Chaffee Road

Corridor Study

Prepared for:

North Florida Transportation Planning Organization

980 North Jefferson Street

Jacksonville, FL 32209

(904) 306-7500 | *www.northfloridatpo.com*

Prepared by:

ATKINS

Member of the SNC-Lavalin Group

August 2020

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North Florida TPO
Transportation Planning Organization
PLAN • FUND • MOBILIZE

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ACRONYMS

CIP	Capital Improvement Plan
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FGDL	Florida Geographic Data Library
FGTS	Florida Greenways and Trails System
FHWA	Federal Highway Administration
FY	Fiscal Year
HCM	Highway Capacity Manual
LOS	Level of Service
LRTP	Long Range Transportation Plan
MOCF	Model Output Conversion Factor
MPO	Metropolitan Planning Organization
OGT	Office of Greenways and Trails
PD&E	Project Development and Environment
PUD	Planned Unit Development
ROW	Right-of-Way
RTP	Regional Trails Program
S4	Signal 4 Analytics
SRTS	Safe Routes to School
TIP	Transportation Improvement Plan
TPO	Transportation Planning Organization
UF	University of Florida

1.0 Introduction

The North Florida Transportation Planning Organization (TPO) conducted a study along the Chaffee Road Corridor from Beaver Street to north of Old Plank Road on behalf of the City of Jacksonville to develop mobility alternatives for the corridor. The study was conducted in partnership with the City of Jacksonville, the Florida Department of Transportation (FDOT) and the North Florida TPO to analyze the corridor and provide recommendations for future transportation improvements that align with the City of Jacksonville's Transportation Master Plan. This report summarizes study efforts and recommendations to improve the corridor that will set the groundwork to implement future projects.

This plan evaluated various features and characteristics of the roadway and the surrounding area including traffic data, land use data, crash data, intersection geometries, and bicycle and pedestrian facilities. By evaluating these corridor conditions, the project team designed a plan to increase safety and enhance multi-modal transportation along the corridor.

This plan evaluates several aspects of the corridor, such as the urban design context, traffic and transportation elements, and safety concerns. Additionally, this plan provides a baseline to understand the impacts of the proposed improvements. This plan incorporates Complete Streets into the recommended design elements to ensure adequate space for all users and modes of transportation in a way that creates a more livable community and sense of place. Streets are not just for moving people and vehicles, but also often serve as places for commerce and recreation. Complete streets also are compatible with the surrounding community, and support adjacent land uses and activities, in a contextually appropriate manner.

Through analysis, on-site reviews, and discussions with stakeholders, proposed recommendations have been developed to help mitigate some of the corridor's most pressing issues. The proposed recommendations provide a robust menu of improvements that can be constructed when funding becomes available.

2.0 Existing Conditions Analysis

The existing conditions analysis included a review of current infrastructure and the corridor's transportation system. To determine the adequacy of existing facilities using the following criteria:

- safety
- connectivity
- completeness of network
- ability to serve commercial freight
- recreational
- residential uses
- barriers and constraints and the ability to serve the needs of all users.

2.1 Study Corridor Description

Chaffee Road is a north-south roadway located in Duval County, Florida. The study limits of Chaffee Road are from Beaver Street to north of Old Plank Road. It is functionally classified by FDOT as an **Urban Major Collector** and is approximately **1.25 miles long**. The local jurisdiction for the Chaffee Road Corridor is the City of Jacksonville. See Figure 2.1 for the project study area limits.

Figure 2.1 - Study Area

2.2 General Roadway Characteristics

The following list summarizes the existing roadway characteristics for the Chaffee Road Study corridor:

- The FDOT functional classification of Chaffee Road is **Urban Major Collector.**
- Within the **Urbanized Area** as classified by the Federal Highway Administration (FHWA).
- Chaffee Road is a **two-lane, undivided** facility.
- The posted speed limit along the corridor is **40 mph.**
- **Sidewalks** are present along the length of the corridor.
- No existing **on-road bicycle facilities** are within the project area.
- Crosswalks are present at the southern limits at the intersection of Chaffee Road/Beaver Street (US 90).
- There are **no school zones** along the corridor.
- **Street Lighting** is present along the corridor.

2.3 Chaffee Road Corridor Typical Section

The existing roadway configuration consists of two 10-foot travel lanes and a 4-foot sidewalk on east side of the roadway north of US 90 to Belmont Oaks Drive. North of Belmont Drive the lanes narrow to 10.5 feet and the sidewalk crosses to the west side of the roadway (See Figures 2.2 and 2.3). Based on the Duval County Property Appraiser's parcel map, the right-of-way along the corridor ranges from 60 to 83 feet with the wider right-of-way being located north of Williams Avenue. Drainage is handled through open swales located on one or both sides along the corridor.

There are two major intersections along the study section:

US 90 (SR 10) – US 90 is located at the southern end of the study corridor and is just north of Interstate 10 (I-10) and the CSX east-west rail line. This intersection is currently under design at the Florida Department of Transportation (FDOT). Major improvements include right and left turn lanes at all approaches. This intersection is signalized.

Old Plank Road – Old Plank Road is located at the northern end of the study corridor and is a east-west roadway providing connections neighborhoods and businesses on Jacksonville's westside. This intersection is signalized.

The posted speed limit along this section of Chaffee Road in 40 mph.

Figure 2.2 - Chaffee Road Corridor Typical Section-North Of Us 90

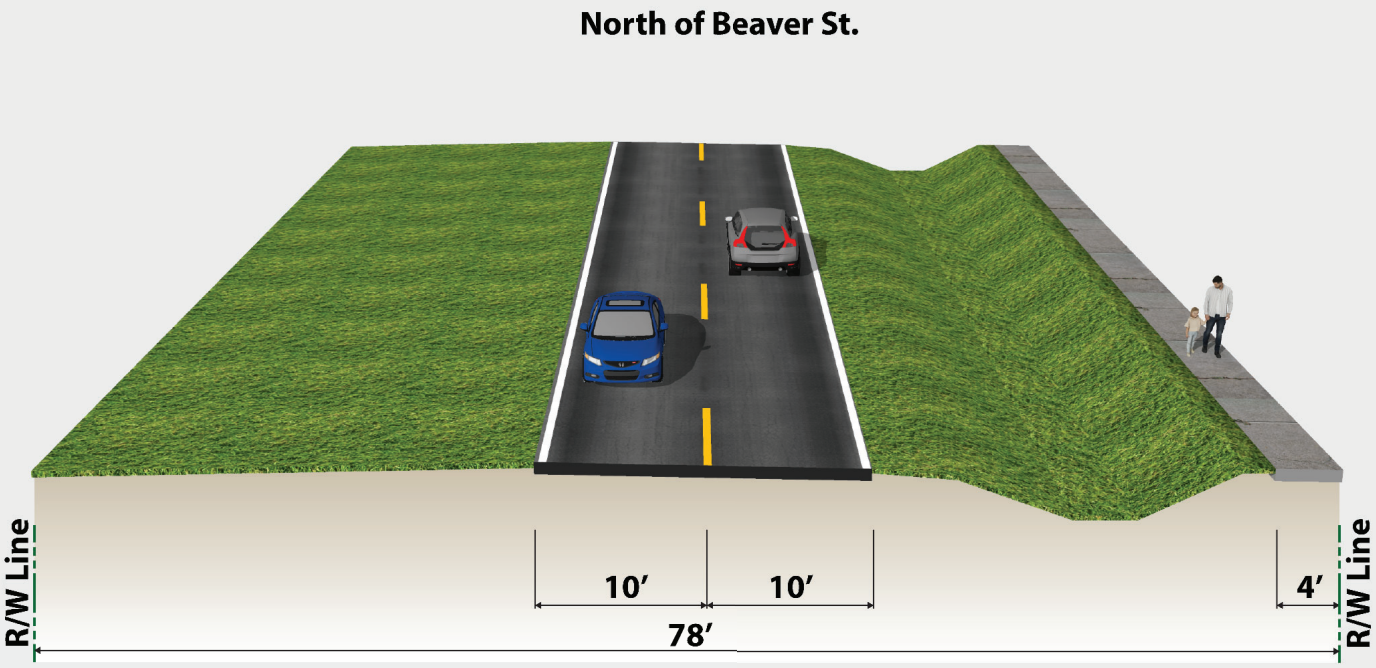
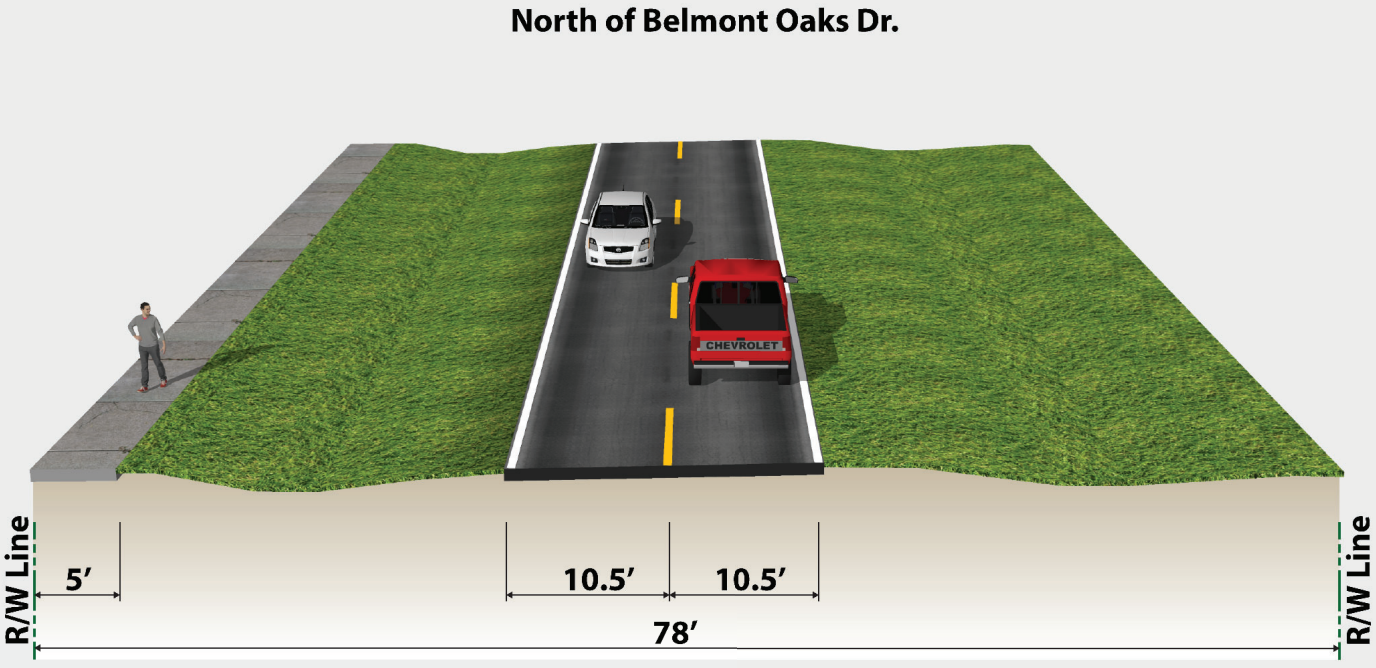


Figure 2.3 - Chaffee Road Corridor Typical Section – North Of Belmont Oaks Road



2.4 Study Intersections

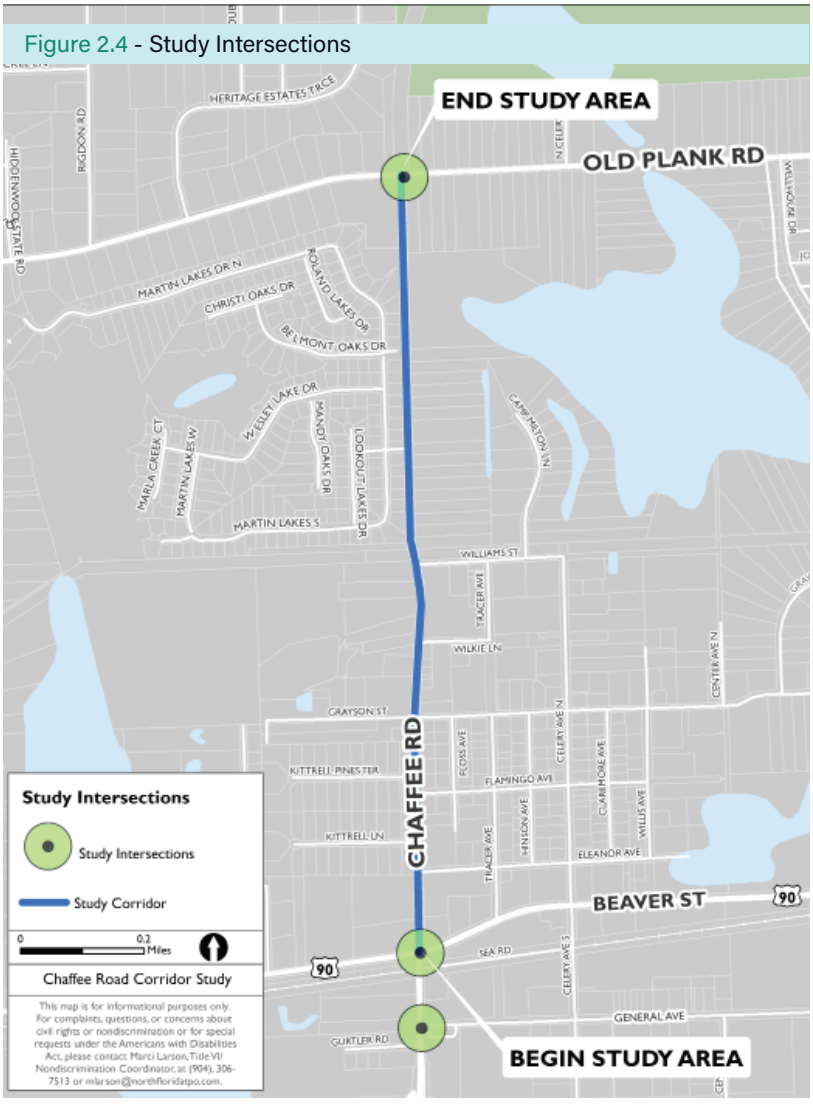
There were three (3) intersections included in the study listed below and displayed in Figure 2.4. An analysis of these intersections is included in the Needs Analysis section of this report.

- **Chaffee Road/General Avenue:** The intersection of Chaffee Road and General Avenue is an unsignalized three-way intersection and provides the access to Whitehouse Elementary. Sidewalks are present on both sides of the road. Additionally, painted crosswalks are on the south side of the intersection crossing Chaffee Road and across General Avenue. Chaffee Road is undivided north of General Avenue and a narrow, separated median begins south of General Avenue.

- **Chaffee Road/Beaver Street (US 90):** The intersection of Chaffee Road and Beaver Street (US 90) is a signalized intersection with westbound left turn lanes and eastbound right turn lanes along Beaver Street. Sidewalks are present along the east side of Chaffee Road and along the north side of Beaver Street beginning at Chaffee Road. Signalized crosswalks are present in all four crossings.

- **Chaffee Road/Old Plank Road:** The intersection of Chaffee Road and Old Plank Road is a signalized intersection with two lanes in each direction. Sidewalks are present on the west side of Chaffee Road and none along Old Plank Road. There are no marked crosswalks at this

Figure 2.4 - Study Intersections

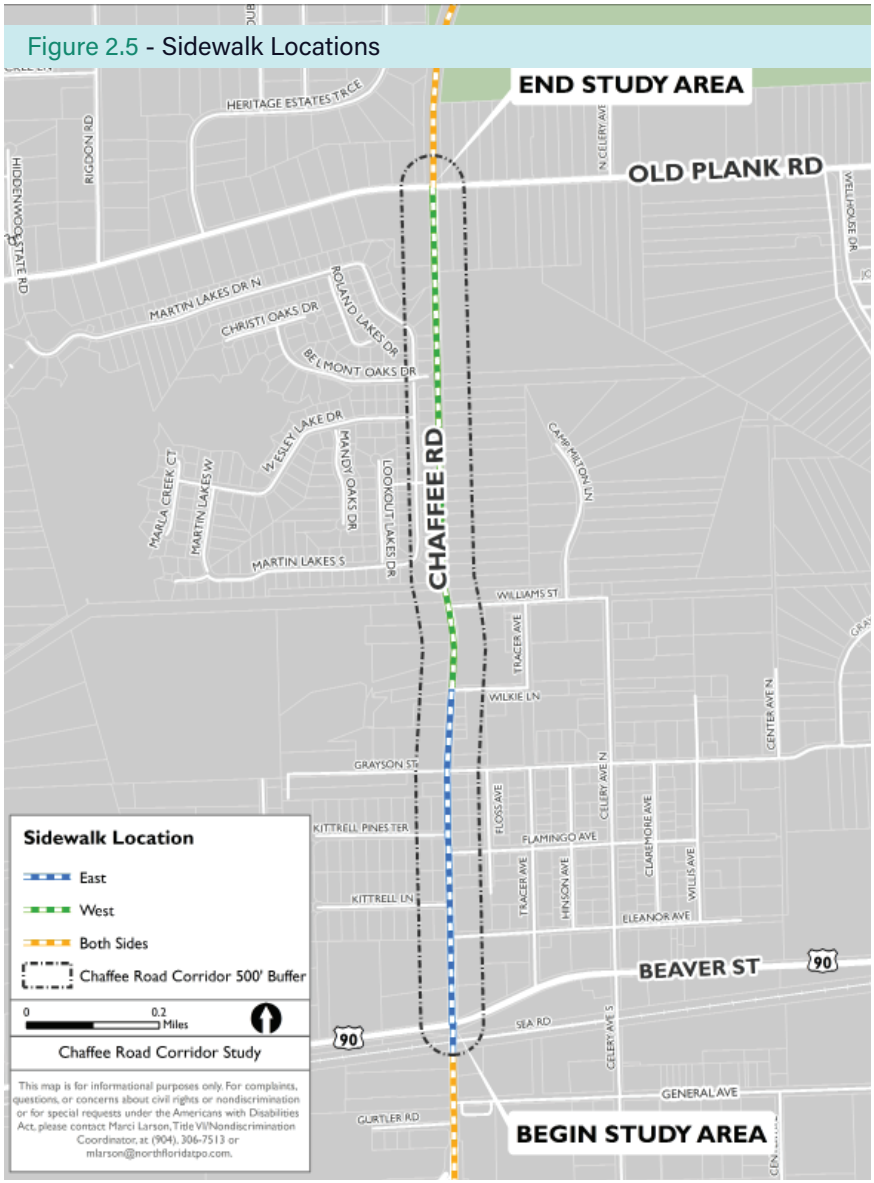


2.5 Bicycle And Pedestrian Facilities

Sidewalks are present along the east side of the roadway from Beaver Street to Wilkie Lane then switches to the west side of the roadway (see Figure 2.5). Connecting sidewalks are present on both sides of the roadway to the north and south of the study area.

There are no on-street bicycle facilities along the corridor. Signalized crosswalks are present in all directions at the intersection of Chaffee Road and Beaver Street (US 90). However there are no crosswalks at the intersection of Old Blank Road.

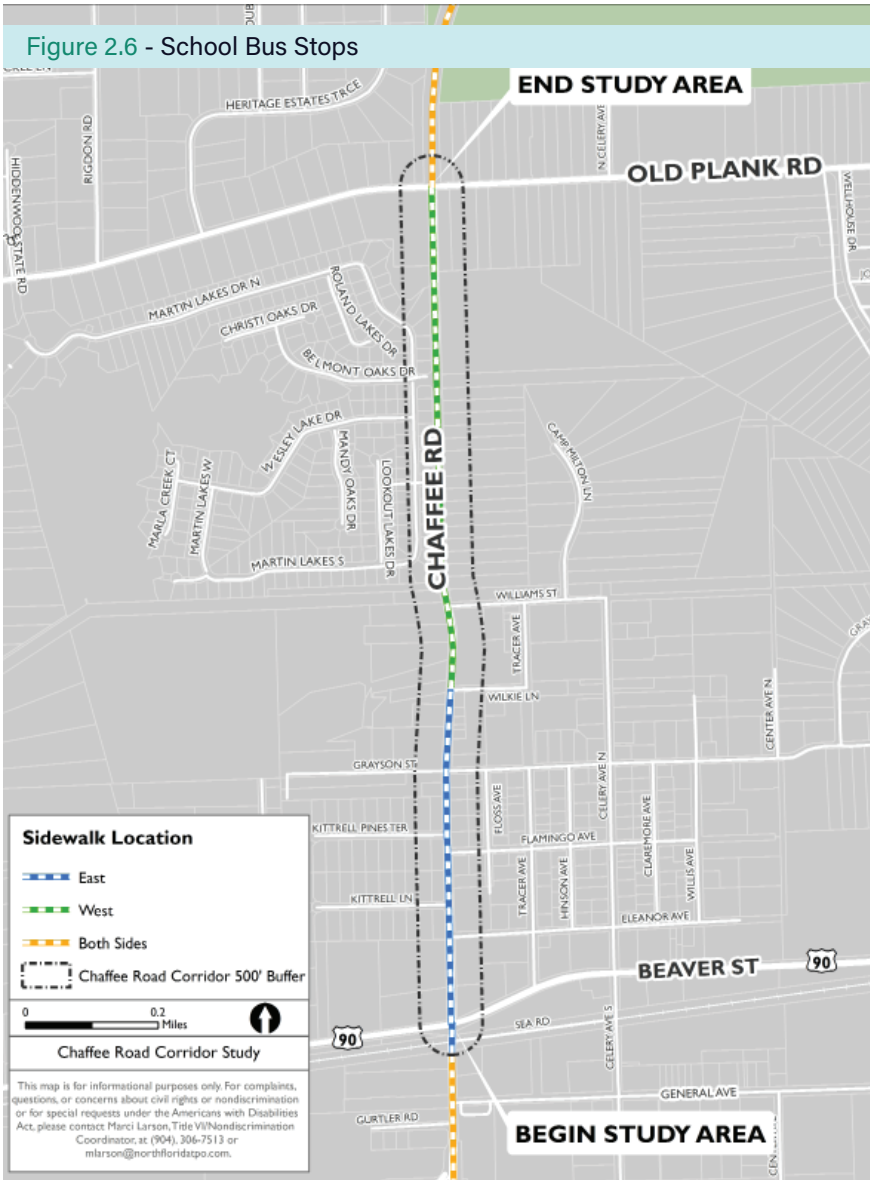
Figure 2.5 - Sidewalk Locations



2.6 School Zones And School Bus Stops

Whitehouse Elementary School, located at Chaffee Road and General Avenue, serves elementary aged students within the area. Whitehouse Elementary is considered a non-transportation zone by Duval County Public Schools. Therefore, there are no bus routes for the school along the Chaffee Road Corridor.

Figure 2.6 - School Bus Stops



Middle and high school students attend **Baldwin Middle-High School** which is located approximately 7.5 miles to the east of Chaffee Road in the Town of Baldwin. According to the Duval County Public Schools website dated 12/10/2019, there are **two bus stops** for Baldwin-Middle High School along the study corridor for 2019/2020 school year. The stops are summarized in the list below and displayed in Figure 2.6.

- Chaffee Road/Kittrell Pines Terrace (Route 0351)
  - » Pick up: 6:28 a.m.
  - » Drop off: 2:22 p.m.
- Chaffee Road/Belmont Oaks Drive (Routes 0160 and 0293)
  - » Pick up: 6:23 a.m. (Route 0160)
  - » Drop off: 2:24 p.m. (Route 0293)

2.7 Railroads

No railroads are within the study corridor. However, a CSX railroad is located just south of the Beaver Street (US 90) study limits (shown in red in Figure 2.7).

The Amtrak Silver Star formerly used the railroad but service has since been discontinued. There has been discussion to revive this route.

2.8 Transit

There are no local transit routes or stops along the Chaffee Road Corridor.

2.9 Recently Completed Projects In The Area

There have been no capacity or operational projects completed along this stretch of Chaffee Road in the past few years.

Figure 2.7 - Railroads

2.10 Planned And Programmed Roadway Projects In The Area

- City of Jacksonville Capital Improvements Plan (CIP) FY 2020-2024: Widening Chaffee Road from Normandy Boulevard to I-10 from two lanes to four lanes with medians and turn lanes to be completed beyond 2021 (Project Number PW0780 01).

- The Florida Department of Transportation is scheduled to begin a $500,000 landscaping project this summer for the I-10 and Chaffee Road interchange. The landscaping project will have a naturalistic approach utilizing a diverse combination of plant species. The project will also include installing a new irrigation system and other incidental work items related. This project is expected to be completed in Summer 2021.

This landscaping project has been developed as a concept in conjunction with District Two's FDOTree program, a new initiative created to educate the public about the Florida Department of Transportation's Northeast Florida landscaping programs.

- North Florida TPO Transportation Improvement Plan (TIP) 2018 List of Priority Projects: Chaffee Road Truck Route from Old Plank Road to I-10. Redesign to accommodate semi-tractor trailers with safe pedestrian access.

- FDOT is developing an intersection improvement project at US 90 and Chaffee Road. This project will include geometric improvements adding a southbound right turn lane, an eastbound right turn lane and a westbound continuous right turn lane. The project will also include milling and resurfacing the entire intersection and updating the signals and pedestrian features. Appendix B describes the plans for this improvement.

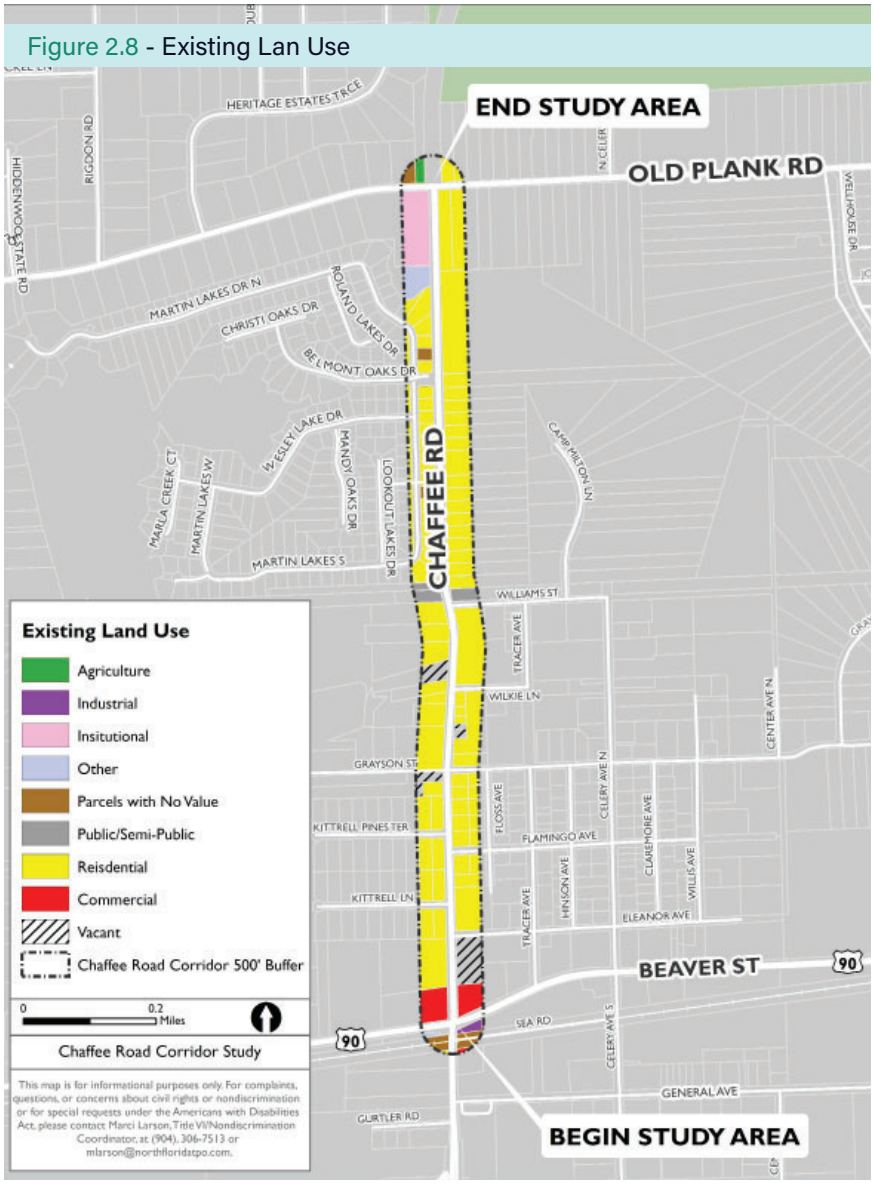
2.11 Existing Land Use, Zoning, And Future Land Use

EXISTING LAND USE

The generalized land use was determined using the 'Generalized Land Use Derived from 2018 Florida Parcels' dataset from the GeoPlan Center. The dataset was created for FDOT and generalizes 99 available land uses into 15 land use classifications.

As displayed in Figure 2.8, the corridor primarily consists of Residential (yellow) land use. Some Commercial (red) land uses are clustered around Beaver Street (US 90) and some Institutional (pink) land uses near Old Plank Road.

Figure 2.8 - Existing Lan Use



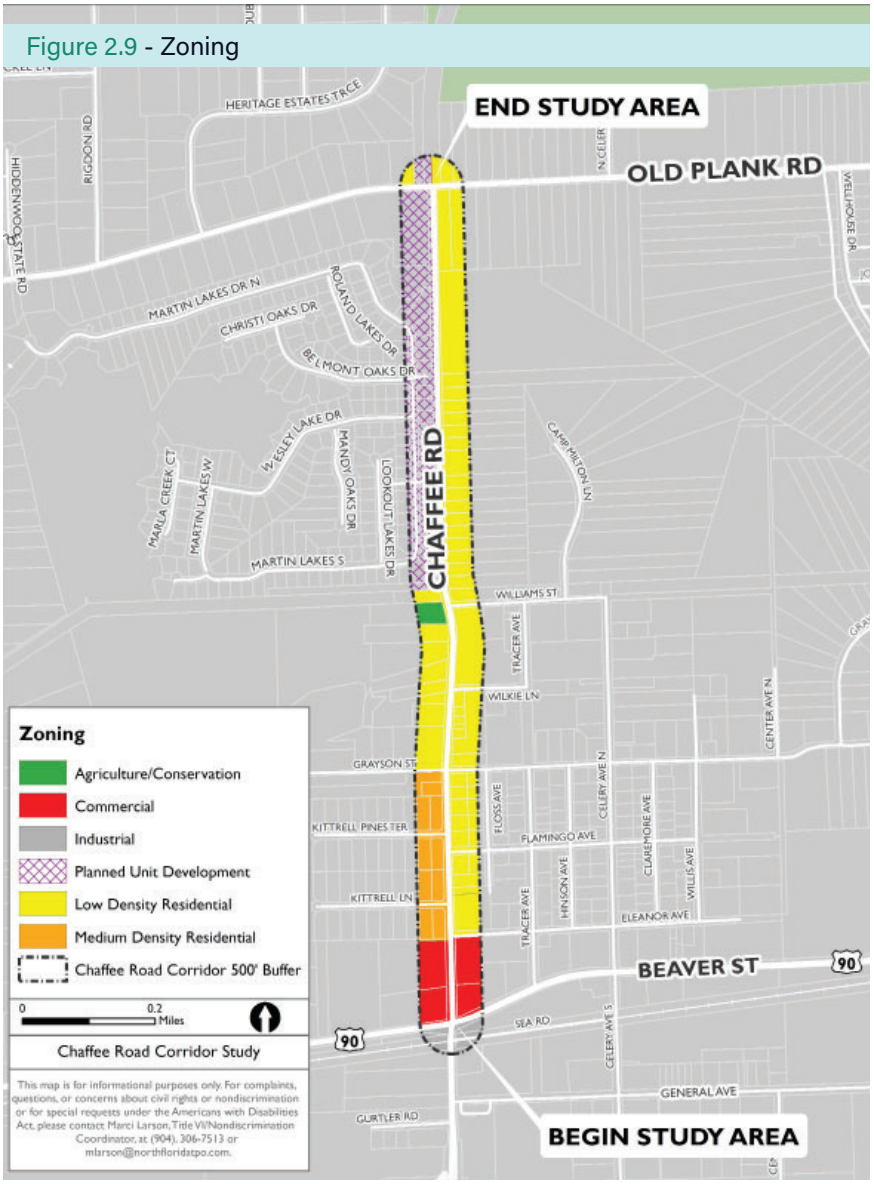
ZONING

The zoning data was obtained from the City of Jacksonville (dated September 2019) and displayed in Figure 2.9. The zoning categories were generalized based on the City of Jacksonville's Zoning District summaries on their website.

The zoning along the corridor is primarily Low Density Residential (yellow), Planned Unit Development (PUD, purple hatch), or Medium Density Residential (orange). Additionally, there is some Commercial (red) near Beaver Street (US 90).

The zoning in the surrounding area of the corridor is either Industrial (grey), PUD or public south of Beaver Street. North of Old Plank Road, the zoning is either Low Density Residential or PUD.

Figure 2.9 - Zoning



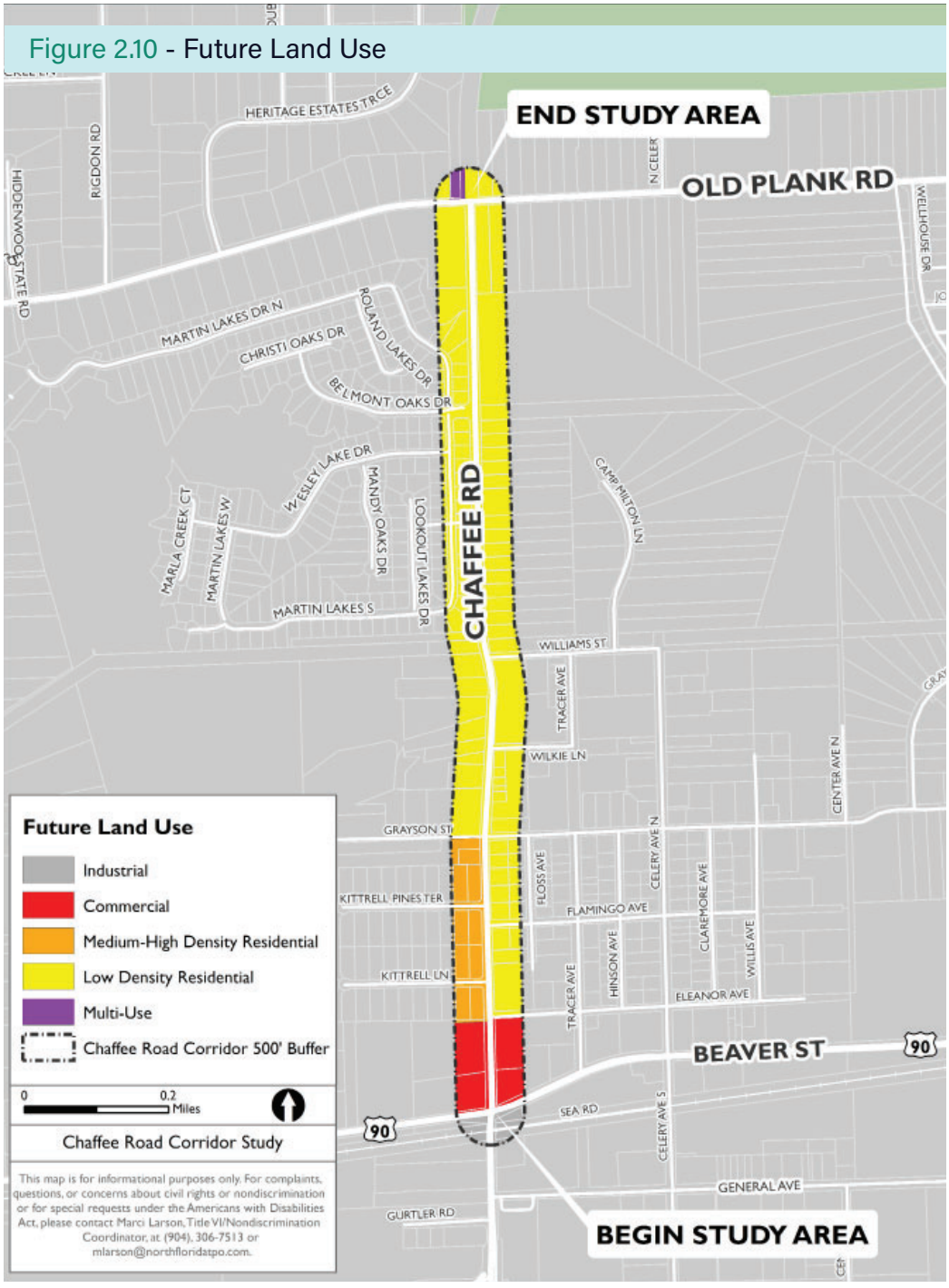
FUTURE LAND USE

The future land use data was obtained from the City of Jacksonville (dated September 2019) and displayed in Figure 2.10. The future land use categories were generalized based on the City of Jacksonville's 2030 Comprehensive Plan Land Use Category descriptions defined on their website.

The future land use along the study corridor is generally Low Density Residential (yellow). South of Grayson Street, the future land use shifts to Medium-High Density Residential (orange) along the west side of Chaffee Road and eventually to Commercial (red) near Beaver Street (US 90).

The future land use just outside the study corridor is either Industrial (grey) or Low Density Residential south of Beaver Street (US 90), North of Old Plank Road, the future land use is either Low Density Residential, Multi-Use (purple), or Industrial.

Figure 2.10 - Future Land Use



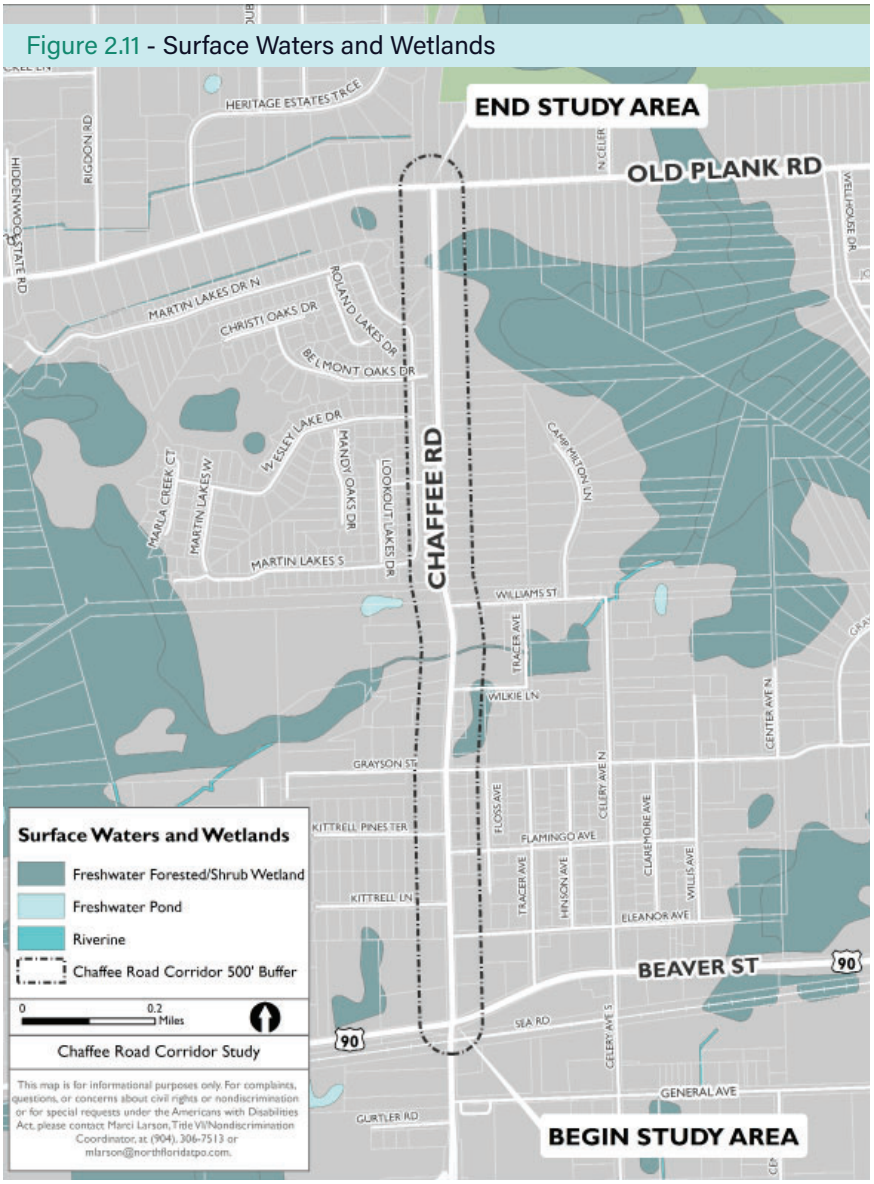
2.12 General Environmental Characteristics

General environmental characteristics for the corridor were documented including surface waters and wetlands, species and habitat, contamination, and cultural historic sites.

- **Surface Waters and Wetlands:** The surface waters and wetlands within the vicinity of the project area are shown in Figure 2.11 using the National Wetlands Inventory Polygons in Florida dataset from U.S. Fish and Wildlife Services published on the Florida Geographic Data Library (FGDL) dated July 2018.

The primary wetlands located within the vicinity of the project area are identified as Freshwater Forested/Shrub Wetland (dark teal).

Figure 2.11 - Surface Waters and Wetlands



- **Species and Habitat:** No identified protected species and habitat are within the vicinity of the project area as indicated by the Species Locations in the State of Florida dataset from the University of Florida (UF) Geoplan Center published on FGDL, dated November 2013.
- **Contamination:** No identified brownfield areas were within the project area as determined using the Brownfield Areas in Florida dataset from the Florida Department of Environmental Protection (FDEP) published on FGDL, dated July 2019.
- **Cultural Historic Sites:** No identified cultural historic sites are within the project area as determined using the Historical Structure Locations in Florida dataset from the Bureau of Archaeological Research published on FGDL, dated October 2019.

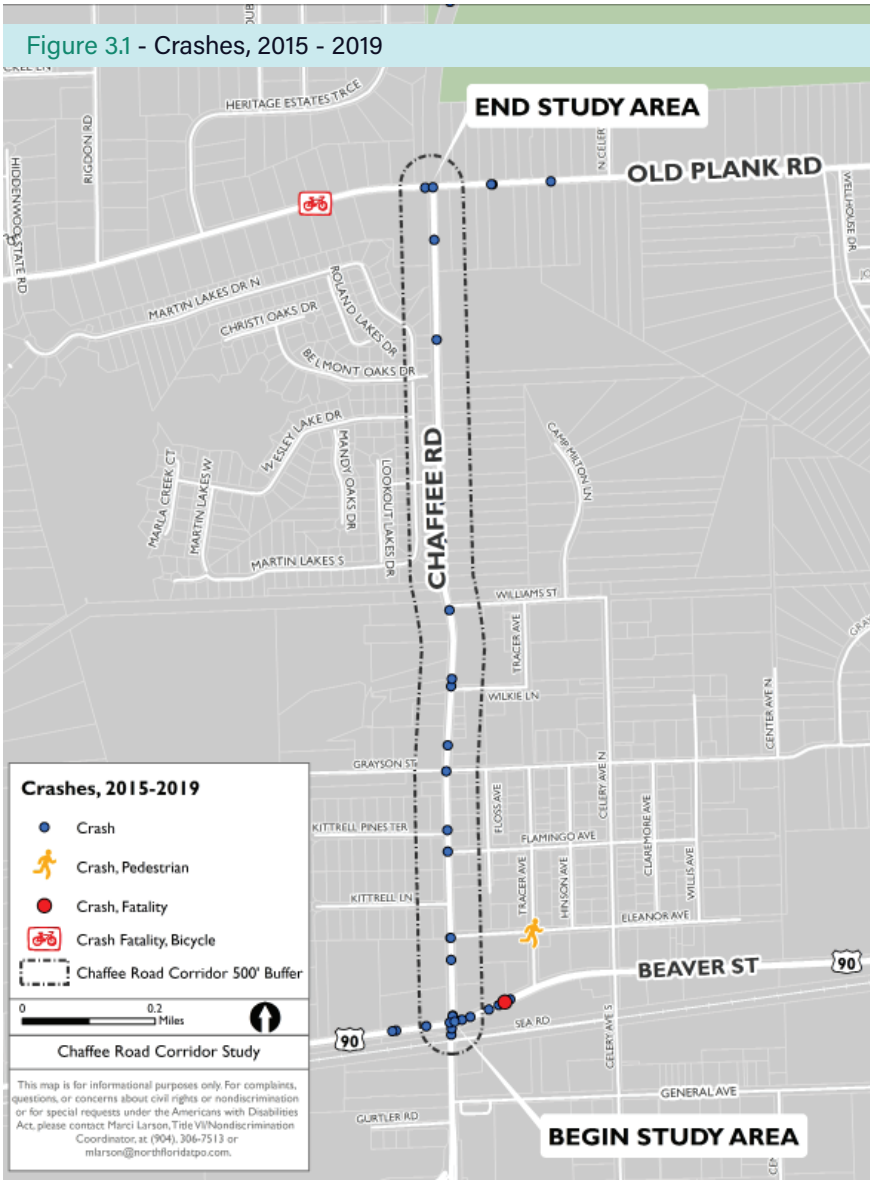
3.0 Needs Analysis

A Needs Analysis was conducted to evaluate to mobility needs of the corridor. This analysis included identifying operational and safety issues, evaluating truck/freight movement needs, bicycle and pedestrian needs, and other relevant issues that arose during the study.

3.1 HISTORICAL SAFETY REVIEW (CRASH ANALYSIS)

A historical safety review was conducted in the form of a crash analysis using the Signal 4 Analytics (S4) database to summarize corridor-wide and intersection crash trends from the previous five years. A summary of the crash analysis is provided in this section. The crash locations are displayed in Figure 3.1.

Figure 3.1 - Crashes, 2015 - 2019



GENERAL CRASH STATISTICS

There were 88 total crashes in the vicinity of the study corridor between 2015 and 2019. The highest concentration of crashes was at the intersection of Chaffee Road and Beaver Street (US 90).

CRASH SEVERITY

Of the 88 crashes, two of them resulted in fatalities (shown in red on the map). One fatality involved a bicycle along Old Plank Road to the west of the 500-foot buffer of the study corridor. The bicycle fatality occurred in March 2016 at 6 a.m. and was reported to be distracted driving related. The other fatality occurred just east of the study corridor along Beaver Street (US 90) at 11:40 p.m. and was reported to be alcohol related.

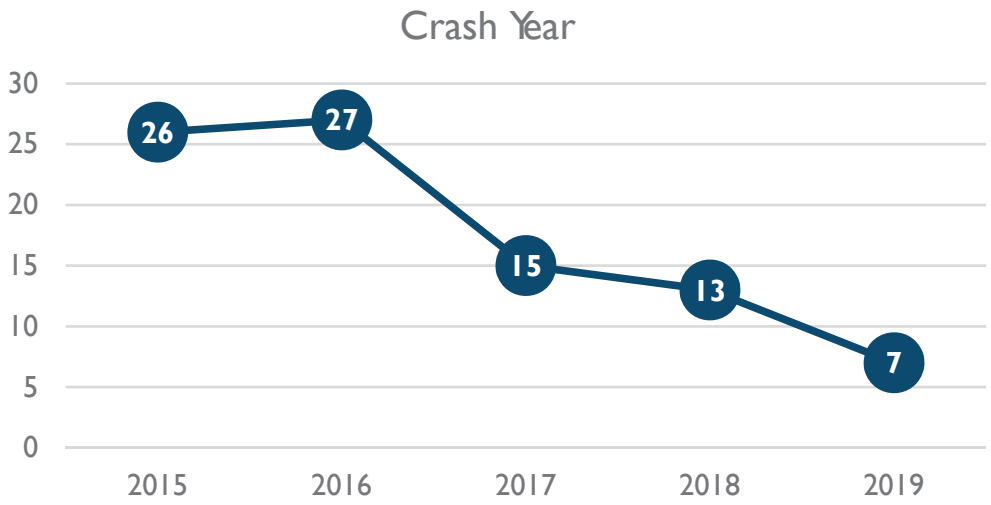
BICYCLE AND PEDESTRIAN CRASHES

Two crashes involved bicycles or pedestrians. The bicycle crash resulted in a fatality (detailed in the previous paragraph). The pedestrian crash (shown in orange on the map) occurred near the intersection of Eleanor Avenue and Tracer Avenue.

CRASH YEAR

Overall, the number of crashes decreased from the 2015 to 2019. The years 2015 and 2016 experienced a similar number of crashes with 26 and 27 crashes each year, respectively.

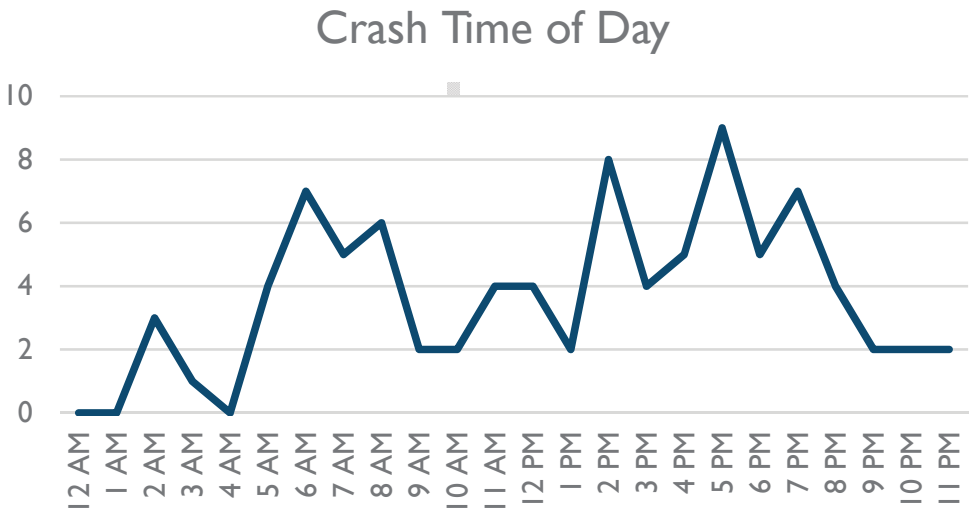
Crashes declined from 27 in 2016 to 15 in 2017. 2018 saw 13 crashes and 2019 saw the fewest crashes with 7 for the year.



CRASH TIME OF DAY

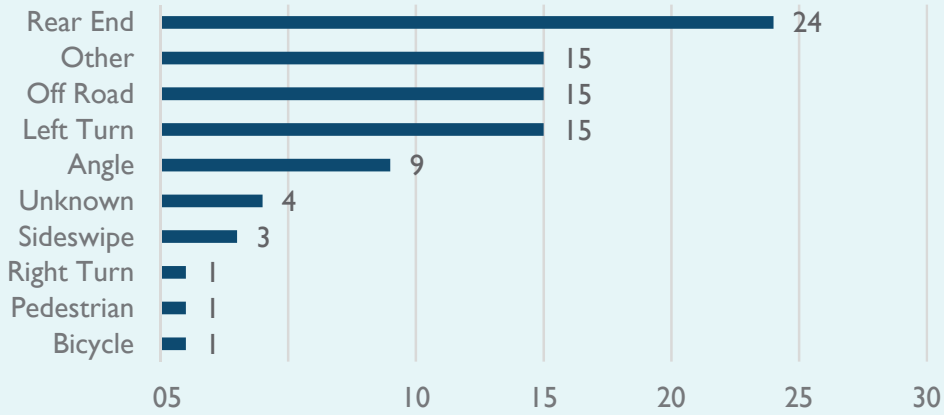
Crash frequency was highest during the 2 p.m. hour (8 crashes) and 5 p.m. hour (9 crashes). Crash frequency was higher during the morning peak hours between 6-9 a.m. with about 6 crashes per hour. The evening peak hours of 4-6 p.m. saw about 5 crashes each.

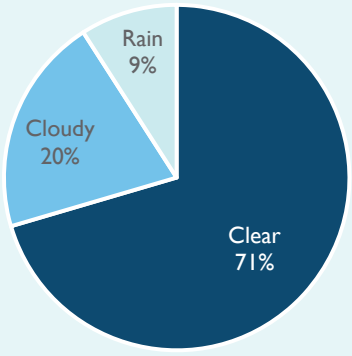
Zero crashes were reported between the midnight, 2 a.m. and 4 a.m. hours.



CRASH TYPE

The majority of the crashes were Rear End crashes, with 24. The other most common crashes were Other, Off Road, and Left Turn crashes with 15 instances each. The least frequent crash types were Right Turn, Pedestrian, and Bicycle with one crash each.





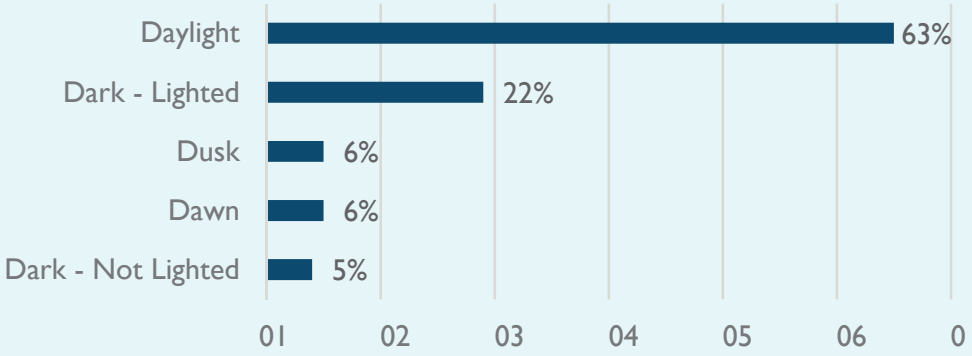
WEATHER CONDITIONS

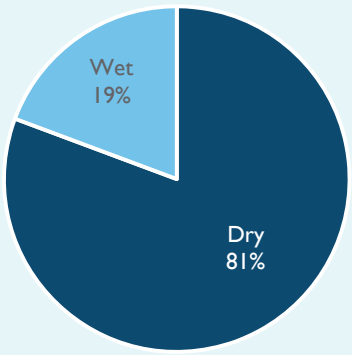
A majority of the crashes occurred during Clear weather conditions (71%).

The remaining crashes occurred either in Cloudy (20%) or Rain (9%) weather conditions.

LIGHT CONDITIONS

Most crashes occurred during Daylight conditions (63%) or in Dark – Lighted conditions (22%). Approximately 12% of the crashes occurred in Dusk or Dawn conditions, and 5% occurred in Dark – Not Lighted conditions.





ROAD SURFACE CONDITION

A majority of the crashes occurred during Dry road surface conditions (81%). The remaining 19% of the crashes occurred during Wet road surface conditions.

3.2 Traffic Analysis

Traffic analysis of the Chaffee Road Corridor was performed using a combination of traffic forecasting utilizing the regional planning model to estimate future travel and demand along the corridor in addition to a network operations analysis featuring a corridor and intersection level of service (LOS) analysis.

TRAFFIC FORECASTING

Traffic forecasting was conducted using the Northeast Regional Planning Model (NERPM) to estimate future travel for Chaffee Road and all crossroads between I-10 and Old Plank Road.

Model Years

Year 2015 was the base year for model validation and year 2045 as the horizon year.

Modeling Results

The 2045 model output volumes were adjusted based on the Duval County Model Output Conversion Factor (MOCF) of 0.98. Table 3.1 shows the traffic count and model-based projections for links within the study area. The study focuses on the network including Chaffee Road between I-10 and Old Plank Road.

The resulting 2045 volumes were compared to 2019 AADTs as counted by the FDOT Florida Traffic Online database, both volumes are provided below in table format and in the straight-line diagram. The results generally show projected AADT to grow less than 1.0% per year for all the links except the western leg of Old Plank Road where a 14.7% annual increase in traffic is projected.

Additionally, three links of the 2019 AADT counts were higher than the projected 2045 AADT. While a negative growth is feasible it does not align with the growth projections for Duval County. Those links with negative growth in the model were the following:

- Chaffee Road between Williams and Old Plank Road
- East approach of Beaver Street
- West approach of Beaver Street

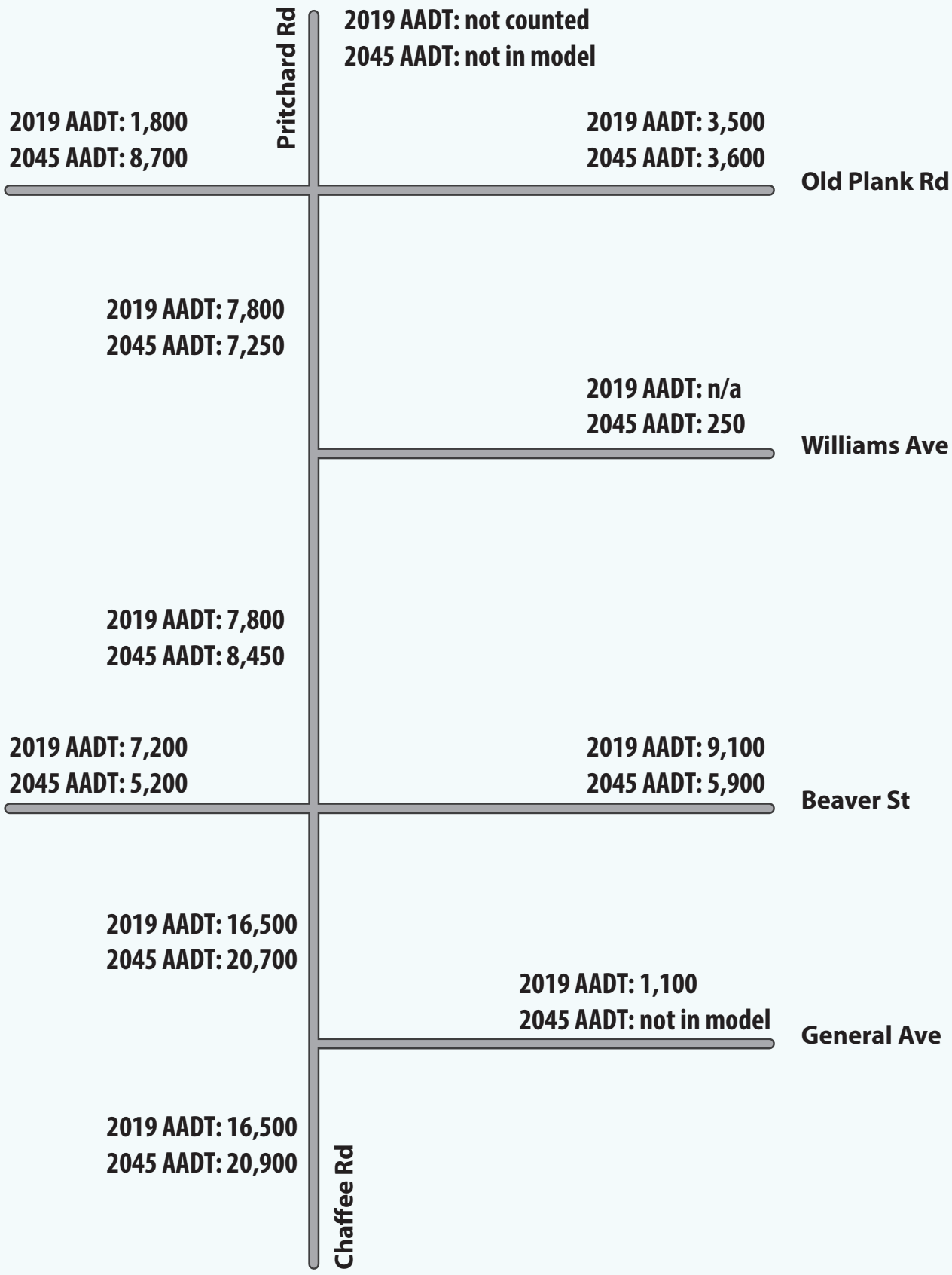
Table 3.1 - Traffic Counts and Projections

Location	2019 FTO Count	2045 Model	Annual Growth Rate
Chaffee Rd - South of Beaver	16,500	20,700	0.98%
Chaffee Rd - North of Beaver	7,800	8,450	0.32%
Beaver St - East of Chaffee	9,100	5,200	-1.65%
Beaver St - West of Chaffee	7,200	5,900	-0.69%
Old Plank Rd - East of Chaffee	3,500	3,600	0.11%
Old Plank Rd - West of Chaffee	1,800	8,700	14.74%

Figure 3.2 presents the traffic counts and the projections for the study corridor.

Pritchard Road and General Avenue were not included in the model links but are provided in the figure.

Figure 3.2 - Traffic Counts and Projections



Historical Traffic Counts

To supplement data received from the model historical trends analysis was performed. Historical traffic count data for the most recently available 10 years of AADT data were collected from FDOT's Florida Traffic Online database. Six locations were available within the study area. Those locations are listed below.

Table 3.2 provides the annual count estimate along with the simple growth rate estimate comparison between 2010 (or earliest year of data) with 2019. The annual growth rate for these locations averaged between -4.0% to 5.6% growth.

- Chaffee Road – South of Beaver Street
- Chaffee Road – Between Beaver Street and Old Plank Road
- Beaver Street – East of Chaffee Road
- Beaver Street – West of Chaffee Road
- Old Plank Road – East of Chaffee Road
- Old Plank Road – West of Chaffee Road

Table 3.2 - Historical Counts

Location	Count ID	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Simple Growth Rate
Chaffee Rd - South of Beaver	72877	16,300	13,100	15,900	17,000	17,500	16,900	18,500	17,000	18,200	16,500	0.1%
Chaffee Rd - North of Beaver	728102	n/a	4,100	4,100	6,100	6,100	6,100	6,300	6,500	7,700	7,800	5.6%
Beaver St - East of Chaffee	720005	8,800	9,200	8,200	7,300	6,900	7,500	7,700	8,000	7,500	9,100	0.3%
Beaver St - West of Chaffee	723911	12,000	9,700	9,900	9,100	9,900	8,900	10,000	9,400	10,500	7,200	-4.0%
Old Plank Rd - East of Chaffee	729009	4,400	4,100	3,900	3,400	3,300	3,500	3,600	3,500	3,700	3,500	-2.0%
Old Plank Rd - West of Chaffee	729028	1,500	1,400	1,300	1,350	1,300	1,200	1,600	1,700	1,900	1,800	2.0%

Regression Analysis using Historical Traffic Data

The historical counts collected from FDOT's count program were then referenced to develop a Regression Analysis procedure used to project the 2045 design year volumes. This growth projection process assumes that the growth trend that occurred between 2010 and 2019 will be applicable for forecasting traffic in year 2045. Based on this assumption the following growth rates were projected and range from -0.6% to 4.1%. The FDOT TRENDs worksheet was used to generate the growth rate projections between 2019 and 2045. The resulting forecast figures will be provided in Appendix C.

Table 3.3 - Regression Analysis

Location	Regression Analysis Growth Rate
Chaffee Rd - South of Beaver	0.9%
Chaffee Rd - North of Beaver	4.1%
Beaver St - East of Chaffee	-0.3%
Beaver St - West of Chaffee	-0.6%
Old Plank Rd - East of Chaffee	-0.6%
Old Plank Rd - West of Chaffee	3.2%

Population Projections

The FDOT publishes population projections by county by district on its Demographic Analysis Website. The population projection was collected for Duval County for all available years. The most recent available forecast data is for years 2020 to 2045 in five-year increments adjusted based on the 2016 population estimates. The table below shows the population estimate for Duval County for Census Year 2010, Year 2016, and projections for years 2020 to 2045. The resulting annual growth rate between 2020 and 2045 is projected to be 1.0% per year.

Table 3.4 - Population Projections

	2010	2016	2020	2025	2030	2035	2040	2045	Growth Rate
Population (Duval)	864,263	923,647	975,500	1,035,100	1,089,300	1,138,500	1,179,900	1,218,700	1.0%

Source: FDOT Demographic Analysis Website:
https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/fto/demographic/2045forecast.pdf?sfvrsn=45f3dab4 0

Growth Rate Summary

In order to select an appropriate growth rate, all of the forecasts were compared to account for the variability in the different methods. The four methods of volume analytics are provided for comparison in the table below. Based on the variability a suggested annual growth rate between 0.5% and 3% is proposed for the different segments within the study area.

Table 3.5 - Growth Rate Summary

Location	10 yr Historical Growth	FDOT Trends 2045	Model Forecast 2045	County Pop Growth 2045	Suggested
Annual Growth Rate					
Chaffee Rd - South of Beaver	0.1%	0.9%	1.0%	1.0%	1.0%
Chaffee Rd - North of Beaver	5.6%	4.1%	0.3%	1.0%	2.0%
Beaver St - East of Chaffee	0.3%	-0.3%	-1.6%	1.0%	0.5%
Beaver St - West of Chaffee	-4.0%	-0.6%	-0.7%	1.0%	0.5%
Old Plank Rd - East of Chaffee	-2.0%	-0.6%	0.1%	1.0%	0.5%
Old Plank Rd - West of Chaffee	2.0%	3.2%	14.7%	1.0%	3.0%

Corridor Level of Service

The 2013 FDOT Quality Level of Service tables were used to complete a planning level analysis of the Chaffee Road segments. The table below presents the results.

Table 3.6 - Corridor LOS

Location	Service Volume	2019 AADT	2019 LOS	Suggested Annual Growth Rate	2045 AADT	2045 LOS
Chaffee Rd - South of Beaver*	37,900	16,500	C	1.0%	20,800	C
Chaffee Rd - North of Beaver	17,000	7,800	C	2.0%	11,850	C
Beaver St - East of Chaffee	16,800	9,100	C	0.5%	10,300	C
Beaver St - West of Chaffee	16,800	7,200	C	0.5%	8,150	C
Old Plank Rd - East of Chaffee	17,000	3,500	B	0.5%	4,000	B
Old Plank Rd - West of Chaffee	17,000	1,800	B	3.0%	3,200	B

**Segment is scheduled to be widened to 4 lanes.*

Based on the segment analysis, the roadway level of service (LOS) is expected to operate within acceptable limits through the study period.

Network Operations Analysis

In addition to the segment capacity analysis, a Network Operations Analysis was conducted for intersections of Chaffee Road at General Avenue, Beaver Street, and Old Plank Road.

Intersection Level of Service Analysis

Turning Movement Counts (TMCs) were collected Tuesday, January 21, 2020 from 6:30-10:30 a.m. and 3:30-7:30 p.m. at the intersections noted above. The overall network peaks were determined to be 7-8 a.m. and 4:45-5:45. Peak Volumes were adjusted by the Duval County Seasonal Correction Factor of 1.06%.

An operational analysis of the project's major intersections was performed for existing traffic and for design year 2045. Directional Design Hour Volume (DDHV) were developed for both the AM and PM peak periods at the study intersections. To develop DDHV and intersection movements the 2020 turning movement counts were adjusted based on the respective link growth rate. Turning volume and DDHVs between analysis intersections were smoothed to achieve better volume balancing. This process was based on review of adjacent land uses and reasonable differences that may occur from local driveways.

The intersection traffic analysis was conducted using Synchro (version 10) traffic software, which uses the HCM methodology to determine intersection delay and LOS. Signal timings for all signalized intersections were optimized using Synchro's optimization tool to achieve comparable intersection operating conditions and traffic progression to regular Transportation Systems Management and Operations (TSM&O) signal retiming maintenance.

Intersection analysis was performed for three models including existing volumes and existing infrastructure, 2045 volumes with no infrastructure changes, and 2045 volumes with FDOT's intersection concept plans at Chaffee Road and Beaver Street.

The results of the existing traffic analysis indicate that all intersections and movements currently operate within target LOS (LOS D or better).

The results of the future traffic analysis indicate that with the existing transportation infrastructure the signalized intersection at Beaver Street will fall to a LOS E in the PM and the westbound movement at the stop controlled General Avenue will fall to LOS F in the PM. With the Beaver Street planned intersection improvements applied the 2045 results show this intersection will improve to a LOS D or better in both AM and PM.

Table 3.7 - Intersection LOS Existing

	Intersection	Approach Delay (LOS)												
		EB			WB			NB			SB			
		L	T	R	L	T	R	L	T	R	L	T	R	
AM	Chaffee Rd and General Ave	-		-	16.9(C)	-	16.9(C)	-	0(A)	0(A)	0.4(A)	0(A)	-	
	Chaffee Rd and Beaver St	27.9(C)	27.9(C)	30.2(C)	35.8(D)	35.8 (D)	35.8 (D)	17.4(B)	16.3(B)	16.3(B)	27(C)	27(C)	27(C)	25.5 (C)
	Chaffee Rd and Old Plank Rd		10.1(B)			9.2 (A)	9.2 (A)		7.2(A)			6.4(A)		9.8(A)
PM	Chaffee Rd and General Ave	-	-	-	25.7(D)	-	25.7(D)		0(A)	0(A)	0.3(A)	0(A)		
	Chaffee Rd and Beaver St	35.1(D)	35.1(D)	46.2(D)	49.1(D)	49.1(D)	49.1(D)	24.6(C)	24.8(C)	24.8(C)	41.5(D)	41.5(D)	41.5(D)	37.0 (D)
	Chaffee Rd and Old Plank Rd		9.3(A)			9.7 (A)			7.3(A)			6.9(A)		7.9 (A)

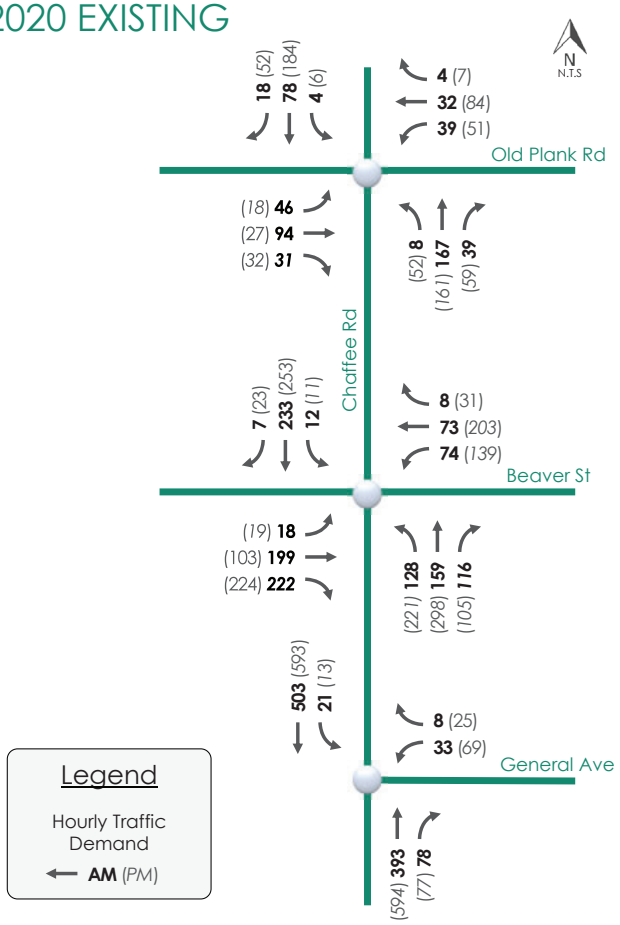
Table 3.8 - Intersection LOS 2045 No-Build

	Intersection	Approach Delay (LOS)												
		EB			WB			NB			SB			
		L	T	R	L	T	R	L	T	R	L	T	R	
AM	Chaffee Rd and General Ave	-	-	-	22.7(C)	-	22.7(C)	-	0(A)	0(A)	9(A)	0.2(A)	-	
	Chaffee Rd and Beaver St	33.6(C)	33.6(C)	43.1(D)	51.7(D)	51.7(D)	51.7(D)	19.3(B)	19.4(B)	19.4(B)	34(C)	34(C)	27(C)	32.5 (C)
	Chaffee Rd and Old Plank Rd		10.4(B)			8.4(A)			10.2(B)			8.9(A)		9.8(A)
PM	Chaffee Rd and General Ave			-	56.4(F)	-	56.4(F)		0(A)	0(A)	10.1(B)	0.2(A)		
	Chaffee Rd and Beaver St	46.5(D)	46.5(D)	77.6(E)	102(F)	102(F)	102(F)	35.5(D)	36.5(D)	36.5(D)	72.5(E)	72.E(D)	41.5(D)	63.1 (E)
	Chaffee Rd and Old Plank Rd		11.3(A)			11.6(A)			8.3(A)			7.4(A)		8.9 (A)

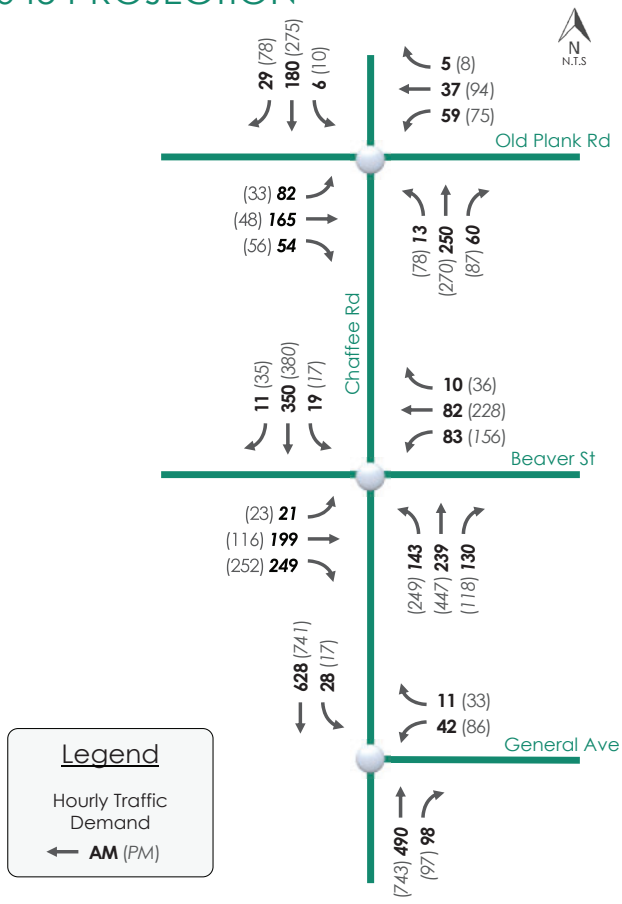
Table 3.9 - 2045 Revised Concept at Chaffee Road and Beaver Street

Analysis Period	Intersection	Approach Delay (LOS)												
		EB			WB			NB			SB			
		L	T	R	L	T	R	L	T	R	L	T	R	
AM Peak	Chaffee Rd and Beaver St	17.0(B)	28.6(C)	35.5(D)	18.7(B)	25.8(C)	0(A)	21.1(C)	23.6(C)	23.6(C)	21.3(C)	36.8(D)	36.8(D)	28.8 (C)
AM Peak	Chaffee Rd and Beaver St	21.0(C)	30.0(C)	39.2(D)	22.7(C)	34.5(C)	0(A)	23(C)	29.7(C)	29.7(C)	23.2(C)	37.8(D)	37.8(D)	31.6 (C)

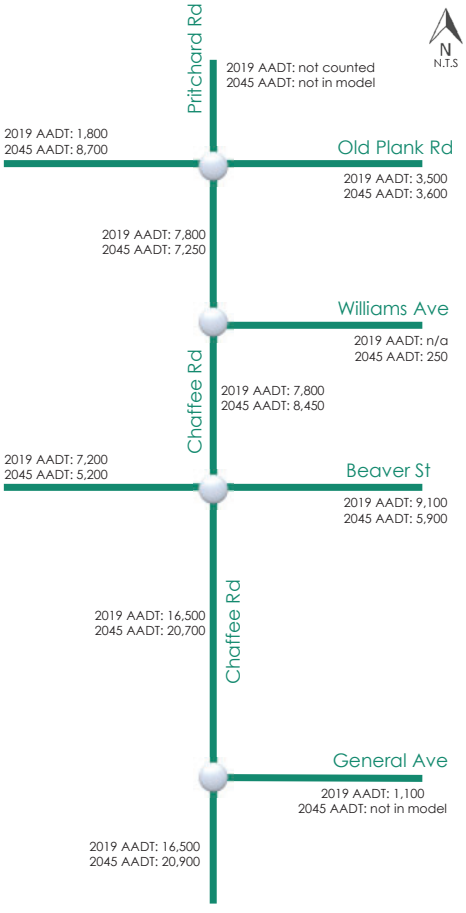
2020 EXISTING



2045 PROJECTION



AADT



Based on the analysis presented in this section, no significant delays are expected along the corridor at the intersections studied. The US 90 at Chaffee Road if left unimproved would experience delay; however as noted earlier the FDOT is developing an intersection improvement project at this location. A rendering is included in Appendix B.

3.3 Truck/Freight Movement Needs

- Truck influences – several warehouse and industrial facilities impact the study segment. Located north of the study area and serviced by Pritchard Road are the following trucking related facilities:
  - » Suddath Global Logistics
  - » Southeast Toyota Distributers
  - » BJ's Wholesale Club Distribution Center
  - » United Parcel Service River City Hub
  - » Georgia Pacific Warehouse
  - » Westside Industrial Park

  There are a number of warehouse/distributing facilities located along US 90 east and west of Chaffee Road. These include:
  - » R&L Carriers
  - » Publix Distribution Center
  - » Michaels Distribution Center
  - » C&S Wholesale Grocers (Winn Dixie)
- The truck factor (T Factor) based on vehicle class counts collected by the FDOT in this area is 1.2

3.4 ISSUES AND OPPORTUNITIES IDENTIFICATION

The Existing Conditions Analysis identified issues and operations for the corridor based on safety, traffic operations, lighting, drainage and ditches, pedestrian and bicycle mobility, school bus pick up/drop off locations, and connections to the Baldwin Trail.

SAFETY

With the high number of trucks traveling along the corridor, the narrow lanes have resulted in minor lane departures which are causing severe drop-offs at the pavement's edge. This could result in crashes if passenger vehicles veer off the roadway and attempt to correct the vehicle back on the pavement.

TRAFFIC OPERATIONS

Based on the operation analysis presented in the previous section, there are no intersections operating below acceptable level of service standards. In addition, the future year analysis did not produce any operational deficiencies.

LIGHTING

Currently street level lighting exists along the corridor located primarily on the west side of the roadway. The existing sidewalks are not illuminated by the current lighting. A lighting plan for both the sidewalks and the roadway should be considered as part of any future improvements to Chaffee Road.

DRAINAGE AND DITCHES

The drainage along this section of Chaffee Road is provided through open ditches and swales. While a drainage analysis was not part of this effort, field observations suggest the system is adequate at the present time.

PEDESTRIAN AND BICYCLE MOBILITY

There are limited pedestrian and no bicycle features along this section of roadway. The City of Jacksonville is developing a project to widen Chaffee Road south of this segment and it will include sidewalks and bike lanes. The segment of Chaffee Road to the north (Prichard Road) includes paved shoulders and sidewalks on both sides of the roadway. This is also where bicyclists and pedestrians can access the Baldwin Trail.

This segment of Chaffee Road will become a gap in the bike/ped network if not improved to include appropriate bicycle and pedestrian facilities.

SCHOOL BUS PICK UP/DROP OFF

The residents living along the corridor are within the 1.5-mile no transportation zone for Whitehouse Elementary, which is located just south of the corridor. Therefore, there are no school bus pick up or drop off locations for elementary school students along Chaffee Road.

For students attending middle or high school at Baldwin Middle-High School, two bus stops are along the west side of Chaffee Road at Kittrell Pines Terrace and Belmont Oaks Drive. The bus arrives between 6:20 a.m. and 6:30 a.m. and between 2:20 p.m. and 2:25 p.m.

There have been concerns about the bus stop locations along Chaffee Road and the safety of the students waiting for the bus directly on Chaffee Road. A request was submitted to the Duval County Public School system in April 2020 to evaluate these locations and potentially locate the bus stops within the neighborhoods to begin the 2020/2021 school year. The School Board has indicated this evaluation is underway.

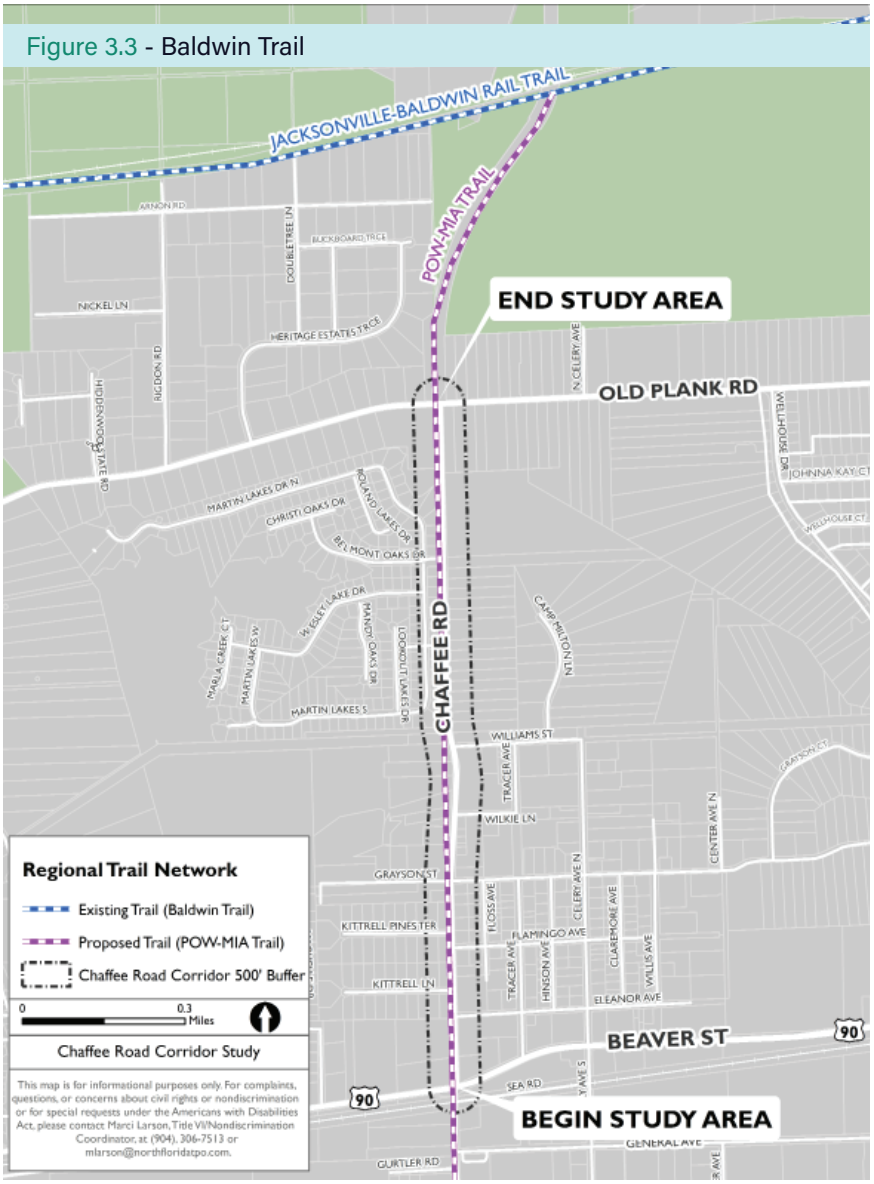
BALDWIN TRAIL CONNECTIONS

The Jacksonville Baldwin Rail Trail (Baldwin Trail) is a popular 12-foot multi-use path currently extending approximately 14.5 miles from Imeson Road in Jacksonville to the Town of Baldwin. An equestrian trail parallels the paved trail. The ROW is generally flat and passes through rural areas. The trail runs just north of the project area (shown in Figure 3.3 in blue).

There is currently a planned trail connection along the Chaffee Road corridor known as the POW-MIA Memorial Trail (shown in purple in Figure 3.3). It is approximately 7.7 miles long and provides a connection from the Cecil trail system located south of the project area and the Baldwin Trail.

The northern portion of the POW-MIA Trail has been prioritized via FDOT's Transportation Regional Incentive Program (TRIP).

Figure 3.3 - Baldwin Trail



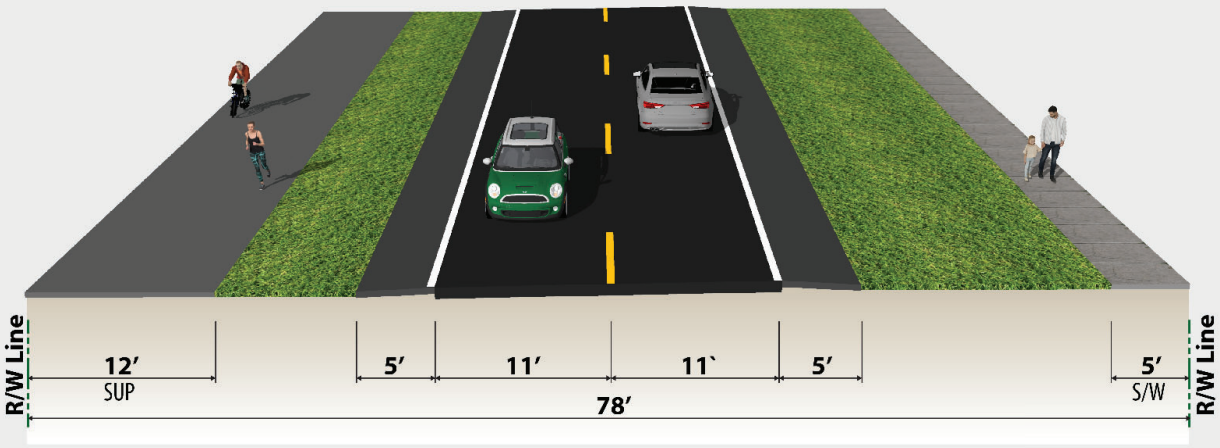
4.0 Proposed Corridor Improvements

As a result of the Existing Conditions Analysis and Needs Analysis, a set of proposed corridor improvements were developed. The proposed corridor improvements are summarized in this section and are intended to make Chaffee Road safer for all users. Additionally, planning-level cost estimates are provided for the proposed improvements.

4.1 Roadway Improvements

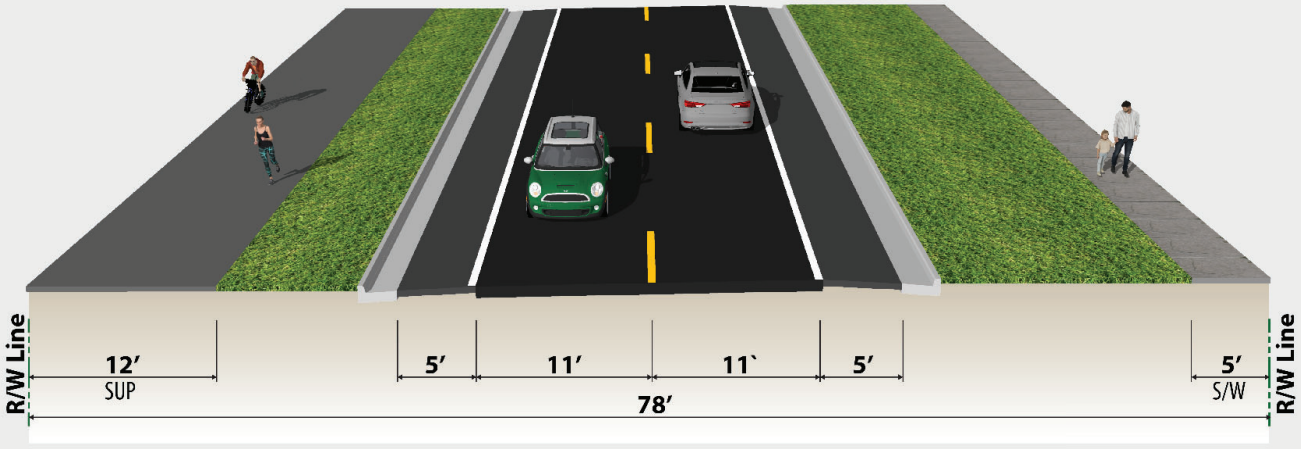
Based on the forecasted traffic volumes, widening this section of Chaffee Road to four-lanes is not needed at this time. However, with the high percentage of truck traffic and the need to provide better pedestrian and bicycle connections, an improved two-lane facility is recommended. Two alternatives have been developed. The first alternative is a rural typical section consistent with what is in place today. This would include a typical section that is comprised of two 11-foot lanes, a 5-foot paved shoulder, a 12-foot shared use path on the west side of Chaffee Road and a 5-foot sidewalk on the east side of the roadway. Figure 4.1 presents the recommended typical section.

Figure 4.1 - Alternative A Proposed Typical Section



Alternative B is an urban typical section which will also include 11-foot travel lanes, 5-foot paved shoulders, a 12-foot shared use path and a 5-foot sidewalk on the east side of Chaffee Road. This alternative will include curb and gutter and would require ponds. This typical section is shown below in Figure 4.2.

Figure 4.2 - Alternative A Proposed Typical Section



5.0 Conclusion

After review of analysis presented in this report, it is evident that the Chaffee Road corridor is greatly impacted by the shipping activities located north of the study area on Pritchard Road. A significant portion of the truck traffic associated with these facilities and those located east and west of Chaffee Road on US 90 travel on this segment. The existing lane widths along this segment of Chaffee Road average 10 feet with no paved shoulders. This creates contention between other users of Chaffee Road and the trucks. The lack of paved shoulders coupled with the narrow lanes is resulting in a significant drop off at the edge of pavement. This is not only a maintenance issue but a safety issue as well.

The City of Jacksonville is designing a widening project on Chaffee Road south of the study area and the section north of the study segment includes paved shoulders and sidewalks on both sides of the roadway. Without an improvement along this segment of Chaffee Road, a gap will exist making it difficult for bicyclists and pedestrians to access the Baldwin Trail and the commercial and service areas south of the study area.

At the onset of the study, concern was expressed regarding the location of several school bus stops along Chaffee Road. Due to the heavy truck traffic and the lack of sidewalks along both sides of the roadway, it was felt conditions were unsafe for school age children to walk along sections of Chaffee Road. Based on the study team's discussions with the Duval County School Board, plans are underway to relocate these bus stops from Chaffee Road and into residential areas adjacent to Chaffee Road.

Given these issues and the safety of the existing roadway configuration, the study team is recommending the City of Jacksonville move forward with the necessary studies to develop an improved two-lane roadway. This would include 12-foot travel lanes, protected bicycle lanes and sidewalks on both sides of Chaffee Road. With an average right-of-way width of 78 feet, this new configuration will not require additional right-of-way. This project should include both roadway and pedestrian level lighting and appropriate pedestrian crossing features at Old Plank Road.

Appendix A

Traffic Data

All Traffic Data Services, Inc.

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Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/21/20	0	5	1	0	2	3	0	2	5	2	0	0	0	1	21
01:00	0	9	3	0	1	1	0	1	0	0	1	0	0	1	17
02:00	0	22	0	0	1	1	0	1	4	0	0	0	0	0	29
03:00	0	84	3	0	0	0	0	0	0	0	0	0	0	3	90
04:00	1	90	4	0	0	0	0	0	3	0	0	0	0	0	98
05:00	4	144	8	0	0	4	0	0	10	1	0	0	0	3	174
06:00	0	141	15	0	0	3	0	2	9	5	0	0	0	0	175
07:00	1	177	10	0	0	5	0	2	5	0	0	0	0	4	204
08:00	1	135	5	0	1	9	0	3	6	1	0	0	0	4	165
09:00	0	89	6	0	2	8	0	1	14	2	0	0	0	1	123
10:00	1	113	9	0	0	3	0	0	9	0	0	0	0	2	137
11:00	2	49	6	0	0	3	0	2	5	1	0	0	0	1	69
12 PM	4	66	5	1	3	7	0	0	8	2	0	0	0	1	97
13:00	0	63	4	0	0	3	0	1	8	0	0	0	0	1	80
14:00	1	64	10	0	1	4	0	1	13	2	0	0	0	5	101
15:00	2	85	4	0	1	10	0	3	8	0	0	0	0	8	121
16:00	1	152	10	0	0	4	0	2	12	1	0	0	0	4	186
17:00	2	90	12	0	1	2	0	2	16	0	0	0	0	5	130
18:00	2	62	17	0	4	2	0	2	6	0	0	0	0	1	96
19:00	0	42	9	0	2	3	0	2	6	1	0	0	0	0	65
20:00	1	39	4	0	0	0	0	1	4	0	0	0	0	0	49
21:00	0	49	2	0	0	1	0	1	5	0	0	0	0	0	58
22:00	1	55	1	0	0	0	0	1	7	1	0	0	0	3	69
23:00	1	59	2	0	1	2	0	1	5	1	0	0	0	1	73
Total	25	1884	150	1	20	78	0	31	168	20	1	0	0	49	2427
Percent	1.0%	77.6%	6.2%	0.0%	0.8%	3.2%	0.0%	1.3%	6.9%	0.8%	0.0%	0.0%	0.0%	2.0%	
AM Peak	05:00	07:00	06:00		00:00	08:00		08:00	09:00	06:00	01:00			07:00	
Vol.	4	177	15		2	9		3	14	5	1			4	
PM Peak	12:00	16:00	18:00	12:00	18:00	15:00		15:00	17:00	12:00				15:00	
Vol.	4	152	17	1	4	10		3	16	2				8	

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Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/22/20	0	7	0	0	3	0	0	0	12	0	0	0	0	0	22
01:00	0	13	2	0	1	2	0	0	1	0	0	0	0	0	19
02:00	0	19	0	0	0	0	0	3	3	0	0	0	0	0	25
03:00	1	64	2	0	0	1	0	0	4	0	0	0	0	2	74
04:00	1	123	3	0	0	0	0	0	2	1	0	0	0	3	133
05:00	1	143	4	0	0	3	0	2	11	2	0	0	0	1	167
06:00	1	151	10	0	1	4	0	4	10	1	0	0	0	5	187
07:00	2	167	5	0	0	14	1	0	6	1	0	0	0	1	197
08:00	4	135	4	0	1	12	1	3	7	1	0	0	0	1	169
09:00	2	104	9	0	3	3	0	1	14	1	0	0	0	2	139
10:00	0	107	8	0	1	10	0	1	11	1	0	0	0	1	140
11:00	0	52	4	0	1	13	0	1	8	1	0	0	0	2	82
12 PM	2	56	16	1	0	11	0	0	6	0	0	0	0	6	98
13:00	2	66	7	0	2	7	0	1	9	1	0	0	0	3	98
14:00	0	76	8	0	3	3	0	2	15	1	0	0	0	1	109
15:00	3	101	6	0	1	6	0	4	9	1	0	0	0	3	134
16:00	1	154	10	0	2	6	0	2	19	0	0	0	0	8	202
17:00	1	77	13	0	2	1	0	0	7	2	0	0	0	3	106
18:00	0	61	19	0	3	2	0	2	7	0	0	0	0	0	94
19:00	0	38	11	0	2	2	0	1	4	1	0	0	0	2	61
20:00	1	61	6	0	0	1	0	1	5	0	0	0	0	0	75
21:00	1	41	3	0	0	2	0	1	11	0	0	0	0	0	59
22:00	1	59	1	0	0	1	0	0	7	1	0	0	0	0	70
23:00	0	55	0	0	2	1	0	1	7	0	0	0	0	1	67
Total	24	1930	151	1	28	105	2	30	195	16	0	0	0	45	2527
Percent	0.9%	76.4%	6.0%	0.0%	1.1%	4.2%	0.1%	1.2%	7.7%	0.6%	0.0%	0.0%	0.0%	1.8%	
AM Peak	08:00	07:00	06:00		00:00	07:00	07:00	06:00	09:00	05:00				06:00	
Vol.	4	167	10		3	14	1	4	14	2				5	
PM Peak	15:00	16:00	18:00	12:00	14:00	12:00		15:00	16:00	17:00				16:00	
Vol.	3	154	19	1	3	11		4	19	2				8	

All Traffic Data Services, Inc.

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Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

NB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/23/20	0	10	2	0	1	0	0	1	10	1	0	0	0	0	25
01:00	1	8	0	0	0	1	0	0	4	0	0	0	0	0	14
02:00	0	14	5	0	0	1	0	0	5	0	0	0	0	0	25
03:00	1	64	1	0	0	0	0	0	5	0	0	0	0	1	72
04:00	1	100	4	0	0	2	0	0	7	1	0	0	0	0	115
05:00	1	145	8	0	0	3	0	0	6	2	0	0	0	0	165
06:00	0	148	9	0	0	8	0	2	11	2	0	0	1	4	185
07:00	2	152	10	0	0	7	0	4	8	2	0	0	0	9	194
08:00	4	147	11	0	0	7	0	2	14	0	0	0	0	7	192
09:00	2	98	3	0	2	4	1	0	10	3	0	0	0	0	123
10:00	3	113	6	0	2	3	0	1	14	0	0	0	0	2	144
11:00	0	58	6	1	0	4	0	0	10	0	0	0	0	2	81
12 PM	3	72	7	0	1	2	0	2	8	3	0	0	0	0	98
13:00	0	53	6	0	2	4	0	3	16	0	0	0	0	0	84
14:00	1	75	3	0	2	5	0	2	10	2	0	0	0	3	103
15:00	1	88	9	0	1	4	0	0	11	0	0	0	0	6	120
16:00	2	152	9	0	1	5	0	4	11	1	0	0	0	10	195
17:00	2	92	11	0	1	1	0	2	5	2	0	0	0	4	120
18:00	0	74	20	0	1	1	0	2	7	0	0	0	0	4	109
19:00	1	41	15	0	3	1	0	1	4	2	0	0	0	3	71
20:00	0	39	7	0	0	2	0	0	3	1	0	0	0	0	52
21:00	0	54	1	0	0	0	0	0	7	0	0	0	0	0	62
22:00	0	39	0	0	0	0	0	1	9	1	0	0	0	0	50
23:00	0	65	0	0	3	2	0	2	4	1	0	0	0	0	77
Total	25	1901	153	1	20	67	1	29	199	24	0	0	1	55	2476
Percent	1.0%	76.8%	6.2%	0.0%	0.8%	2.7%	0.0%	1.2%	8.0%	1.0%	0.0%	0.0%	0.0%	2.2%	
AM Peak	08:00	07:00	08:00	11:00	09:00	06:00	09:00	07:00	08:00	09:00			06:00	07:00	
Vol.	4	152	11	1	2	8	1	4	14	3			1	9	
PM Peak	12:00	16:00	18:00		19:00	14:00		16:00	13:00	12:00				16:00	
Vol.	3	152	20		3	5		4	16	3				10	
Grand Total	74	5715	454	3	68	250	3	90	562	60	1	0	1	149	7430
Percent	1.0%	76.9%	6.1%	0.0%	0.9%	3.4%	0.0%	1.2%	7.6%	0.8%	0.0%	0.0%	0.0%	2.0%	

All Traffic Data Services, Inc.

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Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/21/20	0	10	1	0	0	0	0	3	5	3	0	0	0	0	22
01:00	1	16	3	1	1	2	0	0	2	0	0	0	0	0	26
02:00	0	25	0	0	1	1	0	1	2	0	0	0	0	1	31
03:00	1	58	1	0	1	1	0	1	10	0	0	0	0	2	75
04:00	0	31	0	0	1	1	0	1	6	4	0	0	0	0	44
05:00	1	24	0	0	0	2	0	3	5	0	0	0	0	3	38
06:00	2	50	8	0	3	5	0	0	9	1	0	0	0	1	79
07:00	0	79	6	0	0	2	0	2	2	0	0	0	0	4	95
08:00	1	93	0	0	1	6	0	0	8	0	0	0	0	1	110
09:00	1	86	44	0	4	6	0	1	8	1	0	0	0	0	151
10:00	1	65	7	0	2	2	0	4	16	0	0	0	0	0	97
11:00	0	47	3	0	1	8	0	2	12	1	0	0	0	3	77
12 PM	1	89	10	0	0	1	0	4	8	1	0	0	1	0	115
13:00	2	70	7	0	2	5	0	1	9	0	0	0	0	0	96
14:00	2	115	6	0	1	6	0	2	14	0	0	0	0	3	149
15:00	2	224	14	0	3	4	0	5	7	0	0	0	0	1	260
16:00	2	164	10	0	0	6	0	0	4	0	0	0	0	1	187
17:00	2	194	8	0	0	3	0	5	12	0	0	0	0	2	226
18:00	4	130	5	0	1	3	0	1	8	0	0	0	0	2	154
19:00	1	86	4	0	2	2	0	3	5	1	0	0	0	0	104
20:00	0	52	1	0	1	1	0	1	9	0	0	0	0	0	65
21:00	0	63	2	0	0	1	0	1	3	0	0	0	0	1	71
22:00	5	90	3	0	0	2	0	3	7	5	0	0	0	2	117
23:00	1	55	1	0	0	1	1	1	10	1	0	0	0	0	71
Total	30	1916	144	1	25	71	1	45	181	18	0	0	1	27	2460
Percent	1.2%	77.9%	5.9%	0.0%	1.0%	2.9%	0.0%	1.8%	7.4%	0.7%	0.0%	0.0%	0.0%	1.1%	
AM Peak	06:00	08:00	09:00	01:00	09:00	11:00		10:00	10:00	04:00				07:00	
Vol.	2	93	44	1	4	8		4	16	4				4	
PM Peak	22:00	15:00	15:00		15:00	14:00	23:00	15:00	14:00	22:00			12:00	14:00	
Vol.	5	224	14		3	6	1	5	14	5			1	3	

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/22/20	0	13	0	0	0	0	0	2	3	1	0	0	0	0	19
01:00	1	17	0	0	1	0	0	1	0	2	0	0	0	0	22
02:00	1	15	0	0	0	0	0	0	3	0	0	0	0	0	19
03:00	3	57	0	0	1	0	0	3	7	0	0	0	0	0	71
04:00	0	52	3	0	3	1	0	1	5	5	0	0	0	0	70
05:00	0	27	0	0	2	3	0	1	3	1	0	0	0	0	37
06:00	1	43	4	0	1	9	0	1	7	1	0	0	0	4	71
07:00	2	93	3	0	2	4	1	0	9	0	0	0	0	3	117
08:00	1	78	1	0	1	7	0	1	4	0	0	0	0	3	96
09:00	2	83	42	0	4	2	0	2	13	0	0	0	0	5	153
10:00	2	63	9	0	5	12	0	2	14	0	0	0	0	2	109
11:00	0	55	3	0	2	11	0	1	12	1	0	0	0	1	86
12 PM	2	78	5	1	1	9	0	5	5	0	0	0	0	2	108
13:00	3	77	5	0	0	8	0	2	10	0	0	0	0	0	105
14:00	4	140	5	0	1	5	0	1	4	0	0	0	0	2	162
15:00	4	215	16	0	1	5	0	1	17	0	0	0	0	3	262
16:00	2	201	6	0	1	6	0	2	10	0	0	0	0	4	232
17:00	2	196	14	0	2	5	0	3	12	1	0	0	0	1	236
18:00	1	96	9	0	2	1	0	3	8	0	0	0	0	2	122
19:00	0	89	5	0	2	1	0	0	6	1	0	0	0	1	105
20:00	1	33	5	0	0	0	0	1	9	0	0	0	0	0	49
21:00	0	61	3	0	0	2	0	2	3	1	0	0	0	1	73
22:00	0	91	1	0	0	1	0	2	7	7	1	0	0	0	110
23:00	0	48	0	0	0	0	0	1	9	4	0	0	0	0	62
Total	32	1921	139	1	32	92	1	38	180	25	1	0	0	34	2496
Percent	1.3%	77.0%	5.6%	0.0%	1.3%	3.7%	0.0%	1.5%	7.2%	1.0%	0.0%	0.0%	0.0%	1.4%	
AM Peak	03:00	07:00	09:00		10:00	10:00	07:00	03:00	10:00	04:00				09:00	
Vol.	3	93	42		5	12	1	3	14	5				5	
PM Peak	14:00	15:00	15:00	12:00	17:00	12:00		12:00	15:00	22:00	22:00			16:00	
Vol.	4	215	16	1	2	9		5	17	7	1			4	

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 1
Station ID: 1
PRITCHARD ROAD NORTH OF
OLD PLANK ROAD

SB

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
01/23/20	1	8	1	0	0	1	0	1	4	1	0	0	0	0	17
01:00	0	16	1	0	0	0	0	0	2	1	0	0	0	0	20
02:00	1	21	2	0	0	1	0	1	2	0	0	0	0	0	28
03:00	4	72	2	0	1	3	0	3	8	0	0	1	0	1	95
04:00	1	30	0	1	1	3	0	0	9	3	0	0	0	0	48
05:00	0	29	3	0	1	2	0	0	2	1	0	0	0	0	38
06:00	4	49	6	0	2	7	1	0	8	1	0	0	0	3	81
07:00	1	82	6	0	3	9	0	2	4	0	0	0	0	6	113
08:00	1	91	4	0	1	6	0	1	9	0	0	0	0	3	116
09:00	1	73	43	0	5	5	0	2	8	0	0	0	0	0	137
10:00	1	67	8	0	1	4	0	3	11	0	0	0	0	1	96
11:00	1	64	8	0	0	2	0	1	12	0	0	0	0	2	90
12 PM	4	61	4	0	0	3	0	2	7	0	0	0	0	1	82
13:00	1	52	5	0	0	4	0	2	6	0	0	0	0	0	70
14:00	0	114	7	0	0	4	0	1	11	0	0	0	0	4	141
15:00	3	198	10	0	0	5	0	3	6	0	0	0	0	6	231
16:00	2	186	10	0	1	8	0	2	8	0	0	0	0	3	220
17:00	5	216	13	0	0	2	0	3	12	0	0	0	0	5	256
18:00	3	101	4	0	1	2	0	1	2	0	0	0	0	2	116
19:00	1	84	9	0	1	1	0	1	9	1	0	0	0	1	108
20:00	0	60	2	0	0	0	0	2	9	0	0	0	0	1	74
21:00	1	84	3	0	0	2	0	0	1	2	0	0	0	0	93
22:00	1	87	1	0	0	0	0	3	10	7	0	0	0	0	109
23:00	0	39	1	0	0	2	0	1	5	1	0	0	0	0	49
Total	37	1884	153	1	18	76	1	35	165	18	0	1	0	39	2428
Percent	1.5%	77.6%	6.3%	0.0%	0.7%	3.1%	0.0%	1.4%	6.8%	0.7%	0.0%	0.0%	0.0%	1.6%	
AM Peak	03:00	08:00	09:00	04:00	09:00	07:00	06:00	03:00	11:00	04:00		03:00		07:00	
Vol.	4	91	43	1	5	9	1	3	12	3		1		6	
PM Peak	17:00	17:00	17:00		16:00	16:00		15:00	17:00	22:00				15:00	
Vol.	5	216	13		1	8		3	12	7				6	
Grand Total	99	5721	436	3	75	239	3	118	526	61	1	1	1	100	7384
Percent	1.3%	77.5%	5.9%	0.0%	1.0%	3.2%	0.0%	1.6%	7.1%	0.8%	0.0%	0.0%	0.0%	1.4%	

All Traffic Data Services, Inc.

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Site Code: 2
Station ID: 2
CHAFFEE ROAD NORTH OF
GRAYSON ROAD

Start Time	21-Jan-20 Tue	NB	SB							Total
12:00 AM		26	25							51
01:00		19	29							48
02:00		28	27							55
03:00		80	80							160
04:00		87	66							153
05:00		145	93							238
06:00		163	213							376
07:00		**191**	**220**							**411**
08:00		186	210							396
09:00		154	218							372
10:00		162	151							313
11:00		124	136							260
12:00 PM		147	184							331
01:00		153	173							326
02:00		206	214							420
03:00		206	**293**							499
04:00		**316**	230							546
05:00		292	293							**585**
06:00		245	226							471
07:00		172	131							303
08:00		125	87							212
09:00		99	82							181
10:00		95	115							210
11:00		87	74							161
Total		3508	3570							7078
Percent		49.6%	50.4%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	191	220	-	-	-	-	-	-	411
PM Peak	-	16:00	15:00	-	-	-	-	-	-	17:00
Vol.	-	316	293	-	-	-	-	-	-	585

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

Site Code: 2
Station ID: 2
CHAFFEE ROAD NORTH OF
GRAYSON ROAD

Start Time	22-Jan-20 Wed	NB	SB							Total
12:00 AM		30	20							50
01:00		23	22							45
02:00		25	19							44
03:00		68	75							143
04:00		121	86							207
05:00		149	90							239
06:00		183	195							378
07:00		**184**	**247**							**431**
08:00		181	176							357
09:00		159	219							378
10:00		163	160							323
11:00		128	144							272
12:00 PM		165	178							343
01:00		173	165							338
02:00		207	235							442
03:00		233	303							536
04:00		**335**	290							**625**
05:00		248	**310**							558
06:00		239	207							446
07:00		160	165							325
08:00		174	83							257
09:00		106	84							190
10:00		104	116							220
11:00		95	64							159
Total		3653	3653							7306
Percent		50.0%	50.0%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	184	247	-	-	-	-	-	-	431
PM Peak	-	16:00	17:00	-	-	-	-	-	-	16:00
Vol.	-	335	310	-	-	-	-	-	-	625

All Traffic Data Services, Inc.

WWW.ALLTRAFFICDATA.NET

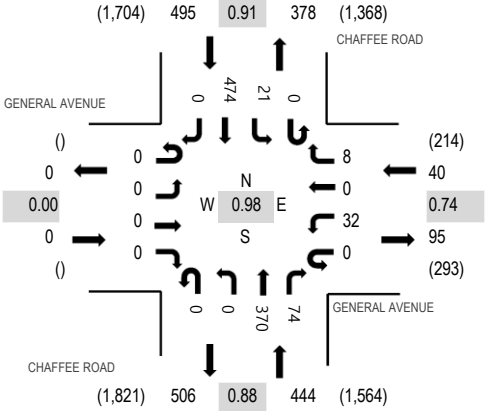
Site Code: 2
Station ID: 2
CHAFFEE ROAD NORTH OF
GRAYSON ROAD

Start Time	23-Jan-20 Thu	NB	SB							Total
12:00 AM		31	23							54
01:00		22	27							49
02:00		26	24							50
03:00		70	97							167
04:00		97	68							165
05:00		143	85							228
06:00		181	206							387
07:00		188	**236**							424
08:00		**223**	227							**450**
09:00		147	211							358
10:00		191	169							360
11:00		127	161							288
12:00 PM		142	157							299
01:00		157	141							298
02:00		196	199							395
03:00		219	272							491
04:00		**301**	277							578
05:00		272	**314**							**586**
06:00		227	194							421
07:00		178	142							320
08:00		138	107							245
09:00		107	103							210
10:00		75	113							188
11:00		95	52							147
Total		3553	3605							7158
Percent		49.6%	50.4%							
AM Peak	-	08:00	07:00	-	-	-	-	-	-	08:00
Vol.	-	223	236	-	-	-	-	-	-	450
PM Peak	-	16:00	17:00	-	-	-	-	-	-	17:00
Vol.	-	301	314	-	-	-	-	-	-	586
Grand Total		10714	10828							21542
Percent		49.7%	50.3%							
ADT		ADT 7,181		AADT 7,181						

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

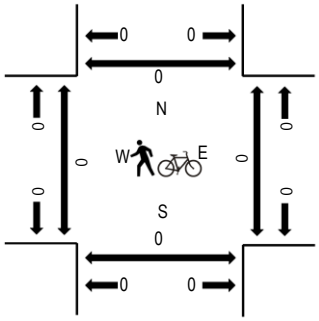
Location: 1 CHAFFEE ROAD & GENERAL AVENUE AM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	GENERAL AVENUE Eastbound				GENERAL AVENUE Westbound				CHAFFEE ROAD Northbound				CHAFFEE ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:30 AM	0	0	0	0	0	10	0	1	0	0	99	11	0	3	99	0	223	948	3	0	0	0
6:45 AM	0	0	0	0	0	4	0	0	0	0	111	8	0	1	112	0	236	975	0	0	1	0
7:00 AM	0	0	0	0	0	7	0	2	0	0	92	7	0	5	125	0	238	979	0	0	0	0
7:15 AM	0	0	0	0	0	11	0	2	0	0	87	13	0	8	130	0	251	937	0	0	0	0
7:30 AM	0	0	0	0	0	8	0	4	0	0	98	21	0	4	115	0	250	950	0	0	0	0
7:45 AM	0	0	0	0	0	6	0	0	0	0	93	33	0	4	104	0	240	953	0	0	0	0
8:00 AM	0	0	0	0	0	13	0	5	0	0	70	29	0	8	71	0	196	900	0	0	0	0
8:15 AM	0	0	0	0	0	18	0	5	0	0	69	33	0	11	128	0	264	880	0	0	0	0
8:30 AM	0	0	0	0	0	16	0	8	0	0	86	15	0	6	122	0	253	836	0	0	0	0
8:45 AM	0	0	0	0	0	4	0	2	0	0	74	20	0	1	86	0	187	796	0	0	0	0
9:00 AM	0	0	0	0	0	9	0	1	0	0	63	9	0	1	93	0	176	805	0	0	0	0
9:15 AM	0	0	0	0	0	15	0	0	0	0	77	11	0	1	116	0	220	788	0	0	0	0
9:30 AM	0	0	0	0	0	13	0	1	0	0	92	6	0	1	100	0	213	748	0	0	0	0
9:45 AM	0	0	0	0	0	19	0	1	0	0	79	6	0	0	91	0	196		0	0	0	0
10:00 AM	0	0	0	0	0	11	0	6	0	0	60	8	0	3	71	0	159		0	0	0	0
10:15 AM	0	0	0	0	0	10	0	2	0	0	78	6	0	0	84	0	180		0	0	0	0

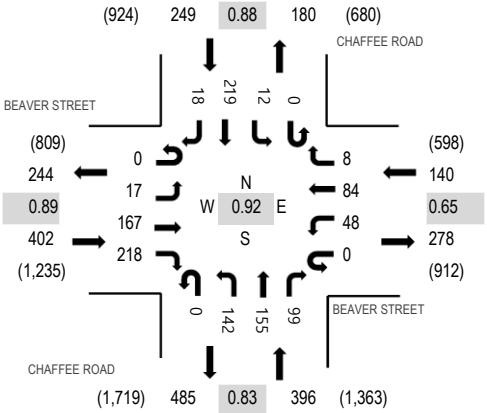
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	5	0	0	0	0	22	1	0	1	20	0	49
Lights	0	0	0	0	0	25	0	7	0	0	329	72	0	19	444	0	896
Mediums	0	0	0	0	0	2	0	1	0	0	19	1	0	1	10	0	34
Total	0	0	0	0	0	32	0	8	0	0	370	74	0	21	474	0	979

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

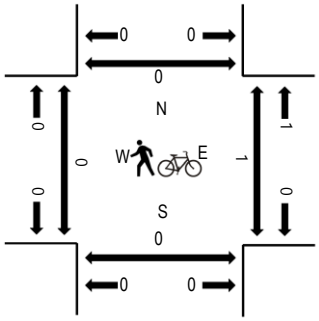
Location: 2 CHAFFEE ROAD & BEAVER STREET AM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 06:30 AM - 07:30 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	BEAVER STREET Eastbound				BEAVER STREET Westbound				CHAFFEE ROAD Northbound				CHAFFEE ROAD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:30 AM	0	4	38	49	0	10	25	2	0	39	37	14	0	3	58	5	284	1,187	0	1	0	0
6:45 AM	0	3	36	42	0	9	20	2	0	40	55	25	0	5	49	9	295	1,185	0	0	0	0
7:00 AM	0	7	42	67	0	12	21	1	0	35	24	27	0	1	46	2	285	1,180	0	0	0	0
7:15 AM	0	3	51	60	0	17	18	3	0	28	39	33	0	3	66	2	323	1,110	0	0	0	0
7:30 AM	0	6	41	46	0	18	12	2	0	26	42	25	0	5	58	1	282	1,093	0	0	0	0
7:45 AM	0	2	54	36	0	23	18	2	0	31	45	24	0	3	50	2	290	1,103	0	0	0	0
8:00 AM	0	7	50	31	0	18	15	0	0	17	26	12	0	3	33	3	215	1,023	0	0	0	0
8:15 AM	0	2	24	41	0	39	34	4	0	29	41	26	0	5	56	5	306	1,021	0	0	0	0
8:30 AM	0	0	28	49	0	18	27	2	0	23	47	24	0	8	59	7	292	964	0	0	0	1
8:45 AM	0	1	22	31	0	16	14	3	0	16	37	21	0	4	43	2	210	912	0	0	0	0
9:00 AM	0	3	27	32	0	14	21	0	0	23	22	18	0	4	47	2	213	920	0	0	0	0
9:15 AM	0	4	26	37	0	13	12	7	0	24	38	17	0	4	66	1	249	912	0	0	0	0
9:30 AM	0	3	17	34	0	6	14	1	0	31	41	20	0	5	65	3	240	876	0	0	0	0
9:45 AM	0	3	21	46	0	10	14	1	0	34	35	11	0	1	39	3	218		0	0	0	0
10:00 AM	0	4	18	26	0	16	29	3	0	26	26	13	0	3	36	5	205		0	0	0	0
10:15 AM	0	3	22	36	0	9	18	5	0	22	32	22	0	6	37	1	213		0	0	0	0

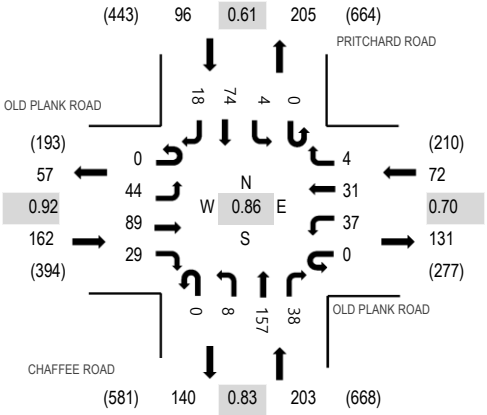
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	1	4	3	0	7	11	0	0	3	11	15	0	0	6	2	63
Lights	0	16	151	211	0	40	69	7	0	125	143	80	0	8	211	15	1,076
Mediums	0	0	12	4	0	1	4	1	0	14	1	4	0	4	2	1	48
Total	0	17	167	218	0	48	84	8	0	142	155	99	0	12	219	18	1,187

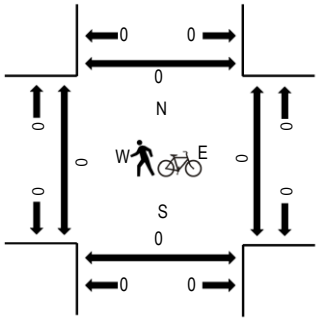
All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

Location: 3 CHAFFEE ROAD & OLD PLANK ROAD AM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

Peak Hour - All Vehicles



Peak Hour - Pedestrians/Bicycles in Crosswalk



Note: Total study counts contained in parentheses.

Traffic Counts

Interval Start Time	OLD PLANK ROAD Eastbound				OLD PLANK ROAD Westbound				CHAFFEE ROAD Northbound				PRITCHARD ROAD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
6:30 AM	0	9	14	5	0	7	5	1	0	4	38	4	0	0	12	5	104	467	0	0	0	0
6:45 AM	0	9	12	6	0	6	8	2	0	3	55	1	0	2	18	8	130	508	0	0	0	0
7:00 AM	0	7	21	8	0	6	5	2	0	1	35	8	0	2	16	5	116	533	0	0	0	0
7:15 AM	0	12	17	10	0	10	5	1	0	2	32	8	0	0	19	1	117	527	0	0	0	0
7:30 AM	0	18	23	2	0	7	8	0	0	4	44	14	0	2	16	7	145	525	0	0	0	0
7:45 AM	0	7	28	9	0	14	13	1	0	1	46	8	0	0	23	5	155	473	0	0	0	0
8:00 AM	0	10	13	12	0	11	7	1	0	1	33	3	0	0	16	3	110	410	0	0	0	0
8:15 AM	0	11	7	2	0	9	5	1	0	9	30	11	0	0	23	7	115	387	0	0	0	0
8:30 AM	0	5	5	4	0	4	1	1	0	3	30	7	0	0	32	1	93	406	0	0	0	0
8:45 AM	0	6	4	7	0	4	4	3	0	1	32	6	0	0	21	4	92	409	0	0	0	0
9:00 AM	0	4	6	9	0	6	4	0	0	1	19	5	0	0	28	5	87	393	0	0	0	0
9:15 AM	0	6	6	9	0	9	2	1	0	3	27	7	0	2	57	5	134	364	0	0	0	0
9:30 AM	0	3	4	8	0	6	5	0	0	4	29	4	0	1	30	2	96	317	0	0	0	0
9:45 AM	0	6	7	5	0	2	4	1	0	3	27	4	0	0	13	4	76		0	0	0	0
10:00 AM	0	3	5	1	0	2	1	0	0	2	21	2	0	0	19	2	58		0	0	0	0
10:15 AM	0	1	3	5	0	7	7	1	0	2	33	1	0	0	26	1	87		0	0	0	0

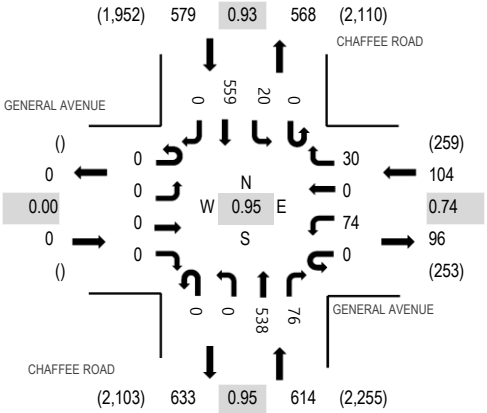
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	9	0	0	1	4	1	15
Lights	0	42	84	28	0	37	28	4	0	8	144	37	0	3	70	15	500
Mediums	0	2	5	1	0	0	3	0	0	0	4	1	0	0	0	2	18
Total	0	44	89	29	0	37	31	4	0	8	157	38	0	4	74	18	533

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

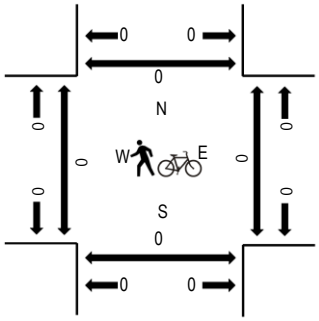
Location: 1 CHAFFEE ROAD & GENERAL AVENUE PM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 05:30 PM - 05:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	GENERAL AVENUE Eastbound				GENERAL AVENUE Westbound				CHAFFEE ROAD Northbound				CHAFFEE ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:30 PM	0	0	0	0	0	10	0	1	0	0	129	11	0	2	132	0	285	1,137	0	0	0	0
3:45 PM	0	0	0	0	0	11	0	5	0	0	129	16	0	1	124	0	286	1,192	0	0	0	0
4:00 PM	0	0	0	0	0	3	0	3	0	0	133	10	0	1	119	0	269	1,215	0	0	0	0
4:15 PM	0	0	0	0	0	8	0	7	0	0	160	17	0	1	104	0	297	1,286	0	0	0	0
4:30 PM	0	0	0	0	0	17	0	6	0	0	158	14	0	1	144	0	340	1,296	0	0	0	0
4:45 PM	0	0	0	0	0	14	0	8	0	0	147	19	0	2	119	0	309	1,297	0	0	0	0
5:00 PM	0	0	0	0	0	20	0	5	0	0	136	23	0	7	149	0	340	1,256	0	0	0	0
5:15 PM	0	0	0	0	0	14	0	6	0	0	120	17	0	3	147	0	307	1,167	0	0	0	0
5:30 PM	0	0	0	0	0	26	0	11	0	0	135	17	0	8	144	0	341	1,145	0	0	0	0
5:45 PM	0	0	0	0	0	21	0	7	0	0	120	14	0	5	101	0	268	1,059	0	0	0	0
6:00 PM	0	0	0	0	0	10	0	2	0	0	111	9	0	2	117	0	251	1,008	0	0	0	0
6:15 PM	0	0	0	0	0	11	0	0	0	0	129	12	0	2	131	0	285	964	0	0	0	0
6:30 PM	0	0	0	0	0	5	0	3	1	0	125	11	0	1	109	0	255	888	0	0	0	0
6:45 PM	0	0	0	0	0	11	0	2	0	0	111	7	0	3	83	0	217		0	0	0	0
7:00 PM	0	0	0	0	0	8	0	2	0	0	93	5	0	2	97	0	207		0	0	0	0
7:15 PM	0	0	0	0	0	2	0	0	0	0	106	10	0	0	91	0	209		0	0	0	0

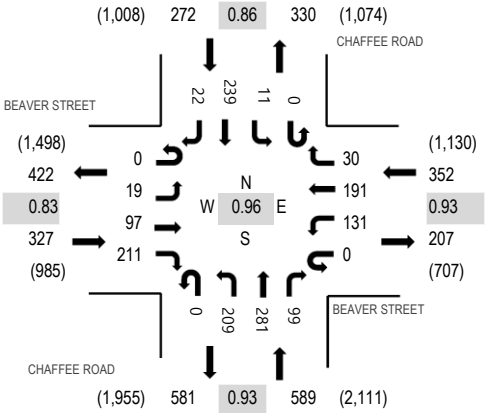
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	2	0	1	0	0	23	10	0	2	13	0	51
Lights	0	0	0	0	0	69	0	28	0	0	502	52	0	17	533	0	1,201
Mediums	0	0	0	0	0	3	0	1	0	0	13	14	0	1	13	0	45
Total	0	0	0	0	0	74	0	30	0	0	538	76	0	20	559	0	1,297

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

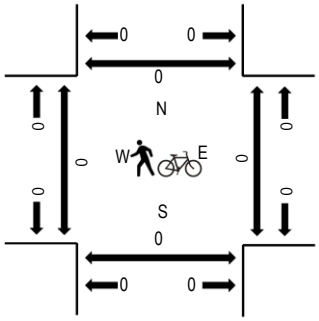
Location: 2 CHAFFEE ROAD & BEAVER STREET PM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

Interval Start Time	BEAVER STREET Eastbound				BEAVER STREET Westbound				CHAFFEE ROAD Northbound				CHAFFEE ROAD Southbound					Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:30 PM	0	3	28	35	0	38	30	5	0	58	52	27	0	5	62	4	347	1,360	0	0	0	0
3:45 PM	0	1	19	40	0	20	37	2	0	60	54	22	0	0	70	9	334	1,413	0	1	0	1
4:00 PM	0	1	24	42	0	23	51	1	0	55	53	24	0	2	58	6	340	1,460	0	0	0	0
4:15 PM	0	2	17	32	0	23	39	11	0	68	66	22	0	3	52	4	339	1,499	0	0	0	0
4:30 PM	0	5	32	61	0	33	44	5	0	57	73	27	0	4	55	4	400	1,540	0	0	0	0
4:45 PM	0	6	27	44	0	30	46	7	0	62	78	23	0	2	47	9	381	1,517	0	0	0	0
5:00 PM	0	3	17	53	0	33	53	11	0	50	61	20	0	3	72	3	379	1,471	0	0	0	0
5:15 PM	0	5	21	53	0	35	48	7	0	40	69	29	0	2	65	6	380	1,389	0	0	0	0
5:30 PM	0	4	21	42	0	32	51	4	0	52	57	29	0	4	75	6	377	1,342	0	0	0	0
5:45 PM	0	3	24	38	0	28	45	12	0	53	56	24	0	3	44	5	335	1,238	0	0	0	0
6:00 PM	0	1	16	33	0	32	45	2	0	40	47	20	0	2	54	5	297	1,140	0	0	0	0
6:15 PM	0	3	14	46	0	27	37	6	0	58	59	18	0	2	58	5	333	1,086	0	0	0	0
6:30 PM	0	3	11	28	0	23	26	5	0	52	47	27	0	5	45	1	273	992	0	0	0	0
6:45 PM	0	2	11	18	0	11	17	5	0	37	62	14	0	2	55	3	237		0	0	0	0
7:00 PM	0	1	10	40	0	20	19	7	0	35	54	13	0	4	39	1	243		0	0	0	0
7:15 PM	0	4	12	29	0	23	17	4	0	41	45	21	0	0	39	4	239		0	0	0	0

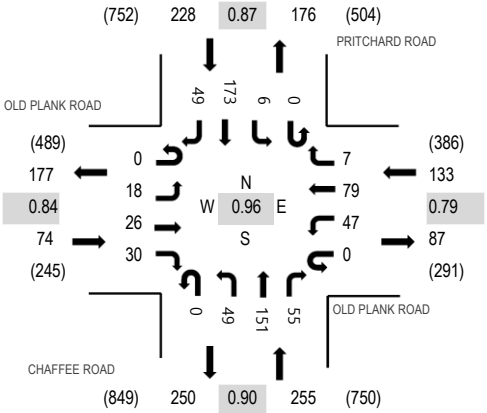
Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	2	7	4	0	2	4	0	0	4	17	4	0	1	8	2	55
Lights	0	17	86	204	0	127	180	30	0	204	257	93	0	9	228	20	1,455
Mediums	0	0	4	3	0	2	7	0	0	1	7	2	0	1	3	0	30
Total	0	19	97	211	0	131	191	30	0	209	281	99	0	11	239	22	1,540

All Traffic Data Services Inc.
(303) 216-2439
www.alltrafficdata.net

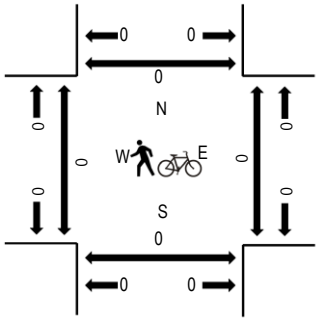
Location: 3 CHAFFEE ROAD & OLD PLANK ROAD PM
Date and Start Time: Tuesday, January 21, 2020
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles in Crosswalk



Traffic Counts

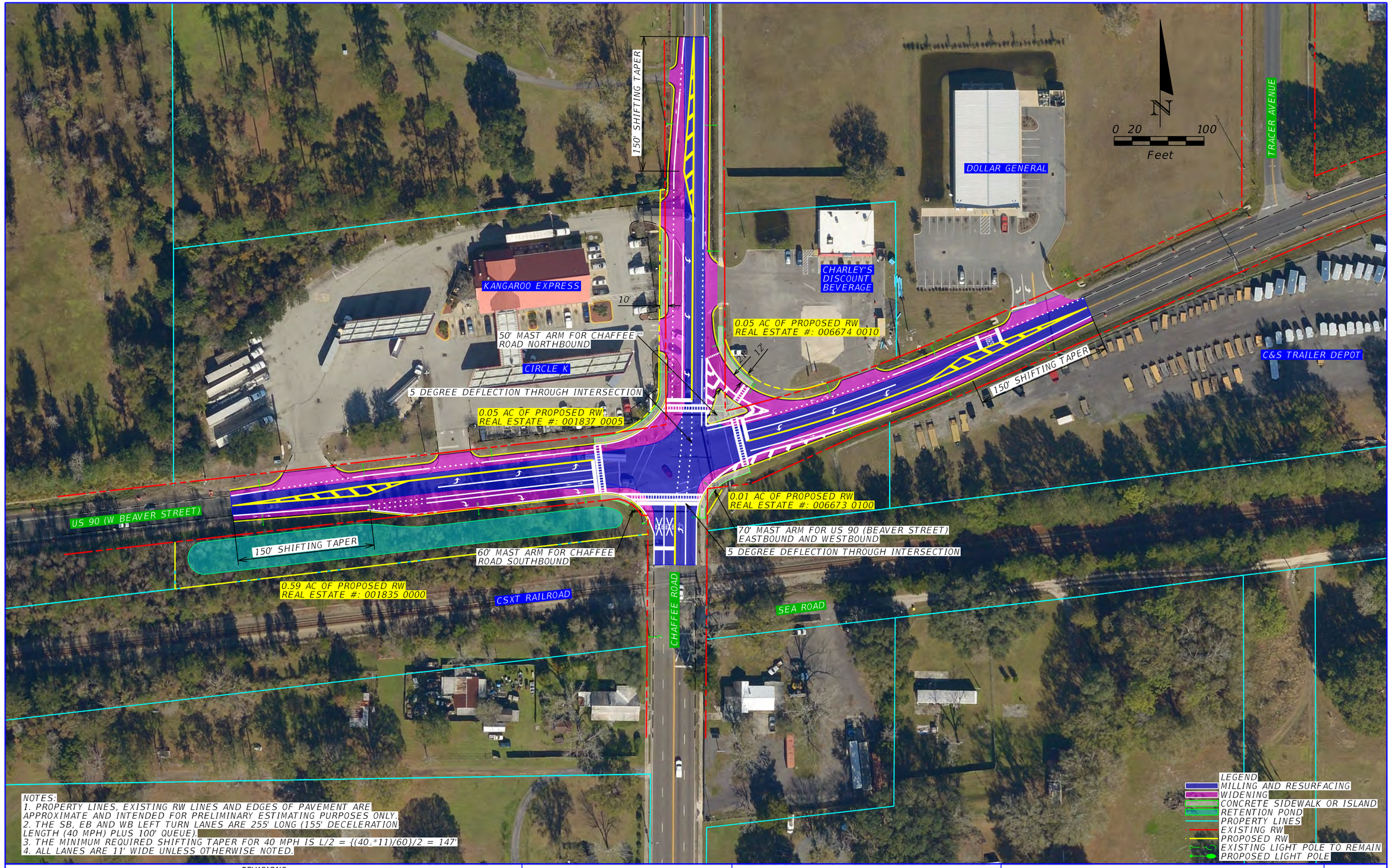
Interval Start Time	OLD PLANK ROAD Eastbound				OLD PLANK ROAD Westbound				CHAFFEE ROAD Northbound				PRITCHARD ROAD Southbound				Total	Rolling Hour	Pedestrain Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
3:30 PM	0	7	9	7	0	9	10	1	0	4	19	7	0	3	62	11	149	561	0	0	0	0
3:45 PM	0	4	8	3	0	9	10	0	0	7	29	8	0	0	47	11	136	576	0	0	0	0
4:00 PM	0	4	10	9	0	9	10	2	0	5	28	9	0	1	31	6	124	611	0	0	0	0
4:15 PM	0	6	1	1	0	13	22	1	0	9	42	10	0	0	34	13	152	662	0	0	0	0
4:30 PM	0	4	7	6	0	10	19	6	0	12	46	11	0	2	33	8	164	690	0	0	0	0
4:45 PM	0	3	9	5	0	9	15	0	0	15	44	14	0	2	42	13	171	670	0	0	0	0
5:00 PM	0	5	8	9	0	16	14	1	0	15	29	16	0	1	46	15	175	639	0	0	0	0
5:15 PM	0	6	2	10	0	12	31	0	0	7	32	14	0	1	52	13	180	581	0	0	0	0
5:30 PM	0	3	6	5	0	15	22	1	0	8	28	12	0	0	36	8	144	528	0	0	0	0
5:45 PM	0	2	6	12	0	8	10	0	0	12	20	17	0	1	41	11	140	485	0	0	0	0
6:00 PM	0	2	8	8	0	12	5	2	0	11	18	7	0	0	35	9	117	448	0	0	0	0
6:15 PM	0	3	4	7	0	11	11	4	0	11	20	15	0	2	30	9	127	402	0	0	0	0
6:30 PM	0	1	4	9	0	8	7	2	0	7	16	12	0	1	28	6	101	354	0	0	0	0
6:45 PM	0	3	4	4	0	8	7	0	0	9	24	11	0	1	28	4	103		0	0	0	0
7:00 PM	0	1	2	1	0	7	6	0	0	6	17	8	0	1	19	3	71		0	0	0	0
7:15 PM	0	2	3	2	0	3	7	1	0	1	15	13	0	0	28	4	79		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	18	0	0	0	10	0	28
Lights	0	17	24	29	0	46	78	7	0	48	128	52	0	6	160	47	642
Mediums	0	1	2	1	0	1	1	0	0	1	5	3	0	0	3	2	20
Total	0	18	26	30	0	47	79	7	0	49	151	55	0	6	173	49	690

Appendix B

US 90 at Chaffee Road Intersection Improvement



NOTES:
1. PROPERTY LINES, EXISTING RW LINES AND EDGES OF PAVEMENT ARE APPROXIMATE AND INTENDED FOR PRELIMINARY ESTIMATING PURPOSES ONLY.
2. THE SB, EB AND WB LEFT TURN LANES ARE 255' LONG (155' DECELERATION LENGTH (40 MPH) PLUS 100' QUEUE).
3. THE MINIMUM REQUIRED SHIFTING TAPER FOR 40 MPH IS L/2 = {(40.*11)/60}/2 = 147'
4. ALL LANES ARE 11' WIDE UNLESS OTHERWISE NOTED.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
US 90	DUVAL	N/A

CONCEPT PLAN
US 90 AND CHAFFEE ROAD

SHEET NO. 1

TAROBERT 07/11/19 10:25:25 PW:\011656\CON0101970\000000000265954\5.0_Project_Development\5.2_Work_In_Progre:

Appendix C

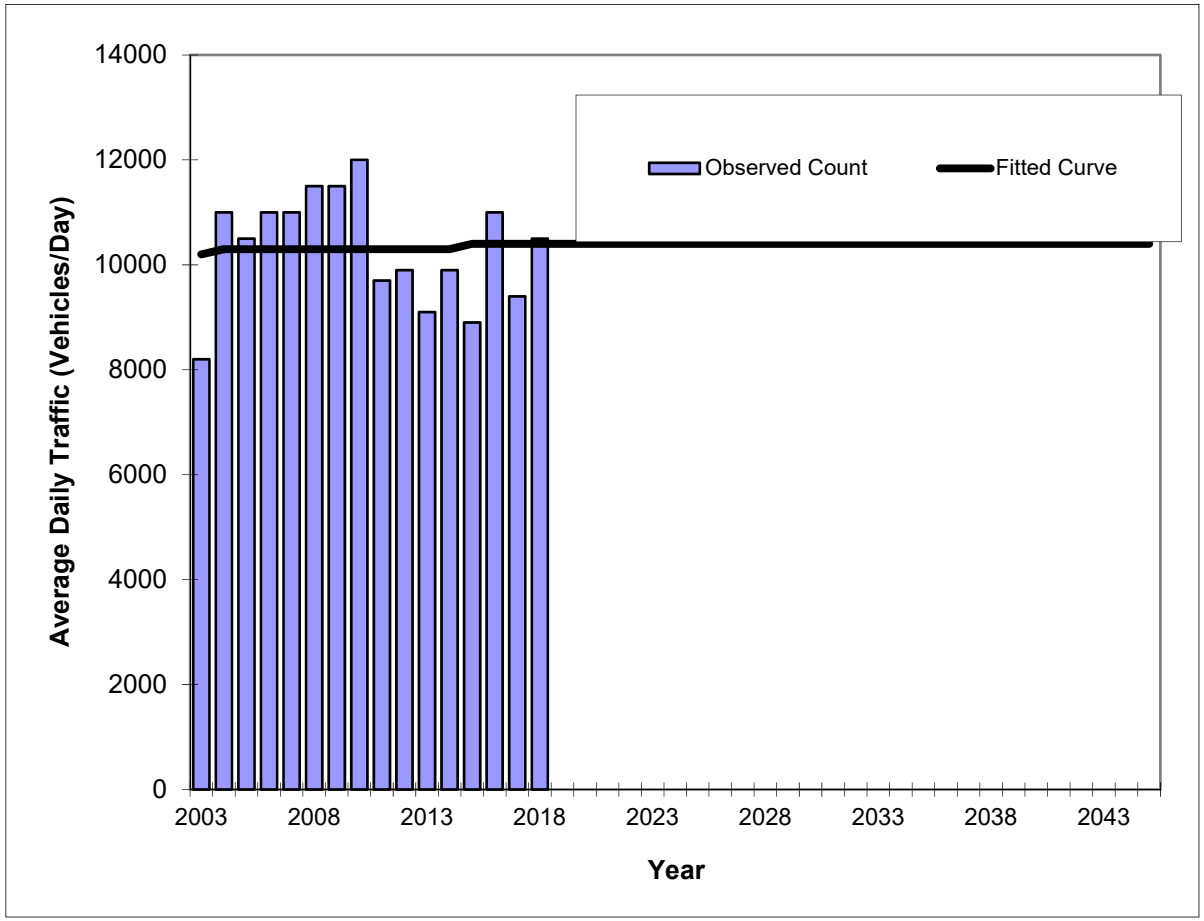
FDOT TRENDs Worksheets

Traffic Trends - V03.a

BEAVER ST -- 723911

FIN#	1234
Location	1

County:	Duval (72)
Station #:	0
Highway:	BEAVER ST



Year	Traffic (ADT/AADT) Count*	Trend**
2003	8200	10200
2004	11000	10300
2005	10500	10300
2006	11000	10300
2007	11000	10300
2008	11500	10300
2009	11500	10300
2010	12000	10300
2011	9700	10300
2012	9900	10300
2013	9100	10300
2014	9900	10300
2015	8900	10400
2016	11000	10400
2017	9400	10400
2018	10500	10400
2025 Opening Year Trend		
2025	N/A	10400
2035 Mid-Year Trend		
2035	N/A	10400
2045 Design Year Trend		
2045	N/A	10400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	0.16%
Compounded Annual Historic Growth Rate:	0.13%
Compounded Growth Rate (2018 to Design Year):	0.00%
Printed:	2-Apr-20

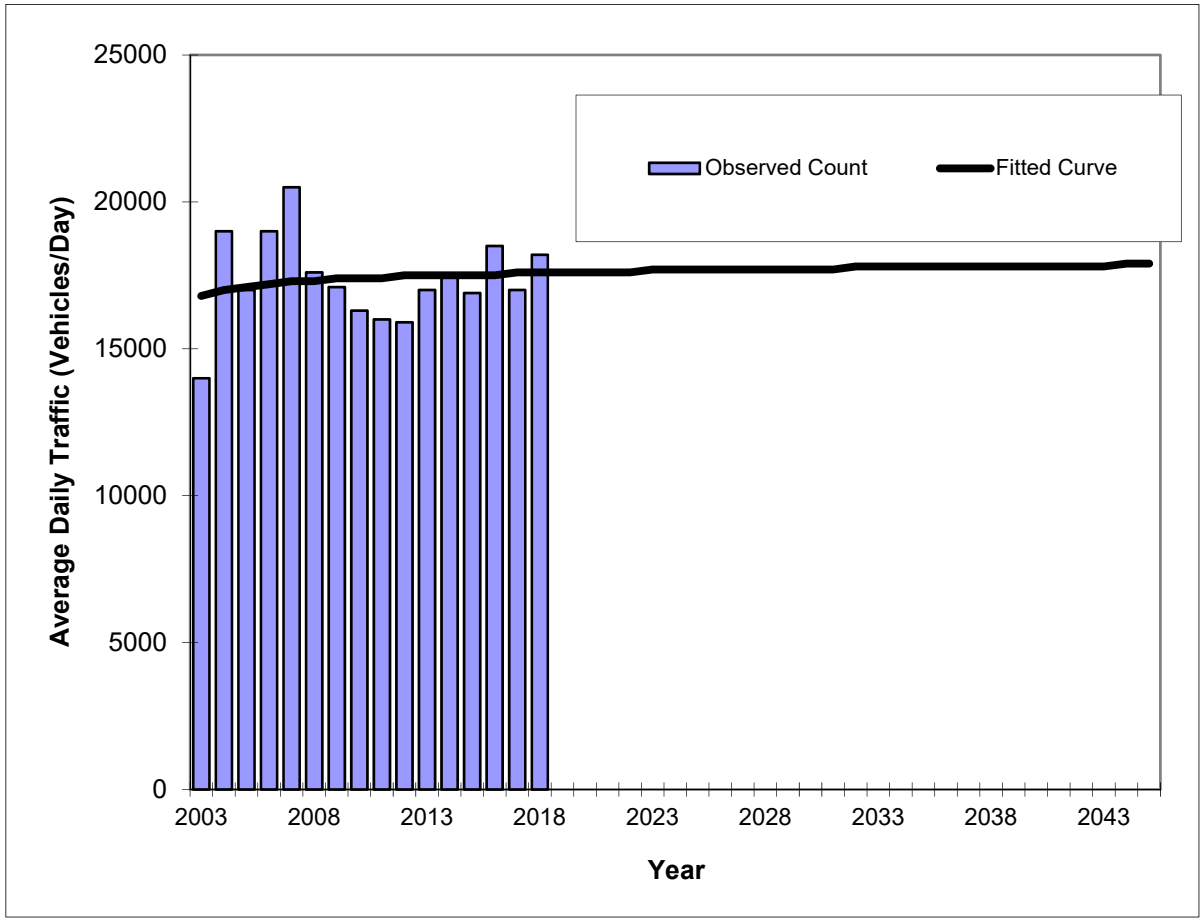
Decaying Exponential Growth Option

Traffic Trends - V03.a

CHAFFEE RD -- 720877

FIN#	1234
Location	1

County:	Duval (72)
Station #:	0
Highway:	CHAFFEE RD



Year	Traffic (ADT/AADT) Count*	Trend**
2003	14000	16800
2004	19000	17000
2005	17000	17100
2006	19000	17200
2007	20500	17300
2008	17600	17300
2009	17100	17400
2010	16300	17400
2011	16000	17400
2012	15900	17500
2013	17000	17500
2014	17500	17500
2015	16900	17500
2016	18500	17500
2017	17000	17600
2018	18200	17600
2025 Opening Year Trend		
2025	N/A	17700
2035 Mid-Year Trend		
2035	N/A	17800
2045 Design Year Trend		
2045	N/A	17900
TRANPLAN Forecasts/Trends		

Trend R-squared:	2.11%
Compounded Annual Historic Growth Rate:	0.31%
Compounded Growth Rate (2018 to Design Year):	0.06%
Printed:	2-Apr-20

Decaying Exponential Growth Option

*Axle-Adjusted