Shropshire Associates LLC

ESBE / SBE Certified

Traffic Engineering, Transportation Planning & Design

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August 21, 2020

Mr. Greg Kanter (via email: gkanter@americanproperties.net)
American Properties Realty, Inc.
517 Route 1 South, Suite 2100
Iselin, NJ 08830

Re: Traffic Engineering Assessment
Heritage at West Windsor
Block 28, Lots 15 & 21
Old Trenton Road (CR 535) and Princeton-Hightstown Road (CR 571)
West Windsor Township, Mercer County, NJ
SA Project No. 18196

Dear Greg:

In response to your request and in order to support the Township of West Windsor site plan application for the Heritage at West Windsor residential development, Shropshire Associates, LLC has prepared a Traffic Engineering Assessment report to evaluate the impact of the traffic to be generated by the proposed development. The proposed development is located along westbound Old Trenton Road and southbound Princeton-Hightstown Road in West Windsor Township, Mercer County, NJ. The proposal is for the construction of a total of 254 residential dwelling units consisting of 60 apartment units, 193 townhomes, and one (1) group home facility.

The site is currently vacant and access to the site is proposed via two (2) new driveways, one (1) along westbound Old Trenton Road (CR 535) and one (1) along southbound Princeton-Hightstown Road (CR 571). The two (2) proposed driveways are under the jurisdiction of Mercer County and have received approval from the County for the following. Full-movement access will be permitted along westbound Old Trenton Road (CR 535) via one (1) new driveway location. This driveway location and design will also include a dedicated left-turn lane along eastbound Old Trenton Road for inbound left-turn movements. For Princeton-Hightstown Road (CR 571) driveway location, right-in, right-out and left-out access will be permitted by the County, with the inbound left-turn movements being prohibited.

In addition, there is the possibility that future outbound left-turning access to Old Trenton Road could eventually be provided via an internal roadway connection and access easement with the adjacent parcel in East Windsor Township. This one-way only internal connection would enable outbound only traffic from the Heritage at West Windsor residential development to access the future signalized Old Trenton Road/Windsor Center Drive intersection. Currently, the proposed residential Heritage at West Windsor development has been designed with this potential internal roadway. Further discussion of this access option is provided below.

Existing Conditions

A field reconnaissance was conducted to determine the features of the adjacent roadway network within the study area. A description of the roadways and intersection that comprise the study area for this report is provided below.

Old Trenton Road (CR 535) is a two-lane undivided roadway that is classified as an Urban Minor Arterial and under the jurisdiction of Mercer County. Along the site's frontage, Old Trenton Road has a posted speed limit of 50 MPH and an approximate cartway width of 24' with 12' travel lanes and no shoulders in each direction. For the purpose of this study, Old Trenton Road is assumed to extend in a general east-west direction.

Princeton-Hightstown Road (CR 571) is a four-lane undivided roadway that is classified as an Urban Principal Arterial and under the jurisdiction of Mercer County. Princeton-Hightstown Road has a posted speed limit of 50 MPH and an approximate cartway width of 44'. For the purpose of this study, Princeton-Hightstown Road is assumed to extend in a general north-south direction.

Windsor Center Drive is a two-lane undivided local roadway and is under the jurisdiction of East Windsor Township. Windsor Center Drive has a posted speed limit of 35 MPH and an approximate cartway width of 42'. Windsor Center Drive acts as a connecter between Old Trenton Road and Princeton-Hightstown Road and provides access to the Aurobindo facility. For the purpose of this study, Windsor Center Drive is assumed to extend in a general north-south direction.

The T-shaped **Old Trenton Road/Windsor Center Drive** intersection is stop-controlled along the northbound Windsor Center Drive approach. The westbound Old Trenton Road approach consists of a dedicated left-turn lane and a dedicated through lane. The eastbound Old Trenton Road approach consists of a dedicated through lane and a channelized right-turn lane. The northbound Windsor Center Drive approach consists of a dedicated left-turn lane and a dedicated right-turn lane.

Traffic Count Data

Manual turning movement counts (MTMC) were conducted within the study area in the vicinity of the proposed residential development on Tuesday, May 21, 2019. This data was analyzed to determine the peak hour volumes along the adjacent roadway network that coincide with the peak times of the proposed residential development and the existing roadway network. These peak times typically occur during the weekday AM (6:00 to 10:00 AM) and weekday PM (3:00 to 7:00 PM) peak periods. In addition, automatic traffic recorders (ATRs) were placed along the roadways discussed above to collect hourly, daily, and weekly volumes. The existing AM and PM peak hour volumes based upon the collect MTMC and ATR data are illustrated on the attached Figure 1.

In addition to the MTMC and ATR data that was collected along Old Trenton Road and Princeton-Hightstown Road, Gap Counts were done on both County roadways at the potential site driveway locations to determine the number of gaps along each roadway during the weekday AM and weekday PM peak hour conditions. Copies of this Gap Count data is attached for your review and analyses are provided below. This data was collected on June 4, 2019.

Future Conditions

As indicated above, the proposed Heritage at West Windsor residential development will contain a total of 254 residential dwelling units. The traffic resulting from the proposed development will not affect the adjacent roadway network until 2023, when the development is expected to be fully built-out and occupied. It can be expected that the traffic volumes along the adjacent roadway network will increase as a result of other developments in the area of the site and general area traffic growth.

A 1.00% annual traffic growth is projected to occur along Old Trenton Road and Princeton-Hightstown Road in the vicinity of the site based on the *Annual Background Growth Table* prepared by the New Jersey Department of Transportation (NJDOT).

In addition, a traffic impact study was done by Maser Consulting P.A. for the adjacent property on Old Trenton Road in East Windsor Township. The traffic impact study provided by Maser Consulting P.A. is for a 186-unit residential development. The site traffic for this proposed development was included in our 2023 No-Build volumes, along with the annual growth rates to the existing volumes. By applying the 1.00% annual background growth rate to the existing roadway volumes (Figure 2A), and the site-specific peak hour traffic from the Maser Consulting P.A. traffic report (Figure 2B), the No-Build volumes were estimated and are indicated on Figure 2C.

Maser Consulting P.A. also conducted a traffic signal warrant analysis for the future intersection of Old Trenton Road and Windsor Center Drive. In their analysis, a traffic signal was warranted by the eight-hour, four-hour, and peak hour warrants. Therefore, in the No-Build and Build scenarios, the future study location was analyzed to include the warranted traffic signal with the proposed signal timings and lane configuration information provided by Maser Consulting P.A.

ITE Trip Generation

The amount of traffic to be generated by the proposed residential development can best be estimated by a comparison with similar sites. Data published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 10th Edition* was used to estimate the trip generating potential for the proposed development. The types of residential dwelling units within the overall Heritage at West Windsor development are most similar to ITE Land Use 220: Multifamily Housing (Low-Rise). Table 1 indicates the peak hour site traffic to be generated by the proposed 254-unit residential development based upon the ITE trip generation data. Copies of the ITE trip generation worksheets are attached for your review.

Table 1
ITE Trip Generation – Heritage at West Windsor

Development	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Multifamily Housing (254 units)	27	91	118	90	53	143

The traffic to be generated by the proposed Heritage at West Windsor residential development must then be distributed to the adjacent roadway network in a manner in which we can reasonably expect the residents to travel. The site traffic was assigned to the roadway

network based on the existing flow of traffic along the adjacent roadway (Figure 3). The site traffic (Figure 4) was then added to the total No-Build volumes (Figure 2C) to project the Build volumes, which are illustrated on the attached Figure 5.

Operational Analysis

In order to measure the quality of the traffic flow for the adjacent roadways and intersections, capacity analyses for the study intersections have been completed based upon the methods outlined in the *Highway Capacity Manual*. Capacity analysis is a procedure used to estimate the ability of the roadway network to carry traffic. Capacity analyses are performed based on a Level of Service methodology. Level of Service (LOS) is a qualitative measure that characterizes the operational conditions of a roadway or intersection based on the perceptions by motorists and passengers. Levels of Service are defined for each type of facility (i.e. freeways, highways, signalized intersections, unsignalized intersections). These Levels of Service range from LOS A to LOS F, with a LOS A representing the best operating conditions and a LOS F representing the worst operating conditions.

The LOS for signalized intersections is classified in terms of delay, which is based on the extent of driver discomfort and frustration, fuel consumption and lost travel time. The delay experienced by a motorist consists of many factors that relate to control, geometrics, and traffic. Some of these factors include the quality of progression, traffic signal cycle length, the green ratio, and the volume-to-capacity ratio. The determination for the LOS for an unsignalized intersection is based upon the average control delay associated with each minor movement (i.e. yielding left-turn movements from the major roads and stop-controlled movements from the minor approaches). The Level of Service criteria for signalized and unsignalized intersections is summarized below in Table 2.

Table 2
Level of Service Criteria

Level of Service	Unsignalized Delay (sec)	Signalized Delay (sec)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

The existing and future operating conditions at the study intersections were evaluated using the above-described methodology. The existing and future levels of service are illustrated on Figures 6, 7 and 8; with the detailed capacity analyses worksheets attached for your review. A detailed description of the intersections' operating conditions is provided below.

Old Trenton Road (CR 535) and Windsor Center Drive Intersection

Currently, the westbound Old Trenton Road conflicting left-turn movements operate at a LOS A during both the AM and PM peak hours. The northbound Windsor Center Drive stop-controlled left-turn movements operate at a LOS F during both the AM and PM peak hours. The northbound Windsor Center Drive stop-controlled right-turn movements operate at a LOS C or better during both the AM and PM peak hours.

As noted above, the proposal is for the signalization of the future Old Trenton Road/Windsor Center Drive intersection in East Windsor as part of the development of the property adjacent to our site. Based upon our review of the preliminary traffic study for this development, the eastbound Old Trenton Road approach will consist of a shared through/left-turn lane and a dedicated right-turn lane, while the westbound approach will consist of a dedicated left-turn lane and a shared through/right-turn lane. The northbound Windsor Center Drive approach will consist of a dedicated left-turn lane and a shared through/right-turn lane, while the southbound site access approach will consist of single shared lane for all movements.

Based upon this signalized intersection configuration and proposed signal timings provided by the adjacent development, under the No-Build conditions, the signalized intersection of Old Trenton Road and Windsor Center Drive will operate at an overall LOS B during both the AM and PM peak hours. All individual movements will operate at a LOS B or better during both peak hours, with the exception of the westbound Old Trenton Road shared through/right-turn movements, which will operate at a LOS C during both peak hours.

In the Build scenario, the traffic resulting from the proposed Heritage at West Windsor residential development will have a minimal impact at the signalized intersection of Old Trenton Road and Windsor Center Drive. The signalized intersection will operate at an overall LOS B during the AM peak hour and an overall LOS C during the PM peak hour. All individual movements will continue to operate at No-Build levels of service.

Old Trenton Road (CR 535) and Site Driveway Intersection

Under the future Build scenario, access to the Heritage at West Windsor residential development is currently proposed via one (1) full-movement access along westbound Old Trenton Road. This driveway will be stop-controlled and consist of individual inbound and outbound lanes providing for all permitted movements.

A left-turn lane warrant analysis was performed for eastbound Old Trenton Road at the proposed site driveway location under the future Build conditions. Based upon the weekday AM and weekday PM peak hour volumes and the Highway Research Board Number 211 guidelines, a left-turn lane is warranted for eastbound Old Trenton Road during both the AM and PM peak hour conditions. The AM and PM peak hour warrant graphs are attached for your review.

Based upon this configuration, the outbound site driveway stop-controlled approach will operate at a LOS D during the weekday AM and weekday PM peak hours. In addition, the eastbound Old Trenton Road inbound conflicting left-turn movements will operate at a LOS A during both peak hours. As noted above, final approval is required from Mercer County for the driveway location as it is under the County's jurisdiction.

As noted above, a Gap Analysis was done for the proposed driveway location along westbound Old Trenton Road. The analysis was done for eastbound and westbound Old Trenton Road during peak hour conditions at the proposed site driveway location. Based upon the collected gap data for Old Trenton Road, there are sufficient gaps for the following number of outbound left-turn movements from the site driveway, and for the following number of inbound left-turn movements from eastbound Old Trenton Road.

Outbound Left-Turn Gaps

- AM Peak Hour – 60 vehicular gaps
- PM Peak Hour – 28 vehicular gaps

Inbound Left-Turn Gaps

- AM Peak Hour – 151 vehicular gaps
- PM Peak Hour – 92 vehicular gaps

As shown in Figure 4, the site traffic assignment for the proposed Heritage at West Windsor residential development will include 22 outbound left-turn movements during the weekday AM peak hour and 12 outbound left-turn movements during the weekday PM peak hour. Therefore, based upon the gap analysis for Old Trenton Road, there will be more than sufficient gaps to accommodate the anticipated left-turn movements in/out of the site driveway location during peak hour conditions. Copies of the Gap Analysis data is attached for your review.

Therefore, it is our recommendation that a full-movement driveway be permitted along westbound Old Trenton Road as part of the proposed Heritage at West Windsor residential development.

Princeton-Hightstown Road (CR 571) and Site Driveway Intersection

Under the future Build scenario, access to the proposed Heritage at West Windsor residential development is proposed via one (1) right-in/left-out/right-out access along southbound Princeton-Hightstown Road. This driveway will be stop-controlled and consist of an individual inbound and outbounds lanes providing for all permitted movements.

Based upon this configuration, the outbound site driveway stop-controlled movements will operate at a LOS C during the weekday AM peak hour and a LOS D during the weekday PM peak hour. As noted above, final approval is required from Mercer County for the driveway location as it is under the County's jurisdiction.

Again, a Gap Analysis was done for northbound and southbound Princeton-Hightstown Road during peak hour conditions at the proposed site driveway location. Based upon the collected gap data for Princeton-Hightstown Road, there are sufficient gaps for the following number of outbound left-turn movements from the site driveway, and for the following number of inbound left-turn movements from northbound Princeton-Hightstown Road.

Outbound Left-Turn Gaps

- AM Peak Hour – 147 vehicular gaps
- PM Peak Hour – 82 vehicular gaps

Inbound Left-Turn Gaps

- AM Peak Hour – 376 vehicular gaps
- PM Peak Hour – 257 vehicular gaps

As shown in Figure 4, the site traffic assignment for the proposed Heritage at West Windsor residential development will include 37 outbound left-turn movements during the weekday AM peak hour and 9 outbound left-turn movements during the weekday PM peak hour. Therefore, based upon the Gap Analysis for Princeton-Hightstown Road, there will be more than sufficient gaps to accommodate the anticipated left-turn movements in/out of the site driveway location during peak hour conditions.

In addition, without the ability to make outbound left-turn movements at the future Princeton-Hightstown Road site driveway location, all residents wishing to travel north on this roadway will be required to go out to Old Trenton Road and travel over ¾ of a mile to reach the site driveway location on Princeton-Hightstown Road. Therefore, while there may be delays in making an outbound left-turn movement, those delays and queues will be maintained on-site and off the main County roadway.

Therefore, it is our recommendation that a right-in/left-out/right-out driveway be permitted along southbound Princeton-Hightstown Road as part of the proposed Heritage at West Windsor residential development.

Alternative Scenario Analysis – Cross Access Easement

As discussed above, the adjacent development in East Windsor Township along Old Trenton Road includes the construction of a new signalized intersection at the Old Trenton Road/Windsor Center Drive intersection. The recommendation from West Windsor Township and Mercer County is for an internal connection from the proposed Heritage at West Windsor residential development to the adjacent East Windsor Township parcel to allow outbound access to the future signalized intersection. Currently, the Heritage at West Windsor residential site plan includes the provision for the construction of this one-way internal connection.

It is our opinion that a full-movement driveway along westbound Old Trenton Road can operate safely and efficiently for the proposed Heritage at West Windsor residential development without any ability to access the future Old Trenton Road/Windsor Center Drive signalized intersection. However, an alternative access scenario analysis has been prepared that assumes a one-way outbound only internal connection to allow outbound left-turn movements from the Heritage at West Windsor residential development to utilize the Old Trenton Road/Windsor Center Drive signalized intersection.

Attached Figures 9 and 10 show the revised Site Traffic (Figure 9) and Build (Figure 10) scenario peak hour volumes based upon this provision of an internal roadway connection to the Old Trenton Road/Windsor Center Drive signalized intersection. Figure 11 shows the revised Build scenario levels of service, with a brief description provided below.

Old Trenton Road (CR 535) and Windsor Center Driveway Intersection

With the additional site traffic from the potential internal roadway connection to the future Old Trenton Road/Windsor Center Drive signalized intersection, the signalized intersection will continue to operate at an overall LOS B during the weekday AM peak hour and an overall LOS C during the weekday PM peak hour. In addition, all individual movements will continue to operate at the same Build scenario levels of service during both peak hours when compared to the operations without the potential internal connection. Therefore, the potential internal outbound traffic resulting from the Heritage at West Windsor residential development will cause

no changes at the future Old Trenton Road/Windsor Center Drive signalized intersection during both peak hours.

Old Trenton Road (CR 535) and Site Driveway Intersection

With the removal of the outbound left-turn movements from the currently proposed full-movement driveway along westbound Old Trenton Road, the outbound stop-controlled right-turn only movements will operate at a LOS B during both the weekday AM and weekday PM peak hours. The inbound conflicting left-turn movements from eastbound Old Trenton Road will continue to operate at a LOS A during both peak hours.

Conclusion

Based on the results presented in this traffic engineering assessment report, the traffic resulting from the proposed Heritage at West Windsor residential development will have a minimal impact on the adjacent roadway network based upon the following conclusions:

- Based upon the current ITE trip generation rates, the proposed Heritage at West Windsor residential development will generate a total of 118 trips during the AM peak hour and 143 trips during the PM peak hour.

- Access to the proposed Heritage at West Windsor residential development will be provided via two (2) new driveways, one (1) along westbound Old Trenton Road and one (1) along southbound Princeton-Hightstown Road. These roadways and driveways are under the jurisdiction of Mercer County and the driveways will need the appropriate permitting and approvals from Mercer County.

- A traffic signal is being proposed at the future intersection of Old Trenton Road and Windsor Center Drive as part of the adjacent residential development located in East Windsor Township.

  The traffic resulting from the proposed Heritage at West Windsor residential development will have a minimal impact at the signalized intersection of Old Trenton Road and Windsor Center Drive. The signalized intersection will operate at an overall LOS B during the AM peak hour and an overall LOS C during the PM peak hour. All individual movements will continue to operate at No-Build levels of service.

- Access to the Heritage at West Windsor residential development is currently proposed via one (1) full-movement access along westbound Old Trenton Road. This driveway will be stop-controlled and consist of an individual inbound and outbounds lanes providing for all permitted movements.

  Based upon this configuration, the outbound site driveway stop-controlled approach will operate at a LOS D during the weekday AM and weekday PM peak hours. In addition, the eastbound Old Trenton Road inbound conflicting left-turn movements will operate at a LOS A during both peak hours. As noted above, final approval is required from Mercer County for the driveway location as it is under the County's jurisdiction.

A gap analysis was done for the proposed driveway location along westbound Old Trenton Road. The analysis was done for eastbound and westbound Old Trenton Road during peak hour conditions at the proposed site driveway location. Based upon the collected gap data for Old Trenton Road, there are sufficient gaps along the existing roadway to accommodate the anticipated outbound left-turn movements from the site driveway and inbound left-turn movements from eastbound Old Trenton Road.

Therefore, it is our recommendation that a full-movement driveway be permitted along westbound Old Trenton Road as part of the proposed Heritage at West Windsor residential development.

- Access to the proposed Heritage at West Windsor residential development is proposed via one (1) right-in/left-out/right-out access along southbound Princeton-Hightstown Road. This driveway will be stop-controlled and consist of an individual inbound and outbound lanes providing for all permitted movements.

  Based upon this configuration, the outbound site driveway stop-controlled movements will operate at a LOS C during the weekday AM peak hour and a LOS D during the weekday PM peak hour. As noted above, final approval is required from Mercer County for the driveway location as it is under the County's jurisdiction.

  A gap analysis was done for northbound and southbound Princeton-Hightstown Road during peak hour conditions at the proposed site driveway location. Based upon the collected gap data for Princeton-Hightstown Road, there are sufficient gaps along the existing roadway to accommodate the anticipated outbound left-turn movements from the site driveway.

  Without the ability to make outbound left-turn movements at the future Princeton-Hightstown Road site driveway location, all residents wishing to travel north on this roadway will be required to go out to Old Trenton Road and travel over ¾ of a mile to reach the site driveway location on Princeton-Hightstown Road. Therefore, it is our recommendation that a right-in/left-out/right-out driveway be permitted along southbound Princeton-Hightstown Road as part of the proposed Heritage at West Windsor residential development.

- An alternative access scenario analysis has been prepared for future access to Old Trenton Road that includes the one-way only internal connection to allow outbound left-turn movements from the Heritage at West Windsor residential development to utilize the Old Trenton Road/Windsor Center Drive signalized intersection.

  It is our opinion that a full-movement driveway along westbound Old Trenton Road can operate safely and efficiently for the proposed Heritage at West Windsor residential development without any ability to access the future Old Trenton Road/Windsor Center Drive signalized intersection.

  Based upon the results of this alternative access analysis, the additional outbound traffic from the Heritage at West Windsor residential development will cause no changes in the overall or individual levels of service at the future Old Trenton Road/Windsor Center Drive signalized intersection.

In addition, the outbound stop-controlled right-turn movements at the Old Trenton Road site driveway will operate at a LOS B during both the weekday AM and weekday PM peak hours.

Should you have any questions please feel free to contact us.

Sincerely,
Shropshire Associates LLC

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Professional Engineer
N.J. License No. #48698
NBM/jab
Attachments

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Frank Petrino (via email: fpetrino@eckertseamans.com)
William Parkhill (via email: wjp@midatlanticeng.com)
Michael Weseloski (24 copies via UPS and email: mweseloski@midatlanticeng.com)

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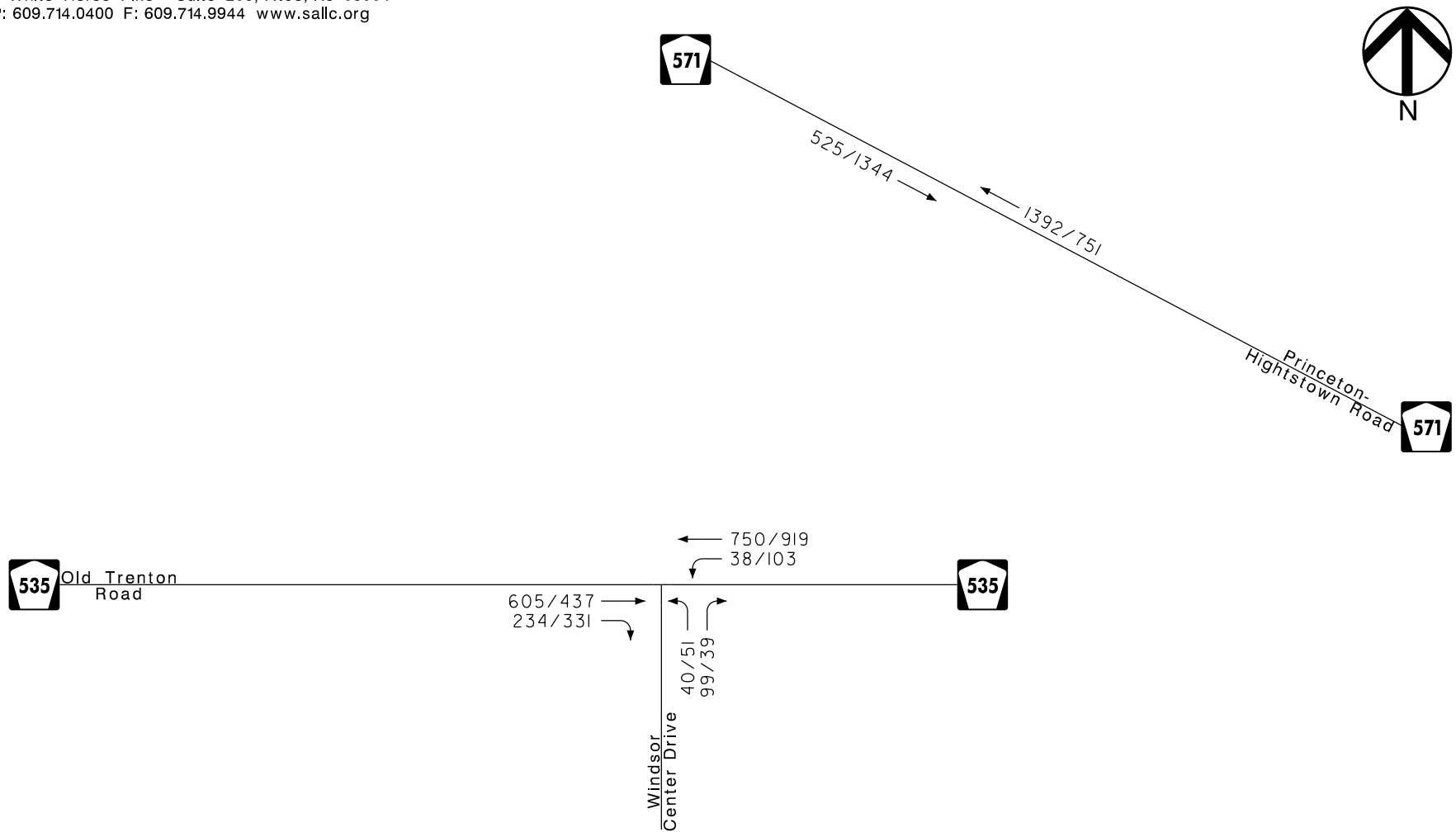
FIGURE 1
EXISTING VOLUMES



Heritage at West Windsor

West Windsor Township, Mercer County, NJ
August 2020

TRAFFIC SIGNAL
AM/PM PEAK HOUR

SA Project No. 18196-A

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FIGURE 2A
NO-BUILD GROWTH

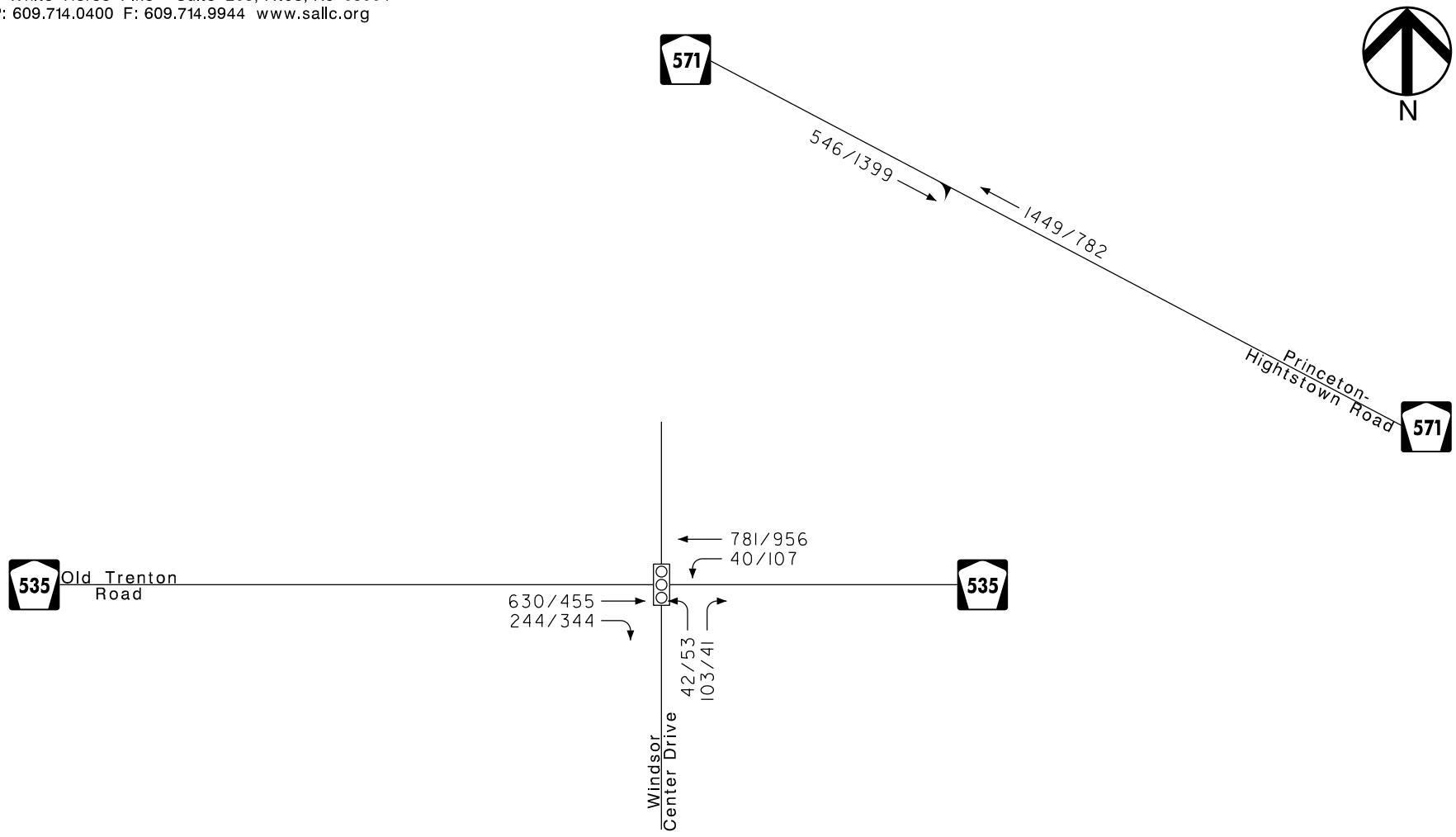

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FIGURE 2B
ADD-IN TRAFFIC

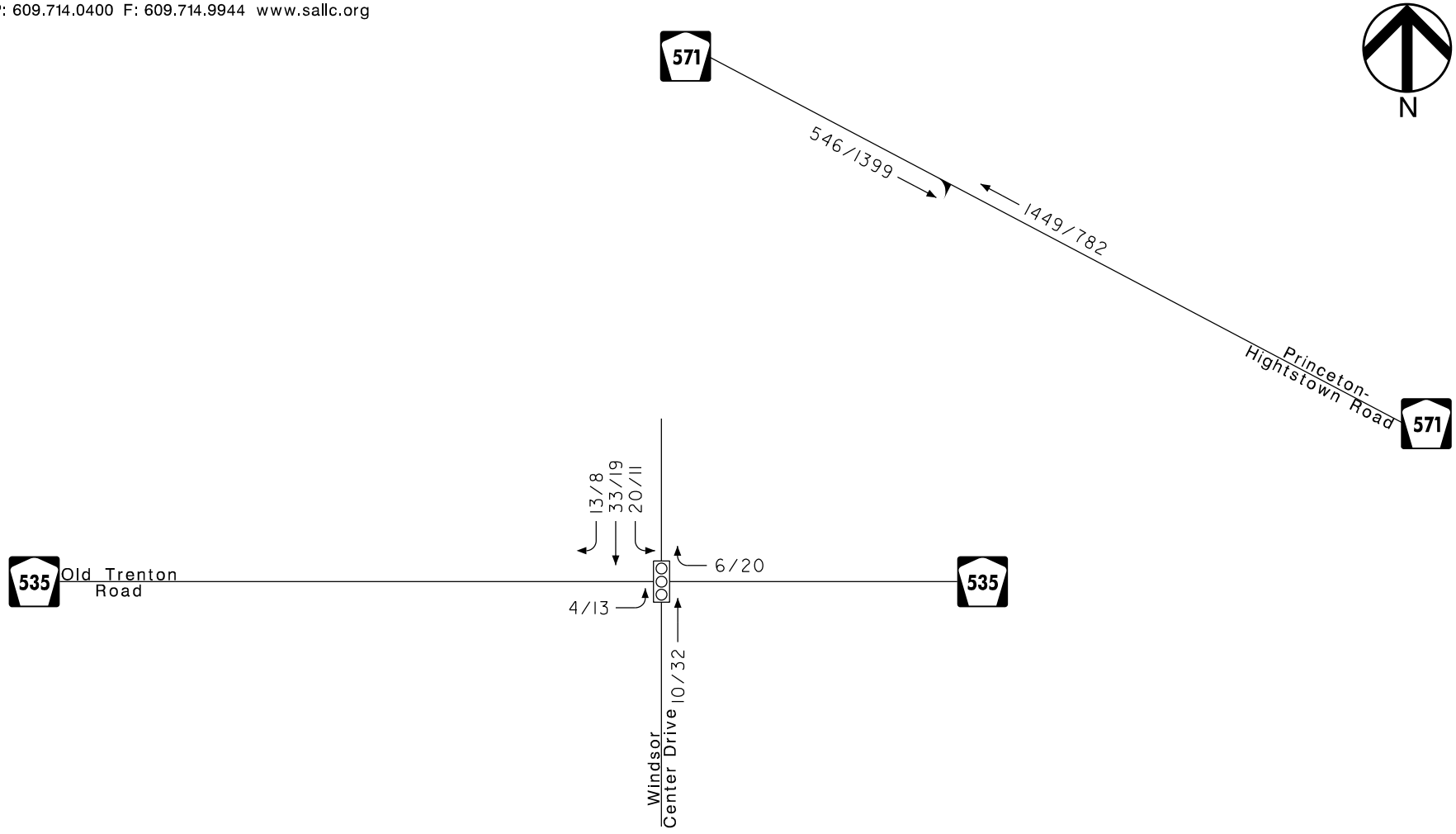

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FIGURE 2C
NO-BUILD VOLUMES

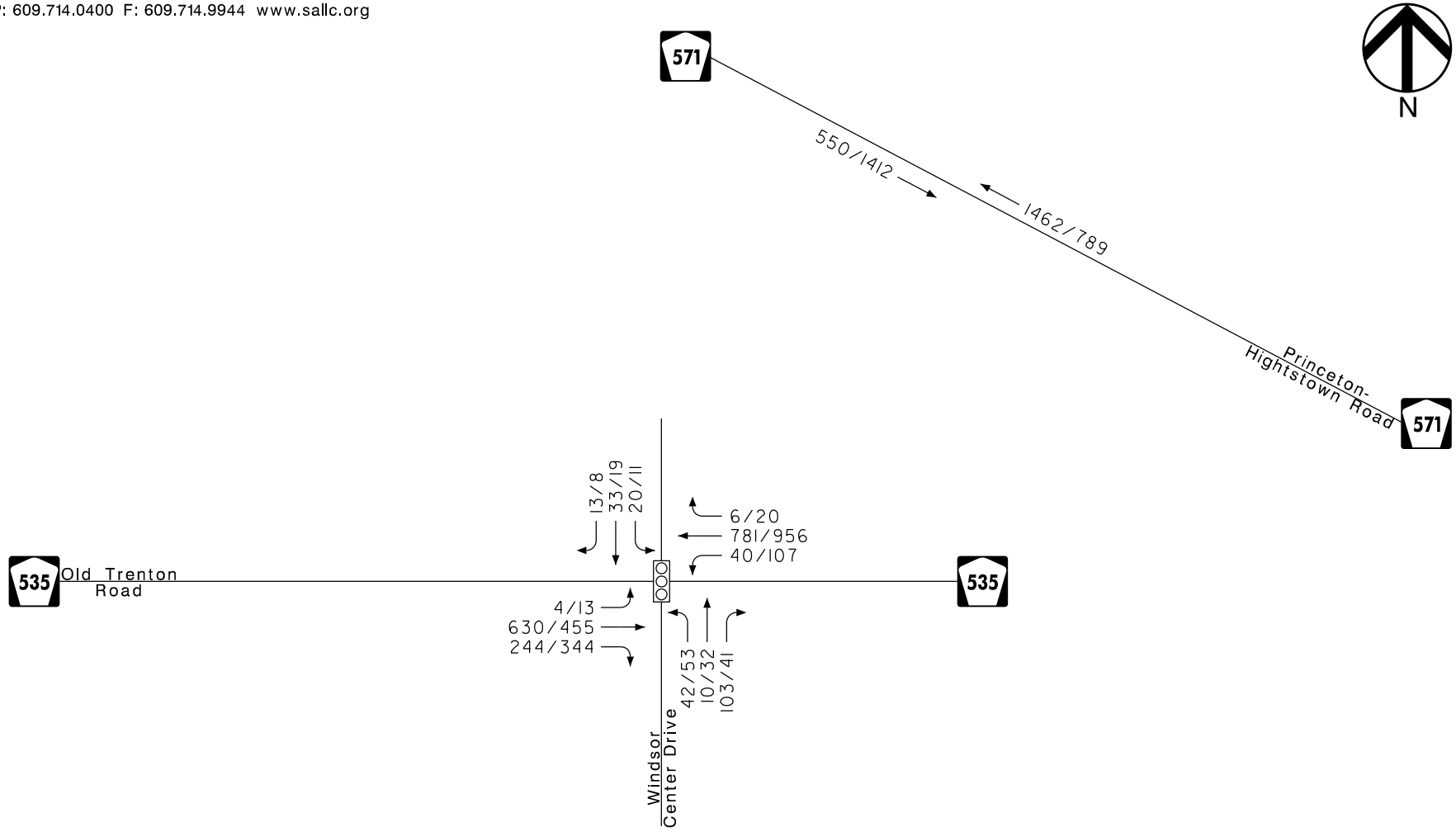

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FIGURE 3
TRIP DISTRIBUTION

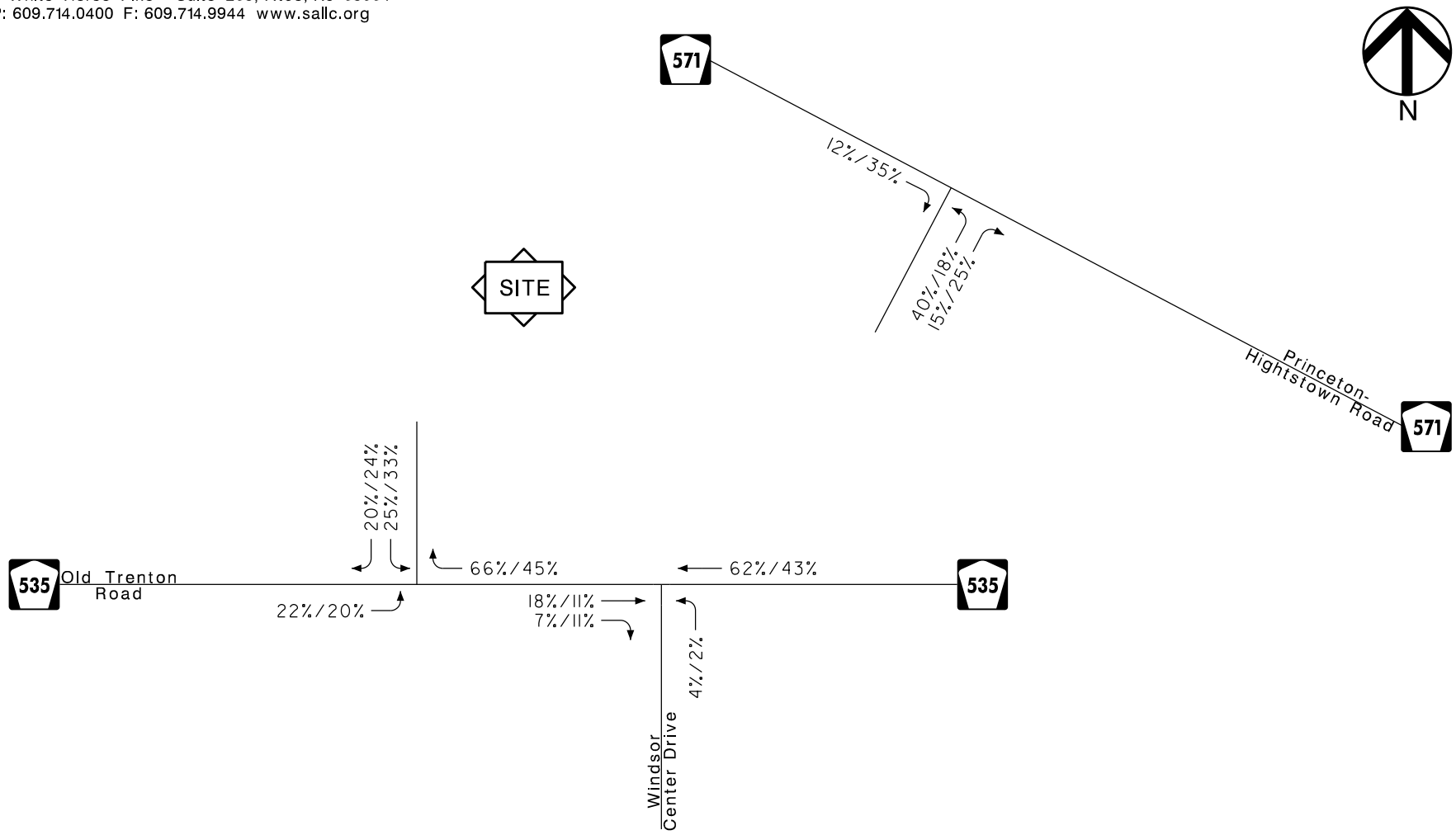

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FIGURE 4
SITE TRAFFIC

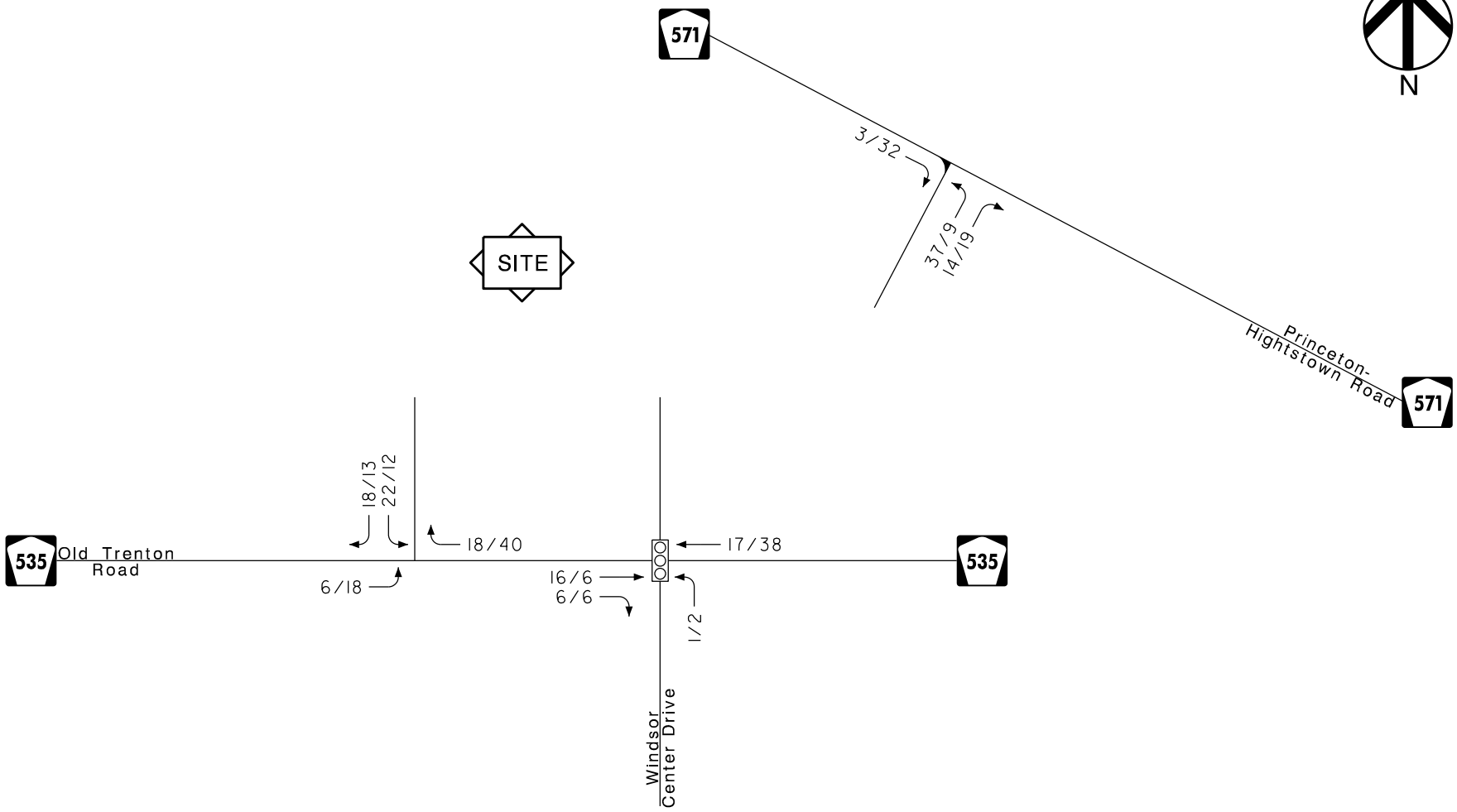

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FIGURE 5
BUILD VOLUMES

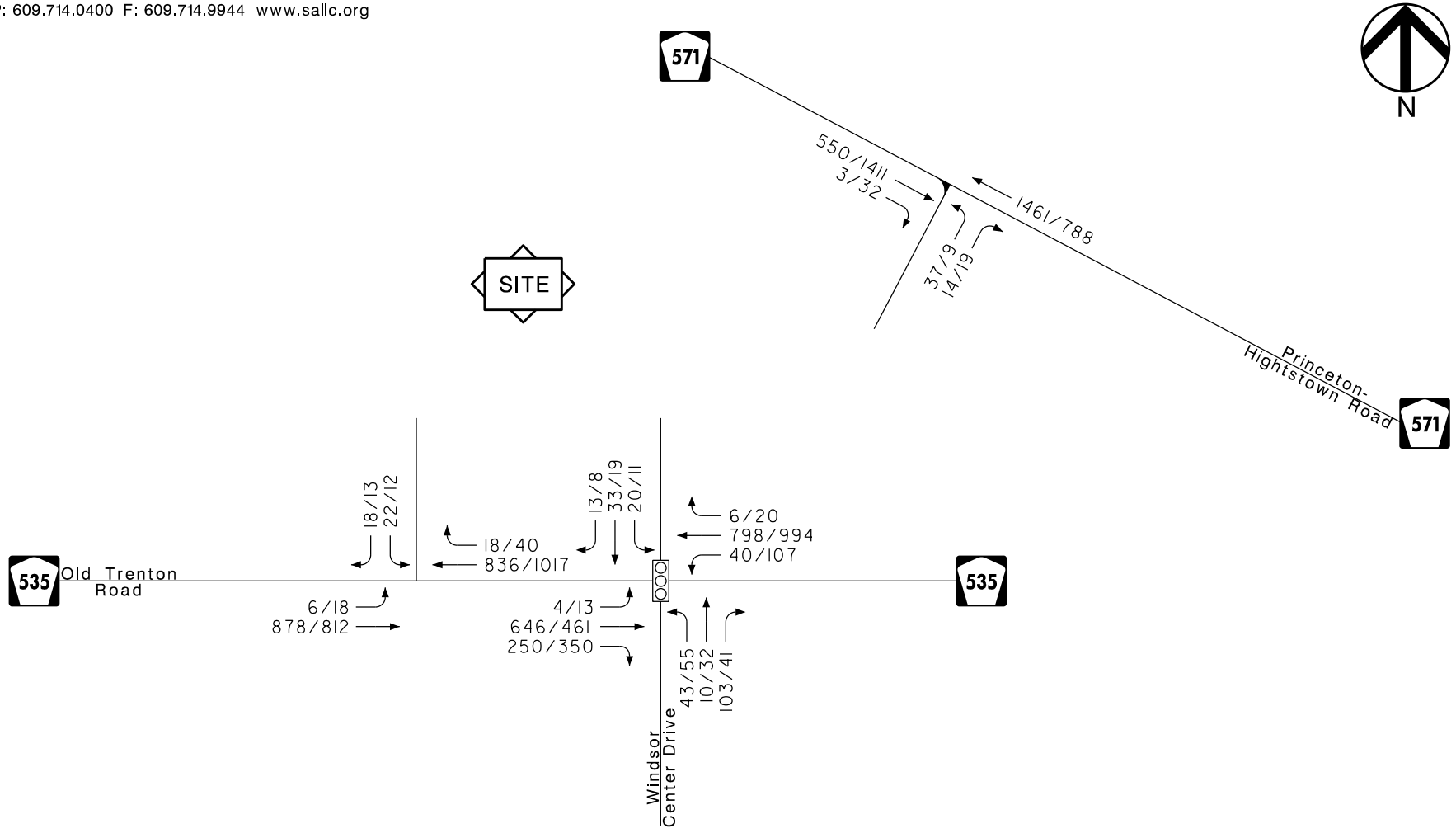

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FIGURE 6
EXISTING LEVELS OF SERVICE

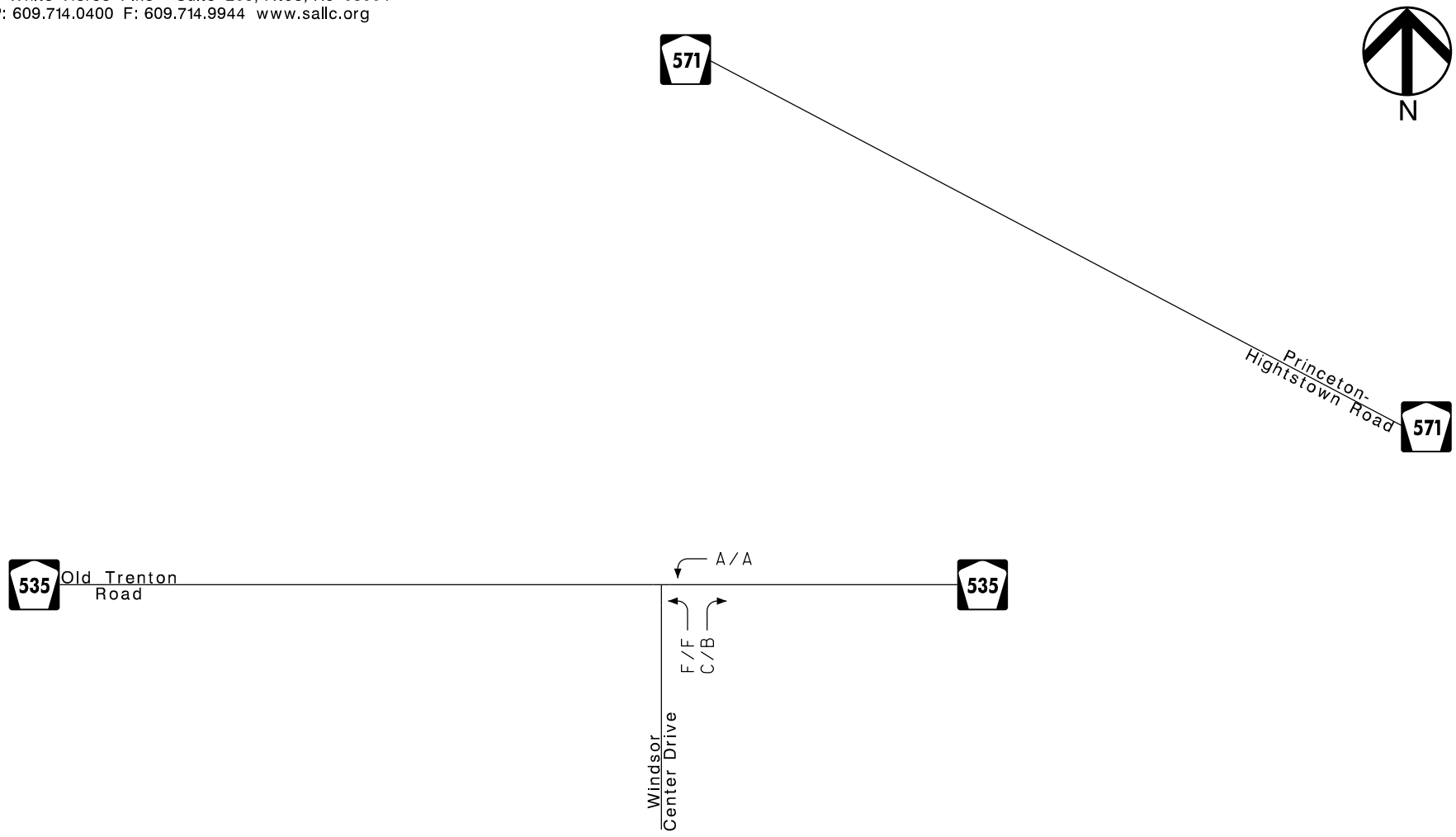

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FIGURE 7
NO-BUILD LEVELS OF SERVICE

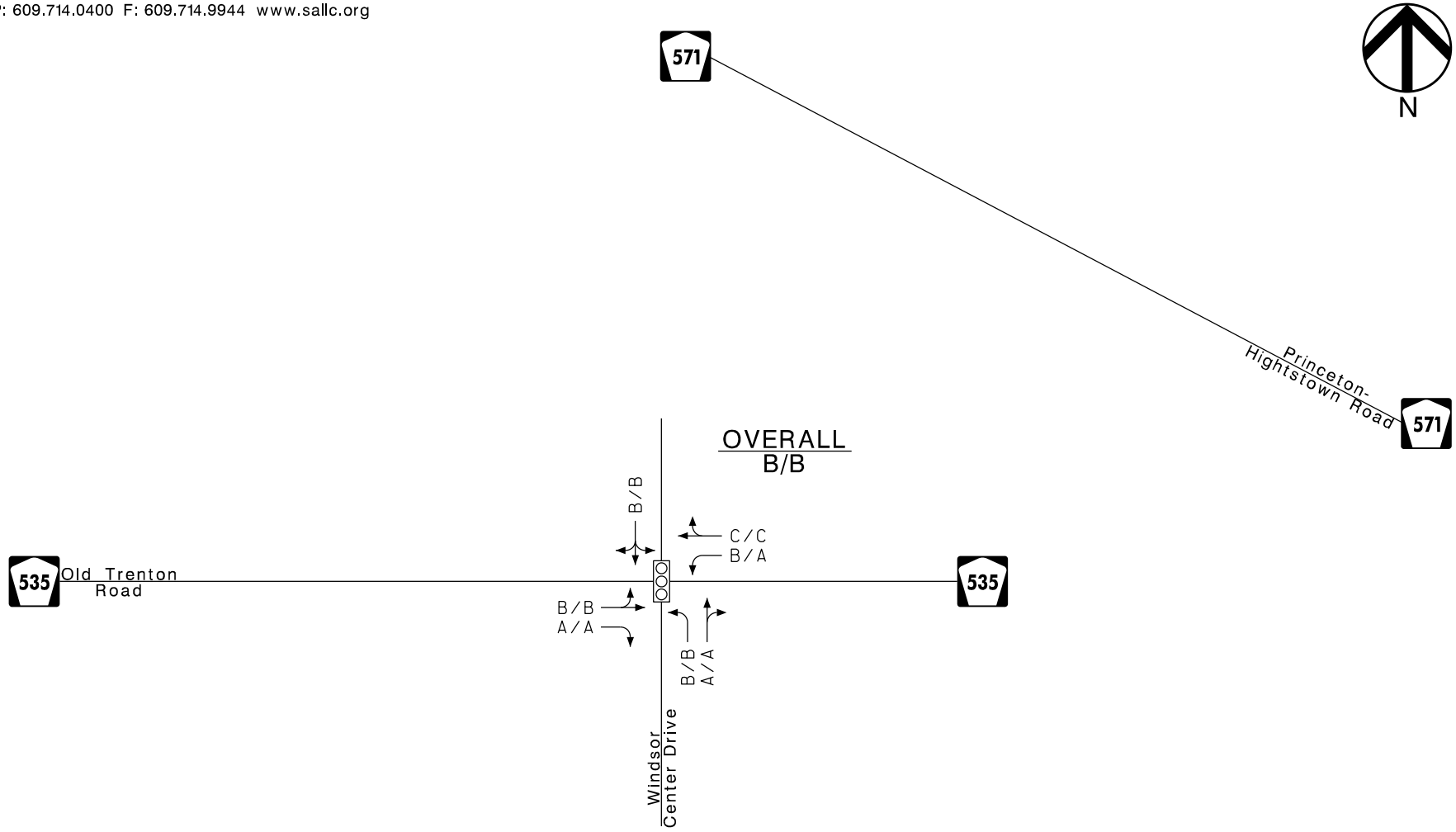

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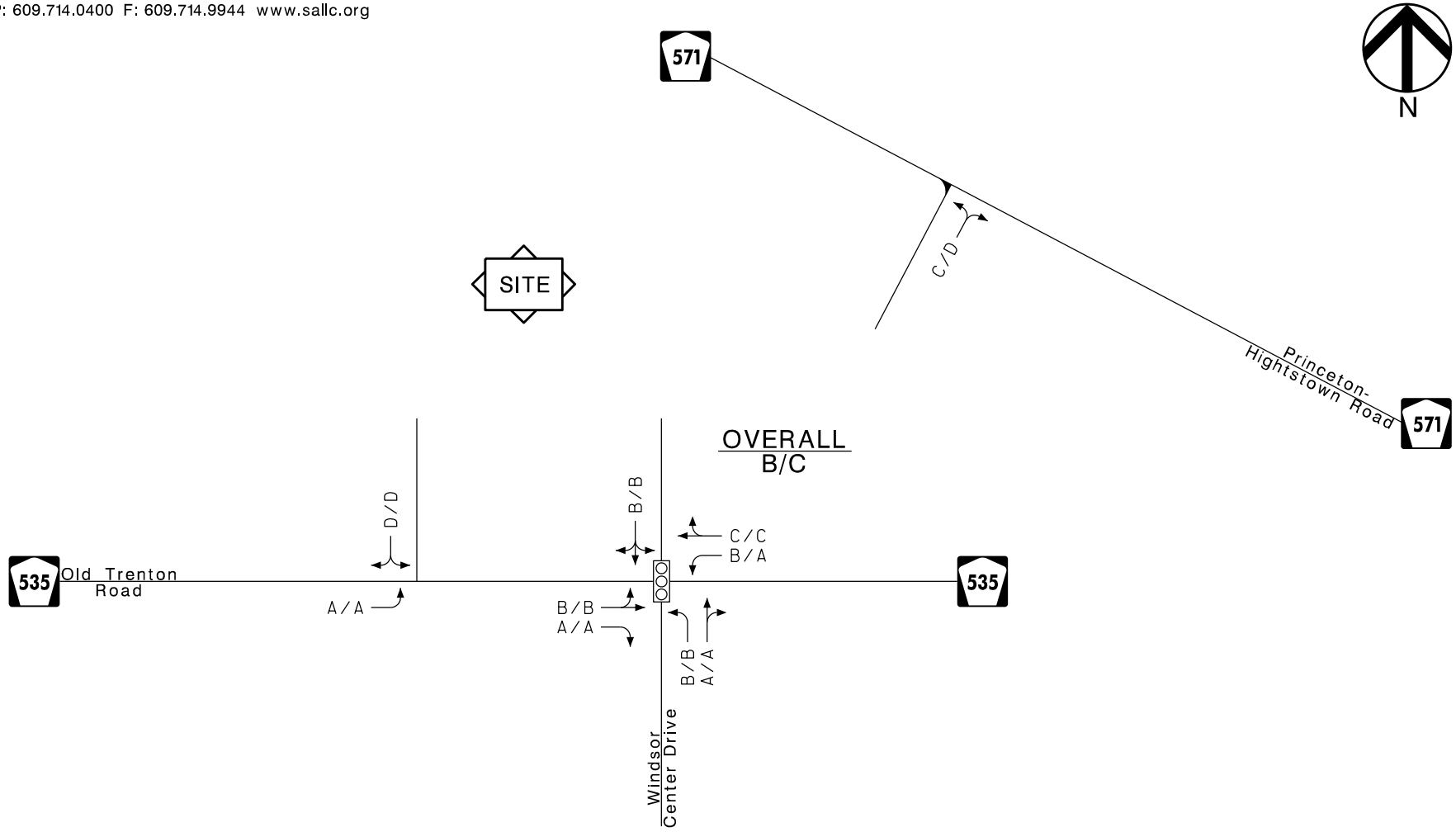
FIGURE 8
BUILD LEVELS OF SERVICE



Heritage at West Windsor

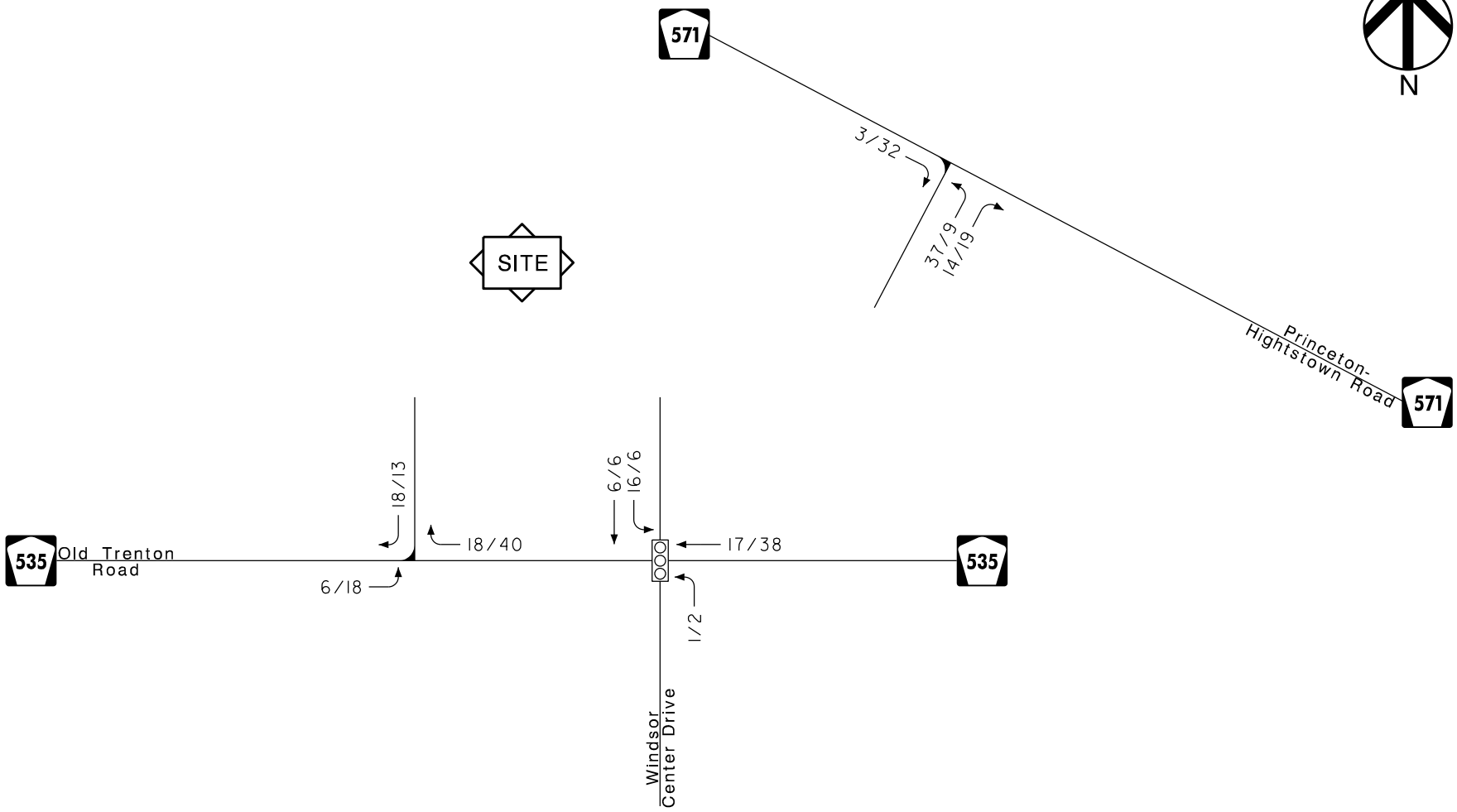
West Windsor Township, Mercer County, NJ
August 2020

TRAFFIC SIGNAL
AM/PM PEAK HOUR

SA Project No. 18196-A

Shropshire Associates LLC
277 White Horse Pike - Suite 203, Atco, NJ 08004
P: 609.714.0400 F: 609.714.9944 www.sallc.org

FIGURE 9
SITE TRAFFIC



Heritage at West Windsor

West Windsor Township, Mercer County, NJ
August 2020

TRAFFIC SIGNAL
AM/PM PEAK HOUR

SA Project No. 18196-A

Shropshire Associates LLC
277 White Horse Pike - Suite 203, Atco, NJ 08004
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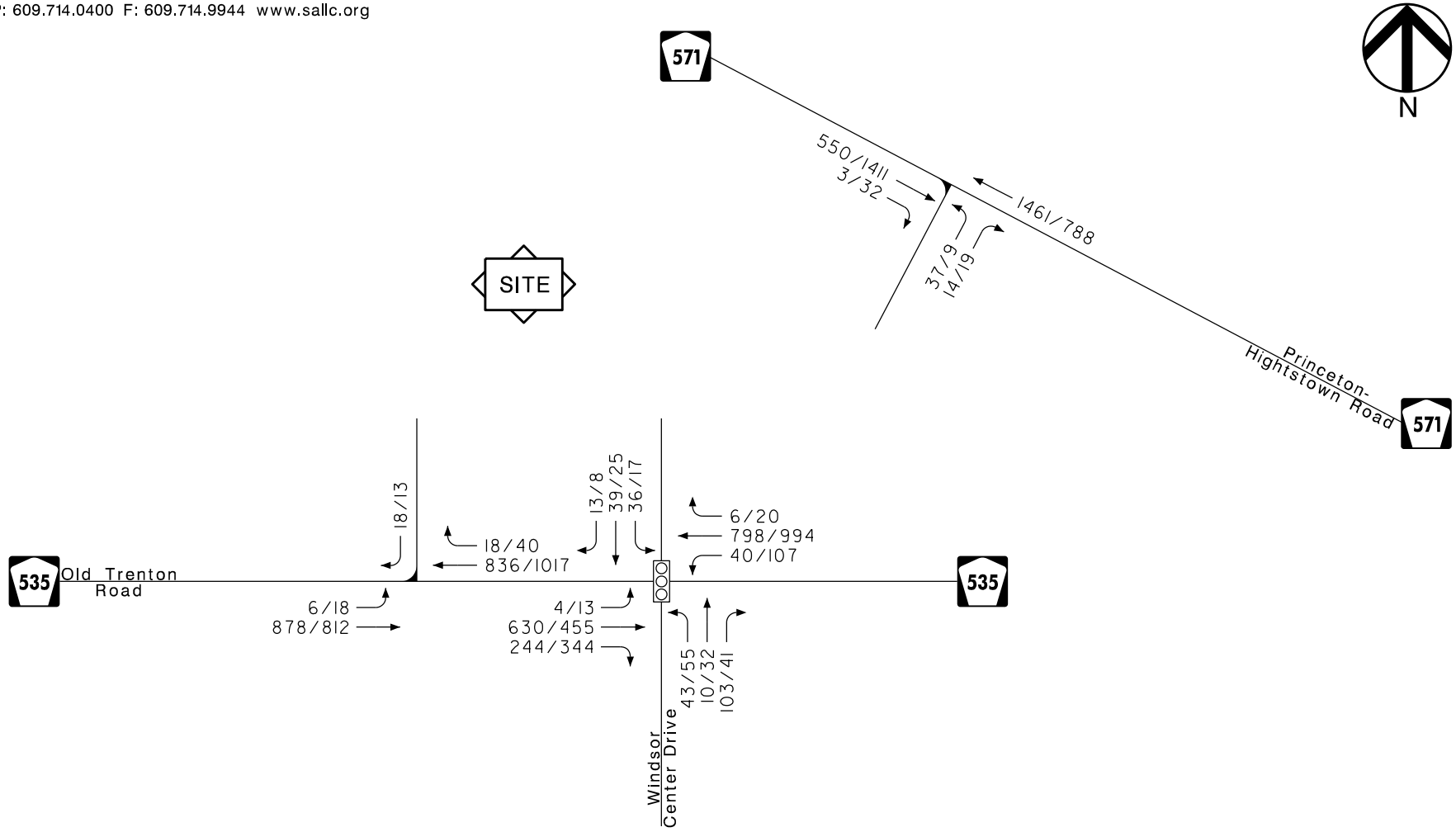
FIGURE 10
BUILD VOLUMES



Heritage at West Windsor

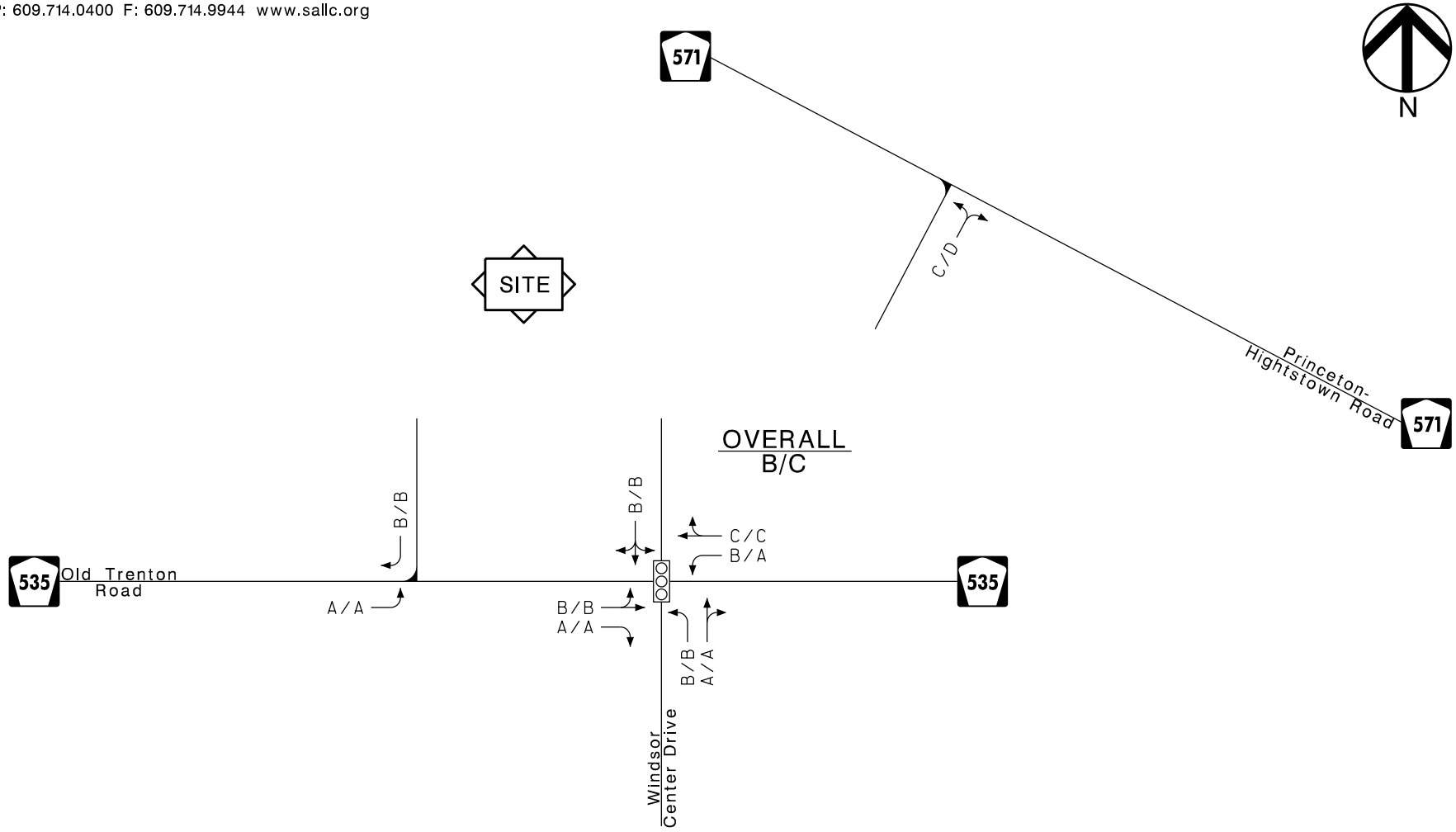
West Windsor Township, Mercer County, NJ
August 2020

TRAFFIC SIGNAL
AM/PM PEAK HOUR

SA Project No. 18196-A

Shropshire Associates LLC
277 White Horse Pike - Suite 203, Atco, NJ 08004
P: 609.714.0400 F: 609.714.9944 www.sallc.org

FIGURE 11
BUILD LEVELS OF SERVICE



Heritage at West Windsor

West Windsor Township, Mercer County, NJ

July 2020

TRAFFIC SIGNAL

AM/PM PEAK HOUR

SA Project No. 18196

Shropshire Associates LLC

277 Whitehorse Pike, Suite 203
Atco, NJ 08004

N/S Route: Windsor Center Drive
E/W Route: Old Trenton Road
West Windsor Twp/Mercer County/NJ
Tuesday/clear/GH/3142

File Name : 18196001
Site Code : 18196001
Start Date : 5/21/2019
Page No : 1

Groups Printed- Unshifted - Bank 1

	Old Trenton Road Westbound			Windsor Center Drive Northbound			Old Trenton Road Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
06:00 AM	37	0	37	7	2	9	31	64	95	141
06:15 AM	40	5	45	15	3	18	28	91	119	182
06:30 AM	52	8	60	14	6	20	38	145	183	263
06:45 AM	74	8	82	25	3	28	47	140	187	297
Total	203	21	224	61	14	75	144	440	584	883
07:00 AM	117	9	126	11	4	15	44	136	180	321
07:15 AM	174	10	184	15	6	21	57	153	210	415
07:30 AM	175	7	182	33	7	40	56	171	227	449
07:45 AM	219	13	232	28	15	43	67	168	235	510
Total	685	39	724	87	32	119	224	628	852	1695
08:00 AM	182	8	190	23	12	35	54	113	167	392
08:15 AM	163	8	171	30	7	37	62	142	204	412
08:30 AM	198	6	204	13	17	30	56	126	182	416
08:45 AM	158	9	167	15	7	22	64	119	183	372
Total	701	31	732	81	43	124	236	500	736	1592
09:00 AM	112	8	120	13	5	18	37	119	156	294
09:15 AM	107	8	115	11	6	17	39	84	123	255
09:30 AM	92	5	97	10	6	16	30	77	107	220
09:45 AM	88	11	99	6	3	11	26	88	114	224
Total	399	32	431	42	20	62	132	368	500	993
*** BREAK ***										
03:00 PM	122	7	129	14	9	23	47	95	142	294
03:15 PM	134	9	143	8	4	12	49	101	150	305
03:30 PM	172	20	192	8	9	17	55	92	147	356
03:45 PM	196	20	216	11	1	12	32	88	120	348
Total	624	56	680	41	23	64	183	376	559	1303
04:00 PM	192	11	203	6	7	13	60	101	161	377
04:15 PM	208	27	235	8	7	15	61	94	155	405
04:30 PM	214	23	237	11	5	16	49	97	146	399
04:45 PM	188	38	226	4	11	15	72	91	163	404
Total	802	99	901	29	30	59	242	383	625	1585
05:00 PM	233	16	249	13	14	27	66	114	180	456
05:15 PM	228	35	263	10	13	23	86	111	197	483
05:30 PM	226	28	254	7	9	16	95	107	202	472
05:45 PM	232	24	256	9	15	24	84	105	189	469
Total	919	103	1022	39	51	90	331	437	768	1880
06:00 PM	204	18	222	8	12	20	63	121	184	426
06:15 PM	185	22	207	7	8	15	70	83	153	375
06:30 PM	158	11	169	7	6	13	37	77	114	296
06:45 PM	131	11	142	8	3	11	40	74	114	267
Total	678	62	740	30	29	59	210	355	565	1364
Grand Total	5011	443	5454	410	242	652	1702	3487	5189	11295
Apprch %	91.9	8.1		62.9	37.1		32.8	67.2		
Total %	44.4	3.9	48.3	3.6	2.1	5.8	15.1	30.9	45.9	
Unshifted	4980	438	5418	409	240	649	1690	3474	5164	11231
% Unshifted	99.4	98.9	99.3	99.8	99.2	99.5	99.3	99.6	99.5	99.4

Shropshire Associates LLC

277 Whitehorse Pike, Suite 203
Atco, NJ 08004

N/S Route: Windsor Center Drive
E/W Route: Old Trenton Road
West Windsor Twp/Mercer County/NJ
Tuesday/clear/GH/3142

File Name : 18196001
Site Code : 18196001
Start Date : 5/21/2019

Groups Printed- Unshifted - Bank 1

	Old Trenton Road Westbound			Windsor Center Drive Northbound			Old Trenton Road Eastbound			
	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Bank 1	31	5	36	1	2	3	12	13	25	64
% Bank 1	0.6	1.1	0.7	0.2	0.8	0.5	0.7	0.4	0.5	0.6

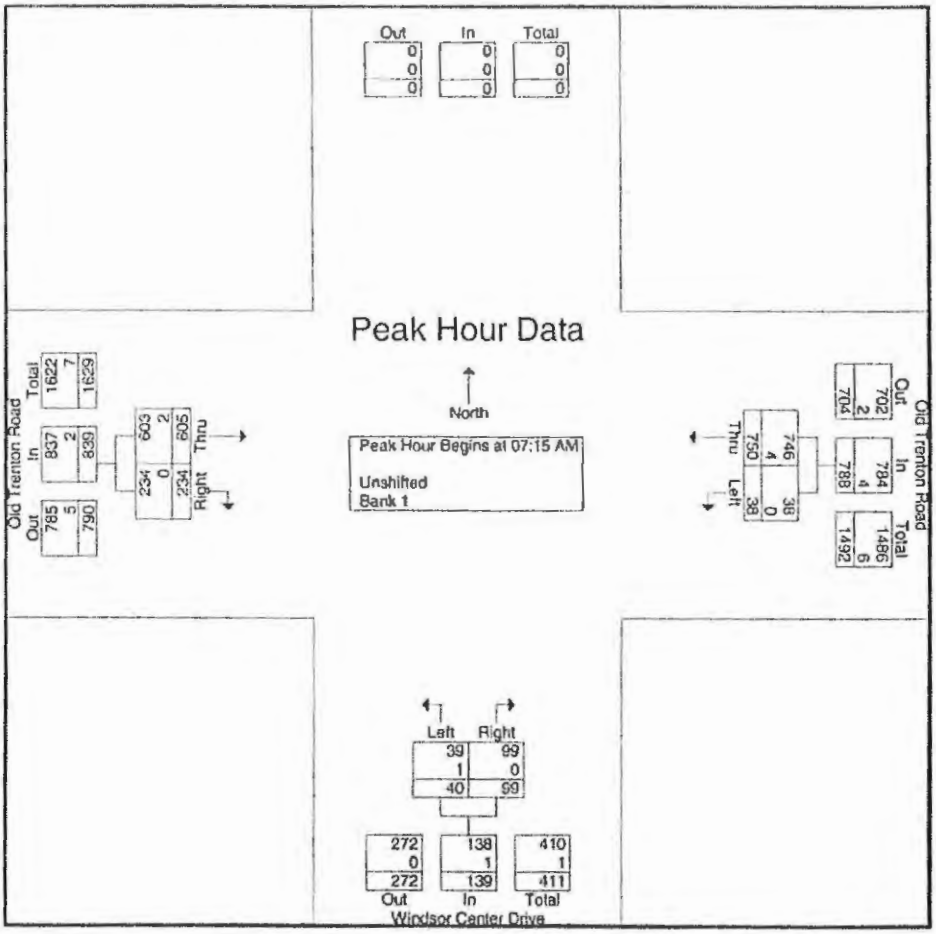
Shropshire Associates LLC

277 Whitehorse Pike, Suite 203
Atco, NJ 08004

N/S Route: Windsor Center Drive
E/W Route: Old Trenton Road
West Windsor Twp/Mercer County/NJ
Tuesday/clear/GH/3142

File Name : 18196001
Site Code : 18196001
Start Date : 5/21/2019
Page No : 3

	Old Trenton Road Westbound			Windsor Center Drive Northbound			Old Trenton Road Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	174	10	184	15	6	21	57	153	210	415
07:30 AM	175	7	182	33	7	40	56	171	227	449
07:45 AM	219	13	232	28	15	43	67	168	235	510
08:00 AM	182	8	190	23	12	35	54	113	167	392
Total Volume	750	38	788	99	40	139	234	605	839	1766
% App. Total	95.2	4.8		71.2	28.8		27.9	72.1		
PHF	.856	.731	.849	.750	.667	.808	.873	.885	.893	.866
Unshifted	746	38	784	99	39	138	234	603	837	1759
% Unshifted	99.5	100	99.5	100	97.5	99.3	100	99.7	99.8	99.6
Bank 1	4	0	4	0	1	1	0	2	2	7
% Bank 1	0.5	0	0.5	0	2.5	0.7	0	0.3	0.2	0.4



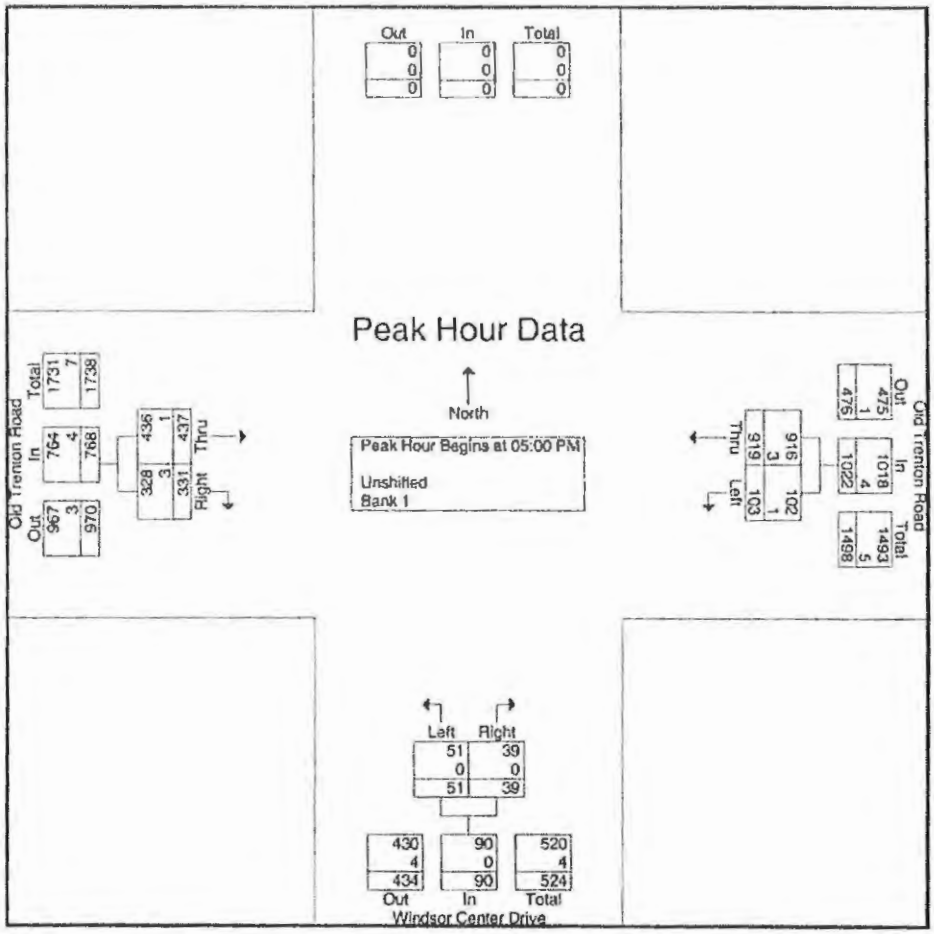
Shropshire Associates LLC

277 Whitehorse Pike, Suite 203
Atco, NJ 08004

N/S Route: Windsor Center Drive
E/W Route: Old Trenton Road
West Windsor Twp/Mercer County/NJ
Tuesday/clear/GH/3142

File Name : 18196001
Site Code : 18196001
Start Date : 5/21/2019
Page No : 4

	Old Trenton Road Westbound			Windsor Center Drive Northbound			Old Trenton Road Eastbound			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	233	16	249	13	14	27	66	114	180	456
05:15 PM	228	35	263	10	13	23	86	111	197	483
05:30 PM	226	28	254	7	9	16	95	107	202	472
05:45 PM	232	24	256	9	15	24	84	105	189	469
Total Volume	919	103	1022	39	51	90	331	437	768	1880
% App. Total	89.9	10.1		43.3	56.7		43.1	56.9		
PHF	.986	.736	.971	.750	.850	.833	.871	.958	.950	.973
Unshifted	916	102	1018	39	51	90	328	436	764	1872
% Unshifted	99.7	99.0	99.6	100	100	100	99.1	99.8	99.5	99.6
Bank 1	3	1	4	0	0	0	3	1	4	8
% Bank 1	0.3	1.0	0.4	0	0	0	0.9	0.2	0.5	0.4



Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Old Trenton Road
Location:600 ft west of the Windsor Center Drive intersection
West Windsor Twp/Mercer County/NJ
ATR#25803

Site Code: 18196005
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/20/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	East	West	East	West	East	West	East	West	East	West	East	West	East	West	East	West
12:00 AM	-	-	-	-	23	34	13	40	32	44	61	52	80	56	42	45
01:00	-	-	-	-	9	31	13	31	10	27	22	28	35	35	18	30
02:00	-	-	-	-	20	20	15	13	20	23	12	18	33	24	20	20
03:00	-	-	-	-	69	35	76	46	77	46	32	43	28	41	56	42
04:00	-	-	-	-	274	86	227	64	212	96	89	40	55	26	171	62
05:00	-	-	-	-	578	218	527	202	528	190	203	120	139	70	395	160
06:00	-	-	-	-	802	657	799	602	697	562	234	283	152	147	537	450
07:00	-	-	-	-	719	790	748	778	670	614	334	422	211	278	536	576
08:00	-	-	-	-	551	497	492	519	523	438	415	418	322	308	461	436
09:00	-	-	-	-	357	358	376	372	473	390	428	475	321	391	391	397
10:00	-	-	-	-	381	373	430	381	466	434	489	541	452	494	444	445
11:00	-	-	-	-	465	462	460	476	478	564	523	550	477	509	481	512
12:00 PM	-	-	420	387	436	431	421	425	558	733	482	569	491	526	468	512
01:00	-	-	468	520	585	508	544	537	774	687	551	539	472	449	566	540
02:00	-	-	563	656	636	694	654	645	753	750	524	544	522	458	609	624
03:00	-	-	643	851	698	861	674	872	696	881	399	473	568	455	613	732
04:00	-	-	774	954	724	999	821	963	635	763	450	427	335	422	623	755
05:00	-	-	566	714	578	685	623	710	501	619	484	367	431	329	530	571
06:00	-	-	387	553	428	498	406	504	417	545	353	448	316	357	384	484
07:00	-	-	296	382	303	390	306	395	318	437	318	371	220	277	294	375
08:00	-	-	225	365	239	369	245	350	266	379	292	385	205	361	245	368
09:00	-	-	151	212	140	201	96	232	225	281	198	269	149	221	160	236
10:00	-	-	174	148	159	136	176	181	281	213	241	176	221	136	209	165
11:00	-	-	64	104	81	127	79	98	157	130	143	118	132	79	109	109
Lane	0	0	4731	5846	9255	9460	9221	9436	9767	9846	7277	7676	6367	6449	8362	8646
Day	0		10577		18715		18657		19613		14953		12816		17008	
AM Peak	-	-	-	-	06:00	07:00	06:00	07:00	06:00	07:00	11:00	11:00	11:00	11:00	06:00	07:00
Vol.	-	-	-	-	802	790	799	778	697	814	523	550	477	509	537	576
PM Peak	-	-	16:00	16:00	16:00	16:00	16:00	16:00	13:00	15:00	13:00	12:00	15:00	12:00	16:00	16:00
Vol.	-	-	774	954	724	999	821	963	774	881	551	569	568	526	623	755

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Old Trenton Road
Location:600 ft west of the Windsor Center Drive intersection
West Windsor Twp/Mercer County/NJ
ATR#25803

Site Code: 18196005
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/27/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	East	West	East	West	East	West	East	West	East	West	East	West	East	West	East	West
12:00 AM	26	52	15	30	17	44	-	-	-	-	-	-	-	-	19	42
01:00	18	48	11	23	14	24	-	-	-	-	-	-	-	-	14	32
02:00	44	25	35	18	28	12	-	-	-	-	-	-	-	-	36	18
03:00	32	27	75	36	80	34	-	-	-	-	-	-	-	-	62	32
04:00	77	23	217	80	231	87	-	-	-	-	-	-	-	-	175	63
05:00	135	62	528	197	574	233	-	-	-	-	-	-	-	-	412	164
06:00	154	123	710	622	787	677	-	-	-	-	-	-	-	-	550	474
07:00	170	169	709	765	754	791	-	-	-	-	-	-	-	-	544	575
08:00	282	228	486	462	511	465	-	-	-	-	-	-	-	-	426	385
09:00	309	268	405	409	380	339	-	-	-	-	-	-	-	-	365	339
10:00	373	313	425	394	-	-	-	-	-	-	-	-	-	-	399	354
11:00	411	363	405	462	-	-	-	-	-	-	-	-	-	-	408	412
12:00 PM	336	371	440	430	-	-	-	-	-	-	-	-	-	-	388	400
01:00	364	378	510	502	-	-	-	-	-	-	-	-	-	-	437	440
02:00	330	383	532	707	-	-	-	-	-	-	-	-	-	-	431	545
03:00	306	334	622	801	-	-	-	-	-	-	-	-	-	-	464	568
04:00	327	374	689	907	-	-	-	-	-	-	-	-	-	-	508	640
05:00	343	328	487	666	-	-	-	-	-	-	-	-	-	-	415	497
06:00	270	282	354	482	-	-	-	-	-	-	-	-	-	-	312	382
07:00	246	275	213	307	-	-	-	-	-	-	-	-	-	-	230	291
08:00	184	354	206	335	-	-	-	-	-	-	-	-	-	-	195	344
09:00	133	192	111	159	-	-	-	-	-	-	-	-	-	-	122	176
10:00	176	119	154	128	-	-	-	-	-	-	-	-	-	-	165	124
11:00	97	48	67	113	-	-	-	-	-	-	-	-	-	-	82	80
Lane	5143	5139	8406	9035	3376	2706	0	0	0	0	0	0	0	0	7159	7377
Day	10282		17441		6082		0		0		0		0		14536	
AM Peak	11:00	11:00	06:00	07:00	06:00	07:00	-	-	-	-	-	-	-	-	06:00	07:00
Vol.	411	363	710	765	787	791	-	-	-	-	-	-	-	-	550	575
PM Peak	13:00	14:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Vol.	364	383	689	907	-	-	-	-	-	-	-	-	-	-	508	640

Comb. Total	10282	28018	24797	18657	19613	14953	12816	31544
ADT	ADT 16,334	AADT 16,334						

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Princeton Hightstown Road
Location:2000 ft west of the Old Trenton Road intersection
West Windsor Twp/Mercer County/NJ
ATR#34808

Site Code: 18196003
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/20/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	West	West	West	West	West	West	West	West	West	West	West	West	West	West	West	West
12:00 AM	-	-	-	-	27	28	25	25	34	34	55	55	52	52	39	39
01:00	-	-	-	-	10	10	12	12	22	22	28	28	23	23	19	19
02:00	-	-	-	-	23	22	20	21	24	25	23	23	27	27	23	24
03:00	-	-	-	-	68	69	81	81	69	68	50	50	29	29	59	59
04:00	-	-	-	-	212	212	217	216	192	192	68	68	55	55	149	149
05:00	-	-	-	-	619	618	560	558	511	512	190	191	112	112	398	398
06:00	-	-	-	-	1179	1177	1048	1046	980	978	273	272	161	161	728	727
07:00	-	-	-	-	**1392**	**1392**	**1180**	**1177**	**1036**	**1034**	490	491	249	249	**869**	**869**
08:00	-	-	-	-	931	930	869	867	808	807	592	592	347	347	709	709
09:00	-	-	-	-	569	569	589	587	607	608	566	567	509	511	568	568
10:00	-	-	-	-	593	592	598	597	649	647	631	632	520	521	598	598
11:00	-	-	-	-	628	628	660	659	642	643	**668**	**671**	**637**	**638**	647	648
12:00 PM	-	-	630	630	598	597	676	679	719	720	646	646	**588**	**588**	643	643
01:00	-	-	582	581	624	622	581	582	724	725	**667**	**668**	545	545	620	620
02:00	-	-	611	612	566	566	610	611	**727**	**728**	664	663	552	553	622	622
03:00	-	-	**681**	**682**	629	631	606	606	657	659	626	627	548	549	624	626
04:00	-	-	645	644	**750**	**751**	**744**	**744**	701	699	561	562	512	513	**652**	**652**
05:00	-	-	627	626	641	640	736	737	619	622	589	591	503	504	619	620
06:00	-	-	448	447	505	504	466	467	541	540	491	491	476	476	488	488
07:00	-	-	348	348	357	357	364	364	421	419	369	369	319	319	363	363
08:00	-	-	211	211	223	223	206	206	270	269	333	334	297	296	257	256
09:00	-	-	120	119	146	146	132	131	250	250	190	191	209	209	174	174
10:00	-	-	109	109	89	88	141	141	148	148	146	146	154	154	131	131
11:00	-	-	49	49	59	59	101	101	86	86	85	85	74	74	76	76
Lane	0	0	5061	5058	11438	11431	11222	11215	11437	11435	9001	9013	7498	7505	10075	10078
Day	0		10119		22869		22437		22872		18014		15003		20153	
AM Peak	-	-	-	-	07:00	07:00	07:00	07:00	07:00	07:00	11:00	11:00	11:00	11:00	07:00	07:00
Vol.	-	-	-	-	1392	1392	1180	1177	1036	1034	668	671	637	638	869	869
PM Peak	-	-	15:00	15:00	16:00	16:00	16:00	16:00	14:00	14:00	13:00	13:00	12:00	12:00	16:00	16:00
Vol.	-	-	681	682	750	751	744	744	727	728	667	668	588	588	652	652

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Princeton Hightstown Road
Location:2000 ft west of the Old Trenton Road intersection
West Windsor Twp/Mercer County/NJ
ATR#34808

Site Code: 18196003
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/27/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	West	West	West	West	West	West	West	West	West	West	West	West	West	West	West	West
12:00 AM	28	28	21	21	20	20	-	-	-	-	-	-	-	-	23	23
01:00	16	17	18	19	17	17	-	-	-	-	-	-	-	-	17	18
02:00	19	19	30	29	27	27	-	-	-	-	-	-	-	-	25	25
03:00	36	35	81	81	86	86	-	-	-	-	-	-	-	-	68	67
04:00	65	66	233	234	221	221	-	-	-	-	-	-	-	-	173	174
05:00	113	113	583	582	614	615	-	-	-	-	-	-	-	-	437	437
06:00	171	170	1148	1152	1197	1196	-	-	-	-	-	-	-	-	839	839
07:00	227	227	**1329**	**1327**	**1358**	**1356**	-	-	-	-	-	-	-	-	**971**	**970**
08:00	344	345	882	880	881	882	-	-	-	-	-	-	-	-	702	702
09:00	415	416	570	569	573	573	-	-	-	-	-	-	-	-	519	519
10:00	484	486	558	558	-	-	-	-	-	-	-	-	-	-	521	522
11:00	**549**	**549**	591	592	-	-	-	-	-	-	-	-	-	-	570	570
12:00 PM	**559**	**559**	638	637	-	-	-	-	-	-	-	-	-	-	598	598
01:00	518	518	602	603	-	-	-	-	-	-	-	-	-	-	560	560
02:00	461	462	573	574	-	-	-	-	-	-	-	-	-	-	517	518
03:00	491	494	586	584	-	-	-	-	-	-	-	-	-	-	538	539
04:00	512	510	**694**	**694**	-	-	-	-	-	-	-	-	-	-	**603**	**602**
05:00	445	446	554	554	-	-	-	-	-	-	-	-	-	-	500	500
06:00	411	412	408	408	-	-	-	-	-	-	-	-	-	-	410	410
07:00	284	284	269	269	-	-	-	-	-	-	-	-	-	-	276	276
08:00	271	270	174	174	-	-	-	-	-	-	-	-	-	-	222	222
09:00	136	137	108	108	-	-	-	-	-	-	-	-	-	-	122	122
10:00	89	89	78	78	-	-	-	-	-	-	-	-	-	-	84	84
11:00	44	43	41	41	-	-	-	-	-	-	-	-	-	-	42	42
Lane	6688	6695	10769	10768	4994	4993	0	0	0	0	0	0	0	0	9337	9339
Day	13383		21537		9987		0		0		0		0		18676	
AM Peak	11:00	11:00	07:00	07:00	07:00	07:00	-	-	-	-	-	-	-	-	07:00	07:00
Vol.	549	549	1329	1327	1358	1356	-	-	-	-	-	-	-	-	971	970
PM Peak	12:00	12:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Vol.	559	559	694	694	-	-	-	-	-	-	-	-	-	-	603	602

Comb. Total	13383	31656	32856	22437	22872	18014	15003	38829
ADT	ADT 19,791	AADT 19,791						

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway: Princeton Hightstown Road
Location:2200 ft west of Old Trenton Road
West Windsor Twp/Mercer County/NJ
ATR#34809

Site Code: 18196002
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/20/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	East	East	East	East	East	East	East	East	East	East	East	East	East	East	East	East
12:00 AM	-	-	-	-	24	24	34	34	32	31	42	42	40	40	34	34
01:00	-	-	-	-	14	14	22	22	26	26	28	28	19	19	22	22
02:00	-	-	-	-	10	11	5	5	19	20	12	12	10	10	11	12
03:00	-	-	-	-	29	29	30	29	30	29	23	23	17	17	26	25
04:00	-	-	-	-	59	59	72	73	54	55	54	55	17	17	51	52
05:00	-	-	-	-	184	184	210	210	178	177	101	101	58	57	146	146
06:00	-	-	-	-	447	446	429	428	371	372	181	182	107	107	307	307
07:00	-	-	-	-	525	525	471	472	475	475	286	287	209	209	393	394
08:00	-	-	-	-	454	453	446	445	475	474	432	432	369	369	435	435
09:00	-	-	-	-	453	452	419	419	511	512	494	493	420	420	459	459
10:00	-	-	-	-	548	548	487	488	590	591	646	645	552	552	565	565
11:00	-	-	-	-	558	560	588	586	730	730	655	655	542	541	615	614
12:00 PM	-	-	589	589	616	615	676	675	754	754	623	623	551	551	635	634
01:00	-	-	662	663	686	687	681	681	954	953	644	643	544	545	695	695
02:00	-	-	840	840	861	860	892	893	1168	1169	611	611	546	552	820	821
03:00	-	-	1146	1143	1166	1164	1215	1213	1106	1106	594	595	553	556	963	963
04:00	-	-	1381	1379	1344	1344	1383	1384	956	956	534	534	463	466	1010	1010
05:00	-	-	1100	1096	1084	1083	920	921	694	696	496	496	437	441	788	789
06:00	-	-	675	675	658	656	621	619	578	578	546	544	396	398	579	578
07:00	-	-	519	519	544	543	466	466	529	529	476	477	304	306	473	473
08:00	-	-	353	354	367	368	398	398	405	404	363	362	274	279	360	361
09:00	-	-	187	187	171	171	214	213	288	287	238	238	174	176	212	212
10:00	-	-	90	89	91	91	111	111	116	116	146	146	90	90	107	107
11:00	-	-	37	37	51	51	55	56	90	90	69	69	53	53	59	59
Lane	0	0	7579	7571	10944	10938	10845	10841	11129	11130	8294	8293	6745	6771	9765	9767
Day	0		15150		21882		21686		22259		16587		13516		19532	
AM Peak	-	-	-	-	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	10:00	10:00	11:00	11:00
Vol.	-	-	-	-	558	560	588	586	730	730	655	655	552	552	615	614
PM Peak	-	-	16:00	16:00	16:00	16:00	16:00	16:00	14:00	14:00	13:00	13:00	15:00	15:00	16:00	16:00
Vol.	-	-	1381	1379	1344	1344	1383	1384	1168	1169	644	643	553	556	1010	1010

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway: Princeton Hightstown Road
Location:2200 ft west of Old Trenton Road
West Windsor Twp/Mercer County/NJ
ATR#34809

Site Code: 18196002
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/27/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	East	East	East	East	East	East	East	East	East	East	East	East	East	East	East	East
12:00 AM	25	25	21	21	20	11	-	-	-	-	-	-	-	-	22	19
01:00	23	23	16	16	13	4	-	-	-	-	-	-	-	-	17	14
02:00	14	14	15	15	21	8	-	-	-	-	-	-	-	-	17	12
03:00	24	25	25	25	29	17	-	-	-	-	-	-	-	-	26	22
04:00	29	29	71	73	74	36	-	-	-	-	-	-	-	-	58	46
05:00	60	59	215	216	183	89	-	-	-	-	-	-	-	-	153	121
06:00	126	126	390	393	417	279	-	-	-	-	-	-	-	-	311	266
07:00	178	181	492	494	**521**	**325**	-	-	-	-	-	-	-	-	397	333
08:00	298	301	436	438	437	259	-	-	-	-	-	-	-	-	390	333
09:00	365	365	443	449	441	258	-	-	-	-	-	-	-	-	416	357
10:00	413	416	527	532	-	-	-	-	-	-	-	-	-	-	470	474
11:00	**486**	**497**	**592**	**600**	-	-	-	-	-	-	-	-	-	-	**539**	**548**
12:00 PM	**516**	**519**	619	624	-	-	-	-	-	-	-	-	-	-	568	572
01:00	516	518	637	645	-	-	-	-	-	-	-	-	-	-	576	582
02:00	427	430	818	834	-	-	-	-	-	-	-	-	-	-	622	632
03:00	459	464	1070	1091	-	-	-	-	-	-	-	-	-	-	764	778
04:00	370	374	**1398**	**1420**	-	-	-	-	-	-	-	-	-	-	**884**	**897**
05:00	378	383	976	1006	-	-	-	-	-	-	-	-	-	-	677	694
06:00	369	370	566	590	-	-	-	-	-	-	-	-	-	-	468	480
07:00	303	309	349	368	-	-	-	-	-	-	-	-	-	-	326	338
08:00	255	257	287	298	-	-	-	-	-	-	-	-	-	-	271	278
09:00	147	147	180	160	-	-	-	-	-	-	-	-	-	-	164	154
10:00	58	58	79	27	-	-	-	-	-	-	-	-	-	-	68	42
11:00	32	32	36	9	-	-	-	-	-	-	-	-	-	-	34	20
Lane	5871	5922	10258	10344	2156	1286	0	0	0	0	0	0	0	0	8238	8012
Day	11793		20602		3442		0		0		0		0		16250	
AM Peak	11:00	11:00	11:00	11:00	07:00	07:00	-	-	-	-	-	-	-	-	11:00	11:00
Vol.	486	497	592	600	521	325	-	-	-	-	-	-	-	-	539	548
PM Peak	12:00	12:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Vol.	516	519	1398	1420	-	-	-	-	-	-	-	-	-	-	884	897

Comb. Total	11793	35752	25324	21686	22259	16587	13516	35782
ADT	ADT 18,603	AADT 18,603						

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Windsor Center Drive
Location: 1000 ft from intersection with Old Trenton Road
West Windsor Twp/Mercer County/NJ
ATR#25802

Site Code: 18196004
Date Start: 5/21/2019
Date End: 5/29/2019

Start	5/20/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North
12:00 AM	*	*	*	*	3	0	4	1	11	1	15	1	16	9	10	2
01:00	*	*	*	*	4	1	3	0	3	2	6	4	16	1	6	2
02:00	*	*	*	*	7	2	2	0	6	2	5	1	9	2	6	1
03:00	*	*	*	*	19	5	27	4	25	1	10	3	9	2	18	3
04:00	*	*	*	*	59	29	44	22	38	30	20	14	14	3	35	20
05:00	*	*	*	*	149	71	144	62	150	62	58	20	36	17	107	46
06:00	*	*	*	*	256	139	253	121	188	106	73	28	48	16	164	82
07:00	*	*	*	*	242	159	241	152	190	122	99	41	61	25	167	100
08:00	*	*	*	*	159	73	146	78	157	61	134	42	112	36	142	58
09:00	*	*	*	*	116	51	125	50	146	68	156	64	107	36	130	54
10:00	*	*	*	*	145	64	121	60	160	69	201	54	163	34	158	56
11:00	*	*	*	*	176	77	154	90	173	72	187	49	181	43	174	66
12:00 PM	*	*	147	65	168	77	167	56	204	70	194	51	194	41	179	60
01:00	*	*	180	72	205	70	190	62	293	80	197	52	177	43	207	63
02:00	*	*	260	74	303	64	266	61	333	81	223	44	218	45	267	62
03:00	*	*	361	72	362	75	364	89	386	75	173	42	225	38	312	65
04:00	*	*	439	86	399	82	458	99	277	62	169	31	113	31	309	65
05:00	*	*	276	59	278	73	293	74	190	71	184	53	152	32	229	60
06:00	*	*	195	44	175	45	193	36	185	37	138	42	113	33	166	40
07:00	*	*	142	33	148	31	138	43	115	37	128	32	74	17	124	32
08:00	*	*	78	26	98	22	95	22	86	29	88	29	62	24	84	25
09:00	*	*	53	9	54	22	43	18	74	15	72	23	47	19	57	18
10:00	*	*	55	16	51	6	58	14	79	9	58	9	48	8	58	10
11:00	*	*	12	1	15	4	20	3	31	5	43	10	26	3	24	4
Lane	0	0	2198	557	3591	1242	3549	1217	3500	1167	2631	739	2221	558	3133	994
Day	0		2755		4833		4766		4667		3370		2779		4127	
AM Peak	-	-	-	-	06:00	07:00	06:00	07:00	07:00	07:00	10:00	09:00	11:00	11:00	11:00	07:00
Vol.	-	-	-	-	256	159	253	152	190	122	201	64	181	43	174	100
PM Peak	-	-	16:00	16:00	16:00	16:00	16:00	16:00	15:00	14:00	14:00	17:00	15:00	14:00	15:00	15:00
Vol.	-	-	439	86	399	82	458	99	386	81	223	53	225	45	312	65

Shropshire Associates, LLC

277 White Horse Pike, Suite 203
Atco, New Jersey 08004

Roadway:Windsor Center Drive
Location: 1000 ft from intersection with Old Trenton Road
West Windsor Twp/Mercer County/NJ
ATR#25802

Site Code: 18196004
Date Start: 5/21/2019
Date End: 5/29/2019

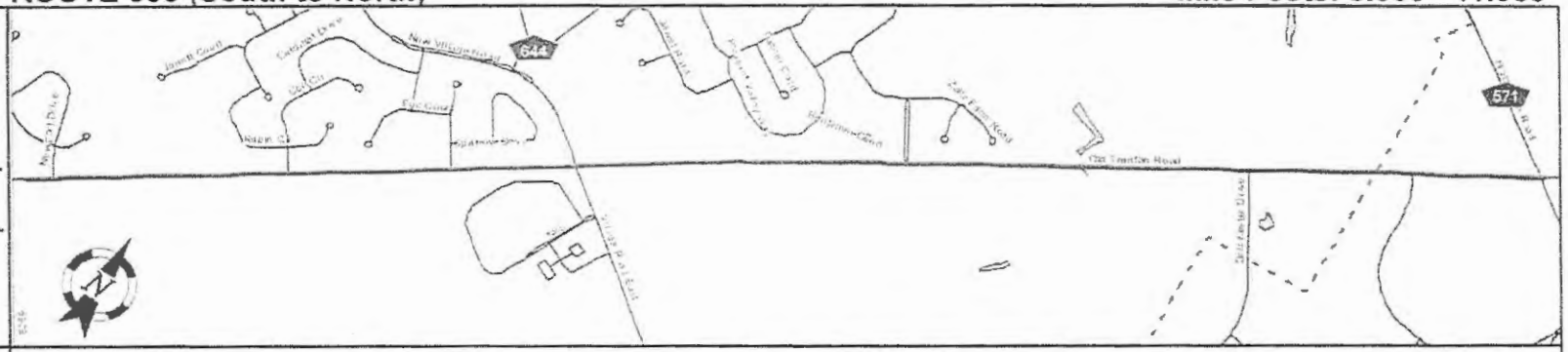
Start	5/27/2019		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North
12:00 AM	4	2	7	2	3	1	-	-	-	-	-	-	-	-	5	2
01:00	6	3	7	1	5	0	-	-	-	-	-	-	-	-	6	1
02:00	8	1	8	2	6	0	-	-	-	-	-	-	-	-	7	1
03:00	7	2	26	5	18	6	-	-	-	-	-	-	-	-	17	4
04:00	19	7	53	35	46	28	-	-	-	-	-	-	-	-	39	23
05:00	43	19	141	64	154	69	-	-	-	-	-	-	-	-	113	51
06:00	49	20	231	148	245	134	-	-	-	-	-	-	-	-	175	101
07:00	43	19	229	171	251	151	-	-	-	-	-	-	-	-	174	114
08:00	90	26	173	83	154	88	-	-	-	-	-	-	-	-	139	66
09:00	110	36	139	58	129	49	-	-	-	-	-	-	-	-	126	48
10:00	127	38	157	45	104	41	-	-	-	-	-	-	-	-	129	41
11:00	137	34	146	62	-	-	-	-	-	-	-	-	-	-	142	48
12:00 PM	138	39	155	76	-	-	-	-	-	-	-	-	-	-	146	58
01:00	124	46	195	61	-	-	-	-	-	-	-	-	-	-	160	54
02:00	115	38	244	60	-	-	-	-	-	-	-	-	-	-	180	49
03:00	113	38	376	82	-	-	-	-	-	-	-	-	-	-	244	60
04:00	111	39	411	89	-	-	-	-	-	-	-	-	-	-	261	64
05:00	143	37	258	59	-	-	-	-	-	-	-	-	-	-	200	48
06:00	103	31	180	36	-	-	-	-	-	-	-	-	-	-	142	34
07:00	73	22	108	28	-	-	-	-	-	-	-	-	-	-	90	25
08:00	71	25	79	26	-	-	-	-	-	-	-	-	-	-	75	26
09:00	36	8	44	8	-	-	-	-	-	-	-	-	-	-	40	8
10:00	36	4	40	11	-	-	-	-	-	-	-	-	-	-	38	8
11:00	24	4	14	3	-	-	-	-	-	-	-	-	-	-	19	4
Lane	1730	538	3421	1215	1115	567	0	0	0	0	0	0	0	0	2667	938
Day	2268		4636		1682		0		0		0		0		3605	
AM Peak	11:00	10:00	06:00	07:00	07:00	07:00	-	-	-	-	-	-	-	-	06:00	07:00
Vol.	137	38	231	171	251	151	-	-	-	-	-	-	-	-	175	114
PM Peak	17:00	13:00	16:00	16:00	-	-	-	-	-	-	-	-	-	-	16:00	16:00
Vol.	143	46	411	89	-	-	-	-	-	-	-	-	-	-	261	64

Comb. Total	2268	7391	6515	4766	4667	3370	2779	7732

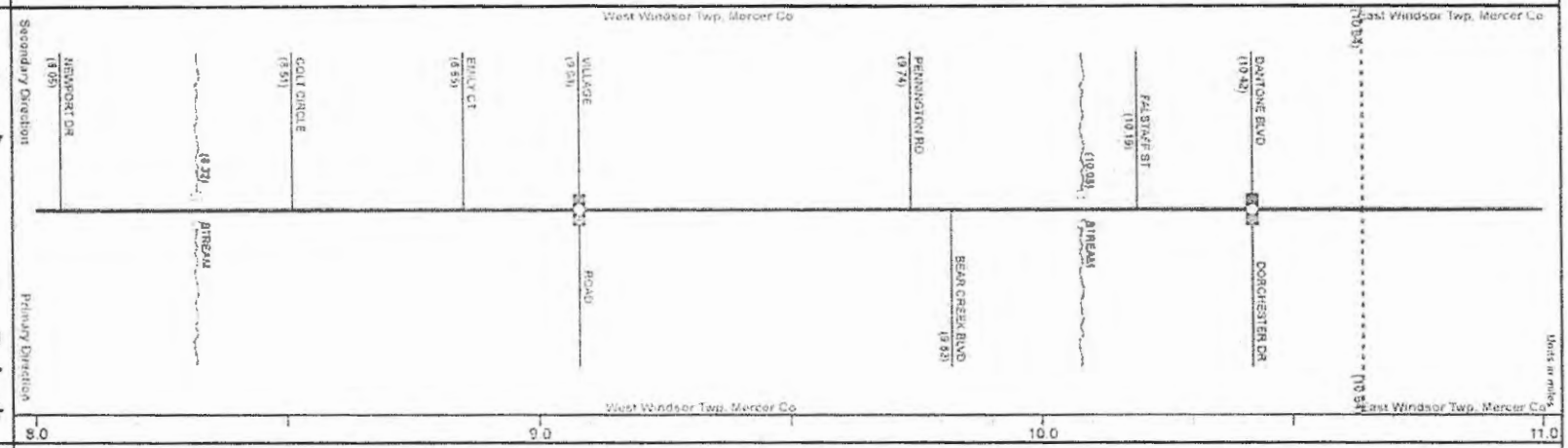
ADT ADT 3,999 AADT 3,999

ROUTE 535 (South to North)

Mile Posts: 8.000 - 11.000



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	



Street Name	Old Trenton Road
Jurisdiction	County
Functional Class	Urban Minor Arterial
Federal Aid - NHS Sy	STP
Control Section	
Speed Limit	50
Number of Lanes	2
Med. Type	None
Med. Width	0
Pavement	28
Shoulder	1
Traffic Volume	
Traffic Sta. ID	
Structure No	N/A N/A
Enlarged Views	

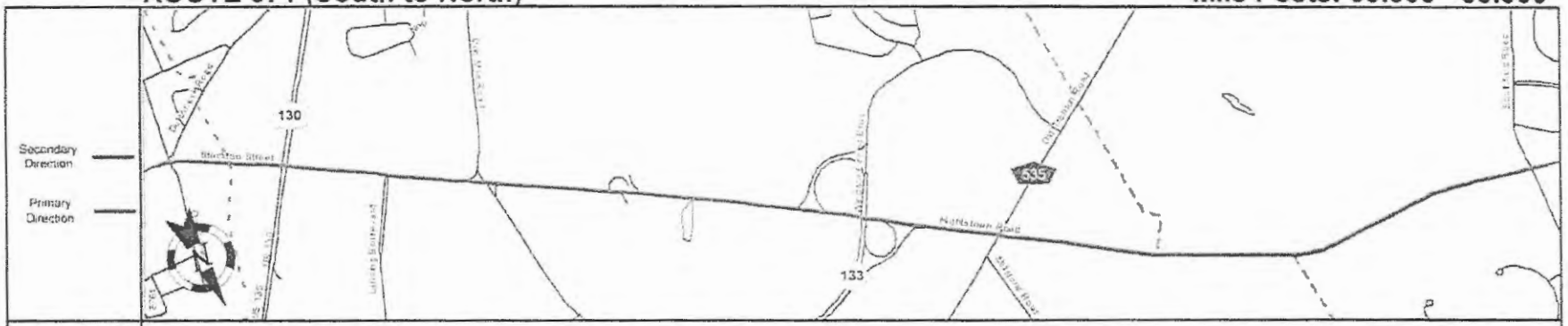
SRI = 00000535__

Date last inventoried: October 2012

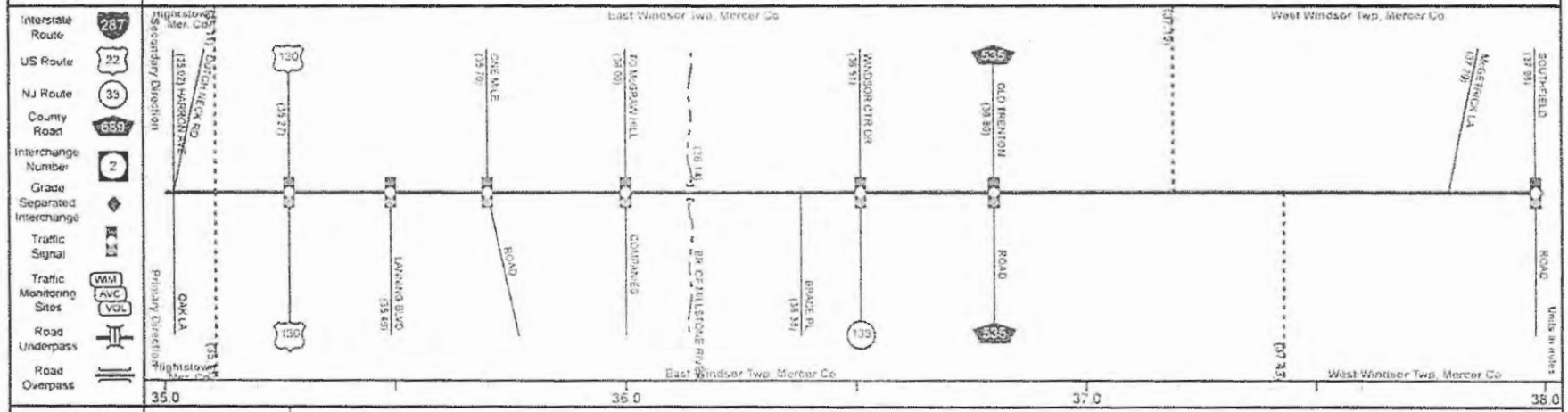
Page Created June 2013

ROUTE 571 (South to North)

Mile Posts: 35.000 - 38.000



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	



Street Name	Stockton Street		Hightstown Road	
Jurisdiction			County	
Functional Class		Urban Minor Arterial		Urban Principal Arterial
Federal Aid - NHS Sy		STP		NHS
Control Section				
Speed Limit	25	45	50	
Number of Lanes	2		4	
Med. Type			None	
Med. Width			0	
Pavement	28	60	48	
Shoulder		2	1	
Traffic Volume	10,328 (2012)		19,222 (2012)	
Traffic Sta. ID	5-6-167		131116	
Structure No.		N/A		
Enlarged Views				

Page Created June 2015

SRI = 00000571__

Date last inventoried: October 2012

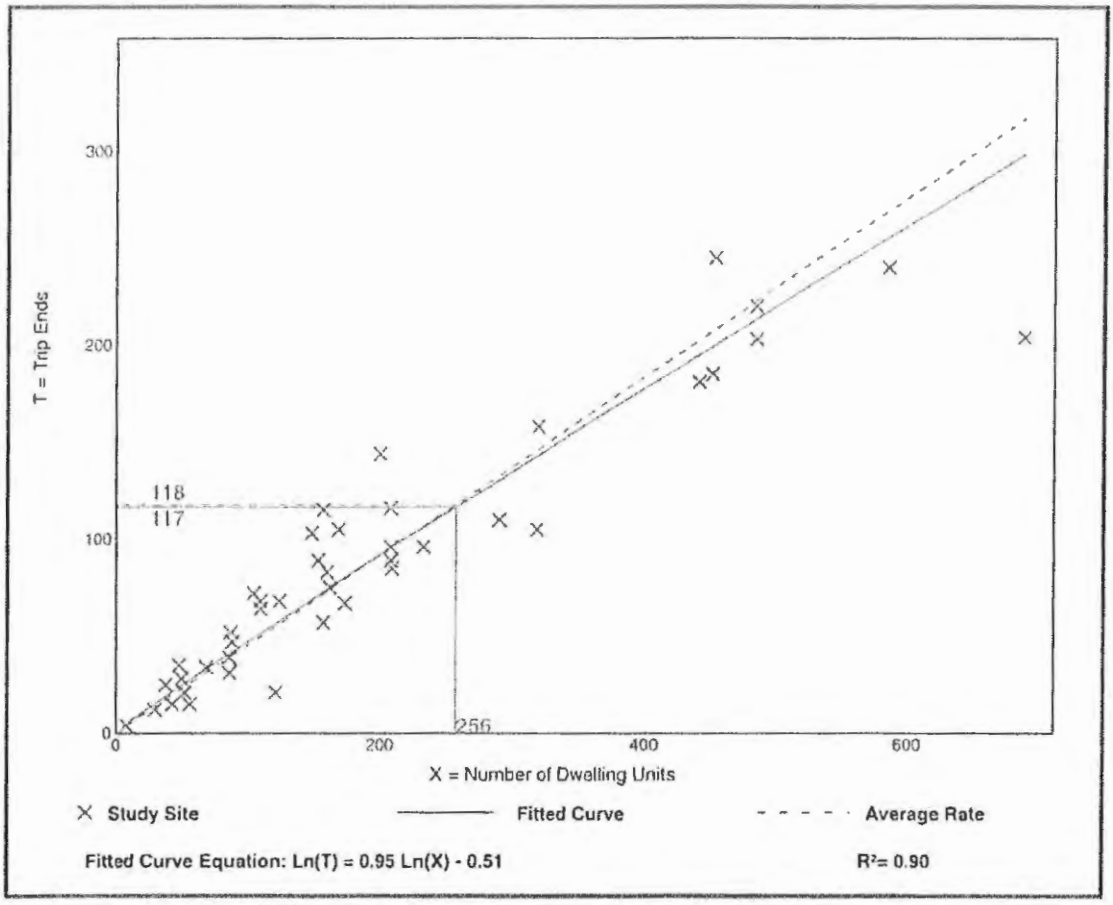
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs:	Dwelling Units
On a:	Weekday,
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	General Urban/Suburban
Number of Studies:	42
Avg Num. of Dwelling Units:	199
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



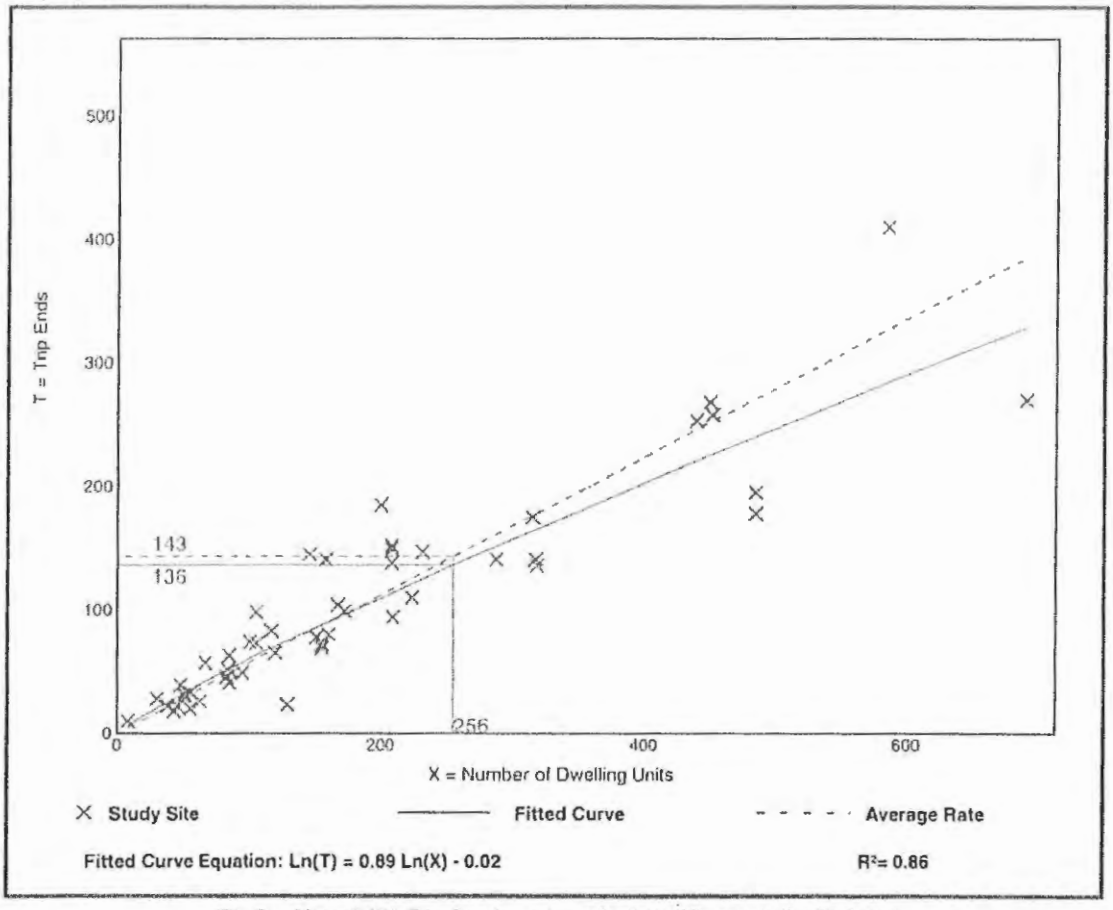
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	50
Avg. Num. of Dwelling Units:	187
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



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Shropshire Associates LLC

Left-Turn Lane Warrant Analysis (Two-Lane Roadways)

Time Period	AM	**Analyzed Roadway**	Old Trenton Road (CR 535)	**Analyzed Roadway Speed Limit (MPH):**	50
SA Project No.	18196	**Intersecting Roadway**	Site Driveway		
Date	2-26-20	**Municipality**	West Windsor Township		
Analyst	NBM	**County**	Mercer		

Highway Research Record, Number 211, Table 21

Opposing Volume (V_O)	Percent Left Turns in Advancing Volume (V_A)					
	5%	10%	15%	20%	30%	40%
800	280	215	170	140	100	125
700	315	235	190	175	145	135
600	350	255	215	195	165	155
500	390	285	240	215	185	170
400	435	320	270	235	210	190
300	485	360	305	265	235	215
200	545	400	340	300	265	245
100	615	445	375	335	295	275

Inputs

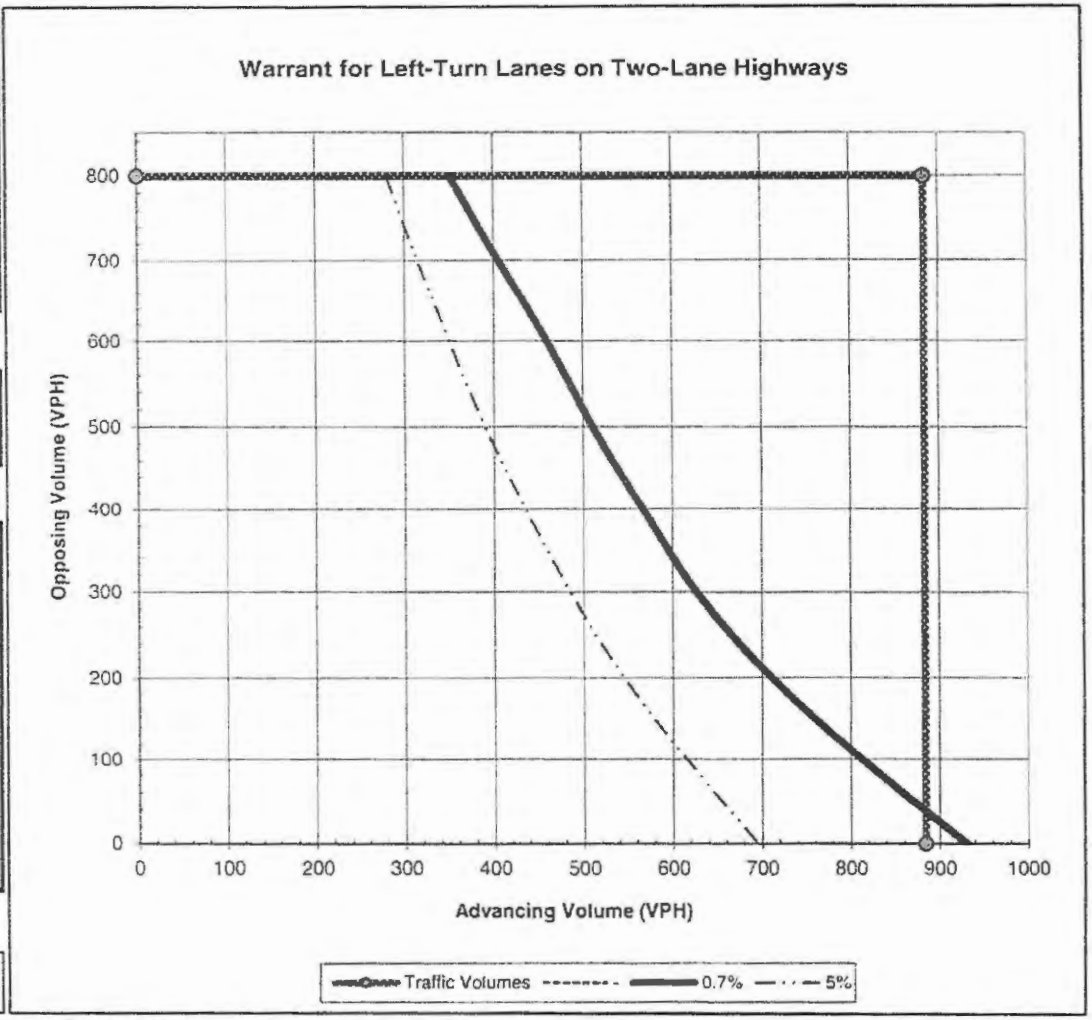
Advancing Traffic Volume (V_A) - Veh / Hr	884
Left-Turning Vehicles in V_A - Veh / Hr	0
Opposing Traffic Volume (V_O) - Veh / Hr	800

Analyses

Opposing Volume (V_O) in Veh / Hr	Advancing Volume (V_A) Required For Warrant		
	Next Lower Range	Calculated % Left-Turns	Next Higher Range
	-	0.7%	5%
800		351	280
700		405	315
600		460	350
500		511	390
400		566	435
300		627	485
200		711	545
100		812	615

Conclusion

Left-Turn Lane Warranted



Note: Percent Left-Turns in Advancing Volume Less Than 5% - Results Extrapolated

Shropshire Associates LLC

Left-Turn Lane Warrant Analysis (Two-Lane Roadways)

Time Period	PM	**Analyzed Roadway**	Old Trenton Road (CR 535)	**Analyzed Roadway Speed Limit (MPH):**	50
SA Project No.	18196	**Intersecting Roadway**	Site Driveway		
Date	2-26-20	**Municipality**	West Windsor Township		
Analyst	NBM	**County**	Mercer		

Highway Research Record, Number 211, Table 21

Opposing Volume (V_O)	Percent Left Turns in Advancing Volume (V_A)					
	5%	10%	15%	20%	30%	40%
800	280	215	170	160	120	125
700	315	235	190	175	145	135
600	350	255	215	195	165	155
500	390	285	240	215	185	170
400	435	320	270	235	210	190
300	485	360	305	265	235	215
200	545	400	340	300	265	245
100	615	445	375	335	295	275

Inputs

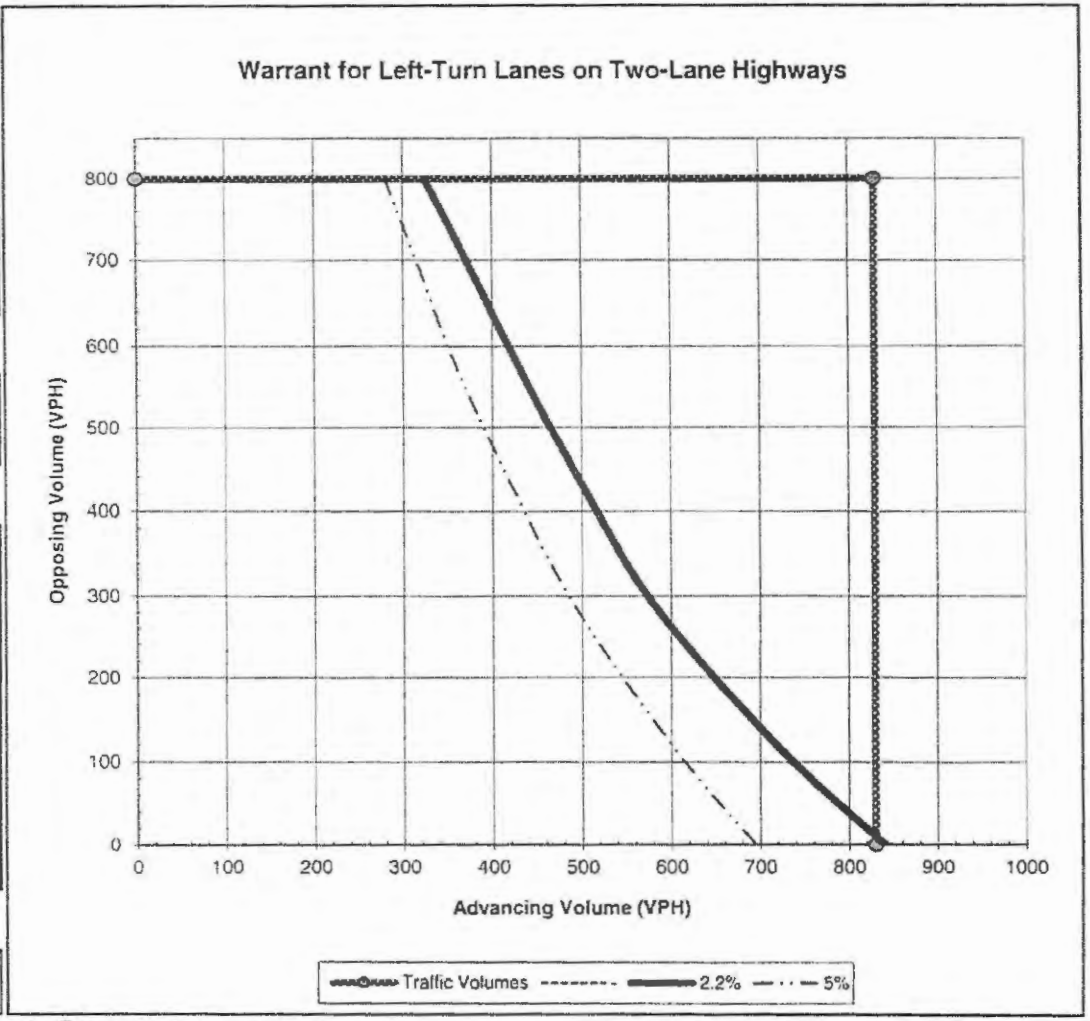
Advancing Traffic Volume (V_A) - Veh / Hr	830
Left-Turning Vehicles in V_A - Veh / Hr	18
Opposing Traffic Volume (V_O) - Veh / Hr	800

Analyses

Opposing Volume (V_O) in Veh / Hr	Advancing Volume (V_A) Required For Warrant		
	Next Lower Range	Calculated % Left-Turns	Next Higher Range
	-	2.2%	5%
800		325	280
700		371	315
600		418	350
500		465	390
400		517	435
300		573	485
200		648	545
100		737	615

Conclusion

Left-Turn Lane Warranted



Note: Percent Left-Turns in Advancing Volume Less Than 5% - Results Extrapolated

Shropshire Associates LLC

GAP ANALYSIS

Transportation Research Board - Highway Capacity Manual
Critical Gap Calculations for a Left-Turn onto a Minor Street

SA Project: Heritage at West Windsor **SA Project No.:** 18196
Roadway: Old Trenton Road **Date:** 6/4/2019 **Two or Four Lanes ?** 2
Municipality: West Windsor Township **County:** Mercer County **State:** NJ

Critical Gap: 4.1 sec **Follow-Up Time:** 2.2 sec

AM Peak Hour:	7:00 AM to 8:00 AM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
7:00 AM	7	4	4	2	0	0	0	0	1	0	0	0	2
7:15 AM	4	3	2	0	1	0	0	1	0	0	0	0	0
7:30 AM	4	1	0	3	2	0	0	0	0	0	0	0	0
7:45 AM	2	3	0	1	0	0	0	0	0	0	0	0	0
Totals:	17	11	6	6	3	0	0	1	1	0	0	0	2

PM Peak Hour:	4:00 PM to 5:00 PM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
4:00 PM	3	2	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	5	3	0	2	1	0	0	0	0	0	0	0
4:30 PM	6	0	0	1	0	0	1	0	0	0	0	0	0
4:45 PM	6	1	2	0	0	0	0	0	0	0	0	0	0
Totals:	15	8	6	1	2	1	1	0	0	0	0	0	0

SAT Peak Hour:													
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
12:00 PM													
12:15 PM													
12:30 PM													
12:45 PM													
Totals:	0	0	0	0	0	0	0	0	0	0	0	0	0

	AM	PM	Sat
Gaps for 1 Vehicle	0	0	0
Gaps for 2 Vehicles	19	17	0
Gaps for 3 Vehicles	10	8	0
Gaps for 4 Vehicles	6	4	0
Gaps for 5 Vehicles	5	1	0
Gaps for 6 Vehicles	1	1	0
Gaps for 7 Vehicles	4	1	0

Total Left-Turns Accommodable **151** **92** **0**

Shropshire Associates LLC

GAP ANALYSIS

Transportation Research Board - Highway Capacity Manual
Critical Gap Calculations for a Left-Turn onto a Major Street

SA Project: Heritage at West Windsor **SA Project No.:** 18196
Roadway: Old Trenton Road **Date:** 6/4/2019 **Two or Four Lanes ?** 2
Municipality: West Windsor Township **County:** Mercer County **State:** NJ

Critical Gap: 7.1 sec **Follow-Up Time:** 3.5 sec

AM Peak Hour:	7:00 AM to 8:00 AM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
7:00 AM	7	4	4	2	0	0	0	0	1	0	0	0	2
7:15 AM	4	3	2	0	1	0	0	1	0	0	0	0	0
7:30 AM	4	1	0	3	2	0	0	0	0	0	0	0	0
7:45 AM	2	3	0	1	0	0	0	0	0	0	0	0	0
Totals:	17	11	6	6	3	0	0	1	1	0	0	0	2

PM Peak Hour:	4:00 PM to 5:00 PM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
4:00 PM	3	2	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	5	3	0	2	1	0	0	0	0	0	0	0
4:30 PM	6	0	0	1	0	0	1	0	0	0	0	0	0
4:45 PM	6	1	2	0	0	0	0	0	0	0	0	0	0
Totals:	15	8	6	1	2	1	1	0	0	0	0	0	0

SAT Peak Hour:													
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
12:00 PM													
12:15 PM													
12:30 PM													
12:45 PM													
Totals:	0	0	0	0	0	0	0	0	0	0	0	0	0

	AM	PM	Sat
Gaps for 1 Vehicle	17	14	0
Gaps for 2 Vehicles	9	4	0
Gaps for 3 Vehicles	2	2	0
Gaps for 4 Vehicles	0	0	0
Gaps for 5 Vehicles	1	0	0
Gaps for 6 Vehicles	0	0	0
Gaps for 7 Vehicles	2	0	0
Total Left-Turns Accommodable	**60**	**28**	**0**

Shropshire Associates LLC

GAP ANALYSIS

Transportation Research Board - Highway Capacity Manual
Critical Gap Calculations for a Left-Turn onto a Major Street

SA Project: Heritage at West Windsor **SA Project No.:** 18196
Roadway: Princeton Hightstown Road **Date:** 6/4/2019 **Two or Four Lanes ?** 4
Municipality: West Windsor Township **County:** Mercer County **State:** NJ

Critical Gap: 7.5 sec **Follow-Up Time:** 3.5 sec

AM Peak Hour:	7:00 AM to 8:00 AM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
7:00 AM	9	2	5	3	7	0	0	0	2	0	0	0	0
7:15 AM	9	4	3	3	5	2	1	1	1	0	0	0	0
7:30 AM	10	1	0	4	4	0	3	0	0	0	0	0	0
7:45 AM	5	2	1	2	2	3	1	1	0	0	1	0	0
Totals:	33	9	9	12	18	5	5	2	3	0	1	0	0

PM Peak Hour:	4:00 PM to 5:00 PM												
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
4:00 PM	5	4	5	1	2	0	0	0	0	0	0	0	0
4:15 PM	9	3	3	2	4	3	0	0	0	0	0	0	0
4:30 PM	5	9	0	2	0	1	0	0	0	0	0	0	0
4:45 PM	7	7	2	3	2	0	0	0	0	0	0	1	0
Totals:	26	23	10	8	8	4	0	0	0	0	0	1	0

SAT Peak Hour:													
	6 - 7	8 - 9	10 - 11	12 - 13	14 - 15	16 - 17	18 - 19	20 - 21	22 - 23	24 - 25	26 - 27	28 - 29	> 29
12:00 PM													
12:15 PM													
12:30 PM													
12:45 PM													
Totals:	0	0	0	0	0	0	0	0	0	0	0	0	0

	AM	PM	Sat
Gaps for 1 Vehicle	15	30	0
Gaps for 2 Vehicles	23	14	0
Gaps for 3 Vehicles	15	8	0
Gaps for 4 Vehicles	5	0	0
Gaps for 5 Vehicles	3	0	0
Gaps for 6 Vehicles	1	0	0
Gaps for 7 Vehicles	0	0	0

Total Left-Turns Accommodable 147 82 0

Intersection						
Int Delay, s/veh	4.2					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	605	234	38	750	40	99
Future Vol, veh/h	605	234	38	750	40	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	85	155	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	87	73	86	67	75
Heavy Vehicles, %	0	0	0	1	3	0
Mvmt Flow	680	269	52	872	60	132

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	680	0	1656	680
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	976	-
Critical Hdwy	-	-	4.1	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.2	-	3.527	3.3
Pot Cap-1 Maneuver	-	0	922	-	107	454
Stage 1	-	0	-	-	501	-
Stage 2	-	0	-	-	364	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	922	-	101	454
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	344	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	36.8
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	101	454	-	922	-
HCM Lane V/C Ratio	0.591	0.291	-	0.056	-
HCM Control Delay (s)	82.6	16.1	-	9.1	-
HCM Lane LOS	F	C	-	A	-
HCM 95th %tile Q(veh)	2.8	1.2	-	0.2	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	437	331	103	919	51	39
Future Vol, veh/h	437	331	103	919	51	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Free	-	None	-	None
Storage Length	-	85	155	-	190	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	87	74	99	85	75
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	455	380	139	928	60	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	455	0	1661	455
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	1206	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	1111	-	108	609
Stage 1	-	0	-	-	643	-
Stage 2	-	0	-	-	286	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1111	-	95	609
Mov Cap-2 Maneuver	-	-	-	-	95	-
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	250	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	55.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	WBL	WBT
Capacity (veh/h)	95	609	-	1111	-
HCM Lane V/C Ratio	0.632	0.085	-	0.125	-
HCM Control Delay (s)	92.8	11.5	-	8.7	-
HCM Lane LOS	F	B	-	A	-
HCM 95th %tile Q(veh)	3	0.3	-	0.4	-

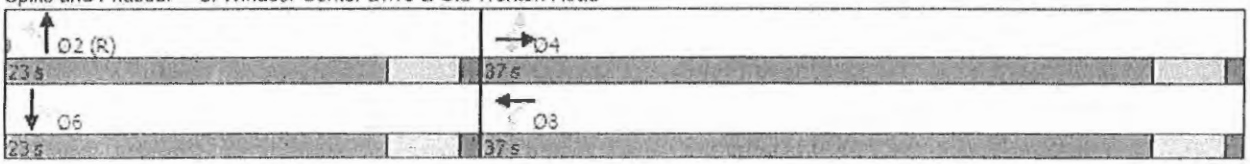
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	630	244	40	781	6	42	10	103	20	33	13
Future Volume (vph)	4	630	244	40	781	6	42	10	103	20	33	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	0		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.861			0.974	
Flt Protected				0.950			0.950				0.985	
Satd. Flow (prot)	0	1900	1615	1805	1879	0	1752	1636	0	0	1823	0
Flt Permitted		0.977		0.231			0.710				0.904	
Satd. Flow (perm)	0	1856	1615	439	1879	0	1310	1636	0	0	1673	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			227		1			137			14	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		1410			702			727			335	
Travel Time (s)		19.2			9.6			14.2			7.6	
Peak Hour Factor	0.92	0.89	0.87	0.73	0.86	0.92	0.67	0.92	0.75	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	708	280	55	908	7	63	11	137	22	36	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	712	280	55	915	0	63	148	0	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	37.0	37.0	37.0	37.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	61.7%	61.7%	61.7%	61.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	32.5	32.5	32.5	32.5	32.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.5	32.5	32.5	32.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.31	0.31			0.31	
v/c Ratio		0.71	0.29	0.23	0.90		0.16	0.25			0.14	
Control Delay		15.1	2.8	10.4	26.9		16.4	5.2			13.5	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		15.1	2.8	10.4	26.9		16.4	5.2			13.5	
LOS		B	A	B	C		B	A			B	
Approach Delay		11.6			26.0			8.6			13.5	
Approach LOS		B			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 72.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



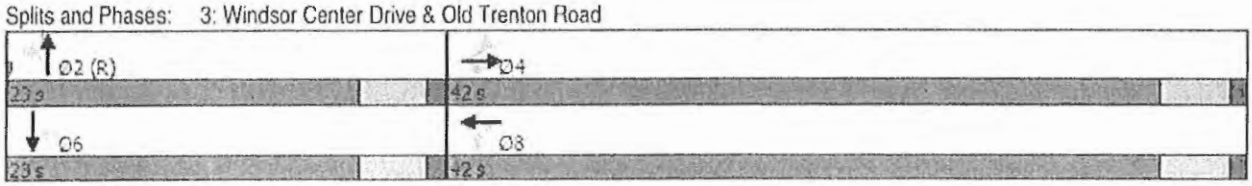
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	455	344	107	956	20	53	32	41	11	19	8
Future Volume (vph)	13	455	344	107	956	20	53	32	41	11	19	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997			0.908			0.971	
Flt Protected		0.999		0.950			0.950				0.986	
Satd. Flow (prot)	0	1898	1599	1787	1894	0	1805	1725	0	0	1819	0
Flt Permitted		0.788		0.411			0.730				0.933	
Satd. Flow (perm)	0	1497	1599	773	1894	0	1387	1725	0	0	1721	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			395		3			55			9	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		1410			702			727			262	
Travel Time (s)		19.2			9.6			14.2			6.0	
Peak Hour Factor	0.92	0.96	0.87	0.74	0.99	0.92	0.85	0.92	0.75	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	14	474	395	145	966	22	62	35	55	12	21	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	488	395	145	988	0	62	90	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	42.0	42.0	42.0	42.0	42.0		23.0	23.0		23.0	23.0	
Total Split (%)	64.6%	64.6%	64.6%	64.6%	64.6%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	37.5	37.5	37.5	37.5	37.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		37.5	37.5	37.5	37.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.28	0.28			0.28	
v/c Ratio		0.57	0.36	0.33	0.90		0.16	0.17			0.08	
Control Delay		11.9	1.8	9.7	26.3		18.8	9.8			15.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		11.9	1.8	9.7	26.3		18.8	9.8			15.0	
LOS		B	A	A	C		B	A			B	
Approach Delay		7.4			24.2			13.5			15.0	
Approach LOS		A			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 96.2% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



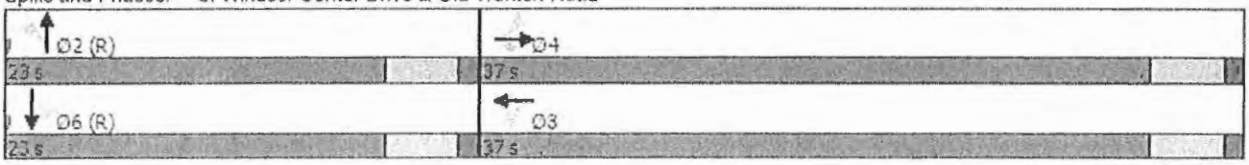
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	646	250	40	798	6	43	10	103	20	33	13
Future Volume (vph)	4	646	250	40	798	6	43	10	103	20	33	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.861			0.974	
Flt Protected				0.950			0.950				0.985	
Satd. Flow (prot)	0	1900	1615	1805	1879	0	1752	1636	0	0	1823	0
Flt Permitted		0.937		0.218			0.710				0.904	
Satd. Flow (perm)	0	1780	1615	414	1879	0	1310	1636	0	0	1673	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			226		1			137			14	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		628			702			727			238	
Travel Time (s)		8.6			9.6			14.2			5.4	
Peak Hour Factor	0.92	0.89	0.87	0.73	0.86	0.92	0.67	0.92	0.75	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	726	287	55	928	7	64	11	137	22	36	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	730	287	55	935	0	64	148	0	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	37.0	37.0	37.0	37.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	61.7%	61.7%	61.7%	61.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	32.5	32.5	32.5	32.5	32.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.5	32.5	32.5	32.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.31	0.31			0.31	
v/c Ratio		0.76	0.29	0.25	0.92		0.16	0.25			0.14	
Control Delay		17.3	2.9	10.8	29.4		16.4	5.2			13.5	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		17.3	2.9	10.8	29.4		16.4	5.2			13.5	
LOS		B	A	B	C		B	A			B	
Approach Delay		13.2			28.3			8.6			13.5	
Approach LOS		B			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 73.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	878	836	18	22	18
Future Vol, veh/h	6	878	836	18	22	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	7	954	909	20	24	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	929	0	-	0	1887	919
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	968	-
Critical Hdwy	3.5	-	-	-	5.5	5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	2	-	-	-	3	3
Pot Cap-1 Maneuver	934	-	-	-	133	479
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	456	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	934	-	-	-	132	479
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	456	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	28.5
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	-	-	-	196
HCM Lane V/C Ratio	0.007	-	-	-	0.222
HCM Control Delay (s)	8.9	-	-	-	28.5
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection						
Int Delay, s/veh	0.6					

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑			↑↑	↱	
Traffic Vol, veh/h	550	3	0	1462	37	14
Future Vol, veh/h	550	3	0	1462	37	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	0	2	1	0	0
Mvmt Flow	598	3	0	1589	40	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	1395	301
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	795	-
Critical Hdwy	-	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	-	-	3	3
Pot Cap-1 Maneuver	-	-	0	-	198	822
Stage 1	-	-	0	-	610	-
Stage 2	-	-	0	-	487	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	198	822
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	610	-
Stage 2	-	-	-	-	487	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBT
Capacity (veh/h)	250	-	-	-
HCM Lane V/C Ratio	0.222	-	-	-
HCM Control Delay (s)	23.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-

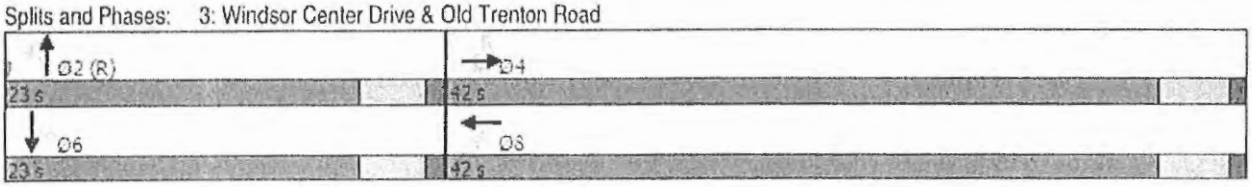
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	461	350	107	994	20	55	32	41	11	19	8
Future Volume (vph)	13	461	350	107	994	20	55	32	41	11	19	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997			0.908			0.971	
Flt Protected		0.999		0.950			0.950				0.986	
Satd. Flow (prot)	0	1861	1583	1770	1857	0	1770	1691	0	0	1783	0
Flt Permitted		0.713		0.407			0.730				0.933	
Satd. Flow (perm)	0	1328	1583	758	1857	0	1360	1691	0	0	1688	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			402		3			55			9	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		650			702			727			250	
Travel Time (s)		8.9			9.6			14.2			5.7	
Peak Hour Factor	0.92	0.96	0.87	0.74	0.99	0.92	0.85	0.92	0.75	0.92	0.92	0.92
Adj. Flow (vph)	14	480	402	145	1004	22	65	35	55	12	21	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	494	402	145	1026	0	65	90	0	0	42	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	42.0	42.0	42.0	42.0	42.0		23.0	23.0		23.0	23.0	
Total Split (%)	64.6%	64.6%	64.6%	64.6%	64.6%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	37.5	37.5	37.5	37.5	37.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		37.5	37.5	37.5	37.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.28	0.28			0.28	
v/c Ratio		0.64	0.37	0.33	0.96		0.17	0.17			0.09	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.2	1.9	9.9	34.5		18.9	9.8			15.0	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		14.2	1.9	9.9	34.5		18.9	9.8			15.0	
LOS		B	A	A	C		B	A			B	
Approach Delay		8.7			31.4			13.7			15.0	
Approach LOS		A			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 20.9 Intersection LOS: C
Intersection Capacity Utilization 98.5% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑		↰	
Traffic Vol, veh/h	18	812	1017	40	12	13
Future Vol, veh/h	18	812	1017	40	12	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	96	92	99	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	20	846	1105	40	13	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1145	0	-	0	2011	1125
Stage 1	-	-	-	-	1125	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	3.5	-	-	-	5.5	5
Critical Hdwy Stg 1	-	-	-	-	5	-
Critical Hdwy Stg 2	-	-	-	-	5	-
Follow-up Hdwy	2	-	-	-	3	3
Pot Cap-1 Maneuver	799	-	-	-	115	388
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	496	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	799	-	-	-	110	388
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	496	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	29.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	799	-	-	-	175
HCM Lane V/C Ratio	0.024	-	-	-	0.155
HCM Control Delay (s)	9.6	0	-	-	29.3
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↳			↑↑	↰	
Traffic Vol, veh/h	1412	32	0	789	9	19
Future Vol, veh/h	1412	32	0	789	9	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	0	0	1	0	0
Mvmt Flow	1535	35	0	858	10	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	1982	785
Stage 1	-	-	-	-	1553	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	-	-	6	6
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	-	-	-	-	3	3
Pot Cap-1 Maneuver	-	-	0	-	90	442
Stage 1	-	-	0	-	199	-
Stage 2	-	-	0	-	741	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	90	442
Mov Cap-2 Maneuver	-	-	-	-	90	-
Stage 1	-	-	-	-	199	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	NE
HCM Control Delay, s	0	0	26.7
HCM LOS			D

Minor Lane/Major Mvmt	NELn1	EBT	EBR	WBT
Capacity (veh/h)	196	-	-	-
HCM Lane V/C Ratio	0.155	-	-	-
HCM Control Delay (s)	26.7	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

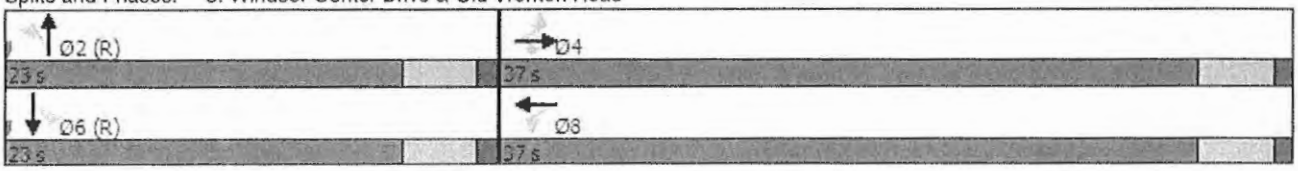
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	630	244	40	798	6	43	10	103	36	39	13
Future Volume (vph)	4	630	244	40	798	6	43	10	103	36	39	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.861			0.980	
Flt Protected				0.950			0.950				0.980	
Satd. Flow (prot)	0	1900	1615	1805	1879	0	1752	1636	0	0	1825	0
Flt Permitted		0.937		0.231			0.773				0.855	
Satd. Flow (perm)	0	1780	1615	439	1879	0	1426	1636	0	0	1592	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			227		1			137			14	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		628			702			727			238	
Travel Time (s)		8.6			9.6			14.2			5.4	
Peak Hour Factor	0.92	0.89	0.87	0.73	0.86	0.92	0.67	0.92	0.75	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	4	708	280	55	928	7	64	11	137	39	42	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	712	280	55	935	0	64	148	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	37.0	37.0	37.0	37.0	37.0		23.0	23.0		23.0	23.0	
Total Split (%)	61.7%	61.7%	61.7%	61.7%	61.7%		38.3%	38.3%		38.3%	38.3%	
Maximum Green (s)	32.5	32.5	32.5	32.5	32.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.5	32.5	32.5	32.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.54	0.54	0.54	0.54		0.31	0.31			0.31	
v/c Ratio		0.74	0.29	0.23	0.92		0.15	0.25			0.19	
Control Delay		16.5	2.8	10.4	29.4		16.2	5.2			14.6	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		16.5	2.8	10.4	29.4		16.2	5.2			14.6	
LOS		B	A	B	C		B	A			B	
Approach Delay		12.6			28.3			8.5			14.6	
Approach LOS		B			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 73.6% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



Intersection						
Int Delay, s/veh	0.2					

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	878	836	18	0	18
Future Vol, veh/h	6	878	836	18	0	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	7	954	909	20	0	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	929	0	-	0	-	919
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	3.5	-	-	-	-	5
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2	-	-	-	-	3
Pot Cap-1 Maneuver	934	-	-	-	0	479
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	934	-	-	-	-	479
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	934	-	-	-	479
HCM Lane V/C Ratio	0.007	-	-	-	0.041
HCM Control Delay (s)	8.9	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

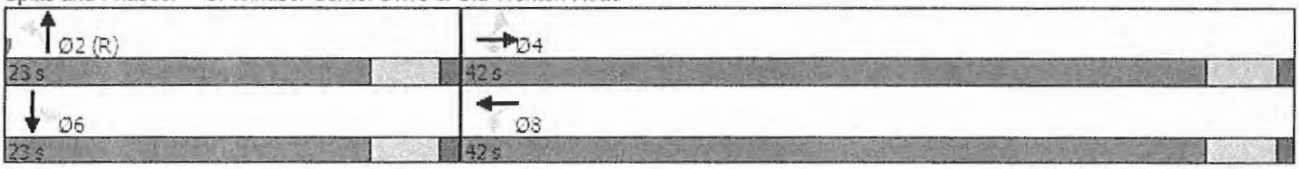
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	455	344	107	994	20	55	32	41	17	25	8
Future Volume (vph)	13	455	344	107	994	20	55	32	41	17	25	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		85	155		0	190		0	0		0
Storage Lanes	0		1	1		0	1		0	0		0
Taper Length (ft)	25			0			100			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.997			0.908			0.977	
Flt Protected		0.999		0.950			0.950				0.984	
Satd. Flow (prot)	0	1861	1583	1770	1857	0	1770	1691	0	0	1791	0
Flt Permitted		0.713		0.411			0.722				0.914	
Satd. Flow (perm)	0	1328	1583	766	1857	0	1345	1691	0	0	1663	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			395		3			55			9	
Link Speed (mph)		50			50			35			30	
Link Distance (ft)		650			702			727			250	
Travel Time (s)		8.9			9.6			14.2			5.7	
Peak Hour Factor	0.92	0.96	0.87	0.74	0.99	0.92	0.85	0.92	0.75	0.92	0.92	0.92
Adj. Flow (vph)	14	474	395	145	1004	22	65	35	55	18	27	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	488	395	145	1026	0	65	90	0	0	54	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	42.0	42.0	42.0	42.0	42.0		23.0	23.0		23.0	23.0	
Total Split (%)	64.6%	64.6%	64.6%	64.6%	64.6%		35.4%	35.4%		35.4%	35.4%	
Maximum Green (s)	37.5	37.5	37.5	37.5	37.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5		4.5	4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		37.5	37.5	37.5	37.5		18.5	18.5			18.5	
Actuated g/C Ratio		0.58	0.58	0.58	0.58		0.28	0.28			0.28	
v/c Ratio		0.64	0.37	0.33	0.96		0.17	0.17			0.11	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.0	1.9	9.8	34.5		19.0	9.8			15.8	
Queue Delay		0.0	0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay		14.0	1.9	9.8	34.5		19.0	9.8			15.8	
LOS		B	A	A	C		B	A			B	
Approach Delay		8.6			31.4			13.7			15.8	
Approach LOS		A			C			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 20.9 Intersection LOS: C
Intersection Capacity Utilization 98.9% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: Windsor Center Drive & Old Trenton Road



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↰	↑			↱
Traffic Vol, veh/h	18	812	1017	40	0	13
Future Vol, veh/h	18	812	1017	40	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	96	92	99	92	92
Heavy Vehicles, %	0	0	1	0	0	0
Mvmt Flow	20	846	1105	40	0	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1145	0	-	0	-	1125
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	3.5	-	-	-	-	5
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2	-	-	-	-	3
Pot Cap-1 Maneuver	799	-	-	-	0	388
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	799	-	-	-	-	388
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	799	-	-	-	388
HCM Lane V/C Ratio	0.024	-	-	-	0.036
HCM Control Delay (s)	9.6	0	-	-	14.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1