
TRAFFIC IMPACT STUDY

for

**Proposed Warehouse Development
25 Talbot Lane
South Windsor, Connecticut**

Prepared for:

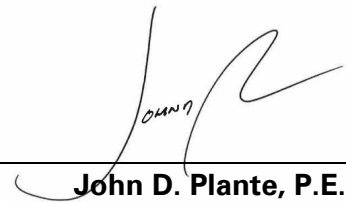
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EXECUTIVE SUMMARY

Langan has prepared this traffic impact study to identify the potential impacts of the proposed warehouse at 25 Talbot Lane in South Windsor, Connecticut (See Figure 1). The project site is approximately 30.37-acres of vacant land.

The project includes the construction of a ±360,000 square-foot warehouse with approximately 318 car parking spaces, 59 trailer spaces, 30 tractor-trailer queuing spaces and 54 loading docks and associated site improvements (See Site Plan in Appendix A). The proposed development will be served by a full movement driveway connection to each Talbot Lane and Governor's Highway. The driveway connection to Governor's Highway will operate as a stop-controlled intersection for passenger vehicles only. The driveway to Talbot Lane will be stop-controlled for truck-traffic only. The site has been designed to enforce the exclusive use of these driveways by locating all trailer spaces and loading docks west of the proposed building and all passenger vehicles parking spaces east of the proposed building. The proposed development is anticipated to be in operation in 2023. All tractor-trailer truck traffic from the facility will be directed to only travel west on Governor's Highway to comply with the town's restriction of truck traffic on Governor's Highway east of Talbot Lane. In addition, the development will install clear signage along Talbot Lane indicating no tractor-trailer truck can use Governor's Highway east of Talbot Lane.

Langan used the Institute of Transportation Engineers (ITE) land-use code 156 to develop the trip generation for the proposed warehouse and site use. These trip generation volumes were used to evaluate the peak-hour and average daily traffic (ADT) for the 2023 build-year traffic operations conditions

Video turning-movement and vehicle-classification were conducted in December 2021, while schools were in session, at three intersections and used as a basis for this evaluation. The existing roadway infrastructure is adequate to support the nominal increase in traffic volume generated by the proposed warehouse development. No improvements are required or recommended at this time; signal timing optimization at the intersection of Route 5 and Governors Highway can improve signal operations in the future as needed.

The proposed driveway connection to Governor's Highway an Talbot Lane expected to operate with an acceptable Level of Service (LOS) during the morning and afternoon peak-hours build conditions.

1.0 INTRODUCTION

Langan has prepared this traffic impact study to identify the potential impacts of the proposed warehouse at 25 Talbot Lane in South Windsor, Connecticut (See Figure 1 for the Location Map). The 30.37-acre vacant site is on the southeast corner of Governor's Highway and Talbot Lane. Commercial uses exist to the west and north of the development site, with residential areas to the east and south.

The proposed warehouse development will include a ±360,000 square-foot building with approximately 318 car parking spaces, 59 trailer spaces, 30 tractor-trailer queuing spaces and 54 loading docks and associated landscaping, utility improvements and stormwater systems (See Site Plan in Appendix A). The proposed development is anticipated to be in operation in 2023.

2.0 SITE ACCESS AND STUDY LOCATIONS

Site Access

The proposed development will have a driveway connection to each Talbot Lane and Governor's Highway. Both driveways will operate as full-movement stop-controlled driveways. The driveway at Governor's Highway will be the project's main driveway connection for passenger vehicles. The driveway connection to Talbot Lane will be a stop-controlled driveway for truck-traffic only. The site has been designed to enforce the exclusive use of these driveways by locating all trailer spaces and loading docks west of the proposed building and all passenger vehicles parking spaces east of the proposed building. (See Site Plan in Appendix A). Governor's Highway has a truck traffic restriction from Talbot Lane to Ellington Road issued by the Town of South Windsor under ordinance #172. The development will install clear signage at both driveways along Talbot Lane indicating no tractor-trailer truck can use Governor's Highway east of Talbot Lane.

Study Locations

Three key intersections were evaluated in this study (See Figure 2).

- John Fitch Boulevard (US-5) and Governor's Highway
- Talbot Lane and Governor's Highway
- Ellington Road (SR-30) and Governor's Highway/ Podunk Circle

This study will evaluate traffic impacts of the facility's peak-hours on these intersections and the area roadway network.

3.0 EXISTING CONDITIONS

Area Roadway Network

John Fitch Boulevard (U.S. Route 5) is a four lane, north-south major highway under state jurisdiction. The north and south lanes are separated by a 25-foot wide grassy median with guardrails. *U.S. Route 5* provides two 12-foot wide travel lanes in each direction, with a 6-foot shoulder that varies along the length of the road on the outside of each travel lane, with a posted speed limit of 50 MPH.

Governor's Highway is a two lane, east-west, urban major collector road under local jurisdiction, with a posted speed limit of 30 MPH. Governor's Highway provides two 12-foot wide travel lanes and a 3-foot shoulder in each direction that varies along the length of the road. Governor's Highway transitions into a two-lane road without a shoulder and a 25 MPH posted speed limit between Talbot Lane and Ellington Road, which was designed to support the residential uses east of the development site. The roadway segment of Governor's Highway between Talbot Lane and US-5 was designed to support the commercial and industrial uses located on this area, and its pavement was restored in 2019 to support the truck traffic of this roadway segment.

Ellington Road (State Road 30) is a two lane, northeast-southwest, undivided, major highway under state jurisdiction, with a posted speed limit of 40 MPH. Ellington Road provides two 12-foot wide travel lanes in each direction, with 6-foot wide shoulders on the outside of each travel lane.

Podunk Circle is a two lane, north-south, local private road, that operates as the main access for residential lots.

Study Intersections

John Fitch Boulevard and Governor's Highway is a signalized four way intersection with the following geometry:

- Governor's Highway – one shared right-turn/left-turn/thru lane on both sides of intersection.
- Southbound John Fitch Boulevard – one shared right-turn/thru lane, one left-turn lane with approximately 260 feet of storage and one thru lane.
- Northbound John Fitch Boulevard - one left turn lane with approximately 260 feet of storage, one right-turn lane with approximately 280 feet of storage and two thru lane.

Talbot Lane and Governor's Highway is a stop-sign controlled "T" intersection with the following geometry:

- Talbot Lane – one share right-turn/left-turn lane.
- Governor's Highway Eastbound – one shared right-turn/thru lane.
- Governor's Highway Westbound – one shared left-turn/thru lane.

Ellington Road and Governor's Highway/Podunk Circle is a signalized four-way intersection with the following geometry:

- Governor's Highway – one shared right-turn/left-turn/thru lane.
- Podunk Circle – one shared right-turn/left-turn/thru lane.
- Ellington Road Southbound – one shared left-turn/thru lane, one right-turn lane with approximately 250 feet of storage.
- Ellington Road Northbound – one sharedright-turn/left-turn/thru lane.

Site Driveway and Governor's Highway is a stop sign controlled "T" intersection with the following geometry:

- Site Driveway – One shared left and right-turn lane, allowing full movement for cars.
- Governor's Highway Eastbound – one shared right-turn/thru lane lane.
- Governor's Highway Westbound – one shared left-turn/thru lane.

4.0 INTERSECTION CAPACITY ANALYSIS MEASURES

Langan conducted capacity analyses for the existing, background and build traffic conditions to assess quality of traffic flow. Capacity analyses provide an indication of the adequacy of the road and intersections to serve traffic demands.

Level of Service Criteria

Level of Service (LOS) is the term used to denote the different operating conditions that occur at an intersection under various traffic volume demands. LOS is a qualitative measure that considers a number of factors including road geometry, speed and travel delay. LOS provides an index to the operational qualities of an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. The LOS designation is reported differently for signalized intersections and unsignalized intersections.

For signalized intersections, the analysis considers the operation of all traffic entering the intersection. For unsignalized intersections, however, the analysis considers the operation of all movements that are in conflict with other movements such as mainline

left turns and traffic exiting the side street. An overall LOS is given for signalized intersections. For unsignalized intersections, LOS is given for each specific approach.

The evaluation criteria used to analyze the study area intersections are based on the Highway Capacity Manual (HCM) 6th Edition, published by the Transportation Research Board (TRB). SYNCHRO Plus SimTraffic 10 was used to facilitate computer calculation for the capacity analyses at each intersection.

The HCM 6th Edition defines level of service for signalized intersections as follows:

<u>Level of Service</u>	<u>Control Delay per Vehicle (sec/veh)</u>
A	≤10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	>80

The HCM defines level of service for unsignalized intersections as follows:

<u>Level of Service</u>	<u>Control Delay per Vehicle (sec/veh)</u>
A	≤10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	> 50

5.0 METHODOLOGY AND ANALYSIS

To assess the potential traffic impact of the proposed development, Langan employed a five-step methodology outlined below and described in detail in subsequent sections 5.1 through 5.5:

Step One: Determine the existing peak-hour traffic volumes and evaluate existing traffic operating conditions for the study intersections.

Step Two: Project the existing peak-hour traffic volumes (Step One) to create 2023 Background peak-hour traffic volumes (including approved or pending developments in the area) and evaluate traffic operating conditions for the study intersections.

Step Three: Determine the traffic volumes to be generated by the proposed development. Distribute and assign these site traffic volumes throughout the study area roadway network.

Step Four: Combine the Background traffic volumes (Step Two) with the assigned proposed traffic (Step Three) to establish 2023 Build traffic volumes. Determine traffic operating conditions and identify mitigation of potential impacts.

Step Five: Investigate the safety conditions within the area roadway network.

5.1 Step One: Determine the existing peak-hour traffic volumes and evaluate traffic operating conditions for the study intersections.

Existing Peak-Hour Traffic Volumes

Video turning-movement counts (TMC's) and vehicle classification counts were conducted on Tuesday, December 14 2021 to determine the existing peak-hour traffic volumes. The TMC's and vehicle classification counts were conducted on a weekday during the morning (7:00 a.m. to 9:00 a.m.) and evening (4:00 p.m. to 6:00 p.m.) peak periods of the development. The traffic counts were conducted when schools were in regular session. During these study periods, the peak-hours of the adjacent roadway network generally occurred from 7:15 to 8:15 a.m. and 4:15 to 5:15 p.m. We adjusted the traffic volumes to reflect peak-season conditions and adjust volumes as requested by the Office of the State Traffic Administration (OSTA). The traffic volumes adjustment was based on the expected traffic volumes from the Carla's Pasta expansion. The adjustment of the counts results in a conservative approach because the Carla's Pasta expansion has been operating since 2018 and its traffic is accounted on the collected traffic data.

2021 Existing Traffic Operating Conditions

The traffic operating conditions for the study area intersections were analyzed during the roadway peak-hour periods using the 2021 existing traffic volumes. Figure 3 illustrate the 2021 existing peak-hour traffic volumes. A summary of the traffic operating conditions is provided in Tables 2 and 3. Detailed reports can be found in Appendix B.

5.2 Step Two: Project the existing peak-hour traffic volumes (Step One) to create 2023 Background peak-hour traffic volumes (Including approved or pending developments in the area) and evaluate traffic operating conditions for the study intersections.

Background Peak-Hour Traffic Volumes

Background traffic growth was estimated based on historical data available from ConnDOT in the vicinity of the project. A review of the ConnDOT data indicates that traffic volumes in Windsor have fluctuated over the last several years, with a growth of 0.46%. In order to be conservative, a reasonable growth rate of 0.5% annually was applied to the existing traffic volumes to develop the 2023 background ambient growth peak-hour traffic volumes shown on Figure 4A.

We contacted the Town of South Windsor Planning Department and confirmed that there are no planned or approved developments in our study area. In addition, we reviewed the 2021-2025 ConnDOT Transportation Capital Infrastructure Program and found that there are no planned improvements in the study area.

2023 Background Traffic Operating Conditions

The traffic operating conditions for the study area intersections were analyzed during the peak-hour periods using the 2023 background traffic volumes illustrated in Figure 4. A summary of the traffic operating conditions is provided in Tables 2 and 3. Detailed reports can be found in Appendix C.

5.3 Step Three: Determine the traffic volumes to be generated by the proposed development. Distribute and assign these site traffic volumes throughout the study area roadway network.

The project includes the construction of a ±360,000 square-foot warehouse with approximately 318 car parking spaces, 59 trailer spaces, 30 tractor-trailer queuing spaces and 54 loading docks and associated site improvements (See Site Plan in Appendix A).

The site design also proposes construction of two site driveways, one connection to each Governor's Highway and Talbot Lane (See Site Plan in Appendix A). The driveway on Governor's Highway will operate as a full-access stop-controlled driveway for passenger vehicles only. The driveway along Talbot Lane will be a full-access stop-controlled driveway for truck-traffic only. The site has been designed to enforce the exclusive use of these driveways by locating all docks and trailer spaces and loading docks west of the proposed building and all passenger vehicles parking spaces east of the proposed building.

Peak-Hour Trip Generation

The anticipated number of peak-hour trips generated by the proposed facility is based on rates established in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. Land Use Code 156: High-Cube Parcel Hub Warehouse was selected based on a representative trip generation estimate and the intended building use. Overall, the number of trips the proposed development is expected to generate is 275 for the morning peak hour, and 253 for the evening peak hour. **Table 1** below identifies the anticipated peak-hour trip generation of the proposed development using ITE data.

TABLE 1 - ANTICIPATED TRIP GENERATION – 25 TALBOT LANE WAREHOUSE									
USE	LAND USE CODE ¹	VEHICLE TYPE	DAILY	AM PEAK HOUR			PM PEAK HOUR		
				ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
High-Cube Parcel Hub Warehouse (360,000 SF)	156	PV	1,458	122	121	243	157	74	231
		Trucks	209	16	16	32	15	7	22
		Total	1,667	138	137	275	172	81	253

¹ Land Use Codes and Volumes based on ITE Trip Generation Manual 10th Edition. LUC 156: High-Cube Parcel Hub Warehouse.

The site-generated traffic peak-hour volumes were distributed to and from the site onto the roadway network based on anticipated travel patterns of employees and journey to work data obtained for the Town of South Windsor. The anticipated percent distribution of the site generated trips is illustrated in Figure 5. Figure 6 illustrates the assignment of the peak-hour site-generated trips, indicated in Table 1, into the area roadway network.

5.4 Step Four: Combine the Background traffic volumes (Step Two) with the assigned proposed traffic (Step Three) to establish 2023 Build traffic volumes. Determine traffic operating conditions and identify mitigation of potential impacts.

Build Traffic Volumes

To evaluate the impacts of the proposed development, the proposed trip assignment volumes (Figure 6), as distributed on the roadway network, are combined with the background traffic volumes (Figure 4). Figure 7 illustrate the 2023 build traffic volumes in the roadway network during the peak-hour periods.

Build Traffic Operating Conditions

The resulting traffic volumes illustrated in Figure 7 were evaluated to determine the effective operating conditions of the study area intersections without any proposed improvements. Tables 2 and 3 compare the traffic operating conditions for the study area intersections during the peak-hour periods. Appendix D provides detailed reports for the 2023 build conditions.

Queuing Evaluation

In addition to the traffic operating conditions, we evaluated the resulting vehicular queuing for all conditions to assess the impacts at study intersections. In evaluating queuing length, the industry standard is to utilize the 50th and the 95th percentile queue lengths developed by the analysis. The 50th percentile queue represents the average or typical vehicular queue that can be expected during the peak-hour. The 95th percentile queue length represents the queuing experience during the highest peak periods, which

accounts for 5% of the analysis period. Queues are calculated in feet, and approximately 25 feet of queue is equal to a single vehicle.

Tables 4 and 5 provide the expected 50th and 95th percentile queue lengths for the analyzed periods. For most analyzed intersections, queue lengths do not increase more than four car lengths. Any increase in queuing due to the proposed development is minimal and the existing roadway network can fully accommodate the anticipated queues.

Truck Access

The site has been designed to have all truck traffic access the site via Talbot Lane and by locating all trailer spaces and loading docks west of the proposed building. In addition, the development will provide 30 onsite tractor-trailer parking spaces that will serve as staging spaces to ensure that the anticipated truck-traffic can queue onsite without impacting Talbot Lane.

TABLE 2 CAPACITY ANALYSIS SUMMARY – WEEKDAY A.M. PEAK-HOUR																							
INTERSECTION	CONTROL TYPE	LANE USE	STORAGE LENGTH (ft)	EXISTING CONDITIONS					BACKGROUND CONDITIONS					BUILD CONDITIONS					SIGNAL TIMING OPTIMIZATION CONDITIONS				
				LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)
							50th%	95th%				50th%	95th%				50th%	95th%				50th%	95th%
John Fitch Blvd./ Us-5 & Governor's Hwy.	ACTUATED-COORDINATED	Overall		C	33.5	0.92			C	34.2	0.93			D	37.7	98			C	33	0.91		
		EB-LTR	>1000'	B	18	0.06	7'	25'	B	18	0.06	6'	25'	B	17.7	0.05	6'	25'	B	15.7	0.05	6'	23'
		WB-LTR	>1000'	D	49.3	0.82	151'	237'	D	49.5	0.82	152'	244'	E	72.9	0.98	226'	418'	D	54.4	0.91	210'	377'
		NB-L	260'	A	7.4	0.03	3'	10'	A	7.4	0.03	3'	10'	A	7.7	0.04	3'	10'	B	10.3	0.05	3'	11'
		NB-TT	>1000'	C	23	0.53	166'	221'	C	23.1	0.54	168'	224'	C	23.1	0.54	168'	224'	C	28.2	0.63	185'	246'
		NB-R	280'	A	4.3	0.16	0'	32'	A	4.3	0.16	0'	32'	A	3.8	0.26	0'	40'	A	4.7	0.29	0'	44'
		SB-L	260'	D	35.1	0.2	32'	72'	D	35.2	0.2	33'	73'	D	40.9	0.43	57'	109'	D	37.4	0.35	56'	107'
		SB-TTR	>1000'	D	38.9	0.92	352'	495'	D	40.2	0.93	357'	503'	D	40.2	0.93	357'	503'	C	33.2	0.88	342'	477'
Podunk Cir. / Governors Hwy. & Elington Road	ACTUATED-UNCOORDINATED	Overall		A	9	0.48			A	9	0.48			A	9.8	0.5							
		EB-LTR	>1000'	A	6.9	0.21	33'	94'	A	6.9	0.21	34'	95'	A	7.6	0.25	39'	105'					
		WB-LT	>1000'	A	9.4	0.48	95'	250'	A	9.4	0.48	96'	253'	A	9.9	0.5	100'	253'					
		WB-R	240'	A	1.8	0.21	0'	29'	A	1.8	0.21	0'	29'	A	1.8	0.23	0'	29'					
		SEB-LTR	>1000'	C	28.2	0.4	29'	84'	C	28.4	0.41	30'	85'	C	28	0.48	32'	112'					
		NWB-LTR	>1000'	C	26.5	0.01	1'	7'	B	26.5	0.01	1'	7'	B	26	0.01	1'	7'					
Talbot Ln. & Governor's Hwy.	UNSIGNALIZED	EB	-	A	0	0		0'	A	0	0		0'	A	0	0		0'					
		WB	-	A	7.6	0.038		3'	A	7.6	0.038		3'	A	7.9	0.043		3'					
		NB	-	A	11.4	0.088		8'	A	11.5	0.089		8'	B	14.6	0.161		15'					
Site Driveway & Governor's Hwy.	UNSIGNALIZED	EB	-											A	0	0		0'					
		WB	-											A	7.7	0.024		3'					
		NB	-											B	14.0	0.247		25'					

TABLE 3 CAPACITY ANALYSIS SUMMARY – WEEKDAY P.M. PEAK-HOUR																							
INTERSECTION	CONTROL TYPE	LANE USE	STORAGE LENGTH (ft)	EXISTING CONDITIONS					BACKGROUND CONDITIONS					BUILD CONDITIONS					SIGNAL TIMING OPTIMIZATION CONDITIONS				
				LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)	LOS	DELAY (sec)	V/C RATIO	QUEUES (ft)	QUEUES (ft)
							50th%	95th%				50th%	95th%				50th%	95th%				50th%	95th%
John Fitch Blvd./ Us-5 & Governor's Hwy.	ACTUATED-COORDINATED	Overall		C	29	0.87			C	29.2	0.88			C	31.5	0.98			C	29	0.91		
		EB-LTR	>1000'	C	30.3	0.51	81'	145'	C	30.4	0.52	82'	148'	C	28.3	0.47	82'	148'	C	25.2	0.44	76'	137'
		WB-LTR	>1000'	E	58.7	0.87	130'	256'	E	59.6	0.88	131'	261'	E	75.5	0.98	180'	356'	E	58.5	0.91	166'	321'
		NB-L	260'	A	7.5	0.02	2'	9'	A	7.5	0.02	2'	9'	A	7.6	0.03	2'	9'	A	9.5	0.03	3'	10'
		NB-TT	>1000'	C	26.7	0.71	242'	314'	C	26.9	0.72	245'	318'	C	26.9	0.72	245'	318'	C	26.9	0.72	245'	318'
		NB-R	280'	A	4.5	0.14	0'	30'	A	4.5	0.15	0'	30'	A	3.8	0.26	0'	41'	A	3.8	0.26	0'	41'
		SB-L	260'	D	36.8	0.28	46'	91'	D	37	0.29	46'	92'	D	44.7	0.55	75'	135'	D	53	0.62	79'	178'
		SB-TTR	>1000'	C	24.2	0.6	194'	255'	C	24.3	0.61	196'	259'	C	24.3	0.61	196'	259'	C	22.4	0.58	18''	248'
Podunk Cir. / Governors Hwy. & Elington Road	ACTUATED-UNCOORDINATED	Overall		C	20.1	0.87			C	20.6	0.89			C	25	0.98							
		EB-LTR	>1000'	B	15.9	0.75	140'	342'	B	16	0.75	142'	347'	B	17.2	0.78	153'	381'					
		WB-LT	>1000'	A	8.5	0.32	44'	113'	A	8.5	0.32	45'	114'	A	8.2	0.31	45'	114'					
		WB-R	240'	A	2.1	0.18	0'	23'	A	2	0.18	0'	24'	A	2	0.18	0'	25'					
		SEB-LTR	>1000'	E	55.6	0.87	75'	280'	E	58.2	0.89	76'	282'	E	77.2	0.98	89'	304'					
		NWB-LTR	>1000'	A	0	0.01	0'	0'	A	0	0.01	0'	0'	A	0	0.01	0'	0'					
Talbot Ln. & Governor's Hwy.	UNSIGNALIZED	EB	-	A	0	0		0'	A	0	0		0'	A	0	0		0'					
		WB	-	A	7.8	0.008		0'	A	7.8	0.008		0'	A	8.2	0.009		0'					
		NB	-	B	11.8	0.211		20'	B	11.8	0.214		20'	B	14.6	0.288		30'					
Site Driveway & Governor's Hwy.	UNSIGNALIZED	EB	-										A	0	0		0'						
		WB	-										A	8.4	0.039		3'						
		NB	-										C	14.4	0.174		18'						

Analysis Results

The analysis of the study intersections reveals that all the signalized intersections analyzed will maintain overall acceptable or background operating conditions for the 2023 build scenario; therefore no mitigation measures at the three study intersections are proposed for the 2023 build scenarios. Individual movements and lane groups may change slightly in level of service, delay, and queue length; however, overall levels of service at these signalized intersections analyzed remain unchanged or acceptable, with nominal impacts to intersection delays.

We analyzed the proposed driveway connection to Governor's Highway and determined that is expected to operate with an acceptable LOS during the morning and afternoon peak-hour build conditions.

At the intersection of US Route 5 and Governors Highway during the morning and evening peak-hours the overall delay at the intersection increases by 2-5 seconds and changes from LOS C to LOS D in the morning peak hour from background to build conditions. Minor signal timing optimization at this intersection can mitigate these impacts and improve the expected overall delays at the intersection. These results take into account the projected volumes from the Carla's Pasta expansion and is considered a conservative approach because the Carla's Pasta expansion has been in operation since 2018 and accounted on the collected traffic counts. The analysis of the study intersections with the raw traffic counts show that there will be no changes in LOS with the project's impacts and therefore the roadway network can handle the nominal increase of traffic. At this time, no signal timing optimization is proposed as part of this application, however should conditions change in the future, the traffic signal timings can be adjusted.

5.5 Step Five: Investigate the safety conditions within the area roadway network.

Intersection Sight Distance

Langan evaluated the intersection sight distances (ISD) at the proposed site driveways on Governor's Highway and Talbot Road to confirm that they will meet the Town of South Windsor requirements for entering and exiting vehicles based on standards from ConnDOT Highway Design Manual Section 11-2. Sight distances requirements for the Town of South Windsor are based on minimum requirements established by the Connecticut Highway Design Manual and the American Association of State Highway and Transportation Officials (AASHTO) as outlined in *A Policy on Geometric Design of Highways and Streets*, 6th Edition (also known as the AASHTO Green Book). As shown in **Table 4**, the proposed intersection sight distances (ISDs) provided at the site driveways meet AASHTO's minimum requirements.

TABLE 4 INTERSECTION SIGHT DISTANCE SUMMARY					
LOCATION	Design Speed	Intersection Sight Distance			
		Passenger Car		Combination Truck	
		Required	Provided	Required	Provided
Talbot Lane & Governors Highway					
Left (Governors Highway eastbound)	35 mph ¹	±390 ft	>390 ft	595 ft	>595 ft
Right (Governors Highway westbound)	35 mph ¹	±390 ft	>390 ft	595 ft	>595 ft
Site Driveway & Governors Highway					
Left (Governors Highway eastbound)	35 mph ¹	±390 ft	960 ft	595 ft	960 ft
Right (Governors Highway westbound)	35 mph ¹	±390 ft	600 ft	595 ft	860 ft

¹ Design speed of 35 MPH based on an assumed 85th percentile speed (the posted speed limit of 30 MPH plus 5 MPH)

The driveway connection to Governor's Highway will be located approximately 960 feet east of Talbot Lane and 860 feet east of Baker Lane allowing all site-generated vehicle trips to access the site safely without impacting the existing connections to Governor's Highway.

Accidents

The most recent three years of accident data were requested via the online UConn Crash Data Repository website in order to conduct an accident analysis in the project vicinity. From August 2018 to August 2021, ten (10) accidents occurred in the vicinity of the site and the surrounding study intersection locations. Accidents included various types of crashes which are behaviors typical at signalized intersections. One fatality was reported in June 2021. Discussions with the South Windsor Police Department indicated that the fatality was related to a DUI. Four of the reported accidents resulted in injuries. The majority of accidents occurred during dry weather conditions (70%) and during daylight hours (60%). Table 5 provides a summary of the accident history.

TABLE 5 ACCIDENT DATA SUMMARY (08/2018 – 08/2021)									
INTERSECTION	NUMBER OF ACCIDENTS		SEVERITY			CONDITIONS			
	Total	Average Per Year	Property Damage Only	Personal Injury	Fatality	Clear (Dry)	Rain/Snow	Day	Night
John Fitch Boulevard & Governor's Highway	9	3.00	4 (44%)	4 (44%)	1 (12%)	6 (67%)	3 (33%)	5 (56%)	4 (44%)
Talbot Lane & Governor's Highway	0	0.00	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Ellington Road & Governor's Highway	1	0.333	1 (100%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	1 (100%)	0 (0%)
TOTAL	10	3.333	5 (50%)	4 (40%)	1 (10%)	7 (70%)	3 (30%)	6 (60%)	4 (40%)

Source: UConn Crash Data Repository (2018 – 2021)

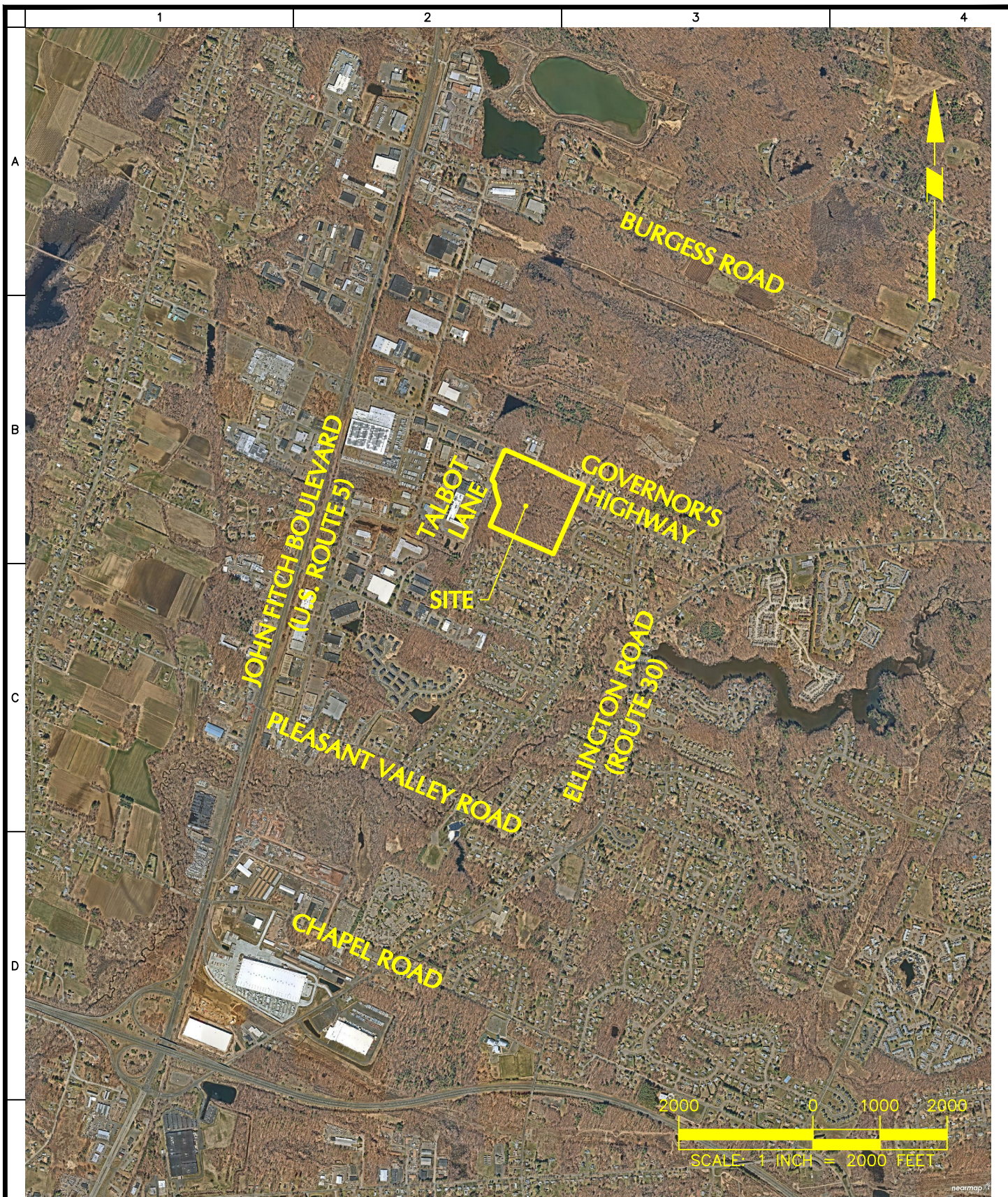
6.0 SUMMARY AND CONCLUSIONS

This evaluation identifies the potential traffic impacts generated by the proposed development on the surrounding area road network. We performed a capacity analysis for the existing, background, and build scenarios for three intersections. Our evaluation indicates that, the existing roadway infrastructure is adequate to support the nominal increase in traffic volume generated by the proposed warehouse development. No improvements are required or recommended at this time; signal timing optimization at the intersection of Route 5 and Governors Highway can improve signal operations in the future as needed. The development will install clear signage along Talbot Lane indicating no tractor-trailer truck can use Governor's Highway east of Talbot Lane. The development will provide 30 onsite tractor-trailer parking spaces that will serve as trailer queuing staging spaces to ensure that the anticipated arriving truck-traffic can queue onsite without impacting Talbot Lane. The proposed driveway connections to Governor's Highway and Talbot Lane are expected to operate with an acceptable LOS for the morning and afternoon conditions.

\\Langan.com\data\NH\data6\140236601\Project Data\Discipline\Traffic\Reports\Traffic Impact Study\140236601 - 25 Talbot Lane - Traffic Impact Study - January 2022.docx

Figures

Figure 1	Location Map
Figure 2	Study Intersections Map
Figure 3	2021 Existing Peak-Hour Traffic Volumes
Figure 4	2023 Background Peak-Hour Traffic Volumes
Figure 5	Trip Distribution
Figure 6	Trip Assignment
Figure 7	2023 Build Peak-Hour Traffic Volumes



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Project

**475 GOVERNOR'S
HIGHWAY**

SOUTH WINDSOR

CONNECTICUT

Drawing Title

LOCATION MAP

Project No.

140236601

Date

09/07/2021

Drawn By

MS

Checked By

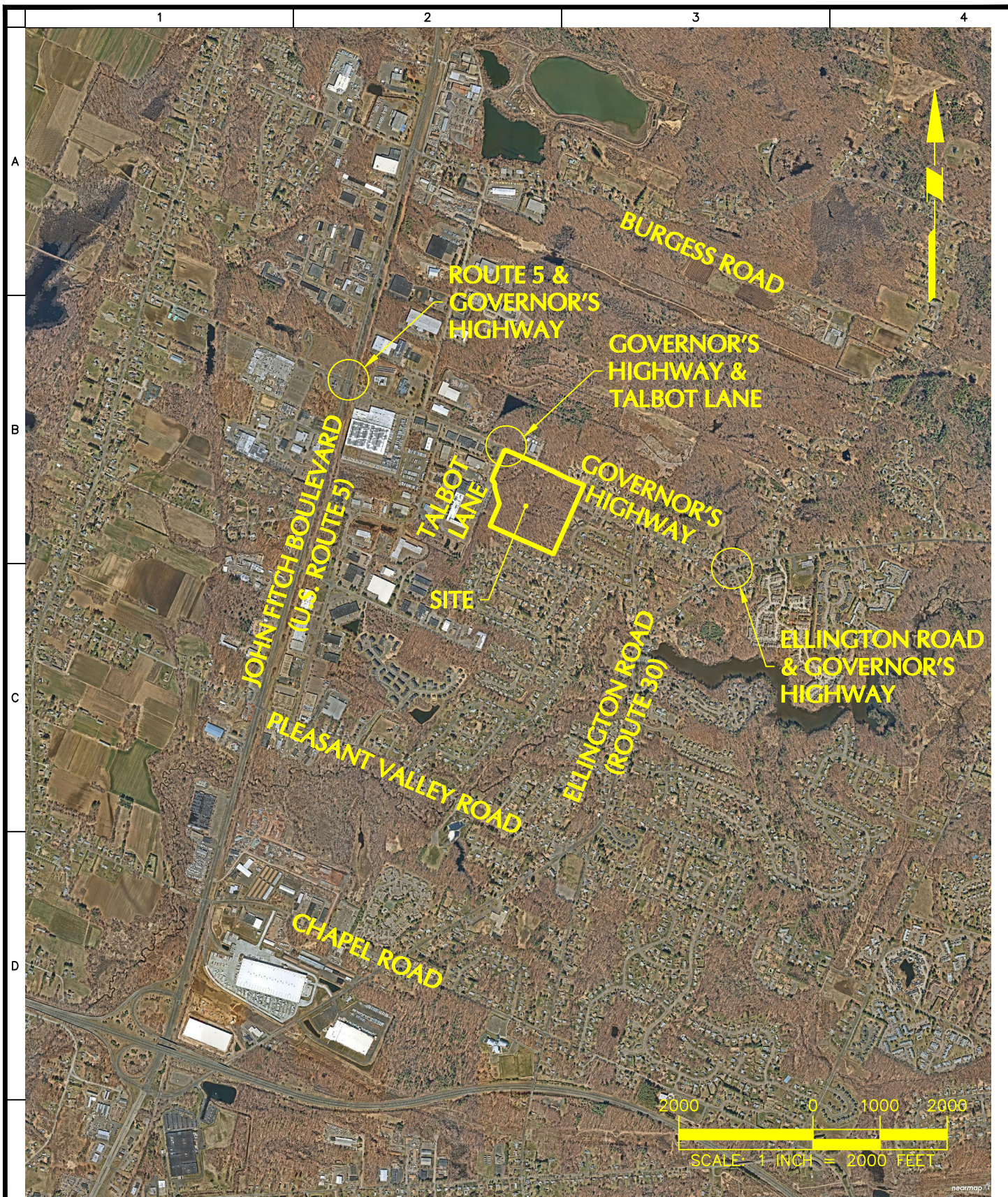
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FIG. 1

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**475 GOVERNOR'S
HIGHWAY**

SOUTH WINDSOR

CONNECTICUT

Drawing Title

**STUDY
INTERSECTION
MAP**

Project No.

140236601

Date

09/07/2021

Drawn By

MS

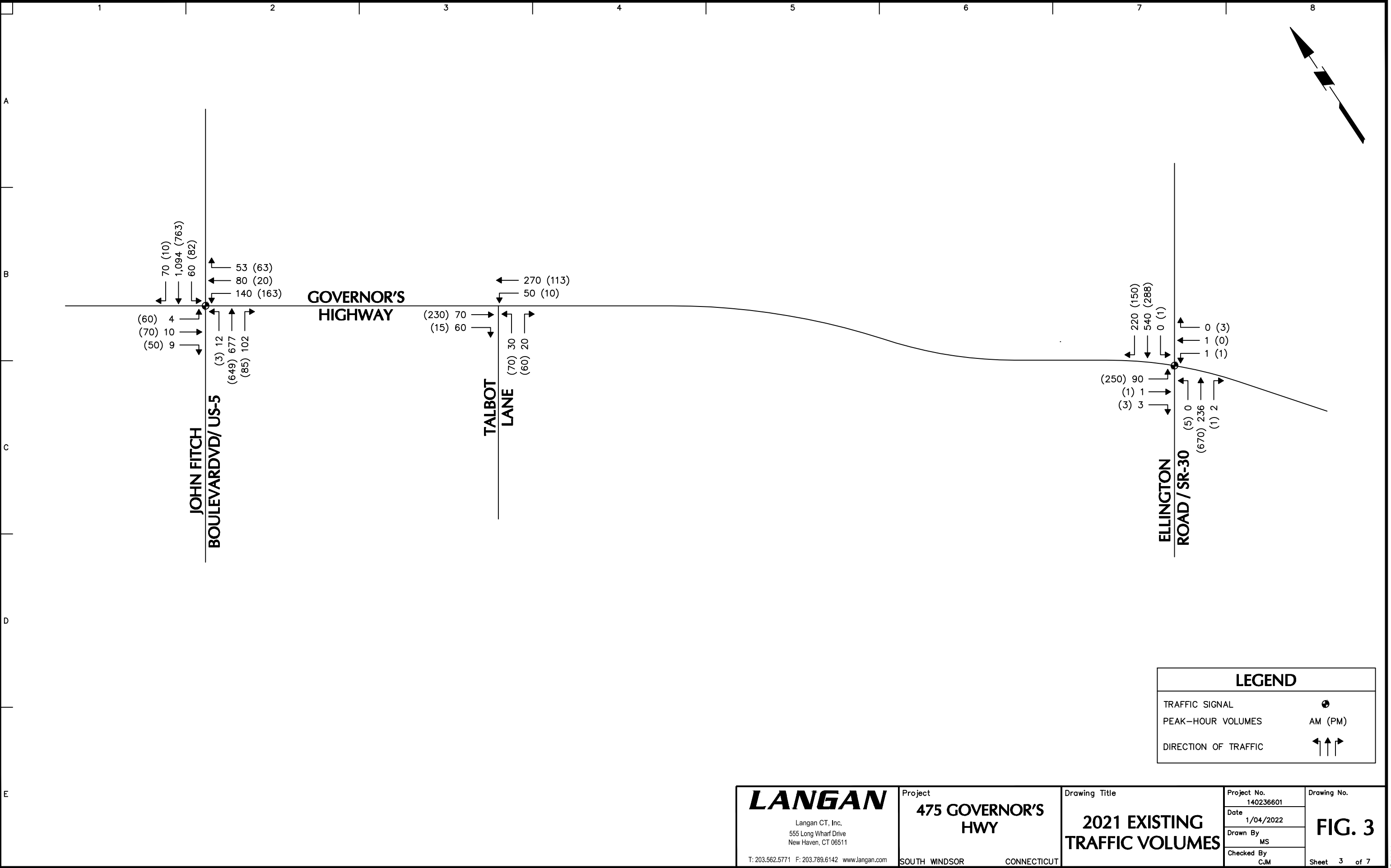
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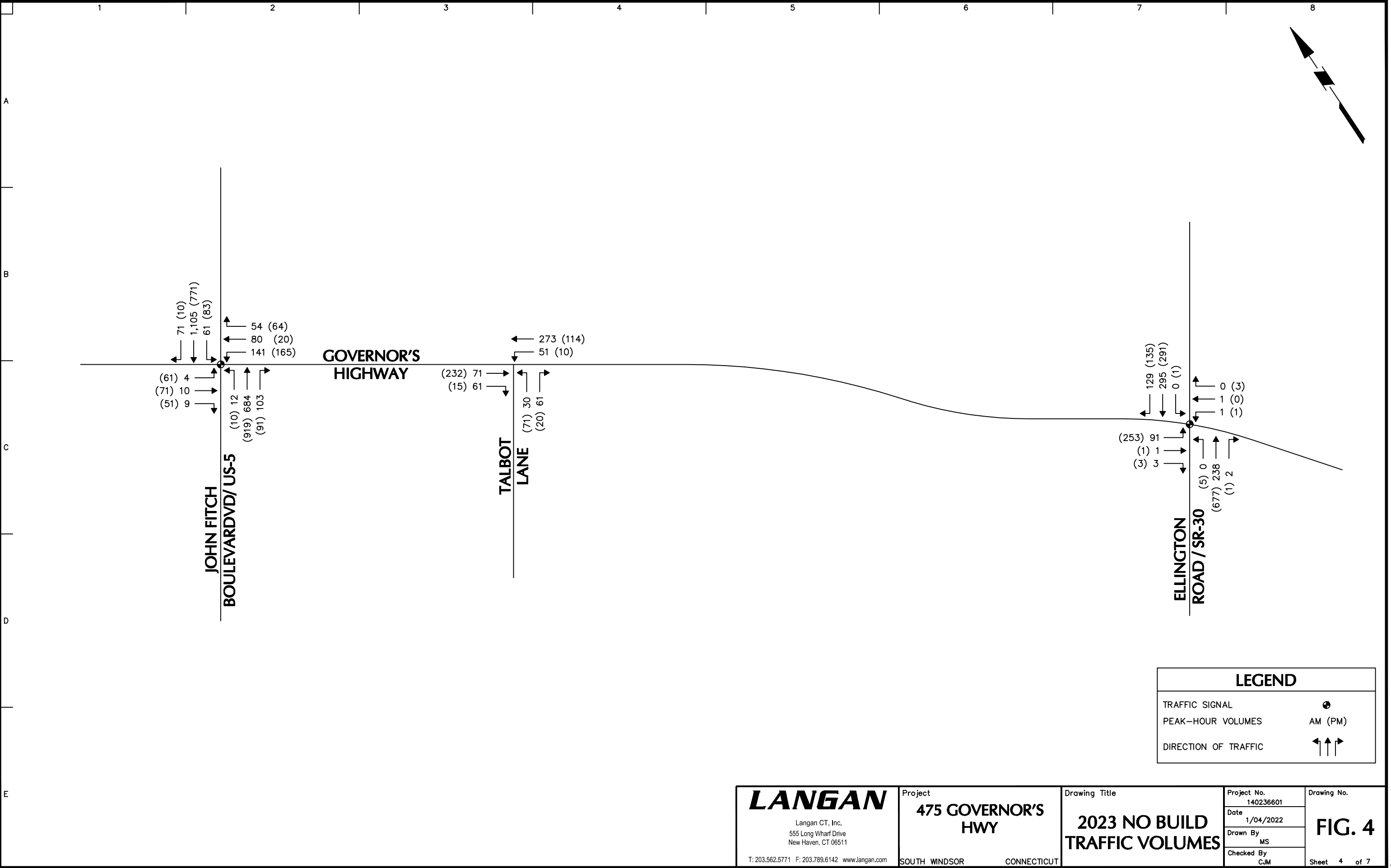
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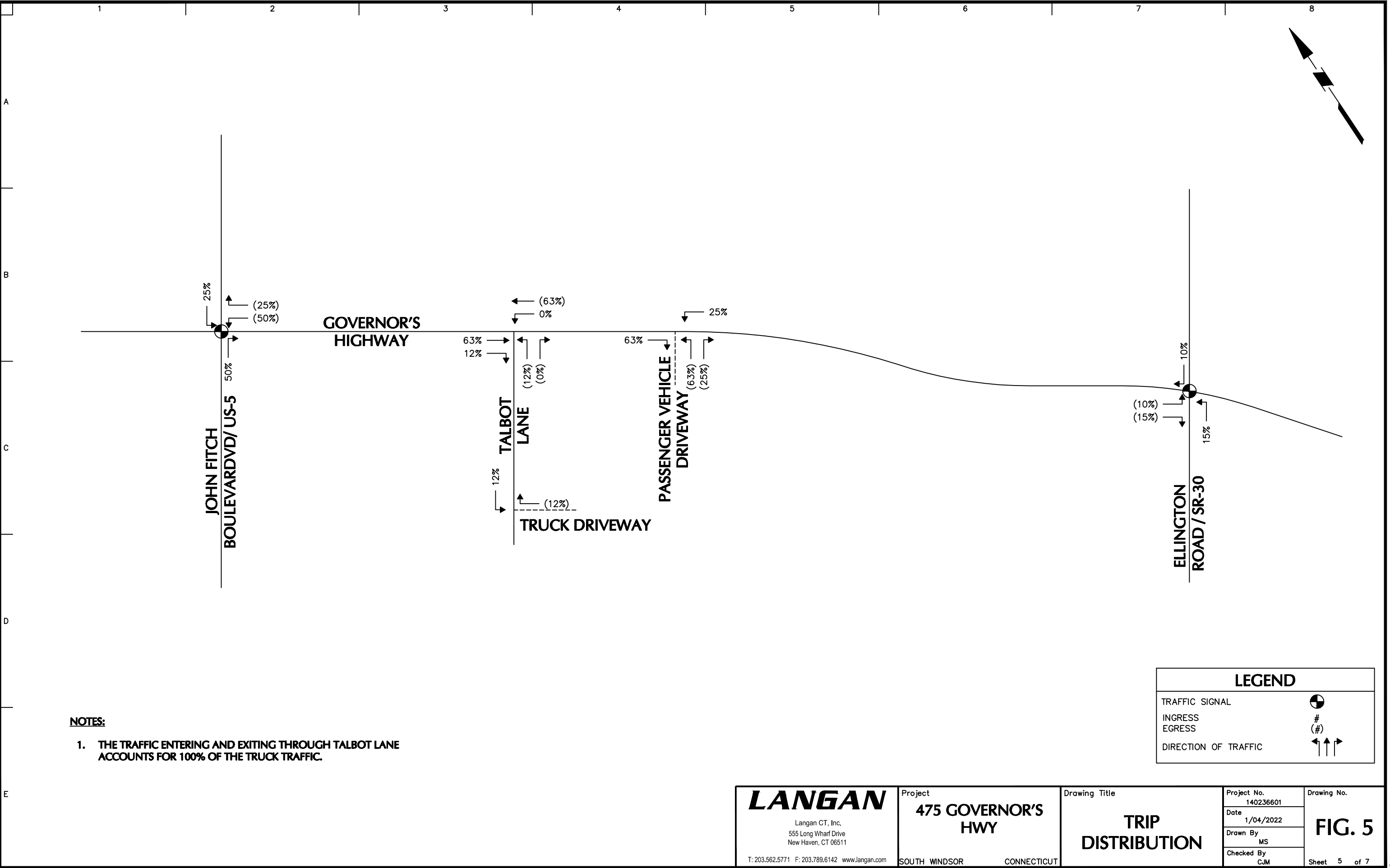
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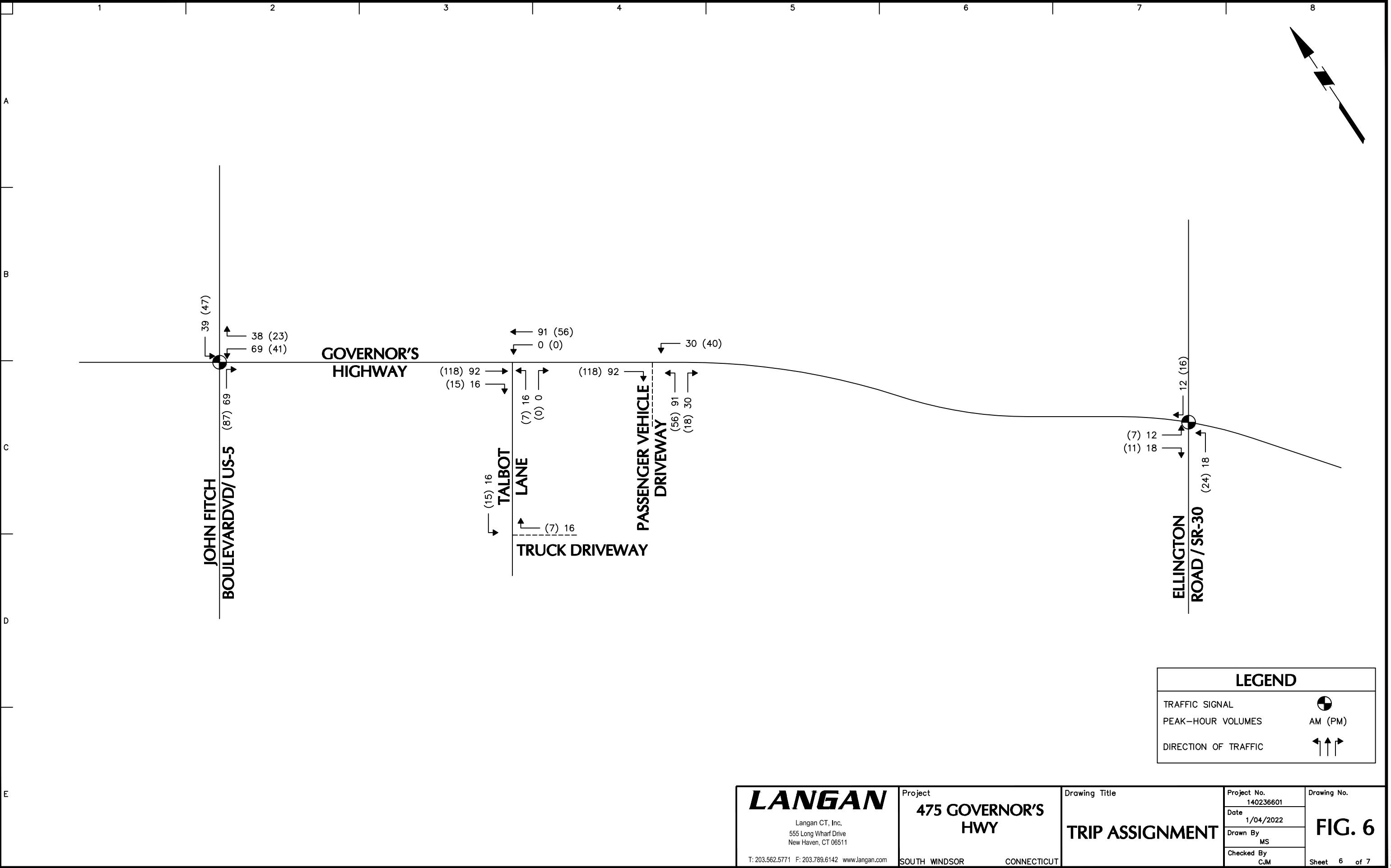
FIG. 2

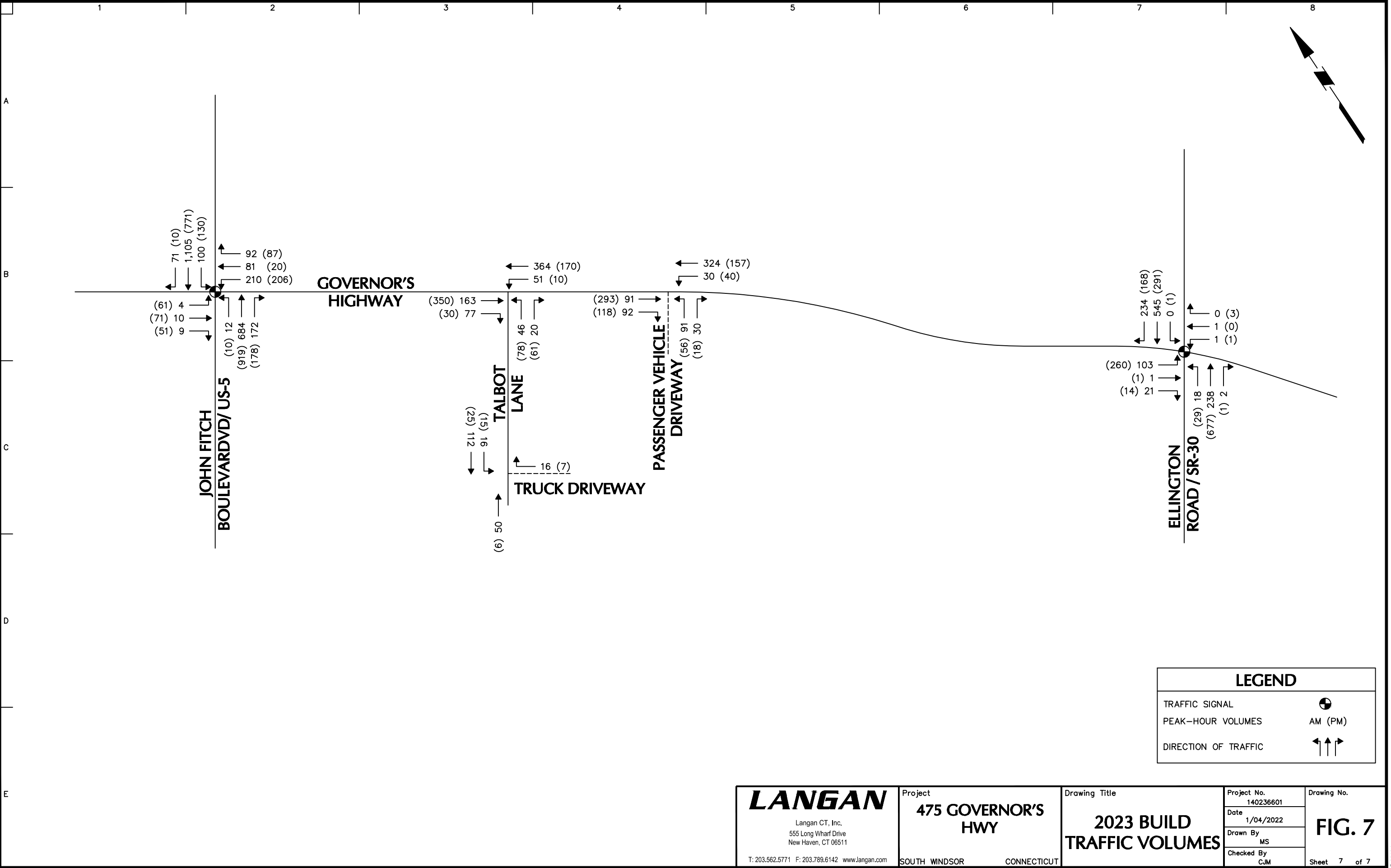
Sheet 2 of 7











Appendix A
Overall Site Plan

[illegible]

Appendix B

Capacity Analysis – 2021 Existing Traffic Conditions

2021 Existing Weekday A.M.

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2021 Existing Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	9	140	80	53	12	677	102	60	1094	70
Future Volume (vph)	4	10	9	140	80	53	12	677	102	60	1094	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.946			0.974				0.850		0.991	
Flt Protected		0.992			0.975		0.950			0.950		
Satd. Flow (prot)	0	1748	0	0	1769	0	1770	3539	1583	1770	3507	0
Flt Permitted		0.943			0.826		0.114			0.950		
Satd. Flow (perm)	0	1662	0	0	1499	0	212	3539	1583	1770	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			13				111		8	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	11	10	152	87	58	13	736	111	65	1189	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	297	0	13	736	111	65	1265	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2021 Existing Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		21.2			21.2		52.9	35.0	35.0	16.9	35.0	
Actuated g/C Ratio		0.24			0.24		0.59	0.39	0.39	0.19	0.39	
v/c Ratio		0.06			0.82		0.03	0.53	0.16	0.20	0.92	
Control Delay		18.0			49.3		7.4	23.0	4.3	35.1	38.9	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		18.0			49.3		7.4	23.0	4.3	35.1	38.9	
LOS		B			D		A	C	A	D	D	
Approach Delay		18.0			49.3			20.3			38.7	
Approach LOS		B			D			C			D	
Queue Length 50th (ft)		7			151		3	166	0	32	352	
Queue Length 95th (ft)		25			#237		10	221	32	72	#495	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		470			427		417	1376	683	332	1368	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.05			0.70		0.03	0.53	0.16	0.20	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 33.5

Intersection LOS: C

Intersection Capacity Utilization 73.4%

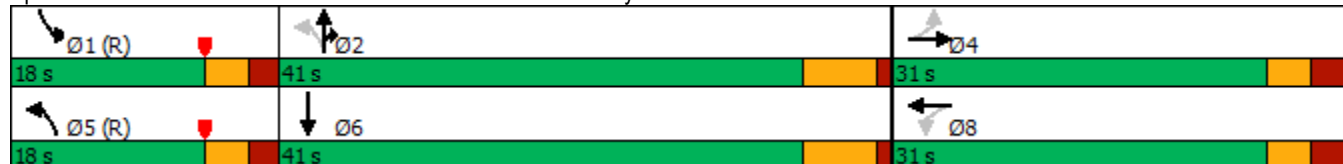
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



25 Talbot Lane
2: Talbot Ln. & Governor's Hwy. /Governors Hwy.

2021 Existing Conditions
AM Peak Hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	70	60	50	270	30	20
Future Volume (vph)	70	60	50	270	30	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938				0.946	
Flt Protected				0.992	0.971	
Satd. Flow (prot)	1747	0	0	1848	1711	0
Flt Permitted				0.992	0.971	
Satd. Flow (perm)	1747	0	0	1848	1711	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			3853	751	
Travel Time (s)	56.2			87.6	17.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	65	54	293	33	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	141	0	0	347	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	37.7%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	60	50	270	30	20
Future Vol, veh/h	70	60	50	270	30	20
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, %	2	2	2	2	2	2
Mvmt Flow	76	65	54	293	33	22
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	141	0	510	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	401	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1442	-	523	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1442	-	499	945
Mov Cap-2 Maneuver	-	-	-	-	499	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	676	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		11.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	615	-	-	1442	-	
HCM Lane V/C Ratio	0.088	-	-	0.038	-	
HCM Control Delay (s)	11.4	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2021 Existing Conditions

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	236	2	0	540	220	90	1	3	1	1	0
Future Volume (vph)	0	236	2	0	540	220	90	1	3	1	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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		0.999				0.850		0.996				
Flt Protected								0.954			0.976	
Satd. Flow (prot)	0	1861	0	0	1863	1583	0	1770	0	0	1818	0
Flt Permitted								0.954				
Satd. Flow (perm)	0	1861	0	0	1863	1583	0	1770	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				239		2				
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			3853			188	
Travel Time (s)		31.0			29.4			105.1			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	257	2	0	587	239	98	1	3	1	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	259	0	0	587	239	0	102	0	0	2	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)		0			0			0			0	
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		NA			NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2021 Existing Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		34.3			34.3	34.3		7.4			5.3	
Actuated g/C Ratio		0.66			0.66	0.66		0.14			0.10	
v/c Ratio		0.21			0.48	0.21		0.40			0.01	
Control Delay		6.9			9.4	1.8		28.2			26.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		6.9			9.4	1.8		28.2			26.5	
LOS		A			A	A		C			C	
Approach Delay		6.9			7.2			28.2			26.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		33			95	0		29			1	
Queue Length 95th (ft)		94			250	29		84			7	
Internal Link Dist (ft)		1740			1645			3773			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1348			1349	1212		320			226	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.19			0.44	0.20		0.32			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 9.0

Intersection LOS: A

Intersection Capacity Utilization 49.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road

 Ø2	 Ø4	 Ø8
45 s	15 s	10 s
 Ø6		
45 s		

2021 Existing Weekday P.M.

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2021 Existing Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	70	50	163	20	63	10	910	90	82	763	10
Future Volume (vph)	60	70	50	163	20	63	10	910	90	82	763	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.962			0.965				0.850		0.998	
Flt Protected		0.984			0.968		0.950			0.950		
Satd. Flow (prot)	0	1763	0	0	1740	0	1770	3539	1583	1770	3532	0
Flt Permitted		0.823			0.653		0.226			0.950		
Satd. Flow (perm)	0	1475	0	0	1174	0	421	3539	1583	1770	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			19				97		2	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	65	75	54	175	22	68	11	978	97	88	820	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	194	0	0	265	0	11	978	97	88	831	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2021 Existing Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		22.1			22.1		52.0	35.0	35.0	16.0	35.0	
Actuated g/C Ratio		0.25			0.25		0.58	0.39	0.39	0.18	0.39	
v/c Ratio		0.51			0.87		0.02	0.71	0.14	0.28	0.60	
Control Delay		30.3			58.7		7.5	26.7	4.5	36.8	24.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		30.3			58.7		7.5	26.7	4.5	36.8	24.2	
LOS		C			E		A	C	A	D	C	
Approach Delay		30.3			58.7			24.6			25.4	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)		81			130		2	242	0	46	194	
Queue Length 95th (ft)		145			#256		9	314	30	91	255	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		426			341		482	1376	674	313	1374	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.46			0.78		0.02	0.71	0.14	0.28	0.60	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 29.0

Intersection LOS: C

Intersection Capacity Utilization 64.8%

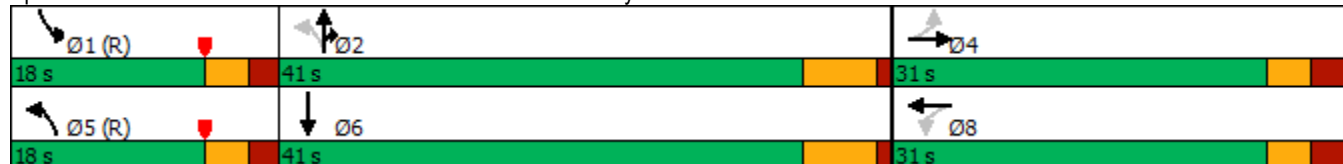
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



25 Talbot Lane
2: Talbot Ln. & Governor's Hwy. /Governors Hwy.

2021 Existing Conditions
PM Peak Hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	230	15	10	113	70	60
Future Volume (vph)	230	15	10	113	70	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.938	
Flt Protected				0.996	0.974	
Satd. Flow (prot)	1848	0	0	1855	1702	0
Flt Permitted				0.996	0.974	
Satd. Flow (perm)	1848	0	0	1855	1702	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			3853	751	
Travel Time (s)	56.2			87.6	17.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	16	11	123	76	65
Shared Lane Traffic (%)						
Lane Group Flow (vph)	266	0	0	134	141	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	28.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	230	15	10	113	70	60
Future Vol, veh/h	230	15	10	113	70	60
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, %	2	2	2	2	2	2
Mvmt Flow	250	16	11	123	76	65
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	266	0	403	258
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	145	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1298	-	603	781
Stage 1	-	-	-	-	785	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1298	-	598	781
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	882	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		11.8	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	671	-	-	1298	-	
HCM Lane V/C Ratio	0.211	-	-	0.008	-	
HCM Control Delay (s)	11.8	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2021 Existing Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	5	670	1	1	288	150	250	1	3	1	0	3
Future Volume (vph)	5	670	1	1	288	150	250	1	3	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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		0.998			0.899	
Flt Protected								0.953			0.988	
Satd. Flow (prot)	0	1863	0	0	1863	1583	0	1772	0	0	1655	0
Flt Permitted		0.997			0.998			0.953				
Satd. Flow (perm)	0	1857	0	0	1859	1583	0	1772	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						160		1			176	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			3853			188	
Travel Time (s)		31.0			29.4			105.1			5.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	713	1	1	306	160	266	1	3	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	719	0	0	307	160	0	270	0	0	4	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)		0			0			0			0	
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	NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2021 Existing Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		27.2			27.2	27.2		9.1			5.1	
Actuated g/C Ratio		0.52			0.52	0.52		0.17			0.10	
v/c Ratio		0.75			0.32	0.18		0.87			0.01	
Control Delay		15.9			8.5	2.1		55.6			0.0	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		15.9			8.5	2.1		55.6			0.0	
LOS		B			A	A		E			A	
Approach Delay		15.9			6.3			55.6				
Approach LOS		B			A			E				
Queue Length 50th (ft)		140			44	0		75			0	
Queue Length 95th (ft)		342			113	23		#280			0	
Internal Link Dist (ft)		1740			1645			3773			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1338			1339	1185		309			352	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.54			0.23	0.14		0.87			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.3

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 72.0%

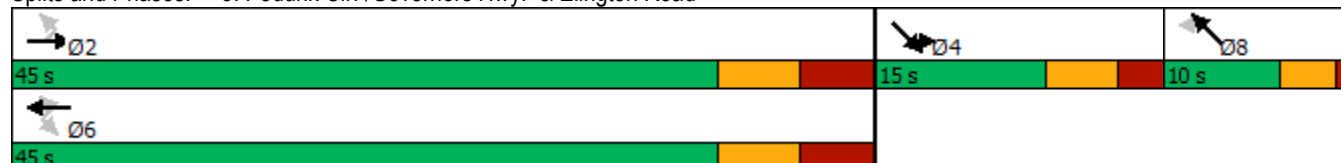
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road



Appendix C

Capacity Analysis – 2023 Background Traffic Conditions

2023 Background Weekday A.M.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	9	141	81	54	12	684	103	61	1105	71
Future Volume (vph)	4	10	9	141	81	54	12	684	103	61	1105	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.946			0.973				0.850		0.991	
Flt Protected		0.992			0.975		0.950			0.950		
Satd. Flow (prot)	0	1748	0	0	1767	0	1770	3539	1583	1770	3507	0
Flt Permitted		0.943			0.826		0.114			0.950		
Satd. Flow (perm)	0	1662	0	0	1497	0	212	3539	1583	1770	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			14				112		8	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	11	10	153	88	59	13	743	112	66	1201	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	300	0	13	743	112	66	1278	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 No Build Conditions
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		21.3			21.3		52.8	35.0	35.0	16.8	35.0	
Actuated g/C Ratio		0.24			0.24		0.59	0.39	0.39	0.19	0.39	
v/c Ratio		0.06			0.82		0.03	0.54	0.16	0.20	0.93	
Control Delay		18.0			49.5		7.4	23.1	4.3	35.2	40.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		18.0			49.5		7.4	23.1	4.3	35.2	40.2	
LOS		B			D		A	C	A	D	D	
Approach Delay		18.0			49.5			20.4			39.9	
Approach LOS		B			D			C			D	
Queue Length 50th (ft)		6			152		3	168	0	33	357	
Queue Length 95th (ft)		25			#244		10	224	32	73	#503	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		470			427		415	1376	684	330	1368	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.05			0.70		0.03	0.54	0.16	0.20	0.93	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 34.2

Intersection LOS: C

Intersection Capacity Utilization 73.9%

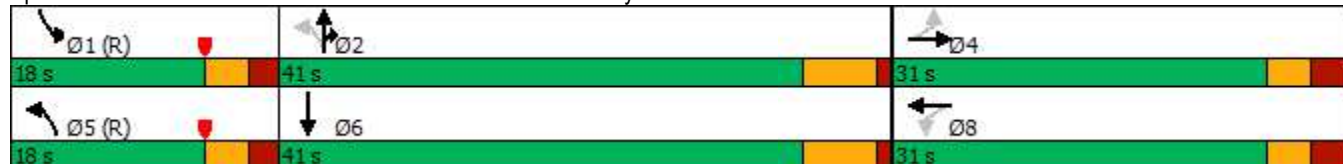
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	71	61	51	273	30	20
Future Volume (vph)	71	61	51	273	30	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.938				0.946	
Flt Protected				0.992	0.971	
Satd. Flow (prot)	1747	0	0	1848	1711	0
Flt Permitted				0.992	0.971	
Satd. Flow (perm)	1747	0	0	1848	1711	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			3853	751	
Travel Time (s)	56.2			87.6	17.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	66	55	297	33	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	143	0	0	352	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	38.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	71	61	51	273	30	20
Future Vol, veh/h	71	61	51	273	30	20
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, %	2	2	2	2	2	2
Mvmt Flow	77	66	55	297	33	22
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	143	0	517	110
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1440	-	518	943
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1440	-	494	943
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	672	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.2		11.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	610	-	-	1440	-	
HCM Lane V/C Ratio	0.089	-	-	0.038	-	
HCM Control Delay (s)	11.5	-	-	7.6	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 No Build Conditions

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	238	2	0	545	222	91	1	3	1	1	0
Future Volume (vph)	0	238	2	0	545	222	91	1	3	1	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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		0.999				0.850		0.996				
Flt Protected								0.954			0.976	
Satd. Flow (prot)	0	1861	0	0	1863	1583	0	1770	0	0	1818	0
Flt Permitted								0.954				
Satd. Flow (perm)	0	1861	0	0	1863	1583	0	1770	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				241		2				
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			3853			188	
Travel Time (s)		31.0			29.4			105.1			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	259	2	0	592	241	99	1	3	1	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	592	241	0	103	0	0	2	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)		0			0			0			0	
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		NA			NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

Lanes, Volumes, Timings

Synchro 10 Rep
Page 5

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 No Build Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		34.5			34.5	34.5		7.4			5.3	
Actuated g/C Ratio		0.66			0.66	0.66		0.14			0.10	
v/c Ratio		0.21			0.48	0.21		0.41			0.01	
Control Delay		6.9			9.4	1.8		28.4			26.5	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		6.9			9.4	1.8		28.4			26.5	
LOS		A			A	A		C			C	
Approach Delay		6.9			7.2			28.4			26.5	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		34			96	0		30			1	
Queue Length 95th (ft)		95			253	29		85			7	
Internal Link Dist (ft)		1740			1645			3773			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1343			1344	1209		319			225	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.19			0.44	0.20		0.32			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 9.0

Intersection LOS: A

Intersection Capacity Utilization 49.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road

 Ø2	 Ø4	 Ø8
45 s	15 s	10 s
 Ø6		
45 s		

2023 Background Weekday P.M.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	71	51	165	20	64	10	919	91	83	771	10
Future Volume (vph)	61	71	51	165	20	64	10	919	91	83	771	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.962			0.965				0.850		0.998	
Flt Protected		0.984			0.968		0.950			0.950		
Satd. Flow (prot)	0	1763	0	0	1740	0	1770	3539	1583	1770	3532	0
Flt Permitted		0.822			0.650		0.222			0.950		
Satd. Flow (perm)	0	1473	0	0	1168	0	414	3539	1583	1770	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			19				98			2
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	76	55	177	22	69	11	988	98	89	829	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	0	268	0	11	988	98	89	840	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 No Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		22.3			22.3		51.8	35.0	35.0	15.8	35.0	
Actuated g/C Ratio		0.25			0.25		0.58	0.39	0.39	0.18	0.39	
v/c Ratio		0.52			0.88		0.02	0.72	0.15	0.29	0.61	
Control Delay		30.4			59.6		7.5	26.9	4.5	37.0	24.3	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		30.4			59.6		7.5	26.9	4.5	37.0	24.3	
LOS		C			E		A	C	A	D	C	
Approach Delay		30.4			59.6			24.7			25.6	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)		82			131		2	245	0	46	196	
Queue Length 95th (ft)		148			#261		9	318	30	92	259	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		425			339		475	1376	675	309	1374	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.46			0.79		0.02	0.72	0.15	0.29	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 29.2

Intersection LOS: C

Intersection Capacity Utilization 70.8%

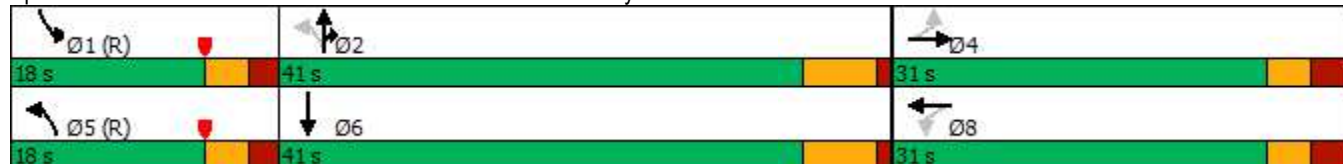
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



25 Talbot Lane
2: Talbot Ln. & Governor's Hwy. /Governors Hwy.

2023 No Build Conditions
PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Traffic Volume (vph)	232	15	10	114	71	61
Future Volume (vph)	232	15	10	114	71	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.938	
Flt Protected				0.996	0.974	
Satd. Flow (prot)	1848	0	0	1855	1702	0
Flt Permitted				0.996	0.974	
Satd. Flow (perm)	1848	0	0	1855	1702	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			3853	751	
Travel Time (s)	56.2			87.6	17.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	16	11	124	77	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	268	0	0	135	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	28.6%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	3.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	232	15	10	114	71	61
Future Vol, veh/h	232	15	10	114	71	61
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, %	2	2	2	2	2	2
Mvmt Flow	252	16	11	124	77	66
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	268	0	406	260
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	146	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1296	-	601	779
Stage 1	-	-	-	-	783	-
Stage 2	-	-	-	-	881	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1296	-	596	779
Mov Cap-2 Maneuver	-	-	-	-	596	-
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	881	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.6		11.8	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	669	-	-	1296	-	
HCM Lane V/C Ratio	0.214	-	-	0.008	-	
HCM Control Delay (s)	11.8	-	-	7.8	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 No Build Conditions

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	5	677	1	1	291	152	253	1	3	1	0	3
Future Volume (vph)	5	677	1	1	291	152	253	1	3	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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			0.899	
Flt Protected								0.953			0.988	
Satd. Flow (prot)	0	1863	0	0	1863	1583	0	1773	0	0	1655	0
Flt Permitted		0.997			0.998			0.953				
Satd. Flow (perm)	0	1857	0	0	1859	1583	0	1773	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						162		1			176	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			3853			188	
Travel Time (s)		31.0			29.4			105.1			5.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	720	1	1	310	162	269	1	3	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	726	0	0	311	162	0	273	0	0	4	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)		0			0			0			0	
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	NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 No Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		27.5			27.5	27.5		9.1			5.1	
Actuated g/C Ratio		0.52			0.52	0.52		0.17			0.10	
v/c Ratio		0.75			0.32	0.18		0.89			0.01	
Control Delay		16.0			8.5	2.0		58.2			0.0	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		16.0			8.5	2.0		58.2			0.0	
LOS		B			A	A		E			A	
Approach Delay		16.0			6.3			58.2				
Approach LOS		B			A			E				
Queue Length 50th (ft)		142			45	0		76			0	
Queue Length 95th (ft)		347			114	24		#282			0	
Internal Link Dist (ft)		1740			1645			3773			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1330			1331	1179		307			351	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.55			0.23	0.14		0.89			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 72.5%

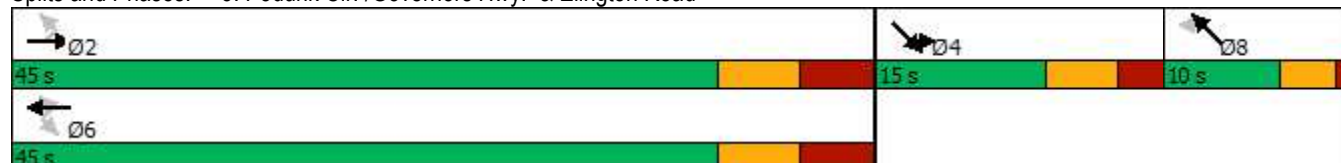
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road



Appendix D

Capacity Analysis – 2023 Build Traffic Conditions

2023 Build Weekday A.M.

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	9	210	81	92	12	684	172	100	1105	71
Future Volume (vph)	4	10	9	210	81	92	12	684	172	100	1105	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.946			0.968				0.850		0.991	
Flt Protected		0.992			0.973		0.950			0.950		
Satd. Flow (prot)	0	1748	0	0	1754	0	1770	3539	1583	1770	3507	0
Flt Permitted		0.940			0.816		0.114			0.950		
Satd. Flow (perm)	0	1656	0	0	1471	0	212	3539	1583	1770	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			18				187		8	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	11	10	228	88	100	13	743	187	109	1201	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	416	0	13	743	187	109	1278	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		25.1			25.1		49.0	35.0	35.0	13.0	35.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.39	0.39	0.14	0.39	
v/c Ratio		0.05			0.98		0.04	0.54	0.26	0.43	0.93	
Control Delay		17.7			72.9		7.7	23.1	3.8	40.9	40.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		17.7			72.9		7.7	23.1	3.8	40.9	40.2	
LOS		B			E		A	C	A	D	D	
Approach Delay		17.7			72.9			19.1			40.2	
Approach LOS		B			E			B			D	
Queue Length 50th (ft)		6			226		3	168	0	57	357	
Queue Length 95th (ft)		25			#418		10	224	40	109	#503	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		469			423		340	1376	729	255	1368	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.05			0.98		0.04	0.54	0.26	0.43	0.93	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 37.7

Intersection LOS: D

Intersection Capacity Utilization 80.1%

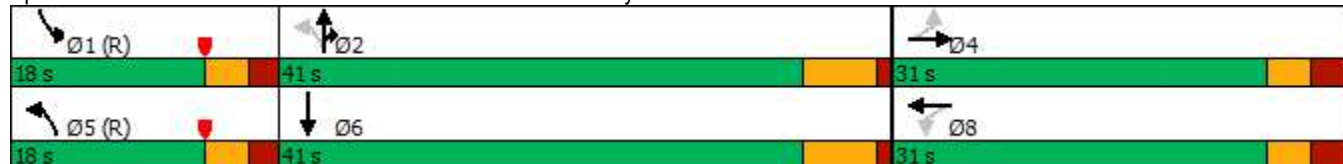
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



25 Talbot Lane
2: Talbot Ln. & Governor's Hwy. /Governors Hwy.

2023 Build Conditions
AM Peak Hour

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	163	77	51	364	46	20
Future Volume (vph)	163	77	51	364	46	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.957				0.959	
Flt Protected				0.994	0.966	
Satd. Flow (prot)	1783	0	0	1852	1726	0
Flt Permitted				0.994	0.966	
Satd. Flow (perm)	1783	0	0	1852	1726	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			955	483	
Travel Time (s)	56.2			21.7	11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	177	84	55	396	50	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	0	0	451	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	49.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	163	77	51	364	46	20
Future Vol, veh/h	163	77	51	364	46	20
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, %	2	2	2	2	2	2
Mvmt Flow	177	84	55	396	50	22
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	261	0	725	219
Stage 1	-	-	-	-	219	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1303	-	392	821
Stage 1	-	-	-	-	817	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1303	-	371	821
Mov Cap-2 Maneuver	-	-	-	-	371	-
Stage 1	-	-	-	-	773	-
Stage 2	-	-	-	-	606	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1		14.6	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	445	-	-	1303	-	
HCM Lane V/C Ratio	0.161	-	-	0.043	-	
HCM Control Delay (s)	14.6	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 Build Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	18	238	2	0	545	234	103	1	21	1	1	0
Future Volume (vph)	18	238	2	0	545	234	103	1	21	1	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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		0.999				0.850		0.977				
Flt Protected		0.996						0.960			0.976	
Satd. Flow (prot)	0	1853	0	0	1863	1583	0	1747	0	0	1818	0
Flt Permitted		0.941						0.960				
Satd. Flow (perm)	0	1751	0	0	1863	1583	0	1747	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				254		12				
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			2898			188	
Travel Time (s)		31.0			29.4			79.0			5.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	259	2	0	592	254	112	1	23	1	1	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	281	0	0	592	254	0	136	0	0	2	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)		0			0			0			0	
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			NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 Build Conditions
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		32.4			32.4	32.4		7.7			5.3	
Actuated g/C Ratio		0.64			0.64	0.64		0.15			0.10	
v/c Ratio		0.25			0.50	0.23		0.49			0.01	
Control Delay		7.6			9.9	1.8		28.0			26.0	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		7.6			9.9	1.8		28.0			26.0	
LOS		A			A	A		C			C	
Approach Delay		7.6			7.5			28.0			26.0	
Approach LOS		A			A			C			C	
Queue Length 50th (ft)		39			100	0		32			1	
Queue Length 95th (ft)		105			253	29		#112			7	
Internal Link Dist (ft)		1740			1645			2818			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1306			1390	1245		333			232	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.22			0.43	0.20		0.41			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 50.7

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 51.7%

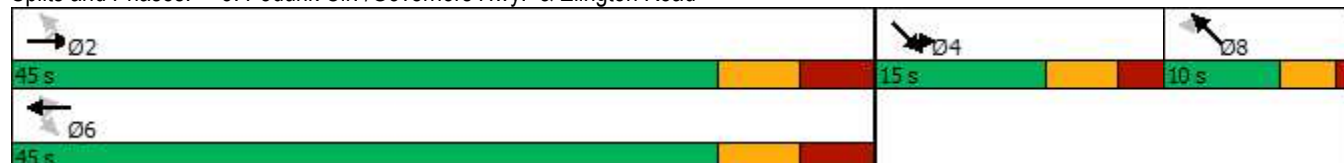
ICU Level of Service A

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road



25 Talbot Lane
4: Passenger Vehicle Driveway & Governors Hwy.

2023 Build Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	91	92	30	324	91	30
Future Vol, veh/h	91	92	30	324	91	30
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, %	2	2	2	2	2	2
Mvmt Flow	99	100	33	352	99	33
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	199	0	567	149
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1373	-	485	898
Stage 1	-	-	-	-	879	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1373	-	470	898
Mov Cap-2 Maneuver	-	-	-	-	470	-
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	664	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		14	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	533	-	-	1373	-	
HCM Lane V/C Ratio	0.247	-	-	0.024	-	
HCM Control Delay (s)	14	-	-	7.7	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1	-	-	0.1	-	

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	16	50	0	16	112
Future Vol, veh/h	0	16	50	0	16	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	2	2	2	2	2	2
Mvmt Flow	0	17	54	0	17	122
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	210	54	0	0	54	0
Stage 1	54	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	778	1013	-	-	1551	-
Stage 1	969	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	769	1013	-	-	1551	-
Mov Cap-2 Maneuver	769	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.6	0		0.9		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	1013	1551	-	
HCM Lane V/C Ratio	-	-	0.017	0.011	-	
HCM Control Delay (s)	-	-	8.6	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

2023 Build Weekday P.M.

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	71	51	206	20	87	10	919	178	130	771	10
Future Volume (vph)	61	71	51	206	20	87	10	919	178	130	771	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.962			0.962				0.850		0.998	
Flt Protected		0.984			0.968		0.950			0.950		
Satd. Flow (prot)	0	1763	0	0	1735	0	1770	3539	1583	1770	3532	0
Flt Permitted		0.813			0.663		0.222			0.950		
Satd. Flow (perm)	0	1457	0	0	1188	0	414	3539	1583	1770	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			21				191		2	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	76	55	222	22	94	11	988	191	140	829	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	0	338	0	11	988	191	140	840	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	31.0	31.0		31.0	31.0		18.0	41.0	41.0	18.0	41.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		20.0%	45.6%	45.6%	20.0%	45.6%	
Maximum Green (s)	25.1	25.1		25.1	25.1		13.0	35.0	35.0	13.0	35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		25.1			25.1		49.0	35.0	35.0	13.0	35.0	
Actuated g/C Ratio		0.28			0.28		0.54	0.39	0.39	0.14	0.39	
v/c Ratio		0.47			0.98		0.03	0.72	0.26	0.55	0.61	
Control Delay		28.3			75.5		7.6	26.9	3.8	44.7	24.3	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		28.3			75.5		7.6	26.9	3.8	44.7	24.3	
LOS		C			E		A	C	A	D	C	
Approach Delay		28.3			75.5			23.1			27.3	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)		82			180		2	245	0	75	196	
Queue Length 95th (ft)		148			#356		9	318	41	135	259	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		421			346		421	1376	732	255	1374	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.47			0.98		0.03	0.72	0.26	0.55	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 31.5

Intersection LOS: C

Intersection Capacity Utilization 79.6%

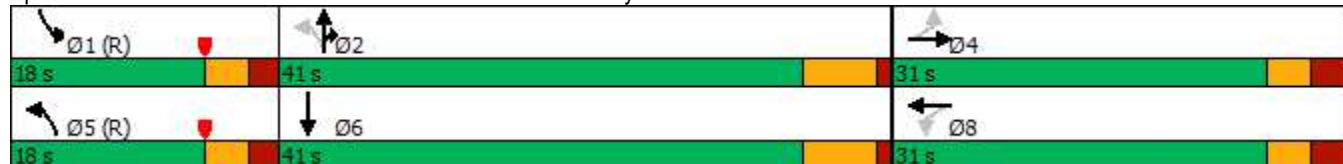
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↱	
Traffic Volume (vph)	350	30	10	170	78	61
Future Volume (vph)	350	30	10	170	78	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.989				0.941	
Flt Protected				0.997	0.973	
Satd. Flow (prot)	1842	0	0	1857	1706	0
Flt Permitted				0.997	0.973	
Satd. Flow (perm)	1842	0	0	1857	1706	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	2473			910	483	
Travel Time (s)	56.2			20.7	11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	380	33	11	185	85	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	413	0	0	196	151	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	35.0%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	350	30	10	170	78	61
Future Vol, veh/h	350	30	10	170	78	61
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, %	2	2	2	2	2	2
Mvmt Flow	380	33	11	185	85	66
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	413	0	604	397
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	207	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1146	-	461	652
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	828	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1146	-	456	652
Mov Cap-2 Maneuver	-	-	-	-	456	-
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	828	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.5		14.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	525	-	-	1146	-	
HCM Lane V/C Ratio	0.288	-	-	0.009	-	
HCM Control Delay (s)	14.6	-	-	8.2	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1.2	-	-	0	-	

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	29	677	1	1	291	168	260	1	14	1	0	3
Future Volume (vph)	29	677	1	1	291	168	260	1	14	1	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		240	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	50			50			50			50		
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		0.993			0.899	
Flt Protected		0.998						0.955			0.988	
Satd. Flow (prot)	0	1859	0	0	1863	1583	0	1766	0	0	1655	0
Flt Permitted		0.975			0.998			0.955				
Satd. Flow (perm)	0	1816	0	0	1859	1583	0	1766	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						179		3			176	
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1820			1725			2942			188	
Travel Time (s)		31.0			29.4			80.2			5.1	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	31	720	1	1	310	179	277	1	15	1	0	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	752	0	0	311	179	0	293	0	0	4	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)		0			0			0			0	
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	NA	Perm	Split	NA		Perm	NA	
Protected Phases		2			6		4	4			8	
Permitted Phases	2			6		6				8		
Detector Phase	2	2		6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0		26.2	26.2	26.2	15.0	15.0		10.0	10.0	
Total Split (s)	45.0	45.0		45.0	45.0	45.0	15.0	15.0		10.0	10.0	
Total Split (%)	64.3%	64.3%		64.3%	64.3%	64.3%	21.4%	21.4%		14.3%	14.3%	
Maximum Green (s)	36.8	36.8		36.8	36.8	36.8	8.9	8.9		6.0	6.0	
Yellow Time (s)	4.2	4.2		4.2	4.2	4.2	3.7	3.7		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0	4.0	2.4	2.4		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0			0.0	
Total Lost Time (s)		8.2			8.2	8.2		6.1			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	4.0	4.0		4.0	4.0	4.0	2.0	2.0		2.0	2.0	
Recall Mode	Min	Min		Min	Min	Min	None	None		None	None	
Walk Time (s)							1.0	1.0				

25 Talbot Lane
3: Podunk Cir. /Governors Hwy. & Elington Road

2023 Build Conditions
PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)		28.9			28.9	28.9		9.1			5.1	
Actuated g/C Ratio		0.54			0.54	0.54		0.17			0.09	
v/c Ratio		0.78			0.31	0.19		0.98			0.01	
Control Delay		17.2			8.2	2.0		77.2			0.0	
Queue Delay		0.0			0.0	0.0		0.0			0.0	
Total Delay		17.2			8.2	2.0		77.2			0.0	
LOS		B			A	A		E			A	
Approach Delay		17.2			5.9			77.2				
Approach LOS		B			A			E				
Queue Length 50th (ft)		153			45	0		89			0	
Queue Length 95th (ft)		#381			114	25		#304			0	
Internal Link Dist (ft)		1740			1645			2862			108	
Turn Bay Length (ft)						240						
Base Capacity (vph)		1265			1295	1157		300			346	
Starvation Cap Reductn		0			0	0		0			0	
Spillback Cap Reductn		0			0	0		0			0	
Storage Cap Reductn		0			0	0		0			0	
Reduced v/c Ratio		0.59			0.24	0.15		0.98			0.01	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 54

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 25.0

Intersection LOS: C

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Podunk Cir. /Governors Hwy. & Elington Road

 Ø2	 Ø4	 Ø8
45 s	15 s	10 s
 Ø6		
45 s		

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	293	118	40	157	56	18
Future Vol, veh/h	293	118	40	157	56	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	318	128	43	171	61	20
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	446	0	639	382
Stage 1	-	-	-	-	382	-
Stage 2	-	-	-	-	257	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1114	-	440	665
Stage 1	-	-	-	-	690	-
Stage 2	-	-	-	-	786	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1114	-	421	665
Mov Cap-2 Maneuver	-	-	-	-	421	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	786	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		14.4	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	462	-	-	1114	-	
HCM Lane V/C Ratio	0.174	-	-	0.039	-	
HCM Control Delay (s)	14.4	-	-	8.4	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	132	0	15	25
Future Vol, veh/h	0	7	132	0	15	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
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, %	2	2	2	2	2	2
Mvmt Flow	0	8	143	0	16	27
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	202	143	0	0	143	0
Stage 1	143	-	-	-	-	-
Stage 2	59	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	787	905	-	-	1440	-
Stage 1	884	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	778	905	-	-	1440	-
Mov Cap-2 Maneuver	778	-	-	-	-	-
Stage 1	874	-	-	-	-	-
Stage 2	964	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9	0		2.8		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	905	1440	-	
HCM Lane V/C Ratio	-	-	0.008	0.011	-	
HCM Control Delay (s)	-	-	9	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Appendix E

Capacity Analysis – 2023 Build with Improvements Traffic Conditions

2023 Build with Improvements Weekday A.M.

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	10	9	210	81	92	12	684	172	100	1105	71
Future Volume (vph)	4	10	9	210	81	92	12	684	172	100	1105	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.946			0.968				0.850		0.991	
Flt Protected		0.992			0.973		0.950			0.950		
Satd. Flow (prot)	0	1748	0	0	1754	0	1770	3539	1583	1770	3507	0
Flt Permitted		0.939			0.816		0.133			0.950		
Satd. Flow (perm)	0	1655	0	0	1471	0	248	3539	1583	1770	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			19				187		9	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	11	10	228	88	100	13	743	187	109	1201	77
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	25	0	0	416	0	13	743	187	109	1278	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	35.0	35.0		35.0	35.0		12.0	36.0	36.0	19.0	43.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		13.3%	40.0%	40.0%	21.1%	47.8%	
Maximum Green (s)	29.1	29.1		29.1	29.1		7.0	30.0	30.0	14.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions with Signal Optimization

AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		27.2			27.2		39.9	30.0	30.0	15.9	37.0	
Actuated g/C Ratio		0.30			0.30		0.44	0.33	0.33	0.18	0.41	
v/c Ratio		0.05			0.91		0.05	0.63	0.29	0.35	0.88	
Control Delay		15.7			54.4		10.3	28.2	4.7	37.4	33.2	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		15.7			54.4		10.3	28.2	4.7	37.4	33.2	
LOS		B			D		B	C	A	D	C	
Approach Delay		15.7			54.4			23.3			33.5	
Approach LOS		B			D			C			C	
Queue Length 50th (ft)		6			210		3	185	0	56	342	
Queue Length 95th (ft)		23			#377		11	246	44	107	#477	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		541			488		260	1179	652	312	1447	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.05			0.85		0.05	0.63	0.29	0.35	0.88	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 33.0

Intersection LOS: C

Intersection Capacity Utilization 80.1%

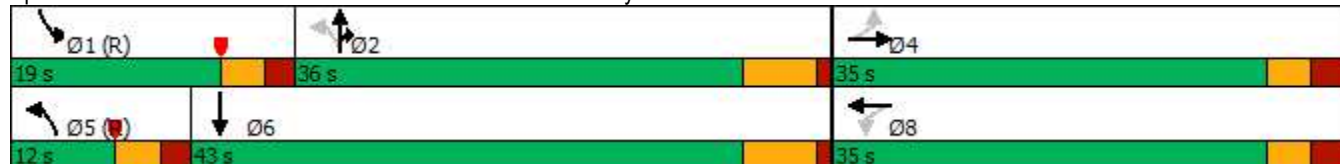
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.



2023 Build with Improvements Weekday P.M.

25 Talbot Lane

1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions with Signal Optimization

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	71	51	206	20	87	10	919	178	130	771	10
Future Volume (vph)	61	71	51	206	20	87	10	919	178	130	771	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	260		280	260		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.962			0.962				0.850		0.998	
Flt Protected		0.984			0.968		0.950			0.950		
Satd. Flow (prot)	0	1763	0	0	1735	0	1770	3539	1583	1770	3532	0
Flt Permitted		0.811			0.668		0.247			0.950		
Satd. Flow (perm)	0	1453	0	0	1197	0	460	3539	1583	1770	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			23				191		2	
Link Speed (mph)		30			30			50			30	
Link Distance (ft)		1034			2473			2927			1619	
Travel Time (s)		23.5			56.2			39.9			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	66	76	55	222	22	94	11	988	191	140	829	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	197	0	0	338	0	11	988	191	140	840	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)		0			0			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	NA		pm+pt	NA	Prot	Prot	NA	
Protected Phases		4			8		5	2	2	1	6	
Permitted Phases	4			8			2					
Detector Phase	4	4		8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		6.0	15.0	15.0	6.0	15.0	
Minimum Split (s)	23.9	23.9		23.9	23.9		18.0	24.0	24.0	18.0	41.0	
Total Split (s)	35.0	35.0		35.0	35.0		12.0	41.0	41.0	14.0	43.0	
Total Split (%)	38.9%	38.9%		38.9%	38.9%		13.3%	45.6%	45.6%	15.6%	47.8%	
Maximum Green (s)	29.1	29.1		29.1	29.1		7.0	35.0	35.0	9.0	37.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	5.0	5.0	3.0	5.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.0	1.0	1.0	2.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.9			5.9		5.0	6.0	6.0	5.0	6.0	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		2.0	3.0	3.0	2.0	3.0	
Recall Mode	None	None		None	None		C-Max	Max	Max	C-Max	Max	
Walk Time (s)												7.0

25 Talbot Lane
1: John Fitch Blvd./US-5 & Governor's Hwy.

2023 Build Conditions with Signal Optimization

PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)												14.0
Pedestrian Calls (#/hr)												0
Act Effct Green (s)		26.7			26.7		45.4	35.0	35.0	11.4	37.0	
Actuated g/C Ratio		0.30			0.30		0.50	0.39	0.39	0.13	0.41	
v/c Ratio		0.44			0.91		0.03	0.72	0.26	0.62	0.58	
Control Delay		25.2			58.5		9.5	26.9	3.8	53.0	22.4	
Queue Delay		0.0			0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		25.2			58.5		9.5	26.9	3.8	53.0	22.4	
LOS		C			E		A	C	A	D	C	
Approach Delay		25.2			58.5			23.1			26.8	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)		76			166		3	245	0	79	188	
Queue Length 95th (ft)		137			#321		10	318	41	#178	248	
Internal Link Dist (ft)		954			2393			2847			1539	
Turn Bay Length (ft)							260		280	260		
Base Capacity (vph)		485			402		369	1376	732	225	1453	
Starvation Cap Reductn		0			0		0	0	0	0	0	
Spillback Cap Reductn		0			0		0	0	0	0	0	
Storage Cap Reductn		0			0		0	0	0	0	0	
Reduced v/c Ratio		0.41			0.84		0.03	0.72	0.26	0.62	0.58	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 16 (18%), Referenced to phase 1:SBL and 5:NBL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 29.0

Intersection LOS: C

Intersection Capacity Utilization 79.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: John Fitch Blvd./US-5 & Governor's Hwy.

