Gulf Coast Consulting, Inc.

Land Development Consulting
Engineering • Planning • Transportation • Permitting
ICOT Center
13825 ICOT Boulevard, Suite 605
Clearwater, FL 33760
Phone: (727) 524-1818
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March 13, 2026

Ms. Ava Schmidt, Planner II
City of Clearwater Planning & Development Services
100 S. Myrtle Avenue, 2nd Floor
Clearwater, FL 33756

Re: 375 Turner Street – DRC Action Agenda
Case No.: FLD2025-10026
Atlas Page: 295B
Zoning District: I - Institutional
Address: 375 Turner St, Clearwater FL 33756

Dear Ms. Ava Schmidt:

Pursuant to your request for additional information correspondence received on March 2, 2026, the following are our responses to each of the review comments:

PLANNING - PRIOR TO CDB: COMPREHENSIVE LANDSCAPE PROGRAM: Ava Schmidt 2/25/26

Comment:

1. **Per discussions with staff and applicant, it was agreed upon that the angled parking may remain on site with the addition of landscaped areas along the southern property line in addition to the proposed landscaping (Sheet C3, version 2) along the north property line. The discussion was not landscaping at the south in lieu of landscaping at the north. Rather, the new landscaping must be in addition to what was already proposed.**

Response:

1. The previously proposed landscape on the north side has been added back into the plan.

PLANNING - PRIOR TO CDB: IMPERVIOUS SURFACE RATIO: Ava Schmidt 11/20/25
Issue is attached to Plans on sheet C1

Comment:

1. **Please revise ISR inconsistency. Sheet C1 states proposed ISR is 0.80 while page two of the application states proposed ISR is 0.90. The maximum permitted ISR for a property with an Institutional (I) Future Land Use designation is 0.85.**

   Sean Cashen on 2/4/2026 3:09:07 PM - ANSWERED
   As per our discussion, we will provide minimal landscaping along the front and rear resulting in an ISR of 87.24%, significant improvement from the existing 94.79% ISR.

   Ava Schmidt on 2/25/2026 2:10:07 PM - NOTACCEPTED
   The maximum permitted ISR for a property with an Institutional (I) Future Land Use designation is 0.85. An ISR at 0.87 cannot be permitted.

Response:

1. ISR remains as discussed.

PLANNING - PRIOR TO CDB: Trees: Ava Schmidt 2/25/26
Issue is attached to Plans on sheet LA1

Comment:

1. **Each new landscape island is required to be wide enough to allow for successful growth of a tree and shrubs. Please include the provision of at least one shade tree within each parking island, including the island located at the northeast corner of the site.**

Response:

1. See revised landscape plan.

PUBLIC UTILITIES - PRIOR TO CDB: PUBLIC UTILITIES: Andrew Blauvelt 2/22/26

Comment:

1. **Call out new locations of Reclaimed, Potable and sanitary taps if not connecting to existing.**

Response:

1. There will be no new utility connections.

Enclosed for your review are the following:

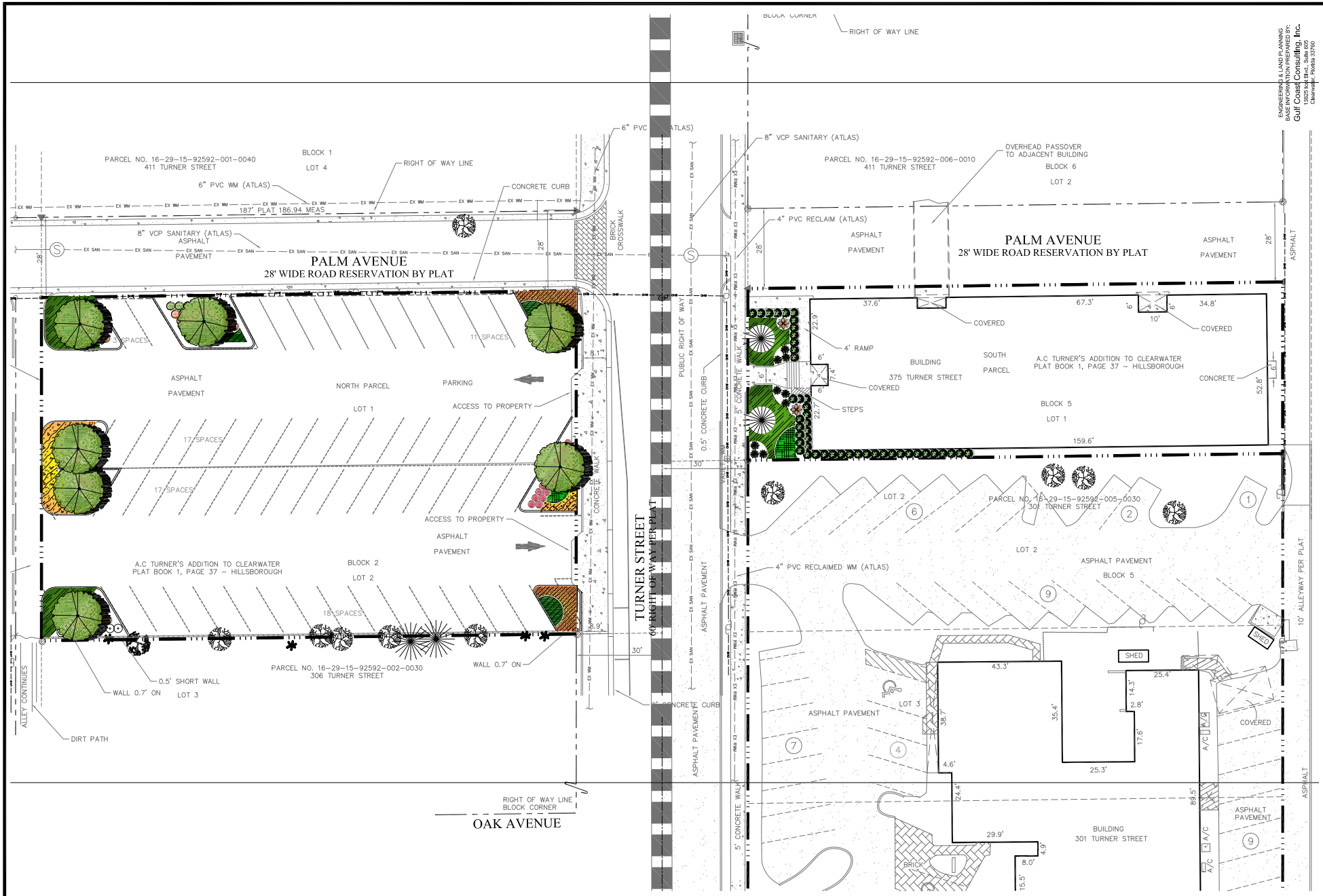
1. **Preliminary Site Plan**
2. **Landscape Plan**

Please call me if you have any questions or need any additional information to facilitate your review and approval of this project.

Sincerely,

Krikor Greg Kassarjian
Principal

Encl.
cc: Ricky Huff, Brown Huff Zohar
File 24-002



ENGINEERING & LAND PLANNING
BASE INFORMATION PREPARED BY:
Gulf Coast Consulting, Inc.
13825 Icot Blvd., Suite 605
Clearwater, Florida 33760

ROBERSON RESOURCE GROUP
Landscape Architecture & Consulting
PO Box 5585, Maryville, TN 37802
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Florida License # LA0001461

Revision	Date
Rev. per City of Clearwater comment	03/12/26
Rev. per City of Clearwater comment	02/04/26
Rev. Site Plan	10/29/25
Rev. Name of Project	09/19/24
Rev. per City of Clearwater comment	09/16/24
Rev. per City of Clearwater comment	03/13/24

Project Title
310 TURNER STREET
Clearwater, Florida

LANDSCAPE SITE PLAN

Project No. 24-01
Date 01/30/24
Sheet EX1

Gulf Coast Consulting, Inc.
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February 4, 2026

Ms. Ava Schmidt, Planner II
City of Clearwater Planning & Development Services
100 S. Myrtle Avenue, 2nd Floor
Clearwater, FL 33756

Re: 375 Turner Street – DRC Comments
Issue for record: FLD2025-10026
Address: 375 Turner St, Clearwater FL 33756

Job Description: request for redevelopment of existing building and parking lot for a Comprehensive Infill Redevelopment with flexibility for building setbacks and for parking space amount to 3.23 space/1000 SF GFA per ITE Manual, and walking distance to PSTA bus stop location.

Dear Ms. Ava Schmidt:

Pursuant to your request for additional information correspondence received on December 4, 2025, the following are our responses to each of the review comments:

PLANNING: Ava Schmidt / Alba Horanlli

Prior to CDB: Dotted Line – C3

Comment:

1. **Please label and measure the dotted line shown within the property. Are these setback measurements?**

Response:

1. Dotted line is limits of landscape buffer which will be removed based on our discussions with Lauren Matzke, Ted Kozak, and Ava Schmidt.

Prior to CDB: Overhead Passover – C2

Comment:

1. **Is the overhead pass over that connects this property to the church proposed to remain?**

Please provide a narrative that addresses how the proposed development will separate the access between the church and the proposed development via the skyway located between the east wall of the proposed development and the west wall of the church.

Response:

1. Yes, the skyway walkway will be owned 50/50 between the medical clinic and the Church. Access will be restricted from within with a dividing wall in the middle.

LAND RESOURCE: Danny McDonnell / Alba Horanlli

Prior to CDB: Tree Removal – ET1

Comment:

1. **Tree #15 is slated to be removed in the tree table but is not shown to be removed on the plan and is still shown on the landscape plan. Please revise.**

Response:

1. Plan updated to show tree #15 being removed.

PLANNING: Ava Schmidt / Alba Horanlli

Prior to CDB: Required Parking Setbacks

Comment:

1. **Pursuant to CDC Section 3-903.F, parking lots shall be set back from front property lines a distance of 15 feet, and shall be set back from all other property lines a distance that is consistent with the required perimeter landscape buffer width.**

Response:

1. Per our discussions, the angled parking shall remain as is within some added landscape areas. The angled parking is necessary to facilitate safe parking and vehicle entry and exit to ease the level of difficulty of parking and reversing for the mostly elderly and severely ill patients of the medical clinic

STORMWATER: Viktoria Poniava / Alba Horanlli

Prior to CDB (Acknowledge) - General Comments

Comment:

1. **DRC review is a prerequisite for Building Permit review; additional design details and comments may be forthcoming upon submittal of a Building Permit Application.**

Response:

1. Acknowledged

ENVIRONMENTAL: Sarah Kessler / Alba Horanlli

Prior to issuance of Building Permit

Comment:

1. **An Asbestos Survey is usually required prior to conducting any demolition or renovations. Contact Pinellas County Air Quality (727/464-4422) for more information.**

Response:

1. Acknowledged. Survey has been completed as renovations are almost complete.

ENGINEERING: Raymond Dresch / Alba Horanlli

Prior to CDB (Acknowledge) - General Comments
Please acknowledgment each condition in your response:

Comment:

1. **Written Acknowledgement of all Engineering (including Stormwater, Traffic, Utilities and Environmental) conditions/comments is required.**

Response:

1. Acknowledged

Comment:

2. **Plans submitted have been reviewed for general engineering criteria only, additional comments (including Stormwater, Traffic, Utilities and Environmental) may be forthcoming upon submittal of a Building Permit Application.**

Response:

2. Acknowledged

Comment:

3. **Applicant shall be responsible for maintaining all landscaping, irrigation, hardscaping, and lighting located within Right of Way.**

Response:

3. Acknowledged. Only driveway in front of property.

Comment:

4. **Work on right-of-way shall require a permit with the appropriate entity.**

Response:

4. Acknowledged. No work is proposed in R/W.

Comment:

5. **Per Sec. 47.181, bring all sidewalks and ramps adjacent to or as part of the project up to Standards, including ADA.**

Response:

5. Per our discussion with staff, no work is proposed in R/W.

TRAFFIC ENG: Raymond Dresch / Alba Horanlli

Prior to CDB - Site Data Table (Parking) – C1

Comment:

1. **Please verify the site data table parking data as it reflects proposed parking of 48space while the plans reflect retention of the existing 66 space parking lot.**

Response:

1. Parking spaces have been updated to show 60 spaces.

PLANNING: Ava Schmidt / Alba Horanlli

Prior to CDB: Parking design standards – C3

Comment:

1. **Please revise the off-street parking spaces to meet design standards in CDC Section 3-1402.A.**

   https://library.municode.com/fl/clearwater/codes/community_development_code?nodeId=PTICODECO_ART3DEST_DIV14PALO_S3-1402DESTPALOPAGA

Response:

1. Per our discussions, the angled parking shall remain as is within some added landscape areas. The angled parking is necessary to facilitate safe parking and vehicle entry and exit to ease the level of difficulty of parking and reversing for the mostly elderly and severely ill patients of the medical clinic.

Prior to CDB (Acknowledge) Parking and Landscaping – LA1

Comment:

1. **The stated job value of $674,726 exceeds 25% of the total assessed value of the existing principal structure. These improvements will require parking and landscaping to be brought up to code to the greatest extent practicable.**
   Further, Any parking area which is to serve a new use of land, shall satisfy the standards in this division and the landscaping standards in Article 3, Division 12(pursuant to CDC Section 3-1401.B.2).

   Pursuant to CDC Section 3-1401.B.3.a:
   Existing parking lots not meeting the requirements contained in this division shall be brought into compliance to the greatest extent practicable as determined by the Community Development Coordinator under one or more of the following conditions:

a. **If an existing use is improved or remodeled in a value of 25 percent or more of the total assessed valuation of the existing principal structure as reflected on the property appraiser's current records at the time of application or as established by a qualified independent appraiser using a recognized appraisal method.**

   CDC Section 3-1202.A.3.a:
   Existing lots not meeting the requirements contained in this division shall be brought into full compliance to the greatest extent practicable under one or more of the following conditions:

a. **If an existing use except those uses identified in subsection d. below is improved or remodeled in a value of 25 percent or more of the total assessed valuation of the principal structure as reflected on the property appraiser's current records at the time of application or as established by a qualified independent appraiser using a recognized appraisal method.**

Response:

1. Per our discussions, the angled parking shall remain as is within some added landscape areas. The angled parking is necessary to facilitate safe parking and vehicle entry and exit to ease the level of difficulty of parking and reversing out of the spaces for the mostly elderly and severely ill patients of the medical clinic. Keeping the parking lot as close to existing conditions provides additional parking spaces for the daily patients that visit the clinic. Adding any additional landscaping would only take away parking spaces. We feel that this design brings the lot in compliance to the greatest extent practicable.

Prior to CDB: Comprehensive Landscape Program – LA1

Pursuant to the Article 3, Division 12 of the CDC, proposed landscaping must be demonstrably more attractive than landscaping otherwise permitted on the parcel proposed for development under the minimum landscape standards. It appears that even minimum standards are not being met, such as the provision of shrubs along all property lines. The proposed landscaping is not demonstrably more attractive than minimum required. The site already has reduced landscaping approval, case FLD2024-01003 through a comprehensive landscape program application. The proposed parking lot does not meet the comprehensive landscape program requirements.

These are the minimum standards provided in CDC Section 3-1202:
Required Perimeter Buffers:

Comment:

- **A minimum 10' wide perimeter landscape buffer is required along the north and east property lines at 375 Turner St. A minimum 10' wide perimeter landscape buffer is required along the south, east, and west property lines at 310 Turner St. A minimum 10' wide perimeter landscape buffer is required along the north and west property lines at 301 Turner St. A minimum 5' wide landscape buffer is required along all other interior property lines. The landscape buffer must consist of continuous shrubs and 1 tree every 35 feet.**
  The shrubs will be 18—24" in height when used in a perimeter buffer – planted every 36", (measured from the center of the shrub) providing a 100% continuous hedge which will be 36", high and 80% opaque 12 months from the time a certificate of occupancy is received (excluding drives and visibility triangles where applicable).

- **Required Foundation Planting:**
  Foundation plantings shall be provided for 100 percent of a building façade with frontage along a street right-of-way, excluding space necessary for building ingress and egress, within a minimum five-foot wide landscaped area. A minimum of 50 percent of the area shall contain shrubs with the remainder to be ground cover.

- **Parking Lots Required Interior Islands:**
  If the paved vehicular use area is greater than 4,000 square feet, then landscaping for the interior of parking lots shall be provided in accordance with the following:

1. **Ten percent of gross vehicular use area or 12 percent of gross vehicular area if parking spaces are greater than or equal to 110 percent of required parking shall be provided in an island.**

2. **Interior islands shall be incorporated into parking lot designs so that no more than 20 parking spaces are provided in a row.**

3. **Interior islands incorporating bioswales shall not be required to provide curbing;**

4. **Depth of interior islands. All interior landscape islands shall have a minimum depth that is consistent with the depth of the adjacent off-street parking space.**

5. **Width of interior islands. All interior landscape islands shall have a minimum width of 17 feet as measured from back of curb to back of curb.**

6. **Required trees/plants.**

i. **A minimum of one shade tree, or accent/palm equivalent, shall be provided in each interior landscape island.**

ii. **One shade tree, or accent/palm equivalent, shall be provided per 300 square feet of required greenspace.**

iii. **Shrubs shall be provided in an amount to equal or exceed 50 percent of the required greenspace.**

iv. **Groundcover shall be utilized for required greenspace in-lieu of natural turf.**

v. **The use of artificial turf in interior landscaped islands is prohibited.**

Response:

- Per our discussion with staff, it was agreed to only provide some landscaping along the front, along Turner St., with bioswales, and some landscaping in the rear along the alley to the greatest extent practicable to preserve the angled parking spaces.

SOLID WASTE: Brandi Portalatin / Alba Horanlli

Comment:

Prior to CDB: Garbage service

Comment:

1. **There is no room on the property for a dumpster enclosure for garbage services. Please speak with the business to the west about having a shared dumpster. A note from the owner will be needed stating they will share a dumpster with the medical facility.**

Response:

1. Business to West (301 Turner) is same owner and will be sharing the dumpster.

PLANNING: Ava Schmidt / Alba Horanlli

Prior to CDB: Sight Visibility Triangles – C2

Comment:

1. **Please show the required site visibility triangles (SVT) on your site plan. SVTs are measured at corners and driveways. To minimize traffic hazards at street or driveway intersections, no structure or landscaping may be installed which will obstruct views at a level between 30 inches above grade and eight feet above grade within the sight visibility triangle.**

Response:

1. Sight visibility triangles have been added.

Prior to CDB: Update Site Data Table – C1

Comment:

1. **Site data table does not reflect current proposal.**

Response:

1. Site data table has been updated.

Prior to CDB: Impervious Surface Ratio – C1

Comment:

1. **Please revise ISR inconsistency. Sheet C1 states proposed ISR is 0.80 while page two of the application states proposed ISR is 0.90. The maximum permitted ISR for a property with an Institutional (I) Future Land Use designation is 0.85.**

Response:

1. As per our discussion, we will provide minimal landscaping along the front and rear resulting in an ISR of 87.24%, significant improvement from the existing 94.79% ISR.

Prior to CDB (Acknowledge) Mechanical Equipment Screening

Comment:

1. **Equipment shall be placed on roofs or to the rear or side of buildings and shall not be placed between any right-of-way and the principal structure(s). Ground-mounted mechanical equipment shall be screened from public view by landscape materials or architecturally finished walls and enclosures designed consistent with the exterior facade of the building or other fencing as approved by the Community Development Coordinator. Rooftop-mounted mechanical equipment shall be screened by a parapet wall, articulated roofline or other roof screen, or similar device that is integrated into the building's architectural design and of a height equal to or exceeding the height of the equipment being screened.**

Response:

1. Acknowledged.

Prior to CDB (Acknowledge) Planning comments

Comment:

1. **All planning comments need to be fully addressed prior to development order.**

Response:

1. Acknowledged.

Prior to CDB (Acknowledge) General Comments

Comment:

1. **Please note that additional comments may be generated at or after the Development Review Committee (DRC) meeting based on responses to DRC comments.**

Substantial redesign or unresolved issues will delay the ability to receive a Development Order and another DRC meeting may be required.

Response:

1. Acknowledged

Comment:

2. **All plans and supporting documents must match. Additionally, any changes to plans, elevations, and other supporting documents must be coordinated for consistency across all documentation to move forward.**

Response:

2. Acknowledged

Comment:

3. **Pursuant to Fla. Stat. § 166.033, "Within 120 days after the municipality has deemed the application complete, or 180 days for applications that require final action through a quasi-judicial hearing or a public hearing, the municipality must approve, approve with conditions, or deny the application for a development permit or development order. Both parties may agree to a reasonable request for an extension of time, particularly in the event of a force majeure or other extraordinary circumstance. Revised applications that are not timely resubmitted to address DRC conditions, or for which a request for an extension of time is not received and agreed upon in a timeframe consistent with Florida Statutes, may be denied.**

Response:

3. Acknowledged

Enclosed for your review are the following:

1. **Preliminary Site plans**
2. **Landscape plans**
3. **Affidavit of Ownership**
4. **Flexible Development Application**
5. **Comprehensive Landscaping Program Application**
6. **Aerial Photograph**
7. **Narrative for General Applicability Compliance – Section 3-914.A**
8. **Comprehensive Infill Redevelopment Narrative per Section 2-1204A**
9. **Stormwater Narrative**
10. **Parking Assessment**
11. **Traffic Assessment**
12. **Approved Traffic Impact Study**
13. **Floor Plans & Building Elevations**
14. **Vehicular Turning Movement Exhibit**

Please call me if you have any questions or need any additional information to facilitate your review and approval of the Site Permit.

Sincerely,

Krikor Greg Kassarjian
Principal

Encl.
cc: Ricky Huff, Brown Huff Zohar
File 24-002

TRAFFIC ASSESSMENT

375 Turner Street
Medical Clinic/Office

This Traffic Assessment is being prepared for the proposed development of a medical clinic building which is located in the Institutional (I) zoning district. The site is proposed to be a redeveloped project with an existing building, associated parking, and landscaping.

The medical clinic site would generate 547 daily trips, of which 47 trips would occur during the AM peak hour and 60 trips would occur during the PM peak hour. Excerpts from ITE Trip Generation, 11th Edition are attached. Turner Street is an unregulated roadway. The nearest regulated roadway is Ft Harrison Avenue which is controlled by a traffic signal at Turner Street. Based on a report prepared by Gulf Coast Consulting Inc in April 2023 for a nearby project, and approved by the City of Clearwater as part of FLS2023-06022, the signalized intersection operated at a level A, and the adjacent sections of Ft Harrison operate at a level of D. Based on the study, North of Turner Street had a PM Peak volume of 721 and south of Turner Street had a PM peak volume of 817, both with a Level D Capacity of 1,400. Therefore, sufficient capacity exists. This meets the level of service standards for the City of Clearwater.

Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

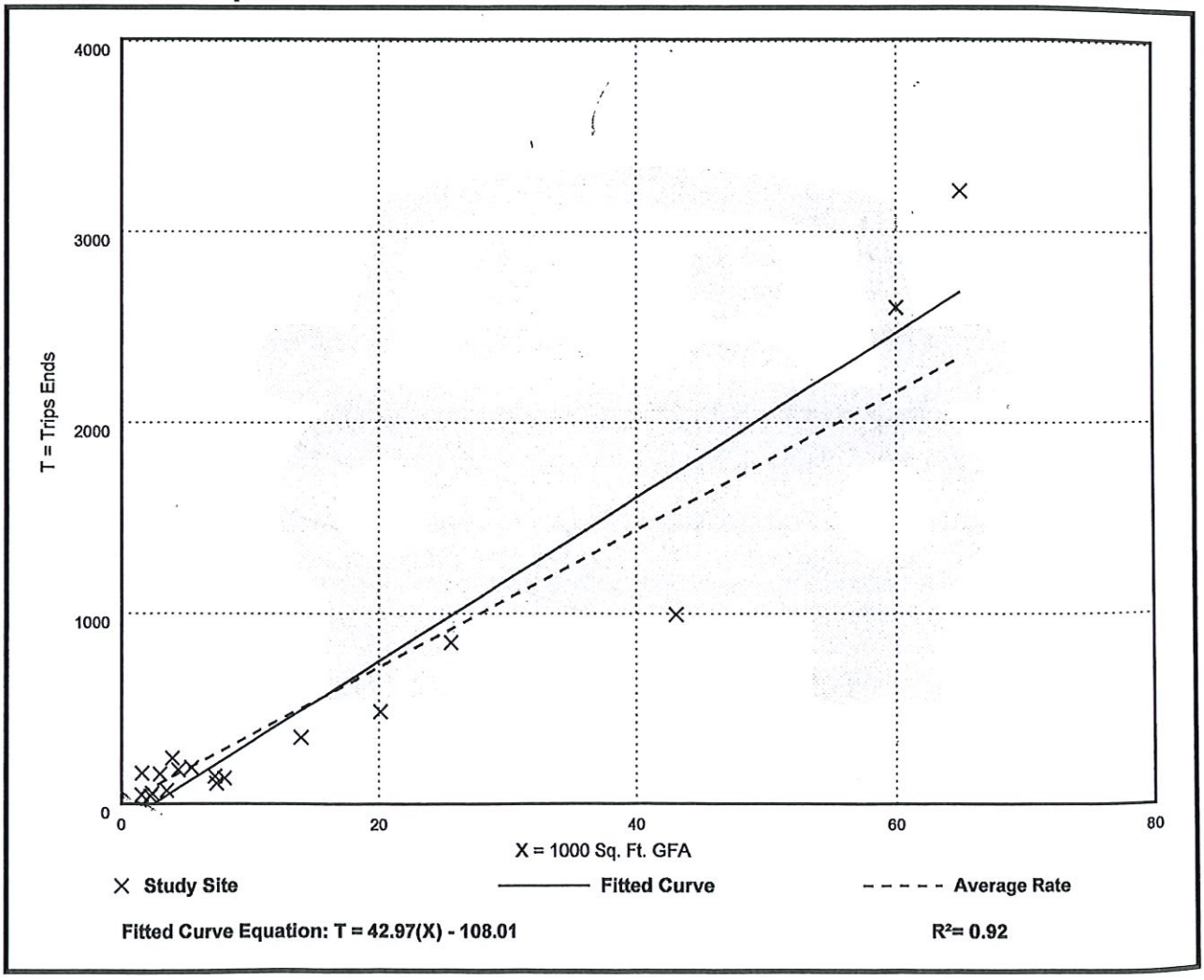
Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

15,200/1000 x 36 = 547

Data Plot and Equation



Fitted Curve Equation: T = 42.97(X) - 108.01

R^2= 0.92

Medical-Dental Office Building - Stand-Alone (720)

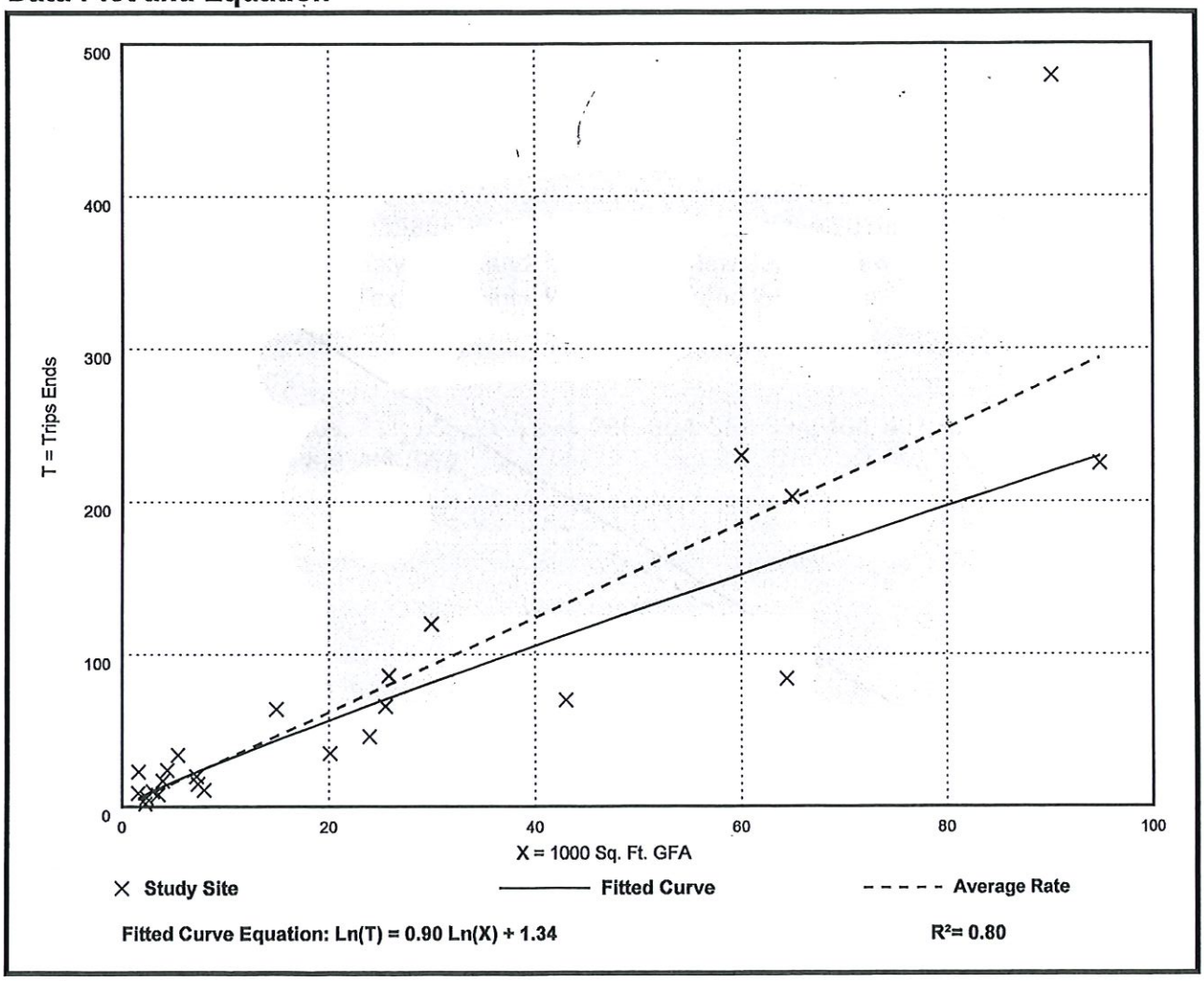
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 24
Avg. 1000 Sq. Ft. GFA: 25
Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation

15,200/1000 x 3.10 = 47



Medical-Dental Office Building - Stand-Alone (720)

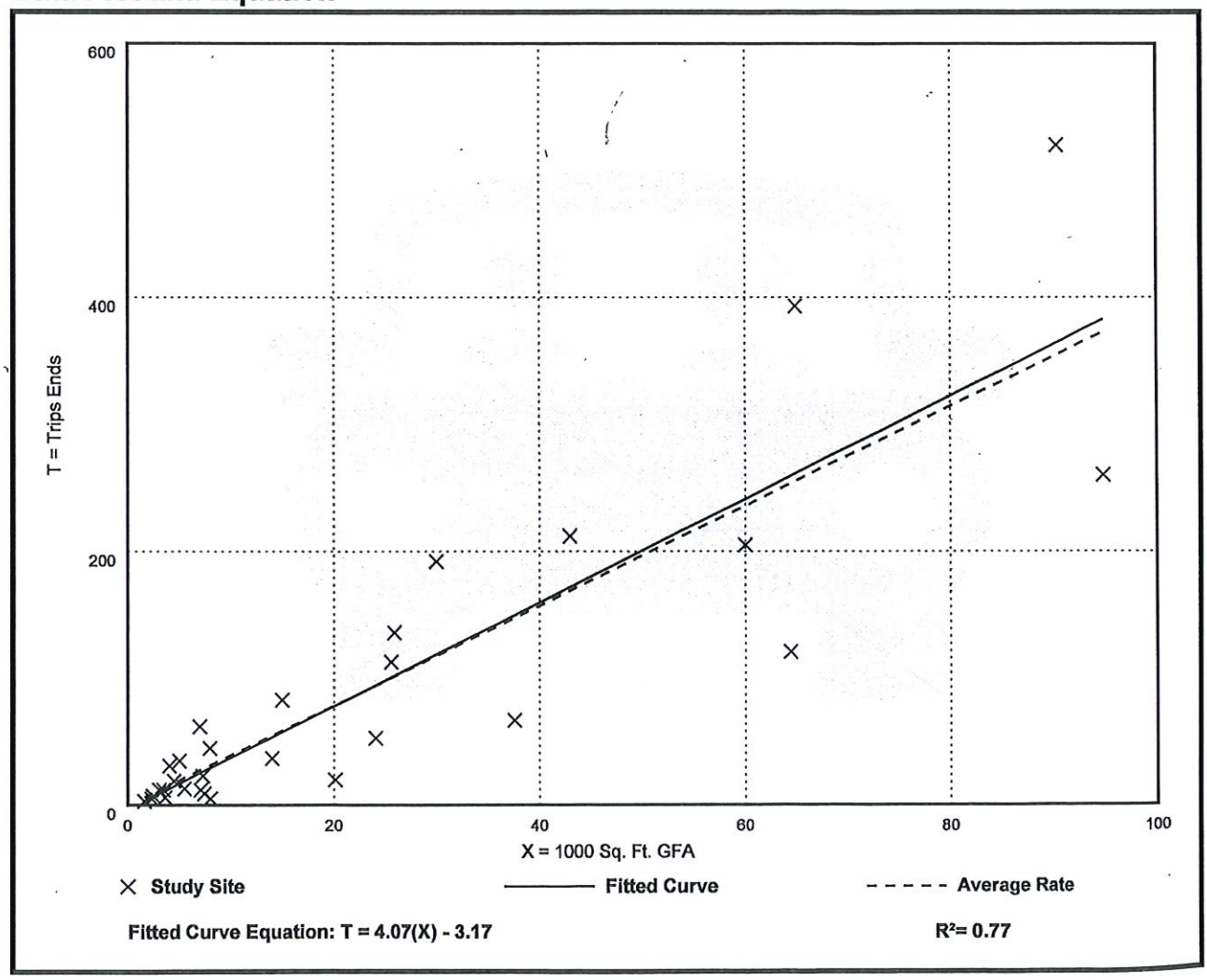
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. 1000 Sq. Ft. GFA: 23
Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation

15,200 / 1,000 × 3.93 = 60



Fitted Curve Equation: T = 4.07(X) - 3.17

R^2= 0.77

STORMWATER NARRATIVE

375 Turner Street, Clearwater, FL

The subject property is currently developed with a parking lot and existing building containing 0.77 acres. The building is located on the south side of Turner Street while the parking lot is located on the north side, and is approximately 300 feet west of Ft. Harrison Avenue, on the west side of Palm Ave.

In its current condition, the site drains towards Turner Street and the overall site is 99% impervious. The parking lot will provide islands for landscaping purposes. The disturbed area is a total of (1924 SF) 0.044 acres, and has a pre-development C value of 0.50 (for design purposes).

In the proposed condition, the impervious surface will decrease to 0.0% within the disturbed area. The post-development condition will have a C value of 0.20. As the C value has decreased, no stormwater treatment or attenuation would be required.

The center landscape area along Turner Street will incorporate LID by providing a bioswale in order to provide additional water quality treatment.

PARKING ASSESSMENT

375 Turner Street
Medical Office

This Parking Assessment is being prepared for the redevelopment of a proposed medical office located at 375 Turner Street which is located in the Institutional (I) zoning district. The site is being redeveloped as a Comprehensive Infill Redevelopment Project in accordance with the I zone Level 2 standards. According to Table 2-1202 of the City of Clearwater Community Development Code "Medical Clinics" are required to have 5 spaces per 1,000 SF GFA. As such, the existing 15,200 SF GFA redevelopment would require 76 parking spaces per strict interpretation of the code.

Detailed specific data from ITE Parking Generation, 5th Edition shows a parking rate of 3.23 spaces per 1,000 SF GFA. The adjusted parking requirement is calculated below:

15,200 SF / 1,000 SF * 3.23 spaces = 50 spaces

As part of the proposed site modifications the site must be improved to contain a minimum of 50 parking spaces to satisfy demand. The proposed Preliminary Site Plan shows 60 parking spaces, and sidewalk to a nearby PSTA bus stop.

The adjoining medical office at 301 Turner Street (PIN 16-29-15-92592-005-0030) owned by the same owner, having an existing building of 8,582 SF GFA requires 28 parking spaces per the same ITE guidelines,

8,582 SF / 1,000 SF * 3.23 spaces = 28 spaces
and provides 42 parking spaces, including 3 ADA spaces.

The combined parking spaces of both owned parcels would have 102 parking spaces (60+42=102), including 3 ADA spaces, exceeding the required amount of 78 parking spaces as specified in the ITE manual. (50+28=78)

Medical-Dental Office Building
(720)

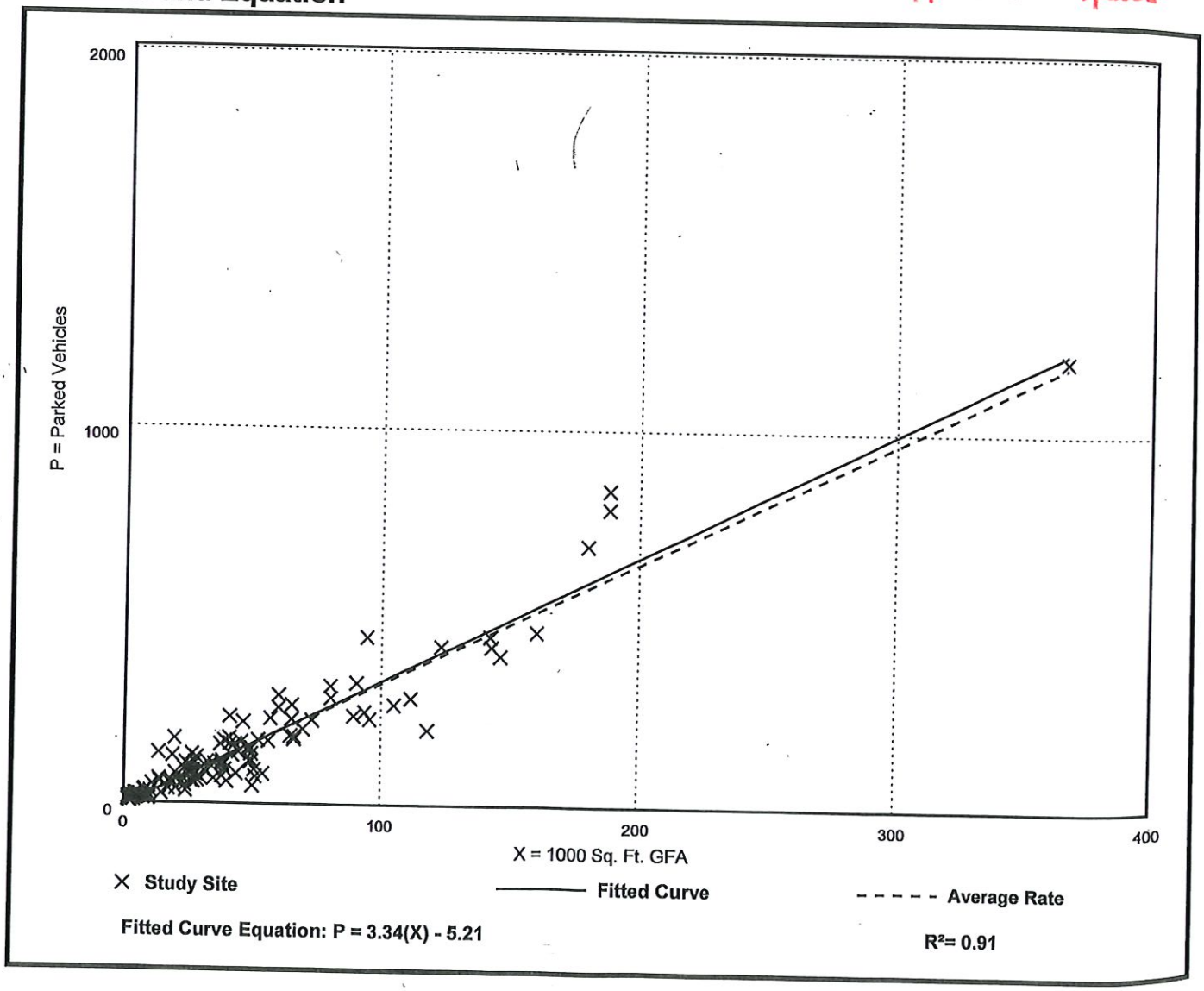
Peak Period Parking Demand vs: 1000 Sq. Ft. GFA
On a: Weekday (Monday - Friday)
Setting/Location: General Urban/Suburban
Peak Period of Parking Demand: 9:00 a.m. - 4:00 p.m.
Number of Studies: 117
Avg. 1000 Sq. Ft. GFA: 46

Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.23	0.96 - 10.27	2.73 / 4.59	3.04 - 3.42	1.05 (33%)

Data Plot and Equation

15,200 SF / 1,000 SF = 15.2 x 3.23 = 49.09 → 50 spaces



Fitted Curve Equation: P = 3.34(X) - 5.21

R^2= 0.91

TRAFFIC IMPACT STUDY
FOR
BAY VALOR CONDOS
THE OAKS SOUTH PARCEL SITE
BAY AVENUE
CLEARWATER, FLORIDA

PREPARED FOR:
BAY VALOR CAPITAL, LLC

PREPARED BY:
GULFCOAST CONSULTING, INC.
REVISED JULY 2023
Project #20-029.02

Robert Pergolizzi, AICP / PTP
AICP #9023 / PTP #133

I. INTRODUCTION

The applicant is proposing to redevelop a 2.55-acre site located at 432 Bay Avenue in Clearwater. (See Figure 1) This redevelopment project will eliminate existing outdated villa buildings and redevelop the site with high-rise condominium buildings to contain up to 223 units by implementing a density bonus from the Public Amenities Incentive Pool. The Preliminary Site Plan includes removal of parking and other minor site modifications. This application is being processed as a Flexible Standard Development (FLS) for property within the Downtown (D) Zoning District, and Downtown Core Character District. This FLS application requires an assessment of the traffic impacts of the redevelopment. This analysis was conducted in accordance with a methodology established with the City of Clearwater staff in April 2023. This study is for 223 high-rise units which is expected to generate 1,012 daily trips, 60 AM peak hour trips, and 71 PM peak hour trips.

II. EXISTING TRAFFIC CONDITIONS

The property has sole vehicular access to Bay Avenue. Per the approved methodology PM peak period intersection turning movement counts were conducted at the following intersections in April 2023.

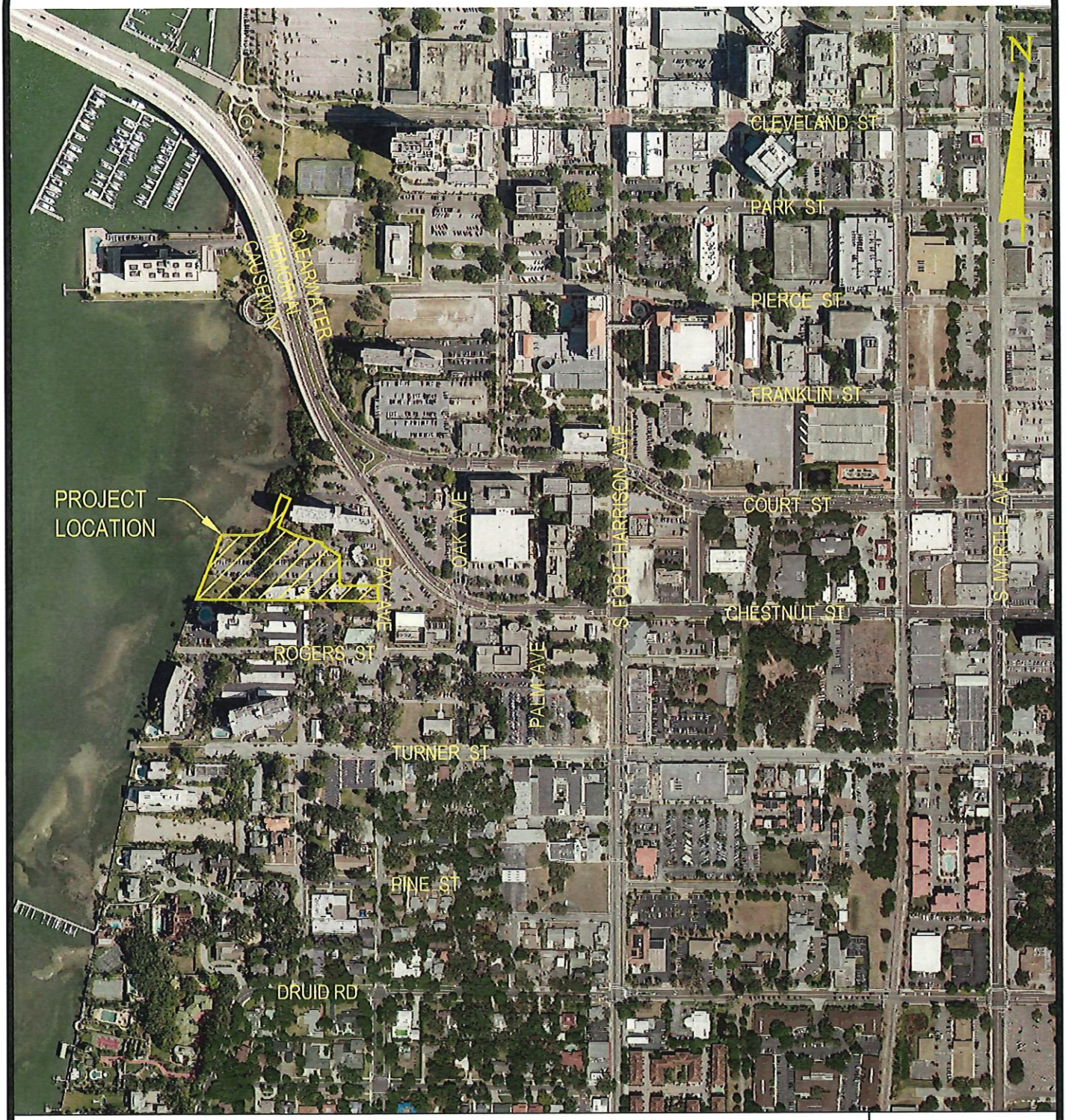
1. Bay Avenue / Rogers Street (stop)
2. Turner Street / Bay Avenue (stop)
3. Turner Street / Oak Avenue (stop)
4. S. Ft. Harrison Avenue / Turner Street (signal)

All traffic counts were converted to annual average equivalents using FDOT seasonal adjustment factors. Existing traffic volumes are shown in Figure 2. Existing intersections were analyzed using the SYNCHRO software. The count data, and SYNCHRO printouts are included in Appendix A. Existing intersection conditions are shown below in Table 1. Queues are shown in Table 1Q.

Table 1 – Existing PM Peak Hour Intersection Conditions (2023)

Intersection	PM LOS	PM Delay sec/veh
Bay Avenue / Rogers St.	A/A*	7.3 / 9.4 seconds
Turner St / Bay Avenue	A/B*	7.4/10.2 seconds
Turner St / Oak Avenue	A/A*	7.6/9.2 seconds
S. Ft. Harrison Ave / Turner St	A	6.7 seconds

* For unsignalized intersections A/B = LOS major street left turn / side street approach



PROJECT LOCATION – BAY VALOR

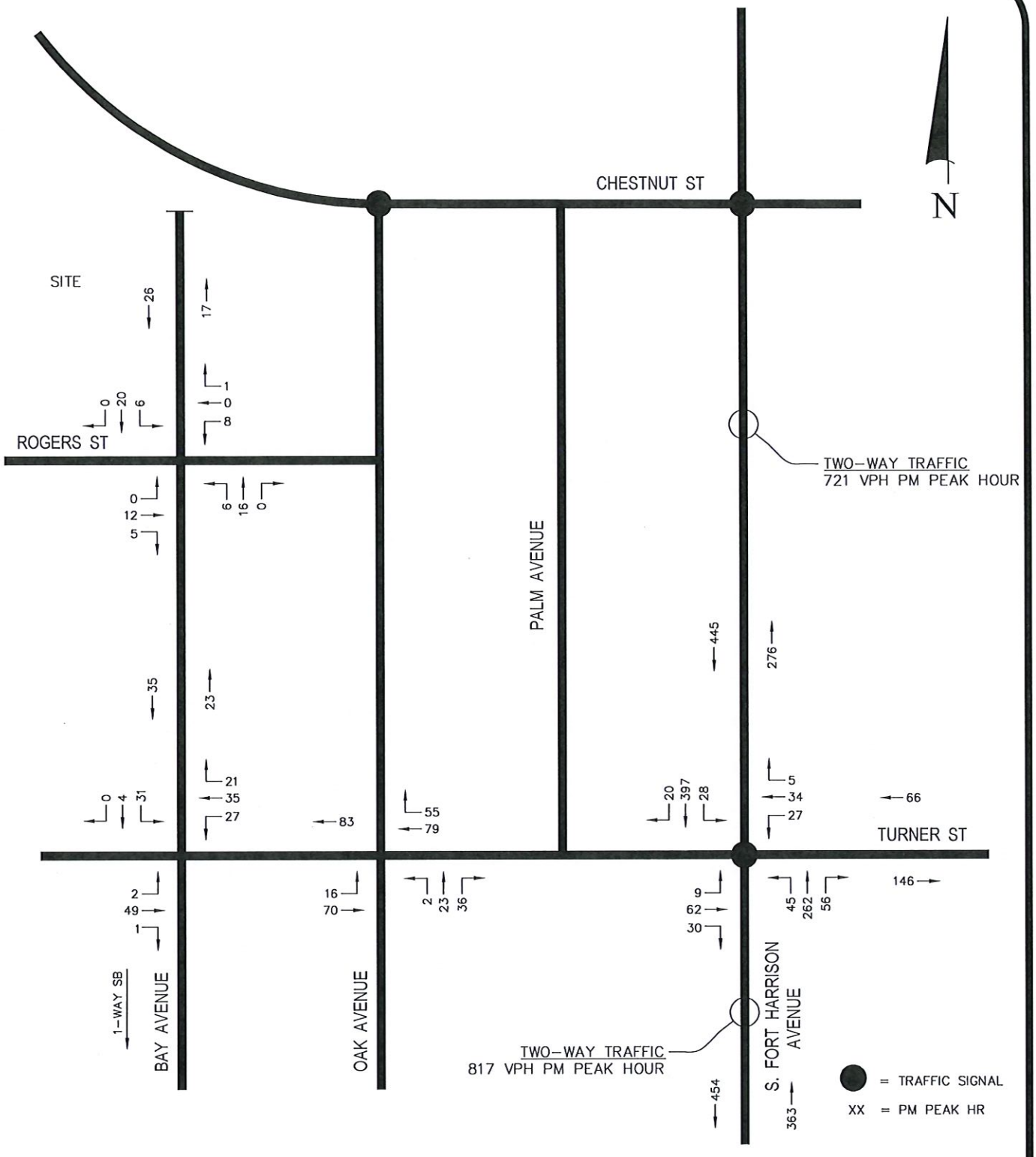
PROJECT NO: 20-029.02

Gulf Coast Consulting, Inc.
Land Development Consulting

DATE: 4/2023

DRAWN BY: GJS

FIGURE: 1



EXISTING PM PEAK HOUR TRAFFIC (2023)

PROJECT NO: 20-029.02

DATE: 04/2023

FIGURE: 2

DRAWN BY: GJS

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Phone: (727) 524-1818 Fax: (727) 524-6090
www.gulfcoastconsultinginc.com

TABLE 1Q
BAY VALOR CONDOS - OAKS SOUTH PARCEL SITE
432 BAY AVENUE
EXISTING CONDITIONS 2023
QUEUE LENGTH TABLE

INTERSECTION	BAY AVENUE / ROGERS STREET				(ROGER ST STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / BAY AVENUE				(BAY AVENUE SB STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	NA	NA	NA	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / OAK AVENUE				(OAK AVENUE NB 1-WAY STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	NA	0 FT	0 FT	NA	0 FT	0 FT	0 FT	NA	NA	NA

INTERSECTION	S FT HARRISON AVENUE / TURNER STREET					(SIGNAL)						
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	47 FT	47 FT	5 FT	43 FT	43 FT	0 FT	25 FT	123 FT	123 FT	9 FT	95 FT	95 FT

The existing PM peak hour LOS for area major roadway segments is shown below in Table 2. The capacity shown is from FDOT Generalized Capacity Tables:

Table 2 - Existing Peak Hour Roadway Conditions (2023)

Roadway Segment	Lanes	PM Peak Volume	LOS D Capacity	PM LOS
S. Ft. Harrison (S of Turner St)	2LD	817	1,400	D
S Ft. Harrison (Turner-Chestnut).	2LD	721	1,400	D

Presently all roadway segments operate at LOS D during the PM peak hour which indicates acceptable levels of service and traffic operations. PSTA bus stops located along Ft. Harrison Avenue are within walking distance of the site and there is continuous sidewalk between the site and these PSTA bus stops. Bay Avenue also contains the "Druid Trail" which is a wide sidewalk/bike path that leads to Chestnut Street and to Clearwater Beach.

Accident Data Evaluation

As requested by the City of Clearwater an evaluation of the accident at the intersections in the study area was conducted. The city provided accident data for all intersections in the study area. Typically, a 3-year period is evaluated, however, due to a sparse accident history a 5-year period between January 2018 and January 2023 was evaluated. A detailed chart is in Appendix A.

During the 60-month period there were a total of 18 accidents, 7 in 2018, 2 in 2019, 3 in 2020, 5 in 2021, non in 2022 and 1 in January 2023. Of these, most had no injuries, and only 3 accidents (16.6%) involved injuries, of those only 1 had a severe injury. The accidents mostly occur during daylight hours with 16 (89%) in the daylight and 2 (11%) at night. Of the 18 accidents evaluated, 17 (94) occurred during clear weather on dry pavement, and only 1 (6%) was on wet pavement/rainy conditions.

Of the 18 accidents, 5 (28%) were angle type accidents, 5 (28%) were rearend accidents, 3 (17%) were sideswipes, 2 were head-on collisions, and only 3 accidents (17%) involved bikes/motorcycles. The primary causes of accidents were "careless driving" (8 accidents), "followed too closely" (2 accidents) "failed to yield right-of-way" (1 accidents), "improper backing" (1 accident) and "ran red light" (1 accident).

The top accident locations were Ft. Harrison Avenue/Turner Street (11 accidents: 61%), which is not surprising since this is the signalized location carrying the most traffic, and Turner Street/Oak Avenue (4 accidents: 22%) which is "Stop" controlled.

III. FUTURE TRAFFIC CONDITIONS (Completion Year 2026)

The build-out year of the condominium project is 2026. As per the methodology, existing traffic was adjusted by a 1% annual growth rate to the expected build-out year to 2026 to account for background traffic from other nearby redevelopment projects. Also included was traffic from the Harborview Hotel traffic study, and the Clearwater Bluffs City Hall site apartments traffic study. Traffic distributions from those traffic studies are included in Appendix B and each project adds traffic to S. Ft. Harrison Avenue

The 2.55-acre site will be developed with 223 high-rise condominium units. Using Institute of Transportation Engineers (ITE) Trip Generation,11th Edition rates for Multi-Family Housing High-Rise (LUC 222). Per ITE new external vehicle trips was calculated as 1,012 daily trips, 60 AM peak hour trips (20 enter/40 exit) and 71 PM peak hour trips (40 enter/31 exit.) Trip generation calculations are shown in Appendix B:

Vehicular access will be taken solely from Bay Avenue per the methodology was assigned through the neighborhood to Turner Street to reach the signalized intersection at Ft. Harrison Avenue. The expected distribution per the approved methodology is shown in Figure 3 and is as follows:

30% to/from the south on Ft Harrison Avenue
30% to/from the north on Ft. Harrison Avenue
40% to/from the east on Turner Street

The projects impact to the surrounding roadway system is shown below:

PROJECT IMPACT CALCULATIONS

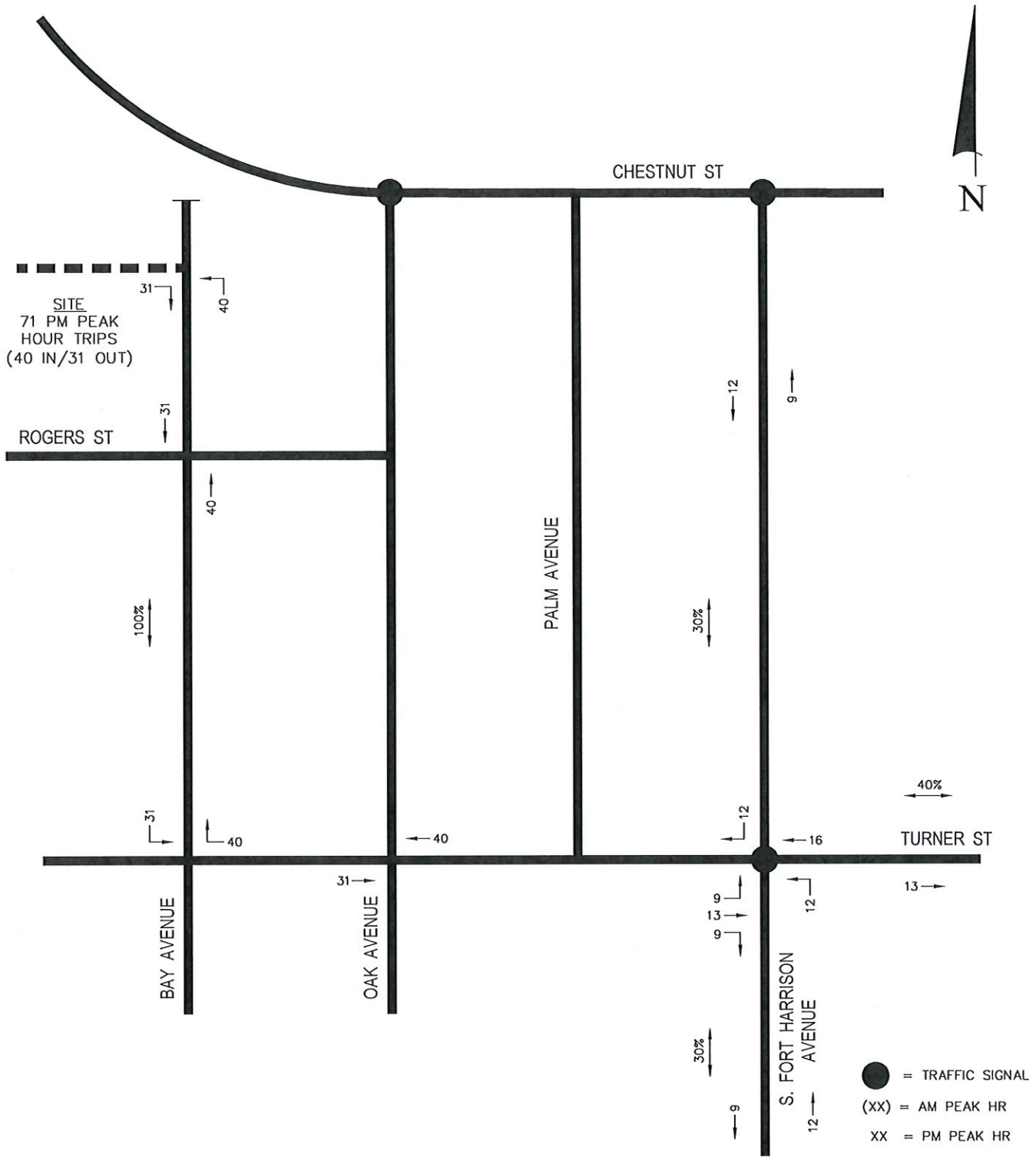
Road Segment	Lanes	PM Project Trips	LOS D Capacity	Project Percent
Ft. Harrison Avenue (S of Turner St)	2LD	21	1,400	1.5%
Ft. Harrison avenue (N of Turner St)	2LD	21	1,400	1.5%

Significant Impact Area

Typically, a project "significant impact area" is defined where the project added traffic comprises 5% or more of the roadway capacity. As shown above the project traffic does not "significantly impact" any roadway segment. Primary impacts will be to Turner Street and Ft Harrison Avenue.

Analysis

Project traffic was added to accumulated background traffic for the completion year of 2026. All intersections, roadway segments and project driveways were analyzed for future conditions. Future traffic volumes are shown in Figure 4, and



PROJECT TRAFFIC DISTRIBUTION – CONDOS

PROJECT NO: 20-029.02

Gulf Coast Consulting, Inc.
Land Development Consulting
ENGINEERING TRANSPORTATION PLANNING PERMITTING
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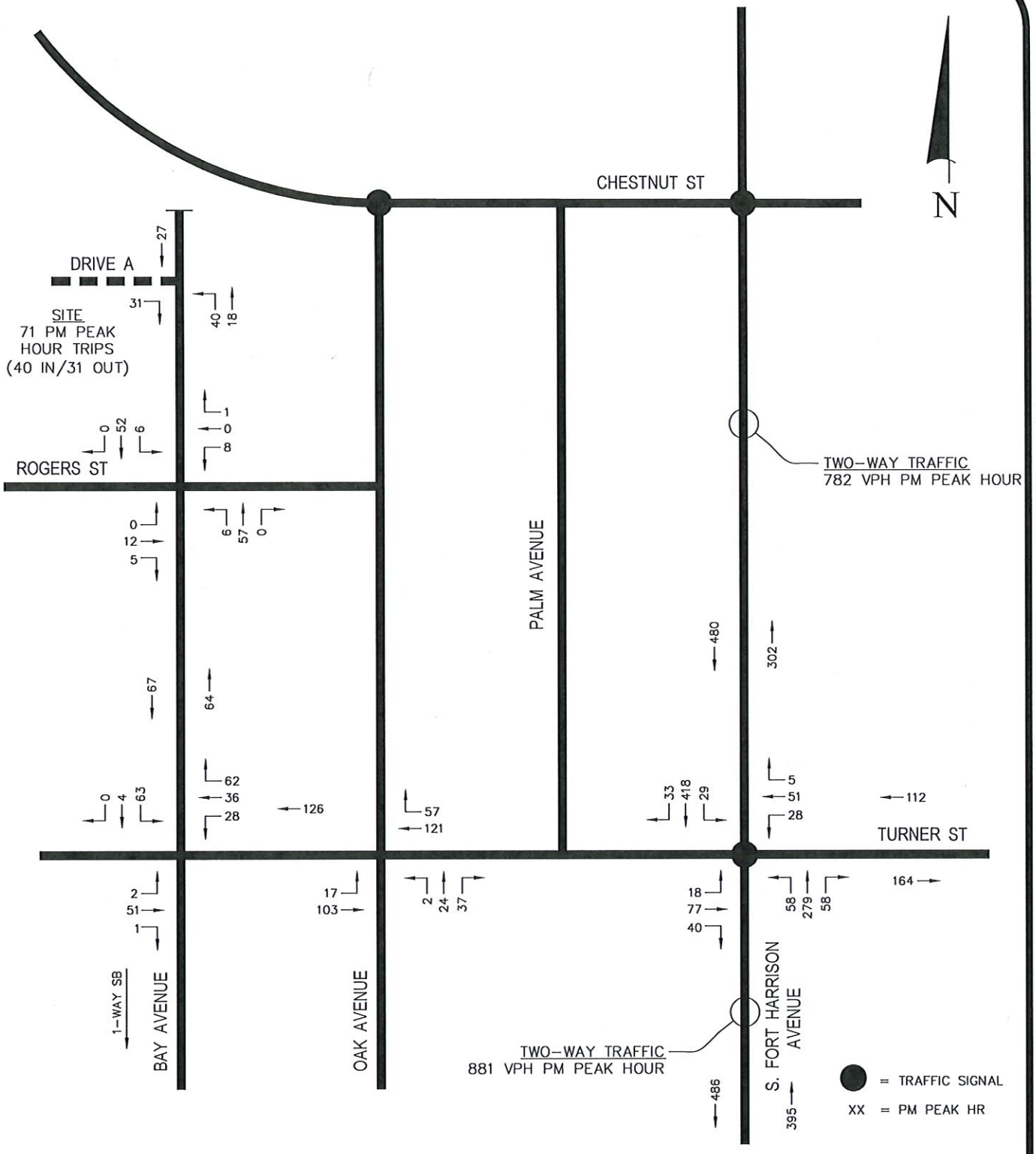
Phone: (727) 524-1818 Fax: (727) 524-6090
www.gulfcoastconsultinginc.com

DATE: 04/2023

DRAWN BY: GJS

FIGURE: 3



FUTURE PM PEAK HOUR TRAFFIC WITH PROJECT OPENING YEAR (2026)

PROJECT NO: 20-029.02

DATE: 04/2023

FIGURE: 4

DRAWN BY: GJS

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www.gulfcoastconsultinginc.com

TABLE 3Q
BAY VALOR CONDOS - OAKS SOUTH PARCEL SITE
432 BAY AVENUE
FUTURE CONDITIONS OPENING YEAR 2026
QUEUE LENGTH TABLE

INTERSECTION	BAY AVENUE / ROGERS STREET				(ROGER ST STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / BAY AVENUE				(BAY AVENUE SB STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	NA	NA	NA	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / OAK AVENUE				(OAK AVENUE NB 1-WAY STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	NA	0 FT	0 FT	NA	0 FT	0 FT	0 FT	NA	NA	NA

INTERSECTION	S FT HARRISON AVENUE / TURNER STREET					(SIGNAL)						
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	62 FT	62 FT	10 FT	54 FT	54 FT	0 FT	32 FT	139 FT	139 FT	10 FT	116 FT	116 FT

INTERSECTION	BAY AVENUE / DRIVE A				(SITE DRIVEWAY "A" IS STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	NA	NA	NA	0 FT	0 FT	NA	NA	0 FT	0 FT

the SYNCHRO printouts are included in Appendix B. Future 2026 intersection conditions in the build-out year of 2026 are shown below in Table 3 and includes the project driveway to Bay Avenue. Sidewalks will also be provided to assist pedestrians. Future opening year queues are shown in Table 3Q.

Table 3 – Future PM Peak Hour Intersection Conditions (2026)

Intersection	PM LOS	PM Delay sec/veh
Bay Avenue / Rogers St.	A/A*	7.4/9.9 seconds
Turner St / Bay Avenue	A/B*	7.5/10.9 seconds
Turner St / Oak Avenue	A/A*	7.7/9.5 seconds
S. Ft. Harrison Ave / Turner St	A	8.2 seconds
Bay Avenue / Drive A	A/A*	7.3/8.6 seconds

* For unsignalized intersections A/B = LOS major street left turn / side street approach

Expected roadway conditions with the project in impacts are shown in Table 4:

Table 4 – Future PM Peak Hour Roadway Conditions (2026)

Roadway Segment	Lanes	PM Peak Volume	LOS D Capacity	PM LOS
S. Ft. Harrison (S of Turner St)	2LD	881	1,400	D
S Ft. Harrison (Turner-Chestnut).	2LD	782	1,400	D

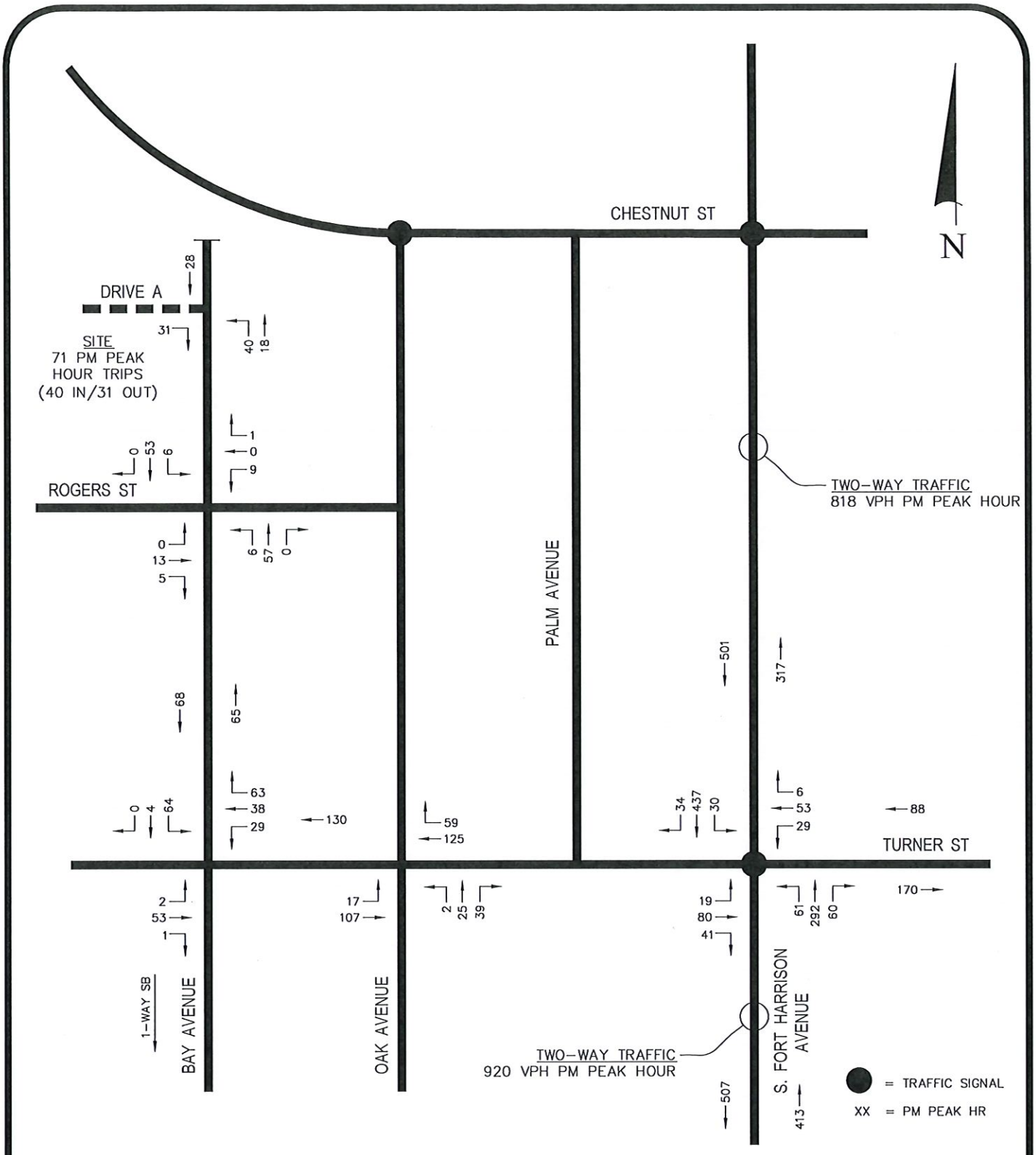
All roadway segments would continue to operate at LOS D, which meets the levels of service standards for the City of Clearwater.

IV. FUTURE HORIZON YEAR ANALYSIS (2031)

Per the approved methodology, the impacts of the redevelopment must be analyzed for a horizon year 5-years after the buildout date. Since the completion date of the condominium project is 2026, the horizon year of 2031 was assumed. Background traffic was accumulated to 2031 using the 1% annual growth rate, and the traffic impacts of the project was added. Horizon year 2031 traffic volumes are shown in Figure 5 and the SYNCHRO printouts are included in Appendix C. Future horizon year 2031 intersection conditions are shown below in Table 5. Future 2029 queues are shown in Table 5Q.

Table 5 – Future PM Peak Hour Intersection Conditions (2031)

Intersection	PM LOS	PM Delay sec/veh
Bay Avenue / Rogers St.	A/A*	7.4/9.9 seconds
Bay Avenue / Turner St	A/B*	7.5/11.0 seconds
Turner St / Oak Avenue	A/A*	7.8/9.6 seconds
S. Ft. Harrison Ave / Turner St	A	9.1 seconds
Bay Avenue / Drive A	A/A*	7.3/8.6 seconds



FUTURE PM PEAK HOUR TRAFFIC WITH PROJECT HORIZON YEAR (2031)

PROJECT NO: 20-029.02

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Phone: (727) 524-1818 Fax: (727) 524-6090
www.gulfcoastconsultinginc.com

DATE: 04/2023

DRAWN BY: GJS

FIGURE: 5

TABLE 5Q
BAY VALOR CONDOS - OAKS SOUTH PARCEL SITE
432 BAY AVENUE
FUTURE CONDITIONS HORIZON YEAR 2031
QUEUE LENGTH TABLE

INTERSECTION	BAY AVENUE / ROGERS STREET				(ROGER ST STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / BAY AVENUE				(BAY AVENUE SB STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	NA	NA	NA	0 FT	0 FT	0 FT

INTERSECTION	TURNER STREET / OAK AVENUE				(OAK AVENUE NB 1-WAY STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	NA	0 FT	0 FT	NA	0 FT	0 FT	0 FT	NA	NA	NA

INTERSECTION	S FT HARRISON AVENUE / TURNER STREET					(SIGNAL)						
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	66 FT	66 FT	11 FT	56 FT	56 FT	0 FT	34 FT	148 FT	148 FT	11 FT	128 FT	128 FT

INTERSECTION	BAY AVENUE / DRIVE A				(SITE DRIVEWAY "A" IS STOP CONTROLLED)							
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
PM PEAK	0 FT	0 FT	0 FT	NA	NA	NA	0 FT	0 FT	NA	NA	0 FT	0 FT

*For unsignalized intersection A/B = LOS major street left turn / side street approach

Expected roadway conditions in the horizon year of 2031 are shown in Table 6:

Table 6 – Future PM Peak Hour Roadway Conditions (2031)

Roadway Segment	Lanes	PM Peak Volume	LOS D Capacity	PM LOS
S. Ft. Harrison (S of Turner St)	2LD	920	1,400	D
S Ft. Harrison (Turner-Chestnut).	2LD	818	1,400	D

All roadway segments would continue to operate at LOS D, which meets the levels of service standards for the City of Clearwater.

V. CONCLUSION

This analysis was conducted in accordance with a methodology established with City of Clearwater staff. The proposed Bay Valor condominium project would generate 1,012 daily vehicle trips of which 60 vehicle trips would occur during the AM peak hour and 71vehicle trips would occur during the PM peak hour. The project traffic does not significantly impact any roadway segment above the 5% level. Traffic impact is primarily limited to Turner Street and Ft. Harrison Avenue. This analysis demonstrates traffic operations at nearby intersections and on adjacent roadways would continue at acceptable levels of service with or without the project impacts in the opening year of 2026, and in the horizon year of 2031.

Pedestrian Circulation/On-Site Circulation

Pedestrian circulation will be enhanced by providing widened sidewalk along the project frontage, and eliminating a conflict point by removing head-in parking spaces along Bay Avenue. On-site circulation will be enhanced by providing 6-foot-wide sidewalks between the buildings and the Bay Avenue sidewalk system and large pedestrian areas near the building entrances. A large radius cul-de-sac will provide ease of circulation within the site and access to below-grade parking garages. PSTA bus stops along Ft. Harrison Avenue are within 1,000 feet walking distance of the site. The site plan provides for on-site short term bicycle parking near the building entrances, and long-term bicycle parking within the lower levels of the buildings. Cyclists and pedestrians can access the public sidewalk via on-site sidewalks. The plan accommodates all modes of transportation.

Recommended improvements are noted below:

1. Construct a two-way 24-foot-wide driveway to Bay Avenue. Construct 6-foot-wide pedestrian path to Bay Avenue.

APPENDIX A

City of Clearwater
Engineering Department
Traffic Study Checklist

Applicant: Oaks on the Bay, LLC / Bay Valor Capital, LLC

Assigned Staff: Traffic Study: Gulf Coast Consulting Robert Pergolizzi AICP/PTP

Reference Number: _____

Traffic Study Submittal:

- [x] Was prepared based on a scope of work approved by the City Traffic Engineer Methodology in Appendix A.
- [x] Used the most recent version of Synchro for intersection analysis SYNCHRO 11
- [x] Used the most recent version of the ITE Trip Generation ITE TRIP GENERATION, 11th Edition
- [x] Was prepared and reviewed under the supervision and direction of a qualified engineer or authorized owner/principal of firm Principal at Gulf Coast Consulting
- [x] Was prepared using count data collected within one year of the submittal date Count date April 2023/See Appendix A
- [x] Includes an electronic copy, assembled as a complete document
- [x] Includes One (1) hard copy
- [x] Conforms to the most recent version of the City's Traffic Study Guidelines
- [x] Includes operational analysis files (Synchro) Upon request

Traffic Study includes:

- [x] Entitlement/ Parcel Map No.
- [x] Assigned Staff name Robert Pergolizzi AICP/PTP
- [x] Stamp and/or signature of qualified engineer or authorized owner/principal of firm stating the study was prepared and reviewed under their supervision and direction
- [x] Project description
- [x] Methodology description See Appendix A.
- [x] Project Trip Generation ITE DATA IN APPENDIX B
- [ ] Trip Generation Comparison (if a General Plan Amendment) NA
- [x] Delay analysis SYNCHRO Files / Printouts in Appendix A, Appendix B, Appendix C.
- [x] Queuing analysis for all movements at all study intersections SYNCHRO
- [x] Discussion of existing and planned bicycle, pedestrian and transit facilities – Sidewalk connections to Bay Avenue
- [x] Collision analysis Appendix A
- [x] On-site circulation analysis – Internal Driveway
- [x] Mitigations and Recommendations

City of Clearwater
Engineering Department
Traffic Study Checklist

Applicant: Oasis on the Bay, LLC / Bay Valor Capital, LLC

Assigned Staff: Traffic Study: Gulf Coast Consulting Robert Persohn AICP/PTP

Reference Number: _____

Included Figures:

- [x] Vicinity Map — Figure 1.
- [x] Site Plan — Appendix B
- [x] Trip distribution at intersections/along roadways — See Figure 3
- [x] Trip distribution at proposed access points — See Figure 3
- [x] Volumes for all scenarios analyzed — See Figure 2, Figure 4 and Figure 5
- [x] Lane configurations for all scenarios analyzed — SYNCHRO Printouts Appendix A, Appendix B, Appendix C
- [ ] Locations of approved projects — None approved 4/2023

Included Appendices:

- [x] Approved Scope of Work — Appendix A
- [ ] Model request
- [ ] Model data
- [x] Count data — Appendix A
- [x] Level of Service analysis worksheets — Appendix A, Appendix B, Appendix C SYNCHRO PRINTOUTS
- [x] Collision data — Appendix A
- [ ] Warrants — NA

CERTIFICATION OF APPLICANT: Read each of the statements below. After you have read the statements and understand them, please sign and date in the space provided at the end of this section:

1) I certify that I have read the Traffic Study Checklist thoroughly, followed any and all instruction, and have supplied the necessary information to allow staff to review my study or application and that the supplied information is true and correct information herein to the best of my knowledge and belief.

2) I understand that falsification or misrepresentation on my part of any of the information that I have supplied above constitutes sufficient grounds for return of my submittal, or should any of my responses be determined false, misleading and/or incomplete will subject my application/plans to review delays and may result in the requirement for the applicant to pay additional review fees.

Applicant's signature: Date: 9/17/2023

Robert Pergolizzi

From: Atallah, Omar <Omar.Atallah@MyClearwater.com>
Sent: Friday, April 14, 2023 11:38 AM
To: Robert Pergolizzi
Cc: Jordi, Gus
Subject: RE: Bay Valor Condos 420-432 Bay Avenue - The Oaks South Parcel
Attachments: CrashDataExport 041422023.xls; 232 - urb.pdf

Robert

Crash data as attached

ITE land use code 232 could be used if the project has ground floor retail use (see attached description) which I think the Bluffs projects have but the Valor condos will not have.

The trip rate difference in the AM between code 222 and 232 is 8 vehicles - 54 vs 62

Using 222 would be acceptable.

Regards,

Omar Atallah
Traffic Engineering Manager
City of Clearwater | Public Works | Engineering
(727) 562-4794
(727) 224-7027 Mobile

CLEARWATER
BRIGHT AND BEAUTIFUL · BAY TO BEACH

From: Robert Pergolizzi <pergo@gulfcoastconsultinginc.com>
Sent: Friday, April 14, 2023 9:28 AM
To: Atallah, Omar <Omar.Atallah@MyClearwater.com>
Cc: Jordi, Gus <Gus.Jordi@MyClearwater.com>
Subject: RE: Bay Valor Condos 420-432 Bay Avenue - The Oaks South Parcel

Omar – Since Trip Generation, 11th Edition, ITE no longer separates out apartments vs condos. They are all considered Multi-Family Housing. See attached LUC 222 description. This project will be high-rise (more than 10 stories)

Please send accident statistics for the intersection I have identified for study.

I need to talk with you regarding distribution of traffic from this site.

Robert Pergolizzi, AICP PTP
Gulf Coast Consulting, Inc.
13825 ICOT Boulevard, Suite 605
Clearwater, FL 33760
Phone: 727-524-1818
Fax: 727-524-6090
Cell: 727-644-2695
Email: pergo@gulfcoastconsultinginc.com

From: Atallah, Omar <Omar.Atallah@MyClearwater.com>
Sent: Thursday, April 13, 2023 4:40 PM
To: Robert Pergolizzi <pergo@gulfcoastconsultinginc.com>
Cc: Jordi, Gus <Gus.Jordi@MyClearwater.com>
Subject: RE: Bay Valor Condos 420-432 Bay Avenue - The Oaks South Parcel

Robert,

Please complete by signing and forwarding the attached Traffic Study Check list.

1. The proposed study intersections is acceptable.
2. Background conditions (without project) Refer to the data that was provided to PSTA for downtown development projects
3. for trip rates – code 222 multifamily for apartments, and code 232 is for condos. His project description is for condos.
4. TIS must evaluate crash experience and address safety deficiencies
5. the study must also address pedestrian, bicycle and transit access to the site, especially connections across Chestnut/ Court

Omar Atallah
Traffic Engineering Manager, Public Works/Engineering

562-4794
Cell: 224-7027

From: Robert Pergolizzi <pergo@gulfcoastconsultinginc.com>
Sent: Tuesday, April 11, 2023 9:50 AM
To: Atallah, Omar <Omar.Atallah@MyClearwater.com>
Subject: Bay Valor Condos 420-432 Bay Avenue - The Oaks South Parcel

Omar – Attached is a proposed methodology for a condominium project on Bay Avenue. Traffic impact is rather minor at only 64 PM peak trips, and we propose to evaluate the neighborhood intersections out to Fort Harrison /Turner Street signal.

Please review and let me know if you have any questions/comments.

Robert Pergolizzi, AICP PTP
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Land Development Consulting
Engineering • Planning • Transportation • Permitting
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Clearwater, FL 33760
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Fax: (727) 524-6090

April 11, 2022

Mr. Omar Atallah
Traffic Engineering Manager
City of Clearwater Engineering Department
100 S. Myrtle Avenue, 2nd Floor
Clearwater, Fl 33756

Bay Valor Condos Oaks South Parcel 420-432 Bay Avenue – Traffic Analysis Methodology

Dear Mr. Atallah:

We are providing this traffic methodology to confirm the procedures and requirements for preparing a Traffic Impact Study (TIS) for a proposed condominium development located at 420-432 Bay Avenue. The Final Plat (PLT2022-05005) known as "The Oaks of Clearwater" was approved March 16, 2023, to create two separate parcels, and the south parcel is 2.55 acres and is proposed to be developed with up to 200 condominium units in a high-rise. Development Order FLS2022-05026 approved the existing ALF/ILF tower which is to remain on the north parcel. To make way for the new condominium project, 22 exiting villa units will be demolished.

The 200 high-rise condominium is expected to generate 908 daily trips, of which 54 would occur during the AM peak hour and 64 would occur during the PM peak hour. Although a rather minor impact, the neighborhood intersections will be evaluated.

Existing Conditions

Existing conditions will be established by conducting PM peal period (4-6PM) intersection turning movement counts at the following 4 intersections:

1. Bay Avenue / Rogers Street (stop)
2. Bay Avenue / Turner Street (stop)
3. Turner Street / Oak Avenue (Stop)
4. S Ft. Harrison Avenue / Turner Street (signal)

All traffic counts will be seasonally adjusted to annual averages using FDOT seasonal adjustment factors. Existing conditions analysis for the intersections will be prepared using SYNCHRO 11 software and HCS. Roadway segments will be evaluated using FDOT Generalized Capacity Tables and HCS Arterial Analysis procedures.

Background Traffic

The condominium project is expected to be completed by mid-2026. Based on FDOT historical traffic counts on area roadways, the traffic "growth" in the past 5 years has been low, ranging

between 0.53% (Chestnut St) and 1.8% (Court St). Existing traffic will be projected to the buildout year of 2026 for using a 1% annual growth rate.

Future Conditions with Project

Traffic generation for each development project will be estimated using ITE Trip Generation, 11th Edition rates for ITE LUC 222 (Multi-Family Housing High-Rise). The expected trip generation is only 908 daily trips and 64 PM peak hour trips.

The project will have sole access to Bay Avenue which is a dead-end road north of the site and does not connect to Chestnut Street. All vehicle trips will be distributed to the surrounding roadway system based on the following percentages:

100% south on Bay Avenue to Turner Street then east to Ft Harrison Avenue
Then,
30% south on S Ft. Harrison Avenue
30% north on S Ft. Harrison Avenue
40% East on Turner Street to Myrtle Avenue

Build-out Year Analysis

The build-out year analysis for the project will assume a 2026 buildout. Project traffic from the condominiums will be added to background traffic to evaluate future conditions in 2026. Intersections, roadway segments, and the project driveway will be evaluated.

Five Year Horizon Analysis

A horizon analysis will be conducted for total traffic conditions five years beyond the build-out of the project. This will include an additional five years of background traffic. For the purpose of the traffic study the horizon date will be 2031. We will evaluate the intersections and roadways for future conditions in 2031.

Report

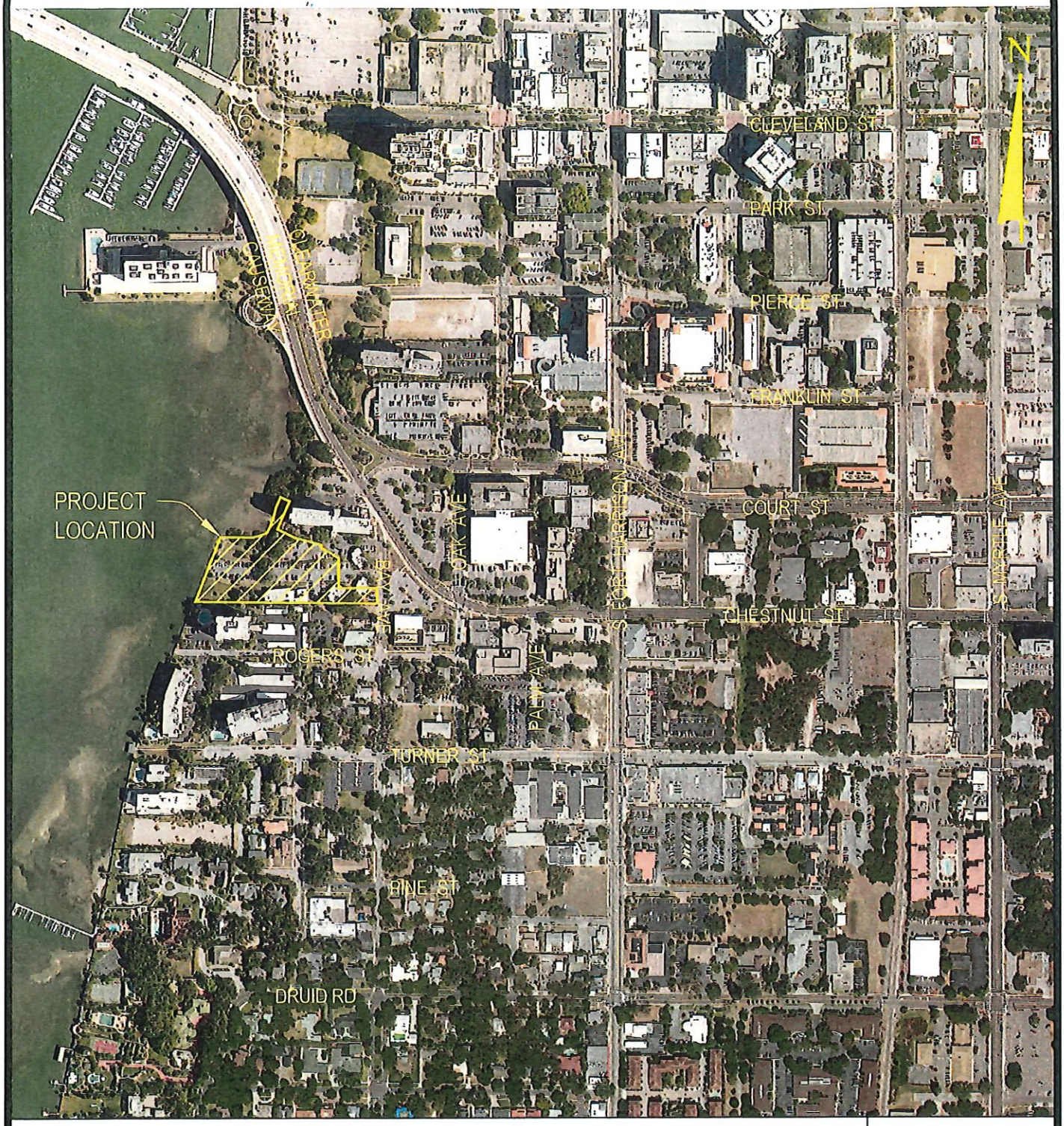
A written report will be prepared for the development project. The written report will include all SYNCHRO/HCS file printouts in Appendices which will include v/c ratios, delays, and LOS.

I look forward to your approval of this methodology and conducting this study.

Sincerely,

Robert Pergolizzi, AICP/PTP
Principal

Cc: 20-029.02



PROJECT LOCATION – BAY VALOR

PROJECT NO: 20–029.02

Gulf Coast Consulting, Inc.
Land Development Consulting

DATE: 4/2023

DRAWN BY: GJS

FIGURE: 1

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 15 - PINELLAS

SITE: 1253 - SR 60/CHESNUT ST (EASTBOUND), WEST OF MYRTLE AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	19500 C	E 19500	0	9.00	99.90	2.70
2020	17500 F	0	0	9.00	99.90	2.50
2019	19000 C	E 19000	0	9.00	99.90	2.50
2018	21000 E	E 17000	0	9.00	99.90	2.50
2017	19500 S	0	0	9.00	99.90	2.10
2016	19000 F	0	0	9.00	99.90	2.10
2015	18500 C	E 18500	0	9.00	99.90	2.10
2014	16000 C	E 16000		9.00	99.90	2.00
2013	15500 C	E 15500	0	9.00	99.90	1.80
2012	16500 C	E 16500	0	9.00	99.90	1.70
2011	15000 C	E 15000	0	9.00	99.90	1.90
2010	15000 C	E 15000	0	10.52	99.99	1.80
2009	14000 C	E 14000	0	10.53	99.99	2.40

5 yr growth rate (2016 - 2021) = 0.53%

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2021 HISTORICAL AADT REPORT

COUNTY: 15 - PINELLAS

SITE: 1252 - SR 60/COURT ST (WESTBOUND), WEST OF MYRTLE AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2021	18000 C	W 18000	0	9.00	99.90	2.10
2020	17500 C	W 17500	0	9.00	99.90	2.40
2019	15500 C	W 15500	0	9.00	99.90	2.40
2018	17200 E	W 14500	0	9.00	99.90	2.70
2017	17000 S	0	0	9.00	99.90	2.10
2016	16500 F	0	0	9.00	99.90	2.10
2015	16000 C	W 16000	0	9.00	99.90	2.10
2014	14500 C	W 14500		9.00	99.90	1.70
2013	13500 C	W 13500	0	9.00	99.90	1.80
2012	15500 C	W 15500	0	9.00	99.90	1.50
2011	15000 C	W 15000	0	9.00	99.90	2.00
2010	14000 C	W 14000	0	10.52	99.99	2.80
2009	12500 C	W 12500	0	10.53	99.99	2.80

5 yr growth rate (2016-2021) = 1.8 %

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1500 PINELLAS COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.96 PSCF
1	01/01/2021 - 01/02/2021	0.99	1.03
2	01/03/2021 - 01/09/2021	1.07	1.11
3	01/10/2021 - 01/16/2021	1.15	1.20
4	01/17/2021 - 01/23/2021	1.13	1.18
5	01/24/2021 - 01/30/2021	1.11	1.16
6	01/31/2021 - 02/06/2021	1.09	1.14
7	02/07/2021 - 02/13/2021	1.07	1.11
8	02/14/2021 - 02/20/2021	1.05	1.09
9	02/21/2021 - 02/27/2021	1.03	1.07
10	02/28/2021 - 03/06/2021	1.01	1.05
11	03/07/2021 - 03/13/2021	0.99	1.03
12	03/14/2021 - 03/20/2021	0.97	1.01
13	03/21/2021 - 03/27/2021	0.97	1.01
*14	03/28/2021 - 04/03/2021	0.97	1.01
*15	04/04/2021 - 04/10/2021	0.97	1.01
*16	04/11/2021 - 04/17/2021	0.97	1.01
*17	04/18/2021 - 04/24/2021	0.96	1.00
*18	04/25/2021 - 05/01/2021	0.96	1.00
*19	05/02/2021 - 05/08/2021	0.95	0.99
*20	05/09/2021 - 05/15/2021	0.95	0.99
*21	05/16/2021 - 05/22/2021	0.95	0.99
*22	05/23/2021 - 05/29/2021	0.95	0.99
*23	05/30/2021 - 06/05/2021	0.95	0.99
*24	06/06/2021 - 06/12/2021	0.95	0.99
*25	06/13/2021 - 06/19/2021	0.96	1.00
*26	06/20/2021 - 06/26/2021	0.97	1.01
27	06/27/2021 - 07/03/2021	0.98	1.02
28	07/04/2021 - 07/10/2021	0.99	1.03
29	07/11/2021 - 07/17/2021	1.00	1.04
30	07/18/2021 - 07/24/2021	1.01	1.05
31	07/25/2021 - 07/31/2021	1.02	1.06
32	08/01/2021 - 08/07/2021	1.03	1.07
33	08/08/2021 - 08/14/2021	1.04	1.08
34	08/15/2021 - 08/21/2021	1.04	1.08
35	08/22/2021 - 08/28/2021	1.04	1.08
36	08/29/2021 - 09/04/2021	1.04	1.08
37	09/05/2021 - 09/11/2021	1.04	1.08
38	09/12/2021 - 09/18/2021	1.04	1.08
39	09/19/2021 - 09/25/2021	1.02	1.06
40	09/26/2021 - 10/02/2021	1.01	1.05
41	10/03/2021 - 10/09/2021	1.00	1.04
42	10/10/2021 - 10/16/2021	0.98	1.02
43	10/17/2021 - 10/23/2021	0.99	1.03
44	10/24/2021 - 10/30/2021	0.99	1.03
45	10/31/2021 - 11/06/2021	0.99	1.03
46	11/07/2021 - 11/13/2021	1.00	1.04
47	11/14/2021 - 11/20/2021	1.00	1.04
48	11/21/2021 - 11/27/2021	1.00	1.04
49	11/28/2021 - 12/04/2021	1.00	1.04
50	12/05/2021 - 12/11/2021	1.00	1.04
51	12/12/2021 - 12/18/2021	0.99	1.03
52	12/19/2021 - 12/25/2021	1.07	1.11
53	12/26/2021 - 12/31/2021	1.15	1.20

TMC Cards

* PEAK SEASON

08-MAR-2022 12:36:28 830UPD 7_1500_PKSEASON.TXT

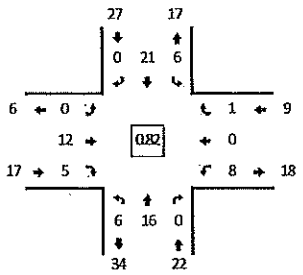
Type of peak hour being reported: Intersection Peak

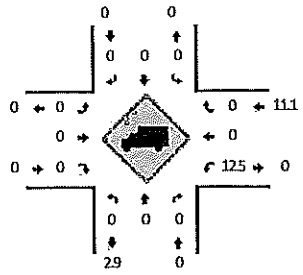
Method for determining peak hour: Total Entering Volume

LOCATION: Bay Ave -- Rogers St
CITY/STATE: Clearwater, FL

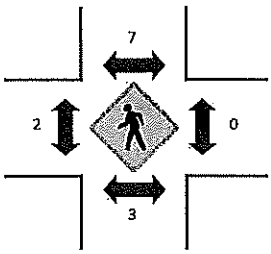
QC JOB #: 16169701
DATE: Tue, Apr 18 2023

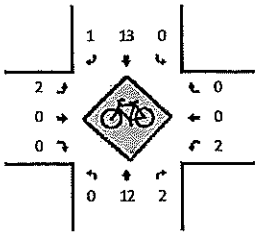
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

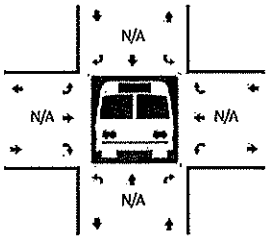


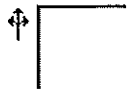


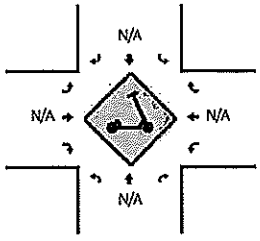
Quality Counts
DATA THAT DRIVES COMMUNITIES











15-Min Count Period Beginning At	Bay Ave (Northbound)				Bay Ave (Southbound)				Rogers St (Eastbound)				Rogers St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	9	0	0	1	4	0	0	0	3	2	0	0	0	1	0	20	
4:15 PM	2	5	0	0	0	3	0	0	0	3	0	0	0	0	0	0	13	
4:30 PM	2	3	0	0	3	7	0	0	0	5	2	0	1	0	0	0	23	
4:45 PM	1	2	0	0	3	5	0	0	0	2	2	0	2	0	0	0	17	73
5:00 PM	1	6	0	0	0	6	0	0	0	2	1	0	5	0	1	0	22	75
5:15 PM	0	2	1	0	1	4	1	0	1	2	1	0	0	0	0	0	13	75
5:30 PM	1	1	1	0	1	3	0	0	0	1	1	0	0	0	0	0	9	61
5:45 PM	0	2	0	0	2	2	0	0	0	2	0	0	0	0	0	0	8	52

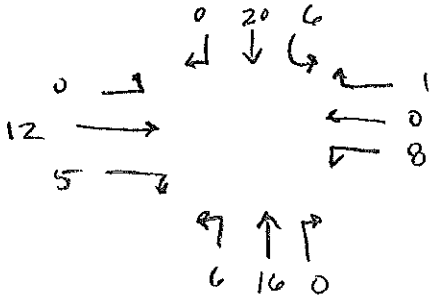
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	12	0	0	12	28	0	0	0	20	8	0	4	0	0	0	92
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				8				0			8
Bicycles	0	8	8		0	0	0		8	0	0		0	0	0		24
Scooters																	

Comments:

Report generated on 4/24/2023 11:54 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

PF = 0.96



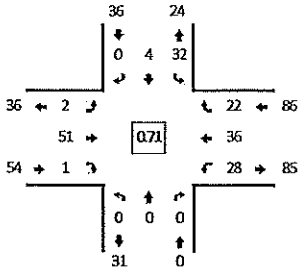
Type of peak hour being reported: Intersection Peak

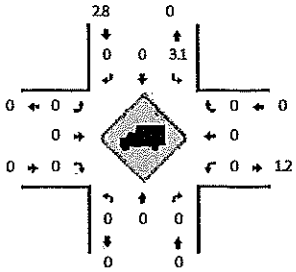
Method for determining peak hour: Total Entering Volume

LOCATION: Bay Ave -- Turner St
CITY/STATE: Clearwater, FL

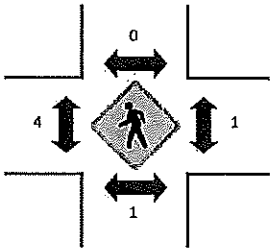
QC JOB #: 16169702
DATE: Tue, Apr 18 2023

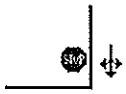
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

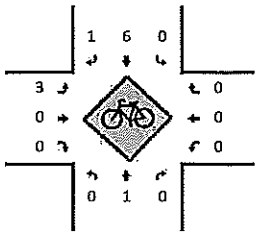


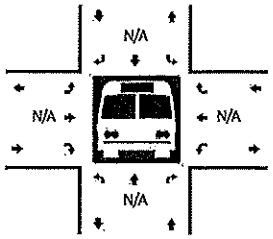


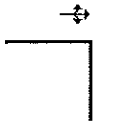
Quality Counts
DATA THAT DRIVES COMMUNITIES

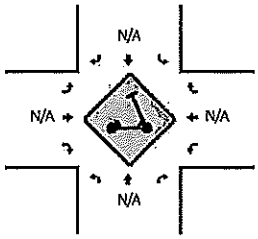












15-Min Count Period Beginning At	Bay Ave (Northbound)				Bay Ave (Southbound)				Turner St (Eastbound)				Turner St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	6	0	0	0	1	12	1	0	3	10	8	1	42	
4:15 PM	0	0	0	0	4	0	0	0	0	7	0	0	4	10	8	0	33	
4:30 PM	0	0	0	0	8	1	0	0	0	13	0	0	9	9	5	0	45	
4:45 PM	0	0	0	0	8	2	0	0	1	10	0	0	3	7	4	1	36	156
5:00 PM	0	0	0	0	12	1	0	0	1	21	1	0	10	10	5	1	62	176
5:15 PM	0	0	0	0	3	1	1	0	1	11	0	0	6	6	2	0	31	174
5:30 PM	0	0	0	0	4	0	0	0	0	8	0	0	6	5	3	0	26	155
5:45 PM	0	0	0	0	4	0	0	0	0	9	0	0	0	10	2	0	25	144

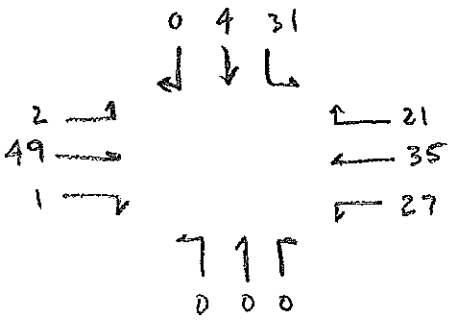
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	48	4	0	0	4	84	4	0	40	40	20	4	248
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				8				0			8
Bicycles	0	0	0		0	12	4		4	0	0		0	0	0		20
Scooters																	

Comments:

Report generated on 4/24/2023 11:54 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

SF = 0.96



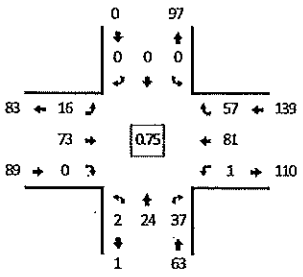
Type of peak hour being reported: Intersection Peak

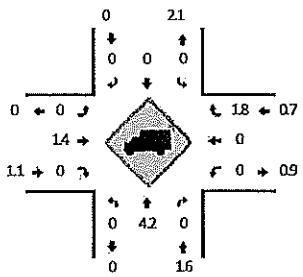
Method for determining peak hour: Total Entering Volume

LOCATION: Oak Ave -- Turner St
CITY/STATE: Clearwater, FL

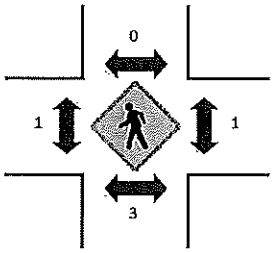
QC JOB #: 16169703
DATE: Tue, Apr 18 2023

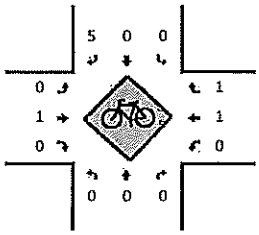
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

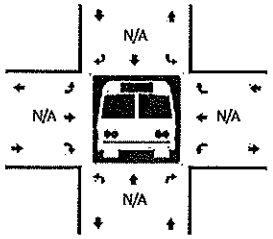


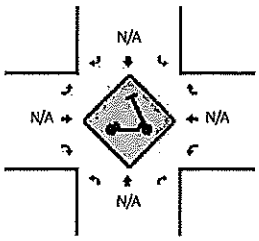


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	Oak Ave (Northbound)				Oak Ave (Southbound)				Turner St (Eastbound)				Turner St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	5	8	0	0	0	0	0	6	17	0	0	0	19	11	0	67	
4:15 PM	0	4	9	0	0	0	0	0	4	9	0	0	0	20	20	0	66	
4:30 PM	1	5	6	0	0	0	0	0	4	17	0	0	0	21	9	0	63	
4:45 PM	1	7	8	0	0	0	0	0	5	16	0	0	0	14	14	0	65	261
5:00 PM	0	8	14	0	0	0	0	0	3	31	0	0	1	26	14	0	97	291
5:15 PM	0	7	6	0	0	0	0	0	4	10	0	0	0	14	8	0	49	274
5:30 PM	0	7	2	0	0	0	0	0	1	13	0	0	0	14	6	0	43	254
5:45 PM	0	6	4	0	0	0	0	0	2	12	0	0	0	12	3	0	39	228

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	32	56	0	0	0	0	0	12	124	0	0	4	104	56	0	388
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	8		0	0	0		0	0	0		8
Scooters																	

Comments:

Report generated on 4/24/2023 11:54 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

SF = 0.96 ↑ ONE WAY NB

16 → 1
70 →

← 55
← 79

↰ ↑ ↱
2 23 36

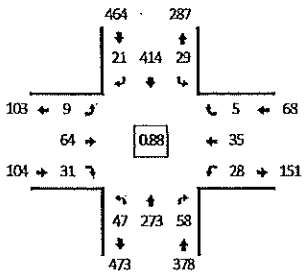
Type of peak hour being reported: Intersection Peak

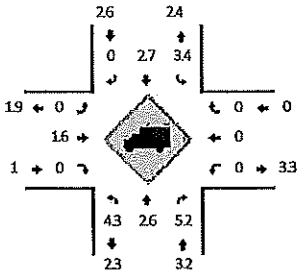
Method for determining peak hour: Total Entering Volume

LOCATION: S Ft Harrison Ave -- Turner St
CITY/STATE: Clearwater, FL

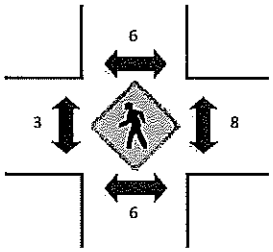
QC JOB #: 16169704
DATE: Tue, Apr 18 2023

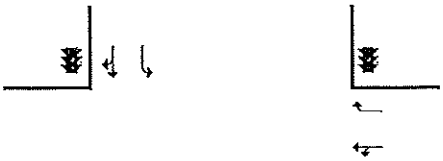
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

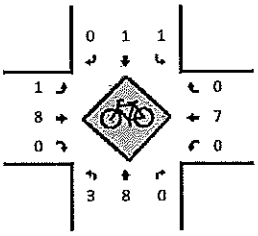


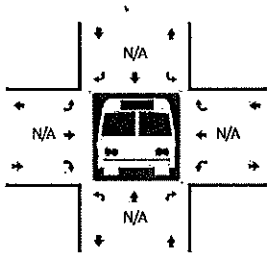


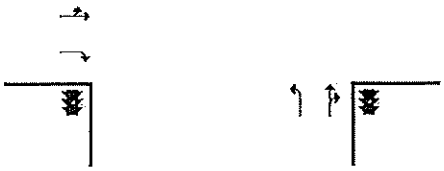
Quality Counts
DATA THAT DRIVES COMMUNITIES

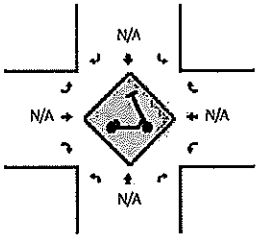












15-Min Count Period Beginning At	S Ft Harrison Ave (Northbound)				S Ft Harrison Ave (Southbound)				Turner St (Eastbound)				Turner St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	61	16	1	9	95	10	0	0	17	6	0	9	7	1	0	240	
4:15 PM	18	55	10	0	7	84	6	0	0	10	2	0	7	8	4	0	211	
4:30 PM	12	73	14	0	10	96	8	0	1	13	3	0	6	8	2	0	246	
4:45 PM	13	55	15	0	3	110	3	0	0	18	4	0	4	14	0	0	239	936
5:00 PM	14	70	16	0	5	105	6	0	6	27	19	0	11	9	1	0	289	985
5:15 PM	8	75	13	0	11	103	4	0	2	6	5	0	7	4	2	0	240	1014
5:30 PM	7	74	12	0	2	104	8	0	1	11	2	0	8	5	3	0	237	1005
5:45 PM	4	74	8	0	6	78	4	0	1	6	0	0	7	5	4	0	197	963

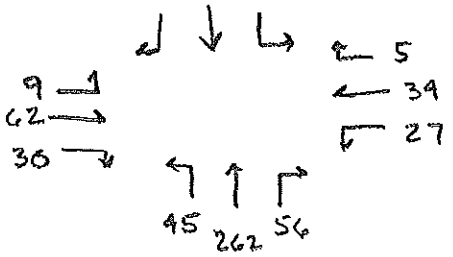
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	280	64	0	20	420	24	0	24	108	76	0	44	36	4	0	1156
Heavy Trucks	0	8	4		0	12	0		0	0	0		0	0	0		24
Buses																	
Pedestrians		12				12				0				8			32
Bicycles	0	0	0		0	4	0		4	4	0		0	8	0		20
Scooters																	

Comments:

Report generated on 4/24/2023 11:54 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

SF = 0.96



Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	12	5	8	0	1	6	16	0	6	20	0
Future Vol, veh/h	0	12	5	8	0	1	6	16	0	6	20	0
Conflicting Peds, #/hr	9	0	5	3	0	7	5	0	3	7	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	11	11	11	0	0	0	0	0	0
Mvmt Flow	0	15	6	10	0	1	7	20	0	7	24	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	91	88	38	95	88	36	33	0	0	27	0	0
Stage 1	47	47	-	41	41	-	-	-	-	-	-	-
Stage 2	44	41	-	54	47	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.21	6.61	6.31	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.599	4.099	3.399	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	898	806	1040	867	785	1011	1592	-	-	1600	-	-
Stage 1	972	860	-	951	843	-	-	-	-	-	-	-
Stage 2	975	865	-	936	838	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	876	787	1026	835	766	996	1578	-	-	1589	-	-
Mov Cap-2 Maneuver	876	787	-	835	766	-	-	-	-	-	-	-
Stage 1	959	849	-	941	834	-	-	-	-	-	-	-
Stage 2	962	855	-	906	827	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	9.3	2	1.7
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1578	-	-	845	850	1589	-	-
HCM Lane V/C Ratio	0.005	-	-	0.025	0.013	0.005	-	-
HCM Control Delay (s)	7.3	0	-	9.4	9.3	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

NBLT BAY AVE

EB Rogers St.

WB Rogers St

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	2	49	1	27	35	21	0	0	0	31	4	0
Future Vol, veh/h	2	49	1	27	35	21	0	0	0	31	4	0
Conflicting Peds, #/hr	4	0	5	2	0	1	0	0	0	1	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	3	3
Mvmt Flow	3	69	1	38	49	30	0	0	0	44	6	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	83	0	0	75	0	0	221	225	72
Stage 1	-	-	-	-	-	-	144	144	-
Stage 2	-	-	-	-	-	-	77	81	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	1527	-	-	1537	-	-	765	672	987
Stage 1	-	-	-	-	-	-	881	776	-
Stage 2	-	-	-	-	-	-	943	826	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1521	-	-	1537	-	-	737	0	979
Mov Cap-2 Maneuver	-	-	-	-	-	-	737	0	-
Stage 1	-	-	-	-	-	-	876	0	-
Stage 2	-	-	-	-	-	-	915	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	2.4	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1521	-	-	1537	-	-	737
HCM Lane V/C Ratio	0.002	-	-	0.025	-	-	0.067
HCM Control Delay (s)	7.4	0	-	7.4	0	-	10.2
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.2

EBLT TURNER

WBLT TURNER

SB BAY AVE

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑			↑↱			↰↑↱				
Traffic Vol, veh/h	16	70	0	0	79	55	2	23	36	0	0	0
Future Vol, veh/h	16	70	0	0	79	55	2	23	36	0	0	0
Conflicting Peds, #/hr	1	0	3	4	0	1	4	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	1	1	1	1	1	1	2	2	2	0	0	0
Mvmt Flow	21	93	0	0	105	73	3	31	48	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	179	0	-	-	-	0	281	314	97
Stage 1	-	-	-	-	-	-	135	135	-
Stage 2	-	-	-	-	-	-	146	179	-
Critical Hdwy	4.11	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1403	-	0	0	-	-	709	601	959
Stage 1	-	-	0	0	-	-	891	785	-
Stage 2	-	-	0	0	-	-	881	751	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1403	-	-	-	-	-	695	0	955
Mov Cap-2 Maneuver	-	-	-	-	-	-	695	0	-
Stage 1	-	-	-	-	-	-	877	0	-
Stage 2	-	-	-	-	-	-	877	0	-

Approach	EB	WB	NB
HCM Control Delay, s	1.4	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	937	1403	-	-	-
HCM Lane V/C Ratio	0.087	0.015	-	-	-
HCM Control Delay (s)	9.2	7.6	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

NB OAK

EBLT TURNER

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	62	30	27	34	5	45	262	56	28	397	20
Future Volume (vph)	9	62	30	27	34	5	45	262	56	28	397	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	300		175	150		0	275		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.96	1.00	0.99		0.99	1.00	
Frt			0.850			0.850		0.973			0.993	
Flt Protected		0.994			0.978		0.950			0.950		
Satd. Flow (prot)	0	1683	1439	0	1858	1615	1752	1780	0	1752	1829	0
Flt Permitted		0.943			0.819		0.492			0.447		
Satd. Flow (perm)	0	1594	1378	0	1549	1550	905	1780	0	819	1829	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78			78		18			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		848			397			499			403	
Travel Time (s)		23.1			10.8			11.3			9.2	
Confl. Peds. (#/hr)	6		6	6		6	3		8	8		3
Confl. Bikes (#/hr)			9			7			12			5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	10	70	34	31	39	6	51	298	64	32	451	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	34	0	70	6	51	362	0	32	474	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	35.7%	42.9%	42.9%		21.4%	64.3%	
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	21.0	26.0	26.0		11.0	41.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0			0	
Act Effct Green (s)		7.7	7.7		7.6	7.6	22.4	22.4		21.8	23.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.68	0.68		0.66	0.72	
v/c Ratio		0.22	0.09		0.20	0.01	0.08	0.30		0.05	0.36	
Control Delay		14.0	2.0		13.9	0.0	6.9	6.7		4.0	5.0	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		14.0	2.0		13.9	0.0	6.9	6.7		4.0	5.0	
LOS		B	A		B	A	A	A		A	A	
Approach Delay		10.4			12.8			6.7			5.0	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		9	0		8	0	3	26		2	39	
Queue Length 95th (ft)		(47)	5		(43)	0	(25)	(123)		(9)	(95)	
Internal Link Dist (ft)		768			317			419			323	
Turn Bay Length (ft)			50			175	150			275		
Base Capacity (vph)		1066	947		1035	1062	747	1472		867	1763	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.08	0.04		0.07	0.01	0.07	0.25		0.04	0.27	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 33.1
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: (6.7) Intersection LOS: (A)
Intersection Capacity Utilization: (47.5%) ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: FT HARRISON AVE & TURNER ST

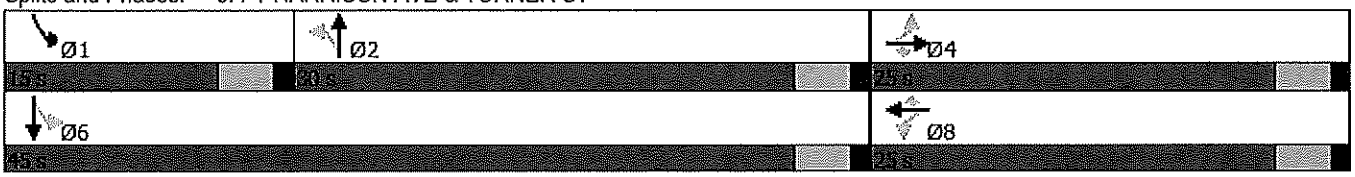


TABLE 4

Generalized Peak Hour Two-Way 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
2	Undivided	*	1,510	1,600	**
4	Divided	*	3,420	3,580	**
6	Divided	*	5,250	5,390	**
8	Divided	*	7,090	7,210	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	660	1,330	1,410
4	Divided	*	1,310	2,920	3,040
6	Divided	*	2,090	4,500	4,590
8	Divided	*	2,880	6,060	6,130

Ft. Herrison 105 % 240 690 1400

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
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
—	—	—	Yes	+5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
4	4,120	5,540	6,700	7,190
6	6,130	8,370	10,060	11,100
8	8,230	11,100	13,390	15,010
10	10,330	14,040	16,840	18,930
12	14,450	18,880	22,030	22,860

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+1,800	+5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	770	1,530	2,170	2,990
4	Divided	3,300	4,660	5,900	6,530
6	Divided	4,950	6,990	8,840	9,790

Uninterrupted Flow Highway Adjustments

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

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%	*	260	680	1,770
50-84%	190	600	1,770	>1,770
85-100%	830	1,770	>1,770	**

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%	*	*	250	850
50-84%	*	150	780	1,420
85-100%	340	960	1,560	>1,770

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

[1] Values shown are presented as peak hour two-way 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

ACCIDENT DATA

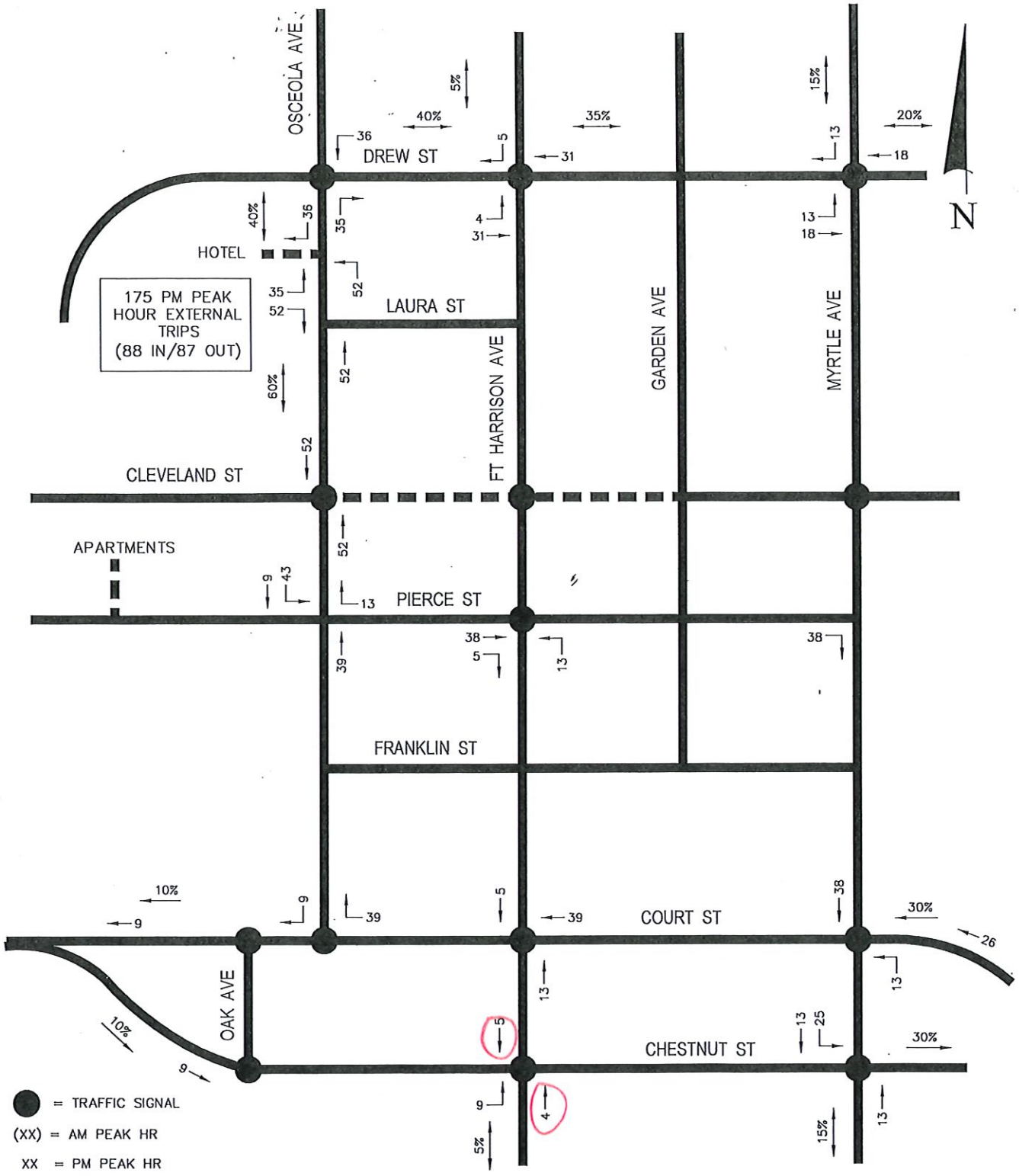
January 2018 - January 2023

A B D/E G, K, L, M, N, EY, EZ CI X Y, Z AA P Q BX

	Date	Time	Location	Type & Cause	Injury	Light	Weather
1	2/6/2018	12:15 PM	Turner St / Ft. Harrison Ave	Bike WBLT	NO	DAY	Clear/Dry
2	4/25/2018	3:09 PM	Ft. Harrison Ave / Turner St	Rear End NB/NB Stopped Careless driving	NO	DAY	Clear/Dry
3	5/31/2018	5 PM	Ft. Harrison Ave / Turner St	Rear End NB/NB Stopped Followed too closely	NO	DAY	Clear/Dry
4	7/4/2018	9:52 PM	Turner St / Oak Avenue	Sideswipe WBRT / WB Parked Car unknown cause	NO	Dark	Clear/Dry
5	7/13/2018	3:00 PM	Turner St / Ft. Harrison Ave	Rear End EB/EB Stopped Followed too closely	NO	DAY	Clear/Dry
6	8/8/2018	12:00 PM	Turner St / Oak Ave	Head on WB/EB Unknown cause	NO	DAY	Clear/Dry
7	9/10/2018	7:49 AM	Ft. Harrison Ave / Turner St	Sideswipe NB/NB Tired / Careless Driving	NO	DAY	Clear/Dry
8	6/6/2019	9:01 PM	Ft Harrison Ave / Turner St	Angle LT NBLT/SBT motorcycle Careless Driving	Yes-Severe	Dark	Clear/Dry
9	7/2/2019	3:16 PM	Turner St / Oak Ave	Angle NB/WB Careless Driving	Yes-Minor	DAY	Clear/Dry
10	1/25/2020	11:45 AM	Turner St / Oak Ave	Angle NB/EB Failed to Yield ROW	NO	DAY	Clear/Dry
11	3/11/2020	8:48 AM	Turner St / Palm Ave	WBRT motorcycle Careless Driving	Yes-Minor	DAY	Clear/Dry
12	3/11/2020	3:58 PM	Turner St / Ft. Harrison Ave	Angle SB/WB Careless Driving	NO	DAY	Clear/Dry
13	1/30/2021	10:00 AM	Ft. Harrison Ave / Turner St	Sideswipe NB/NB Lane Change Unknown Cause	NO	DAY	Clear/Dry
14	6/13/2021	2:15 PM	Turner St / Bay Ave.	BIKE WB hit car unknown	NO	DAY	Clear/Dry
15	7/1/2021	1:10 PM	Ft. Harrison Ave / Turner St	Head on WBRT hit SB Stopped Careless Driving	NO	DAY	Rain/Wet
16	7/2/2021	2:49 PM	Ft. Harrison Ave / Turner St	Rear end NB/NB Stopped Careless Driving	NO	DAY	Clear/Dry
17	7/30/2021	7:35 PM	Turner St / Ft. Harrison Ave	Angle SB/WB Ran Red Light	NO	DAY	Clear/Dry
18	1/4/2023	10:35 AM	Turner St / Palm Ave	Rear end EB Backing / INB Stopped Improper backing	NO	DAY	Cloudy/Dry
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							

2018 2019 2020 2021 2022

APPENDIX B



PROJECT TRAFFIC DISTRIBUTION – HOTEL

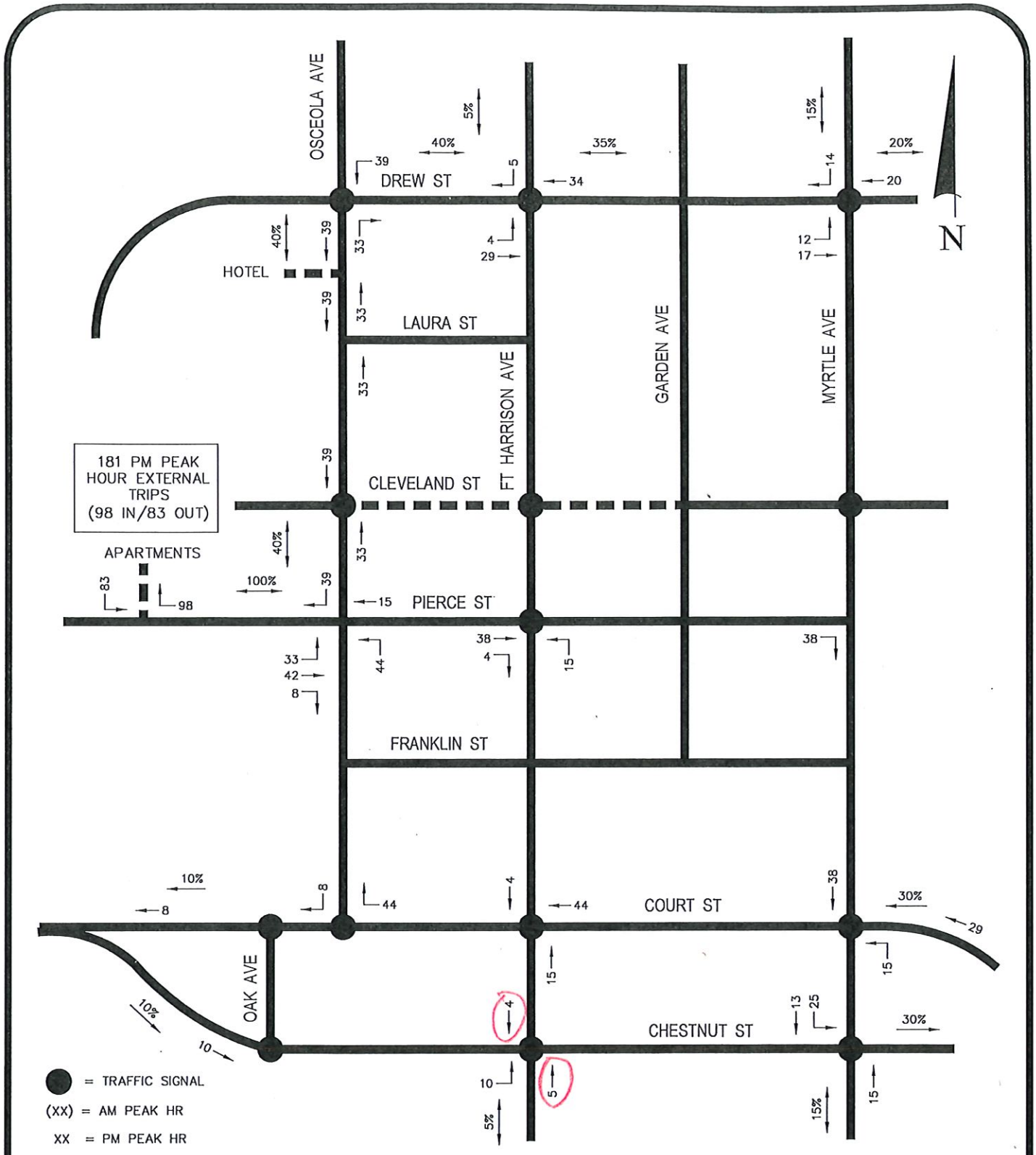
PROJECT NO: 22-091

Gulf Coast Consulting, Inc.
Land Development Consulting
ENGINEERING TRANSPORTATION PLANNING PERMITTING
13825 ICOT BLVD., SUITE 605
Clearwater, Florida 33760
Phone: (727) 524-1818 Fax: (727) 524-6090
www.gulfcoastconsultinginc.com

DATE: 2/2023

DRAWN BY: GJS

FIGURE: 3



PROJECT TRAFFIC DISTRIBUTION – APARTMENTS

PROJECT NO: 22-091

Gulf Coast Consulting, Inc.
Land Development Consulting
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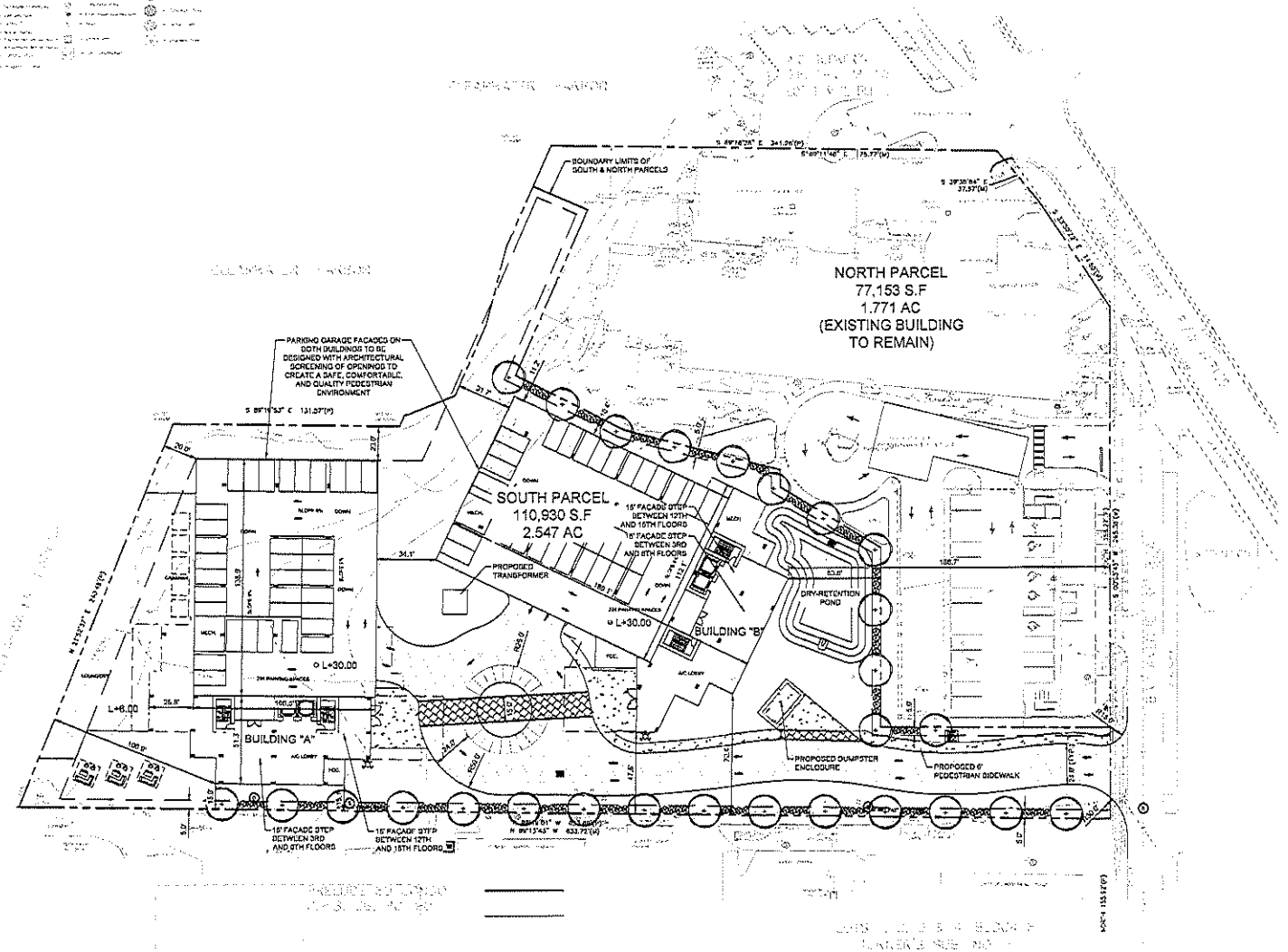
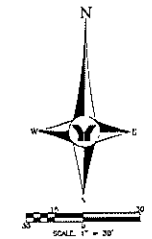
13825 ICOT BLVD., SUITE 605
Clearwater, Florida 33760
Phone: (727) 524-1818 Fax: (727) 524-6090
www.gulfcoastconsultinginc.com

DATE: 2/2023

DRAWN BY: GJS

FIGURE: 3





FLOOD ZONE NOTE:

FLOOD STATEMENT: THIS PROPERTY APPEARS TO LIES IN FLOOD ZONE "X", ZONE "X" SHADED, ZONE "AE" BASE FLOOD 12 AND ZONE "VE" BASE FLOOD 13 AND 14, ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP # 12103C0105H, DATED MAY 17, 2005.

LEGEND:

- SANITARY MANHOLE
- POTABLE WATER METER & BFP
- DOUBLE DETECTOR CHECK VALVE
- FDC
- PROPOSED PAVEMENT
- 4" 3000 PSI CONCRETE
- PROPOSED COLORED PAVERS
- MITERED END SECTION
- FDOT TYPE "C" GRATE INLET
- SHRUBS
- SHADE TREE

REVISED NO.	BY	DATE	DESCRIPTION

REVISED NO.	BY	DATE	DESCRIPTION

	INITIALS	DATE
DESIGN		
DRAWN		
CHECKED		
QUALITY CHK		
SCALE		

PREPARED FOR:
VALOR CAPITAL REAL ESTATE DEVELOPMENT
400 CLEVELAND STREET
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ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 31
CIVIL & TRANSPORTATION ENGINEERING/ECOLOGY/SURVEYING/LANDSCAPE ARCHITECTURE
PLANNING/SURVEYING/MARINE AGE UTILITY ENGINEERING
SARASOTA • LAKEWOOD RANCH • ORLANDO • ST. PETERSBURG • TAMPA

TIMOTHY MARSH NO. 66733
DATE

OAKS AT CLEARWATER - SOUTH PARCEL
PRELIMINARY SITE PLAN
SECTION 10, TOWNSHIP 29S., RANGE 15E.

JOB NO. 22028000SC
SHEET NO. C03.0

Land Use: 222
Multifamily Housing (High-Rise)

Description

High-rise multifamily housing includes apartments, townhouses, and condominiums. Each building has more than 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevators, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), off-campus student apartment (high-rise) (Land Use 227), and high-rise residential with ground-floor commercial (Land Use 232) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the 12 sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 1.6 residents per occupied dwelling unit.

For the 26 sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 98 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the 12 sites for which data were provided for both occupied dwelling units and residents, there was an average of 1.6 residents per occupied dwelling unit.

For the 26 sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 2000s, and the 2010s in California, District of Columbia, Maryland, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, and Virginia.

Source Numbers

105, 168, 169, 237, 321, 356, 818, 862, 901, 910, 949, 963, 964, 966, 967, 1056, 1057, 1076, 1077

Multifamily Housing (High-Rise) Not Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

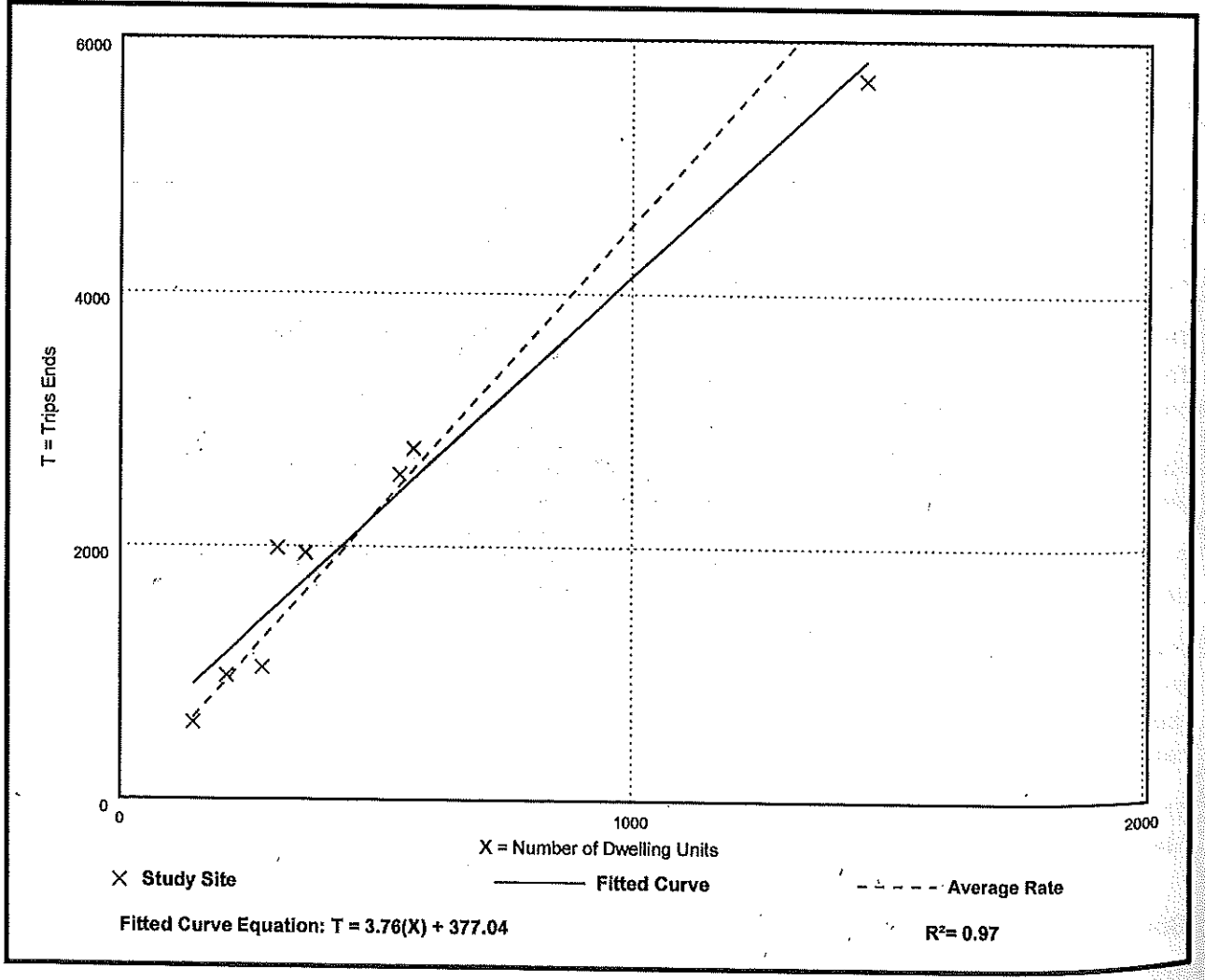
Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Dwelling Units: 484
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.74 - 6.45	0.81

Data Plot and Equation

223 units × 4.54 = 1,012 daily trips



Fitted Curve Equation: T = 3.76(X) + 377.04

R^2= 0.97

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

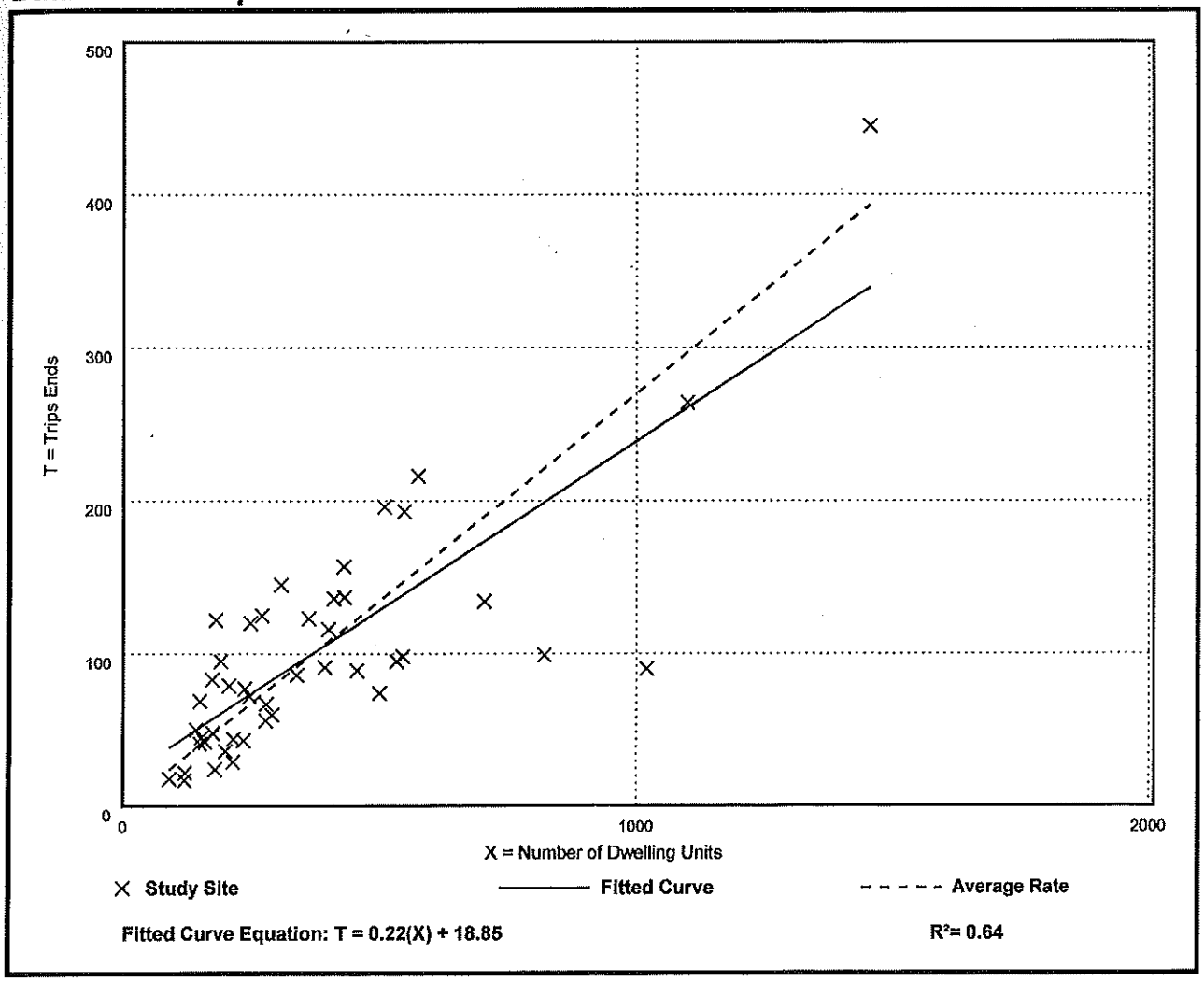
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 45
Avg. Num. of Dwelling Units: 372
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.27	0.09 - 0.67	0.11

223 units × 0.27 60 AM Peak trips (20/40)

Data Plot and Equation



Fitted Curve Equation: T = 0.22(X) + 18.85

R^2= 0.64

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

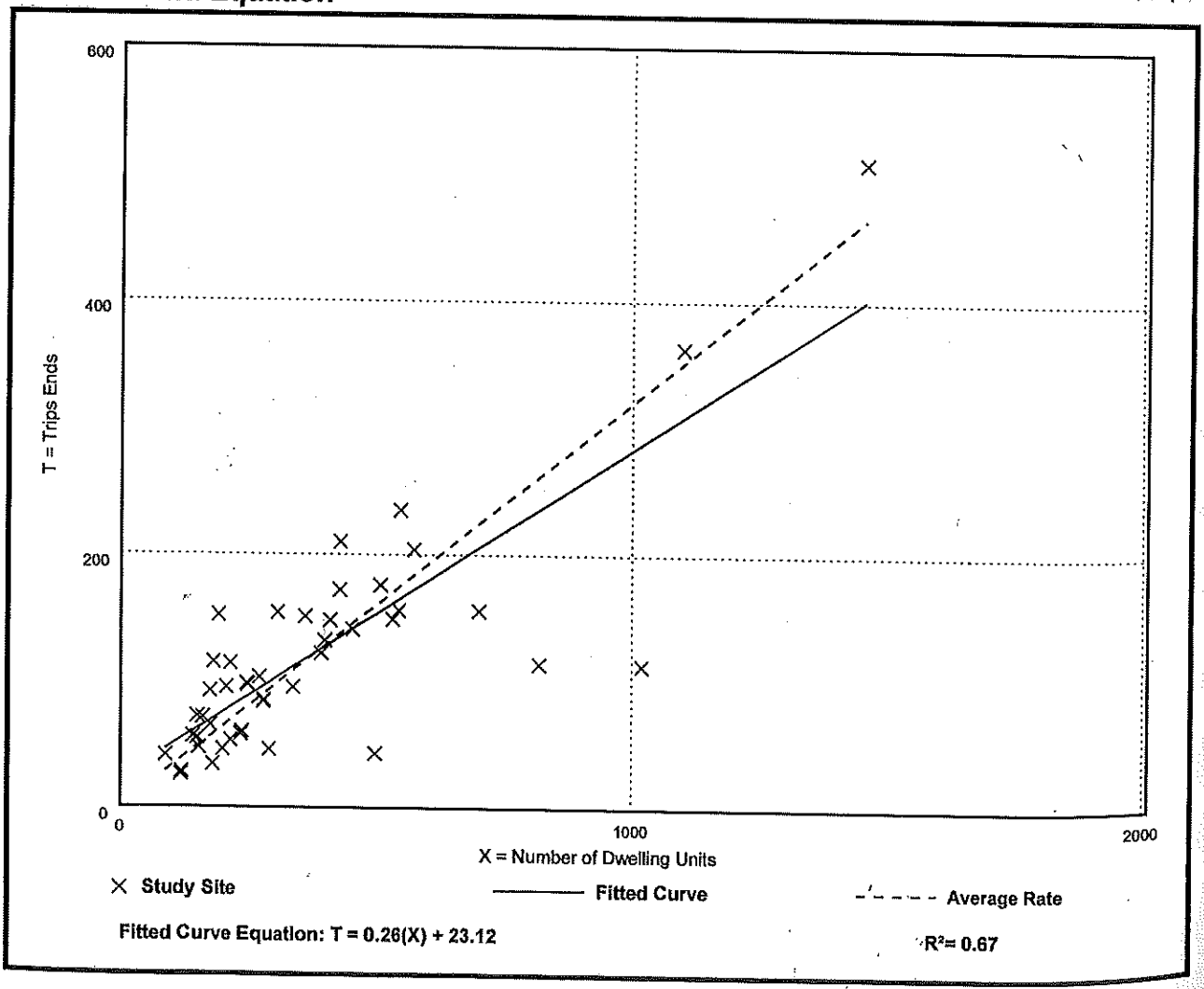
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 45
Avg. Num. of Dwelling Units: 372
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.09 - 0.80	0.13

Data Plot and Equation

223 units * 0.32 = 71 PM PEAK HOUR TRIPS (40/31)



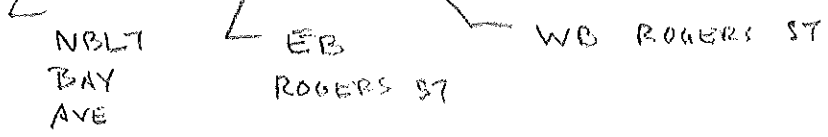
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	12	5	8	0	1	6	57	0	6	52	0
Future Vol, veh/h	0	12	5	8	0	1	6	57	0	6	52	0
Conflicting Peds, #/hr	9	0	5	3	0	7	5	0	3	7	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	11	11	11	0	0	0	0	0	0
Mvmt Flow	0	15	6	10	0	1	7	70	0	7	63	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	180	177	77	184	177	86	72	0	0	77	0	0
Stage 1	86	86	-	91	91	-	-	-	-	-	-	-
Stage 2	94	91	-	93	86	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.21	6.61	6.31	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.599	4.099	3.399	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	786	720	990	758	701	948	1541	-	-	1535	-	-
Stage 1	927	827	-	894	802	-	-	-	-	-	-	-
Stage 2	918	823	-	892	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	766	701	977	727	683	934	1528	-	-	1525	-	-
Mov Cap-2 Maneuver	766	701	-	727	683	-	-	-	-	-	-	-
Stage 1	914	815	-	883	792	-	-	-	-	-	-	-
Stage 2	904	813	-	862	795	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	9.9	0.7	0.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1528	-	-	765	745	1525	-	-
HCM Lane V/C Ratio	0.005	-	-	0.027	0.015	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.8	9.9	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-



Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	2	51	1	28	36	62	0	0	0	63	4	0
Future Vol, veh/h	2	51	1	28	36	62	0	0	0	63	4	0
Conflicting Peds, #/hr	4	0	5	2	0	1	0	0	0	1	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	3	3
Mvmt Flow	3	72	1	39	51	87	0	0	0	89	6	0

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	142	0	0	78	0	0	257	261	103
Stage 1	-	-	-	-	-	-	177	177	-
Stage 2	-	-	-	-	-	-	80	84	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.43	5.53	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.527	4.027	3.327
Pot Cap-1 Maneuver	1453	-	-	1533	-	-	730	642	949
Stage 1	-	-	-	-	-	-	851	751	-
Stage 2	-	-	-	-	-	-	941	823	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1447	-	-	1533	-	-	702	0	942
Mov Cap-2 Maneuver	-	-	-	-	-	-	702	0	-
Stage 1	-	-	-	-	-	-	846	0	-
Stage 2	-	-	-	-	-	-	911	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	1.6	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1447	-	-	1533	-	-	702
HCM Lane V/C Ratio	0.002	-	-	0.026	-	-	0.134
HCM Control Delay (s)	7.5	0	-	7.4	0	-	10.9
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.5

EBLT TURNER

WBLT TURNER

SB BAY AVE.

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑			↑↱			↰↑↱				
Traffic Vol, veh/h	17	103	0	0	121	57	2	24	37	0	0	0
Future Vol, veh/h	17	103	0	0	121	57	2	24	37	0	0	0
Conflicting Peds, #/hr	1	0	3	4	0	1	4	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	1	1	1	1	1	1	2	2	2	0	0	0
Mvmt Flow	23	137	0	0	161	76	3	32	49	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	238	0	-	-	-	0	386	421	141
Stage 1	-	-	-	-	-	-	183	183	-
Stage 2	-	-	-	-	-	-	203	238	-
Critical Hdwy	4.11	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1335	-	0	0	-	-	617	524	907
Stage 1	-	-	0	0	-	-	848	748	-
Stage 2	-	-	0	0	-	-	831	708	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1335	-	-	-	-	-	603	0	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	603	0	-
Stage 1	-	-	-	-	-	-	832	0	-
Stage 2	-	-	-	-	-	-	828	0	-

Approach	EB	WB	NB
HCM Control Delay, s	1.1	0	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	881	1335	-	-	-
HCM Lane V/C Ratio	0.095	0.017	-	-	-
HCM Control Delay (s)	9.5	7.7	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

NB OAK

EBLT TURNER

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	77	40	28	51	5	58	279	58	29	418	33
Future Volume (vph)	18	77	40	28	51	5	58	279	58	29	418	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	300		175	150		0	275		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.96	1.00	0.99		0.99	1.00	
Frt			0.850			0.850		0.974			0.989	
Flt Protected		0.991			0.983		0.950			0.950		
Satd. Flow (prot)	0	1678	1439	0	1868	1615	1752	1782	0	1752	1820	0
Flt Permitted		0.925			0.849		0.474			0.412		
Satd. Flow (perm)	0	1563	1378	0	1607	1550	872	1782	0	755	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78			78		17			10	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		848			397			499			403	
Travel Time (s)		23.1			10.8			11.3			9.2	
Confl. Peds. (#/hr)	6		6	6		6	3		8	8		3
Confl. Bikes (#/hr)			9			7			12			5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	20	88	45	32	58	6	66	317	66	33	475	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	45	0	90	6	66	383	0	33	513	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	35.7%	42.9%	42.9%		21.4%	64.3%	
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	21.0	26.0	26.0		11.0	41.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0			0	
Act Effct Green (s)		8.4	8.4		8.4	8.4	20.3	20.3		20.6	21.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.24	0.24		0.24	0.24	0.58	0.58		0.59	0.62	
v/c Ratio		0.29	0.11		0.23	0.01	0.13	0.37		0.05	0.45	
Control Delay		15.0	3.0		14.4	0.0	7.8	8.1		4.4	6.7	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		15.0	3.0		14.4	0.0	7.8	8.1		4.4	6.7	
LOS		B	A		B	A	A	A		A	A	
Approach Delay		11.5			13.5			8.0			6.6	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		13	0		11	0	5	30		2	46	
Queue Length 95th (ft)		62	10		54	0	32	139		10	116	
Internal Link Dist (ft)		768			317			419			323	
Turn Bay Length (ft)			50			175	150			275		
Base Capacity (vph)		1000	910		1028	1020	690	1414		779	1735	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.11	0.05		0.09	0.01	0.10	0.27		0.04	0.30	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 34.9
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 50.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: FT HARRISON AVE & TURNER ST

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	31	40	18	27	0
Future Vol, veh/h	0	31	40	18	27	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	38	49	22	33	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	153	33	33	0	-	0
Stage 1	33	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	843	1046	1592	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	817	1046	1592	-	-	-
Mov Cap-2 Maneuver	817	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	5.1	0
HCM LOS	A		

EB EXIT DRIVE A

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	1046	-	-
HCM Lane V/C Ratio	0.031	-	0.036	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

NBLT
BAY AVE

APPENDIX C

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	5	9	0	1	6	57	0	6	53	0
Future Vol, veh/h	0	13	5	9	0	1	6	57	0	6	53	0
Conflicting Peds, #/hr	9	0	5	3	0	7	5	0	3	7	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	11	11	11	0	0	0	0	0	0
Mvmt Flow	0	16	6	11	0	1	7	70	0	7	65	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	182	179	79	186	179	86	74	0	0	77	0	0
Stage 1	88	88	-	91	91	-	-	-	-	-	-	-
Stage 2	94	91	-	95	88	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.21	6.61	6.31	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.21	5.61	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.599	4.099	3.399	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	784	718	987	755	699	948	1538	-	-	1535	-	-
Stage 1	925	826	-	894	802	-	-	-	-	-	-	-
Stage 2	918	823	-	890	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	764	699	974	723	681	934	1525	-	-	1525	-	-
Mov Cap-2 Maneuver	764	699	-	723	681	-	-	-	-	-	-	-
Stage 1	912	814	-	883	792	-	-	-	-	-	-	-
Stage 2	904	813	-	859	794	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.9	0.7	0.7
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1525	-	-	758	740	1525	-	-
HCM Lane V/C Ratio	0.005	-	-	0.029	0.016	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.9	9.9	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕						⇕	
Traffic Vol, veh/h	2	53	1	29	38	63	0	0	0	64	4	0
Future Vol, veh/h	2	53	1	29	38	63	0	0	0	64	4	0
Conflicting Peds, #/hr	4	0	5	2	0	1	0	0	0	1	0	4
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	3	3	3
Mvmt Flow	3	75	1	41	54	89	0	0	0	90	6	0

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	147	0	0	81	0	0			268	272	107
Stage 1	-	-	-	-	-	-			185	185	-
Stage 2	-	-	-	-	-	-			83	87	-
Critical Hdwy	4.1	-	-	4.1	-	-			6.43	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-			5.43	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.43	5.53	-
Follow-up Hdwy	2.2	-	-	2.2	-	-			3.527	4.027	3.327
Pot Cap-1 Maneuver	1447	-	-	1529	-	-			719	633	944
Stage 1	-	-	-	-	-	-			844	745	-
Stage 2	-	-	-	-	-	-			938	821	-
Platoon blocked, %		-	-		-	-					
Mov Cap-1 Maneuver	1441	-	-	1529	-	-			691	0	937
Mov Cap-2 Maneuver	-	-	-	-	-	-			691	0	-
Stage 1	-	-	-	-	-	-			839	0	-
Stage 2	-	-	-	-	-	-			907	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	1.7	11
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1441	-	-	1529	-	-	691
HCM Lane V/C Ratio	0.002	-	-	0.027	-	-	0.139
HCM Control Delay (s)	7.5	0	-	7.4	0	-	11
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	0.5

EBLT TURNER

WBLT TURNER

SB BAY AVE

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑			↑↱			↔				
Traffic Vol, veh/h	17	107	0	0	125	59	2	25	39	0	0	0
Future Vol, veh/h	17	107	0	0	125	59	2	25	39	0	0	0
Conflicting Peds, #/hr	1	0	3	4	0	1	4	0	4	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	75	75	75	75	75	75	75	75	75
Heavy Vehicles, %	1	1	1	1	1	1	2	2	2	0	0	0
Mvmt Flow	23	143	0	0	167	79	3	33	52	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	247	0	-	-	-	0	400	436	147
Stage 1	-	-	-	-	-	-	189	189	-
Stage 2	-	-	-	-	-	-	211	247	-
Critical Hdwy	4.11	-	-	-	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.209	-	-	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1325	-	0	0	-	-	606	514	900
Stage 1	-	-	0	0	-	-	843	744	-
Stage 2	-	-	0	0	-	-	824	702	-
Platoon blocked, %		-			-	-			
Mov Cap-1 Maneuver	1325	-	-	-	-	-	592	0	897
Mov Cap-2 Maneuver	-	-	-	-	-	-	592	0	-
Stage 1	-	-	-	-	-	-	827	0	-
Stage 2	-	-	-	-	-	-	821	0	-

Approach	EB	WB	NB
HCM Control Delay, s	1.1	0	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	875	1325	-	-	-
HCM Lane V/C Ratio	0.101	0.017	-	-	-
HCM Control Delay (s)	9.6	7.8	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	-

NB OAK

EBLT TURNER

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	80	41	29	53	6	61	292	60	30	437	34
Future Volume (vph)	19	80	41	29	53	6	61	292	60	30	437	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	300		50	300		175	150		0	275		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00	0.96		1.00	0.96	1.00	0.99		0.99	1.00	
Frt			0.850			0.850		0.974			0.989	
Flt Protected		0.990			0.983		0.950			0.950		
Satd. Flow (prot)	0	1676	1439	0	1868	1615	1752	1782	0	1752	1821	0
Flt Permitted		0.920			0.846		0.464			0.395		
Satd. Flow (perm)	0	1555	1378	0	1602	1550	854	1782	0	724	1821	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			78			78		17			10	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		848			397			499			403	
Travel Time (s)		23.1			10.8			11.3			9.2	
Confl. Peds. (#/hr)	6		6	6		6	3		8	8		3
Confl. Bikes (#/hr)			9			7			12			5
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	3%	3%	3%
Parking (#/hr)	0	0	0									
Adj. Flow (vph)	22	91	47	33	60	7	69	332	68	34	497	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	113	47	0	93	7	69	400	0	34	536	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (s)	25.0	25.0	25.0	25.0	25.0	25.0	30.0	30.0		15.0	45.0	
Total Split (%)	35.7%	35.7%	35.7%	35.7%	35.7%	35.7%	42.9%	42.9%		21.4%	64.3%	
Maximum Green (s)	21.0	21.0	21.0	21.0	21.0	21.0	26.0	26.0		11.0	41.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	Min	Min		None	Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0			0	
Act Effct Green (s)		8.6	8.6		8.6	8.6	21.1	21.1		23.0	24.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.23	0.23		0.23	0.23	0.56	0.56		0.61	0.65	
v/c Ratio		0.32	0.12		0.25	0.02	0.14	0.40		0.06	0.46	
Control Delay		17.3	3.4		16.5	0.0	9.4	9.7		4.1	6.4	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		17.3	3.4		16.5	0.0	9.4	9.7		4.1	6.4	
LOS		B	A		B	A	A	A		A	A	
Approach Delay		13.2			15.3			9.7			6.3	
Approach LOS		B			B			A			A	
Queue Length 50th (ft)		14	0		11	0	5	33		2	50	
Queue Length 95th (ft)		66	11		56	0	34	148		11	126	
Internal Link Dist (ft)		768			317			419			323	
Turn Bay Length (ft)			50			175	150			275		
Base Capacity (vph)		942	866		970	970	640	1341		770	1690	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.12	0.05		0.10	0.01	0.11	0.30		0.04	0.32	

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 37.5			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: FT HARRISON AVE & TURNER ST

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	31	40	18	28	0
Future Vol, veh/h	0	31	40	18	28	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	38	49	22	34	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	154	34	34	0	-	0
Stage 1	34	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	842	1045	1591	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	816	1045	1591	-	-	-
Mov Cap-2 Maneuver	816	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	5.1	0
HCM LOS	A		

EB EXIT DRIVE A

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1591	-	1045	-	-
HCM Lane V/C Ratio	0.031	-	0.036	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

NBLT

BAY AVE

375 Turner Street

Parking Lot Cost Estimate

EXHIBIT A

Total: $674,800.00

Project Estimate

Item Description	Quantity	Unit	Unit Cost	Item Cost
Regrading, Sodding and Restoration	1	LS	$3,000.00	$3,000.00
6" Vertical Curb	554	LF	$19.00	$10,526.00
Reclaimed Water Wet-tap, 4"x2" tapping sleeve & valve	1	LS	$1,700.00	$1,700.00
Landscaping and Irrigation	1	LS	$9,500.00	$9,500.00
Building Renovations	1	LS	$650,000.00	$650,000.00
			Total:	$674,726.00

Existing Tree Inventory Condition Rating Criteria

1. A tree that is dying, severely declining, hazardous, harboring a communicable disease or a tree designated by the State of Florida's Exotic Pest Plant Council as a category #1 ecological pest i.e., Brazilian pepper tree (*Schinus terebinthifolius*). A tree with a rating of 1 should be removed as it is beyond treatment and is a threat to cause personal injury or property damage

2. A tree exhibiting serious structural defects such as codominant stems with included bark at or near the base, large cavities, large areas of decayed wood, crown dieback, cracked/split scaffold branches, etc. In addition, a tree with health issues such as low energy, low live crown ratio, serious disease or insect problems, nutritional deficiencies or soil pH problems. A tree with a rating of #2 should be removed unless the problem(s) can be treated. A tree with a #2 condition rating will typically require a considerable amount of maintenance to qualify for an upgrade of the condition rating.

3. A tree with average structure and systemic health and with problems that can be corrected with moderate maintenance. A tree with a codominant stem not in the basal area that will be subordinated or cabled and braced or a codominant stem that will soon have included bark can be included as a #3. A tree with a rating of #3 has average appearance, crown density and live crown ratio and should be preserved if possible.

4. A tree with a rating of 4 has good structure and systemic health with minor problems that can be easily corrected with minor maintenance. The tree should have an attractive appearance and be essentially free of any debilitating disease or insect problem. The tree should also have above average crown density and live crown ratio. Mature trees exhibiting scars, old wounds, small cavities or other problems that are not debilitating can be included in this group particularly if they possess unique form or other aesthetic amenities relating to their age. A tree with a rating of 4 is valuable to the property and should be preserved

5. A tree with very high live crown ratio and exceptional structure and systemic health and virtually free of insect of disease problems or nutritional deficiencies. A tree in this category should have a balanced crown with exceptional aesthetic amenities. A tree in this category should be of a species that possesses characteristics inherent to longevity and withstanding construction impacts. A tree with a #5 rating lends considerable value to the site and should be incorporated into the site design. A tree with a #5 rating is worthy of significant site plan modification to ensure its preservation.

6. A specimen tree. A specimen tree is a tree that possesses a combination of superior qualities in regards to systemic health, structural strength, crown density, live crown ratio, form (balanced crown), overall aesthetic appeal, size, species, age and uniqueness. A great effort should be made to preserve a specimen tree including shifting structures that would adversely impact the tree. In addition, a specimen tree should have an undisturbed area equal to its dripline (equal to the branch spread to grow in. Only an experienced and competent International Society of Arboriculture (I.S.A.) Certified Arborist should be allowed to work on a specimen tree.

General Condition Rating Notes:

Per City of Clearwater requirements, trees rated as 1 or 2 are to be removed.

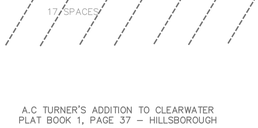
Trees to remain that are rated as 2.5 are to be pruned for defects, disease and evaluated by a Certified Arborist based on detailed inspection on the limits of decay / defect. These trees may be upgraded to 3 at the time of this work or down graded to a lower rating, if detailed inspection indicates more extensive decay / defects at the time the pruning / maintenance work is been performed. These trees should be evaluated annually or as determined by Certified Arborist conducting the pruning / field work.

Trees to remain that are rated as 3 or greater may require minor pruning to remove dead wood or correct minor structure issues.

Existing Tree Inventory ratings are based on general observations of highly visible signs and indicators of the general condition of the tree from ground based observations.

The tree inventory is valid for one year, unless events such as, but not limited to, severe weather, lightning, drought, construction, poor maintenance or other man-made impacts occur on or adjacent to project site. At the time of any of these occurrences, the site should be re-inspected by a Certified Arborist to determine the impact(s) to the overall condition of the existing tree(s).

Existing Tree Inventory Legend



Existing Tree Legend w/ Genus species

LA	Laurel Oak	*Quercus laurifolia*
LO	Live Oak	*Quercus virginiana*
SP	Sabal Palm	*Sabal palmetto*
CL	Cherry Laurel	*Prunus caroliniana*
MA	Mango	*Mangifera indica*
CM	Crape Myrtle	*Lagerstroemia indica*

Tree Number	Tree Type	Genus / Species	Diameter at Breast Height	General Condition Rating	Tree to be Removed	Replacement Required	Required Replacement Inches
1	Sabal Palm	Sabal palmetto	17	3	No		
2	Mango Tree	Mangifera indica	7	3	Off-site		
3	Laurel Oak	Quercus laurifolia	8	3	Off-site		
4	Laurel Oak	Quercus laurifolia	23	3	Off-site		
5	Sabal Palm	Sabal palmetto	16	3	Off-site		
6	Laurel Oak	Quercus laurifolia	18	3	No		
7	Laurel Oak	Quercus laurifolia	12	2	Off-site		
8	Laurel Oak	Quercus laurifolia	22	2	Off-site		
9	Cherry Laurel	Prunus caroliniana	4	2	Off-site		
10	Cherry Laurel	Prunus caroliniana	4	3	Off-site		
11	Laurel Oak	Quercus laurifolia	19	2	Off-site		
12	Sabal Palm	Sabal palmetto	16	4	Off-site		
13	Sabal Palm	Sabal palmetto	13	3	Off-site		
14	Live Oak	Quercus virginiana	45	2	Off-site		
15	Live Oak	Quercus virginiana	34	2	Yes	No	0
16	Crape Myrtle	Lagerstroemia indica	15 multi	4	No		
17	Crape Myrtle	Lagerstroemia indica	15 multi	4	No		
18	Live Oak	Quercus virginiana	39	3	Off-site		
19	Live Oak	Quercus virginiana	29	3	Off-site		
20	Live Oak	Quercus virginiana	44	3	Off-site		
					Total Replacement Inches Required		0

Existing Tree Inventory preformed by ISA Certified Arborist:

Patrick Roberson
ISA Certification
#FL-1051A

NORTH

0 20 40 60 feet

SCALE: 1" = 20'

ENGINEERING & LAND PLANNING
BASE INFORMATION PREPARED BY:
Gulf Coast Consulting, Inc.
13825 Icot Blvd., Suite 605
Clearwater, Florida 33760

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Landscape Architecture & Consulting
PO Box 5585, Maryville, TN 37802
Phone: 727-255-4258 Web: RRGLA.com
Florida License # LA0001461

This item has been digitally signed and sealed by Patrick Roberson, License # LA0001461 on the date of the Digital Signature. The signature must be verified on any electronic copies.

Patrick Roberson

Digitally signed by Patrick Roberson
Date: 2025.10.30 01:35:45 -04'00'

Revision	Date
Rev. Site Plan	10/29/25
Rev. Name of Project	09/19/24
Rev. per City of Clearwater comment	09/16/24
Rev. per City of Clearwater comment	03/13/24

Project Title

310 TURNER STREET
Clearwater, Florida

EXISTING TREE INVENTORY

Project No. 24-01

Date 01/30/24

Sheet ET1

CITY OF CLEARWATER GENERAL LANDSCAPE REQUIREMENTS

TREE TYPE PERCENTAGE REQUIREMENT

TOTAL TREES PROVIDED: 4

INTERNAL LANDSCAPE VUA REQUIREMENTS:

INTERNAL LANDSCAPE VUA AREA REQUIRED: 10% OF VUA PARKING AREA
EXISTING VUA AREA: 20,493 SF
REQUIRED VUA LANDSCAPE AREA: EXISTING CONDITIONS
PROVIDED VUA LANDSCAPE AREA: 933 SF (4.6%)

1 TREE REQUIRED PER 300 SF OF REQUIRED INTERNAL LANDSCAPE VUA AREA:
933 / 300 = 3 TREES REQUIRED

INTERNAL VUA AREA TREES PROVIDED = 4 TREES

SHRUBS ARE REQUIRED FOR 50% OF THE REQUIRED INTERNAL LANDSCAPE VUA AREA, WITH REMAINING AREA COVERED BY GROUND COVERS, NOT INCLUDING SOD.
TOTAL SHRUB AREA 709 SF (49%) / TOTAL GROUND COVER AREA 741 SF (51%)
GROUND COVERS UTILIZED IN CLEAR SIGHT TRIANGLES.

EXISTING TREE REPLACEMENT REQUIREMENTS

REQUIRED REPLACEMENT - 0"
PROVIDED REPLACEMENT - 10"
0" REQUIRED REPLACEMENT DEFICIT
TREE FUND CONTRIBUTION = 0" X $48 = $0.00

SEE EXISTING TREE SUMMARY SHEET ET1 FOR DETAILED SUMMARY OR REQUIRED REPLACEMENT INCHES

REQUIRED PERIMETER LANDSCAPE BUFFERS PARKING AREA

NORTH BUFFER (NON-RESIDENTIAL) 120 LF
REQUIRED: 5' WIDE BUFFER WITH 1 TREE PER 35 LF (3 TREES REQ.) & 100% CONTINUOUS HEDGE
PROVIDED: 5' WIDE BUFFER WITH 4 TREES AND CONTINUOUS HEDGE OUTSIDE OF CLEAR SIGHT TRIANGLES.

SOUTH BUFFER (LOCAL ROW) 120 LF
EXISTING CONDITIONS.

EAST BUFFER (LOCAL ROW) 187 LF
EXISTING CONDITIONS.

WEST BUFFER (NON-RESIDENTIAL) 187 LF
EXISTING CONDITIONS.

BUILDING FOUNDATION LANDSCAPE REQUIREMENTS

FOUNDATION PLANTINGS TO BE PROVIDED FOR 100% OF BUILDING FACADE ALONG STREET RIGHT OF WAY WITHIN THE COMMERCIAL LAND USE, EXCLUDING AREAS FOR BUILDING INGRESS AND EGRESS. MINIMUM 5' WIDE WITH 50% OF LANDSCAPE AREA TO BE SHRUBS WITH REMAINING AREA TO BE GROUND COVERS.

20' AVERAGE WIDTH OF FOUNDATION PLANTINGS PROVIDED ALONG BUILDING FACADE.

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPACING	REMARKS
TREES								
UP	4	Ulmus parvifolia `Allee`	Allee Elm	-	2.5"Cal	10`-12` Ht., 5`-6` Sp.		Drought Tolerant
SHRUBS								
CH	12	Chrysobalanus icaco `Horizontalis`	Horizontal Cocoplum	3 gal., 14" Ht. x 14" Sp.			30" o.c.	Native, Drought Tolerant
CR	46	Chrysobalanus icaco `Red Tip`	Red Tip Cocoplum	3 gal., 20" Ht. x 20" Sp.			36" o.c.	Native, Drought Tolerant
HP	14	Hamelia patens 'Firefly	Firefly Dwarf Firebush	3 gal., 14" Ht. x 14" Sp.			36" o.c.	Native, Drought Tolerant
MF	28	Myrcianthes fragrans	Simpson`s Stopper	3 gal., 20" Ht. x 20" Sp.			36" o.c.	Native, Drought Tolerant
SR	2	Strelitzia reginae	Bird Of Paradise	7 gal., 3` x 3`			48" o.c.	
ZF	9	Zamia floridana	Coontie	3 Gal., 18" Ht. x 18" Sp.			36" o.c.	Native, Drought Tolerant
GROUND COVERS								
AG	116	Arachis glabrata-rhizoma	Ornamental Peanut Grand Reserve	6`x18`, 1 gal.@			18" o.c.	Drought Tolerant
DV	43	Dietes vegeta	White African Iris	12`x18`, 1 gal.			24" o.c.	
LE	38	Liriope muscari `Emerald Goddess`	Emerald Goddess Liriope	12`x18`, 1 gal.			18" o.c.	Drought Tolerant
TR	600	Trachelospermum asiaticum	Dwarf Asiatic Jasmine	4"pot@			12" o.c.	Drought Tolerant

GENERAL NOTES:

Do not install landscaping or irrigation (unless directional bore) in the critical root zone (inside the tree barricade) of the existing trees to be preserved.

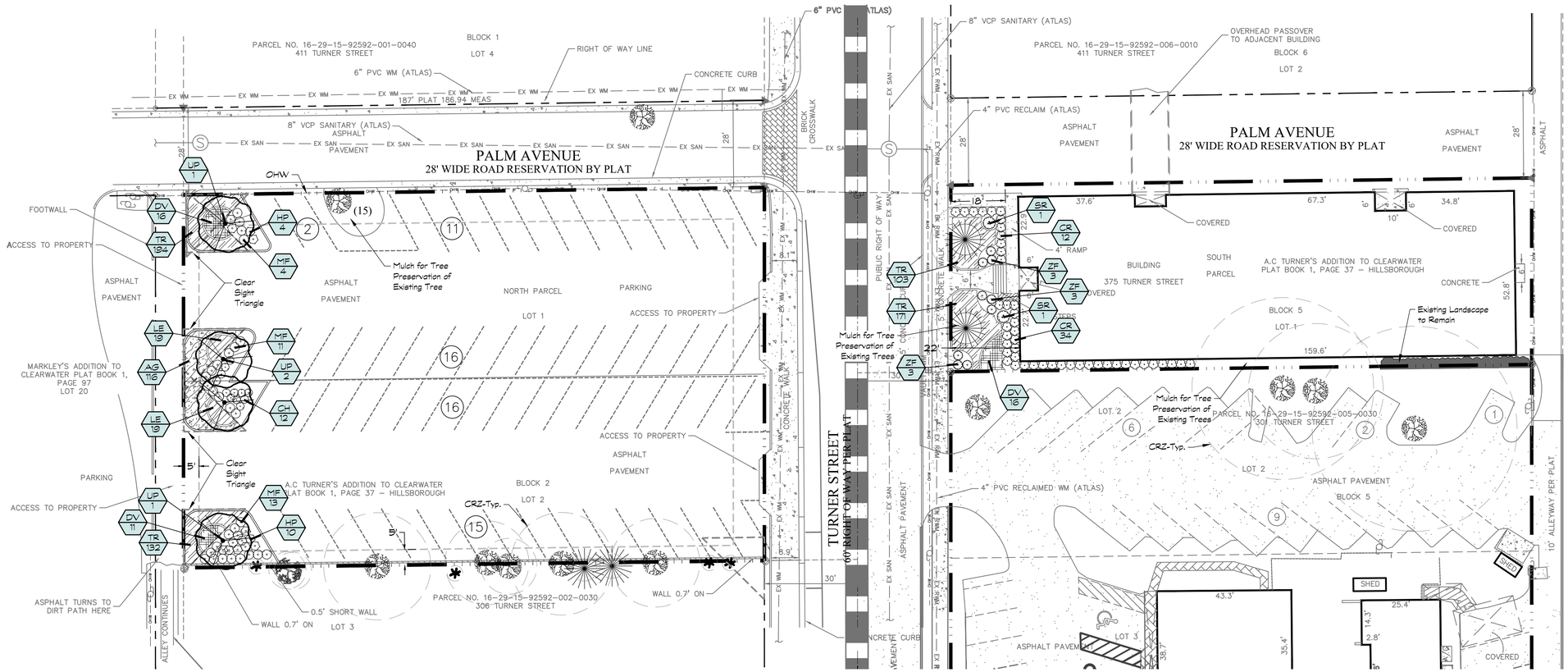
All shade trees must be a minimum of 5 feet from any impervious surface or utility (adjust landscape to conform)

IRRIGATION NOTE:

See the Irrigation Plan, Sheet IR1, for requirements to provide 100% irrigation coverage for all proposed plant materials by automatic permanent irrigation system.

CITY OF CLEARWATER PLANT QUALITY REQUIREMENT:

All plant materials shall conform to Florida Grades and Standards for Nursery Stock, Florida Grade #1. See notes 2.01 Materials, A. 3 & 4, on Sheet LA2.



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CALL 811 BEFORE YOU DIG
Sunshine State One Call of Florida

NORTH
0 20 40 60 feet
SCALE: 1" = 20'

This item has been digitally signed and sealed by Patrick Roberson, License # LA0001461 on the date of the Digital Signature. The signature must be verified on any electronic copies

Patrick Roberson
Digitally signed by Patrick Roberson
Date: 2025.10.30 01:36:11 -04'00'

Revision	Date
Rev. Site Plan	10/29/25
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Project Title
310 TURNER STREET
Clearwater, Florida

LANDSCAPE PLAN

Project No. 24-01
Date 01/30/24
Sheet LA1

LANDSCAPE GENERAL NOTES

1. Permits required by any authority or governing jurisdiction, for any installation or construction work described in the contract documents, shall be obtained by the Contractor. Any applicable fees or financial requirements are to be paid by the Contractor for such permits, unless stipulated specifically in writing by the Owner.

2. The Contractor shall comply with all codes, safety requirements, and environmental regulations of federal, state, local and other regulatory agencies that have jurisdiction over the project, without additional cost to the owner. This includes any safety standards of the Occupational Safety and Health Act and amendments. The Owner and Owner's Representative shall be held harmless from any accident, injury or any other incident resulting from compliance or non-compliance with these standards.

3. The work included in this Section include the furnishing of all materials, equipment and labor necessary and incidental to the installation and preparation of planting areas, soil treatment, plants, grassing, protection of existing and proposed plants, hauling and spreading of topsoil, finish grading, removal and / or transplanting of existing plants as indicated, warranty, replacement of plants and / or materials, and related items as required to complete the work as indicated on the plans and fulfilling all warranty provisions, as specified herein.

4. The work shall also include the maintenance of all landscape plants and materials, planting areas, and sod / seeded areas until the Final Acceptance by the Owner's Representative. This time period of required maintenance may be extended through the full warranty period, as specified in the contract agreement, until Final Project Acceptance.

5. During construction, protect all existing trees, shrubs, and other specified vegetation, site features and improvements, structures, installed elements and utilities specified herein and / or on submitted plans. Removal or destruction of items described above is prohibited unless specifically authorized by the Owner.

6. The plant list as shown on the plans is for the Contractor's information only and no guarantee is expressed or implied that quantities shown therein are correct or that the list is complete. The Contractor shall verify that all plant material shown on the drawings are included in the Contractor's bid.

7. Substitutions of plant materials will not be permitted unless authorized in writing by the Owner's Representative. Proof is to be submitted in writing from 5 different regional sources that a plant specified is not obtainable. Consideration will be given to the nearest available size or similar variety with a corresponding adjustment of the contract price.

8. The Contractor shall review and verify the proposed and existing site elements, including but not limited to, storm drainage, water, sewer, phone, cable and electrical utilities, paving, site grading, buildings, walks, hardscape, and vegetation to preclude any misunderstanding and ensure a trouble free installation.

9. Stated dimensions shall govern over scaled dimensions on the plans.

10. Plants shall be subject to inspection for conformity to specification requirements and approval by the Owner's Representative at their place of growth, or upon delivery to the site, as determined by the Owner's Representative. Such approval shall not preclude the right of inspection and rejection during any phase of the work. Rejected plant materials shall be immediately removed from the project site and replaced with approved plant materials within seven (7) days or as approved by the Owner's Representative.

11. All plants may be selected and tagged by the Owner's Representative at their place of growth. For distance material, photographs may be submitted for pre-inspection review and approval by the Owner's Representative. Pictures shall be clear and contain the full image of the plant material to be reviewed and have a clear indication of size in foot increments for trees and palms and inches for shrubs and groundcovers. The photograph will become the representative sample for that plant type (species and size).

12. Submit certificates of inspection, as required by governmental authorities, and manufacturers or vendors certified analysis for soil amendments, herbicides, insecticides and fertilizer materials and any additional data that indicates that the materials comply with specified requirements.

13. The Contractor shall conduct a minimum of three (3) soil tests at locations as shown on the plans or determined by the Owner's Representative. The Contractor shall test each location for soil composition (type, strata, pH, soluble salts, and organic content) and sub-surface drainage conditions (percolation rate), as a minimum. Soil testing shall be conducted by an approved soil-testing laboratory. The Contractor shall provide the Owner's Representative with the results of the soil analyses prior to any installations throughout the project. If soil conditions are insufficient for proper plant growth, the Contractor is required to supply recommendations for improving the condition of each area, to the Owner's Representative for approval. The Contractor shall, at the discretion of the Owner's Representative, proceed with the recommendations for improving the soil conditions.

14. Trees designated as Ball and Burlap (B&B) shall be properly dug with firm natural balls of soil retaining as many fibrous roots as possible is sizes and shapes as specified in the most recent edition of the American Standard for Nursery Stock. Balls shall be firmly wrapped with nonsynthetic, rottable burlap and secured with heavy nonsynthetic, rottable twine. Root collar shall be apparent at the surface of the rootball. No trees with loose, broken, or manufactured rootballs will be planted, except with written approval of the Owner's Representative, prior to planting.

15. Sabal Palms shall have all frond removed prior to planting, leaving a minimum of twelve (12) inches of new frond growth above the bud. Boots shall be removed from the trunk of sabal palms unless otherwise specified by the Owner's Representative. Remove only a minimum number of fronds on other palm species to facilitate the handling of the palm material. Do not damage the buds of any palms and take necessary care to protect the bud during digging, handling, transportation and installation.

16. During transportation of plant material, the Contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, rootball damage, or areas of torn bark, the Owner's Representative may reject the injured plant material and require replacement of the rejected material at no additional cost to the Owner.

17. Plant material that is stored improperly shall receive a special review of acceptance or rejection, established on a case by case basis.

18. The Contractor shall protect existing pavement, buildings, walks, curbing, walls, hardscape elements, utilities and planting materials (trees, shrubs, ground covers, etc.) which are not designated for removal on the plans from damage.

19. The Contractor shall request the proper utility company to stake the exact location of all underground lines including but not limited to electric, gas, cable and/or telephone service prior to layout and excavating of any planting area. The Contractor shall contact Sunshine State One-Call of Florida, Inc. (SSOCOF) at 1-800-432-4770. Per SSOCOF, the calls shall be made a minimum of two days and a maximum of five days before beginning construction operations.

20. Not all utilities are members of the Sunshine State One-Call system and direct contact shall be taken as necessary.

21. The Contractor shall be responsible for the preservation and protection of all site conditions to remain from damage due to this work. In the event damage does occur, all damage shall be completely repaired to its original condition. All the costs of such work shall be charged to and paid by the Contractor.

22. The Contractor shall thoroughly examine the project site, including sub-surface soil conditions, existing and proposed elevations and general conditions under which the work is to be preformed. The Contractor shall notify in writing of any conflicts or unsatisfactory conditions discovered, prior to beginning work. If the Contractor begins work before the unsatisfactory condition have been resolved, this will indicate that the Contractor has accepted the existing conditions and is responsible to complete the work at no additional cost to the Owner.

23. The Contractor shall be responsible for all unauthorized cutting or damage to existing trees not marked for removal on the plans. Such damage may be caused by operation of equipment, stockpiling of materials, careless labor, etc. This shall include compaction by driving or parking inside the drip-line of trees or the spillage of oil, gasoline, or other deleterious materials within the drip-line of trees.

24. The Contractor shall have a clear understanding and identify each existing tree, shrub and / or palm that is designated to remain or to be removed.

25. The Contractor shall maintain tree barricades at all times during the construction activities on the project for all existing trees, palms and other plant material within and adjacent to the limits of construction that are specified to remain. The Contractor shall refer to the tree protection detail and notes provided within the Landscape Plans.

26. The Contractor shall provide an International Society of Arboriculture (I.S.A.) Certified Arborist with a minimum of five (5) years experience with similar projects, to direct appropriate pruning (roots, branches) and/or other treatment necessary to ensure the health, viability and attractiveness of trees and palms to remain. The Contractor shall be responsible for implementation of the Certified Arborist's instructions.

27. Uncover specified work when directed by the Owner's Representative without compensation. Should the material, workmanship, or method of installation not meet the standards specified herein, the Contractor shall replace the work at his own expense.

28. Rejected work shall be removed and corrected within seventy-two (72) hours upon notification of rejection by the Owner's Representative.

29. Plants shall be true to species, variety and size as specified on the plans and nursery grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project.

30. All plant material shall comply with all required inspections, grading standards and plant regulations, as set forth by the Florida Department of Agriculture and Consumer Services Division of Plant Industry, Grades and Standards for Nursery Plants, latest edition. All plant material shall also conform to ANSI Standards for Nursery Stock (ANSI Z60.1-1990).

31. Plant materials not specifically covered in "Florida's Grade and Standards for Nursery Plants" shall conform to a minimum grade of Florida No. 1 as to: health and vitality, condition of foliage, root system, freedom from pests or mechanical damage; heavily branched and densely foliated according to the accepted normal shape; freedom from low and/or "V" shaped crotches.

32. The minimum grade for all plant material shall be Florida No. 1 or better.

33. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 3/4 inch in diameter that are not completely closed will be rejected.

34. Palms shall have straight trunks (within 3 degrees of vertical) unless other wise stated on the plans. Palms shall be free from burn marks and / or other damage to the trunk.

35. Balled and burlapped (B&B) plants (field grown trees and palms) shall be dug with firm, natural balls of soil of sufficient size to encompass the fibrous and feeding roots of the plants. No plants moved with a ball shall be planted if the ball is cracked or broken. B&B root balls shall exhibit small white fibrous roots coming through the burlap. Field grown trees and palms shall be nursery grown material. Root pruning and hardening off of plant material shall be done a minimum of six (6) weeks or for a period as determined by the Owner's Representative, prior to planting at the project. The supplier of the tree material shall supply certification of the date of root pruning and harvest date of the tree material, prior to the installation of the trees at the project site.

36. Protect roots or balls of plants at all times from sun and drying winds, excess water and freezing, as necessary until planting.

37. Prepared planting soil shall be fertile, friable natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks and other foreign materials. The acidity range shall be between pH 5.5 and 6.5. Prepared planting soil mixture shall consist of three (3) parts native topsoil meeting the above requirements and one (1) part peat. The peat shall be brown to black in color, sterile, weed and seed free, granulated raw peat, containing not more than 9% mineral content on a dry basis.

38. Planting shall be coordinated with the underground automatic irrigation system(s) installation. The irrigation system is to supply 100 percent coverage of water to all required landscape plant material and turf at time of landscape installation.

39. The Contractor shall supply supplemental water; over the amount of water supplied by the irrigation system, for establishment to all newly installed trees and palms for ninety (90) days, commencing immediately after installation. Supplemental water can be supplied by water truck or direct water source on site (hose bib, reclaimed water, pump/well source), and shall be applied in such a manner to avoid disturbance to mulch and soil, and to avoid damage to plant materials.

40. It is the Contractor's responsibility to adjust watering amounts and frequency to ensure proper establishment of all plant material.

41. Fertilizer shall be complete, uniform in composition, dry and free flowing. Fertilizer shall be delivered to the site in the original unopened containers, each bearing the manufacturer's statement of analysis. Store in a manner to prevent wetting and deterioration.

42. Mulch is to be 100% organic shredded Melaleuca, Pine Bark Nuggets (2" max.) or Eucalyptus mulch, type as approved by the Owner, shall be utilized and installed to a wetted depth of three (3) inches. Mulch shall be free of extraneous sticks and other tree residue.

43. A pre-emergent herbicide (DOW Snapshot or approved equal) shall be applied to all planting areas as specified by manufacturer's recommendations.

44. Sod shall be as specified on the plans, in areas designated on the plans, and for disturbed areas within the construction limits, grass sod type shall be well matted with grass roots. The sod shall be taken up in rectangles, preferably 12" x 24", shall be a minimum of 2" in thickness, and shall be live, fresh, and uninjured at the time of planting. Sod shall be a minimum of 95% free from all noxious weeds, other grasses, and extraneous materials. The sod shall have a soil mat of sufficient thickness adhering to the roots to withstand all necessary handling.

45. The sod shall be planted as soon as possible after being dug, and kept moist and shaded until it is planted. Dumping from vehicles will not be permitted and damaged sod will be rejected. Replanting shall be performed within 24 hours after time of harvesting or sod shall be stacked in an approved manner and properly moistened until planted. Sod which has been cut for more than 72 hours shall not be used unless specifically authorized by the Owner's Representative, after inspection of the sod.

The sod shall be kept in a moist condition to the full depth of the rooting zone for at least two (2) weeks after placement. It is the responsibility of the Contractor to apply water as necessary until the sod roots begin to grow. This period shall be extended for a period of 30 days during low rainfall periods for any non-irrigated Bahia sod and/or seeded areas. St. Augustine species sod shall have a permanent underground irrigation system providing 100%, head to head coverage at time of installation.

46. The work area may have existing utilities, such as, but not limited to, irrigation, phone, cable, electrical, water, sanitary sewer, and storm sewer. The locations of some of these existing utilities may have been indicated on the Plans. However, no guarantee is implied that the Plans are accurate or complete in reference to existing utility information. It shall be the responsibility of the Contractor to verify the location of all such utilities, structures, etc., by hand excavation or other appropriate measures before performing any work that could result in damage or injury to persons, utilities, structures or property. The Contractor shall make a thorough search of the site for utilities, structures, etc., before work is commenced in any particular location.

47. The Contractor shall take immediate steps to repair, replace, or restore all services to any utilities or other facilities which are disrupted due the Contractor's operations. The Contractor shall also engage any additional outside repairs on a continuous basis until services are restored. Contractor shall provide and operate any supplemental temporary services to maintain uninterrupted use of the facilities. All responsibility for damage due to negligence on the part of the Contractor shall be borne by the Contractor and the Contractor shall also be fully responsible for any and all claims resulting from the damage.

48. The Contractor shall notify the Owner's Representative, in writing, of soil conditions that the Contractor considers detrimental to the growth of plant material. These conditions are to be described, as well as suggestions for correcting them. Proper soil percolation must be assured at a minimum rate of 1/2" percolation per hour to a depth of a typical tree planting pit.

49. Planting areas are to be finished graded to conform to grades on engineering drawings or as noted on the landscape drawings, after full settlement and installation has occurred. The Contractor shall correct or repair the grades as necessary to conform to the finished grades specified. All planting areas shall be free from concrete debris, lumps, depressions, rocks, sticks or other debris and shall be raked and graded smooth to conform to the finish grades after the installation of landscape materials. The planting areas shall provide positive surface drainage without puddling of water. This requirement is applicable to sodded areas also. Sodded areas shall present a smooth and finished appearance, meeting finished grades as specified after installation.

50. All materials and equipment shall be installed in a neat and workmanlike manner. The Owner's Representative reserves the right to direct the removal and replacement of any items, which, in his opinion, do not present an orderly and workmanlike appearance. Plant locations may also be adjusted by the Owner's Representative due to unforeseen on-site conditions.

51. Clean-up work and planting areas of rubbish or objectionable matter. Mortar, concrete and toxic material shall be removed from the surface of all plant beds. These materials shall not be mixed with the soil. Should the Contractor find conditions beneath the soil, which will in any way adversely affect the plant growth, he shall immediately call it to the attention of the Owner's Representative. Failure to do so before planting shall make the corrective measures the responsibility of the Contractor.

52. If underground construction, utilities or obstructions are encountered during the excavation of planting areas or pits, alternative locations for the plant material shall be selected by the Owner's Representative. Such changes in location shall be made by the Contractor without additional compensation.

53. All required trees and palms shall be placed a minimum of four (4) feet from impervious surfaces; shrubs shall be placed a minimum of 18 inches as measured from the edge of the plant.

54. All shrub beds shall be considered as a single mulched area. There shall be no sod incorporated within such planted areas. All shrub and groundcovers shall be mulched curb-to-curb or edge of planting bed, unless otherwise indicated. Top of mulch shall be level with the top of curb or surrounding grade.

55. Sides of pits and trenches shall be vertical. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, and/or obstructions, the Owner's Representative shall be notified before planting. Sites with poor drainage may require the use of sloped sides, for pits or trenches.

56. In planting areas where soils have been compacted to a density, which is detrimental to plant growth, loosen soils to allow root penetration beyond the planting pit.

57. Width of planting pit shall be 3 times the diameter of the rootball in highly compacted or poorly draining soils, with the sides of the pit sloped.

58. Shrubs fertilizer shall be Osmocote Time Released Fertilizer and composed of a fertilizer ratio of 3:1:1 or 3:1:2, (nitrogen: phosphorus: potassium) and contain all primary and secondary trace elements, or approved equal.

59. Sod fertilizer shall be composed of sixteen percent (16%) nitrate nitrogen, four percent (4%) phosphorus, eight percent (8%) potassium and contain all primary and secondary trace elements for sodded areas, or approved equal.

60. Palms: Fertilizer shall be composed of twelve percent (12%) nitrogen, four percent (4%) phosphorus, twelve percent (12%) potassium and contain all primary and secondary trace elements for Florida palm trees.

61. Fertilizer shall be applied at the rates recommended by the manufacture and soil testing laboratory. Fertilizer shall be applied as a top dressing only and shall not be mixed in with the backfill material at time of installation. The Contractor shall apply fertilizers at the time of installation. Fertilizer shall be applied per ANSI 300, Part 2 - 1998 and Best Management Practices, Tree and Shrub Fertilization, ISA.

62. Trees, shrubs and ground cover shall be set straight and at such a level, that after settlement, the plant ball will stand flush, to 1" - 1/2" above grade. Each plant shall be set in the center of the planting pit (see planting details). Planting goal shall be thoroughly "watered-in" to remove all air pockets around the root ball. Do not rely on the irrigation system to achieve this task. All burlap, rope wires, etc. shall be loosened from the top and sides of the ball, but no burlap shall be pulled from underneath. No more than two (2) inches of soil shall remain over the first major root closest to the soil surface. Remove non-biodegradable nursery wrappings and unwrap burlap from the top 1/3 of the rootball.

63. Plant materials such as trees, shrubs and groundcovers shall be planted prior to the planting of the grassed / sodded areas. The grassed / sodded areas shall be protected during and repaired if damaged during the planting installation activities.

64. All new furnished trees and palms shall be set plumb at the time they are installed to within a tolerance of three (3) degrees from vertical. Trees and palms found not to be vertically aligned will not be accepted.

65. A basin shall be built around all plants or trees that stand-alone and are not located in larger mulched beds. A water-holding soil-dam shall be built on the outside edge of the planting pit to form a basin of sufficient volume to hold water, as per the Planting Details.

66. Each tree shall be pruned to preserve the natural character of the plant as shown on the Plans. All softwood (sucker growth) and all broken or badly damaged branches shall be removed with a clean cut. Pruning procedures shall conform to ANSI A300 Part 1 - 2001 and Pruning and Best Management Practices, Tree Pruning, by the International Society of Arboriculture. All pruning shall be previously approved by the Owner's Representative.

67. Within one week after the planting, mulch material, as specified, shall be uniformly applied to a minimum wetted thickness of three (3) inches or as indicated on the Plans, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection.

68. All trees not within planting beds shall be mulched within a three (3) foot diameter of the tree.

69. Do not place mulch immediately against trunks of trees and palms.

70. Soft spots and inequalities in grade shall be corrected before starting sod work. Soil shall be watered before sod planting. Tamp or roll all newly installed sod. Sod shall be thoroughly watered in.

71. The setting of the sod pieces shall be staggered so as to avoid a continuous seam. The offsets of individual strips shall not exceed 6". In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a feathered edge effect. On steep slopes, the Contractor shall, if so directed, prevent the sod from sliding by means of wooden pegs driven through the sod blocks into firm earth, at directed intervals. Sod shall be placed in rows perpendicular to the slope.

72. The project site shall be kept in a relative neat and clean appearance throughout the course of the landscape installation. Perform cleaning during installation of the work and upon completion of the work. Remove from the site all excess materials, soil, debris, and equipment. Repair damage resulting from planting and other landscape installation operations. Landscape beds and sodded areas shall be kept weed free until acceptance by Owner and maintenance period commences.

73. Provide one (1) year warranty covering the life and satisfactory condition of all planted materials. All sod shall be warranted for 90 days after Final Acceptance. The one (1) year warranty does not begin until the entire landscape installation has been accepted by the Owner's Representative at the time of Final Acceptance for Landscape work. After the one (1) year warranty period, the Owner's Representative shall conduct the Project's Final Inspection.

74. All plant material and turf not found in a healthy growing condition, questionable survivability or dead at the end or at any time during the warranty period shall be removed from the site and replaced within ten (10) calendar days after written notice.

75. All plant material replacements shall be of the same kind and size as specified in the Plant List. They shall be furnished, planted, mulched and watered-in as specified at no additional cost to the Owner. These replacement materials shall be bound to the same warranty conditions as the original materials.

76. Damage to plant material from obvious vandalism, theft, Owner's neglect, or acts of providence (i.e., prolonged flooding, gale force winds, etc.), or incidents beyond the Contractor's control will not be covered under this warranty.

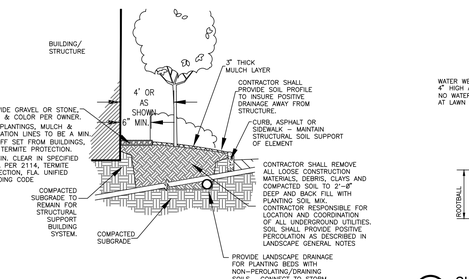
77. The Contractor shall notify the Owner's Representative in writing, a minimum of ten (10) days in advance, when all work is substantially complete to schedule a substantial completion. Based on this inspection, the Owner's Representative will develop a punch list of items to be addressed by the Contractor. Upon completion of Punch List items, the Contractor shall coordinate with the Owner's Representative to schedule a Final Acceptance Inspection. At the time of Final Acceptance, the warranty period shall begin.

78. Upon Final Acceptance of the plant material, the Contractor shall submit two (2) written maintenance instructions recommending procedures for the maintenance of plant materials and sod, for a one year period.

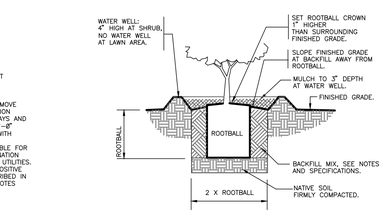
EXISTING TREES AND PALMS WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND SPECIFIED TO REMAIN ARE TO BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS WITH TREE BARRICADES PER THE JURISDICTIONAL CITY/COUNTY REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE AN INTERNATIONAL SOCIETY OF ARBORIST (ISA) CERTIFIED ARBORIST WITH A MINIMUM OF 5 YEARS EXPERIENCE WITH SIMILAR PROJECTS, TO DIRECT APPROPRIATE PRUNING (ROOTS, BRANCHES) AND/OR OTHER TREATMENT NECESSARY TO ENSURE THE HEALTH, VIABILITY AND ATTRACTIVENESS OF TREES TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE CERTIFIED ARBORIST'S INSTRUCTIONS. PRUNING SHALL CONFORM TO ANSI A-300 PRUNING STANDARDS.

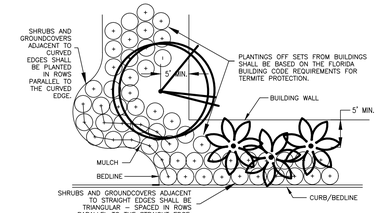
ALL TREE ROOTS EXISTING WITHIN IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA WHERE INDICATED ON THE PLANS. ROOT PRUNING SHALL BE ACCOMPLISHED BY MECHANICAL TRENCHER WITH SHARP BLADES AND UNDER THE DIRECT SUPERVISION OF THE CERTIFIED ARBORIST. ROOT PRUNING SHALL MEET THE STANDARDS AND REQUIREMENTS OF THE JURISDICTIONAL CITY/COUNTY AND ISA.



1 TYPICAL PERIMETER LANDSCAPE DETAIL

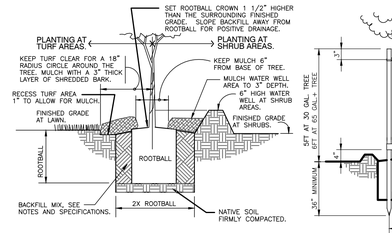


2 SHRUB PLANTING

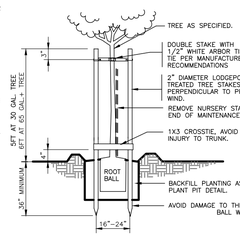


NOTES:
1. ON CENTER TO CENTER SPACING (O.C.) VARIES FOR DIFFERENT PLANT SPECIES. SPACE EACH VARIETY OF PLANT EQUALLY IN PLANTING AREAS PER SPACING SHOWN ON PLANS.
2. TREES ADJACENT TO BUILDING/STRUCTURE SHOULD BE PLANTED AT A MINIMUM OF 5' AWAY FROM THE BUILDING/STRUCTURE WALL.
3. PALMS SHOULD NOT BE PLANTED CLOSER THAN 10' FROM THE BUILDING/STRUCTURE WALL.
4. TREES ADJACENT TO BUILDINGS SHALL BE UNTIL SECURED TO THE FOUNDATION SIDEWALL PROVIDED AT LEAST 6-INCH CLEAR INSPECTION SPACE OF THE FOUNDATION SIDEWALL EXTERIOR EXIST BETWEEN THE VENEER AND THE TOP OF ANY SOIL, SOD, MULCH OR OTHER ORGANIC LANDSCAPE MATERIAL OR ANY OTHER WORK IMMEDIATELY ADJACENT TO OR ABOVE THE STRUCTURE, PER SECTION 2114, TERMITE INSPECTION, FLORIDA UNIFIED BUILDING CODE, LATEST EDITION.

3 PLANT MATERIAL LAYOUT DETAIL

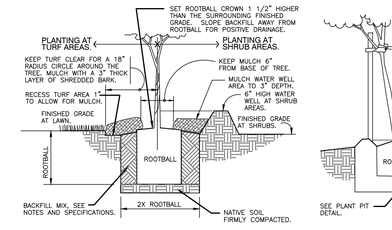


PLANT PIT DETAIL

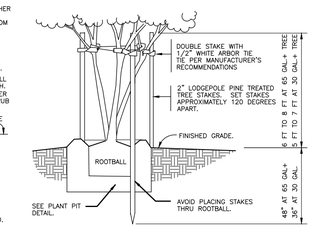


STAKING DETAIL

4 SINGLE TRUNK TREE STAKING

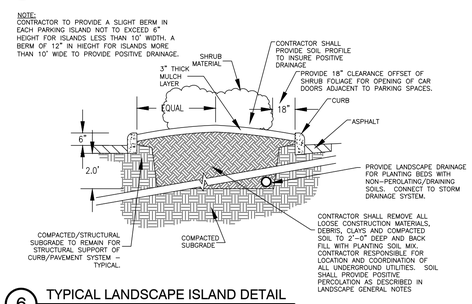


PLANT PIT DETAIL



STAKING DETAIL

5 MULTI-TRUNK TREE STAKING



6 TYPICAL LANDSCAPE ISLAND DETAIL

ROBERSON RESOURCE GROUP
Landscape Architecture & Consulting
PO Box 5585, Maryville, TN 37802
Phone: 727-255-4258 Web: RRGLA.com
Florida License # LA0001461

This item has been electronically signed and sealed by Patrick Roberson. License # LA0001461 on the date of the Digital Signature. The signature must be verified on any electronic copies.

Patrick Roberson
Digitally signed by Patrick Roberson
Date: 2025.10.30 01:36:27 -04'00'

Revision	Date
Rev. Site Plan	10/29/25
Rev. Name of Project	09/19/24
Rev. per City of Clearwater comment	09/16/24
Rev. per City of Clearwater comment	03/13/24

Project Title: 310 TURNER STREET Clearwater, Florida

LANDSCAPE NOTES & DETAILS

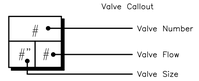
Project No. 24-01
Date 01/30/24
Sheet LA2

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Hunter ICZ-101-40 Drip Control Zone Kit. 1in. ICV Globe Valve with 1in. HY100 filter system. Pressure Regulation: 40psi. Flow Range: 2 GPM to 20 GPM. 150 mesh stainless steel screen.	1
	Hunter ICZ-151-XL-40 Drip Control Zone Kit. 1-1/2in. ICV Globe Valve with 1in. HY100 filter system. Pressure Regulation: 40psi. Flow Range: 20 GPM to 60 GPM. 120 mesh stainless steel screen. 1-1/2in. inlet x single 2in. outlet	1
	Hunter HDL-09-12-R Drip Ring	4
	Area to Receive Dripline Hunter HDL-09-12-R HDL-09-12-R: Hunter Dripline with 0.9 GPH flow. Light brown tubing with purple striping. Emitters at 12" O.C. Dripline laterals spaced at 12" apart, with emitters offset for triangular pattern. Install with Hunter PLD barbed or PLD-LOC fittings.	2,388 lf

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
C1	Hunter NODE-100 Single Station Controller, Outdoor, Battery Powered. DC Latching Solenoid Included.	1
C2	Hunter NODE-200 2-Station Controller, Outdoor, Battery Powered. DC Latching Solenoid Ordered Separately.	1
RS	Hunter MINI-CLIK-C Rain Sensor, with 1/2in. female thread at bottom for conduit installation, mount as noted	2
M1	Water Meter 1" Reclaimed Water Meter	1
M2	Water Meter 1" Reclaimed Water Meter	1
	Irrigation Lateral Line: PVC Class 200 SDR 21	126.4 lf
	Irrigation Mainline: PVC Schedule 40	167.5 lf
	Pipe Sleeve: PVC Schedule 40	217.6 lf

Valve Callout

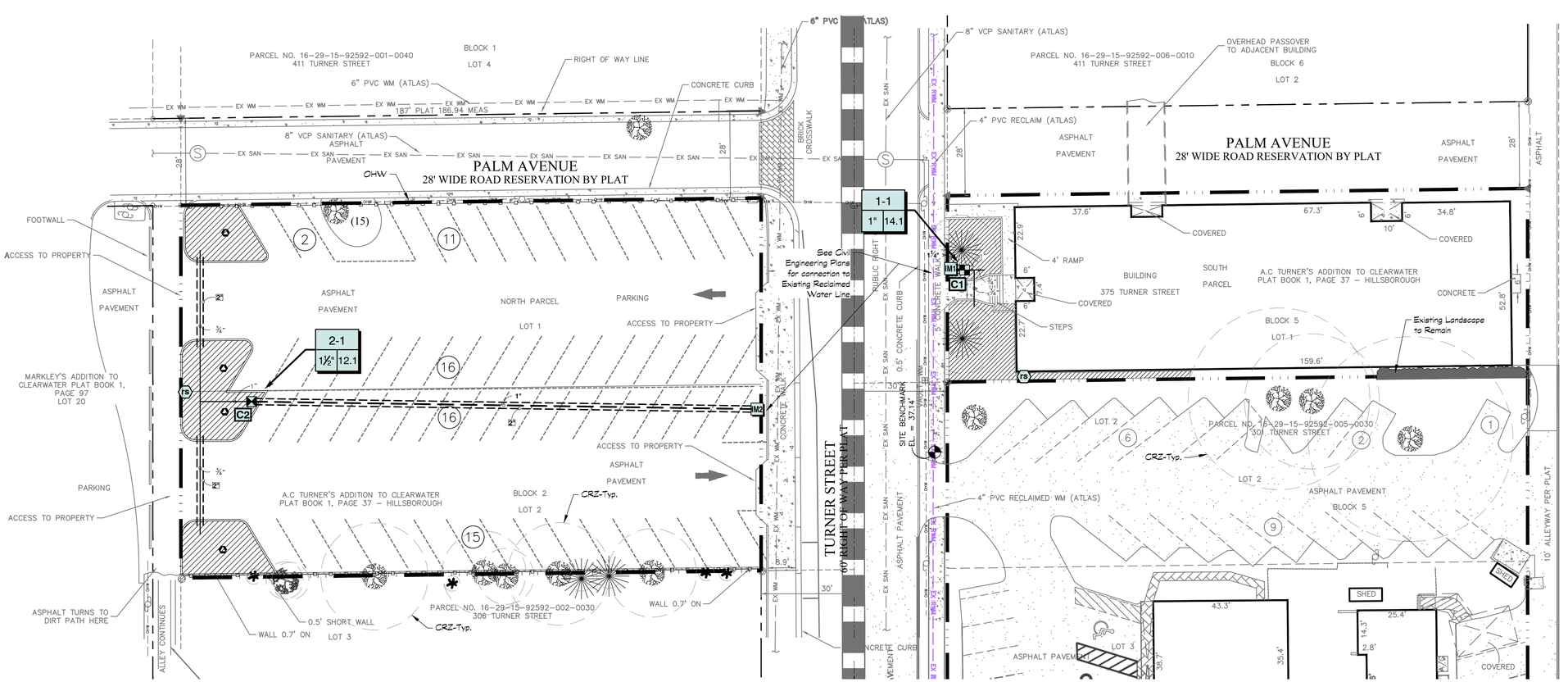


VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	PSI	PSI @ POC	PRECIP
1-1	Hunter ICZ-101-40	1"	Area for Dripline	14.08	31.1	32.3	1.44 in/h
2-1	Hunter ICZ-151-XL-40	1-1/2"	Area for Dripline	12.12	23.3	30.9	1.44 in/h

Pipe Routing at Existing Trees to Remain

Irrigation pipe (lateral or mainline) is to be tunneled under the main root system (24" depth min.) when proposed alignment is within the canopy drip line / critical root zone of existing trees to remain.



IRRIGATION PLANS ARE DIAGRAMMATIC

- ALL IRRIGATION EQUIPMENT TO BE INSTALLED IN LANDSCAPE/SODDED AREAS AND WITHIN PROPERTY LINES.
- ANY PIPING, VALVES, OR OTHER EQUIPMENT SHOWN OUTSIDE OF THE LANDSCAPE/SODDED AREAS OR PROPERTY LINES IS FOR CLARITY PURPOSES OF THE IRRIGATION PLAN ONLY.
- SLEEVES UNDER SIDEWALKS AND PAVEMENT ARE TO BE PLACED AS NECESSARY WITH ENDS IN LANDSCAPE/SODDED AREAS.

DRIP TUBING SPACING NOTE

- DRIP TUBING IS TO BE SPACED EVENLY THROUGHOUT THE LANDSCAPE BED AS PER THE LAYOUT DETAILS ON SHEET IR2. LATERAL RUNS SHOULD BE SPACED AT 12" ON CENTER TO PROVIDE COVERAGE OVER THE ENTIRE PLANTING BED. INSTALLING ONLY ONE LATERAL RUN NEXT TO AN INDIVIDUAL PLANT OR ROW OF PLANTS IS NOT AN ACCEPTABLE LAYOUT.

PROPOSED TREES/PALMS IRRIGATION

- ALL PROPOSED TREES ARE TO HAVE DRIP TREE RINGS AS DETAILED ON SHEET IR2 OR AS AN ALTERNATE FOUR TO EIGHT DRIP BUBBLERS CAN BE ATTACHED TO THE DRIP TUBING ON OPPOSITE SIDES OF THE ROOTBALL, PER EACH TREE, AND ADJUSTED TO PROVIDE IRRIGATION CONSISTENT WITH THE DRIP TREE RING. SEE IRRIGATION DETAILS.

CALL 811 BEFORE YOU DIG
Sunshine State One Call of Florida

NORTH
0 20 40 60 feet
SCALE: 1" = 20'

ENGINEERING & LAND PLANNING
BASE INFORMATION PREPARED BY:
Gulf Coast Consulting, Inc.
13825 Icot Blvd., Suite 605
Clearwater, Florida 33760

ROBERSON RESOURCE GROUP
Landscape Architecture & Consulting
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Phone: 727-255-4258 Web: RRGLA.com
Florida License # LA0001461

This item has been digitally signed and sealed by Patrick Roberson, License # LA0001461 on the date of the Digital Signature. The signature must be verified on any electronic copies.

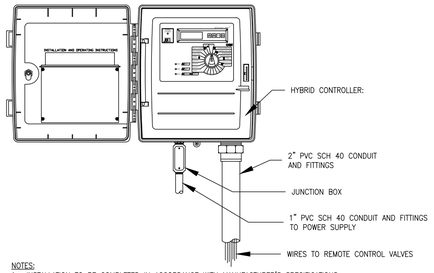
Patrick Roberson
Digitally signed by Patrick Roberson
Date: 2025.10.30 01:36:43 -04'00'

Revision	Date
Rev. Site Plan	10/29/25
Rev. Name of Project	09/19/24
Rev. per City of Clearwater comment	09/16/24
Rev. per City of Clearwater comment	03/13/24

Project Title
310 TURNER STREET
Clearwater, Florida

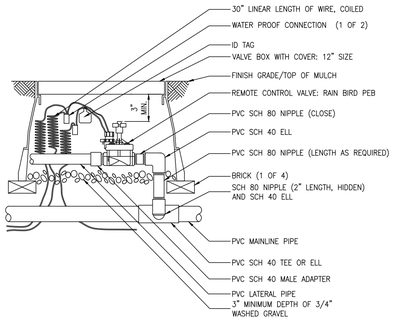
IRRIGATION PLAN

Project No. 24-01
Date 01/30/24
Sheet IR1



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. INSTALLATION TO BE IN ACCORDANCE WITH STATE AND LOCAL AGENCY CODE REQUIREMENTS.

HYBRID CONTROLLER
OUTDOOR WALL MOUNT



NOTES:
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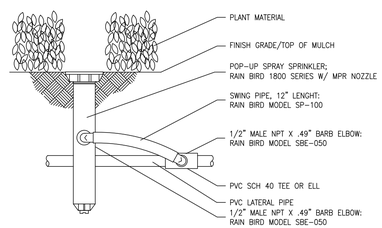
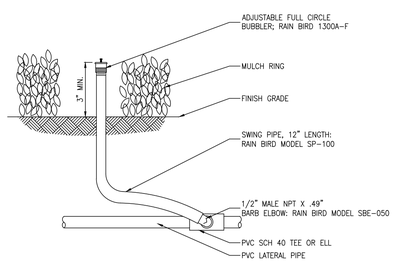
2. DO NOT SCALE DRAWINGS.

REMOTE CONTROL VALVE
RAINBIRD PEB VALVE



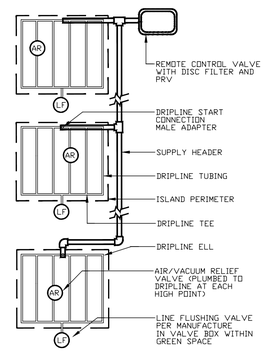
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. POP-UP HEIGHT ADJUSTED FOR CLEARANCE OF PLANT MATERIAL, 12" MIN. HEIGHT

POP-UP SPRAY SPRINKLER
RAINBIRD 1800 SERIES POP-UP SPRAY

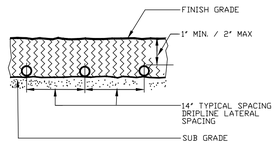


NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.

1300A-F BUBBLER
RAINBIRD ADJUSTABLE FLOOD BUBBLER

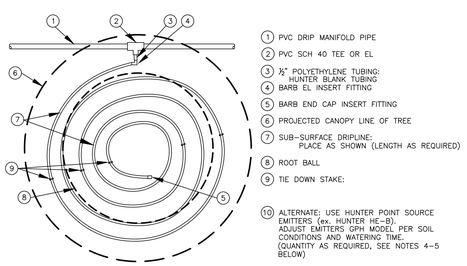


TYPICAL DRIPLINE ISLAND LAYOUT
DRIPLINE TYPICAL DETAIL – NTS



DRIPLINE SUBGRADE INSTALLATION
DRIPLINE TYPICAL DETAIL – NTS

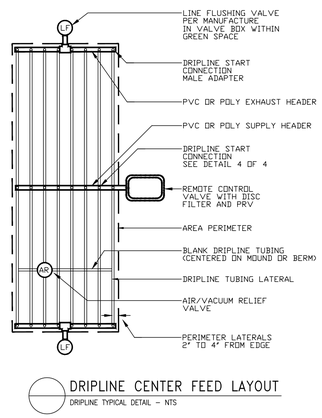
REMOTE CONTROL VALVE W/ PRV & FILTER
DRIPLINE TYPICAL DETAIL – NTS



1. PVC DRIP MANIFOLD PIPE
2. PVC SCH 40 TEE OR EL
3. ½" POLYETHYLENE TUBING: 7' HUNTER BLANK TUBING
4. BARB EL INSERT FITTING
5. BARB END CAP INSERT FITTING
6. PROJECTED CANOPY LINE OF TREE
7. SUB-SURFACE DRIPLINE: PLACE AS SHOWN (LENGTH AS REQUIRED)
8. ROOT BALL
9. TIE DOWN STAKE:
10. ALTERNATE: USE HUNTER POINT SOURCE EMITTERS (ex. HUNTER HE-B). ADJUST EMITTERS GPH MODEL PER SOIL CONDITIONS AND WATERING TIME. (QUANTITY AS REQUIRED, SEE NOTES 4-5 BELOW)

NOTES:
1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY. SEE DRIPLINE MANUFACTURE'S INSTALLATION GUIDE FOR SUGGESTED SPACINGS.
2. PLACE TIE DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.
3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.
4. IF USING ALTERNATE EMITTERS, PROVIDE 4 OR MORE – 4 GPH OR 6 GPH EMITTERS FOR TREES 5" CALIPER & LARGER, DEPENDING ON SOIL CONDITIONS AND TREE SIZE.
5. USE ALTERNATE EMITTERS, PROVIDE 4 OR MORE – 4 GPH OR 6 GPH EMITTERS FOR PHOENIX PALMS, DEPENDING ON SOIL CONDITIONS.

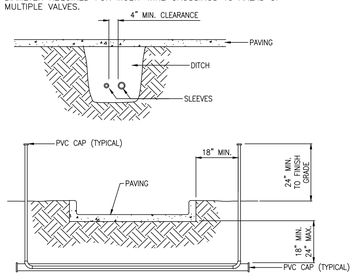
SUB-SURFACE DRIPLINE AROUND TREE
N.T.S.



DRIPLINE CENTER FEED LAYOUT
DRIPLINE TYPICAL DETAIL – NTS

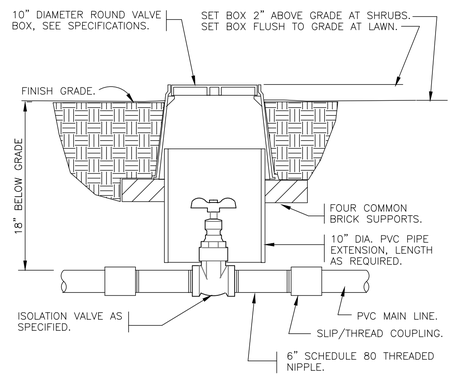
FOR OPEN TRENCH INSTALLATION OF SLEEVES. SLEEVES ARE TO BE PRE-LOADED WITH THE LATERAL PIPE TO BE CARRIED, SIZED PER IRRIGATION PLANS. THE PRE-LOADED LATERAL PIPE WITHIN THE SLEEVE SHALL BE CAPPED TO PREVENT DEBRIS AND SOIL FROM ENTERING LATERAL PIPE DURING INSTALLATION OF SLEEVE.

MAINLINE PIPE SLEEVES TO ALSO INCLUDE SEPERATE SLEEVE FOR CONTROL WIRES. WIRE SLEEVE TO BE 1", SCHEDULE 40 MIN. FOR INDIVIDUAL WIRES TO ONE VALVE OR 1" LARGER THAN DIAMETER REQUIRED FOR MULTI-WIRE CROSSINGS TO AREAS OF MULTIPLE VALVES.

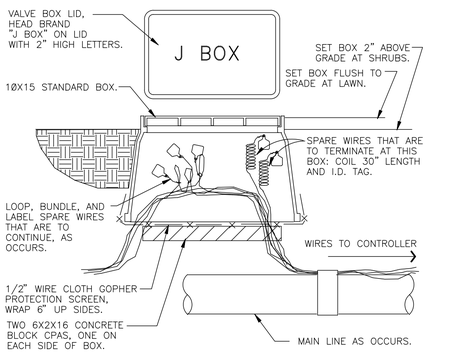


NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. ALL PVC IRRIGATION SLEEVES TO BE SCH. 40 PIPE.
4. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
5. WHERE THERE IS MORE THAN ONE SLEEVE, EXTEND THE SMALLER SLEEVE TO 24" MINIMUM ABOVE FINISH GRADE.
6. MECHANICALLY TAMP TO 95% PROCTOR.
7. SLEEVE TO BE 2 SIZES LARGER THAN MAIN LINE/LATERAL PIPE BEING CARRIED.
8. SLEEVES TO BE LOADED WITH LATERAL PIPE SIZED PER PLAN

SLEEVING LOADED W/LATERAL PIPE
SLEEVES UNDER HARDSCAPES



BRASS ISOLATION VALVE
NTS



WIRE BUNDLE JUNCTION BOX
NTS

IRRIGATION GENERAL NOTES

1. NO PLANTING SHALL OCCUR UNTIL THE UNDERGROUND AUTOMATIC IRRIGATION SYSTEM IS INSTALLED AND FULLY FUNCTIONAL. THE IRRIGATION SYSTEM IS TO SUPPLY 100% COVERAGE TO ALL REQUIRED LANDSCAPE PLANT MATERIAL AND ST. AUGUSTINE TURF.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST WATERING AMOUNTS AND FREQUENCY TO ENSURE PROPER ESTABLISHMENT OF ALL PLANT MATERIAL.

3. THE CONTRACTOR SHALL BE FAMILIAR WITH BOTH PROPOSED AND EXISTING SITE CONDITIONS SUCH AS, UTILITIES, PLANT MATERIALS AND ARCHITECTURAL ELEMENTS IN ORDER TO AVOID CONFLICTS DURING INSTALLATION.

4. THE CONTRACTOR SHALL AVOID DAMAGE TO EXISTING TREES AND SHRUBS ON SITE THAT MAY OR MAY NOT BE INDICATED ON THE PLANS.

5. THE CONTRACTOR SHALL INSTALL THE IRRIGATION SYSTEM IN CONFORMANCE TO ALL APPLICABLE STATE AND REGIONAL REGULATIONS AND CODES.

6. A MAXIMUM OF 50% OF THE ON-SITE GREEN SPACE MAY BE ALLOWED TO BE PLANTED WITH ST. AUGUSTINE GRASS SPECIES, CONFIGURED WITH A PERMANENT IRRIGATION SYSTEM. TURF/SODDED AREAS SHALL BE ON SEPARATE IRRIGATION ZONES, THAN OTHER LANDSCAPE PLANT MATERIAL.

7. DRIP LINE, BUBBLERS, SPRAY HEADS AND ROTORS SHALL NOT BE COMBINED ON THE SAME CONTROL VALVE CIRCUIT. SPRAY AND ROTOR COMPONENTS SHALL HAVE MATCHING APPLICATION RATES WITHIN EACH IRRIGATION ZONE.

8. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND ADJUSTED TO AVOID OVERSPRAY AND RUNOFF ONTO SIGNS, BUILDINGS, WALLS, WALKWAYS, ROADWAY PAVEMENT OR OTHER IMPERVIOUS SURFACES.

9. THE IRRIGATION SYSTEM CONTROLLER SHALL HAVE PROGRAM FLEXIBILITY SUCH AS REPEAT CYCLES AND MULTIPLE PROGRAM CAPABILITIES AND HAVE A BATTERY BACK-UP SYSTEM TO RETAIN IRRIGATION PROGRAMS. THE IRRIGATION CONTROL SYSTEM SHALL BE EQUIPPED WITH AN OPERABLE SOIL MOISTURE SENSOR SHUTOFF DEVICE EXPOSED PER THE MANUFACTURERS SPECIFICATIONS. THE CONTROLLER SHALL ALSO BE EQUIPPED WITH A PUMP START RELAY SYSTEM.

10. THE IRRIGATION SYSTEM SHALL BE INSTALLED TO "STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS", LATEST EDITION, (FIFTH EDITION MINIMUM) AND ANY AMENDMENTS, BY THE FLORIDA IRRIGATION SOCIETY, INC.

11. RAIN BIRD DRIP TUBING SYSTEM COMPONENTS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.

12. SPRAY HEAD AND ROTOR LAYOUT SHALL PROVIDE FOR PROPER HEAD TO HEAD COVERAGE. SPRINKLER SPACING SHALL NOT TO EXCEED 55% OF THE SPRINKLERS DIAMETER OF COVERAGE.

13. LANDSCAPE OR SODDED AREAS 4' WIDE OR LESS ARE TO BE IRRIGATED WITH DRIP LINE (MICRO IRRIGATION) ONLY, THESE AREAS ARE INDICATED ON THE PLANS.

14. THE IRRIGATION CONTRACTOR SHALL ASCERTAIN THE IRRIGATION SYSTEM REQUIREMENTS FOR GPM AND PSI DEMAND AND DETERMINE IF THE METER AND BACKFLOW ASSEMBLY IS CAPABLE OF MEETING THE DEMAND WITHIN THE ALLOWABLE WATERING TIMES. METER AND BACKFLOW ASSEMBLY TO BE PER LOCAL JURISDICTIONAL REQUIREMENTS AND APPLICABLE STATE OF FLORIDA BUILDING CODES.

15. THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THE SITE/BUILDING CONTRACTOR TO VERIFY ANY REQUIRED ELECTRICALLY POWER FOR THE IRRIGATION SYSTEM IS AVAILABLE.

16. WIRE CONNECTIONS FOR ELECTRIC CONTROL VALVES ARE TO BE MADE WITH NORTHSTAR WATERPROOF SPLICE KITS (3M DBT).

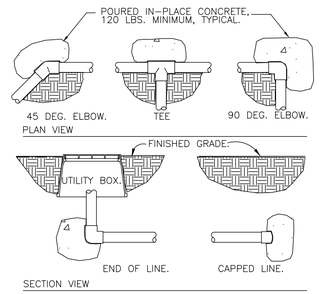
17. MAINLINE PIPE IS TO BE INSTALLED A MINIMUM OF 18" BELOW FINISH GRADE. LATERAL LINE PIPE IS TO BE INSTALLED A MINIMUM OF 12" BELOW FINISH GRADE.

18. THE IRRIGATION CONTROLLER SHALL HAVE PROPER LIGHTNING PROTECTION INSTALLED PER MANUFACTURE AND APPLICABLE CODES.

19. CONTROL VALVE WIRES SHALL RUN UNDER THE MAINLINE PIPE.

20. THE MAINLINE PIPE AND SLEEVES ARE TO BE SCHEDULE 40 PVC. LATERAL LINE PIPE IS TO BE CLASS 200 PVC. IRRIGATION PIPE SHALL BE PROPERLY SIZED TO A MAXIMUM OF 5 FEET PER SECOND OF WATER VELOCITY FLOW THROUGH THE IRRIGATION SYSTEM.

21. NO IRRIGATION COMPONENTS, MAINLINE PIPING, LATERAL PIPING OR TRENCHING SHALL OCCUR WITHIN THE PROTECTED ZONE OF EXISTING TREES ON SITE AS INDICATED ON THE PLANS.



THRUST BLOCKING
NTS

THRUST BLOCKS ARE REQUIRED ON ALL UNRESTRAINED, PUSH-ON GASKETED PIPE JOINTS AND FITTINGS AT DEAD ENDS, AND WHENEVER THE LINE CHANGES DIRECTION OF 30 DEGREES OR MORE. CONCRETE HAVING A COMPRESSIVE STRENGTH OF 2000 PSI OR HIGHER WILL BE SPECIFIED. THRUST BLOCKS WILL BE FORMED AGAINST SOLID, UNEXCAVATED EARTH THAT HAS BEEN UNDAMAGED BY MECHANICAL EQUIPMENT. THE SPACE BETWEEN THE PIPE AND TRENCH WALL WILL BE FILLED TO THE HEIGHT OF THE OUTSIDE DIAMETER OF THE PIPE. SIZE THRUST BLOCKS IN ACCORDANCE WITH ASAE (AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS) STANDARD S-376.2.

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Patrick Roberson
Digitally signed by Patrick Roberson
Date: 2025.10.30 01:37:00 -04'00'

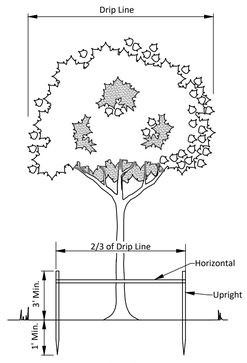
Revision	Date
Rev. Site Plan	10/29/25
Rev. Name of Project	09/19/24
Rev. per City of Clearwater comment	09/16/24
Rev. per City of Clearwater comment	03/13/24

Project Title
310 TURNER STREET
Clearwater, Florida

IRRIGATION NOTES & DETAILS

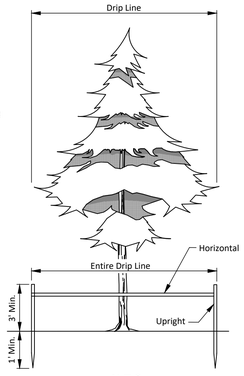
Project No. 24-01
Date 01/30/24
Sheet IR2

HARDWOODS



N.T.S.

PINES



N.T.S.

SPECIFICATIONS - WOOD BARRIER

1. Minimum radius to be protected:
   A. Hardwoods - 2/3 drip line
   B. Conifers & Sabal Palms - Entire drip line.
2. Uprights - No less than 2" X 2" lumber.
3. Horizontals - No less than 1" X 4" lumber.
4. Barriers shall be erected around all protected trees and palms, and inspected by city representative before construction begins.
5. Upright posts are to be at least 4 feet in length with a minimum of 1 foot anchored in ground and 3 feet above ground.
6. Barriers to remain in place until all paving, construction and heavy equipment is out of area.

Further information may be obtained from the Land Resource Specialists at 562-4575 and 562-4558.

CITY OF CLEARWATER PUBLIC WORKS - ENGINEERING 2022 DESIGN STANDARDS	900 SERIES: LANDSCAPE DETAILS	TREE BARRICADES	INDEX NO. 909	PAGE NO. 1 OF 1
			LATEST REVISION	10/22/18

IRRIGATION PIPE ROUTING AT EXISTING TREES TO REMAIN

IRRIGATION PIPE (LATERAL OR MAINLINE) IS TO BE TUNNELED UNDER THE MAIN ROOT SYSTEM (24" DEPTH MIN.) WHEN PROPOSED ALIGNMENT IS WITHIN THE CANOPY DRIP LINE / CRITICAL ROOT ZONE OF EXISTING TREES TO REMAIN.

EXISTING TREE PRUNING & BARRICADE NOTE:

EXISTING TREE PRUNING AND BARRICADES ARE APPROXIMATE AND FINAL PLACEMENT SHALL BE DETERMINED BY COORDINATION WITH THE FINAL ENGINEERING GRADING AND UTILITY PLANS AND ACTUAL FIELD CONDITIONS.

GENERAL TREE PRESERVATION PLAN NOTES:

THE TREE PRESERVATION PLAN INDICATES EXISTING & PROPOSED ELEMENTS, REVIEW THE DEMOLITION AND ENGINEERING PLANS FOR CLARIFICATION AND SPECIFIC DATA.

ROOT PRUNE OUTSIDE TREE BARRICADE AS INDICATED ON THE TREE PRESERVATION PLAN. FIELD ADJUST AS NECESSARY.

EXISTING TREES THAT ARE ROOT PRUNED SHALL BE WATERED AFTER ROOT PRUNING TO ALLOW TREE TO RECOVER. CERTIFIED ARBORIST FOR CONSTRUCTION/FIELD ACTIVITIES TO ESTABLISH SCHEDULE AND FINAL QUANTITY BASED ON EXTENT OF ROOT PRUNING PER TREE.

FINAL GRADE WITHIN CANOPY DRIP LINE OF EXISTING TREES TO REMAIN SHALL BE THE SAME AS EXISTING GRADE OR AS DETERMINED BY CONSTRUCTION/FIELD ARBORIST PER FIELD CONDITIONS / TREE SPECIES. FINAL GRADES SHALL PROVIDE FOR POSITIVE DRAINAGE IN AREA OF CANOPY DRIP LINE.

AT THE COMPLETION OF CONSTRUCTION, EXISTING TREES THAT ARE TO REMAIN SHOULD BE REVIEWED BY A CERTIFIED ARBORIST MINIMUM OF ONCE PER YEAR FOR THE FIRST THREE YEARS AND THERE AFTER DETERMINED BY THE OWNER AND ARBORIST.

EXISTING TREE PROTECTION GENERAL NOTES

PROTECTIVE BARRIERS ARE USED DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES TO PROTECT TREES AND NATURAL AREAS TO BE RETAINED ON A SITE.

PROTECTIVE BARRIERS MUST BE ERECTED AROUND TREES TO BE RETAINED WITHIN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR AS WELL AS ALONG NATURAL AREAS WHERE SUCH AREAS ARE ADJACENT TO PERMITTED LAND ALTERATION OR CONSTRUCTION ACTIVITIES. A PROTECTIVE BARRIER MUST REMAIN IN PLACE UNTIL THE LAND ALTERATION AND CONSTRUCTION ACTIVITIES ARE COMPLETED OR UNTIL COMMENCEMENT OF GRADE FINISHING AND SODDING. NO GROUND DISTURBANCE MUST OCCUR WITHIN THE BARRICADED AREA. THE FOLLOWING REPRESENTS MINIMUM PROTECTION BARRIER SPECIFICATIONS.

DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE CITY.

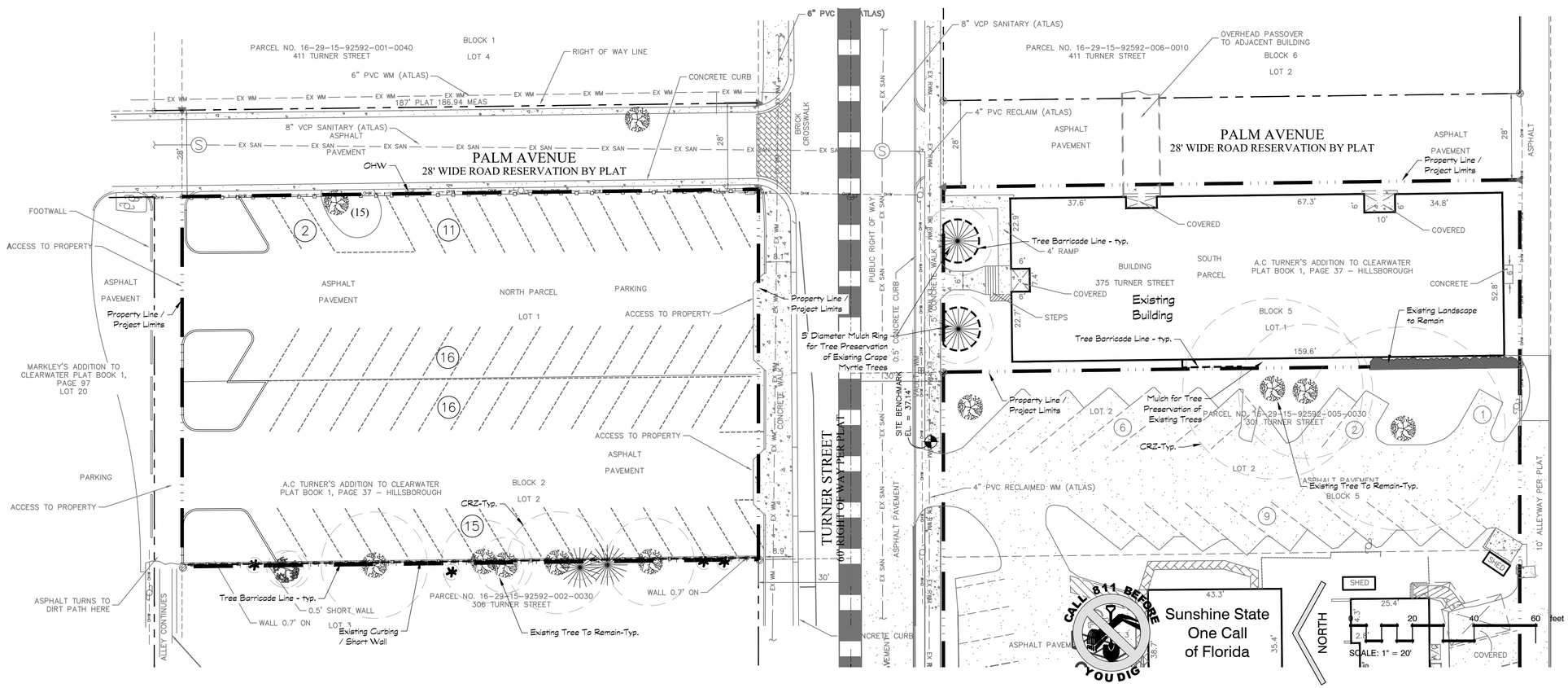
EXISTING TREE REMOVAL NOTE:

TREES TO BE REMOVED WITHIN THE CANOPY DRIPLINE OF AN ADJACENT EXISTING TREE TO REMAIN SHALL BE CUT OFF BY HAND AT GRADE AND THE STUMP GROUND TO JUST BELOW THE GROUND SURFACE. USE NO HEAVY EQUIPMENT TO PULL/PUSH OVER THE TREE.

ADDITIONAL CITY OF CLEARWATER REQUIREMENTS:

1. Install silt fences to the manufacturer's specifications. DO NOT TRENCH UNDER EXISTING TREES TO REMAIN.
2. Install tree barricades to the City of Clearwater standards, 2"x2" post with 1"x4" rails at two thirds of the trees drip line.
3. Use care in removing existing shrub materials not indicated to remain within the drip line of existing trees to remain.

SEE DEMOLITION SHEET, CIVIL ENGINEERING PLANS FOR DETAILED INFORMATION ON EXISTING SITE ELEMENTS TO BE REMOVED



ENGINEERING & LAND PLANNING
BASE INFORMATION PREPARED BY:
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ISA Certified Arborist:

Patrick Roberson
ISA Certification
#FL-1051A

Patrick Roberson
Digitally signed by Patrick Roberson
Date: 2025.10.30 01:37:15 -04'00'

Revision	Date
Rev. Site Plan	10/29/25
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Rev. per City of Clearwater comment	09/16/24
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Project Title
310 TURNER STREET
Clearwater, Florida

EXIST. TREE PRESERVATION PLAN

Project No. 24-01
Date 01/30/24
Sheet TP1