

**DRAFT**

**Traffic Impact Study  
Trader Joe's Development  
Chicago, Illinois**



Submitted By:



**Kenig, Lindgren, O'Hara, Aboona, Inc.**

May 2, 2014

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# 1. Introduction

This memorandum summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed commercial development to be located in Chicago, Illinois. The site is located in the southeast corner of the intersection of Division Street and Honore Street. As proposed, the development is to consist of an approximate 13,180 square-foot Trader Joe's store, 3,965 square feet of commercial space and 76 parking spaces. Access to the development's parking garage is proposed to be provided via one access drive located Honore Street. The following street modifications/improvements are proposed as part of the development.

- In order to provide direct access between Division Street and the development's parking garage, Honore Street is proposed to be converted from a one-way northbound to a two-way street between Division Street and Thomas Street. As proposed, the street will provide one moving lane in each direction with parking generally provided on the east side of the street and parking/loading on the west side of the street.
- In order to improve the operation of the all-way stop sign controlled intersection of Division Street with the Honore Street south leg and Marion Court, Marion Court is proposed to be converted from a one-way southbound street to a one-way northbound street from Division Street to Ellen Street. In addition, striping modifications will be provided at the intersection of Division Street with the Honore Street south leg.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development and street modifications will have on traffic conditions in the area, and determine if any additional street or access improvements are necessary to accommodate traffic generated by the development. The sections of this report present the following.

- Existing transportation conditions and operations
- A summary of the LaSalle II Magnet Elementary School operations
- A description of the proposed development
- Directional distribution of the development generated traffic
- Vehicle trip generation for the proposed development
- Projected future traffic conditions including the increase in traffic due the Ashland BRT project
- Traffic analyses for the weekday morning, weekday afternoon, weekday evening and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access system and adjacent street network

## 2. Existing Conditions

Existing conditions in the area were documented based on field visits conducted by KLOA, Inc. to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area street system including lane usage and traffic control devices, an inventory of the public transportation and non-motorized modes of transportation serving the area and existing peak hour vehicle, pedestrian and bicycle volumes.

### Site Location

The subject site is located in the southeast quadrant of the intersection of Division Street with Honore Street. Land-uses in the area generally consist of residential neighborhoods north and south of the site and commercial and restaurant establishments located primarily along Division Street. LaSalle II Magnet Elementary School is located directly west of the site bounded by Division Street on the north, Honore Street on the east, a public alley on the south and Wolcott Avenue on the west. **Figure 1** shows the location of the site and **Figure 2** shows an aerial photo of the site.

### Area Streets

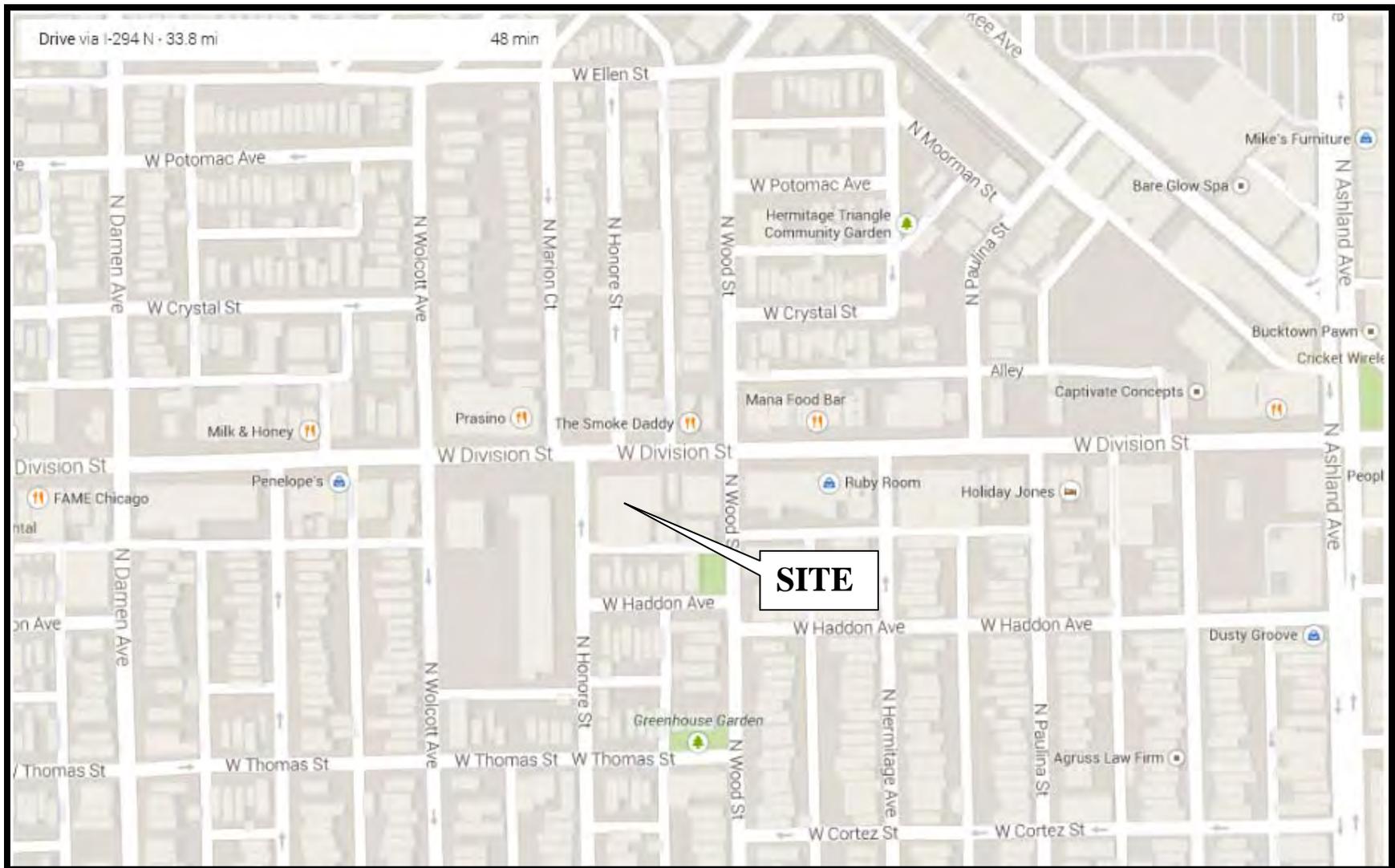
The principal streets that provide access to the site are described in the following paragraphs and shown in **Figure 3**.

*Division Street* is an east-west arterial street. In the vicinity of the site, Division Street has one moving lane and one bike lane in each direction with parking generally permitted on both sides of the street. Parking is prohibited on the south side of Division Street along the LaSalle II Magnet Elementary School frontage on school days from 7:00 A.M. to 4:30 P.M. The Division Street/Wood Street intersection is under traffic signal control and the Division Street/Honore Street south leg/Marion Court intersection is under all-way stop sign control.

*Thomas Street* is a one-way eastbound street that terminates in the area at Wood Street. It has one moving lane with parking generally permitted on both sides of the street. The intersections of Thomas Street/Wolcott Avenue, Thomas Street/Honore Street and Thomas Street/Wood Street are under all-way stop sign control.

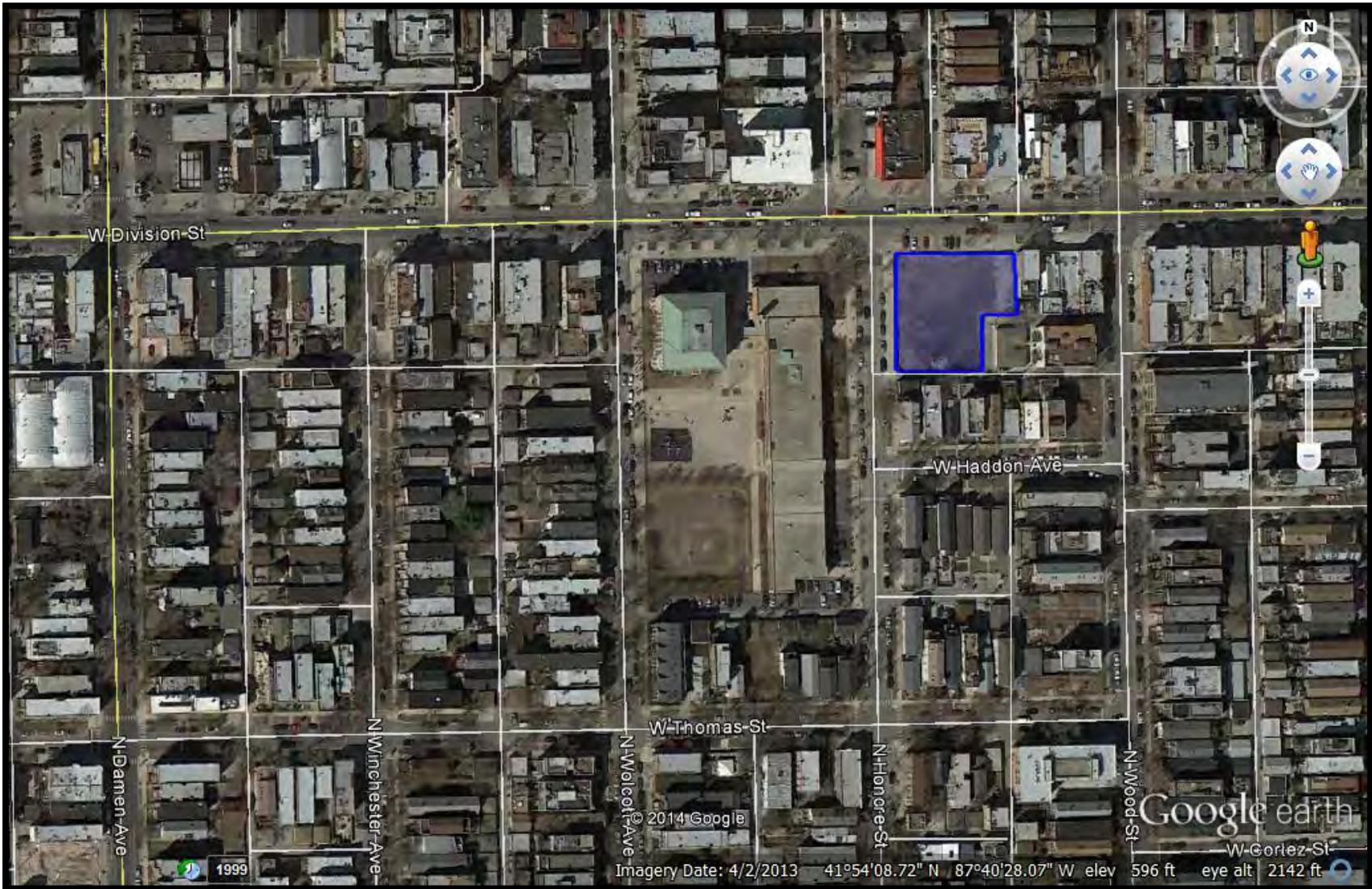
*Haddon Avenue* is a one-way westbound street that extends from Wood Street to Honore Street. It has one moving lane with parking generally permitted on both sides of the street. The intersection of Haddon Avenue/Honore Street is under all-way stop sign control.

*Wood Street* is a north-south street that terminates in the area just south of Milwaukee Avenue. Wood Street has one moving lane in each direction with parking generally permitted on both sides of the street. The Wood Street/Division Street intersection is under traffic signal control and the Wood Street/Thomas Street intersection is under all-way stop sign control.



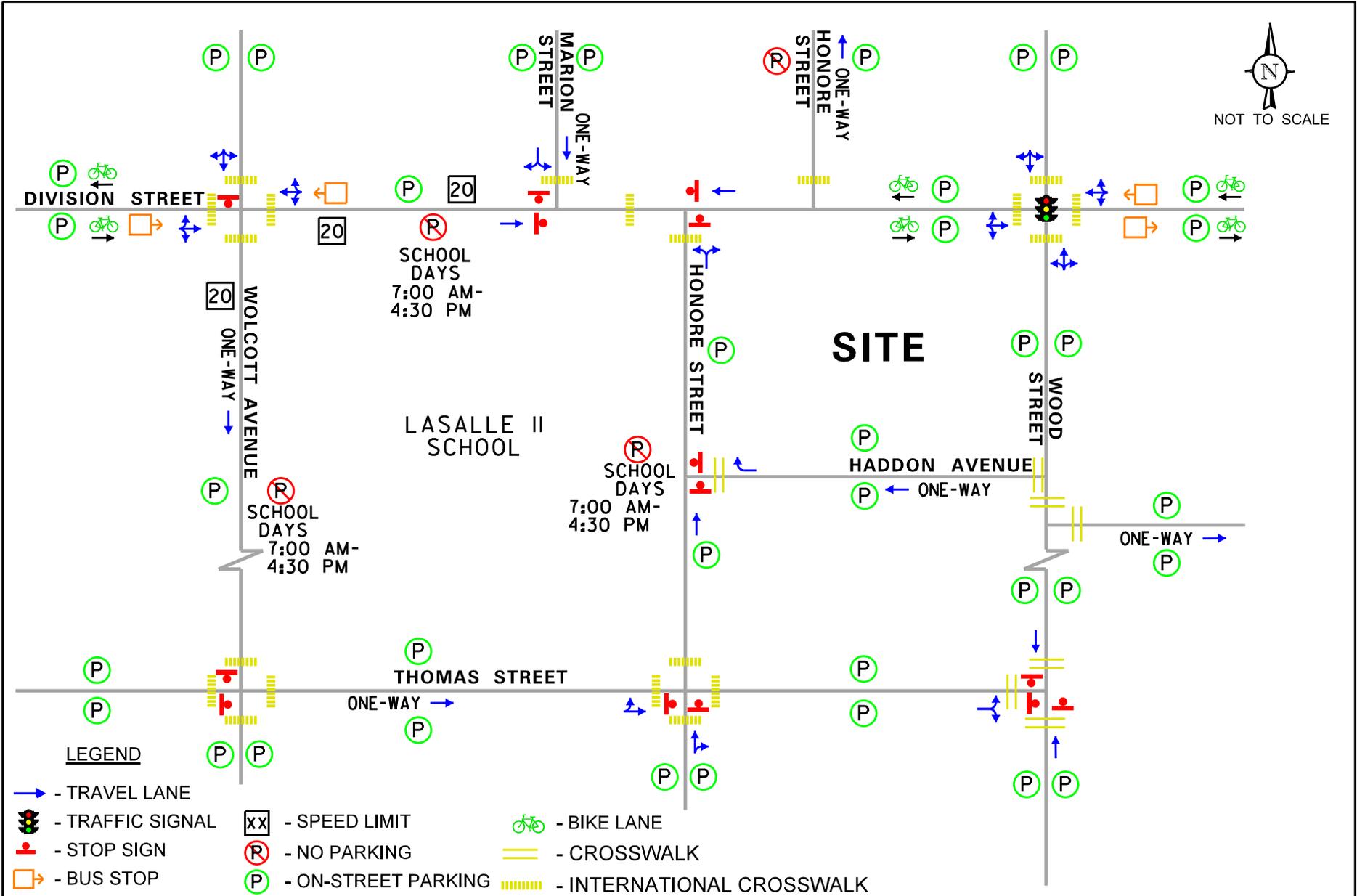
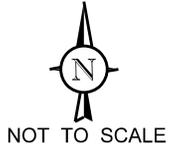
Site Location

Figure 1



Aerial View of the Site

Figure 2



**LEGEND**

- ➡ - TRAVEL LANE
- 🚦 - TRAFFIC SIGNAL
- 🛑 - STOP SIGN
- 🚌 - BUS STOP
- ⓧ - SPEED LIMIT
- 🚫 - NO PARKING
- 🅑 - ON-STREET PARKING
- 🚲 - BIKE LANE
- ══ - CROSSWALK
- ▤ - INTERNATIONAL CROSSWALK

PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Existing Street Conditions

**KLOA**  
Job No: 14-050  
Figure: 3

*Honore Street* is a one-way northbound street that has an offset intersection with Division Street. South of Division Street, Honore Street has one moving lane with parking generally permitted on both sides of the street. Parking is prohibited on the west side of Honore Street along the LaSalle II Magnet Elementary School frontage on school days from 7:00 A.M. to 4:30 P.M. North of Division Street, Honore Street has one moving lane with parking permitted on the east side of the street only. The intersections of Honore Street/Thomas Street, Honore Street/Haddon Avenue and Division Street/Honore Street south leg/Marion Court intersections are all under all-way stop sign control.

*Wolcott Avenue* is a north-south street. South of Division, Wolcott Avenue is a one-way southbound Street that has one moving lane with parking generally permitted on both sides of the street. Parking is prohibited on the east side of Wolcott Avenue along the LaSalle II Magnet Elementary School frontage on school days from 7:00 A.M. to 4:30 P.M. North of Division Street, Wolcott Avenue has one moving lane in each direction with parking generally permitted on both sides of the street. The intersection of Wolcott Avenue/Thomas Street is under all-way stop sign control and Wolcott Avenue is under stop sign control at its intersection with Division Street.

*Marion Court* is a one-way southbound street that extends from Ellen Street to Division Street. It has one moving lane with parking generally permitted on both sides of the street. The intersection of Division Street/Honore Street south leg/Marion Court is under all-way stop sign control.

### **Street Modifications/Improvements**

The Chicago Transit Authority (CTA) and Chicago Department of Transportation (CDOT) are proposing to provide a center running Bus Rapid Transit (BRT) system on Ashland Avenue between Irving Park Road and 95th Street. As currently proposed, the system will eliminate one of the vehicle through lanes in each direction along Ashland Avenue and prohibit left-turn at most intersections. The Environmental Assessment has been completed and the CTA and CDOT has been gathering input from key stakeholders and the public. According to the CTA web site, the “CTA and CDOT are still developing the Ashland BRT design, and we are considering options and modifications, including the implementation of additional left turns, based on continued feedback from the public.”

### **Alternative Modes of Transportation**

Accessibility to and from the area is enhanced by the various alternative modes of transportation serving the area as summarized below.

**Public Transportation.** The area is served by the CTA Blue rapid transit line which runs from O’Hare Airport through the Loop to Forest Park. A local stop for the Blue rapid transit line is provided at the intersection of Ashland Avenue/Division Street/Milwaukee Avenue which is located just over a quarter mile from the site. In addition, the following two CTA bus routes serve the area.

- *Route Number 50 - Damen* primarily runs along Damen Avenue between the Clark Street/Edgewater Avenue intersection and Damen Avenue/Archer Avenue intersection and provides connections to the CTA Blue, Brown, Orange and Pink rapid transit lines. Bus stops are located in both directions at Division Street and service is provided seven days a week and on holidays.
- *Route Number 70 - Division* primarily runs along Division Street between Clark Street and Austin Avenue and provides connections to the CTA Blue and Red rapid transit lines. Bus stops are located in both directions at Wolcott Avenue and Wood Street and service is provided Monday through Friday.

***Bicycle Routes.*** The *Chicago's Streets for Cycling Plan 2020* identifies the following streets as bike routes.

- Milwaukee Avenue as a Spoke Route
- Division Street and Damen Avenue as Crosstown Bike Routes
- Wood Street as a Neighborhood Bike Route.

Currently, Division Street and Damen Avenue provide dedicated bike lanes and shared vehicle/bike lanes are provided on Milwaukee Avenue.

***Mode-Sharing Transportation Availability.*** Within the vicinity of the site, Divvy bike sharing stations are located on Division Street at Wood Street and Damen Avenue. Car-sharing programs have vehicles within walking distance of the site.

***Pedestrian Facilities.*** All of the streets in the immediate area generally have sidewalks on both sides of the street. In addition, crosswalks and pedestrian traffic signals are provided at the signalized intersection of Division Street/Wood Street and Division Street/Damen Avenue.

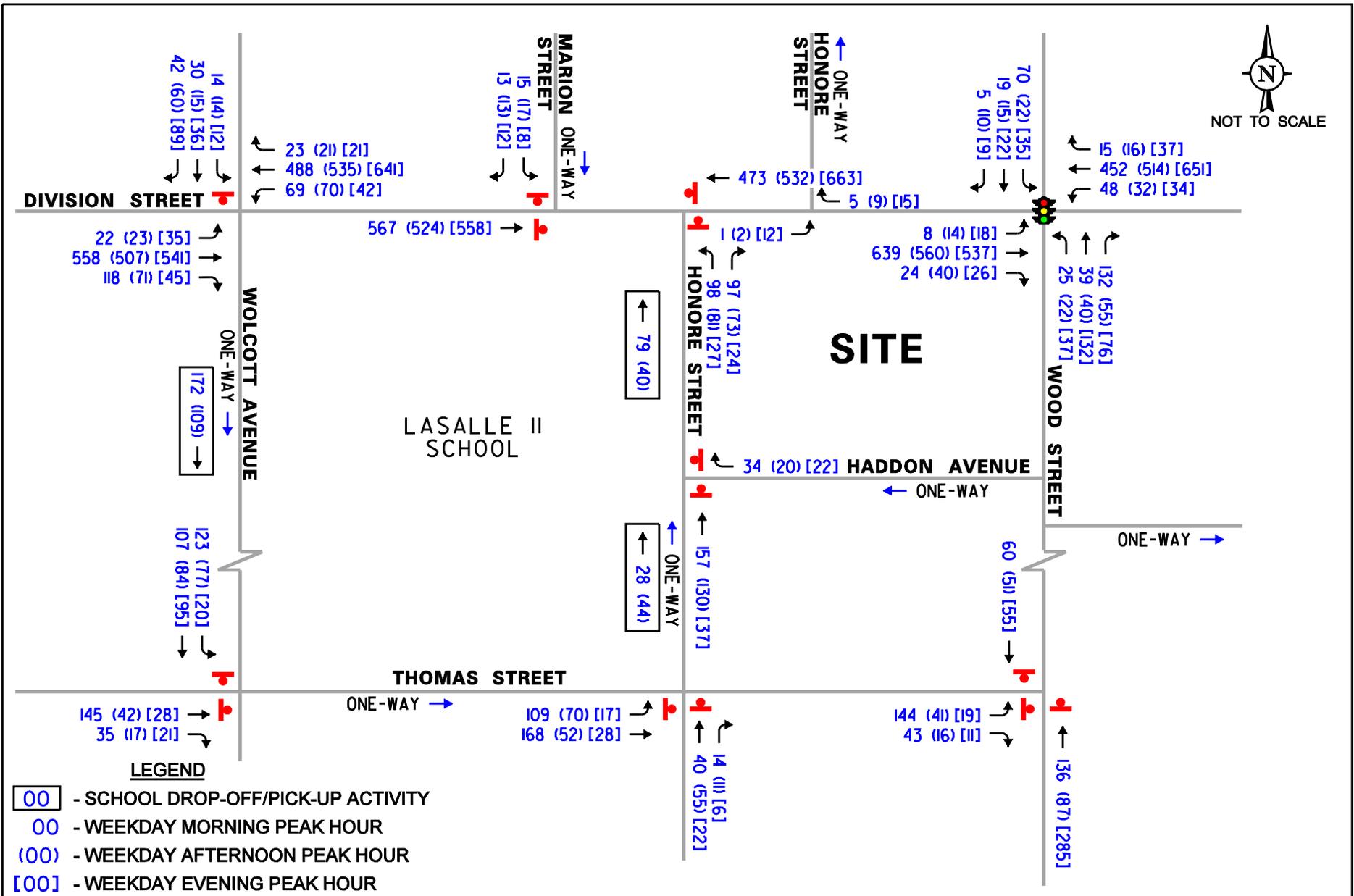
### **Existing Traffic Volumes**

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period vehicle, pedestrian and bicycle counts at the following intersections.

- Division Street with Wood Street
- Division Street with Honore Street
- Division Street with Marion Court
- Division Street with Wolcott Avenue
- Thomas Street with Wood Street
- Thomas Street with Honore Street
- Thomas Street with Wolcott Avenue
- Haddon Avenue and Honore Street

In addition, surveys were performed of the drop-off/pick-up activity that occurred along the LaSalle II Magnet Elementary School loading zones on Honore Street and Wolcott Avenue. The traffic counts were conducted on Thursday, March 13, 2014 during the morning (7:00 A.M. to 9:00 A.M.) and afternoon/evening (2:00 P.M. to 6:00 P.M.) peak periods and Saturday, March 22, 2014 during the midday peak period (noon to 2:00 P.M.). Based on the results of the traffic counts, the weekday morning peak hour of traffic occurs from 7:30 A.M. to 8:30 A.M., the weekday afternoon peak hour occurs from 2:15 P.M. to 3:15 P.M., the weekday evening peak hour of traffic occurs from 4:45 P.M. to 5:45 P.M. and the Saturday midday peak hour occurs from 12:30 P.M. to 1:30 P.M. **Figures 4A** and **4B** illustrates the existing peak hour traffic volumes and **Figures 5A** and **5B** illustrates the existing pedestrian and bicycle volumes.

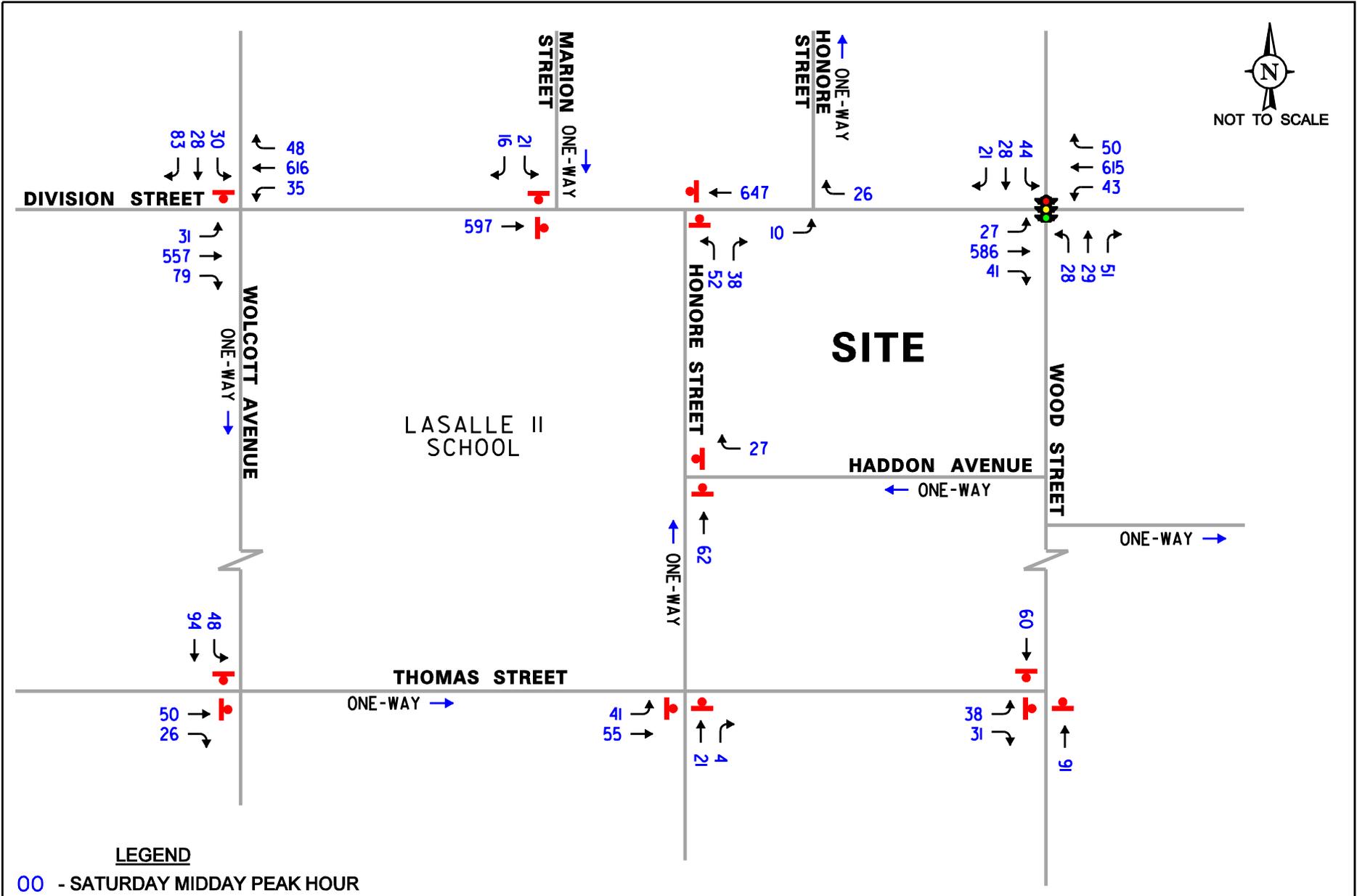
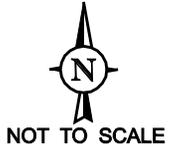
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**LEGEND**

- 00 - SCHOOL DROP-OFF/PICK-UP ACTIVITY
- 00 - WEEKDAY MORNING PEAK HOUR
- (00) - WEEKDAY AFTERNOON PEAK HOUR
- [00] - WEEKDAY EVENING PEAK HOUR

PROJECT: <p style="text-align: center;">Proposed Trader Joes Chicago, Illinois</p>	TITLE: <p style="text-align: center;">Existing Weekday Traffic Volumes</p>	<p>Job No: 14-050</p> <p>Figure: 4A</p>
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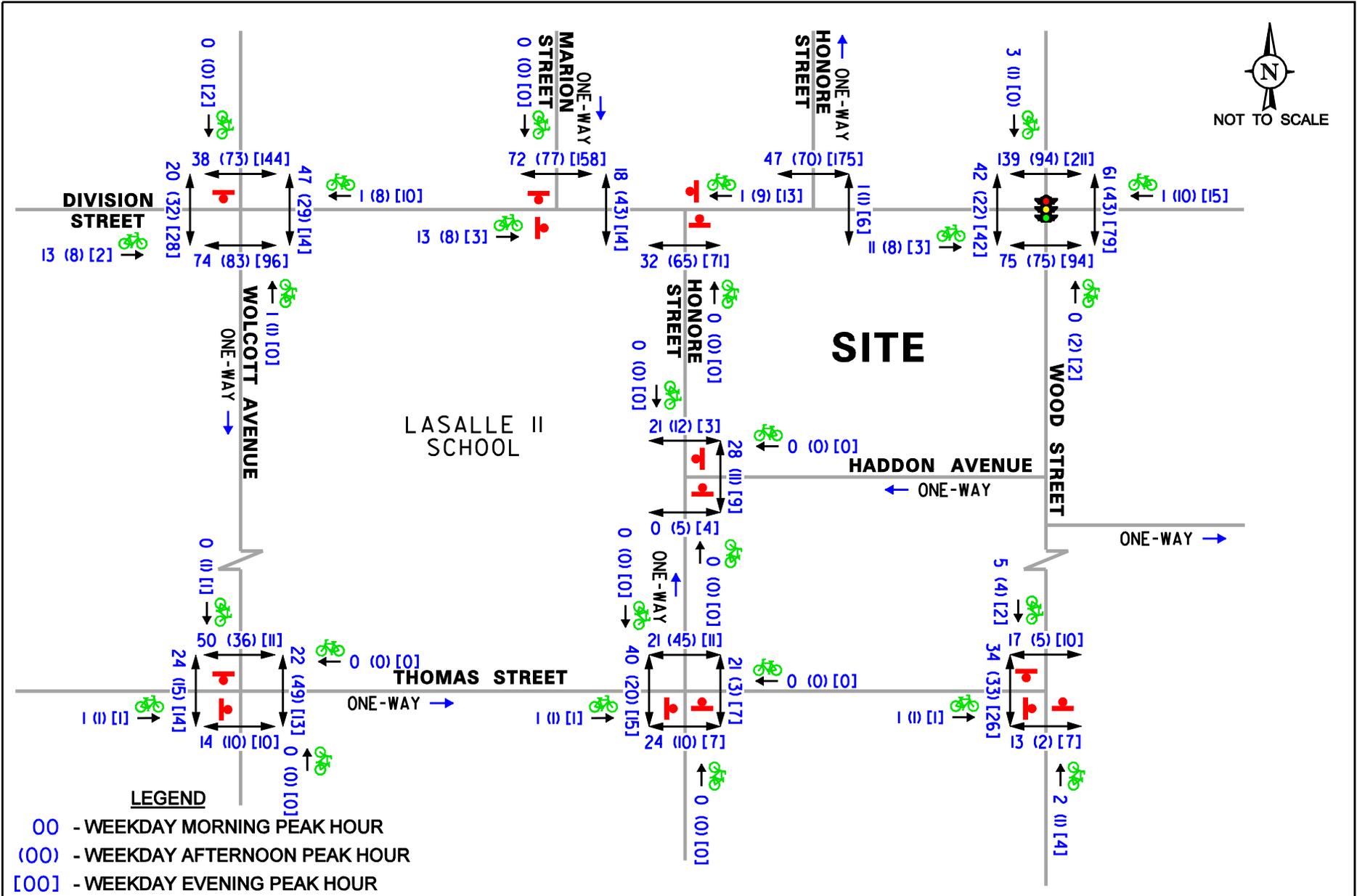
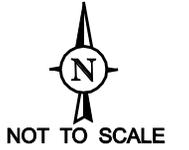
**LEGEND**

00 - SATURDAY MIDDAY PEAK HOUR

PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Existing Saturday Traffic Volumes

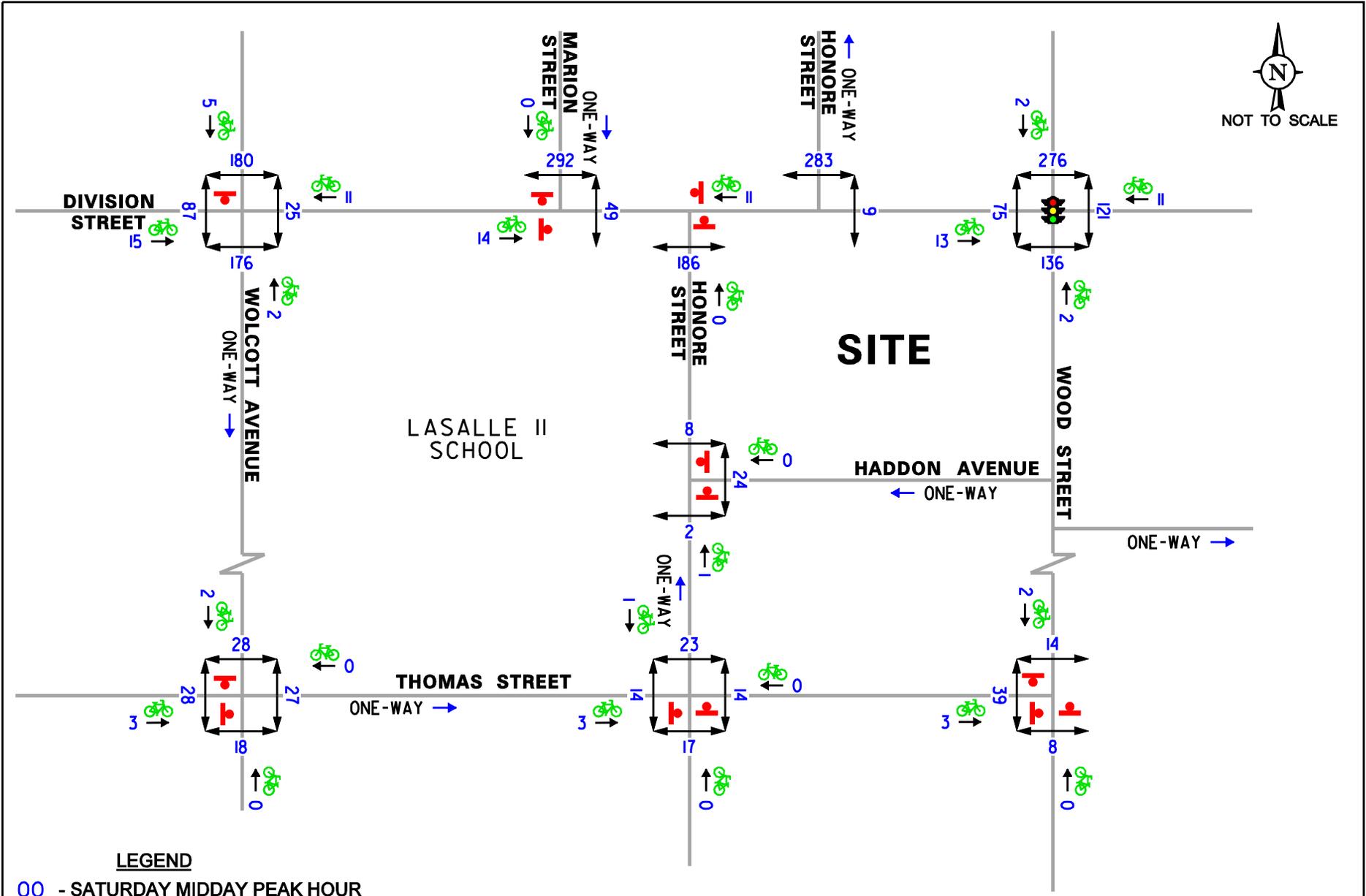
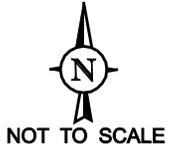
**KLOA**  
Job No: 14-050  
Figure: 4B



PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Existing Weekday Pedestrian and Bicycle Traffic Volumes

**KLOA**  
Job No: 14-050  
Figure: 5A



PROJECT:  
 Proposed Trader Joes  
 Chicago, Illinois

TITLE:  
 Existing Saturday Pedestrian and Bicycle Traffic Volumes

**KLOA**  
 Job No: 14-050  
 Figure: 5B

### **3. LaSalle II Magnet Elementary School Operations**

LaSalle II Magnet Elementary School is located directly west of the subject site bounded by Division Street on the north, Honore Street on the east, a public alley on the south and Wolcott Avenue on the west. Based on meetings with school administrators and LSC representatives and field observations, the following summarizes our understanding of the existing operations of the school, specifically the drop-off/pick-up activity and bus loading.

#### **General School Operations**

LaSalle II Magnet Elementary School has an enrollment of approximately 620 students consisting of pre-kindergarteners through eighth graders and approximately 80 faculty/staff. The school day for kindergarten through eighth grade begins at 7:45 A.M. and ends at 2:45 P.M. The pre-kindergarten provides two half-day classes with morning classes beginning at 7:45 A.M. and ending at 10:30 A.M. and the afternoon classes beginning at noon and ending at approximately 2:35-2:40 P.M. Both the morning and afternoon pre-kindergarten classes have approximately 60 students.

The school provides parking at two locations within the school campus. The north parking lot which is located in the southeast corner of the Division Street/Wolcott Avenue intersection provides a total of approximately 24 parking spaces with access provided via Division Street. In addition, 28 parking spaces are provided along the north side of the public alley that forms the southern border of the campus. Further, faculty/staff as well as visitors park on the streets surrounding the campus.

The school does not contain any internal loading areas on the campus so all drop-off/pick-up activity occurs on the external streets adjacent to the campus, primarily along Wolcott Avenue and Honore Street. To facilitate the drop-off/pick-up activity, parking is prohibited on school days from 7:00 A.M. to 4:30 P.M. along the school frontage on the east side of Wolcott Avenue, the west side of Honore Street and the south side of Division Street.

#### **Morning Drop-Off Operations**

The entrances along the west (Wolcott Avenue) side of the school are only open from 7:45 A.M. to 7:55 A.M. Any students arriving late must enter the school from the Honore Street northern entrance. Further, many parents park on the surrounding streets and walk their children to the school. The following summarizes the morning drop-off operations.

*Wolcott Avenue (Kiss & Go).* Students in kindergarten through eighth grades are dropped off along the east side of Wolcott Avenue. Two designated student unloading areas are provided at the two playground gates which are located at the north portion of the playground. To facilitate the drop-off activity, several parent assistants aid in the unloading of students and assist in directing/managing the operations. In addition, sawbuck barriers are placed along Wolcott Avenue to (1) define the drop-off zone and (2) physically separate the drop-off activity from the Wolcott Avenue through traffic.

*Honore Street.* The loading zone along the southern section of Honore Street is used for the pre-kindergarten drop-off operation. Parents are required to park and walk their children into the school via the southern school entrance or release them to one of the teachers whom are often waiting outside the southern school entrance. The loading zone along the north section of Honore Street is used by (1) any students that are arriving late, (2) parents that need to walk their students into the school and (3) parents obtaining lunch or transportation reimbursements. These students and parents enter/exit the school through the northern entrance.

### **Afternoon Pick-Up Operations**

All students walking home from school are required to exit the building via the west (Wolcott Avenue) side of the building. Further, many parents park on the surrounding streets and walk to the school to retrieve their students. The following summarizes the afternoon pick-up operation.

*Wolcott Avenue (Kiss & Go).* Students in fourth through eighth grades are picked up along the Wolcott Avenue loading zone. Parents pull up along the entire school frontage where they wait for their students. Given the limited frontage, parents will double park/stand along Wolcott Avenue between Division Street and Thomas Street.

*Honore Street.* The loading zone along the southern section of Honore Street is used for pre-kindergarten pick-up. Parents are required to park and retrieve their students via the southern school entrance. Students in kindergarten through third grade are picked up along Honore Street. Parent assistants collect cards with the students name from the parents that are waiting along the Honore Street, retrieve the students who are waiting at the northern school entrance and then walk the students to the parents. One to two parent assistants assist with gathering the student cards, waking the students to the appropriate vehicles and loading them into the vehicles.

### **School Buses**

*Division Street Loading.* Buses that transport students with special needs drop off/pick up students on the south side of Division Street between Wolcott Avenue and Honore Street. According to school officials, five buses are used to transport the special need students.

*Honore Street Loading.* Buses traveling to/from other magnet schools drop off and pick up students along Honore Street at the northern school entrance. Since the buses are traveling from other Magnet Schools, the buses arrive during various times in the morning and afternoon. The traffic counts recorded three buses traversing Honore Street between 7:00 A.M. and 9:00 A.M. and six buses traversing Honore Street between 2:00 P.M. and 6:00 P.M. Field observations have revealed that these buses typically arrive before the peak drop-off period and after the peak pick-up period.

## **Crossing Guards**

A crossing guard is located at the Division Street/Wolcott Avenue intersection during the morning prior to the start of school and at the Division Street/Honore Street south leg/Marion Court intersection during the afternoon after school is dismissed.

## **Field Observations**

Generally, the drop-off/pick-up operations function efficiently and in an orderly fashion. Field observations have revealed that the area street system does experience some congestion, particularly along Wolcott Avenue and the south portion of Honore Street, associated with the drop-off/pick-up activity. However, this is typical of most schools and only lasts for approximately 15 to 20 minutes before and after school. The following summarizes how the drop-off/pick-up activity is operating.

### ***Wolcott Avenue (Kiss & Go)***

During the peak drop-off period, the queue of vehicles waiting to drop off students often backs-up onto Division Street. However, this typically only occurs for a 15-20 minute period. In addition, some double parking/standing occurs within the loading zone. The through lane on Wolcott Avenue generally remains open during the drop-off activity.

During the afternoon pick-up period, parents line up along the entire frontage of the school. Given the limited school frontage, parents will double park/stand along Wolcott Avenue between Division Street and Thomas Street and, at times, will also triple park/stand which blocks the through lane along Wolcott Avenue. The queue of traffic can extend onto Division Street. However, this typically only occurs for a 15 to 20-minute period.

### ***Honore Street***

Given that the pre-kindergarten parents have to park and walk the students into the school, many parents will double park/stand along Honore Street during both the drop-off and pick-up periods. Double parking/standing generally occurs from the southern entrance to Thomas Street and often will occur even though space is available along the loading zone north of the southern entrance.

The drop-off activity at the northern school entrance generally operates well. This is due to the limited activity in the morning and the fact that it is distributed over a longer time period. During the afternoon pick-up period, parents picking up students via the northern school entrance line up along the Honore Street and generally do not double park/stand. However, the queue of vehicles associated with the pre-kindergarten pick-up operation and the kindergarten through third grade pick-up operation can extend past and through the Thomas Street intersection in the afternoon. However, this typically only occurs for a 15 to 20-minute period.

## **4. Traffic Characteristics of the Proposed Development**

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development including the directional distribution and volumes of traffic that it will generate.

### **Proposed Development Plan**

As proposed, the development is to consist of an approximate 13,180 square-foot Trader Joe's store, 3,965 square feet of commercial space and 76 parking spaces.

Access to the development's parking garage is proposed to be provided via one access drive located on Honore Street at the south end of the site. The access drive will provide one inbound lane and one outbound lane with the outbound lane under stop sign control. To limit the traffic that will traverse the neighborhood, the outbound lane of the access drive will be signed and striped for right-turn movements only which will direct all of the outbound traffic to Division Street.

Deliveries to the store will occur on Honore Street along the site frontage just north of the access drive. Trucks will access Honore Street from Augusta Boulevard and will travel northbound on Honore Street for two blocks. When leveling, trucks will travel north to Division Street.

### **Street Improvements/Modifications**

The following street modifications/improvements are proposed as part of the development.

- In order to provide direct access between Division Street and the development's parking garage, Honore Street is proposed to be converted from a one-way northbound to a two-way street between Division Street and Thomas Street. As proposed, the street will provide one moving lane in each direction with parking generally provided on the east side of the street and parking/loading on the west side of the street.
- In order to improve the operation of the all-way stop sign controlled intersection of Division Street with the Honore Street south leg and Marion Court, Marion Court is proposed to be converted from a one-way southbound street to a one-way northbound street from Division Street to Ellen Street. In addition, striping modifications will be provided at the intersection of Division Street with the Honore Street south leg.

### **Directional Distribution of Site Traffic**

The directions of approach and departure of the future site generated traffic was estimated based on the existing travel patterns, as determined from the traffic counts.

## Estimated Development-Generation Traffic

The peak hour vehicle traffic that will be generated by the Trader Joe's store was based on surveys conducted at the parking garage access drive of the existing Trader Joe's store located in the southeast quadrant of Diversey Parkway/Orchard Street intersection. The traffic counts were conducted during the weekday morning (7:00 A.M. to 9:00 A.M.), weekday afternoon/evening (2:00 P.M. to 6:00 P.M.) and Saturday (noon to 2:00 P.M.) midday peak periods. It is important to note that the Diversey store is approximately 11 percent larger and provides 18 more parking spaces than the proposed store and has greater sales volume than that projected for the proposed store. As such, the peak traffic volumes observed at the Diversey Parkway store were reduced by approximately 10 percent to better reflect the operation of the proposed Trader Joe's store.

The estimate of the traffic to be generated by the commercial space was estimated based on the trip rates provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9<sup>th</sup> Edition. Given that the ITE trip rates are based on suburban rates, the trip estimates were reduced by 30 percent to account for the location of the site in an urban neighborhood and the other modes of transportation serving the site. It is important to note that the parking garage will be reserved for the Trader's Joe customers only and, as such, patrons of the commercial space will have to park on-street. **Table 1** shows the estimated peak hour traffic to be generated by the proposed development.

## Trip Generation Comparison

The subject site has been previously approved in 2013 to contain a 4,820 square-foot restaurant, 4,511 square feet of commercial spaces, 36 apartment units and 35 parking spaces. To provide a comparison of the traffic to be generated by the proposed development and the previously approved mixed-use development, the traffic to be generated by the previously approved development was also estimated based on the rates provided in the ITE *Trip Generation Manual*, 9<sup>th</sup> Edition. **Table 2** shows the traffic to be generated by the previously approved development.

From the tables it can be seen that the previously approved development is estimated to generate approximately half of the traffic to be generate by the proposed Trader Joe's development. However, it is important to note that the commercial space for the previously approved development could be developed as a restaurant which would increase the volume of traffic to be generated by the previously approved development. Further, the restaurant(s) would likely have valet parking which would increase the traffic to be generated to/from the development as the valets must drive the vehicles to/from a remote parking facility.

Table 1

**PROJECTED TRADER JOE'S DEVELOPMENT - SITE-GENERATED TRAFFIC VOLUMES**

Land Use	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	In	Out	In	Out	In	Out	In	Out
Trader Joe's store (13,180 sq. ft.)	13	10	34	33	62	55	50	56
Commercial Space (3,965 sq. ft.)	<u>2</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>5</u>
Total	15	12	44	36	66	59	55	61

- The estimate of the traffic to be generated by the Trader Joe's store was based on surveys performed at the existing Trader Joe's store located in the southeast corner of Diversey Parkway and Orchard Street.
- The estimate of the traffic to be generated by the commercial space was based on the Specialty Retail Center (Land-Use Code 826) provided in the ITE *Trip Generation Manual*, 9<sup>th</sup> Edition and assuming a 30 percent reduction for patrons that will use alternative modes of transportation to reach the site.

Table 2

**PREVIOUSLY APPROVED MIXED-USE DEVELOPMENT -PROJECTED SITE-GENERATED TRAFFIC VOLUMES**

Land Use	Weekday Morning Peak Hour		Weekday Afternoon Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	In	Out	In	Out	In	Out	In	Out
Apartment (36 Units)	2	8	9	4	12	6	8	8
Restaurant (4,820 sq. ft.)	0	0	9	8	19	17	18	18
Commercial Space (4,511 sq. ft.)	<u>3</u>	<u>3</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>5</u>	<u>6</u>	<u>6</u>
Total	5	11	22	16	36	28	32	32

The estimate of the traffic to be generated by the development was based on the rates provided in the ITE *Trip Generation Manual*, 9<sup>th</sup> Edition and assuming a 50 percent reduction for the apartment rates and a 30 percent reduction for the restaurant and commercial rates for residents/patrons that will use alternative modes of transportation to reach the site.

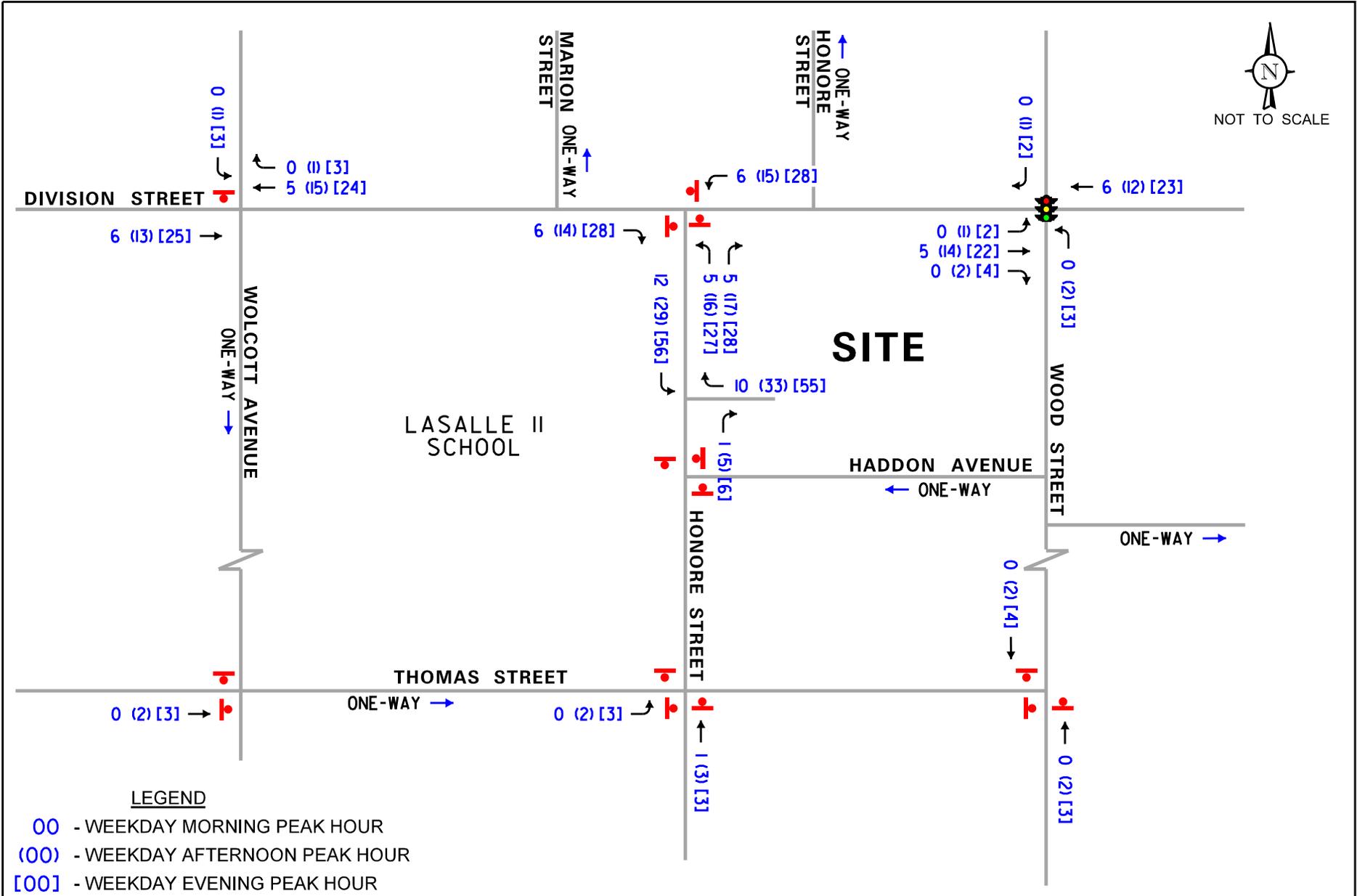
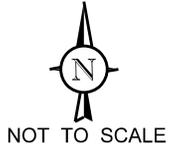
## Development Traffic Assignment

The estimated traffic volumes that will be generated by the proposed development were assigned to the street system in accordance with the previously described directional distribution. It was assumed Honore Street will be converted to a two-way street and the traffic exiting the parking garage will be permitted to make right-turn movements only onto Honore Street. Lastly, the traffic to be generated by the commercial space was not assigned to the street system as this traffic will not be allowed to park in the garage will be parking on the various streets surrounding the site. **Figures 6A** and **6B** show the development generated traffic volumes.

## Projected Traffic Volumes

**Figures 7A** and **7B** illustrates the total projected traffic volumes which include the following traffic volumes.

- The existing traffic volumes
- The redistribution of the existing traffic volumes to account for the conversion of Honore Street to two-way traffic and Marion Court to a one-way northbound street.
- The traffic to be generated by the proposed Trader Joe's store.
- To account for other growth in the area and the redistribution of traffic due to the Ashland BRT project, the existing traffic along Division Street was increased by five percent and the traffic along Wood Street, Honore Street and Wolcott Avenue was increased by 10 percent.



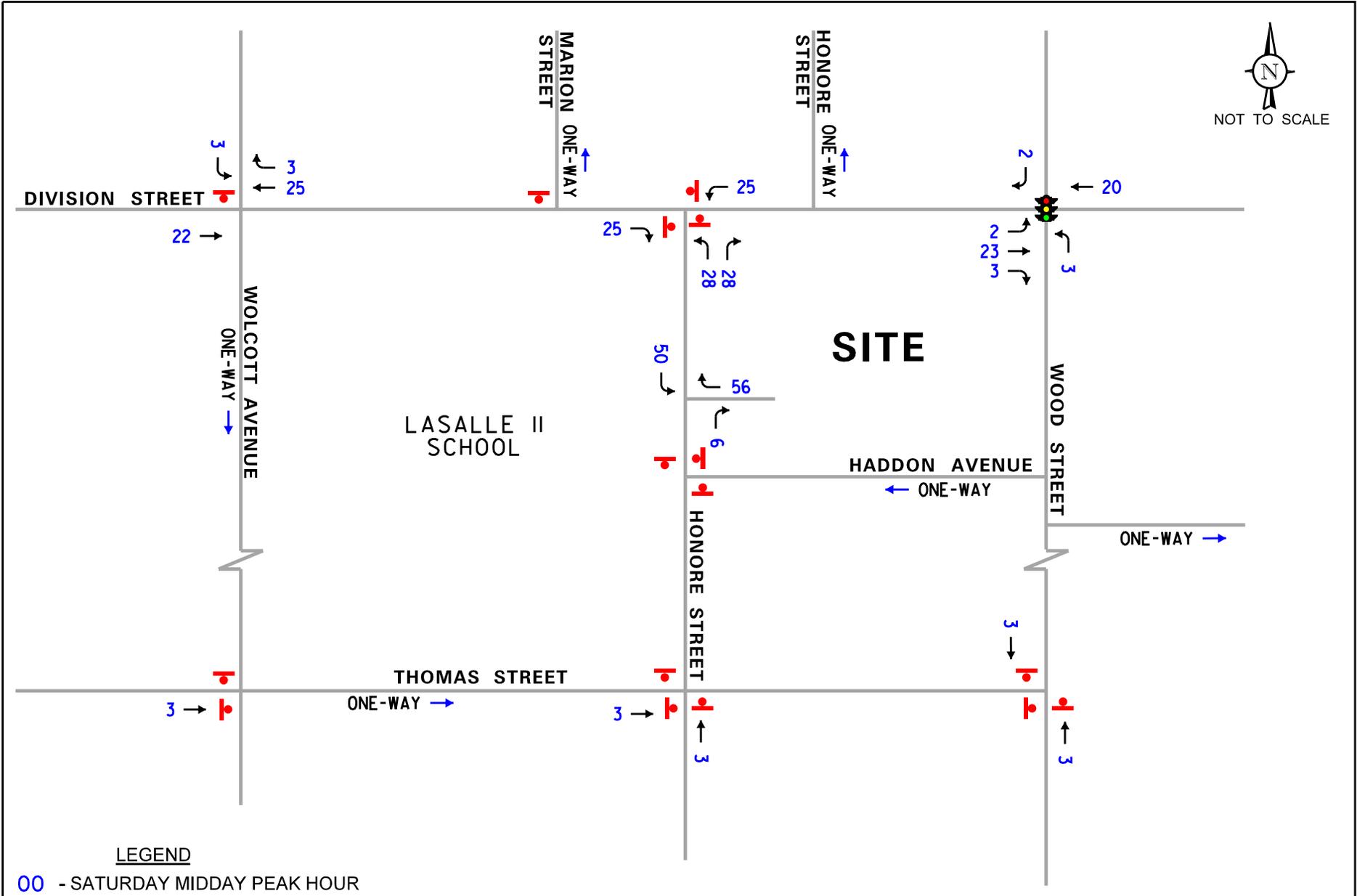
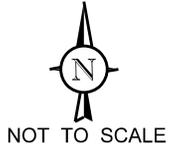
PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Weekday Development Generated Traffic Volumes



Job No: 14-050

Figure: 6A



LEGEND

00 - SATURDAY MIDDAY PEAK HOUR

PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Saturday Development Generated Traffic Volumes

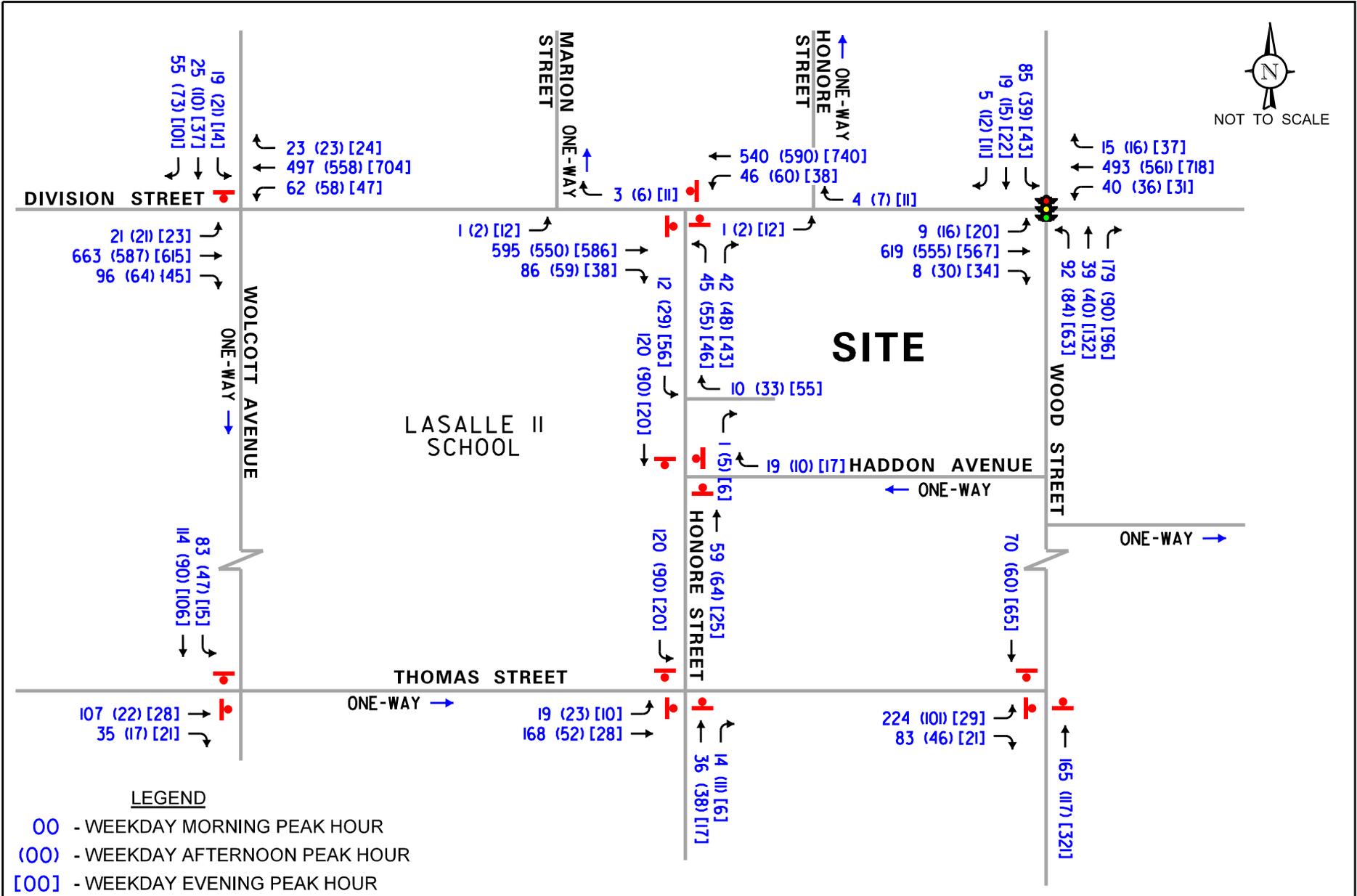


Job No: 14-050

Figure: 6B



NOT TO SCALE



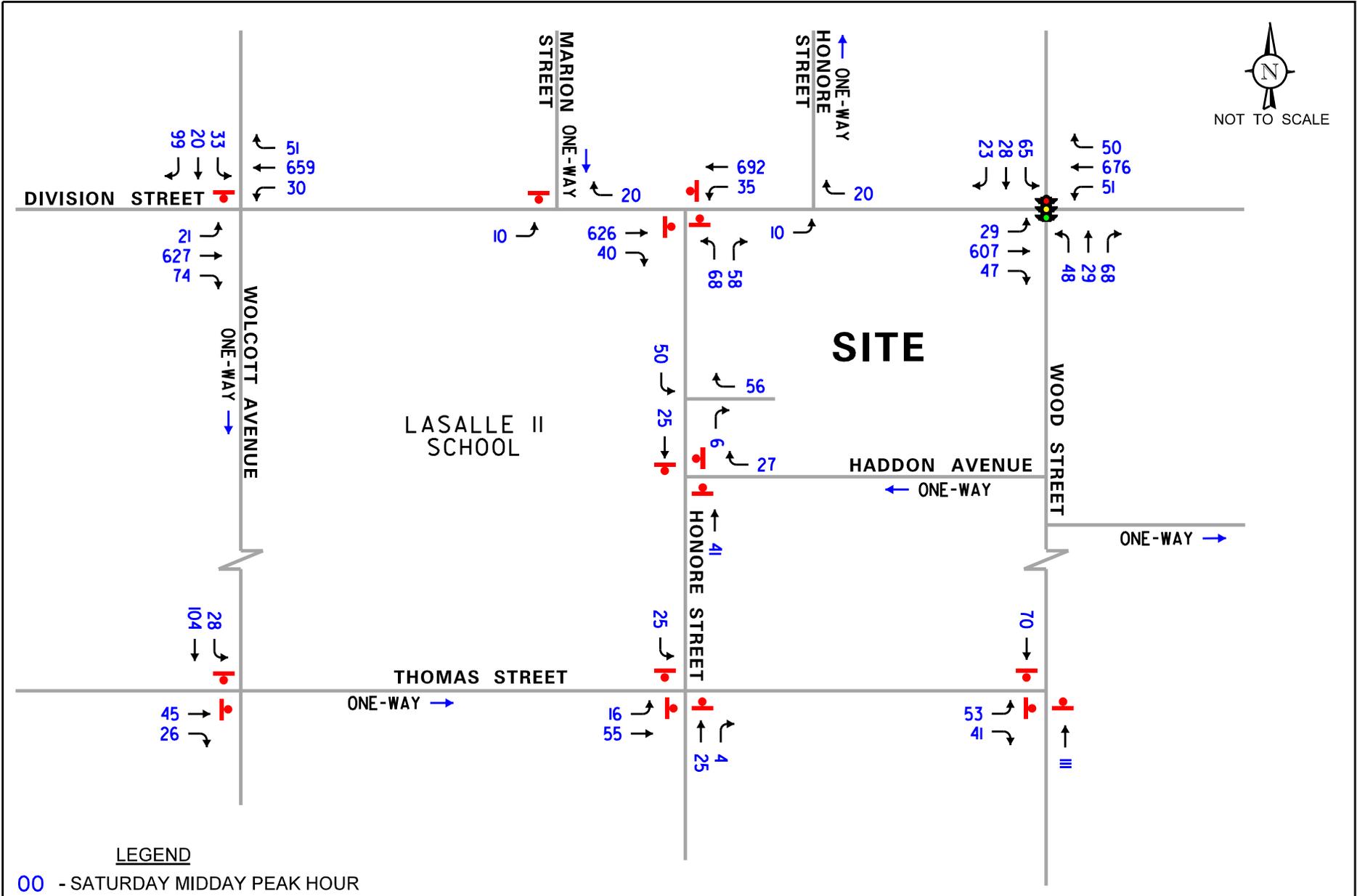
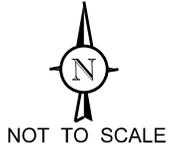
PROJECT:  
Proposed Trader Joes  
Chicago, Illinois

TITLE:  
Total Weekday Traffic Volumes with Redistributed Volumes



Job No: 14-050

Figure: 7A



PROJECT:  
 Proposed Trader Joes  
 Chicago, Illinois

TITLE:  
 Total Saturday Traffic Volumes with Redistributed Volumes



Job No: 14-050  
 Figure: 7B

## 5. Proposed Street Modifications/Improvements

In order to provide direct access to the development's parking garage, to enhance the operation of the existing street system and help mitigate the impact of the development, several street modifications/improvements are proposed as part of the development. The primary street modifications include (1) the conversion of Honore Street to a two-way street between Division Street and Thomas Street and (2) the conversion of Marion Court from a one-way southbound street to a one-way northbound street. **Figure 8** illustrates the existing operation of the street system and **Figure 9** shows the proposed operation of the street system. The following summarizes the proposed street modifications/improvements.

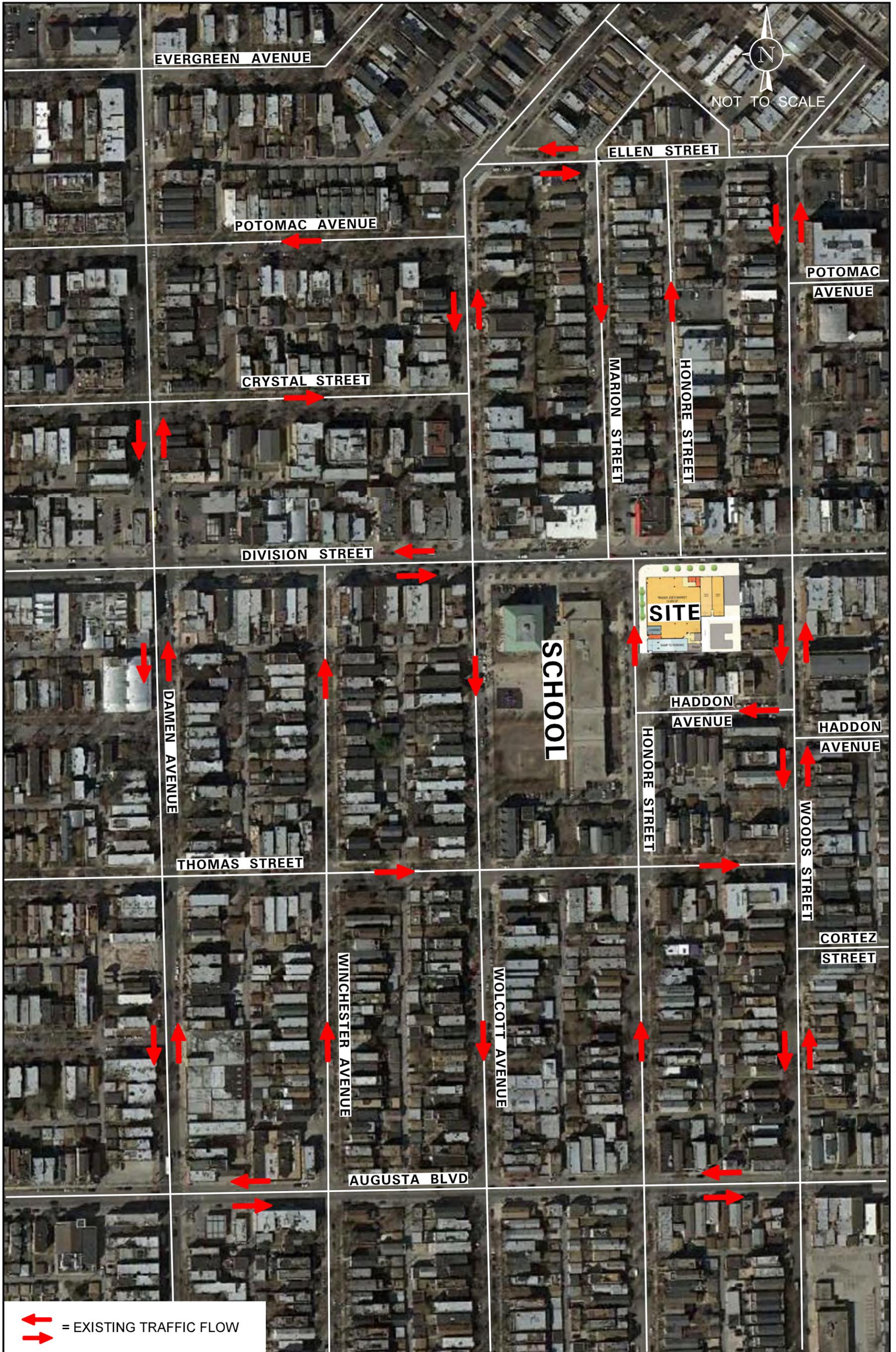
### Conversion of Honore Street to Two-Way Traffic

Honore Street is proposed to be converted from a one-way northbound street to a two-way street between Division Street and Thomas Street. With an approximate 37-foot cross section, Honore Street currently provides a seven to eight foot parking lane on the east side of the street, one wide (21 to 23 foot) northbound through lane and a seven to eight foot parking/loading lane on the west side of the street. As proposed, Honore Street will be converted to provide two-way traffic that will generally provide a seven to eight foot parking lane on the east side of the street, a 10.5 to 11.5 foot northbound lane, a 10.5 to 11.5 foot southbound lane and a seven to eight foot parking/loading lane on the west side of the street. **Figures 10** and **11** illustrate the proposed Honore Street modifications/improvements.

As proposed, the intersections of Honore Street/Division Street, Honore Street/Haddon Avenue and Honore Street/Thomas Street will continue to operate under all-way stop sign control. At its intersection with Division Street, Honore Street is proposed to provide one wide (approximately 17-foot) southbound lane and two 10-foot northbound lanes striped to provide a separate left-turn lane and a separate right-turn lane. Parking will be prohibited on the east side of Honore Street along the site frontage. At its intersection with Thomas Street, southbound Honore Street traffic will be required to make a left-turn onto Thomas Street.

The conversion of Honore Street to a two-way street provides a number of benefits to the neighborhood and the operation of the school which are listed below.

- It provides direct two-way access to the Trader Joe's parking garage which will minimize the Trader Joe's traffic that will traverse the neighborhood. To further minimize the impact on the neighborhood and school, the outbound lane from the parking garage will be signed and striped for right-turn movements only.
- It provides enhanced access to and circulation through the neighborhood which will help reduce the circulation of neighborhood traffic.



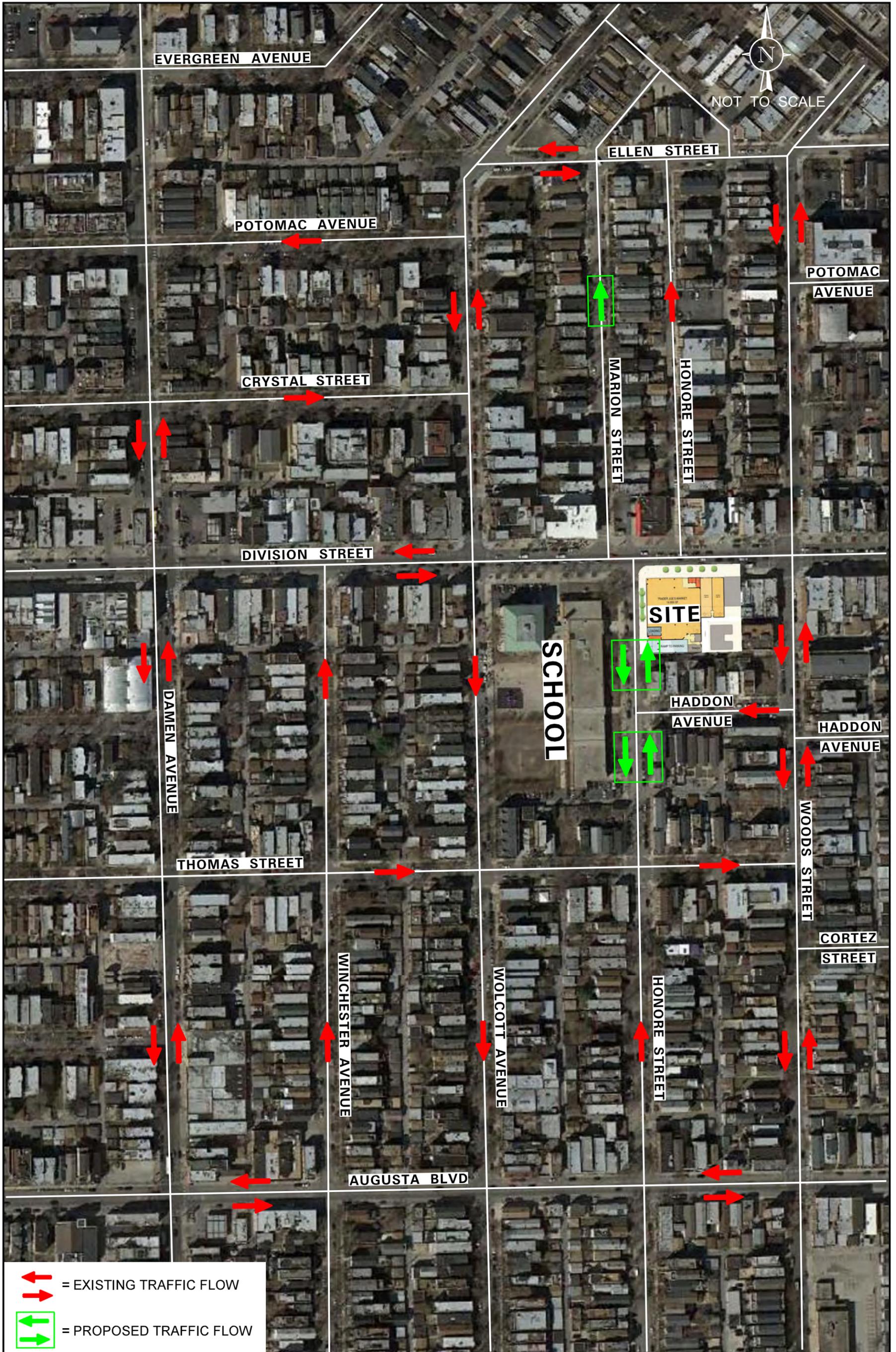


 = EXISTING TRAFFIC FLOW

PROJECT:  
 Proposed Trader Joe's  
 Chicago, Illinois

TITLE:  
 EXISTING STREET OPERATION

  
 Job No: 14-050  
 Figure: 8



PROJECT:  
Proposed Trader Joe's  
Chicago, Illinois

TITLE:  
PROPOSED STREET OPERATION

**KLOA**  
Job No: 14-050  
Figure: 9



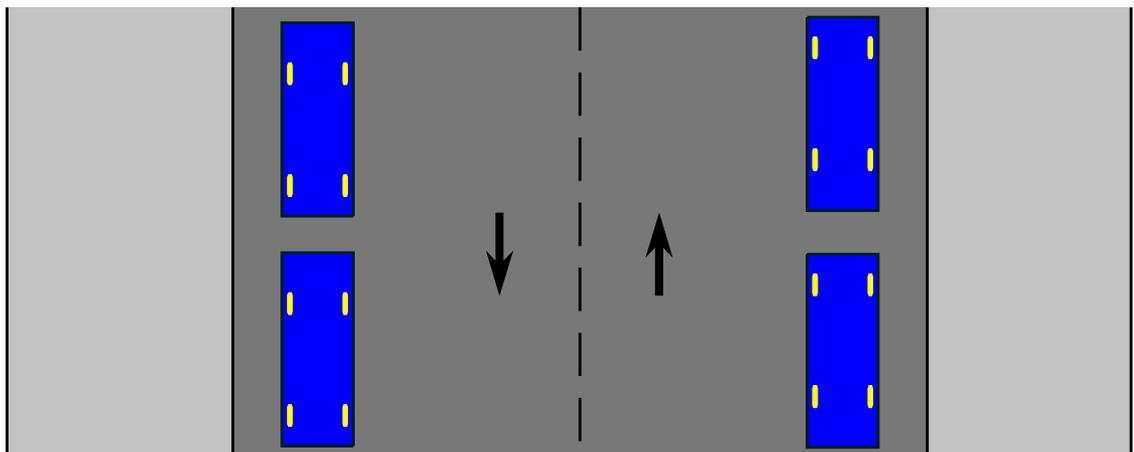
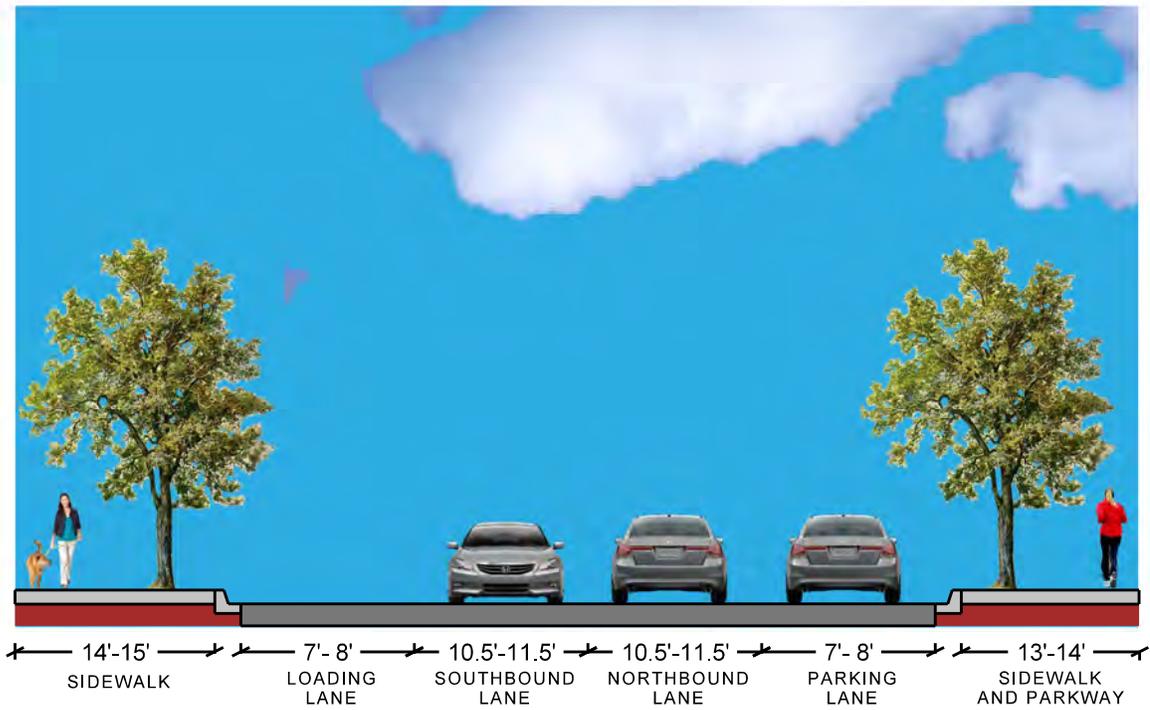
# CONCEPTUAL PLAN



PROJECT:  
 Proposed Trader Joe's  
 Chicago, Illinois

TITLE:  
 Proposed Two-Way Honore Street

# HONORE STREET



PROJECT:

Proposed Trader Joe's  
Chicago, Illinois

TITLE:

Proposed Cross Section  
Two-Way Honore Street



- It reduces the volume of traffic along Wolcott Avenue between Division Street and Thomas Street as parents will not have to circulate around the neighborhood to reach the Honore Street loading zone. The reduction in the Wolcott Avenue through traffic will enhance the school's Wolcott Avenue drop-off/pick-up operations and the flow of traffic along Wolcott Avenue.
- It decreases the width of the travel lane along Honore Street from 20+ feet to two 10.5-11.5 foot lanes and introduces two-way traffic all of which will serve as traffic calming measures that will help reduce the speed of traffic along Honore Street and provide for a safer operation for motorists, bicyclists and pedestrians.
- It allows for the Honore Street school drop-off/pick-up activity to occur along the passenger side of the vehicle. With the one-way northbound operation, currently the driver side of the vehicle is aligned along the Honore Street sidewalk which is not typical and generally less efficient when loading passengers. More important, loading of buses must occur from the Honore Street through lane as opposed to the Honore Street sidewalk and requires students to cross in front of the bus to reach the sidewalk. With the conversion of the street, the buses will be facing south which will allow students to load directly from the sidewalk.
- It provides for more and better utilized stacking for the pre-kindergarten drop-off and pick-up operations that will help reduce the double parking and congestion along Honore Street and its intersection with Thomas Street. With the pre-kindergarten entrance located at the south end of the loading zone, parent arrive at the entrance south of the loading zone and often park and double park south of the Honore Street loading zone although parking is available along the loading zone north of the entrance. With the proposed conversion of Honore Street, the pre-kindergarten parents will arrive at the southern school entrance along the loading zone which will increase the utilization of the loading zone.

### **Marion Court Conversion and Modifications to Division Street/Honore Street Intersection**

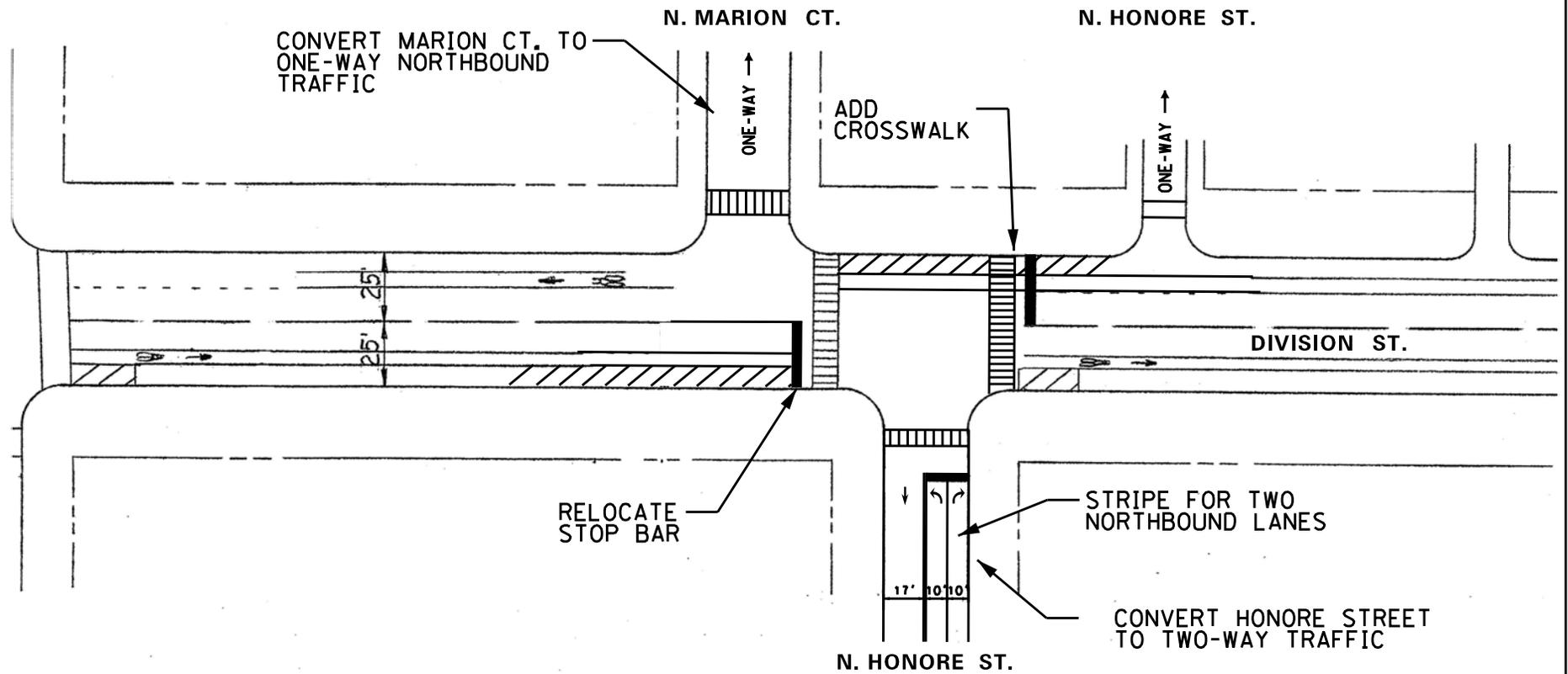
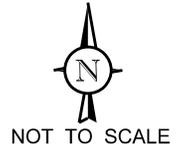
The intersection of Division Street/Honore Street south leg/Marion Court currently operate as one all-way stop sign controlled intersection. Given that Honore Street and Marion Court are off-set from one another, the intersection is very wide and requires the Division Street crosswalk to be located in the middle of the intersection between Honore Street and Marion Court. As such, the current design of the intersection does not operate as efficiently or safely as a typical intersection.

To enhance the operation of this intersection, Marion Court is proposed to be converted from a one-way southbound street to a one-way northbound street. The conversion will eliminate traffic traversing from Marion Court to Division Street and the need to have this street under stop sign control at Division Street. As such, the Division Street/Honore Street south leg intersection can operate as T-intersection under all-way stop sign control. **Figure 12** illustrates the proposed modifications to the Division Street/Honore Street and Division Street/Marion Street intersections and the following highlights how the modifications will improve the intersections' operation.

- It reduces the size of the all-way stop sign controlled intersection and the time it takes to clear the intersection which will increase the intersection's capacity.
- It eliminates the turning conflicts associated with the off-set alignment between Honore Street and Marion Court which will provide for a safer and more efficient operation.
- The intersection will operate as a T-Intersection which is more efficient than a four-way intersection.
- It eliminates motorist's indecision associated with the size of the intersection and the off-set alignment between Honore Street and Marion Court.
- It eliminates the need for a crosswalk within the middle of the intersection between Honore Street and Marion Court and will provide a second crosswalk on the east side of Honore Street all of which will provide for a safer pedestrian crossing. As proposed, crosswalks will be provided on Division Street at both the east and west sides of Honore Street with the Division Street stop bars located just prior to the crosswalks.

Lastly, the conversion of Marion Court will have a limited impact on the neighborhood and the street system. First, both Wood Street and Wolcott Avenue are two-way streets that will provide southbound access from the neighborhood. Second, the volume of additional traffic to traverse these streets will be minimal as (1) Marion Court carries a low volume of traffic, (2) the traffic will be distributed over both Wood Street and Wolcott Avenue and (3) the conversion will eliminate the northbound traffic that had to travel the two streets and Honore Street to reach Marion Court.

CONCEPTUAL PLAN



PROJECT:

Proposed Trader Joe's  
Chicago, Illinois

Division Street with Honore Street and Marion Court  
Proposed Modifications



Job No: 14-050

Figure: 12

## 6. Traffic Analysis and Recommendations

Traffic analyses were performed for the intersections within the study area to determine the operation of the existing street system, evaluate the impact of the proposed development, and determine the ability of the existing street system to accommodate projected traffic demands. Analyses were performed for the existing and the projected traffic volumes.

The traffic analyses were performed using Synchro 8 computer software, which is based on the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010*. The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter grade from A to F based on the average control delay experienced by vehicles passing through the intersection. Control delay is that portion of the total delay attributed to the traffic signal or stop sign control operation and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Level of Service A is the highest grade (best traffic flow and least delay), Level of Service E represents saturated or at-capacity conditions, and Level of Service F is the lowest grade (oversaturated conditions, extensive delays). For two-way stop controlled (TWSC) intersections, levels of service are only calculated for the approaches controlled by a stop sign (not for the intersection as a whole).

The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are shown in the Appendix. It is important to note that the projected capacity analyses were conducted assuming the various street modifications/improvements summarized in the preceding chapter. The results of the capacity analysis are summarized in **Tables 3 and 4**.

### Evaluation of the Street Operations

The following outlines how each of the intersections are currently operating and projected to operate.

#### *Neighborhood Intersections*

The intersections of Thomas Street/Wolcott Avenue, Thomas Street/Honore Street, Thomas Street/Wood Street and Honore Street/Haddon Avenue are all currently operating at a very good Level of Service A or B. Assuming the projected traffic volumes and the conversion of Honore Street to two-way traffic, all of the intersections are projected to continue to operate a very good Level of Service A or B. This is due to the fact that outside of the school-generated traffic, the neighborhood streets carry a low volume of traffic. Further, with direct two-way access between Division Street and the parking garage, the Trader Joe's store is projected to generate a limited volume of traffic along the neighborhood streets. It is important to note that during the school drop-off/peak pick-up periods, the intersections do experience some congestion which results in additional delay and queuing. However, this is typical of most schools and generally only occurs for a 15 to 20 minutes in the morning and afternoon.

Table 3  
**INTERSECTION LEVEL OF SERVICE AND DELAY—EXISTING CONDITIONS**

Intersection	Weekday Morning		Weekday Afternoon		Weekday Evening		Saturday Midday	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Division and Wood <sup>1</sup>	B	12.6	B	12.2	B	14.4	B	14.2
Division and Honore/Marion <sup>2, 4</sup>	D <sup>4</sup>	30.9	D <sup>4</sup>	28.0	E <sup>4</sup>	35.8	E <sup>4</sup>	48.3
Division and Wolcott <sup>3</sup>	F	54.4	E	39.6	F	99+	F	99+
Thomas and Wood <sup>2</sup>	A	9.3	A	7.8	A	9.0	A	7.6
Thomas and Honore <sup>2</sup>	A	10.0	A	8.1	A	7.3	A	7.6
Thomas and Wolcott <sup>2</sup>	B	10.2	A	8.4	A	7.7	A	7.9
Hadden and Honore <sup>2</sup>	A	8.0	A	7.8	A	6.9	A	7.1

LOS = Level of Service

Delay = Seconds

1. Signalized Intersection

2. All-Way Stop Sign Controlled Intersection

3. Two-Way Stop Sign Controlled Intersection

<sup>4.</sup> Due to limitations with the capacity analyses methodology, this intersection had to be evaluated as a typical intersection assuming that Honore Street south leg and Marion Court are aligned opposite each other. As such, given the size of the intersection and the off-set alignment, the intersection is actually operating worse than that shown in the table.

Table 4  
 INTERSECTION LEVEL OF SERVICE AND DELAY—PROJECTED CONDITIONS

Intersection	Weekday Morning		Weekday Afternoon		Weekday Evening		Saturday Midday	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Division and Wood <sup>1</sup>	B	12.7	B	12.5	B	16.0	B	15.2
Division and Honore <sup>2</sup>	E	44.4	E	46.7	F	80.8	F	82.7
Division and Wolcott <sup>3</sup>	F	65.9	F	49.2	F	99+	F	99+
Thomas and Wood <sup>2</sup>	B	11.8	A	8.7	B	10.1	A	7.8
Thomas and Honore <sup>2</sup>	A	9.2	A	8.0	A	7.3	A	7.4
Thomas and Wolcott <sup>2</sup>	A	9.3	A	8.1	A	7.9	A	8.0
Hadden and Honore <sup>2</sup>	A	7.7	A	7.6	A	7.0	A	7.0

LOS = Level of Service  
 Delay = Seconds  
 1. Signalized Intersection  
 2. All-Way Stop Sign Controlled Intersection  
 3. Two-Way Stop Sign Controlled Intersection

## ***Overall Division Street Operations***

The capacity analyses and field observations reveal that queuing and delays are currently experienced along Division Street and some intersection approaches and individual movements. Often, the queuing and delays is due to the capacity/operational deficiencies at the all-way stop sign controlled intersection of Division Street/Honore Street/Marion Court and other intersections outside of the study area that can have a ripple effect along Division Street. Also contributing to the congestion is the higher concentration of pedestrian movements, which reduces the intersection vehicle capacity as turning vehicles must yield to pedestrians in the crosswalks, as well as the on-street parking and valet services along the street. Finally, the school's drop-off/pick-up operations also contribute to the congestion along Division Street as vehicles can stack onto Division Street. However, the impact of the school's operation generally only occurs for 15 to 20 minutes in the morning and afternoon.

### ***Division Street/Honore Street South Leg/Marion Court***

This intersection currently operates at a poor level of service. As previously discussed, this intersection operates less efficiently than a typical all-way stop sign controlled intersection due to the size of the intersection and the fact that Honore Street and Marion Court are off-set from one another. Further reducing the efficiency of the intersection is the fact that the Division Street crosswalk is located in the middle of the intersection. It is important to note that due to limitation with the capacity analyses methodology, the existing intersection had to be evaluated as a typical intersection assuming that Honore Street south leg and Marion Court are aligned opposite each other. As such, given the size of the intersection and the off-set alignment, the intersection is actually operating worse than that shown in Table 2.

As part of the development, Marion Court is proposed to be converted from a one-way southbound street to a one-way northbound street so that Division Street/Honore Street intersection can operate as T-intersection under all-way stop sign control. The proposed modifications will provide for a more efficient and safer operation for motorists, bicyclist and pedestrians as summarized below.

- It reduces the size of the all-way stop sign controlled intersection and the time it takes to clear the intersection.
- It eliminates the turning conflicts associated with the off-set alignment of Honore Street and Marion Court.
- It reduces the all-way stop sign controlled intersection from a four-legged to a three-legged intersection.
- It eliminates the motorist indecision associated with the size of the intersection and the off-set alignment of Honore Street and Marion Court.
- It eliminates the existing Division Street crosswalk in the middle of the all-way stop sign controlled intersection and provide for a second crosswalk.

With the proposed modifications/improvements and assuming the total projected traffic volumes, the intersection is projected to continue to operate at a poor level of service. However, it is important to note that the poor level of service is also contributed to the additional growth projected in the area and assumed in the study. An analyses of the intersection's operation assuming the existing street conditions and the projected traffic volumes assuming the previously approved mixed-use development shows that the intersection is projected to operate at a poor level of service.

Finally, in addition to the previously discussed design/operational issues, the all-way stop sign control at this intersection is generally not efficient in accommodating the traffic volumes along arterial streets such as Division Street. Due to the all-way stop sign control operation and the other operational issues, this intersection currently experiences longer delays and queuing that limits the progression of traffic along Division Street. Additional analyses have shown that the intersection would be projected to operate at a good level of service assuming traffic signal control at the Division Street/Honore Street intersection and a westbound left-turn lane is provided on Division Street. As such, the installation of a traffic signal at this intersection would mitigate the existing and projected deficiencies associated with the existing all-way stop sign control at this intersection.

#### ***Division Street with Wood Avenue***

This signalized intersection is currently operating at a good level of service. However, it should be noted that the operation of this intersection is often impacted due to the operation of downstream intersections that can queue through the intersection. The intersection is projected to continue to operate at a good level of service assuming the projected traffic volumes. As such, no modifications/improvements are required to accommodate the projected traffic volumes.

#### ***Division Street with Wolcott Avenue***

The southbound approach of Wolcott Avenue is under stop sign control at this intersection. Currently the Wolcott Avenue approach is operating at a poor level of service and is projected to continue to operate at a poor level of service assuming the projected traffic volumes. The poor level of service is due to the volume of traffic and pedestrians on Division Street and the reduced number of gaps available in the traffic stream. This Wolcott Avenue traffic is and will be able to access Division Street or cross Division Street. However, during the peak periods it experiences some additional delay. Further, field observations have shown that the delay and queuing at this intersection is reduced as many vehicles enter the traffic stream via courtesy gaps.

## **Truck Deliveries**

Deliveries for the store will occur on Honore Street along the site frontage just north of the access drive to the parking garage. Trucks will access Honore Street from Augusta Boulevard and will travel northbound on Honore Street for two blocks. When leaving, trucks will travel directly north to Division Street.

According to Trader Joe's representatives, the proposed store will receive two to three semi-trailer deliveries per day. Further, Trader Joe's representatives indicated that they control when the deliveries occur and that they will schedule the semi-trailers to arrive before 7:00 A.M. or after 3:30 P.M. In addition, it is expected that the store will receive one to three additional deliveries from outside vendors. These deliveries occur via single unit vans or trucks and occur throughout the day. However, Trader Joe's representatives have indicated that they will work with the vendors to prohibit deliveries during the school's drop-off and pick-up periods.

The mixed-use development previously approved for the site in 2013 was to have all of the deliveries for the restaurants to occur along Honore Street. Further, any commercial land use developed on this site will likely have deliveries occur on Honore Street. As such, any future development of the site will likely add truck traffic to Honore Street.

## **Impact of Conversion on LaSalle II Magnet Elementary School**

As discussed previously, the conversion of Honore Street to two-way traffic will provide the following benefits to the schools drop-off and pick-up operations.

- It reduces the volume of traffic along Wolcott Avenue between Division Street and Thomas Street as parents will not have to circulate around the neighborhood to reach the Honore Street loading zone. The reduction in the Wolcott Avenue through traffic will enhance the school's Wolcott Avenue drop-off/pick-up operations and the flow of traffic along Wolcott Avenue.
- It decreases the width of the travel lane along Honore Street from 20+ feet to two 10.5-11.5 foot lanes and introduces two-way traffic all of which will serve as traffic calming measures that will help reduce the speed of traffic along Honore Street and provide for a safer operation for motorists, bicyclists and pedestrians.
- It allows for the Honore Street school drop-off/pick-up activity to occur along the passenger side of the vehicle. With the one-way northbound operation, currently the driver side of the vehicle is aligned along the Honore Street sidewalk which is not typical and generally less efficient when loading passengers. More important, loading of buses must occur from the Honore Street through lane as opposed to the Honore Street sidewalk and requires students to cross in front of the bus to reach the sidewalk. With the conversion of the street, the buses will be facing south which will allow students to load directly from the sidewalk.

- It provides for more and better utilized stacking for the pre-kindergarten drop-off and pick-up operations that will help reduce the double parking and congestion along Honore Street and its intersection with Thomas Street. With the pre-kindergarten entrance located at the south end of the loading zone, parent arrive at the entrance south of the loading zone and often park and double park south of the Honore Street loading zone although parking may is available along the loading zone north of the entrance. With the proposed conversion of Honore Street, the pre-kindergarten parents will arrive at the southern school entrance along the loading zone which will increase the utilization of the loading zone.

The total available stacking along the school frontage will generally remain the same with the proposed conversion of Honore Street to two-way traffic. The reversal of the loading zone on Honore Street to the southbound direction would reduce the frontage for stacking at the northern school entrance due to the proximity of the northern school entrance to the intersection of Honore Street and Division Street. A number of alternatives to the current drop-off/pick-up procedures have been developed and explored in collaboration with school administrators and representatives of the LaSalle II Local School Council. The school should consider implementing one or more of these alternatives or other changes as may be developed through further discussions, to manage operations with the proposed conversion, minimize any potential stacking onto Division Street and improve the overall efficiency of the drop-off/pick-up operations on Honore Street. The following summarizes some of the alternatives that have been developed and explored.

- Relocate the drop-off/pick-up point for the kindergarten through third grade students from the northern school entrance to the middle or southern school entrance in order to increase the effective stacking along the loading zone.
- Modify the pick-up procedures for the kindergarten through third grade students in order to reduce the time parents wait in the loading zone and the subsequent queuing that occurs. One suggestion is to implement a metered system that requires all loading to be done by means of first in line only. Under this technique, parents are given a family name card that is placed on the passenger side visor or window for easy identification. As parents pull up to the designated pick-up point, one of the parent assistants identifies the parent, radios or calls out the student(s) and assists them into the vehicle. Under this technique several vehicles can be loaded and released from the loading zone at the same time.
- Convert Honore Street to a one-way southbound street during the drop-off and/or pick-up periods in order to increase the available stacking along Honore Street. Similar to the Wolcott Avenue operation, the one-way southbound operation would allow for a stacking lane along the loading zone, a second lane for parents to double park/stand and a through southbound lane which would effectively double the available stacking/parking along Honore Street. Temporarily converting a two-way street to a one-way operation is a common measure implemented by schools and is typically only required for a 30 to 60 minute period. The one-way conversion would require that temporary sign/barricades be placed along Honore Street at its intersections with Thomas Street, the public alley, Haddon Avenue and the Trader Joe's access drive.

- To increase the available stacking along Honore Street, extend the school no parking zone (7:00 A.M. to 4:30 P.M. Monday through Friday) on the east side of Honore Street from the public alley to Thomas Street. This would require the elimination of four parking spaces during the school day.
- To reduce the peak pick-up demand, increase the off-set between the end of the school day for the pre-kindergarten and the rest of the school and/or relocate some of the drop-off activity from Honore Street to Wolcott Avenue.

### **Transportation Sustainability Recommendations**

The following summarizes measures to be implemented by the development and/or recommendations to further minimize the impact of the development, foster alternative modes of transportation other than the automobile, and to enhance pedestrian/bicycle safety.

- Bike racks will be provided as part of the development.
- One to two parking spaces within the parking garage should be reserved for car-sharing vehicles.
- The proposed modifications at the Division Street/Honore Street south leg/Marion Court intersection would eliminate the existing Division Street crosswalk in the middle of the all-way stop sign controlled intersection and provide for a second crosswalk.

## 7. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made.

- The amount of new traffic generated by the proposed development will be reduced due to the proximity of development within an urban area and the alternative modes of transportation serving the area.
- The volume of traffic generated by the development will be limited during the drop-off and pick-up periods at the LaSalle II Magnet Elementary School. This is due to the fact that the Trader Joe's store will not open until 8:00 A.M. which is after the start of school. Further, while the store is open when school is dismissed, the late afternoon time period is typically a slower period at a Trader Joe's store.
- Access to the development's parking garage is proposed to be provided via one access drive located on Honore Street at the south end of the site. The access drive will provide one inbound lane and one outbound lane with the outbound lane under stop sign control. To limit the traffic that will traverse the neighborhood, the outbound lane of the access drive will be signed and striped for right-turn movements only.
- In order to provide direct access to the Trader Joe's parking garage, except the Honore Street is proposed to be converted from a one-way northbound street to a two-way street between Division Street and Thomas Street. As proposed, the street will provide one moving lane in each direction with parking generally provided on the east side of the street and parking/loading on the west side of the street. The conversion to a two-way street provides the following benefits.
  - ❖ It minimizes the Trader Joe's traffic that will traverse the neighborhood as direct two-way access will be provided between Division Street and the parking garage.
  - ❖ It reduces the circulation of traffic in the neighborhood as it will enhance the neighborhood access and circulation.
  - ❖ It enhances the school's Wolcott Avenue drop-off/pick-up operations and the flow of traffic along Wolcott Avenue as parents will not need to circulate around the neighborhood to reach the Honore Street loading zone.
  - ❖ It helps reduce the speed of traffic on Honore Street and provide a safer operation due to the reduction in the width of the lanes and the introduction of two-way traffic.
  - ❖ It allows for more efficient and safer student loading along Honore Street, particularly bus loading, as the loading will occur on the passenger side of the vehicle as opposed to the driver side of the vehicle.

- ❖ It provides for more and better utilized stacking for the pre-kindergarten drop-off and pick-up operations which will help reduce the double parking and congestion along Honore Street and its intersection with Thomas Street.
- Marion Court is proposed to be converted from a one-way southbound street to a one-way northbound street from Division Street to Ellen Street so that Division Street/Honore Street intersection can operate as T-intersection under all-way stop sign control. The proposed modifications will provide for a more efficient and safer operation for motorists, bicyclist and pedestrians as summarized below.
  - ❖ It reduces the size of the all-way stop sign controlled intersection and the time it takes to clear the intersection.
  - ❖ It eliminates the turning conflicts associated with the off-set alignment of Honore Street and Marion Court.
  - ❖ It reduces the all-way stop sign controlled intersection from a four-legged to a three-legged intersection.
  - ❖ It eliminates the motorist indecision associated with the size of the intersection and the off-set alignment of Honore Street and Marion Court.
  - ❖ It eliminates the existing Division Street crosswalk in the middle of the all-way stop sign controlled intersection and provide for a second crosswalk.
- All of the intersections within the study area, except Division Street/Honore Street south leg/Marion Court, are generally operating at a good level of service and are projected to continue to operate at a good level of service assuming the total projected traffic volumes and the proposed street modifications. These intersections have sufficient reserve capacity to accommodate the projected traffic volumes and no additional street improvements are required other than those proposed as part of the development. It is important to note that the area intersections do experience additional congestions associated with the school drop-off/pick-up operations. However, this is typical of most schools and only occurs for a 15 to 20-minute period in the morning and afternoon.

- The intersection of Division Street/Honore Street south leg/Marion Court is currently operating at a poor level of service. The proposed modifications/improvements at this intersection will enhance the operation of the intersection by reducing its size, eliminating the off-set alignment of Honore Street and Marion Court and having the intersection operate as a T-intersection. With the modifications/improvements the intersection is projected to continue to operate a poor level of service. An analysis of the intersection's operation assuming the existing street conditions and the projected traffic volumes assuming the previously approved mixed-use development shows that the intersection is projected to operate at a poor level of service.
- The proposed street modifications/improvements will provide a number of benefits to the schools drop-off/pick-up operations that were outlined previously. The total available stacking along the school frontage will generally remain the same with the proposed conversion of Honore Street to two-way traffic. However, the reversal of the loading zone on Honore Street to southbound direction would reduce the frontage for stacking at the northern school entrance due to the proximity of the northern school entrance to the intersection of Honore Street and Division Street. A number of alternatives to the current drop-off/pick-up procedures have been developed and explored in collaboration with school administrators and representatives of the LaSalle II Local School Council. The school should consider implementing one or more of these alternatives or other changes as may be developed through further discussions, to manage operations with the proposed conversion, minimize any potential stacking onto Division Street and improve the overall efficiency of the drop-off/pick-up operations on Honore Street.

Draft

**Appendix**

## LEVEL OF SERVICE CRITERIA

### Signalized Intersections

Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	$\leq 10$
B	Good progression, with more vehicles stopping than for Level of Service A.	$>10 - 20$
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	$>20 - 35$
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	$>35 - 55$
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	$>55 - 80$
F	The volume-to-capacity ratio is very high, progression is very poor and the cycle length is long. Most cycles fail to clear the queue.	$>80.0$

### Unsignalized Intersections

Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	$> 10 - 15$
C	$> 15 - 25$
D	$> 25 - 35$
E	$> 35 - 50$
F	$> 50$

Source: *Highway Capacity Manual*, 2010.