

**Traffic Impact Study  
for the  
3817-45 North Broadway  
Mixed-Use Development  
Chicago, Illinois**

Draft

Prepared by



March 30, 2015

# 1.

## Introduction

This report summarizes the methodologies, results and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed mixed-use development to be located in Chicago, Illinois. The site is located on the east side of North Broadway south of Sheridan Road and currently contains five one-to-three-story buildings. Overall the existing buildings provide approximately 58,500 square feet of commercial, office and residential space.

The current plans call for 93 apartment units located above 32,732 square feet of office space on floors two and three and 19,600 square feet of ground floor retail space. In addition, the development is proposed to provide a below grade parking garage with 93 spaces that will be reserved for the residents of the proposed development. Access to the parking garage is to be provided from Grace Street via the existing public alley and a proposed right-in/right-out access drive on North Broadway.

The following sections of this report present the following.

- Existing street conditions including vehicle, pedestrian, and bicycle traffic volumes for the weekday morning, weekday evening and Saturday midday peak hours
- A detailed description of the proposed development
- Vehicle trip generation for the proposed development
- Directional distribution of development-generated traffic
- Future transportation conditions including access to and from the development.

The purpose of this study is three-fold:

1. To examine existing vehicle, pedestrian, and bicycle traffic conditions to establish a base condition.
2. Determine the vehicle trips to be generated by the proposed development and then determine its impact on the surrounding street network.
3. Evaluate the impact of the development and, if necessary, recommend improvements to effectively mitigate and accommodate the development traffic volumes.

## 2. Existing Conditions

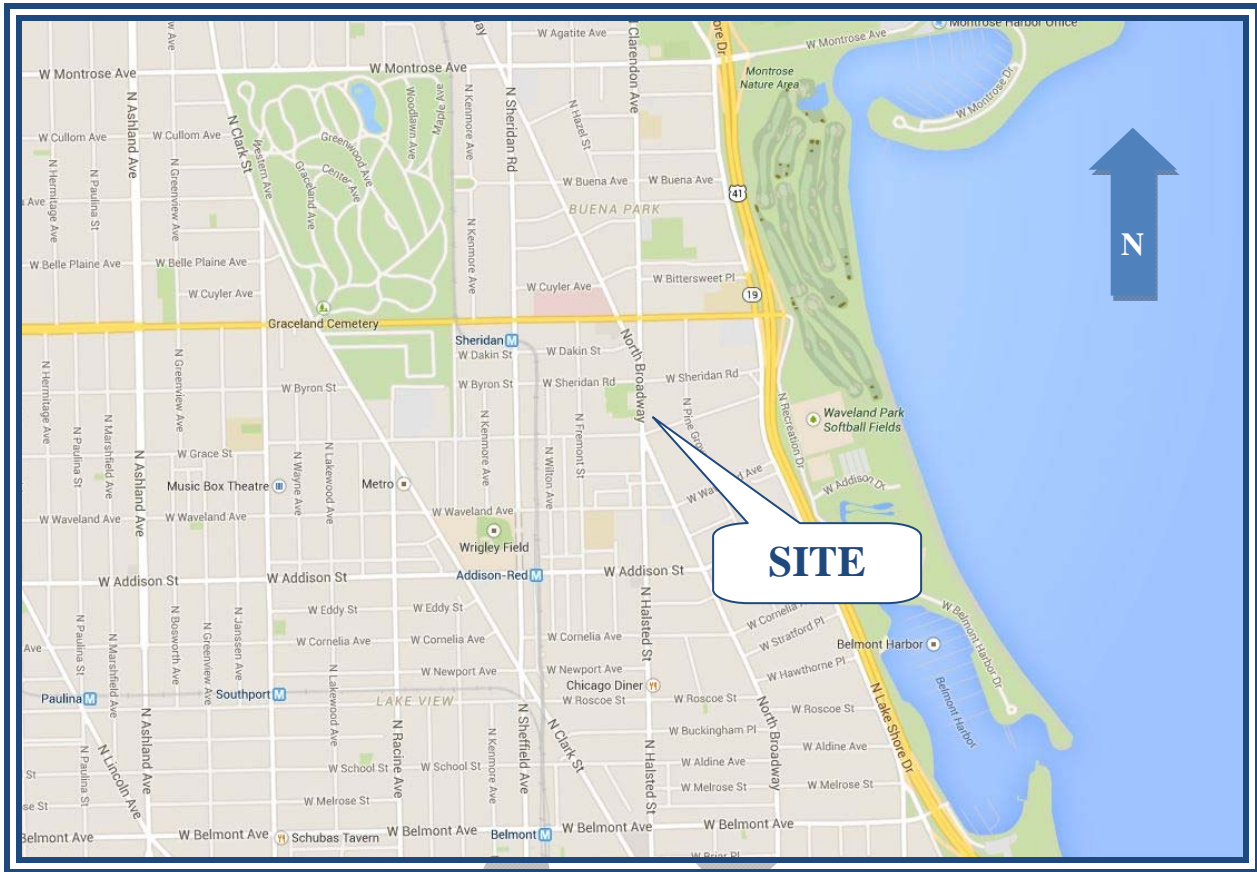
Transportation conditions in the vicinity of the site were inventoried to obtain a basis for projecting future conditions. Four components of existing conditions were considered:

1. The geographic location of the site.
2. The characteristics of the adjacent street system, including lane geometry, traffic orientation (e.g. one-way street pairings) and intersection traffic controls.
3. The weekday morning, evening, and Saturday midday peak-hour vehicle, bicycle, and pedestrian traffic volumes at the study intersections.
4. The locations and availability of alternative modes of transportation, including public transportation, bicycle lanes, and pedestrian amenities.

### Site Location

The development site is located on the east side of North Broadway south of Sheridan Road and currently contains five one-to-three-story buildings, totaling 58,500 square-feet of space. Currently, the first floors of the buildings consist of various commercial and office space including Starbucks, Remax, Sun Cleaners, Lakeview Pantry, Tutto Fresco and Spritz Burger. The second floors of the buildings include residential units, office space and Strawdog Theatre Company. The third floors of the buildings consist primarily of residential units. The site is primarily surrounded by residential and retail/commercial land uses. The Anshe Emet Synagogue and the Bernard Zell Anshe Emet Day School are located south of the site in the southeast quadrant of the North Broadway/Halsted Street/Grace Street intersection.

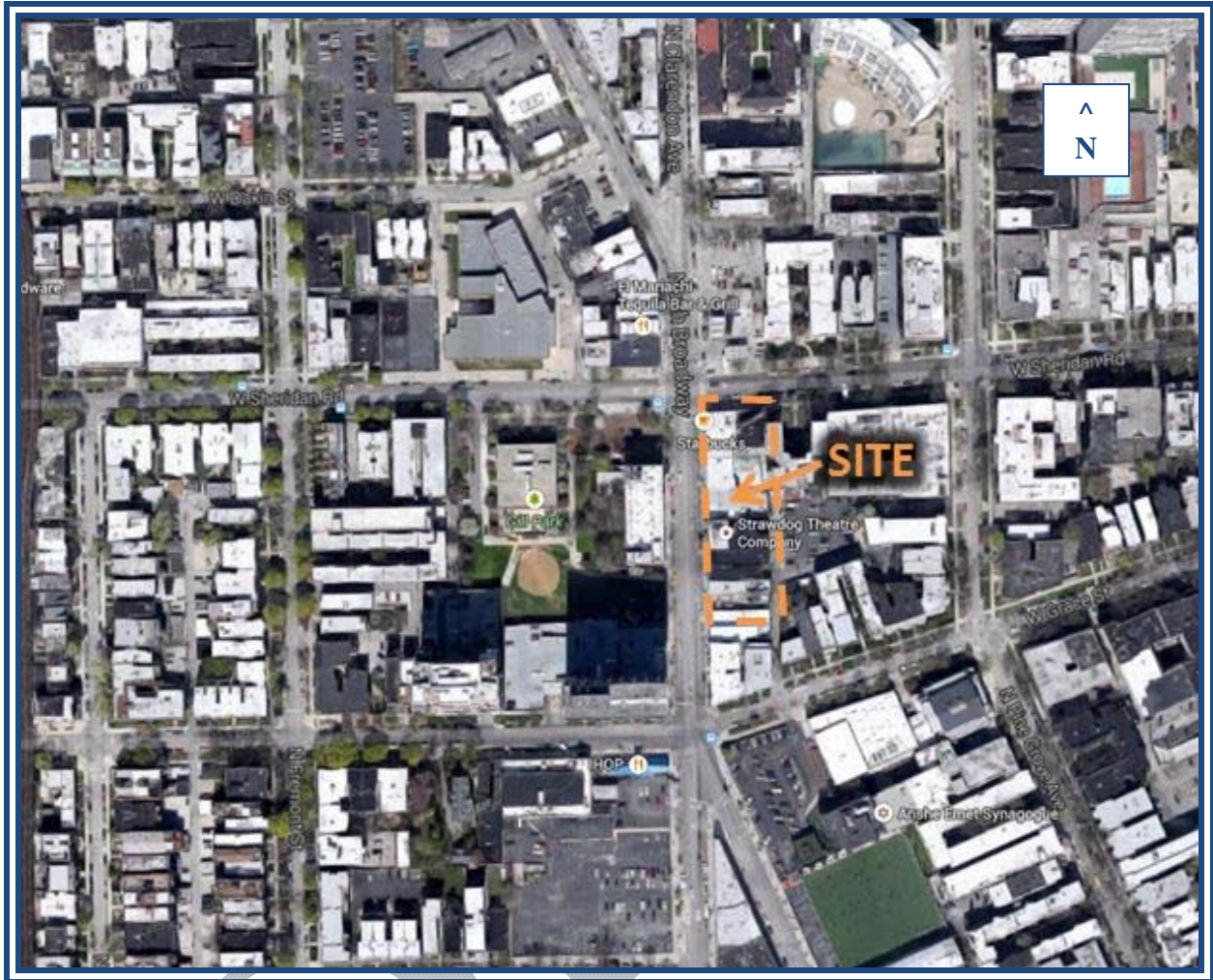
**Figure 1** shows the site location with respect to the surrounding street system. **Figure 2** shows an aerial view of the site area.



Site Location

Figure 1

3817-45 North Broadway  
 Mixed-Use Development  
 Chicago, Illinois



Aerial View of Site Area

Figure 2

## Existing Street System Characteristics

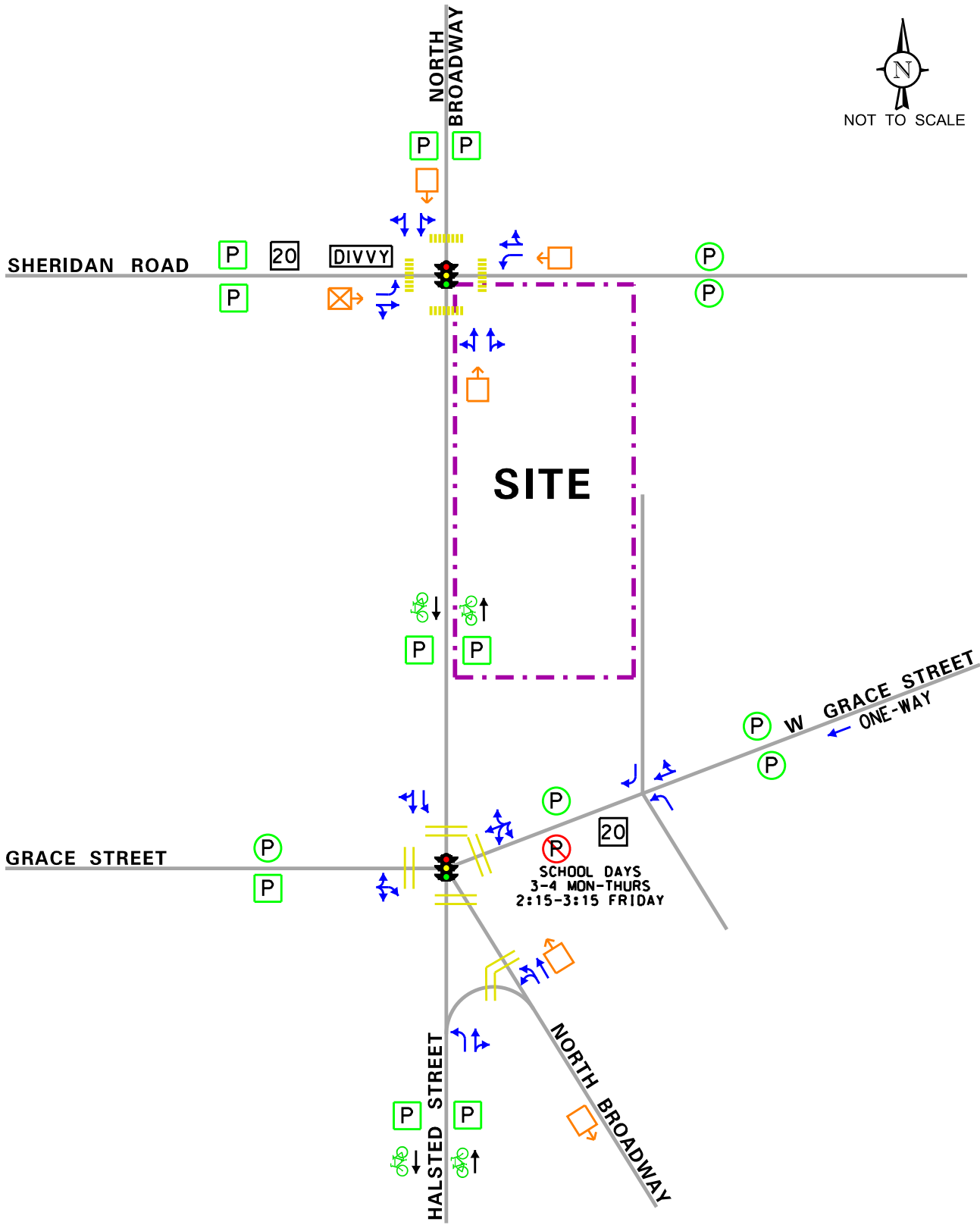
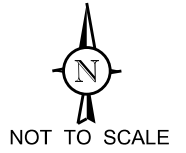
The characteristics of the existing streets that surround the proposed development are illustrated in **Figure 3** and described below. All of the streets are under the jurisdiction of the Chicago Department of Transportation (CDOT), unless otherwise stated.

*North Broadway* is a southeast-to-northwest street that generally provides one travel lane in each direction within the vicinity of the site. Pay-box parking is provided on both sides of the street. At its signalized intersection with Sheridan Road, North Broadway provides a shared left-turn/through/right-turn lane on both approaches. At its signalized, five-legged intersection with Grace Street and Halsted Street, North Broadway provides an exclusive left-turn and a shared through/right-turn lane on the southbound approach and a shared left-turn/through lane on the northwest bound approach. North Broadway has an average daily traffic (ADT) volume of 14,900 and 7,800 north and south of Grace Street, respectively.

*Halsted Street* is a north-south street that provides one travel lane in each direction. A designated bike lane and pay box parking is provided on both sides of the street. Between Grace Street and just north of Sheridan Road, Halsted Street merges with North Broadway and extends as one street. At its signalized, five-legged intersection with North Broadway and Grace Street, Halsted Street provides an exclusive left-turn lane and a shared through/right-turn lane on the northbound approach.

*Sheridan Road* is an east-west street that provides one lane in each direction. At its signalized intersection with North Broadway, Sheridan Road provides an exclusive left-turn and a shared through/right-turn lane on both approaches. On-street parking is generally allowed on both sides of the street that is free parking east of North Broadway and is regulated pay-box parking west of North Broadway.

*Grace Street* is generally an east-west street. East of North Broadway, Grace Street is a one-way westbound street that provides a single travel lane. West of North Broadway, Grace Street is a two-way street that provides one travel lane in each direction. At its signalized, five-legged intersection with North Broadway and Halsted Street, Grace Street provides a shared left-turn/through/right-turn lane on its westbound approach and a shared left-turn/right-turn lane on its eastbound approach. On-street parking is generally allowed on both sides of the street and is free parking on the north side of the street and on the south side of the street east of North Broadway. Parking on the south side of Grace Street west of North Broadway is regulated pay-box parking.



PROJECT:  
Mixed-Use Development  
3817 N. Broadway  
Chicago, Illinois

TITLE:  
Existing Street Characteristics



Figure: 3

## Alternative Modes of Transportation

Accessibility to and from the area is enhanced by the various alternative modes of transportation.

The area is served by the CTA Red Line rapid transit line which provides 24-hour train service between the Howard Station on the North Side of Chicago and the 95th/Dan Ryan Station on the South Side of Chicago. The nearest station is on Sheridan Road approximately 215 feet south of Irving Park Road and is located approximately 1,500 feet west of the site.

In addition, the following bus routes serve the immediate area and all have stops within walking distance of the development.

- *Route Number 36 – Broadway* generally runs along Broadway and Clark Street providing service to the Red Line Wilson Station, Lincoln Park Zoo, and the LaSalle Street Metra Station. Service is provided seven days a week, including holidays.
- *Route Number 80 – Irving Park* primarily runs along Irving Park Road between Cumberland Avenue and Lake Shore Drive. The bus route provides connections to the CTA Blue, Brown, and Red Lines and the Irving Park Union Pacific Northwest Metra Rail line. Service is provided seven days a week, including holidays.
- *Route Number 135 – Clarendon/LaSalle Express* generally provides service along LaSalle Street and Clarendon Avenue from the Weiss Memorial Hospital to Jackson Boulevard. Service is only provided on the weekdays, with southbound service provided in the morning (approximately 5:45 A.M. to 10:00 A.M.) and northbound service provided in the evening (approximately 3:00 P.M. to 7:40 P.M.).
- *Route Number 151 – Sheridan* generally runs along Sheridan Road and Lake Shore Drive providing service to Loyola University, Howard Station (Red, Purple and Yellow lines), Red Line Sheridan Station, Lincoln Park Zoo, Millennium Park, and Union Station. Service is seven days a week, including holidays.
- *Route Number 148 – Clarendon/Michigan Express* runs in a north-south orientation between Foster Avenue/Marine Drive and State Street/Harrison Street with express travel along Lake Shore Drive. This route provides service to Weiss Memorial Hospital, North Michigan Avenue, Illinois Center, Grant Park, and the Downtown area. Service is only provided on weekdays, with southbound service provided in the morning (approximately 6:00 A.M. to 9:20 A.M.) and northbound service provided in the evening (approximately 3:00 P.M. to 6:30 P.M.).

**Figure 4** shows a map of the public transportation in the area.





CTA Transit Map

Figure 4

3817-45 North Broadway  
 Mixed-Use Development  
 Chicago, Illinois

***Pedestrian Facilities.*** All of the streets within the immediate area have sidewalks on both sides of the street with crosswalks provided at all of the area intersections. Continental style crosswalks are provided at the intersection of North Broadway and Sheridan Road. In addition, pedestrian countdown signals are provided at the intersection of North Broadway with Grace Street and Halsted Avenue.

***Mode-sharing Facilities.*** A Divvy Bike Sharing Station is located in the northwest corner of North Broadway and Sheridan Road located across the street from the proposed development. Further, there is a Zipcar car sharing station and an Enterprise car sharing station in proximity to the subject site both located approximately 280 feet north of Sheridan Road on the east side of North Broadway,

### **Bernard Zell Anshe Emet Day School Operations**

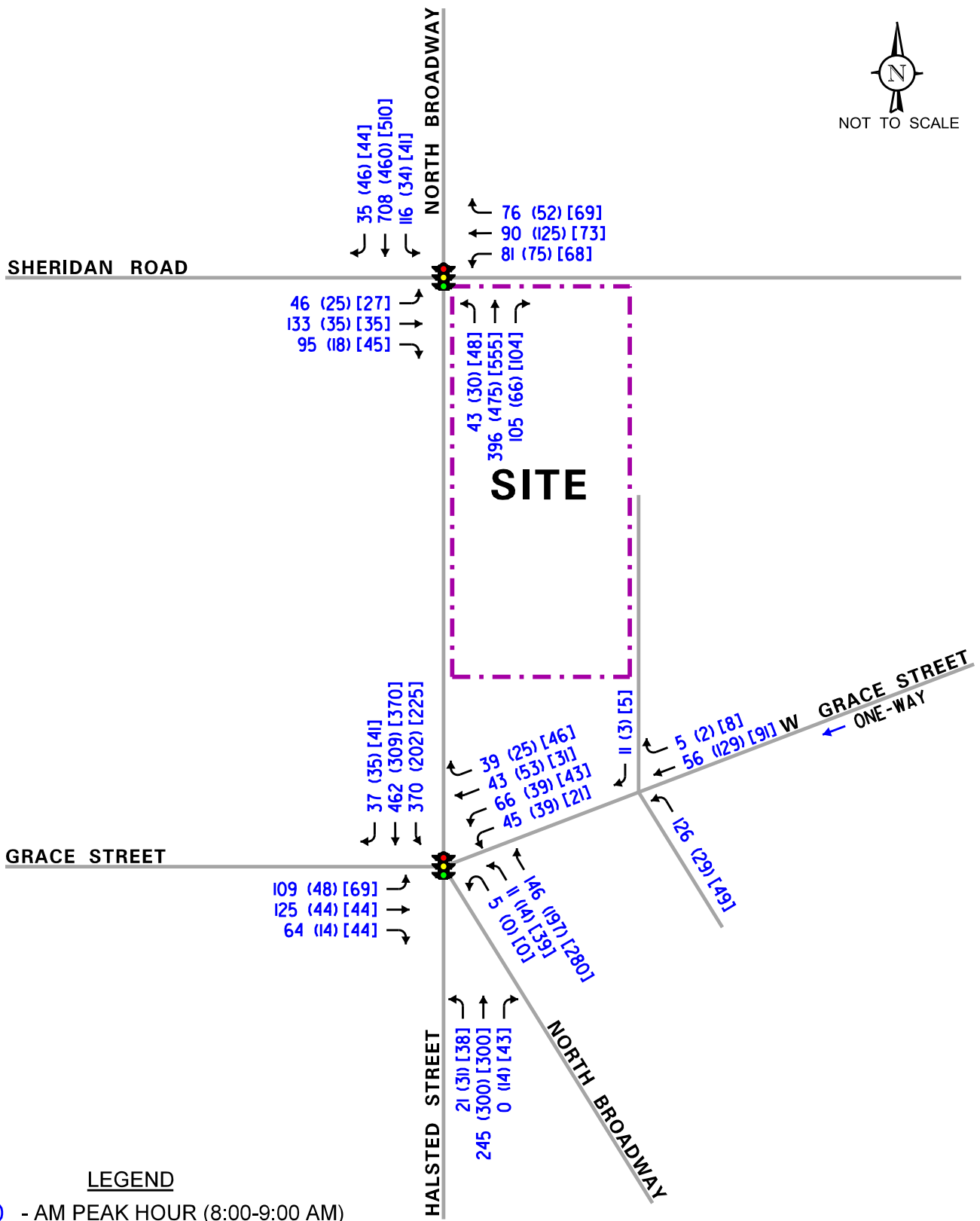
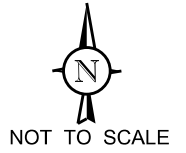
The Bernard Zell Anshe Emet Day School is located in the southeast corner of North Broadway and Grace Street and is a private Jewish school that has an enrollment of approximately 544 students. Student drop-off and pick-up activity occurs within the parking lot located in the southeast corner of North Broadway and Grace Street. Inbound access to the parking lot is provided via an access drive on North Broadway approximately 260 feet south of Grace Street. Outbound access from the parking lot is provided via an access drive on Grace Street located 160 feet east of North Broadway aligned opposite the public alley that serves the existing buildings located within the proposed development site. The results of the traffic counts and field observations show that the peak drop-off and pick-up activity occurs for a 15 to 30 minute period in both the morning and afternoon. It should be noted that during the peak drop-off and pick-up activity, the school typically provides a traffic aid at the intersection of Grace Street with the access drive and public alley to help manage and control traffic at this intersection.

### **Existing Vehicle, Pedestrian, and Bicycle Traffic Volumes**

In order to determine the current transportation conditions near the proposed development and on the surrounding streets, KLOA, Inc. conducted traffic, pedestrian, and bicycle counts during the weekday morning (7:00 to 9:00 A.M.), weekday evening (4:00 to 6:00 P.M.), and Saturday midday (12:00 to 2:00 P.M.) peak periods on Saturday, February 28, 2015, Tuesday, March 3, 2015 and Wednesday, March 4, 2015 at the following three intersections:

- North Broadway with Sheridan Road
- North Broadway with Grace Street/Halsted Street
- Grace Street with the Public Alley

From the turning movement count data, it was determined that the weekday morning peak hour generally occurs between 8:00 and 9:00 A.M., the weekday evening peak hour generally occurs between 5:00 and 6:00 P.M., and the Saturday midday peak hour generally occurs between 1:00 and 2:00 P.M. These respective peak hours will be used for the traffic capacity analyses and are presented later in this report. The existing peak hour vehicle traffic volumes are shown in **Figure 5**. The existing peak hour pedestrian and bicycle traffic volumes are shown in **Figure 6**.



**LEGEND**

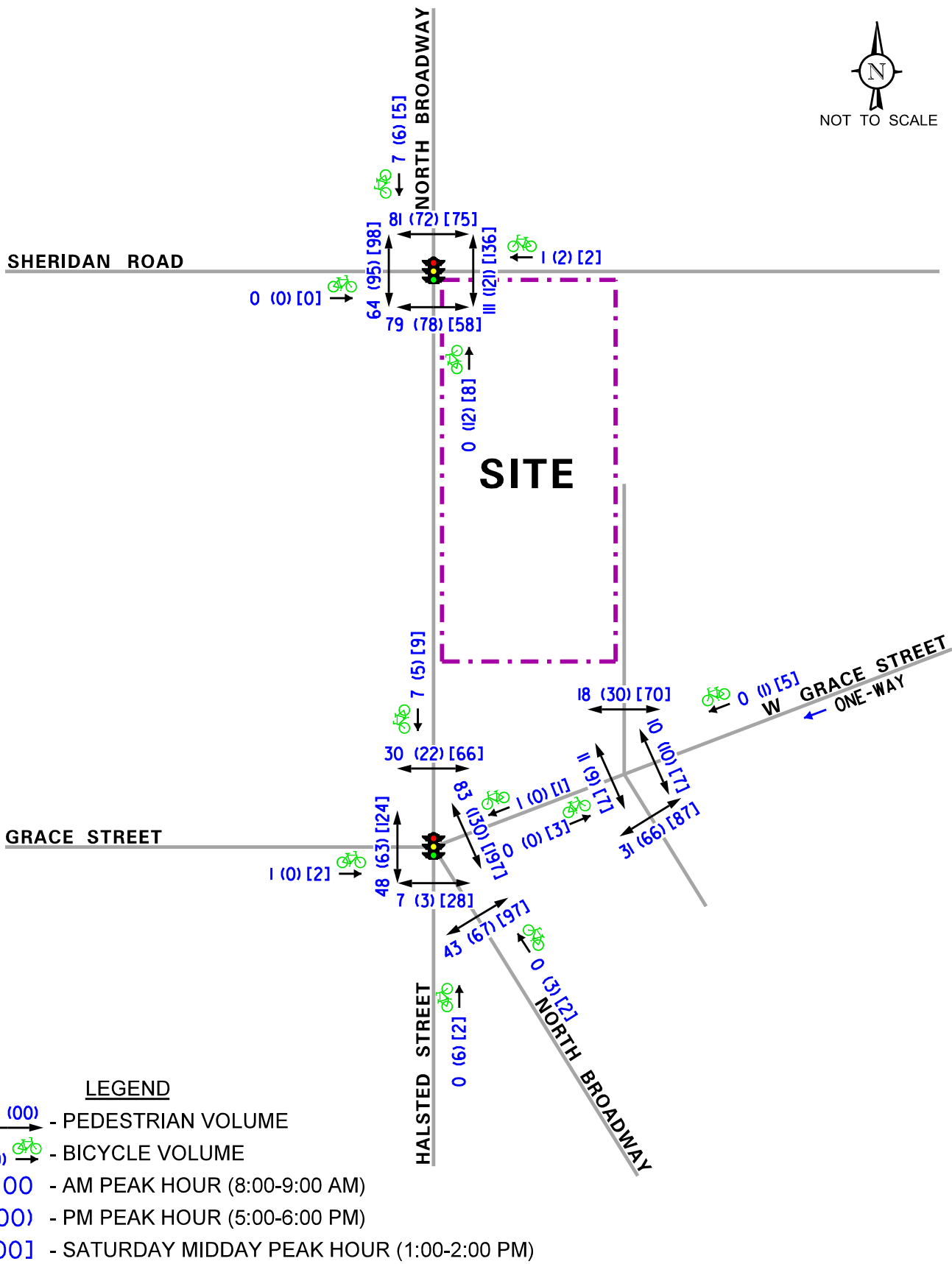
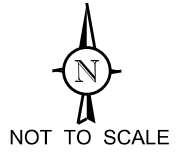
- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

PROJECT:  
 Mixed-Use Development  
 3817 N. Broadway  
 Chicago, Illinois

TITLE:  
 Existing Traffic Volumes



Figure: 5



**LEGEND**

- 00 (00) - PEDESTRIAN VOLUME
- 00 (00) - BICYCLE VOLUME
- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

PROJECT:  
 Mixed-Use Development  
 3817 N. Broadway  
 Chicago, Illinois

TITLE:  
 Existing Pedestrian and Bicycle  
 Traffic Volumes



Figure: 6

### 3.

## Traffic Characteristics of the Proposed Development

To evaluate the impact of the subject development on the area street system, it was necessary to quantify the number of vehicle trips the overall development will generate during the weekday morning, weekday evening and Saturday Midday peak hours and then determine the directions from which this traffic will approach and depart the site.

### Proposed Site and Development Plan

As proposed, the mixed-use development is to contain 93 apartment units located above 32,732 square feet of office space on floors two and three and 19,605 square feet of ground floor retail space. A parking garage with approximately 93 spaces will provide off-street parking for future residents of the proposed development. No parking will be provided for the retail or office space within the development.

### Vehicle Site Access

Access to the parking garage will be provided via the following.

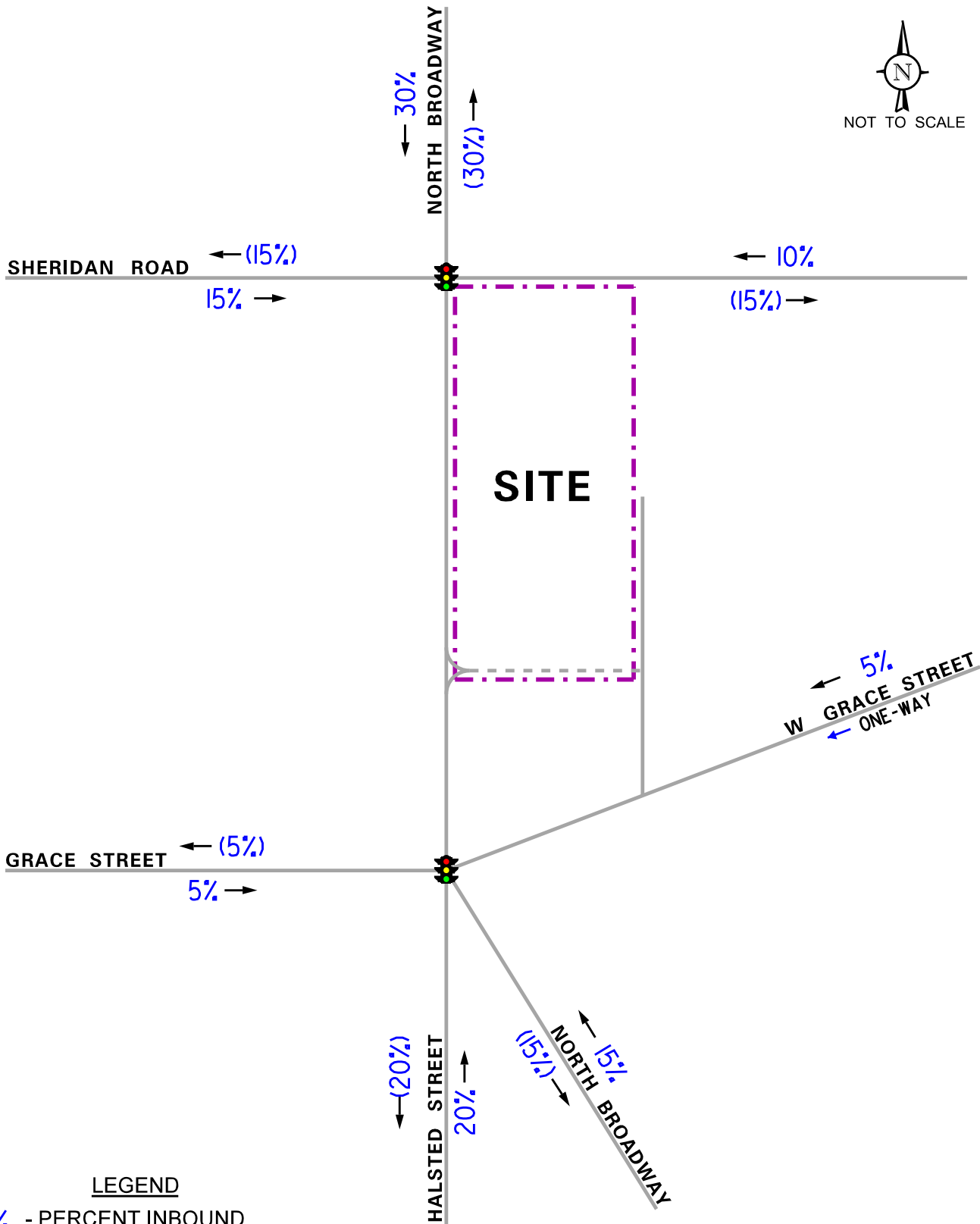
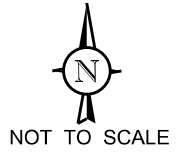
- A proposed right-in/right-out access drive on North Broadway located approximately 200 feet north of Grace Street. This access drive will provide one inbound lane and one outbound lane. Appropriate signage and pavement markings should be provided along the access drive indicating that left-turns are prohibited
- Access will also be provided via the public alley that extends along the east side of the site. The public alley intersects Grace Street approximately 150 feet northeast of North Broadway and is aligned opposite the outbound access drive for the Anshe Emet Synagogue parking lot.

### Pedestrian Access to the Development

The primary pedestrian entrance for the residential lobby will be located on Sheridan Road approximately 60 feet east of North Broadway. The office lobby will be located on North Broadway approximately 135 feet south of Sheridan Road. The primary pedestrian entry for the retail stores will be located at various locations along North Broadway and Sheridan Road.

### Directional Distribution of Development Traffic

The directional distribution of how traffic will approach and depart the site was estimated based on a combination of existing travel patterns and the orientation and physical restrictions of the surrounding street system. The estimated directional distribution for the proposed development was established and is illustrated in **Figure 7**.



**LEGEND**

00% - PERCENT INBOUND  
 (00%) - PERCENT OUTBOUND

<p>PROJECT:          Mixed-Use Development          3817 N. Broadway          Chicago, Illinois</p>	<p>TITLE:          Estimated Directional Distribution</p>	<p><b>KLOA</b>          Job No: 15-056</p>
		<p>Figure: 7</p>

## Development Traffic Generation

The volume of traffic to be generated by the development was estimated based on trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition*. However, the ITE trip rates are based on suburban rates where the primary mode of transportation is the automobile. Given the dense urban nature of the neighborhood, it contains a large population of people who live and work within walking distance of the site. In addition, the site is located within walking distance of the CTA Red Line Sheridan Station, several CTA bus line stops, and bike and car sharing facilities. Furthermore, Halsted Street provides designated bike lanes. As such, the number of vehicle trips to be generated by the development will be reduced due to the mixed-use nature of the development, the location of the site within a dense, urban neighborhood and the available public and non-motorized transportation (walking and biking) serving the area. Based on census data and previous studies the estimated traffic to be generated by the residential use was reduced by 65 percent and the traffic to be generated by the office and retail use was reduced by 50 percent. **Table 1** shows the estimated number of peak hour trips to be generated by the proposed development.

It should be noted that the site of the development currently contains several commercial buildings that contain residential units, office space, and commercial uses including a Starbucks, Remax, Sun Cleaners, Lakeview Pantry, Tutto Fresco and Spritz Burger. These developments are currently generating traffic that will be eliminated with the redevelopment of the site. However, to provide a conservative (worst case) analyses, no reductions were assumed in the trip generation estimates for the traffic currently generated by the existing uses.

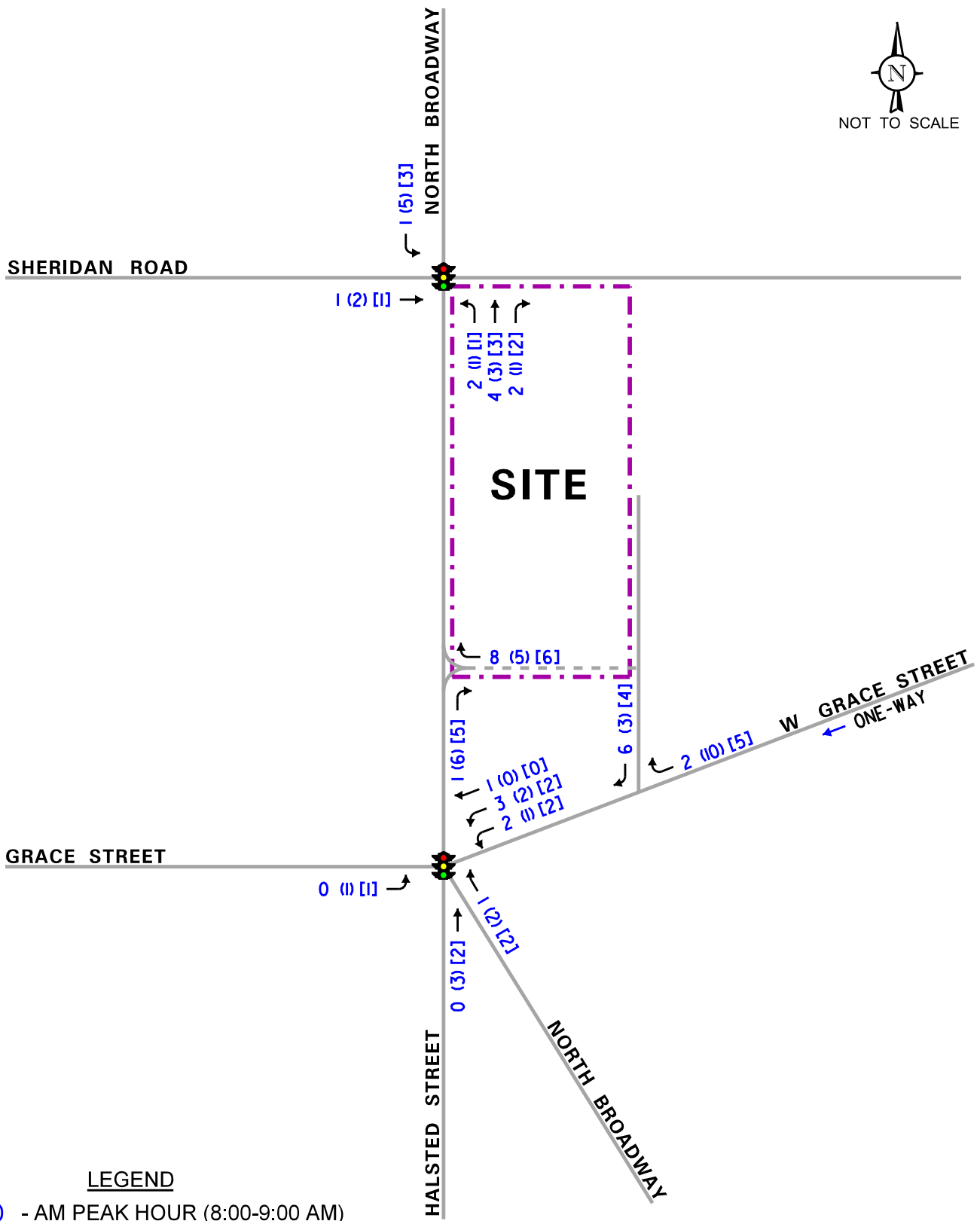
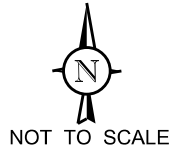
## Development Traffic Assignment

The peak hour traffic volumes projected to be generated by the proposed development (refer to Table 1) were assigned to the area streets based on the directional distribution analysis (Figure 7). **Figure 8** shows the assignment of the development-generated traffic volumes for the residential units which will be parking in the building. **Figure 9** shows the assignment of the development-generated traffic volumes for the office and commercial uses which will be parking along the area streets. To provide a conservative (worst-case) analysis, it was assumed that all of the parking will occur on North Broadway between Sheridan Road and Grace Street.

Table 1  
ESTIMATED SITE TRAFFIC VOLUMES

Land Use	LUC#	Density	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
			In	Out	In	Out	In	Out
Apartment	220	93 Units	10	39	45	24	29	28
		65% Reduction	<u>(-7)</u>	<u>(-25)</u>	<u>(-29)</u>	<u>(-16)</u>	<u>(-19)</u>	<u>(-18)</u>
		<i>Apartment Subtotal</i>	3	14	16	8	10	10
Office	710	32,732 sq-ft.	45	6	8	41	8	6
		50% Reduction	<u>(-23)</u>	<u>(-3)</u>	<u>(-4)</u>	<u>(-21)</u>	<u>(-4)</u>	<u>(-3)</u>
		<i>Office Subtotal</i>	22	3	4	20	8	3
Retail	820	19,605 sq-ft.	12	7	35	38	49	45
		50% Reduction	<u>(-6)</u>	<u>(-4)</u>	<u>(-18)</u>	<u>(-19)</u>	<u>(-25)</u>	<u>(-23)</u>
		<i>Retail Subtotal</i>	<u>9</u>	<u>3</u>	<u>17</u>	<u>19</u>	<u>24</u>	<u>22</u>
<b>Development Total</b>			<b>34</b>	<b>20</b>	<b>37</b>	<b>47</b>	<b>42</b>	<b>35</b>





**LEGEND**

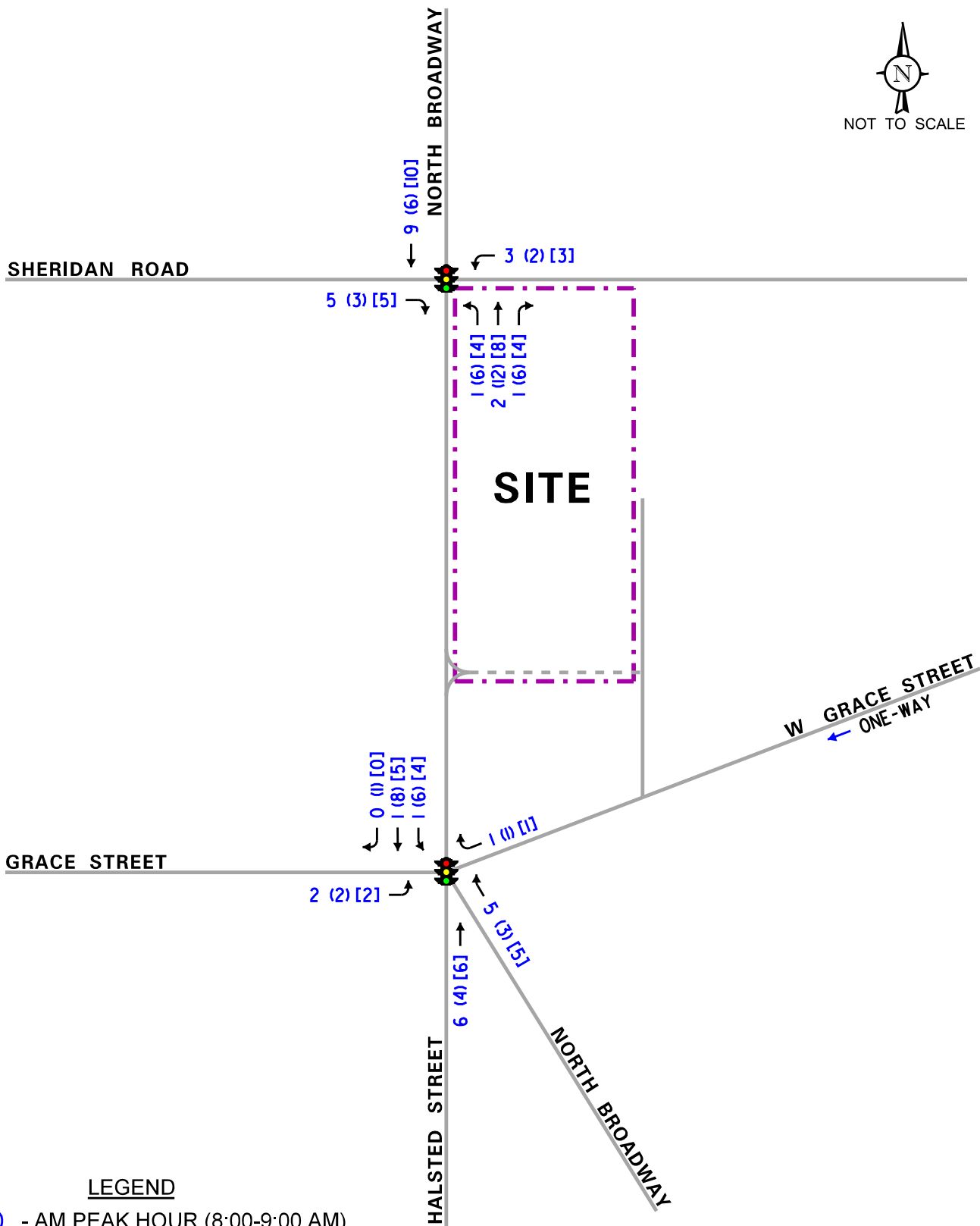
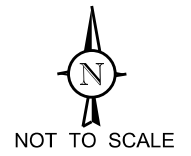
- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

PROJECT:  
 Mixed-Use Development  
 3817 N. Broadway  
 Chicago, Illinois

TITLE:  
 Residential  
 Site Traffic Assignment



Figure: 8



**LEGEND**

- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

PROJECT:  
 Mixed-Use Development  
 3817 N. Broadway  
 Chicago, Illinois

TITLE:  
 Office/Retail  
 Site Traffic Assignment



Figure: 9

## 4. Total Projected Traffic Conditions

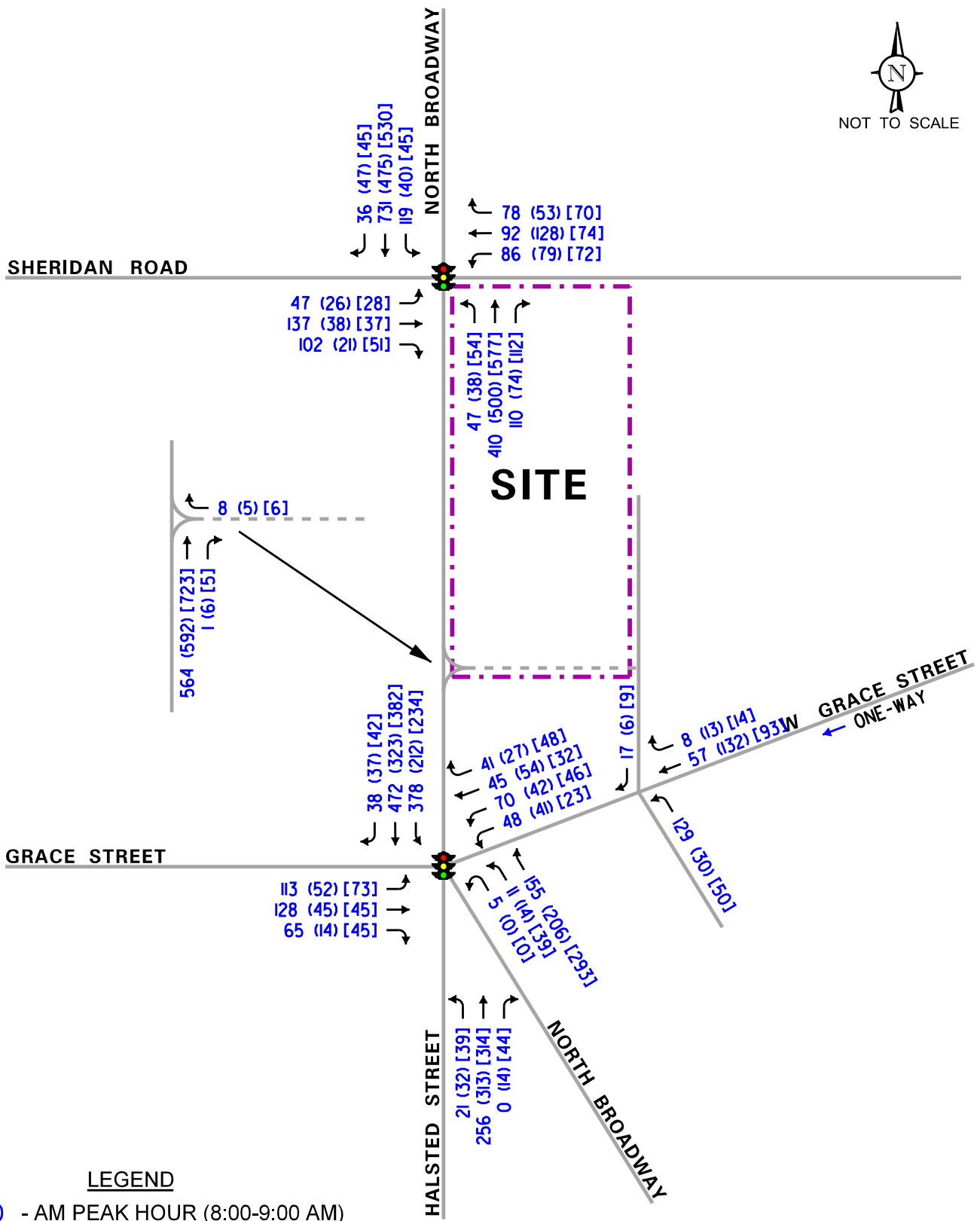
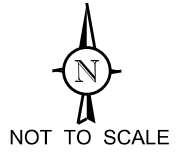
The total projected traffic volumes include the existing traffic volumes increase by a regional growth factor to account for ambient traffic growth and other future developments in the area and the traffic estimated to be generated by the proposed subject development.

### Background Development Traffic

To account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development), the existing traffic volumes (Figure 4) were increased by two percent.

### Total Projected Traffic Volumes

Total projected traffic volumes include the existing traffic volumes, background growth, and the traffic estimated to be generated by the proposed subject development (refer to Figures 7 and 8). **Figure 10** shows the total projected traffic volumes.



**LEGEND**

- 00 - AM PEAK HOUR (8:00-9:00 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (1:00-2:00 PM)

PROJECT:  
 Mixed-Use Development  
 3817 N. Broadway  
 Chicago, Illinois

TITLE:  
 Total Projected Traffic Volumes



Figure: 10

## 5. Traffic Analysis and Recommendations

Capacity analyses were performed for the key intersections included in the study area to determine the ability of the existing street system to accommodate existing and future traffic demands. Analyses were performed for the existing and total projected peak hour traffic conditions.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010* and using Synchro/SimTraffic version 8 software.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

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).

The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized and unsignalized intersections is included in the Appendix. The results of the capacity analyses explained in terms of level of service and delay are shown in **Table 2** and **Table 3** for the existing and future conditions, respectively.

Table 2  
CAPACITY ANALYSES RESULTS—EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
North Broadway with Sheridan Road <sup>1</sup>						
• Overall	B	17.4	B	13.1	B	13.7
• Northbound Approach	B	10.3	B	10.6	B	14.1
• Southbound Approach	B	17.3	A	9.9	B	11.1
• Eastbound Approach	C	26.8	B	18.3	B	15.3
• Westbound Approach	C	22.8	C	24.1	B	19.1
North Broadway with Grace Street/Halsted Street <sup>1</sup>						
• Overall	C	28.0	C	25.5	C	26.8
• Northbound Approach	D	38.6	D	40.3	D	37.0
• Northwestbound Approach	C	28.0	C	29.6	D	38.7
• Southbound Approach	C	26.1	B	16.5	B	18.8
• Eastbound Approach	C	24.1	B	14.6	B	16.2
• Westbound Approach	C	28.4	C	26.1	C	20.7
Grace Street with Public Alley/Exit-only Access Drive <sup>2</sup>						
• Southbound Approach	A	8.9	A	9.3	A	9.6
• Northbound Approach	B	10.3	A	9.8	B	10.1
LOS = Level of Service Delay is measured in seconds. 1 - Signalized Intersection 2 - Unsignalized Intersection						

Table 3  
CAPACITY ANALYSES RESULTS—FUTURE CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
North Broadway with Sheridan Road <sup>1</sup>						
• Overall	B	18.5	B	13.5	B	14.5
• Northbound Approach	B	10.8	B	11.3	B	15.4
• Southbound Approach	B	18.7	B	10.2	B	11.6
• Eastbound Approach	C	27.9	C	24.4	B	15.1
• Westbound Approach	C	23.9	B	18.2	B	19.4
North Broadway with Grace Street/Halsted Street <sup>1</sup>						
• Overall	C	28.9	C	26.3	C	27.9
• Northbound Approach	D	40.2	D	42.4	D	38.9
• Northwestbound Approach	C	28.5	C	30.2	D	40.5
• Southbound Approach	C	26.8	B	16.8	B	19.2
• Eastbound Approach	C	24.7	B	15.1	B	16.6
• Westbound Approach	C	29.4	C	26.7	C	21.4
Grace Street with Public Alley/Exit-only Access Drive <sup>2</sup>						
• Southbound Approach	A	9.0	A	9.4	A	9.8
• Northbound Approach	B	10.6	A	9.9	B	10.3
North Broadway with Right-in/Right-out Access Drive <sup>2</sup>						
• Westbound Approach	B	11.7	B	12.1	B	13.8

LOS = Level of Service  
Delay is measured in seconds.  
1 - Signalized Intersection  
2 - Unsignalized Intersection

## Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identify any roadway and traffic control improvements to accommodate the development traffic.

### *North Broadway with Sheridan Road*

The results of the capacity analysis and field observations indicate that intersection and each of the approaches currently operate at good levels of service during the morning, evening, and Saturday midday peak hours. With the addition of development traffic and area growth, this intersection and each of the approaches are projected to continue operating at good levels of service with minimal increases in delay and limited queueing during all three peak hours. As such, this intersection has sufficient reserve capacity to accommodate the development traffic and no street or traffic control improvements are required.

### *North Broadway with Grace Street/Halsted Street*

The results of the capacity analysis and field observations indicate that the intersection and each of the approaches currently operate at good levels of service during the morning, evening, and Saturday midday peak hours. With the addition of development traffic and area growth, the intersection and each of the approaches are projected to continue operating at good levels of service with minimal increases in delay and limited queueing during all three peak hours. As such, this intersection has sufficient reserve capacity to accommodate the development traffic and no street or traffic control improvements are required.

### *North Broadway with Right-In/Right-Out Access Drive*

This access drive will provide one inbound lane and one outbound lane and will be restricted to right-in/right-out movements via pavement marking and proper signage. The results of the capacity analysis indicate that this access drive is projected to operate at good levels of service during the morning, evening, and Saturday midday peak hours. As such, this access drive will provide efficient and adequate access to the parking garage and will also provide access flexibility to and from the development.

### *Grace Street with Public Alley/Exit-only Access Drive*

The results of the capacity analysis indicate that the northbound and southbound approaches at Grace Street currently operate at good levels of service during the morning, evening and Saturday midday peak hours. With the addition of development traffic and area growth these approaches are projected to continue operating at good levels of service with minimal increases in delay during all three peak hours. During the peak drop-off and pick-up activity at the Bernard Zell Anshe Emet Day School, this intersection does experience some localized queueing and delay. However, this only occurs for a 15 to 30-minute period during the morning and afternoon and is reduced by the school traffic aid that helps control and manage the flow of traffic through the intersection. Finally, the impact of the development traffic on this intersection will be very limited given the low volume of traffic projected to access the development via the alley.



## 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 should be provided as part of the development.
- One to two parking spaces within the parking garage should be reserved for car-sharing services and electric vehicle charging stations.
- Continental style crosswalks should be installed at the intersection of North Broadway with Grace Street and Halsted Street.
- Pedestrian countdown signals should be installed at the intersection of North Broadway with Sheridan Road

## 6. Conclusion

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

- Accessibility to and from the development and surrounding area is enhanced by the various alternative modes of transportation serving the area, including bus, rapid transit train service and mode sharing facilities.
- The amount of traffic generated by the proposed development will be reduced due to the alternative modes of transportation serving the area, the dense urban nature of the neighborhood, the mixed-use nature of the development and the elimination of trips generated by the existing land uses.
- The development-generated traffic can be accommodated efficiently with limited impact to the external street system. All of the intersections within the study limits are generally projected to continue to operate at good levels of service with the addition of development-generated traffic. As such, all of the study area intersections have sufficient reserve capacity and will not require intersection modifications.
- The Bernard Zell Anshe Emet Day School experiences localized queueing and delay during the drop-off and pick-up activities. However, the queueing and delay experienced only occurs for a 15 to 30-minute period during the morning and afternoon. Furthermore, the impact at the development will be limited due to the low volume of development traffic projected to use Grace Street and the public alley.
- Continental style crosswalks should be installed at the intersection of North Broadway with Grace Street and Halsted Street.
- Pedestrian countdown signals should be installed at the intersection of North Broadway with Sheridan Road