

CHARLOTTE COUNTY COMMUNITY DEVELOPMENT DEPARTMENT

SMALL SCALE* PLAN AMENDMENT (MAP) Application Information

Application Submittal Requirements

- Supply one unbound copy of the Application Materials (see checklist below). Staff will have up to 5 working days following the application deadline day to review the application for completeness. If incomplete, the application will be returned with a description of the reasons why the application is incomplete. The applicant may resubmit the application any time prior to the next application deadline day.
- Once deemed complete, the applicant will be notified that the application has been logged-in.
 The applicant is then required to supply one electronic copy, in PDF format, of all documents. Additional copies of certain items will be required prior to the public hearing dates.

 Do not submit the additional copies to the Building and Growth Management Department until requested by a staff member of the department.
- If deemed complete, the application will be logged in and assigned to a P&Z and BCC hearing cycle (see attached Application Schedule). Staff will commence review.
 - The applicant is responsible for promptly providing any information that needs to be updated, modified, or newly submitted as part of the review; otherwise the petition may be continued to a later cycle or a recommendation of denial will be necessary.
- No additional changes may be made to any information in an application subsequent to one week before the hearing packet is due to be compiled for the Planning and Zoning Board members or the NOVUS Agenda item deadline for the Board of County Commissioners. The planner in charge of the petition will be able to inform the applicant of the drop-dead date.

Consistency with the Comprehensive Plan

The changes proposed by this application will be reviewed with regard to consistency with the Goals, Objectives, and Policies (GOPs) of the Smart Charlotte 2050 comprehensive plan. Inconsistency with Smart Charlotte will be a basis for a recommendation of denial by Staff.

The review will also be concerned with impacts to infrastructure (i.e. roads, water and sewer facilities, libraries, public buildings, parks, and schools), services (i.e. garbage collection, police protection, and fire/EMS service), the environment (i.e. impact to listed plant and animals species, soil content, erosion, generation of hazardous waste, water quality), and the potential for natural disasters (i.e. hurricanes and flooding).

i

Application Materials

☐ Completed Application Form

^{*}Small Scale means any petition that involves a FLUM change of 10 acres or less.

	4	Survey and accurate legal description (including acreage), signed and sealed by a registered land
		surveyor
		• For unplatted property, one original boundary survey- an AutoCAD format copy may be
		required
		• For platted land, provide one original surveyor's sketch
		Most current Title Insurance Policy or an Ownership and Encumbrance Report for subject property
		Notarized authorization from each owner, as applicable (Form A)
		Notarized authorization for agent to submit petition, as applicable (Form B)
N/A		A copy of any covenants, easements or restrictions that have been recorded for the subject site
		Environmental Assessment Report
		Traffic Impact Report
		Letters of availability of utility service from water and sewer utilities that would provide service to
		the site and Estimated Potable Water and Sanitary Sewer Usage Report
		Archeological/Historical Memo indicating whether or not listed objects are located on the subject site
		• Archeological/Historical Survey, as applicable
		Narrative addressing rezoning standards of approval
I/A		Adjacent property owners map and an electronic copy of the adjacent property owners list in text
		format (txt file) provided on disc
		Affidavits A & B, signed and notarized
		Filing fee of \$2,490, with check made payable to the Charlotte County Board of County
		Commissioners or CCBCC

Additional Copies for Board Packet

10 copies each of the following when requested by department staff:

- any bound items
- any maps or other graphics sized larger than 11 X 17 (except surveys)
- any items in color

ATTENTION

If you are submitting an application that, if approved, will increase the amount of density allowed to be developed on your property, read this notice.

FLU Policy 1.2.7 of Smart Charlotte County outlines those situations wherein the Transfer of Density Units program is applicable.

"The TDU program shall be used during the review and approval process for all plan amendments and rezonings that propose to increase the base density on land and street vacations that would result in an accumulation of acreage allowing development of new units of density; this requirement shall continue to apply to lands that have been annexed by the City of Punta Gorda."

Property may be exempted from the TDU program if located within a Revitalizing Neighborhood with an adopted Revitalization Plan. The exemption would need to be consistent with policies adopted into Smart Charlotte.

If not exempted, property must meet one of these requirements in order to be an acceptable Receiving Zone:

FLU Policy 1.2.10 TDU Receiving Zones

Receiving zones inside the Urban Service Area include lands within the following designations of FLUM Series Map #2: 2050 Framework:

- 1. Emerging Neighborhoods.
- 2. Maturing Neighborhoods.
- 3. Economic Corridors and Centers.
- 4. CRAs
- 5. Revitalizing Neighborhoods prior to adoption of a Revitalization Plan and also what may be required in accordance with a Revitalization Plan.

Receiving Zones within the Rural Service Area include lands within:

- 1. Rural Community Mixed Use areas.
- 2. The Rural Settlement Area Overlay District.

AND

Must not be in a prohibited Receiving Zone:

FLU Policy 1.2.11 Prohibited Receiving Zones

Density shall not be transferred into:

- 1. Lands within Managed Neighborhoods (FLUM Series Map #2).
- 2. Lands within the Resource Conservation and Preservation FLUM categories.
- 3. Land containing historical or archeological resources, or land deemed to contain environmentally sensitive resources; when a portion of a property contains resources, that area deemed not to contain resources may receive density if it meets one of the criteria of a receiving zone, a conservation easement will be required over the resource along with an undeveloped buffer of at least 100 feet. An historical structure that is to be integrated into a development will not need to be buffered.
- 4. Lands within the Prime Aquifer Recharge Area (FLUM Series Map #6).
- 5. Lands within the one-half mile setback of the Watershed Overlay District and Tippen Bay and Long Island Marsh (FLUM Series Map #4).
- 6. Land within a Public Water System Wellhead Protection Area (FLUM Series Map #7).
- 7. Land on a barrier island.



CHARLOTTE COUNTY BUILDING AND GROWTH MANAGEMENT DEPARTMENT

APPLICATION for SMALL SCALE PLAN AMENDMENT (MAP)

Date Received:	Time Received:		
Data of Log in:	Petition #:		
Date of Log-in:	Accela #:		
Receipt #:	Amount Paid:		
1. PARTIES TO THE APPLICATION	011.0		
Name of Applicant: Casto JBCC Hwy 70			
Mailing Address: 5391 Lakewood Ranch			
City: Sarasota State: FL	Zip Code: 34240		
Phone Number: 941-916-5247	Fax Number:		
Email Address: triplenetinvestment@	ngmail.com		
Name of Agent: Robert H. Berntsson			
Mailing Address: 3195 S. Access Road			
City: Englewood State: FL	Zip Code: 34224		
Phone Number: 941-627-1000 x5	Fax Number:		
Email Address: rberntsson@bigwlaw.co	om		
Name of Engineer/Surveyor: First Choice S	Surveying, Inc.		
Mailing Address: PO 470978			
City: Lake Monroe State: FL	Zip Code: 32747		
Phone Number: 407-951-3425	Fax Number: 407-520-5453		
Email Address:			
Name of Property Owner (if more than one property owner, attach a separate sheet with a list of all owners): Multiple, see attached list.			
Mailing Address:			
City: State:	Zip Code:		
Phone Number:	Fax Number:		
Email Address:			

2. PROPERTY INFORMATION

If more than one account number exist	c attach a cor	narata chaat licting	r all information i	panirad ha	thic caction
if filore than one account number exist	s, anach a sep	parate sheet fisting	g am mhormanom	equired by	uns section

Property Account #: Multiple, see attached list.			
Section: 5	Township: 41	Range: 21	
Parcel/Lot #: 4-18	Block #: 5121	Subdivision: Port Charlotte Section 95	
Total acreage or square feet of the property: 3.52 +/- acres			

3. SURVEY:

- For unplatted property, provide one original boundary survey that is **signed and sealed** by a registered land surveyor and an accurate legal description (including acreage) of the property.
- For platted land, provide one original surveyor's sketch that is **signed and sealed** by a registered land surveyor and an accurate legal description (including acreage) of the property.
- **4. PROOF OF LAND OWNERSHIP:** Provide the most current *Title Insurance Policy* or an *Ownership and Encumbrance Report* on the subject property.
- **5. NOTARIZED AUTHORIZATION:** A written, notarized authorization from each owner must be provided with this application if:
 - If the applicant is not the owner of the property, a written, notarized authorization from each owner must be provided with this application use Form A, attached. Property owner authorization is required. If the property owner withdraws permission at any point during the review and approval process, the application is considered null and void.
 - If an agent is submitting the application for the applicant authorization from the applicant is required use Form B, attached.
- **6. RESTRICTIONS:** Provide a copy of any covenants, easements or restrictions that have been recorded for the subject site.

7. EXISTING LAND USE DESIGNATIONS

Future Land Use Map (FLUM) designation(s)	Acreage
Low Density Residental	3.52 +/- acres
Zoning District(s)	Acreage
RSF 3.5	3.52 +/- acres

Q	A PPI	ICA	NT'C	PROPOSED	CHANGE(S).

Amending FLUM designation(s) to:	Commercial

If the proposed change involves an increase in density, which of the Receiving Zone criteria does the property meet, or would this be an exemption consistent with a Revitalization Plan? N/A

9. REASON FOR PROPOSED CHANGE(S):

To allow for commercial development along SR 776.

10. CURRENT LAND USE OF SUBJECT PROPERTY: (example: house, vacant land, barn, etc.)

Vacant

11. SURROUNDING LAND USES:

North: SR 776, Residential homes

South: Primarily vacant

East: Wendy's, commercial development

West: Primarily vacant, one residential dwelling

12. ENVIRONMENTAL ASSESSMENT:

- Provide an *Environmental Assessment Report*, conducted within one year or less from the date of submittal, that includes:
 - Maps and surveys of the subject site illustrating the existing land cover according to Level
 3 of the FLUCCS
 - o Locations of listed flora and fauna species, if present.
 - o If any wetlands are identified on site, provide a survey showing delineations of any wetlands, acreages, and the wetland Category (ENV Policy 3.1.3) under which they fall.
 - o If the property is adjacent to any Federal, State, or County wildlife management areas, parks, preserves or reserves, supply a science-based analysis of possible impacts to the environmental resources of these lands and the manner in which these impacts can be eliminated. Where elimination is not possible, the analysis shall detail how these impacts can be reduced and mitigated.

13. INFRASTRUCTURE:

A. Roadway

i. List the roads or streets upon which vehicles may travel to gain access to the site (generally within ¼ mile radius):

SR 776, South Access Road, Pinedale Drive

ii. *Traffic Impact Report*: This narrative does not need to be authored by a registered professional engineer. Address the number of vehicle trips that may be generated by development of the subject site at maximum buildout allowed under the proposed FLUM and Zoning.

B. Potable Water and Sanitary Sewer

- i. Submit a letter from the utility companies (water/sewer) stating availability of utility service to the property.
- ii. Attach an *Estimated Potable Water and Sanitary Sewer Usage Report* showing the gallons per day that may be generated by development of the subject site at maximum buildout allowed under the proposed FLUM and Zoning.
- **14. HISTORICAL OR ARCHEOLOGICAL SITES:** When the property under review is within the area determined to contain potential historic and archeological resources by the Archaeological Predictive Model (depicted on SPAM Series Map #3), the applicant must submit an *Archeological/Historical Memo* indicating that a review of the National Register of Historic Places, the Florida Master Site File and the Local Historic Register (when available) has been performed and the results of that review. If the subject site contains any object listed in these resources, the applicant must provide an *Archeological/Historical Survey* performed by a professional archeologist licensed in the State of Florida.

15. ADJACENT PROPERTY OWNERS INFORMATION:

Provide an *electronic text file* (.txt) that includes the names and addresses of all property owners within 200 feet of the subject property (excluding street right-of-ways), and a map indicating which properties are included in the address list. The Adjacent Property Owner List must be based upon the latest available property records of the Property Appraiser's Office. The list shall include property owner's name, mailing address, and parcel(s) or lot(s) description or account number so each parcel can be referenced on the Adjacent Property Owner Map. Refer to the Geographic Information System Internet site for mapping and owner information at http://www.ccgis.com/. (Use a buffer of 250 feet or larger in order to account for right-of-ways, canals, etc.) Every property owner within 200 feet of every parcel of land involved will be notified of the schedule of public hearings.

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICANT Lot(s) 45-133775, ACCESS RD. POS-CHARLOTE 33981

I, the undersigned, being first duly sworn, depose and say that I am the owner of the property described and which is the subject matter of the proposed hearing. I give authorization for Casto JBCC Hwy 70 LLC to be the applicant for this REZONING. day of $May O_1$, 2023, by who is personally known to me or has/have produced as identification and who did/did not take an oath. Signature of Owner Richard Halvorson/Christine Halvorson Printed Signature of Owner 320 Rotonda Blvd. E. NOTARY Address Rotonda West, FL 33947 City, State, Zip 941-628-6866 Telephone Number KAREN A GARDINER Notary Public - State of Florida Commission # GG 975358 My Comm. Expires May 8, 2024 Bonded through National Notary Assn.

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICANT Lot(s) 6, 7, 8, 13, 16 I, the undersigned, being first duly sworn, depose and say that I am the owner of the property described and which is the subject matter of the proposed hearing. I give authorization for Casto JBCC Hwy 70 LLC to be the applicant for this REZONING. STATE OF FC, COUNTY OF Lee The foregoing instrument was acknowledged before me this 29 day of Manch Fullenkamp who is personally known to me or has/have produced as identification and who did/did not take an oath. Signature of Owner Printed Signature of Owner Notary Printed Signature Title Commission Code CAROLYN QUINONES *33*2 ⋅ 47

Telephone Number MY COMMISSION # GG 921126 EXPIRES: October 18, 2023 Bonded Thru Notary Public Underwriters

FORM A. PROPERTY OWN Lot(s)	ER AUTHORIZATION TO APPLICANT
I, the undersigned, being first duly sworn, de	pose and say that I am the owner of the property described
and which is the subject matter of the propos	
I give authorization for Casto JBCC Hwy 70 LLC	to be the applicant for this
REZONING.	
STATE OF FLORIDA, COUNTY O	FSARASOTA
The foregoing instrument was acknowledged	before me this <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>
JACK MCCARTHY	who is personally known to me or has/have produced
FL DL	as identification and who did/did not take an oath.
Linda & arombette	Jak me Cathy
Notary Public Signature	Signature of Owner
LINDA J TROMBETTI	TACK ME EASTRY
Notary Printed Signature	Printed Signature of Owner
NOTARY	239 BALIA ViSTAPA
Title	Address
#H 301008	Engleword L. 3/223
Commission Code	City, State, Zip
	9414680347
LINDA J. TROMBETTI Commission # HH 301008 Expires October 15, 2026	Telephone Number

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICANT

Lot(s) 6937 Pinedale Dr Port Charlotte (Lot 10)

and which is the subject matter of the propos I give authorization for Casto JBCC Hwy 70 LLC	pose and say that I am the owner of the property described ed hearing. to be the applicant for this
REZONING.	
STATE OF Florida, COUNTY C	OF Sarasota
The foregoing instrument was acknowledged	before me this 14 day of April , 2023, by
Maliwan Sai Ngarm	who is personally known to me or has/have produced
	as identification and who did/did not take an oath.
amanda ROSAN	Mahiram Sai-Ngam- Signature of Owner
Notary Public Signature	Signature of Owner
Amanda R DATE	Maliwan Sai-Ngarm Printed Signature of Owner
Notary Printed Signature	Printed Signature of Owner
Notay Rubbic Title	35-24 62nd St
Title /	Address
	Woodside, NY 11377
Commission Code	City, State, Zip
	347-278-2327
AMANDA R. ORTIZ Notary Public-State of Florida Commission # GG 974485 My Commission Expires March 30, 2024	Telephone Number

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICANT

Lot(s) 6945 Pinedale Dr Port Charlotte (Lot 11)

I, the undersigned, being first duly sworn, depose and say that I am the owner of the property described and which is the subject matter of the proposed hearing. I give authorization for Casto JBCC Hwy 70 LLC to be the applicant for this REZONING.			
STATE OF, COUNTY C	of Westchester day of March, 2023, by		
Paul Uttaraponk	who is personally known to me or has/have produced		
	as identification and who did/did not take an oath.		
Notary Public Signature	Signature of Owner		
Notary Printed Signature	Paul Uttaraponk Printed Signature of Owner		
Notary Public	1617 Astor Avenue		
Title Commission Code	Address Pelham Gardens, NY 10469 City, State, Zip		
OUSMANE DIOP Notary Public State of New York No. 01DI6392371 Qualified in Westchester County My Commission Expires May 23, 2023	917-736-2269 Telephone Number		

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICANT Lot(s)

I, the undersigned, being first duly sworn, de and which is the subject matter of the propos	pose and say that I am the owner of the proped hearing.	erty described
I give authorization for Casto JBCC Hwy 70 LLC	to be the ap	plicant for this
REZONING.		
STATE OF New York, COUNTY O	of Queens Annual	
The foregoing instrument was acknowledged	before me this day of	, 20 <u>23</u> , by
Claudia Fluhas	who is personally known to me or has/ha	
	as identification and who did/did not	take an oath.
Ol Ve	Cum Hu	
Notary Public Signature	Signature of Owner	
John P. Volpe	Claudia Flechas	
Notary Printed Signature	Printed Signature of Owner	
Notas Pullic	4131 515+ Street, Apt	62
Title	Address No dsidy NY 11377	
Commission Code	City, State, Zip	•
Will PAU	917-715-8546	
OF NEW YORK	Telephone Number	
OF NEW YORK NOTARY PUBLIC Qualified in Nessest Costay 02V05282182		

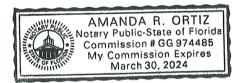
FORM A. PROPERTY OWNE Lot(s) 15 4 17	ER AUTHORIZATION TO APPLICANT
I, the undersigned, being first duly sworn, dependent of the subject matter of the proposed I give authorization for Casto JBCC Hwy 70 LLC	ose and say that I am the owner of the property described d hearing. to be the applicant for this
REZONING. STATE OF, COUNTY OF	n
The foregoing instrument was acknowledged to Dennis J. Fullen Hamp E James H. Forrester	before me this 29 day of March, 2023, by who is personally known to me or has/have produced
Carolyn Quinones	as identification and who did/did not take an oath. Signature of Owner Printed Signature of Owner
	Address Fort Myers FL 33901 City, State, Zip
CAROLYN QUINONES MY COMMISSION # GG 921126 EXPIRES: October 18, 2023 Bonded Thru Notary Public Underwriters	Telephone Number The state of

FORM A. PROPERTY OWNER AUTHORIZATION TO APPLICATION TO APPLICATION

I, the undersigned, being first duly sworn, d and which is the subject matter of the propo	epose and say that I am the owner of the property described
ave authorization for Casto JBCC Hwy 70 LL	
REZONING.	
STATE OF Hovida . COUNTY	of Charlotte
The foregoing instrument was acknowledge	ed before me this <u>ZZ</u> day of <u>March</u> , 20 <u>23</u> , by
Moses Rivera	who is personally known to me or has/have produced
	as identification and who did/did not take an oath.
Sacr	Moses V. Rouera
Notary Public Signature	Signature of Owner
Staceytaw	Moses V. Rivera
Notary Printed Signature	Printed Signature of Owner
	1610 Blambrada Blvd
Title	Address
4	Punta Gorda F133955
Commission Code	City, State, Zip
STACEY LAW	941-258-1048
Notary Public - State of Florida Commission # HH 028524 My Comm. Expires Aug 5, 2024	Telephone Number

FORM B. APPLICANT AUTHORIZATION TO AGENT

pose and say that I am the applicant for the REZONING of ect matter of the proposed hearing.
to be my agent for this
F Sarasota
before me this 20 day of March, 2023, by
who is personally known to me or has/have produced
as identification and who did/did not take an oath.
Colm P. Cox
Signature of Applicant
Clinton P. Conway
Printed Signature of Applicant
1858 Ringling Blvd # 200 Address
Sarasota Fl 34236 City, State, Zip
941. 916 · 5247 Telephone Number



AFFIDAVIT A

I, the undersigned, being first duly sworn, depose and say that I am the owner or agent of the property described and which is the subject matter of the proposed hearing; that all answers to the questions in this application, and all sketches, data and other supplementary matter attached to and made a part of the application are honest and true to the best of my knowledge and belief. I understand this application must be complete and accurate before the hearing can be advertised, and that if I am not the owner of the property I have attached a notarized authorization from the owner(s) to submit this application. I acknowledge that all items listed in the application must be submitted concurrent at the time the County accepts the application. I swear that the attached list of adjacent property owners is complete, including all property owners within 200 feet of the subject properties (excluding right-of-ways), that it is correct, providing addresses as listed in the County Tax Roll.

STATE OF Florida, COUNTY	OF Charlote
The foregoing instrument was acknowledge	ed before me this 18th day of April, 2023, by who is personally known to me or has/have produced
Notary Public Signature	as identification and who did/did not take an oath. Signature of Applicant or Agent
Heather Bennett Notary Printed Signature	Robert H. Berntsson Printed Signature of Applicant or Agent
Title	3195 S. Access Rd Address
Commission Code	City, State, Zip
Notary Public State of Florida Heather M. Bennett My Commission HH 356711 Expires 2/3/2027	$\frac{941 - 627 - 1000 \times 5}{\text{Telephone Number}}$

AFFIDAVIT B

The applicant/owner hereby acknowledges and agrees that any staff discussion about conditions of approval are preliminary only, and are not final, nor are they the specific conditions or demands required to gain approval of the application, unless the conditions or demands are actually included in writing in the final development order or the final denial determination or order.

OF CHARLOTTE
ed before me this 18th day of April , 2023, by who is personally known to me or has/have produced
as identification and who did/did not take an oath.
Signature of Applicant or Agent Robert H. Berntsson Printed Signature of Applicant or Agent 3195 S. Access Rd
Address 342Z4
City, State, Zip $941 - 627 - (000 \times 5)$ Telephone Number

PROTECTED SPECIES ASSESSMENT

SOUTH ACCESS ROAD PARCELS Charlotte County, Florida

August 2024

Prepared by:



22102 Kimble Avenue = Port Charlotte, FL 33952 (941) 457-6272 www.IVAenvironmental.com

INTRODUCTION

The following assessment has been prepared to identify on-site vegetative communities and address wildlife species listed by the Florida Fish and Wildlife Conservation Commission (FWC) and U.S. Fish and Wildlife Service (FWS) as endangered, threatened, or species of special concern which may be utilizing the subject property.

The subject property is located within Section 05, Township 41S, and Range 21E in Port Charlotte, Florida. See attached Location Map.

SITE CONDITIONS

A site inspection was conducted by qualified staff ecologists in August 2024. During the inspection, temperatures ranged from 89° - 92° F, winds were 1-8 mph, and skies were partly cloudy.

VEGETATIVE COMMUNITIES

Field observations, in conjunction with the Charlotte County Soil Survey and aerial photographs, were used to develop a map of the vegetative communities onsite. The vegetative communities were identified and classified utilizing the Florida Land Use Cover and Forms Classification System (FLUCCS). The following table displays the vegetative associations found on the subject property. A description of the communities is also included. Please refer to the attached Protected Species Assessment Map.

FLUCCS ID	FLUCCS DESCRIPTION	ACREAGE
190	Open Land	0.50
320	Shrub and Brushland	0.78
422	Brazilian Pepper	0.18
425D	Disturbed Temperate Hardwoods	1.91
630	Wetland Forested, Mixed	0.15
TOTAL		3.52

FLUCCS 190 – Open Land

This upland habitat lacks a significant canopy. Midstory and groundcover species present include: false buttonweed (Spermacoce sp.), finger grass (Digitaria sp.), hairy indigo (Indigofera hirsuta), sandspur (Cenchrus sp.), frog-fruit (Phyla nodiflora), grapevine (Vitis sp.), bluestem (Schizachyrium sp.), flatsedges (Cyperus spp.), dog fennel (Eupatorium capillifolium), rustweed (Polypremum procumbens), and ragweed (Ambrosia artemisiifolia).

FLUCCS 320 – Shrub and Brushland

This upland habitat lacks a significant canopy. Midstory and groundcover species present include: grapevine, greenbrier (*Smilax sp.*), wax myrtle (*Myrica cerifera*), beggar's tick (*Bidens alba*), peppervine (*Ampelopsis arborea*), carrotwood (*Cupaniopsis anacardioides*), goldenrod (*Solidago sp.*), bluestem, rustweed, false buttonweed, and dog fennel (*Eupatorium capillifolium*).

FLUCCS 422 – Brazilian pepper

This upland habitat is dominated by Brazilian pepper (*Schinus terebinthifolius*). Midstory and groundcover species present include: grapevine, greenbriar, and peppervine.

FLUCCS 425D – Disturbed Temperate Hardwoods

This disturbed upland habitat contains a canopy of live oak (*Quercus virginiana*), cabbage palm (*Sabal palmetto*), and laurel oak (*Quercus laurifolia*). Midstory and groundcover species present include: grapevine, greenbrier, Brazilian pepper, beautyberry (*Callicarpa americana*), beaksedges (*Rhynchospora sp.*), goldenrod, peppervine, rustweed, bluestem, wax myrtle, and flatsedges.

FLUCCS 630 – Wetland Forested, Mixed

This wetland habitat contains a canopy of melaleuca (*Melaleuca quinquenervia*) and laurel oak. Midstory and emergent species present include: bluestem, flatsedges, foxtail (*Setaria sp.*), beaksedges, grapevine, peppervine, flattop goldenrod (*Euthamia caroliniana*), St. John's wort (*Hypericum fasciculatum*), redroot (*Lachnanthes caroliniana*), and tickseed (*Coreopsis sp.*).

LISTED SPECIES SURVEY METHODOLOGY

To provide approximately 80 percent coverage of the site, both linear and nonlinear overlapping transects were completed across the parcels per FWC guidelines. Transects were spaced approximately 30-50 feet apart depending on the visibility within the vegetative association being surveyed. Evidence of protected species was gathered through both direct observation and through observation of signs such as tracks, nests, burrows, and fecal material. If evidence of utilization by a protected species which may require permitting prior to development of the subject properties was observed, an aerial photograph was marked depicting the approximate location. In addition, a search of available online resources was conducted to reveal the previously documented presence of listed species which may be utilizing the subject properties. These resources included, but were not limited to, the following: FWS Wood Stork Colony Map(s); Charlotte County Natural Resources Department Scrub Jay Territory Search Database; Audubon Eagle Nest Locator Database; FWS Florida Bonneted Bat Consultation Area Map(s); FWS Crested Caracara Consultation Area Map(s); FWS Red-cockaded Woodpecker Consultation Area Map(s); and FWS Panther Consultation Area Map(s). If the site contained suitable habitat for a protected species, or if the site was within close proximity to a verified sighting or consultation area for a protected species, additional scrutiny was given during the inspection relative to that specific species.

LISTED SPECIES ASSESSMENT RESULTS

Search of available online resources revealed that the subject property is located within an 18.6-mile radius designated as Core Foraging Area of several wood stork (Mycteria americana) nesting colonies. Each of the documented colonies appears to be greater than 4 miles from the subject property. Under current regulations, the proximity of the off-site nesting colonies is not likely to affect the future development of the subject property. However, any impacts which require federal review may trigger additional coordination relative to the species.

Search of available online resources revealed that the subject property is located within the Consultation Area of the Florida scrub jay (*Aphelocoma coerulescens*). However, review of the Charlotte County Natural Resources Department Florida Scrub Jay Territory Search Database revealed that the subject property is not a scrub jay review area parcel. No evidence of utilization by the species was observed on the subject property. Therefore, the Florida scrub jay is not likely to affect the future development of the property.

Search of the Audubon Society Bald Eagle Nest Locator website revealed no nests within a mile radius of the subject property. No eagles or nests were observed on or around the subject property. Bald eagles should therefore not likely affect the future development of the subject property.

The subject parcel is located within the FWS Consultation Area of the Florida bonneted bat (*Eumops floridanus*). No evidence of utilization by the Florida bonneted bat was observed onsite during the site inspection. Thus, the Florida bonneted bat is not likely to affect the future development of the property. However, any impacts which require federal review may trigger additional coordination relative to the species.

Search of available online resources did not reveal documentation of any other listed wildlife species currently utilizing the subject property.

The subject site contains upland habitats which could potentially be utilized by the gopher tortoise (*Gopherus polyphemus*). No gopher tortoise burrows or evidence of the species were observed on the parcel. If gopher tortoise burrows are found on the parcel, a 100% gopher tortoise survey and relocation permit from the Florida Fish and Wildlife Conservation Commission will be required prior to development of the site if gopher tortoise burrows cannot be avoided during construction.

No protected species or evidence of protected species utilization which would require permits from the FWC or FWS were observed onsite during the site inspection.

Sincerely,

IVA Environmental Services

Vaul Marrie

Senior Ecologist

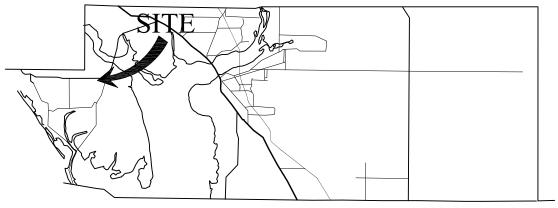
Certified Arborist (FL-0985-A)

ISA Tree Risk Assessor Qualified



SECTION 05; TOWNSHIP 41S; RANGE 21E





CHARLOTTE COUNTY, FLORIDA

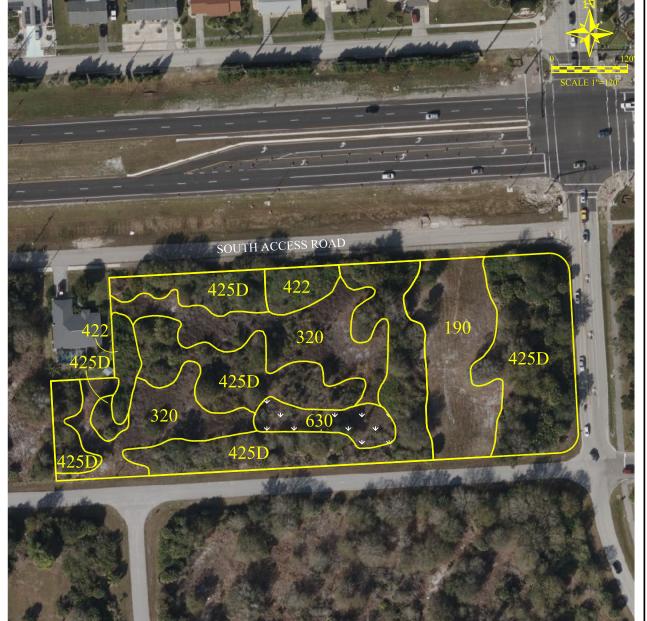


SOUTH ACCESS ROAD PARCELS

LOCATION MAP



SECTION 05; TOWNSHIP 41S; RANGE 21E



LEGEND

FLUCCS	DESCRIPTIONS	4	ACREAGE
190	OPEN LAND		$0.50\pm$
320	SHRUB AND BRUSHLAND		$0.78\pm$
422	BRAZILIAN PEPPER		$0.18\pm$
425D	DISTURBED TEMPERATE HARDWOO	DDS	$1.91\pm$
630	WETLAND FORESTED, MIXED		$0.15\pm$
		TOTAL	3.52±



WETLAND

 $0.15 \pm$

NOTE

- 1. FOR PERMIT USE ONLY, NOT FOR CONSTRUCTION.
- 2. PROJECT BOUNDARY IS APPROXIMATE AND WAS OBTAINED FROM CHARLOTTE COUNTY GIS
- 3. MAPPING APPROXIMATE AND BASED ON INTERPRETATION OF 2017 AERIAL PHOTOGRAPHY AT 1"=120' SCALE.
- 4. THE DELINEATION OF ANY ON-SITE WETLANDS, SURFACE WATERS, AND/OR OTHER SURFACE WATERS IS PRELIMINARY AND SUBJECT TO REVIEW/APPROVAL BY APPLICABLE REGULATORY AGENCIES.

22-477 / AUGUST 14, 2024

SOUTH ACCESS ROAD PARCELS
PROTECTED SPECIES ASSESSMENT MAP



WETLAND CLASSIFICATION

SOUTH ACCESS ROAD PARCELS Charlotte County, Florida

August 2024

Prepared by:



4050 Rock Creek Drive, Port Charlotte, FL 33948 (941) 457-6272 www.IVAenvironmental.com

INTRODUCTION

The following wetland classification narrative has been prepared in accordance with Charlotte County Comprehensive Plan Natural Resources Element Policy ENV 3.1.1 – Identification and Categorization of Wetlands.

The subject property is located in Section 5, Township 41S, Range 21E. Please refer to the attached Location Map and Development Suitability Assessment Map.

WETLAND CLASSIFICATION

The Charlotte County Comprehensive Plan requires that all wetlands within a parcel under development review be categorized as either Category I or Category II wetlands. Additional scrutiny is afforded to impacts proposed within wetlands which qualify as Category I. For the purposes of this analysis, all wetlands on site have been consolidated into a single wetland due to both existing wetland areas (as illustrated on the attached Protected Species Assessment Map) due to both wetlands containing a direct hydrologic surface water connection to Charlotte Harbor. In order to qualify as a Category I wetland, a wetland must have no more than 30% undesirable vegetation and meet at least two of the following criteria:

1. Any wetland of any size that has a permanent surface water connection to natural surface waterbodies with special water classifications, such as an Outstanding Florida Water, an Aquatic Preserve, or Class I or II waters. A natural hydrological connection that has been enhanced by human technology will be considered a connection under this category.

The subject wetland is isolated and wholly surrounded by uplands. Therefore, the wetland does not meet this criterion.

2. Any wetland of any size that has a direct connection to the Floridan aquifer by way of an open sinkhole or spring.

The subject wetland does not meet this criterion.

- 3. Any wetland of any size that has functioning hydroperiods with minimal human disturbance and provides critical habitat for listed species.
 - The natural hydrologic regime of this wetland has been altered by the surrounding development and roadway and does not fall within designated critical habitat for any listed species. Therefore, the wetland does not meet this criterion.
- 4. Any wetland of any size whose functioning hydroperiods are connected via a direct natural surface water connection to parks or conservation lands.
 - The subject wetland is isolated and wholly surrounded by uplands with no connection to parks or conservation lands. Therefore, the wetland does not meet this criterion.
- 5. Any wetland of any size where downstream or other hydrologically connected habitats are significantly dependent on discharges from the wetland.
 - The subject wetland does not meet this criterion.

During site inspections conducted in August 2024, exotic species, primarily melaleuca (*Melaleuca quinquenervia*) comprised approximately 60% aerial coverage within the canopy of the wetland. Exotic species comprised less than 5% aerial coverage within the midstory and herbaceous strata. While portions of the wetland may meet the 30% exotic threshold described above, the wetland as a whole appears to be below 30% overall exotic vegetative coverage.

Based on the information provided herein, the subject wetland fails to meet any of the five criteria above and, subsequently, falls within the definition of Category II wetlands.

WETLAND IMPACT JUSTIFICATION

The wetland proposed for impact is a small (0.15 ac.), isolated wetland with minimal wetland functional value. As stated above, the wetland canopy is dominated by melaleuca; the wetland is located within an infill parcel in an area that is heavily developed; and the natural hydrologic regime of the wetland has been severely altered by the surrounding development.

The location of the wetland on the parcel makes avoidance of the wetland impacts impractical. Preservation of the 0.15 acre wetland, along with the required 25' upland buffer would result in a total of 0.29 acres of preserve. The irregular shape of the wetland and associated buffer would require that the stormwater pond, parking, and 8 bay building all be shifted approximately 125 feet north to the approximate center of the parcel. This site plan change would negatively impact the underlying purpose of the proposed development and effectively eliminate one of the three proposed building due to the inability to provide the parking, driveway, and stormwater within the remaining developable area.

Additionally, due to the isolated nature, small size, and relatively low ecological function of the wetland, the Southwest Florida Water Management District (SWFWMD) will not require mitigation for the wetland impacts.

Updated Traffic Impact Analysis (TIA) For Submittal to Charlotte County

SR 776 & Pinedale Drive Commercial

Charlotte County, Florida

Prepared for:

Casto JBCC HWY 70 LLC

Prepared by:

Kimley-Horn and Associates, Inc.

©Kimley-Horn and Associates, Inc. Updated October 2024

Updated Traffic Impact Analysis (TIA) For Submittal to Charlotte County

SR 776 & Pinedale Drive Commercial Charlotte County, Florida

Prepared for:		
Casto JBCC HWY 70 LLC		
Prepared by:		
Kimley-Horn and Associates, Inc.		
©Kimley-Horn and Associates, Inc. Updated October 2024	Christopher Hatton, P.E. PE Number: 48905	Date



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APPENDIX E: Synchro Intersection Analyses Worksheets

APPENDIX F: Volume Development Worksheets

APPENDIX G: Turn Lane Calculations



INTRODUCTION

Based upon discussions with Charlotte County transportation department staff on February 5, 2024, and March 12, 2024, this Traffic Impact Analysis (TIA) has been updated for the proposed SR 776 & Pinedale Drive Commercial development located in the southwest quadrant of SR 776 (S. McCall Road) & Pinedale Drive in Charlotte County, Florida. The site is not directly connected to SR 776, but to S. Access Road, which lies between SR 776 and the project site. The general site location map is provided in Figure 1. The site is currently vacant and is proposed to be developed for a 7,500 SF auto parts store, a 7,200 SF auto service center, a 1,687 SF oil change shop, and a 2,800 SF commercial building with 1,400 SF for a coffee shop with drive thru and the other 1,400 SF for general retail.

As shown in the conceptual site plan in Appendix A, and based upon discussions with Charlotte County transportation department staff on February 5, 2024, and March 12, 2024, access to the site has been improved based upon direction from Charlotte County to be provided through the following proposed access connections:

- Two (2) full-access connections along Hopkinton Avenue
- One (1) full-access connection and one (1) right-in only connection along S. Access Road

This report identifies the estimated trip generation potential of the proposed commercial development and the anticipated traffic impacts on the study area intersections and roadway segments in accordance with the Charlotte County Engineering Design Manual Part 7 *Traffic Impact Statement*.





In general, the following procedural steps were undertaken in this Traffic Impact Analysis (TIA):

- Traffic volumes anticipated to be generated by the proposed development were estimated using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition;
- Project traffic was distributed and assigned to the public roadway network based upon the distribution identified in the select zone analysis using the Florida Standard Urban Transportation Modeling Structure (FSUTMS) District One Regional Planning Model (D1RPM);
- Existing p.m. peak-hour traffic volumes in the study area were collected and adjusted to reflect peak season volumes using the Florida Department of Transportation's peak season conversion factor (PSCF), and were used as part of future background volumes;
- Work Programs of Charlotte County and the FDOT were reviewed to identify scheduled road improvements in the area;
- Background (non-project) traffic volumes consist of existing traffic grown by 2% based on a growth rate identified in 2023 Charlotte County Roadway Level of Service Data for the project-adjacent roadway segment of SR 776; and
- Intersection and roadway segment LOS analyses within the study area for existing and future scenarios were completed using the *Synchro* version 11 software package and the 2023 Charlotte County Roadway Level of Service Data.



PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development. These trips were distributed and assigned throughout the study roadway network.

Proposed Land Uses

The project site is located in the southwest quadrant of SR 776 & Pinedale Drive in Charlotte County, Florida. The site is currently vacant and is proposed to be developed for a 7,500 SF auto parts store, a 7,200 SF auto service center, a 1,687 SF oil change shop, and a 2,800 SF commercial building with 1,400 SF set up for a coffee shop with drive thru and the other 1,400 SF set up for general retail. Buildout of the site is anticipated by 2025.

As shown in the conceptual site plan in Appendix A, and based upon discussions with Charlotte County transportation department staff on February 5, 2024, and March 12, 2024, access to the site has been improved based upon direction from Charlotte County to be provided through the following access connections:

- Two (2) full-access connections along Hopkinton Avenue
- One (1) full-access connection and one (1) right-in only connection along S. Access Road

The proposed project driveways meet the Charlotte County Engineering Design Standard of 20foot separation between commercial driveways.

Trip Generation

Trip generation for the proposed commercial development was based on the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 11th Edition, for land use codes (LUC) 822 (Strip Retail Plaza (<40k)), 843 (Automobile Parts Sales), 937 (Coffee/Donut Shop with Drive-Through Window), 941 (Quick Lubrication Vehicle Shop), and 942 (Automobile Care Center).

Kimley » Horn

Internal capture was based on ITE's *Trip Generation Handbook*, 3rd Edition, and considered for the Strip Retail Plaza (LUC 822) and the Coffee/Donut Shop (LUC 937) portion of the site. Internal capture calculations are provided in the Appendix B. Pass-by capture rates were also considered for the Strip Retail Plaza (LUC 822) and the Coffee/Donut Shop (LUC 937) portion of the site using rates from ITE's *Trip Generation Handbook*, 3rd Edition and ITE *Trip Generation Manual* Appendices (2021). Pass-by rates are not published for LUC 937; therefore, the pass-by rates for LUC 934 (Fast-Food with Drive Through Window) were utilized. LUC 938 (Coffee/Donut Shop with Drive Through Window and No Indoor Seating) is another comparable use; however, the pass-by rates for LUC 938 were not utilized because the average pass-by rate is 98% for the p.m. peak hour, which is significantly higher than rate for LUC 934 (55%). Thus, the pass-by rate for LUC 934 allowed for a more conservative (worst-case) analysis. The proposed development is anticipated to generate 107 net, new p.m. peak-hour trips (51 entering/56 exiting). The anticipated trip generation potential for the p.m. peak-hour is identified in Table 1.

Trip Distribution and Assignment

Project traffic attributed to the development was distributed to the adjacent roadway network from the project site. Trip distribution and assignment was based upon the results of a select zone analysis using the FSUTMS District One Regional Planning Model (D1RPM) and engineering judgement. Project trips were manually assigned at the proposed project driveways. The FSUTMS model output is provided in Appendix B.

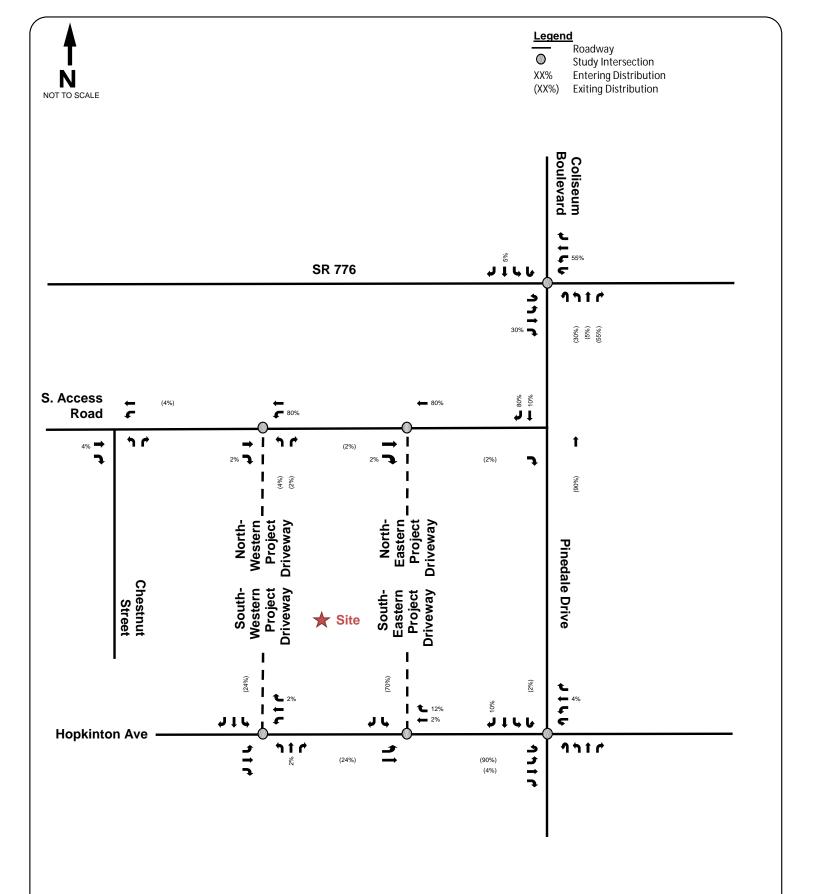
The net-new project distribution is shown in Figure 2 and pass-by project distribution is shown in Figure 3. The p.m. peak-hour project volumes are shown in Figure 4.



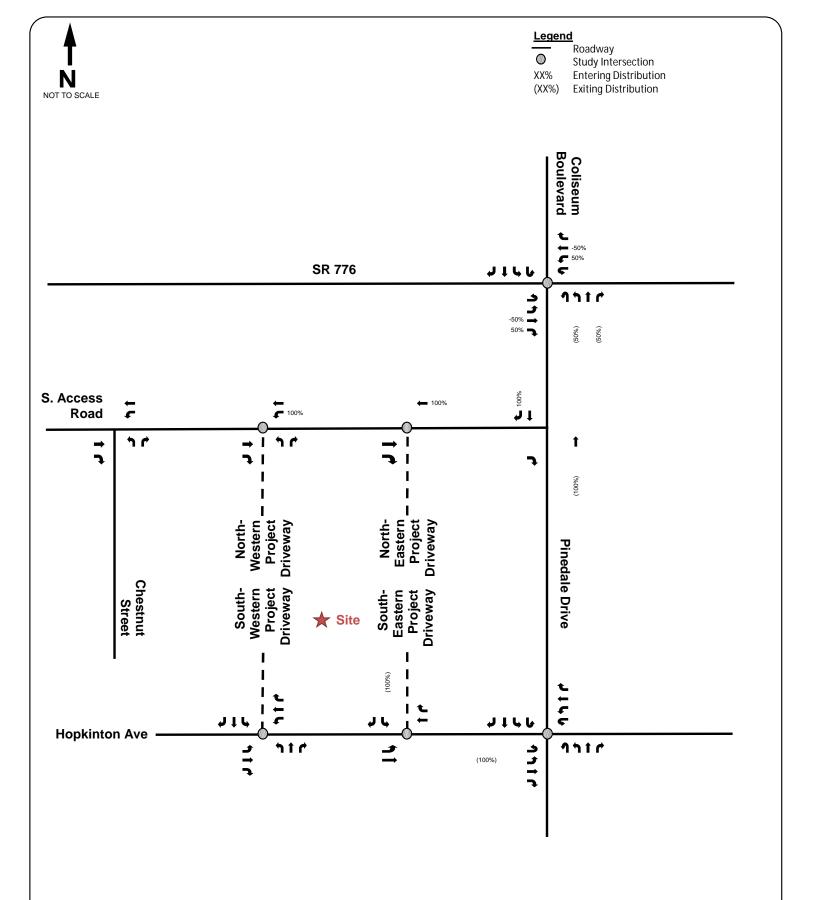
Table 1: P.M. Peak Hour Trip Generation Potential

						ΓΙΟΝΑL		GROS	S	INTER	NAL		TOTA	۸L	PASS-	ВҮ		NET NE	EW
ITE TRIP GENERATION CHAI	ITE TRIP GENERATION CHARACTERISTICS					BUTION		TRIPS	5	CAPTL	JRE	EX	TERNAL	TRIPS	CAPTL	JRE	E	XTERNAL	. TRIPS
	ITE	ITE		ITE	Per	cent					IC					PB			
Land Use	Edition	Code	Scale	Units	In	Out	In	Out	Total	Percent	Trips	In	Out	Total	Percent	Trips	In	Out	Total
Strip Retail Plaza (<40k)	11	822	1.4	KSF	50%	50%	5	5	10	40.0%	4	2	4	6	34.0%	2	1	3	4
Automobile Parts Sales	11	843	7.5	KSF	48%	52%	18	19	37	0.0%	0	18	19	37	0.0%	0	18	19	37
Coffee/Donut Shop with Drive-Through Window	11	937	1.4	KSF	50%	50%	27	27	54	7.4%	4	26	24	50	55.0%	28	12	10	22
Quick Lubrication Vehicle Shop	11	941	1.687	KSF	42%	58%	6	9	15	0.0%	0	6	9	15	0.0%	0	6	9	15
Automobile Care Center	11	942	7.2	KSF	48%	50%	14	15	29	0.0%	0	14	15	29	0.0%	0	14	15	29
						Total:	70	75	145	5.5%	8	66	71	137	21.9%	30	51	56	107

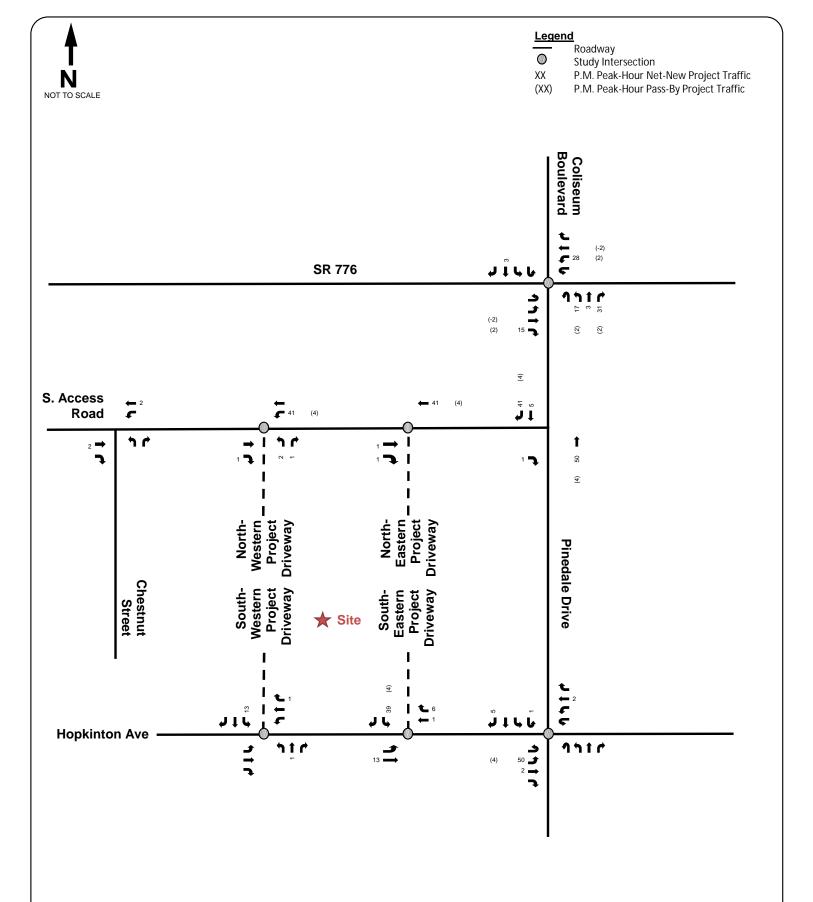
SR 776 & Pinedale Drive Commercial Page 6 Updated October 2024















SCHEDULED IMPROVEMENTS

The Work Programs for Charlotte County, Florida Department of Transportation (FDOT) District 1, developer committed improvements, and the Capital Improvement Program (CIP) for Charlotte County were reviewed for capacity enhancing improvements which are currently planned and funded for construction within the immediate vicinity of the project site. No improvement projects were identified.



STUDY AREA DETERMINATION

The proposed development is anticipated to generate over 1,000 net, new daily trips and, therefore, meets the requirements for a major traffic study pursuant to the Charlotte County Engineering Design Manual Part 7 *Traffic Impact Statement*. The study area roadway segments and intersections were defined in accordance with the Charlotte County Engineering Design Manual Part 7 *Traffic Impact Statement* for a major traffic study and are as follows:

- The first directly accessed roadway segment provided the project traffic consumes one percent (1.0%) or more of the facility's adopted service volume.
- Any roadway segment where the project traffic consumes five percent (5.0%) or more of the facility's adopted service volume.
- Any major intersection located along the significantly impacted roadway segments.

As identified in Table 2, the study area roadway segment consists of the segment of Pinedale Drive from SR 776 to Hopkinton Avenue. Two study area intersections were identified:

- SR 776 (S. McCall Road) & Pinedale Drive/Coliseum Boulevard
- Pinedale Drive & Hopkinton Avenue

The adopted LOS performance standard for the study area roadways of Pinedale Drive is LOS D based on LOS performance standard for the adjacent segment of SR 776 according to the Charlotte County 2023 Roadway Level of Service Data.



Table 2: Study Area Determination

ROADWAY			SERVICE	VOLUMES	PRC	JECT VOLUME	STUDY NETWORK DETERMINATION		
	FROM	то	EXISTING + COMMITED LANEAGE	LOS D SERVICE VOLUME PEAK HOUR TWO-WAY	DIRECTION	PROJECT TRAFFIC ASSIGN.	PROJECT TRAFFIC VOLUME	PROJECT TRAFFIC % OF SERVICE VOLUME	WITHIN STUDY NETWORK?
Pinedale Drive	Hopkinton Avenue	SR 776	2 Lane Undivided	1,818³	Northbound/ Southbound	90%	96	5.28%	Yes ¹
CD 77/	Oceanspray Boulevard	Coliseum Boulevard	4 Lane Divided	3,2222	Eastbound/ Westbound	30%	32	0.99%	No
SR 776	Coliseum Boulevard C.R. 771		4 Lane Divided	3,2222	Eastbound/ Westbound	55%	59	1.83%	No

- 1. First-accessed roadway segment
- 2. Obtained from Charlotte County's 2023 Roadway Level of Service Data
- 3. Obtained from FDOT's 2023 *Multimodal Quality/Level of Service Handbook* for a 2-Lane C3R Suburban Residential Peak Hour Two-Way roadway. A -10% Non-State Signalized Roadways factor applied to standard LOS D capacity of 2,020.



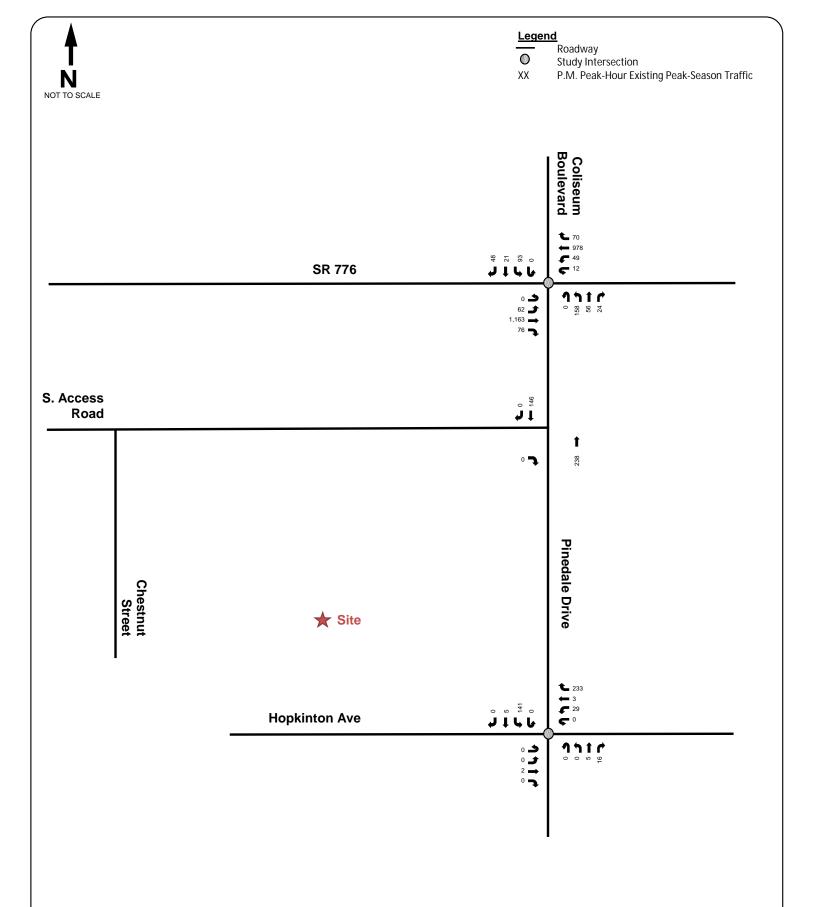
EXISTING TRAFFIC CONDITIONS

In accordance with the Charlotte County Engineering Design Manual Part 7 *Traffic Impact Statement*, existing traffic conditions were evaluated within the study network. The procedures used in this analysis are discussed below.

Pinedale Drive is a 2-lane undivided collector road that generally runs north-south adjacent to the site with a speed limit of 30 miles per hour (mph). Please note that Pinedale Drive does not have any posted speed limit signs, so the 30 mph is the adopted speed limit of all roads in the County unless otherwise posted. SR 776 is a 4-lane divided arterial roadway that runs east-west adjacent to the site with a posted speed limit of 55 mph. A service road (S. Access Road) runs south of, and parallel to SR 776 and forms a T-intersection with Pinedale Drive while allowing southbound right-in/eastbound right-out movements only.

Vehicle turning movement counts (TMC) were collected at the intersections of SR 776 & Pinedale Drive and Pinedale Drive & Hopkinton Avenue on Tuesday, December 20, 2022, during the p.m. peak period (4:00 p.m. to 6:00 p.m.) to quantify existing p.m. peak-hour conditions. Since this report is an update to a previous one, 2022 conditions were evaluated as existing intersection conditions. The vehicle counts at the study intersections were adjusted to reflect peak season conditions. This modification was performed using FDOT peak season conversion factors (PSCF) for Charlotte County. The p.m. peak-hour peak season existing (2022) traffic volumes are illustrated in Figure 5.

The raw turning movement counts and the peak season factors are provided in Appendix C.







Existing Conditions Roadway Analysis

The existing roadway segment analysis was conducted for the study area roadway segment of Pinedale Drive from Hopkinton Avenue to SR 776. Since the segment is not included in the *Charlotte County: 2023 Roadway Level of Service Data* report, FDOT's 2023 *Multimodal Quality/Level of Service Handbook* and peak-hour traffic volumes based on the TMC collected on December 20, 2022 (for Pinedale Drive segment) were utilized in the analysis of existing roadway conditions. The PSCF was applied to the TMC to reflect peak-season conditions. A growth rate of 2% per year was utilized as indicated in the *Charlotte County: 2023 Roadway Level of Service Data* report (Appendix D) for the project-adjacent roadway segment of SR 776 to reflect 2024 existing conditions. Existing lane geometry was considered along the study roadway segment.

The results of the existing conditions roadway analysis are summarized in Table 3 and indicate that the study area roadway segment currently operates at an acceptable LOS for existing peakhour conditions.

Supporting documentation for the study area roadway analysis is provided in Appendix D.



Table 3: Existing P.M. Peak-Hour Roadway Conditions

ROADWAY		ТО	SERVICE \	/OLUMES			5.40 5 11.0 (0.00 i)		
	FROM		EXISTING + COMMITED LANEAGE	LOS D SERVICE VOLUME PEAK HOUR	2022 VOLUME (2-WAY PEAK-HOUR) ²	GROWTH RATE PER YEAR	EXISTING (2024) VOLUME (2-WAY PEAK-HOUR)	EXCEED LOS SERVICE VOLUME?	
				TWO-WAY 1					
Pinedale Drive	Hopkinton Avenue	SR 776	2 Lane Undivided	1,818	384	2%	399	No	

^{1.} Peak-Hour Two-Way volumes were obtained from FDOT's 2023 *Multimodal Quality/Level of Service Handbook* for a 2-Lane C3R – Suburban Residential roadway. A -10% Non-State Signalized Roadways factor applied to standard LOS D capacity of 2,020.

^{2.} Obtained from applying PSCF to TMC collected on December 20, 2022.



Existing Conditions Intersection Analysis

Pursuant to the *Charlotte County Engineering Design Manual*, the overall intersection LOS performance standard for the study intersection is governed by the roadway segments LOS performance standard. Therefore, the study intersections were analyzed relative to a LOS D performance standard. Pursuant to the *Charlotte County Engineering Design Manual*, the LOS for individual lane approaches may exceed the LOS standard by one letter grade provided that the volume-to-capacity (v/c) ratio is less than or equal to one (1.0). A delay time of up to hundred (100) seconds is acceptable for an individual lane approach provided the v/c ratio is less than 0.8.

Using the p.m. peak-hour peak-season existing (2022) traffic volumes identified in Figure 5, an intersection analysis was conducted for the study area intersections. The intersection analysis was performed using *Synchro* version 11. As a part of this analysis, existing lane geometry and traffic controls were used in the evaluation of the study area intersections. Existing signal timings (where applicable) were also used for the analysis. Signal timing worksheets for the SR 776 & Pinedale Drive intersection are attached in Appendix D.

The results of the existing conditions intersection analysis are summarized in Table 4. The results of the analysis indicate that the study intersection of Pinedale Drive & Hopkinton Avenue currently operates at acceptable Levels of Service (LOS) for all approaches. For the intersection of SR 776 & Pinedale Drive, the approaches are anticipated to operate at acceptable LOS standards as well.

Synchro output worksheets of the existing conditions intersection analysis are provided in Appendix E.



Table 4: Existing P.M. Peak-Hour Intersection Conditions

Intersection	Intersection	LOS	Existing Conditions Max v/c Ratio Existing Conditions Max Delay Existing Conditions Approach LOS							
	Control	Standard	Eastbound Approach	Westbound Approach	Northbound Approach	Southbound Approach				
Dinadala Driva 0			0.01	0.31	-	0.10				
Pinedale Drive & Hopkinton Avenue	Unsignalized	D	12.0	10.5	0.0	7.3				
Hopkilitoli Avellue			В	В	А	А				
CD 774 9 Dinadala			0.64	0.54	0.73	0.44				
SR 776 & Pinedale Drive	Signalized	D	19.2	17.1	63.8	56.9				
Drive			В	В	E	E				

SR 776 & Pinedale Drive Commercial Page 18 Updated October 2024



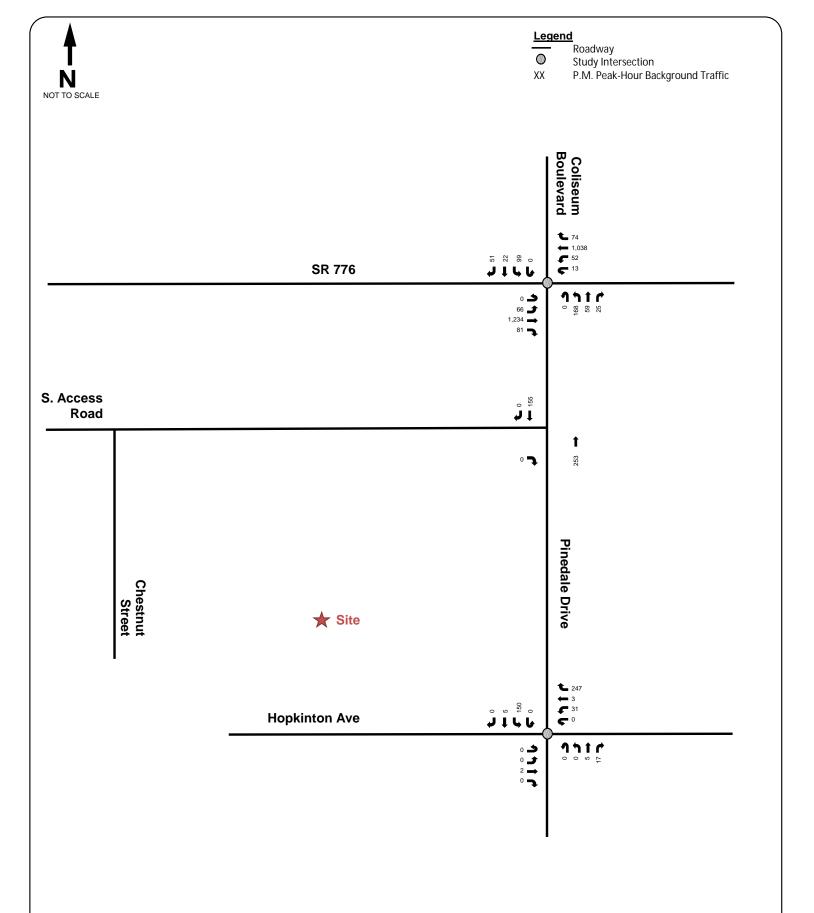
FUTURE TRAFFIC VOLUMES

Future traffic volumes consist of two components: project traffic and background (non-project) traffic estimates. Project traffic volumes have been previously identified in this report. Background traffic volumes, including the procedures used to develop these estimates, are provided below.

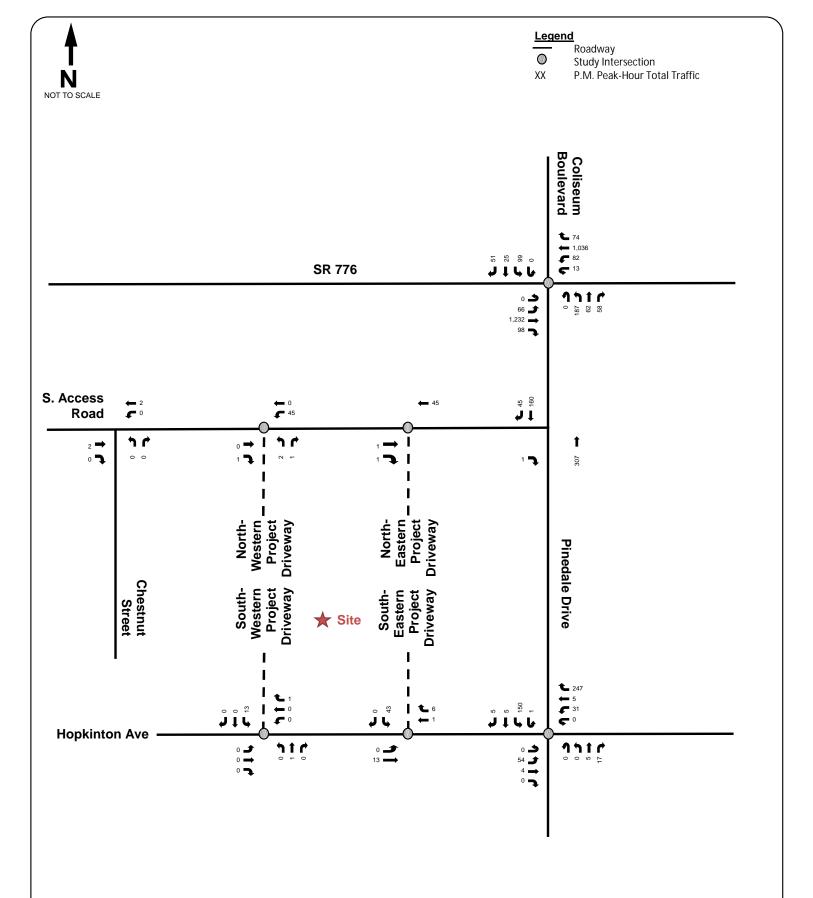
Future background traffic is defined as a growth of existing traffic forecasted to the buildout year of the proposed development. For the purposes of this analysis, 2025 was considered the buildout year for the development and thus, 2025 conditions were evaluated as the "future" year scenario. A growth rate of 2% was utilized as indicated in the *Charlotte County: 2023 Roadway Level of Service Data* report (Appendix D) for the roadway segment of SR 776 in the vicinity of the project.

The p.m. peak-hour background traffic volumes are illustrated in Figure 6. The project traffic, illustrated in Figure 4, was then added to these background traffic volumes to determine total traffic volumes. The p.m. peak-hour total traffic volumes are provided in Figure 7.

Volume development worksheets are documented in Appendix F.











FUTURE BACKGROUND TRAFFIC CONDITIONS

Future background traffic conditions were evaluated for the study area roadway segment and study intersections during the p.m. peak-hour. For this analysis, future background traffic estimates were considered. A determination of the impact of the non-project background traffic on the roadway network was made, including LOS conditions for the roadway segment within the study area.

Background Conditions Roadway Analysis

A roadway analysis was undertaken on the previously identified study roadway segment. The adopted service volume for the study area roadway segment was based on FDOT's 2023 *Multimodal Quality/Level of Service Handbook* for Peak Hour Two-Way service volume of a 2-Lane, C3R – Suburban Residential roadway. A -10% Non-State Signalized Roadways factor applied to standard LOS D capacity of 2,020. A growth rate of 2% was applied annually for one (1) year based on growth rate identified in *2023 Charlotte County Roadway Level of Service Data* (Appendix D) for the roadway segment of SR 776 in the vicinity of the project to develop background (2025) volumes.

The results of the background conditions roadway analysis are summarized in Table 5 and indicate that the study area roadway segment is anticipated to operate at an acceptable LOS for future background peak-hour conditions (without project traffic).

Supporting documentation for the study area roadway analysis is provided in Appendix D.



Table 5: Background P.M. Peak-Hour Roadway Conditions

ROADWAY			SERVICE '	VOLUMES	EXISTING		FUTURE		
	FROM	ТО	EXISTING + COMMITED	LOS D SERVICE VOLUME	(2024) VOLUME (2-WAY	GROWTH RATE	BACKGROUND (2025) VOLUME (2-WAY	EXCEED LOS SERVICE VOLUME?	
			LANEAGE	PEAK HOUR TWO-WAY ¹	PEAK-HOUR)		PEÀK-HOUR)		
Pinedale Drive	Hopkinton Avenue	SR 776	2 Lane Undivided	1,818	399	2%	407	No	

^{1.} Peak-Hour Two-Way volumes were obtained from FDOT's 2023 *Multimodal Quality/Level of Service Handbook* for a 2-Lane C3R – Suburban Residential roadway. A -10% Non-State Signalized Roadways factor applied to standard LOS D capacity of 2,020.



Background Conditions Intersection Analysis

Using the p.m. peak-hour background traffic volumes identified in Figure 6, an intersection analysis was conducted at the study area intersections. The analysis procedures used in this evaluation were consistent with those used to evaluate existing traffic conditions. The results of the background intersection analysis are summarized in Table 6 and indicate that the study intersection of Pinedale Drive & Hopkinton Avenue is anticipated to operate at acceptable Levels of Service (LOS) for all approaches. For the intersection of SR 776 & Pinedale Drive, the approaches are anticipated to operate at acceptable LOS standards as well.

Synchro output worksheets of the background conditions intersection analysis are provided in Appendix E.



Table 6: Background P.M. Peak-Hour Intersection Conditions

Intersection	Intersection	LOS	Background Conditions Max v/c Ratio Background Conditions Max Delay Background Conditions Approach LOS							
	Control	Standard	Eastbound Approach	Westbound Approach	Northbound Approach	Southbound Approach				
Dinadala Driva 9			0.01	0.34	-	0.11				
Pinedale Drive & Hopkinton Avenue	Unsignalized	D	12.2	10.7	0.0	7.3				
Hopkillton Avenue			В	В	А	Α				
CD 774 9 Dipodala			0.69	0.59	0.74	0.45				
SR 776 & Pinedale Drive	Signalized	D	21.6	18.9	64.0	55.9				
			C	В	E	Ē				



FUTURE TOTAL TRAFFIC CONDITIONS

Future total traffic conditions were evaluated for the proposed SR 776 & Pinedale Drive Commercial development during the p.m. peak-hour. For this analysis, total traffic estimates (background plus project) were considered. A determination of the impact of the project traffic on the roadway network was made, including LOS conditions for the roadway segments within the study area and for the study intersections.

Buildout Conditions Roadway Analysis

A roadway analysis was undertaken on the previously identified study roadway segment. Total roadway volumes for the roadway analysis were calculated by adding project traffic to the background roadway volumes. The analysis procedures for this evaluation were consistent with those used to evaluate existing and background traffic conditions.

The results of the total conditions roadway analysis are summarized in Table 7 and indicate that the study area roadway segment is anticipated to operate at an acceptable LOS for bulidout conditions during the p.m. peak-hour.

Supporting documentation for the study area roadway analysis is provided in Appendix D.



Table 7: Total Buildout P.M. Peak-Hour Roadway Conditions

ROADWAY	FROM	ТО	SERVICE	VOLUMES	FUTURE BACKGROUND (2025) VOLUME (2-WAY PEAK-HOUR)			FUTURE	
			EXISTING + COMMITED LANEAGE	LOS D SERVICE VOLUME PEAK HOUR TWO-WAY 1			PROJECT TRAFFIC	TOTAL (2025) VOLUME (2-WAY PEAK-HOUR)	EXCEED LOS SERVICE VOLUME?
Pinedale Drive	Hopkinton Avenue	SR 776	2 Lane Undivided	1,818	407	90%	96	503	No

^{1.} Peak-Hour Two-Way volumes were obtained from FDOT's 2023 *Multimodal Quality/Level of Service Handbook* for a 2-Lane C3R – Suburban Residential roadway. A -10% Non-State Signalized Roadways factor applied to standard LOS D capacity of 2,020.

SR 776 & Pinedale Drive Commercial Page 27 Updated October 2024



Buildout Conditions Intersection Analysis

Using the p.m. peak-hour total traffic volumes identified in Figure 7, an intersection analysis was conducted at the study area intersections. The analysis procedures used in this evaluation were consistent with those used to evaluate existing and background traffic conditions. The results of the buildout intersection analysis are summarized in Table 8 and indicate that the intersection of Pinedale Drive & Hopkinton Avenue is anticipated to operate at acceptable Levels of Service (LOS) for all approaches. For the intersection of SR 776 & Pinedale Drive, the approaches are anticipated to operate at acceptable LOS standards as well.

As requested by Charlotte County transportation department staff, the future northbound queues at the SR 776 & Pinedale Drive intersection were evaluated. The northbound left-turn lane is anticipated to have the highest 95th percentile northbound queue which is less than the distance between the SR 776 & Pinedale Drive intersection and the Pinedale Drive & Hopkinton Avenue intersection. Therefore, northbound queues at the SR 776 & Pinedale Drive intersection are not anticipated to back-up and impede the Pinedale Drive & Hopkinton Avenue intersection.

Synchro output worksheets of the buildout conditions intersection analysis are provided in Appendix E.



Table 8: Total Buildout P.M. Peak-Hour Intersection Conditions

Intersection	Intersection	LOS	Buildout Conditions Max v/c Ratio Buildout Conditions Max Delay Buildout Conditions Approach LOS							
	Control	Standard	Eastbound Approach	Westbound Approach	Northbound Approach	Southbound Approach				
Dinadala Driva 0			0.20	0.34	-	0.11				
Pinedale Drive & Hopkinton Avenue	Unsignalized	D	18.9	10.8	0.0	7.1				
Hopkiliton Avenue			С	В	Α	Α				
CD 774 9 Dipodolo		D	0.72	0.60	0.76	0.47				
SR 776 & Pinedale Drive	Signalized		24.7	20.9	63.0	55.6				
			С	С	E	Е				

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Project Turn Lane Evaluation

Turn lane warrant thresholds were reviewed to determine the need for exclusive turn lanes at the two (2) proposed project driveways along Hopkinton Avenue and the two (2) proposed project driveways along S. Access Road. Guidelines for determining the need for left-turn lanes and right-turn lanes were utilized based upon the criteria in the *National Cooperative Highway Research Program (NCHRP) 457*. The project traffic turning movement volumes are illustrated in Figure 7.

Based on the above guidelines, turn lanes are neither warranted nor recommended at any of the four (4) project driveways. Turn lane warrant worksheets are provided in Appendix G.



CONCLUSION

Based upon discussions with Charlotte County transportation department staff on February 5, 2024, and March 12, 2024, access to the site has been improved based upon direction from Charlotte County to be provided through the following proposed access connections:

- Two (2) full-access connections along Hopkinton Avenue
- One (1) full-access connection and one (1) right-in only connection along S. Access Road

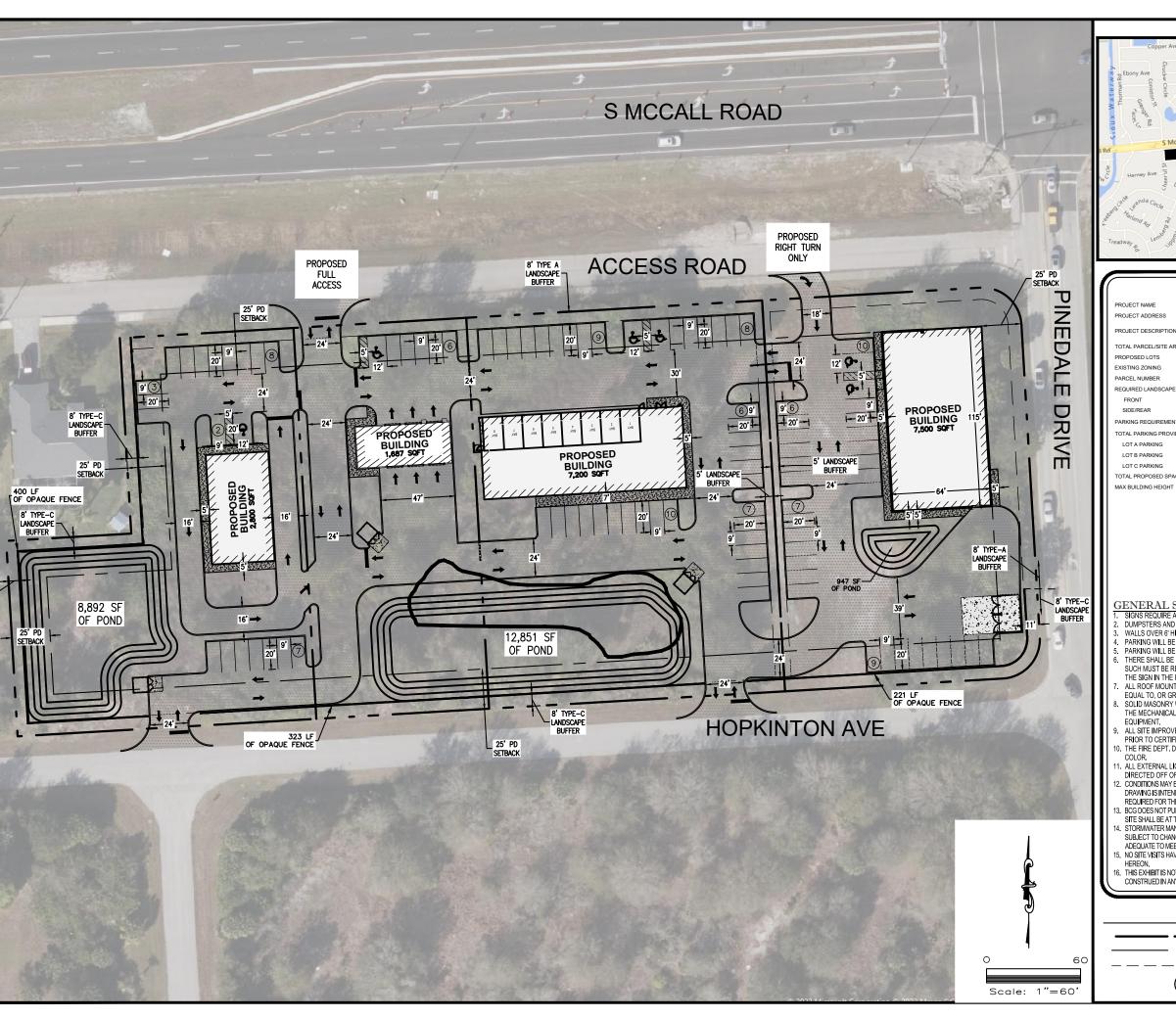
The project driveways meet the Charlotte County Engineering Design standard of 20-foot separation between commercial driveways. Based upon the results of the roadway segment analysis conducted for the existing, future background, and future total roadway conditions, the study roadway segment of Pinedale Drive from Hopkinton Avenue to SR 776 is projected to operate at an acceptable level of service following buildout of the development in 2025. Based upon the results of the intersection analysis conducted for the existing, future background, and future total roadway conditions, the study intersection of Pinedale Drive & Hopkinton Avenue is anticipated to operate at acceptable Levels of Service (LOS) for all approaches. For the intersection of SR 776 & Pinedale Drive, the approaches are anticipated to operate at acceptable LOS standards.

Based upon the guidelines for determining the need for exclusive left-turn lanes and right-turn lanes in *National Cooperative Highway Research Program (NCHRP) 457*, exclusive turn lanes are not warranted at any of the project driveways.



APPENDIX

APPENDIX A: Conceptual Site Plan





SITE DATA TABLE

PROJECT ADDRESS

PROPOSED LOTS

REQUIRED LANDSCAPE BUFFERS

PARKING REQUIREMENTS

TOTAL PARKING PROVIDED

LOT B PARKING

TOTAL PROPOSED SPACES

MULTI-USE DEVELOPMENT 6397 PINEDALE DR.

PROPOSAL FOR A NEW 510 SF QSR, 1,687 SF AUTO SERVICE CENTER, AND A NEW 7,500 SF AUTO PARTS RETAIL, 10,640 SF RETAIL.

153,482 (3.52 AC) A: 40,815 (0.94 AC), B: 47,296 (1.09 AC), C: 65,370 (1.50 AC)

RSF3.5

412105477001, 412105477002, 412105477003, 41210547700

10' STREET / 0' SIDE INTERIOR / 10' REAR

(1) SPACE PER 100 SQFT GFA = 25 SPACES

30 REGULAR (9' x 20'), 2 ADA (12' x 20') 38 REGULAR (9' x 20'), 2 ADA (12' x 20')

24 REGUALR (9' x 20'), 2 ADA (12' x 20')

GENERAL SITE NOTES:

. SIGNS REQUIRE A SEPARATE PERMIT.

DUMPSTERS AND MECHANICAL EQUIPMENT WILL BE SCREENED FROM THE PUBLIC. WALLS OVER 6' HIGH APPROVED BY SEPARATE PERMIT.

PARKING WILL BE PAVED.

- PARKING WILL BE WITHIN 600' OF BUILDING.
 THERE SHALL BE NO OBSTRUCTION OF SITE SIGNAGE BY LANDSCAPE PLANT MATERIAL, AND SUCH MUST BE RELOCATED/CORRECTED BEFORE THE FIELD INSPECTION WILL ACCEPT/PASS THE SIGN IN THE FIELD OR ISSUE A CERTIFICATE OF OCCUPANCY FOR A PROJECT.
- ALL ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE FULLY SCREENED BY PARAPET WALLS EQUAL TO, OR GREATER THAN, THE HIGHEST POINT ON THE MECHANICAL EQUIPMENT.
- SOLID MASONRY WALLS AND GATES EQUAL TO, OR GREATER THAN, THE HIGHEST POINT ON THE MECHANICAL EQUIPMENT SHALL SCREEN ALL GROUND MOUNTED MECHANICAL
- ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETED PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE. THE FIRE DEPT. DOUBLE CHECK ASSEMBLY SHALL BE PAINTED TO MATCH ADJACENT WALL
- . ALL EXTERNAL LIGHTING SHALL BE LOCATED AND DESIGNED TO PREVENT RAYS FROM BEING
- DIRECTED OFF OF THE PROPERTY UPON WHICH THE LIGHTING IS LOCATED.

 CONDITIONS MAY EXIST THAT COULD RESTRICT THE DEVELOPMENT OF THIS SITE AS SHOWN. THIS DRAWING IS INTENDED TO BE CONCEPTUAL ONLY AND ADDITIONAL RESEARCH AND DESIGN WOULD BE REQUIRED FOR THE PREPARATION OF A SITE PLAN THAT MEETS LOCAL JURISDICTIONAL CODES.
- . BCG DOES NOT PURPORT THAT THIS SITE CAN BE DEVELOPED AS SHOWN. THE PURCHASE OF THIS SITE SHALL BE AT THE OWNER/DEVELOPER'S SOLE EXPENSE. STORMWATER MANAGEMENT FACILITY SHOWN ON THIS PLAN ARE PURELY CONCEPTUAL AND IS
- SUBJECT TO CHANGE UPON FINAL CIVIL DESIGN. BCG DOES NOT PURPORT THAT WHAT IS SHOWN IS ADEQUATE TO MEET ALL JURISDICTIONAL REQUIREMENTS. NO SITE VISITS HAVE BEEN PERFORMED TO ENSURE THE ACCURACY OF THE AERIAL IMAGE SHOWN
- THIS EXHIBIT IS NOT INTENDED TO BE USED AS A CONSTRUCTION DOCUMENT, AND SHOULD NOT BE CONSTRUED IN ANYWAY TO BE USED FOR CONSTRUCTION PURPOSES.

PROPOSED LEGEND

BUILDING SETBACK LINE LANDSCAPE BUFFER (12) PARKING COUNT

ALW ALW

DSGN DRAWN CHK 011116-01-001 SCALE 1" = 60'

VERSION

MULTI-USE DEVELOPMENT

6397 PINEDALE DR. PORT CHARLOTTE, FL 33981

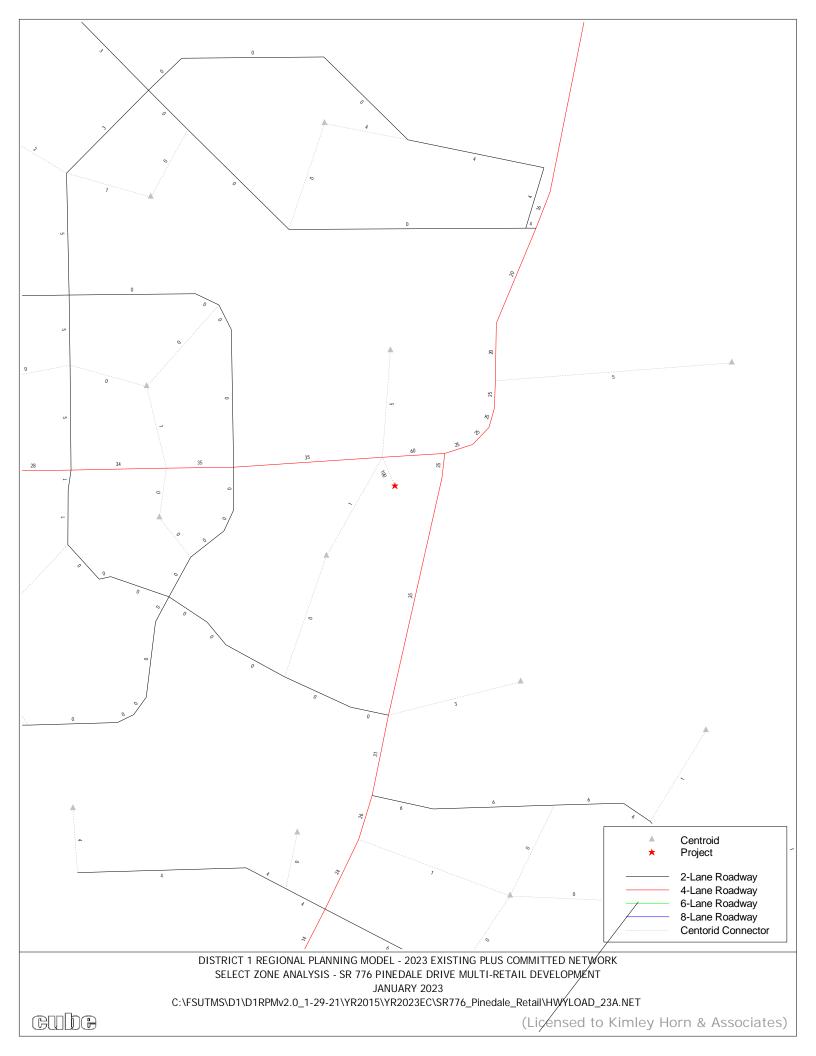
APPENDIX B: Internal Capture Calculations FSUTMS Model Output

Internal Capture Reduction Calculations

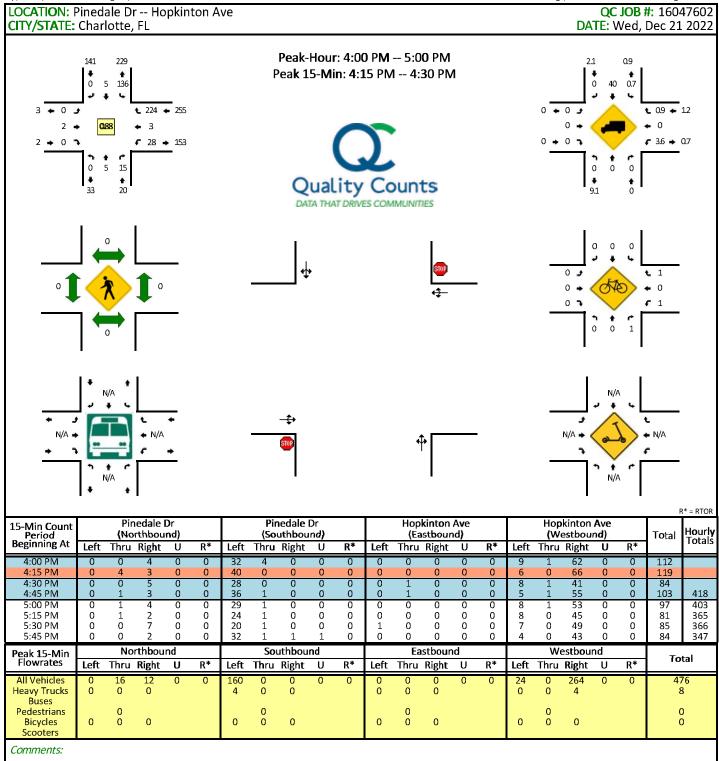
Methodology for A.M. Peak Hour and P.M. Peak Hour based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

		SUMI	Mary (E	XISTING)				
			GROSS TRIP	GENERATION				
		Da	aily	A.M. Pea	ak Hour	P.M. Peak Hour		
	Land Use	Enter	Exit	Enter	Exit	Enter	Exit	
—	Office							
INPUT	Retail					5	5	
	Restaurant					27	27	
	Cinema/Entertainment							
	Residential							
	Hotel							
		0	0	0	0	32	32	
		Da	INTERN	IAL TRIPS A.M. Pea	ak Hour	P.M. Pea	ak Hour	
	Land Use	Enter	Exit	Enter	Exit	Enter	Exit	
OUTPUT	Office	0	0	0	0	0	0	
Ы	Retail	0	0	0	0	3	1	
	Restaurant	0	0	0	0	1	3	
\preceq	Cinema/Entertainment	0	0	0	0	0	0	
\circ	Residential	0	0	0	0	0	0	
	Hotel	0	0	0	0	0	0	
		0	0	0	0	4	4	
	Total % Reduction	0.	0%	0.0	%	12.5%		
OUTPUT	Office							
ا ک	Retail					40.0%		
	Restaurant					7.4	%	
\cap	Cinema/Entertainment							
0	Residential							
	Hotel							
			EXTERN	IAL TRIPS				
	Londilles	Da	aily	A.M. Pea	ak Hour	P.M. Pea	ak Hour	
	Land Use	Enter	Exit	Enter	Exit	Enter	Exit	
OUTPUT	Office	0	0	0	0	0	0	
P	Retail	0	0	0	0	2	4	
J	Restaurant	0	0	0	0	26	24	
\supset	Cinema/Entertainment	0	0	0	0	0	0	
	Residential	0	0	0	0	0	0	
	Hotel	0	0	0	0	0	0	
		0	0	0	0	28	28	

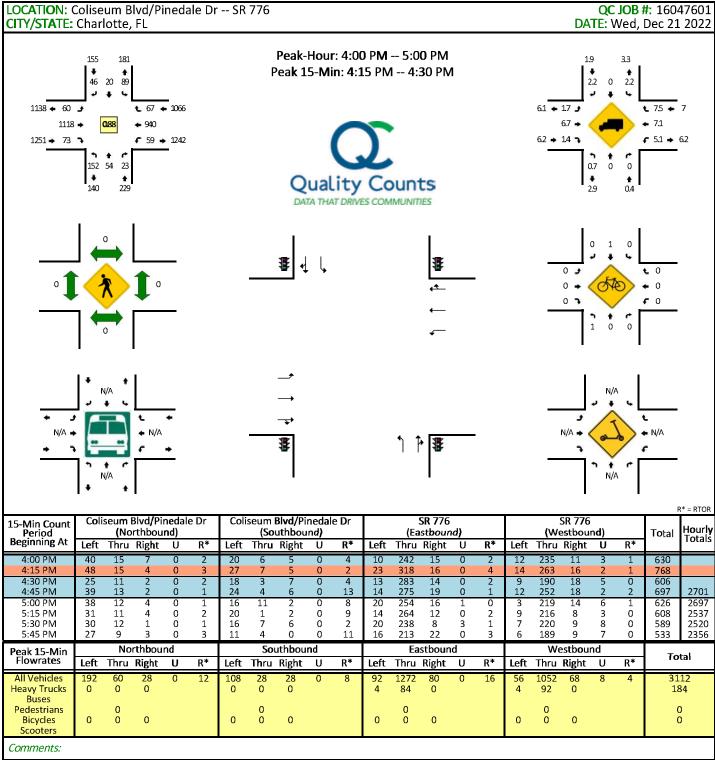


APPENDIX C: Raw Turning Movement Counts and Peak Season Factor Report



Report generated on 12/28/2022 8:50 AM

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



Report generated on 12/28/2022 8:50 AM

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

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL

CATEGORY: 0100 COUNTYWIDE

CATEGO	DRY: 0100 COUNTYWIDE		MOCF: 0.95
WEEK	DATES	SF	PSCF
1	01/01/2021 - 01/02/2021	0.94	0.99
2	01/03/2021 - 01/09/2021	0.99	1.04
3	01/10/2021 - 01/16/2021	1.05	1.11
4	01/17/2021 - 01/23/2021	1.03	1.08
5	01/24/2021 - 01/30/2021	1.02	1.07
6	01/31/2021 - 02/06/2021	1.00	1.05
* 7	02/07/2021 - 02/13/2021	0.99	1.04
* 8	02/14/2021 - 02/20/2021	0.97	1.02
* 9	02/21/2021 - 02/27/2021	0.96	1.01
*10	02/28/2021 - 03/06/2021	0.94	0.99
*11	03/07/2021 - 03/13/2021	0.93	0.98
*12	03/14/2021 - 03/20/2021	0.91	0.96
*13	03/21/2021 - 03/27/2021	0.92	0.97
*14 *15	03/28/2021 - 04/03/2021	0.93	0.98
*16	04/04/2021 - 04/10/2021 04/11/2021 - 04/17/2021	0.94 0.96	0.99 1.01
*17	04/11/2021 - 04/11/2021 04/18/2021 - 04/24/2021	0.97	1.02
*18	04/25/2021 - 05/01/2021	0.99	1.04
*19	05/02/2021 - 05/08/2021	1.00	1.05
20	05/09/2021 - 05/15/2021	1.02	1.07
21	05/16/2021 - 05/22/2021	1.02	1.07
22	05/23/2021 - 05/29/2021	1.02	1.07
23	05/30/2021 - 06/05/2021	1.02	1.07
24	06/06/2021 - 06/12/2021	1.03	1.08
25	06/13/2021 - 06/19/2021	1.03	1.08
26	06/20/2021 - 06/26/2021	1.04	1.09
27	06/27/2021 - 07/03/2021	1.05	1.11
28	07/04/2021 - 07/10/2021	1.06	1.12
29	07/11/2021 - 07/17/2021	1.07	1.13
30	07/18/2021 - 07/24/2021	1.08	1.14
31	07/25/2021 - 07/31/2021	1.08	1.14
32	08/01/2021 - 08/07/2021	1.09	1.15
33 34	08/08/2021 - 08/14/2021 08/15/2021 - 08/21/2021	1.10 1.10	1.16 1.16
35	08/13/2021 - 08/21/2021	1.10	1.16
36	08/29/2021 - 08/28/2021	1.10	1.16
37	09/05/2021 - 09/11/2021	1.09	1.15
38	09/12/2021 - 09/18/2021	1.09	1.15
39	09/19/2021 - 09/25/2021	1.06	1.12
40	09/26/2021 - 10/02/2021	1.04	1.09
41	10/03/2021 - 10/09/2021	1.02	1.07
42	10/10/2021 - 10/16/2021	0.99	1.04
43	10/17/2021 - 10/23/2021	0.98	1.03
44	10/24/2021 - 10/30/2021	0.98	1.03
45	10/31/2021 - 11/06/2021	0.97	1.02
46	11/07/2021 - 11/13/2021	0.96	1.01
47	11/14/2021 - 11/20/2021	0.95	1.00
48	11/21/2021 - 11/27/2021	0.95	1.00
49	11/28/2021 - 12/04/2021	0.95	1.00
50	12/05/2021 - 12/11/2021	0.94	0.99
51 52	12/12/2021 - 12/18/2021 12/19/2021 - 12/25/2021	0.94	0.99 1.04
52 53	12/19/2021 - 12/25/2021	1.05	1.11
55	12/31/2021	1.00	±•±±

^{*} PEAK SEASON

APPENDIX D: Roadway Segment Analysis Documentation and Signal Timing Worksheets

CHARLOTTE COUNTY: 2023 ROADWAY LEVEL OF SERVICE DATA

															culations ¹		
٧٧	Roadway	Station	From	То	Speed	Lanes	2023 AADT	Sugg. Gr.		100 th Hr	Level of Service Limits (P Hr. Two-way Vol.)				Level of	Percent (%)	
SNO	,				-,			Rate	K100	Vol.	В	C C	D D	1.) E	Adopted	Current	- Capacity Used
169	Rotonda Blvd E	154	Boundary Blvd.	C.R. 771	35	2U	4,552	5.00%	0.091	414	-	594	1197	1269	D	С	35%
170	Rotonda Blvd N	122	Parade Cir.	Rotonda Cir.	35	2U	2,195	2.00%	0.091	200	-	594	1197	1269	D	С	17%
171	Rotonda Blvd W	135	Normandy Way	Boundary Blvd.	35	2U	6,005	2.00%	0.091	546	-	594	1197	1269	D	С	46%
172	Rotonda Blvd W	136	Boundary Blvd.	Parade Cir.	35	2U	3,023	5.00%	0.091	275	-	594	1197	1269	D	С	23%
173	Jones Loop Road S	193	Taylor Rd.	I-75	45	2U	2,329	2.00%	0.091	212	-	1359	1440	*	D	С	15%
174	San Casa Drive	138	Worth Ave.	C.R. 775	45	2U	6,147	2.00%	0.091	559	-	1359	1440	*	D	С	39%
175	San Casa Drive	139	S.R. 776	Worth Ave.	45	2U	6,732	2.00%	0.091	613	-	1359	1440	*	D	С	43%
176	Sandhill Blvd	109	Kings Highway	Deep Creek Blvd.	40	2U	13,548	2.00%	0.091	1,233	-	1359	1440	*	D	С	86%
177	Sandhill Blvd	110	Deep Creek Blvd.	Rio De Janeiro Ave.	40	2U	5,989	2.00%	0.091	545	-	1359	1440	*	D	С	38%
178	Sheehan Blvd	231	Midway Blvd.	Alton Rd.	30	2U	2,595	5.00%	0.091	236	-	594	1197	1269	D	С	20%
179	Shreve Street	150	Henry St.	Pompano Ter.	30	2U	4,543	2.00%	0.091	413	-	594	1197	1269	D	С	35%
180	Spinnaker Blvd	215	Cougar Way	Gulfstream Blvd.	30	2U	2,712	2.00%	0.091	247	-	594	1197	1269	D	С	21%
181	Spinnaker Blvd	214	Gulfstream Blvd.	S.R. 776	30	2U	2,190	2.00%	0.091	199	-	594	1197	1269	D	С	17%
182	Spinnaker Blvd	149	S.R. 776	Willmington Blvd.	40	2U	1,365	5.00%	0.091	124	-	1359	1440	*	D	С	9%
183	SR 776	306	Murdock Cir./Enterprise Dr.	U.S. 41	55	4D	23,557	2.00%	0.091	2,144	-	3078	3222	*	D	С	67%
184	SR 776	86	Biscayne Dr.	Murdock Cir/Enterprise Dr.	55	4D	26,881	2.00%	0.091	2,446	-	3078	3222	*	D	С	76%
185	SR 776	14	El Jobean Bridge	Biscayne Dr.	55	4D	34,263	3.00%	0.091	3,118	-	3078	3222	*	D	D	97%
186	SR 776	13	C.R. 771	El Jobean Bridge	55	4D	37,547	3.00%	0.091	3,417	-	3078	3222	*	D	Е	106%
187	SR 776	160	Coliseum Blvd.	C.R. 771	55	4D	25,912	2.00%	0.091	2,358	-	3078	3222	*	D	С	73%
188	SR 776	194	Oceanspray Blvd.	Coliseum Blvd.	55	4D	24,414	2.00%	0.091	2,222	-	3078	3222	*	D	С	69%
189	SR 776	145	Sunnybrook Blvd.	Oceanspray Blvd.	55	4D	24,846	2.00%	0.091	2,261	-	3078	3222	*	D	С	70%
190	SR 776	146	Spinnaker Blvd.	Sunnybrook Blvd.	55	4D	20,664	2.00%	0.091	1,880	-	3078	3222	*	D	С	58%
191	SR 776	143	Gulfstream Blvd.	Spinnaker Blvd.	55	4D	28,924	2.00%	0.091	2,632	-	3078	3222	*	D	С	82%
192	SR 776	144	Oriole Blvd.	Gulfstream Blvd.	45	4D	33,412	2.00%	0.091	3,040	-	3078	3222	*	D	С	94%
193	SR 776	142	Pine St.	Oriole Blvd.	45	4D	30,174	2.00%	0.091	2,746	-	3078	3222	*	D	С	85%
194	SR 776	120	Beach Rd.	Pine St.	45	4D	26,092	2.00%	0.091	2,374	-	3078	3222	*	D	С	74%
195	Sunnybrook Blvd	134	Boundary Blvd.	Rotonda Blvd. North	35	2U	4,473	2.00%	0.091	407	-	594	1197	1269	D	С	34%
196	Sunnybrook Blvd	133	Gulfstream Blvd.	Boundary Blvd.	40	2U	10,162	2.00%	0.091	925	-	1359	1440	*	D	С	64%
197	Sunnybrook Blvd	148	S.R. 776	Oceanspray Blvd.	35	2U	6,024	2.00%	0.091	548	-	594	1197	1269	D	С	46%
198	Sunnybrook Blvd	147	Waterford Ave.	S.R. 776	35	2U	2,797	2.00%	0.091	255	-	594	1197	1269	D	С	21%
199	Sunnybrook Road	233	Highlands Rd.	Broadpoint Dr.	35	2U	5,719	3.00%	0.091	520	-	594	1197	1269	D	С	43%
200	Taylor Road	179	U.S. 41 N	Burnt Store Rd.	45	2U	8,549	3.00%	0.091	778	-	1359	1440	*	D	С	54%
201	Taylor Road	180	Burnt Store Rd.	Airport Rd.	45	2U	8,988	2.00%	0.091	818	-	1359	1440	*	D	С	57%
202	Taylor Road	181	Airport Rd.	Cooper St.	45	2U	6,559	2.00%	0.091	597	-	1359	1440	*	D	С	41%
203	Toledo Blade Blvd	93	Collingswood Blvd.	S.R. 776	35	2U	7,496	5.00%	0.091	682	-	594	1197	1269	D	D	57%
204	Toledo Blade Blvd	196	S.R. 776	U.S. 41 N	45	2U	8,349	3.00%	0.091	760	-	1359	1440	*	D	С	53%
205	Toledo Blade Blvd	16	U.S. 41 N	Sarasota Co Line	45	4D	15,854	2.00%	0.091	1,443	-	3078	3222	*	D	С	45%
206	Tucker's Grade	188	U.S. 41	I-75	45	4D	14,767	5.00%	0.091	1,344	-	3078	3222	*	D	С	42%
208	US Highway 17	182	I-75	Marlympia Way	45	6D	15,078	2.00%	0.091	1,372	-	5250	5390	*	D	С	25%
209	US Highway 17	183	Regent Rd.	I-75	45	6D	33,212	5.00%	0.091	3,022	-	5250	5390	*	D	С	56%
210	US Highway 17	284	Washington Loop Rd. S	Constitutional Ave.	45	6D	16,456	2.00%	0.091	1,498	-	5250	5390	*	D	С	28%
211	US Highway 17	112	Peace River Shores Blvd.	Washington Loop Rd. S	45	4D	16,991	5.00%	0.091	1,546	-	3078	3222	*	D	C	48%



C3C & C3R

Motor Vehicle Arterial Generalized Service Volume Tables

Peak Hour Directional

D В С Ε 1,070 ** 1 Lane 760 1,520 ** 2 Lane 1,810 3 Lane 2,360 2,680 ** 3,170 3,180 ** 4 Lane

Peak Hour Two-Way

	В	С	D	E
2 Lane	*	1,380	1,950	**
4 Lane	*	2,760	3,290	**
6 Lane	*	4,290	4,870	**
8 Lane	*	5,760	5,780	**

AADT

	В	С	D	Е
2 Lane	*	15,300	21,700	**
4 Lane	*	30,700	36,600	**
6 Lane	*	47,700	54,100	**
8 Lane	*	64,000	64,200	**



(C3C-Suburban

Commercial)

(C3R-Suburban Residential)

	В	С	D	E
1 Lane	*	970	1,110	**
2 Lane	*	1,700	1,850	**
3 Lane	*	2,620	2,730	**

	В	С	D	Е
2 Lane	*	1,760	2,020	**
4 Lane	*	3,090	3,360	**
6 Lane	*	4,760	4,960	**

	В	С	D	E
2 Lane	*	19,600	22,400	**
4 Lane	*	34,300	37,300	**
6 Lane	*	52,900	55,100	**

Time of Day Plan

Designed By: M. Munson
Date: 5/31/2018
Checked By: P. Kurth

Date: 5/31/2018

System ID: 01050C

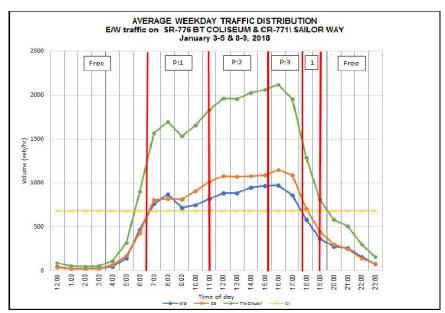
Section: 01050

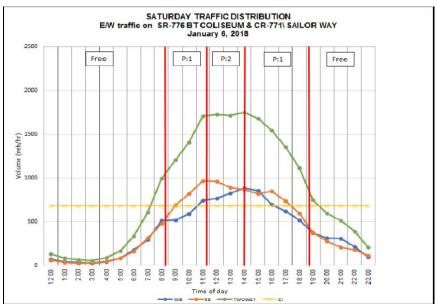
From: Coliseum Boulevard
To: CR 771/Sailors Way

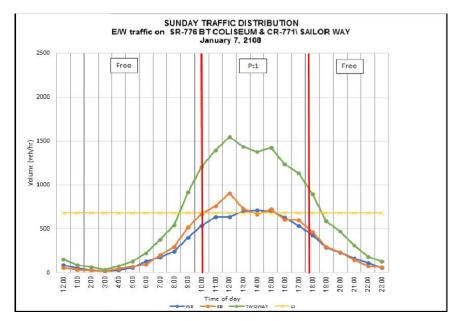
ALL SEASON PLAN

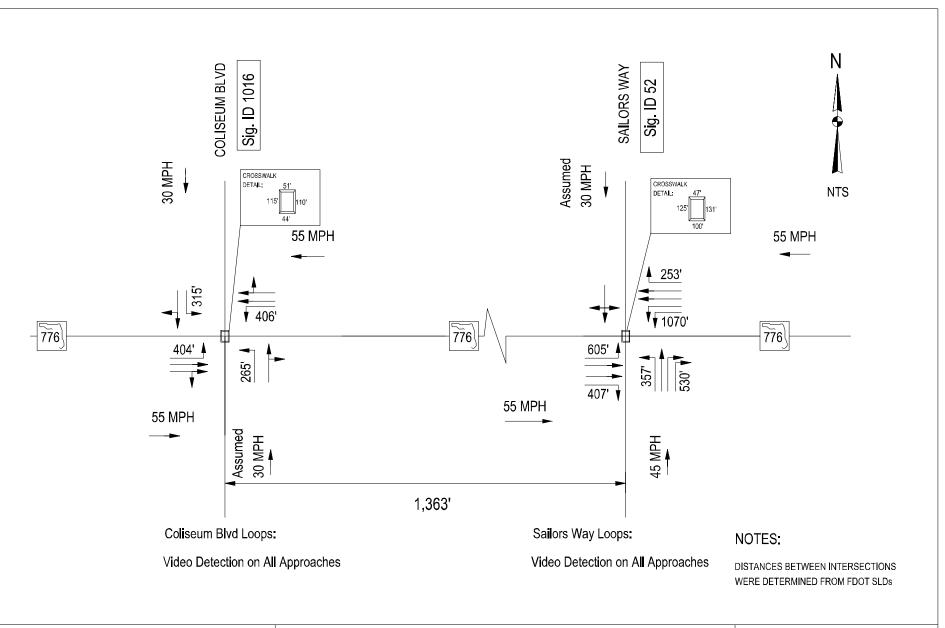
Day	Time	Pattern (C/S/O)	Cycle Length		
	0000-0630	-	FREE		
	0630-1100	1	130		
	1100-1515	2	140		
Monday Thru Friday	1515-1745	3	150		
Monday Iniu Filday	1745-1900	1	130		
	1900-0000	-	FREE		
	0000-0815	-	FREE		
	0815-1115	1	130		
Coturdov	1115-1400	2	140		
Saturday -	1400-1845	1	130		
	1845-0000	-	FREE		
	0000-1000	-	FREE		
	1000-1745	1	130		
	1745-0000		FREE		
Sunday					

COUPLING INDEX (SR 776 from Coliseum Blvd to CR 771/Sailors Way)











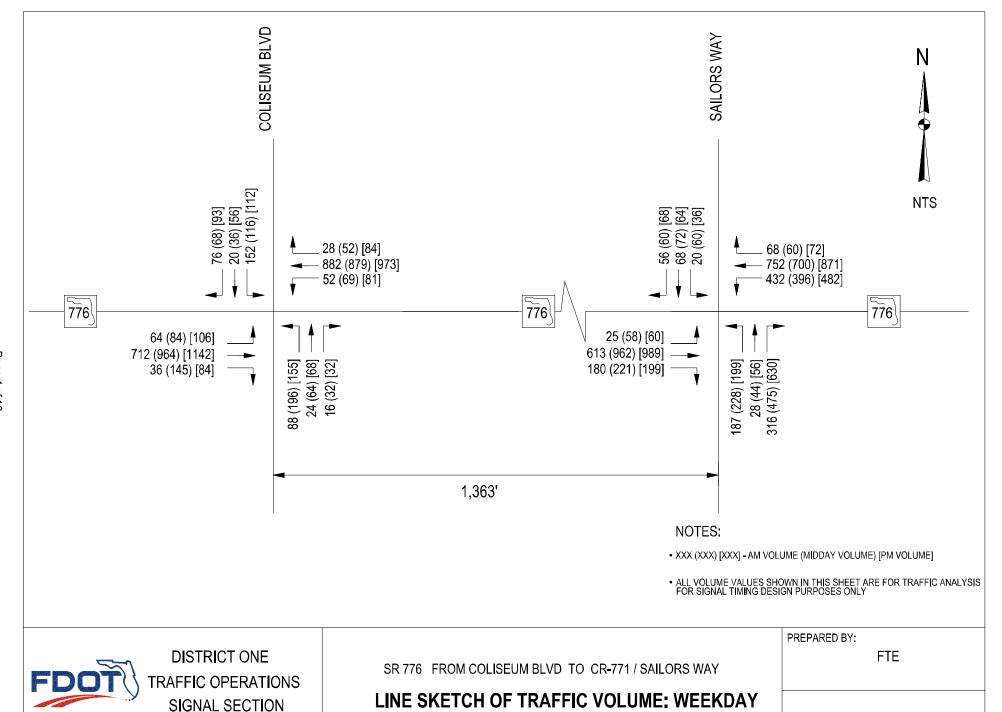
SR 776 FROM COLISEUM BLVD TO CR-771 / SAILORS WAY

LINE SKETCH OF LANE CONFIGURATIONS

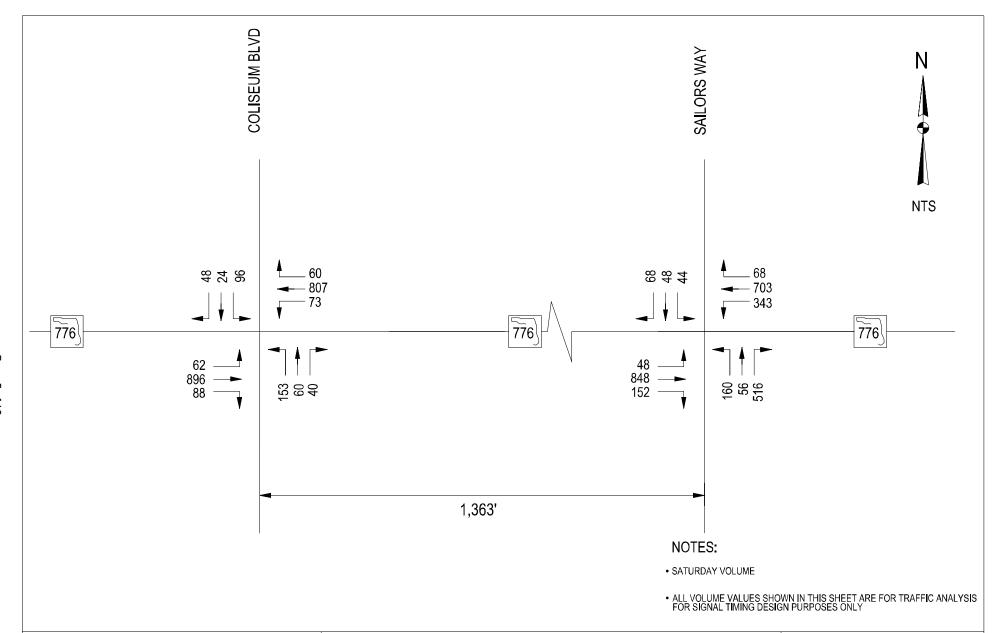
PREPARED BY:

FTE

DATE: 01/09/2018



DATE: 01/11/2018





SR 776 FROM COLISEUM BLVD TO CR-771 / SAILORS WAY

LINE SKETCH OF TRAFFIC VOLUME: SATURDAY

ᇡ				

FTE

DATE: 01/11/2018

Designed By:	M. Munson
Date:	5/31/2018
Checked By:	P. Kurth
Date:	5/31/2018

Location Details							
Section: 01050	Mile Post: 9.156						
Major Street: SR 776/McCall Road	Orientation E-W						
Minor Street: Coliseum Boulevard	Orientation N-S						
Sig ID: 1016	System ID: 01050C						

					Conti	roller Timin	ıgs (secon	ıds)					
Moveme	ent # (Control	ler Phase Ø)	1	2	3	4	5	6	7	8		Notes	
	Direction EBL		EBL	WB		NB	WBL	EB		SB			
	Turn Type Prot						Prot/Perm						
	Min Gree	en	5	20		5	5	20		5			
	Ext		3	5		3	3	5		3			
	Yellow		5.6	5.6		3.7	5.6	5.6		3.7			
	All Red		2.0	2.0		2.5	2.0	2.0		2.5			
	Max I		15	40		30	15	40		20			
	Max II		30	120		50	30	120		50			
	Walk			7		7		7		7			
Fla	ashing Don	't Walk		15		32		13		33			
C	Detector Me	mory											
De	et. Cross S	witch.	YES				YES						
	Dual Ent	ry		ON		ON		ON		ON			
	Vehicle Re	ehicle Recall MIN MIN											
	CNA												
	Rest in W	alk											
					Coordi	ination Tim	ings (seco	onds)					
Pattern	c-s-o	Cycle Length				Spi		·			Offset	Sequence	Coord Phase
1		130	16	84		30	16	84		30	30	1	2
2		140	17	88		35	17	88		35	35	1	2
3		150	18	101		31	17	102		31	25	1	2

Offset Reference Point		SOF	7 (Sequenc	e 1)
End of Main Street Green	Ring 1	1	2	4
	Ring 2	5	6	8

Notes:

- 1) Use 'Max I" during FREE operations and 'Max II' during coordination
- 2) Use Fixed Force Offs
- 3) Max recall phases 2 & 6 during coordination
- 4) Sequence 1 used during FREE operation
- 5) Program phase restriction to omit phase 1 when phase 2 is green, and omit phase 5 when phase 6 is green
- 6) Program 8 sec of detection delay for minor street right turn movements
- 7) Controller Brand Naztec Controller Model:980
- 7.a) Program 'MinPerm' for pedestrian phases during coordination
- 7.b) Enable 'Stop In Walk' during coordination
- 7.c) Program 'Return Hold' during coordination
- 7.d) Short/Long percentage is 10/22 for all paterns
- 7.e) Program Walk Recycle. '3478_INH' during coordination

Designed By:	M. Munson
Date:	5/31/2018
Checked By:	P. Kurth
Date:	5/31/2018

L	ocation Details
Section: 01050	Mile Post: 9.403
Major Street: SR 776/McCall Road	Orientation E-W
Minor Street: CR 771/Sailors Way	Orientation N-S
Sig ID: 52	System ID: 01050C

					Cont	roller Timin	gs (secon	ds)					
Moveme	ent #(Control	ler Phase Ø)	1	2	3	4	5	6	7	8		Notes	
	Directio	n	EBL	WB		NB	WBL	EB	NBL	SB			
	Turn Typ	pe	Prot				Prot		Prot				
	Min Gree	en	5	20		10	5	20	5	5			
	Ext		3	5		3	3	5	3	3			
	Yellow	1	5.6	5.6		4.9	5.6	5.6	4.9	4.9			
	All Rec	i	2.0	2.0		2.5	3.0	2.0	2.0	2.5			
	Max I		20	50		30	30	50	20	20			
	Max II		30	100		70	40	100	40	40			
	Walk			7		7		7		7			
Fla	shing Don	't Walk		14		38		29		36			
D	etector Me	emory											
De	et. Cross S	witch.											
	Dual Ent	ry		ON		ON		ON		ON			
	Vehicle Re	ecall		MIN				MIN					
	CNA												
	Rest in W	alk											
					Coord	ination Tim	ings (seco	nds)					
Pattern	c-s-o	Cycle Length				Spl		·			Offset	Sequence	Coord Phase
1		130	16	62		52	33	45	27	25	0	3	6
2		140	16	72		52	32	56	28	24	0	1	2
3		150	16	77		57	34	59	29	28	0	3	6
													<u> </u>
	_												
													1

Offset Reference Point		
End of Main Street Green	Ring 1	1

Notes:

1) Use 'Max I" during FREE operations and 'Max II' during coordination

2) Use Fixed Force Offs

3) Max recall phases 2 & 6 during coordination

4) Sequence 1 used during FREE operation

5) Program 8 sec of detection delay for minor street right turn movements

6) Controller Brand Naztec Controller Model:980

7) No Short Phase 5 and 7

8) Lock Call phase 7

8.a) Program 'MinPerm' for pedestrian phases during coordination

8.b) Enable 'Stop In Walk' during coordination

8.c) Program 'Return Hold' during coordination

SOP Special (Sequence 3)
Ring 1 2 1 4

Ring 2

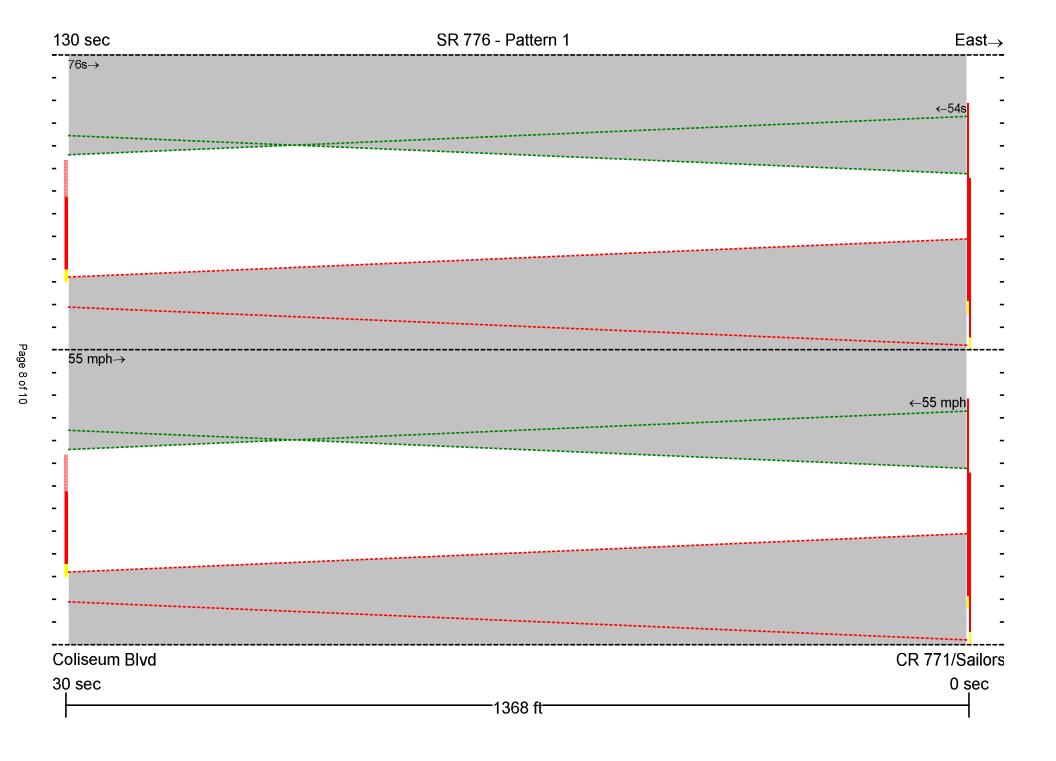
8.d) Long seeking only. Percentage is 0/50 for all paterns

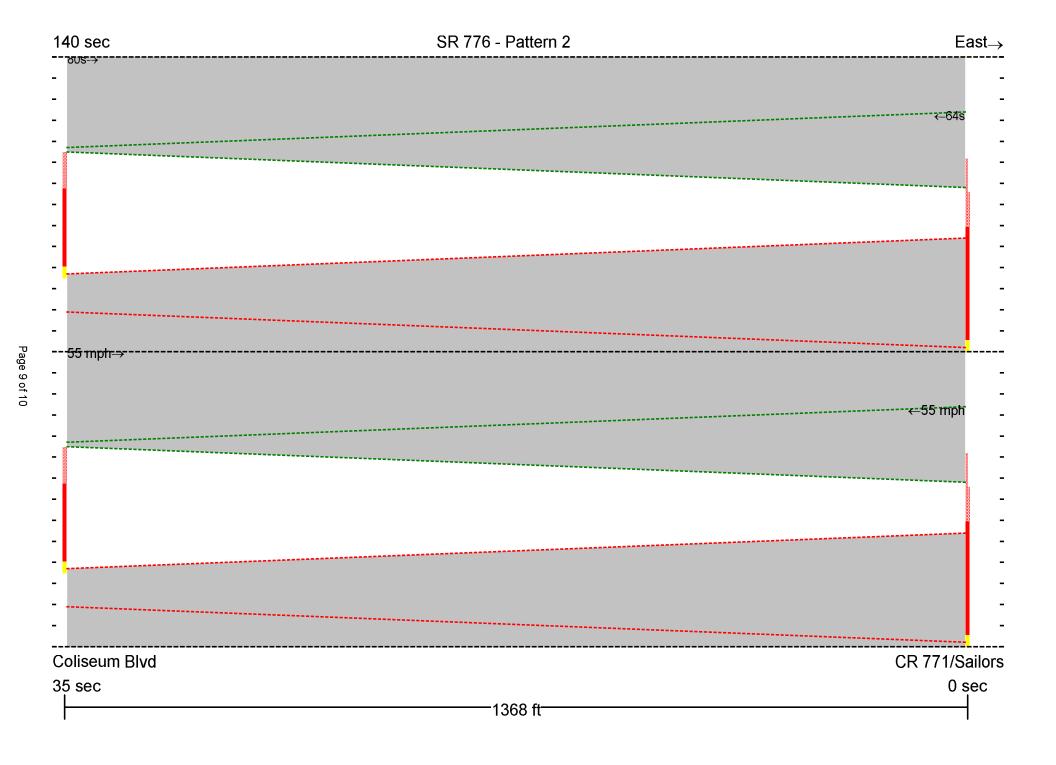
8.e) Program Walk Recycle. '3478_INH' during coordination

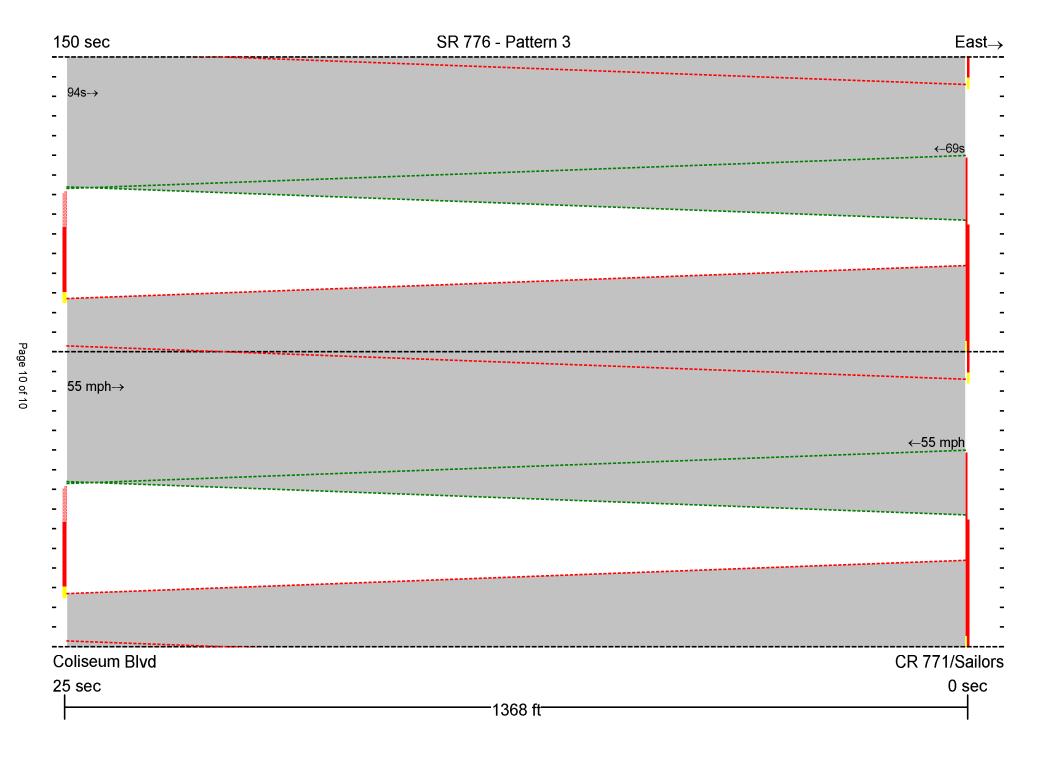
8.f) Overlap A is a NBRT with parent Phases 4 and 5 with 10 seconds Min Green, 4.9 seconds of yellow and 2.5 seconds of red

8.g) "NO RIGHT TURN" sign to be activated when P4 is active

8.h) Overlap A to display red when P4 is active







APPENDIX E: Synchro Intersection Analysis Worksheets

Existing Conditions

	•	→	•	•	1	†	-	↓	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	7	∱ }	7	∱ ⊅	7	1>	*	f)	
Traffic Volume (vph)	62	1163	61	978	158	56	93	21	
Future Volume (vph)	62	1163	61	978	158	56	93	21	
Lane Group Flow (vph)	70	1408	69	1191	180	91	106	79	
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA	
Protected Phases	1	6	5	2		4		8	
Permitted Phases	6		2		4		8		
Detector Phase	1	6	5	2	4	4	8	8	
Switch Phase									
Minimum Initial (s)	5.0	20.0	5.0	20.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.6	27.6	12.6	27.6	28.1	28.1	28.1	28.1	
Total Split (s)	13.6	96.0	13.6	96.0	40.4	40.4	40.4	40.4	
Total Split (%)	9.1%	64.0%	9.1%	64.0%	26.9%	26.9%	26.9%	26.9%	
Yellow Time (s)	5.6	5.6	5.6	5.6	3.7	3.7	3.7	3.7	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	7.6	7.6	7.6	6.2	6.2	6.2	6.2	
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	
v/c Ratio	0.24	0.63	0.30	0.54	0.80	0.29	0.49	0.24	
Control Delay	8.7	18.1	10.2	16.0	84.5	46.8	62.4	20.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	8.7	18.1	10.2	16.0	84.5	46.8	62.4	20.5	
Queue Length 50th (ft)	17	423	17	324	171	67	95	20	
Queue Length 95th (ft)	38	548	38	425	239	112	145	62	
Internal Link Dist (ft)		364		437		128		367	
Turn Bay Length (ft)									
Base Capacity (vph)	294	2231	229	2208	299	415	291	422	
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	0.24	0.63	0.30	0.54	0.60	0.22	0.36	0.19	

Intersection Summary

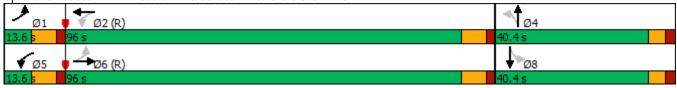
Cycle Length: 150
Actuated Cycle Length: 150

Offset: 17 (11%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 1: Pinedale Drive/Coliseum Boulevard & SR 776



1: Pinedale Drive/Coliseum Boulevard & SR 776

	ᄼ	→	•	•	←	•	1	†	-	/	ļ	4
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	∱ β		*	↑ 1>		*	1>		*	1>	
Traffic Volume (veh/h)	62	1163	76	61	978	70	158	56	24	93	21	48
Future Volume (veh/h)	62	1163	76	61	978	70	158	56	24	93	21	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1322	86	69	1111	80	180	64	27	106	24	55
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
Percent Heavy Veh, %	6	6	6	7	7	7	2	2	2	2	2	2
Cap, veh/h	304	2082	135	244	2048	147	247	239	101	241	97	221
Arrive On Green	0.03	0.63	0.63	0.03	0.63	0.63	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1725	3280	213	1711	3229	232	1320	1249	527	1306	505	1157
Grp Volume(v), veh/h	70	692	716	69	587	604	180	0	91	106	0	79
Grp Sat Flow(s), veh/h/ln	1725	1721	1773	1711	1706	1754	1320	0	1776	1306	0	1662
Q Serve(g_s), s	2.1	36.9	37.1	2.1	28.7	28.8	20.1	0.0	6.6	11.3	0.0	6.1
Cycle Q Clear(g_c), s	2.1	36.9	37.1	2.1	28.7	28.8	26.2	0.0	6.6	17.9	0.0	6.1
Prop In Lane	1.00	00.7	0.12	1.00	20.7	0.13	1.00	0.0	0.30	1.00	0.0	0.70
Lane Grp Cap(c), veh/h	304	1092	1125	244	1083	1113	247	0	340	241	0	318
V/C Ratio(X)	0.23	0.63	0.64	0.28	0.54	0.54	0.73	0.00	0.27	0.44	0.00	0.25
Avail Cap(c_a), veh/h	318	1092	1125	258	1083	1113	296	0.00	405	289	0.00	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.0	16.8	16.8	14.4	15.3	15.3	62.6	0.0	51.7	59.3	0.0	51.5
Incr Delay (d2), s/veh	0.4	2.8	2.8	0.6	1.9	1.9	7.1	0.0	0.4	1.3	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	13.9	14.4	0.8	10.6	10.9	7.3	0.0	3.0	3.8	0.0	2.6
Unsig. Movement Delay, s/veh		13.7	17.7	0.0	10.0	10.7	7.5	0.0	3.0	3.0	0.0	2.0
LnGrp Delay(d),s/veh	12.4	19.6	19.6	15.0	17.2	17.2	69.7	0.0	52.1	60.6	0.0	51.9
LnGrp LOS	12.4 B	17.0 B	17.0 B	13.0 B	В	17.2 B	67.7 E	Α	D	E	Α	D
Approach Vol, veh/h	D	1478	D	D	1260	U U	<u> </u>	271	U	<u> </u>	185	<u> </u>
		19.2			17.1			63.8			56.9	
Approach LOS		19.2 B			17.1 B						50.9 E	
Approach LOS					D			Е			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	102.8		34.9	12.3	102.8		34.9				
Change Period (Y+Rc), s	7.6	7.6		* 6.2	7.6	7.6		* 6.2				
Max Green Setting (Gmax), s	6.0	88.4		* 34	6.0	88.4		* 34				
Max Q Clear Time (g_c+l1), s	4.1	30.8		28.2	4.1	39.1		19.9				
Green Ext Time (p_c), s	0.0	8.6		0.5	0.0	11.3		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			С									
Notes												

^{*} HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	LDL	<u>EBI</u>	LDK	WDL	WDI	WDK	NDL	IND I	אטוז	JDL	3B1 ♣	אמכ
Traffic Vol, veh/h	0	2	0	29	3	233	0	5	16	141	5	0
Future Vol, veh/h	0	2	0	29	3	233	0	5	16	141	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	J.(0p	J.10p	None	- -	- -	None	-	-	None	-	-	None
Storage Length	_	_	-	_	_	-	_	_	-	_	_	-
Veh in Median Storage	. # -	0	_	_	0	_	_	0	_	_	0	_
Grade, %	-	0	_	_	0	_	_	0	_	_	0	_
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	0	33	3	265	0	6	18	160	6	0
Major/Minor I	Minor2			Minor1		ı	Major1		ı	Major2		
Conflicting Flow All	475	350	6	342	341	15	6	0	0	24	0	0
Stage 1	326	326	-	15	15	-	-	-	-	-	-	-
Stage 2	149	24	_	327	326	_	_	_	_	_	_	_
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	_	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318		4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	500	574	1077	612	581	1065	1615	-	-	1591	-	-
Stage 1	687	648	-	1005	883	-	-	-	-	-	-	-
Stage 2	854	875	-	686	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	345	516	1077	563	522	1065	1615	-	-	1591	-	-
Mov Cap-2 Maneuver	345	516	-	563	522	-	-	-	-	-	-	-
Stage 1	687	583	-	1005	883	-	-	-	-	-	-	-
Stage 2	639	875	-	614	583	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12			10.5			0			7.3		
HCM LOS	В			В								
Minor Lane/Major Mvm	nt	NBL	NBT	NBR	EBLn1V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1615			516	960	1591					
HCM Lane V/C Ratio		-	_	_		0.314		_	_			
HCM Control Delay (s)		0	-	-	12	10.5	7.5	0	_			
HCM Lane LOS		A	_	_	В	В	Α.	A	_			
HCM 95th %tile Q(veh	1)	0	-	_	0	1.3	0.3	-	_			
	,											

Future Background Conditions

1: Pinedale Drive/Coliseum Boulevard & SR 776

	•	-	1	•	1	Ť	1	ļ	
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	
Lane Configurations	*	∱ }	¥	∱ }	ř	4	¥	1>	
Traffic Volume (vph)	66	1234	65	1038	168	59	99	22	
Future Volume (vph)	66	1234	65	1038	168	59	99	22	
Lane Group Flow (vph)	75	1494	74	1264	191	95	113	83	
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA	
Protected Phases	1	6	5	2		4		8	
Permitted Phases	6		2		4		8		
Detector Phase	1	6	5	2	4	4	8	8	
Switch Phase									
Minimum Initial (s)	5.0	20.0	5.0	20.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	12.6	27.6	12.6	27.6	28.1	28.1	28.1	28.1	
Total Split (s)	13.6	96.0	13.6	96.0	40.4	40.4	40.4	40.4	
Total Split (%)	9.1%	64.0%	9.1%	64.0%	26.9%	26.9%	26.9%	26.9%	
Yellow Time (s)	5.6	5.6	5.6	5.6	3.7	3.7	3.7	3.7	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.6	7.6	7.6	7.6	6.2	6.2	6.2	6.2	
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	
v/c Ratio	0.29	0.70	0.37	0.60	0.83	0.29	0.51	0.24	
Control Delay	9.7	21.0	12.2	18.3	86.1	46.6	62.5	19.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	9.7	21.0	12.2	18.3	86.1	46.6	62.5	19.9	
Queue Length 50th (ft)	19	485	19	367	182	70	101	21	
Queue Length 95th (ft)	40	606	40	466	255	116	155	63	
Internal Link Dist (ft)		364		437		128		367	
Turn Bay Length (ft)									
Base Capacity (vph)	264	2146	201	2124	298	416	287	424	
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	0.28	0.70	0.37	0.60	0.64	0.23	0.39	0.20	

Intersection Summary

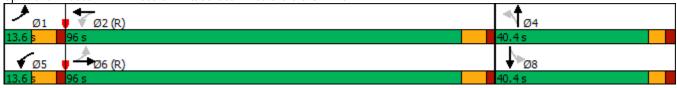
Cycle Length: 150 Actuated Cycle Length: 150

Offset: 17 (11%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 1: Pinedale Drive/Coliseum Boulevard & SR 776



1: Pinedale Drive/Coliseum Boulevard & SR 776

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	7	∱ β		*	∱ 1>		7	1>		7	1>	
Traffic Volume (veh/h)	66	1234	81	65	1038	74	168	59	25	99	22	51
Future Volume (veh/h)	66	1234	81	65	1038	74	168	59	25	99	22	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	1402	92	74	1180	84	191	67	28	112	25	58
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
Percent Heavy Veh, %	6	6	6	7	7	7	2	2	2	2	2	2
Cap, veh/h	276	2047	134	218	2017	143	257	252	105	251	101	234
Arrive On Green	0.03	0.62	0.62	0.03	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1725	3279	214	1711	3232	230	1315	1253	523	1301	500	1161
Grp Volume(v), veh/h	75	734	760	74	623	641	191	0	95	112	0	83
Grp Sat Flow(s), veh/h/ln	1725	1721	1772	1711	1706	1755	1315	0	1776	1301	0	1661
Q Serve(g_s), s	2.3	41.9	42.3	2.3	32.4	32.5	21.4	0.0	6.8	11.9	0.0	6.3
Cycle Q Clear(g_c), s	2.3	41.9	42.3	2.3	32.4	32.5	27.7	0.0	6.8	18.7	0.0	6.3
Prop In Lane	1.00		0.12	1.00		0.13	1.00		0.29	1.00		0.70
Lane Grp Cap(c), veh/h	276	1074	1107	218	1065	1095	257	0	357	251	0	334
V/C Ratio(X)	0.27	0.68	0.69	0.34	0.58	0.59	0.74	0.00	0.27	0.45	0.00	0.25
Avail Cap(c_a), veh/h	290	1074	1107	232	1065	1095	293	0	405	286	0	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	18.5	18.5	16.9	16.7	16.7	62.0	0.0	50.6	58.4	0.0	50.4
Incr Delay (d2), s/veh	0.5	3.5	3.5	0.9	2.3	2.3	8.5	0.0	0.4	1.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	16.0	16.6	0.9	12.1	12.5	7.8	0.0	3.1	4.0	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	22.0	22.0	17.8	19.0	19.0	70.6	0.0	50.9	59.7	0.0	50.8
LnGrp LOS	В	С	С	В	В	В	Е	Α	D	Е	Α	D
Approach Vol, veh/h		1569			1338			286			195	
Approach Delay, s/veh		21.6			18.9			64.0			55.9	
Approach LOS		С			В			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	101.2		36.4	12.4	101.2		36.4				
Change Period (Y+Rc), s	7.6	7.6		* 6.2	7.6	7.6		* 6.2				
Max Green Setting (Gmax), s	6.0	88.4		* 34	6.0	88.4		* 34				
Max Q Clear Time (g_c+l1), s	4.3	34.5		29.7	4.3	44.3		20.7				
Green Ext Time (p_c), s	0.0	9.4		0.5	0.0	12.4		0.6				
•	0.0	7.4		0.5	0.0	12.4		0.0				
Intersection Summary HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			26.1 C									
			C									
Notes												

^{*} HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Kimley-Horn

Intersection	
Int Delay, s/veh 9	
	SBR
Lane Configurations	אטכ
Traffic Vol, veh/h 0 2 0 31 3 247 0 5 17 150 5	0
Future Vol, veh/h 0 2 0 31 3 247 0 5 17 150 5	0
Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0	0
5 ,	Free
	Vone
Storage Length	NOLIC
Veh in Median Storage, # - 0 0 0	_
Grade, % - 0 0 0	
	88
Heavy Vehicles, % 2 2 2 2 2 2 2 2 2 2 2 2	2
Mvmt Flow 0 2 0 35 3 281 0 6 19 170 6	0
0 2 0 00 0 201 0 0 17 170 0	- 0
Major/Minor Minor Minor Major Major	
Major/Minor Minor2 Minor1 Major1 Major2	^
Conflicting Flow All 504 371 6 363 362 16 6 0 0 25 0	0
Stage 1 346 346 - 16 16	-
Stage 2 158 25 - 347 346	-
Critical Hdwy 7.12 6.52 6.22 7.12 6.52 6.22 4.12 - 4.12 -	-
Critical Hdwy Stg 1 6.12 5.52 - 6.12 5.52	-
, J	-
Follow-up Hdwy 3.518 4.018 3.318 3.518 4.018 3.318 2.218 2.218 - Pot Cap-1 Maneuver 478 559 1077 593 565 1063 1615 1589 -	-
Character (70 / 25 1004 000	-
Stage 1 670 635 - 1004 882	-
Platoon blocked, %	-
Mov Cap-1 Maneuver 321 499 1077 543 505 1063 1615 - 1589 -	_
Mov Cap-2 Maneuver 321 499 - 543 505	_
Stage 1 670 567 - 1004 882	_
Stage 2 619 874 - 595 567	-
Approach ED WD ND CD	
Approach EB WB NB SB	
HCM Control Delay, s 12.2 10.7 0 7.3	
HCM LOS B B	
Minor Lane/Major Mvmt NBL NBT NBR EBLn1WBLn1 SBL SBT SBR	
Capacity (veh/h) 1615 499 951 1589	
HCM Lane V/C Ratio 0.005 0.336 0.107	
HCM Control Delay (s) 0 12.2 10.7 7.5 0 -	
HCM Lane LOS A B B A A -	
HCM 95th %tile Q(veh) 0 0 1.5 0.4	

HCM 6th TWSC 04/17/2024

Total Buildout Conditions

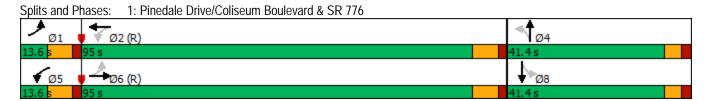
1: Pinedale Drive/Coliseum Boulevard & SR 776

Lane Group Lane Configurations Traffic Volume (vph) Future Volume (vph) Cane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/C Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Storage Cap Reductn Reduced v/c Ratio O.29 Intersection Summary	1232 1232 1232 1511 NA 6	95 95 108 pm+pt 5	WBT 1036 1036 1261 NA	NBL 187 187	NBT \$	SBL	SBT	
Lane Configurations Traffic Volume (vph) Future Volume (vph) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 95th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio O.29 Control Cap Reductn Reduced v/c Ratio O.29 Control Cap Reductn	1232 1232 1232 1511 NA 6	95 95 95 108 pm+pt 5	1036 1036 1036 1261	187 187	f)			
Traffic Volume (vph) Future Volume (vph) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio O.29 Ceduce Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio O.29 Ceduce Capacity (vph) Coduced Capacity (vph) Coduced Capacity (vph) Coduced Capacity (vph) Coduced Capacity (vph) Coductor	1232 1232 1511 NA 6	95 95 108 pm+pt 5	1036 1036 1261	187 187			₽	
Future Volume (vph) Lane Group Flow (vph) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Yellow Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio O.29 Control Cap Reductn C	1232 1511 NA 6	95 108 pm+pt 5	1036 1261	187		99	25	
Lane Group Flow (vph) Turn Type pm+p Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 5.0 Minimum Split (s) 12.0 Total Split (s) 9.1% Yellow Time (s) 2.0 Lost Time Adjust (s) 7.0 Lead/Lag Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/C Ratio 0.29 Control Delay 10.2 Control Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio 0.29	5 1511 t NA 6	108 pm+pt 5	1261		62	99	25	
Turn Type protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) 5.0 Minimum Split (s) 12.6 Total Split (s) 9.1% Yellow Time (s) 2.0 Lost Time Adjust (s) 7.0 Lead/Lag Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.6 V/C Ratio 0.29 Control Delay 10.2 Control Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 4 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 0.29	t NA 6	pm+pt 5		213	136	113	86	
Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 0.29	6	5		Perm	NA	Perm	NA	
Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio C.5	6		2	I CIIII	4	1 CIIII	8	
Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio C.26 Reduced V/c Ratio C.26 Reduced Reductn Reduced V/c Ratio C.26 Reduced Reductn Reduced V/c Ratio C.26 Reduced V/c Ratio C.27 Reduced V/c Ratio C.26 Reduced V/c Ratio C.27 Reduced V/c Ratio	6	2	2	4	7	8	U	
Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (s) Total Split (%) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio Cotal Split (s) Starvation Cap Reductn Storage Cap Reductn Reduced v/c Ratio Cotal Split (s) Starvation Cap Reductn Reduced v/c Ratio Cotal Split (s) Starvation Cap Reductn Reduced v/c Ratio Cotal Split (s) Starvation Cap Reductn Cotal Split (s) Starvat		5	2	4	4	8	8	
Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (s) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/C Ratio Control Delay Queue Delay Total Delay LOS Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 12.6 12.6 13.6 14.6 15.6 16.6 16.6 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.7 16.		J	2	7	7	U	U	
Minimum Split (s) 12.6 Total Split (s) 13.6 Total Split (%) 9.1% Yellow Time (s) 5.6 All-Red Time (s) 2.6 Lost Time Adjust (s) 0.6 Total Lost Time (s) 7.6 Lead/Lag Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/C Ratio 0.29 Control Delay 10.2 Queue Delay 10.2 Total Delay 10.2 Approach LOS Queue Length 50th (ft) 26 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 256 Starvation Cap Reductn (c) Storage Cap Reductn (c) Reduced v/c Ratio 0.29	20.0	5.0	20.0	5.0	5.0	5.0	5.0	
Total Split (s) 13.6 Total Split (%) 9.1% Yellow Time (s) 5.6 All-Red Time (s) 2.6 Lost Time Adjust (s) 7.6 Lead/Lag Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.66 V/c Ratio 0.29 Control Delay 10.2 Useue Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 26 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 256 Storage Cap Reductn (c) Reduced v/c Ratio 0.29		12.6	27.6	28.1	28.1	28.1	28.1	
Total Split (%) 9.1% Yellow Time (s) 5.6 All-Red Time (s) 2.0 Lost Time Adjust (s) 7.6 Lost Time Adjust (s) 7.6 Lead/Lag Lead Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/c Ratio 0.29 Control Delay 10.2 Queue Delay 10.2 Approach Delay 10.2 Approach LOS EAPProach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 259 Starvation Cap Reductn (c) Storage Cap Reductn (c) Reduced v/c Ratio 0.29		13.6	95.0	41.4	41.4	41.4	41.4	
Yellow Time (s) 5.0 All-Red Time (s) 2.0 Lost Time Adjust (s) 0.0 Total Lost Time (s) 7.0 Lead/Lag Lead Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/c Ratio 0.20 Control Delay 10.2 Queue Delay 10.2 Approach Delay 10.2 Approach LOS EAPProach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (c) Spillback Cap Reductn (c) Reduced v/c Ratio 0.29		9.1%	63.3%	27.6%	27.6%	27.6%	27.6%	
All-Red Time (s) 2.0 Lost Time Adjust (s) 0.0 Total Lost Time (s) 7.0 Lead/Lag Lead Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.0 Actuated g/C Ratio 0.60 V/c Ratio 0.20 Control Delay 10.2 Queue Delay 10.2 Total Delay 10.2 Approach Delay 10.2 Approach LOS EApproach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 40 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (c) Storage Cap Reductn (c) Reduced v/c Ratio 0.29								
Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Oueue Delay Total Delay LOS Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio		5.6	5.6	3.7	3.7	3.7	3.7	
Total Lost Time (s) 7.6 Lead/Lag Lead Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/c Ratio 0.29 Control Delay 10.2 Queue Delay 10.2 LOS EApproach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) 47 Internal Link Dist (ft) 259 Starvation Cap Reductn 59 Storage Cap Reductn (c) Reduced v/c Ratio 0.29		2.0	2.0	2.5	2.5	2.5	2.5	
Lead/Lag Lead Lead-Lag Optimize? Yes Recall Mode None Act Effct Green (s) 100.7 Actuated g/C Ratio 0.29 Actuated g/C Ratio 0.29 Actuated Delay 10.2 Oueue Delay 10.2 Total Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (c) Storage Cap Reductn (c) Reduced v/c Ratio 0.29		0.0	0.0	0.0	0.0	0.0	0.0	
Lead-Lag Optimize? Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay Total Delay LOS Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Storage Cap Reductn Reduced v/c Ratio		7.6	7.6	6.2	6.2	6.2	6.2	
Recall Mode Act Effct Green (s) Actuated g/C Ratio V/c Ratio Control Delay Queue Delay LOS Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Reduced v/c Ratio S.5		Lead	Lag					
Act Effct Green (s) 100.7 Actuated g/C Ratio 0.67 V/c Ratio 0.29 Control Delay 10.2 Queue Delay 10.2 Total Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 259 Starvation Cap Reductn (c) Spillback Cap Reductn (c) Reduced v/c Ratio 0.29		Yes	Yes					
Actuated g/C Ratio 0.67 v/c Ratio 0.29 Control Delay 10.2 Queue Delay 0.6 Total Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (0.29 Reduced v/c Ratio 0.29		None	C-Max	None	None	None	None	
v/c Ratio 0.29 Control Delay 10.2 Queue Delay 0.6 Total Delay 10.2 Approach Delay 10.2 Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 4° Internal Link Dist (ft) 4° Internal Link Dist (ft) 50th (ft) 4° Example 10 10 10 10 10 10 10 10 10 10 10 10 10		101.5	94.0	27.8	27.8	27.8	27.8	
Control Delay 10.2 Queue Delay 0.0 Total Delay 10.2 Approach Delay Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 4 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (0 Spillback Cap Reductn (0 Storage Cap Reductn (0 Reduced v/c Ratio 0.29		0.68	0.63	0.19	0.19	0.19	0.19	
Oueue Delay 0.0 Total Delay 10.2 LOS E Approach Delay Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 4 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (0 Spillback Cap Reductn (0 Reduced v/c Ratio 0.29		0.55	0.60	0.88	0.40	0.56	0.24	
Total Delay 10.2 LOS E Approach Delay Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 42 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 259 Starvation Cap Reductn (Capacity Capacity (Capacity Capacity Capacity (Capacity Capacity Capacity Capacity Capacity (Capacity Capacity Ca		19.3	19.1	92.7	43.5	65.6	20.4	
Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio		0.0	0.0	0.0	0.0	0.0	0.0	
Approach Delay Approach LOS Queue Length 50th (ft) Queue Length 95th (ft) Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 200 200 200 200 200 200 200 200 200 2		19.3	19.1	92.7	43.5	65.6	20.4	
Approach LOS Queue Length 50th (ft) 20 Queue Length 95th (ft) 4 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 250 Starvation Cap Reductn (Capacity Capacity Ca		В	В	F	D	Е	С	
Queue Length 50th (ft) 20 Queue Length 95th (ft) 47 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 256 Starvation Cap Reductn (Spillback Cap Reductn Storage Cap Reductn (Reduced v/c Ratio 0.29	22.2		19.1		73.5		46.1	
Queue Length 95th (ft) 4 Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 256 Starvation Cap Reductn Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 0.29	С		В		Е		D	
Internal Link Dist (ft) Turn Bay Length (ft) Base Capacity (vph) 259 Starvation Cap Reductn (Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 0.29		29	376	204	91	101	23	
Turn Bay Length (ft) Base Capacity (vph) 259 Starvation Cap Reductn (Spillback Cap Reductn Storage Cap Reductn Reduced v/c Ratio 0.29		58	472	283	146	158	67	
Base Capacity (vph) 259 Starvation Cap Reductn (Spillback Cap Reductn (Storage Cap Reductn (Reduced v/c Ratio 0.29)	364		437		128		367	
Starvation Cap Reductn (Spillback Cap Reductn (Storage Cap Reductn (Reduced v/c Ratio 0.29								
Spillback Cap Reductn (Storage Cap Reductn (Reduced v/c Ratio 0.29)	2097	198	2095	306	428	253	437	
Storage Cap Reductn (Reduced v/c Ratio 0.29	0	0	0	0	0	0	0	
Reduced v/c Ratio 0.29	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	
Intersection Summary	0.72	0.55	0.60	0.70	0.32	0.45	0.20	
Cycle Length: 150								
Actuated Cycle Length: 150								
Offset: 17 (11%), Referenced to pha	se 2:WBT	L and 6:F	BTL, Star	t of Gree	n			
Natural Cycle: 90		OIL	. 2, 3.01	2. 2.00				
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.88								
Intersection Signal Delay: 27.5			lr	ntersectio	n LOS: C			
Intersection Capacity Utilization 77.3	10/				of Service			
Analysis Period (min) 15	70		10	CO LOVOI	JI JOIVIO			

Lanes, Volumes, Timings 05/23/2024

Kimley-Horn

1: Pinedale Drive/Coliseum Boulevard & SR 776



	۶	→	•	•	—	•	•	†	<i>></i>	/	+	✓
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	∱ β		ሻ	ተ ኈ		ሻ	₽		ሻ	₽	
Traffic Volume (veh/h)	66	1232	98	95	1036	74	187	62	58	99	25	51
Future Volume (veh/h)	66	1232	98	95	1036	74	187	62	58	99	25	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1796	1796	1796	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	1400	111	108	1177	84	212	70	66	112	28	58
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
Percent Heavy Veh, %	6	6	6	7	7	7	2	2	2	2	2	2
Cap, veh/h	266	1946	154	210	1963	140	278	193	182	237	118	245
Arrive On Green	0.03	0.60	0.60	0.04	0.61	0.61	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1725	3231	255	1711	3231	230	1311	885	835	1253	543	1125
Grp Volume(v), veh/h	75	743	768	108	621	640	212	0	136	112	0	86
Grp Sat Flow(s), veh/h/ln	1725	1721	1765	1711	1706	1755	1311	0	1720	1253	0	1668
Q Serve(g_s), s	2.5	45.3	46.0	3.6	33.7	33.8	23.9	0.0	10.1	12.5	0.0	6.4
Cycle Q Clear(g_c), s	2.5	45.3	46.0	3.6	33.7	33.8	30.2	0.0	10.1	22.6	0.0	6.4
Prop In Lane	1.00		0.14	1.00		0.13	1.00		0.49	1.00		0.67
Lane Grp Cap(c), veh/h	266	1036	1063	210	1037	1066	278	0	375	237	0	363
V/C Ratio(X)	0.28	0.72	0.72	0.51	0.60	0.60	0.76	0.00	0.36	0.47	0.00	0.24
Avail Cap(c_a), veh/h	280	1036	1063	215	1037	1066	300	0	404	258	0	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	20.9	21.0	20.8	18.2	18.2	60.8	0.0	49.8	59.4	0.0	48.4
Incr Delay (d2), s/veh	0.6	4.3	4.3	2.0	2.6	2.5	10.3	0.0	0.6	1.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	17.7	18.3	1.5	12.8	13.2	8.8	0.0	4.4	4.1	0.0	2.7
Unsig. Movement Delay, s/veh	1											
LnGrp Delay(d),s/veh	15.5	25.1	25.3	22.8	20.7	20.7	71.1	0.0	50.4	60.9	0.0	48.7
LnGrp LOS	В	С	С	С	С	С	Е	Α	D	Е	Α	D
Approach Vol, veh/h		1586			1369			348			198	
Approach Delay, s/veh		24.7			20.9			63.0			55.6	
Approach LOS		С			С			Е			Е	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	98.7		38.9	13.2	97.9		38.9				
Change Period (Y+Rc), s	7.6	7.6		* 6.2	7.6	7.6		* 6.2				
Max Green Setting (Gmax), s	6.0	87.4		* 35	6.0	87.4		* 35				
Max Q Clear Time (g_c+l1), s	4.5	35.8		32.2	5.6	48.0		24.6				
Green Ext Time (p_c), s	0.0	9.4		0.4	0.0	12.4		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			28.8									
HCM 6th LOS			20.0 C									
Notes												

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	10.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	54	4	0	31	5	247	0	5	17	151	5	5
Future Vol, veh/h	54	4	0	31	5	247	0	5	17	151	5	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	5	0	35	6	281	0	6	19	172	6	6
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	512	378	9	372	372	16	12	0	0	25	0	0
Stage 1	353	353	-	16	16	-	-	-	-	-	-	-
Stage 2	159	25	_	356	356	_	_	_	-	_	_	_
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52		6.12	5.52	-	-	-		-		-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	_	-
Follow-up Hdwy	3.518	4.018	3.318		4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	472	554	1073	585	558	1063	1607	-	-	1589	-	-
Stage 1	664	631	-	1004	882	-	-	-	-	-	-	-
Stage 2	843	874	-	661	629	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	316	494	1073	532	497	1063	1607	-	-	1589	-	-
Mov Cap-2 Maneuver	316	494	-	532	497	-	-	-	-	-	-	-
Stage 1	664	562	-	1004	882	-	-	-	-	-	-	-
Stage 2	616	874	-	584	560	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	18.9			10.8			0			7.1		
HCM LOS	С			В								
Minor Lane/Major Mvn	nt	NBL	NBT	NBR	EBLn1\	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)		1607	-	-	324	941	1589	-	-			
HCM Lane V/C Ratio		-	-	-		0.342		-	-			
HCM Control Delay (s))	0	-	-	18.9	10.8	7.5	0	-			
HCM Lane LOS		Α	-	-	С	В	Α	Α	-			
HCM 95th %tile Q(veh	1)	0	-	-	0.7	1.5	0.4	-	-			

APPENDIX F: Volume Development Worksheets

TRAFFIC VOLUMES AT STUDY INTERSECTION

INTERSECTION: SR 776 at Pinedale Dr/Coliseum Blvd

COUNT DATE: December 21, 2022 TIME PERIOD: 4:00 p.m. - 5:00 p.m.

PEAK HOUR FACTOR: 0.88

"EXISTING TRAFF	FIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning Mover	ments	0	60	1,118	73	12	47	940	67	0	152	54	23	0	89	20	46
Peak Season Correction	on Factor	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040
EXISTING CONDITI	IONS	0	62	1,163	76	12	49	978	70	0	158	56	24	0	93	21	48
"BACKGROUND TRA	AFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To Buildo	Years To Buildout		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Growth Ra	Yearly Growth Rate		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC	BACKGROUND TRAFFIC GROWTH		4	71	5	1	3	60	4	0	10	3	1	0	6	1	3
NON-PROJECT TRA	AFFIC	0	66	1,234	81	13	52	1,038	74	0	168	59	25	0	99	22	51
"PROJECT TRAFF	IC"																
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New				15		28				17	3	31			3	
TOTAL PROJECT TR	AFFIC	0	0	-2	17	0	30	-2	0	0	19	3	33	0	0	3	0
TOTAL TRAFFIC	C	0	66	1,232	98	13	82	1,036	74	0	187	62	58	0	99	25	51

TRAFFIC VOLUMES AT STUDY INTERSECTION

Pinedale Dr at Hopkinton Ave December 21, 2022 INTERSECTION:

COUNT DATE: TIME PERIOD: 4:00 p.m. - 5:00 p.m.

PEAK HOUR FACTOR: 0.88

"EXISTING	TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Raw Turning	Movements	0	0	2	0	0	28	3	224	0	0	5	15	0	136	5	0
Peak Season Co	orrection Factor	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040	1.040
EXISTING C	ONDITIONS	0	0	2	0	0	29	3	233	0	0	5	16	0	141	5	0
"BACKGROU	ND TRAFFIC"	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Years To	Buildout	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Yearly Gro	owth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND T	BACKGROUND TRAFFIC GROWTH		0	0	0	0	2	0	14	0	0	0	1	0	9	0	0
NON-PROJE	ECT TRAFFIC	0	0	2	0	0	31	3	247	0	0	5	17	0	150	5	0
"PROJECT																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Trips	Net New		50	2				2						1			5
TOTAL PROJ	ECT TRAFFIC	0	54	2	0	0	0	2	0	0	0	0	0	1	0	0	5
							1							1			
TOTAL	TRAFFIC	0	54	4	0	0	31	5	247	0	0	5	17	1	150	5	5

APPENDIX G: Turn Lane Calculations

Left-Turn Lane Warrant for Northwestern Driveway on S. Access Road

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

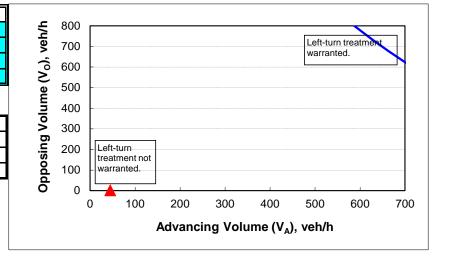
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	30
Percent of left-turns in advancing volume (V _A), %:	98%
Advancing volume (V _A), veh/h:	45
Opposing volume (V _O), veh/h:	1

OUTPUT

Variable	Value					
Limiting advancing volume (V _A), veh/h:	1389					
Guidance for determining the need for a major-road left-turn bay:						
Left-turn treatment NOT warranted.						



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

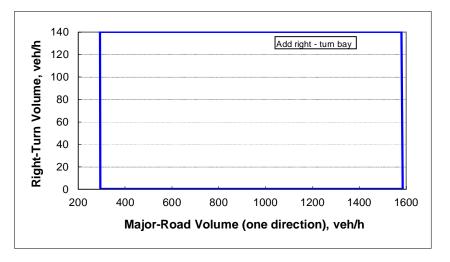
Right-Turn Lane Warrant for Northwestern Driveway on S. Access Road

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway ▼					
Variable	Value					
Major-road speed, mph:	30					
Major-road volume (one direction), veh/h:	2					
Right-turn volume, veh/h:	1					

Variable	Value							
Limiting right-turn volume, veh/h:	##########							
Guidance for determining the need for a major-road								
right-turn bay for a 2-lane roadway:								
Do NOT add right-turn bay.								



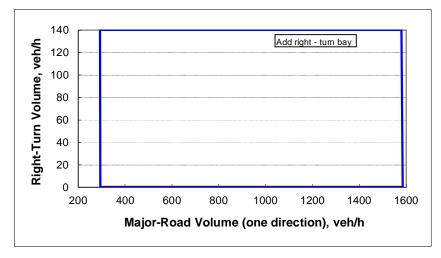
Right-Turn Lane Warrant for Northeastern Driveway on S. Access Road

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway ▼						
Variable		Value					
Major-road speed, mph:		30					
Major-road volume (one direction), veh/h:	2						
Right-turn volume, veh/h:	1						

Variable	Value							
Limiting right-turn volume, veh/h:	##########							
Guidance for determining the need for a major-road								
right-turn bay for a 2-lane roadway:								
Do NOT add right-turn bay.								



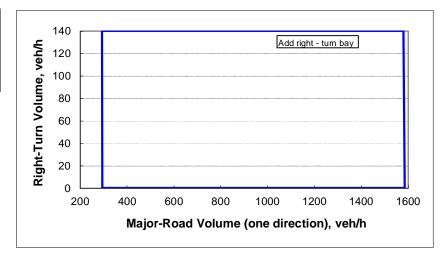
Right-Turn Lane Warrant for Southwestern Driveway on Hopkinton Avenue

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway					
Variable	Value					
Major-road speed, mph:	30					
Major-road volume (one direction), veh/h:	1					
Right-turn volume, veh/h:	1					

Variable	Value					
Limiting right-turn volume, veh/h:	##########					
Guidance for determining the need for a major-road						
right-turn bay for a 2-lane roadway:						
Do NOT add right-turn bay.						



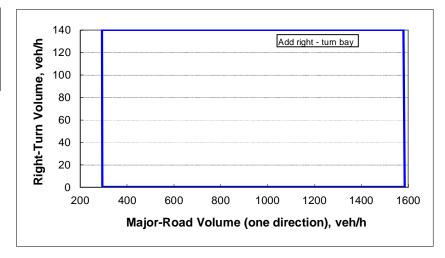
Right-Turn Lane Warrant for Southeastern Driveway on Hopkinton Avenue

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane ro	-lane roadway ▼			
Variable	Value				
Major-road speed, mph:	30				
Major-road volume (one direction), veh/h:	7				
Right-turn volume, veh/h:	6				

Variable	Value						
Limiting right-turn volume, veh/h:	##########						
Guidance for determining the need for a major-road							
right-turn bay for a 2-lane roadway:							
Do NOT add right-turn bay.							





00/00/0000

AVAILABILITY REQUEST FORM

Charlotte County Government Utilities Department 25550 Harbor View Road, Suite 1

Port Charlotte, FL 33980

Email: Administrative.Assistants@CharlotteCountyFL.gov

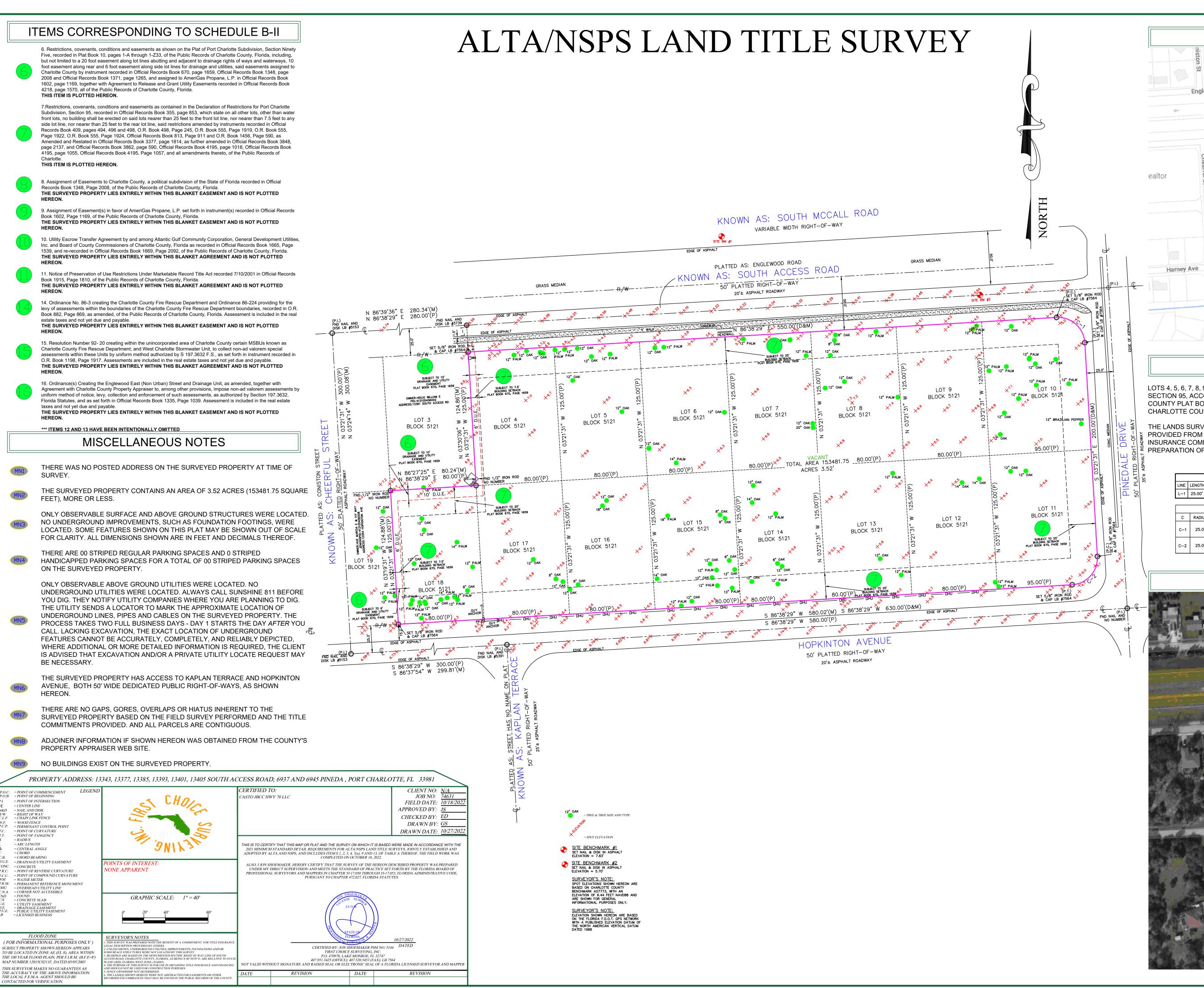
Phone: 941.764.4300 Option 3

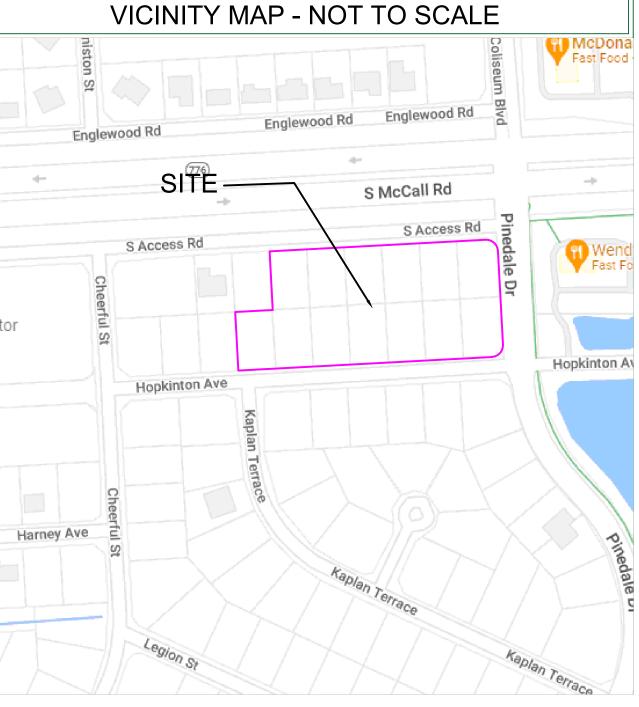
First Name	Last Name								
Wistenly									
Organization			<u> </u>						
Bowman									
Email Address	Phor	Phone Number							
Walphonse@bo	/alphonse@bowman.com								
Site Address									
House Number	Street Name				Street Suffix				
6937		Pined	da		Drive				
Short Legal Descrip	otion								
Subdivision	Section		Block	Lot					
	9	5	5121		1 -18				
Availability - Comp	leted by CCU Staff								
Potabl	e Water	Se	ewer	Reclair	Reclaimed Water				
Connected		Connected		Connected					
Mandatory	X	Mandatory	X	Mandatory					
Available		Available		Available					
Unavailable		Unavailable		Unavailable	X				
Comments									
Once the lo	ots are rezone	d as commer	cial both wate	er and sewer	will be				
mandatory v	with a develop	er's agreem	ent to connect	- .					
-	-	J							

All commercial developments are to access the following link for guidelines and familiarize themselves with the requirements for plans review and the utility service agreement.

https://www.charlottecountyfl.gov/departments/utilities/about-utilities/forms.stml

Disclaimer: Information provided on this form is provided as a public convenience. Every effort is made to ensure that information provided is timely and accurate. However, Charlotte County makes no warranty, representation or guaranty as to its complete accuracy, nor does Charlotte County assume liability for any errors, omissions, or inaccuracies in the information provided, regardless how caused. In any case, where reliance on information is required, please check with County staff for updated information and/or the official records of the County.





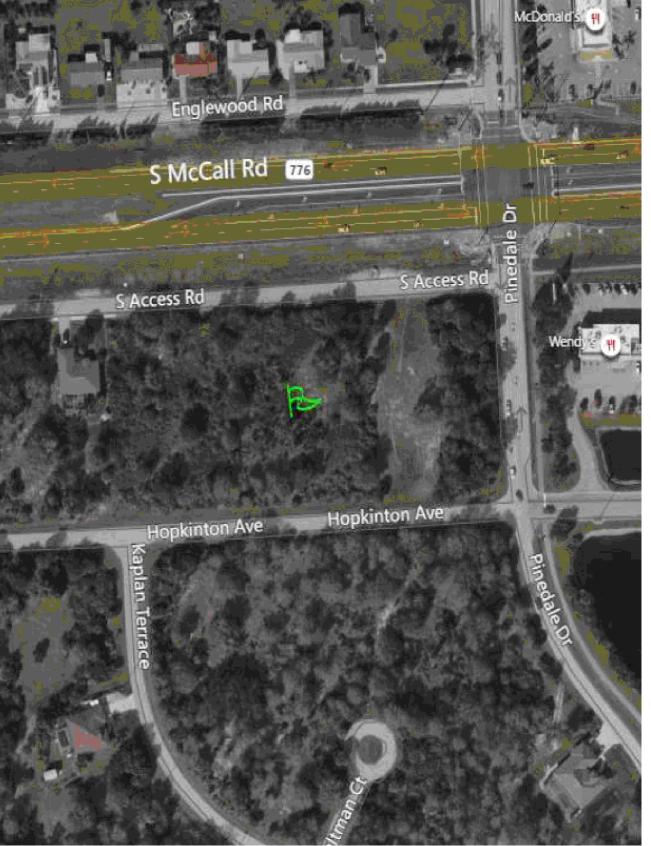
RECORD DESCRIPTION

LOTS 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 AND 18, BLOCK 5121, PORT CHARLOTTE SECTION 95, ACCORDING TO THE MAP OR PLAT THEREOF AS RECORDED IN CHARLOTTE COUNTY PLAT BOOK 10, PAGES 1A THROUGH 1Z33 OF THE PUBLIC RECORDS OF CHARLOTTE COUNTY, FLORIDA.

THE LANDS SURVEYED, SHOWN AND DESCRIBED HEREON ARE BASED ON INFORMATION PROVIDED FROM THE CLIENT. TITLE COMMITMENT PROVIDED BY CHICAGO TITLE INSURANCE COMPANY, FILE NO. 22-0150, DATED 03/29/2022 @ 5:00 PM WAS USED IN

LINE	LENGTH		BEARINGS		LEI	NGTH	BEARINGS			
L-1	25.00'	N	03°21'31" W	(P)	24	.93'	N 02*44'37"	w	(M)	
CURVE TABLE										
С	RADIUS	5	Δ	LENG	TH	CHORD BEARING			CHOR	D
C-1 25.00'	,	90'00'00"	39.2	7'	N	48°21'31" W	3	35.36'	(P)	
	25.00		90 00 00	39.2	7'	N	48 ° 21'31" W	3	35.36'	(M)
C-2	:-2 25.00' 90'00'0	90°00'00"	39.2	7'	N	41°38'29" E	3	35.36'	(P)	
	25.00	.	90 00 00	39.2	7'	N	41°38'29" E	3	35.36'	(M)







This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical

Resources at CompliancePermits@dos.MyFlorida.com for project review information.

March 13, 2023

Robert H. Berntsson, Esq. Wideikis, Benedict & Berntsson, L.L.C. THE BIG W LAW FIRM 3195 South Access Road Englewood, Florida 34224

In response to your request on March 13, 2023, the Florida Master Site File lists no cultural resources recorded for the site near Pinedale Dr. in Port Charlotte, Florida.

- This search area may contain unrecorded archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.
- Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.
- While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.

Federal, state and local laws require formal environmental review for most projects. This search DOES NOT constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at CompliancePermits@dos.MyFlorida.com

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

Eman M. Vovsi, Ph.D. Florida Master Site File

Eman.Vovsi@DOS.MyFlorida.com