

MEMORANDUM TO: Brett Katz
Range Group

FROM: Kelly Pachowicz
Consultant

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Principal

DATE: April 10, 2024

SUBJECT: Travel Demand Management Plan
455 North Carpenter Street Residential Development
Chicago, Illinois

This memorandum summarizes the results of a Travel Demand Management Plan (TDM) for a proposed residential development to be located at 455 North Carpenter Street in Chicago, Illinois. The purpose of this memorandum is to provide details regarding how the proposed development will reduce single-occupancy vehicle use by residents, visitors, and retail customers/employees. The following sections of the memorandum will summarize the proposed development plan, the public transportation and alternative modes of transportation serving the area, the multi-modal volume of traffic to be generated by the development, and the TDM strategies that will be implemented to reduce the number of single-occupancy vehicles generated by the development.

Development Plan

The site of the development, which is currently occupied by an industrial building, is located in the southeast corner of Grand Avenue with Carpenter Street. As proposed, the development is to consist of a five-story building with a total of 72 residential units and approximately 3,605 square feet of retail space on the first floor. Further, the development will provide a total of 30 off-street parking spaces within a first floor garage. Access to the garage will be provided via a single access drive located off the public north-south alley east of Carpenter Street. Pedestrian access to the development will be provided via the existing sidewalks along Grand Avenue and Carpenter Street. Additionally, a first floor bike room will be provided off the lobby for residents' use.

Area Public and Alternative Modes of Transportation

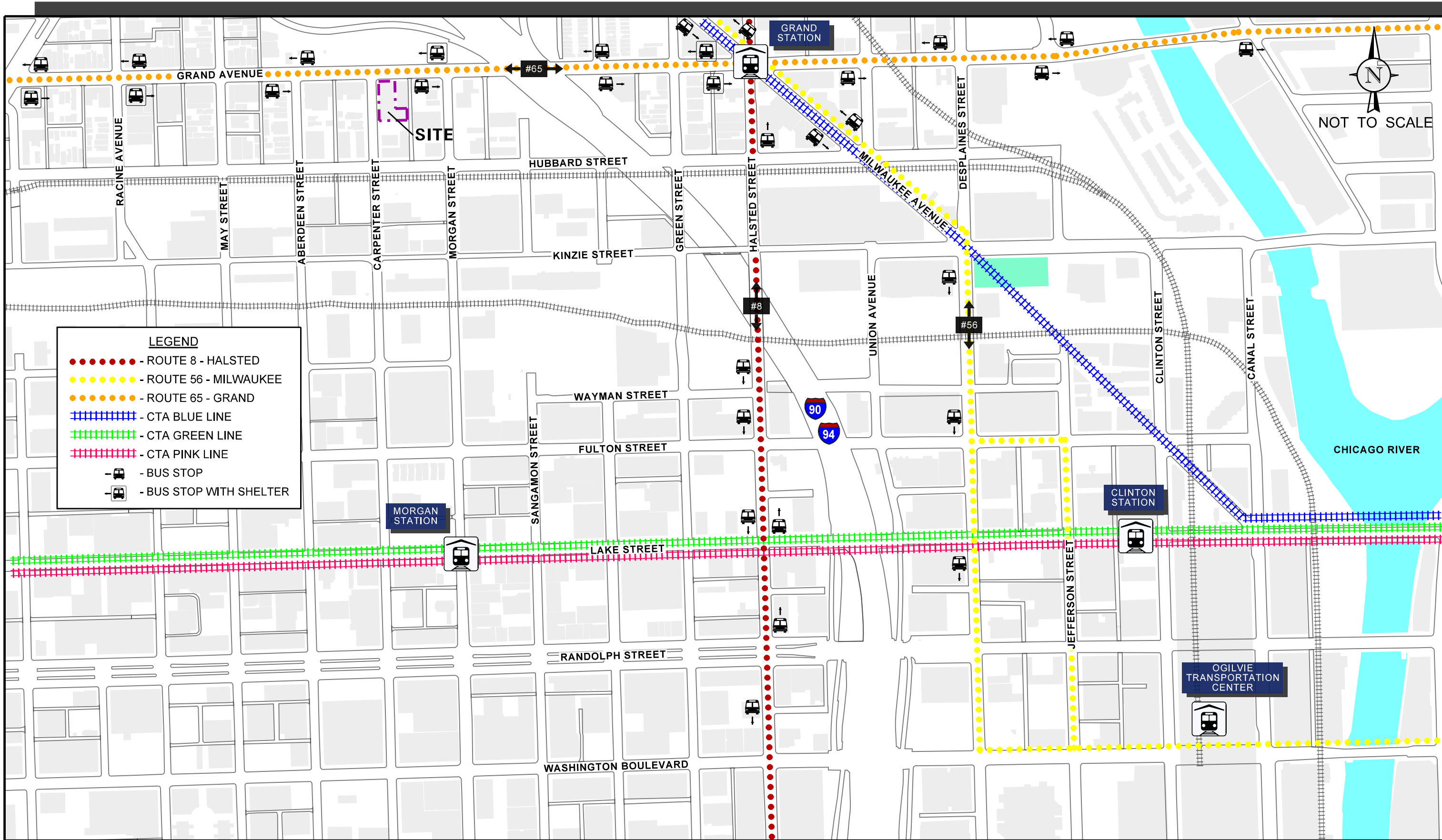
As discussed previously, the site is located in the southeast corner of Grand Avenue with Carpenter Street. Located within the West Town community area, the site is located approximately 1.25 miles northwest of the Loop, which is served by the CTA Rapid Transit Lines, Metra, and Amtrak. The following and **Figure 1** summarizes the public transportation and alternative modes of transportation serving the area.

- The Chicago Transit Authority (CTA) Blue Line serves the area with the Grand Station located approximately 1,525 feet (0.25 miles) east of the site. The CTA Green and Pink Lines serve the area with the Morgan Station located approximately 2,255 feet (0.40 miles) south of the site.
- CTA bus routes 8, 56, and 65 serve the area with bus stops within walking distance of the subject site.
- Bike lanes are located in both directions on Hubbard Street. The nearest Divvy bike sharing stations are located at the northwest corner of Grand Avenue with Milwaukee Avenue and at the southwest corner of Race Avenue with Ogden Avenue.
- Sidewalks are provided on both sides of the area streets and high visibility crosswalks are provided at the intersections along Grand Avenue and Carpenter Street.

Overall, the location of the site incorporates the area's existing pedestrian-oriented design and available transportation infrastructure. Upon review of the study area, no additional pedestrian facility enhancements are needed to facilitate pedestrian trips within the area.

Trip Generation

The volume of total trips to be generated by the proposed development was estimated based on the "Multifamily Housing (Low-Rise)" (Land-Use Code 220) and "Strip Retail Plaza (<40k)" (Land-Use Code 822) trips rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Copies of the ITE trip generation sheets are included in the Appendix. Given the location of the site within a dense, urban area and the proximity of the site to public transportation and alternative modes of transportation, it is expected that many trips to the development will be via public and alternative modes of transportation other than a passenger vehicle. **Table 1** shows the total number of peak hour trips estimated to be generated by the development. **Table 2** shows the total number of peak hour trips estimated to be generated by the development for all modes of transportation, which was estimated based on Census data for the area. Given that the annual average daily traffic volume along Grand Avenue is 8,900 vehicles (IDOT 2022), the projected passenger vehicle traffic from the site is only projected to increase daily volumes on Grand Avenue by three percent.



LEGEND

- - ROUTE 8 - HALSTED
- - ROUTE 56 - MILWAUKEE
- - ROUTE 65 - GRAND
- ▬▬▬▬▬▬ - CTA BLUE LINE
- ▬▬▬▬▬▬ - CTA GREEN LINE
- ▬▬▬▬▬▬ - CTA PINK LINE
- 🚌 - BUS STOP
- 🚌 - BUS STOP WITH SHELTER

455 N. CARPENTER
CHICAGO, ILLINOIS

PUBLIC TRANSIT

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.
Job No: 24-098 Figure: 1

Table 1
PROJECTED PEAK HOUR DEVELOPMENT-GENERATED TRIPS

ITE Land-Use Code	Type/Size	Weekday Midday Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Traffic		
		In	Out	Total	In	Out	Total	In	Out	Total
220	Multifamily Housing (Low-Rise) [72 units]	11	34	45	23	14	37	269	269	538
822	Strip Retail Plaza (<40k) [3,605 S.F.]	<u>5</u>	<u>4</u>	<u>9</u>	<u>12</u>	<u>12</u>	<u>24</u>	<u>99</u>	<u>99</u>	<u>198</u>
Total		16	38	54	35	26	61	368	368	736

Table 2
PROJECTED MULTI-MODAL PEAK HOUR DEVELOPMENT-GENERATED TRIPS

Mode of Transportation	Weekday Midday Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Traffic		
	In	Out	Total	In	Out	Total	In	Out	Total
Passenger Vehicles (37%)	6	14	20	13	10	23	136	136	272
<i>Public Transportation (33%)</i>	<u>5</u>	<u>13</u>	<u>18</u>	<u>11</u>	<u>9</u>	<u>20</u>	<u>121</u>	<u>121</u>	<u>242</u>
<i>Walk (24%)</i>	<u>5</u>	<u>9</u>	<u>14</u>	<u>9</u>	<u>5</u>	<u>14</u>	<u>89</u>	<u>89</u>	<u>178</u>
<i>Bike (3%)</i>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>11</u>	<u>11</u>	<u>22</u>
<i>Other: Ride-share, taxi, etc. (3%)</i>	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>11</u>	<u>11</u>	<u>22</u>
Total	16	38	54	35	26	61	368	368	736

Travel Demand Management Strategies

TDM strategies are mitigation measures that a development can implement to reduce the number of single occupancy vehicle trips generated by the development. Furthermore, these strategies are also meant to increase the utilization of public transportation and alternative modes of transportation which will maximize transit, bicycle, and walking trips generated by the proposed development. As previously indicated, the area currently provides a robust multi-modal network and the following travel demand management strategies will be incorporated to capitalize the utilization of this pedestrian-oriented area:

- *Car-Sharing* is already available from multiple locations within the vicinity of the site. The nearest vehicles are located at 755 West Kinzie Street and 365 North Halsted Street (approximately 0.35 miles southeast). Information on these services, including their location and how to utilize them will be provided to residents upon move-in. In addition, consideration should be given to dedicating an on-street parking space for a car sharing vehicle.
- *Transit Information* will be made available for area public transportation services. This information will include the type, location and frequency of the CTA Blue Line, Green Line, Pink Line, local bus routes (Routes 8, 56, 65), and commuter rail lines. This transit information will be available via paper handouts but will primarily be provided digitally through app interface or QR Codes. The bus routes and train station locations are illustrated in Figure 1.
- *Real-Time Transit Monitors* will be provided in the residential lobby to inform potential transit users of approaching trains and buses.
- *Bike Sharing* via Divvy is already available in the area via numerous stations located within the vicinity of the site with the closest locations at the northwest corner of Grand Avenue with Milwaukee Avenue and at the southwest corner of Race Avenue with Ogden Avenue. Promotion of Divvy bikes and scooters will be made available to residents upon move-in as well as copies of the most recent Chicago Bike Map, published by CDOT.
- *Bike Storage* including cargo bikes, will be provided via a first floor bike room for residents' use. E-bike/scooter charging will also be available on the first floor.
- *Bike Racks* will be provided outside along the building frontage for retail use.

Implementation Plan

The following provides an outline of the steps that will be taken to implement the recommended TDM strategies, which will be the responsibility of building management who will inform residents of these various TDM strategies.

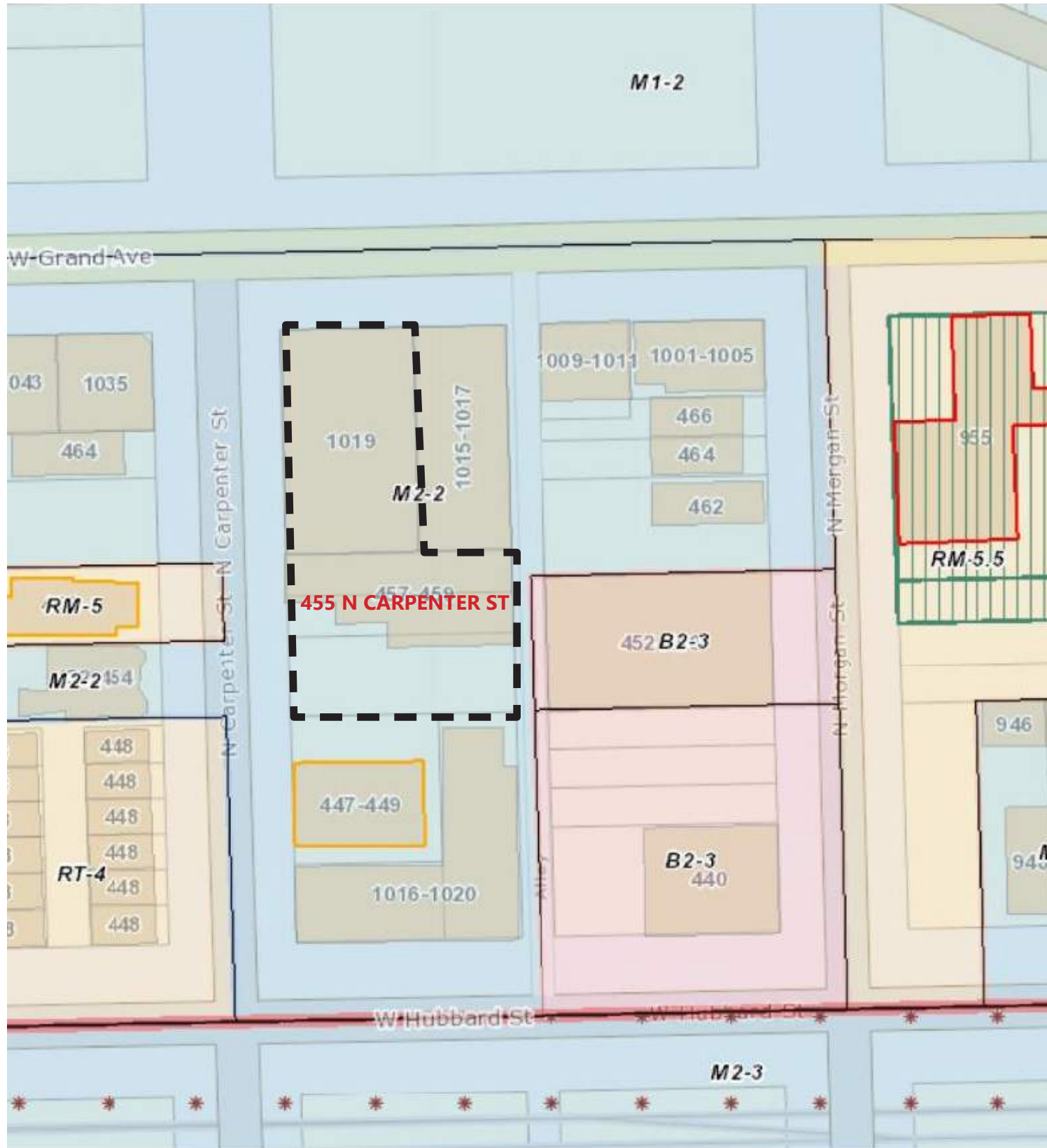
- *Welcoming/Promotional Documents* will be provided to residents by management during move-in. The management will be responsible for preparing the information which will include location of car-sharing, bike-sharing, and transit options as listed in the TDM Strategies. Additional information can be periodically shared via electronic communications to residents.
- *Building Lobby Amenities* will consist of posted fliers as needed and an electronic information board located in the lobby of the building that will provide real-time transit information. Instances when fliers are provided can include nearby temporary bus reroutes or train station closures in addition to transit or Divvy reduced fee promotions to encourage system-wide ridership. Maintenance and updating of this information will be the responsibility of building management.
- *Bike Amenities* will include bike parking for residents, guests and bike racks for retail customers/employees as described in the TDM strategies and will be provided as part of the building construction. Future maintenance of these amenities is the responsibility of the management.

Appendix

Site Plan
ITE Trip Generation Sheets

Site Plan

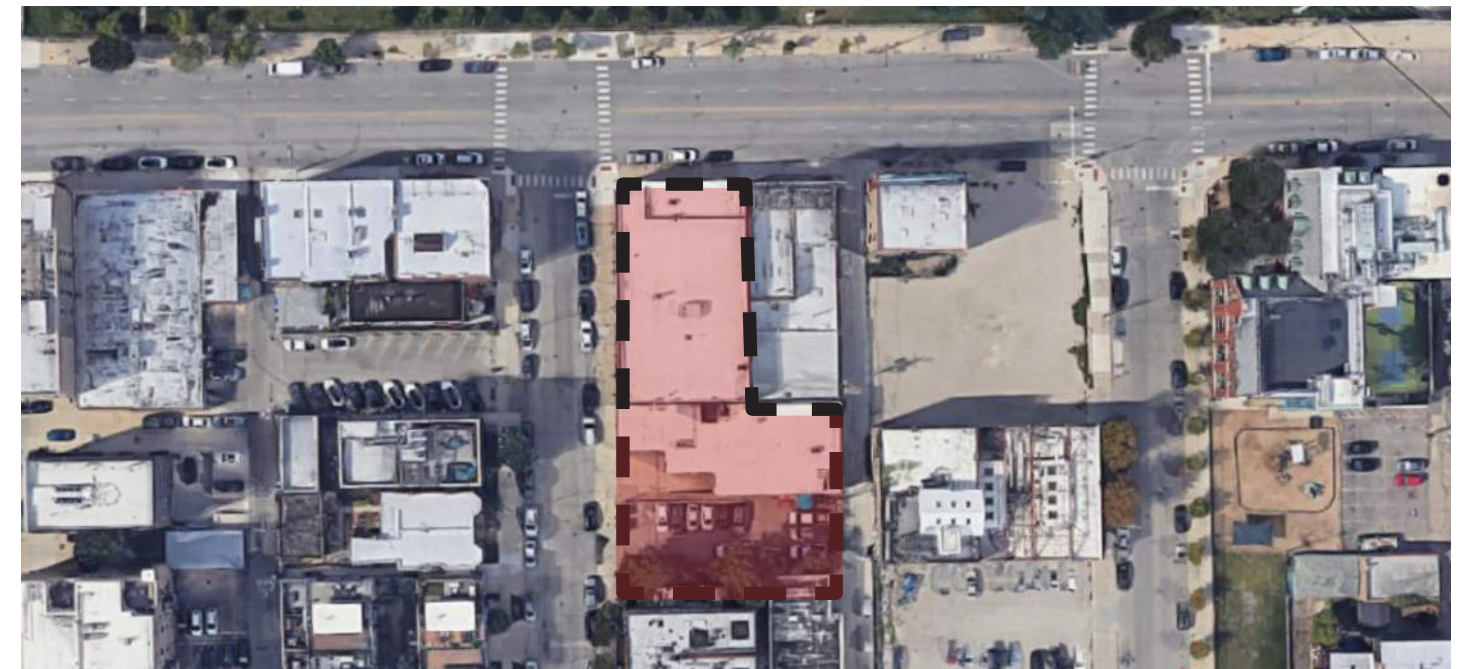
ZONING & PROPOSED METRICS



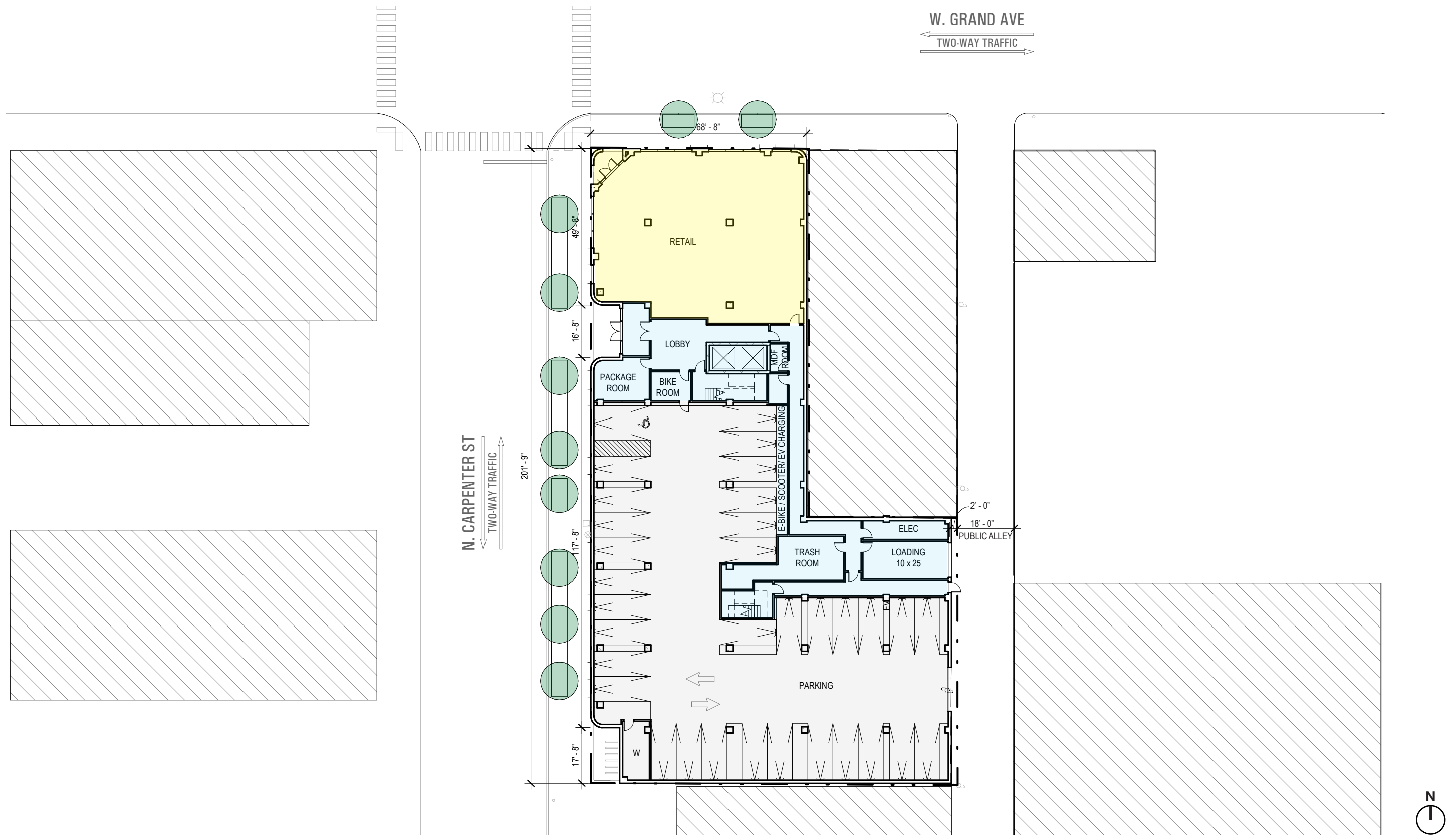
ZONING ANALYSIS

SITE AREA:	18,026 SF
EXISTING ZONING:	M2-2
PROPOSED ZONING:	B3-5
ALLOWABLE F.A.R.:	5.0 = 90,130 SF
PROPOSED F.A.R.:	3.6 = 64,000 SF
RETAIL SF:	3605 SF
ALLOWABLE UNITS:	90
PROPOSED UNITS:	72 (14 ARO)
PROPOSED PARKING:	30 (40% PARKING RATIO)

*50-100% REDUCTION PER TOD



DIAGRAMMATIC GROUND FLOOR PLAN



ITE Trip Generation Sheets

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 22

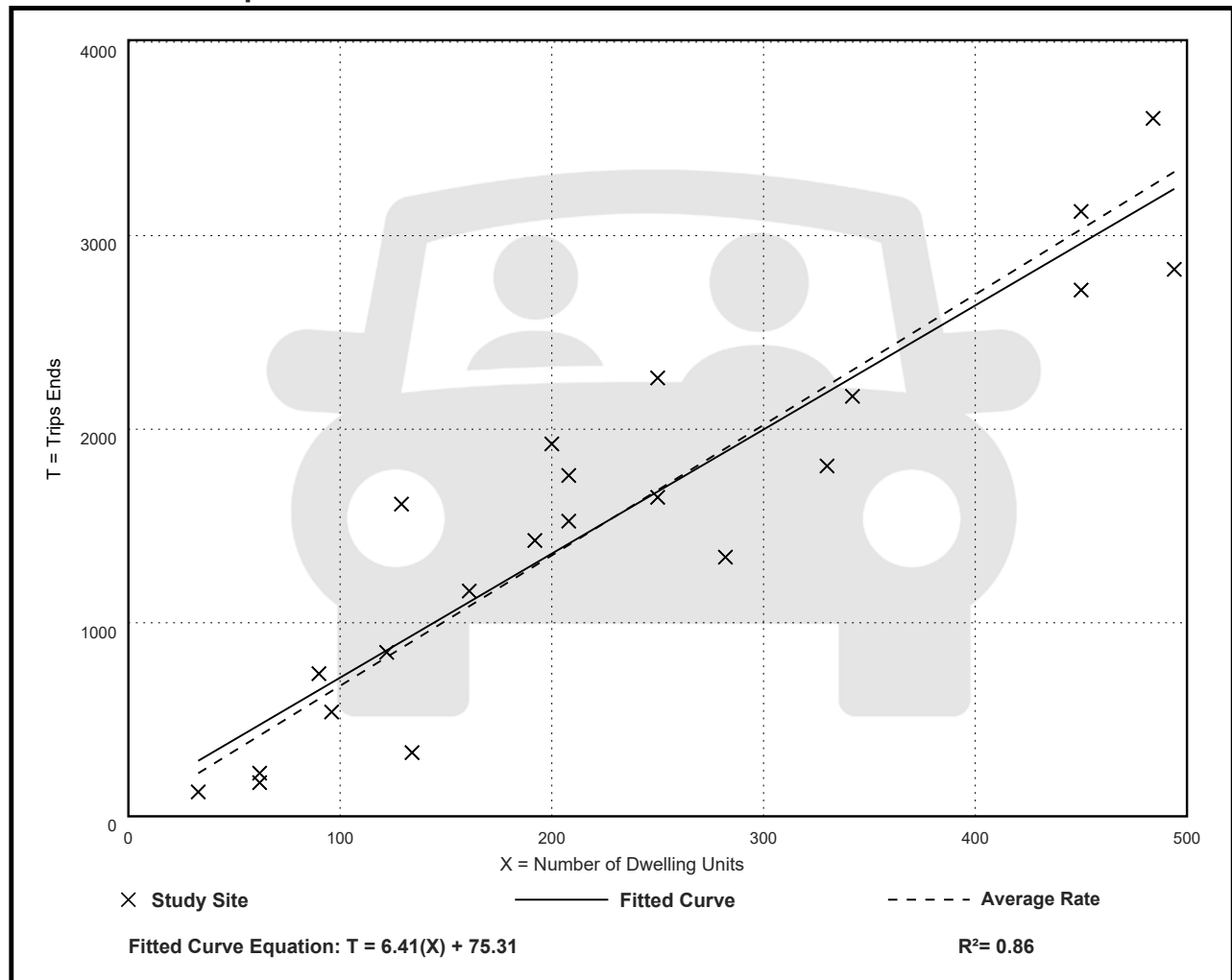
Avg. Num. of Dwelling Units: 229

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

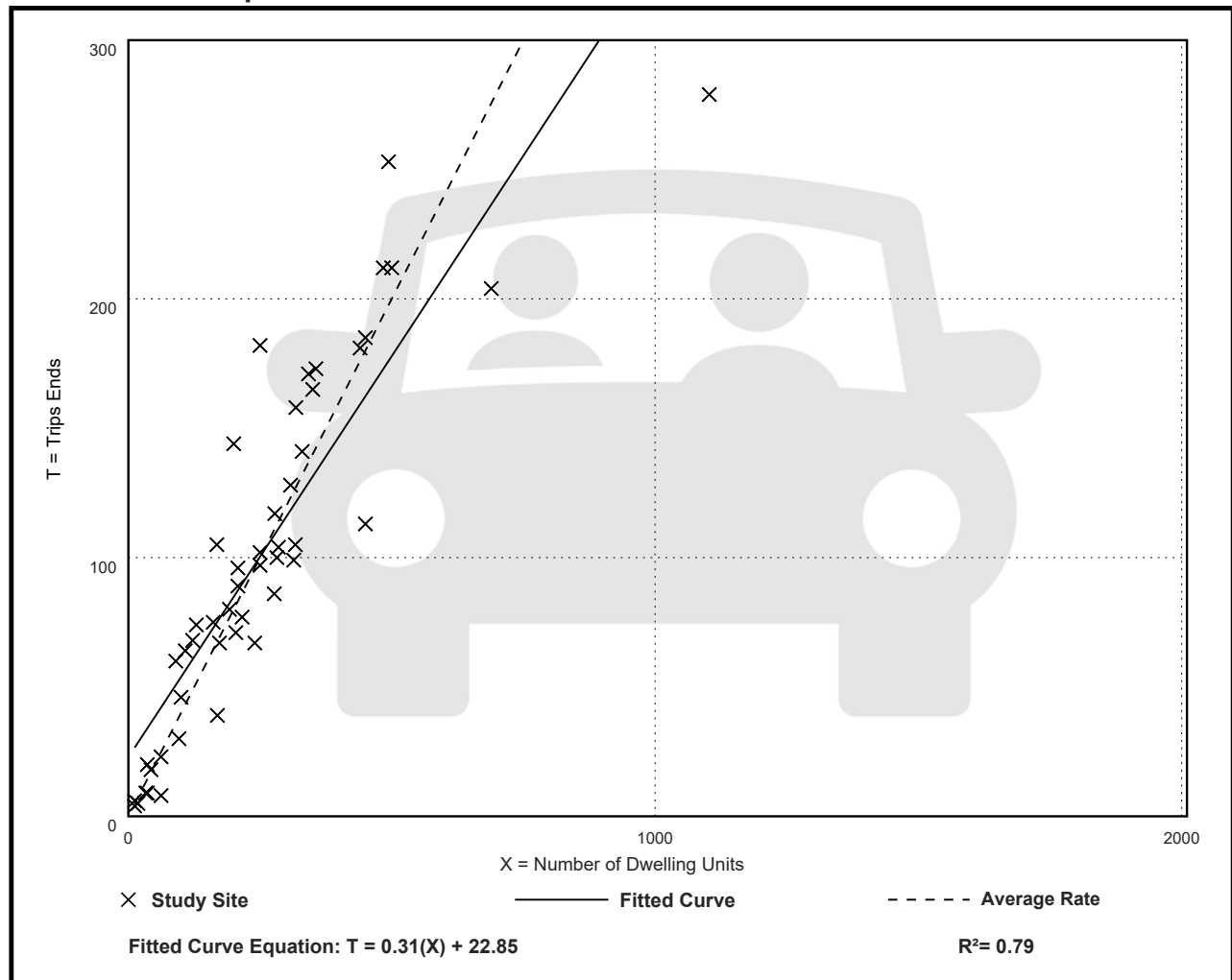
Avg. Num. of Dwelling Units: 249

Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

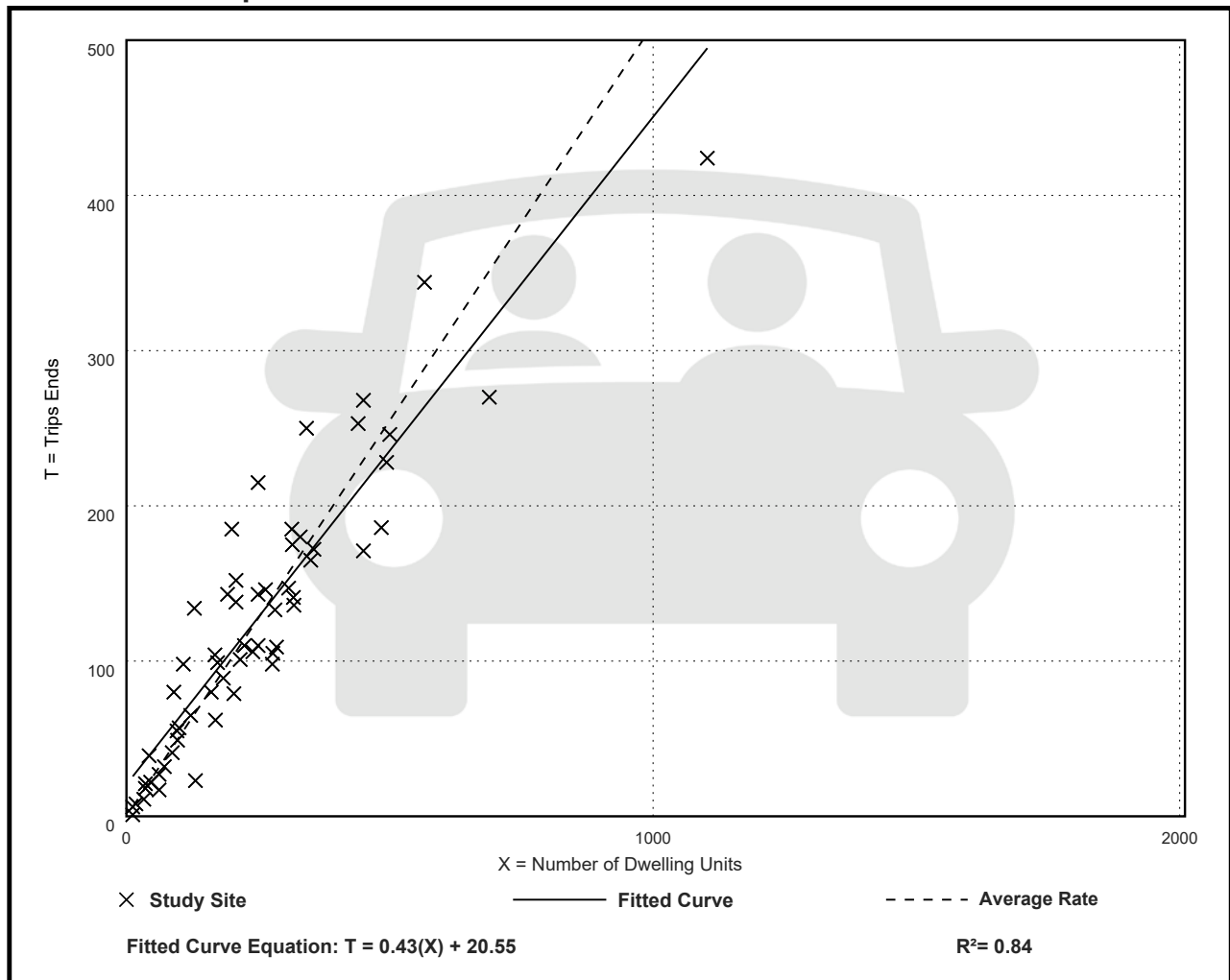
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

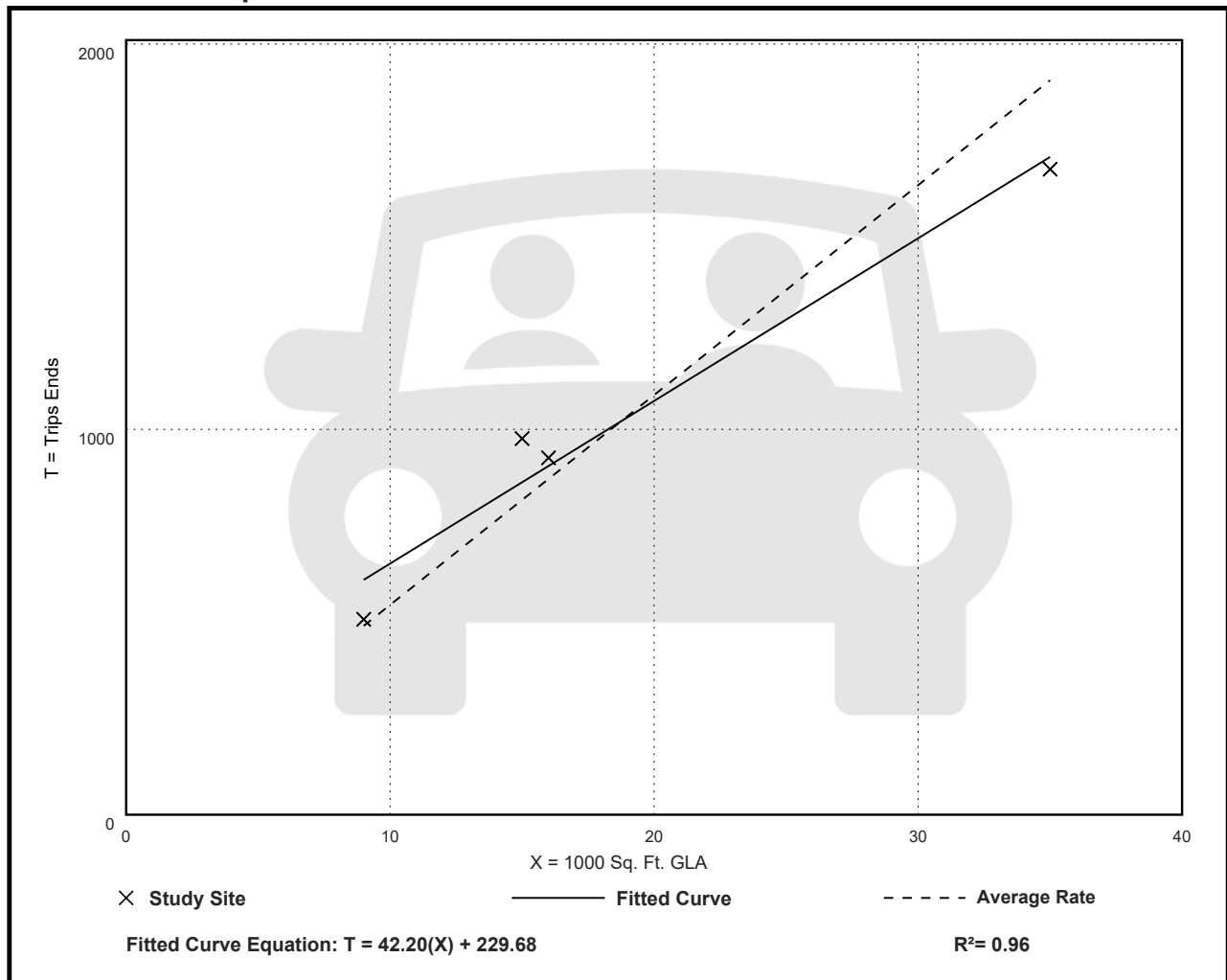
Avg. 1000 Sq. Ft. GLA: 19

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

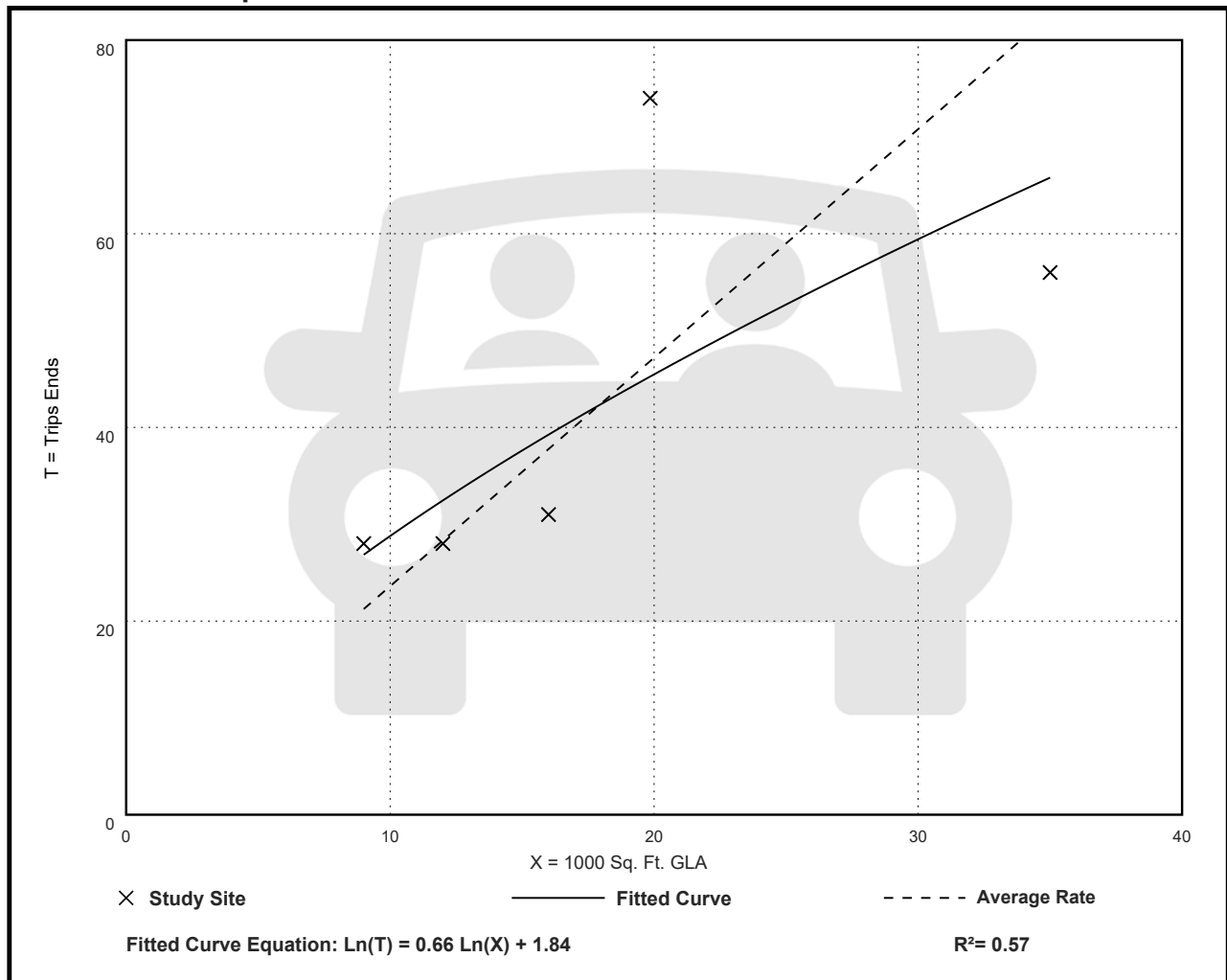
Avg. 1000 Sq. Ft. GLA: 18

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 25

Avg. 1000 Sq. Ft. GLA: 21

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation

