



Traffic Impact Statement

Rose Marina - Site Development Plan Amendment (SDPA)

City of Marco Island,
Collier County, FL
12/08/2025

Prepared for:

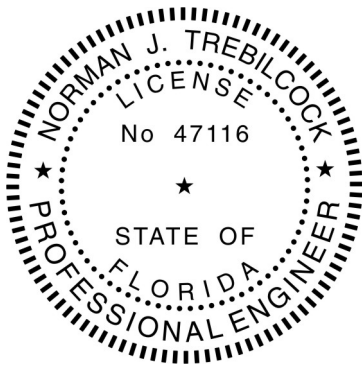
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Statement of Certification

I certify that this Traffic Impact Statement has been prepared by me or under my immediate supervision and that I have experience and training in the field of Traffic and Transportation Engineering.



This item has been electronically signed and sealed by Norman J. Trebilcock, P.E., State of Florida license 47116, using a *SHA-1* authentication code. Printed copies of this document are not considered signed and sealed, and the *SHA-1* authentication code must be verified on any electronic copies.

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by Norman
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Table of Contents

Project Description.....	4
Trip Generation	6
Trip Distribution and Assignment	8
Background Traffic	10
Roadway Network Conditions	11
Project Impacts to Area Roadway Network – Roadway Link Analysis.....	12
Site Access Turn Lane Analysis.....	13
Improvement Analysis	15
Mitigation of Impact	15

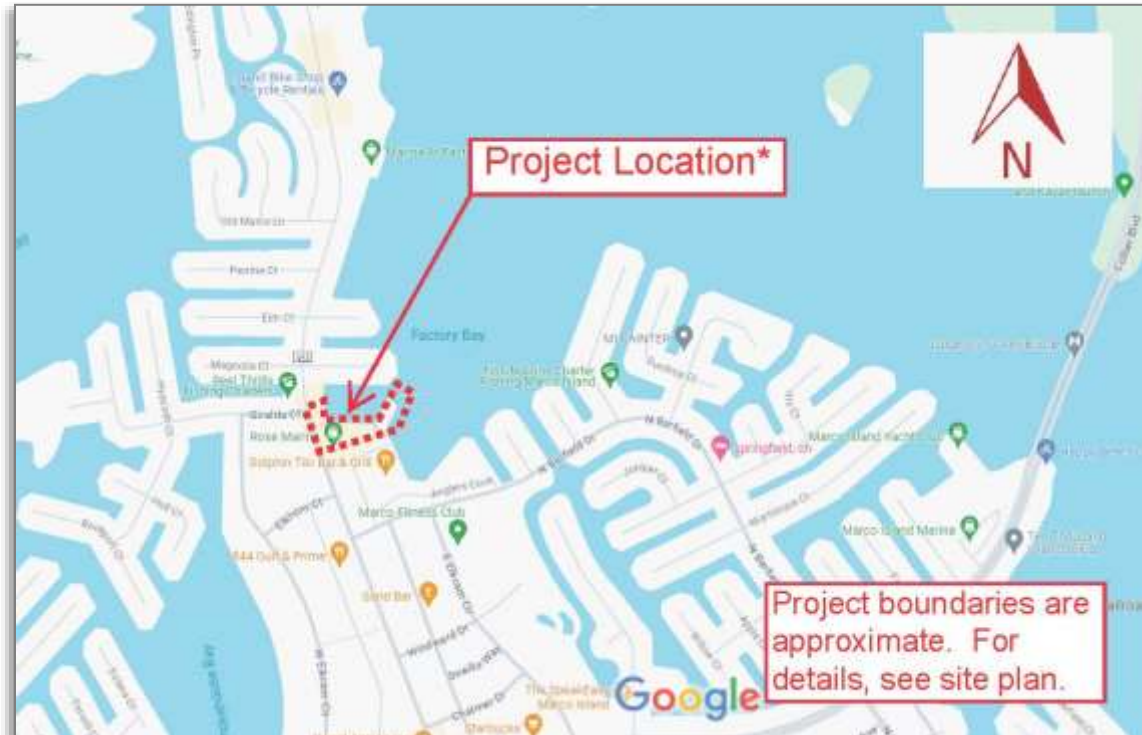
Appendices

Appendix A: Project Master Site Plan	16
Appendix B: Initial Meeting Checklist (Methodology Meeting).....	18
Appendix C: ITE Trip Generation Calculations	24
Appendix D: 2025 Intersection Traffic Counts	41
Appendix E: 2023 FTE Traffic Counts	45
Appendix F: LOS Standard - Evaluation.....	48
Appendix G: LOS Analysis Based on 2025/2023 Traffic Counts	50
Appendix H: Turning Movement Exhibits	59

Project Description

The Rose Marina project is located at 900-950 Bald Eagle Drive, in Section 16, Township 52 South, Range 26 East, along both sides of Bald Eagle Drive, just south of its intersection with Giralda Court in Marco Island, Collier County, Florida. Refer to **Figure 1 – Project Location Map**, which follows and **Appendix A – Project Master Site Plan**.

Figure 1 – Project Location Map



The subject site is currently developed with 15,945 square feet of boat sales, retail and related office space; 197 boat storage spaces and boat slips; and provides dockage and parking for boat charter and boat ferry services. In addition, there are existing and proposed parking areas located on each side of Bald Eagle Drive.

The Rose Marina Site Development Plan Amendment (SDPA) proposes to increase the total number of boat slips to 271 berths and add a 220-seat high-turnover restaurant.

Traffic generation associated with the proposed development is evaluated generally based on ITE Trip Generation Manual (TGM), 12th Edition and ITE Trip Generation Handbook, 3rd Edition. The proposed ITE land use designations are determined based on the ITE Land Use Code (LUC) descriptions and are intended to provide the highest and best use trip generation scenario with respect to the project's existing and proposed development parameters.

The ITE TGM does not have a land use code for boat sales and service center. For this analysis, LUC 842 – Recreational Vehicle Sales was used as the most comparable use for boat sales and service per the ITE TGM. In addition, ITE does not have a land use code for boat charter or boat ferry service. The LUC 090 – Park-and-Ride Lot with Bus and Light Rail Service land use operates in a similar way as the ferry and charter services and was used to estimate the traffic associated with the boat charter and boat ferry services.

The ITE TGM 12th Edition does not contain data for the marina land-use. The ITE TGM 11th Edition will be used to generate the trips associated with the marina uses.

The proposed development parameters are illustrated in **Table 1**.

Table 1
Development Program

Development	Land Use	ITE Land Use Code	Total Size
Existing Conditions	Boat Charter and Boat Ferry Services	090 – Park-and-Ride Lot with Bus and Light Rail Service	269 parking spaces
Existing Conditions	Marina	420 - Marina	197 berths
Existing Conditions	Boat Sales and Service	842 – Recreational Vehicle Sales	15,945 square feet
Proposed Conditions	Boat Charter and Boat Ferry Services	090 – Park-and-Ride Lot with Bus and Light Rail Service	221 parking spaces
Proposed Conditions	Marina	420 - Marina	271 berths
Proposed Conditions	Boat Sales and Service	842 – Recreational Vehicle Sales	16,920 square feet
Proposed Conditions	Restaurant	932 – High-Turnover (Sit-Down) Restaurant	220 seats

For the purposes of this analysis, the traffic planning horizon year is assumed to be 2027.

A methodology meeting was held with the City of Marco Staff on May 20, 2024, via email (refer **Appendix B: Initial Meeting Checklist**). The analysis in this report is generally consistent with the submitted methodology report.

Accesses to the development are provided on both sides of Bald Eagle Drive with one full movement connection on Elkhorn Court. For more details refer to **Appendix A: Project Master Site Plan**.

Trip Generation

The software program OTISS – Online Traffic Impact Study Software (most recent version) is used to create the trip generation for the project. Traffic volumes are determined by using ITE equations or average rates, as applicable.

The ITE – OTISS trip generation calculation worksheets are provided in **Appendix C: ITE Trip Generation Calculations**.

Based on ITE recommendations, no reductions for **internal capture** have been taken into consideration for this analysis.

The **pass-by trips** account for traffic that is already on the external roadway network and stops at the project on the way to a primary trip destination. It should be noted that the driveway volumes are not reduced as a result of the pass-by reduction, only the traffic added to the surrounding streets and intersections. As such, pass-by trips are not deducted for operational turn lane analysis (all external traffic is accounted for).

Consistent with Collier County TIS Guidelines and Procedures, High-Turnover Restaurant pass-by rates are limited to 40% per County guidelines and the daily capture rates are assumed to be 10% lower than the peak hour capture rate.

In summary, this analysis evaluates pass-by capture associated with the proposed land use as follows:

- High-Turnover Restaurant (LUC 932) – Weekday 30%; AM 40%; PM 40%

The estimated trip generation associated with the proposed SDPA development at buildout conditions is illustrated in **Table 2A**.

Table 2A
Proposed SDPA Buildout – Trip Generation – Average Weekday

Land Use	Size	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Boat Charter and Boat Ferry Services	221 parking spaces	83	23	106	32	92	124
Marina	271 berths	6	13	19	34	23	57
Boat Sales and Service	16,920 square feet	7	1	8	4	9	13
Restaurant	220 seats	44	40	84	58	43	101
Total External		140	77	217	128	167	295
Pass-by		18	16	34	23	17	40
Net External		122	61	183	105	150	255

The operational site access turn lane analysis is evaluated based on the estimated SDPA buildout **total external** traffic – AM and PM peak hour average weekday, as illustrated in **Table 2A**.

The estimated trip generation associated with the existing development built to date is illustrated in **Table 2B**.

Table 2B
Existing Conditions – Trip Generation – Average Weekday

Land Use	Size	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Boat Charter and Boat Ferry Services	269 parking spaces	101	28	129	37	106	143
Marina	197 berths	5	9	14	25	16	41
Boat Sales and Service	15,945 square feet	6	1	7	4	8	12
Total External		112	38	150	66	130	196

Consistent with the City’s Comprehensive Plan (page VIII – 5) the evaluation for Level of Service (LOS) standards for roads within the city limits are to be measured at PM peak hour. The transportation concurrency is evaluated based on the proposed SDPA traffic generated by the site as illustrated in **Table 2C**.

Table 2C
Proposed SDPA – Net New Trip Generation – Average Weekday

	AM Peak Hour			PM Peak Hour		
Development	Enter	Exit	Total	Enter	Exit	Total
Proposed SDPA	122	61	183	105	150	255
Existing Development	112	38	150	66	130	196
Net New Trips	10	23	33	39	20	59

Trip Distribution and Assignment

The estimated net new traffic generated by the development is assigned to the surrounding roadway system based on the knowledge of the area and anticipated routes drivers will utilize to access the site. The site-generated trip distribution is shown in **Table 3, Project Traffic Distribution** and is graphically depicted on **Figure 2 – Project Distribution by Percentage and by PM Peak Hour**.

Table 3
Project Traffic Distribution

Roadway Link	Roadway Link Location	# of Lanes per Direction	Distribution of Project Traffic	PM Peak Hour Project Traffic Vol.		
				Enter	Exit	pc/h/ln ⁽¹⁾
Bald Eagle Dr	South of Old Marco Ln	1	10%	SB – 4	NB – 2	4
Bald Eagle Dr	North of N Barfield Dr	1	80%	NB – 31	SB – 16	31
Bald Eagle Dr	South of N Barfield Dr	1	60%	NB – 23	SB – 19	23
Bald Eagle Dr	S of Collier Blvd	1	20%	NB – 8	SB – 4	8
Collier Blvd	E of Bald Eagle Dr	2	20%	WB – 8	EB – 2	4
Collier Blvd	W of Bald Eagle Dr	2	20%	EB – 8	WB – 2	4
N Barfield Dr	Bald Eagle Dr to Collier Blvd	1	20%	WB – 8	EB – 4	8
Giralda Ct	W of Bald Eagle Dr	1	5%	EB – 2	WB – 1	2
Elkhorn Ct	W of Bald Eagle Dr	1	5%	EB – 2	WB – 1	2

Note(s): 1) The highest between entering and exiting traffic; pc/h/ln = passenger car per hour per lane.

Figure 2 – Project Distribution by Percentage and by PM Peak Hour



Background Traffic

Average background traffic growth rates were estimated for the segments of the roadway network in the study area using a minimum 2% growth rate. Traffic count data was collected on Bald Eagle Drive north of Old Marco Lane and South of North Barfield Drive which were conducted on February 4, 5, and 6, 2025 (for details, see **Appendix D: 2025 Intersection Traffic Counts**).

Traffic count data from the 2023 Marco Island ITS Project, which utilized tube counts at the intersection of Bald Eagle Drive and Barfield Drive, provide in season traffic volumes and are used for background traffic on North Barfield Drive. In addition, tube counts were conducted at the intersection of Bald Eagle Drive and Collier Boulevard and are used for background traffic for Collier Boulevard and Bald Eagle Drive south of Collier Boulevard (for details, see **Appendix E: 2023 FTE Traffic Counts**).

Consistent with the method illustrated in the adopted 2012 Annual Level of Service Report, the future background traffic is evaluated based on the passenger cars per hour per lane (pc/h/ln) for each analyzed roadway segment. **Table 4, Background Traffic without Project** illustrates the application of projected growth rates to generate background (without project) peak hour per lane traffic volume for the planning horizon year (2027).

Table 4
Background Traffic without Project (2025-2027)

Roadway Link	Roadway Link Location	2025/2023 Peak Hour, Peak Dir Background Traffic Vol (trips/hr)	2025/2023 Peak Hour, Peak Dir Per Lane Background Traffic Vol (pc/h/ln) ⁽⁶⁾	Projected Traffic Annual Growth Rate (%/yr)	Growth Factor	2027 Projected Peak Hour, Peak Dir Per Lane Background Traffic Volume w/out Project (pc/h/ln)
Bald Eagle Dr ⁽¹⁾⁽³⁾	South of Old Marco Ln	302	302/1 = 302	2.0%	1.0404	314
Bald Eagle Dr ⁽¹⁾⁽⁴⁾	North of N Barfield Dr	380	380/1 = 380	2.0%	1.0404	395
Bald Eagle Dr ⁽¹⁾⁽⁴⁾	South of N Barfield Dr	474	474/1 = 474	2.0%	1.0404	493
Bald Eagle Dr ⁽²⁾⁽⁵⁾	S of Collier Blvd	539	539/1 = 539	2.0%	1.0824	586
Collier Blvd ⁽²⁾⁽⁵⁾	E of Bald Eagle Dr	1,033	1,033/2 = 517	2.0%	1.0824	560
Collier Blvd ⁽²⁾⁽⁵⁾	W of Bald Eagle Dr	1,206	1,206/2 = 603	2.0%	1.0824	653
N Barfield Dr ⁽²⁾⁽⁵⁾	Bald Eagle Dr to Collier Blvd	241	241/1 = 241	2.0%	1.0824	261

Note(s): 1) Annual Growth Rate = 2%; Growth Factor = $(1 + \text{Annual Growth Rate})^2$; 2027 Projected Volume = 2025 Volume x Growth Factor.

2) Annual Growth Rate = 2%; Growth Factor = $(1 + \text{Annual Growth Rate})^4$; 2027 Projected Volume = 2023 Volume x Growth Factor

3) From Trends counts collected on February 5, 2025, at the intersection of Bald Eagle Drive and Old Marco Lane.

4) From Trends counts collected on February 4, 2025, at the intersection of Bald Eagle Drive and Barfield Drive.

5) From FTE counts collected on January 04, 2023, at the intersection of Bald Eagle Dr and Collier Blvd.

6) Number of lanes per direction – see **Table 3**.

Roadway Network Conditions

In agreement with the information contained within the City’s Comprehensive Plan – Transportation Element, the adopted level of service (LOS) for Marco Island roadways is LOS “D”, with the exception of North Collier Boulevard (from San Marco Road to the Jolley Bridge), which is required to operate at LOS “C”.

Consistent with the method illustrated in the adopted 2012 Annual Level of Service Report, the LOS standard is evaluated based on the posted speed limit for each analyzed roadway segment.

Bald Eagle Drive is a two-lane undivided local collector roadway and has a posted legal speed of 30 mph in the vicinity of project with a design speed of 30 mph.

The LOS standard for the analyzed roadways is determined based on the flow rate method presented in the City’s 2012 Annual Level of Service Report. As such, the maximum flow rate for a LOS D roadway facility with a posted speed limit of 30 mph is 1,050 pc/h/ln. For more details refer to **Appendix F: LOS Standard – Evaluation**.

Collier Boulevard is a four-lane divided minor arterial roadway and has a posted legal speed of 30 mph in the vicinity Bald Eagle Drive with a design speed of 30 mph.

The maximum flow rate for a LOS C roadway facility with a posted speed limit of 30 mph is 750 pc/h/ln. For more details refer to **Appendix F**. The roadway network conditions for the analyzed segments are illustrated in **Table 5**.

Table 5
Roadway Network Conditions

Roadway Link	Roadway Link Location	Adopted LOS Standard	Service Flow Rate (pc/h/ln) ⁽¹⁾
Bald Eagle Dr	South of old Marco Lane to South of N Barfield Dr	D	1,050
Bald Eagle Dr	S of Collier Blvd	D	1,050
Collier Blvd	E of Bald Eagle Dr	C	750
Collier Blvd	W of Bald Eagle Dr	C	750
N Barfield Dr	Bald Eagle Dr to Collier Blvd	D	1,050

Note(s): 1) Refer to **Appendix E**.

Project Impacts to Area Roadway Network – Roadway Link Analysis

Transportation concurrency evaluation is performed to ensure that the adopted LOS standard is not exceeded for the analyzed roadway segments.

Based on our analysis, none of the analyzed roadway segments are projected to exceed the adopted LOS standard with or without the project at 2027 future build-out conditions. **Table 6, Roadway Link Level of Service** illustrates the LOS impacts of the project on the analyzed roadway network.

Based on the method illustrated in the 2012 Annual LOS Report, the LOS determination for the analyzed roadway segments, with and without the project, are depicted in **Appendix G: LOS Analysis Based on 2025/2023 Traffic Counts**.

Table 6
Roadway Link Level of Service (LOS) – With Project in the Year 2027

Roadway Link	Roadway Link Location	LOS Standard – Peak Hour, Peak Dir Service Flow Rate (pc/h/ln) ⁽¹⁾	2027 Background LOS – Peak Hour, Peak Dir Flow Rate (pc/h/ln) ⁽²⁾	LOS Standard exceeded without Project? Yes/No	Peak Hour, Peak Dir Per Lane (Pj Traffic Added) ⁽³⁾	2027 LOS – Peak Hour, Peak Dir Flow Rate w/ Pj (pc/h/ln) ⁽⁴⁾	LOS Standard exceeded with Project? Yes/No
Bald Eagle Dr	South of Old Marco Ln	D – 1,050	B – 314	No	4	B – 318	No
Bald Eagle Dr	North of N Barfield Dr	D – 1,050	B – 395	No	31	B – 426	No
Bald Eagle Dr	South of N Barfield Dr	D – 1,050	B – 493	No	23	B – 516	No
Bald Eagle Dr	S of Collier Blvd	D – 1,050	C – 586	No	8	C – 594	No
Collier Blvd	E of Bald Eagle Dr	C – 750	C – 560	No	4	C – 564	No
Collier Blvd	W of Bald Eagle Dr	C – 750	C – 653	No	4	C – 657	No
N Barfield Dr	Bald Eagle Dr to Collier Blvd	D – 1,050	A – 261	No	8	A – 269	No

Note(s): 1) Refer to **Table 5** from this report.
2) Refer to **Table 4** from this report.
3) Refer to **Table 3** from this report.
4) 2027 Projected Volume = 2027 background + Project Volume added.

Site Access Turn Lane Analysis

Accesses to the development are provided on both sides of Bald Eagle Drive with one full movement connection on Elkhorn Court. For more details refer to **Appendix A: Project Master Site Plan**.

Project accesses were evaluated for turn lane warrants based on the criteria illustrated in the Collier County Construction Standards Handbook: (a) two-lane roadways – 40vph for right-turn lane/20vph for left-turn lane; and (b) multi-lane divided roadways – right-turn lanes shall always be provided; and (c) when new median openings are permitted, they shall always include left-turn lanes. **Appendix H** contains exhibits of project traffic turning movements consistent with the peak hour trip generation in **Table 2A** and the project traffic distribution pattern shown in **Figure 2**.

Bald Eagle Drive is a 2-lane, local collector under the City of Marco Island jurisdiction, and has a posted speed limit of 30 mph in the vicinity of the project. Based on the 2025 FDOT Design Manual 212 – Exhibit 212-1, for a design speed of 30 mph – urban conditions – the minimum turn lane length is 120 feet (which includes a 50-foot taper) plus required queue.

Turn lane lengths required at build-out conditions are analyzed based on the number of turning vehicles in an average one-minute period for right-turning movements, and two-minute period for left-turning movements, within the peak hour traffic. The minimum queue length is 25 feet and the queue/vehicle is 25 feet.

Bald Eagle Drive – Main Marina Access: A dedicated, approximately 125 foot right-turn lane is proposed for this access. The project is expected to generate 42vph and 38vph northbound right-turning movements during the AM and PM peak hour, respectively, which is above the 40vph threshold value. As such, a right-turn lane is warranted at this location.

The proposed turn-lane is geometrically constrained due to the location of the project’s South Marina Access. The proposed turn-lane will operate in a free-flow manner due to an anticipated low operating speed.

The proposed 125-foot stacking lane will provide 75 feet of queue. As such, the proposed right-turn lane is adequate to accommodate projected traffic at this location.

The project is expected to generate 7vph and 7vph southbound left-turning movements during the AM and PM peak hour, respectively, which is below the 20vph threshold value. As such, a dedicated left-turn lane is not warranted at this location.

Bald Eagle Drive – North Parking Lot Access: A dedicated, approximately 240 foot northbound left-turn lane is proposed for this access. The project is expected to generate 63vph and 58vph northbound left-turning movements during the AM and PM peak hour, respectively, which is above the 20vph threshold. As such, a dedicated left-turn lane is warranted at this location.

At the minimum, the left-turn lane should be 195 feet long, which includes 75 feet of queue. As such, the proposed left-turn lane is adequate to accommodate projected traffic at this location.

The project is expected to generate 14vph and 13vph southbound right-turning movements during the AM and PM peak hour, respectively, which is below the 40vph threshold value. As such, a dedicated right-turn lane is not warranted at this location.

Elkhorn Court – North Parking Lot Access: The project is expected to generate 7vph and 6vph westbound right-turning movements during the AM and PM peak hour, respectively, which is below the 40vph threshold. As such, a dedicated right-turn lane is not warranted at this location.

The project is expected to generate 7vph and 6vph eastbound left-turning movements during the AM and PM peak hour, respectively, which is above the 20vph threshold. As such, a dedicated left-turn lane is warranted at this location.

Improvement Analysis

Based on the concurrency evaluation results, there is adequate and sufficient roadway capacity to accommodate projected traffic at buildout conditions. The analyzed roadway network is projected to perform within the adopted level of service standard.

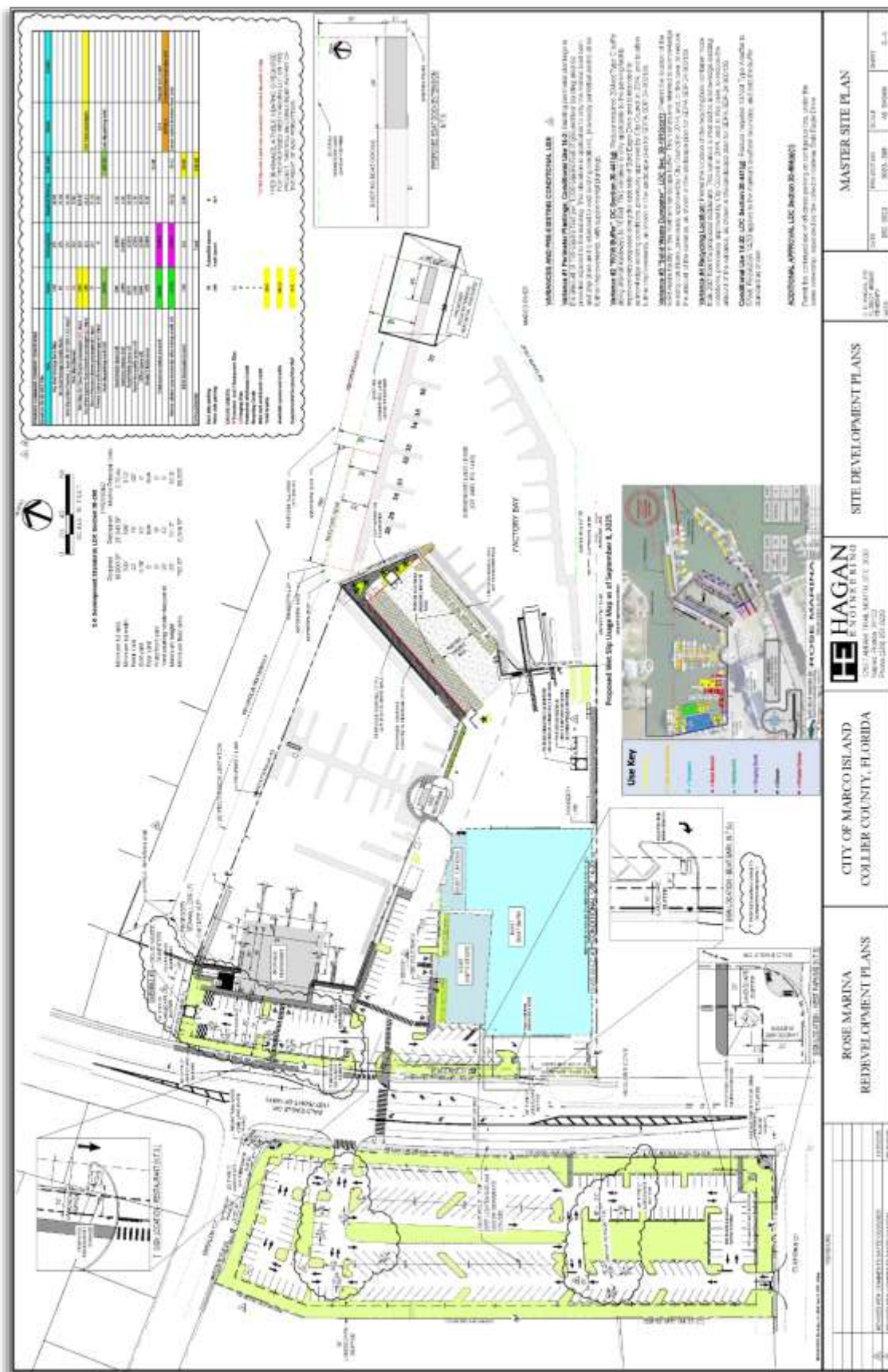
Based on the site access turn lane analysis, turn lane improvements are recommended at the marina accesses and the north parking lot's main access off of Bald Eagle Drive.

Mitigation of Impact

The developer proposes to pay the appropriate City of Marco Island Road Impact Fees as building permits are issued for the project, as applicable.

Appendix A:

Project Master Site Plan



Appendix B:

Initial Meeting Checklist (Methodology Meeting)

INITIAL MEETING CHECKLIST

Suggestion: Use this Appendix as a worksheet to ensure that no important elements are overlooked. Cross out the items that do not apply, or N/A (not applicable).

Date: May 20, 2024 Time: N/A

Location: N/A – Via Email

People Attending:

Name, Organization, and Telephone Numbers

- 1) Justin Martin, City of Marco Island
- 2) Norman Trebilcock, TCS
- 3) Daniel Doyle, TCS

Study Preparer:

Preparer's Name and Title: Norman Trebilcock, AICP, PTOE, PE

Organization: Trebilcock Consulting Solutions, PA

Address & Telephone Number: 2800 Davis Boulevard, Suite 200, Naples, FL 34104; Ph 239-566-9551

Reviewer(s):

Reviewer's Name & Title: Justin Martin, Director of Public Works

Organization & Telephone Number: City of Marco Island

Ph: 239-389-5184

Applicant:

Applicant's Name: Hagan Engineering

Address: 1250 Tamiami Trail North, Suite 203B, Naples, FL 34102

Telephone Number: 239-851-8239

Proposed Development:

Name: Rose Marina – Site Development Plan Amendment (SDPA)

Location: 951 Bald Eagle Drive – Refer to **Figure 1**

Land Use Type: Marina

ITE Code #: LUC 090 – Park-and-Ride Lot with Bus and Light Rail Service, LUC 420 – Marina, LUC 842 – RV Sales, LUC 932 – High Turnover (Sit-Down) Restaurant

Description: Rose Marina is an existing marina which provides boat sales, service, wet and dry slips and indoor storage facilities as well a public restaurant. See **Figure 1 – Project Location Map**. The subject site is currently developed with 15,945 square feet of boat sales, retail and related office space; 197 boat storage spaces and boat slips; and provides dockage and parking for boat charter and boat ferry services. The SDPA project proposes to add 106 dry boat storage spaces; 3 transient wet slips; and a 200 seat high-

turnover restaurant. In addition, there are existing and proposed parking areas located west of Bald Eagle Drive.

LUC 842 – Recreational Vehicle Sales was used as the most comparable use for boat sales and service per Institute of Transportation Engineers (ITE) Trip Generation Manual (TGM), 11th Edition. In addition, ITE does not have a land use code for boat charter or boat ferry service. For this report, LUC 090 – Park-and-Ride Lot with Bus and Light Rail Service was used to estimate the traffic associated with the boat charter and boat ferry services.

Access to the subject site is proposed via a right-in only access and one full movement access onto Bald Eagle Drive. The additional parking areas have accesses along Bald Eagle Drive, Giralda Court and Elkhorn Court.

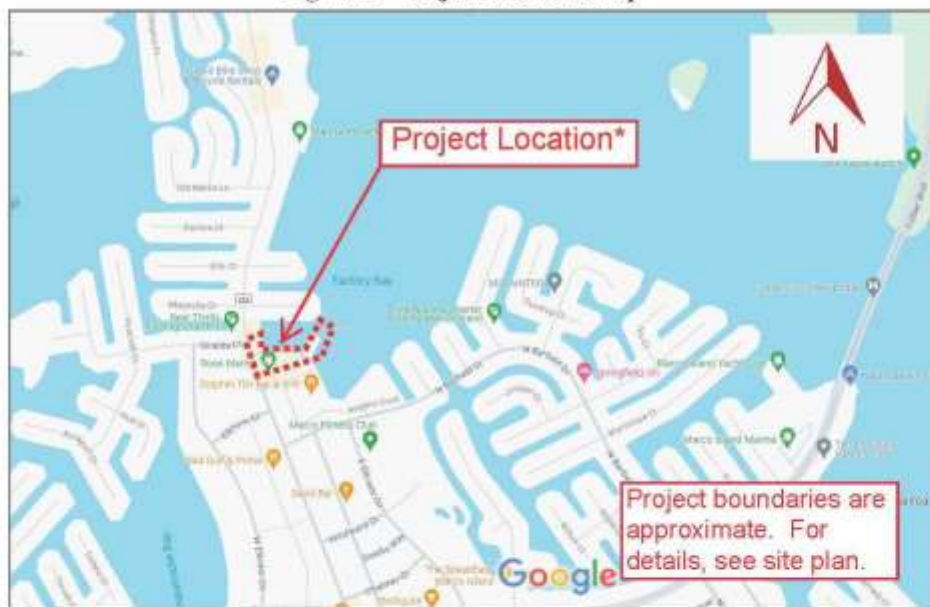
Zoning:

Existing: C-5 heavy commercial district

Comprehensive plan recommendation: N/A

Requested: To allow proposed development

Figure 1 – Project Location Map



Findings of the Preliminary Study:

Study type: Study qualifies for a Minor study TIS based on a total area of less than 10 acres.

TIS will be consistent with City of Marco Island Traffic Impact Study Requirements (as illustrated in the City of Marco Island Construction Standard Handbook for Work within the Public ROW – Appendix B).

TIS will include daily, AM and PM peak hour trip generation (ITE 11th Edition), traffic distribution and assignments, LOS capacity analysis and site access operational evaluation.

Transportation Concurrency Analysis – Roadway Network LOS/Capacity – based on net new projected traffic impact.

Operational site access – turn lane analysis based on proposed build-out conditions (external traffic AM/PM peak hour trip generation).

TIS assumptions: No internal capture reductions are considered for this study. Pass-by traffic reductions are included for the proposed restaurant as follows: 30% weekday and 40% for AM and PM peak hour.

Bald Eagle Drive – 2 lane undivided local collector in the vicinity of project; Posted speed limit – 30 mph; Design speed – 30 mph.

Traffic Counts – 2023 traffic count data collected on March 29, 2023 will be provided for Bald Eagle Drive and North Barfield Drive for LOS and capacity analysis.

No intersection analysis is part of this TIS

Study Type: (if not net increase, operational study)

Minor TIS ☒

Major TIS ☐

Study Area:

Boundaries: Bald Eagle Drive

Additional intersections to be analyzed: N/A

Build Out Year: N/A

Planning Horizon Year: 2026

Analysis Time Period(s): Concurrency PM Peak Hour; Operational AM/PM Peak Hour

Future Off-Site Developments: N/A

Source of Trip Generation Rates: ITE 11th Edition

Reductions in Trip Generation Rates:

None: N/A

Pass-by trips: LUC 932; weekday 30%, AM and PM peak hour 40%

Internal trips: N/A

Transit use: N/A

Other: N/A

Horizon Year Roadway Network Improvements: 2026

Methodology & Assumptions:

Non-site traffic estimates: 2023 FTE Count Data for N Barfield Drive and Bald Eagle Drive; collected 03-29-2023

Site-trip generation: OTISS – ITE 11th Edition

Trip distribution method: Engineer's Estimate – refer to **Figure 2**

Traffic assignment method: project trip generation with background growth

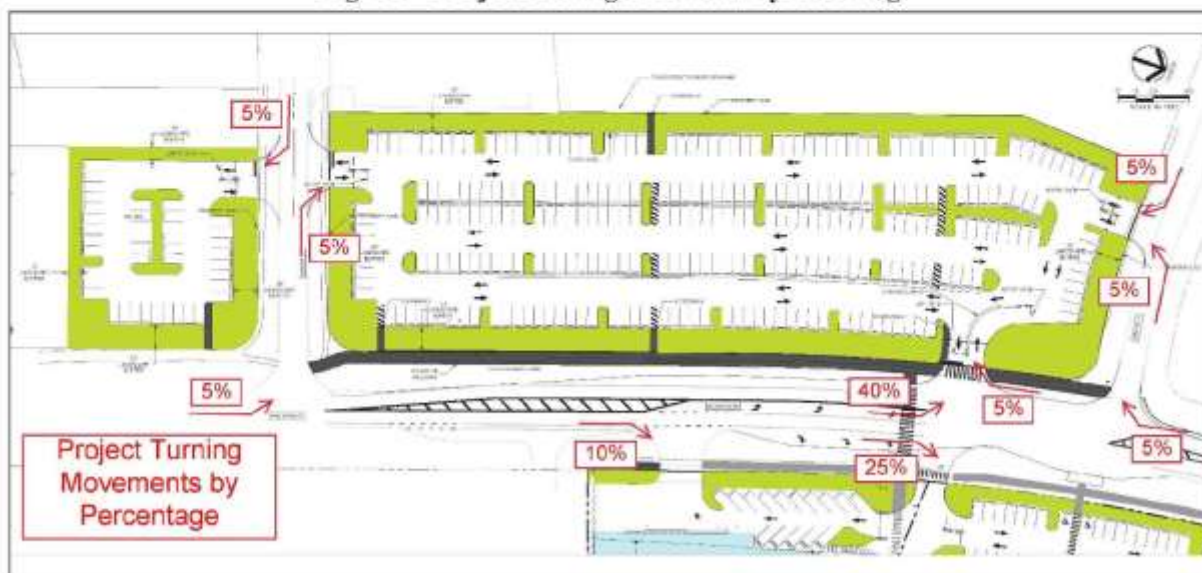
Traffic growth rate: historical growth rate or 2% minimum

Turning movement assignment: Engineer's Estimate – refer to **Figure 3**

Figure 2 – Project Trip Distribution by Percentage



Figure 3 – Project Turning Movements by Percentage



Special Features: (from preliminary study or prior experience)

Accident locations: N/A

Sight distance: N/A

Queuing: N/A

Access location & configuration: N/A

Traffic control: MUTCD

Signal system location & progression needs: N/A

On-site parking needs: N/A

Data Sources: City of Marco Annual Level of Service Report, March 2023 FTE Traffic Counts

Base maps: N/A

Prior study reports: N/A

Access policy and jurisdiction: N/A

Review process: N/A

Requirements: N/A

Miscellaneous: N/A

SIGNATURES

Norman Trebilcock

Study Preparer—Norman Trebilcock

Reviewer(s)

Applicant

Appendix C:

ITE Trip Generation Calculations

Land Use: 090

Park-and-Ride Lot with Bus or Light Rail Service

Description

A park-and-ride lot with bus or light rail service is an area used for the transfer of people between private vehicles and buses or light rail. It usually contains a passenger shelter, a parking lot, and circulation facilities for buses and personal passenger vehicles. The site may contain ticketing facilities and other amenities such as restrooms, vending machines, and a coffee stand. In addition to the motorists that use the park-and-ride lot, the vehicles that enter or exit the site may include a significant number that drop off or pick up passengers.

Additional Data

Based on vehicle counts taken during presumed AM and PM peak periods at some sites, the morning and afternoon peak hours were on average between 6:45 and 7:45 a.m. and 5:15 and 6:15 p.m., respectively. However, the peak hours varied significantly between stations based on the data submitted.

The sites were surveyed in the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, New Hampshire, New Jersey, Oregon, Texas, Utah, Vermont, and Washington.

Source Numbers

425, 435, 443, 579, 598, 611, 728, 834, 904, 925, 932, 933, 940, 969, 981, 1029

Land Use: 420 Marina

Description

A marina is a public or private facility that provides docks and berths for boats and may include limited retail and restaurant space.

Additional Data

The sites were surveyed in the 1980s in Connecticut and Washington.

Source Numbers

123, 265



Land Use: 842 Recreational Vehicle Sales

Description

A recreational vehicle (RV) sales dealership is a free-standing facility that specializes in the sales of new RVs. Recreational vehicle services; parts and accessories sales; and substantial used RV sales may also be available. Some RV dealerships may also include boat sales and servicing.

Additional Data

The sites were surveyed in the 2000s and the 2010s in Florida and Texas.

Source Numbers

721, 881

Land Use: 932

High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal. Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Additional Data

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Arizona, California, Florida, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

Source Numbers

338, 340, 341, 358, 384, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 1048, 1224, 1267



Proposed Development Trip Generation

Project Information					
Project Name:	Rose Marina - SDPA				
No:					
Date:	11/20/2025				
City:					
State/Province:					
Zip/Postal Code:					
Country:					
Client Name:					
Analyst's Name:	DTD				
Edition:	Trip Generation Manual, 12th Ed				

Land Use	Size	AM Peak Hour		PM Peak Hour	
		Entry	Exit	Entry	Exit
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	221 Parking Spaces	83	23	32	92
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		83	23	32	92
842 - Recreational Vehicle Sales (General Urban/Suburban)	16.92 1000 Sq. Ft. GFA	7	1	4	9
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		0	0	0	0
Non-pass-by		7	1	4	9
932 - High-Turnover (Sit-Down) Restaurant (General Urban/Suburban)	220 Seats	44	40	58	43
Reduction		0	0	0	0
Internal		0	0	0	0
Pass-by		18	16	23	17
Non-pass-by		26	24	35	26
Total		134	64	94	144
Total Reduction		0	0	0	0
Total Internal		0	0	0	0
Total Pass-by		18	16	23	17
Total Non-pass-by		116	48	71	127

PERIOD SETTING

Analysis Name : AM Peak Hour
Project Name : Rose Marina - SDPA **No :**
Date: 11/20/2025 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: DTD **Edition:** Trip Generation Manual, 12th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	Parking Spaces	221	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG) $\ln(T) = 0.99\ln(X) + -0.68$	83 78%	23 22%	106
842 - Recreational Vehicle Sales (General Urban/Suburban)	1000 Sq. Ft. GFA	16.92	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.46	7 ⁽¹⁾ 88%	1 ⁽¹⁾ 12%	8 ⁽¹⁾
932 - High-Turnover (Sit-Down) Restaurant (General Urban/Suburban)	Seats	220 ⁽⁰⁾	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.38	44 ⁽¹⁾ 52%	40 ⁽¹⁾ 48%	84 ⁽¹⁾

(0) indicates size out of range.

(1) indicates small sample size, use carefully.

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
090 - Park-and-Ride Lot with Bus or Light Rail Service	0 %	83	0 %	23
842 - Recreational Vehicle Sales	0 %	7	0 %	1
932 - High-Turnover (Sit-Down) Restaurant	0 %	44	0 %	40

INTERNAL TRIPS

090 - Park-and-Ride Lot with Bus or Light Rail Service

842 - Recreational Vehicle Sales

Exit 23

Demand Exit: 0 % (0)

Balanced:
0

Demand Entry: 0 % (0)

Entry 7

Entry	83	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 0 % (0)	Exit	1
090 - Park-and-Ride Lot with Bus or Light Rail Service			932 - High-Turnover (Sit-Down) Restaurant			
Exit	23	Demand Exit: 0 % (0)	Balanced: 0	Demand Entry: 0 % (0)	Entry	44
Entry	83	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 0 % (0)	Exit	40
842 - Recreational Vehicle Sales			932 - High-Turnover (Sit-Down) Restaurant			
Exit	1	Demand Exit: 0 % (0)	Balanced: 0	Demand Entry: 0 % (0)	Entry	44
Entry	7	Demand Entry: 0 % (0)	Balanced: 0	Demand Exit: 0 % (0)	Exit	40
090 - Park-and-Ride Lot with Bus or Light Rail Service						
	Total Trips	Internal Trips			External Trips	
		842 - Recreational Vehicle Sales	932 - High-Turnover (Sit-Down) Restaurant	Total		
Entry	83 (100%)	0 (0%)	0 (0%)	0 (0%)	83 (100%)	
Exit	23 (100%)	0 (0%)	0 (0%)	0 (0%)	23 (100%)	
Total	106 (100%)	0 (0%)	0 (0%)	0 (0%)	106 (100%)	
842 - Recreational Vehicle Sales						
	Total Trips	Internal Trips			External Trips	
		090 - Park-and-Ride Lot with Bus or Light Rail Service	932 - High-Turnover (Sit-Down) Restaurant	Total		
Entry	7 (100%)	0 (0%)	0 (0%)	0 (0%)	7 (100%)	
Exit	1 (100%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	
Total	8 (100%)	0 (0%)	0 (0%)	0 (0%)	8 (100%)	
932 - High-Turnover (Sit-Down) Restaurant						
	Total Trips	Internal Trips			External Trips	
		090 - Park-and-Ride Lot with Bus or Light Rail Service	842 - Recreational Vehicle Sales	Total		
Entry	44 (100%)	0 (0%)	0 (0%)	0 (0%)	44 (100%)	
Exit	40 (100%)	0 (0%)	0 (0%)	0 (0%)	40 (100%)	
Total	84 (100%)	0 (0%)	0 (0%)	0 (0%)	84 (100%)	
EXTERNAL TRIPS						
Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips		
090 - Park-and-Ride Lot with Bus or Light Rail Service	106	0	0	106		
842 - Recreational Vehicle Sales	8	0	0	8		

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
932 - High-Turnover (Sit-Down) Restaurant	84	40	34	50

ITE DEVIATION DETAILS	
Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	
Landuse	No deviations from ITE.
Methods	No deviations from ITE.
External Trips	090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case. 842 - Recreational Vehicle Sales (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case. 932 - High-Turnover (Sit-Down) Restaurant (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case.

SUMMARY	
Total Entering	134
Total Exiting	64
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	18
Total Exiting Pass-by Reduction	16
Total Entering Non-Pass-by Trips	116
Total Exiting Non-Pass-by Trips	48

PERIOD SETTING							
Analysis Name :		AM Peak Hour					
Project Name :		Rose Marina - Proposed LUC No : 420					
Date:		11/24/2025		City:			
State/Province:				Zip/Postal Code:			
Country:				Client Name:			
Analyst's Name:		BLC		Edition:		Trip Generation Manual, 11th Ed	

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
420 - Marina (General Urban/Suburban)	Berths	271 ⁽⁰⁾	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.07	6 ⁽¹⁾ 32%	13 ⁽¹⁾ 68%	19 ⁽¹⁾

(0) indicates size out of range.
 (1) indicates small sample size, use carefully.

PERIOD SETTING

Analysis Name :	PM Peak Hour	No :	
Project Name :	Rose Marina - SDPA	City:	
Date:	11/20/2025	Zip/Postal Code:	
State/Province:		Client Name:	
Country:		Edition:	Trip Generation Manual, 12th Ed
Analyst's Name:	DTD		

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	Parking Spaces	221	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.38 (X) + 40.38$	32 26%	92 74%	124
842 - Recreational Vehicle Sales (General Urban/Suburban)	1000 Sq. Ft. GFA	16.92	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.77	4 31%	9 69%	13
932 - High-Turnover (Sit-Down) Restaurant (General Urban/Suburban)	Seats	220	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.46	58 57%	43 43%	101

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
090 - Park-and-Ride Lot with Bus or Light Rail Service	0 %	32	0 %	92
842 - Recreational Vehicle Sales	0 %	4	0 %	9
932 - High-Turnover (Sit-Down) Restaurant	0 %	58	0 %	43

INTERNAL TRIPS

090 - Park-and-Ride Lot with Bus or Light Rail Service

Exit	92	Demand Exit:	0 % (0)
Entry	32	Demand Entry:	0 % (0)

Balanced:
0Balanced:
0

842 - Recreational Vehicle Sales

Demand Entry:	0 % (0)	Entry	4
Demand Exit:	0 % (0)	Exit	9

090 - Park-and-Ride Lot with Bus or Light Rail Service

Exit 92 Demand Exit: 0 % (0)

Balanced:
0

Entry 32 Demand Entry: 0 % (0)

Balanced:
0**842 - Recreational Vehicle Sales**

Exit 9 Demand Exit: 0 % (0)

Balanced:
0

Entry 4 Demand Entry: 0 % (0)

Balanced:
0**932 - High-Turnover (Sit-Down) Restaurant**

Demand Entry: 0 % (0) Entry 58

Demand Exit: 0 % (0) Exit 43

932 - High-Turnover (Sit-Down) Restaurant

Demand Entry: 0 % (0) Entry 58

Demand Exit: 0 % (0) Exit 43

090 - Park-and-Ride Lot with Bus or Light Rail Service

	Total Trips	Internal Trips			External Trips
		842 - Recreational Vehicle Sales	932 - High-Turnover (Sit-Down) Restaurant	Total	
Entry	32 (100%)	0 (0%)	0 (0%)	0 (0%)	32 (100%)
Exit	92 (100%)	0 (0%)	0 (0%)	0 (0%)	92 (100%)
Total	124 (100%)	0 (0%)	0 (0%)	0 (0%)	124 (100%)

842 - Recreational Vehicle Sales

	Total Trips	Internal Trips			External Trips
		090 - Park-and-Ride Lot with Bus or Light Rail Service	932 - High-Turnover (Sit-Down) Restaurant	Total	
Entry	4 (100%)	0 (0%)	0 (0%)	0 (0%)	4 (100%)
Exit	9 (100%)	0 (0%)	0 (0%)	0 (0%)	9 (100%)
Total	13 (100%)	0 (0%)	0 (0%)	0 (0%)	13 (100%)

932 - High-Turnover (Sit-Down) Restaurant

	Total Trips	Internal Trips			External Trips
		090 - Park-and-Ride Lot with Bus or Light Rail Service	842 - Recreational Vehicle Sales	Total	
Entry	58 (100%)	0 (0%)	0 (0%)	0 (0%)	58 (100%)
Exit	43 (100%)	0 (0%)	0 (0%)	0 (0%)	43 (100%)
Total	101 (100%)	0 (0%)	0 (0%)	0 (0%)	101 (100%)

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
090 - Park-and-Ride Lot with Bus or Light Rail Service	124	0	0	124
842 - Recreational Vehicle Sales	13	0	0	13
932 - High-Turnover (Sit-Down) Restaurant	101	40	40	61

ITE DEVIATION DETAILS	
Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	
Landuse	No deviations from ITE.
Methods	No deviations from ITE.
External Trips	090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case. 842 - Recreational Vehicle Sales (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case. 932 - High-Turnover (Sit-Down) Restaurant (General Urban/Suburban) ITE does not recommend a particular pass-by% for this case.
SUMMARY	
Total Entering	94
Total Exiting	144
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	23
Total Exiting Pass-by Reduction	17
Total Entering Non-Pass-by Trips	71
Total Exiting Non-Pass-by Trips	127

PERIOD SETTING							
Analysis Name :		PM Peak Hour					
Project Name :		Rose Marina - Proposed LUC No : 420					
Date:		11/24/2025		City:			
State/Province:				Zip/Postal Code:			
Country:				Client Name:			
Analyst's Name:		BLC		Edition:		Trip Generation Manual, 11th Ed	
Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
420 - Marina (General Urban/Suburban)	Berths	271 ⁽⁰⁾	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.21	34 ⁽¹⁾ 60%	23 ⁽¹⁾ 40%	57 ⁽¹⁾
⁽⁰⁾ indicates size out of range. ⁽¹⁾ indicates small sample size, use carefully.							

Existing Development Trip Generation

Project Information	
Project Name:	Rose Marina - Existing 12th Edition
No:	
Date:	11/20/2025
City:	
State/Province:	
Zip/Postal Code:	
Country:	
Client Name:	
Analyst's Name:	DTD
Edition:	Trip Generation Manual, 12th Ed

Land Use	Size	Weekday		AM Peak Hour		PM Peak Hour	
		Entry	Exit	Entry	Exit	Entry	Exit
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	269 Parking Spaces	222	222	101	28	37	106
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		222	222	101	28	37	106
842 - Recreational Vehicle Sales (General Urban/Suburban)	15.95 1000 Sq. Ft. GFA	40	40	6	1	4	8
Reduction		0	0	0	0	0	0
Internal		0	0	0	0	0	0
Pass-by		0	0	0	0	0	0
Non-pass-by		40	40	6	1	4	8
Total		262	262	107	29	41	114
Total Reduction		0	0	0	0	0	0
Total Internal		0	0	0	0	0	0
Total Pass-by		0	0	0	0	0	0
Total Non-pass-by		262	262	107	29	41	114

PERIOD SETTING

Analysis Name : AM Peak Hour
Project Name : Rose Marina - Existing 12th Edition
Date: 11/20/2025
State/Province:
Country:
Analyst's Name: DTD
City:
Zip/Postal Code:
Client Name:
Edition: Trip Generation Manual, 12th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	Parking Spaces	269	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LOG) $\ln(T) = 0.99\ln(X) + -0.68$	101 78%	28 22%	129
842 - Recreational Vehicle Sales (General Urban/Suburban)	1000 Sq. Ft. GFA	15.95	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.46	6 ⁽⁰⁾ 86%	1 ⁽⁰⁾ 14%	7 ⁽⁰⁾

(0) indicates small sample size, use carefully.

PERIOD SETTING

Analysis Name : AM Peak Hour
Project Name : Rose Marina - Existing LUC 420
Date: 11/24/2025
State/Province:
Country:
Analyst's Name: BLC
City:
Zip/Postal Code:
Client Name:
Edition: Trip Generation Manual, 11th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
420 - Marina (General Urban/Suburban)	Berths	197 ⁽⁰⁾	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 0.07	5 ⁽¹⁾ 36%	9 ⁽¹⁾ 64%	14 ⁽¹⁾

(0) indicates size out of range.

(1) indicates small sample size, use carefully.

PERIOD SETTING

Analysis Name : PM Peak Hour
Project Name : Rose Marina - Existing 12th Edition
Date: 11/20/2025
State/Province:
Country:
Analyst's Name: DTD
City:
Zip/Postal Code:
Client Name:
Edition: Trip Generation Manual, 12th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
090 - Park-and-Ride Lot with Bus or Light Rail Service (General Urban/Suburban)	Parking Spaces	269	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.38 (X) + 40.38$	37 26%	106 74%	143
842 - Recreational Vehicle Sales (General Urban/Suburban)	1000 Sq. Ft. GFA	15.95	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.77	4 33%	8 67%	12

PERIOD SETTING

Analysis Name : PM Peak Hour
Project Name : Rose Marina - Existing LUC 420
Date: 11/24/2025
State/Province:
Country:
Analyst's Name: BLC
City:
Zip/Postal Code:
Client Name:
Edition: Trip Generation Manual, 11th Ed

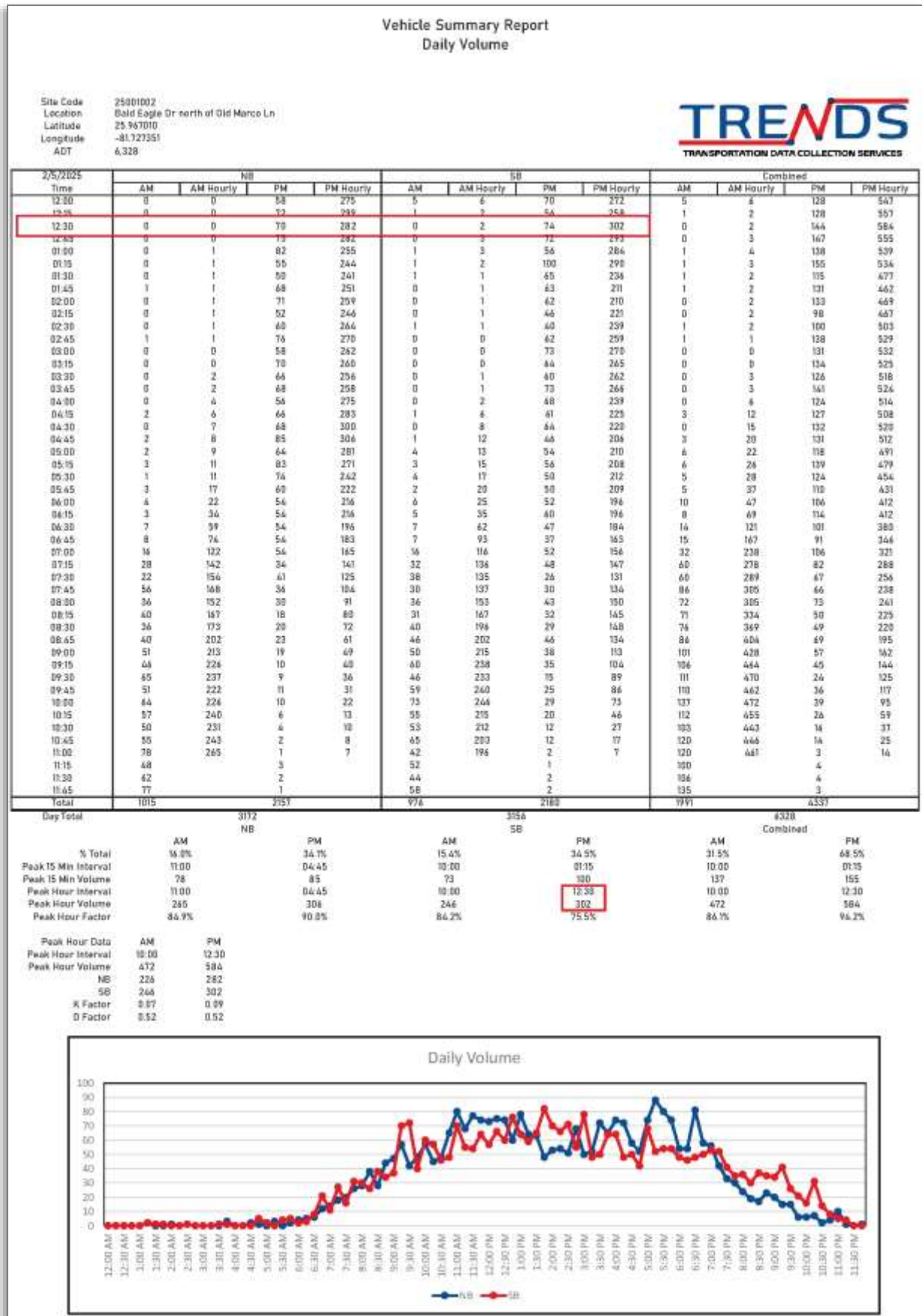
Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
420 - Marina (General Urban/Suburban)	Berths	197 ⁽⁰⁾	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 0.21	25 ⁽¹⁾ 61%	16 ⁽¹⁾ 39%	41 ⁽¹⁾

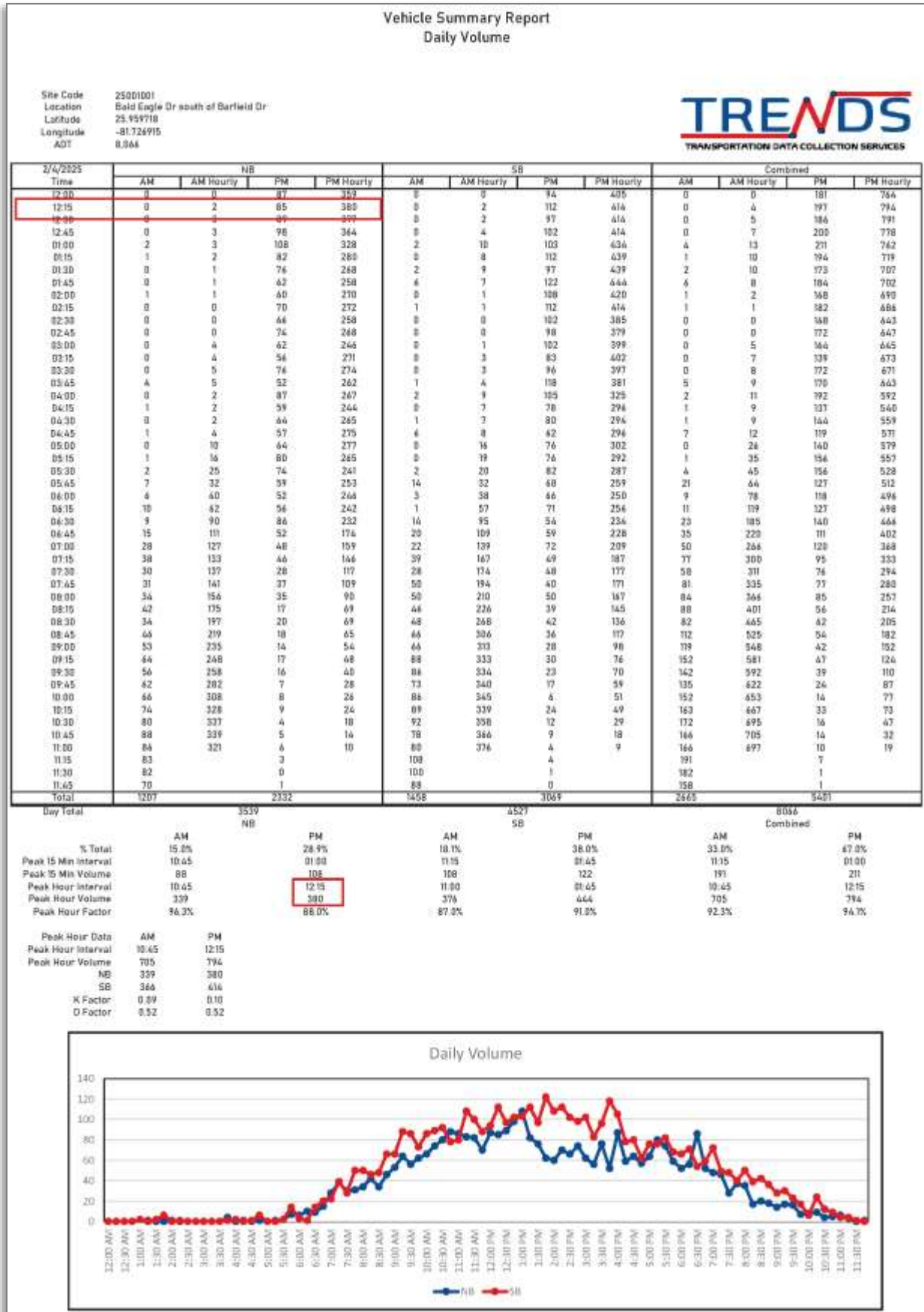
(0) indicates size out of range

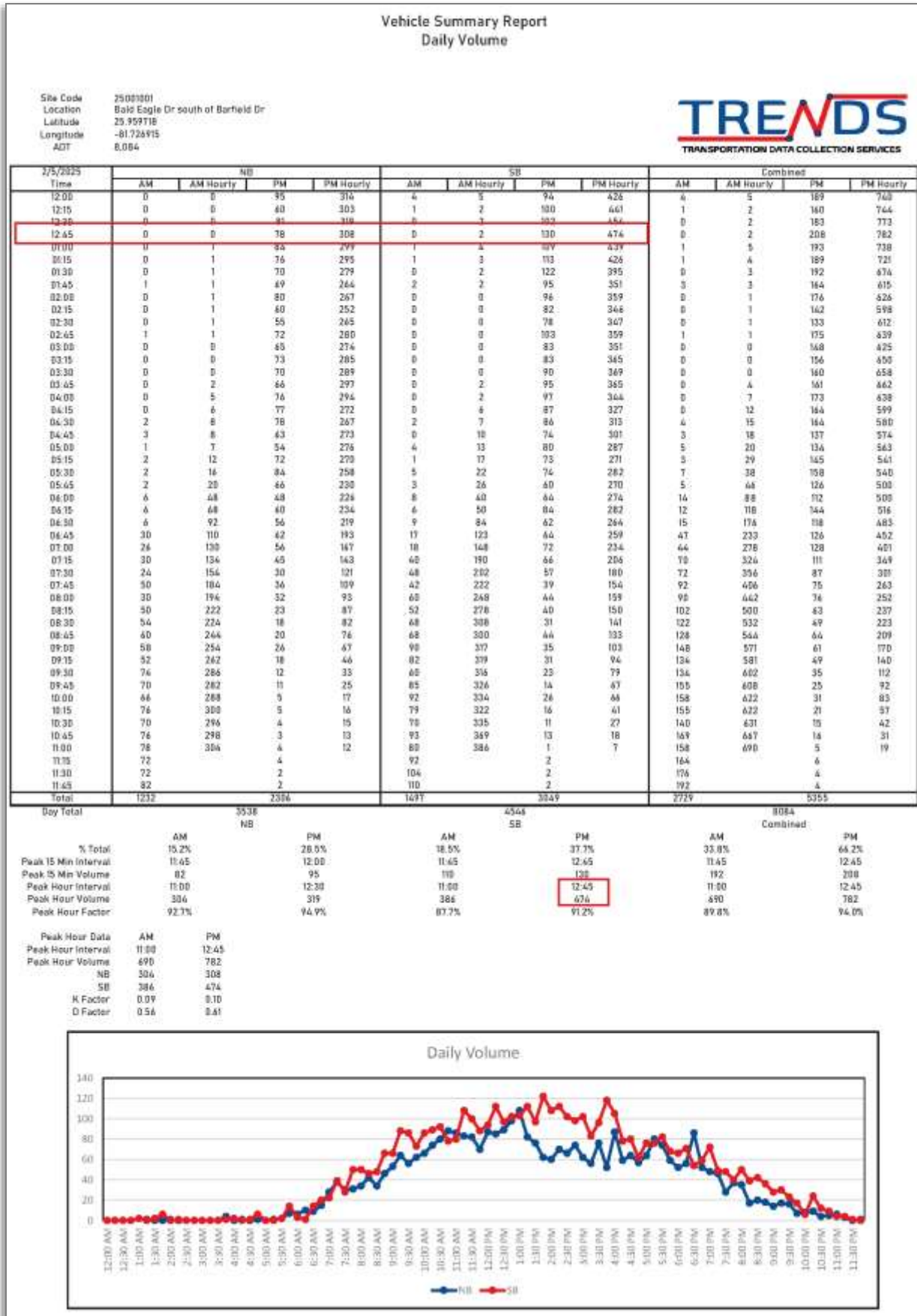
(1) indicates small sample size, use carefully.

Appendix D:

2025 Intersection Traffic Counts







Appendix E:

2023 FTE Traffic Counts

Bald Eagle Dr at N. Barfield Dr

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851

Count Name: Bald Eagle Dr @
N Barfield Dr
Site Code:
Start Date: 03/29/2023
Page No: 1

Turning Movement Data

Start Time	N Barfield Dr Westbound					Bald Eagle Dr Northbound					Bald Eagle Dr Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	
6:00 AM	0	2	8	0	10	0	4	1	0	5	0	1	5	0	6	21
6:15 AM	0	3	4	0	7	0	5	4	0	9	0	7	3	0	10	26
6:30 AM	0	4	13	0	17	0	9	2	0	11	0	5	8	0	13	41
6:45 AM	0	14	23	0	37	0	28	4	0	32	0	13	19	0	32	101
Hourly Total	0	23	48	0	71	0	46	11	0	57	0	26	35	0	61	189
7:00 AM	0	6	18	1	24	0	22	5	0	27	0	19	20	0	39	90
7:15 AM	0	8	26	0	34	0	24	3	0	27	0	16	29	1	45	106
7:30 AM	0	12	35	1	47	0	27	7	0	34	0	13	33	0	45	127
7:45 AM	0	15	38	3	53	0	29	8	0	37	0	20	44	1	64	154
Hourly Total	0	41	117	5	158	0	102	23	0	125	0	68	126	2	194	477
8:00 AM	0	11	40	5	51	0	36	8	0	44	0	32	50	1	82	177
8:15 AM	0	7	44	0	51	0	40	12	0	52	0	21	33	1	54	157
8:30 AM	0	9	49	0	58	0	40	13	0	53	0	24	44	0	68	179
8:45 AM	0	15	49	13	64	0	49	10	0	59	0	19	60	0	79	202
Hourly Total	0	42	182	18	224	0	165	43	0	208	0	96	187	2	283	715
9:00 AM	0	21	36	3	57	0	53	7	0	60	0	27	57	2	84	201
9:15 AM	0	12	47	7	59	0	42	13	0	55	0	26	67	1	93	207
9:30 AM	0	16	30	0	46	0	54	9	0	63	0	32	59	0	91	200
9:45 AM	0	16	40	6	56	0	52	16	0	68	0	29	70	0	99	223
Hourly Total	0	65	153	24	218	0	201	45	0	246	0	114	253	3	367	831
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	17	39	3	56	0	67	11	0	78	0	38	78	0	116	250
11:15 AM	0	17	42	4	59	0	65	13	0	78	0	27	89	0	116	253
11:30 AM	0	12	56	5	68	0	64	12	0	76	0	29	66	0	95	239
11:45 AM	0	14	41	1	55	0	87	11	0	98	0	34	105	0	139	292
Hourly Total	0	50	178	13	228	0	282	47	0	329	0	101	218	0	356	1014
12:00 PM	0	18	39	1	57	0	89	22	0	111	0	32	97	0	129	297
12:15 PM	0	18	49	2	67	0	67	21	0	88	0	44	80	0	124	279
12:30 PM	0	12	47	5	59	0	84	17	0	101	0	26	94	0	120	280
12:45 PM	0	19	39	6	58	0	67	16	0	83	0	25	106	0	131	272
Hourly Total	0	67	174	24	241	0	307	76	0	383	0	127	377	0	504	1128
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2:00 PM	0	15	30	2	45	0	47	17	0	64	0	28	90	2	118	227
2:15 PM	0	12	35	5	47	0	57	11	0	68	0	26	76	0	102	217
2:30 PM	0	14	34	0	48	0	46	10	0	56	0	32	74	0	106	210
2:45 PM	0	15	34	1	49	0	53	22	0	75	0	30	74	0	104	228
Hourly Total	0	56	133	8	189	0	203	60	0	263	0	116	314	2	430	882
3:00 PM	0	20	44	3	64	0	62	18	0	80	0	22	63	0	85	229
3:15 PM	0	22	42	3	64	0	55	19	0	74	0	31	63	0	94	232
3:30 PM	0	15	21	3	36	0	47	22	0	69	0	24	82	0	106	211
3:45 PM	0	8	40	0	48	0	45	16	0	61	0	47	87	0	134	243
Hourly Total	0	65	147	9	212	0	209	75	0	284	0	124	295	0	419	915
4:00 PM	0	14	34	1	48	0	55	13	0	68	0	36	71	0	107	223
4:15 PM	0	14	34	5	48	0	52	20	0	72	0	32	78	1	110	230
4:30 PM	0	7	43	1	50	0	40	9	0	49	0	32	76	0	108	207
4:45 PM	0	7	34	2	41	0	52	7	0	59	0	21	80	0	101	201
Hourly Total	0	42	145	9	187	0	199	49	0	248	0	121	305	1	426	861
5:00 PM	0	12	31	10	43	0	57	23	3	80	0	32	80	0	112	235
5:15 PM	0	16	42	5	58	0	45	11	0	56	0	28	71	0	99	213
5:30 PM	0	14	24	2	38	0	65	17	0	82	0	24	57	0	81	201
5:45 PM	0	10	32	0	42	0	54	9	0	63	0	16	50	3	66	171
Hourly Total	0	52	129	25	181	0	221	60	3	281	0	100	258	3	358	820
Grand Total	0	513	1406	141	1919	0	1936	489	3	2425	0	1020	2488	13	3508	7852
Approach %	0.0	26.7	73.3	-	-	0.0	79.8	20.2	-	-	0.0	29.1	70.9	-	-	-
Total %	0.0	6.5	17.9	-	24.4	0.0	24.7	6.2	-	30.9	0.0	13.0	31.7	-	44.7	-
Lights	0	488	1370	-	1858	0	1895	473	-	2368	0	993	2438	-	3431	7657
% Lights	-	95.1	97.4	-	96.8	-	97.9	96.7	-	97.6	-	97.4	98.0	-	97.8	97.5
Other Vehicles	0	25	36	-	61	0	41	16	-	57	0	27	50	-	77	195
% Other Vehicles	-	4.9	2.6	-	3.2	-	2.1	3.3	-	2.4	-	2.6	2.0	-	2.2	2.5

N. Collier Blvd. at Bald Eagle Dr
Weekday

Florida Transportation Engineering, Inc.
(FTE)
8250 Pascal Dr
Punta Gorda, Florida, United States 33950
(800) 639-4851

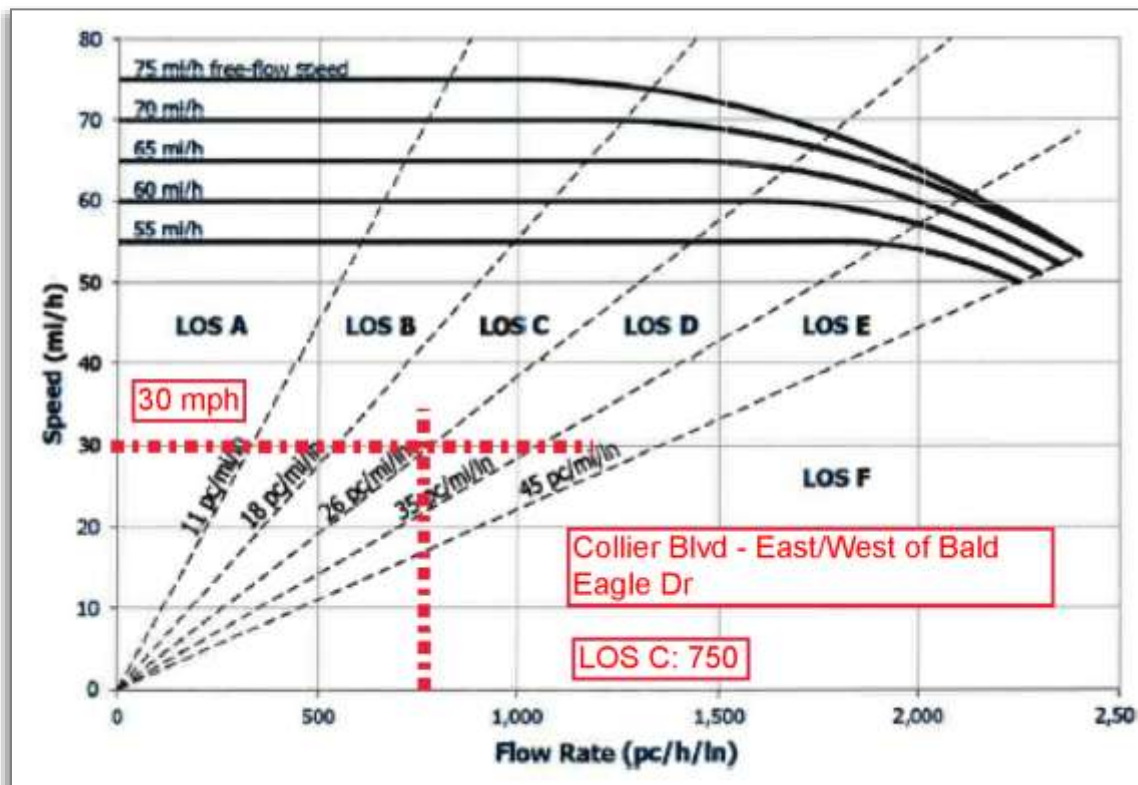
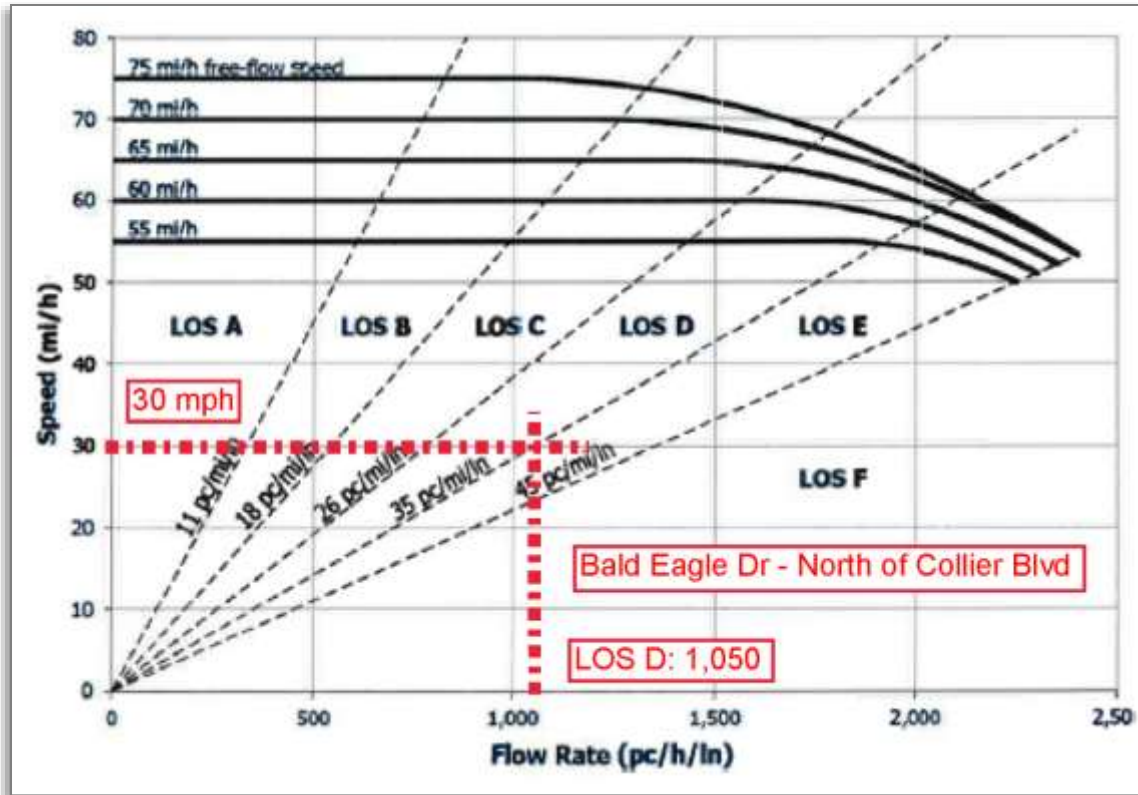
Count Name: N. Collier Blvd at
Bald Eagle Dr - Wed
Site Code:
Start Date: 01/04/2023
Page No: 1

Turning Movement Data

Start Time	N. Collier Blvd. Eastbound						N. Collier Blvd. Westbound						Bald Eagle Dr Northbound						Bald Eagle Dr. Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 AM	0	0	28	3	0	31	0	16	42	5	0	63	1	2	2	12	1	17	0	1	5	0	0	6	117
6:15 AM	0	0	25	4	0	29	0	13	52	5	1	70	0	5	5	2	0	12	0	5	4	1	2	10	121
6:30 AM	1	6	43	7	0	57	0	13	76	0	1	89	0	11	10	4	0	25	0	6	8	6	0	20	191
6:45 AM	0	9	41	7	0	57	0	12	122	9	1	143	0	8	9	2	0	19	0	8	7	6	0	21	240
Hourly Total	1	15	137	21	0	174	0	54	292	19	3	365	1	26	26	20	1	73	0	20	24	13	2	57	669
7:00 AM	0	8	69	16	1	93	0	19	118	12	3	149	0	4	15	6	3	25	0	3	19	11	0	33	300
7:15 AM	0	6	67	16	0	91	0	30	130	6	1	166	0	20	18	4	0	42	0	8	30	17	2	55	354
7:30 AM	0	9	71	28	0	108	0	26	153	11	1	190	0	23	27	3	3	63	0	11	29	19	2	59	410
7:45 AM	0	16	87	24	0	127	0	29	163	11	6	203	0	34	45	8	0	87	0	5	43	34	3	82	498
Hourly Total	0	41	294	84	1	419	0	104	564	40	11	708	0	81	105	21	6	207	0	27	121	81	7	229	1583
8:00 AM	0	33	82	25	4	140	0	32	168	8	0	208	0	32	23	8	5	63	0	9	50	25	4	84	495
8:15 AM	0	11	89	38	0	138	0	30	199	10	6	239	0	24	34	3	4	61	0	13	40	26	12	79	517
8:30 AM	0	30	127	28	0	185	0	37	180	17	6	234	0	32	28	4	7	64	0	7	39	22	5	68	551
8:45 AM	0	28	120	37	0	185	0	49	172	12	2	233	0	49	49	3	3	101	0	15	37	28	10	80	599
Hourly Total	0	102	418	128	4	648	0	148	719	47	18	914	0	137	134	18	19	289	0	44	166	101	31	311	2162
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11:00 AM	0	57	192	44	12	293	1	40	169	36	2	246	0	52	61	22	4	135	0	54	65	47	8	166	840
11:15 AM	0	42	220	62	6	324	0	29	228	28	6	285	0	69	44	17	7	130	0	34	57	54	3	145	884
11:30 AM	0	52	204	50	11	306	0	31	167	28	9	226	0	47	55	18	4	120	0	52	69	64	6	175	827
11:45 AM	0	57	178	49	16	283	0	43	208	25	5	278	0	67	60	27	9	154	0	51	56	53	4	160	873
Hourly Total	0	208	794	204	45	1206	1	143	772	117	22	1033	0	235	220	84	24	639	0	191	247	208	21	646	3424
12:00 PM	0	63	203	53	4	319	1	35	216	36	8	288	0	53	51	13	11	117	0	42	49	50	4	141	865
12:15 PM	0	44	167	30	14	241	1	41	198	25	11	265	0	59	65	27	6	151	0	39	72	57	11	168	825
12:30 PM	0	46	237	38	2	319	0	16	190	35	9	241	0	50	42	24	11	116	0	44	55	59	9	158	834
12:45 PM	0	46	158	36	8	240	0	36	150	29	3	215	0	54	58	22	10	144	0	52	50	60	5	162	761
Hourly Total	0	199	765	155	28	1119	2	128	754	125	31	1009	0	216	226	86	36	528	0	177	226	226	29	629	3285
1:00 PM	0	59	171	36	0	266	0	23	206	27	2	256	0	54	41	9	4	104	0	43	54	36	6	133	759
1:15 PM	0	45	168	29	0	242	0	20	162	38	4	220	0	50	56	17	5	123	0	33	52	50	6	135	720
1:30 PM	0	46	160	31	0	237	0	28	163	30	2	221	0	35	63	16	2	113	0	42	60	52	2	154	725
1:45 PM	0	43	198	34	0	275	0	22	198	30	4	250	0	46	54	18	0	118	0	48	49	39	6	136	779
Hourly Total	0	193	697	130	0	1020	0	93	729	125	12	947	0	185	214	59	11	458	0	166	215	177	20	558	2983
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3:00 PM	0	38	238	31	2	307	0	34	150	21	1	205	0	66	58	23	5	147	0	47	68	61	0	176	835
3:15 PM	1	34	210	32	12	277	0	17	177	29	0	223	0	49	44	14	3	107	0	45	60	46	2	151	756
3:30 PM	0	33	239	34	0	306	0	24	160	15	1	199	0	43	56	18	3	117	0	43	50	63	2	146	768
3:45 PM	0	42	181	32	14	255	0	21	168	27	1	216	0	51	59	20	11	130	0	48	53	39	3	140	741
Hourly Total	1	147	868	129	28	1145	0	96	655	92	3	843	0	209	217	75	22	501	0	183	231	199	7	613	3102
4:00 PM	1	42	231	27	0	301	0	18	168	38	6	224	0	45	46	18	0	109	0	55	54	32	9	141	775
4:15 PM	0	38	260	27	0	325	0	19	189	15	3	223	0	28	37	16	8	81	0	43	51	43	7	137	766
4:30 PM	0	33	203	29	0	265	0	14	154	21	3	189	0	34	48	14	4	96	0	50	39	36	4	125	675
4:45 PM	1	37	209	39	0	286	0	23	163	22	4	208	0	29	35	18	5	82	0	38	24	40	7	102	678
Hourly Total	2	150	903	129	0	1177	0	74	674	96	16	844	0	136	166	66	17	368	0	186	168	151	27	505	2894
5:00 PM	0	31	214	22	0	267	0	16	158	19	2	193	0	35	39	12	1	86	0	54	49	34	4	137	683
5:15 PM	1	37	242	31	0	311	0	18	177	18	1	213	0	35	30	13	5	78	0	42	43	36	4	121	723
5:30 PM	0	21	194	26	0	241	1	11	119	17	1	148	0	35	25	20	3	80	0	34	24	32	4	90	559
5:45 PM	0	29	172	24	0	225	0	9	127	12	1	148	0	31	29	12	5	72	0	23	27	32	4	82	527
Hourly Total	1	118	822	103	0	1044	1	54	581	66	5	702	0	136	123	57	14	316	0	153	143	134	16	430	2492
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 PM	0	37	104	21	0	162	0	9	91	15	1	115	0	25	22	9	0	56	0	25	19	25	3	69	402
7:15 PM	0	37	91	15	0	143	0	7	58	18	0	83	0	28	24	7	0	59	0	31	22	35	0	88	373
7:30 PM	0	27	83	13	0	123	0	4	89	11	7	104	0	22	19	8	2	49	0	31	30	32	7	93	369
7:45 PM	0	17	89	5	1	111	0	7	78	4	2	89	0	22	19	10	3	51	0	18	17	29	2	64	315
Hourly Total	0	118	367	54	1	539	0	27	316	48	10	391	0	97	84	34	13	215	0	105	88	121	12	314	1459
Grand Total	5	1291	6065	1130	107	8491	4	921	6066	775	127	7756	1	1458	1615	520	165	3494	0	1202	1629	1411	172	4292	24033
Approach %	0.1	15.2	71.4	13.3	-	-	0.1	11.9	78.1	10.0	-	-	0.0	41.7	43.4	14.9	-	-	0.0	29.2	38.0	32.9	-	-	-
Total %	0.0	5.4	25.2	4.7	-	35.3	0.0	3.8	29.2	3.2	-	32.3	0.0	6.1	6.3	2.2	-	14.5	0.0	5.2	6.8	5.9	-	17.9	-
Lights	5	1258	5897	1108	-	8269	4	877	5856	757	-	7494	1	1431	1476	497	-	3405	0	1225	1587	1371	-	4183	23950
% Lights	100.0	97.4	97.3	98.1	-	97.4	100.0	95.2	96.7	97.7	-	96.6	100.0	98.1	97.4	95.6	-	97.5	-	97.8	97.4	97.2	-	97.5	97.2
Other Vehicles	0	33	168	22	-	223	0	44	200	18	-	262	0	27	38	23	-	89	0	27	42	40	-	109	683

Appendix F:

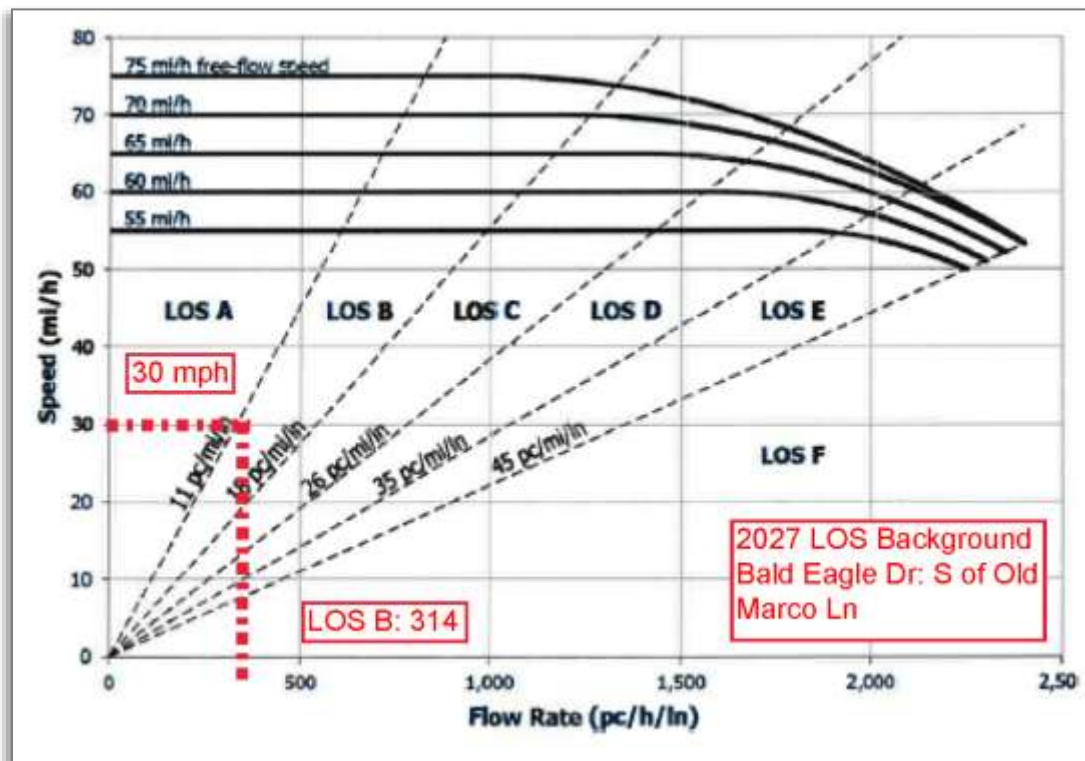
LOS Standard - Evaluation

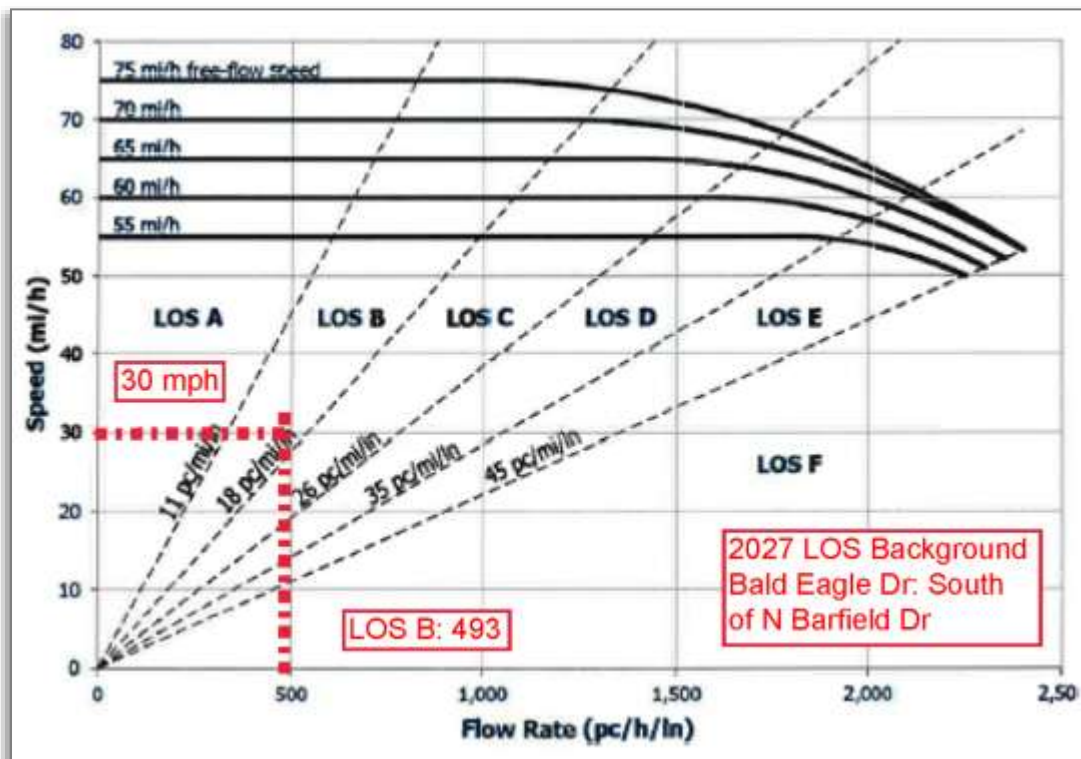
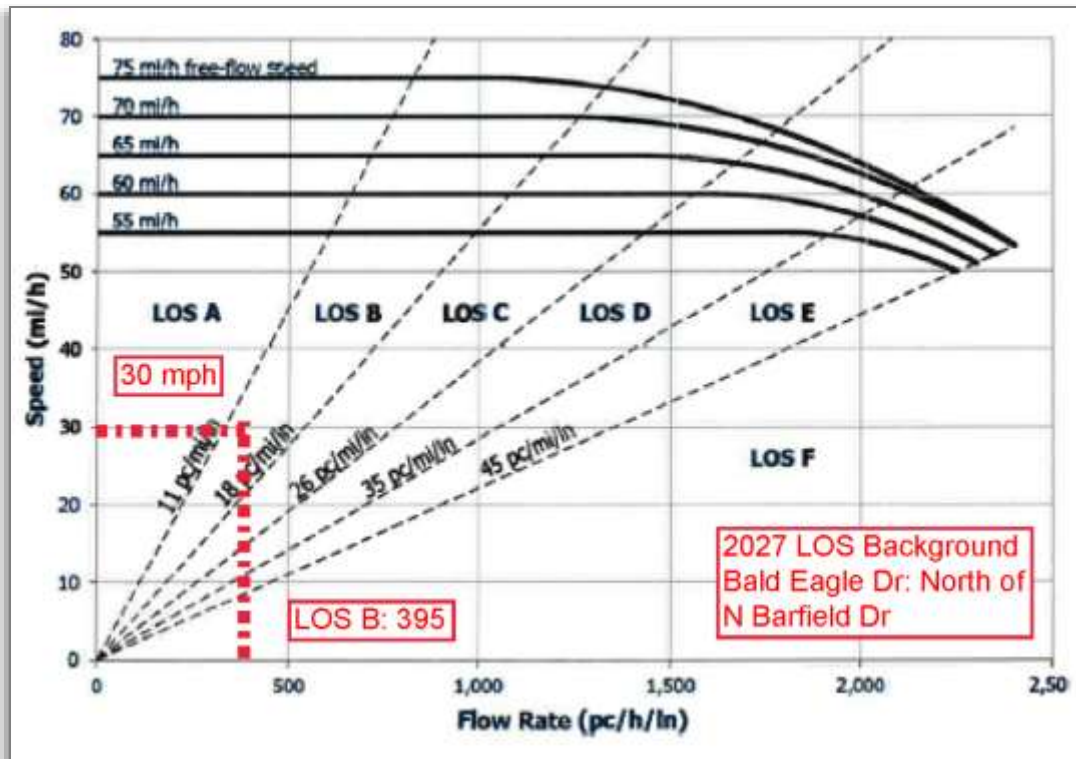


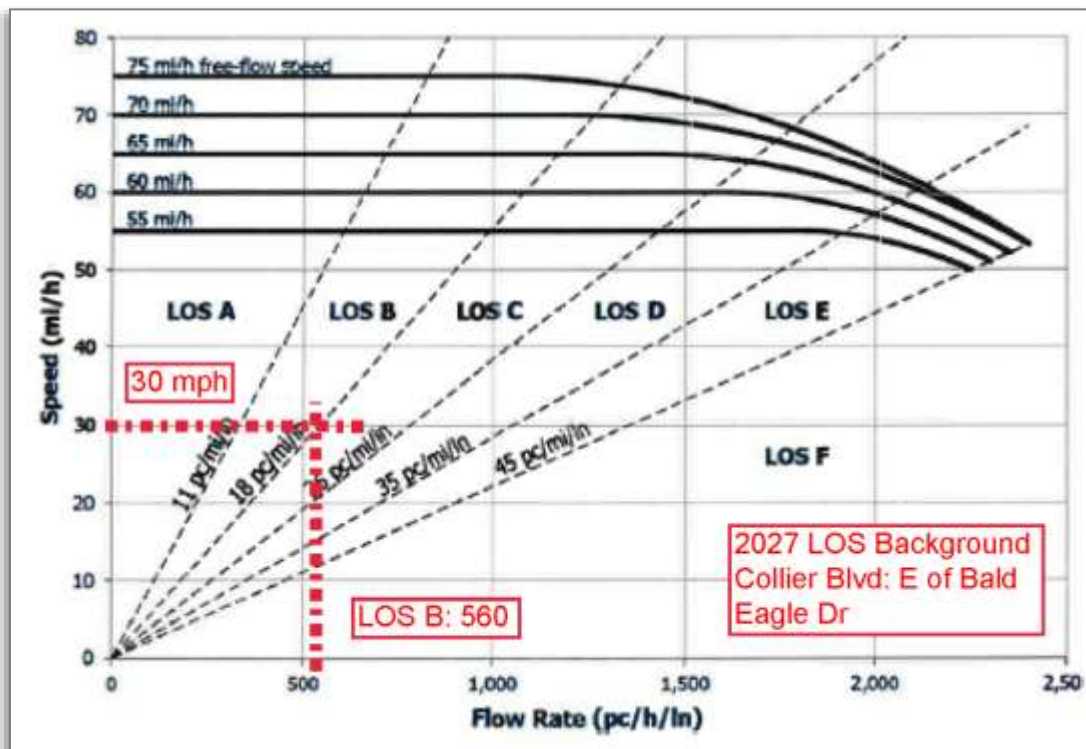
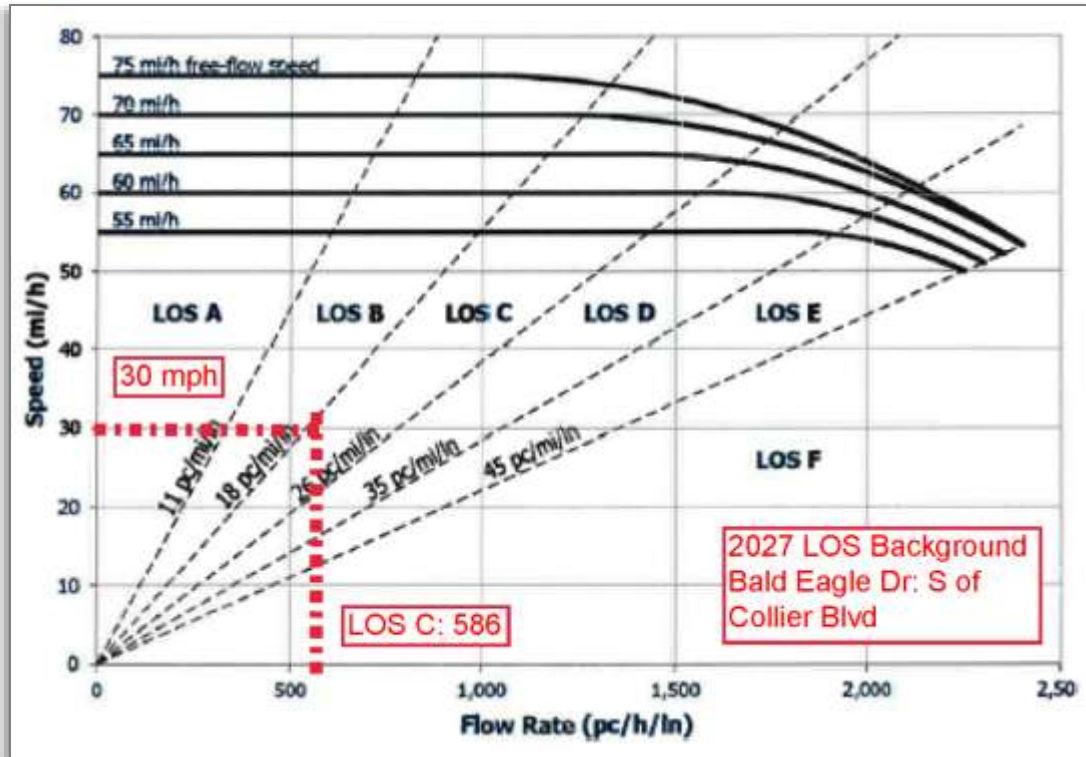
Appendix G:

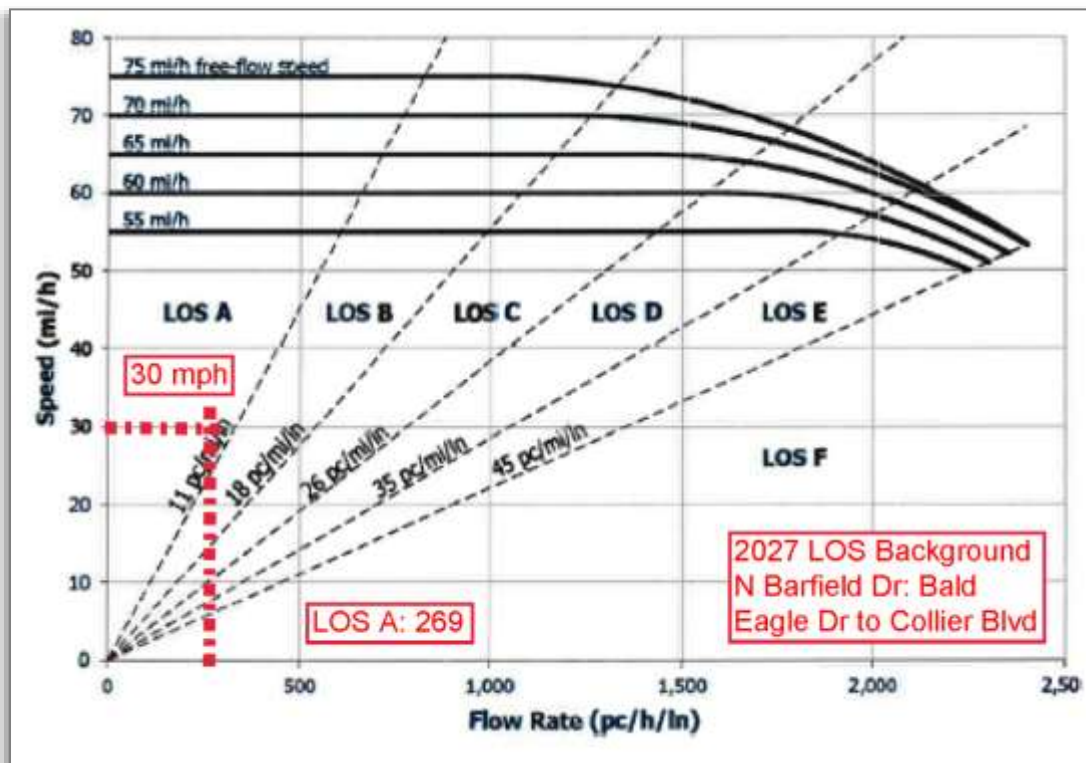
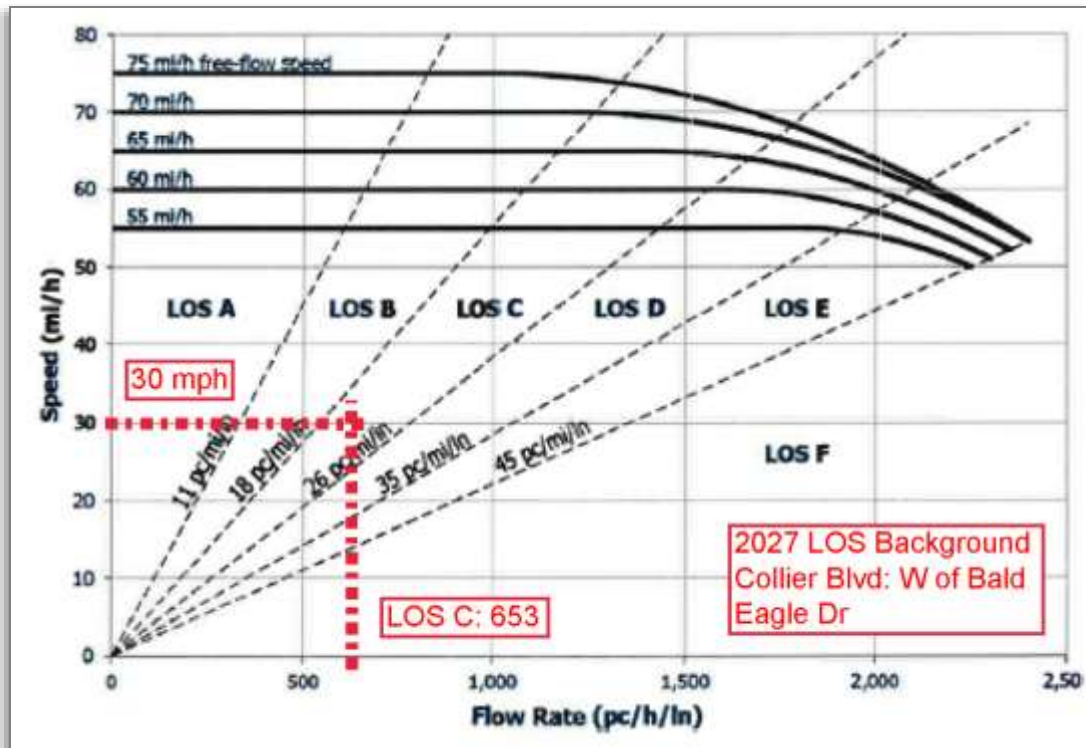
LOS Analysis Based on 2025/2023 Traffic Counts

2027 Background LOS without Project

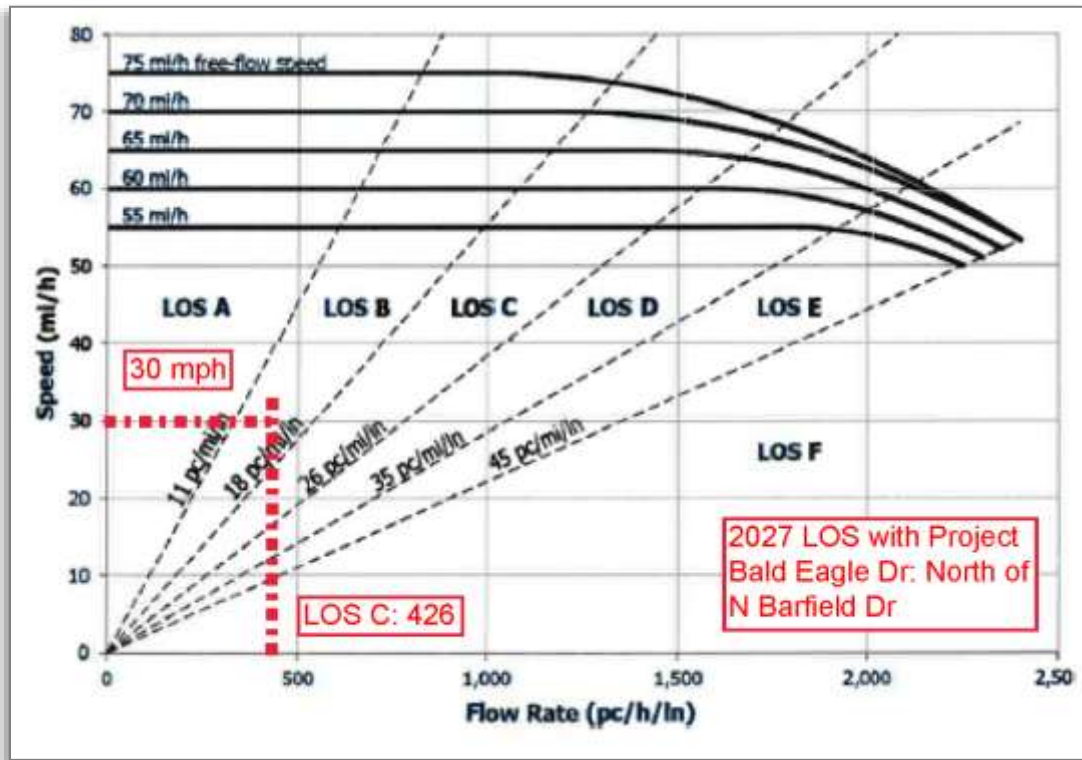
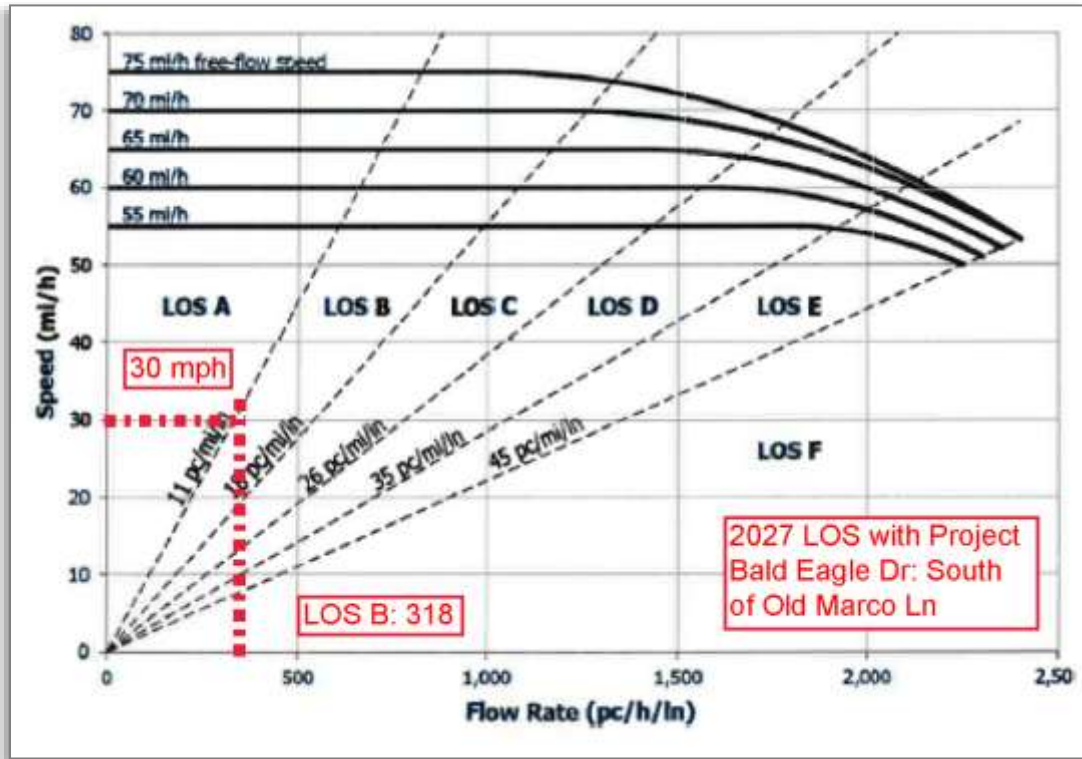


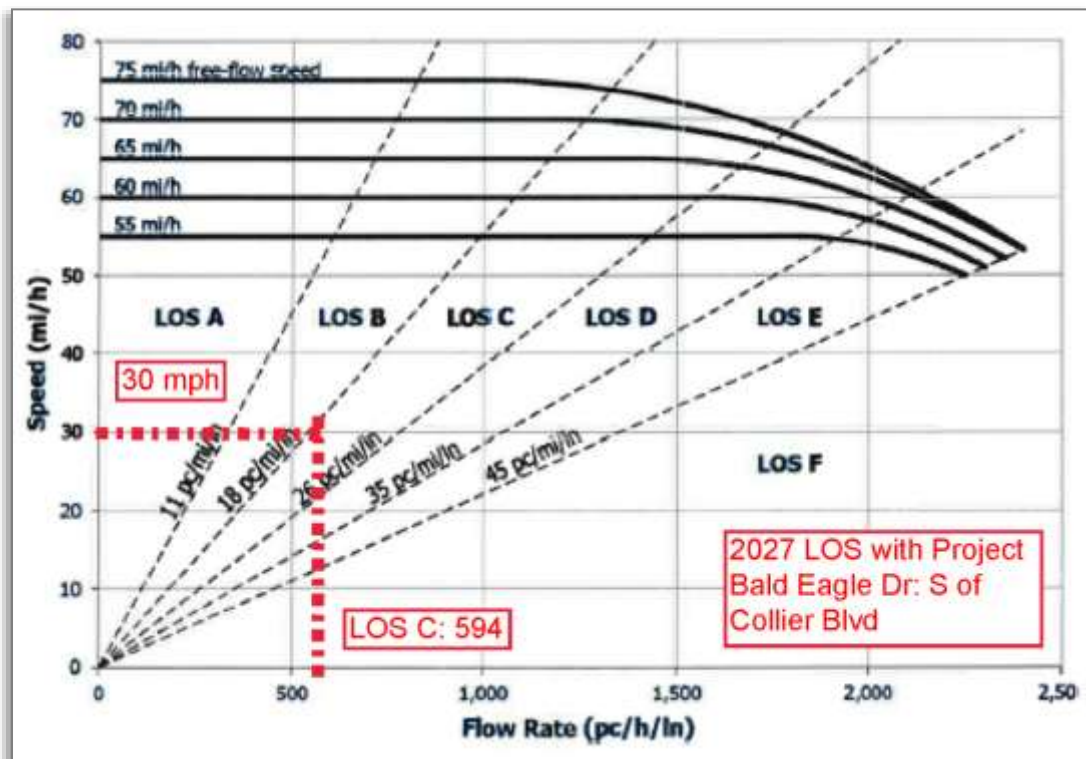
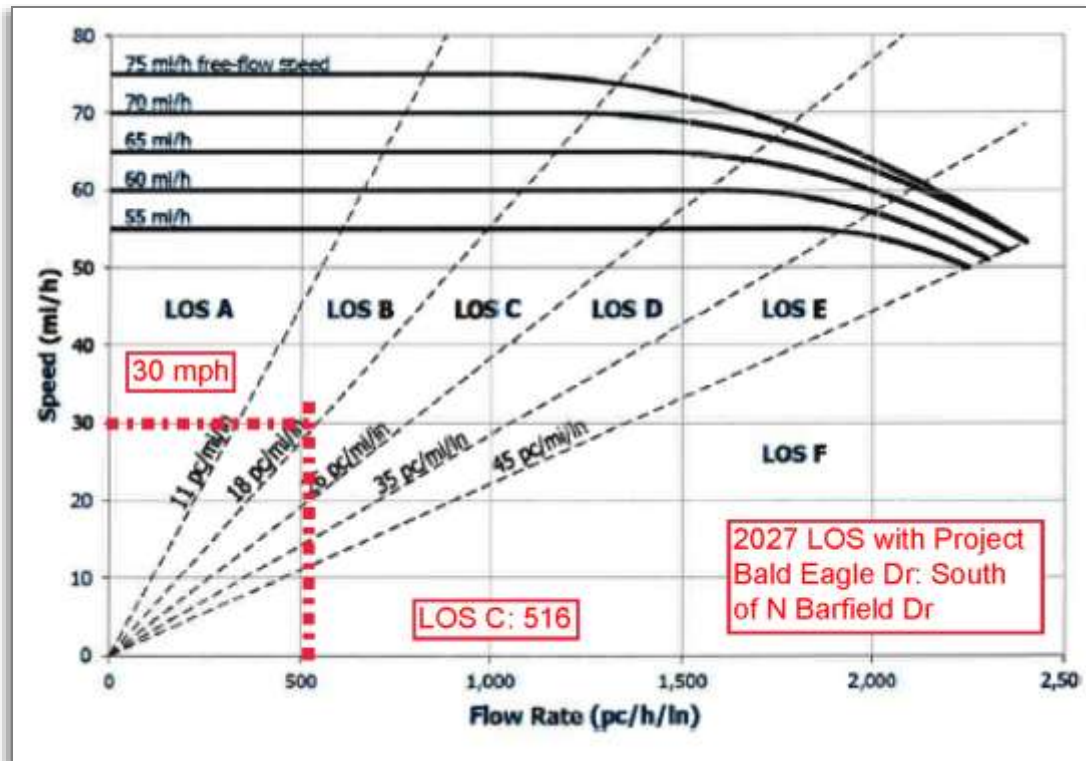


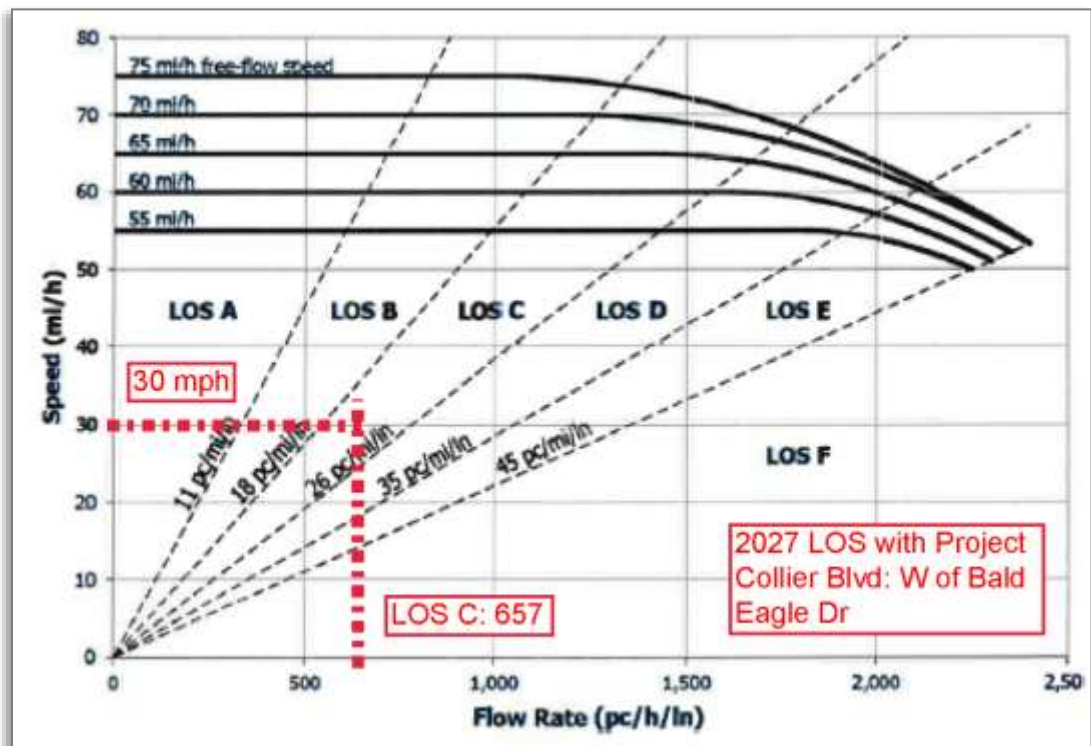
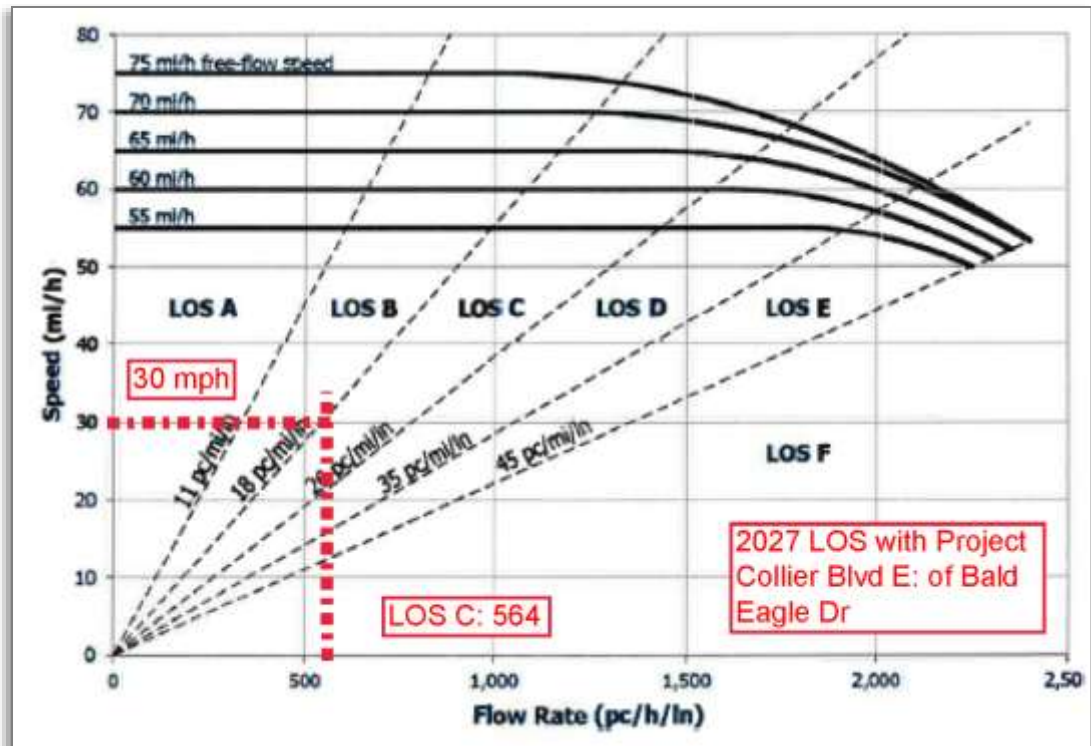


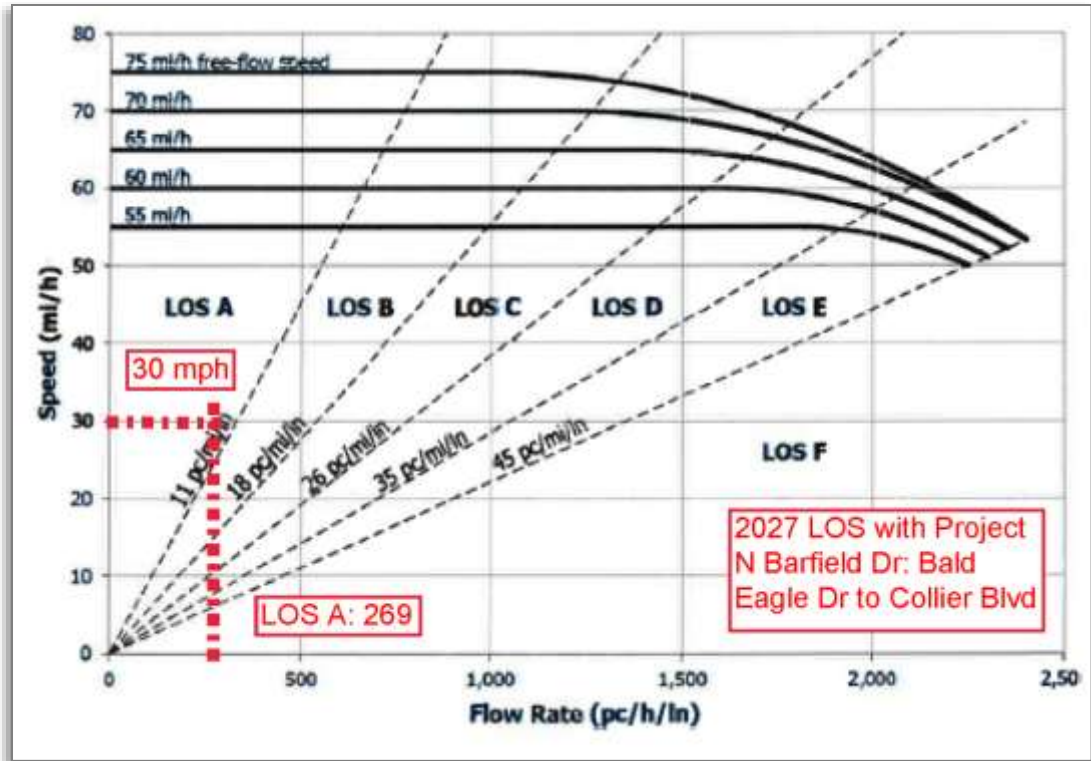


2027 Background LOS with Project









Appendix H:

Turning Movement Exhibits

