

McDonough & Rea Associates, Inc.

Traffic and Transportation Consulting

Kevin P. McDonough (1953-1994)
John H. Rea, P.E.
Jay S. Troutman, Jr., P.E.
Scott T. Kennel

January 17, 2025

Edele Hovnanian
H. Hovnanian Industries
4000 Route 66
Tinton Falls, NJ 07753

Re: Traffic Impact Study
Major Access Permit Application
3601 Route 66 LLC
Lot 1 in Block 39.01.01
Neptune Township, Monmouth County
MRA File No. 13-112

Dear Ms. Hovnanian:

McDonough & Rea Associates (MRA) has prepared a *Traffic Analysis* for the redevelopment proposal to include a commercial mixed-use project slated for the northwest corner of New Jersey State Route 66 and the Jumping Brook Road intersection in Neptune Township, Monmouth County, as shown on *Figure 1, a Site Location Map*, in the *Appendix*. Specifically, the proposed *Land Use Plan* prepared by Hammer Land Engineering (HLE) includes the following elements:

- Golf entertainment facility– 72 Bays
- Super convenience market with gas – 5,670 SF
- Fast-food restaurant with drive-thru – 2,335 SF
- Sit-down restaurant – 8,000 SF
- Hotel – 100 Rooms

SCOPE OF STUDY

In order to prepare a thorough *Traffic Impact Analysis* for the subject property, MRA has conducted the following tasks:

1. Made field visits to the site to establish existing roadway and traffic conditions in the area.
2. Participated in a New Jersey Department of Transportation (NJDOT) virtual pre-application meeting on June 18, 2024.

Please reply to:

- ☒ 1431 Lakewood Road, Suite C, Manasquan, NJ 08736 • (732) 528-7076 • Fax (732) 528-6673
- ☐ 105 Elm Street, Lower Level, Westfield, NJ 07090 • (908) 789-7180 • Fax (908) 789-7181



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3. Conducted manual weekday AM, PM, and Saturday peak hour traffic counts along Route 66 and Essex Road in August and October, 2024.
4. Prepared estimates of traffic to be generated by the subject property based upon the *11th Edition* of the Institute of Transportation Engineers (ITE) *Trip Generation Manual* and MRA research data.
5. Distributed site generated traffic to the adjacent roadway network in accordance with anticipated origins and destinations, based on existing traffic patterns and the proposed access modifications.
6. Analyzed the projected 2030 traffic volumes with and without the proposed redevelopment plan.
7. Reviewed the NJDOT *Route 66 Roadway Improvement Plans*.
8. Conducted level of service capacity analyses for the Route 66, Jumping Brook Road and Essex Road study intersections with the proposed NJDOT Route 66 roadway improvements.
9. Reviewed the *Site Plan* for access, on-site circulation and parking.

The following report sets forth the database accumulated and the conclusions reached with respect to this proposed project.

EXISTING CONDITIONS

The subject property, Lot 1 in Block 3901.01, was previously occupied by the 175,000 SF *Asbury Park Press* building (100,000 SF office and 75,000 SF manufacturing) served by access to Route 66 and Essex Road. The property is located on the north side of New Jersey State Route 66, a major east/west State arterial highway and is located west of the signalized intersection of Jumping Brook Road. Route 66 adjacent to the site provides 2 lanes flanked by a shoulder in each direction.

Premium Outlets Boulevard borders the site to the west and is a north/south municipal collector with a posted speed limit of 25 MPH connecting Route 66 to Essex Road.

Jumping Brook Road is a 2-lane north/south regional collector under municipal jurisdiction and borders the site to the east.



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Essex Road is a local collector roadway connecting Jumping Brook Road to Asbury Avenue to the north and provides 1 lane of travel lane in each direction. Essex Road borders the site to the north.

Route 66 and Jumping Brook Road is a 4-way intersection controlled by a 4-phase 90-second cycle traffic signal. Each approach to the intersection provides 3 lanes with the eastbound, northbound, and southbound approaches consisting of a dedicated left-turn lane, a thru lane and a dedicated right-turn lane. The Route 66 westbound approach provides a dedicated left-turn lane, a thru lane, and a shared thru/right-turn lane.

Essex Road intersects Jumping Brook Road as a “Y” shaped intersection controlled by a stop sign on the Essex Road approach. The northbound approach provides 2 lanes; a dedicated left-turn lane and a thru lane while the southbound and the eastbound approaches provide 1 lane.

The Premium Outlets Boulevard and Hovchild Boulevard intersection is controlled by a 3 Phase 60-70 second traffic signal with 2 lanes on each approach.

Premium Outlets Boulevard intersects Essex Road from the south and is controlled by a stop sign. The intersection provides 2 lanes on the northbound and westbound approaches with 1 lane on the eastbound approach.

EXISTING TRAFFIC VOLUMES

Peak hour turning movements counts were conducted in August and October, 2024, during the weekday AM, PM and Saturday mid-day peak hours along Route 66, Essex Road and Jumping Brook Road. *Figure 2* in the *Appendix* illustrates existing weekday AM, PM and mid-day Saturday peak hours and traffic volumes passing the site. The traffic count summaries are attached to the *Appendix*.

SITE TRAFFIC GENERATION AND DISTRIBUTION

The ITE *Trip Generation Manual, 11th Edition*, was consulted to develop traffic projections for the proposed uses with the exception of the golf entertainment use. The ITE does not have a land use category for a golf entertainment use and, therefore, research data compiled by MRA was utilized and is appended to the report. *Table I* illustrates the anticipated AM peak street hour, PM peak street hour and Saturday peak hour traffic generation from the various components of the new 3601 Route 66 *Land Use Plan*.



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TABLE I
3601 ROUTE 66 TRIP GENERATION

LAND USE	AM PSH			PM PSH			SATURDAY PH		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
100 Room Hotel (LUC 310)	29	18	47	32	28	60	42	30	72
2,335 SF Fast-food Rest. w/DT (LUC 934)	48	46	94	40	36	76	67	61	128
5,670 SF Conv. Store w/Gas (LUC 945)	237	237	474	200	200	400	182	182	364
8,000 SF High-turnover Rest. (LUC 832).	44	36	80	50	30	80	45	45	90
Golf Entertainment ¹	5	5	10	46	46	92	56	56	112
Totals	363	342	705	368	340	708	392	374	766
Pass-by Credit									
Convenience Store w/Gas ²	-178	-178	-356	-150	-150	-300	-91	-91	-182
Fast-food Restaurant	-23	-22	-45	-20	-18	-38	-	-	-
High-Turnover Restaurant	-	-	-	-21	-13	-34	-	-	-
Pass-by Total	-201	-200	-401	-191	-181	-372	-91	-91	-182
Total New Site Trips	162	142	304	177	159	336	301	283	584

The development will draw a portion of its traffic from the existing traffic on Route 66 and area roadways. Therefore, our analysis took into consideration the NJDOT Approved pass-by credits for the AM and PM weekday and Saturday peak hours. In addition, internal trips are expected amongst the different land uses, as well as the *Premium Outlets*. However, no internal credits were applied in the analysis herein.

The projected site trips detailed in *Table I* were surcharged on the area roadway network based on existing traffic patterns, the area roadway network, and location of existing population centers. *Table II* details anticipated site traffic distribution:

¹ Based on MRA research data

² NJDOT approved pass-by rates



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TABLE II
SITE TRAFFIC DISTRIBUTION

<u>TO/FROM</u>	<u>RESTS</u> <u>INBOUND</u>	<u>RESTS</u> <u>OUTBOUND</u>	<u>CONVEN.</u> <u>INBOUND</u>	<u>CONVEN.</u> <u>OUTBOUND</u>	<u>GE & HOTEL</u> <u>INBOUND</u>	<u>GE & HOTEL</u> <u>OUTBOUND</u>
Jumping Brook Rd No.	10%	10%	10%	5%	5%	5%
Jumping Brook Rd So.	10%	10%	10%	5%	5%	5%
Route 66 – West	35%	35%	15%	60%	55%	55%
Route 66 – East	30%	30%	50%	10%	20%	20%
Essex Road – North	10%	10%	10%	15%	10%	10%
Hovchild Blvd South	5%	5%	5%	5%	5%	5%
Total	100%	100%	100%	100%	100%	100%

In accordance with the NJDOT guidelines, site traffic from the pre-existing uses on the site were reviewed and compared to the site traffic, without pass-by credits, of the redevelopment proposal. *Table III* details the trip generation comparison of the prior use (175,000 SF office/manufacturing) and the proposed *Land Use Plan*.

TABLE III
3601 ROUTE 66 LLC-TRIP GENERATION COMPARISON
APPROVED VS. PROPOSED

LAND USE	AM PSH			PM PSH			SATURDAY PH		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Pre-existing	181	25	150	20	122	142	28	25	53
Proposed	363	342	705	368	340	708	392	374	766
Net Difference	182	317	555	348	218	566	364	349	713

The alternative access percentage is projected to be 50 percent and *Table IV* details the proposed peak hour access permit traffic volumes for the weekday and weekend peak hours assigned to Route 66.

TABLE IV
3601 ROUTE 66 LLC
ACCESS PERMIT TRIP GENERATION

AM PSH	PM PSH	SATURDAY PH
353	354	383



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ANALYSIS OF FUTURE TRAFFIC

A design year of 2030 was assumed for analysis. The NJDOT's *Background Growth Rate* data for the area suggests that traffic volumes on Route 66 will grow at a rate of 2.0 percent per year for principal arterials and 1.0 percent per year for minor arterials. MRA expanded the 2024 peak hour traffic data by 10 percent in order to establish the 2030 pre-development traffic volumes to account for regional traffic growth.

The following elements were included in the 2030 pre-development traffic volumes:

- *Hovtowne* townhomes – 108 Units
- *Victoria Gardens* – 101 Units
- *Walmart* rerouted Route 66 eastbound ingress movements
- *Home Depot* rerouted Route 66 westbound egress movements

The site traffic associated with the prior office/warehouse use was surcharged on *Figure 4* to establish the 2030 pre-development traffic volumes, in the *Appendix*. The additional site traffic attributed to the redevelopment proposal, as detailed in *Table III* and *Figure 3* in the *Appendix*, was surcharged onto the traffic volumes in *Figure 4* to establish the 2030 post-development traffic volumes depicted on *Figure 5* in the *Appendix*.

Traffic engineers calculate levels of service of unsignalized and signalized intersections which relate to the quality of traffic flow. Level of service is a measure of average control delay. Average control delay is the time lost due to deceleration and the amount of time from when a vehicle is stopped for a traffic control device (or at the end of the queue) to when the vehicle departs the intersection. Delay is a relative quantity of driver discomfort, frustration, fuel consumption, and loss in travel time.

Levels of service range from "A" to "F," with "A" being the highest, or best attainable level of service. Level of service "E" with average control delays of not more than 50 seconds per vehicle at an unsignalized intersection or 80 seconds per vehicle at a signalized intersection indicates near to or at capacity conditions and is generally considered the limit of acceptable level of service and delay.

Full definitions of levels of service for unsignalized and signalized intersections as well as level of service summaries are included in the *Appendix*. The intersections studied by this report were analyzed according to the procedures set forth in the *Highway Capacity Manual 2022*, using the *McTrans Highway Capacity Software (HCS 2024)*.



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The analysis herein included the proposed NJDOT Route 66 roadway improvements slated for the Jumping Brook Road intersection and the site frontage with 4 lanes on the southbound approach and 5 lanes on the eastbound and westbound approaches.

ROUTE 66 AND JUMPING BROOK ROAD

The Route 66 and Jumping Brook Road intersection was analyzed under 2030 pre-development conditions and the intersection will operate at an overall level of service "C" for the weekday AM peak hour and level of service "D" for the PM and Saturday mid-day peak hours.

In the 2030 post-development condition at the Route 66 and Jumping Brook Road intersection is projected to continue to operate at an overall level of service "C" for the weekday AM peak hour and level of service "D" for the PM and Saturday peak hours without any level of service violations.

ROUTE 66 AND SITE ACCESS

The Route 66 and site access intersection was analyzed under 2030 post-development conditions and will operate at level of service "C" or better for both the weekday AM, PM and Saturday mid-day peak hours.

ROUTE 66 AND PREMIUM OUTLETS BOULEVARD

The Premium Outlets Boulevard and Route 66 intersection is projected to operate at level of service "C" or better for the peak hours analyzed under 2030 pre and post-development traffic volumes.

PREMIUM OUTLETS BOULEVARD AND HOVCHILD BOULEVARD

The signalized Premium Outlets Boulevard and Hovchild Boulevard intersection is projected to operate at level of service "B" for the weekday AM and PM peak hours under 2030 pre and post-development traffic volumes. The Saturday peak hour is projected to operate at level of service "C" for both the 2030 pre and post-development traffic volumes.

PREMIUM OUTLETS BOULEVARD AND SOUTH ACCESS

The unsignalized intersection of Premium Outlets Boulevard and the south access is projected to operate at level of service "B" for the peak hours analyzed for the 2030 pre and post-development traffic volumes.



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PREMIUM OUTLETS BOULEVARD AND ESSEX ROAD

The unsignalized intersection of Premium Outlets Boulevard and Essex Road is projected to operate at level of service “B” for the weekday and weekend peak hours analyzed under 2030 pre and post-development traffic volumes.

ESSEX ROAD AND EAST/WEST ACCESS

The unsignalized intersection analysis for the Essex Road site driveways revealed that the driveways would operate at level of service “C” or better for the peak hours analyzed under the 2030 post-development traffic volumes.

JUMPING BROOK ROAD AND ESSEX ROAD

The Essex Road approach to the Jumping Brook Road intersection is projected to operate at level of service “B” and “F” for the 2030 pre-development weekday AM and PM peak hours, respectively, while the Saturday peak hour is projected to be at level of service “F”. Under the 2030 post-development conditions, the intersection will operate at level of service “C” for the weekday AM peak hour and level of service “F” for the weekday PM and Saturday mid-day peak hours.

In order to reduce delays on Essex Road to levels less than the 2030 pre-development conditions, it is proposed to restripe the Essex Road approach to provide a dedicated left turn lane and a dedicated right turn lane. The restriping of the Essex Road approach will reduce delays and provide a level of service “B” for the AM peak hour, level of service “E” for the right turn movements in the PM peak hour and level of service “C” for the right turn movement during the Saturday peak hour, under 2030 post-development traffic volumes.

SITE PLAN

The *Site Plan*, prepared by HLE, dated January 17, 2025, details 5 commercial buildings with 3 buildings along Route 66. Circulation patterns utilizing 9 foot wide by 18 feet long parking stalls and 24 foot wide parking aisles have been established. The parking stall sizes and width of circulation aisles are consistent with industry standards for commercial properties and will promote safe and efficient traffic flow. The site design will also accommodate large wheel-base delivery, refuse, and emergency services vehicles.



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The proposed access system serving the subject property will consist of the following:

- Route 66-Westbound
 - Right-in/Right-out driveway west of Jumping Brook Road
- Premium Outlets Boulevard
 - Full Movement driveway opposite *Premium Outlets*
 - Full movement driveway between Hovchild Boulevard and Route 66
- Essex Road
 - Right-in/Right-out driveway west of Jumping Brook Road
 - Full movement driveway east of Premium Outlets Boulevard

The *Site Plan* details 661 parking spaces for the 5 proposed uses with 361 parking spaces assigned to the golf entertainment facility. MRA has conducted parking accumulation studies at similar golf entertainment facilities in New Jersey and found that the peak parking demand for the proposed facility would be approximately 250 vehicles. The total site parking supply proposed exceeds the 343 parking spaces recommended by the Township ordinance. Therefore, the proposed parking supply, which exceeds the municipal requirements, is deemed more than adequate and appropriate to support the proposed buildings.

CONCLUSIONS

Findings were that levels of service at the 3 Route 66 intersections will operate within acceptable traffic engineering parameters with the proposed *3601 Route 66 LLC* land use plan without the need for additional roadway improvements or signal timing modifications. Overall, the intersection levels of service at Route 66/Jumping Brook Road will be at level of service "D" or better for the weekday AM and PM peak street hours and Saturday peak hour. For the intersection of Essex Road and Jumping Brook Road, it is recommended to restripe the Essex Road approach to provide a dedicated left turn lane and a dedicated right turn lane.

The *Site Plan* has been designed to optimize accessibility to the site with access to Route 66, Essex Road and Premium Outlets Boulevard. The site design provides positive circulation for passenger and large wheel-base vehicles. The parking is well distributed and the supply is adequate to support the projected demand.



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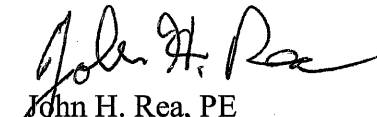
Ms. Edele Hovnanian

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January 17, 2025

Please contact our office if you have any questions or comments.

Very truly yours,



John H. Rea, PE
Principal



Scott A. Kennel
Sr. Associate

cc: Leanne Hoffmann, PE
Mark Aikins, Esq.

APPENDIX



3601 Route 66 LLC



McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT:

3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
SITE LOCATION MAP

FIGURE

1

JOB NO.

13-112

DATE:

DEC 2024

13112.mxd



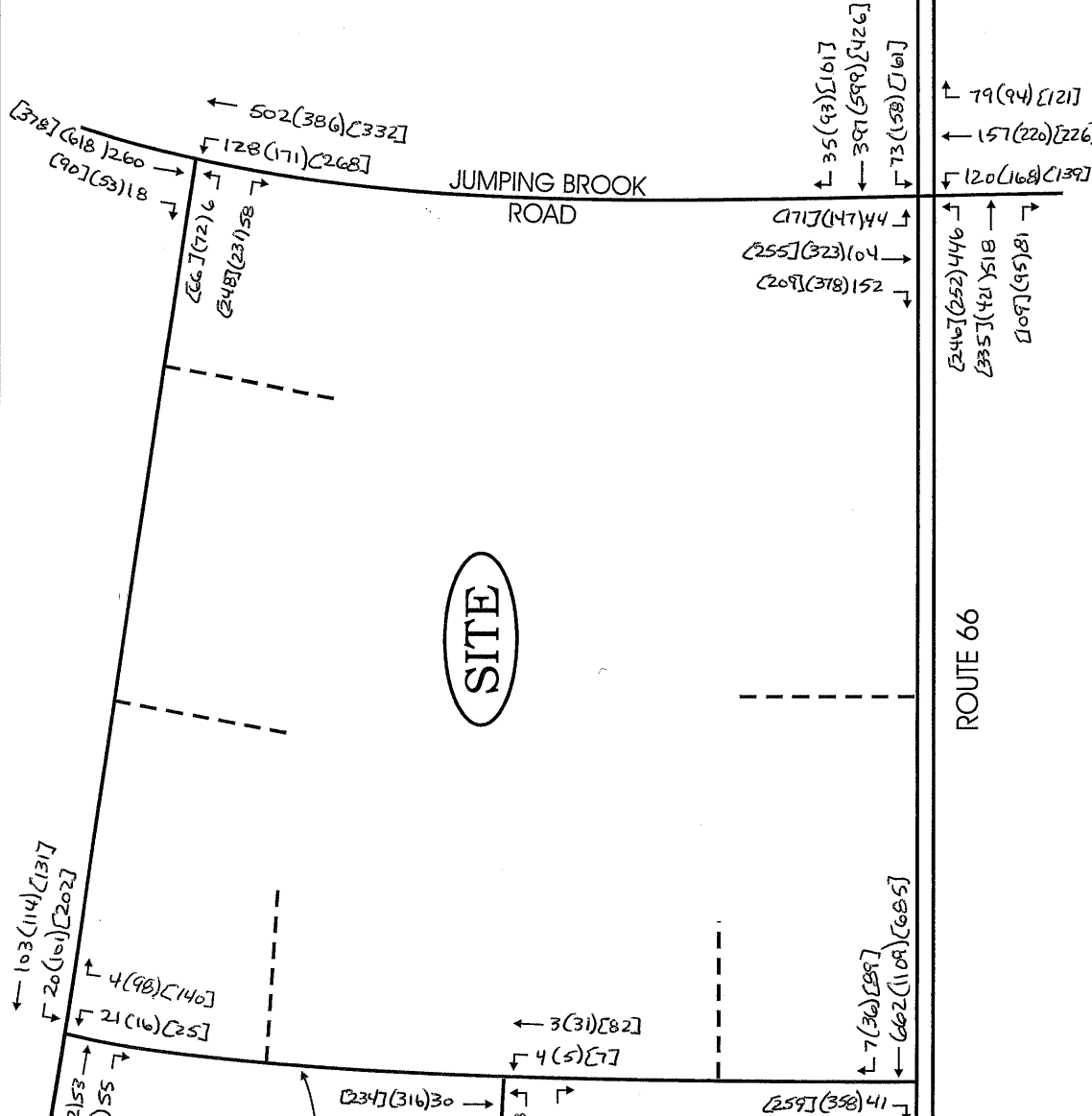
ESSEX ROAD
PREMIUM OUTLETS
PREMIUM OUTLETS BLVD
JUMPING BROOK ROAD

SITE

HOVCHILD BLVD

ROUTE 66

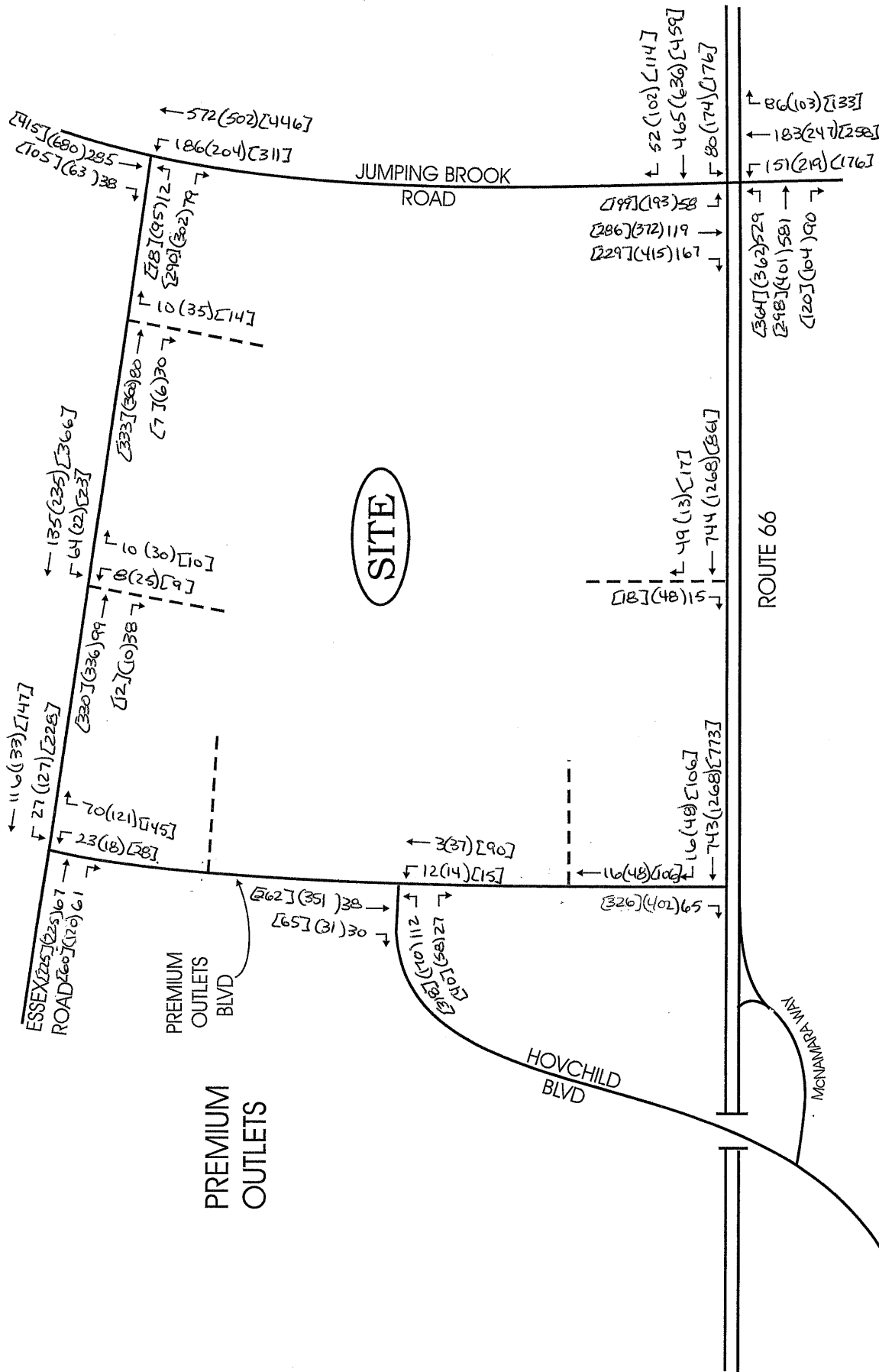
MONMOUTH WAY



McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
2024 EXISTING PEAK HOUR TRAFFIC VOLUMES

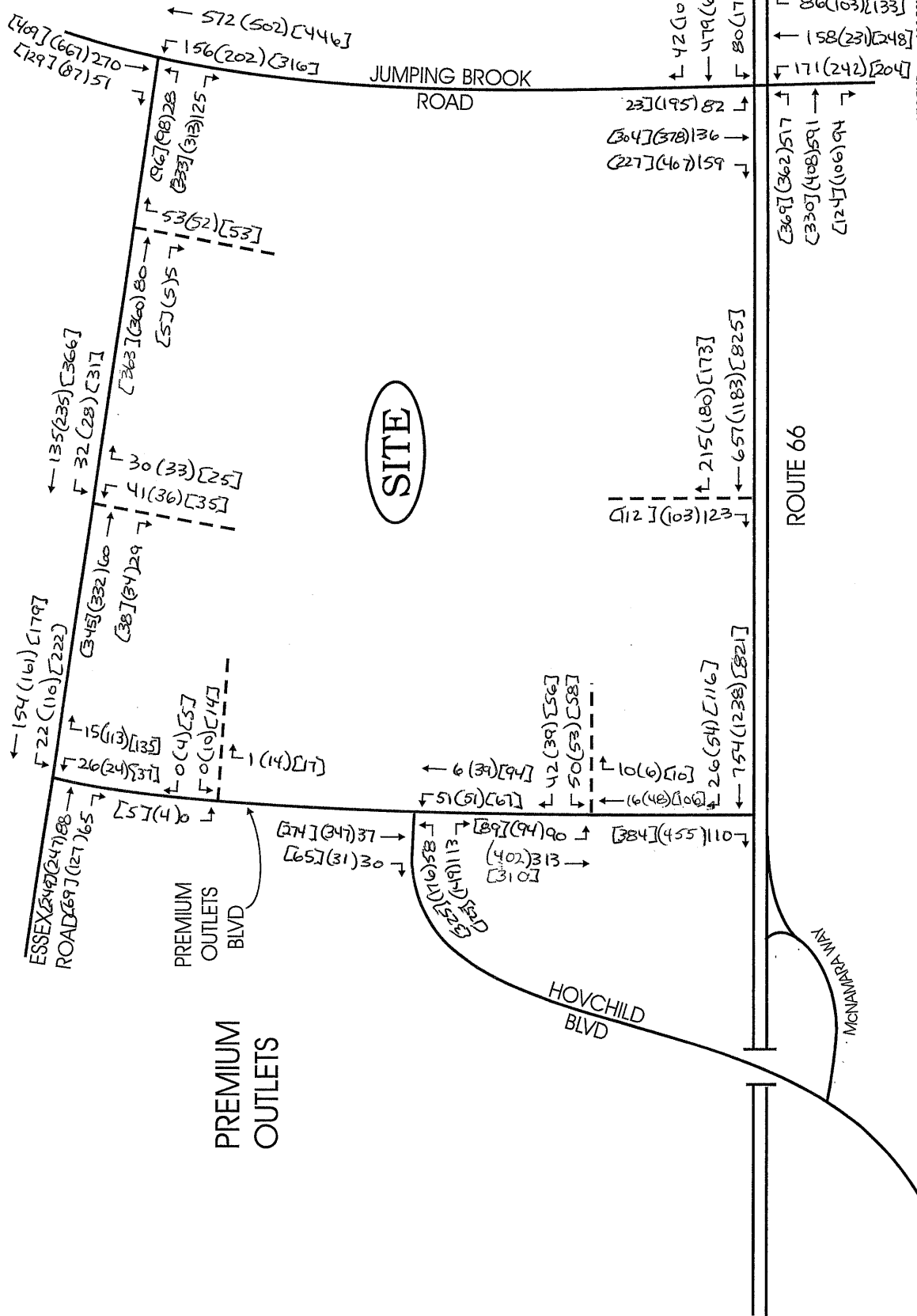
FIGURE 2
JOB NO. 13-112
DATE: DEC 2024



LEGEND: ← AM PSH (PM PSH) SAT PSH

McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP, MONMOUTH COUNTY 2030 FUTURE PRE - DEVELOPMENT TRAFFIC VOLUMES		FIGURE 4
	JOB NO. 13-112	DATE: DEC 2024	





McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT:

3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
2030 FUTURE POST - DEVELOPMENT TRAFFIC VOLUMES

FIGURE

5

JOB NO.

13-112

DATE:

DEC 2024

10/15/2024

APPENDIX A: NJDOT CORRESPONDENCE/APPLICATIONS



McDonough & Rea Associates, Inc.

Traffic and Transportation Consulting

Kevin P. McDonough (1953-1994)
John H. Rea, P.E.
Jay S. Troutman, Jr., P.E.
Scott T. Kennel

May 9, 2024

Mr. Larry Cotton
New Jersey Department of Transportation
Bureau of Major Access Permits
P.O. Box 600
Trenton, NJ 08625-0600

Re: Request for Pre-Application Meeting
Asbury Park Press Redevelopment
Lot 3 in Block 1508
Neptune Township, Monmouth County
MRA File No. 13-112

Dear Larry:

This is a request for a pre-application meeting for plans to redevelop the existing property located along Route 66 in Neptune Township, Monmouth County, New Jersey. The property previously contained an office/warehouse use (*Asbury Park Press*) and it is proposed to redevelop the property with a mixed-use development as follows:

- *Top Golf* facility – ±43,000 SF
- Hotel – 100 rooms
- Convenience store with gas – ±5,000 SF
- Fast-food restaurant with drive-thru – ±3,500 SF
- High turnover restaurant – ±8,000 SF

In accordance with the checklist items required by the New Jersey Department of Transportation (NJDOT) for a pre-application the following information is provided:

1. The name of the Applicant is *H. Hovnanian Industries*.
2. The property is designated as Lot 3 in Block 1508, Neptune Township, Monmouth County, New Jersey. It is located along a stretch of New Jersey State Route 66 west of Jumping Brook Road at MP 0.60.

Please reply to:

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Mr. Larry Cotton

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May 9, 2024

3. A total of 5 buildings, including recreational, commercial and hospitality uses are proposed (see attached *Conceptual Site Plan*). The property previously contained approximately 175,000 SF of office/warehouse space (see attached *Existing Conditional Plan*).
4. Access to the property is proposed as follows:
 - Via a right-in/right-out access to Route 66 at MP 0.60.
 - Via 2 driveways to Premium Outlet Boulevard, a local roadway along the western border of the property.
 - Via a full movement driveway to Essex Road, a local roadway along the northern border of the property.
5. A trip generation table has been prepared utilizing ITE and NJDOT trip rates. The following *Table* illustrates the anticipated trip difference between the proposed mixed-use project and the prior warehouse/office uses.

TABLE I
TRIP GENERATION COMPARISON
MIXED-USE VS. WAREHOUSE/OFFICE

<u>USE</u>	<u>AM PSH</u>	<u>PM PSH</u>	<u>SAT. PH</u>
Proposed mixed-use development	737	910	900
Existing warehouse/office space	<u>165</u>	<u>160</u>	<u>15</u>
Net Difference	+572	+750	+885

6. The opening date for the development is anticipated to be 2026.
7. The build-out year is anticipated to be 2028.
8. A suggested agenda for the pre-application meeting is as follows:
 - Discussion of the existing access and the proposed access system,.
 - Concurrence on trip generation rates for the existing versus proposed uses and the net difference in order to determine the study area for the required traffic study.



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Mr. Larry Cotton

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May 9, 2024

- Access improvements that may be required along Route 66.
 - Discussion/review of NJDOT Route 66 dualization project adjacent to the site and the associated impacts.
 - Review of the appropriate NJDOT applications for the mixed-use redevelopment proposal.
9. Copies of the tax maps showing lot numbers, block numbers and lot lines are attached.
10. Attendees at the meeting will be as follows:
- Leanne Hoffman, PE from Hammer Land Engineering.
 - Scott Kennel from McDonough & Rea Associates.
 - Edele Hovnanian, the Applicant.

Thank you for your attention to this matter and we are available at your earliest possible convenience to meet with you and NJDOT staff.

Very truly yours,

Scott T. Kennel
Associate

Enclosures

cc: Leanne Hoffman, PE (Hammer Land Engineering)
Adele Hovnanian (Applicant)



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MEMORANDUM

To: File

From: Scott T. Kennel

Date: August 20, 2024

Re: NJDOT Pre-Application Meeting-June 18, 2024
Proposed Redevelopment Mixed-Use Plan
Neptune Township, Monmouth County
MRA File No. 13-112

Attendees: Scott T. Kennel-MRA
David Cihocki-NJDOT Major Access
Raj Desai-NJDOT Major Access
Bob Klinger -NJDOT Traffic
Raj Patel- NJDOT Operation Permits
Shilp Shah-NJDOT Operation Permits
Vijay Sangaran-Project Management
Edele Hovnanian-Owner/Developer
Leanne Hoffmann, PE-Hammer Land Engineering

An NJDOT virtual pre-application meeting was held with NJDOT Major Access Bureau on June 18, 2024 for the proposed mixed-use redevelopment plan at the Route 66 and Jumping Brook Road intersection in Neptune Township. Scott Kennel provided a general overview of the property which previously contained an office/warehouse/manufacturing use (*Asbury Park Press*) and it is proposed to redevelop the property with a mixed-use development as follows:

- *Top Golf* facility – ±43,000 SF
- Hotel – 100 rooms
- Convenience store with gas – ±5,000 SF
- Fast-food restaurant with drive-thru – ±3,500 SF
- High turnover restaurant – ±8,000 SF



McDonough & Rea Associates, Inc.

Traffic and Transportation Consulting

1431 Lakewood Road, Suite C, Manasquan, NJ 08736 • (732) 528-7076 • Fax (732) 528-6673
105 Elm Street, Lower Level, Westfield, NJ 07090 • (908) 789-7180 • Fax (908) 789-7181

-2-

Access to the property is proposed as follows:

- Via a right-in/right-out access to Route 66 at MP 0.60.
- Via 2 driveways to Premium Outlet Boulevard, a local roadway along the western border of the property.
- Via a full movement driveway to Essex Road, a local roadway along the northern border of the property.

The opening date for the development is anticipated to be 2026 with a full build occupancy slated for 2028.

Scott Kennel stated that it is proposed to relocate and redesign the Route 66 site driveway. It is also proposed to provide a sewer connection to Route 66.

Dave Cihocki also stated that the NJDOT has awarded a contract to CJ Hesse to dualize Route 66 from Hovchild Boulevard to Asbury Avenue.

Edele Hovnanian had stated that she had been previously contacted by NJDOT regarding the dualization project. Edele asked if the proposed Route 66 access could be incorporated within the awarded dualization project.

Vijay Sangaran stated that it may be possible to include the site driveway within the CJ Hesse contract. However, Hammer Land Engineering would have to submit design plans to incorporate the revised driveway and make a determination as to whether the Applicant's improvements would be compatible and could be incorporated into the dualization project.

David Cihocki stated that NJDOT could provide their design documents and traffic report upon written request from McDonough & Rea Associates.

Vijay Sangaran stated that the Route 66 frontage improvements are slated for the fall of 2025.

David Cihocki also stated that drainage and spread calculations for Route 66 along the site frontage would need to be provided.

Dave Cihocki stated that a traffic study in accordance with the *Access Code* would be required and that the site would qualify as a *Major Access Permit with Planning*.

The property will be subdivided and, therefore, a *Lot Subdivision Application* will be filed.

NEW JERSEY DEPARTMENT OF TRANSPORTATION
DRIVEWAY ACCESS PERMIT APPLICATION

Application No.	
Control Section	
Amount Received	
Check No.	
Date Received	

Department Use Only

Please Print or Type

APPLICANT INFORMATION

Name of Lot Owner: Edele Hovnanian c/o 3601 Route 66 LLC
 Street Address: One Hovchild Plaza, 4000 Route 66
 City: Tinton Falls State: NJ ZIP: 07753
 Telephone No.: (732) 922-6100 ext 270 E-Mail: Ehovnanian@h-hovnanian.com

LOCATION INFORMATION

Block: 3901.01 Lot: 1
 Municipality: Neptune Township County: Monmouth
 Description of Location:
Route 66 west of Jumping Brook Road

TYPE OF PERMIT REQUESTED (Check One)

Submit to the REGIONAL MAINTENANCE OFFICE:

- ☐ Single Family Residential
☐ Combined Residence and Business
☐ Government Driveway
☐ Minor

Mail application to:
NJDOT Operations Permits
1035 Parkway Ave
PO Box 600
Trenton, NJ 08625-0600

Submit to the BUREAU OF MAJOR ACCESS PERMITS:

- ☐ Major
☒ Major with Planning Review
☐ Concept Review

Mail application to:
NJDOT Major Access Permits
1035 Parkway Ave
PO Box 600
Trenton, NJ 08625-0600

THIS PERMIT REQUEST INCLUDES: (Check all that apply.)

- ☐ Lot Consolidation ☒ Lot Subdivision ☒ Drainage ☒ Curb ☐ Sidewalk

PLEASE FILL IN THE FOLLOWING INFORMATION:

(1) Route: 66 (2) Suffix: _____ (3) Milepost: 0.60 (4) Direction: West

(5) List the development land use type & size:

Land Use TYPE (ITE LUC)	Land Use SIZE
Existing Office (710), Manufacturing (140)	100,000 SF Office/75,000 SF Manufact.
Proposed High-turnover rest. (832), FF w.d/t (934)	8,000 SF HT rest./2,335 SF FF w.d/t
Proposed Convenience Store w/gas (960)	5,670 SF
Proposed Hotel (310), TopGolf (432)	100 room hotel/TopGolf

(6) Total size of development the access will serve: 16,005 SF - Conv. Store w/gas, FF rest. w.d/t, High-turnover rest., TopGolf (72 bays) & 100 hotel rooms(7) Is the lot a corner lot? ☐ No ☒ YesIf yes, is the intersecting road also a State highway? ☒ No ☐ Yes(8) Is a traffic signal involved at the lot? ☒ No ☐ Yes(9) Is the lot sharing access with a neighboring lot? ☒ No ☐ Yes

If yes, sharing access with lot on which side? _____

(10) How many two-way driveways are requested? One

(on divided highways, two (2) one-way driveways may be substituted for one (1) two-way driveway)

(11) What size is the lot? (to hundredths of an acre) 21.58(12) Will the lot be served by alternative access? ☒ No ☐ Yes(13) If yes, what is the percentage of traffic using the alternative access? 50%(14) Does the Department own any denial of access along the lot frontage? ☒ No ☐ Yes

If yes, is it on the left or right side of the lot when facing the lot? _____

For how many feet? _____ feet.

(15) How many feet of frontage does the lot have on the State highway? 1,140 feet.

(16) Looking at this lot from the highway, what are the frontages of the neighboring lots within 330' and are the lots single family residential?

Left: <u>140</u> feet.	☒ No ☐ Yes	Right: <u>60</u> feet.	☒ No ☐ Yes
Left: _____ feet.	☐ No ☐ Yes	Right: _____ feet.	☐ No ☐ Yes

(NOTE: Not applicable if this application is for a single family residential lot.)

(17) Have you attached an affidavit for any affordable housing on the lot? ☒ No ☐ Yes

Please provide the information for those items that have check boxes under your application type.

APPLICATION CHECKLIST

For Applicants Use

N.J.A.C 16:47--	Single Family Residential/ Residence & Business 4.9	Other Minor Traffic Generators 4.10	Major 4.12	Major with Planning Review 4.14	Concept Review 4.16	For Department Use
1. Lot location map.	---	☐	☐	☒	☐	☐
2. Copy of tax map.	☐	☐	☐	☒	☐	☐
3. Right of way line from Department desirable typical section.	☐	☐	☐	☒	☐	☐
4. Topography showing all highway features within 500 feet of the lot frontage on both sides of undivided highways and one side of divided highways.	---	☐	☐	☒	---	☐
5. Setback and location of structures.	☐	☐	☐	☒	---	☐
6. Curb: existing and proposed.	☐	☐	☐	☒	---	☐
7. Sidewalks: existing and proposed.	☐	☐	☐	☐	---	☐
8. Trees within Department right-of-way.	☐	☐	☐	☐	---	☐
9. Signs.	☐	☐	☐	☒	---	☐
10. Utility poles.	☐	☐	☐	☒	---	☐
11. Highway electrical installations.	☐	☐	☐	☐	---	☐
12. Locations of all lot driveways -- existing and proposed.	☐	☐	☐	☒	☐	☐
13. Locations of nearest driveway on adjacent lots, including type of operation using adjacent driveways.	---	---	---	☒	---	☐
14. Driveway / street width.	☐	☐	☐	☒	☐	☐
15. Driveway / street alignment with respect to the highway.	☐	☐	☐	☒	☐	☐
16. Curblane openings.	☐	☐	☐	☒	☐	☐
17. Edge clearance.	☐	☐	☐	☒	---	☐
18. Type of driveway / street.	☐	☐	☐	☒	☐	☐
19. Contours: existing and proposed.	---	☐	☐	☒	---	☐
20. Corner clearance.	☐	☐	☐	☒	---	☐
21. Driveway / street & island radii.	---	☐	☐	☒	---	☐
22. Estimated 24-hour & highway peak-hour traffic count for the lot & access point.	☐	☐	☐	☒	☐	☐
23. Number of lanes on the highway.	---	☐	☐	☒	☐	☐
24. Speed-change lanes (acceleration, deceleration, left-turn)	---	☐	☐	☒	☐	☐
25. Lane and shoulder widths.	---	☐	☐	☒	☐	☐
26. Typical highway pavement sections.	---	☐	☐	☒	☐	☐
27. Location of centerline on undivided highways and median on divided highways.	---	☐	☐	☒	☐	☐
28. Location of existing median opening on divided highways.	---	☐	☐	☒	☐	☐
29. Location of existing driveways on opposite side of undivided highways.	---	☐	☐	☒	☐	☐

Form MT-32 (12/2014) For Applicants Use	Single Family Residential/ Residence & Business	Other Minor Traffic Generators	Major	Major with Planning Review	Concept Review	For Department Use
N.J.A.C 16:47--	4.9	4.10	4.12	4.14	4.16	
30. Dimensions from the lot line to the edge of pavement.	---	☐	☐	☒	☐	☐
31. Number of new units for residential units; rooms for hotels; square footage for retail, office or warehouse; or appropriate unit of measure for other land uses.	---	☐	☐	☒	☐	☐
32. Parking facilities & internal traffic circulation.	---	---	☐	☒	☐	☐
33. Traffic patterns: existing and proposed.	---	☐	☐	☒	☐	☐
34. Highway traffic striping: existing and proposed.	---	☐	☐	☒	---	☐
35. Construction details	---	☐	☐	☒	---	☐
36. Type of vehicles anticipated.	---	---	☐	☒	---	☐
37. Attachments to Department drainage system: existing and proposed.	---	---	☐	☒	---	☐
38. Drainage calculations: existing and proposed.	---	---	☐	☒	---	☐
39. Changes to existing traffic signals.	---	---	☐	☐	☐	☐
40. New traffic signals & MUTCD warrant numbers.	---	---	☐	☐	☐	☐
41. Proposed lot and highway transportation improvements	---	---	---	☒	---	☐
42. Length of frontage along highway.	☐	☐	☐	☒	☐	☐
43. Distance to nearest traffic signal if less than 250 feet - preceding (in feet), following (in feet).	☐	☐	---	---	---	☐
44. Distance to nearest traffic signal if less than 500 feet - preceding (in feet), following (in feet).	---	---	☐	---	---	☐
45. Distance to nearest traffic signal - preceding (in feet), following (in feet).	---	---	---	☒	---	☐
46. Zoning designation for lot.	☐	☐	☐	☒	☐	☐
47. Waivers requested.	☐	☐	☐	☐	☐	☐
48. Copies of transmittals of duplicate applications to the municipal clerk and county planning board.	---	---	☐	☒	☐	☐
49. Location of any access easement on the lot.	☐	☐	☐	☐	☐	☐
50. Applicability of Pinelands Act.	☐	☐	☐	☐	☐	☐
51. Justifications for exceptions to design standards.	☐	☐	---	---	---	☐
52. Proposed use and size of buildings.	---	---	---	---	☐	☐
53. Detailed plan or sketch: scale 1 inch = 30 feet or 1 inch = 50 feet. (Plan sheets shall not exceed 24 inches by 36 inches.) Number of sets.	☐ 6	☐ 6	☐ 7	☒ 7	---	☐
54. Submitted plan sets 1 inch = 100 feet or 1 inch = 50 feet. (Plan sheets shall not exceed 24 inches by 36 inches.) Number of sets.	---	---	---	---	☐ 9	☐
55. Traffic impact studies. Include TIS if concept review requires a planning review. Number of copies.	---	---	---	☒ 3	☐ 3	☐
56. A copy of current deed for lot.	☐	☐	☐	☒	☐	☐

PLEASE SUBMIT ONLY THE APPLICATION FEE WITH THIS APPLICATION
SUBMIT CHECK OR MONEY ORDER, PAYABLE TO:

NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CASH WILL NOT BE ACCEPTED
 FEES ARE NOT REFUNDABLE**

FEES:			
APPLICATION TYPE	APPLICATION FEE EACH LOT	PERMIT FEE EACH LOT	RENEWAL FEE EACH LOT
Single Family Residential Driveway	\$60.00	\$25.00	\$25.00
Residence and Business Driveway	\$130.00	\$45.00	\$45.00
Government Driveway	\$265.00	\$880.00	\$440.00
Minor	\$465.00	\$150.00	\$150.00
Major	\$6,600.00	\$2,200.00	\$440.00
Major with Planning Review	\$15,800.00	\$5,300.00	\$440.00
Concept Review	\$880.00	- - -	- - -

FEES FOR LOW AND MODERATE INCOME HOUSING ONLY

For applications with low and moderate income housing, the applicant should submit an affidavit from the Municipal approving authority with his application, certifying to the Department that the development contains at least 10 percent set-aside for low and moderate income housing pursuant to the Fair Housing Act P.L.1985, c222(N.J.S.A. 52:27D-301 et seq.) or court settlement as per N.J.A.C. 16:41-2 et seq. The Department, upon approval of access, will reduce the permit fee by 10 percent of the total application and permit fees combined. The renewal fees are not subject to reduction.

APPLICATION TYPE	APPLICATION FEE	PERMIT FEE	RENEWAL FEE
Minor	Same as above	\$88.00	\$150.00
Major	Same as above	\$1,320.00	\$440.00
Major with Planning Review	Same as above	\$3,190.00	\$440.00

THE DEPARTMENT WILL NOT ACCEPT THIS APPLICATION IF IT IS NOT SIGNED.

IF THE SIGNATURE BELOW IS AN AUTHORIZED REPRESENTATIVE OF THE LOT OWNER, PLEASE ATTACH A COMPLETED POWER OF ATTORNEY FORM.

AUTHORIZED REPRESENTATIVE: Edele Hovnanian c/o 3601 Route 66 LLC

(Name of Lot Owner)

Street: One Hovchild Plaza, 4000 Route 66

City: Tinton Falls

State: NJ

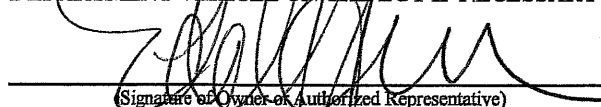
ZIP: 07753

Telephone: (732) 922-6100 ext 270

E-Mail: Ehovnanian@h-hovnanian.com

ENCLOSED IS THE \$ 15,800 APPLICATION FEE.

I CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE. I AM AWARE THAT, IF ANY OF THE ABOVE INFORMATION IS FALSE, I AM SUBJECT TO PUNISHMENT. I AGREE NOT TO PERFORM ANY WORK WITHIN STATE RIGHT OF WAY UNLESS IT AUTHORIZED BY A PERMIT ISSUED BY THE DEPARTMENT. THE APPLICANT ALSO AUTHORIZES DEPARTMENT REPRESENTATIVES TO ENTER UPON THE LOT FOR THE PURPOSE OF PERFORMING A SITE INVESTIGATION. FURTHERMORE, THERE ARE NO OBJECTIONS IN PARKING OF A DEPARTMENT VEHICLE ON THE LOT IF NECESSARY WHILE TAKING FIELD MEASUREMENTS AND OTHER DATA.


 (Signature of Owner or Authorized Representative)

12/23/24
 (Date)

Edele Hovnanian

(Print or Type your Name)

Managing Member

(Title)

**NEW JERSEY DEPARTMENT OF TRANSPORTATION
LOT CONSOLIDATION OR SUBDIVISION APPLICATION**

PLEASE PRINT OR TYPE
* Indicates REQUIRED Information

Application No.:	_____
Control Section:	_____
Amount Received:	_____
Check No.:	_____
Date Received:	_____

Department Use Only

Lot Owner: Edele Hovnanian c/o 3601 Route 66 LLC
 Street Address: One Hovchild Plaza, 4000 Route 66
 City: Tinton Falls State: NJ ZIP: 07753
 Telephone: * (732) 922-6100 ext 270 E-Mail: * Ehovnanian@h-hovnanian.com

LOCATION OF LOT CONSOLIDATION OR SUBDIVISION:

Block(s): 3901.01 Lot(s): 1
 Municipality: Neptune Township County: Monmouth
 Route: * 66 Direction: * West Milepost: * 0.60
 Description: Between -

Jumping Brook Road and Premium Outlets Boulevard

THE TYPE OF PERMIT REQUESTED IS: ☐ LOT CONSOLIDATION ☒ LOT SUBDIVISION

APPLICATION CHECKLIST
(please include all information listed)

APPLICANT
(check here)

DEPT. USE ONLY

(a) Two copies of detailed plans at a scale of one inch equals 30 feet (1=300 for metric) or one inch equals 50 feet (1=600 for metric). (Sheet size not to exceed 24" (594 millimeters) by 36" (841 millimeters).	☒	☐
1. Site location map (The key map must reference at least two cross streets on each side of the property, milepost, north arrow and scale).	☒	☐
2. Zoning designation for the lot.	☒	☐
3. Copy of tax map showing existing block number, lot number and lot lines.	☒	☐
4. Topography on the lot and its frontage.	☒	☐
5. Length of the lot frontage along highway and frontage of next adjacent non-single, family residential lots.	☒	☐
6. Locations of existing lots and driveways.	☒	☐
7. Curblin openings.	☒	☐
8. Driveway width.	☒	☐
9. Driveway alignment with respect to the highway.	☒	☐
10. Edge clearance.	☒	☐
11. Corner clearance.	☒	☐
12. Driveway and island radii.	☒	☐
13. Number of existing units for residential use; rooms for hotels; square footage for retail, office, and warehouse; or appropriate unit of measure for other land use.	☒	☐
14. Type of vehicles anticipated.	☒	☐
15. Percentage of traffic anticipated to use each access point on each lot.	☒	☐
16. Dimensions from lot line to edge of pavement.	☒	☐
17. Copies of transmittals of duplicate applications to the municipal clerk and county planning board.	☒	☐
18. A copy of the deed or the preliminary subdivision approval.	☒	☐

FEES:

PLEASE SUBMIT *ONLY* THE APPLICATION FEE WITH THE APPLICATION.
SUBMIT **CHECK OR MONEY ORDER**, PAYABLE TO:

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CASH WILL NOT BE ACCEPTED

FEES ARE NOT REFUNDABLE

APPLICATION FEE.....\$350.00

PERMIT FEE.....\$90.00

THE DEPARTMENT WILL NOT ACCEPT THIS APPLICATION IF IT IS NOT SIGNED.

IF THE SIGNATURE BELOW IS AN AUTHORIZED REPRESENTATIVE OF THE LOT OWNER, PLEASE ATTACH A COMPLETED
POWER OF ATTORNEY FORM.

AUTHORIZED REPRESENTATIVE: Edele Hovnanian c/o 3601 Route 66 LLC

(Name of Lot Owner)

Street: One Hovchild Plaza, 4000 Route 66

City: Tinton Falls

State: NJ

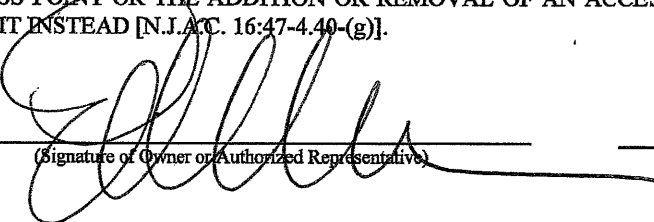
ZIP: 07753

Telephone: (732) 922-6100 ext 270

E-Mail: Ehovnanian@h-hovnanian.com

ENCLOSED IS THE \$ -0- APPLICATION FEE.

I CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE. I AM AWARE THAT, IF ANY OF THE ABOVE INFORMATION IS FALSE, I AM SUBJECT TO PUNISHMENT. I AGREE TO COMPLY WITH THE RULES AND REGULATIONS OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION AS SET FORTH IN N.J.A.C. 16:47, THE ACCESS CODE. THE PERMIT WILL ONLY APPLY TO LOT CONSOLIDATION OR SUBDIVISION. THE PERMIT WILL NOT AUTHORIZE ANY PHYSICAL CHANGE, ONLY CHANGES TO LOT LINES. ANY CHANGE TO AN EXISTING ACCESS POINT OR THE ADDITION OR REMOVAL OF AN ACCESS POINT MUST BE AUTHORIZED BY AN ACCESS PERMIT INSTEAD [N.J.A.C. 16:47-4.40-(g)].


(Signature of Owner or Authorized Representative)

12/23/24
(Date)

Edele Hovnanian

(Print or Type your Name)

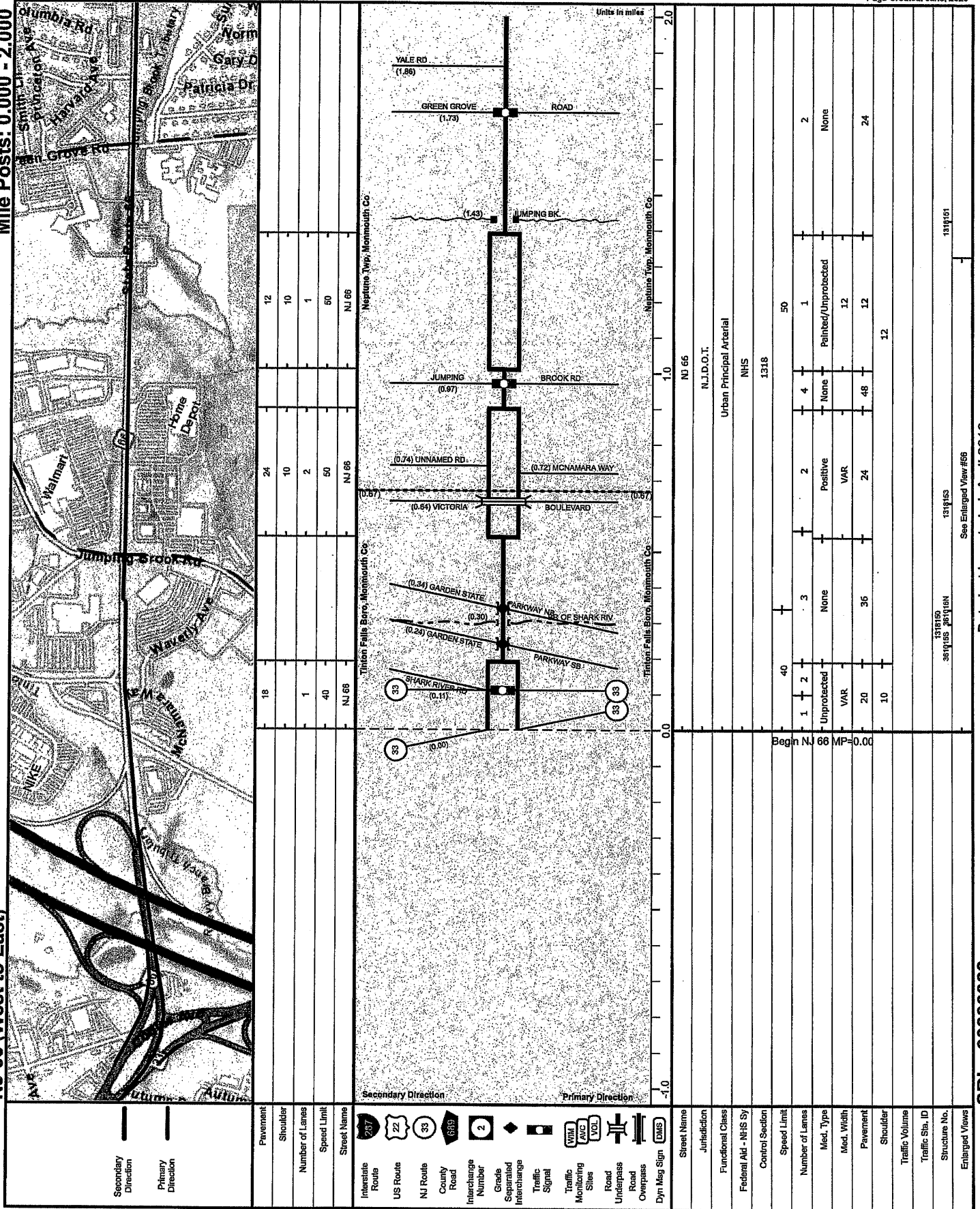
Managing Member

(Title)

APPENDIX B: EXISTING CONDITIONS

NJ 66 (West to East)

Mile Posts: 0.000 - 2.000



SRI = 000000066

Date last inventoried: April 2016

1319453

1319451



Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Rt. 66 & Jumping
Brook Rd
Site Code:
Start Date: 08/22/2024
Page No: 1

Start Time	Rt. 66 Eastbound							Rt. 66 Westbound							Jumping Brook Rd Northbound							Jumping Brook Rd Southbound							Int. Total		
	Left	Thru	Right	Right on Red	U-Turn	Ped s	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped s	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped s	App. Total	Left	Thru	Right	Right on Red	U-Turn	Ped s	App. Total			
7:00 AM	55	75	12	1	0	0	143	20	87	8	2	0	0	0	117	16	21	5	5	0	0	0	47	7	11	10	18	0	0	46	353
7:15 AM	73	101	14	3	0	0	191	8	61	5	0	0	0	0	74	21	12	8	10	0	0	0	51	4	23	11	15	0	0	53	369
7:30 AM	107	124	15	1	0	0	247	13	101	6	0	0	0	0	120	22	31	7	13	0	0	0	73	9	14	10	26	0	0	59	499
7:45 AM	128	148	16	2	0	0	294	15	112	5	6	0	1	138	28	37	10	9	0	0	0	84	8	24	21	18	0	0	71	587	
Hourly Total	363	448	57	7	0	0	875	66	391	24	8	0	1	449	87	101	30	37	0	0	0	255	28	72	62	77	0	0	229	1808	
8:00 AM	111	128	18	2	0	0	259	21	88	3	3	0	0	115	31	40	11	11	0	0	0	93	12	25	14	24	0	0	75	542	
8:15 AM	100	133	16	5	0	0	254	18	98	8	1	0	0	125	22	39	15	6	0	0	0	82	11	25	16	25	0	0	77	538	
8:30 AM	107	109	15	7	0	0	238	19	99	5	4	0	1	127	39	41	9	8	0	0	0	97	13	30	17	17	0	0	77	539	
8:45 AM	104	112	17	8	0	0	241	14	94	6	2	0	0	116	34	51	12	8	0	0	105	11	33	16	22	0	0	82	544		
Hourly Total	422	482	66	22	0	0	992	72	379	22	10	0	1	483	126	171	47	33	0	0	377	47	113	63	66	0	0	311	2183		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	56	99	6	14	0	0	175	39	115	10	11	0	0	175	41	61	16	8	0	0	126	41	72	31	42	0	0	186	662		
4:15 PM	50	88	5	25	0	0	168	47	148	15	4	0	0	214	32	62	17	13	0	0	114	52	63	46	46	0	0	207	703		
4:30 PM	58	90	3	18	0	0	169	41	164	13	9	0	0	227	45	59	10	15	0	0	129	29	72	37	45	0	0	183	708		
4:45 PM	78	104	2	22	0	0	206	39	127	24	8	0	1	198	37	46	7	13	0	0	103	35	67	43	45	0	0	190	697		
Hourly Total	242	381	16	79	0	0	718	166	554	62	32	0	1	814	155	218	50	49	0	0	472	157	274	157	178	0	0	786	2770		
5:00 PM	55	116	11	13	0	0	195	36	168	15	3	0	1	222	49	59	12	13	0	0	133	49	91	43	61	0	0	244	794		
5:15 PM	61	111	20	6	0	0	198	42	140	18																					



Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Rt. 66 & Jumping
Brook Rd
Site Code:
Start Date: 08/22/2024
Page No: 3

[illegible]

Neptune, NJ
Rt. 66 & Jumping Brook Rd
Thursday, August 22, 2024
Location: 40.222537, -
74.086842

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Rt. 66 & Jumping
Brook Rd
Site Code:
Start Date: 08/22/2024
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

[illegible]

Neptune, NJ
Rt. 66 & Jumping Brook Rd
Saturday, August 24, 2024
Location: 40.222537, -
74.086842

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Rt. 66 & Jumping
Brook Rd Sat
Site Code:
Start Date: 08/24/2024
Page No: 3

Turning Movement Peak Hour Data (12:00 PM)

[illegible]

Neptune, NJ
Jumping Brook Rd & Essex Rd
Thursday, August 22, 2024
Location: 40.223512, -
74.087282

www.TSTData.com
Tri-State Traffic Data, Inc
Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Jumping Brook Rd
& Essex Rd
Site Code:
Start Date: 08/22/2024
Page No: 1

Turning Movement Data

Start Time	Essex Rd Eastbound					Jumping Brook Rd Northbound					Jumping Brook Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	2	4	0	0	6	33	51	0	0	84	44	5	0	0	49	139
7:15 AM	4	5	0	0	9	14	80	0	0	94	46	1	0	0	47	150
7:30 AM	0	5	0	0	5	29	117	0	0	146	63	4	0	0	67	218
7:45 AM	2	11	0	0	13	38	138	0	0	176	59	5	0	0	64	253
Hourly Total	8	25	0	0	33	114	386	0	0	500	212	15	0	0	227	760
8:00 AM	3	12	0	0	15	36	121	0	0	157	63	3	0	0	66	238
8:15 AM	1	18	0	0	19	29	121	0	0	150	64	3	0	0	67	236
8:30 AM	0	10	0	0	10	30	130	0	0	160	64	4	0	1	68	238
8:45 AM	1	18	0	0	19	33	130	0	1	163	69	8	0	0	77	259
Hourly Total	5	58	0	0	63	128	502	0	1	630	260	18	0	1	278	971
9:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
4:00 PM	19	65	0	0	84	48	90	0	0	138	117	19	0	0	136	358
4:15 PM	16	58	0	0	74	35	86	0	0	121	148	9	0	0	157	352
4:30 PM	21	53	0	0	74	42	100	0	0	142	140	18	0	0	158	374
4:45 PM	12	48	0	0	60	45	111	0	0	156	137	13	0	0	150	366
Hourly Total	68	224	0	0	292	170	387	0	0	557	542	59	0	0	601	1450
5:00 PM	20	82	0	0	102	46	80	0	0	126	171	9	0	0	180	408
5:15 PM	19	48	0	0	67	38	95	0	0	133	170	13	0	0	183	383
5:30 PM	13	48	0	0	61	46	102	0	0	148	118	12	0	0	130	339
5:45 PM	9	42	0	0	51	36	89	0	0	125	107	9	0	0	116	292
Hourly Total	61	220	0	0	281	166	366	0	0	532	566	43	0	0	609	1422
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	142	527	0	0	669	578	1642	0	1	2220	1580	135	0	1	1715	4604
Approach %	21.2	78.8	0.0	-	-	26.0	74.0	0.0	-	-	92.1	7.9	0.0	-	-	-
Total %	3.1	11.4	0.0	-	14.5	12.6	35.7	0.0	-	48.2	34.3	2.9	0.0	-	37.3	-
Lights	140	515	0	-	655	563	1599	0	-	2162	1541	132	0	-	1673	4490
% Lights	98.6	97.7	-	-	97.9	97.4	97.4	-	-	97.4	97.5	97.8	-	-	97.6	97.5
Buses	0	1	0	-	1	6	19	0	-	25	8	1	0	-	9	35
% Buses	0.0	0.2	-	-	0.1	1.0	1.2	-	-	1.1	0.5	0.7	-	-	0.5	0.8
Trucks	2	11	0	-	13	9	24	0	-	33	31	2	0	-	33	79
% Trucks	1.4	2.1	-	-	1.9	1.6	1.5	-	-	1.5	2.0	1.5	-	-	1.9	1.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-



Neptune, NJ
 Jumping Brook Rd & Essex Rd
 Thursday, August 22, 2024
 Location: 40.223512, -
 74.087282

www.TSTData.com
 Tri-State Traffic Data, Inc
 Coatesville, PA, Pennsylvania, United States 19320
 610-466-1469
 Serving Transportation Professionals Since 1995

Count Name: Jumping Brook Rd
 & Essex Rd
 Site Code:
 Start Date: 08/22/2024
 Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Essex Rd Eastbound					Jumping Brook Rd Northbound					Jumping Brook Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	
8:00 AM	3	12	0	0	15	36	121	0	0	157	63	3	0	0	66	238
8:15 AM	1	18	0	0	19	29	121	0	0	150	64	3	0	0	67	236
8:30 AM	0	10	0	0	10	30	130	0	0	160	64	4	0	1	68	238
8:45 AM	1	18	0	0	19	33	130	0	1	163	69	8	0	0	77	259
Total	5	58	0	0	63	128	502	0	1	630	260	18	0	1	278	971
Approach %	7.9	92.1	0.0	-	-	20.3	79.7	0.0	-	-	93.5	6.5	0.0	-	-	-
Total %	0.5	6.0	0.0	-	6.5	13.2	51.7	0.0	-	64.9	28.8	1.9	0.0	-	28.6	-
PHF	0.417	0.806	0.000	-	0.829	0.889	0.965	0.000	-	0.966	0.942	0.563	0.000	-	0.903	0.937
Lights	5	56	0	-	61	122	488	0	-	610	246	18	0	-	264	935
% Lights	100.0	96.6	-	-	96.8	95.3	97.2	-	-	96.8	94.6	100.0	-	-	95.0	96.3
Buses	0	0	0	-	0	2	9	0	-	11	6	0	0	-	6	17
% Buses	0.0	0.0	-	-	0.0	1.6	1.8	-	-	1.7	2.3	0.0	-	-	2.2	1.8
Trucks	0	2	0	-	2	4	5	0	-	9	8	0	0	-	8	19
% Trucks	0.0	3.4	-	-	3.2	3.1	1.0	-	-	1.4	3.1	0.0	-	-	2.9	2.0
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

Neptune, NJ
Jumping Brook Rd & Essex Rd
Thursday, August 22, 2024
Location: 40.223512, -
74.087282

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Jumping Brook Rd
& Essex Rd
Site Code:
Start Date: 08/22/2024
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

[illegible]



Neptune, NJ
 Jumping Brook Rd & Essex Rd
 Saturday, August 24, 2024
 Location: 40.223512, -
 74.087282

www.TSTData.com
 Tri-State Traffic Data, Inc
 Coatesville, PA, Pennsylvania, United States 19320
 610-466-1469
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Count Name: Jumping Brook Rd
 & Essex Rd Sat
 Site Code:
 Start Date: 08/24/2024
 Page No: 1

Turning Movement Data

Start Time	Essex Rd Eastbound					Jumping Brook Rd Northbound					Jumping Brook Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	
12:00 PM	19	44	0	0	63	71	76	0	0	147	104	9	0	1	113	323
12:15 PM	16	59	0	0	75	74	84	0	0	158	126	27	0	0	153	386
12:30 PM	12	65	0	0	77	51	80	1	0	132	94	22	0	0	116	325
12:45 PM	21	49	0	0	70	68	74	0	1	142	88	20	0	0	108	320
Hourly Total	68	217	0	0	285	264	314	1	1	579	412	78	0	1	490	1354
1:00 PM	17	75	0	0	92	75	94	0	0	169	70	21	0	0	91	352
1:15 PM	18	64	0	0	82	66	73	0	0	139	79	26	0	0	105	326
1:30 PM	20	63	0	0	83	69	70	0	0	139	78	13	0	0	91	313
1:45 PM	37	70	0	0	107	56	92	0	0	148	83	17	0	0	100	355
Hourly Total	92	272	0	0	364	266	329	0	0	595	310	77	0	0	387	1346
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	160	489	0	0	649	530	643	1	1	1174	722	155	0	1	877	2700
Approach %	24.7	75.3	0.0	-	-	45.1	54.8	0.1	-	-	82.3	17.7	0.0	-	-	-
Total %	5.9	18.1	0.0	-	24.0	19.6	23.8	0.0	-	43.5	26.7	5.7	0.0	-	32.5	-
Lights	160	488	0	-	648	530	636	1	-	1167	716	155	0	-	871	2686
% Lights	100.0	99.8	-	-	99.8	100.0	98.9	100.0	-	99.4	99.2	100.0	-	-	99.3	99.5
Buses	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Buses	0.0	0.0	-	-	0.0	0.0	0.2	0.0	-	0.1	0.0	0.0	-	-	0.0	0.0
Trucks	0	1	0	-	1	0	6	0	-	6	6	0	0	-	6	13
% Trucks	0.0	0.2	-	-	0.2	0.0	0.9	0.0	-	0.5	0.8	0.0	-	-	0.7	0.5
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-



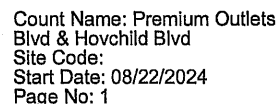
Neptune, NJ
 Jumping Brook Rd & Essex Rd
 Saturday, August 24, 2024
 Location: 40.223512, -
 74.087282

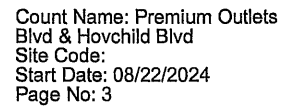
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 Coatesville, PA, Pennsylvania, United States 19320
 610-466-1469
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Count Name: Jumping Brook Rd
 & Essex Rd Sat
 Site Code:
 Start Date: 08/24/2024
 Page No: 3

Turning Movement Peak Hour Data (12:15 PM)

Start Time	Essex Rd Eastbound					Jumping Brook Rd Northbound					Jumping Brook Rd Southbound					Int. Total
	Left	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	
12:15 PM	16	59	0	0	75	74	84	0	0	158	126	27	0	0	153	366
12:30 PM	12	65	0	0	77	51	80	1	0	132	94	22	0	0	116	325
12:45 PM	21	49	0	0	70	68	74	0	1	142	88	20	0	0	108	320
1:00 PM	17	75	0	0	92	75	94	0	0	169	70	21	0	0	91	352
Total	66	248	0	0	314	268	332	1	1	601	378	90	0	0	468	1383
Approach %	21.0	79.0	0.0	-	-	44.6	55.2	0.2	-	-	80.8	19.2	0.0	-	-	-
Total %	4.8	17.9	0.0	-	22.7	19.4	24.0	0.1	-	43.5	27.3	6.5	0.0	-	33.8	-
PHF	0.786	0.827	0.000	-	0.853	0.893	0.883	0.250	-	0.889	0.750	0.833	0.000	-	0.765	0.896
Lights	66	247	0	-	313	268	326	1	-	595	375	90	0	-	465	1373
% Lights	100.0	99.6	-	-	99.7	100.0	98.2	100.0	-	99.0	99.2	100.0	-	-	99.4	99.3
Buses	0	0	0	-	0	0	1	0	-	1	0	0	0	-	0	1
% Buses	0.0	0.0	-	-	0.0	0.0	0.3	0.0	-	0.2	0.0	0.0	-	-	0.0	0.1
Trucks	0	1	0	-	1	0	5	0	-	5	3	0	0	-	3	9
% Trucks	0.0	0.4	-	-	0.3	0.0	1.5	0.0	-	0.8	0.8	0.0	-	-	0.6	0.7
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-





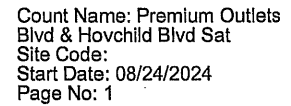
Neptune, NJ
Premium Outlets Blvd &
Hovchild Blvd
Thursday, August 22, 2024
Location: 40.223023, -
74.091838

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Premium Outlets
Blvd & Hovchild Blvd
Site Code:
Start Date: 08/22/2024
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

[illegible]





Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
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Count Name: Premium Outlets
Blvd & Hovchild Blvd Sat
Site Code:
Start Date: 08/24/2024
Page No: 3

[illegible]



Count Name: Essex Rd &
Premium Outlets Blvd
Site Code:
Start Date: 08/22/2024
Page No: 1

[illegible]



Neptune, NJ
Essex Rd & Premium Outlets
Blvd
Thursday, August 22, 2024
Location: 40.225266, -
74.091194

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Tri-State Traffic Data, Inc

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Essex Rd &
Premium Outlets Blvd
Site Code:
Start Date: 08/22/2024
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Essex Rd Eastbound						Essex Rd Westbound						Premium Outlets Blvd Northbound						TDK Driveway Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:45 AM	2	11	14	0	0	27	8	29	6	0	0	43	9	1	2	0	0	12	0	0	0	0	0	0	82
8:00 AM	1	15	19	0	0	35	3	25	5	0	0	33	4	6	1	0	0	11	0	0	0	0	0	0	79
8:15 AM	1	17	10	0	0	28	3	26	2	0	0	31	2	0	0	0	0	2	0	0	0	0	0	0	61
8:30 AM	2	10	12	0	1	24	6	23	0	0	0	29	6	0	1	0	0	7	0	0	0	0	1	0	60
Total	6	53	55	0	1	114	20	103	13	0	0	136	21	7	4	0	0	32	0	0	0	0	1	0	282
Approach %	5.3	46.5	48.2	0.0	-	-	14.7	75.7	9.6	0.0	-	-	65.6	21.9	12.5	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	2.1	18.8	19.5	0.0	-	40.4	7.1	36.5	4.6	0.0	-	48.2	7.4	2.5	1.4	0.0	-	11.3	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.750	0.779	0.724	0.000	-	0.814	0.625	0.888	0.542	0.000	-	0.791	0.583	0.292	0.500	0.000	-	0.667	0.000	0.000	0.000	0.000	-	0.000	0.880
Lights	6	48	55	0	-	109	19	100	13	0	-	132	21	7	4	0	-	32	0	0	0	0	-	0	273
% Lights	100.0	90.6	100.0	-	-	95.6	95.0	97.1	100.0	-	-	97.1	100.0	100.0	100.0	-	-	100.0	-	-	-	-	-	-	96.8
Buses	0	1	0	0	-	1	1	1	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	3
% Buses	0.0	1.9	0.0	-	-	0.9	5.0	1.0	0.0	-	-	1.5	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	-	1.1
Trucks	0	4	0	0	-	4	0	2	0	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	6
% Trucks	0.0	7.5	0.0	-	-	3.5	0.0	1.9	0.0	-	-	1.5	0.0	0.0	0.0	-	-	0.0	-	-	-	-	-	-	2.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	0	-	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-

www.TSTData.com
Tri-State Traffic Data, Inc

Neptune, NJ
Essex Rd & Premium Outlets
Blvd
Thursday, August 22, 2024
Location: 40.225266, -
74.091194

Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Essex Rd &
Premium Outlets Blvd
Site Code:
Start Date: 08/22/2024
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Essex Rd Eastbound						Essex Rd Westbound						Premium Outlets Blvd Northbound						TDK Driveway Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:30 PM	0	47	27	0	0	74	23	29	0	0	0	52	5	0	21	0	0	26	3	5	4	0	0	12	164
4:45 PM	0	33	29	0	0	62	27	32	0	0	0	59	4	0	22	0	0	26	1	1	0	0	0	2	149
5:00 PM	0	71	26	0	0	97	29	27	0	0	1	56	4	0	33	0	0	37	2	8	1	0	0	11	201
5:15 PM	0	51	26	0	0	77	22	26	0	0	0	48	3	0	22	1	0	26	3	5	0	0	0	8	159
Total	0	202	108	0	0	310	101	114	0	0	1	215	16	0	98	1	0	115	9	19	5	0	0	33	673
Approach %	0.0	65.2	34.8	0.0	-	-	47.0	53.0	0.0	0.0	-	-	13.9	0.0	85.2	0.9	-	-	27.3	57.6	15.2	0.0	-	-	-
Total %	0.0	30.0	16.0	0.0	-	46.1	15.0	16.9	0.0	0.0	-	31.9	2.4	0.0	14.6	0.1	-	17.1	1.3	2.8	0.7	0.0	-	4.9	-
PHF	0.000	0.711	0.931	0.000	-	0.799	0.871	0.891	0.000	0.000	-	0.911	0.800	0.000	0.742	0.250	-	0.777	0.750	0.594	0.313	0.000	-	0.688	0.837
Lights	0	201	108	0	-	309	101	112	0	0	-	213	16	0	98	1	-	115	9	19	5	0	-	33	670
% Lights	-	99.5	100.0	-	-	99.7	100.0	98.2	-	-	-	99.1	100.0	-	100.0	100.0	-	100.0	100.0	100.0	100.0	-	-	100.0	99.8
Buses	0	0	0	0	-	0	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	-	-	0.0	0.0	0.9	-	-	-	0.5	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.1
Trucks	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Trucks	-	0.5	0.0	-	-	0.3	0.0	0.9	-	-	-	0.5	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Neptune, NJ
Essex Rd & Premium Outlets
Blvd
Saturday, August 24, 2024
Location: 40.225266, -
74.091194

www.TSTData.com
Tri-State Traffic Data, Inc
Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Count Name: Essex Rd &
Premium Outlets Blvd Sat
Site Code:
Start Date: 08/24/2024
Page No: 1

Turning Movement Data

Start Time	Essex Rd Eastbound						Essex Rd Westbound						Premium Outlets Blvd Northbound						TDK Driveway Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
12:00 PM	0	38	20	0	1	58	42	34	0	0	0	76	4	0	24	0	0	28	0	0	0	0	1	0	162
12:15 PM	0	43	6	0	0	49	61	35	0	0	0	96	5	0	34	0	0	39	0	0	0	0	0	0	184
12:30 PM	0	47	18	0	0	65	42	27	0	0	0	69	3	0	32	0	0	35	0	0	0	0	0	0	169
12:45 PM	0	48	10	0	0	58	50	38	0	0	0	88	1	0	21	0	0	22	0	0	0	0	0	0	188
Hourly Total	0	176	54	0	1	230	195	134	0	0	0	329	13	0	111	0	0	124	0	0	0	0	1	0	683
1:00 PM	0	57	14	0	0	71	59	35	0	0	0	94	8	0	33	0	0	41	0	0	0	0	0	0	206
1:15 PM	0	55	10	0	0	65	58	31	0	0	0	89	4	0	30	0	0	34	0	0	0	0	0	0	188
1:30 PM	0	47	13	0	0	60	46	32	0	0	0	78	8	0	36	0	0	44	0	0	0	0	0	0	182
1:45 PM	0	64	17	0	0	81	39	33	0	0	0	72	5	0	41	0	0	46	0	0	0	0	0	0	199
Hourly Total	0	223	54	0	0	277	202	131	0	0	0	333	25	0	140	0	0	165	0	0	0	0	0	0	775
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	399	108	0	1	507	397	265	0	0	0	662	38	0	251	0	0	289	0	0	0	0	1	0	1458
Approach %	0.0	78.7	21.3	0.0	-	-	60.0	40.0	0.0	0.0	-	-	13.1	0.0	86.9	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.0	27.4	7.4	0.0	-	34.8	27.2	18.2	0.0	0.0	-	45.4	2.6	0.0	17.2	0.0	-	19.8	0.0	0.0	0.0	0.0	-	0.0	-
Lights	0	399	108	0	-	507	397	265	0	0	-	662	36	0	250	0	-	286	0	0	0	0	-	0	1455
% Lights	-	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	94.7	-	99.6	-	-	99.0	-	-	-	-	-	-	99.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	2.6	-	0.0	-	-	0.3	-	-	-	-	-	-	0.1
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	1	0	1	0	-	2	0	0	0	0	-	0	2
% Trucks	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	2.6	-	0.4	-	-	0.7	-	-	-	-	-	-	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Coatesville, PA, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Turning Movement Peak Hour Data (1:00 PM)

Start Time	Essex Rd Eastbound						Essex Rd Westbound						Premium Outlets Blvd Northbound						TDK Driveway Southbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
1:00 PM	0	57	14	0	0	71	59	35	0	0	0	94	8	0	33	0	0	41	0	0	0	0	0	0	208
1:15 PM	0	55	10	0	0	65	58	31	0	0	0	89	4	0	30	0	0	34	0	0	0	0	0	0	188
1:30 PM	0	47	13	0	0	60	46	32	0	0	0	78	8	0	36	0	0	44	0	0	0	0	0	0	182
1:45 PM	0	64	17	0	0	81	39	33	0	0	0	72	5	0	41	0	0	46	0	0	0	0	0	0	199
Total	0	223	54	0	0	277	202	131	0	0	0	333	25	0	140	0	0	165	0	0	0	0	0	0	775
Approach %	0.0	80.5	19.5	0.0	-	-	60.7	39.3	0.0	0.0	-	-	15.2	0.0	84.8	0.0	-	-	0.0	0.0	0.0	0.0	-	-	-
Total %	0.0	28.8	7.0	0.0	-	35.7	26.1	16.9	0.0	0.0	-	43.0	3.2	0.0	18.1	0.0	-	21.3	0.0	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.871	0.794	0.000	-	0.855	0.856	0.936	0.000	0.000	-	0.886	0.781	0.000	0.854	0.000	-	0.897	0.000	0.000	0.000	0.000	-	0.000	0.941
Lights	0	223	54	0	-	277	202	131	0	0	-	333	24	0	140	0	-	164	0	0	0	0	-	0	774
% Lights	-	100.0	100.0	-	-	100.0	100.0	100.0	-	-	-	100.0	96.0	-	100.0	-	-	99.4	-	-	-	-	-	-	99.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	4.0	-	0.0	-	-	0.6	-	-	-	-	-	-	0.1
Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Trucks	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	-	0.0	-	-	0.0	-	-	-	-	-	-	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APP SITE
 ROUTE 66 & WALMART/HOME DEPOT ACCESS
 NEPTUNE TOWNSHIP, MONMOUTH COUNTY
 MRA JOB 13-112 WEDNESDAY PM COUNT

McDonough & Rea Associates
 1431 Lakewood Road Suite C
 Manasquan NJ 08736
 (732) 528-7076

File Name : 13112 route 66 & walmart pm1
 Site Code : 00013112
 Start Date : 10/9/2024
 Page No : 1

Groups Printed- CARS - TRUCKS - SCHOOL BUS

Start Time	Walmart Access Southbound					Home Depot Access Northbound					Route 66 Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right
04:00 PM	2	3	35	40	27	133	28	188	0	2	15	17	19	109	11
04:15 PM	2	1	40	43	34	136	32	202	3	0	20	23	16	119	13
04:30 PM	2	2	29	33	29	148	19	196	4	1	22	27	30	101	16
04:45 PM	2	1	32	35	22	143	26	191	1	1	17	19	15	96	9
Total	8	7	136	151	112	560	105	777	8	4	74	86	80	425	49
05:00 PM	2	2	36	40	30	190	29	249	7	1	20	28	17	111	14
05:15 PM	7	1	41	49	41	147	28	216	12	1	39	52	33	107	10
05:30 PM	9	1	37	47	24	148	29	201	8	1	24	33	8	106	14
05:45 PM	3	1	38	42	26	142	21	189	5	0	20	25	19	100	15
Total	21	5	152	178	121	627	107	855	32	3	103	138	77	424	53
Grand Total	29	12	288	329	233	1187	212	1632	40	7	177	224	157	849	102
Apprch %	8.8	3.6	87.5		14.3	72.7	13.0		17.9	3.1	79.0		14.2	76.6	9.2
Total %	0.9	0.4	8.7	10.0	7.1	36.0	6.4	49.6	1.2	0.2	5.4	6.8	4.8	25.8	3.1

Start Time	Walmart Access Southbound					Route 66 Westbound					Home Depot Access Northbound					Route 66 Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total
Intersection 05:00 PM																				
Volume	21	5	152	178	121	627	107	855	32	3	103	138	77	424	53	554				
Percent	11.8	2.8	85.4		14.2	73.3	12.5		23.2	2.2	74.6		13.9	76.5	9.6					
05:15 Volume	7	1	41	49	41	147	28	216	12	1	39	52	33	107	10	150				
Peak Factor																				
High Int. 05:15 PM					05:00 PM				05:15 PM				05:15 PM							
Volume	7	1	41	49	30	190	29	249	12	1	39	52	33	107	10	150				
Peak Factor				0.908				0.858				0.663				0.923				

APP SITE

ROUTE 66 & WALMART/HOME DEPOT ACCESS
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
MRA JOB 13-112 SATURDAY COUNT

McDonough & Rea Associates
1431 Lakewood Road Suite C
Manasquan NJ 08736
(732) 528-7076

File Name : 13112 route 66 & walmart sat1
Site Code : 00013112
Start Date : 10/12/2024
Page No : 1

Groups Printed- CARS - TRUCKS

Start Time	Walmart Access Southbound					Route 66 Westbound					Home Depot Access Northbound					Route 66 Eastbound				
	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total	Int. Total
11:00 AM	2	3	27	32		49	141	40	230		9	1	30	40		24	96	21	141	443
11:15 AM	4	3	33	40		46	116	31	193		12	6	26	44		34	99	13	146	423
11:30 AM	1	3	30	34		48	97	32	177		10	6	27	43		20	81	20	121	375
11:45 AM	3	8	29	40		48	95	32	175		6	3	12	21		24	74	27	125	361
Total	10	17	119	146		191	449	135	775		37	16	95	148		102	350	81	533	1602
12:00 PM	3	3	61	67		49	109	34	192		3	2	34	39		25	88	15	128	426
12:15 PM	4	1	53	58		34	113	33	180		3	1	26	30		18	75	14	107	375
12:30 PM	0	3	39	42		58	141	39	238		7	1	30	38		16	90	17	123	441
12:45 PM	4	4	39	47		38	128	32	198		7	3	17	27		25	106	22	153	425
Total	11	11	192	214		179	491	138	808		20	7	107	134		84	359	68	511	1667
Grand Total	21	28	311	360		370	940	273	1583		57	23	202	282		186	709	149	1044	3269
Approch %	5.8	7.8	86.4			23.4	59.4	17.2	48.4		20.2	8.2	71.6	8.6		17.8	67.9	14.3	31.9	
Total %	0.6	0.9	9.5	11.0		11.3	28.8	8.4			1.7	0.7	6.2			5.7	21.7	4.6		

Start Time	Walmart Access Southbound					Route 66 Westbound					Home Depot Access Northbound					Route 66 Eastbound				
	Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total		Left	Thru	Right	App. Total	Int. Total
Peak Hour From 11:00 AM to 12:45 PM - Peak 1 of 1																				
Intersection 12:00 PM	11	11	192	214		179	491	138	808		20	7	107	134		84	359	68	511	1667
Volume	11	11	192	214		22.2	60.8	17.1	808		14.9	5.2	79.9	134		16.4	70.3	13.3	511	
Percent	5.1	5.1	89.7			58	141	39			7	1	30	38		16	90	17	123	441
12:30 Volume	0	3	39	42					238											0.945
Peak Factor																				
High Int. 12:00 PM						12:30 PM					12:00 PM					12:45 PM				
Volume	3	3	61	67		58	141	39	238		3	2	34	39		25	106	22	153	
Peak Factor				0.799					0.849					0.859					0.835	

Tri-State Traffic Data, Inc.

610-466-1469
TSTData.com

Road: Rt. 66
Location: 510 ft W of Jumping Brook Rd
Counter: 40578 & 41752

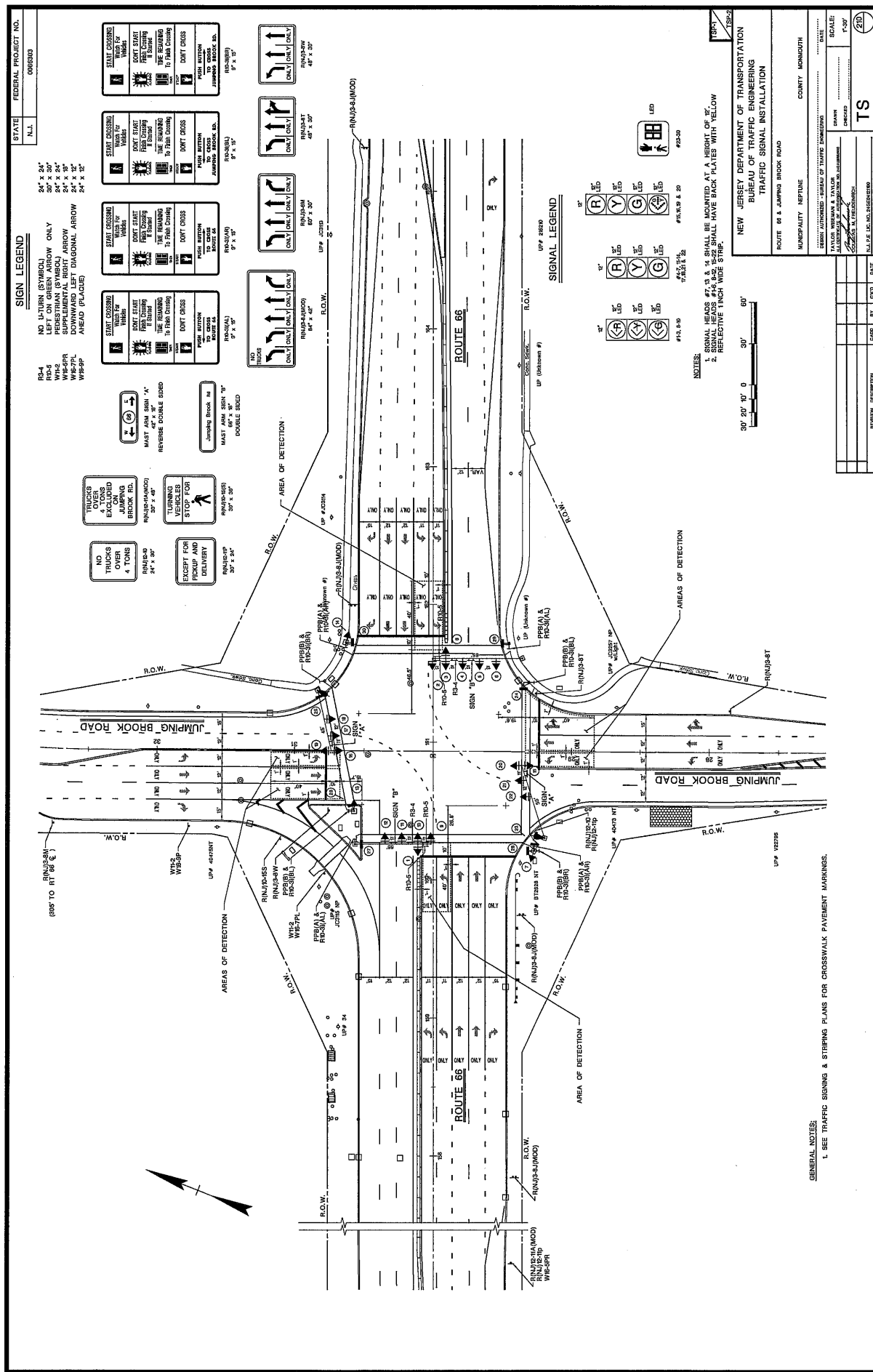
Site Code: 1
Station ID:

Latitude: 40° 22'19.7" North
Longitude: 74° 8'862.0000 West

Start Time	Wednesday, August 21, 2024		Thursday, August 22, 2024		Friday, August 23, 2024		Saturday, August 24, 2024		Sunday, August 25, 2024		Monday, August 26, 2024		Tuesday, August 27, 2024		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	60	72	58	67	85	117	86	184	66	75	55	54	68	95
01:00	*	*	49	35	53	46	81	78	67	101	33	23	32	31	52	52
02:00	*	*	40	44	27	24	51	67	51	74	38	58	26	34	39	50
03:00	*	*	44	46	47	45	33	45	47	48	43	45	40	27	42	43
04:00	*	*	93	76	72	65	56	41	42	30	73	67	73	58	68	56
05:00	*	*	159	137	177	141	94	80	83	61	172	143	181	136	144	116
06:00	*	*	436	418	456	395	206	223	156	168	442	374	465	422	360	333
07:00	*	*	907	590	852	604	336	322	211	246	833	642	902	629	674	506
08:00	*	*	995	671	970	625	425	451	316	291	910	593	992	692	768	554
09:00	*	*	787	593	827	647	608	478	554	477	773	595	761	598	718	565
10:00	*	*	684	695	717	762	675	683	625	612	651	627	713	635	678	669
11:00	719	769	673	825	712	880	675	793	621	706	641	745	688	758	676	782
12:00 PM	722	842	752	862	780	849	720	759	637	754	666	778	688	797	709	806
01:00	701	880	662	869	738	864	766	756	597	743	635	783	614	805	673	814
02:00	694	977	635	840	698	933	663	693	591	711	632	874	673	837	655	838
03:00	730	1032	667	1017	766	926	647	781	533	672	625	1048	650	977	660	922
04:00	755	1140	728	1083	771	1001	517	727	540	665	664	1141	717	1140	670	981
05:00	720	1036	774	1041	682	888	610	658	578	597	715	992	697	1102	682	902
06:00	610	752	599	724	559	689	588	658	453	566	539	694	573	755	560	691
07:00	438	597	463	603	455	588	442	541	384	503	432	567	451	568	438	567
08:00	366	432	312	474	320	489	299	499	283	398	284	411	296	429	309	447
09:00	158	292	221	314	213	323	293	381	224	346	170	308	183	297	209	323
10:00	125	266	159	247	165	363	224	378	146	400	130	204	145	226	156	298
11:00	107	144	109	126	142	255	161	252	90	163	99	100	86	123	113	166
Total Day	6845	9159	11008	12402	11257	12469	9255	10461	7915	9516	10266	11857	10701	12130	10121	11576
	16004		23410		23726		19716		17431		22123		22831		21697	
AM Peak Vol.	11:00	11:00	08:00	11:00	08:00	11:00	10:00	11:00	10:00	11:00	08:00	11:00	08:00	11:00	08:00	11:00
	719	769	995	825	970	880	675	793	625	706	910	745	992	758	768	782
PM Peak Vol.	16:00	16:00	17:00	16:00	12:00	16:00	13:00	15:00	12:00	12:00	17:00	16:00	16:00	16:00	12:00	16:00
	755	1140	774	1083	780	1001	766	781	637	754	715	1111	717	1140	709	981

Latitude: 40' 22197.0000 North
Longitude: 74' 8862.0000 West

[illegible]



ROUTE 66 & JUMPING BROOK ROAD

80 SECOND BACKGROUND CYCLE

SIGNAL INDICATIONS

PHASE	13	4-7	15-16	17-18	22-23	24-25	26-27	TIME (sec)			
								Plan I (80)	Plan II (80)	Plan III (80)	Plan IV (80)
Without Pedestrian Actuation A. EB Route NJ 66 ROW/EB Left Turns Change Clearance	<G-	G	<R-	R	R	R	DW	22-42	5	5	5
	<R-	G	<R-	R	R	R	DW	2	2	2	2
	<R-	G	<R-	R	R	R	DW	2	2	2	2
B. Route NJ 66 ROW Change Clearance	<R-	G	<R-	R	R	R	DW	24-13	7	7	7
	<R-	G	<R-	R	R	R	DW	5*	5*	5*	5*
	<R-	G	<R-	R	R	R	DW	2	2	2	2
C. WB Route NJ ROW/WB Left Turns Change Clearance	<R-	R	<G-	G	R	R	DW	7	7	7	7
	<R-	R	<Y-	R	R	R	DW	5	5	5	5
	<R-	R	<Y-	R	R	R	DW	2	2	2	2
D. Jumping Brook Road Left Turns Change Clearance	<R-	R	<G-/R	R	R	R	DW	5-8	5-8	5-8	5-8
	<R-	R	<Y-/R	R	R	R	DW	3	3	3	3
	<R-	R	<Y-/R	R	R	R	DW	3	3	3	3
E. Jumping Brook Road ROW Change Clearance	<R-	R	<R-	R	G	G	DW	7-13	7-13	7-13	7-13
	<R-	R	<R-	R	Y	Y	DW	3	3	3	3
	<R-	R	<R-	R	Y	Y	DW	5	5	5	5
Emergency Flash Offset	<R-	Y	<R-	Y	R	R	DARK	-	-	-	-
	<R-	-	-	-	-	-	DARK	0	0	0	0

SIGNAL INDICATIONS

PHASE	13	4-7	15-16	17-18	22-23	24-25	26-27	TIME (sec)			
								Plan I (152-157)	Plan II (152-157)	Plan III (152-157)	Plan IV (152-157)
Without Pedestrian Actuation A. EB Route NJ 66 ROW/EB Left Turns Change Clearance	<G-	G	<R-	R	R	R	DW	22-42	5	5	5
	<R-	G	<R-	R	R	R	DW	2	2	2	2
	<R-	G	<R-	R	R	R	DW	2	2	2	2
B. Route NJ 66 ROW Change Clearance	<R-	G	<R-	R	R	R	DW	8	8	8	8
	<R-	G	<R-	R	R	R	DW	31	31	31	31
	<R-	G	<R-	R	R	R	DW	2	2	2	2
C. WB Route NJ ROW/WB Left Turns Change Clearance	<R-	R	<G-	G	R	R	DW	7	7	7	7
	<R-	R	<Y-	R	R	R	DW	5	5	5	5
	<R-	R	<Y-	R	R	R	DW	2	2	2	2
D. Jumping Brook Road Left Turns Change Clearance	<R-	R	<G-/R	R	R	R	DW	5-8	5-8	5-8	5-8
	<R-	R	<Y-/R	R	R	R	DW	3	3	3	3
	<R-	R	<Y-/R	R	R	R	DW	3	3	3	3
E. Jumping Brook Road ROW Change Clearance	<R-	R	<R-	R	G	G	DW	8	8	8	8
	<R-	R	<R-	R	G	G	DW	34	34	34	34
	<R-	R	<R-	R	Y	Y	DW	3	3	3	3
Emergency Flash Offset	<R-	Y	<R-	Y	R	R	DARK	-	-	-	-
	<R-	-	-	-	-	-	DARK	0	0	0	0

NOTES:

- The manual controls to be removed.
- Offsets are to be measured from the beginning of yellow to Route NJ 66 EB thru traffic (lanes 4-7) at the intersection.
- The memory circuits are to be disconnected and vehicle extension is to be set at 3 seconds.
- The controller shall be capable of skipping phases which are not activated.
- If Phase D is called, Phase E shall follow.
- The Phase D left turn lane is to operate independently and concurrently if actuation occurs on both approaches. Each left turn lane shall have the capability of being initiated, extended or terminated separately, if only one of the left turn movements terminates, then opposing non-conflicting through movement shall be initiated.
- The cycle length in Plans I-IV will be extended during pedestrian actuation using the pedestrian override feature.

HOURS OF OPERATION

Plan I: Monday thru Friday, 7:00 A.M. - 7:00 P.M.
Plan II: Monday thru Friday, 7:00 A.M. - 7:00 P.M.
Plan III: Monday thru Friday, 7:00 A.M. - 7:00 P.M.
Plan IV: ALL OTHER TIMES

CYCLE LENGTH

80 Second Background Cycle
80 Second Background Cycle
80 Second Background Cycle



NEW JERSEY DEPARTMENT OF TRANSPORTATION
ELECTRICAL PLANS
ROUTE 66
MUNICIPALITY HERTFORD COUNTY MONMOUTH
ROUTE 66 & JUMPING BROOK ROAD

CONTROL SECTION NO. 1318101
SECTION 214
TAYLOR, WERNER & TAYLOR
INCORPORATED
1000 N. 1ST AVE., SUITE 200
NEW JERSEY 07030

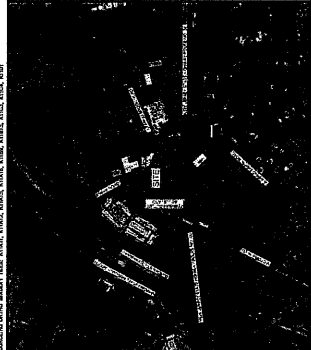
APPENDIX C: TRIP GENERATION/TRIP DISTRIBUTION

PRELIMINARY & FINAL MAJOR SUBDIVISION PLAN AND PRELIMINARY & FINAL MAJOR SITE PLAN
FOR
3601 ROUTE 66, LLC

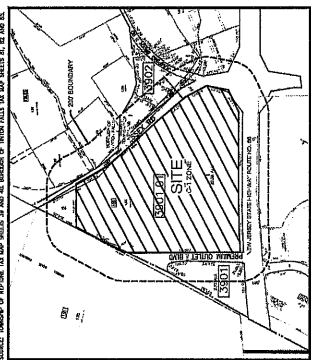
BLOCK 3901.01, LOT 1, TAX MAP SHEET 39
TOWNSHIP OF NEPTUNE, MONMOUTH COUNTY, NJ

LOCATION MAPS

AERIAL MAP



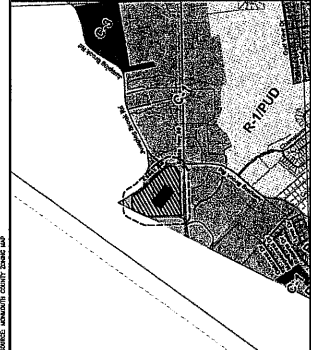
KEY MAP



USGS MAP



ZONING MAP



Sheet List Table

Sheet Number	Sheet Title
1	COVER SHEET
2	GENERAL NOTES AND ZONING
3	EXISTING CONDITIONS AND REMOVALS PLAN
4	OVERALL SITE LAYOUT PLAN
5	SITE LAYOUT PLAN
6	GRADING PLAN
7	DRAINAGE PLAN
8	UTILITY PLAN
9	SOIL EROSION & SEDIMENT CONTROL PLAN
10	SOIL EROSION & SEDIMENT CONTROL NOTES
11	SOIL EROSION & SEDIMENT CONTROL DETAILS
12	LANDSCAPING PLAN
13	LANDSCAPING NOTES & DETAILS
14	LIGHTING PLAN
15	LIGHTING NOTES AND DETAILS
16	LIGHTING DETAILS
17	ROAD PROFILES
18	STORM PROFILES
19	STORM PROFILES
20	STORM PROFILES
21	CONSTRUCTION DETAILS
22	CONSTRUCTION DETAILS
23	CONSTRUCTION DETAILS
24	CONSTRUCTION DETAILS
25	CIRCULATION PLAN - FIRE TRUCK
26	CIRCULATION PLAN - WB-50
27	CIRCULATION PLAN - GARBAGE TRUCK

CERTIFICATION

I, LEANNE R. HOFMANN, P.E., P.P., O.M.E.,
LEARNER'S DESIGN, INC.,
STATE OF NEW JERSEY,
COUNTY OF MONMOUTH,
CERTIFY THAT I AM THE DESIGNER OF THE
SUBDIVISION PLAN AND SITE PLAN
FOR THE PROJECT DESCRIBED HEREIN.

COVER SHEET



LEANNE R. HOFMANN, P.E., P.P., O.M.E.,
LEARNER'S DESIGN, INC.,
STATE OF NEW JERSEY,
COUNTY OF MONMOUTH,
CERTIFY THAT I AM THE DESIGNER OF THE
SUBDIVISION PLAN AND SITE PLAN
FOR THE PROJECT DESCRIBED HEREIN.

SP-01
SHEET 1 OF 27

SITE TRAFFIC GENERATION AND DISTRIBUTION

The ITE *Trip Generation Manual, 11th Edition*, was consulted to develop traffic projections for the proposed uses with the exception of the golf entertainment use. The ITE does not have a land use category for a golf entertainment use and, therefore, research data compiled by MRA was utilized and is appended to the report. *Table I* illustrates the anticipated AM peak street hour, PM peak street hour and Saturday peak hour traffic generation from the various components of the new 3601 Route 66 *Land Use Plan*.

TABLE I
3601 ROUTE 66 TRIP GENERATION

LAND USE	AM PSH			PM PSH			SATURDAY PH		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
100 Room Hotel (LUC 310)	29	18	47	32	28	60	42	30	72
2,335 SF Fast-food Rest. w/DT (LUC 934)	48	46	94	40	36	76	67	61	128
5,670 SF Conv. Store w/Gas (LUC 945)	237	237	474	200	200	400	182	182	364
8,000 SF High-turnover Rest. (LUC 832).	44	36	80	50	30	80	45	45	90
Golf Entertainment ¹	5	5	10	46	46	92	56	56	112
Totals	363	342	705	368	340	708	392	374	766
Pass-by Credit									
Convenience Store w/Gas ²	-178	-178	-356	-150	-150	-300	-91	-91	-182
Fast-food Restaurant	-23	-22	-45	-20	-18	-38	-	-	-
High-Turnover Restaurant	-	-	-	-21	-13	-34	-	-	-
Pass-by Total	-201	-200	-401	-191	-181	-372	-91	-91	-182
Total New Site Trips	162	142	304	177	159	336	301	283	584

The development will draw a portion of its traffic from the existing traffic on Route 66 and area roadways. Therefore, our analysis took into consideration the NJDOT Approved pass-by credits for the AM and PM weekday and Saturday peak hours. In addition, internal trips are expected amongst the different land uses, as well as the *Premium Outlets*. However, no internal credits were applied in the analysis herein.

The projected site trips detailed in *Table I* were surcharged on the area roadway network based on existing traffic patterns, the area roadway network, and location of existing population centers. *Table II* details anticipated site traffic distribution:

¹ Based on MRA research data

² NJDOT approved pass-by rates

TABLE II
SITE TRAFFIC DISTRIBUTION

<u>TO/FROM</u>	<u>RESTS</u>	<u>RESTS</u>	<u>CONVEN.</u>	<u>CONVEN.</u>	<u>GE & HOTEL</u>	<u>GE & HOTEL</u>
	<u>INBOUND</u>	<u>OUTBOUND</u>	<u>INBOUND</u>	<u>OUTBOUND</u>	<u>INBOUND</u>	<u>OUTBOUND</u>
Jumping Brook Rd No.	10%	10%	10%	5%	5%	5%
Jumping Brook Rd So.	10%	10%	10%	5%	5%	5%
Route 66 – West	35%	35%	15%	60%	55%	55%
Route 66 – East	30%	30%	50%	10%	20%	20%
Essex Road – North	10%	10%	10%	15%	10%	10%
Hovchild Blvd South	5%	5%	5%	5%	5%	5%
Total	100%	100%	100%	100%	100%	100%

In accordance with the NJDOT guidelines, site traffic from the pre-existing uses on the site were reviewed and compared to the site traffic, without pass-by credits, of the redevelopment proposal. *Table III* details the trip generation comparison of the prior use (175,000 SF office/manufacturing) and the proposed *Land Use Plan*.

TABLE III
3601 ROUTE 66 LLC-TRIP GENERATION COMPARISON
APPROVED VS. PROPOSED

LAND USE	AM PSH			PM PSH			SATURDAY PH		
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL
Pre-existing	181	25	150	20	122	142	28	25	53
Proposed	363	342	705	368	340	708	392	374	766
Net Difference	182	317	555	348	218	566	364	349	713

TOP GOLF EDISON
102 BAYS
PARKING & TRIP GENERATION
FRIDAY, APRIL 26, 2024
SATURDAY, APRIL 27, 2024
SATURDAY AUGUST 24, 2024

TABLE I
PARKING GENERATION

<u>DATE</u>	<u>TIME</u>	<u>PARKED VEHICLES</u>
Friday, April 26, 2024	5:00 PM	87
	7:00 PM	124
	9:00 PM	129
Saturday, April 27, 2024	1:00 PM	143
	2:00 PM	165
	3:00 PM	171
	6:00 PM	169
	7:30 PM	163
	9:00 PM	186
Saturday, August 24, 2024	6:00 PM	272
	7:30 PM	290
	9:00 PM	287

TABLE II
TRIP GENERATION

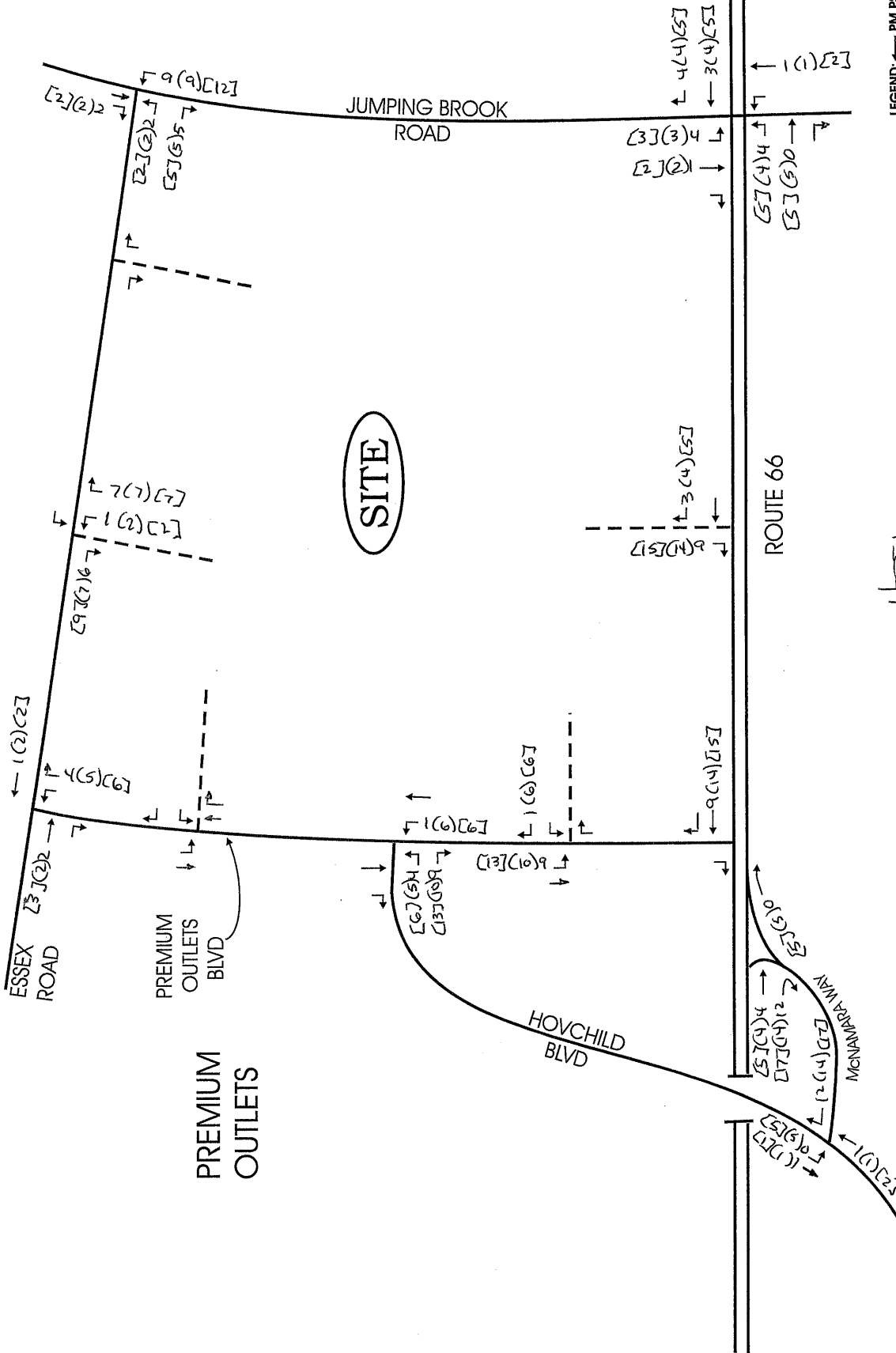
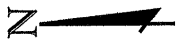
<u>DATE</u>	<u>TIME</u>	<u>IN</u>	<u>OUT</u>	<u>TOTAL</u>
Friday, April 26, 2024	5-6 PM	65	65	130
	6-7 PM	113	74	187
	7-8 PM	73	52	125
	8-9 PM	88	89	177
Saturday, April 27, 2024	1-2 PM	62	42	104
	2-3 PM	78	77	155
	6-7 PM	79	74	153
	7-8 PM	75	75	150
	8-9 PM	78	70	148
Saturday, August 24, 2024	6-7 PM	113	103	216
	7-8 PM	74	86	160
	8-9 PM	151	121	272

Pass- By Rates Approved for Use in Traffic Analysis for Major Access Permits

July 1, 2018

*Trial Rates Approved by NJDOT for Access Permits

LUC	Type	AM%	PM%	SAT%
815	Freestanding Discount	NA	17	23
816	Hardware/Paint Store	NA	26	NA
820	Shopping Center	NA	34	26
843	Automobile Parts Sales	NA	43	NA
848	Tire Store	NA	28	NA
850	Supermarket	NA	36	NA
851	Convenience Market (Open 24 Hours)	NA	51	NA
853	Convenience Market w/Pumps	63	66	50*
854	Discount Supermarket	NA	21	NA
857	Discount Club	NA	37	30
862	Home Improvement Superstore	NA	42	NA
863	Electronic Superstore	NA	40	NA
880	Pharmacy without Drive-Thru	NA	53	NA
881	Pharmacy with Drive-Thru	NA	49	NA
890	Furniture Store	NA	53	NA
912	Drive-In Bank	29	35	38
931	Quality Restaurant	NA	44	NA
932	High Turnover Restaurant	NA	43	NA
934	Fast Food Restaurant W/Drive-Thru	49	50	NA
937	Coffee/Donut Shop W/Drive-Thru	63*	66*	50*
960	Super Convenience Market/Gas Station	76	76	50*



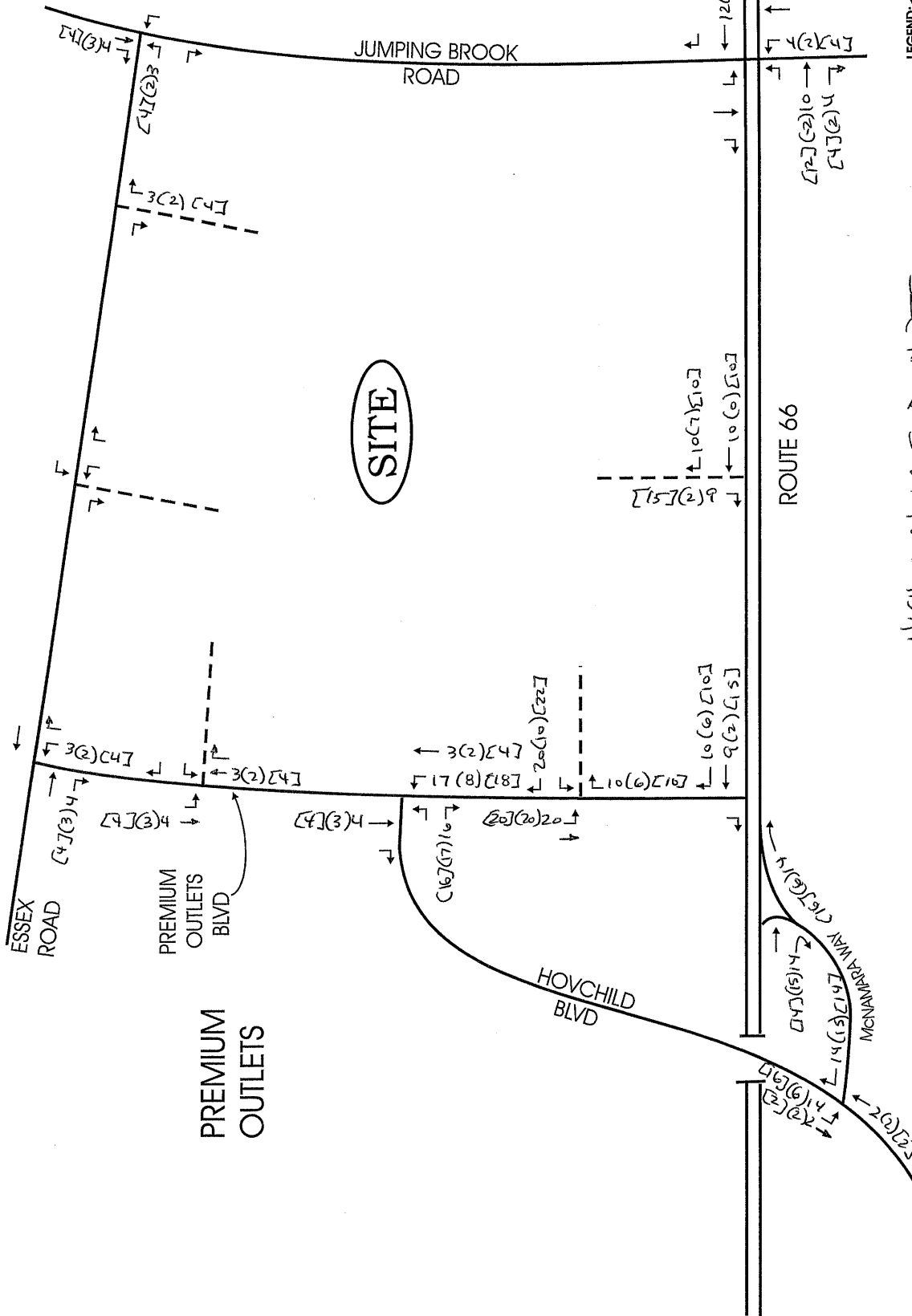
McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
SITE GENERATED TRAFFIC VOLUMES

FIGURE 3B

JOB NO. 13-112
DATE: DEC 2024

LEGEND: ← PM PSH(SAT PSH)



High Turnover Sit-Down Rest.

LEGEND: ← PM PSH(SAT PSH)

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SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
SITE GENERATED TRAFFIC VOLUMES

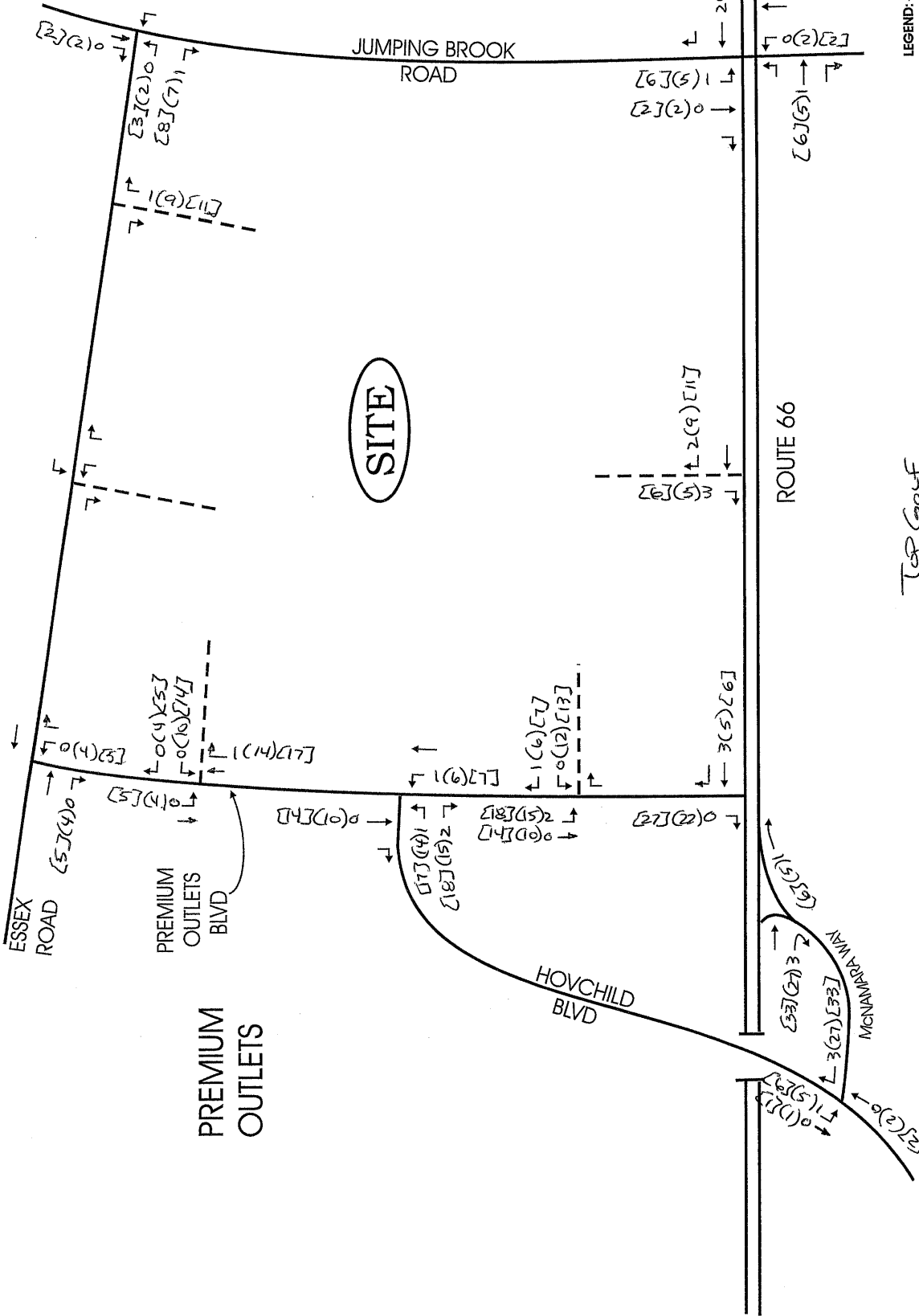
FIGURE 3C

JOB NO. 13-112
DATE: DEC 2024

3/11/2024



 McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP, MONMOUTH COUNTY SITE GENERATED TRAFFIC VOLUMES		FIGURE 3 D	
	JOB NO. 13-112	DATE: DEC 2024	LEGEND: ← PM PSH(SAT PSH)	

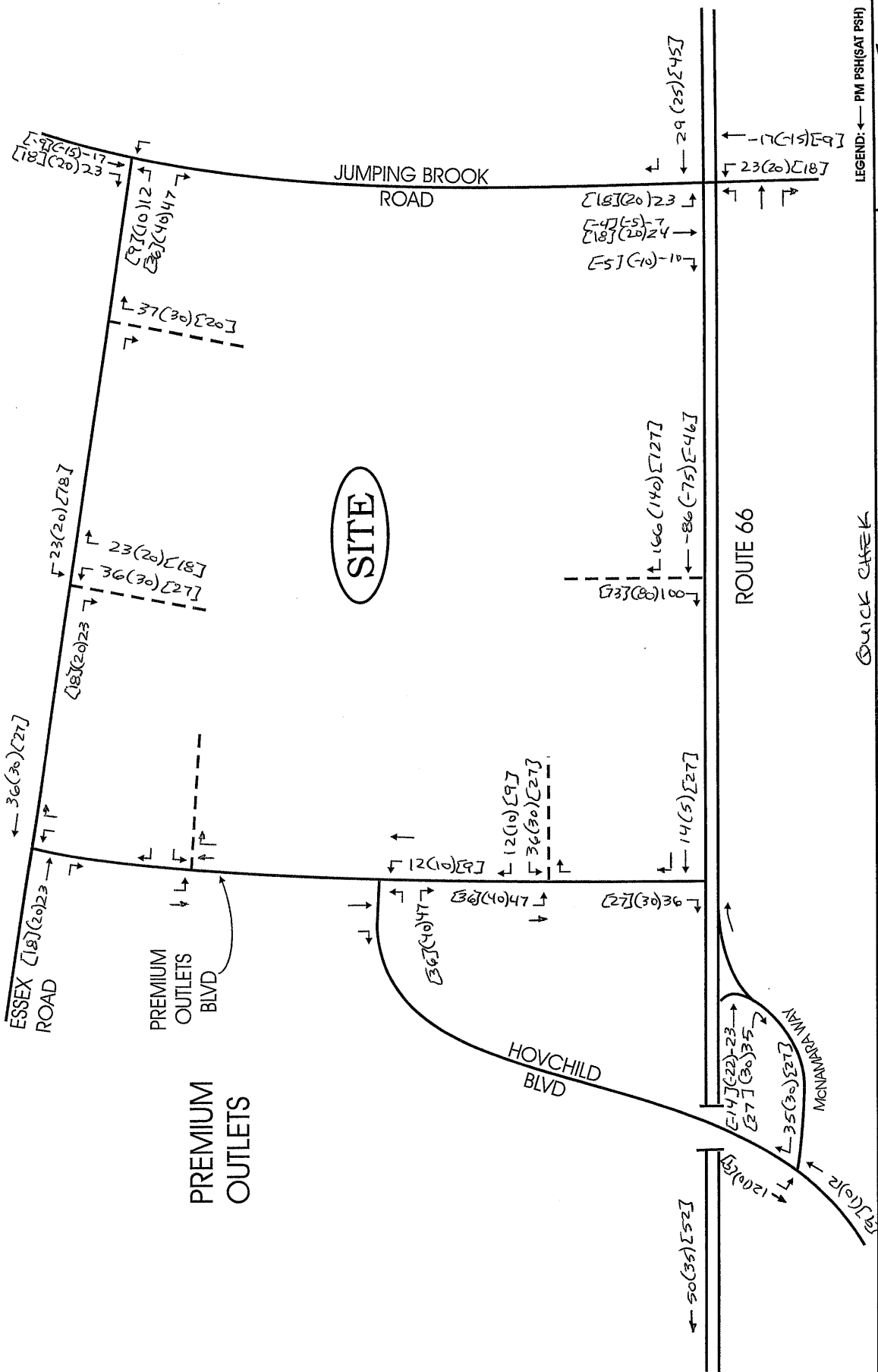


McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
SITE GENERATED TRAFFIC VOLUMES

JOB NO. 13-112
DATE: DEC 2024





Quick check

McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

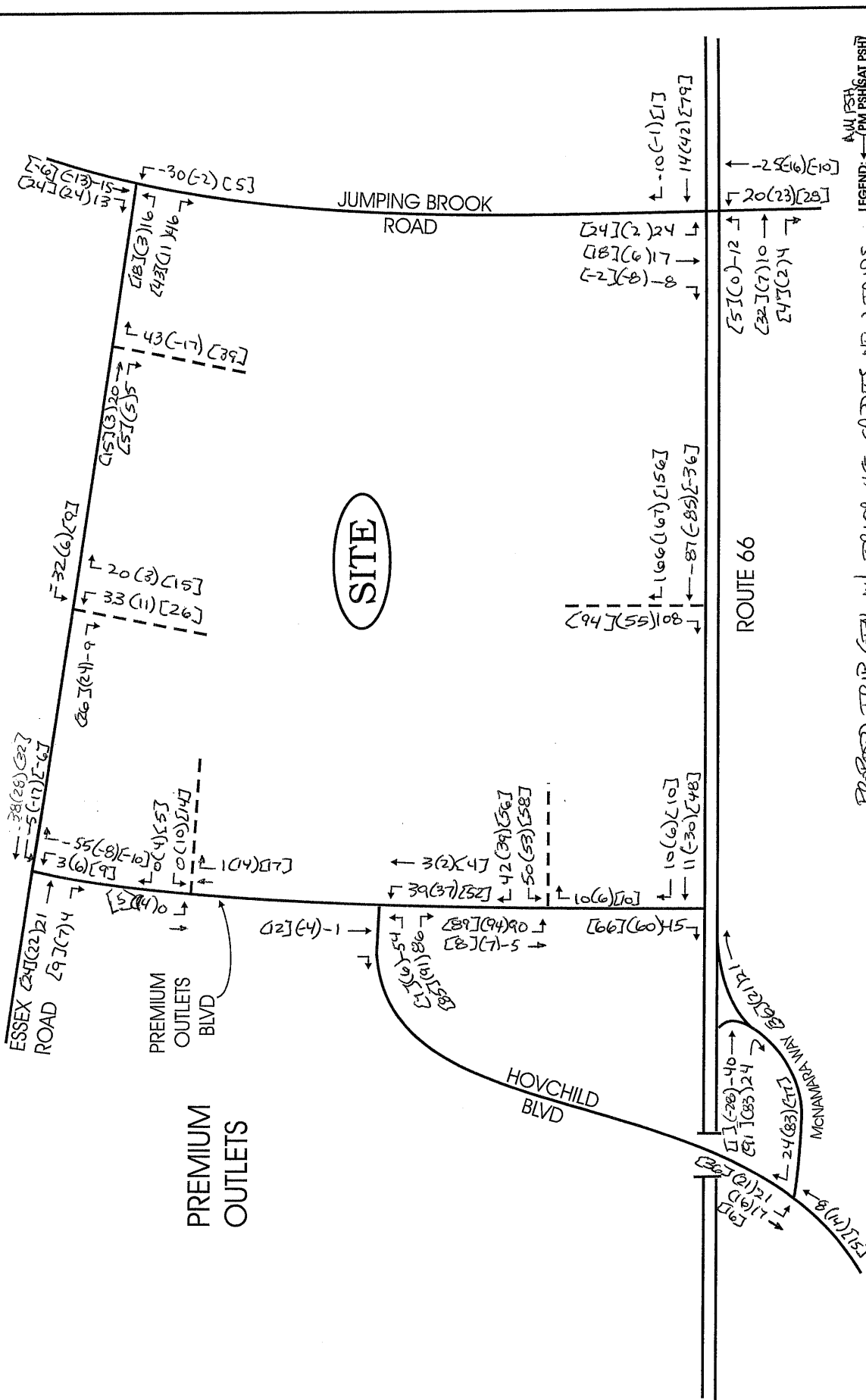
**SUBJECT: 3601ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
SITE GENERATED TRAFFIC VOLUMES**

FIGURE 3F

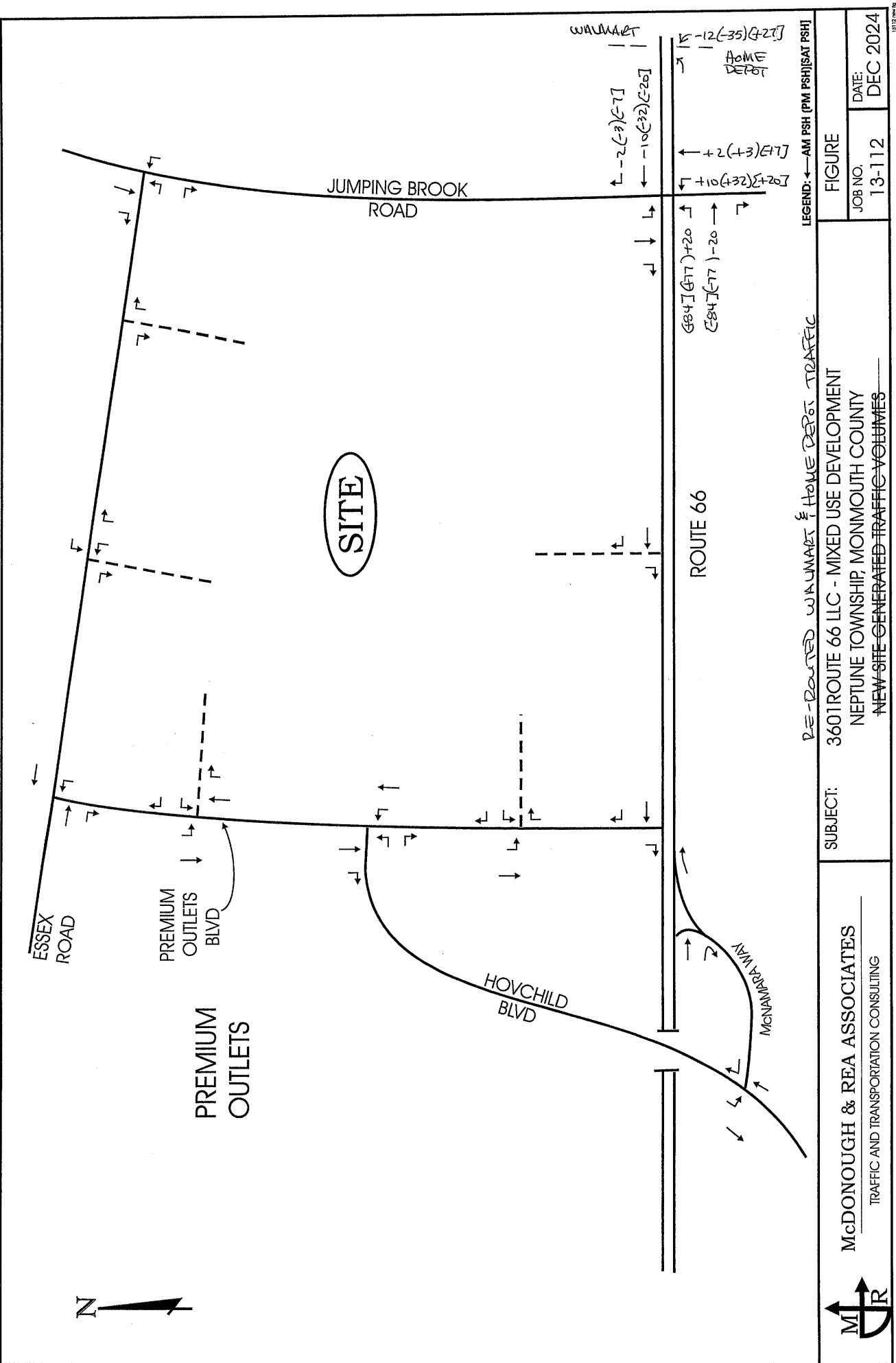
JOB NO.	DATE:
13-112	DEC 2024

19112 new to

APPENDIX D: TRAFFIC VOLUME WORKSHEETS



 McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: LOT 3 BLOCK 1508 - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP MONMOUTH COUNTY SITE GENERATED TRAFFIC VOLUMES	FIGURE 3A	
		JOB NO. 13-112	DATE: DEC 2024



McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT:

3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
NEW SITE GENERATED TRAFFIC VOLUMES

DE-ROUTED WALMART & HOME DEPOT TRAFFIC

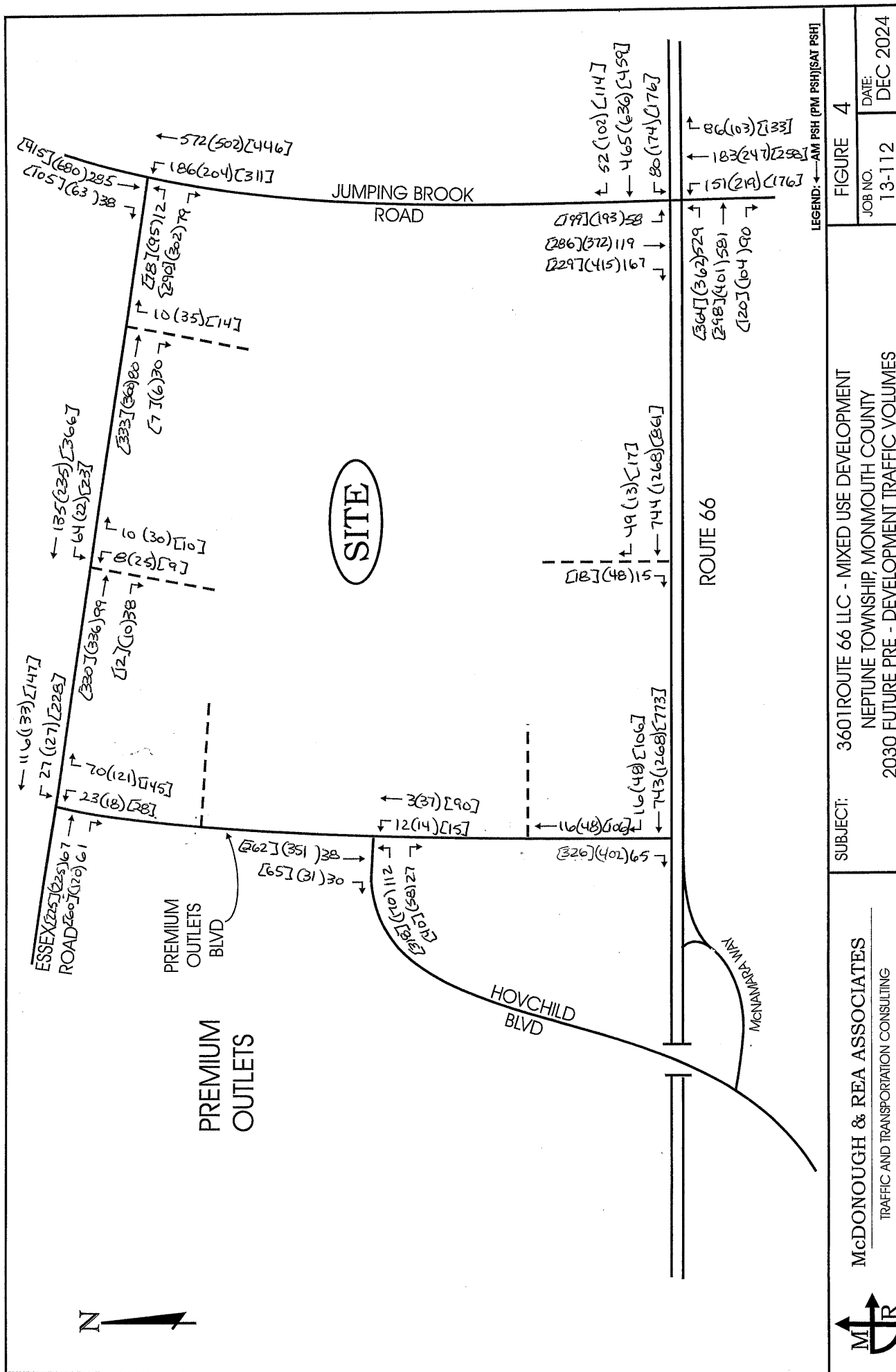
LEGEND: ← AM PSH (PM PSH) SAT PSH

FIGURE

JOB NO.
13-112

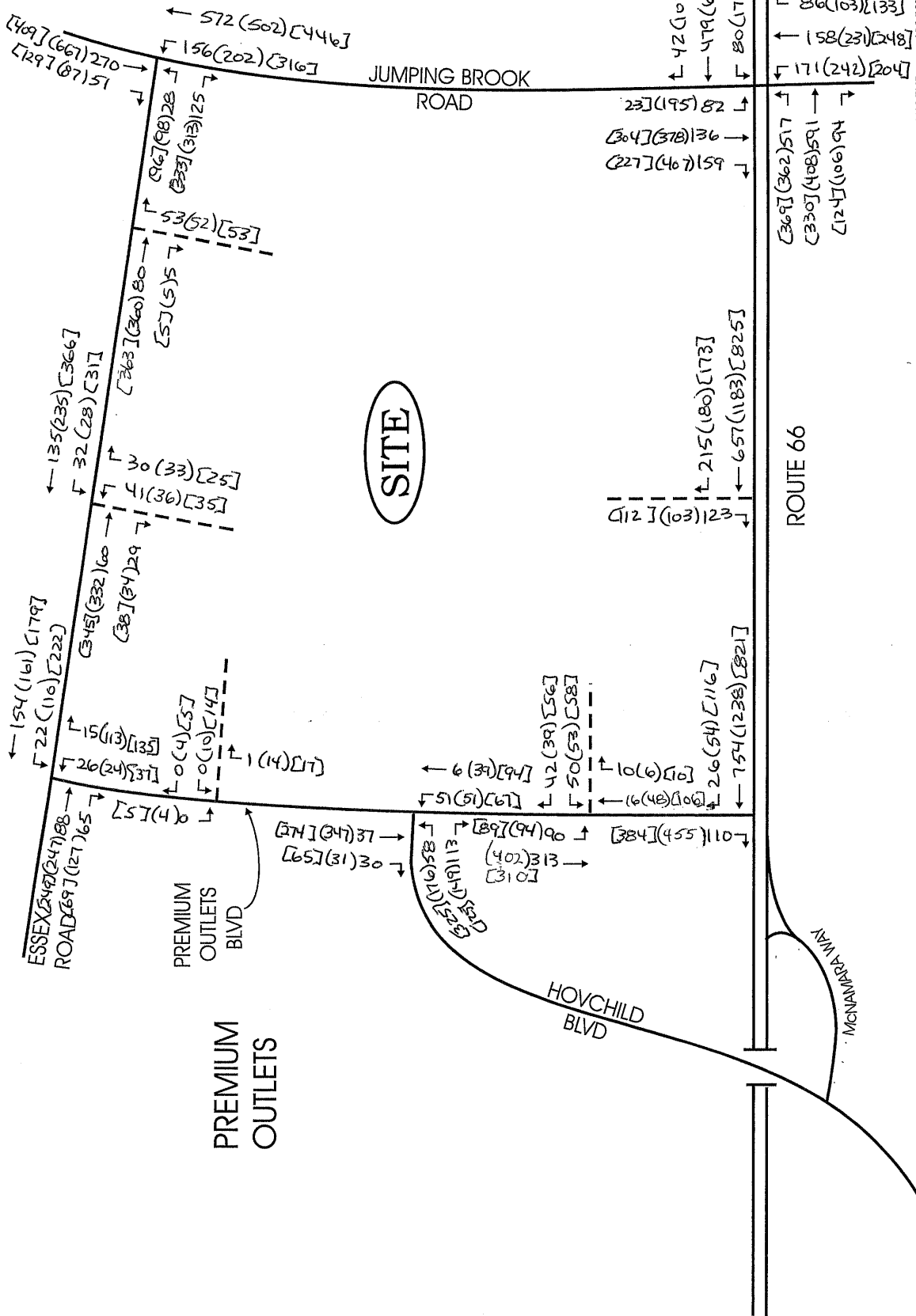
DATE:
DEC 2024

13-112-004



LEGEND: ← AM PSH (PM PSH) [SAT PSH]

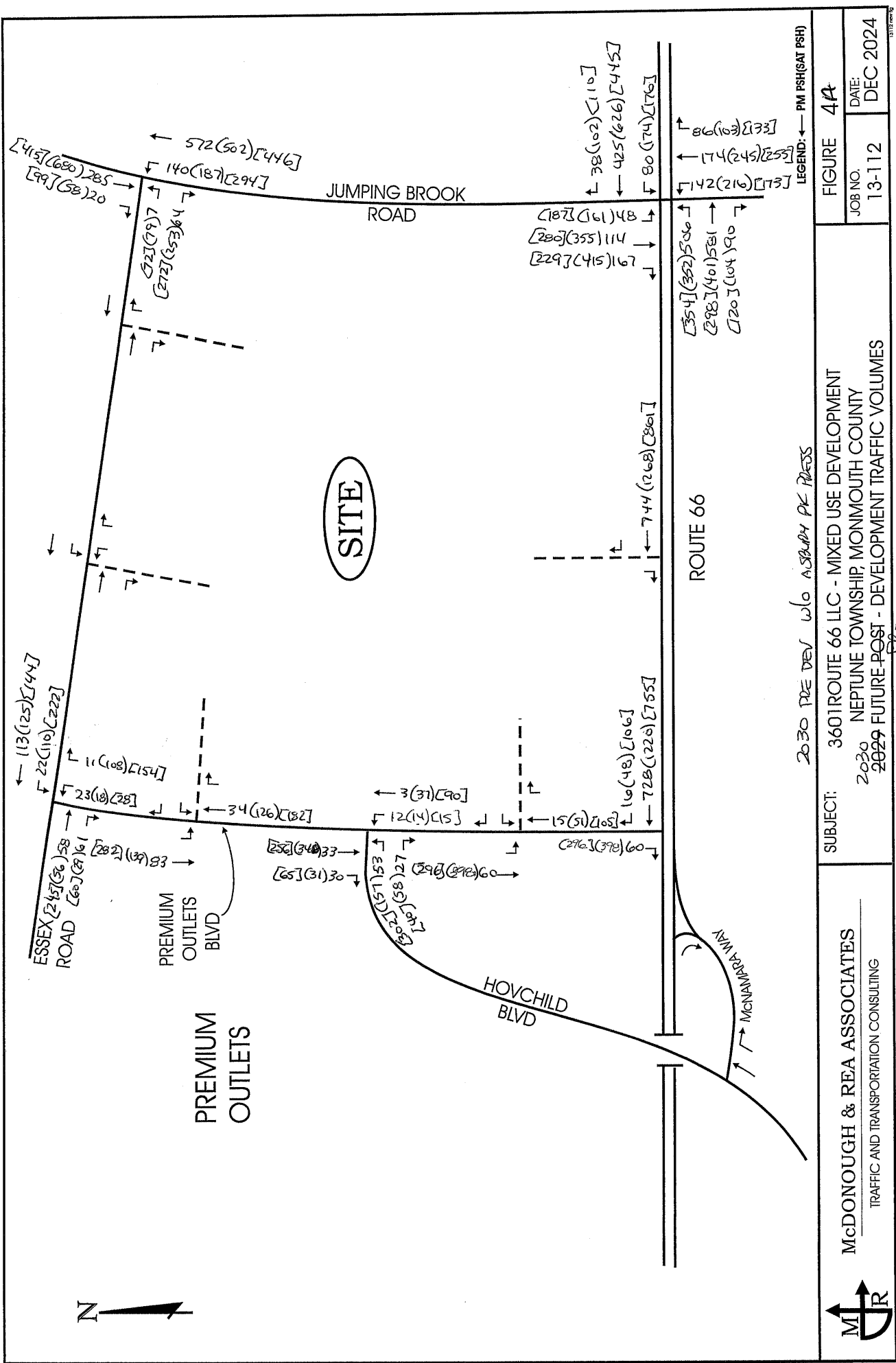
 McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP MONMOUTH COUNTY 2030 FUTURE PRE - DEVELOPMENT TRAFFIC VOLUMES	
	FIGURE 4	JOB NO. 13-112 DATE: DEC 2024



LEGEND: ← AM PSH (PM PSH) SAT PSH

 McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP, MONMOUTH COUNTY 2030 FUTURE POST - DEVELOPMENT TRAFFIC VOLUMES		FIGURE 5
	JOB NO. 13-112	DATE: DEC 2024	

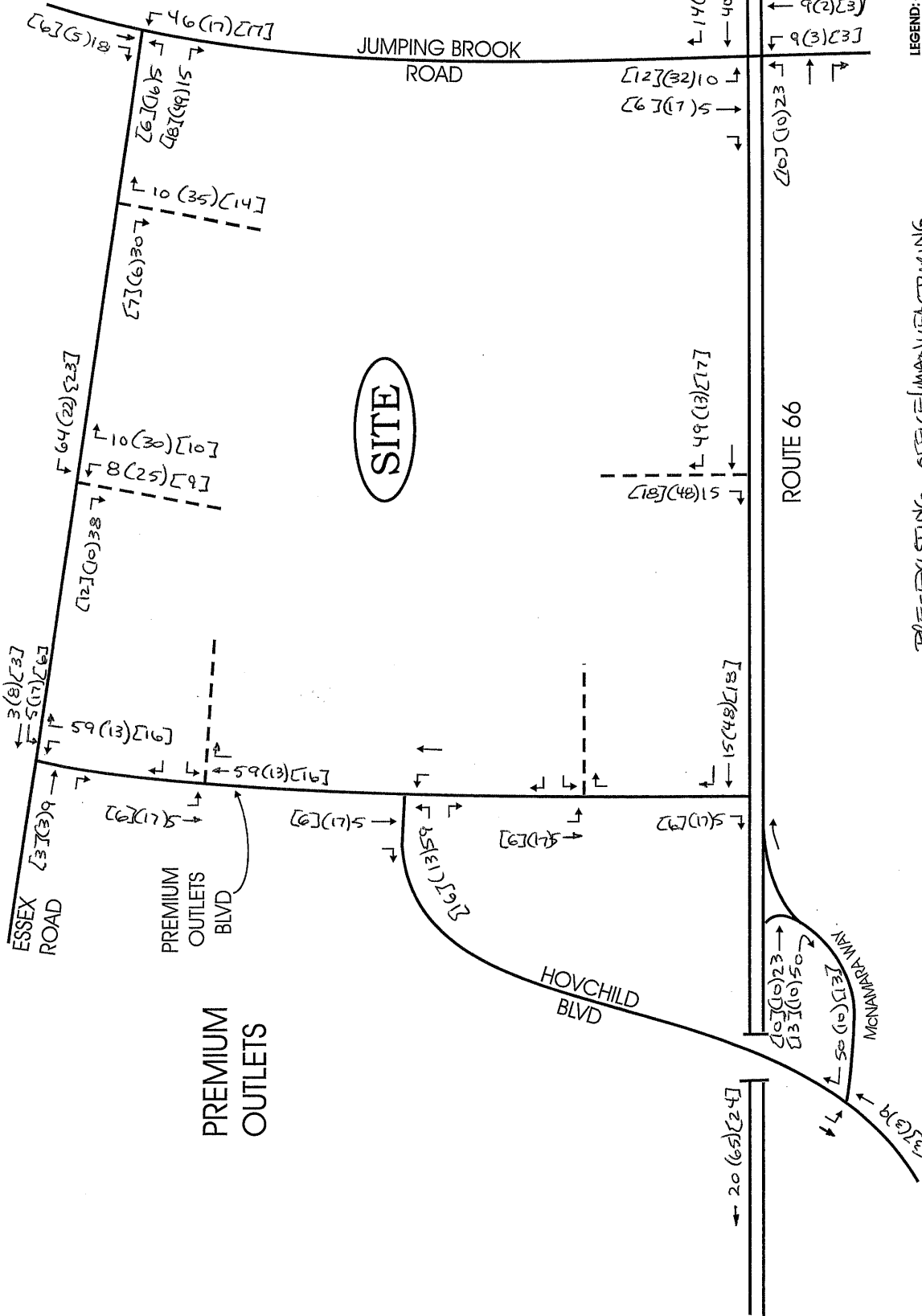
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McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT
NEPTUNE TOWNSHIP, MONMOUTH COUNTY
2029 FUTURE POST - DEVELOPMENT TRAFFIC VOLUMES

FIGURE 4A
JOB NO. 13-112
DATE: DEC 2024

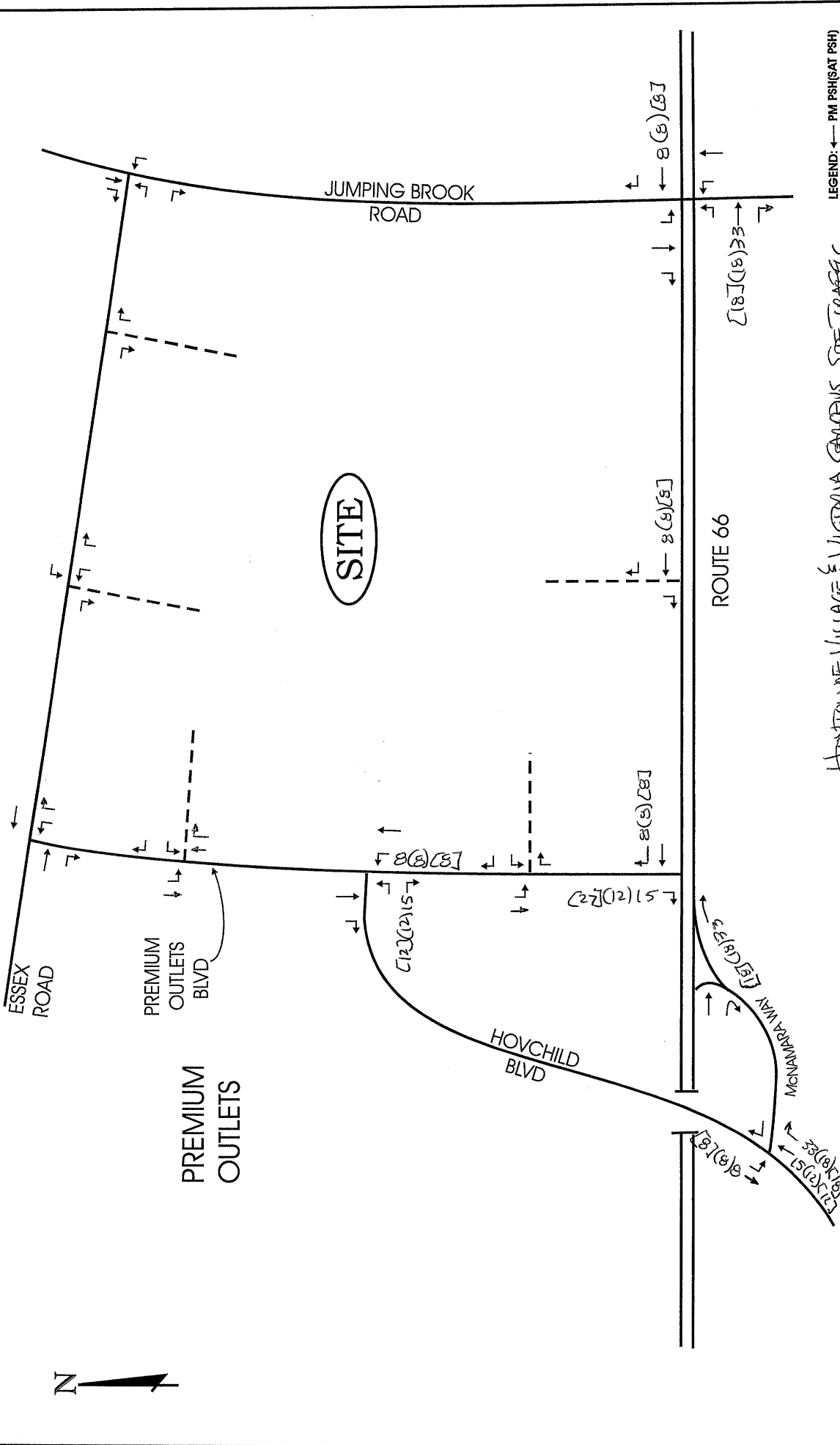


LEGEND: ← PM PSH(SAT PSH)

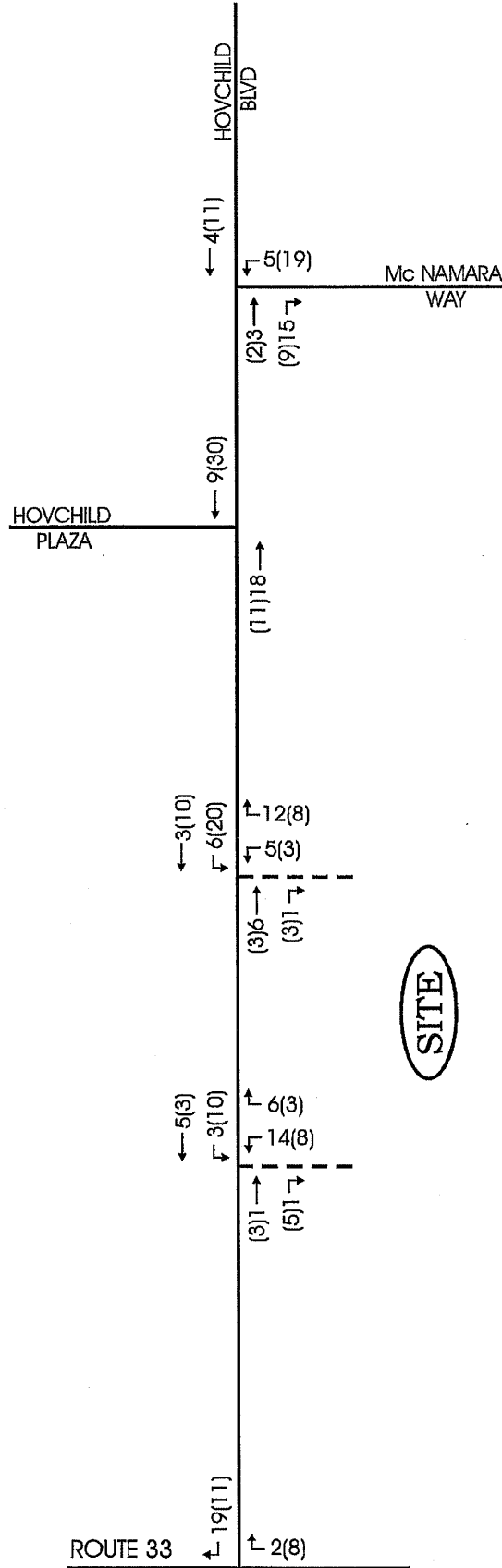
PRE-EXISTING OFFICE MANUFACTURING

McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP, MONMOUTH COUNTY SITE GENERATED TRAFFIC VOLUMES	FIGURE 3	
		JOB NO. 13-112	DATE: DEC 2024

DATE: 12/11/24



McDONOUGH & REA ASSOCIATES TRAFFIC AND TRANSPORTATION CONSULTING	SUBJECT: 3601 ROUTE 66 LLC - MIXED USE DEVELOPMENT NEPTUNE TOWNSHIP, MONMOUTH COUNTY SITE GENERATED TRAFFIC VOLUMES	FIGURE 3
		JOB NO. 13-112



LEGEND: ← AM PSH(PM PSH)



MCDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

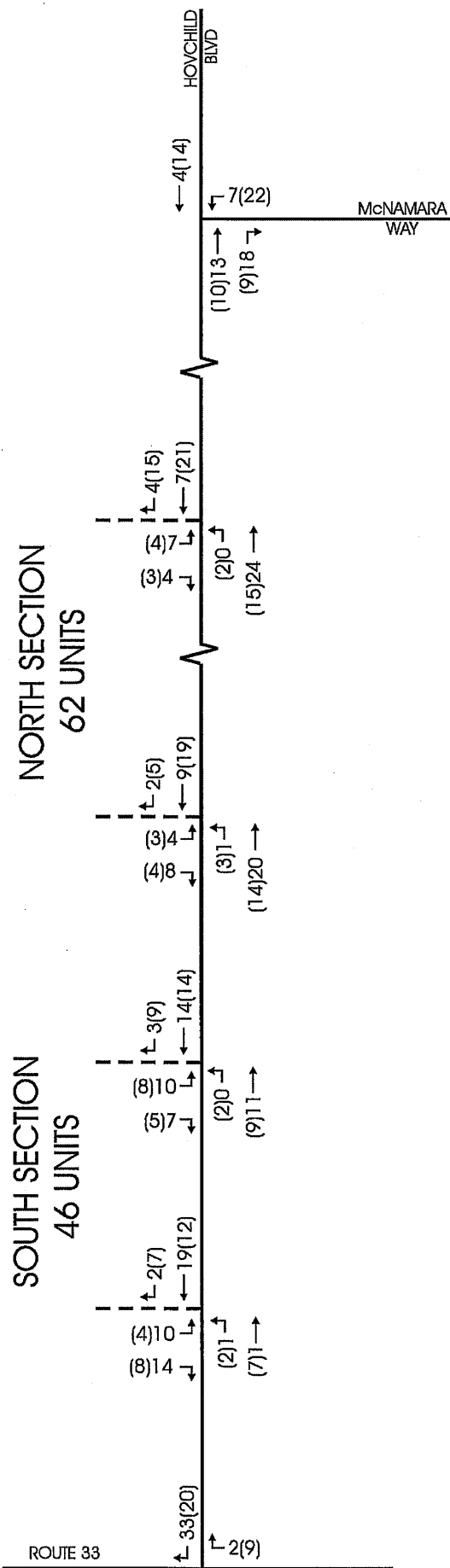
SUBJECT:

VICTORIA GARDENS - NEPTUNE TOWNSHIP
SITE GENERATED TRAFFIC VOLUMES

FIGURE 3

JOB NO.
21-186

DATE:
JUNE 2021



McDONOUGH & REA ASSOCIATES
TRAFFIC AND TRANSPORTATION CONSULTING

SUBJECT:

HOVTOWNE VILLAGE
SITE GENERATED TRAFFIC VOLUMES - COMPOSITE

FIGURE 5

JOB NO. 21-212	DATE: JULY 2021
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APPENDIX E: INTERSECTION ANALYSIS

**LEVEL OF SERVICE
FOR
SIGNALIZED INTERSECTIONS¹**

<u>Level of Service</u>	<u>Description</u>	<u>Control (Signal) Delay Per Vehicle (Seconds)</u>
A	Very short delay, good progression; most vehicles do not stop at intersection.	≤ 10.0
B	Generally good progression and/or short cycle length; more vehicles stop at intersection than at Level of Service "A."	> 10.0 and ≤ 20.0
C	Fair progression and/or longer cycle length; significant number of vehicles stop at intersection, though many still pass through without stopping.	> 20.0 and ≤ 35.0
D	Congestion becomes noticeable; longer delays from unfavorable progression, long cycle lengths, or high volume/capacity ratios; many vehicles stop at intersection.	> 35.0 and ≤ 55.0
E	Considered to be the <u>limit of acceptable delay</u> ; indicative of poor progression, long cycle lengths, or high volume/capacity ratios; frequent individual cycles failures.	> 55.0 and ≤ 80.0
F	Often an indication of over-saturation (i.e., arrival flow exceeds capacity); also caused by poor progression and long cycles lengths; capacity is not necessarily exceeded under this level of service.	> 80.0

¹ Transportation Research Board, Highway Capacity Manual 2022, National Research Council, Washington, DC, 2022.

Table

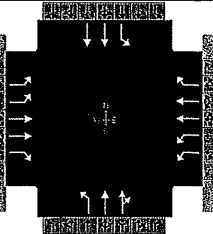
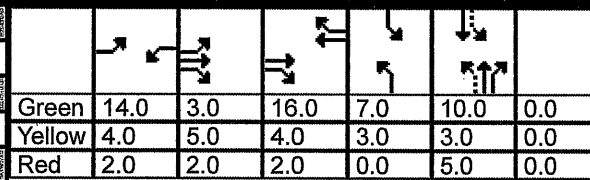
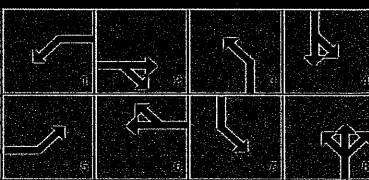
Future 2030 Levels of Service NJ Route 66 and Jumping Brook Road

Lane Group	AM Peak Hour No-Build			AM Peak Hour Build			Allowable		Violation	AM Peak Hour w/Mitigation		
	V/C	Delay	LOS	V/C	Delay	LOS	Delay	LOS		V/C	Delay	LOS
EB Left	0.59	27.0	C	0.58	26.8	C	50.2	N	N			
EB Thru	0.58	25.3	C	0.59	25.5	C	38.9	N	N			
EB Right	0.20	21.1	C	0.21	21.2	C	35.9	N	N			
WB Left	0.15	28.5	C	0.15	28.5	C	41.3	N	N			
WB Thru	0.77	39.4	D	0.80	40.6	D	49.4	N	N			
WB Right	0.19	28.9	C	0.16	28.3	C	41.1	N	N			
NB Left	0.51	33.1	C	0.59	36.1	D	44.9	N	N			
NB Thru/Right	0.69	47.0	D	0.64	47.3	D	55.2	N	N			
SB Left	0.24	28.4	C	0.33	29.9	C	41.2	N	N			
SB Thru	0.30	33.5	C	0.34	34.0	C	45.0	N	N			
Overall		32.1	C		32.1	C						

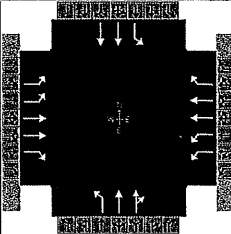
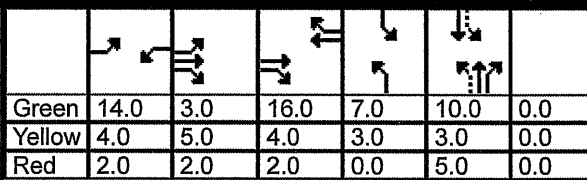
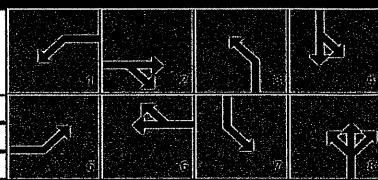
Lane Group	PM Peak Hour No-Build			PM Peak Hour Build			Allowable		Violation	PM Peak Hour w/Mitigation		
	V/C	Delay	LOS	V/C	Delay	LOS	Delay	LOS		V/C	Delay	LOS
EB Left	0.72	39.4	D	0.72	32.4	D	49.5	N	N			
EB Thru	0.50	27.7	C	0.51	27.9	C	40.7	N	N			
EB Right	0.29	26.1	C	0.30	26.2	C	39.6	N	N			
WB Left	0.32	30.2	C	0.32	30.2	C	42.7	N	N			
WB Thru	0.79	35.3	D	0.85	38.3	D	46.6	N	N			
WB Right	0.29	26.0	C	0.28	26.0	C	39.5	N	N			
NB Left	0.75	39.7	D	0.83	47.2	D	49.7	N	N			
NB Thru/Right	0.74	50.4	D	0.71	48.1	D	57.8	N	N			
SB Left	0.65	34.2	C	0.64	33.9	C	45.6	N	N			
SB Thru	0.77	43.1	D	0.79	43.9	D	52.3	N	N			
Overall		36.7	D		37.7	D						

Lane Group	Sat. Peak Hour No-Build			Sat. Peak Hour Build			Allowable		Violation	Sat. Peak Hour w/Mitigation		
	V/C	Delay	LOS	V/C	Delay	LOS	Delay	LOS		V/C	Delay	LOS
EB Left	0.72	39.5	D	0.73	39.9	D	49.6	N	N			
EB Thru	0.41	28.1	C	0.46	28.7	C	41.1	N	N			
EB Right	0.37	29.2	C	0.39	29.5	C	41.7	N	N			
WB Left	0.32	30.3	C	0.32	30.3	C	42.5	N	N			
WB Thru	0.64	31.9	C	0.75	35.1	D	43.9	N	N			
WB Right	0.36	28.9	C	0.36	28.9	C	41.6	N	N			
NB Left	0.49	26.8	C	0.57	29.1	C	40.1	N	N			
NB Thru/Right	0.84	60.1	E	0.82	57.8	E	65.1	N	N			
SB Left	0.61	30.9	C	0.68	33.6	C	43.2	N	N			
SB Thru	0.60	36.6	D	0.63	37.5	D	47.4	N	N			
Overall		36.1	D		36.6	D						

HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst				Analysis Date		12/16/2024		Area Type		Other					
Jurisdiction				Time Period		AM		PHF		0.90					
Urban Street		ROUTE 66		Analysis Year		2030 BUILD		Analysis Period		1> 7:00					
Intersection		JUMPING BROOK RD		File Name		13-112AFB-1.xus									
Project Description		13-112AFB-1													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				517	591	94	80	479	42	171	158	86	82	136	
Signal Information															
Cycle, s	80.0	Reference Phase	2	Green	14.0	3.0	16.0	7.0	10.0	0.0					
Offset, s	0	Reference Point	End	Yellow	4.0	5.0	4.0	3.0	3.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	0.0	5.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6	3	8	7	4				
Case Number				2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0				
Phase Duration, s				30.0	32.0	20.0	22.0	10.0	18.0	10.0	18.0				
Change Period (Y+R), s				7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0				
Max Allow Headway (MAH), s				3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1				
Queue Clearance Time (g _{cl}), s				13.4		3.7		9.0	8.0	5.4	5.1				
Green Extension Time (g _e), s				1.0	0.0	0.1	0.0	0.0	0.2	0.0	0.4				
Phase Call Probability				1.00		1.00		1.00	1.00	1.00	1.00				
Max Out Probability				0.01		0.00		1.00	1.00	1.00	0.27				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h				574	657	104	89	532	47	190	140	131	91	151	
Adjusted Saturation Flow Rate (s _s), veh/h/ln				1730	1781	1585	1730	1781	1585	1781	1870	1654	1781	1781	
Queue Service Time (g _s), s				11.4	12.4	3.9	1.7	11.4	2.0	7.0	5.6	6.0	3.4	3.1	
Cycle Queue Clearance Time (g _{cl}), s				11.4	12.4	3.9	1.7	11.4	2.0	7.0	5.6	6.0	3.4	3.1	
Green Ratio (g/C)				0.29	0.31	0.31	0.18	0.19	0.19	0.21	0.12	0.12	0.21	0.12	
Capacity (c), veh/h				995	1113	495	605	668	297	322	234	207	273	445	
Volume-to-Capacity Ratio (X)				0.578	0.590	0.211	0.147	0.797	0.157	0.591	0.597	0.636	0.334	0.339	
Back of Queue (Q _b), ft/ln (90 th percentile)				183	199	65	32	211	36	158	138	135	74	65	
Back of Queue (Q), veh/ln (90 th percentile)				7.2	7.8	2.6	1.3	8.3	1.4	6.2	5.4	5.4	2.9	2.5	
Queue Storage Ratio (RQ) (90 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh				24.3	23.2	20.2	27.9	31.0	27.2	28.3	33.1	33.3	26.6	32.0	
Incremental Delay (d ₂), s/veh				2.4	2.3	1.0	0.5	9.6	1.1	7.8	10.8	14.0	3.3	2.1	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh				26.8	25.5	21.2	28.5	40.6	28.3	36.1	43.9	47.3	29.9	34.0	
Level of Service (LOS)				C	C	C	C	D	C	D	D	D	C	C	
Approach Delay, s/veh / LOS				25.7		C	38.1		D	41.6		D	32.5		C
Intersection Delay, s/veh / LOS				32.1						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

HCS Signalized Intersection Results Summary

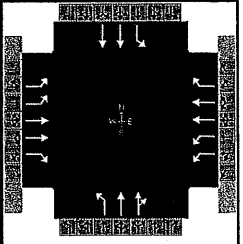
General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst				Analysis Date		12/16/2024		Area Type		Other					
Jurisdiction				Time Period		AM		PHF		0.90					
Urban Street		ROUTE 66		Analysis Year		2030 NOBUILD		Analysis Period		1> 7:00					
Intersection		JUMPING BROOK RD		File Name		13-112ANB-1.xus									
Project Description		13-112ANB-1													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				529	581	90	80	465	52	151	183	86	58	119	
Signal Information															
Cycle, s	80.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
Green	14.0	3.0	16.0	7.0	10.0	0.0									
Yellow	4.0	5.0	4.0	3.0	3.0	0.0									
Red	2.0	2.0	2.0	0.0	5.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6	3	8	7	4				
Case Number				2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0				
Phase Duration, s				30.0	32.0	20.0	22.0	10.0	18.0	10.0	18.0				
Change Period, (Y+R), s				7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0				
Max Allow Headway (MAH), s				3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1				
Queue Clearance Time (g _{cs}), s				13.7		3.7		8.6	8.6	4.4	4.7				
Green Extension Time (g _e), s				1.0	0.0	0.1	0.0	0.0	0.2	0.0	0.5				
Phase Call Probability				1.00		1.00		1.00	1.00	1.00	1.00				
Max Out Probability				0.02		0.00		1.00	1.00	1.00	0.21				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h				588	646	100	89	517	58	168	154	145	64	132	
Adjusted Saturation Flow Rate (s _s), veh/h/ln				1730	1781	1585	1730	1781	1585	1781	1870	1672	1781	1781	
Queue Service Time (g _s), s				11.7	12.2	3.7	1.7	11.0	2.5	6.6	6.3	6.6	2.4	2.7	
Cycle Queue Clearance Time (g _{cc}), s				11.7	12.2	3.7	1.7	11.0	2.5	6.6	6.3	6.6	2.4	2.7	
Green Ratio (g/C)				0.29	0.31	0.31	0.18	0.19	0.19	0.21	0.12	0.12	0.21	0.12	
Capacity (c), veh/h				995	1113	495	605	668	297	329	234	209	264	445	
Volume-to-Capacity Ratio (X)				0.591	0.580	0.202	0.147	0.774	0.194	0.510	0.658	0.694	0.244	0.297	
Back of Queue (Q _b), ft/ln (90 th percentile)				187	195	62	32	203	45	138	154	150	51	56	
Back of Queue (Q), veh/ln (90 th percentile)				7.4	7.7	2.4	1.3	8.0	1.8	5.4	6.1	6.0	2.0	2.2	
Queue Storage Ratio (RQ) (90 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh				24.5	23.1	20.2	27.9	30.9	27.4	27.5	33.4	33.5	26.2	31.8	
Incremental Delay (d ₂), s/veh				2.6	2.2	0.9	0.5	8.5	1.5	5.5	13.6	17.3	2.2	1.7	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh				27.0	25.3	21.1	28.5	39.4	28.9	33.1	47.0	50.9	28.4	33.5	
Level of Service (LOS)				C	C	C	C	D	C	C	D	D	C	C	
Approach Delay, s/veh /LOS				25.8	C		37.0	D		43.2	D		31.8	C	
Intersection Delay, s/veh / LOS				32.1						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score /LOS															

HCS Signalized Intersection Results Summary

General Information

Agency		Analysis Date	12/16/2024	Duration, h	0.250
Analyst		Time Period	PM	Area Type	Other
Jurisdiction		Analysis Year	2030 NOBUILD	PHF	0.90
Urban Street	ROUTE 66	File Name	13-112PNB-1.xus	Analysis Period	1> 7:00
Intersection	JUMPING BROOK RD				
Project Description	13-112PNB-1				

Intersection Information



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (V), veh/h	362	401	104	174	636	102	219	247	103	193	372	

Signal Information

Cycle, s	80.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	14.0	20.0	10.0	12.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	5.0	3.0	3.0	0.0	0.0		
				Red	2.0	2.0	0.0	5.0	0.0	0.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	20.0	27.0	20.0	27.0	13.0	20.0	13.0	20.0
Change Period, (Y+R), s	7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time (g _q), s	10.8		5.9		11.2	10.5	9.9	10.9
Green Extension Time (g _e), s	0.2	0.0	0.2	0.0	0.0	0.4	0.0	0.3
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		1.00	1.00	1.00	1.00

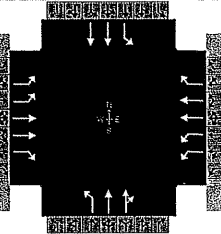
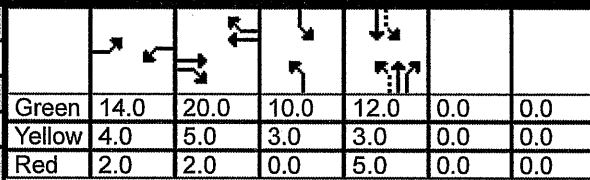
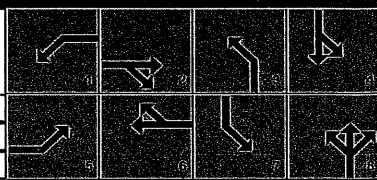
Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h	402	446	116	193	707	113	243	201	188	214	413	
Adjusted Saturation Flow Rate (s ₀), veh/h/ln	1730	1781	1585	1730	1781	1585	1781	1870	1686	1781	1781	
Queue Service Time (g _s), s	8.8	8.6	4.7	3.9	14.9	4.6	9.2	8.2	8.5	7.9	8.9	
Cycle Queue Clearance Time (g _c), s	8.8	8.6	4.7	3.9	14.9	4.6	9.2	8.2	8.5	7.9	8.9	
Green Ratio (g/C)	0.16	0.25	0.25	0.18	0.25	0.25	0.28	0.15	0.15	0.28	0.15	
Capacity (c), veh/h	562	890	396	605	890	396	326	281	253	331	534	
Volume-to-Capacity Ratio (X)	0.716	0.500	0.292	0.319	0.794	0.286	0.747	0.717	0.743	0.648	0.774	
Back of Queue (Q _b), ft/ln (90 th percentile)	166	151	83	74	250	81	198	189	183	168	182	
Back of Queue (Q), veh/ln (90 th percentile)	6.5	5.9	3.3	2.9	9.8	3.2	7.8	7.5	7.3	6.6	7.2	
Queue Storage Ratio (RQ), (90 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	31.7	25.7	24.3	28.8	28.1	24.2	25.2	32.4	32.5	24.7	32.7	
Incremental Delay (d ₂), s/veh	7.6	2.0	1.9	1.4	7.2	1.8	14.5	14.6	17.8	9.4	10.5	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	39.4	27.7	26.1	30.2	35.3	26.0	39.7	46.9	50.4	34.2	43.1	
Level of Service (LOS)	D	C	C	C	D	C	D	D	D	C	D	
Approach Delay, s/veh / LOS	32.4	C		33.3	C		45.2	D		40.1	D	
Intersection Delay, s/veh / LOS	36.7						D					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

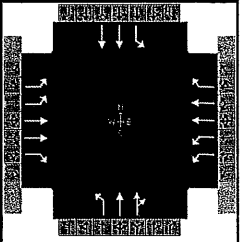
HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst				Analysis Date		12/16/2024		Area Type		Other					
Jurisdiction				Time Period		PM		PHF		0.90					
Urban Street		ROUTE 66		Analysis Year		2030 BUILD		Analysis Period		1> 7:00					
Intersection		JUMPING BROOK RD		File Name		13-112PFB-1.xus									
Project Description		13-112PFB-1													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				362	408	106	174	678	101	242	231	103	195	378	
Signal Information															
Cycle, s	80.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
Green	14.0	20.0	10.0	12.0	0.0	0.0									
Yellow	4.0	5.0	3.0	3.0	0.0	0.0									
Red	2.0	2.0	0.0	5.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6	3	8	7	4				
Case Number				2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0				
Phase Duration, s				20.0	27.0	20.0	27.0	13.0	20.0	13.0	20.0				
Change Period (Y+R), s				7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0				
Max Allow Headway (MAH), s				3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1				
Queue Clearance Time (g _c), s				10.8		5.9		12.0	10.1	10.0	11.1				
Green Extension Time (g _e), s				0.2	0.0	0.2	0.0	0.0	0.5	0.0	0.2				
Phase Call Probability				1.00		1.00		1.00	1.00	1.00	1.00				
Max Out Probability				1.00		0.00		1.00	1.00	1.00	1.00				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h				402	453	118	193	753	112	269	192	179	217	420	
Adjusted Saturation Flow Rate (s _f), veh/h/ln				1730	1781	1585	1730	1781	1585	1781	1870	1678	1781	1781	
Queue Service Time (g _s), s				8.8	8.8	4.8	3.9	16.1	4.6	10.0	7.8	8.1	8.0	9.1	
Cycle Queue Clearance Time (g _c), s				8.8	8.8	4.8	3.9	16.1	4.6	10.0	7.8	8.1	8.0	9.1	
Green Ratio (g/C)				0.16	0.25	0.25	0.18	0.25	0.25	0.28	0.15	0.15	0.28	0.15	
Capacity (c), veh/h				562	890	396	605	890	396	324	281	252	336	534	
Volume-to-Capacity Ratio (X)				0.716	0.509	0.297	0.319	0.846	0.283	0.831	0.684	0.712	0.644	0.786	
Back of Queue (Q _b), ft/ln (90 th percentile)				166	153	84	74	275	80	233	179	173	168	186	
Back of Queue (Q), veh/ln (90 th percentile)				6.5	6.0	3.3	2.9	10.8	3.2	9.2	7.0	6.9	6.6	7.3	
Queue Storage Ratio (RQ) (90 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh				31.7	25.8	24.3	28.8	28.5	24.2	25.9	32.2	32.4	24.7	32.8	
Incremental Delay (d ₂), s/veh				7.6	2.1	1.9	1.4	9.7	1.8	21.3	12.7	15.8	9.2	11.1	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh				39.4	27.9	26.2	30.2	38.3	26.0	47.2	45.0	48.1	33.9	43.9	
Level of Service (LOS)				D	C	C	C	D	C	D	D	D	C	D	
Approach Delay, s/veh / LOS				32.4	C		35.5	D		46.8	D		40.5	D	
Intersection Delay, s/veh / LOS				37.7						D					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

HCS Signalized Intersection Results Summary

General Information

Agency		Duration, h	0.250
Analyst		Analysis Date	12/16/2024
Jurisdiction		Area Type	Other
Urban Street	ROUTE 66	Time Period	SAT
Intersection	JUMPING BROOK RD	PHF	0.90
Project Description	13-112SNB-1	Analysis Year	2030 NO BUILD
		Analysis Period	1> 7:00
		File Name	13-112SNB-1.xus



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	364	298	120	176	459	114	176	258	133	199	286	

Signal Information

Cycle, s	80.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	14.0	18.0	12.0	12.0	0.0	0.0						
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	5.0	3.0	3.0	0.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	0.0	5.0	0.0	0.0						

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0
Phase Duration, s	20.0	25.0	20.0	25.0	15.0	20.0	15.0	20.0
Change Period (Y+R), s	7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1
Queue Clearance Time (g _s), s	10.9		6.0		8.9	11.8	9.9	8.7
Green Extension Time (g _e), s	0.2	0.0	0.2	0.0	0.1	0.1	0.1	0.7
Phase Call Probability	1.00		1.00		1.00	1.00	1.00	1.00
Max Out Probability	1.00		0.00		1.00	1.00	1.00	0.89

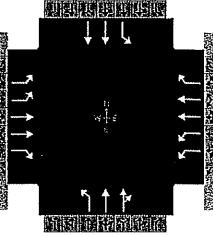
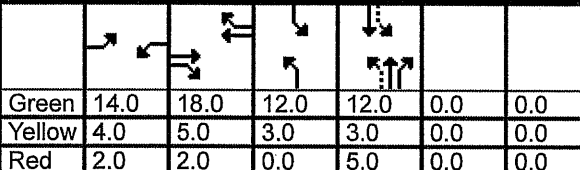
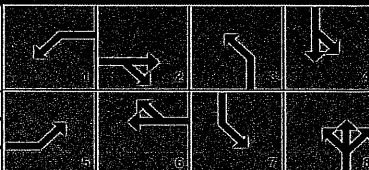
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h	404	331	133	196	510	127	196	226	208	221	318	
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1781	1585	1730	1781	1585	1781	1870	1658	1781	1781	
Queue Service Time (g _s), s	8.9	6.4	5.7	4.0	10.4	5.4	6.9	9.4	9.8	7.9	6.7	
Cycle Queue Clearance Time (g _c), s	8.9	6.4	5.7	4.0	10.4	5.4	6.9	9.4	9.8	7.9	6.7	
Green Ratio (g/C)	0.16	0.22	0.22	0.18	0.22	0.22	0.30	0.15	0.15	0.30	0.15	
Capacity (c), veh/h	562	801	357	605	801	357	401	281	249	360	534	
Volume-to-Capacity Ratio (X)	0.719	0.413	0.374	0.323	0.636	0.355	0.487	0.807	0.836	0.614	0.595	
Back of Queue (Q), ft/ln (90th percentile)	166	119	103	74	181	97	139	224	216	163	136	
Back of Queue (Q), veh/ln (90th percentile)	6.6	4.7	4.1	2.9	7.1	3.8	5.5	8.8	8.7	6.4	5.4	
Queue Storage Ratio (RQ) (90th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	31.8	26.5	26.2	28.9	28.0	26.1	22.6	32.9	33.0	23.3	31.7	
Incremental Delay (d ₂), s/veh	7.7	1.6	3.0	1.4	3.8	2.8	4.2	21.5	27.0	7.6	4.8	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	39.5	28.1	29.2	30.3	31.9	28.9	26.8	54.4	60.1	30.9	36.6	
Level of Service (LOS)	D	C	C	C	C	C	C	D	E	C	D	
Approach Delay, s/veh / LOS	33.6	C		31.0	C		47.7	D		34.2	C	
Intersection Delay, s/veh / LOS	36.1						D					

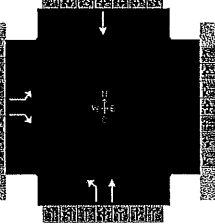
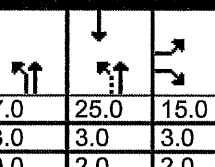
Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency						Duration, h		0.250							
Analyst						Analysis Date		12/16/2024							
Jurisdiction						Time Period		SAT							
Urban Street		ROUTE 66		Analysis Year		2030 BUILD		Analysis Period		1> 7:00					
Intersection		JUMPING BROOK RD		File Name		13-112SFB-1.xus									
Project Description		13-112SFB-1													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				369	330	124	176	538	115	204	248	133	223	304	
Signal Information															
Cycle, s	80.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
Green	14.0	18.0	12.0	12.0	0.0	0.0									
Yellow	4.0	5.0	3.0	3.0	0.0	0.0									
Red	2.0	2.0	0.0	5.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6	3	8	7	4				
Case Number				2.0	3.0	2.0	3.0	1.1	4.0	1.1	4.0				
Phase Duration, s				20.0	25.0	20.0	25.0	15.0	20.0	15.0	20.0				
Change Period (Y+R), s				7.0	7.0	6.0	7.0	3.0	8.0	3.0	8.0				
Max Allow Headway (MAH), s				3.0	0.0	3.0	0.0	3.1	3.1	3.1	3.1				
Queue Clearance Time (g _q), s				11.0		6.0		10.2	11.5	11.0	9.1				
Green Extension Time (g _e), s				0.2	0.0	0.2	0.0	0.1	0.1	0.1	0.6				
Phase Call Probability				1.00		1.00		1.00	1.00	1.00	1.00				
Max Out Probability				1.00		0.00		1.00	1.00	1.00	1.00				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h				410	367	138	196	598	128	227	221	203	248	338	
Adjusted Saturation Flow Rate (s _{sat}), veh/h/ln				1730	1781	1585	1730	1781	1585	1781	1870	1653	1781	1781	
Queue Service Time (g _s), s				9.0	7.1	5.9	4.0	12.5	5.4	8.2	9.1	9.5	9.0	7.1	
Cycle Queue Clearance Time (g _c), s				9.0	7.1	5.9	4.0	12.5	5.4	8.2	9.1	9.5	9.0	7.1	
Green Ratio (g/C)				0.16	0.22	0.22	0.18	0.22	0.22	0.30	0.15	0.15	0.30	0.15	
Capacity (c), veh/h				562	801	357	605	801	357	395	281	248	363	534	
Volume-to-Capacity Ratio (X)				0.729	0.458	0.386	0.323	0.746	0.358	0.574	0.787	0.817	0.682	0.632	
Back of Queue (Q _b), ft/ln (90th percentile)				169	131	107	74	217	98	162	215	208	186	145	
Back of Queue (Q), veh/ln (90th percentile)				6.7	5.2	4.2	2.9	8.5	3.9	6.4	8.5	8.3	7.3	5.7	
Queue Storage Ratio (RQ) (90th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh				31.8	26.8	26.3	28.9	28.9	26.1	23.1	32.8	32.9	23.7	31.9	
Incremental Delay (d ₂), s/veh				8.1	1.9	3.1	1.4	6.3	2.8	6.0	19.6	24.9	9.9	5.6	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh				39.9	28.7	29.5	30.3	35.1	28.9	29.1	52.4	57.8	33.6	37.5	
Level of Service (LOS)				D	C	C	C	D	C	C	D	E	C	D	
Approach Delay, s/veh / LOS				33.8	C		33.2	C		46.0	D		35.9	D	
Intersection Delay, s/veh / LOS				36.6						D					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

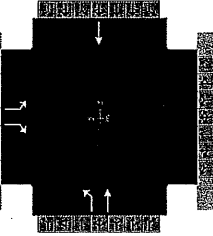
HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency		MRA				Duration, h		0.250							
Analyst		STK		Analysis Date		12/31/2024		Area Type		Other					
Jurisdiction				Time Period		AM		PHF		0.92					
Urban Street		PREM OUTLETS BLVD		Analysis Year		2030 NOBUILD		Analysis Period		1> 7:00					
Intersection		HOVCHILD BLVD		File Name		13-112ANB-6.xus									
Project Description		13-112ANB-6													
															
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				112		27				12	3			38	
Signal Information															
Cycle, s	60.0	Reference Phase	2	Green	7.0	25.0	15.0	0.0	0.0	0.0					
Offset, s	0	Reference Point	End	Yellow	3.0	3.0	3.0	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	2.0	2.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4			5	2		6				
Case Number					9.0			1.0	4.0		8.3				
Phase Duration, s					20.0			10.0	40.0		30.0				
Change Period, (Y+R _c), s					5.0			3.0	5.0		5.0				
Max Allow Headway (MAH), s					3.2			3.1	0.0		0.0				
Queue Clearance Time (g _s), s					5.3			2.2							
Green Extension Time (g _e), s					0.2			0.0	0.0		0.0				
Phase Call Probability					1.00			1.00							
Max Out Probability					0.00			0.02							
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14				5	2			6	
Adjusted Flow Rate (v), veh/h				122		29				13	3			41	
Adjusted Saturation Flow Rate (s _s), veh/h/ln				1781		1585				1781	1870			1870	
Queue Service Time (g _s), s				3.3		0.8				0.2	0.0			0.8	
Cycle Queue Clearance Time (g _c), s				3.3		0.8				0.2	0.0			0.8	
Green Ratio (g/C)				0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h				445		396				879	1091			779	
Volume-to-Capacity Ratio (X)				0.273		0.074				0.015	0.003			0.053	
Back of Queue (Q _b), ft/ln (90 th percentile)				64		15				3	1			14	
Back of Queue (Q), veh/ln (90 th percentile)				2.5		0.6				0.1	0.0			0.6	
Queue Storage Ratio (RQ _s) (90 th percentile)				0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh				18.1		17.2				5.7	5.2			10.4	
Incremental Delay (d ₂), s/veh				1.5		0.4				0.0	0.0			0.1	
Initial Queue Delay (d ₃), s/veh				0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh				19.6		17.6				5.8	5.2			10.6	
Level of Service (LOS)				B		B				A	A			B	
Approach Delay, s/veh / LOS				19.2	B	0.0		5.7	A	10.6	B				
Intersection Delay, s/veh / LOS				16.5						B					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency		MRA				Duration, h		0.250							
Analyst		STK		Analysis Date		12/31/2024		Area Type		Other					
Jurisdiction				Time Period		AM		PHF		0.92					
Urban Street		PREM OUTLETS BLVD		Analysis Year		2030 BUILD		Analysis Period		1> 7:00					
Intersection		HOVCHILD BLVD		File Name		13-112AFB-6.xus									
Project Description		13-112AFB-6													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (V), veh/h				58		113				51	6			37	
Signal Information															
Cycle, s		60.0	Reference Phase	2	Green	7.0	25.0	15.0	0.0	0.0	0.0	Yellow	3.0	3.0	3.0
Offset, s		0	Reference Point	End	Red	0.0	2.0	2.0	0.0	0.0	0.0	Force Mode	Fixed	Simult. Gap N/S	On
Uncoordinated		No	Simult. Gap E/W	On											
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4			5	2		6				
Case Number					9.0			1.0	4.0		8.3				
Phase Duration, s					20.0			10.0	40.0		30.0				
Change Period, (Y+R), s					5.0			3.0	5.0		5.0				
Max Allow Headway (MAH), s					3.3			3.1	0.0		0.0				
Queue Clearance Time (g_c), s					5.8			2.8							
Green Extension Time (g_e), s					0.2			0.0	0.0		0.0				
Phase Call Probability					1.00			1.00							
Max Out Probability					0.00			0.19							
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14				5	2			6	
Adjusted Flow Rate (v), veh/h				63		123				55	7			40	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1585				1781	1870			1870	
Queue Service Time (g_s), s				1.7		3.8				0.8	0.1			0.8	
Cycle Queue Clearance Time (g_c), s				1.7		3.8				0.8	0.1			0.8	
Green Ratio (g/C)				0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h				445		396				880	1091			779	
Volume-to-Capacity Ratio (X)				0.142		0.310				0.063	0.006			0.052	
Back of Queue (Q), ft/ln (90th percentile)				32		67				12	1			14	
Back of Queue (Q), veh/ln (90th percentile)				1.3		2.6				0.5	0.1			0.5	
Queue Storage Ratio (RQ) (90th percentile)				0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d_1), s/veh				17.5		18.3				5.9	5.2			10.4	
Incremental Delay (d_2), s/veh				0.7		2.0				0.1	0.0			0.1	
Initial Queue Delay (d_3), s/veh				0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh				18.2		20.3				6.0	5.2			10.6	
Level of Service (LOS)				B		C				A	A			B	
Approach Delay, s/veh / LOS				19.6	B	0.0		5.9	A	10.6	B				
Intersection Delay, s/veh / LOS				15.4						B					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

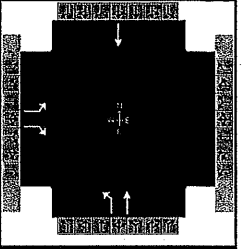
HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency		MRA				Duration, h		0:250							
Analyst		STK		Analysis Date		12/31/2024		Area Type		Other					
Jurisdiction				Time Period		PM		PHF		0.92					
Urban Street		PREM OUTLETS BLVD		Analysis Year		2030 NOBUILD		Analysis Period		1> 7:00					
Intersection		HOVCHILD BLVD		File Name		13-112PNB-6.xls									
Project Description		13-112PNB-6													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				170		58				14	37			351	
Signal Information															
Cycle, s	60.0	Reference Phase	2	Green	7.0	25.0	15.0	0.0	0.0	0.0					
Offset, s	0	Reference Point	End	Yellow	3.0	3.0	3.0	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	2.0	2.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4			5	2		6				
Case Number					9.0			1.0	4.0		8.3				
Phase Duration, s					20.0			10.0	40.0		30.0				
Change Period, (Y+R), s					5.0			3.0	5.0		5.0				
Max Allow Headway (MAH), s					3.2			3.1	0.0		0.0				
Queue Clearance Time (g c), s					7.2			2.2							
Green Extension Time (g e), s					0.3			0.0	0.0		0.0				
Phase Call Probability					1.00			1.00							
Max Out Probability					0.02			0.02							
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14				5	2			6	
Adjusted Flow Rate (v), veh/h				185		63				15	40			382	
Adjusted Saturation Flow Rate (s s), veh/h/ln				1781		1585				1781	1870			1870	
Queue Service Time (g s), s				5.2		1.9				0.2	0.5			9.0	
Cycle Queue Clearance Time (g c), s				5.2		1.9				0.2	0.5			9.0	
Green Ratio (g / C)				0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h				445		396				595	1091			779	
Volume-to-Capacity Ratio (X)				0.415		0.159				0.026	0.037			0.490	
Back of Queue (Q b), ft/ln (90 th percentile)				104		32				4	8			154	
Back of Queue (Q), veh/ln (90 th percentile)				4.1		1.3				0.1	0.3			6.1	
Queue Storage Ratio (R Q) (90 th percentile)				0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d 1), s/veh				18.8		17.6				6.7	5.3			12.8	
Incremental Delay (d 2), s/veh				2.8		0.9				0.1	0.1			2.2	
Initial Queue Delay (d 3), s/veh				0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh				21.7		18.4				6.8	5.4			15.0	
Level of Service (LOS)				C		B				A	A			B	
Approach Delay, s/veh / LOS				20.8	C	0.0				5.8	A		15.0	B	
Intersection Delay, s/veh / LOS				16.4						B					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

HCS Signalized Intersection Results Summary

General Information

Agency	MRA	Duration, h	0.250
Analyst	STK	Analysis Date	12/31/2024
Jurisdiction		Time Period	PM
Urban Street	PREM OUTLETS BLVD	Analysis Year	2030 BUILD
Intersection	HOVCHILD BLVD	File Name	13-112PFB-6.xus
Project Description	13-112PFB-6	Analysis Period	1> 7:00



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (V), veh/h	176		149				51	39			347	

Signal Information

Cycle, s	60.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap EW	On	Green	7.0	25.0	15.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	3.0	0.0	0.0	0.0		
				Red	0.0	2.0	2.0	0.0	0.0	0.0		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			1.0	4.0		8.3
Phase Duration, s		20.0			10.0	40.0		30.0
Change Period, (Y+R _c), s		5.0			3.0	5.0		5.0
Max Allow Headway (MAH), s		3.2			3.1	0.0		0.0
Queue Clearance Time (g _c), s		7.4			2.8			
Green Extension Time (g _e), s		0.5			0.0	0.0		0.0
Phase Call Probability		1.00			1.00			
Max Out Probability		0.04			0.19			

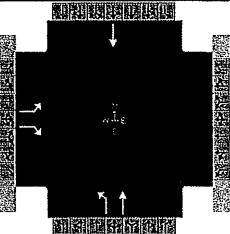
Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	
Adjusted Flow Rate (v), veh/h	191		162				55	42			377	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781		1585				1781	1870			1870	
Queue Service Time (g _s), s	5.4		5.1				0.8	0.6			8.8	
Cycle Queue Clearance Time (g _c), s	5.4		5.1				0.8	0.6			8.8	
Green Ratio (g/C)	0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h	445		396				599	1091			779	
Volume-to-Capacity Ratio (X)	0.430		0.409				0.093	0.039			0.484	
Back of Queue (Q _b), ft/ln (90th percentile)	109		93				13	8			153	
Back of Queue (Q), veh/ln (90th percentile)	4.3		3.7				0.5	0.3			6.0	
Queue Storage Ratio (RQ) (90th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh	18.9		18.8				6.9	5.3			12.8	
Incremental Delay (d ₂), s/veh	3.0		3.1				0.3	0.1			2.1	
Initial Queue Delay (d ₃), s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh	21.9		21.9				7.2	5.4			14.9	
Level of Service (LOS)	C		C				A	A			B	
Approach Delay, s/veh / LOS	21.9	C		0.0			6.4	A		14.9	B	
Intersection Delay, s/veh / LOS	16.9						B					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

HCS Signalized Intersection Results Summary

General Information						Intersection Information									
Agency		MRA				Duration, h		0.250							
Analyst		STK		Analysis Date		12/31/2024		Area Type		Other					
Jurisdiction				Time Period		SAT		PHF		0.92					
Urban Street		PREM OUTLETS BLVD		Analysis Year		2030 NOBUILD		Analysis Period		1> 7:00					
Intersection		HOVCHILD BLVD		File Name		13-112SNB-6.xus									
Project Description		13-112SNB-6													
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (V), veh/h				318		40				15	90			262	
Signal Information															
Cycle, s		60.0	Reference Phase	2											
Offset, s		0	Reference Point	End											
Uncoordinated		No	Simult. Gap E/W	On	Green	7.0	25.0	15.0	0.0	0.0	0.0				
Force Mode		Fixed	Simult. Gap N/S	On	Yellow	3.0	3.0	3.0	0.0	0.0	0.0				
					Red	0.0	2.0	2.0	0.0	0.0	0.0				
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					4			5	2		6				
Case Number					9.0			1.0	4.0		8.3				
Phase Duration, s					20.0			10.0	40.0		30.0				
Change Period (Y+R), s					5.0			3.0	5.0		5.0				
Max Allow Headway (MAH), s					3.1			3.1	0.0		0.0				
Queue Clearance Time (g _c), s					12.8			2.2							
Green Extension Time (g _e), s					0.2			0.0	0.0		0.0				
Phase Call Probability					1.00			1.00							
Max Out Probability					1.00			0.03							
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14				5	2			6	
Adjusted Flow Rate (v), veh/h				346		43				16	98			285	
Adjusted Saturation Flow Rate (s _f), veh/h/ln				1781		1585				1781	1870			1870	
Queue Service Time (g _s), s				10.8		1.3				0.2	1.4			6.3	
Cycle Queue Clearance Time (g _c), s				10.8		1.3				0.2	1.4			6.3	
Green Ratio (g/C)				0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h				445		396				669	1091			779	
Volume-to-Capacity Ratio (X)				0.776		0.110				0.024	0.090			0.365	
Back of Queue (Q _b), ft/ln (90 th percentile)				218		22				4	20			114	
Back of Queue (Q), veh/ln (90 th percentile)				8.6		0.9				0.1	0.8			4.5	
Queue Storage Ratio (RQ) (90 th percentile)				0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh				20.9		17.4				6.3	5.5			12.0	
Incremental Delay (d ₂), s/veh				12.5		0.6				0.1	0.2			1.3	
Initial Queue Delay (d ₃), s/veh				0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh				33.4		17.9				6.3	5.7			13.4	
Level of Service (LOS)				C		B				A	A			B	
Approach Delay, s/veh / LOS				31.7		C		0.0		5.8		A		13.4	
Intersection Delay, s/veh / LOS				21.3						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS															
Bicycle LOS Score / LOS															

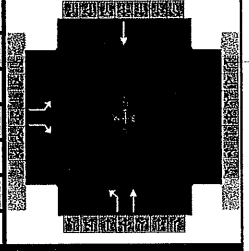
HCS Signalized Intersection Results Summary

General Information

Agency	MRA	Analysis Date	12/31/2024
Analyst	STK	Time Period	SAT
Jurisdiction		Analysis Year	2030 BUILD
Urban Street	PREM OUTLETS BLVD	File Name	13-112SFB-6.xus
Intersection	HOVCHIL D BLVD		
Project Description	13-112SFB-6		

Intersection Information

Duration: h	0.250
Area Type	Other
PHF	0.92
Analysis Period	1> 7:00



Demand Information

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	325		125				67	94			274	

Signal Information

Cycle, s	60.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	7.0	25.0	15.0	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.0	3.0	3.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	0.0	2.0	2.0	0.0	0.0	0.0				

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			5	2		6
Case Number		9.0			1.0	4.0		8.3
Phase Duration, s		20.0			10.0	40.0		30.0
Change Period (Y+R), s		5.0			3.0	5.0		5.0
Max Allow Headway (MAH), s		3.2			3.1	0.0		0.0
Queue Clearance Time (g _s), s		13.1			3.1			
Green Extension Time (g _e), s		0.3			0.0	0.0		0.0
Phase Call Probability		1.00			1.00			
Max Out Probability		1.00			0.32			

Movement Group Results

	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				5	2			6	
Adjusted Flow Rate (v), veh/h	353		136				73	102			298	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781		1585				1781	1870			1870	
Queue Service Time (g _s), s	11.1		4.2				1.1	1.4			6.6	
Cycle Queue Clearance Time (g _c), s	11.1		4.2				1.1	1.4			6.6	
Green Ratio (g/C)	0.25		0.25				0.57	0.58			0.42	
Capacity (c), veh/h	445		396				659	1091			779	
Volume-to-Capacity Ratio (X)	0.793		0.343				0.111	0.094			0.382	
Back of Queue (Q), ft/ln (90 th percentile)	226		76				17	21			120	
Back of Queue (Q), veh/ln (90 th percentile)	8.9		3.0				0.7	0.8			4.7	
Queue Storage Ratio (RQ) (90 th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d ₁), s/veh	21.0		18.5				6.5	5.5			12.1	
Incremental Delay (d ₂), s/veh	13.5		2.4				0.3	0.2			1.4	
Initial Queue Delay (d ₃), s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay (d), s/veh	34.6		20.8				6.9	5.7			13.6	
Level of Service (LOS)	C		C				A	A			B	
Approach Delay, s/veh / LOS	30.8		C	0.0			6.2	A		13.6		B
Intersection Delay, s/veh / LOS	21.0						C					

Multimodal Results

	EB	WB	NB	SB
Pedestrian LOS Score / LOS				
Bicycle LOS Score / LOS				

**LEVEL OF SERVICE CRITERIA
FOR
TWO-WAY STOP-CONTROLLED INTERSECTIONS¹**

<u>Level of Service</u>	<u>Average Control Delay</u>
A	≤ 10.0 Seconds Per Vehicle
B	> 10.0 and ≤ 15.0 Seconds Per Vehicle
C	> 15.0 and ≤ 25.0 Seconds Per Vehicle
D	> 25.0 and ≤ 35.0 Seconds Per Vehicle
E	> 35.0 and ≤ 50.0 Seconds Per Vehicle
F	> 50.0 Seconds Per Vehicle

¹ Transportation Research Board, Highway Capacity Manual 2022, National Research Council, Washington, DC, 2022.

HCS Two-Way Stop-Control Report

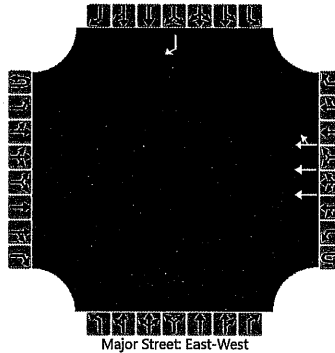
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	12/24/2024
Analysis Year	2030
Time Analyzed	AM
Intersection Orientation	East-West
Project Description	13-112ANB-4NO BUILD

Site Information

Intersection	ROUTE 66 & PREM OUTLETS BLVD
Jurisdiction	
East/West Street	ROUTE 66
North/South Street	PREM OUTLETS BLVD
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							743	16								65
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

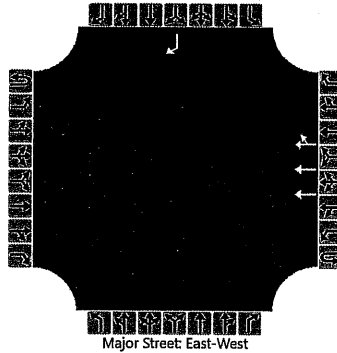
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																68
Capacity, c (veh/h)																649
v/c Ratio																0.11
95% Queue Length, Q ₉₅ (veh)																0.4
95% Queue Length, Q ₉₅ (ft)																10.2
Control Delay (s/veh)																11.2
Level of Service (LOS)																B
Approach Delay (s/veh)													11.2			
Approach LOS													B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & PREM OUTLETS BLVD
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-4 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							754	26								110
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

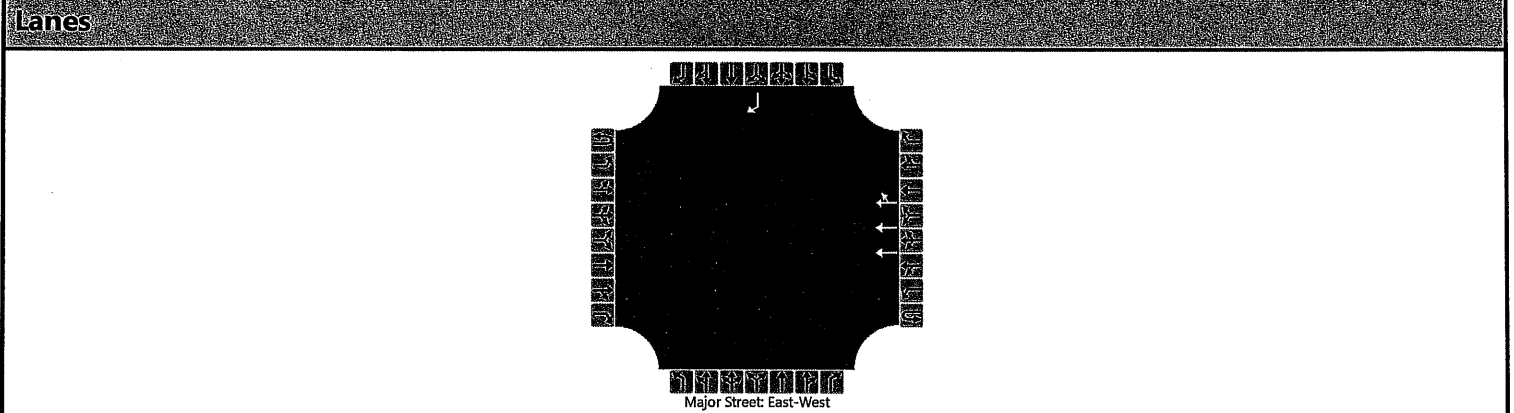
Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																116
Capacity, c (veh/h)																649
v/c Ratio																0.18
95% Queue Length, Q ₉₅ (veh)																0.6
95% Queue Length, Q ₉₅ (ft)																15.4
Control Delay (s/veh)																11.8
Level of Service (LOS)																B
Approach Delay (s/veh)													11.8			
Approach LOS													B			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & PREM OUTLETS BLVD
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PNB-4NO BUILD		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							1268	48								402
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

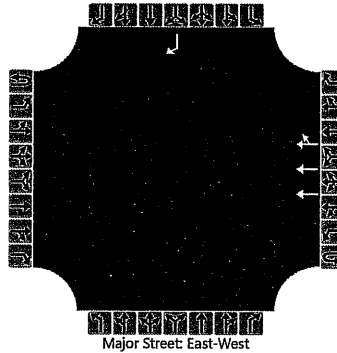
Critical and Follow-up Headways																
Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)																423
Capacity, c (veh/h)																649
v/c Ratio																0.65
95% Queue Length, Q ₉₅ (veh)																4.8
95% Queue Length, Q ₉₅ (ft)																122.9
Control Delay (s/veh)																20.4
Level of Service (LOS)																C
Approach Delay (s/veh)													20.4			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & PREM OUTLETS BLVD
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-4 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							1238	54								455
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

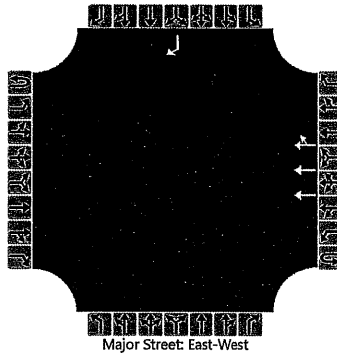
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																479
Capacity, c (veh/h)																649
v/c Ratio																0.74
95% Queue Length, Q ₉₅ (veh)																6.5
95% Queue Length, Q ₉₅ (ft)																166.4
Control Delay (s/veh)																24.5
Level of Service (LOS)																C
Approach Delay (s/veh)													24.5			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & PREM OUTLETS BLVD
Agency/Co.	IMRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112SNB-4NO BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							773	106								326
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

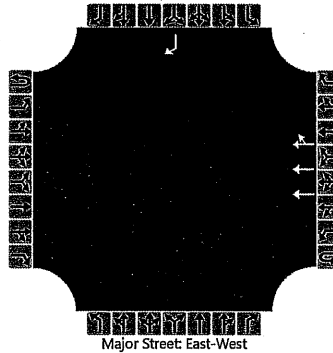
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																343
Capacity, c (veh/h)																649
v/c Ratio																0.53
95% Queue Length, Q ₉₅ (veh)																3.1
95% Queue Length, Q ₉₅ (ft)																79.4
Control Delay (s/veh)																16.6
Level of Service (LOS)																C
Approach Delay (s/veh)													16.6			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & PREM OUTLETS BLVD
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112SFB-4 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							821	116								384
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																0.400
Percent Grade (%)													0			
Right Turn Channelized													Yes			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																6.9
Critical Headway (sec)																6.96
Base Follow-Up Headway (sec)																3.3
Follow-Up Headway (sec)																3.33

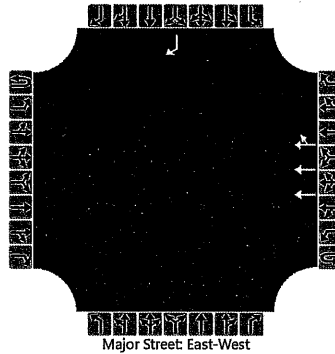
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																404
Capacity, c (veh/h)																649
v/c Ratio																0.62
95% Queue Length, Q ₉₅ (veh)																4.3
95% Queue Length, Q ₉₅ (ft)																110.1
Control Delay (s/veh)																19.3
Level of Service (LOS)																C
Approach Delay (s/veh)													19.3			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & SITE ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	SITE ACCESS
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-3 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							657	215								123
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																7.1
Critical Headway (sec)																7.16
Base Follow-Up Headway (sec)																3.9
Follow-Up Headway (sec)																3.93

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																129
Capacity, c (veh/h)																467
v/c Ratio																0.28
95% Queue Length, Q ₉₅ (veh)																1.1
95% Queue Length, Q ₉₅ (ft)																28.2
Control Delay (s/veh)																15.6
Level of Service (LOS)																C
Approach Delay (s/veh)													15.6			
Approach LOS													C			

HCS Two-Way Stop-Control Report

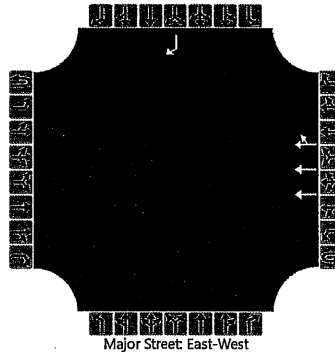
General Information

Analyst	STK
Agency/Co	IMRA
Date Performed	12/24/2024
Analysis Year	2030
Time Analyzed	PM
Intersection Orientation	East-West
Project Description	13-112PFB-3 BUILD

Site Information

Intersection	ROUTE 66 & SITE ACCESS
Jurisdiction	
East/West Street	ROUTE 66
North/South Street	SITE ACCESS
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							1183	180								103
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																7.1
Critical Headway (sec)																7.16
Base Follow-Up Headway (sec)																3.9
Follow-Up Headway (sec)																3.93

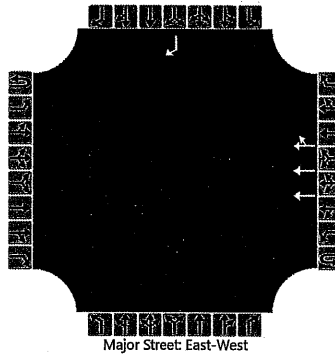
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																108
Capacity, c (veh/h)																317
v/c Ratio																0.34
95% Queue Length, Q ₉₅ (veh)																1.5
95% Queue Length, Q ₉₅ (ft)																38.4
Control Delay (s/veh)																22.1
Level of Service (LOS)																C
Approach Delay (s/veh)													22.1			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ROUTE 66 & SITE ACCESS
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ROUTE 66
Analysis Year	2030	North/South Street	SITE ACCESS
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East - West	Analysis Time Period (hrs)	0.25
Project Description	13-112SFB-3 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	0	0	0	0	3	0		0	0	0		0	0	1
Configuration							T	TR								R
Volume (veh/h)							825	173								112
Percent Heavy Vehicles (%)																3
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																7.1
Critical Headway (Sec)																7.16
Base Follow-Up Headway (sec)																3.9
Follow-Up Headway (sec)																3.93

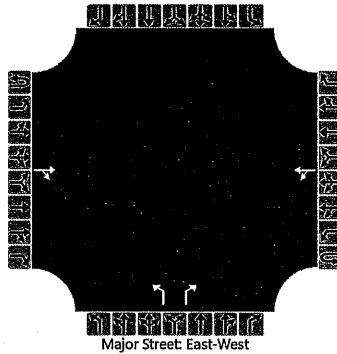
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)																118
Capacity, c (veh/h)																423
v/c Ratio																0.28
95% Queue Length, Q ₉₅ (veh)																11.1
95% Queue Length, Q ₉₅ (ft)																28.2
Control Delay (s/veh)																16.7
Level of Service (LOS)																C
Approach Delay (s/veh)													16.7			
Approach LOS													C			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & PREM-OUTLETS BLVD
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	PREM-OUTLETS BLVD
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112ANB-7NO BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			67	61		27	116			23		70				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

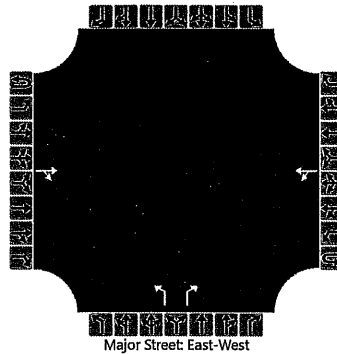
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						28				24		74				
Capacity, c (veh/h)						1444				691		950				
v/c Ratio						0.02				0.04		0.08				
95% Queue Length, Q ₉₅ (veh)						0.1				0.1		0.3				
95% Queue Length, Q ₉₅ (ft)						2.6				2.6		7.7				
Control Delay (s/veh)						7.5	0.2			10.4		9.1				
Level of Service (LOS)						A	A			B		A				
Approach Delay (s/veh)					1.6				9.4							
Approach LOS					A				A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & PREM-OUTLETS BLVD
Agency/Co.	IMRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	PREM-OUTLETS BLVD
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-7 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			88	65		22	154			26		15				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

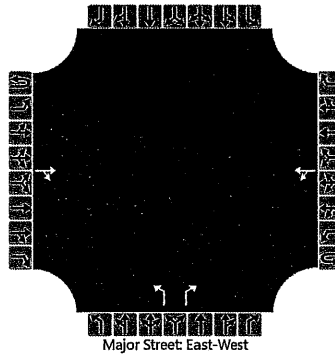
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						23				27		16				
Capacity, c (veh/h)						1412				646		921				
v/c Ratio						0.02				0.04		0.02				
95% Queue Length, Q ₉₅ (veh)						0.1				0.1		0.1				
95% Queue Length, Q ₉₅ (ft)						2.6				2.6		2.6				
Control Delay (s/veh)						7.6	0.1			10.8		9.0				
Level of Service (LOS)						A	A			B		A				
Approach Delay (s/veh)					11.1				10.1							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & PREM OUTLETS BLVD
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PNB-7NO BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			225	120		127	133			18		121				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

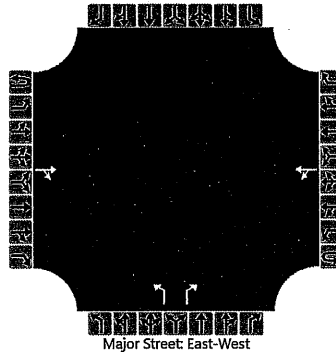
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						134				19		127				
Capacity, c (veh/h)						1190				351		737				
v/c Ratio						0.11				0.05		0.17				
95% Queue Length, Q ₉₅ (veh)						0.4				0.2		0.6				
95% Queue Length, Q ₉₅ (ft)						10.2				5.1		15.4				
Control Delay (s/veh)						8.4		10		15.8		10.9				
Level of Service (LOS)						A		A		C		B				
Approach Delay (s/veh)					4.6				11.5							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & PREM OUTLETS BLVD
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-7 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			247	127		110	161			24		113				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

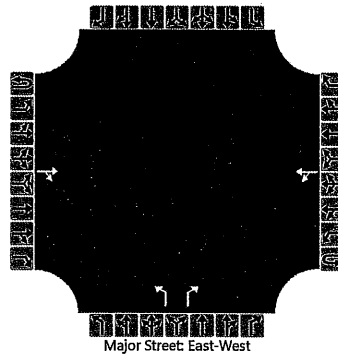
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						116				25		119				
Capacity, c (veh/h)						1159				346		712				
v/c Ratio						0.10				0.07		0.17				
95% Queue Length, Q ₉₅ (veh)						0.3				0.2		0.6				
95% Queue Length, Q ₉₅ (ft)						7.7				5.1		15.4				
Control Delay (s/veh)						8.4	0.9			16.2		11.1				
Level of Service (LOS)						A	A			C		B				
Approach Delay (s/veh)					4.0				12.0							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & PREM-OUTLETS BLVD
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	PREM-OUTLETS BLVD
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112SNB-7NO BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT		-		L		R				
Volume (veh/h)			225	60		228	147			28		145				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						240				29		153				
Capacity, c (veh/h)						1255				242		768				
v/c Ratio						0.19				0.12		0.20				
95% Queue Length, Q ₉₅ (veh)						0.7				0.4		0.7				
95% Queue Length, Q ₉₅ (ft)						17.9				10.2		17.9				
Control Delay (s/veh)						8.5		1.8		21.9		10.8				
Level of Service (LOS)						A		A		C		B				
Approach Delay (s/veh)					5.9				12.6							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

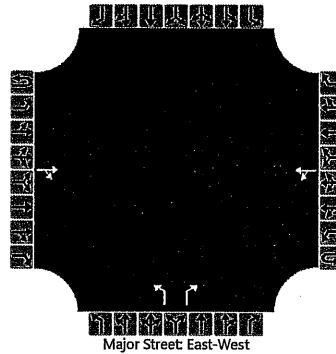
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	12/24/2024
Analysis Year	2030
Time Analyzed	SAT
Intersection Orientation	East-West
Project Description	13-112SFB-7 BUILD

Site Information

Intersection	ESSEX & PREM OUTLETS BLVD
Jurisdiction	
East/West Street	ESSEX
North/South Street	PREM OUTLETS BLVD
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume (veh/h)			249	69		222	179			37		135				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

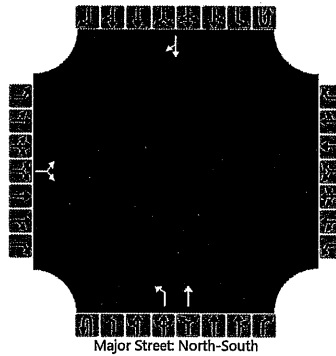
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						234				39		142				
Capacity, c (veh/h)						1219				225		739				
v/c Ratio						0.19				0.17		0.19				
95% Queue Length, Q ₉₅ (veh)						0.7				0.6		0.7				
95% Queue Length, Q ₉₅ (ft)						17.9				15.4		17.9				
Control Delay (s/veh)						8.7		1.9		24.4		11.0				
Level of Service (LOS)						A		A		C		B				
Approach Delay (s/veh)					5.6				13.9							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112ANB-2 NOBUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		12		79						186	572				285	38
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

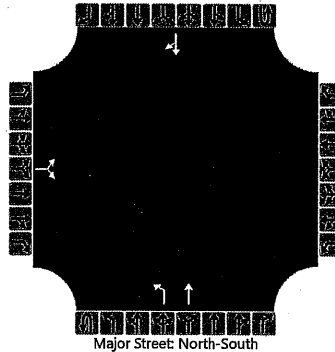
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			96							196						
Capacity, c (veh/h)			473							1214						
v/c Ratio			0.20							0.16						
95% Queue Length, Q ₉₅ (veh)			0.7							0.6						
95% Queue Length, Q ₉₅ (ft)			17.9							15.4						
Control Delay (s/veh)			14.5							8.5						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)	14.5								2.1							
Approach LOS	B								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-2 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		28		125						156	572				270	51
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

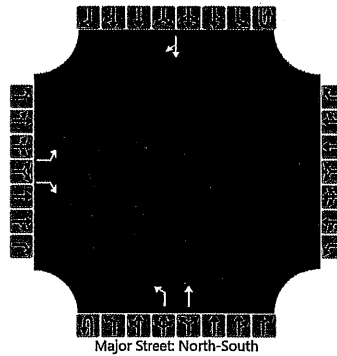
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			161							164						
Capacity, c (veh/h)			449							1216						
v/c Ratio			0.36							0.14						
95% Queue Length, Q ₉₅ (veh)			1.6							0.5						
95% Queue Length, Q ₉₅ (ft)			41.0							12.8						
Control Delay (s/veh)			17.4							8.4						
Level of Service (LOS)			C							A						
Approach Delay (s/veh)	17.4								18							
Approach LOS	C								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-2 BUILD-MIT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0
Configuration		L		R						L	T					TR
Volume (veh/h)		28		125						156	572				270	51
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

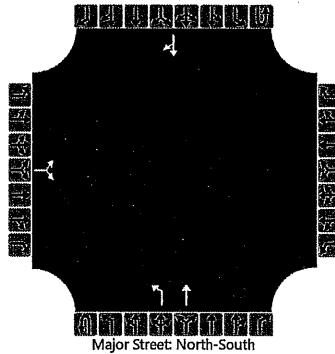
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		29		132						164						
Capacity, c (veh/h)		166		727						1216						
v/c Ratio		0.18		0.18						0.14						
95% Queue Length, Q ₉₅ (Veh)		0.6		0.7						0.5						
95% Queue Length, Q ₉₅ (ft)		15.4		17.9						12.8						
Control Delay (s/veh)		31.3		11.0						8.4						
Level of Service (LOS)		D		B						A						
Approach Delay (s/veh)	14.7								1.8							
Approach LOS	B								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112PNB-2 NOBUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		95		302						204	502				680	63
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

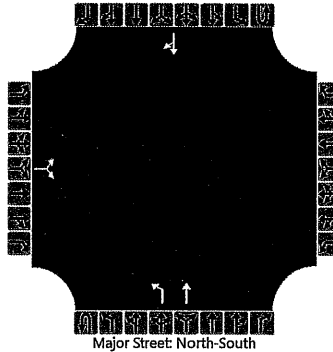
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			418							215						
Capacity, c (veh/h)			196							831						
v/c Ratio			2.13							0.26						
95% Queue Length, Q ₉₅ (veh)			32.5							1.0						
95% Queue Length, Q ₉₅ (ft)			832.0							25.6						
Control Delay (s/veh)			563.3							10.8						
Level of Service (LOS)			F							B						
Approach Delay (s/veh)	563.3								3.1							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-2 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		98		313						202	502				667	87
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

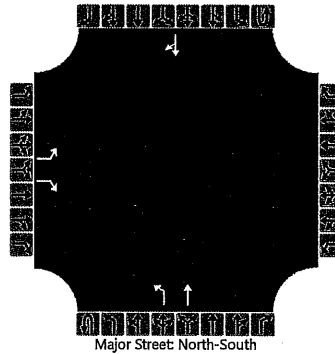
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			433							213						
Capacity, c (veh/h)			198							823						
v/c Ratio			2.19							0.26						
95% Queue Length, Q ₉₅ (veh)			34.1							1.0						
95% Queue Length, Q ₉₅ (ft)			873.0							25.6						
Control Delay (s/veh)			589.1							10.9						
Level of Service (LOS)			F							B						
Approach Delay (s/veh)	589.1								3.1							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-2 BUILD-MIT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0
Configuration		L		R						L	T					TR
Volume (veh/h)		98		313						202	502				667	87
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

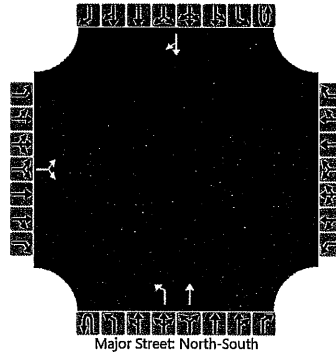
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		103		329						213						
Capacity, c (veh/h)		74		411						823						
v/c Ratio		1.39		0.80						0.26						
95% Queue Length, Q ₉₅ (veh)		8.3		7.1						1.0						
95% Queue Length, Q ₉₅ (ft)		212.5		181.8						25.6						
Control Delay (s/veh)		33.40		41.0						10.9						
Level of Service (LOS)		F		E						B						
Approach Delay (s/veh)	110.8								3.1							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112SNB-2 NOBUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		78		290						311	446				415	105
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

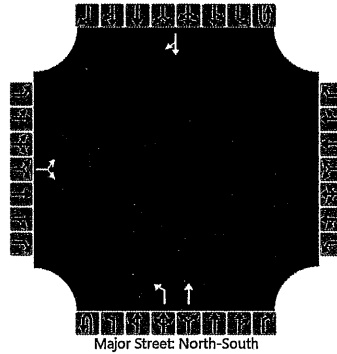
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			387							327						
Capacity, c (veh/h)			242							1017						
v/c Ratio			1.60							0.32						
95% Queue Length, Q ₉₅ (veh)			24.2							1.4						
95% Queue Length, Q ₉₅ (ft)			619.5							35.8						
Control Delay (s/veh)			324.6							10.2						
Level of Service (LOS)			F							B						
Approach Delay (s/veh)	324.6								42							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & JUMPING BROOK
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	
Analysis Year	2030	North/South Street	
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0-25
Project Description	13-112SFB-2 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	1	1	0	0	0	1	0
Configuration			LR							L	T					TR
Volume (veh/h)		96		333						316	446				409	129
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right-Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			452							333						
Capacity, c (veh/h)			228							1001						
v/c Ratio			1.98							0.33						
95% Queue Length, Q ₉₅ (veh)			33.1							1.5						
95% Queue Length, Q ₉₅ (ft)			847.4							38.4						
Control Delay (s/veh)			492.8							10.4						
Level of Service (LOS)			F							B						
Approach Delay (s/veh)	492.8								4.3							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

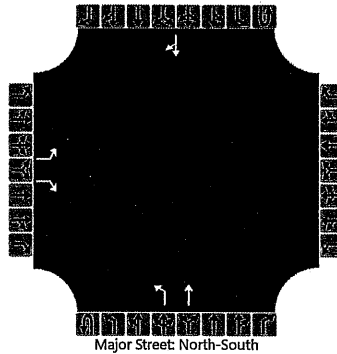
General Information

Analyst	STK
Agency/Co.	MRA
Date Performed	12/24/2024
Analysis Year	2030
Time Analyzed	SAT
Intersection Orientation	North-South
Project Description	13-112SFB-2 BUILD-MIT

Site Information

Intersection	ESSEX & JUMPING BROOK
Jurisdiction	
East/West Street	
North/South Street	
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	0
Configuration		L		R						L	T					TR
Volume (veh/h)		96		333						316	446				409	129
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

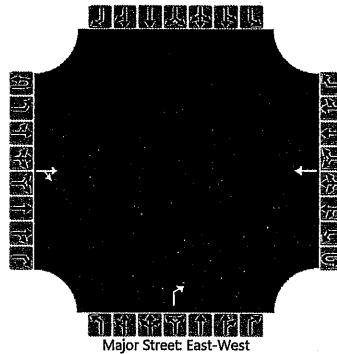
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		101		351						333						
Capacity, c (veh/h)		74		570						1001						
v/c Ratio		1.37		0.62						0.33						
95% Queue Length, Q ₉₅ (veh)		8.1		4.2						1.5						
95% Queue Length, Q ₉₅ (ft)		207.4		107.5						38.4						
Control Delay (s/veh)		328.3		20.9						10.4						
Level of Service (LOS)		F		C						B						
Approach Delay (s/veh)	89.7								4.3							
Approach LOS	F								A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & EAST ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	EAST ACCESS
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-9 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			80	5			167					53				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked												0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

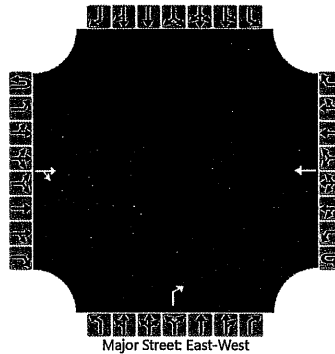
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												56				
Capacity, c (veh/h)												969				
v/c Ratio												0.06				
95% Queue Length, Q ₉₅ (veh)												0.2				
95% Queue Length, Q ₉₅ (ft)												5.1				
Control Delay (s/veh)												8.9				
Level of Service (LOS)												A				
Approach Delay (s/veh)									8.9							
Approach LOS									A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & EAST ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	EAST ACCESS
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-9 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			360	5			263					52				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked												0.000				
Percent Grade (%)									0							
Right-Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

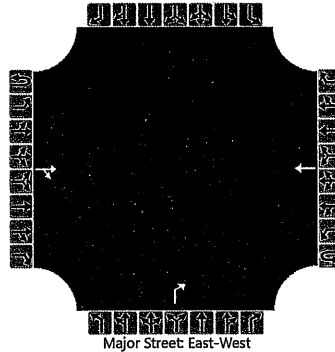
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												55				
Capacity, c (veh/h)												663				
v/c Ratio												0.08				
95% Queue Length, Q ₉₅ (veh)												0.3				
95% Queue Length, Q ₉₅ (ft)												7.7				
Control Delay (s/veh)												10.9				
Level of Service (LOS)												B				
Approach Delay (s/veh)									10.9							
Approach LOS									B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & EAST ACCESS
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	EAST ACCESS
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112SFB-9 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	1		0	0	0
Configuration				TR			T					R				
Volume (veh/h)			363	5			395					53				
Percent Heavy Vehicles (%)												3				
Proportion Time Blocked												0.000				
Percent Grade (%)									0							
Right Turn Channelized									No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

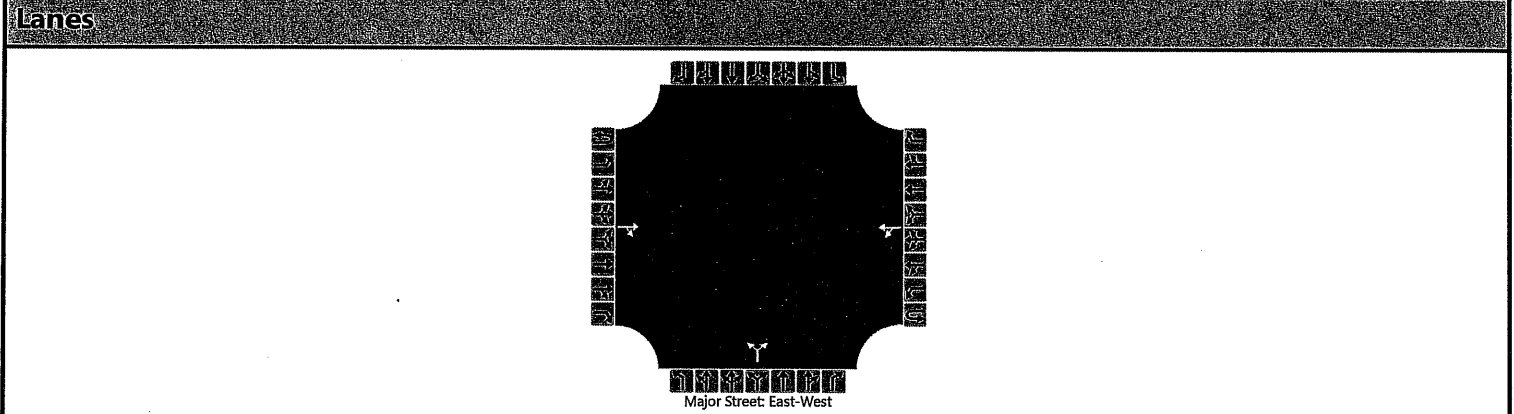
Base Critical Headway (sec)												6.2				
Critical Headway (sec)												6.23				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												56				
Capacity, c (veh/h)												661				
v/c Ratio												0.08				
95% Queue Length, Q ₉₅ (veh)												0.3				
95% Queue Length, Q ₉₅ (ft)												7.7				
Control Delay (s/veh)												11.0				
Level of Service (LOS)												B				
Approach Delay (s/veh)									11.0							
Approach LOS									B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & WEST ACCESS
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	WEST ACCESS
Time Analyzed	AM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112AFB-8 BUILD		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			60	29		32	135			41		30				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

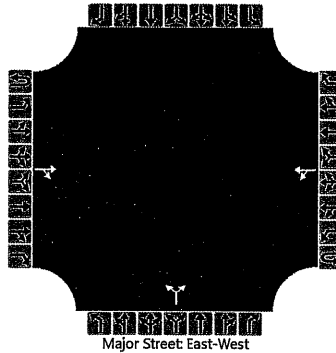
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.38				

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						34					75					
Capacity, c (veh/h)						1494					783					
v/c Ratio						0.02					0.10					
95% Queue Length, Q ₉₅ (veh)						0.1					0.3					
95% Queue Length, Q ₉₅ (ft)						2.6					7.7					
Control Delay (s/veh)						7.5	0.2				10.1					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					11.6				10.1							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & WEST ACCESS
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	WEST ACCESS
Time Analyzed	PM	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-8 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			332	34		28	235			36		33				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

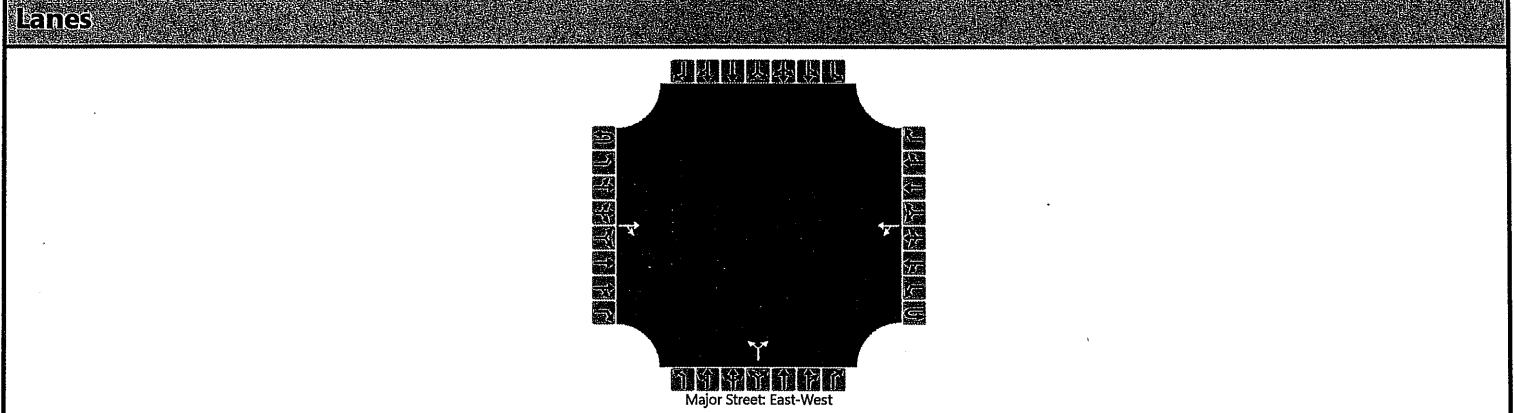
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						29					73					
Capacity, c (veh/h)						1168					502					
v/c Ratio						0.03					0.14					
95% Queue Length, Q ₉₅ (veh)						0.1					0.5					
95% Queue Length, Q ₉₅ (ft)						2.6					12.8					
Control Delay (s/veh)						8.2	0.2				13.4					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					11				13.4							
Approach LOS					A				B							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	ESSEX & WEST ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/24/2024	East/West Street	ESSEX
Analysis Year	2030	North/South Street	WEST ACCESS
Time Analyzed	SAT	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	13-112SFB-8 BUILD		



Vehicle Volumes and Adjustments																
Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			345	38		31	366			35		25				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked						0.000				0.000		0.000				
Percent Grade (%)									0							
Right-Turn Channelized																
Median Type Storage	Undivided															

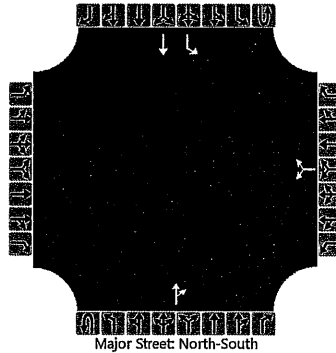
Critical and Follow-up Headways																
Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.13				6.43		6.23				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service																
Flow Rate, v (veh/h)						33					63					
Capacity, c (veh/h)						1150					412					
v/c Ratio						0.03					0.15					
95% Queue Length, Q ₉₅ (veh)						0.1					0.5					
95% Queue Length, Q ₉₅ (ft)						2.6					12.8					
Control Delay (s/veh)						8.2	0.3				15.3					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					0.9				15.3							
Approach LOS					A				C							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	PREM OUTLETS BLVD & SOUTH ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/31/2024	East/West Street	SOUTH ACCESS
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	AM	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0:25
Project Description	13-112AFB-5 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						50		42			16	10		90	313	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.43		6.23							4.13		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.53		3.33							2.23		

Delay, Queue Length, and Level of Service

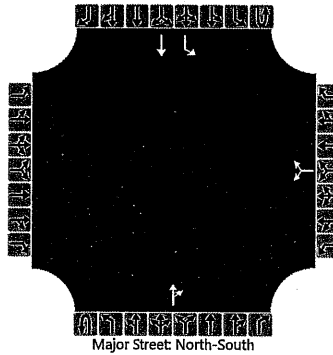
Flow Rate, v (veh/h)						100									98		
Capacity, c (veh/h)						617									1579		
v/c Ratio						0.16									0.06		
95% Queue Length, Q ₉₅ (veh)						0.6									0.2		
95% Queue Length, Q ₉₅ (ft)						15.4									5.1		
Control Delay (s/veh)						12.0									7.4		
Level of Service (LOS)						B									A		
Approach Delay (s/veh)					12.0								1.7				
Approach LOS					B								A				

HCS Two-Way Stop-Control Report

General Information

Analyst	STK	Intersection	PREM OUTLETS BLVD & SOUTH ACCESS
Agency/Co.	MRA	Jurisdiction	
Date Performed	12/31/2024	East/West Street	SOUTH ACCESS
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	PM	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112PFB-5 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						53		39			48	6		94	402	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.43		6.23							4.13		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.53		3.33							2.23		

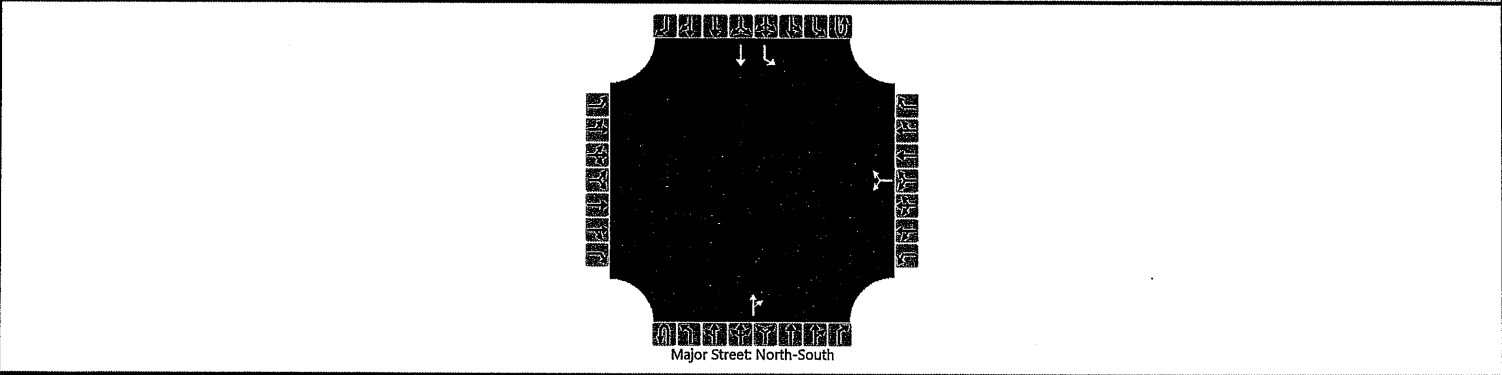
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						100								102		
Capacity, c (veh/h)						515								1539		
v/c Ratio						0.19								0.07		
95% Queue Length, Q ₉₅ (veh)						0.7								0.2		
95% Queue Length, Q ₉₅ (ft)						17.9								5.1		
Control Delay (s/veh)						13.7								7.5		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)					13.7								14			
Approach LOS					B								A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	STK	Intersection	PREM OUTLETS BLVD & SOUTH ACCESS
Agency/Co	MRA	Jurisdiction	
Date Performed	12/31/2024	East/West Street	SOUTH ACCESS
Analysis Year	2030	North/South Street	PREM OUTLETS BLVD
Time Analyzed	SAT	Peak Hour Factor	0.92
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	13-112SFB-5 BUILD		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	1	1	0
Configuration							LR					TR		L	T	
Volume (veh/h)						58		56			106	10		89	310	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						124								97		
Capacity, c (veh/h)						558								1454		
v/c Ratio						0.22								0.07		
95% Queue Length, Q ₉₅ (veh)						0.8								0.2		
95% Queue Length, Q ₉₅ (ft)						20.5								5.1		
Control Delay (s/veh)						13.3								7.7		
Level of Service (LOS)						B								A		
Approach Delay (s/veh)					13.3								1.7			
Approach LOS					B								A			