APPENDIX

APPENDIX A: PROJECT VISIONING TEAM #1 MEETING

The Project Visioning Team (PVT) met on November 13, 2019 for a project kick-off presentation and Walkshop. The presentation included the project background of the corridor and potential design strategies, followed by a brief discussion. The Team then began the Walkshop portion, which included traveling as a group to a few locations in the study area to get out and walk the corridor study area. The PVT included users of different backgrounds, ages, and abilities, emphasizing the need for a more inclusive street design. This allowed the Team to experience the corridor outside of a car, as a person walking, biking, or taking the bus would feel along the street.

After walking portions of each segment of Ft. Harrison Avenue, there was a brief discussion about the key observations along the corridor which included the poor maintenance of the sidewalks, the feeling of danger along narrow and back of curb sidewalks, and a lack of identity for Ft. Harrison Avenue as a street leading into Clearwater's Downtown Core.

CITY OF CLEARWATER
FT HARRISON AVE COMPLETE STREETS STUDY
PROJECT VISIONING GROUP MEETING #1

Wednesday, November 13, 2019

I. ATTENDEES

Name	Organization
Ric Hartman	City of Clearwater
Lauren Matzke	City of Clearwater
Mark Suarez	HDR
Steve Schukraft	HDR
Mackenzie Bland	HDR
Crystal Odoh	HDR
Tyler Valila	HDR
Gloria Lepik Corrigan	PSTA TRAC
Lisa Mansell	Church of Scientology
David Lillesand	Downtown Neighborhood Association
Chuck Lane	City of Clearwater
Greg Stading	Bay Care Health System
Cammie Weeks	PCS
Stephanie Carrier	PCS
Bryant Johnson	SW/GS
David Nugent	Police
Joan Rice	Pinellas County
Brian Smith	BPDR
Amanda Thompson	City of Clearwater
Catherine Corcoran	City of Clearwater
F. Bowling	Clearwater Brewing Company
Diego Guevara	City of Clearwater
Roger Johnson	City of Clearwater
Karen Cunningham	CNC
Rick Perez	COL – Planning
James Warman	CFR
Mandee Steele	Amplify Clearwater
Michael Shumaker	Town of Belleview
Janelle Branch	The Ring
Denise Sanderson	City of Clearwater

II. PRESENTATION

- A presentation was given by Ric Hartman and Mark Suarez. A PDF copy of the presentation is attached.
- Comments from the PVT group
  - High rate of no vehicle ownership is interesting and notable
  - Portion of disabled population may be immobile residents in nursing home
  - Hospital campus on the corridor would likely have many employees with lower incomes who would benefit from better transit access
  - Discussion over why wide driveways are a negative
  - Concern for gentrification and making sure that the improvements are for the people who are already there

III. WALKSHOP COMMENTS

- Segment 1A: Belleair Rd to Belleview Blvd
  - Poor trail signage – need better wayfinding for Pinellas trail
  - Other than the sign at the downtown bypass, need better wayfinding signage for downtown
  - Increase/add pedestrian crossing opportunities
  - Sidewalk and vegetation maintenance
    - Cracks in sidewalk
    - Overhanging tree branches
  - Dangerous pedestrian conditions
  - Enhance/add bike facilities
  - Lane reduction preferred
    - 4 lane to 3 lane road diet
- Segment 1B: Belleview Blvd to Chestnut St
  - Narrow sidewalk
  - Sidewalk maintenance issues
    - Cracks and vegetation growing
  - Dangerous pedestrian conditions
  - Increase crossing opportunities
  - Driveways and turning lanes unsafe for pedestrians
  - Trail
    - Wayfinding
    - Possibly add a rest area for the trail
    - Add signage about Pinellas Trail and Clearwater (including Downtown signage)

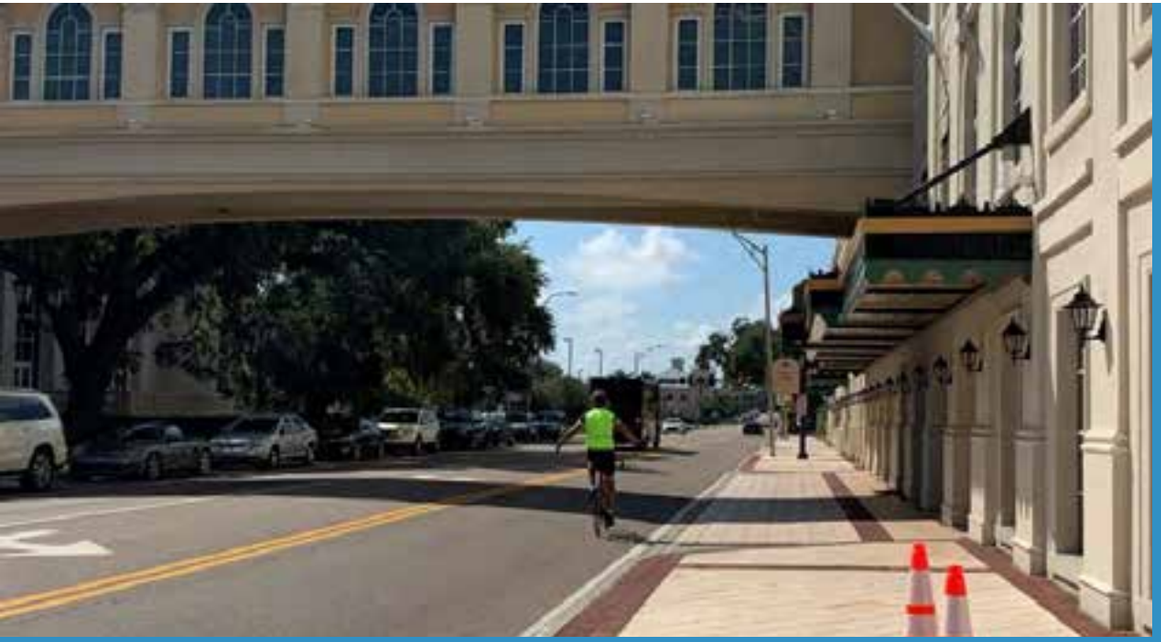
    - Hospital access/circulation issues and wayfinding
    - Bike lanes are narrow
        - Bike lane is next to trail
        - Pavement markings for bikes
- Segment 2: Chestnut St to Drew St
    - "Blast Friday" that occurs once a month closes the intersection of Cleveland St. & Ft. Harrison
        - Many pedestrian drop-offs at this location
    - Consider widening narrow sidewalks
    - Signs / poles throughout the sidewalks
    - Enhance pedestrian crossings
    - New development south of Drew which will potentially result in more pedestrians
    - Driveway and vehicle conflicts with pedestrians
- Segment 3: Drew St to N Myrtle Ave
    - Sidewalk maintenance
        - Overgrown vegetation in the ROW and on private property
    - Beautification of area needed
    - ADA compliance issues
    - Better signage needed
    - Peak hour congestion turning right onto Fairmont to reach Alt-19

IV. WALKSHOP DEBRIEF

- Poor maintenance of sidewalks
    - Other maintenance issues
        - Light poles
        - Would like to see lower maintenance designs
- North end (Segment 3) feels neglected
- Need identity for Ft Harrison
    - Street signs are small and it's difficult to know what road you're on
    - As a pedestrian you make choices every block; need better wayfinding to help with this
- Morton Plant Hospital considerations
    - Ambulances and fire trucks will use the area heavily
    - Jeffords is a tight turn and the curb has been damaged by emergency vehicles
    - Jeffords and Pinellas are primary emergency routes

        - Designed to loop the streets – Jeffords to get into the hospital and Pinellas to exit
    - High pedestrian traffic across Ft Harrison between Jeffords and Pinellas
        - Due to parking for hospital employees across the street
- Bicycles
    - Mark bicycle lanes
    - Bike lane next to Pinellas trail may be redundant
        - Connect street to trail network
- Noise
    - Road is very loud as a pedestrian
        - Vehicle speeds are too high
- High vehicle speeds, especially on Segment 1B, gives pedestrians a feeling of fear
- Making street safer for pedestrians can help with sight distance on side streets
- Education
    - Educate people about the benefits of traffic calming
    - People will complain about increasing travel times, even though times may not increase too much
- Priorities
    - Signage
        - Inexpensive
        - Pedestrian signage
        - Directing people to the hospital on Myrtle
        - Parking in downtown
    - Add color/beautification to the street
    - Markings on sidewalk where it is for bikes and pedestrians
    - Maintenance of sidewalk (especially weeds growing)
    - Diverting through traffic to other corridors

V. PRESENTATION



FT HARRISON AVENUE

Complete Streets Study

Project Visioning Team Meeting #1 – November 13, 2019

HDR

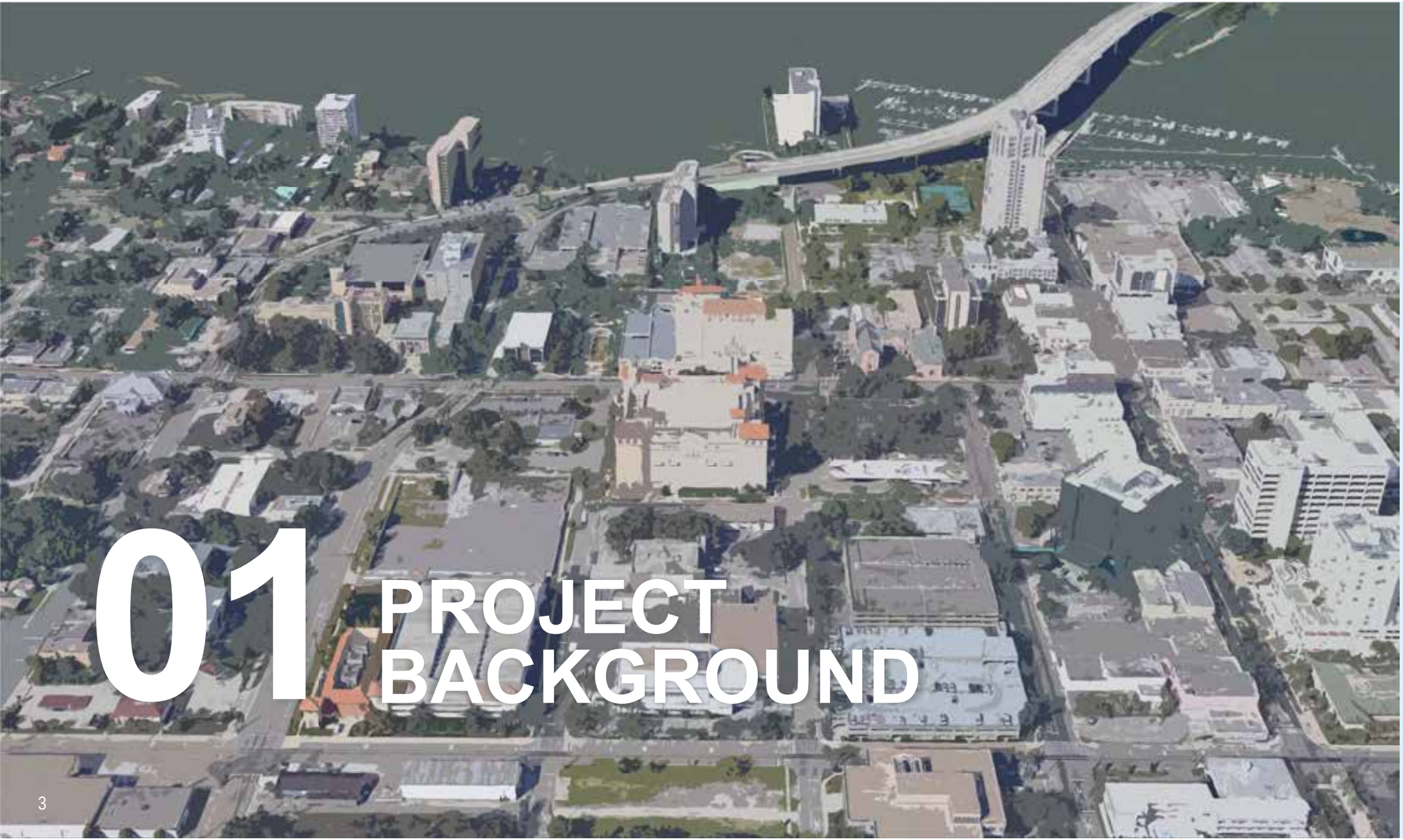
CLEARWATER
BRIGHT AND BEAUTIFUL · BAY TO BEACH

01 **PROJECT BACKGROUND**
8:30 am – 8:50 am

02 **CORRIDOR OVERVIEW**
8:50 am – 9:10 am

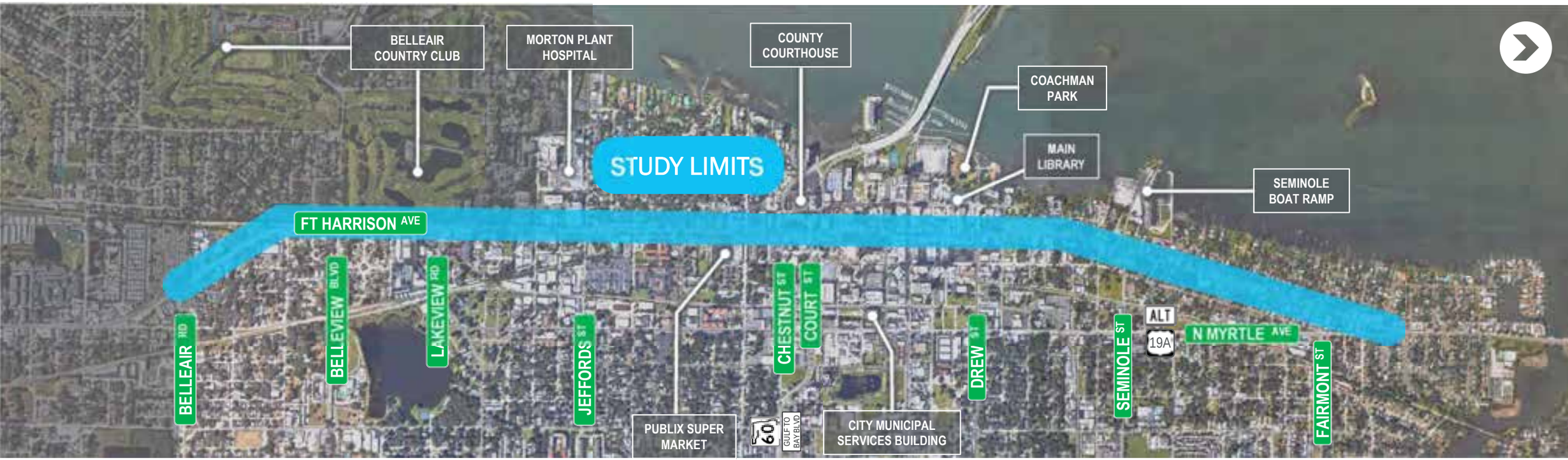
03 **DESIGN STRATEGIES**
9:10 am – 9:30 am

04 **WALKSHOP**
9:30 am – 11:30 am



01 PROJECT BACKGROUND

PROJECT OVERVIEW



LIMITS: Ft. Harrison Avenue from Belleair Rd to N Myrtle Ave

3.2
MILES

CITY OF CLEARWATER
JURISDICTION

CONNECTEDNESS TO KEY DESTINATIONS

- CLEARWATER BEACH
- SEMINOLE BOAT RAMP
- PARK ST TRANSIT CENTER
- MORTON PLANT HOSPITAL
- CITY OF LARGO
- CITY OF DUNEDIN
- US ALT-19 & US 19
- SR 60

PROJECT PURPOSE

DEVELOP CONCEPTS TO ADVANCE CLEARWATER'S **MOBILITY, SAFETY, AND PLACEMAKING** OBJECTIVES THROUGH A COMPLETE STREETS APPROACH

- ✓ DEFINE **ACHIEVABLE IMPROVEMENTS** FOR THE CORRIDOR
- ✓ DEFINE **PRIORITY IMPROVEMENT PROJECTS** TO MOVE FORWARD INTO ENGINEERING AND DESIGN

SCHEDULE

DEFINING SUCCESS & INITIAL DESIGN STRATEGIES

↓

ALTERNATIVES ASSESSMENT & TRAFFIC ANALYSIS

↓

PUBLIC WORKSHOP

↓

REFINE CONCEPTS

↓

CITY COUNCIL PRESENTATION

WHAT IS A COMPLETE STREET?

COMPLETE STREETS REALLOCATE STREETSPACE TO BE DESIGNED FOR AND OPERATED BY EVERYONE

INCLUDING VEHICLES, TRANSIT, PEDESTRIANS, & CYCLISTS OF ALL AGES & ABILITIES

MOBILITY

- 1 in 5 Americans will be over 65 by 2025
- 1 in 5 people in the US currently have a disability

PLACEMAKING

- Slower and fewer cars create a more vibrant, livable place
- Community is fostered in outside spaces

SAFETY

- Good bicycle and pedestrian infrastructure is safer for all users
- Crash & injury risk can be reduced with slower speeds

HEALTH

- Walking & biking for short trips (under 1 mile) improves personal health and the environment

COMPLETE STREETS FOR CLEARWATER

IMPLEMENTATION PLAN

"PROVIDE A NETWORK OF STREETS AND BALANCED TRANSPORTATION OPTIONS THAT ARE SAFER AND MORE EFFICIENT FOR EVERYONE. . . ."

GUIDING PRINCIPLES

- SAFE, COMFORTABLE TRAVEL
- TRANSPORTATION ACCESSIBILITY
- MULTIMODAL MOBILITY
- CONNECTED AND INVITING
- ECONOMIC VITALITY AND PLACEMAKING
- COMMUNITY HEALTH
- SOCIAL EQUITY AND INVESTMENT
- COMMUNITY CHARACTER AND CONTEXT SENSITIVITY
- ENVIRONMENTAL PROTECTION AND SUSTAINABILITY
- TECHNOLOGY

SERVE RESIDENTS WITHOUT VEHICLE ACCESS

IMPROVE SAFETY FOR ALL MODES

SUPPORT LOCAL BUSINESSES AND COMMUNITY

IMPROVE PERSONAL AND ENVIRONMENTAL HEALTH

US ALT-19 & FAIRMONT ST ROUNDABOUT

FDOT, *MAY 2019*

- Project goals
  - Improve traffic operations on US Alt-19
- Importance
  - Corridor serves as alternative N-S corridor to Ft Harrison Ave
  - Improved operations on corridor will allow for more successful traffic calming and safety measures on Ft Harrison Ave
- Proposed roundabout to relieve traffic congestion for vehicles going from northbound Ft Harrison Ave onto northbound Alt-19

COMPLETE DREW ST PROJECT

FORWARD PINELLAS, *OCTOBER 2019*

- Project goals
  - Improve safety, accessibility, and connectivity with land uses
  - Support existing businesses and future growth
  - Promote active living with improved access to trails
- Drew St
  - North border of Segment 2 (Downtown)
- Concept for Drew St corridor at intersection with Ft Harrison Ave
- Improvements:
  - Bike infrastructure
  - Road diet from four lanes to two lanes
  - Additional parking
  - Improved streetscape

NORTH MARINA AREA PLAN

ON FT HARRISON AVE

CITY OF CLEARWATER, *JANUARY 2016*

- Redevelopment plan for area surrounding the Seminole Boat Ramp
- Future land use
  - Primarily Central Business District (CBD) and Commercial General (CG)
  - Small portions of Institutional (I) and Residential Urban (RU)
- On Ft Harrison Ave
  - Wider sidewalks
  - Activated corners as social areas
  - Enhanced interface between pedestrian zone and building uses
  - Avoid driveway conflicts with pedestrians
  - Single-story retail
  - Mid-rise residential
- Ft Harrison Ave & Seminole St
  - Gateway feature

AREA TRANSIT

BUS ROUTE 52/52LX

DOWNTOWN CLEARWATER – DOWNTOWN ST. PETERSBURG

- EXPRESS SERVICE DURING PEAK HOURS
- 30 MIN HEADWAYS MON-SAT
- 1 HR HEADWAYS SUN & HOLIDAYS

BUS ROUTE 66L

TARPON SPRINGS – PARK STREET TERMINAL

- LIMITED STOP ROUTE
- 90 MIN HEADWAYS DURING PEAK HOURS MON-FRI
- NO SAT, SUN, OR HOLIDAY SERVICE

SUNCOAST & JOLLEY TROLLEY

DOWNTOWN CLEARWATER – CLEARWATER BEACH

- 30 MIN HEADWAYS MON – SUN & HOLIDAYS
- JOLLEY TROLLEY SERVICE BETWEEN 9:45 AM – 1:45 PM
- EXTENDED SERVICE ON WEEKENDS

CLEARWATER FERRY

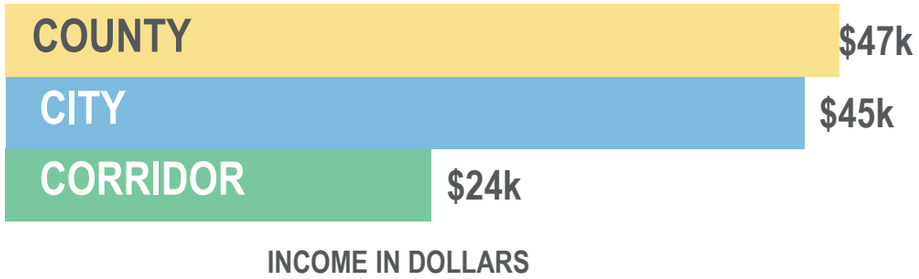
DOWNTOWN CLEARWATER – CLEARWATER BEACH

- 1 HR HEADWAYS THU – SUN
- INCREASED SERVICE DURING PEAK HOURS

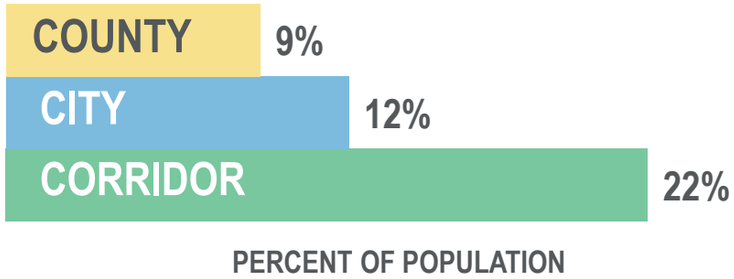
02 CORRIDOR OVERVIEW

AREA STATISTICS

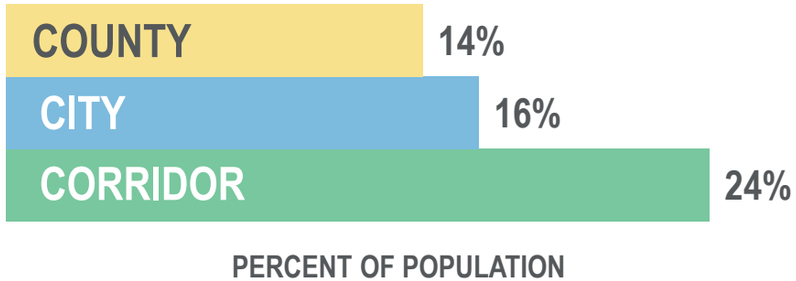
MEDIAN HOUSEHOLD INCOME



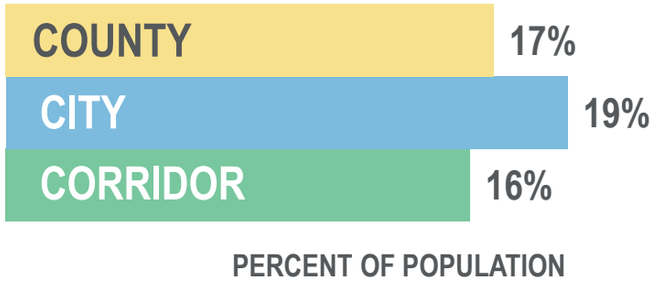
HOUSEHOLDS WITH NO VEHICLES



POPULATION BELOW POVERTY LEVEL

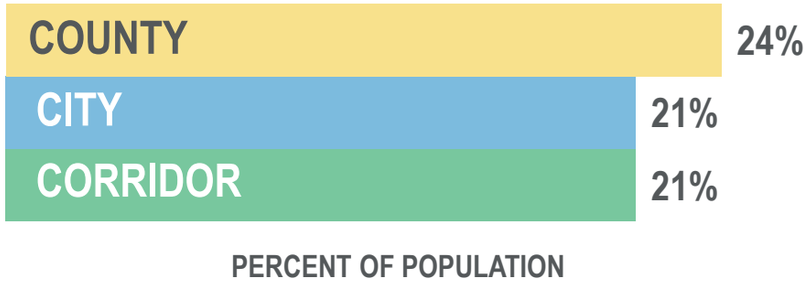


POPULATION UNDER 18

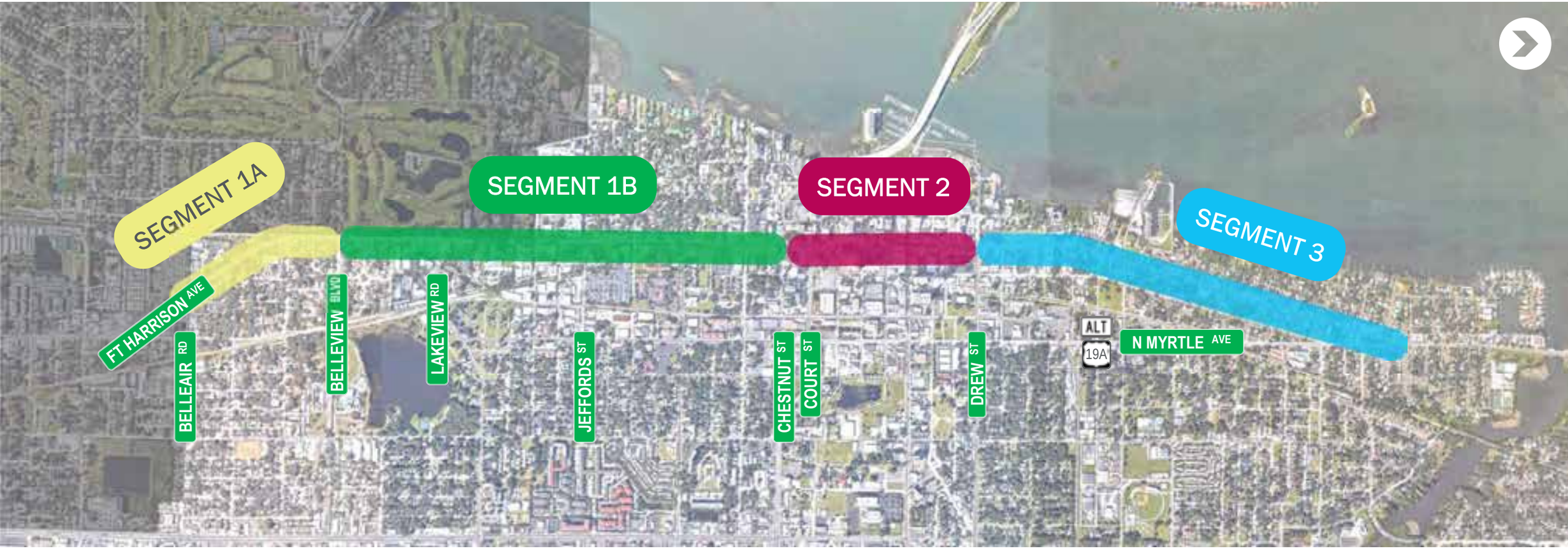


MINORITY POPULATION

POPULATION OVER 65



SEGMENTS

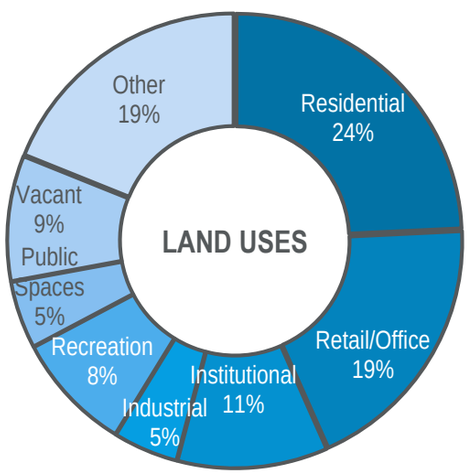


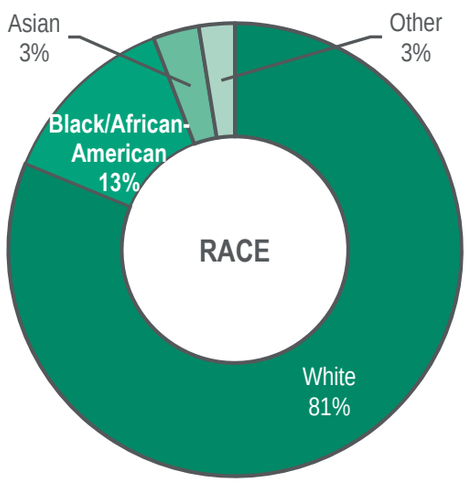
SEGMENT 1A	BELLEAIR RD TO BELLEVIEW BLVD
SEGMENT 1B	BELLEVIEW BLVD TO CHESTNUT ST
SEGMENT 2	CHESTNUT ST TO DREW ST
SEGMENT 3	DREW ST TO N MYRTLE AVE

SEGMENTATION BASED ON:

- CHARACTER
- CONTEXT
- LAND USE
- EXISTING TYPICAL SECTIONS
- AVAILABLE RIGHT-OF-WAY

SEGMENT 1A BELLEAIR RD TO BELLEVIEW BLVD





2.5k PEOPLE

$24.5k MEDIAN HOUSEHOLD INCOME

2.2 AVERAGE HOUSEHOLD SIZE

21% HOUSEHOLDS WITH NO VEHICLES

17% UNDER 18

24% OVER 65

22% BELOW POVERTY LINE

20% PEOPLE WITH DISABILITIES

***DATA INCLUDES SEGMENT 1A AND 1B

*DATA TAKEN FROM ½ MILE WALKSHED BASED ON THE 2016 ACS
**CONTEXT CLASSIFICATIONS PROVIDED IN COMPLETE STREETS FOR CLEARWATER IMPLEMENTATION PLAN

SEGMENT 1A BELLEAIR RD TO BELLEVIEW BLVD

CHARACTERISTICS

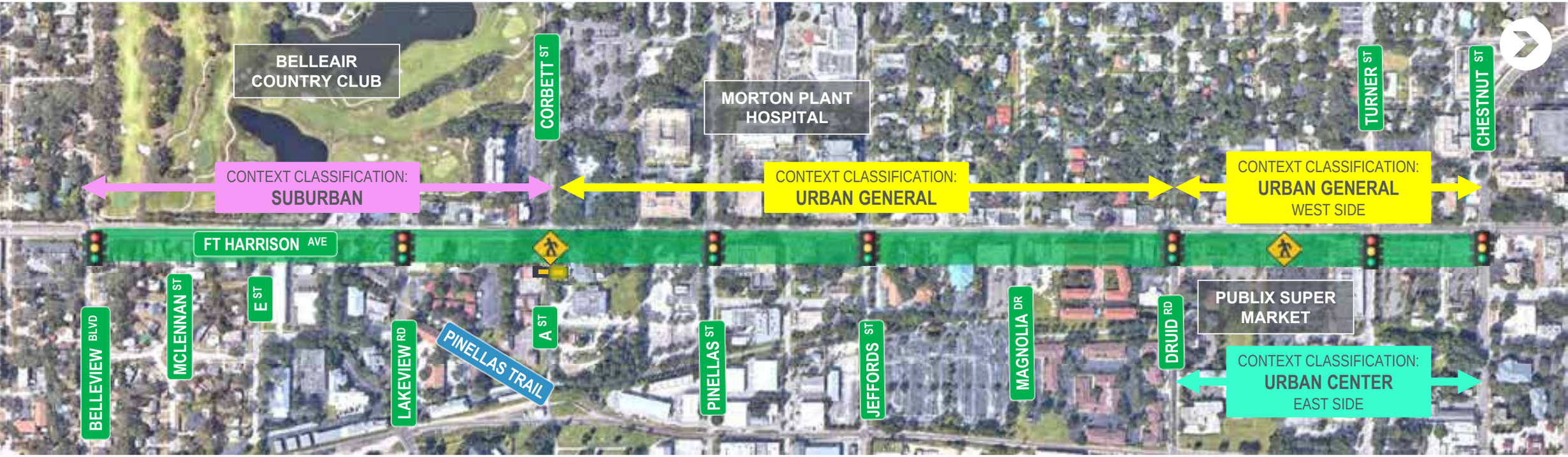
100’
TYPICAL ROW

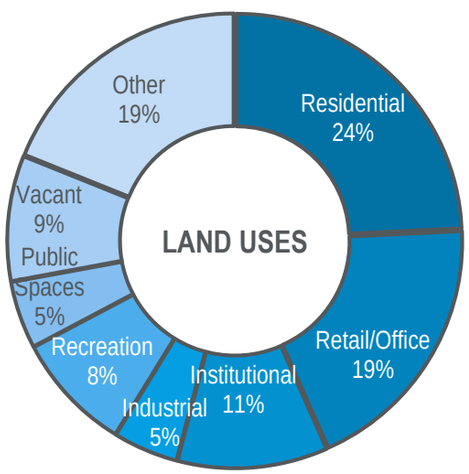
30 MPH
POSTED SPEED

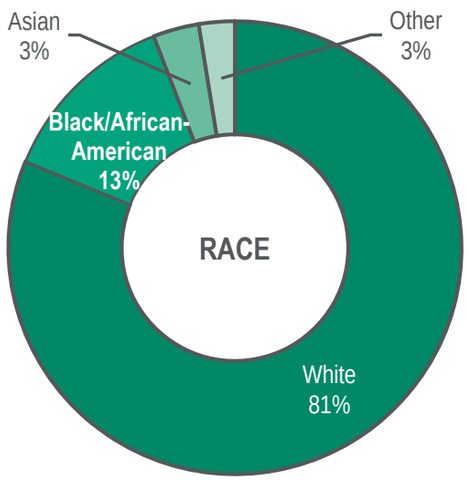
4 LANE UNDIVIDED
TYPICAL SECTION

- NO CURB
- LITTLE SHADE
- WIDE DRIVEWAYS
- UNBUFFERED SIDEWALKS IN SOME AREAS

SEGMENT 1B BELLEVIEW BLVD TO CHESTNUT ST







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**CONTEXT CLASSIFICATIONS PROVIDED IN COMPLETE STREETS FOR CLEARWATER IMPLEMENTATION PLAN

SEGMENT 1B BELLEVIEW BLVD TO CHESTNUT ST

CHARACTERISTICS

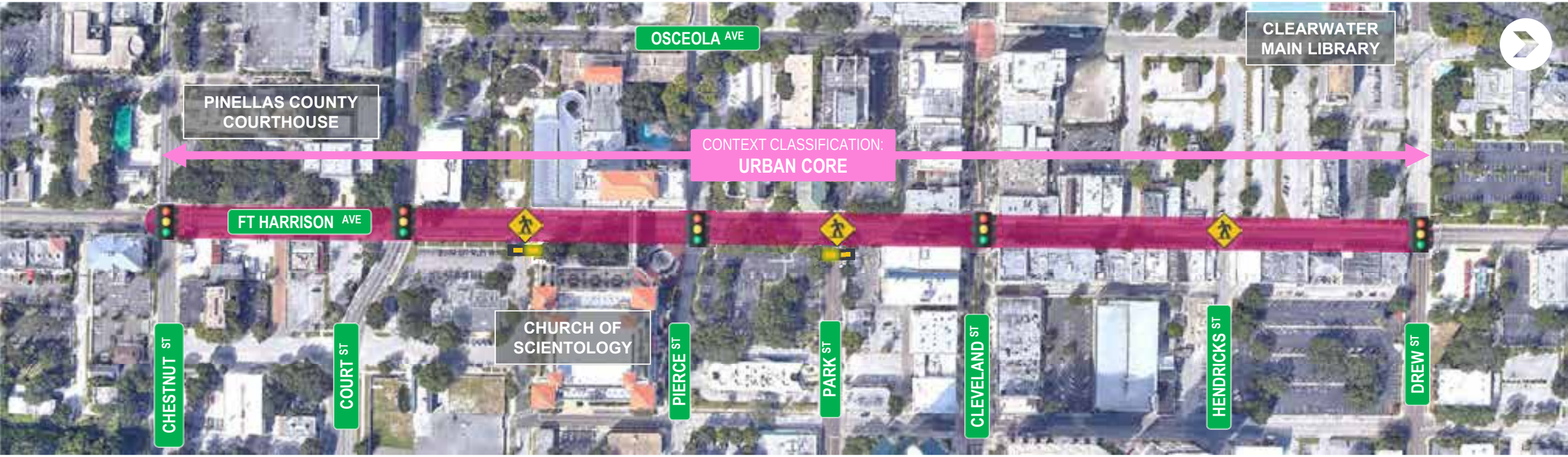
60’
TYPICAL ROW

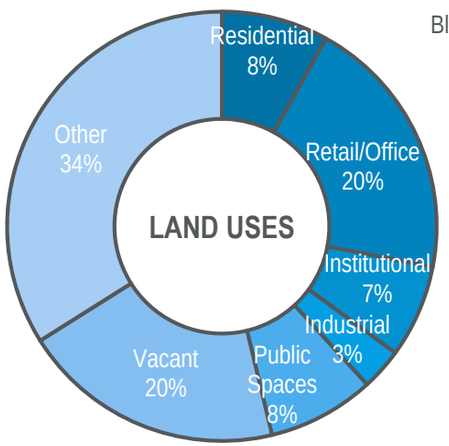
30 MPH
POSTED SPEED

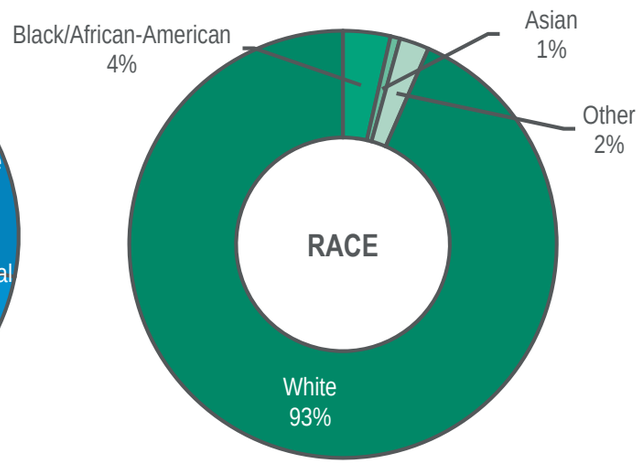
2 LANES WITH TWLTL
TYPICAL SECTION

- PEDESTRIAN CROSSINGS
- INTERMITTENT TREES
- UNBUFFERED SIDEWALKS
- TRANSITION INTO DOWNTOWN
- TRAIL SEPARATES FROM ROW

SEGMENT 2 CHESTNUT ST TO DREW ST







1.2k PEOPLE

$30k MEDIAN HOUSEHOLD INCOME

1.9 AVERAGE HOUSEHOLD SIZE

35% HOUSEHOLDS WITH NO VEHICLES

5% UNDER 18

35% OVER 65

18% BELOW POVERTY LINE

28% PEOPLE WITH DISABILITIES

*DATA TAKEN FROM ½ MILE WALKSHED BASED ON THE 2016 ACS
**CONTEXT CLASSIFICATIONS PROVIDED IN COMPLETE STREETS FOR CLEARWATER IMPLEMENTATION PLAN

SEGMENT 2 CHESTNUT ST TO DREW ST

CHARACTERISTICS

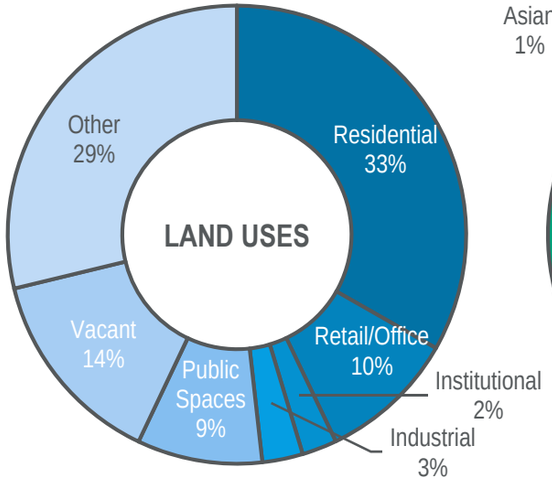
55’ – 70’
TYPICAL ROW

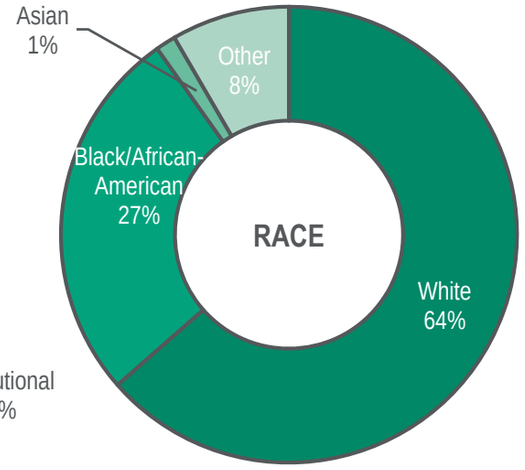
30 MPH
POSTED SPEED

2 LANE WITH TWLTL
TYPICAL SECTION

- **PEDESTRIAN FRIENDLY DEVELOPMENT**
- **INTERMITTENT TREES & SHADE**
- **TRAFFIC CONGESTION DURING PEAK TIMES**

SEGMENT 3 DREW ST TO N MYRTLE AVE





2.5k PEOPLE

$40k MEDIAN HOUSEHOLD INCOME

2.2 AVERAGE HOUSEHOLD SIZE

19% HOUSEHOLDS WITH NO VEHICLES

16% UNDER 18

17% OVER 65

27% BELOW POVERTY LINE

15% PEOPLE WITH DISABILITIES

*DATA TAKEN FROM ½ MILE WALKSHED BASED ON THE 2016 ACS
**CONTEXT CLASSIFICATIONS PROVIDED IN COMPLETE STREETS FOR CLEARWATER IMPLEMENTATION PLAN

SEGMENT 3 DREW ST TO N MYRTLE AVE

CHARACTERISTICS

55’ – 60’
TYPICAL ROW

30 MPH
POSTED SPEED

2 LANES WITH TWLTL
TYPICAL SECTION

- SEMINOLE ST BOAT RAMP ACCESS
- POOR SIDEWALKS & CROSSINGS
- UNBUFFERED & NARROW SIDEWALKS
- NO TREES & SHADE

DEFINING SUCCESS

Segment 1

- Improve **multimodal connections** across corridor & into downtown
- Create a **gateway** into the City & downtown

Segment 2

- Use streetspace to create a **welcoming, livable, & economically vibrant** downtown

Segment 3

- **Beautify** the streetspace to **attract investment and development** to achieve future land use vision

03 DESIGN STRATEGIES

POP-UP PROJECT

- ✓ **SMALLER** PROJECTS WITH **SHORT IMPLEMENTATION** SCHEDULES
- ✓ PROJECTS CAN BE **SHORT-TERM** OR **LONG-TERM**
- ✓ SUCCESS CAN **INSPIRE** PERMANENT CHANGES

SMALLER PROJECTS

LOWER COST

REAL TIME FEEDBACK

PERMANENT INSTALLATION

- ✓ **LARGER** PROJECTS WITH **LONGER IMPLEMENTATION** SCHEDULES
- ✓ PROJECTS CAN BE **LONGER LASTING**
- ✓ SUCCESS CAN CREATE **REPEAT** PROJECTS

LARGER PROJECTS

HIGHER COST

LONG TERM FEEDBACK

DESIGN STRATEGIES

MEDIAN REFUGE ISLANDS

Protected break in crossing to reduce exposure time for pedestrians

PROTECTS CROSSING PEDESTRIANS

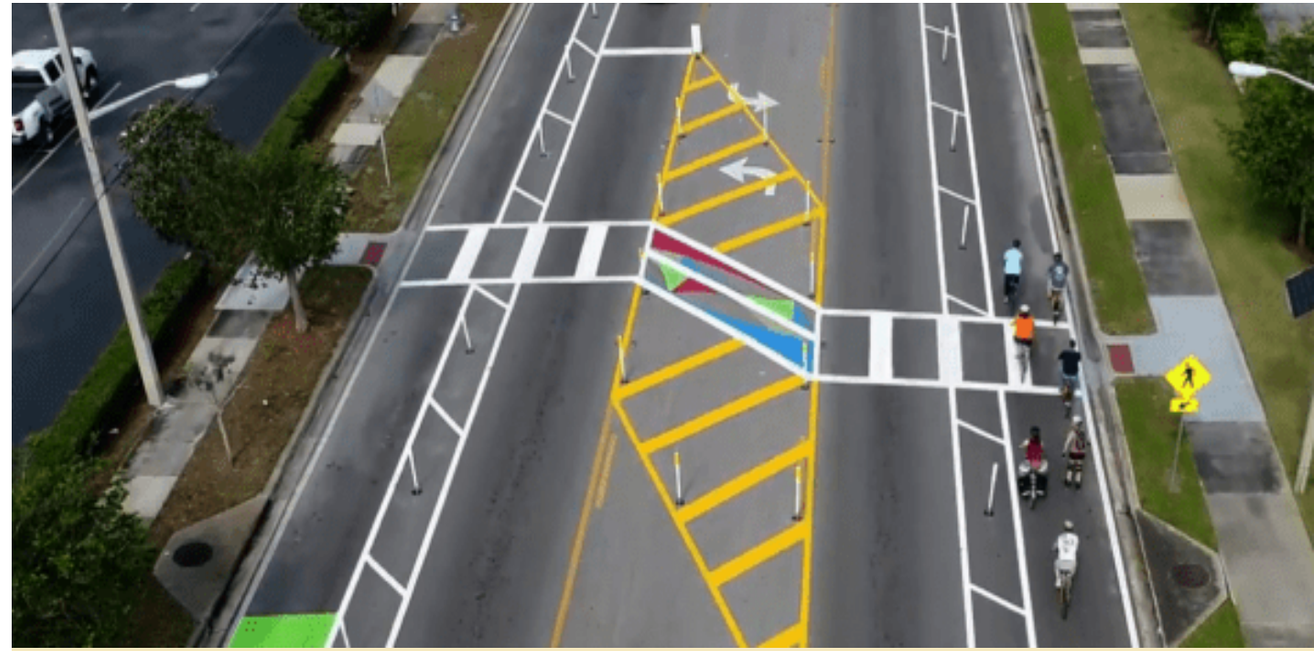
INCREASES CROSS-STREET CONNECTIONS

REDUCES VEHICLE SPEEDS

ADDED BENEFITS

LIGHTING

LANDSCAPING & BEAUTIFICATION



POP-UP PROJECT

PERMANENT INSTALLATION

DESIGN STRATEGIES

BULB-OUTS

Curb line is extended to reduce the curb radius at intersections or narrow the roadway midblock

REDUCES CROSSING DISTANCES

RECLAIMS PUBLIC SPACE

CALMS TRAFFIC

ADDED BENEFITS

INCREASE VISIBILITY

LANDSCAPING & BEAUTIFICATION

INTERSECTIONS	MIDBLOCK
POP-UP PROJECT	POP-UP PROJECT
PERMANENT INSTALLATION	PERMANENT INSTALLATION

DESIGN STRATEGIES

PARKLETS

Conversion of parking spaces to small parks, sidewalk cafés, and other public spaces

- INCREASES LOCAL FOOT AND BIKE TRAFFIC
- CREATES VIBRANT STREET ENVIRONMENT
- BOOSTS SALES FOR NEARBY BUSINESSES

ADDED BENEFITS

- CALMS TRAFFIC
- LANDSCAPING & BEAUTIFICATION
- FLEXIBLE SPACE

POP-UP PROJECT

PERMANENT INSTALLATION

DESIGN STRATEGIES

PROTECTED BIKE LANES

Buffered and protected bike lanes or cycle tracks can be placed within the current right-of-way

REDUCE VEHICLE CONGESTION

IMPROVE SAFETY FOR CYCLISTS

BOOST SALES FOR NEARBY BUSINESSES

ADDED BENEFITS

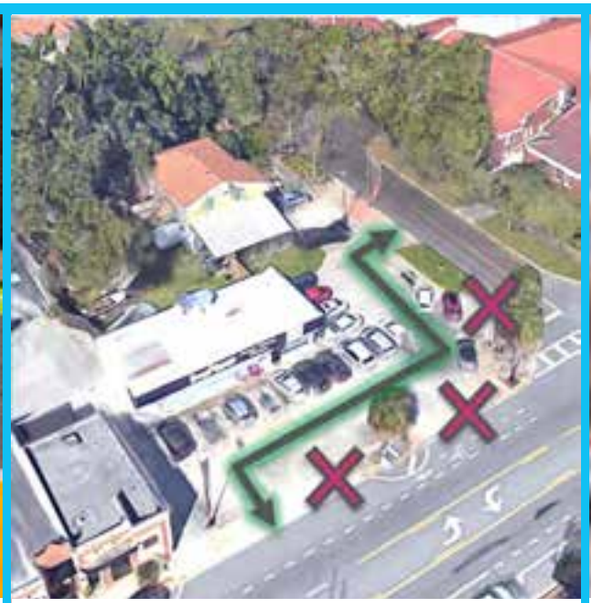
CALM TRAFFIC

PROTECT PEDESTRIANS

ONE-WAY LANES	CYCLE TRACK
POP-UP PROJECT	POP-UP PROJECT
PERMANENT INSTALLATION	PERMANENT INSTALLATION

OTHER COMPLETE STREETS STRATEGIES

PAINTED CROSSWALKS



DRIVEWAY CLOSURES

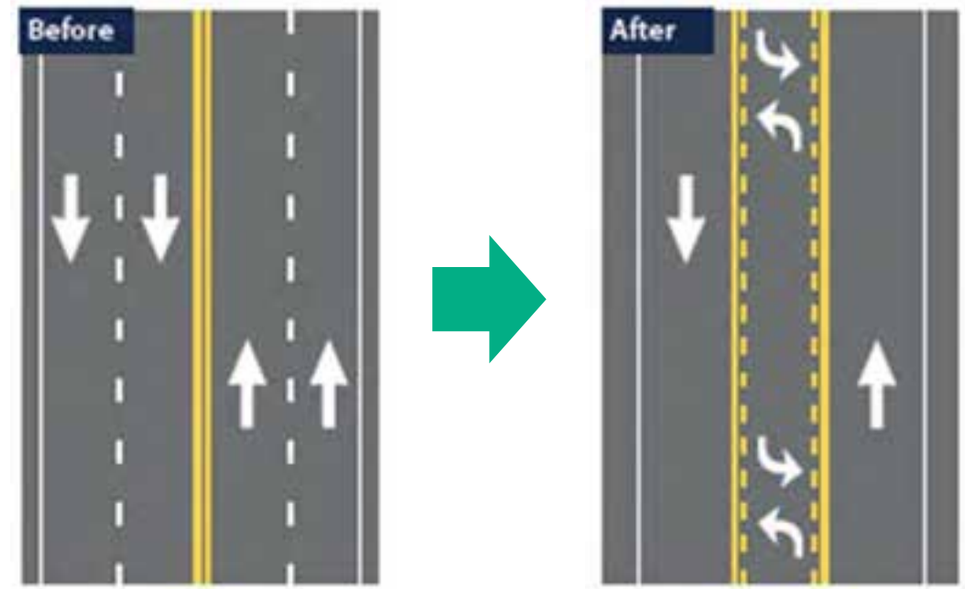
HUMAN-SCALE WAYFINDING

ENHANCED & ACCESSIBLE BUS STOPS

BIKE PARKING

ROAD DIET

A four-lane roadway can be narrowed to a two-lane roadway, possibly with a middle two-way left-turn lane



BOOSTS SALES FOR NEARBY BUSINESSES

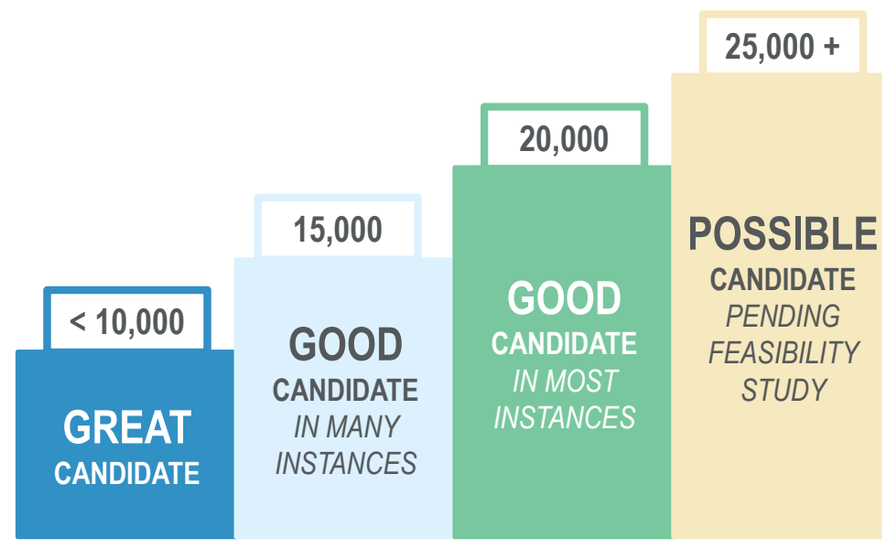
REALLOCATES FOR OTHER USERS

REDUCES SPEEDS AND VEHICULAR CRASHES

ADDED BENEFITS

LANDSCAPING & BEAUTIFICATION

IMPROVE PEDESTRIAN EXPERIENCE



*DATA FROM SAFETY.FHWA.DOT.GOV

04 WALKSHOP

POTENTIAL IMPROVEMENTS

ROUNDABOUTS

LANDSCAPED MEDIANS

PARKLETS

PROTECTED BICYCLE FACILITIES

RAISED INTERSECTIONS

MIDBLOCK BULB-OUTS

ON-STREET PARKING

SHARED ROAD (SHARROWS)

INTERSECTION RECONFIGURATIONS

INTERSECTION BULB-OUTS

REFUGE ISLANDS

FLASHING (RRFB) CROSSINGS

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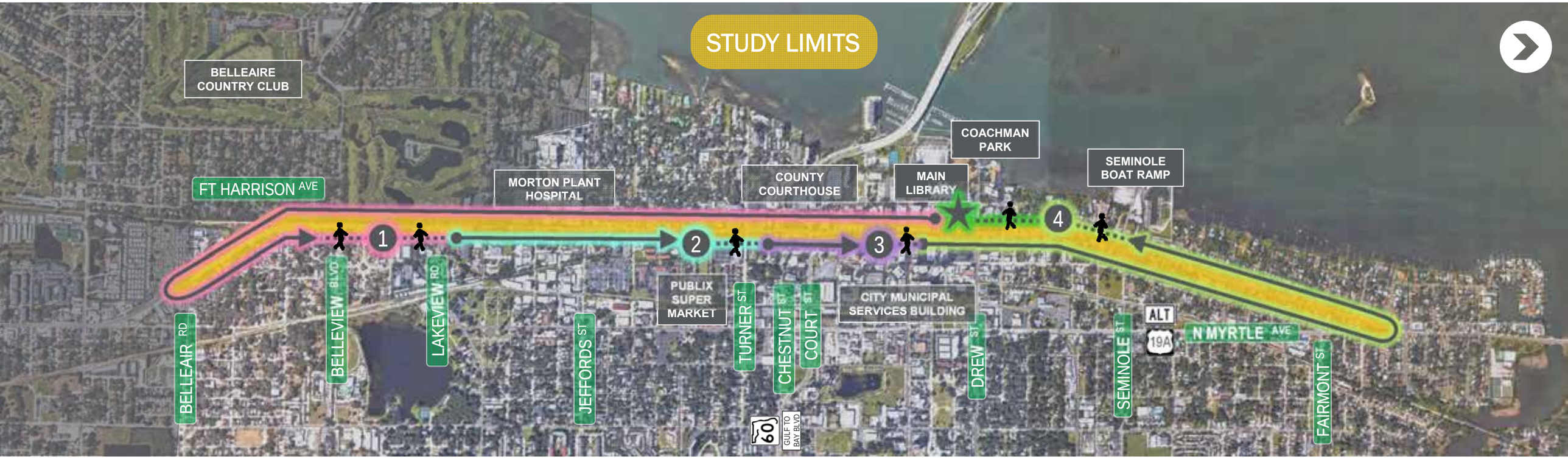
VI. WALKSHOP MATERIALS

WALKSHOP OVERVIEW & AGENDA

LIMITS: Ft. Harrison Avenue from Belleair Rd to N Myrtle Ave



DEPART FROM LIBRARY
10:30 AM

- RIDE IN TROLLEY TO 1ST DESTINATION
- OBSERVE AND DISCUSS CORRIDOR WHILE DRVING

1 BELLEVIEW BLVD
10:35 AM – 11:00 AM

- PARK AT BELLEAIR LANDING AND EXIT TROLLEY
- WALK FROM BELLEVIEW BLVD TO LAKEVIEW RD
- OBSERVE AND DISCUSS SEGMENTS 1A & 1B

2 TURNER ST
10:50 AM – 11:25 AM

- EXIT TROLLEY AT FT HARRISON & PINE BUS STOP * *PARK AT PUBLIX*
- WALK FROM BUS STOP TO TURNER ST
- OBSERVE AND DISCUSS SEGMENT 1B

3 CLEVELAND ST
11:30 AM – 11:55 PM

- STOP ON PARK ST AND EXIT TROLLEY
- WALK FROM PARK ST TO HENDRICKS ST
- OBSERVE AND DISCUSS SEGMENT 2

4 SEMINOLE ST
12:00 PM – 12:25 PM

- EXIT TROLLEY AT FT HARRISON & NICHOLSON BUS STOP
- WALK FROM SEMINOLE ST TO GEORGIA ST
- OBSERVE AND DISCUSS SEGMENT 3

RETURN TO LIBRARY
12:30 PM

- RIDE OR WALK TO LIBRARY
- REGROUP & DISCUSS CORRIDOR

SEGMENT 1A BELLEAIR RD TO BELLEVIEW BLVD

NOTES

CHARACTERISTICS

- No curb
- Little shade
- Wide driveways
- Unbuffered sidewalks in some areas

SEGMENT GOALS

1. Improve multimodal connections across corridor & into downtown
2. Create a gateway into the City & downtown

SEGMENT 1B BELLEVIEW BLVD TO CHESTNUT ST

NOTES

CHARACTERISTICS

- Pedestrian crossings
- Intermittent tress
- Unbuffered sidewalks
- Transition into downtown
- Trail separates from ROW

SEGMENT GOALS

- Improve multimodal connections across corridor & into downtown
- Create a gateway into the City & downtown

SEGMENT 2 CHESTNUT ST TO DREW ST

NOTES

CHARACTERISTICS

- Pedestrian friendly development
- Intermittent trees & shade
- Traffic congestion during peak times

SEGMENT GOALS

- Using streetscape to create a welcoming, livable, & economically vibrant downtown

SEGMENT 3 DREW ST TO N MYRTLE AVE

NOTES

CHARACTERISTICS

- Seminole St. boat ramp access
- Poor sidewalks & crossings
- Unbuffered & narrow sidewalks
- No trees & shade
- Underutilized ROW

SEGMENT GOALS

- Beautify the streetscape to attract investment & development to achieve future land use vision

APPENDIX B: PROJECT VISIONING TEAM #2 MEETING

On June 5, 2020 the Project Visioning Team virtually met for its second meeting. The presentation included information from the first PVT Meeting, a recap of the public input received, and preliminary recommendations for street improvements. Overall, the improvements were well-received by the PVT. The presentation was sent to all members after the meeting and they were given two weeks to provide comments or concerns regarding the recommendations. All comments have been addressed.

CITY OF CLEARWATER
FT HARRISON AVE COMPLETE STREETS STUDY
PROJECT VISIONING GROUP MEETING #2

Friday, June 5th, 2020

I. ATTENDEES

Name	Organization
Mark Suarez	HDR
Steve Schukraft	HDR
Mackenzie Bland	HDR
Lauren Matzke	City of Clearwater, Planning & Development
Gina Clayton	City of Clearwater, Planning & Development
Denise Sanderson	City of Clearwater, Economic Development & Housing
Chuck Lane	City of Clearwater, Economic Development & Housing
Michael Lavery	City of Clearwater, Parks & Recreation
Jesse Rhoades	City of Clearwater, Traffic Operations
Bryant Johnson	City of Clearwater, Solid Waste
Amanda Thompson	City of Clearwater, CRA
Alicia Paranillo	City of Largo
Rick Allison	Town of Belleair
Joseph Camera	PCSB Safety and Transportation
Karen Cunningham	Resident
Amanda Payne	Amplify Clearwater
Janelle Branch	The Ring
F. Bowling	Clearwater Brewing Company
Heather Sobush	PSTA
Gloria Lepic-Corridan	PSTA
Joan Rice	Pinellas County
Lisa Mansell	Church of Scientology
David Lillesand	Downtown Neighborhood Association

II. SUMMARY

- Mark Suarez (HDR) and Mackenzie Bland (HDR) gave presentation (see Section V)
    - Questions were submitted in the Webex Chat Box and answered throughout the presentation. Breaks in the presentation were included to allow for PVT members to ask questions
- Chat Box Conversation / Questions

- Gloria Lepic-Corridan (PSTA) asked do we have a way of looking at the people who might be fighting turning Ft. Harrison into a more complete street? (slides 17 – 20).
    - Mark Suarez (HDR) answered that this is an inexact science and we had people answer the survey in a way that is not in line with Complete Streets, but we are giving public engagement opportunities for anyone against the improvements.
    - Gloria Lepic-Corridan (PSTA) said that answered her question and she just wants to make sure the improvements happen.
- Heather Sobush (PSTA) said it might be interesting to see what the breakdown was for the more general Cleveland Street outreach versus the planners in the room (slides 17 – 20).
    - Mark Suarez (HDR) clarifies that the outreach was not specifically for Cleveland St. It was to attend the Blast Friday event which is on Cleveland St and Ft. Harrison Ave.
- Mackenzie Bland (HDR) answered chat box questions that the speed limit for the entire corridor is 30 mph.
- Joan Rice (Pinellas County)) commented that bike parking in front of businesses is the way to go. Riders feel they have priority being close to their destination, not an afterthought and can keep an eye on their bicycle. She liked the painting on the pavement at the bike racks as well (slide 25).
- Karen Cunningham (resident) said there were good ideas here. From a resident's perspective, please mention the use of signage, for example to direct to the trail and to downtown, etc. and also safety signage (slides 23 – 28).
    - Mark Suarez (HDR) agrees that signage can be important to know where you especially when combined with the design strategies.
- Karen Cunningham (resident) commented that with the mention of bus shelters and placemaking this is an opportunity to tie the entire city to the downtown. She suggested an artistic, unique design for Clearwater shelters, cost subsidized by the city (slides 23 – 28).
- Joan Rice (Pinellas County) commented that a shorter distance for pedestrians to be in the roadway is good (slides 23 – 28).
- Joan Rice (Pinellas County) said that where it is recommened not to move the curb, sometimes it is more difficult not to dig down and remove the asphalt. The

pipes below may need to be replaced and moving the curb might be beneficial. When you do remove a piece of asphalt you need to dig down and remove the lime rock down below so that the plants can grow (slide 36).

    - Mark Suarez (HDR) agreed that those decisions can evolve during final design.
  - Lauren Matzke (City of Clearwater) added that the City has budgeted for the next steps for this project and that hopefully the City would be able to do the improvements comprehensively.
  - Bryant Johnson (City of Clearwater) asked where the delivery trucks will park to unload if the center lane / space is eliminated (slide 40).
    - Mark Suarex (HDR) clarified that the loading zone would be moved to the western side of the road as a flexible parking / loading zone to take the delivery trucks out of the middle of the roadway.
  - Joan Rice (Pinellas County) agreed that more room is needed for pedestrians at the hotel (slide 40).
  - David Lillesand (Downtown Neighborhood Association) agreed that a loading zone for hotel guests is needed by the hotel (slide 40).
  - Joan Rice (Pinellas County) commented that a different color for the loading zone may be needed so motorists don't think it is a through lane (slide 40).
    - Mark Suarez (HDR) clarified that there would be a bulb-out at the intersection so that cars cannot drive straight through the loading zone.
  - Bryant Johnson (City of Clearwater) commented to please keep in mind as you narrow and eliminate lanes, that garbage trucks will be servicing containers all along the streets. Without passing lanes all traffic will get 'stuck' behind those trucks (slide 42).
    - Mackenzie Bland (HDR) answered the comment, clarifying that the center turn lane is not meant to be a passing lane and it can be more dangerous when used as one.

III. NEXT STEPS

- Send presentation to PVT for final comments
- Present to City Council

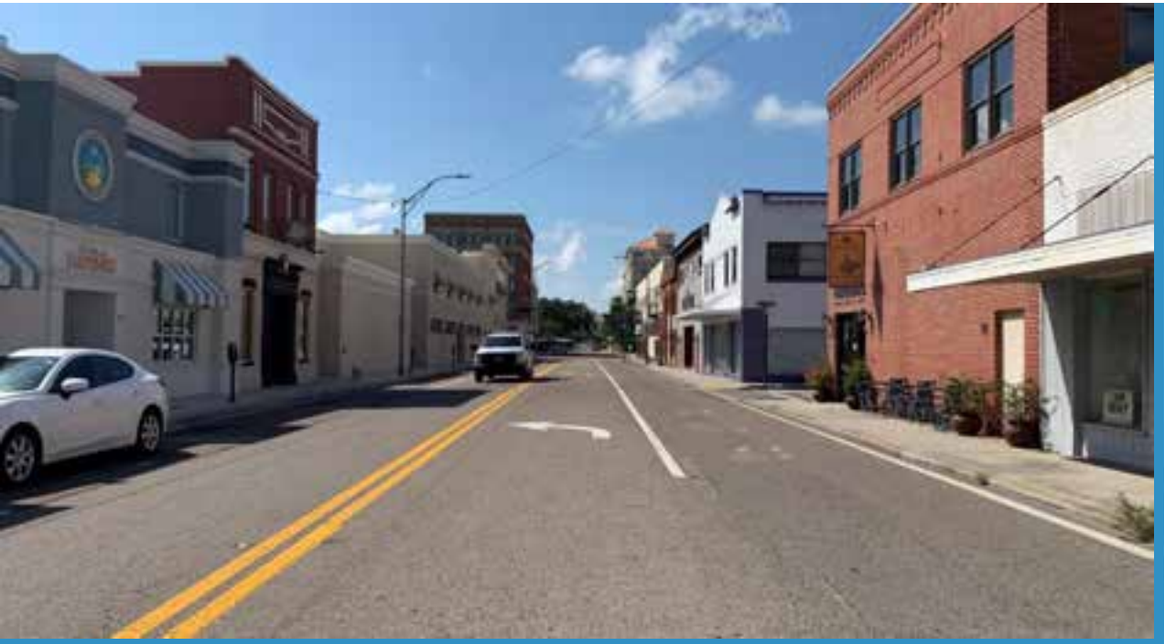
IV. SUMMARY OF COMMENTS FROM PVT REVIEW

	Commenter	Representing	Comments	Responses
1	Richard "Rick" Perez, AICP, MPA, FRA-RP	City of Largo	At the staff level, we are supportive of the ped crossing and refuge south of Belleair Rd. The location of the crossing will facilitate safe crossing where the Alta Belleair Apartment project, on the west side of Ft. Harrison, will include a connection to the Pinellas Trail that generally aligns with Belleair Rd. You can download the approved site plan here: https://content.largo.com/s/SsRJrcLN6ce4cYN (password: Alta 1 Site Plan)(expiration date: 2020-06-20) Please clarify if the segment of roadway north of our city limits in Clearwater or the County's jurisdiction? If it is the County's, are they indicating whether they support and will implement the road diet and other improvements on their portion of the roadway? Finally, the Clearwater Largo Rd Community Development District encompasses the area in the City that is adjacent to this project. The City is working towards updating our Clearwater Largo Rd Community Development Plan in the next 2 years and will likely consider the feasibility of similar roadway treatments and configuration along our portion of CL Rd at that time.	There seem to be no issues with the concept proposed. The site plan can be shared with engineering since the Belleair intersection is joint jurisdiction.
2	Greg Stading	BayCare Facilities Services, West Region	We (Morton Plant Hospital) have a significant concern regarding the proposed plan to eliminate the center turn lane on Ft. Harrison in Segment 2. Our concern is ambulances, fire trucks, and other emergency response vehicles presently use the center turn lane to circumvent traffic in the normal drive lanes. What is your plan for those emergency response vehicles? Have you specifically discussed this with Sunstar, the fire department and the police department? Please feel free	The elimination of the Segment 2 center turn lane is only recommended at pedestrian crossings (for a pedestrian refuge). The presence of dirveways and side streets in the corridor should allow for cars to clear the way for emergency vehicles in the

			to contact me for further follow-up and discussion. Thank you.	chance that a turn lane is removed.
3	Lisa Mansell	Church of Scientology - Public Affairs Director	Final comments were provide separately.	Responses being developed separately.
4	Bryant Johnson	City of Clearwater	My only concerns are ensuring access to residential or commercial trash receptacles along Fort Harrison as well as unimpeded access to sidewalk trash receptacles. If the road is narrowed then we are conceding that that service will impede traffic that has already been reduced. No additional comments other than those.	Trash pickup is an occasional occurrence that could potentially be mitigated with revised routing and scheduling of pick-ups for off peak time.
5	Amanda Thompson	Clearwater CRA - Director	I'm good. I think there are several good options for each segment and I'd love to have any of these improvements.	No changes.
6	Karen Cunningham	Clearwater Neighborhoods Coalition	Thanks for asking, Lauren. I asked a question about signage. I think that people who set up the projects just assume others, especially walkers, know more than they actually do. Simple signs. Showing things like the Pinellas Trail connection, and safety reminders that, for example, remind drivers and bicyclists that there are areas that may be dangerous for crossings, etc, could help keep people safe and oriented.	Recommendations include improved wayfinding and pavement markings.

7	David Lillesand	Lillesand & Associates, P.A.	I did not have any problem opening the files and did so, and actually reviewed them. I just didn't have anything different to add. I thought the whole presentation and the summary was extremely well done. . .	No changes.
8	Michael Lavery	Clearwater Parks & Rec	Hi Lauren, thanks for checking in. I do not have any comments beyond what was discussed in the meeting.	No changes.
9	Autumn Westermann	Pinellas Public Schools	I was able to open the attachments and I don't have any concerns. Thanks so much for making sure!	No changes.
10	Joan Rice	Pinellas County	No additional comments	No changes.
11	Jesse Rhoades	Clearwater Engineering Traffic Operations	No additional comments	No changes.
12	Roger T. Johnson, P.E.	Clearwater Stormwater	In reviewing the preliminary concepts developed, I do not have objections to the intent, or ideas presented. Please note, the concepts presented will have significant impacts on the roadway alignment and infrastructure presently below grade. It is important to note this as we move forward and ensure we provide a clear picture of what the total impacts and costs will be when presented to council for support.	After further discussions, the study will identify costs based on strategies to avoid major odrainage impacts..

V. PRESENTATION



FT. HARRISON AVENUE

Complete Streets Study

Project Recap and Preliminary Concepts

HDR

CLEARWATER
BRIGHT AND BEAUTIFUL · BAY TO BEACH

01 PROJECT RECAP

02 PUBLIC INVOLVEMENT

03 PRELIMINARY CONCEPTS

04 NEXT STEPS

01 PROJECT RECAP

PROJECT PURPOSE

Develop concepts to advance Clearwater's **mobility, safety, and placemaking** objectives through a complete streets approach

- ✓ Define **achievable improvements** for the corridor
- ✓ Define **priority improvement projects** to move forward into engineering and design

FORWARD PINELLAS

- The **Forward Pinellas Complete Streets Program** provides funding for the planning and construction of complete streets projects
- The City was awarded a grant of $50,000 for this project

SCHEDULE

SEPT '19
STUDY KICK-OFF

NOV '19
VISIONING TEAM MEETING & WALKSHOP

FEB '20
BLAST FRIDAY & PUBLIC INPUT SURVEY

MAR '20
DEVELOP CONCEPT ALTERNATIVES

JUN '20
STAFF & VISIONING TEAM REVIEW RESULTS

SUMMER '20
CITY COUNCIL PRESENTATION

VISIONING TEAM MEETING & WALKSHOP

WEDNESDAY

Nov 13th, 2019

30

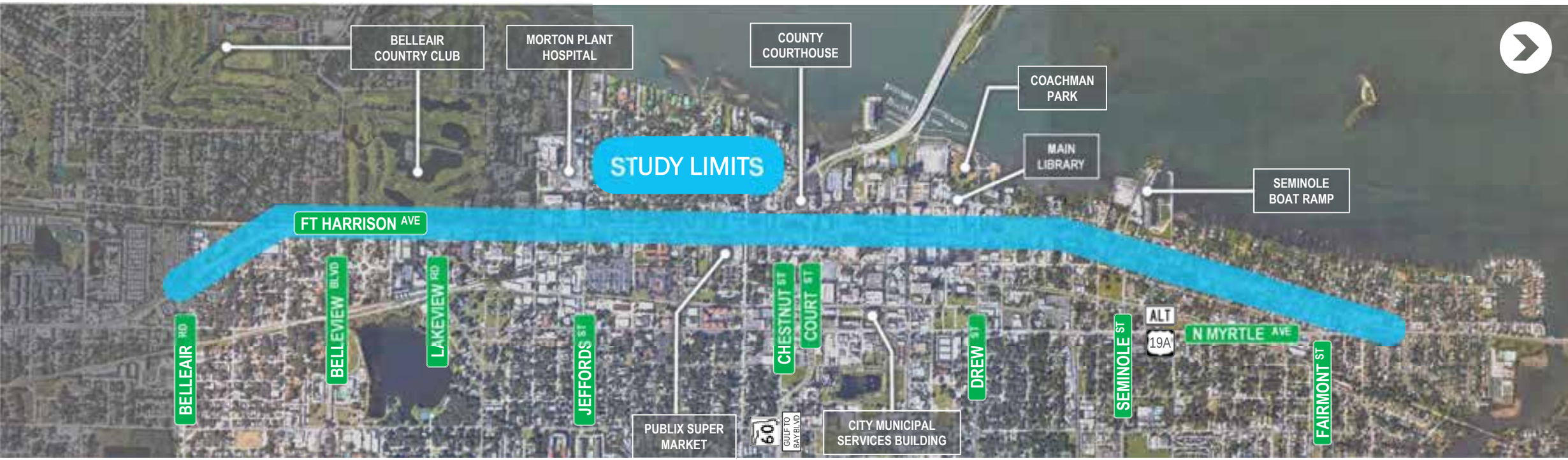
ATTENDEES

KEY OBSERVATIONS & COMMENTS

- Maintenance of sidewalks
- Back of curb sidewalks feel dangerous
- Identity for Ft. Harrison

- The Project Visioning Team (PVT) is made up of business owners, residents, local agencies, and city staff who have an interest in the corridor
- The consultant presented on the project background and potential design strategies
- The group walked through different spots along the corridor to observe existing conditions and brainstorm ideas

PROJECT OVERVIEW



LIMITS: Ft. Harrison Avenue from Belleair Rd to N Myrtle Ave

3.2
MILES

CITY OF CLEARWATER
JURISDICTION

CONNECTEDNESS TO KEY DESTINATIONS

- CLEARWATER BEACH
- SEMINOLE BOAT RAMP
- PARK ST TRANSIT CENTER
- MORTON PLANT HOSPITAL
- CITY OF LARGO
- CITY OF DUNEDIN
- US ALT-19 & US 19
- SR 60

WHAT IS A COMPLETE STREET?

COMPLETE STREETS REALLOCATE STREETSPACE TO BE DESIGNED FOR AND OPERATED BY EVERYONE

INCLUDING VEHICLES, TRANSIT, PEDESTRIANS, & CYCLISTS OF ALL AGES & ABILITIES

MOBILITY

- Approximately 2 out of every 5 Pinellas County residents are under the age of 18 or over the age of 65

PLACEMAKING

- Slower & fewer vehicles create a more vibrant, livable place
- Community is fostered in outside spaces

SAFETY

- Good bicycle & pedestrian infrastructure is safer for all users
- Crash & injury risk can be reduced with slower speeds

HEALTH

- Walking & biking for short trips (under 1 mile) improves personal health & the environment

COMPLETE STREETS FOR CLEARWATER

IMPLEMENTATION PLAN

"PROVIDE A NETWORK OF STREETS AND BALANCED TRANSPORTATION OPTIONS THAT ARE SAFER AND MORE EFFICIENT FOR EVERYONE. . . ."

GUIDING PRINCIPLES

- SAFE, COMFORTABLE TRAVEL
- TRANSPORTATION ACCESSIBILITY
- MULTIMODAL MOBILITY
- CONNECTED AND INVITING
- ECONOMIC VITALITY AND PLACEMAKING
- COMMUNITY HEALTH
- SOCIAL EQUITY AND INVESTMENT
- COMMUNITY CHARACTER AND CONTEXT SENSITIVITY
- ENVIRONMENTAL PROTECTION AND SUSTAINABILITY
- TECHNOLOGY

PREVIOUS STUDIES / PLANS

US ALT-19 CORRIDOR STUDY

FAIRMONT ST ROUNDABOUT

FDOT, *MAY 2019*

- Project goals
  - Improve traffic operations on US Alt-19
- Importance
  - Corridor serves as alternative N-S corridor to Ft Harrison Ave
  - Improved operations on corridor will allow for more successful traffic calming and safety measures on Ft Harrison Ave
- Proposed roundabout to relieve traffic congestion for vehicles going from northbound Ft Harrison Ave onto northbound Alt-19

PREVIOUS STUDIES / PLANS

COMPLETE DREW STREET

DOWNTOWN SEGMENT

FORWARD PINELLAS, *OCTOBER 2019*

- Project goals
  - Improve safety, accessibility, and connectivity with land uses
  - Support existing businesses and future growth
  - Promote active living with improved access to trails
- Improvements:
  - Bike infrastructure
  - Road diet from four lanes to two lanes
  - Additional parking
  - Improved streetscape

PREVIOUS STUDIES & PLANS

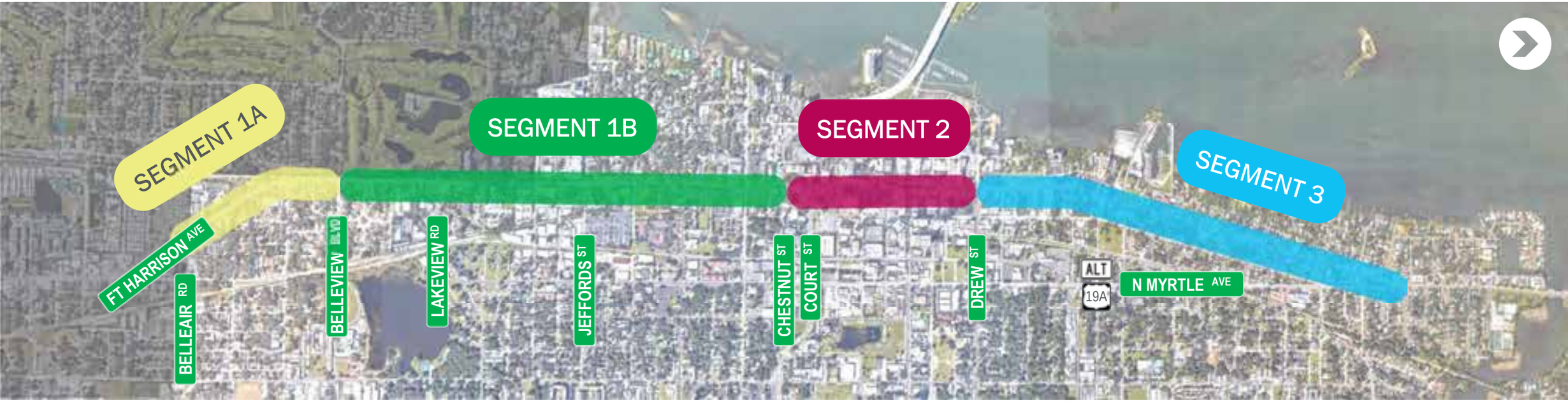
NORTH MARINA AREA MASTER PLAN

FT HARRISON AVE CONCEPT

CITY OF CLEARWATER, *JANUARY 2016*

- Project Goals
  - Redevelopment plan for area surrounding the Seminole Boat Ramp
- On Ft Harrison Ave
  - Wider sidewalks
  - Activated corners as social areas
  - Enhanced interface between pedestrian zone and building uses
  - Avoid driveway conflicts with pedestrians
  - Single-story retail
  - Mid-rise residential
- Ft Harrison Ave & Seminole St
  - Gateway feature

SEGMENT CHARACTERISTICS



Segment 1A

Belleair Rd to Belleview Blvd

Typical Right-of-Way

100’

Typical Section

4 LANE UNDIVIDED

Segment 1B

Belleview Blvd to Chestnut St

Typical Right-of-Way

60’

Typical Section

2 LANES WITH TWLTL*

*Two Way Left Turn Lane

Segment 2

Chestnut St to Drew St

Typical Right-of-Way

55 – 70’

Typical Section

2 LANES WITH TWLTL*

Segment 3

Drew St to N Myrtle Ave

Typical Right-of-Way

55 – 60’

Typical Section

2 LANES WITH TWLTL*

SEGMENT CHARACTERISTICS

DATA & STATISTICS

	CORRIDOR*	CITY	COUNTY
MEDIAN HOUSEHOLD INCOME	$24K	$45K	$47K
POPULATION BELOW POVERTY LEVEL	24%	16%	14%
MINORITY POPULATION	26%	20%	26%
HOUSEHOLDS WITH NO VEHICLES	22%	12%	9%
POPULATION UNDER 18	16%	19%	17%
POPULATION OVER 65	21%	21%	24%

*Includes the area within a ¼ mile walkshed of the Project corridor

DEFINING SUCCESS

Segment 1

- Improve **multimodal connections** across corridor & into downtown
- Create a **gateway** into the City & downtown

Segment 2

- Use streetspace to create a **welcoming, livable, & economically vibrant** downtown

Segment 3

- **Beautify** the streetspace to **attract investment and development** to achieve future land use vision

02 PUBLIC INVOLVEMENT

PUBLIC WORKSHOP

BLAST FRIDAY

Friday Feb 28th
FROM 5 PM TO 10 PM

300+
PEOPLE REACHED AT BLAST FRIDAY

Social Media
OUTREACH INCLUDED POSTS TO FACEBOOK & NEXTDOOR

600
POSTCARDS MAILED

- Outreach before event included social media posts, postcard mailers, and an email to stakeholders
- Handed pamphlets to people attending event
- Spoke with attendees and increased awareness of the project
- Encouraged people to take the MetroQuest survey

What word describes your future vision for Ft. Harrison Ave?

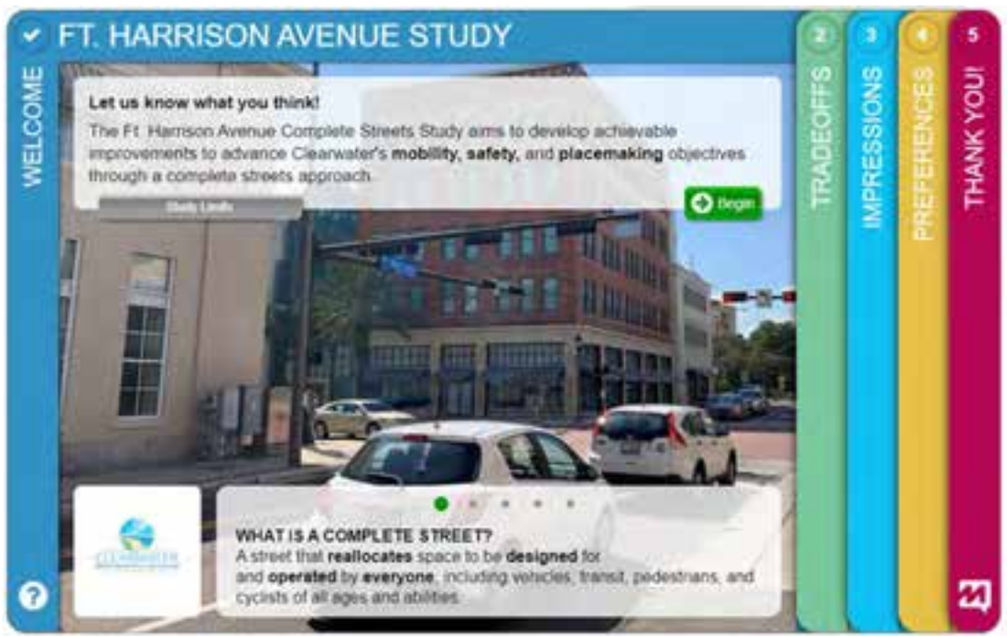
PUBLIC INPUT SURVEY

OVERVIEW

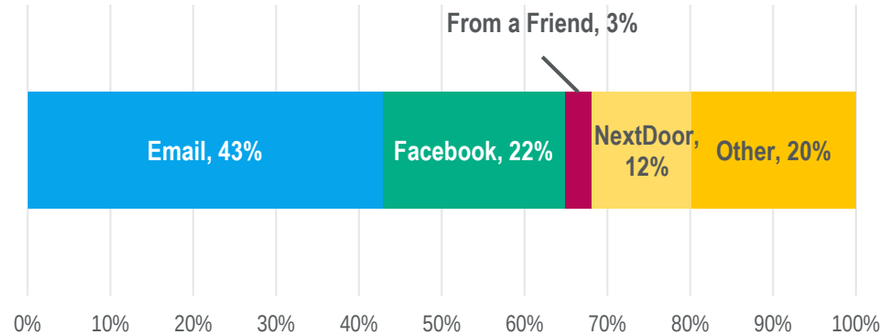
131
TOTAL PARTICIPANTS

3 weeks
TO RESPOND

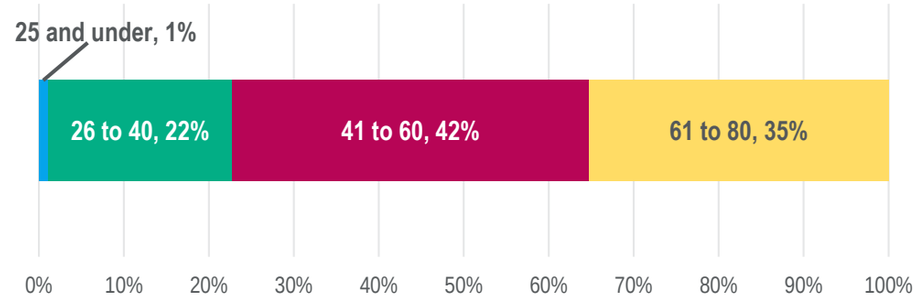
5 min
TO COMPLETE



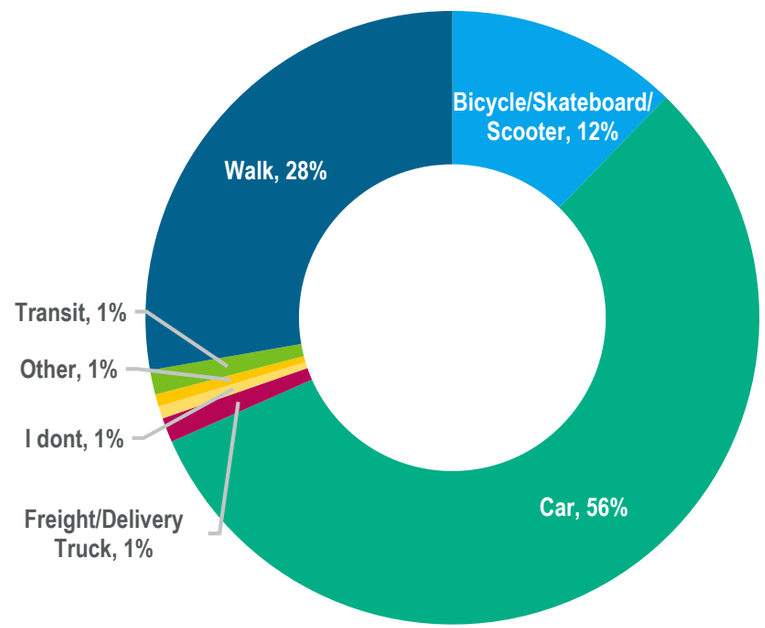
How did you hear about this survey?



Age Distribution



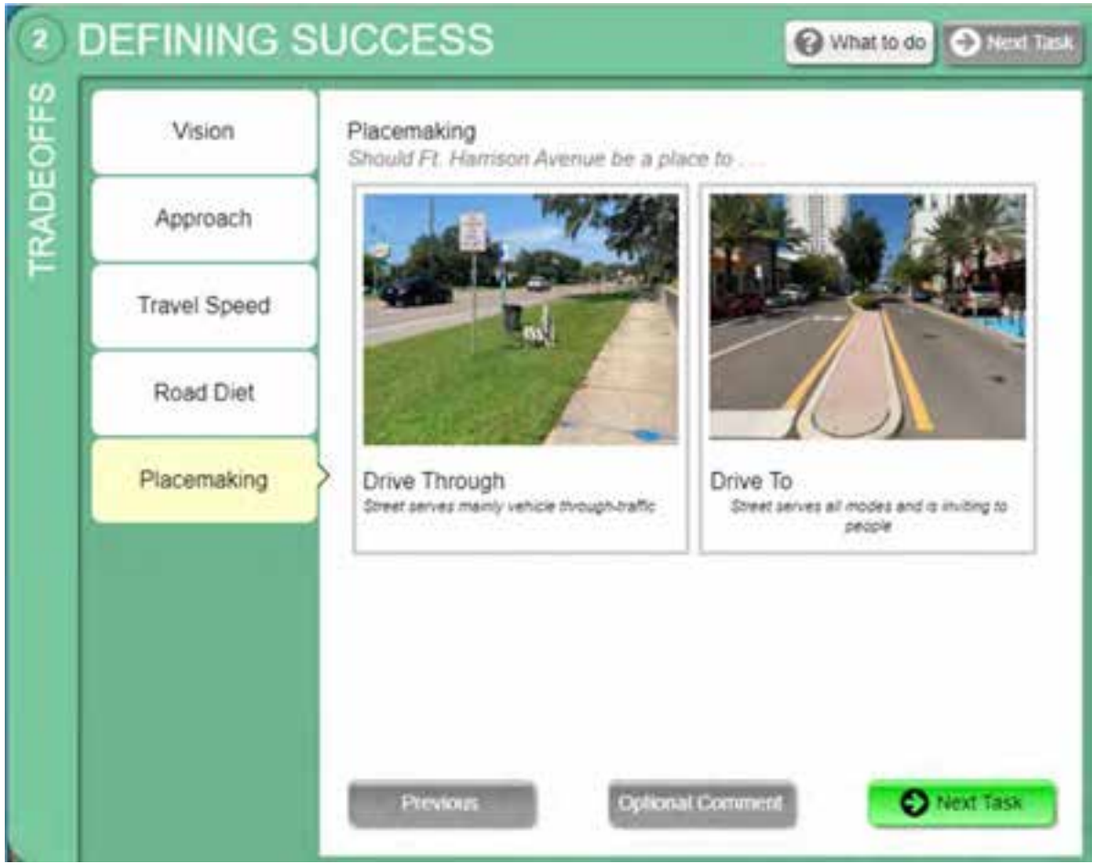
Which way(s) do you travel on Ft. Harrison?

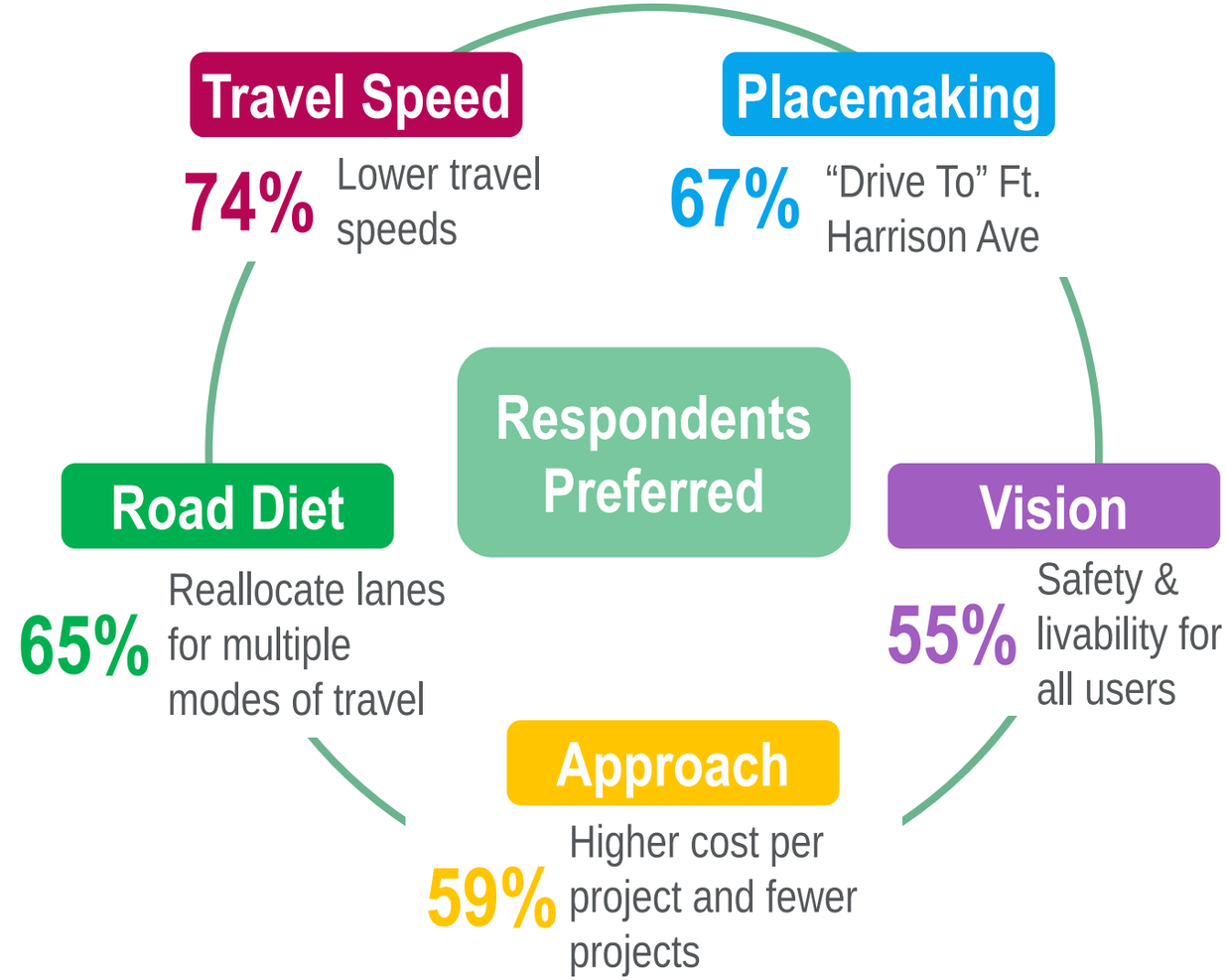


PUBLIC INPUT SURVEY

TRADEOFFS

Example Screen





PUBLIC INPUT SURVEY

IMPRESSIONS

Example Screen

Highest rated photos:

3.7

Painted Crosswalk
Segment 3

3.6

Enhanced Intersection
Segment 2

3.3

Midblock Crossing
Segment 1B

Lowest rated photos:

2.3

Bus Stop
Segment 1A

2.3

Driveway Conflicts
Segment 2

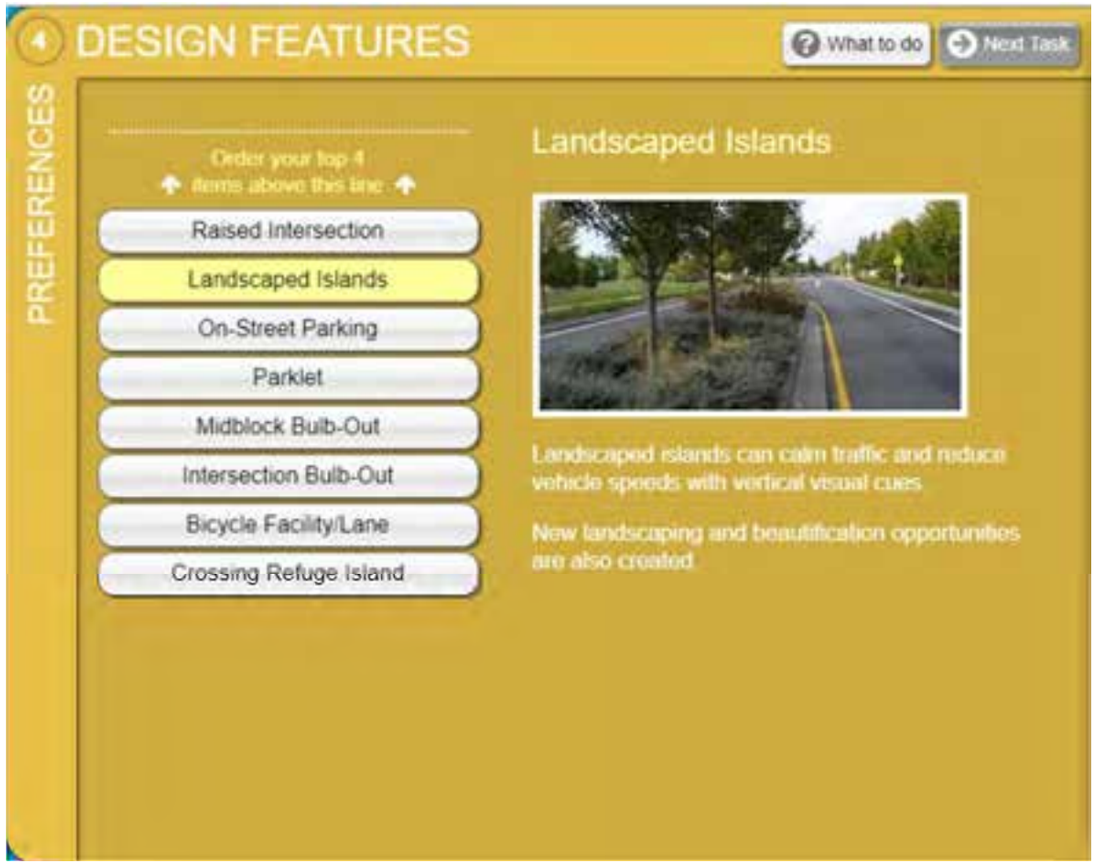
2.4

Street Character
Segment 1A

PUBLIC INPUT SURVEY

PREFERENCES

Example Screen



Design features ranked most often:

(Respondents ranked their top 4 features from 8 choices)

1

LANDSCAPED ISLANDS

2

CROSSING REFUGE ISLAND

Design features ranked highest:

(Respondents ranked their top 4 features from 8 choices)

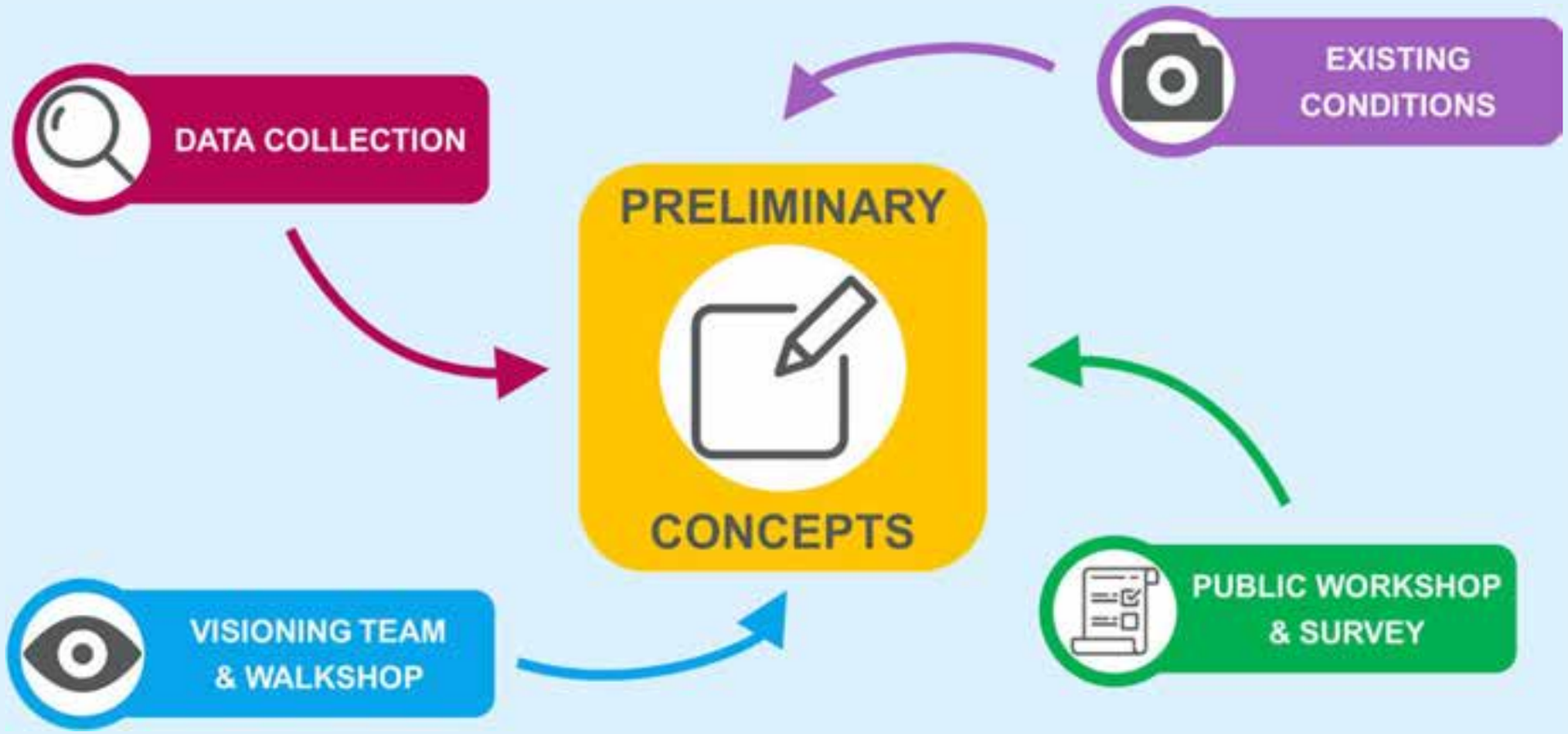
1

ON-STREET PARKING

2

CROSSING REFUGE ISLAND

MOVING FORWARD



03 PRELIMINARY CONCEPTS

DESIGN STRATEGIES OVERVIEW

PARKLET

LANDSCAPED ISLANDS

BICYCLE FACILITY

INTERSECTION BULB-OUT

ON-STREET PARKING

MIDBLOCK BULB-OUT

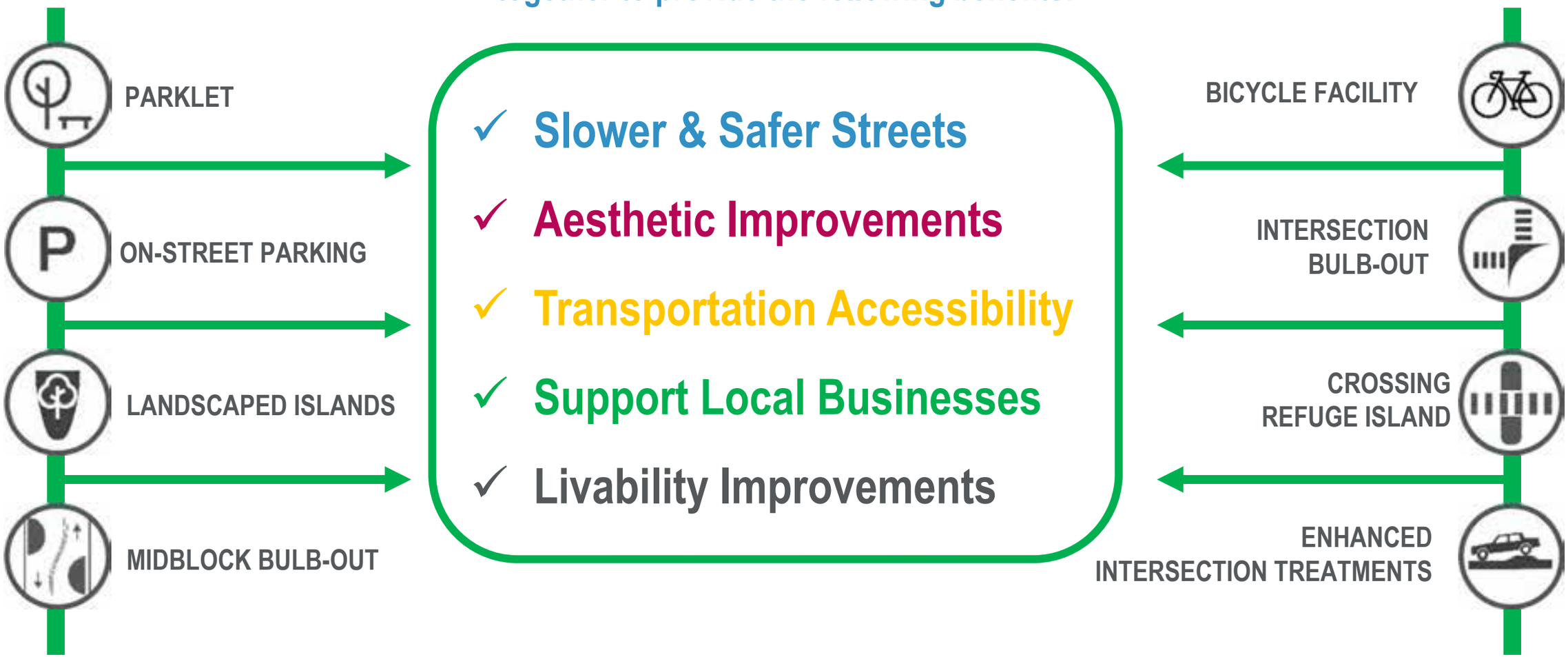
CROSSING REFUGE ISLAND

ENHANCED INTERSECTION TREATMENTS

Each design strategy provides their own unique benefits to enhancing a street . . .

DESIGN STRATEGIES OVERVIEW

. . . and in combination, these strategies work together to provide the following benefits:



ADDITIONAL COMPLETE STREETS STRATEGIES

PAINTED INTERSECTIONS

- Calm traffic and beautify the street
- Demonstration project for future raised intersection
- Implement with other features, such as bulb-outs

Central Ave & 5th St in St. Petersburg, FL

GENERAL STRATEGIES

- Encourage and accommodate non-vehicle travel
- Increase street activity and access to businesses
- Create a sense of place

BIKE PARKING

ENHANCED & ACCESSIBLE BUS STOPS

LIGHTING

SEATING

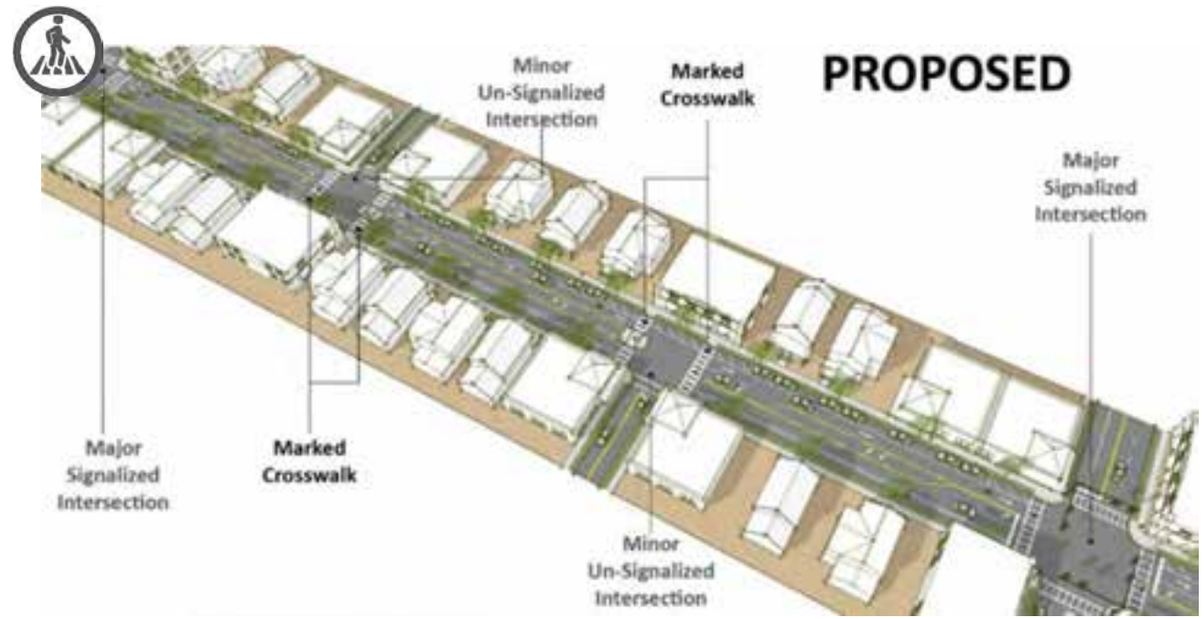
OVERALL IMPROVEMENTS

SHORT BLOCKS

The Florida Design Manual (FDM), published by the Florida Department of Transportation (FDOT) recognizes and recommends emphasizing the existing grid of streets with marked crosswalks to slow vehicles and improve the pedestrian experience.

- Calm traffic by reinforcing presence of existing grid and pedestrians
- Increase pedestrian connections

Marked crosswalks at minor street intersections



Source: FDOT Design Manual Chapter 202

OVERALL IMPROVEMENTS

CROSSINGS WITH REFUGE ISLANDS & RRFB SIGNALS

- Create safer crossing conditions for pedestrians
- Calm traffic with pedestrian presence and median island

Improve existing midblock crossings with RRFB lights and refuge islands

- Rapid rectangular flashing beacon (RRFB) requires vehicles to stop
- Provide opportunity for aesthetic / landscape improvements

CROSSING REFUGE ISLAND

FLASHING (RRFB) CROSSINGS

OVERALL IMPROVEMENTS

BICYCLE ACCOMODATIONS

- Calm vehicle traffic to support mixed traffic of bicycles & vehicles
- Connect to existing trails and bikeways

Utilize existing trail network and increase buffer from traffic

Create a safer street for riders and connect existing facilities

CONNECT TO EXISTING TRAILS & BIKEWAYS

SIDEWALK CONDITIONS

- Manage driveway access and sidewalk conflicts
- Maintain and refurbish damaged sidewalks

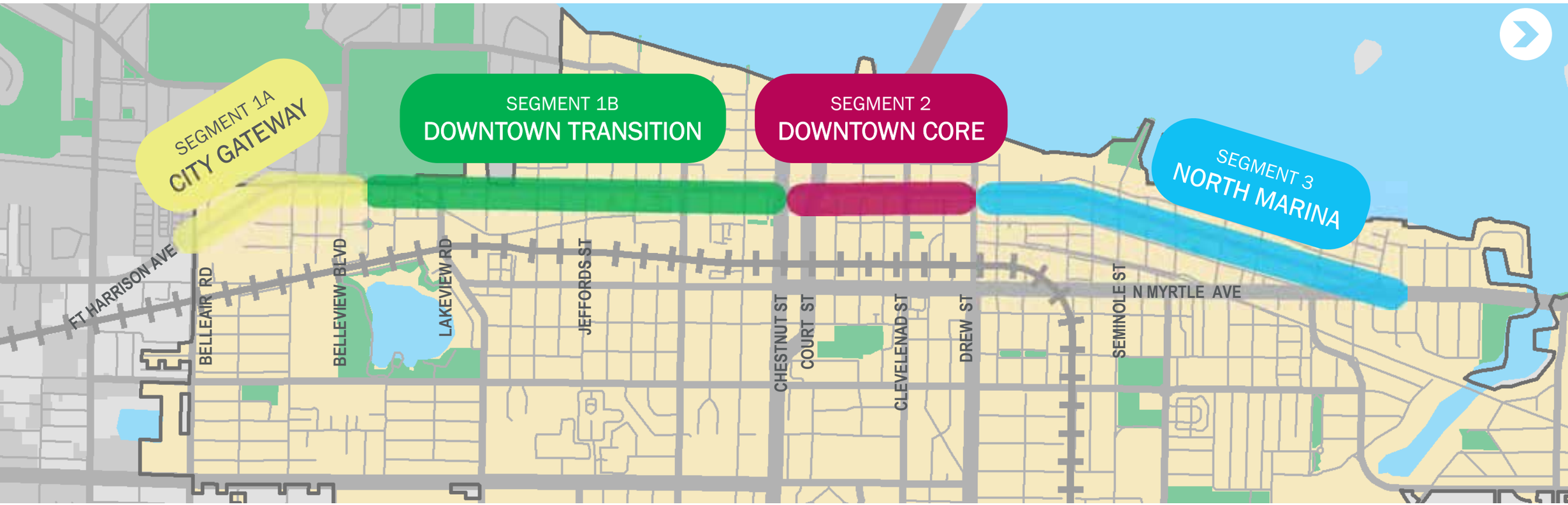
Close or shorten driveways where possible

Buffer sidewalk from street where available right-of-way exists

Driveway closure example

PRELIMINARY CONCEPTS

OVERVIEW



Segment 1A

FROM BELLEAIR RD TO BELLEVIEW BLVD

Segment 1B

FROM BELLEVIEW BLVD TO CHESTNUT ST

Segment 2

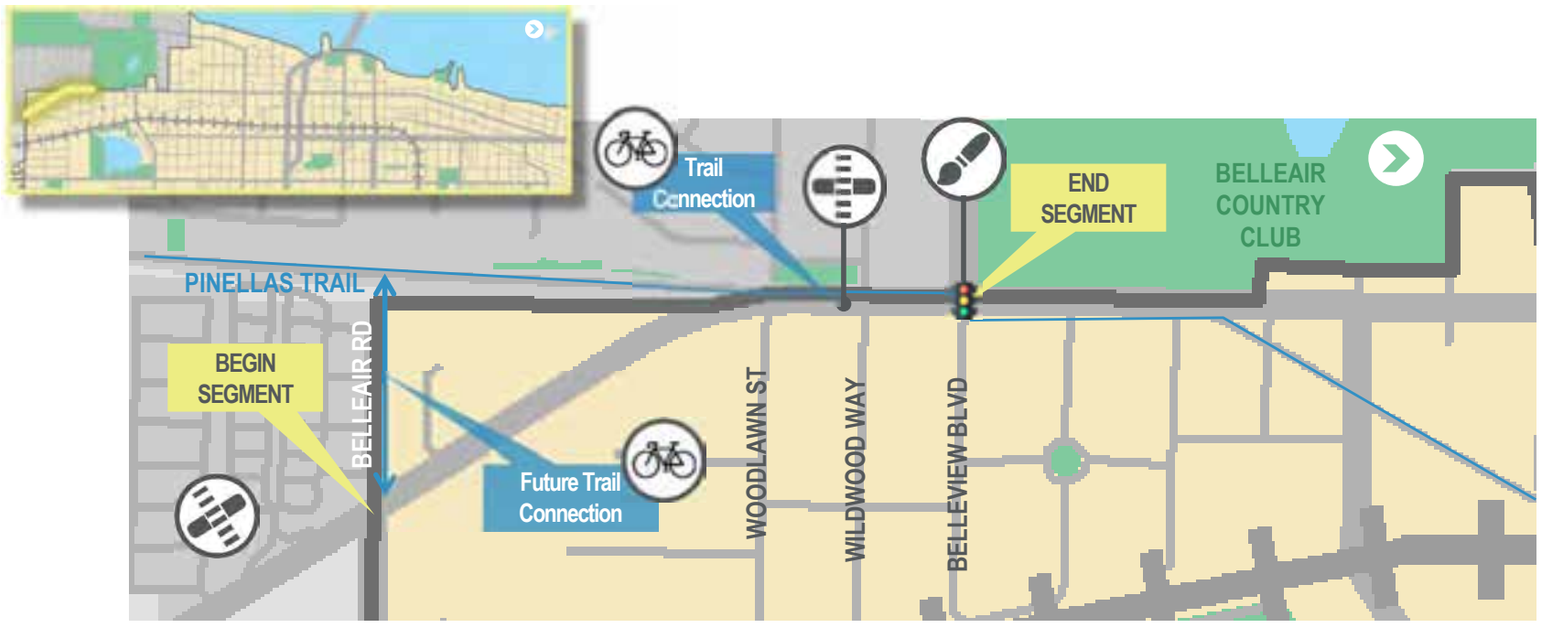
FROM CHESTNUT ST TO DREW ST

Segment 3

FROM DREW STREET TO N MYRTLE AVE

SEGMENT 1A: City Gateway

BELLEAIR RD to BELLEVIEW BLVD



- Evaluated a **road diet** from Belleair Rd to Belleview Blvd
- Improved **multimodal connections** across corridor
- Created a **gateway** into the City & downtown

OVERALL IMPROVEMENTS

*See concept plans for details

ROAD DIET
Reduce from 4 lanes to 3 lanes throughout segment

INTERSECTION BULB-OUTS
Reduce radii at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

LANDSCAPED ISLANDS
Add landscaped islands in center turn lane where turning movements are not needed
Add landscaped islands along eastern side to narrow the road

SPECIFIC IMPROVEMENTS

PAINTED INTERSECTION
Paint intersection at Belleview Blvd to enhance Pinellas Trail crossing, serve as a gateway into the City, and calm traffic

CROSSING REFUGE ISLANDS
Refuge islands added in the center turn lane at two proposed crosswalk locations
Additional crosswalk locations to include refuge islands

BICYCLE FACILITIES
Improve connections to existing Pinellas Trail

SEGMENT 1A: City Gateway

BELLEAIR RD to BELLEVIEW BLVD

EXISTING 4 LANES

PROPOSED ROAD DIET WITH 3 LANES

OVERALL IMPROVEMENTS

*See concept plans for details

ROAD DIET
Reduce from 4 lanes to 3 lanes throughout segment

INTERSECTION BULB-OUTS
Reduce radii at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

LANDSCAPED ISLANDS
Add landscaped islands in center turn lane where turning movements are not needed
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SPECIFIC IMPROVEMENTS

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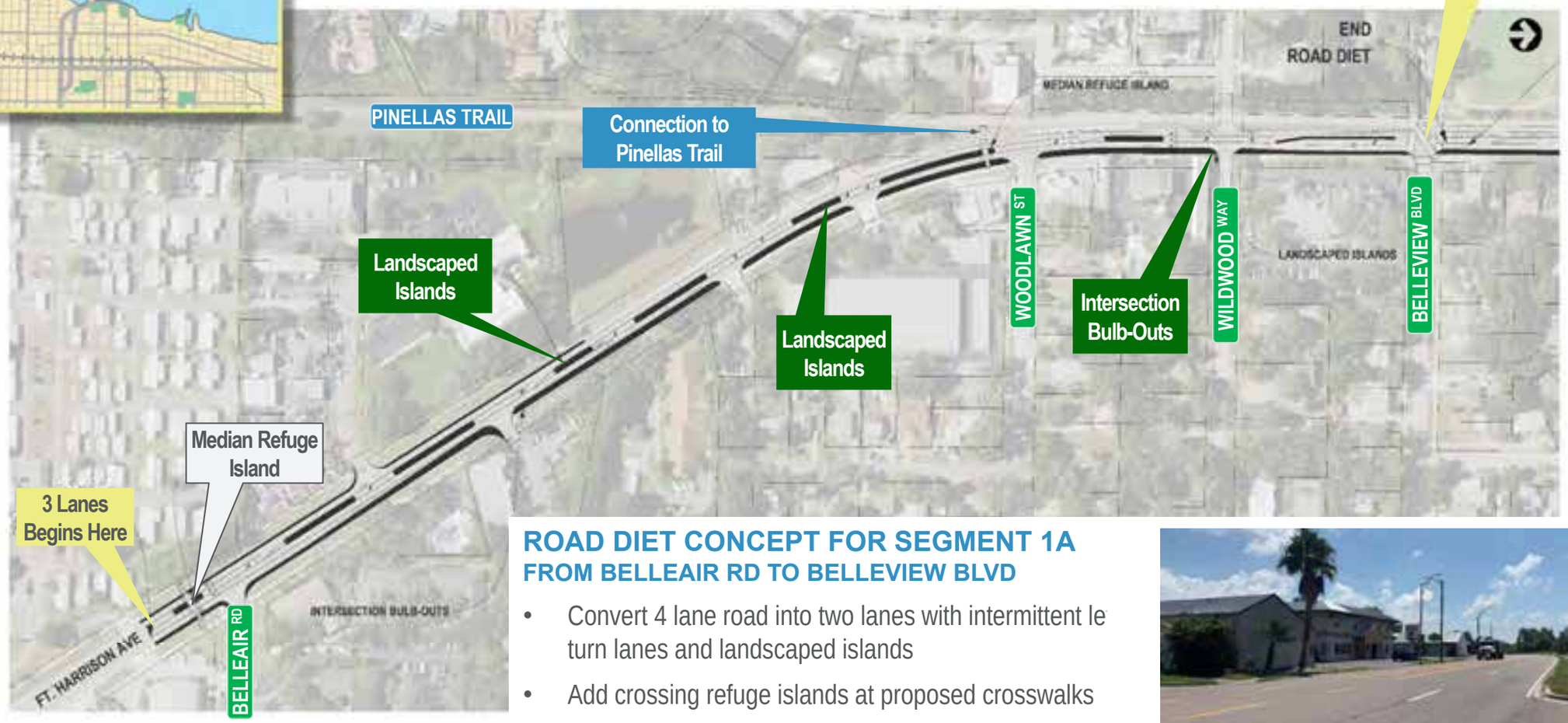
BICYCLE FACILITIES
Improve connections to existing Pinellas Trail

SEGMENT 1A: City Gateway

BELLEAIR RD to BELLEVIEW BLVD



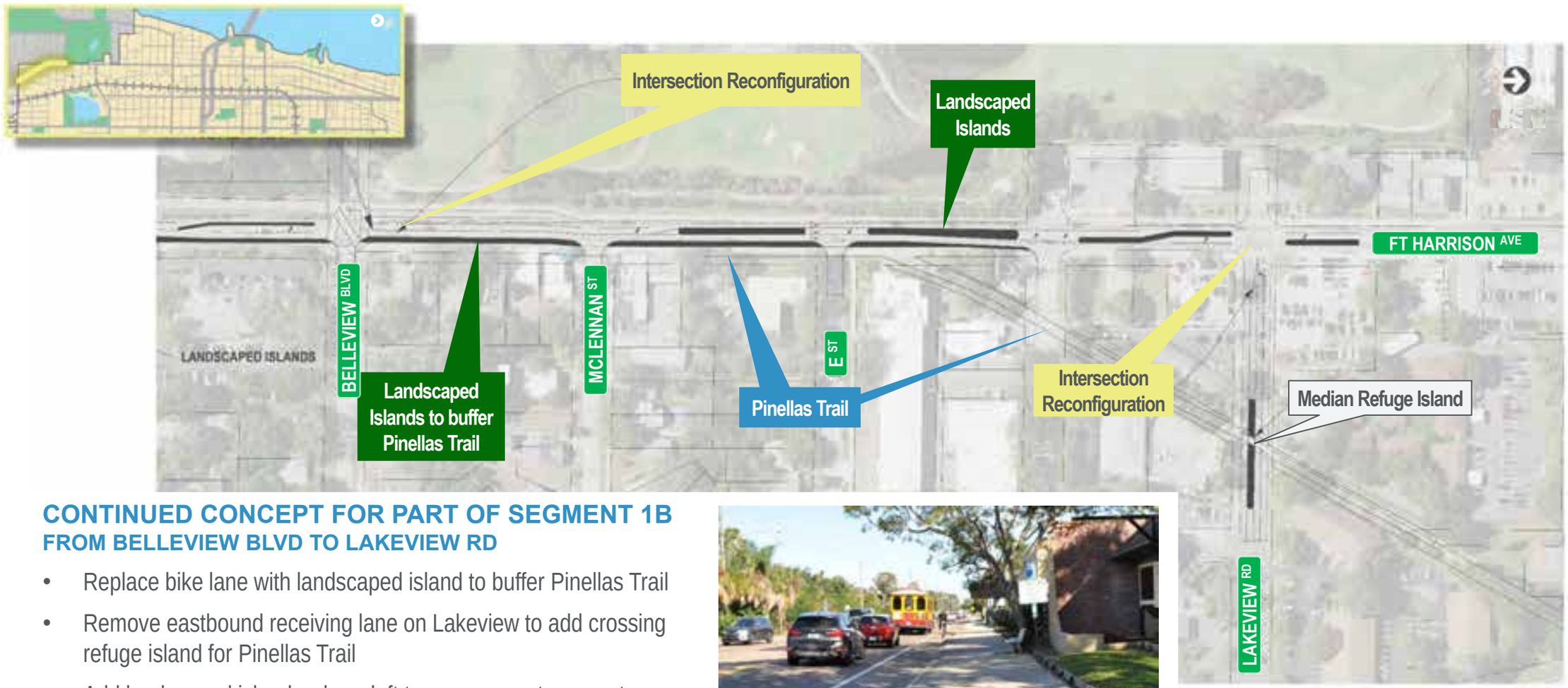
ROAD DIET CONCEPT FOR SEGMENT 1A
FROM BELLEAIR RD TO BELLEVIEW BLVD

- Convert 4 lane road into two lanes with intermittent le turn lanes and landscaped islands
- Add crossing refuge islands at proposed crosswalks
- Landscaped islands on eastern edge buffer sidewalk
- Remove one southbound receiving lane at Belleview

LOOKING SOUTH ON FT. HARRISON AVE FROM WILDWOOD WAY

SEGMENT 1A: City Gateway

BELLEAIR RD to BELLEVIEW BLVD



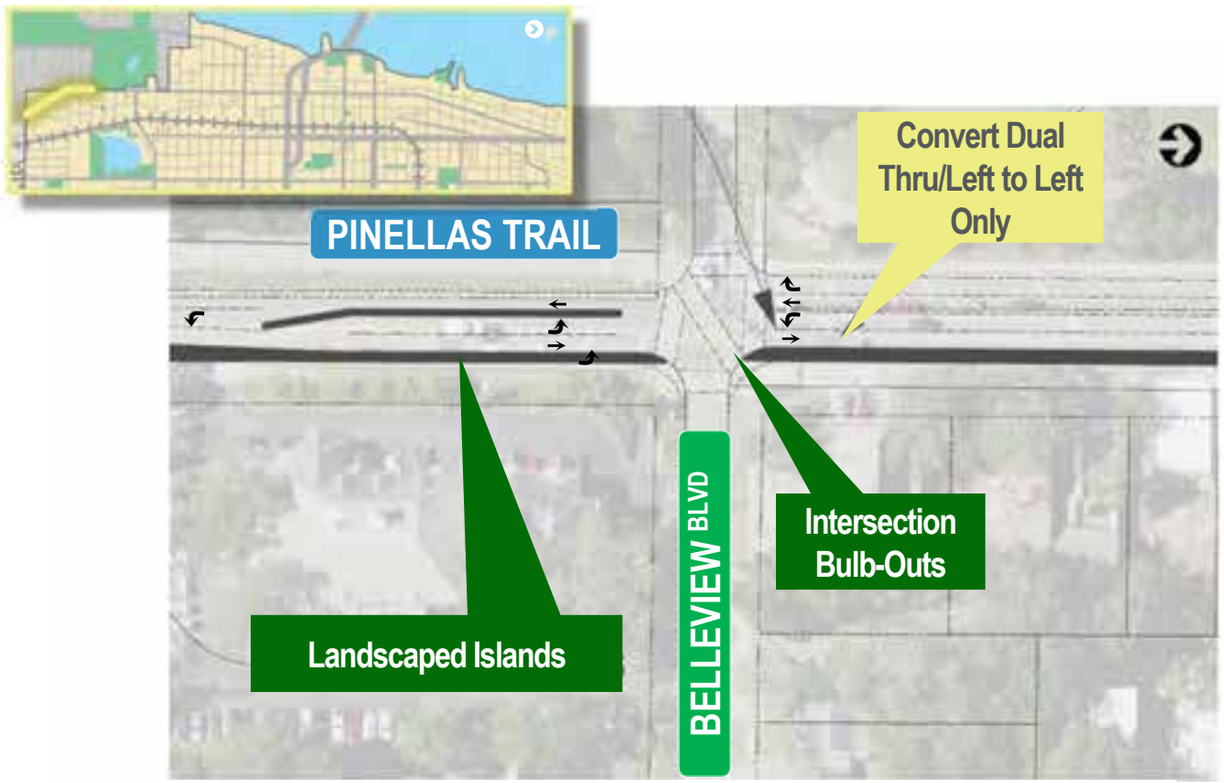
CONTINUED CONCEPT FOR PART OF SEGMENT 1B
FROM BELLEVIEW BLVD TO LAKEVIEW RD

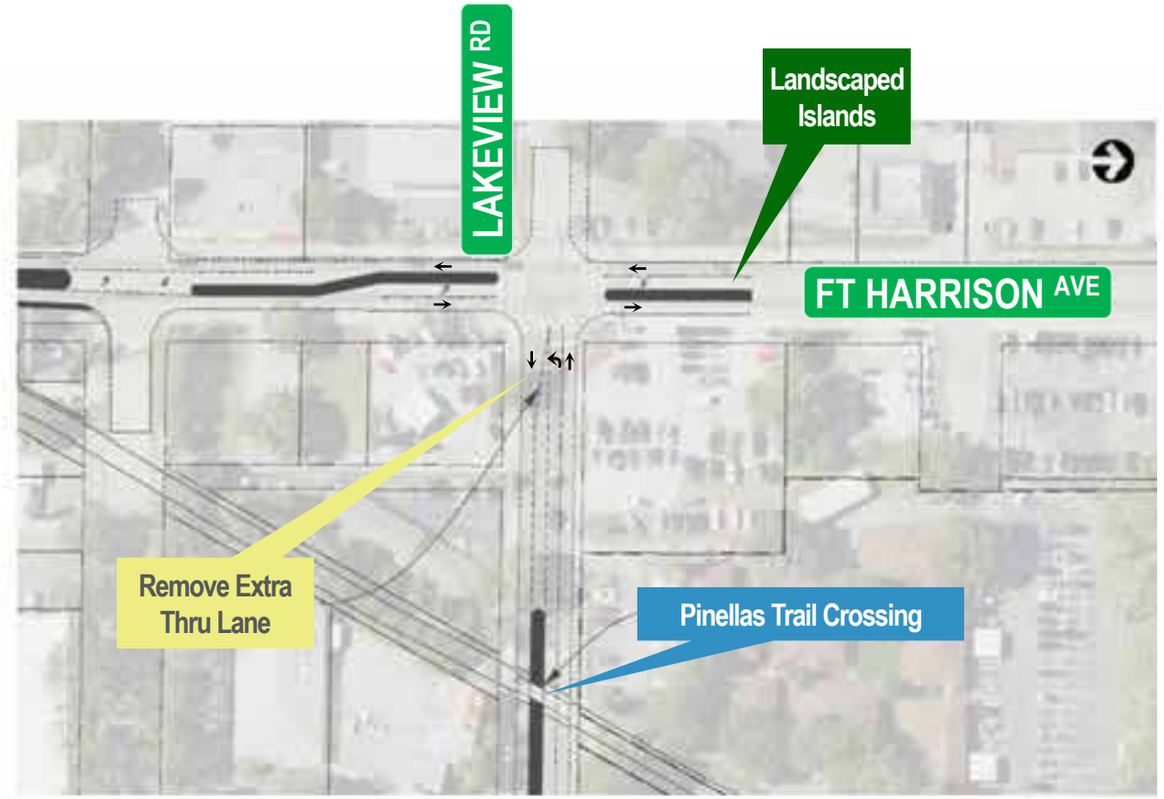
- Replace bike lane with landscaped island to buffer Pinellas Trail
- Remove eastbound receiving lane on Lakeview to add crossing refuge island for Pinellas Trail
- Add landscaped islands where left turn movements are not needed to calm traffic and improve aesthetics near Pinellas Trail

LOOKING NORTH ON FT. HARRISON AVE FROM PINELLAS TRAIL

SEGMENT 1A: City Gateway

BELLEAIR RD to BELLEVIEW BLVD





ROAD DIET CONCEPT FOR SEGMENT 1A
BELLEVIEW BLVD INTERSECTION

- Reconfigure to maintain 3 lanes on each side of the intersection
- Intersection bulb-outs and landscaped islands to create a smaller intersection

ROAD DIET CONCEPT FOR SEGMENT 1A
LAKEVIEW RD INTERSECTION

- Remove thru lane on eastbound Lakeview Rd
- Use former thru lane for a median refuge island for the Pinellas Trail

SEGMENT 1A: City Gateway

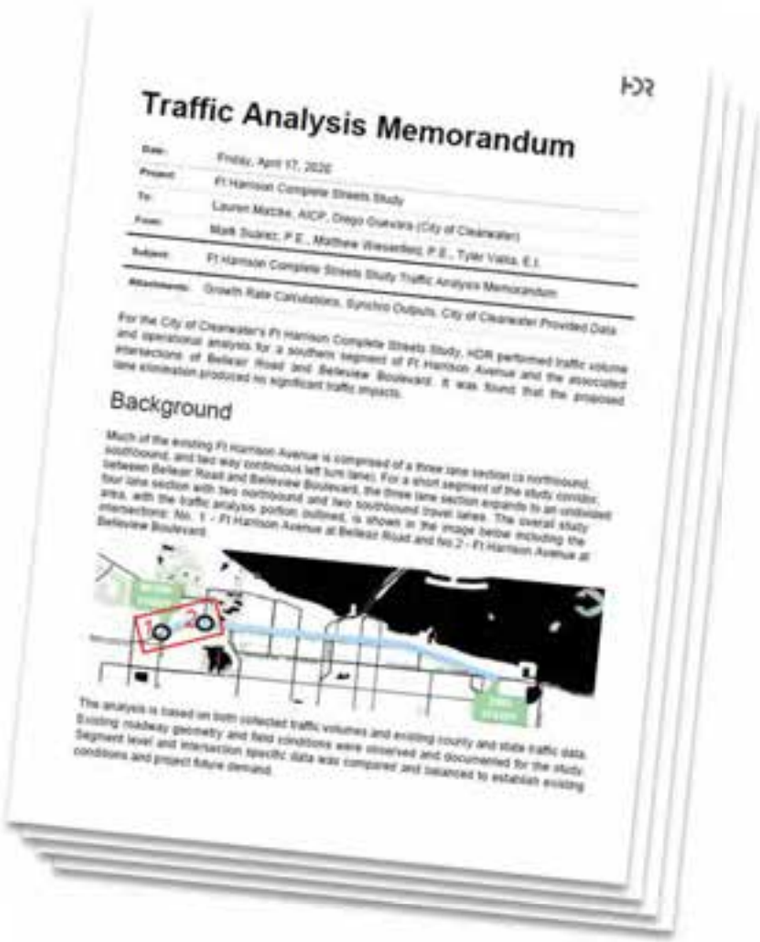
BELLEAIR RD to BELLEVIEW BLVD

METHODOLOGY

- Traffic volume & operational analysis for Segment 1A and Belleview Blvd
- Utilized 1% per year growth rate through 2040
- Measures of Effectiveness (MOEs)
  - Intersection and approach delay per vehicle
  - Approach volume to capacity ratios
  - 50th percentile queue lengths

RESULTS

- Proposed Segment 1A corridor Level of Service (LOS) decreases from LOS C to LOS D (PM peak)
- Proposed Belleview Blvd intersection travel time increase (average of all approaches in PM peak):
  - 2020 → 3 seconds or less
  - 2040 → 7 seconds or less



Traffic Analysis Memorandum

Date: Friday, April 17, 2020

Project: Ft Harrison Complete Streets Study

To: Lauren Matzke, AICP, Diego Guevara (City of Clearwater)

From: Mark Sulecz, P.E., Matthew Wesselbaum, P.E., Tyler Vatta, E.I.

Subject: Ft Harrison Complete Streets Study Traffic Analysis Memorandum

Attachments: Growth Rate Calculations, Synchro Outputs, City of Clearwater Provided Data

For the City of Clearwater's Ft Harrison Complete Streets Study, HDR performed traffic volume and operational analysis for a southern segment of Ft Harrison Avenue and the associated intersections of Belleair Road and Belleview Boulevard. It was found that the proposed lane elimination produced no significant traffic impacts.

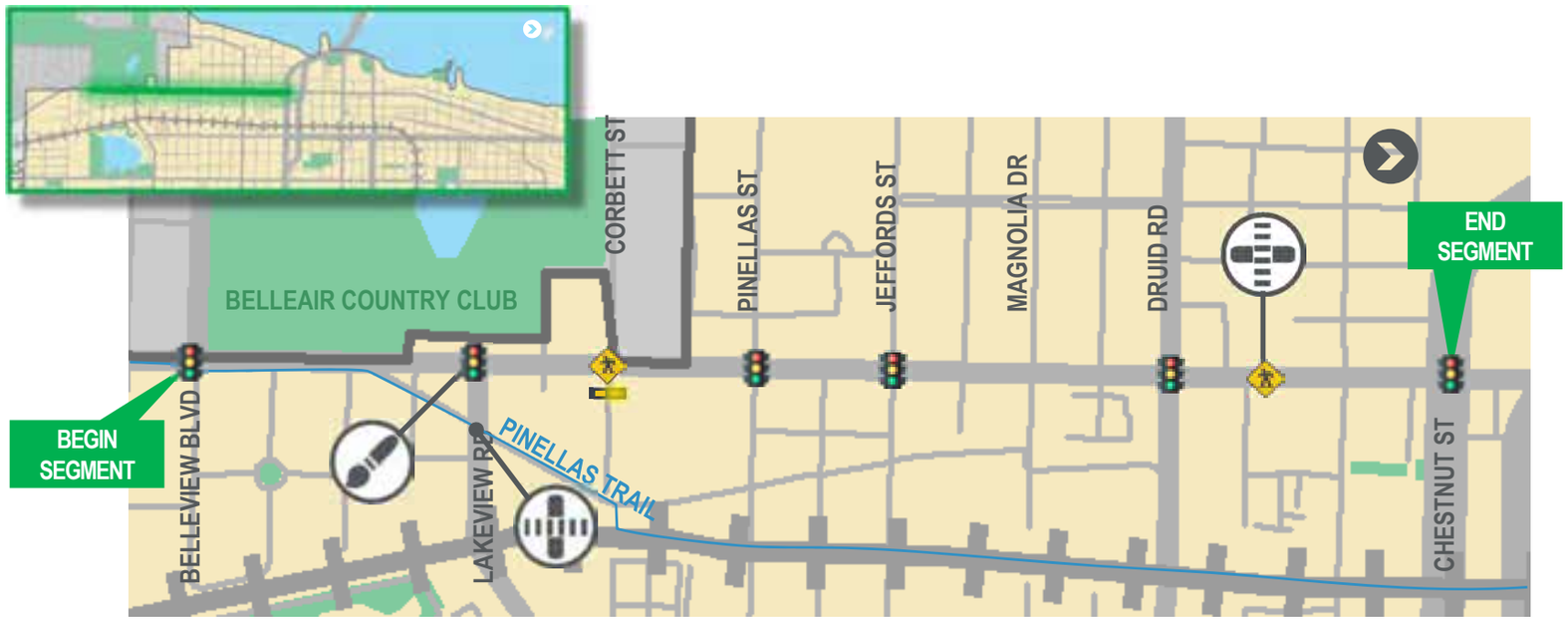
Background

Much of the existing Ft Harrison Avenue is comprised of a three lane section (a northbound, southbound, and two way continuous left turn lane). For a short segment of the study corridor, between Belleair Road and Belleview Boulevard, the three lane section expands to an undivided four lane section with two northbound and two southbound travel lanes. The overall study area, with the traffic analysis portion outlined, is shown in the image below including the intersections: No. 1 - Ft Harrison Avenue at Belleair Road and No.2 - Ft Harrison Avenue at Belleview Boulevard.

The analysis is based on both collected traffic volumes and existing county and state traffic data. Existing roadway geometry and field conditions were observed and documented for the study. Segment level and intersection specific data was compared and balanced to establish existing conditions and project future demand.

SEGMENT 1B: Downtown Transition

BELLEVIEW BLVD to CHESTNUT ST



- Evaluated a **road diet** from Belleair Rd to Belleview Blvd
- Improved **multimodal connections** across corridor
- Created a **gateway** into the City & downtown

OVERALL IMPROVEMENTS

*See concept plans for details

INTERSECTION BULB-OUTS
Reduce radii at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

LANDSCAPED ISLANDS
Add landscaped islands in center turn lane where turning movements are not needed and in unbuffered bike lanes
Add landscaped islands along eastern side to in current bike lane to buffer Pinellas Trail

BICYCLE FACILITIES
Improve connections to Pinellas Trail and other bikeways
Remove unbuffered bike lanes and improve off-street facilities

MARKED CROSSWALKS
Add marked crosswalks at minor intersections to reinforce grid, improve pedestrian connections, and calm traffic

SPECIFIC IMPROVEMENTS

PAINTED INTERSECTION
Intersection at Lakeview Rd painted to enhance Pinellas Trail crossing, serve as a gateway into the City, and calm traffic

CROSSING REFUGE ISLANDS
Add refuge islands in center turn lane at midblock crossings

SEGMENT 1B: Downtown Transition

BELLEVIEW BLVD to CHESTNUT ST

EXISTING 3 LANES

PROPOSED 3 LANES WITH IMPROVEMENTS

OVERALL IMPROVEMENTS

*See concept plans for details

INTERSECTION BULB-OUTS
Reduce radii at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

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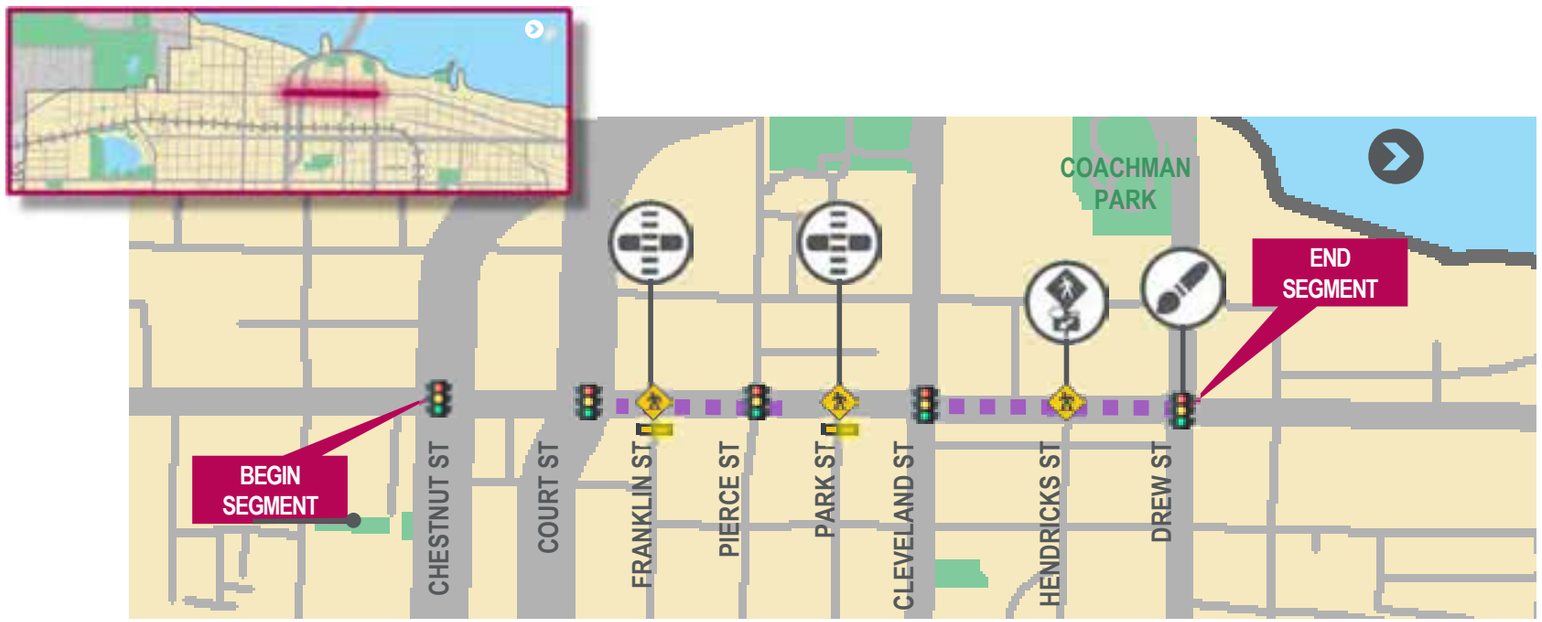
CROSSING REFUGE ISLANDS
Add refuge islands in center turn lane at midblock crossings

SEGMENT 2: Downtown Core

CHESTNUT ST to DREW ST



- Use streetspace to create a **welcoming, livable, & economically vibrant** downtown
- Increase & improve **public space** and **parking / loading access**
- Provide opportunities for **landscaping & beautification**

OVERALL IMPROVEMENTS

INTERSECTION BULB-OUTS
Reduce radius at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

BICYCLE FACILITIES
Improve connections to Pinellas Trail & other bikeways
Calm traffic to allow street to serve bicycle connections

SPECIFIC IMPROVEMENTS

ON-STREET PARKING & PARKLETS
Shorten left turn lanes to create space for on-street parking, parklets, & a wider sidewalk

CROSSING REFUGE ISLANDS
Refuge islands added in the center turn lane at existing crosswalk locations

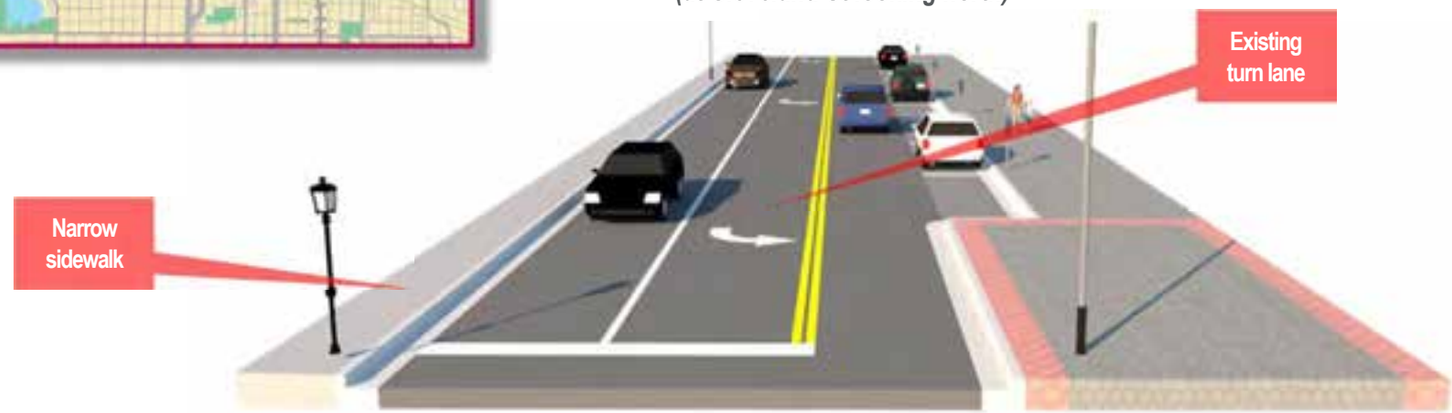
RRFBs
Add rapid rectangular flashing beacon (RRFB) at existing crossings for increased pedestrian safety and traffic calming

PAINTED INTERSECTION
Intersection at Belleview Rd painted to enhance Pinellas Trail crossing, serve as a gateway into the City, and calm traffic

SEGMENT 2: Downtown Core

CHESTNUT ST to DREW ST

EXISTING 2 LANES WITH EXTRA LONG TURN LANE
(at Cleveland St looking north)



ALTERNATIVE WITH NO SB TURN LANES, WIDER SIDEWALK, & OTHER IMPRVEMENTS
(at Cleveland St looking north)

OVERALL IMPROVEMENTS

INTERSECTION BULB-OUTS
Reduce radius at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

BICYCLE FACILITIES
Improve connections to Pinellas Trail & other bikeways
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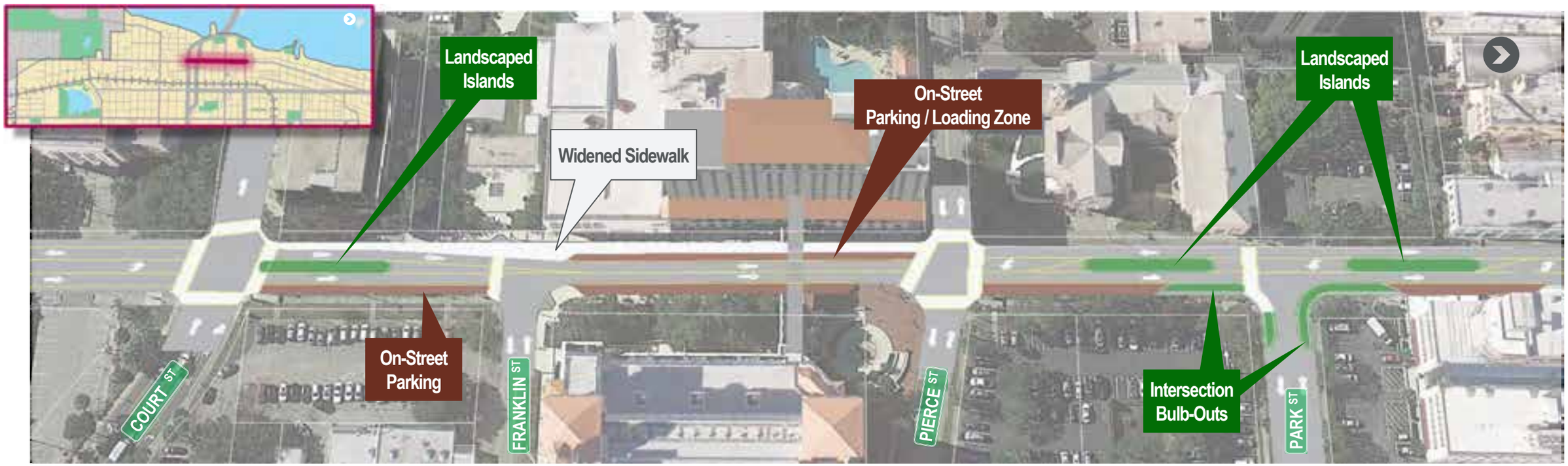


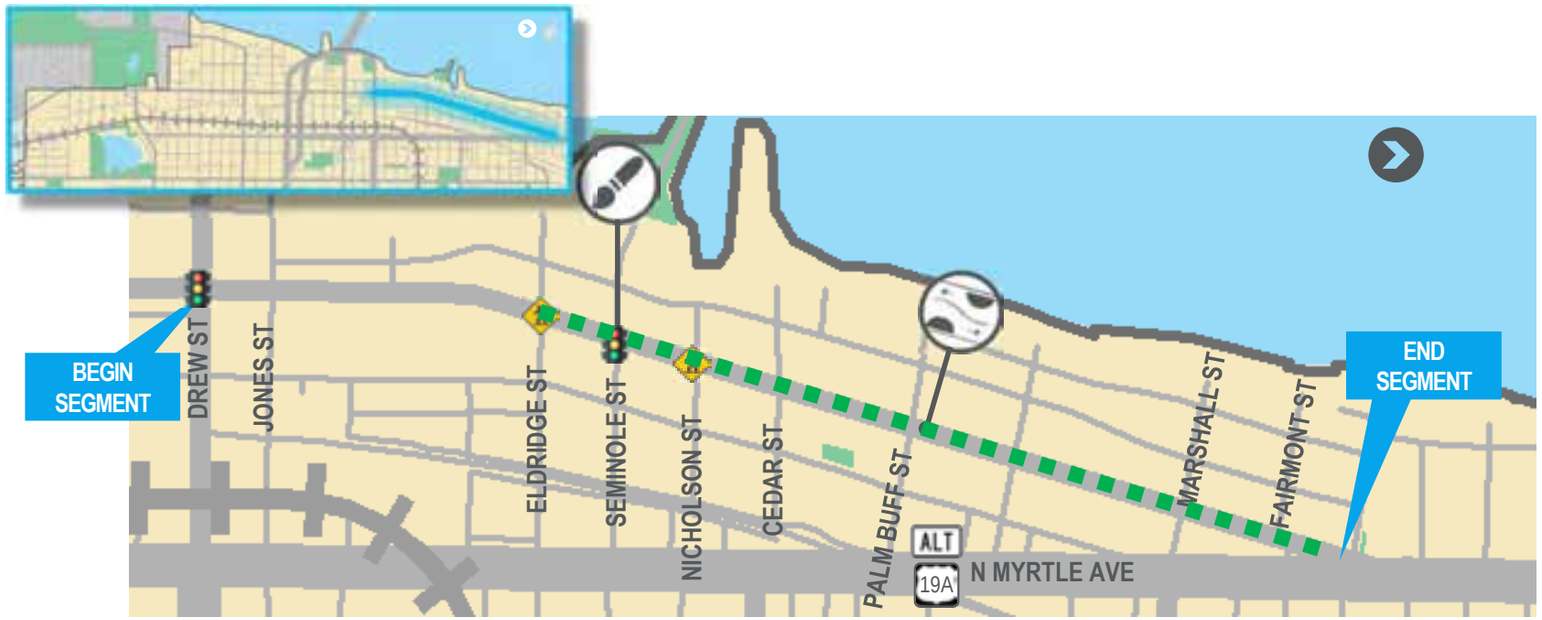
ALTERNATIVE CONCEPT FOR SEGMENT 2
FROM COURT ST TO PIERCE ST

- Remove center turn lane to widen western sidewalk and add on-street parking and/or a curbside loading zone
- New zone can decrease pedestrian conflicts and removes freight and delivery vehicles from center turn lane

LOOKING SOUTH ON FT. HARRISON AVE FROM PIERCE ST

SEGMENT 3: North Marina

DREW ST to N MYRTLE AVE



- **Beautified** the streetscape to **attract investment and development** to achieve future land use vision
- Narrowed lanes for **traffic calming**
- Provided opportunities for **landscaping & beautification**

OVERALL IMPROVEMENTS

INTERSECTION BULB-OUTS
Reduce radius at corners to slow turning traffic, reduce pedestrian crossing distances, and reclaim public space

MARKED CROSSWALKS
Add marked crosswalks at minor intersections to reinforce grid, improve pedestrian connections, and calm traffic

SPECIFIC IMPROVEMENTS

MIDBLOCK BULB-OUTS
Add midblock bulb-outs while maintaining current curb and gutter to narrow the roadway and create a “chicaning” movement

ON-STREET PARKING
Add on-street parking where needed within midblock bulb-outs

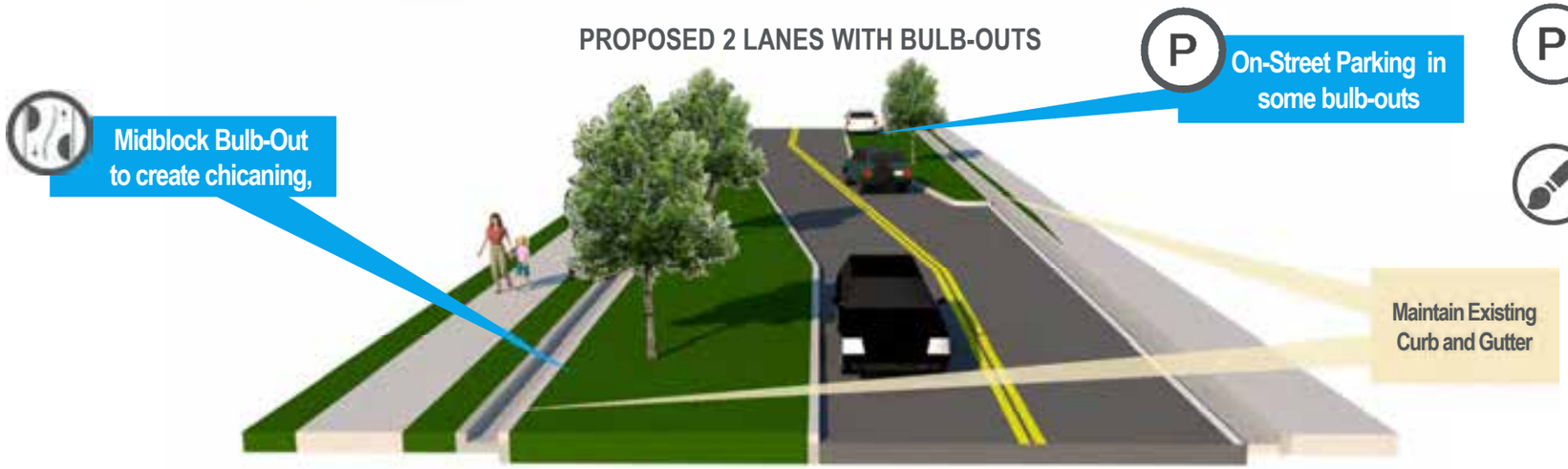
PAINTED INTERSECTION
Paint intersection at Seminole St to calm traffic and create gateway into Downtown

SEGMENT 3: North Marina

DREW ST to N MYRTLE AVE

EXISTING 3 LANES

PROPOSED 2 LANES WITH BULB-OUTS



OVERALL IMPROVEMENTS

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PAINTED INTERSECTION
Paint intersection at Seminole St to calm traffic and create gateway into Downtown

04 NEXT STEPS

NEXT STEPS

SELECT & REFINE PREFERRED IMPROVEMENTS

PLANNING LEVEL COSTS

IDENTIFY IMPLEMENTATION PLAN & PRIORITY PROJECTS

PRESENT TO CITY COUNCIL

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APPENDIX C: TRAFFIC MEMORANDUM

The traffic memorandum was completed to analyze the traffic volumes and operations of Segment 1A from Belleair Road to Belleview Boulevard before and after the proposed road diet. Utilizing a 1% growth rate through 2040, the proposed design for Segment 1A yielded a Level of Service decrease for LOS C to LOS D during the PM peak. The travel time change for the proposed Belleview Boulevard intersection during the PM peak increased from three seconds in 2020 to seven seconds in 2040. The conservative growth rate and acceptable change in travel time indicates that the proposed road diet is feasible.

Traffic Analysis Memorandum

Date:	Friday, April 17, 2020
Project:	Ft Harrison Complete Streets Study
To:	Lauren Matzke, AICP, Diego Guevara (City of Clearwater)
From:	Mark Suarez, P.E., Matthew Wiesenfeld, P.E., Tyler Valila, E.I.
Subject:	Ft Harrison Complete Streets Study Traffic Analysis Memorandum
Attachments:	Growth Rate Calculations, Synchro Outputs, City of Clearwater Provided Data

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Background

Much of the existing Ft Harrison Avenue is comprised of a three lane section (a northbound, southbound, and two way continuous left turn lane). For a short segment of the study corridor, between Belleair Road and Belleview Boulevard, the three lane section expands to an undivided four lane section with two northbound and two southbound travel lanes. The overall study area, with the traffic analysis portion outlined, is shown in the image below including the intersections: No. 1 - Ft Harrison Avenue at Belleair Road and No.2 - Ft Harrison Avenue at Belleview Boulevard.

The analysis is based on both collected traffic volumes and existing county and state traffic data. Existing roadway geometry and field conditions were observed and documented for the study. Segment level and intersection specific data was compared and balanced to establish existing conditions and project future demand.

Traffic Volume Analysis

Two intersections were analyzed to determine intersection peak hours and volumes based on city provided data. A growth rate was also determined to calculate the future volumes.

Intersection Approach Data Analysis

A traffic data review was conducted based on City of Clearwater provided roadway volume counts at each of the intersection approaches. The data, included in the **Attachment**, includes 72-hour traffic machine counts (approach volumes at 15-minute and 60-minute increments) at all approaches to the Ft Harrison Avenue at Belleview Boulevard intersection, and the Ft Harrison Avenue at Belleair Road intersection. The results are displayed in **Table 1** and the AM and PM peak hours are highlighted in bold text. Values represent a three day average per hour per approach.

Table 1: Roadway Counts for Ft Harrison Ave at Belleair Rd and Belleview Blvd (2019)

	Ft Harrison at Belleair Rd				Ft Harrison at Belleview Blvd				
Time	**NB**	**SB**	**WB**	**ALL**	**EB**	**WB**	**NB**	**SB**	**ALL**
00:00	17	23	24	64	3	2	21	44	70
01:00	20	17	8	45	3	0	21	29	53
02:00	11	12	9	32	3	1	11	18	33
03:00	14	8	11	33	5	0	21	16	42
04:00	27	13	25	65	15	0	48	24	87
05:00	90	37	101	228	43	2	195	54	294
06:00	300	140	273	713	144	10	480	223	857
07:00	**494**	**283**	**461**	**1,238**	**329**	**14**	**730**	**563**	**1,636**
08:00	500	282	442	1,224	323	17	671	616	1,627
09:00	437	459	374	1,270	315	18	588	645	1,566
10:00	399	525	333	1,257	277	15	525	723	1,540
11:00	381	542	322	1,245	282	22	494	780	1,578
12:00	443	568	361	1,372	303	13	584	757	1,657
13:00	428	534	367	1,329	307	17	560	707	1,591
14:00	439	625	353	1,417	315	14	535	848	1,712
15:00	419	674	331	1,424	319	15	541	965	1,840
16:00	**411**	**773**	**264**	**1,448**	**302**	**22**	**507**	**1,063**	**1,894**
17:00	407	691	252	1,350	264	13	479	934	1,690
18:00	317	410	231	958	165	7	392	583	1,147
19:00	201	352	140	693	136	5	222	478	841
20:00	150	221	94	465	78	5	161	319	563
21:00	96	158	78	332	58	5	115	229	407
22:00	79	120	62	261	35	3	99	174	311
23:00	41	95	31	167	18	1	47	120	186
TOTAL	**6,121**	**7,562**	**4,947**	**18,630**	**4,042**	**221**	**8,047**	**10,912**	**23,222**

Based on the historical machine count data, existing year (2020) design hour AM and PM peak hours were determined for both study intersections. For both intersections, the AM peak is 7 to 8 AM and the PM peak is 4 to 5 PM. These peak times were used to determine count times for intersection turning movement counts (TMCs). The TMCs were then collected from 7 AM to 9 AM,

10:45 AM to 12:45 PM, and 3:45 PM to 5:45 PM on Thursday, January 16th and seasonally adjusted to convert them to turning movement volumes (TMVs).

These 2020 TMCs had a 2018 peak season factor (SF) applied to convert them into TMV's. 2018 was the most recently available data from FDOT for the aforementioned factors.

Intersection Volume Development

Future volumes were calculated by applying a study area wide linear growth rate to the Existing Year TMVs at both study intersections. The applied growth rate was determined based on historic traffic data, population estimates, and surrounding roadway projects.

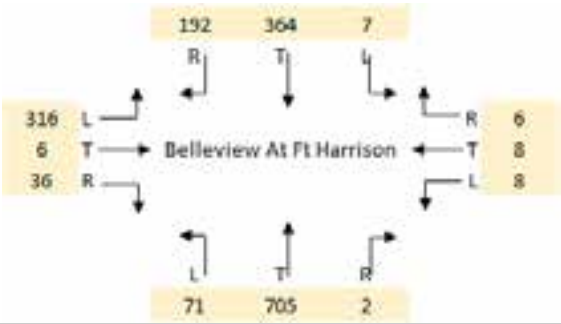
Table 3 shows the proposed future projects that were researched to determine any potential impact to traffic patterns within the study areas. Population forecasts were also researched and are documented in **Table 4** and **Table 5**. Historic AADT data is presented in **Table 6**, along with a recommended annual growth rate for the intersection and corridor. Growth rate calculations using the Historic AADT data is provided in the **Attachment**. A growth rate of 1 % per year was then applied for the future year (2040) AM and PM design hour TMV's.

Once future volumes were determined, the Existing, Build, and No-Build intersections were created in Synchro, a traffic operational analysis software. Synchro outputs follow HCM 6th Edition where applicable. All analysis procedures follow the *2014 Florida Department of Transportation (FDOT) Traffic Analysis Handbook*. The TMVs used for intersection operations analysis in 2020 and 2040 are provided in **Table 2**.

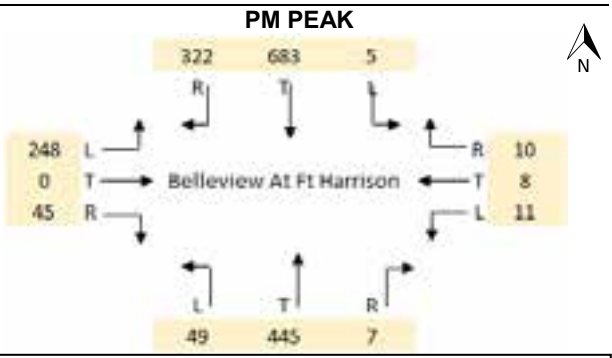
Table 2 – Turning Movement Volumes for Intersection Operations Analysis

EXISTING YEAR 2020

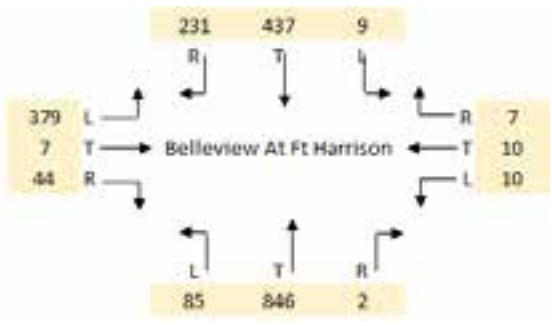
AM PEAK



PM PEAK



DESIGN YEAR 2040



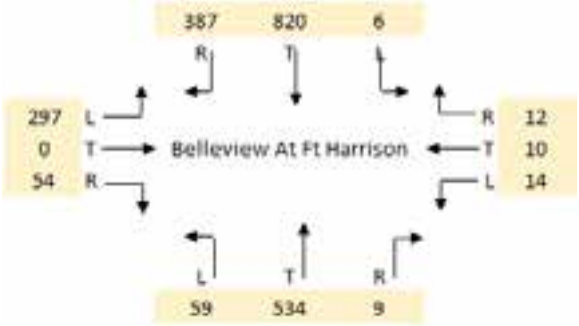


Table 3– Future Projects In or Near Study Area

Source	Limits	Project Type	Reference	Impact to Study Corridor Growth Rate?
FDOT Tampa Bay	Myrtle Ave from Chestnut St to Mohawk St	Repaving	Project Reference	None Anticipated

Table 4 – BEBR Pinellas County Population Estimates and Annual Growth Rates

Estimate	2018 Population Estimate	2020 Population Projection	2040 Population Projection	Annual Growth Rate (2018 to 2020)	Annual Growth Rate (2020 to 2040)
Low	970,532	953,700	947,600	-0.87%	-0.03%
Medium		983,900	1,063,500	0.69%	0.40%
High		1,012,700	1,200,600	2.17%	0.93%

Table 5 – Pinellas County Population Estimates and Annual Growth Rates (Pinellas County Population Projection 2016-2021)

2016 Population Estimate	2021 Population Projection	Annual Growth Rate (2016 to 2021)
960,730	1,036,369	1.57 %

Table 6 – Annual Growth Rates Summary

Scope Task #	Major Road	Segment		Historic AADT			Summary
		From	To	Station #	2018 AADT	Trend Annual Growth Rate (2018 to 2040)	Recommended Annual Growth Rate
4.2	Ft Harrison	Drew Street	Myrtle Avenue	155048	8,900	-3.32 %	**1 %**
4.2	Clearwater-Largo Rd	West Bay Drive	Wyatt Street	159176	22,000	1.56 %	
4.2	Lakeview Road	Ft Harrison	S MLK Jr Ave	159218	8,500	1.71 %	
4.2	Ft Harrison	At Jasmin Way		14,862 AADT*		N/A	

*Provided by City of Clearwater

Traffic Operations Analysis

A traffic operational analysis was conducted for the intersection of Ft Harrison Avenue at Belleview Boulevard and the corridor of Ft Harrison Avenue from Belleair Road to Belleview Boulevard.

Intersection Analysis

At the intersection Ft Harrison Avenue at Belleview Boulevard, the TMVs were used to determine the traffic operations for the existing lane configure and the proposed lane configuration in 2020 and 2040. The proposed project would repurpose the southbound left-through lane to an exclusive left turn lanes with median islands.

Synchro, using HCM 6th Edition methodology is used to evaluate each scenario with the following Measures of Effectiveness (MOEs):

- Intersection and approach delay per vehicle
- Approach Volume to Capacity ratios
- 50th percentile queue lengths

The traffic operations analysis shows that at the intersection of Ft Harrison Avenue at Belleview Boulevard, the proposed geometric change would have a nominal impact on intersection performance. If the proposed configuration was installed in 2020, there would be an anticipated increase in average delay for the intersection peak hour of 3 seconds or less. In the design year of 2040, the proposed configuration would see an increase of 7 seconds or less in average delay during the intersection peak hour. The resulting intersection Level-of-Service (LOS) is C or better for all scenarios. For each approach, the traffic volumes are not expected to exceed capacity and queue lengths are not expected to impact driveways or create other safety concerns under normal average conditions.

Full results for the MOEs by approach are summarized in **Table 7**. The Synchro analysis worksheets are available in the attachment.

Table 7: Ft Harrison Ave and Belleview Blvd Intersection Analysis Results

MOE	Northbound		Southbound		Westbound		Eastbound		Intersection	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
2020 - AM Peak										
Delay (s/veh)	15.0	20.2	13.3	15.2	20.4	20.4	31.3	31.3	**17.9**	**20.9**
Volume/Capacity	0.70	0.78	0.27	0.44	0.04	0.04	0.75	0.75	-	-
50th Queue (veh)**	9.7	9.7	2.3	4.9	0.3	0.3	7.5	7.5	-	-
2040 - AM Peak										
Delay (s/veh)	31.7	32.2	17.9	21.0	19.1	19.1	35.9	35.9	**27.9**	**29.2**
Volume/Capacity	0.90	0.90	0.37	0.59	0.04	0.04	0.81	0.81	-	-
50th Queue (veh)**	18.3	18.3	3.6	3.6	0.4	0.4	10.4	10.4	-	-
2020 - PM Peak										
Delay (s/veh)	12.1	12.1	12.6	17.8	21.4	21.4	28.7	28.7	**15.2**	**18.0**
Volume/Capacity	0.67	0.67	0.42	0.76	0.06	0.06	0.69	0.69	-	-
50th Queue (veh)**	3.8	3.8	4.0	10.5	0.4	0.9	5.5	5.5	-	-
2040 - PM Peak										
Delay (s/veh)	15.7	15.8	16.8	24.1	20.3	25.2	30.0	47.6	**18.7**	**25.6**
Volume/Capacity	0.76	0.78	0.55	0.88	0.07	0.08	0.75	0.85	-	-
50th Queue (veh)**	6.1	5.8	6.1	17.6	0.5	0.6	7.1	9.9	-	-

***Note: Value represents maximum approach volume to capacity ratio.**

****Note: Value represents maximum approach queue.**

Corridor Analysis

The corridor capacity analysis determined the existing level of service (LOS) of the corridor using both directional design hourly volume (DDHV) and average annual daily traffic (AADT) using the 2012 generalized service volume tables. Existing year (2018) and future year (2040) analysis was performed for the existing two lane divided with turn lane typical section which is the predominate condition throughout the corridor. In the segment of Ft Harrison Avenue between Belleair Road and Belleview Boulevard, a portion of the segment is four lanes undivided, however the existing lane configuration drops to three general purpose lanes near the Belleview Boulevard intersection and therefore the segment is defined by the two lane divided capacity. The comparative traffic analysis between existing and proposed lane configuration is based on the impact of the intersection volumes for the southbound departing movements from the Belleview Boulevard intersection and the southbound arriving movements at Belleair Road.

Generalized Planning Analysis

An initial generalized planning analysis for the whole Ft Harrison Avenue corridor was conducted using the available 2018 AADT information. This resulted in a corridor AADT of 15,000 trips and DDHV of 750 trips which is consistent with approach volumes measured in the 72 hour counts for each intersection. On a daily basis, this volume exceeds the Level-of-Service (LOS) E threshold in the three lane section. In the peak hour, peak direction, this volume represents a LOS D. A growth in traffic volume of 1% per year resulting in more than a 20% growth overall would lead to generalized LOS below E regardless of the proposed project. Given that the impact of the study is specific to the removal of the southbound lane between Belleview Boulevard and Belleair Road, additional capacity analysis was performed isolating those southbound lanes.

Southbound Departure Analysis

In the existing condition, the southbound departure from the Belleview Boulevard intersection has two receiving lanes which continue from Belleview Boulevard through Belleair Road to the next signalized intersection of Ponce De Leon Boulevard / Wyatt Street. At Belleair Road, Ft Harrison Avenue is a four lane undivided roadway without turn lanes. In the proposed roadway configuration, Ft Harrison Avenue is a balanced three-lane section with the middle lane serving as intermittent left turn lanes. The volume on this section, derived from the intersection volume analysis, would start at 888 vehicles departing Belleview Boulevard and would increase to 1018 arriving at Belleair Road, of which 212 would use the newly created left turn lane to continue east on Belleair Road.

Using Table 7 – Generalized Peak Hour Directional Volumes for Florida's Urbanized Areas from the 2013 FDOT QLOS Handbook, it is noted that an uninterrupted flow highway would have a Level of Service E Maximum Service Volume (MSV) of 1,640 vehicles in the peak direction during the peak hour. Adjusted for non-state roadways with left turn lanes, this results in a MSV of 1,558 vehicles per hour. When compared to the 1018 vehicles projected in 2040 to be traveling southbound in the PM peak hour, this results in 65% utilization of the service volume for the proposed configuration. The resulting quality of service for the proposed condition would be LOS D.

Conclusion

The lane repurposing proposed for Ft Harrison Avenue, specifically from the southbound approach at Belleview Boulevard through Belleair Road, is not projected to have a noticeable negative impact on traffic conditions. At the controlling intersection of Ft Harrison Avenue and Belleview Boulevard, peak hour delays are projected to increase by less than 7 seconds on average in the 2040 proposed configuration versus the existing lane configurations in 2040. The overall intersection LOS remains at C or better for all scenarios. Along the un-interrupted segment, the projected traffic volume represents less than 2/3rd of the maximum service volume and operates at LOS D in the PM peak hour.

Attachments

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1500 PINELLAS COUNTYWIDE

MOCF: 0.93

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.07	1.15
2	01/07/2018 - 01/13/2018	1.06	1.14
3	01/14/2018 - 01/20/2018	1.04	1.12
4	01/21/2018 - 01/27/2018	1.02	1.10
5	01/28/2018 - 02/03/2018	0.99	1.06
* 6	02/04/2018 - 02/10/2018	0.96	1.03
* 7	02/11/2018 - 02/17/2018	0.93	1.00
* 8	02/18/2018 - 02/24/2018	0.93	1.00
* 9	02/25/2018 - 03/03/2018	0.92	0.99
*10	03/04/2018 - 03/10/2018	0.92	0.99
*11	03/11/2018 - 03/17/2018	0.91	0.98
*12	03/18/2018 - 03/24/2018	0.92	0.99
*13	03/25/2018 - 03/31/2018	0.92	0.99
*14	04/01/2018 - 04/07/2018	0.93	1.00
*15	04/08/2018 - 04/14/2018	0.93	1.00
*16	04/15/2018 - 04/21/2018	0.94	1.01
*17	04/22/2018 - 04/28/2018	0.96	1.03
*18	04/29/2018 - 05/05/2018	0.98	1.05
19	05/06/2018 - 05/12/2018	1.00	1.08
20	05/13/2018 - 05/19/2018	1.02	1.10
21	05/20/2018 - 05/26/2018	1.01	1.09
22	05/27/2018 - 06/02/2018	0.99	1.06
23	06/03/2018 - 06/09/2018	0.98	1.05
24	06/10/2018 - 06/16/2018	0.97	1.04
25	06/17/2018 - 06/23/2018	0.98	1.05
26	06/24/2018 - 06/30/2018	0.98	1.05
27	07/01/2018 - 07/07/2018	0.99	1.06
28	07/08/2018 - 07/14/2018	1.00	1.08
29	07/15/2018 - 07/21/2018	1.00	1.08
30	07/22/2018 - 07/28/2018	1.01	1.09
31	07/29/2018 - 08/04/2018	1.02	1.10
32	08/05/2018 - 08/11/2018	1.02	1.10
33	08/12/2018 - 08/18/2018	1.03	1.11
34	08/19/2018 - 08/25/2018	1.04	1.12
35	08/26/2018 - 09/01/2018	1.06	1.14
36	09/02/2018 - 09/08/2018	1.07	1.15
37	09/09/2018 - 09/15/2018	1.08	1.16
38	09/16/2018 - 09/22/2018	1.08	1.16
39	09/23/2018 - 09/29/2018	1.07	1.15
40	09/30/2018 - 10/06/2018	1.06	1.14
41	10/07/2018 - 10/13/2018	1.05	1.13
42	10/14/2018 - 10/20/2018	1.05	1.13
43	10/21/2018 - 10/27/2018	1.05	1.13
44	10/28/2018 - 11/03/2018	1.05	1.13
45	11/04/2018 - 11/10/2018	1.04	1.12
46	11/11/2018 - 11/17/2018	1.04	1.12
47	11/18/2018 - 11/24/2018	1.05	1.13
48	11/25/2018 - 12/01/2018	1.06	1.14
49	12/02/2018 - 12/08/2018	1.06	1.14
50	12/09/2018 - 12/15/2018	1.07	1.15
51	12/16/2018 - 12/22/2018	1.06	1.14
52	12/23/2018 - 12/29/2018	1.05	1.13
53	12/30/2018 - 12/31/2018	1.04	1.12

* PEAK SEASON

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleair
Date: 1/24/2020
Technician: DL

Groups Printed- Unshifted

	Ft Harrison From North					Belleair From East					Ft Harrison From South					Belleair From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:45 AM	0	75	23	0	98	35	0	1	3	39	2	111	0	0	113	0	0	0	0	0	250
Total	0	75	23	0	98	35	0	1	3	39	2	111	0	0	113	0	0	0	0	0	250
07:00 AM	0	71	32	0	103	29	3	2	24	58	4	124	0	0	128	0	0	0	0	0	289
07:15 AM	0	95	16	0	111	54	0	4	5	63	1	150	0	0	151	0	0	0	0	0	325
07:30 AM	0	102	16	0	118	57	2	3	15	77	3	143	0	0	146	0	0	0	0	0	341
07:45 AM	0	77	13	0	90	42	2	11	2	57	3	110	0	0	113	0	0	0	0	0	260
Total	0	345	77	0	422	182	7	20	46	255	11	527	0	0	538	0	0	0	0	0	1215
08:00 AM	0	91	17	0	108	69	0	9	6	84	1	129	0	1	131	0	0	0	0	0	323
08:15 AM	0	109	22	0	131	64	0	8	0	72	2	124	0	0	126	0	0	0	0	0	329
08:30 AM	0	81	27	0	108	36	0	5	0	41	3	125	0	0	128	0	0	0	0	0	277
*** BREAK ***																					
Total	0	281	66	0	347	169	0	22	6	197	6	378	0	1	385	0	0	0	0	0	929
*** BREAK ***																					
10:45 AM	0	114	38	0	152	31	0	6	1	38	7	110	0	0	117	0	0	0	0	0	307
Total	0	114	38	0	152	31	0	6	1	38	7	110	0	0	117	0	0	0	0	0	307
*** BREAK ***																					
11:15 AM	0	134	35	0	169	40	1	11	1	53	1	88	0	0	89	0	0	0	0	0	311
11:30 AM	0	124	29	0	153	40	1	5	3	49	3	115	0	0	118	0	0	0	0	0	320
11:45 AM	0	150	39	0	189	31	1	5	5	42	8	94	0	0	102	0	0	0	0	0	333
Total	0	408	103	0	511	111	3	21	9	144	12	297	0	0	309	0	0	0	0	0	964
12:00 PM	0	126	33	0	159	35	0	16	0	51	11	132	0	0	143	0	0	0	0	0	353
12:15 PM	0	109	39	0	148	40	1	10	3	54	9	116	0	0	125	0	0	0	0	0	327
12:30 PM	0	114	36	0	150	44	0	19	0	63	21	101	0	0	122	0	0	0	0	0	335
12:45 PM	0	104	32	0	136	44	0	8	0	52	2	102	0	0	104	0	0	0	0	0	292
Total	0	453	140	0	593	163	1	53	3	220	43	451	0	0	494	0	0	0	0	0	1307
*** BREAK ***																					
03:45 PM	0	127	48	0	175	31	0	13	2	46	5	107	0	0	112	0	0	0	0	0	333
Total	0	127	48	0	175	31	0	13	2	46	5	107	0	0	112	0	0	0	0	0	333
04:00 PM	0	157	35	0	192	21	0	9	0	30	8	126	0	0	134	0	0	0	0	0	356
04:15 PM	0	166	43	0	209	26	0	17	3	46	3	97	0	0	100	0	0	0	0	0	355
04:30 PM	0	158	30	0	188	23	0	5	1	29	3	92	0	0	95	0	0	0	0	0	312
04:45 PM	0	165	62	0	227	28	0	6	2	36	6	118	0	0	124	0	0	0	0	0	387
Total	0	646	170	0	816	98	0	37	6	141	20	433	0	0	453	0	0	0	0	0	1410
05:00 PM	0	151	42	0	193	19	0	7	0	26	3	109	0	0	112	0	0	0	0	0	331
05:15 PM	0	127	32	0	159	16	0	5	0	21	1	116	0	0	117	0	0	0	0	0	297
05:30 PM	0	89	31	1	121	34	0	13	3	50	8	72	0	0	80	0	0	0	0	0	251
Grand Total	0	2816	770	1	3587	889	11	198	79	1177	118	2711	0	1	2830	0	0	0	0	0	7594
Apprch %	0	78.5	21.5	0		75.5	0.9	16.8	6.7		4.2	95.8	0	0		0	0	0	0		
Total %	0	37.1	10.1	0	47.2	11.7	0.1	2.6	1	15.5	1.6	35.7	0	0	37.3	0	0	0	0	0	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleair
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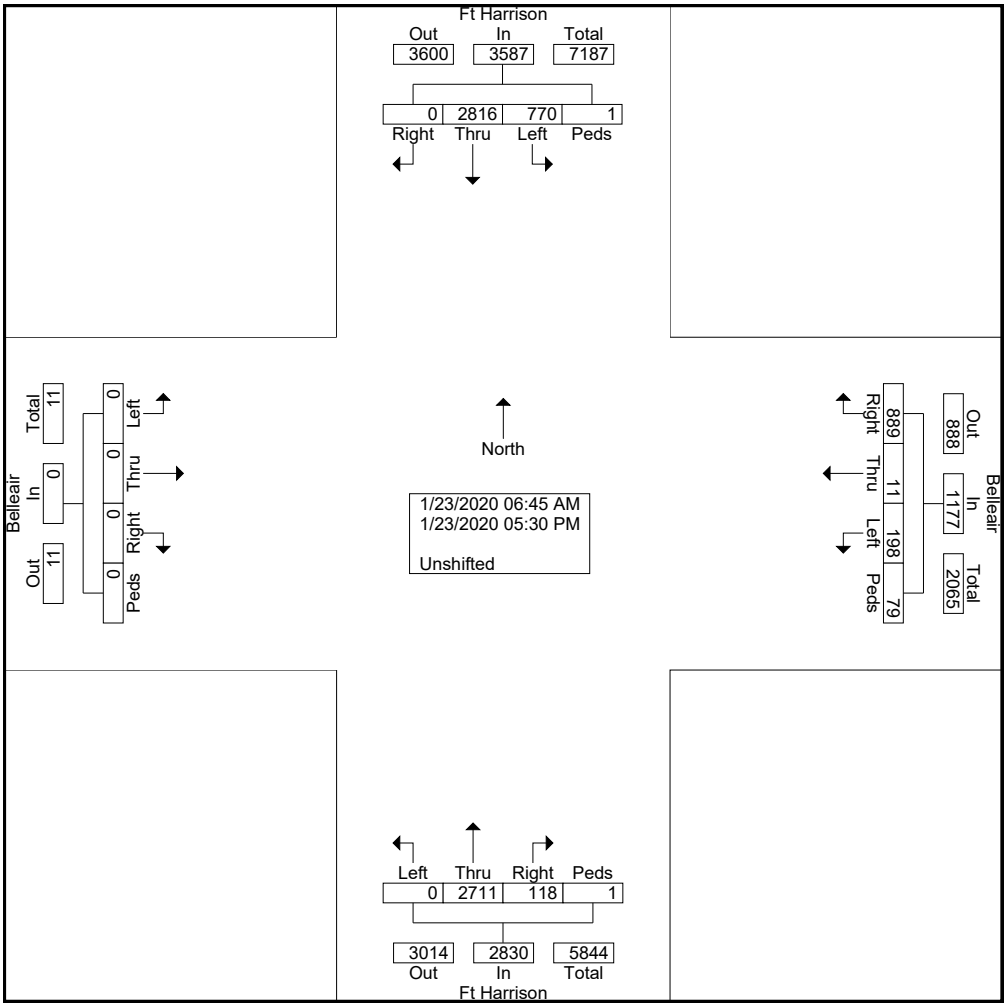
Technician: DL

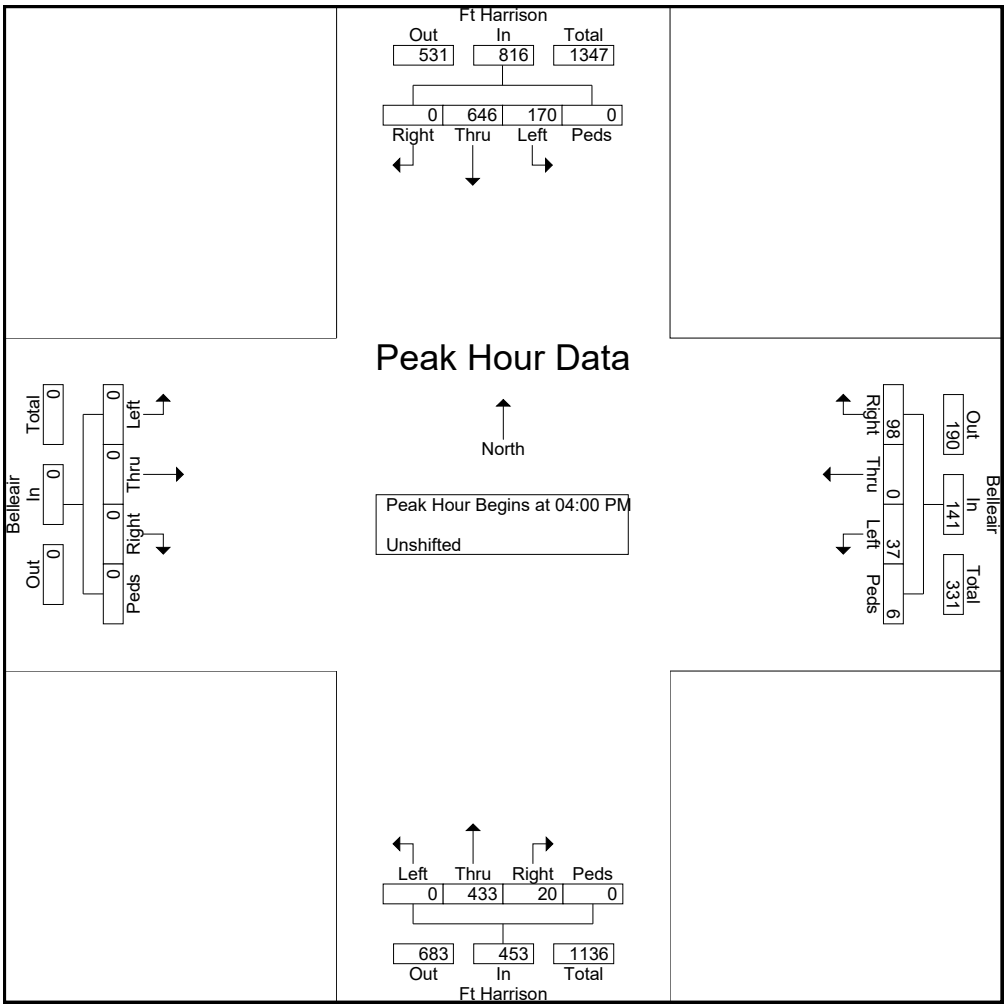


City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleair
Date: 1/24/2020
Technician: DL

	Ft Harrison From North					Belleair From East					Ft Harrison From South					Belleair From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	157	35	0	192	21	0	9	0	30	**8**	**126**	0	0	**134**	0	0	0	0	0	356
04:15 PM	0	**166**	43	0	209	26	0	**17**	**3**	**46**	3	97	0	0	100	0	0	0	0	0	355
04:30 PM	0	158	30	0	188	23	0	5	1	29	3	92	0	0	95	0	0	0	0	0	312
04:45 PM	0	165	**62**	0	**227**	**28**	0	6	2	36	6	118	0	0	124	0	0	0	0	0	**387**
Total Volume	0	646	170	0	816	98	0	37	6	141	20	433	0	0	453	0	0	0	0	0	1410
% App. Total	0	79.2	20.8	0		69.5	0	26.2	4.3		4.4	95.6	0	0		0	0	0	0		
PHF	.000	.973	.685	.000	.899	.875	.000	.544	.500	.766	.625	.859	.000	.000	.845	.000	.000	.000	.000	.000	.911



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
Date: 1/16/2020
Technician: DL, MG

File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 1

Groups Printed- Unshifted

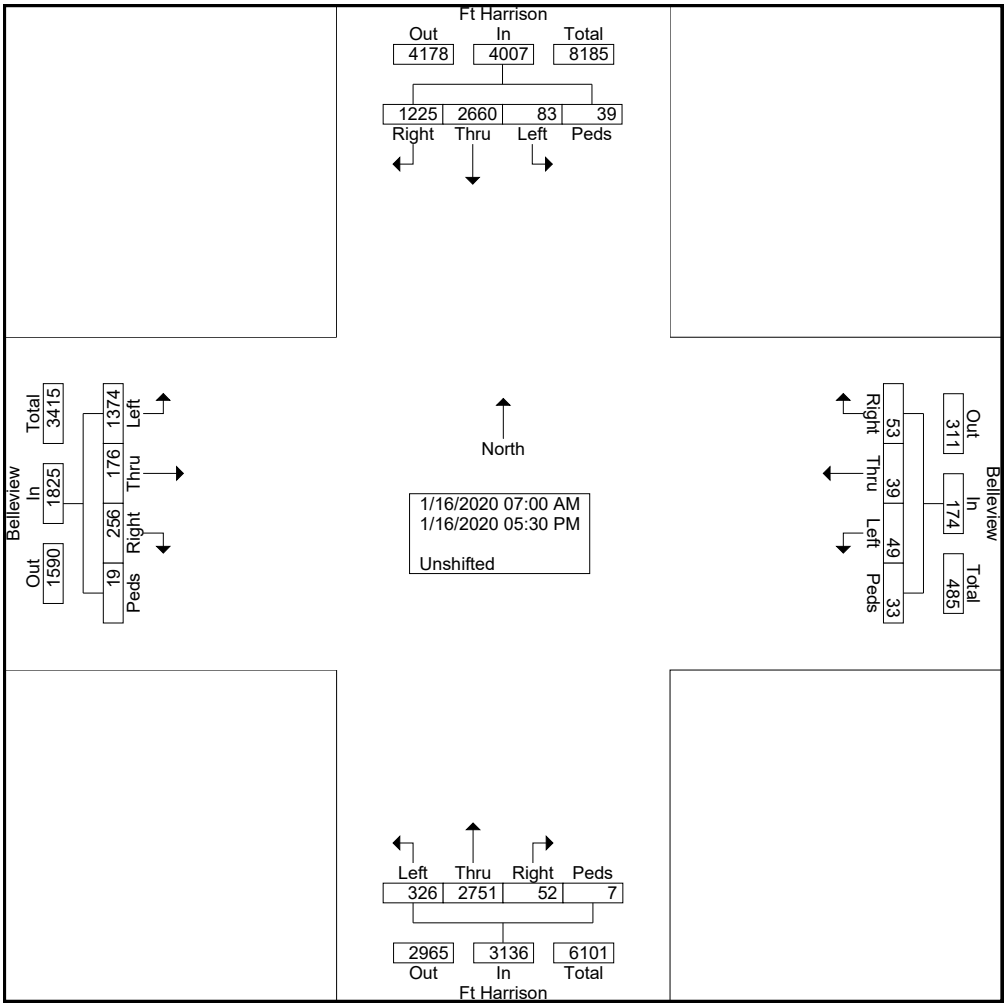
	Ft Harrison From North					Belleview From East					Ft Harrison From South					Belleview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	31	90	1	0	122	0	2	1	1	4	2	64	24	1	91	12	1	62	1	76	293
07:15 AM	35	107	1	0	143	0	1	4	1	6	0	175	18	0	193	8	1	74	0	83	425
07:30 AM	51	88	2	0	141	4	1	0	1	6	0	161	12	0	173	8	1	55	3	67	387
07:45 AM	49	99	0	0	148	1	0	1	0	2	2	191	18	1	212	9	3	70	1	83	445
Total	166	384	4	0	554	5	4	6	3	18	4	591	72	2	669	37	6	261	5	309	1550
08:00 AM	36	95	2	0	133	2	0	1	0	3	0	146	15	0	161	8	2	70	0	80	377
08:15 AM	42	60	2	1	105	2	4	4	0	10	0	165	14	1	180	9	0	79	1	89	384
08:30 AM	58	96	3	0	157	1	4	2	0	7	0	176	21	0	197	9	1	85	0	95	456
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	121	16	0	138	12	1	67	0	80	218
Total	136	251	7	1	395	5	8	7	0	20	1	608	66	1	676	38	4	301	1	344	1435
*** BREAK ***																					
10:45 AM	28	52	25	3	108	4	0	3	4	11	0	0	0	0	0	3	102	10	0	115	234
Total	28	52	25	3	108	4	0	3	4	11	0	0	0	0	0	3	102	10	0	115	234
11:00 AM	23	108	14	4	149	3	1	2	3	9	0	100	11	0	111	8	35	36	1	80	349
11:15 AM	56	141	6	0	203	4	2	1	5	12	5	104	12	0	121	8	0	53	3	64	400
11:30 AM	56	140	5	0	201	1	1	2	0	4	2	106	13	0	121	20	1	57	2	80	406
11:45 AM	45	127	7	0	179	5	4	4	7	20	3	82	12	2	99	14	3	43	1	61	359
Total	180	516	32	4	732	13	8	9	15	45	10	392	48	2	452	50	39	189	7	285	1514
12:00 PM	65	141	2	2	210	2	1	2	7	12	21	83	10	0	114	17	11	52	0	80	416
12:15 PM	49	132	1	7	189	2	2	1	0	5	1	121	11	0	133	16	4	33	2	55	382
12:30 PM	51	78	4	7	140	10	2	3	0	15	0	126	12	1	139	8	2	66	0	76	370
*** BREAK ***																					
Total	165	351	7	16	539	14	5	6	7	32	22	330	33	1	386	41	17	151	2	211	1168
*** BREAK ***																					
03:45 PM	71	144	1	3	219	2	1	4	0	7	4	100	21	0	125	18	3	57	0	78	429
Total	71	144	1	3	219	2	1	4	0	7	4	100	21	0	125	18	3	57	0	78	429
04:00 PM	75	163	1	0	239	3	3	6	0	12	2	123	18	0	143	15	0	62	2	79	473
04:15 PM	83	140	1	3	227	2	1	3	0	6	1	92	11	0	104	9	0	77	0	86	423
04:30 PM	77	179	1	1	258	3	1	1	0	5	4	106	15	0	125	7	0	49	0	56	444
04:45 PM	75	175	2	6	258	2	3	1	2	8	0	107	3	1	111	12	0	50	1	63	440
Total	310	657	5	10	982	10	8	11	2	31	7	428	47	1	483	43	0	238	3	284	1780
05:00 PM	100	182	1	0	283	0	1	0	1	2	2	102	9	0	113	13	2	58	0	73	471
05:15 PM	69	123	1	2	195	0	4	3	1	8	1	80	21	0	102	5	3	71	1	80	385
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	120	9	0	130	8	0	38	0	46	176
Grand Total	1225	2660	83	39	4007	53	39	49	33	174	52	2751	326	7	3136	256	176	1374	19	1825	9142
Apprch %	30.6	66.4	2.1	1		30.5	22.4	28.2	19		1.7	87.7	10.4	0.2		14	9.6	75.3	1		
Total %	13.4	29.1	0.9	0.4	43.8	0.6	0.4	0.5	0.4	1.9	0.6	30.1	3.6	0.1	34.3	2.8	1.9	15	0.2	20	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
Date: 1/16/2020
Technician: DL, MG

File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 2



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
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Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
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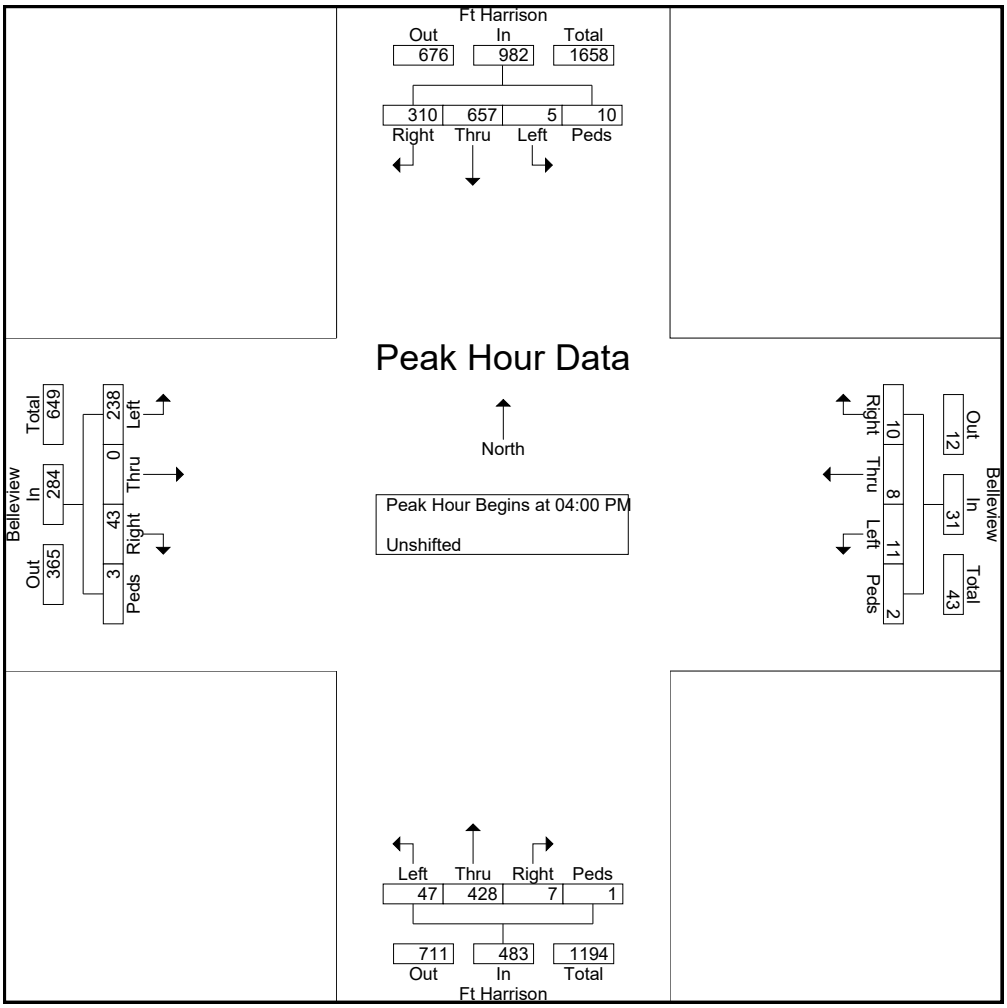
File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 3

	Ft Harrison From North					Belleview From East					Ft Harrison From South					Belleview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	75	163	1	0	239	**3**	**3**	**6**	0	**12**	2	**123**	**18**	0	**143**	**15**	0	62	**2**	79	**473**
04:15 PM	**83**	140	1	3	227	2	1	3	0	6	1	92	11	0	104	9	0	**77**	0	**86**	423
04:30 PM	77	**179**	1	1	**258**	3	1	1	0	5	**4**	106	15	0	125	7	0	49	0	56	444
04:45 PM	75	175	**2**	**6**	258	2	3	1	**2**	8	0	107	3	**1**	111	12	0	50	1	63	440
Total Volume	310	657	5	10	982	10	8	11	2	31	7	428	47	1	483	43	0	238	3	284	1780
% App. Total	31.6	66.9	0.5	1		32.3	25.8	35.5	6.5		1.4	88.6	9.7	0.2		15.1	0	83.8	1.1		
PHF	.934	.918	.625	.417	.952	.833	.667	.458	.250	.646	.438	.870	.653	.250	.844	.717	.000	.773	.375	.826	.941



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
Date: 1/14/2020
Technician: DL, MG

File Name : ft harrison-lakeview
Site Code : 00000000
Start Date : 1/14/2020
Page No : 1

Groups Printed- Unshifted

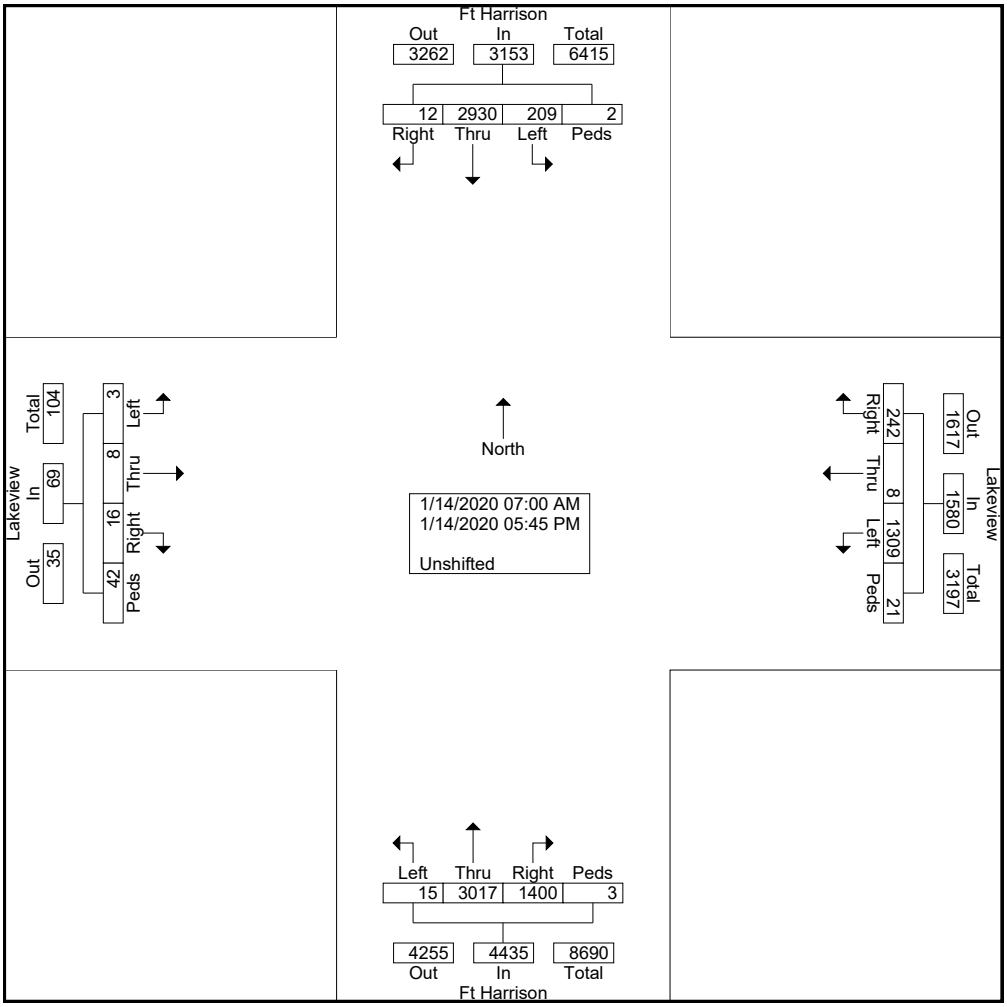
	Ft Harrison From North					Lakeview From East					Ft Harrison From South					Lakeview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	76	2	0	78	4	0	29	0	33	61	133	0	0	194	0	0	0	2	2	307
07:15 AM	0	94	3	0	97	7	0	50	0	57	57	160	0	0	217	0	1	0	1	2	373
07:30 AM	0	92	3	0	95	14	0	47	0	61	83	183	0	1	267	0	0	0	3	3	426
07:45 AM	2	87	5	0	94	15	1	75	1	92	59	178	7	0	244	0	0	0	0	0	430
Total	2	349	13	0	364	40	1	201	1	243	260	654	7	1	922	0	1	0	6	7	1536
08:00 AM	0	75	2	0	77	12	1	59	1	73	44	177	0	0	221	1	0	0	1	2	373
08:15 AM	0	98	2	0	100	16	3	66	0	85	52	159	0	0	211	0	0	0	1	1	397
08:30 AM	0	90	6	0	96	9	0	45	1	55	52	175	2	0	229	1	1	0	1	3	383
08:45 AM	1	86	6	0	93	18	0	73	0	91	70	162	0	0	232	2	1	0	1	4	420
Total	1	349	16	0	366	55	4	243	2	304	218	673	2	0	893	4	2	0	4	10	1573
*** BREAK ***																					
11:00 AM	1	128	11	0	140	13	0	54	0	67	51	142	0	0	193	2	1	0	2	5	405
11:15 AM	0	145	13	0	158	10	0	50	1	61	55	120	0	0	175	1	0	0	1	2	396
11:30 AM	2	135	7	0	144	19	0	42	0	61	55	100	1	0	156	1	2	0	1	4	365
11:45 AM	0	127	15	0	142	7	1	50	1	59	41	114	0	0	155	1	1	0	5	7	363
Total	3	535	46	0	584	49	1	196	2	248	202	476	1	0	679	5	4	0	9	18	1529
12:00 PM	0	136	15	0	151	19	2	58	1	80	60	114	2	2	178	3	0	0	9	12	421
12:15 PM	0	109	14	0	123	14	0	47	0	61	44	118	3	0	165	1	0	1	1	3	352
12:30 PM	2	116	14	0	132	13	0	65	3	81	57	143	0	0	200	0	1	0	0	1	414
*** BREAK ***																					
Total	2	361	43	0	406	46	2	170	4	222	161	375	5	2	543	4	1	1	10	16	1187
*** BREAK ***																					
04:00 PM	0	170	13	0	183	10	0	61	1	72	70	93	0	0	163	1	0	0	0	1	419
04:15 PM	1	171	23	0	195	9	0	61	1	71	75	90	0	0	165	0	0	1	0	1	432
04:30 PM	2	166	8	1	177	7	0	49	5	61	60	100	0	0	160	1	0	1	4	6	404
04:45 PM	1	187	8	0	196	3	0	67	1	71	87	122	0	0	209	0	0	0	4	4	480
Total	4	694	52	1	751	29	0	238	8	275	292	405	0	0	697	2	0	2	8	12	1735
05:00 PM	0	207	21	0	228	4	0	66	0	70	73	98	0	0	171	1	0	0	1	2	471
05:15 PM	0	160	8	0	168	8	0	70	2	80	68	105	0	0	173	0	0	0	0	0	421
05:30 PM	0	151	7	1	159	2	0	67	2	71	67	128	0	0	195	0	0	0	4	4	429
05:45 PM	0	124	3	0	127	9	0	58	0	67	59	103	0	0	162	0	0	0	0	0	356
Total	0	642	39	1	682	23	0	261	4	288	267	434	0	0	701	1	0	0	5	6	1677
Grand Total	12	2930	209	2	3153	242	8	1309	21	1580	1400	3017	15	3	4435	16	8	3	42	69	9237
Apprch %	0.4	92.9	6.6	0.1		15.3	0.5	82.8	1.3		31.6	68	0.3	0.1		23.2	11.6	4.3	60.9		
Total %	0.1	31.7	2.3	0	34.1	2.6	0.1	14.2	0.2	17.1	15.2	32.7	0.2	0	48	0.2	0.1	0	0.5	0.7	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
Date: 1/14/2020
Technician: DL, MG

File Name : ft harrison-lakeview
Site Code : 00000000
Start Date : 1/14/2020
Page No : 2



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
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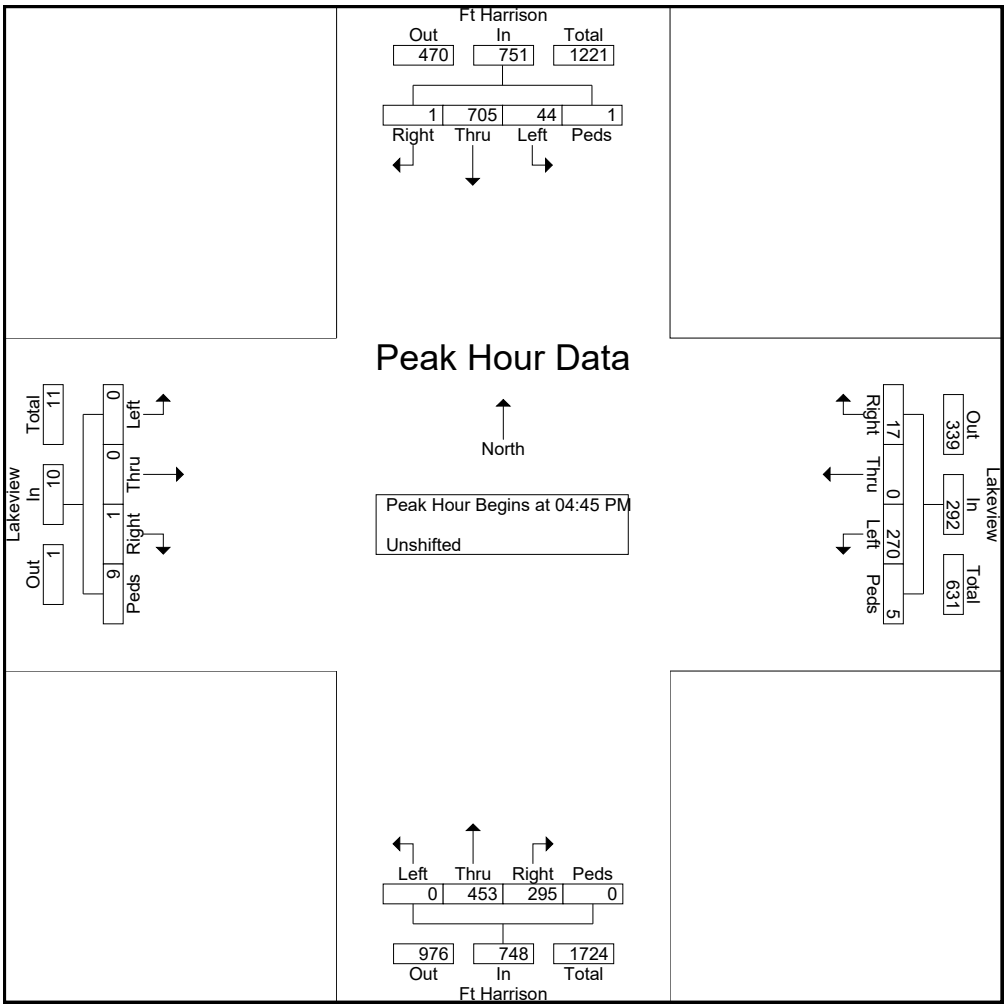
Site Code : 00000000
Start Date : 1/14/2020
Page No : 3

	Ft Harrison From North					Lakeview From East					Ft Harrison From South					Lakeview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**1**	187	8	0	196	3	0	67	1	71	**87**	122	0	0	**209**	0	0	0	**4**	**4**	**480**
05:00 PM	0	**207**	**21**	0	**228**	4	0	66	0	70	73	98	0	0	171	**1**	0	0	1	2	471
05:15 PM	0	160	8	0	168	**8**	0	**70**	**2**	**80**	68	105	0	0	173	0	0	0	0	0	421
05:30 PM	0	151	7	**1**	159	2	0	67	2	71	67	**128**	0	0	195	0	0	0	4	4	429
Total Volume	1	705	44	1	751	17	0	270	5	292	295	453	0	0	748	1	0	0	9	10	1801
% App. Total	0.1	93.9	5.9	0.1		5.8	0	92.5	1.7		39.4	60.6	0	0		10	0	0	90		
PHF	.250	.851	.524	.250	.823	.531	.000	.964	.625	.913	.848	.885	.000	.000	.895	.250	.000	.000	.563	.625	.938



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleair
Date: 1/24/2020
Technician: DL

Groups Printed- Unshifted

	Ft Harrison From North					Belleair From East					Ft Harrison From South					Belleair From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
06:45 AM	0	75	23	0	98	35	0	1	3	39	2	111	0	0	113	0	0	0	0	0	250
Total	0	75	23	0	98	35	0	1	3	39	2	111	0	0	113	0	0	0	0	0	250
07:00 AM	0	71	32	0	103	29	3	2	24	58	4	124	0	0	128	0	0	0	0	0	289
07:15 AM	0	95	16	0	111	54	0	4	5	63	1	150	0	0	151	0	0	0	0	0	325
07:30 AM	0	102	16	0	118	57	2	3	15	77	3	143	0	0	146	0	0	0	0	0	341
07:45 AM	0	77	13	0	90	42	2	11	2	57	3	110	0	0	113	0	0	0	0	0	260
Total	0	345	77	0	422	182	7	20	46	255	11	527	0	0	538	0	0	0	0	0	1215
08:00 AM	0	91	17	0	108	69	0	9	6	84	1	129	0	1	131	0	0	0	0	0	323
08:15 AM	0	109	22	0	131	64	0	8	0	72	2	124	0	0	126	0	0	0	0	0	329
08:30 AM	0	81	27	0	108	36	0	5	0	41	3	125	0	0	128	0	0	0	0	0	277
*** BREAK ***																					
Total	0	281	66	0	347	169	0	22	6	197	6	378	0	1	385	0	0	0	0	0	929
*** BREAK ***																					
10:45 AM	0	114	38	0	152	31	0	6	1	38	7	110	0	0	117	0	0	0	0	0	307
Total	0	114	38	0	152	31	0	6	1	38	7	110	0	0	117	0	0	0	0	0	307
*** BREAK ***																					
11:15 AM	0	134	35	0	169	40	1	11	1	53	1	88	0	0	89	0	0	0	0	0	311
11:30 AM	0	124	29	0	153	40	1	5	3	49	3	115	0	0	118	0	0	0	0	0	320
11:45 AM	0	150	39	0	189	31	1	5	5	42	8	94	0	0	102	0	0	0	0	0	333
Total	0	408	103	0	511	111	3	21	9	144	12	297	0	0	309	0	0	0	0	0	964
12:00 PM	0	126	33	0	159	35	0	16	0	51	11	132	0	0	143	0	0	0	0	0	353
12:15 PM	0	109	39	0	148	40	1	10	3	54	9	116	0	0	125	0	0	0	0	0	327
12:30 PM	0	114	36	0	150	44	0	19	0	63	21	101	0	0	122	0	0	0	0	0	335
12:45 PM	0	104	32	0	136	44	0	8	0	52	2	102	0	0	104	0	0	0	0	0	292
Total	0	453	140	0	593	163	1	53	3	220	43	451	0	0	494	0	0	0	0	0	1307
*** BREAK ***																					
03:45 PM	0	127	48	0	175	31	0	13	2	46	5	107	0	0	112	0	0	0	0	0	333
Total	0	127	48	0	175	31	0	13	2	46	5	107	0	0	112	0	0	0	0	0	333
04:00 PM	0	157	35	0	192	21	0	9	0	30	8	126	0	0	134	0	0	0	0	0	356
04:15 PM	0	166	43	0	209	26	0	17	3	46	3	97	0	0	100	0	0	0	0	0	355
04:30 PM	0	158	30	0	188	23	0	5	1	29	3	92	0	0	95	0	0	0	0	0	312
04:45 PM	0	165	62	0	227	28	0	6	2	36	6	118	0	0	124	0	0	0	0	0	387
Total	0	646	170	0	816	98	0	37	6	141	20	433	0	0	453	0	0	0	0	0	1410
05:00 PM	0	151	42	0	193	19	0	7	0	26	3	109	0	0	112	0	0	0	0	0	331
05:15 PM	0	127	32	0	159	16	0	5	0	21	1	116	0	0	117	0	0	0	0	0	297
05:30 PM	0	89	31	1	121	34	0	13	3	50	8	72	0	0	80	0	0	0	0	0	251
Grand Total	0	2816	770	1	3587	889	11	198	79	1177	118	2711	0	1	2830	0	0	0	0	0	7594
Apprch %	0	78.5	21.5	0		75.5	0.9	16.8	6.7		4.2	95.8	0	0		0	0	0	0		
Total %	0	37.1	10.1	0	47.2	11.7	0.1	2.6	1	15.5	1.6	35.7	0	0	37.3	0	0	0	0	0	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
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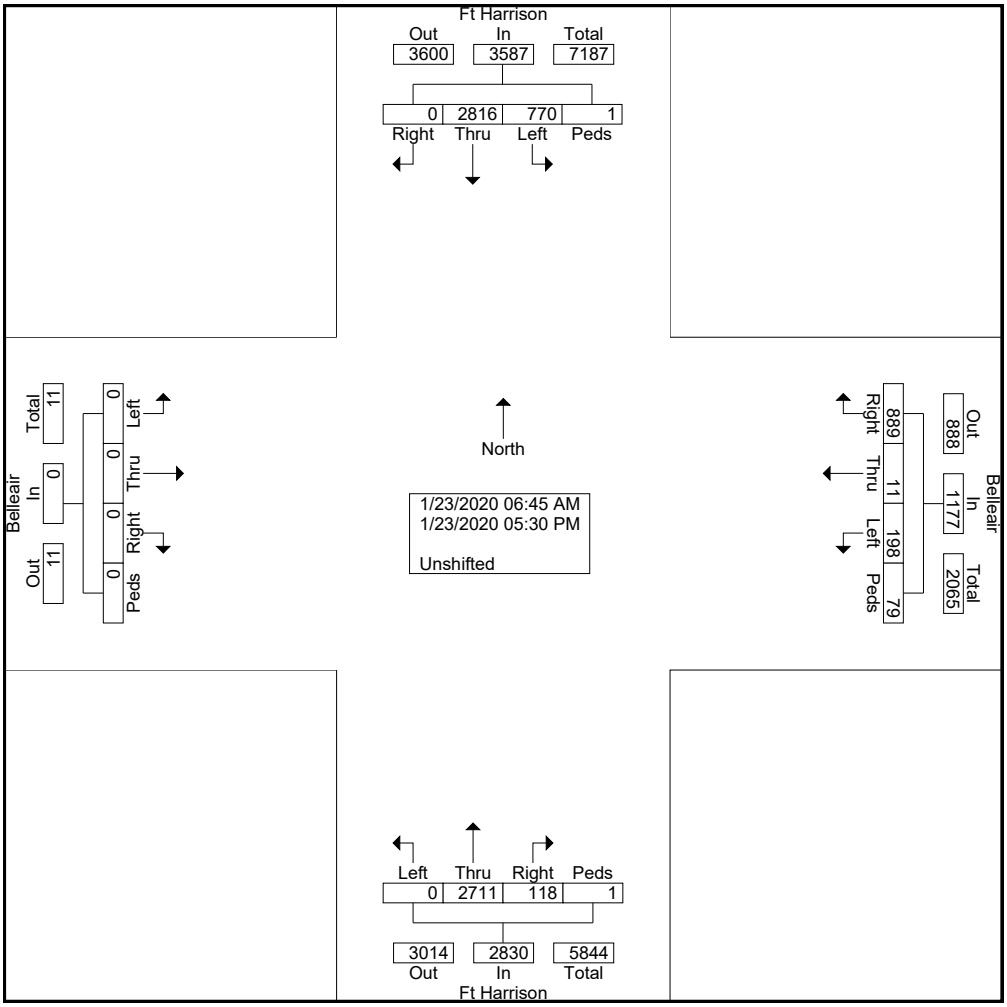
Technician: DL



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
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Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleair
Date: 1/24/2020
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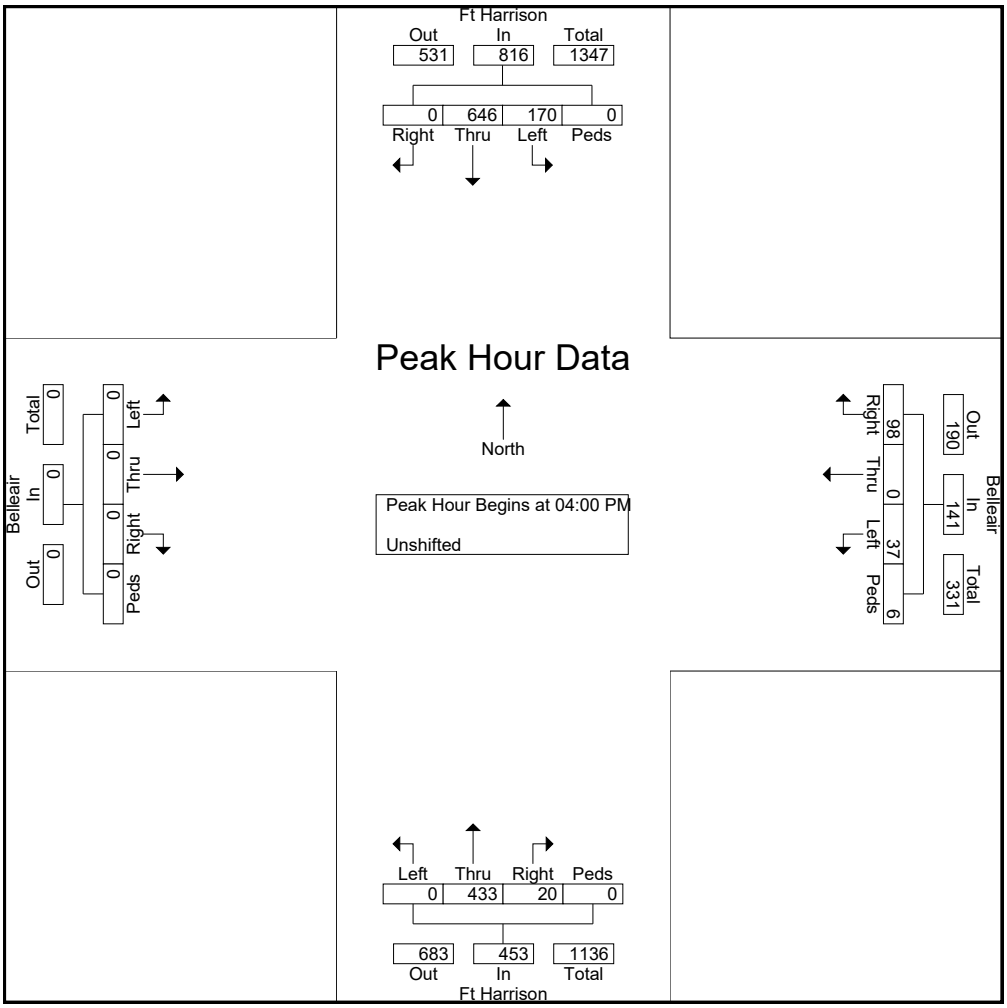
	Ft Harrison From North					Belleair From East					Ft Harrison From South					Belleair From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:45 AM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	157	35	0	192	21	0	9	0	30	**8**	**126**	0	0	**134**	0	0	0	0	0	356
04:15 PM	0	**166**	43	0	209	26	0	**17**	**3**	**46**	3	97	0	0	100	0	0	0	0	0	355
04:30 PM	0	158	30	0	188	23	0	5	1	29	3	92	0	0	95	0	0	0	0	0	312
04:45 PM	0	165	**62**	0	**227**	**28**	0	6	2	36	6	118	0	0	124	0	0	0	0	0	**387**
Total Volume	0	646	170	0	816	98	0	37	6	141	20	433	0	0	453	0	0	0	0	0	1410
% App. Total	0	79.2	20.8	0		69.5	0	26.2	4.3		4.4	95.6	0	0		0	0	0	0		
PHF	.000	.973	.685	.000	.899	.875	.000	.544	.500	.766	.625	.859	.000	.000	.845	.000	.000	.000	.000	.000	.911



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
Date: 1/16/2020
Technician: DL, MG

File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 1

Groups Printed- Unshifted

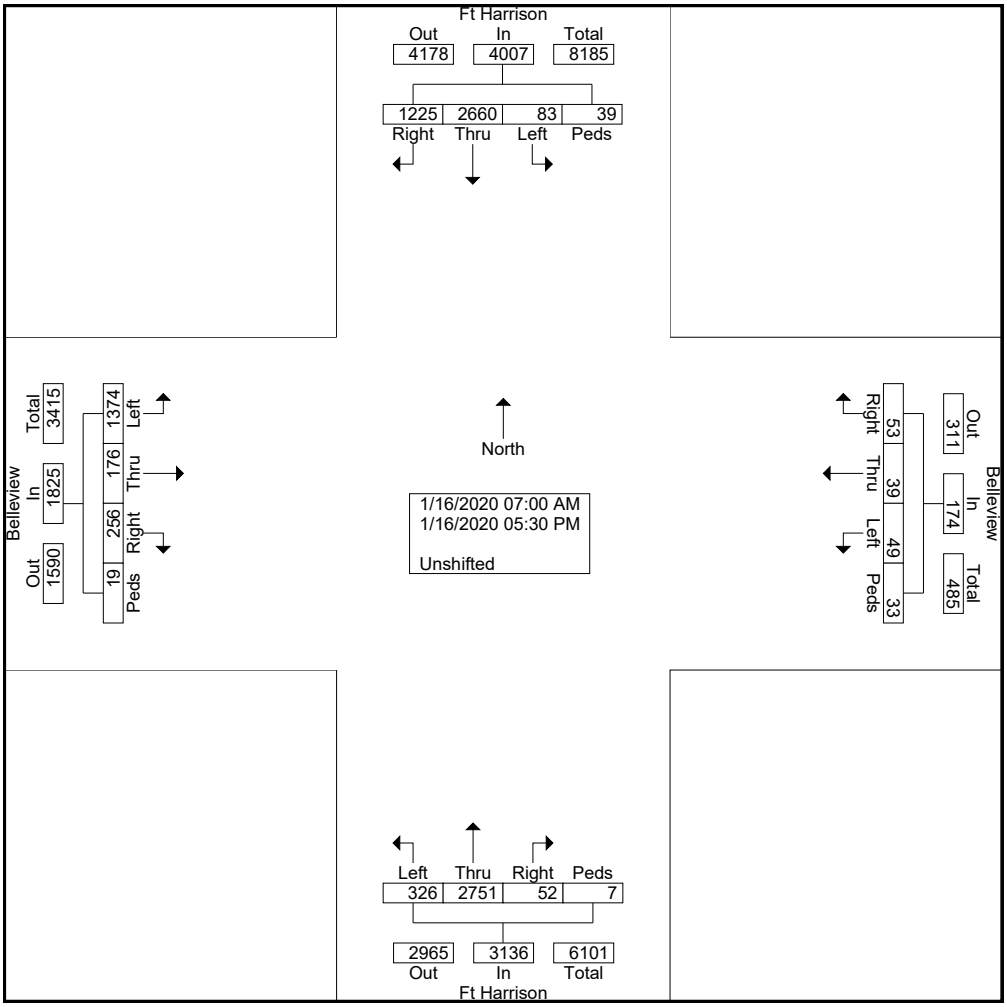
	Ft Harrison From North					Belleview From East					Ft Harrison From South					Belleview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	31	90	1	0	122	0	2	1	1	4	2	64	24	1	91	12	1	62	1	76	293
07:15 AM	35	107	1	0	143	0	1	4	1	6	0	175	18	0	193	8	1	74	0	83	425
07:30 AM	51	88	2	0	141	4	1	0	1	6	0	161	12	0	173	8	1	55	3	67	387
07:45 AM	49	99	0	0	148	1	0	1	0	2	2	191	18	1	212	9	3	70	1	83	445
Total	166	384	4	0	554	5	4	6	3	18	4	591	72	2	669	37	6	261	5	309	1550
08:00 AM	36	95	2	0	133	2	0	1	0	3	0	146	15	0	161	8	2	70	0	80	377
08:15 AM	42	60	2	1	105	2	4	4	0	10	0	165	14	1	180	9	0	79	1	89	384
08:30 AM	58	96	3	0	157	1	4	2	0	7	0	176	21	0	197	9	1	85	0	95	456
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	121	16	0	138	12	1	67	0	80	218
Total	136	251	7	1	395	5	8	7	0	20	1	608	66	1	676	38	4	301	1	344	1435
*** BREAK ***																					
10:45 AM	28	52	25	3	108	4	0	3	4	11	0	0	0	0	0	3	102	10	0	115	234
Total	28	52	25	3	108	4	0	3	4	11	0	0	0	0	0	3	102	10	0	115	234
11:00 AM	23	108	14	4	149	3	1	2	3	9	0	100	11	0	111	8	35	36	1	80	349
11:15 AM	56	141	6	0	203	4	2	1	5	12	5	104	12	0	121	8	0	53	3	64	400
11:30 AM	56	140	5	0	201	1	1	2	0	4	2	106	13	0	121	20	1	57	2	80	406
11:45 AM	45	127	7	0	179	5	4	4	7	20	3	82	12	2	99	14	3	43	1	61	359
Total	180	516	32	4	732	13	8	9	15	45	10	392	48	2	452	50	39	189	7	285	1514
12:00 PM	65	141	2	2	210	2	1	2	7	12	21	83	10	0	114	17	11	52	0	80	416
12:15 PM	49	132	1	7	189	2	2	1	0	5	1	121	11	0	133	16	4	33	2	55	382
12:30 PM	51	78	4	7	140	10	2	3	0	15	0	126	12	1	139	8	2	66	0	76	370
*** BREAK ***																					
Total	165	351	7	16	539	14	5	6	7	32	22	330	33	1	386	41	17	151	2	211	1168
*** BREAK ***																					
03:45 PM	71	144	1	3	219	2	1	4	0	7	4	100	21	0	125	18	3	57	0	78	429
Total	71	144	1	3	219	2	1	4	0	7	4	100	21	0	125	18	3	57	0	78	429
04:00 PM	75	163	1	0	239	3	3	6	0	12	2	123	18	0	143	15	0	62	2	79	473
04:15 PM	83	140	1	3	227	2	1	3	0	6	1	92	11	0	104	9	0	77	0	86	423
04:30 PM	77	179	1	1	258	3	1	1	0	5	4	106	15	0	125	7	0	49	0	56	444
04:45 PM	75	175	2	6	258	2	3	1	2	8	0	107	3	1	111	12	0	50	1	63	440
Total	310	657	5	10	982	10	8	11	2	31	7	428	47	1	483	43	0	238	3	284	1780
05:00 PM	100	182	1	0	283	0	1	0	1	2	2	102	9	0	113	13	2	58	0	73	471
05:15 PM	69	123	1	2	195	0	4	3	1	8	1	80	21	0	102	5	3	71	1	80	385
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	120	9	0	130	8	0	38	0	46	176
Grand Total	1225	2660	83	39	4007	53	39	49	33	174	52	2751	326	7	3136	256	176	1374	19	1825	9142
Apprch %	30.6	66.4	2.1	1		30.5	22.4	28.2	19		1.7	87.7	10.4	0.2		14	9.6	75.3	1		
Total %	13.4	29.1	0.9	0.4	43.8	0.6	0.4	0.5	0.4	1.9	0.6	30.1	3.6	0.1	34.3	2.8	1.9	15	0.2	20	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
Date: 1/16/2020
Technician: DL, MG

File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 2



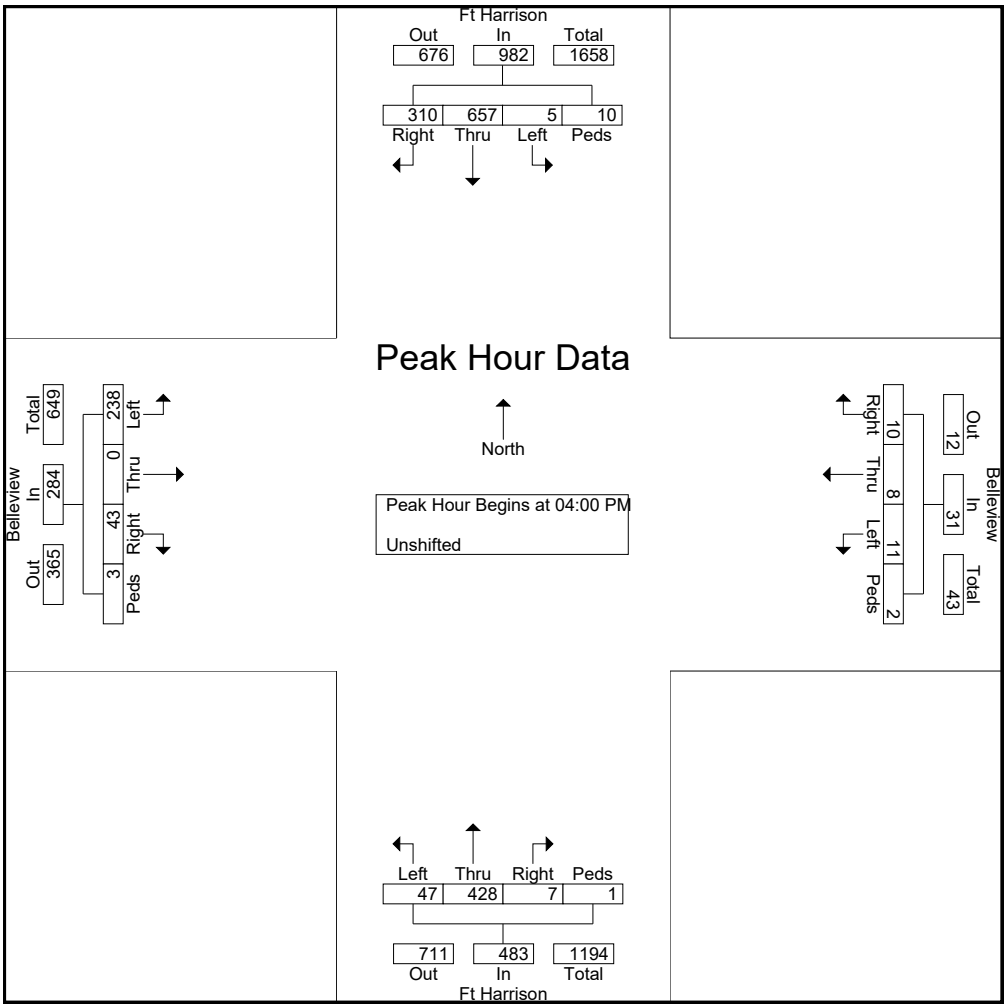
City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Belleview
Date: 1/16/2020
Technician: DL, MG

File Name : ft harrison-belleview
Site Code : 00000000
Start Date : 1/16/2020
Page No : 3

	Ft Harrison From North					Belleview From East					Ft Harrison From South					Belleview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:30 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	75	163	1	0	239	**3**	**3**	**6**	0	**12**	2	**123**	**18**	0	**143**	**15**	0	62	**2**	79	**473**
04:15 PM	**83**	140	1	3	227	2	1	3	0	6	1	92	11	0	104	9	0	**77**	0	**86**	423
04:30 PM	77	**179**	1	1	**258**	3	1	1	0	5	**4**	106	15	0	125	7	0	49	0	56	444
04:45 PM	75	175	**2**	**6**	258	2	3	1	**2**	8	0	107	3	**1**	111	12	0	50	1	63	440
Total Volume	310	657	5	10	982	10	8	11	2	31	7	428	47	1	483	43	0	238	3	284	1780
% App. Total	31.6	66.9	0.5	1		32.3	25.8	35.5	6.5		1.4	88.6	9.7	0.2		15.1	0	83.8	1.1		
PHF	.934	.918	.625	.417	.952	.833	.667	.458	.250	.646	.438	.870	.653	.250	.844	.717	.000	.773	.375	.826	.941



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
Date: 1/14/2020
Technician: DL, MG

File Name : ft harrison-lakeview
Site Code : 00000000
Start Date : 1/14/2020
Page No : 1

Groups Printed- Unshifted

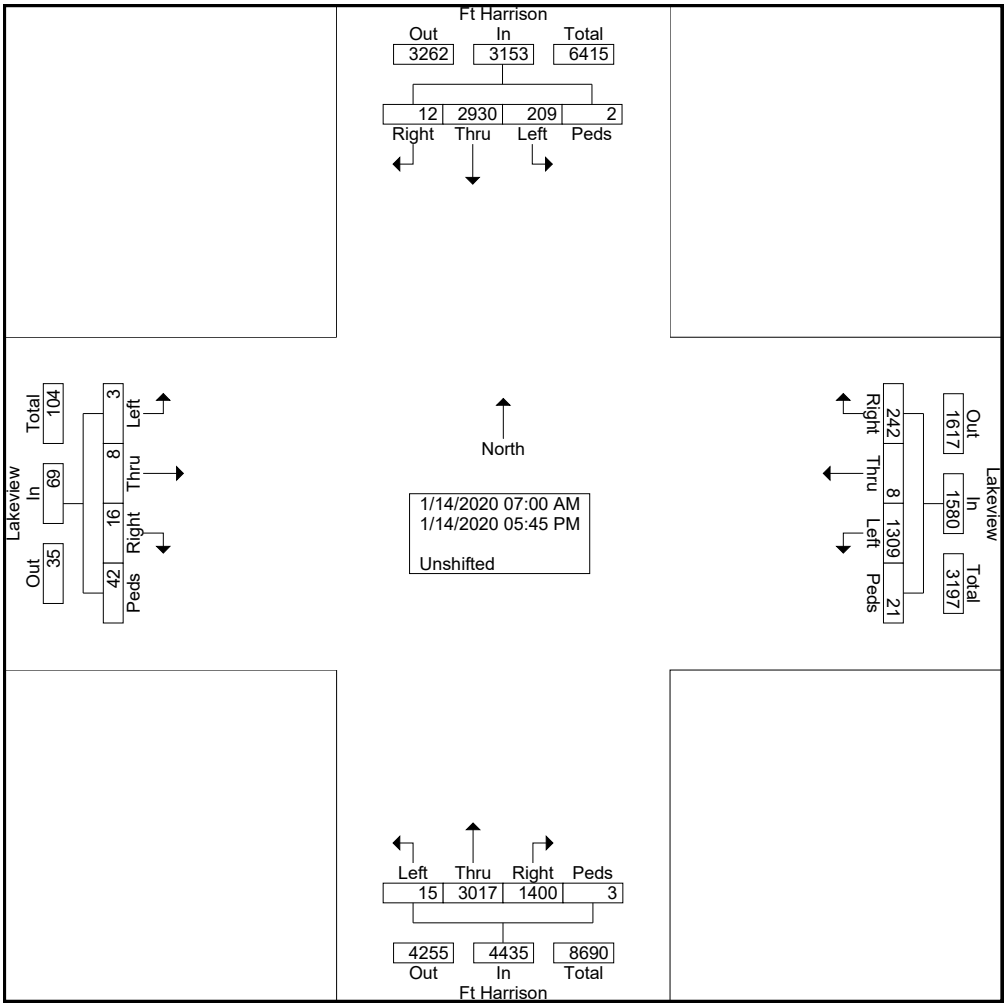
	Ft Harrison From North					Lakeview From East					Ft Harrison From South					Lakeview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	76	2	0	78	4	0	29	0	33	61	133	0	0	194	0	0	0	2	2	307
07:15 AM	0	94	3	0	97	7	0	50	0	57	57	160	0	0	217	0	1	0	1	2	373
07:30 AM	0	92	3	0	95	14	0	47	0	61	83	183	0	1	267	0	0	0	3	3	426
07:45 AM	2	87	5	0	94	15	1	75	1	92	59	178	7	0	244	0	0	0	0	0	430
Total	2	349	13	0	364	40	1	201	1	243	260	654	7	1	922	0	1	0	6	7	1536
08:00 AM	0	75	2	0	77	12	1	59	1	73	44	177	0	0	221	1	0	0	1	2	373
08:15 AM	0	98	2	0	100	16	3	66	0	85	52	159	0	0	211	0	0	0	1	1	397
08:30 AM	0	90	6	0	96	9	0	45	1	55	52	175	2	0	229	1	1	0	1	3	383
08:45 AM	1	86	6	0	93	18	0	73	0	91	70	162	0	0	232	2	1	0	1	4	420
Total	1	349	16	0	366	55	4	243	2	304	218	673	2	0	893	4	2	0	4	10	1573
*** BREAK ***																					
11:00 AM	1	128	11	0	140	13	0	54	0	67	51	142	0	0	193	2	1	0	2	5	405
11:15 AM	0	145	13	0	158	10	0	50	1	61	55	120	0	0	175	1	0	0	1	2	396
11:30 AM	2	135	7	0	144	19	0	42	0	61	55	100	1	0	156	1	2	0	1	4	365
11:45 AM	0	127	15	0	142	7	1	50	1	59	41	114	0	0	155	1	1	0	5	7	363
Total	3	535	46	0	584	49	1	196	2	248	202	476	1	0	679	5	4	0	9	18	1529
12:00 PM	0	136	15	0	151	19	2	58	1	80	60	114	2	2	178	3	0	0	9	12	421
12:15 PM	0	109	14	0	123	14	0	47	0	61	44	118	3	0	165	1	0	1	1	3	352
12:30 PM	2	116	14	0	132	13	0	65	3	81	57	143	0	0	200	0	1	0	0	1	414
*** BREAK ***																					
Total	2	361	43	0	406	46	2	170	4	222	161	375	5	2	543	4	1	1	10	16	1187
*** BREAK ***																					
04:00 PM	0	170	13	0	183	10	0	61	1	72	70	93	0	0	163	1	0	0	0	1	419
04:15 PM	1	171	23	0	195	9	0	61	1	71	75	90	0	0	165	0	0	1	0	1	432
04:30 PM	2	166	8	1	177	7	0	49	5	61	60	100	0	0	160	1	0	1	4	6	404
04:45 PM	1	187	8	0	196	3	0	67	1	71	87	122	0	0	209	0	0	0	4	4	480
Total	4	694	52	1	751	29	0	238	8	275	292	405	0	0	697	2	0	2	8	12	1735
05:00 PM	0	207	21	0	228	4	0	66	0	70	73	98	0	0	171	1	0	0	1	2	471
05:15 PM	0	160	8	0	168	8	0	70	2	80	68	105	0	0	173	0	0	0	0	0	421
05:30 PM	0	151	7	1	159	2	0	67	2	71	67	128	0	0	195	0	0	0	4	4	429
05:45 PM	0	124	3	0	127	9	0	58	0	67	59	103	0	0	162	0	0	0	0	0	356
Total	0	642	39	1	682	23	0	261	4	288	267	434	0	0	701	1	0	0	5	6	1677
Grand Total	12	2930	209	2	3153	242	8	1309	21	1580	1400	3017	15	3	4435	16	8	3	42	69	9237
Apprch %	0.4	92.9	6.6	0.1		15.3	0.5	82.8	1.3		31.6	68	0.3	0.1		23.2	11.6	4.3	60.9		
Total %	0.1	31.7	2.3	0	34.1	2.6	0.1	14.2	0.2	17.1	15.2	32.7	0.2	0	48	0.2	0.1	0	0.5	0.7	

City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
Date: 1/14/2020
Technician: DL, MG

File Name : ft harrison-lakeview
Site Code : 00000000
Start Date : 1/14/2020
Page No : 2



City of Clearwater
Traffic Operations

100 S. Myrtle Ave
Clearwater, FL 33756

Project: Ft Harrison corridor study
Location: Ft Harrison @ Lakeview Rd
Date: 1/14/2020
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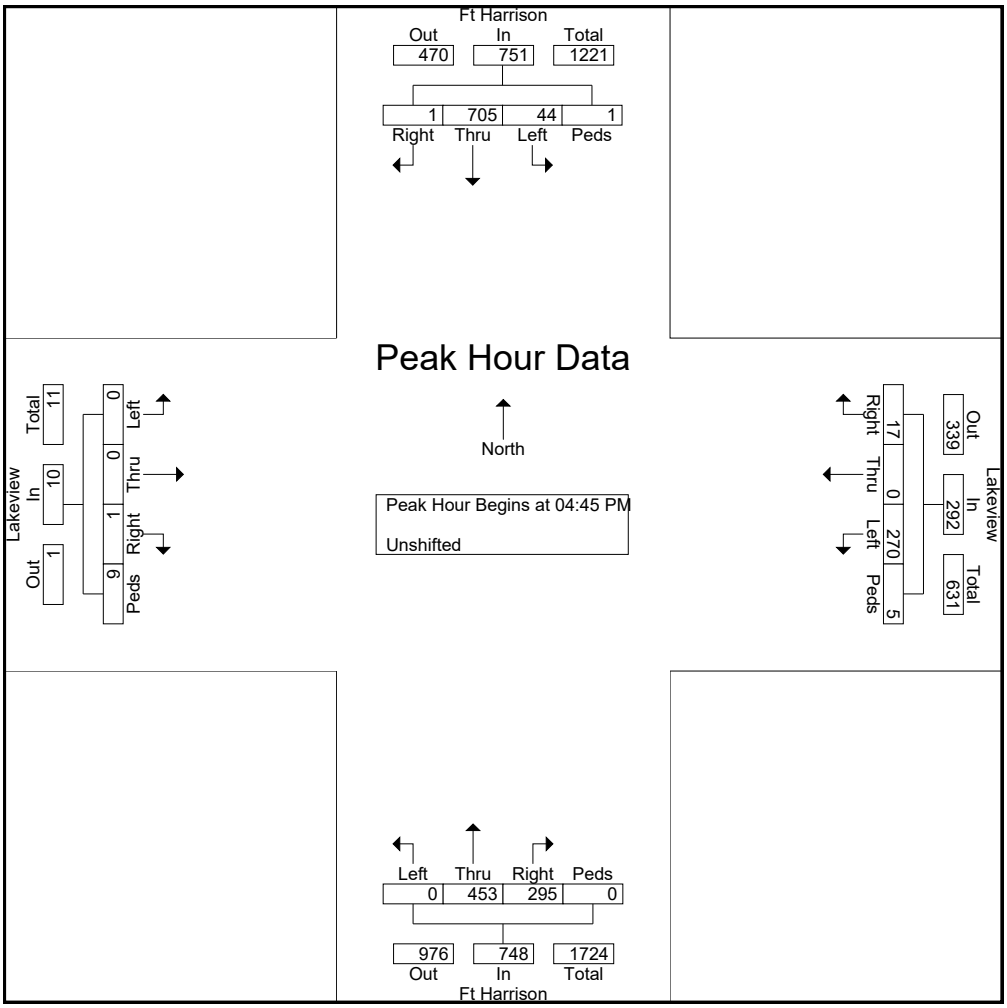
File Name : ft harrison-lakeview
Site Code : 00000000
Start Date : 1/14/2020
Page No : 3

	Ft Harrison From North					Lakeview From East					Ft Harrison From South					Lakeview From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**1**	187	8	0	196	3	0	67	1	71	**87**	122	0	0	**209**	0	0	0	**4**	**4**	**480**
05:00 PM	0	**207**	**21**	0	**228**	4	0	66	0	70	73	98	0	0	171	**1**	0	0	1	2	471
05:15 PM	0	160	8	0	168	**8**	0	**70**	**2**	**80**	68	105	0	0	173	0	0	0	0	0	421
05:30 PM	0	151	7	**1**	159	2	0	67	2	71	67	**128**	0	0	195	0	0	0	4	4	429
Total Volume	1	705	44	1	751	17	0	270	5	292	295	453	0	0	748	1	0	0	9	10	1801
% App. Total	0.1	93.9	5.9	0.1		5.8	0	92.5	1.7		39.4	60.6	0	0		10	0	0	90		
PHF	.250	.851	.524	.250	.823	.531	.000	.964	.625	.913	.848	.885	.000	.000	.895	.250	.000	.000	.563	.625	.938



Type of report: Tube Count - Volume Data

LOCATION: SB S Fort Harrison Ave N of Belleview Blvd
QC JOB #: 15067718
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		34	47	50		44			44	
01:00 AM		26	29	32		29			29	
02:00 AM		17	17	21		18			18	
03:00 AM		12	17	20		16			16	
04:00 AM		26	22	25		24			24	
05:00 AM		54	54	54		54			54	
06:00 AM		237	215	218		223			223	
07:00 AM		553	552	584		563			563	
08:00 AM		631	637	580		616			616	
09:00 AM		669	634	632		645			645	
10:00 AM		663	739	767		723			723	
11:00 AM		**701**	**742**	**897**		**780**			**780**	
12:00 PM		764	784	724		757			757	
01:00 PM		742	670	709		707			707	
02:00 PM		874	796	873		848			848	
03:00 PM		993	931	970		965			965	
04:00 PM		**1050**	**1033**	**1107**		**1063**			**1063**	
05:00 PM		903	924	974		934			934	
06:00 PM		555	549	644		583			583	
07:00 PM		484	467	484		478			478	
08:00 PM		299	338	319		319			319	
09:00 PM		209	235	242		229			229	
10:00 PM		147	175	200		174			174	
11:00 PM		100	138	123		120			120	
Day Total		10743	10745	11249		10912			10912	
% Weekday Average		98.5%	98.5%	103.1%						
% Week Average		98.5%	98.5%	103.1%		100%				
AM Peak Volume		11:00 AM 701	11:00 AM 742	11:00 AM 897		11:00 AM 780			11:00 AM 780	
PM Peak Volume		4:00 PM 1050	4:00 PM 1033	4:00 PM 1107		4:00 PM 1063			4:00 PM 1063	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: WB Belleview Blvd E of S Fort Harrison Ave
QC JOB #: 15067719
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		1	2	3		2			2	
01:00 AM		0	1	0		0			0	
02:00 AM		0	1	1		1			1	
03:00 AM		0	0	0		0			0	
04:00 AM		0	0	0		0			0	
05:00 AM		2	2	3		2			2	
06:00 AM		9	13	8		10			10	
07:00 AM		12	10	**19**		14			14	
08:00 AM		17	17	17		17			17	
09:00 AM		13	23	18		18			18	
10:00 AM		**21**	14	11		15			15	
11:00 AM		18	**35**	13		**22**			**22**	
12:00 PM		17	14	8		13			13	
01:00 PM		14	12	25		17			17	
02:00 PM		18	9	15		14			14	
03:00 PM		16	15	15		15			15	
04:00 PM		**21**	**18**	**28**		**22**			**22**	
05:00 PM		17	14	9		13			13	
06:00 PM		2	10	10		7			7	
07:00 PM		8	4	3		5			5	
08:00 PM		3	4	9		5			5	
09:00 PM		10	2	2		5			5	
10:00 PM		2	7	0		3			3	
11:00 PM		1	1	2		1			1	
Day Total		222	228	219		221			221	
% Weekday Average		100.5%	103.2%	99.1%						
% Week Average		100.5%	103.2%	99.1%		100%				
AM Peak Volume		10:00 AM 21	11:00 AM 35	7:00 AM 19		11:00 AM 22			11:00 AM 22	
PM Peak Volume		4:00 PM 21	4:00 PM 18	4:00 PM 28		4:00 PM 22			4:00 PM 22	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: NB S Fort Harrison Ave S of Belleview Blvd
QC JOB #: 15067720
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		15	20	29		21			21	
01:00 AM		18	26	18		21			21	
02:00 AM		11	11	11		11			11	
03:00 AM		23	20	20		21			21	
04:00 AM		50	47	48		48			48	
05:00 AM		184	202	200		195			195	
06:00 AM		476	462	502		480			480	
07:00 AM		**734**	**718**	**737**		**730**			**730**	
08:00 AM		634	687	693		671			671	
09:00 AM		574	577	613		588			588	
10:00 AM		499	512	564		525			525	
11:00 AM		498	488	495		494			494	
12:00 PM		**578**	**590**	583		**584**			**584**	
01:00 PM		575	515	**590**		560			560	
02:00 PM		539	535	532		535			535	
03:00 PM		550	513	560		541			541	
04:00 PM		502	480	540		507			507	
05:00 PM		493	484	461		479			479	
06:00 PM		392	378	405		392			392	
07:00 PM		216	234	215		222			222	
08:00 PM		148	171	165		161			161	
09:00 PM		100	124	121		115			115	
10:00 PM		82	97	118		99			99	
11:00 PM		45	47	50		47			47	
Day Total		7936	7938	8270		8047			8047	
% Weekday Average		98.6%	98.6%	102.8%						
% Week Average		98.6%	98.6%	102.8%		100%				
AM Peak Volume		7:00 AM 734	7:00 AM 718	7:00 AM 737		7:00 AM 730			7:00 AM 730	
PM Peak Volume		12:00 PM 578	12:00 PM 590	1:00 PM 590		12:00 PM 584			12:00 PM 584	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: EB Belleview Blvd W of S Fort Harrison Ave
QC JOB #: 15067721
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		2	3	5		3			3	
01:00 AM		3	3	3		3			3	
02:00 AM		2	1	6		3			3	
03:00 AM		7	3	4		5			5	
04:00 AM		18	13	15		15			15	
05:00 AM		39	46	43		43			43	
06:00 AM		137	151	143		144			144	
07:00 AM		**340**	328	319		**329**			**329**	
08:00 AM		298	322	**348**		323			323	
09:00 AM		283	**330**	333		315			315	
10:00 AM		262	291	279		277			277	
11:00 AM		294	271	281		282			282	
12:00 PM		294	301	314		303			303	
01:00 PM		311	290	319		307			307	
02:00 PM		310	**329**	306		315			315	
03:00 PM		**322**	315	**321**		**319**			**319**	
04:00 PM		295	308	303		302			302	
05:00 PM		263	272	258		264			264	
06:00 PM		168	156	172		165			165	
07:00 PM		154	105	150		136			136	
08:00 PM		73	86	76		78			78	
09:00 PM		48	63	62		58			58	
10:00 PM		27	38	40		35			35	
11:00 PM		17	18	20		18			18	
Day Total		3967	4043	4120		4042			4042	
% Weekday Average		98.1%	100%	101.9%						
% Week Average		98.1%	100%	101.9%		100%				
AM Peak Volume		7:00 AM 340	9:00 AM 330	8:00 AM 348		7:00 AM 329			7:00 AM 329	
PM Peak Volume		3:00 PM 322	2:00 PM 329	3:00 PM 321		3:00 PM 319			3:00 PM 319	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: SB S Fort Harrison Ave N of Belleair Rd
QC JOB #: 15067722
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Clearwater, FL
DATE: Oct 7 2019 - Oct 9 2019

Start Time	Mon 7 Oct 19	Tue 8 Oct 19	Wed 9 Oct 19	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM	0	29	40			23			23	
01:00 AM	0	23	27			17			17	
02:00 AM	0	17	18			12			12	
03:00 AM	0	9	15			8			8	
04:00 AM	2	20	17			13			13	
05:00 AM	2	58	50			37			37	
06:00 AM	0	218	202			140			140	
07:00 AM	0	439	409			283			283	
08:00 AM	23	403	419			282			282	
09:00 AM	480	448	450			459			459	
10:00 AM	536	517	523			525			525	
11:00 AM	**549**	**530**	**547**			**542**			**542**	
12:00 PM	580	556	568			568			568	
01:00 PM	526	553	524			534			534	
02:00 PM	610	687	577			625			625	
03:00 PM	641	707	675			674			674	
04:00 PM	**744**	**761**	**813**			**773**			**773**	
05:00 PM	700	686	688			691			691	
06:00 PM	410	405	416			410			410	
07:00 PM	320	386	351			352			352	
08:00 PM	205	220	237			221			221	
09:00 PM	137	153	183			158			158	
10:00 PM	110	116	133			120			120	
11:00 PM	90	83	111			95			95	
Day Total	6665	8024	7993			7562			7562	
% Weekday Average	88.1%	106.1%	105.7%							
% Week Average	88.1%	106.1%	105.7%			100%				
AM Peak Volume	11:00 AM 549	11:00 AM 530	11:00 AM 547			11:00 AM 542			11:00 AM 542	
PM Peak Volume	4:00 PM 744	4:00 PM 761	4:00 PM 813			4:00 PM 773			4:00 PM 773	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: WB Belleair Rd E of S Fort Harrison Ave
QC JOB #: 15067723
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		19	24	30		24			24	
01:00 AM		9	5	11		8			8	
02:00 AM		6	8	14		9			9	
03:00 AM		9	10	14		11			11	
04:00 AM		30	26	18		25			25	
05:00 AM		96	101	106		101			101	
06:00 AM		250	273	295		273			273	
07:00 AM		**446**	**476**	461		**461**			**461**	
08:00 AM		424	426	**477**		442			442	
09:00 AM		383	361	378		374			374	
10:00 AM		311	332	355		333			333	
11:00 AM		292	343	330		322			322	
12:00 PM		383	338	361		361			361	
01:00 PM		**384**	**359**	357		**367**			**367**	
02:00 PM		361	335	**364**		353			353	
03:00 PM		311	338	343		331			331	
04:00 PM		288	252	251		264			264	
05:00 PM		262	246	249		252			252	
06:00 PM		276	215	201		231			231	
07:00 PM		121	163	135		140			140	
08:00 PM		115	90	78		94			94	
09:00 PM		63	74	98		78			78	
10:00 PM		66	70	51		62			62	
11:00 PM		35	27	32		31			31	
Day Total		4940	4892	5009		4947			4947	
% Weekday Average		99.9%	98.9%	101.3%						
% Week Average		99.9%	98.9%	101.3%		100%				
AM Peak Volume		7:00 AM 446	7:00 AM 476	8:00 AM 477		7:00 AM 461			7:00 AM 461	
PM Peak Volume		1:00 PM 384	1:00 PM 359	2:00 PM 364		1:00 PM 367			1:00 PM 367	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: NB S Fort Harrison Ave S of Belleair Rd
QC JOB #: 15067724
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Clearwater, FL
DATE: Oct 8 2019 - Oct 10 2019

Start Time	Mon	Tue 8 Oct 19	Wed 9 Oct 19	Thu 10 Oct 19	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		14	17	20		17			17	
01:00 AM		15	22	22		20			20	
02:00 AM		13	15	4		11			11	
03:00 AM		14	12	16		14			14	
04:00 AM		31	20	30		27			27	
05:00 AM		95	90	85		90			90	
06:00 AM		295	294	310		300			300	
07:00 AM		**514**	483	485		494			494	
08:00 AM		476	**506**	**519**		**500**			**500**	
09:00 AM		424	440	448		437			437	
10:00 AM		380	385	433		399			399	
11:00 AM		384	382	378		381			381	
12:00 PM		**451**	**440**	438		**443**			**443**	
01:00 PM		421	427	437		428			428	
02:00 PM		443	407	**466**		439			439	
03:00 PM		439	396	423		419			419	
04:00 PM		432	375	427		411			411	
05:00 PM		388	408	426		407			407	
06:00 PM		350	284	317		317			317	
07:00 PM		187	213	204		201			201	
08:00 PM		136	167	148		150			150	
09:00 PM		84	100	103		96			96	
10:00 PM		67	72	97		79			79	
11:00 PM		39	41	43		41			41	
Day Total		6092	5996	6279		6121			6121	
% Weekday Average		99.5%	98%	102.6%						
% Week Average		99.5%	98%	102.6%		100%				
AM Peak Volume		7:00 AM 514	8:00 AM 506	8:00 AM 519		8:00 AM 500			8:00 AM 500	
PM Peak Volume		12:00 PM 451	12:00 PM 440	2:00 PM 466		12:00 PM 443			12:00 PM 443	

Comments:

Report generated on 10/21/2019 8:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	6	36	8	8	6	71	705	2	7	364	192
Future Volume (veh/h)	316	6	36	8	8	6	71	705	2	7	364	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	343	7	39	9	9	7	77	766	2	8	396	209
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	8	44	223	219	149	515	1096	3	55	1659	766
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.05	0.59	0.59	0.48	0.48	0.48
Sat Flow, veh/h	1263	26	144	541	722	491	1781	1865	5	20	3433	1585
Grp Volume(v), veh/h	389	0	0	25	0	0	77	0	768	215	189	209
Grp Sat Flow(s),veh/h/ln	1433	0	0	1754	0	0	1781	0	1869	1836	1617	1585
Q Serve(g_s), s	20.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	23.7	0.0	5.6	6.5
Cycle Q Clear(g_c), s	21.4	0.0	0.0	0.8	0.0	0.0	1.6	0.0	23.7	5.5	5.6	6.5
Prop In Lane	0.88		0.10	0.36		0.28	1.00		0.00	0.04		1.00
Lane Grp Cap(c), veh/h	516	0	0	591	0	0	515	0	1099	932	781	766
V/C Ratio(X)	0.75	0.00	0.00	0.04	0.00	0.00	0.15	0.00	0.70	0.23	0.24	0.27
Avail Cap(c_a), veh/h	645	0	0	734	0	0	533	0	1099	932	781	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	0.0	0.0	20.3	0.0	0.0	8.8	0.0	11.9	12.5	12.5	12.7
Incr Delay (d2), s/veh	3.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.7	0.6	0.7	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	0.0	0.3	0.0	0.0	0.6	0.0	9.7	2.3	2.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	0.0	20.4	0.0	0.0	9.0	0.0	15.6	13.0	13.2	13.6
LnGrp LOS	C	A	A	C	A	A	A	A	B	B	B	B
Approach Vol, veh/h		389			25			845			613	
Approach Delay, s/veh		31.3			20.4			15.0			13.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		53.0		29.5	8.6	44.4		29.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		48.5		32.5	5.0	39.0		32.5				
Max Q Clear Time (g_c+I1), s		25.7		23.4	3.6	8.5		2.8				
Green Ext Time (p_c), s		5.9		1.6	0.0	3.3		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			17.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	316	6	36	8	8	6	71	705	2	7	364	192
Future Volume (veh/h)	316	6	36	8	8	6	71	705	2	7	364	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	343	7	39	9	9	7	77	766	2	8	396	209
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	465	8	44	223	219	149	99	1096	3	298	894	758
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.06	0.59	0.59	0.48	0.48	0.48
Sat Flow, veh/h	1263	26	144	541	722	491	1781	1865	5	700	1870	1585
Grp Volume(v), veh/h	389	0	0	25	0	0	77	0	768	8	396	209
Grp Sat Flow(s),veh/h/ln	1433	0	0	1754	0	0	1781	0	1869	700	1870	1585
Q Serve(g_s), s	20.6	0.0	0.0	0.0	0.0	0.0	3.5	0.0	23.7	0.7	11.6	6.5
Cycle Q Clear(g_c), s	21.4	0.0	0.0	0.8	0.0	0.0	3.5	0.0	23.7	15.3	11.6	6.5
Prop In Lane	0.88		0.10	0.36		0.28	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	0	0	591	0	0	99	0	1099	298	894	758
V/C Ratio(X)	0.75	0.00	0.00	0.04	0.00	0.00	0.78	0.00	0.70	0.03	0.44	0.28
Avail Cap(c_a), veh/h	645	0	0	734	0	0	108	0	1099	298	894	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	0.0	0.0	20.3	0.0	0.0	38.5	0.0	11.9	20.4	14.3	13.0
Incr Delay (d2), s/veh	3.9	0.0	0.0	0.0	0.0	0.0	27.7	0.0	3.7	0.2	1.6	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	0.0	0.0	0.3	0.0	0.0	2.3	0.0	9.7	0.1	4.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	0.0	20.4	0.0	0.0	66.2	0.0	15.6	20.6	15.9	13.9
LnGrp LOS	C	A	A	C	A	A	E	A	B	C	B	B
Approach Vol, veh/h		389			25			845			613	
Approach Delay, s/veh		31.3			20.4			20.2			15.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		53.0		29.5	9.1	43.9		29.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		48.5		32.5	5.0	39.0		32.5				
Max Q Clear Time (g_c+I1), s		25.7		23.4	5.5	17.3		2.8				
Green Ext Time (p_c), s		5.9		1.6	0.0	3.2		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			20.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	7	44	10	10	7	85	846	2	9	437	231
Future Volume (veh/h)	379	7	44	10	10	7	85	846	2	9	437	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	412	8	48	11	11	8	92	920	2	10	475	251
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	515	9	51	255	251	164	118	1026	2	50	1428	685
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.07	0.55	0.55	0.43	0.43	0.43
Sat Flow, veh/h	1258	24	147	573	720	470	1781	1866	4	18	3303	1585
Grp Volume(v), veh/h	468	0	0	30	0	0	92	0	922	249	236	251
Grp Sat Flow(s),veh/h/ln	1429	0	0	1763	0	0	1781	0	1870	1704	1617	1585
Q Serve(g_s), s	27.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	38.6	0.4	8.5	9.4
Cycle Q Clear(g_c), s	28.0	0.0	0.0	1.0	0.0	0.0	4.5	0.0	38.6	28.7	8.5	9.4
Prop In Lane	0.88		0.10	0.37		0.27	1.00		0.00	0.04		1.00
Lane Grp Cap(c), veh/h	574	0	0	670	0	0	118	0	1028	779	699	685
V/C Ratio(X)	0.81	0.00	0.00	0.04	0.00	0.00	0.78	0.00	0.90	0.32	0.34	0.37
Avail Cap(c_a), veh/h	603	0	0	701	0	0	202	0	1028	779	699	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	0.0	19.1	0.0	0.0	40.5	0.0	17.6	16.4	16.6	16.9
Incr Delay (d2), s/veh	8.2	0.0	0.0	0.0	0.0	0.0	10.5	0.0	12.1	1.1	1.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	0.0	0.4	0.0	0.0	2.3	0.0	18.3	3.4	3.3	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	0.0	0.0	19.1	0.0	0.0	51.0	0.0	29.7	17.5	17.9	18.4
LnGrp LOS	D	A	A	B	A	A	D	A	C	B	B	B
Approach Vol, veh/h		468			30			1014			736	
Approach Delay, s/veh		35.9			19.1			31.7			17.9	
Approach LOS		D			B			C			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		53.0		35.2	10.4	42.6		35.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		48.5		32.5	10.0	34.0		32.5				
Max Q Clear Time (g_c+I1), s		40.6		30.0	6.5	30.7		3.0				
Green Ext Time (p_c), s		4.1		0.7	0.1	1.3		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			27.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	379	7	44	10	10	7	85	846	2	9	437	231
Future Volume (veh/h)	379	7	44	10	10	7	85	846	2	9	437	231
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	412	8	48	11	11	8	92	920	2	10	475	251
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	515	9	51	255	251	164	118	1026	2	149	810	686
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.07	0.55	0.55	0.43	0.43	0.43
Sat Flow, veh/h	1258	24	147	573	720	470	1781	1866	4	606	1870	1585
Grp Volume(v), veh/h	468	0	0	30	0	0	92	0	922	10	475	251
Grp Sat Flow(s),veh/h/ln	1429	0	0	1763	0	0	1781	0	1870	606	1870	1585
Q Serve(g_s), s	27.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	38.6	1.3	17.0	9.4
Cycle Q Clear(g_c), s	28.0	0.0	0.0	1.0	0.0	0.0	4.5	0.0	38.6	29.6	17.0	9.4
Prop In Lane	0.88		0.10	0.37		0.27	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	574	0	0	670	0	0	118	0	1028	149	810	686
V/C Ratio(X)	0.81	0.00	0.00	0.04	0.00	0.00	0.78	0.00	0.90	0.07	0.59	0.37
Avail Cap(c_a), veh/h	603	0	0	701	0	0	151	0	1028	149	810	686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	0.0	0.0	19.1	0.0	0.0	40.6	0.0	17.6	35.4	19.0	16.9
Incr Delay (d2), s/veh	8.2	0.0	0.0	0.0	0.0	0.0	17.9	0.0	12.1	0.9	3.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	0.0	0.4	0.0	0.0	2.5	0.0	18.3	0.2	7.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	0.0	0.0	19.1	0.0	0.0	58.5	0.0	29.7	36.2	22.1	18.4
LnGrp LOS	D	A	A	B	A	A	E	A	C	D	C	B
Approach Vol, veh/h		468			30			1014			736	
Approach Delay, s/veh		35.9			19.1			32.3			21.0	
Approach LOS		D			B			C			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		53.0		35.2	10.3	42.7		35.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		48.5		32.5	7.5	36.5		32.5				
Max Q Clear Time (g_c+I1), s		40.6		30.0	6.5	31.6		3.0				
Green Ext Time (p_c), s		4.1		0.7	0.0	1.8		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	248	0	45	11	8	10	49	445	7	5	683	322
Future Volume (veh/h)	248	0	45	11	8	10	49	445	7	5	683	322
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	270	0	49	12	9	11	53	484	8	5	742	350
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	402	0	57	203	153	153	79	1143	19	50	1808	824
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.04	0.62	0.62	0.52	0.52	0.52
Sat Flow, veh/h	1218	0	221	533	593	590	1781	1835	30	5	3477	1585
Grp Volume(v), veh/h	319	0	0	32	0	0	53	0	492	400	347	350
Grp Sat Flow(s),veh/h/ln	1439	0	0	1717	0	0	1781	0	1865	1865	1617	1585
Q Serve(g_s), s	15.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	10.3	0.0	10.0	10.4
Cycle Q Clear(g_c), s	16.0	0.0	0.0	1.0	0.0	0.0	2.2	0.0	10.3	10.0	10.0	10.4
Prop In Lane	0.85		0.15	0.37		0.34	1.00		0.02	0.01		1.00
Lane Grp Cap(c), veh/h	459	0	0	509	0	0	79	0	1162	1018	841	824
V/C Ratio(X)	0.69	0.00	0.00	0.06	0.00	0.00	0.67	0.00	0.42	0.39	0.41	0.42
Avail Cap(c_a), veh/h	716	0	0	790	0	0	175	0	1162	1018	841	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	0.0	21.3	0.0	0.0	35.9	0.0	7.3	11.2	11.2	11.3
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.1	0.0	0.0	9.5	0.0	1.1	1.1	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	0.4	0.0	0.0	1.2	0.0	3.8	4.0	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	0.0	21.4	0.0	0.0	45.4	0.0	8.5	12.3	12.7	12.9
LnGrp LOS	C	A	A	C	A	A	D	A	A	B	B	B
Approach Vol, veh/h		319			32			545			1097	
Approach Delay, s/veh		28.7			21.4			12.1			12.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		52.0		24.2	7.9	44.1		24.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5	7.5	35.5		33.5				
Max Q Clear Time (g_c+I1), s		12.3		18.0	4.2	12.4		3.0				
Green Ext Time (p_c), s		3.5		1.7	0.0	6.4		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			15.2									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	248	0	45	11	8	10	49	445	7	5	683	322
Future Volume (veh/h)	248	0	45	11	8	10	49	445	7	5	683	322
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	270	0	49	12	9	11	53	484	8	5	742	350
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	402	0	57	203	153	153	79	1143	19	536	973	824
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.04	0.62	0.62	0.52	0.52	0.52
Sat Flow, veh/h	1218	0	221	533	593	590	1781	1835	30	905	1870	1585
Grp Volume(v), veh/h	319	0	0	32	0	0	53	0	492	5	742	350
Grp Sat Flow(s),veh/h/ln	1439	0	0	1717	0	0	1781	0	1865	905	1870	1585
Q Serve(g_s), s	15.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	10.3	0.2	24.1	10.4
Cycle Q Clear(g_c), s	16.0	0.0	0.0	1.0	0.0	0.0	2.2	0.0	10.3	2.6	24.1	10.4
Prop In Lane	0.85		0.15	0.37		0.34	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	459	0	0	509	0	0	79	0	1162	536	973	824
V/C Ratio(X)	0.69	0.00	0.00	0.06	0.00	0.00	0.67	0.00	0.42	0.01	0.76	0.42
Avail Cap(c_a), veh/h	716	0	0	790	0	0	175	0	1162	536	973	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	0.0	21.3	0.0	0.0	35.9	0.0	7.3	10.0	14.6	11.3
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.1	0.0	0.0	9.5	0.0	1.1	0.0	5.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	0.4	0.0	0.0	1.2	0.0	3.8	0.0	10.5	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	0.0	0.0	21.4	0.0	0.0	45.4	0.0	8.5	10.1	20.2	12.9
LnGrp LOS	C	A	A	C	A	A	D	A	A	B	C	B
Approach Vol, veh/h		319			32			545			1097	
Approach Delay, s/veh		28.7			21.4			12.1			17.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		52.0		24.2	7.9	44.1		24.2				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5	7.5	35.5		33.5				
Max Q Clear Time (g_c+I1), s		12.3		18.0	4.2	26.1		3.0				
Green Ext Time (p_c), s		3.5		1.7	0.0	4.5		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			18.0									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	297	0	54	14	10	12	59	534	9	6	820	387
Future Volume (veh/h)	297	0	54	14	10	12	59	534	9	6	820	387
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	0	59	15	11	13	64	580	10	7	891	421
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	446	0	66	233	172	172	84	1079	19	49	1686	770
Arrive On Green	0.30	0.00	0.30	0.30	0.30	0.30	0.05	0.59	0.59	0.49	0.49	0.49
Sat Flow, veh/h	1213	0	222	571	574	573	1781	1833	32	7	3472	1585
Grp Volume(v), veh/h	382	0	0	39	0	0	64	0	590	481	417	421
Grp Sat Flow(s),veh/h/ln	1434	0	0	1718	0	0	1781	0	1865	1862	1617	1585
Q Serve(g_s), s	19.2	0.0	0.0	0.0	0.0	0.0	2.9	0.0	15.4	0.0	14.4	15.0
Cycle Q Clear(g_c), s	20.4	0.0	0.0	1.3	0.0	0.0	2.9	0.0	15.4	14.4	14.4	15.0
Prop In Lane	0.85		0.15	0.38		0.33	1.00		0.02	0.01		1.00
Lane Grp Cap(c), veh/h	513	0	0	577	0	0	84	0	1097	949	785	770
V/C Ratio(X)	0.75	0.00	0.00	0.07	0.00	0.00	0.76	0.00	0.54	0.51	0.53	0.55
Avail Cap(c_a), veh/h	675	0	0	755	0	0	166	0	1097	949	785	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	0.0	20.2	0.0	0.0	38.0	0.0	10.0	14.4	14.4	14.5
Incr Delay (d2), s/veh	3.2	0.0	0.0	0.0	0.0	0.0	13.1	0.0	1.9	1.9	2.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	0.5	0.0	0.0	1.5	0.0	6.1	6.1	5.4	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	0.0	0.0	20.3	0.0	0.0	51.2	0.0	11.9	16.3	17.0	17.3
LnGrp LOS	C	A	A	C	A	A	D	A	B	B	B	B
Approach Vol, veh/h		382			39			654			1319	
Approach Delay, s/veh		30.0			20.3			15.7			16.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		52.0		28.7	8.3	43.7		28.7				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		47.5		33.5	7.5	35.5		33.5				
Max Q Clear Time (g_c+I1), s		17.4		22.4	4.9	17.0		3.3				
Green Ext Time (p_c), s		4.4		1.8	0.0	7.3		0.2				

Intersection Summary												
HCM 6th Ctrl Delay			18.7									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	297	0	54	14	10	12	59	534	9	6	820	387
Future Volume (veh/h)	297	0	54	14	10	12	59	534	9	6	820	387
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	0	59	15	11	13	64	580	10	7	891	421
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	391	0	58	207	153	152	82	1171	20	470	1015	860
Arrive On Green	0.26	0.00	0.26	0.26	0.26	0.26	0.05	0.64	0.64	0.54	0.54	0.54
Sat Flow, veh/h	1217	0	222	581	586	583	1781	1833	32	826	1870	1585
Grp Volume(v), veh/h	382	0	0	39	0	0	64	0	590	7	891	421
Grp Sat Flow(s),veh/h/ln	1439	0	0	1750	0	0	1781	0	1865	826	1870	1585
Q Serve(g_s), s	22.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	15.0	0.4	37.4	14.9
Cycle Q Clear(g_c), s	23.5	0.0	0.0	1.5	0.0	0.0	3.2	0.0	15.0	6.8	37.4	14.9
Prop In Lane	0.85		0.15	0.38		0.33	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	449	0	0	512	0	0	82	0	1191	470	1015	860
V/C Ratio(X)	0.85	0.00	0.00	0.08	0.00	0.00	0.78	0.00	0.50	0.01	0.88	0.49
Avail Cap(c_a), veh/h	449	0	0	512	0	0	101	0	1191	470	1015	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	0.0	25.1	0.0	0.0	42.5	0.0	8.6	12.7	18.0	12.8
Incr Delay (d2), s/veh	14.3	0.0	0.0	0.1	0.0	0.0	26.1	0.0	1.5	0.1	10.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	0.0	0.0	0.6	0.0	0.0	2.0	0.0	5.8	0.1	17.6	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	0.0	25.2	0.0	0.0	68.6	0.0	10.1	12.7	28.6	14.8
LnGrp LOS	D	A	A	C	A	A	E	A	B	B	C	B
Approach Vol, veh/h		382			39			654			1319	
Approach Delay, s/veh		47.6			25.2			15.8			24.1	
Approach LOS		D			C			B			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		62.0		28.0	8.6	53.4		28.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		57.5		23.5	5.1	47.9		23.5				
Max Q Clear Time (g_c+I1), s		17.0		25.5	5.2	39.4		3.5				
Green Ext Time (p_c), s		4.6		0.0	0.0	5.1		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			25.6									
HCM 6th LOS			C									

Projections of Florida Population by County, 2020–2045, with Estimates for 2018 (continued)

County and State	Estimates April 1, 2018	Projections, April 1 2020	2025	2030	2035	2040	2045
MIAMI-DADE	2,779,322						
Low		2,743,000	2,830,000	2,889,800	2,926,300	2,950,700	2,955,700
Medium		2,861,600	3,040,300	3,190,200	3,315,900	3,427,200	3,523,500
High		2,971,500	3,230,900	3,478,000	3,706,300	3,926,700	4,127,200
MONROE	73,940						
Low		71,000	69,300	67,500	65,700	63,900	62,100
Medium		74,000	74,200	74,300	74,400	74,600	74,700
High		77,000	79,300	81,700	84,100	86,200	88,200
NASSAU	82,748						
Low		81,100	85,300	88,300	90,500	91,300	91,300
Medium		86,400	94,800	102,100	108,600	113,900	118,600
High		91,400	103,200	114,700	126,400	136,800	147,100
OKALOOSA	198,152						
Low		192,200	194,300	195,200	194,700	193,300	191,400
Medium		202,600	212,100	220,400	227,400	233,400	239,100
High		212,500	228,800	245,000	260,800	275,300	290,200
OKEECHOBEE	41,120						
Low		39,900	39,600	39,100	38,600	38,000	37,400
Medium		41,500	42,400	43,100	43,600	44,200	44,700
High		43,200	45,300	47,400	49,400	51,300	53,200
ORANGE	1,349,597						
Low		1,341,400	1,433,400	1,498,900	1,543,400	1,575,400	1,595,500
Medium		1,415,500	1,568,100	1,694,000	1,799,300	1,891,800	1,975,300
High		1,482,700	1,679,100	1,862,600	2,032,000	2,195,700	2,352,400
OSCEOLA	352,496						
Low		356,500	399,500	432,200	457,100	476,700	491,000
Medium		380,700	445,300	500,200	548,100	591,000	630,400
High		402,000	480,300	554,900	626,300	697,100	766,400
PALM BEACH	1,433,417						
Low		1,412,800	1,455,100	1,486,500	1,507,200	1,517,500	1,518,000
Medium		1,473,700	1,563,100	1,641,000	1,707,500	1,763,200	1,811,000
High		1,530,500	1,661,200	1,789,100	1,908,900	2,019,400	2,119,700
PASCO	515,077						
Low		512,100	539,100	562,000	578,700	590,700	599,300
Medium		534,500	579,400	619,900	654,000	682,900	708,900
High		554,800	615,400	676,400	733,000	786,100	836,800
PINELLAS	970,532						
Low		953,700	960,700	960,700	955,800	947,600	938,300
Medium		983,900	1,012,900	1,034,300	1,050,600	1,063,500	1,075,000
High		1,012,700	1,068,000	1,118,000	1,161,800	1,200,600	1,236,600
POLK	673,028						
Low		670,300	706,100	732,300	751,200	764,300	773,000
Medium		699,600	758,900	807,900	849,400	884,700	916,200
High		726,100	806,200	881,300	951,400	1,017,100	1,079,400
PUTNAM	72,981						
Low		70,200	68,300	66,600	64,800	63,000	61,200
Medium		73,100	73,200	73,300	73,400	73,500	73,600
High		76,000	78,300	80,600	83,000	85,000	87,000
ST. JOHNS	238,742						
Low		239,900	265,600	284,600	298,700	309,600	317,100
Medium		256,100	295,900	329,500	358,600	384,600	408,500
High		270,500	319,300	365,400	409,300	452,700	495,000
ST. LUCIE	302,432						
Low		300,000	314,100	325,800	335,100	341,600	346,600
Medium		313,100	337,500	359,500	378,700	395,100	410,100
High		325,000	358,500	392,100	424,400	454,600	484,000

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
2	2,260	3,020	3,660	3,940
3	3,360	4,580	5,500	6,080
4	4,500	6,080	7,320	8,220
5	5,660	7,680	9,220	10,360
6	7,900	10,320	12,060	12,500

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	420	840	1,190	1,640
2	Divided	1,810	2,560	3,240	3,590
3	Divided	2,720	3,840	4,860	5,380

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1] Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

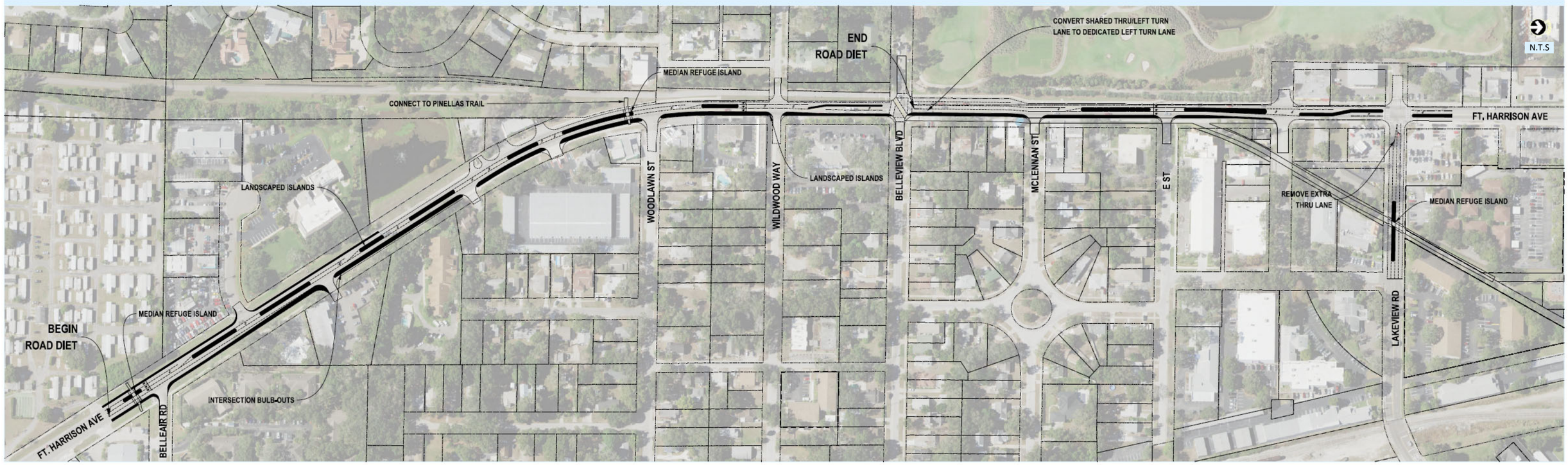
* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

APPENDIX D: CONCEPT PLAN BELLEAIR ROAD TO LAKEVIEW ROAD

A concept plan was drawn for the road diet portion along Segment 1A from Belleair Road to Belleview Boulevard, and extended out to Lakeview Road. With the road diet, median islands are proposed in the center lane where left turn access is not needed in order to provide a traffic calming effect and increase safety. The median islands are extended to Lakeview Road. A median refuge island is proposed on Lakeview Road east of the corridor where the Pinellas Trail crosses the road midblock. While outside the official study area, providing a median refuge island on Lakeview Road at the Pinellas Trail crossing would improve the experience on the Pinellas Trail as it serves as a parallel bike facility for Ft. Harrison Avenue.

SEGMENT 1A ROAD DIET

FT. HARRISON AVENUE FROM BELLEAIR ROAD TO LAKEVIEW ROAD