Color Aerial Background

Figure B

Recommended Pilot Section & Extended Gulfside Sidewalk

Estero Boulevard Corridor Analysis and Design

Lee County, FL



Conceptual Design Plan for the Pilot Section

Two sets of improvements are necessary to enhance the aesthetic qualities of the corridor. The first is to improve the safety aspects for motorists, pedestrians, and bicyclists, while the second is to maintain the corridor's ability to function as a regional connector, and evacuation route.

Conceptual cross-section designs were obtained from the Estero Boulevard Streetscape Master Plan and evaluated to determine their feasibility for implementation along the corridor. **Figure C** shows the conceptual cross-sections from the Estero Boulevard Streetscape Master Plan. For the 50-foot ROW segment of the pilot section, the roadway cross-section includes, for both directions of travel, one 10-foot travel lane, two feet of curb and gutter, trees in grates, and an 8-foot sidewalk. In addition, a 10-foot center turn lane is also provided. For the 65-foot ROW segment of the pilot section, the roadway cross-section includes, for both directions of travel, one 11-foot travel lane, a 4-foot colorized shoulder to serve as an unmarked bike path, two feet of curb and gutter, 4.5 feet of green area and six feet of sidewalk. In addition, a 10-foot center turn lane is also provided. The transition between these ROW segments is anticipated to be located at an intersection. A conceptual rendering of the intersection transition area is depicted in **Figure D**.

Alternative Design Plans

Based on public comments and discussions between relevant agencies, preliminary alternative design plans were also considered. These included the potential for relocation of existing crosswalks in order to optimize their locations, the consolidation of bus stops provided throughout the corridor and the potential for bus pull-offs within the existing ROW along the corridor. In areas where the bus pull-offs would not fit within the ROW, the center turn lane could be removed to provide the required width for the bus pull-off area. The area would be equipped with seating, shelter and handicapped ramps. Conceptual layouts of the bus pull-off alternative, for 50 feet of ROW and for 65 feet of ROW, are shown on **Figure D**. The conceptual design for 50 feet of ROW shows another option that could maintain the center turn lane by locating the bus pull-off facilities in an easement obtained from the adjacent property owner.

Next Steps

Following approval by the Lee County Board of County Commissioners, the next step for this project is to commence with the preliminary engineering and design in Phase II. This effort is expected to take 18 to 24 months. Construction could, therefore, commence in 2011.

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CONCEPTUAL CROSS-SECTIONS

ESTERO BOULEVARD STREETSCAPE MASTER PLAN - Adopted June 12, 2000

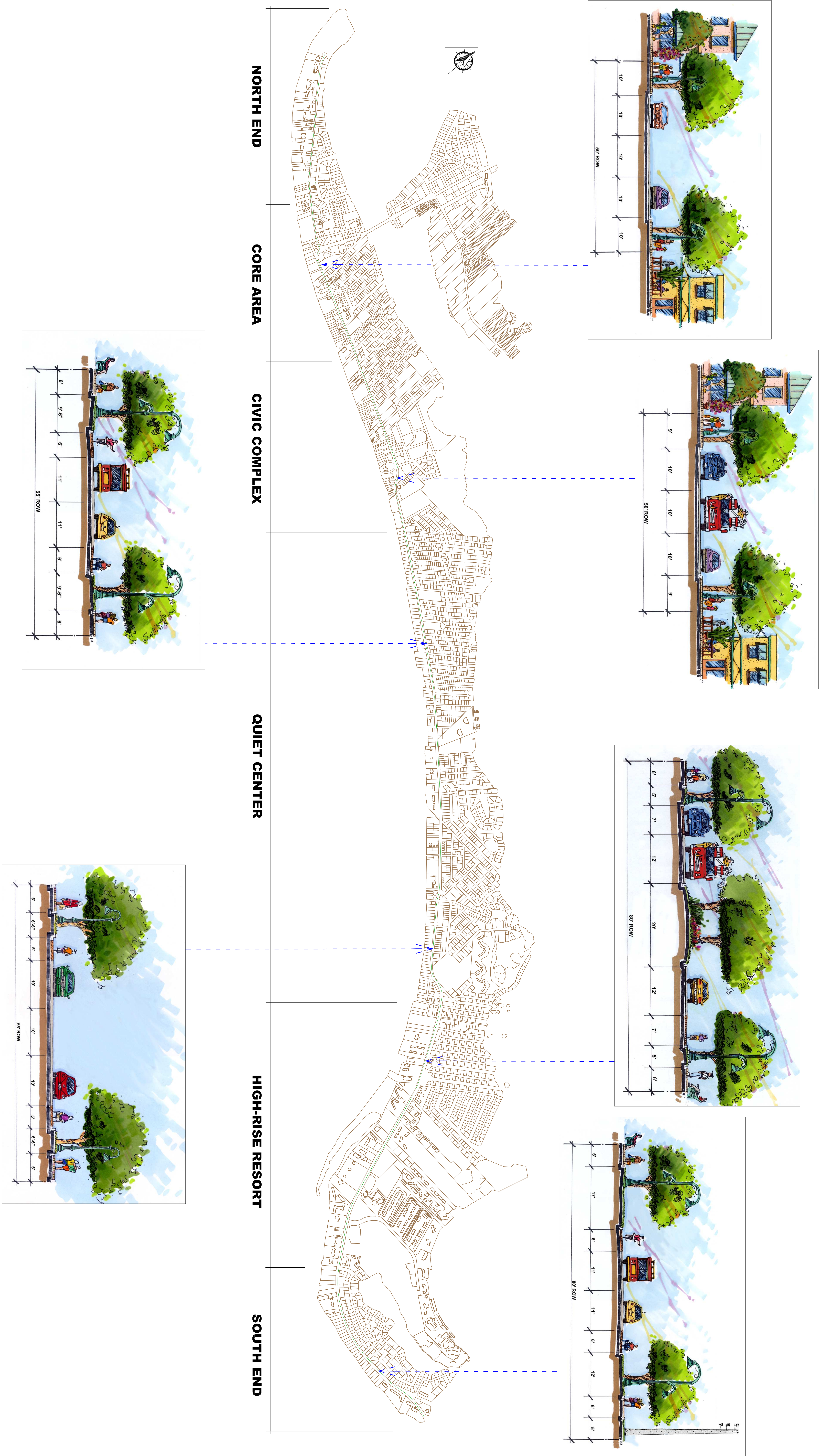
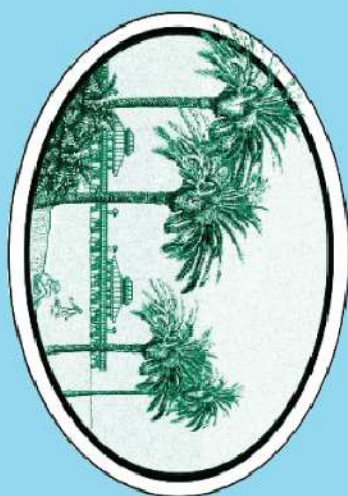
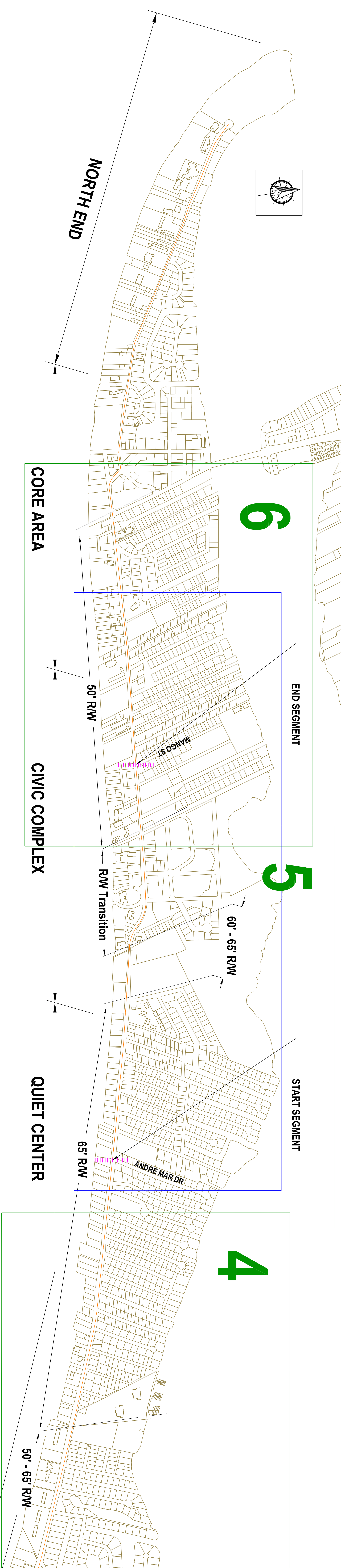
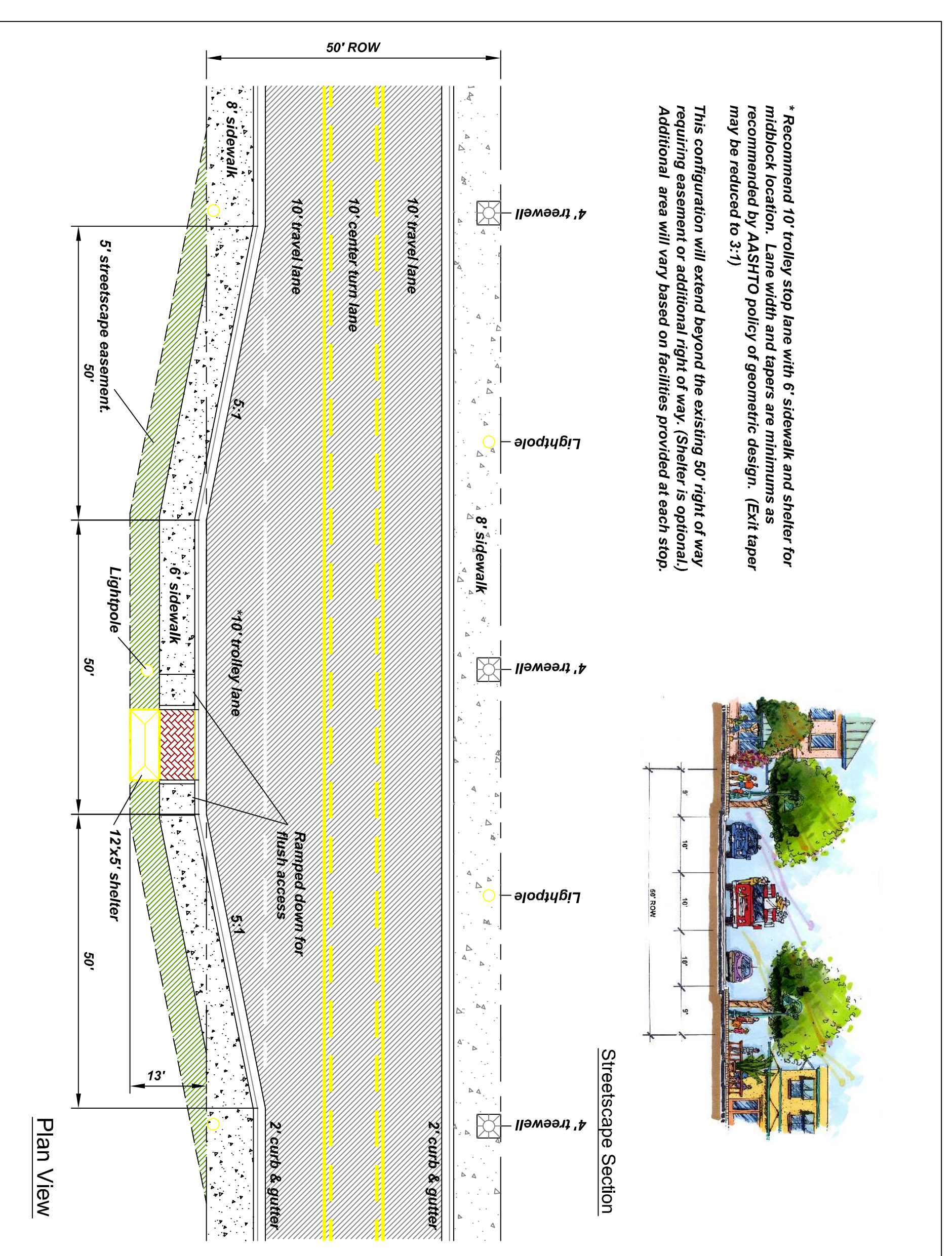


Figure C
Conceptual Cross-Sections
Estero Boulevard Corridor Analysis and Design
Lee County, FL

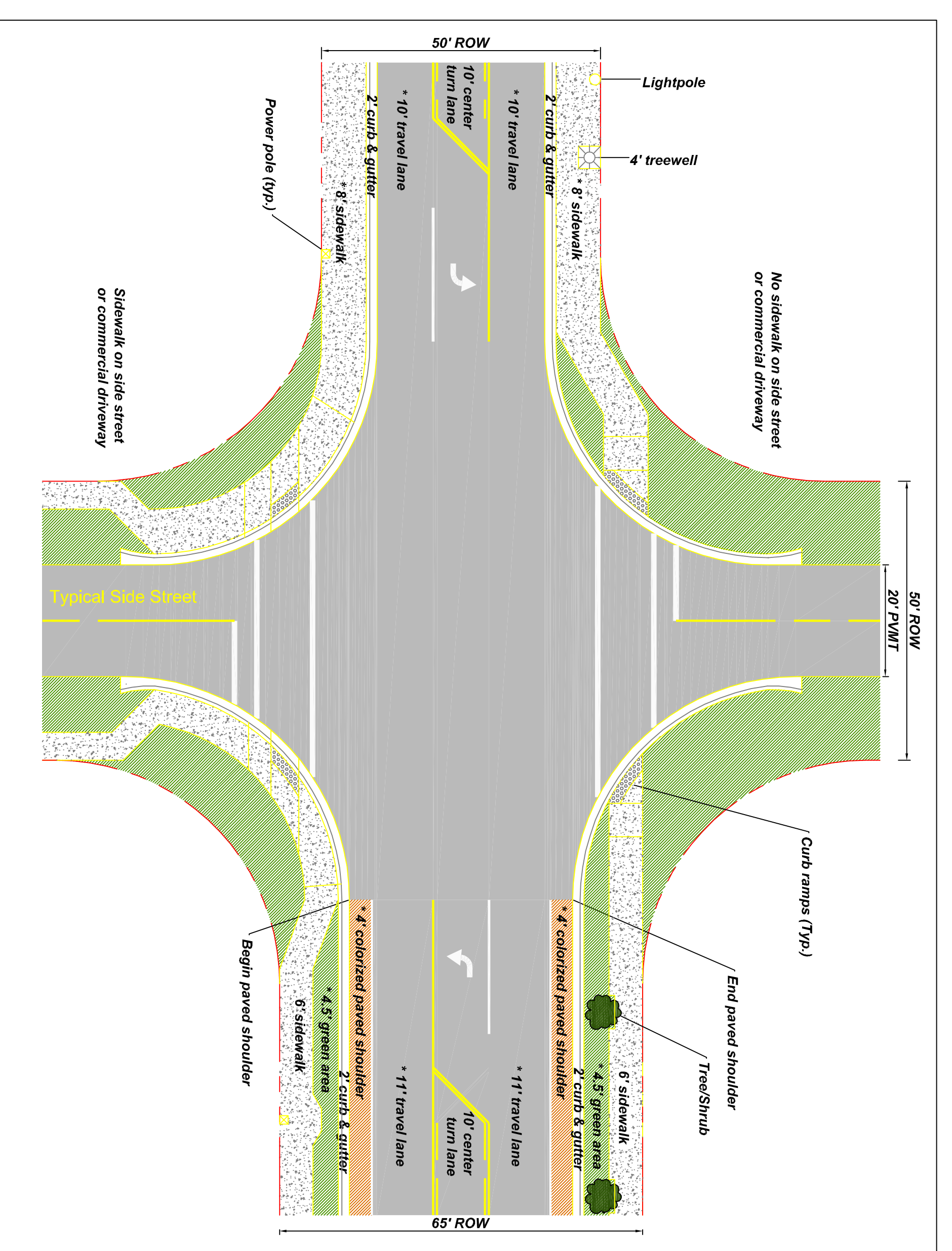




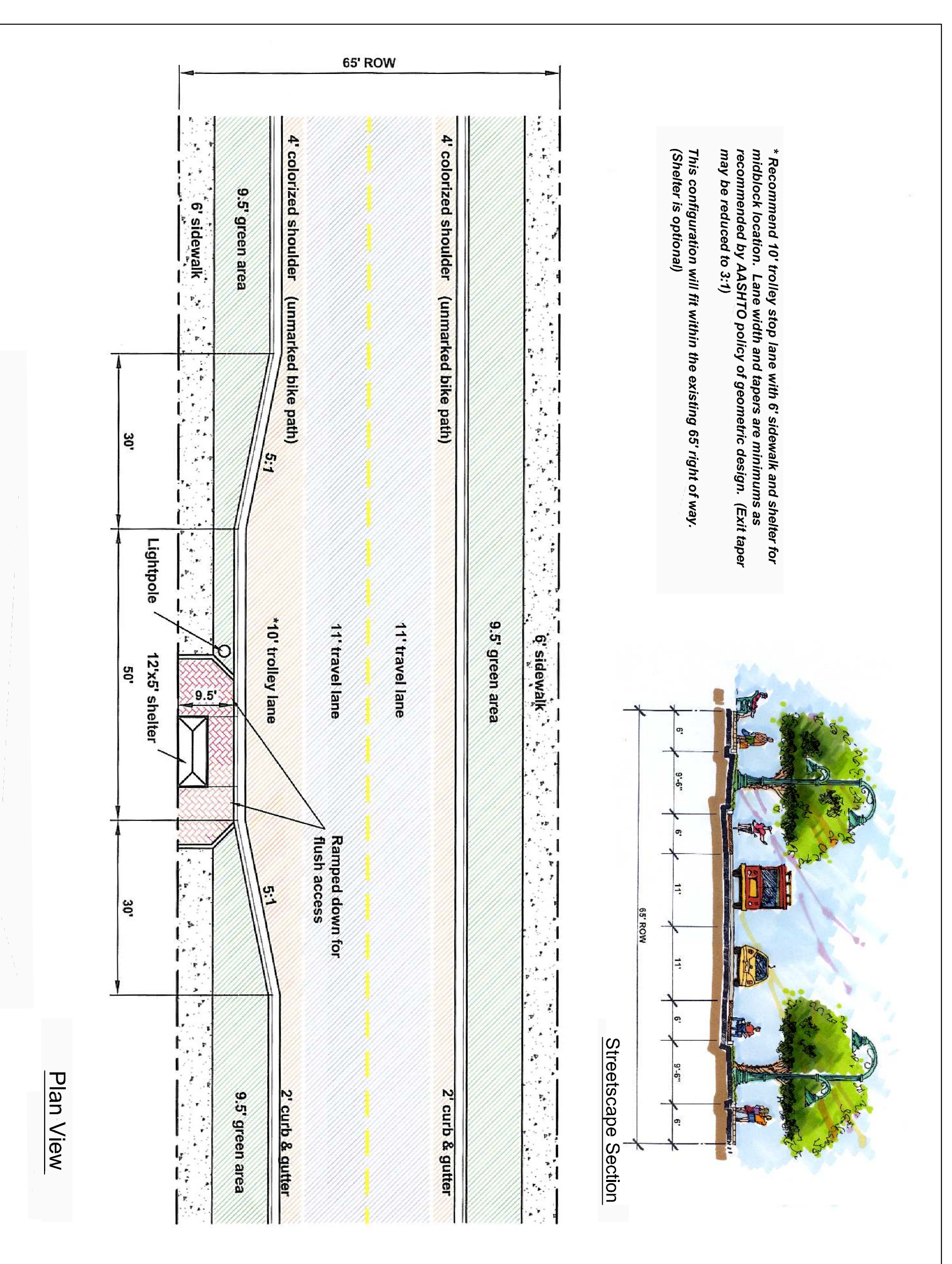
50' ROW - Bus Stop Pull-Off Concept



ROW Transition Concept



65' ROW - Bus Stop Pull-Off Concept



50' ROW Cross Section



65' ROW Cross Section

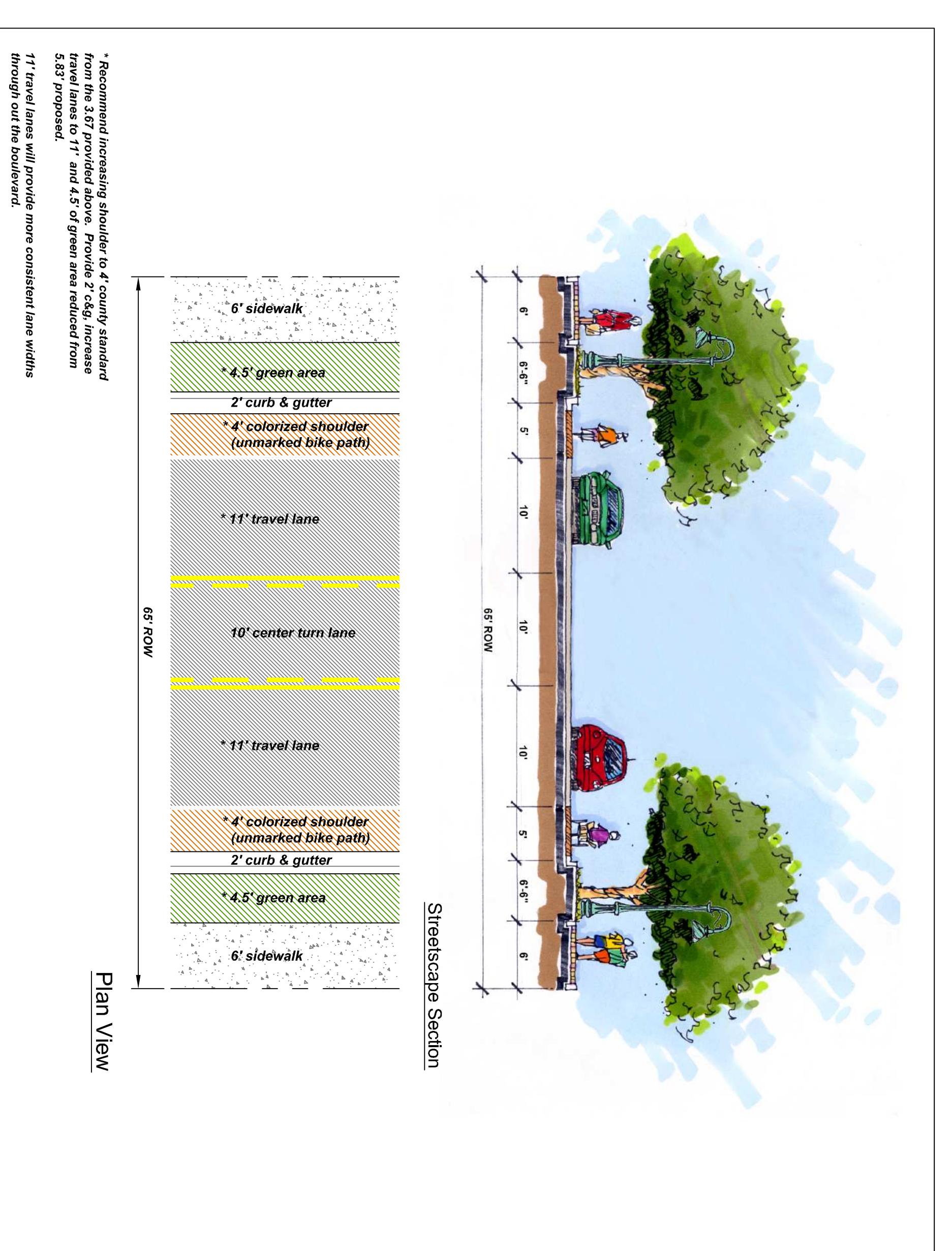


Figure D

Conceptual Transition Area, Bus Pull-Offs and Cross Section for 50' and 65' R/W

Esterio Boulevard Corridor Analysis and Design

Lee County, FL