



**WHEELING PLAN COMMISSION
THURSDAY, JULY 12, 2018 6:30 P.M.**

**AGENDA FOR A REGULAR MEETING OF THE PLAN COMMISSION
Board Room - 2 Community Boulevard, Wheeling, Illinois
REVISED JULY 10, 2018**

- 1. CALL TO ORDER**
- 2. PLEDGE OF ALLEGIANCE**
- 3. ROLL CALL**
- 4. CHANGES TO THE AGENDA**
- 5. CITIZEN CONCERNS AND COMMENTS**

*Municipal Code 2.03.060 Subjects of Orders of Business:

Citizen Concerns and Comments. Members of the public may address the Plan Commission with comments regarding only those issues that are relevant to the Plan Commission's agenda or topics that the Plan Commission has the authority, pursuant to the Village Code, to address. The chairperson or his or her designee shall strictly restrain comments to matters that are relevant to the Plan Commission business and shall not permit repetitious comments or arguments. Members of the general public who wish to address the Plan Commission must sign the request to speak form prior to the commencement of the public meeting. The persons submitting a petition, concern or other comment shall be allocated five minutes to present their points.

- 6. CONSENT ITEMS**
 - A) [Docket No. SCBA 18-30](#)**
Rivers of Living Water Church
345 N. Wolf Road
Appearance Approval of an Awning Sign
 - B) [Docket No. SCBA 18-31](#)**
Champro
1175 Wheeling Road
Appearance Approval of a Freestanding Sign
- 7. ITEMS FOR REVIEW**
 - A) [Docket No. SCBA 18-32](#)**
Amvets
700 McHenry Road
Appearance Approval of a Freestanding Sign

- B)** [Docket No. PC 18-13](#)
 Awesome Design
 2220 Foster Avenue
 Minor Site Plan and Appearance Approval of Building and Site Modifications
- C)** [Docket No. 2018-13A,B&C](#)
 JV Global Services
 Multiple addresses (see full property description in hearing information below)
 (2018-13A) Text Amendment to Add ‘Transportation Center’ as a Special Use in
 the I-3 General Industrial District
 (2018-13B) Rezoning from I-1 Light Industrial and Office District and R-1A
 Single-Family Residential District to I-3 General Industrial District
 (2018-13C) Special Use-Site Plan Approval of a Transportation Center

8. APPROVAL OF MINUTES – none

9. OTHER BUSINESS

10. ADJOURNMENT

THIS MEETING WILL STREAM LIVE AND TELEVISED ON WHEELING’S CABLE CHANNELS 17 & 99.
IF YOU WOULD LIKE TO ATTEND A VILLAGE MEETING BUT REQUIRE AUXILIARY AID SUCH AS A SIGN
LANGUAGE INTERPRETER, PLEASE CALL (847) 459-2600 AT LEAST 72 HOURS PRIOR TO THE MEETING.

**Public Hearing Information
Wheeling Plan Commission Meeting
July 12, 2018
(Attachment to Agenda)**

2018-13 JV Global Services, LLC, contract property owner, is seeking the following actions for Lots 1 through 8 of the Wolf Road Estates, the adjacent vacant lots north of Debra Lane and east of Wolf Road, and the existing Carol Avenue right-of-way:

2018-13 (A) A text amendment to Title 19 Zoning, of the Wheeling Municipal Code, to add ‘Transportation Center’ as a Special Use in the I-3 General Industrial District (Under Appendix A, Use Table); and

2018-13 (B) Rezoning the property from I-1 Light Industrial and Office District and R-1A Single-Family Residential District entirely to I-3 General Industrial District; and

2018-13 (C) Special Use-Site Plan Approval as required under Chapter 19-07 Industrial Districts, Chapter 19-10 Use Regulations, and Chapter 19-12 Site Plan Approval Requirements, and associated sections, in order to establish a Transportation Center in the I-3 General Industrial District.

REQUEST FOR PLAN COMMISSION ACTION
STAFF PROJECT REVIEW

TO: Chairperson Ruffatto and Members of the
Wheeling Plan Commission

FROM: Andrew C. Jennings, Director of Community Development
Brooke A. Casolari, Senior Planner

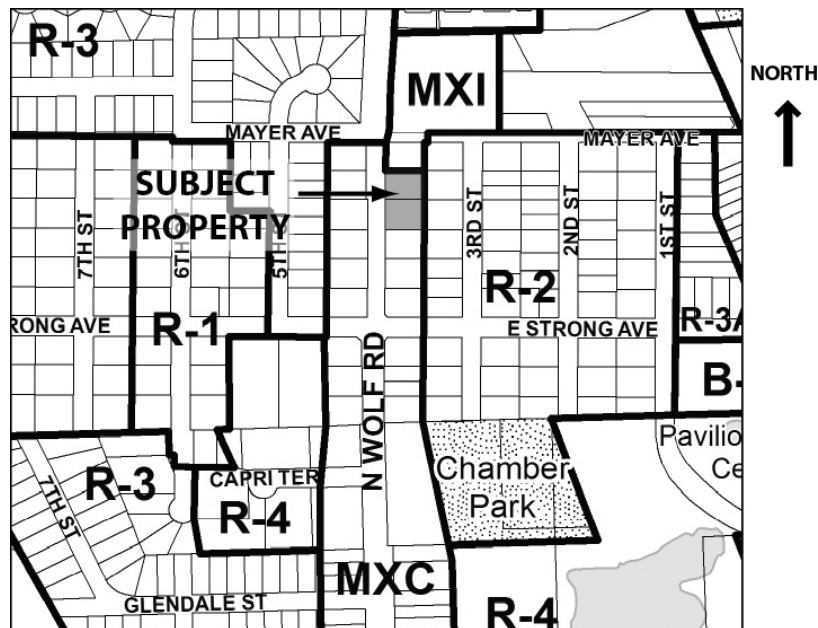
RE: **Docket No. SCBA 18-30**
Rivers of Living Water Church
345 N. Wolf Road
Appearance Approval of an Awning Sign

DATE OF REPORT: July 2, 2018

DATE OF MEETING: July 12, 2018

PROJECT OVERVIEW: The petitioner is requesting appearance approval of an awning sign for a new church.

LOCATION MAP:



GENERAL PROPERTY INFORMATION

<u>Applicant Name:</u>	Pastor Nancy Mendez
<u>Property Owner Name:</u>	345 Wolf Road, LLC
<u>Common Location:</u>	Located on the east side of Wolf Road, south of Mayer Avenue and north of Strong Avenue
<u>Neighboring Property Land Use(s):</u>	North: Industrial West: Commercial South: Single-Family Residential East: Single-Family Residential

Existing Use of Property: Religious assembly (7,433 sq. ft.) and office (861 sq. ft.)

Existing Property Zoning: MXC Commercial Residential Mixed Use District

Previous Relevant Zoning Action on Property:
None.

DESCRIPTION OF PROPOSAL

The petitioner, a new church, is requesting appearance approval to install a an awning with signage over the main entrance to the building.

SIGN REVIEW

Sign Location: The awning sign will be located above the main entry door on the west façade of the building, facing Wolf Road. The awning will have a clearance of eight feet from grade.

Proposed Signage Size, Type and Materials: For its primary identification signage, the petitioner is proposing to install a blue Sunbrella awning above the main entry. The awning will project from the existing mansard-style roof that is located on the office-portion of the building. The awning will have signage on the shed portion of the structure. It will include white lettering stating the church name in English and Spanish. It will also include color image of running water with a bible verse. The total sign area is 44 sq. ft. (11' x 4').

The proposed sign meets the requirements of the Sign Code.

STAFF REVIEW

Impact on adjacent uses: No impact on adjacent uses is expected.

Staff Recommended Action: Staff recommends approval of the awning sign.

PROPOSED MOTION

If the Plan Commission approves of the requested awning sign, an appropriate motion would be to:

Approve Docket No. SCBA 18-30 to grant appearance approval for an awning sign in accordance with the awning plan submitted June 22, 2018 for Rivers of Living Water Christian Church, located at 345 N. Wolf Road, Wheeling, Illinois.


Andrew C. Jennings, AICP
Director of Community Development

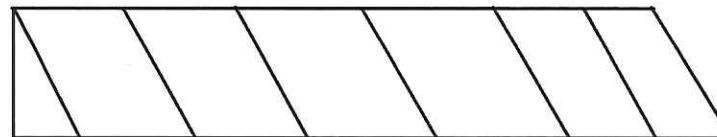
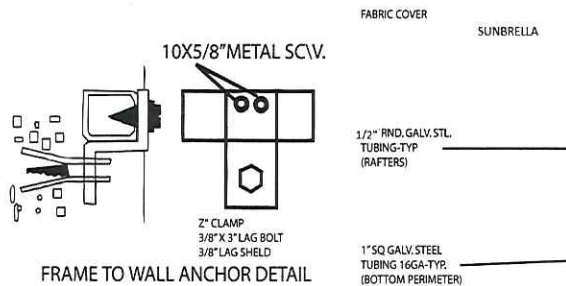
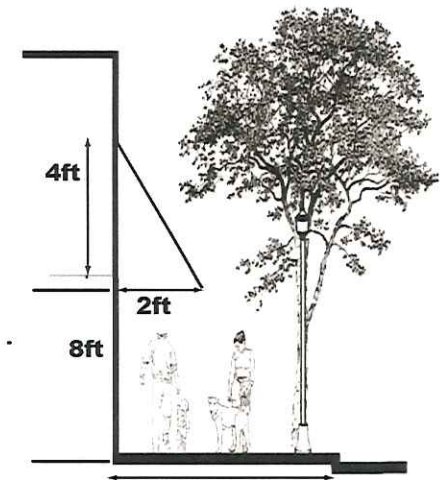

Brooke A. Casolari
Senior Planner

Attachments: [Photo of existing conditions \(staff\)](#)
[Awning sign plan](#)

Rivers of Living Water Church – 345 N. Wolf Road
Docket No. SCBA 18- 30 (Appearance Approval of an Awning Sign)



Existing conditions of building entry (looking east)



Client: Iglesia Rios de Agua Viva
 Address: 345 N Wolf Rd Wheeling, IL 60090
 Scale: Drawn By: Jesus

Drawing #: 1
 Date: 6/15/2018
 Rev Date:

All sign and concepts shown here are confidential and are the property of All-her SignsCo. They are not to be distributed, copied or otherwise used without our written permission.
 COMPUTER GENERATED COLORS ARE NOT A TRUE MATCH TO ANY PMS. VINYL OR PAINT.
 Exhibit received June 22, 2018

REQUEST FOR PLAN COMMISSION ACTION
STAFF PROJECT REVIEW

TO: Chairperson Ruffatto and Members of the
Wheeling Plan Commission

FROM: Andrew C. Jennings, Director of Community Development
Brooke A. Casolari, Senior Planner

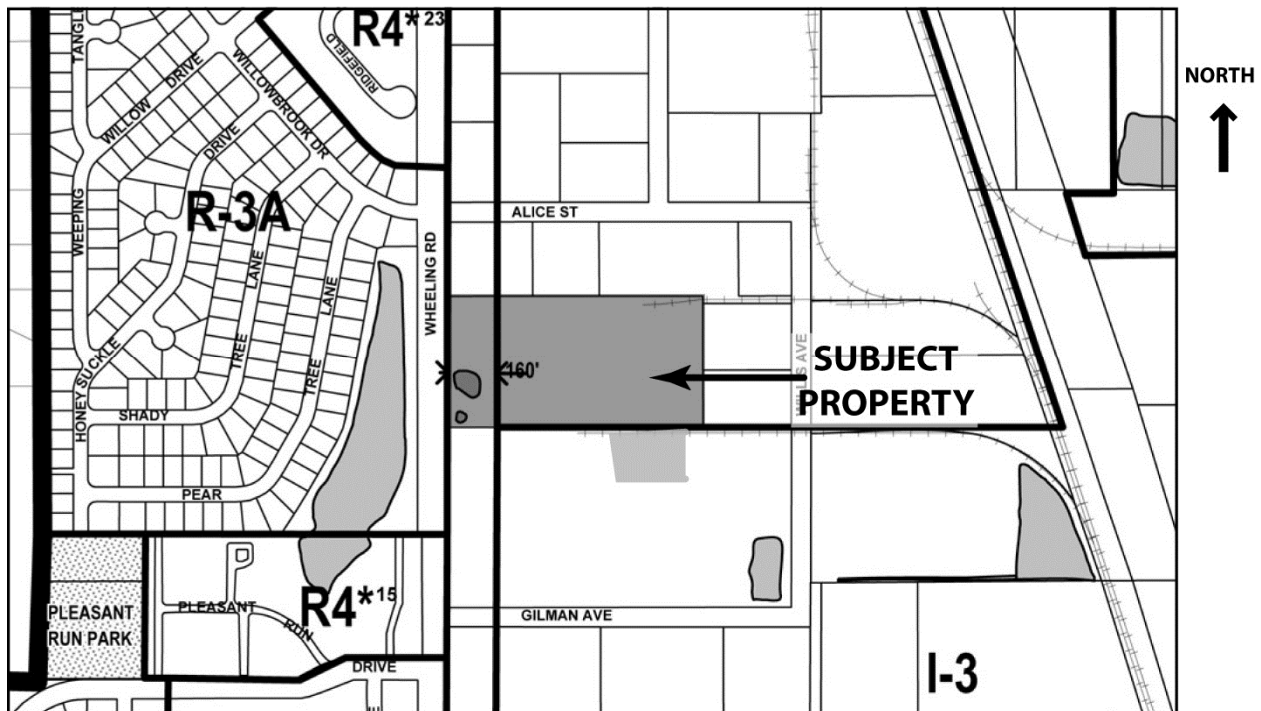
RE: **Docket No. SCBA 18-31**
Champro
1175 Wheeling Road
Appearance Approval of a Freestanding Sign

DATE OF REPORT: June 26, 2018

DATE OF MEETING: July 12, 2018

PROJECT OVERVIEW: The petitioner is seeking appearance approval to modify an existing monument sign at an existing industrial business.

LOCATION MAP:



GENERAL PROPERTY INFORMATION

Applicant Name: Doyle Signs

Property Owner Name: Wilson F Hunt Jr.

Common Location: Located on the east side of Wheeling Road,
between Alice Street and Gilman Avenue.

<u>Neighboring Property Land Use(s):</u>	North: Industrial West: Single-Family Residential South: Industrial East: Industrial
<u>Comprehensive Plan Designation:</u>	Industrial
<u>Existing Use of Property:</u>	Industrial
<u>Existing Property Zoning:</u>	I-1 Light Industrial and Office District & I-2 Limited Industrial District
<u>Previous Relevant Zoning Action on Property:</u>	
PC 459	Appearance approval of a freestanding sign, 1999
SCBA 8-24	Appearance approval of modifications to a freestanding sign

PROJECT DESCRIPTION

The petitioner, which warehouses and distributes sporting goods equipment and apparel from this location, is requesting appearance approval to modify the face of an existing monument sign. A new landscape plan is also proposed.

SIGN REVIEW

Sign Location: The petitioner is proposing to modify the sign face of an existing freestanding sign that was approved in 1999. The existing sign includes an 11-foot setback.

Sign Type, Materials and Size: The existing double-sided, monument-style, freestanding sign has a sign face area of approximately 75 sq. ft. (6' x 12.5'). The sign has a height of six feet from grade. The sign is non-illuminated. A new logo and lettering will replace the existing. The logo and lettering would be black and individually-mounted to the face of the sign. The area of the new signage is 10.84 sq. ft. The proposed sign meets the requirements of the Sign Code.

Landscaping: The existing sign currently does not have landscaping. The proposal requires 150 sq. ft. of landscaping for the double-faced sign. The proposed landscaping area is approximately 230 sq ft. It consists of dwarf evergreens (boxwoods), winter interest (pink heath), deciduous shrubs (roseglow barberry) and unspecified annual flowers. The proposed landscape plan meets the requirements of the Sign Code.

STAFF REVIEW

Impact on Adjacent Uses: No impact on adjacent uses is expected.

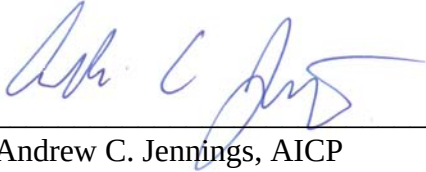
Staff Recommended Action: Staff recommends approval of the proposed freestanding sign.

PROPOSED MOTION

If the Plan Commission finds that the petitioner has satisfied the requirements for appearance approval of the sign, an appropriate motion would be to:

Approve Docket No. SCBA 18-31 to permit modifications to an existing freestanding sign in accordance with the following exhibits submitted June 25, 2018 for Champro, located at 1175 Wheeling Road, Wheeling, Illinois:

- Photo of existing sign,
- Monument sign plans (2 sheets), and
- Landscape plan.



Andrew C. Jennings, AICP
Director of Community Development



Brooke A. Casolari
Senior Planner

Attachments: [Photos of existing conditions \(staff\)](#)

[Photo of existing sign](#)

[Monument sign plans](#)

[Landscape plan](#)

Champro – 1175 Wheeling Road

Docket No. SCBA 18- 31 (Appearance Approval of a Freestanding Sign)



Existing conditions of sign (looking north)
The sign is covered by a temporary banner.



Exhibit received June 25, 2018

Mock Up



Exhibit received June 25, 2018



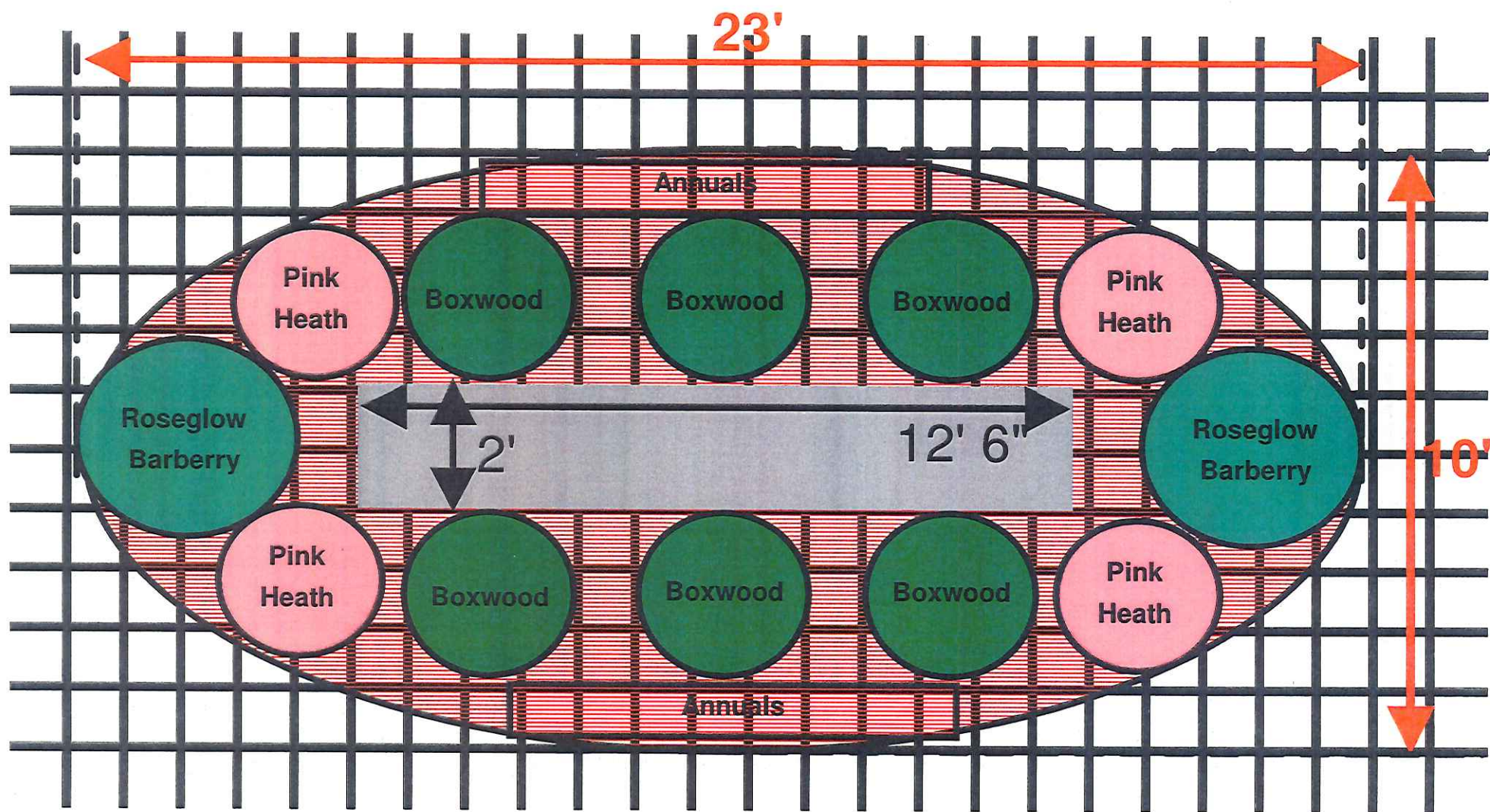
FRONT SIGN

04.09.18

Logo Dimensions



Exhibit received June 25, 2018



REQUEST FOR PLAN COMMISSION ACTION
STAFF PROJECT REVIEW

TO: Chairperson Ruffatto and Members of the
Wheeling Plan Commission

FROM: Andrew C. Jennings, Director of Community Development
Brooke A. Casolari, Senior Planner

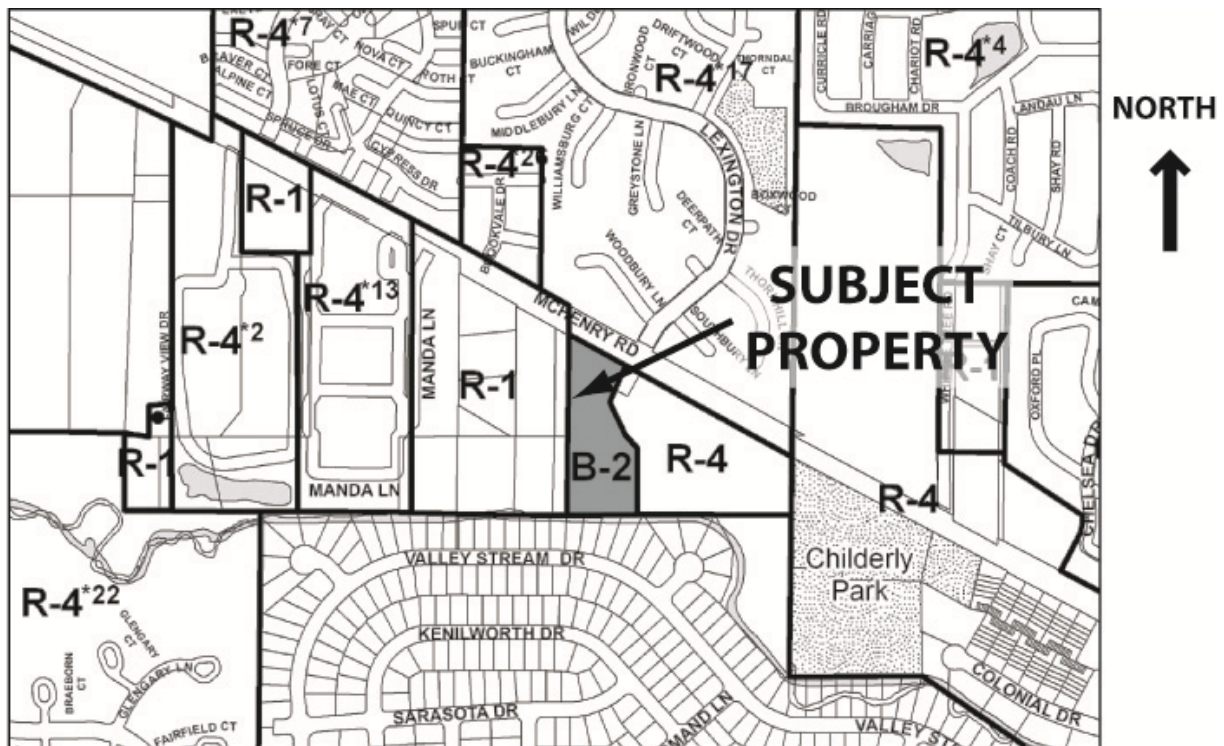
RE: **Docket No. SCBA 18-32**
Amvets
700 McHenry Road
Appearance Approval of a Freestanding Sign

DATE OF REPORT: July 2, 2018

DATE OF MEETING: July 12, 2018

PROJECT OVERVIEW: The petitioner is requesting appearance approval of modifications to an existing freestanding sign for Amvets.

LOCATION MAP:



GENERAL PROPERTY INFORMATION

<u>Applicant Name:</u>	Tony Alteri, Amvets
<u>Property Owner Name:</u>	Amvets
<u>Common Location:</u>	Located on the west side of McHenry Road, at the intersection with Lexington Drive
<u>Neighboring Property Land Use(s):</u>	North: Multi-family Residential

West: Religious assembly
South: Single-family residential
East: Multi-family Residential (Park Pointe)

Existing Use of Property: Commercial

Existing Property Zoning: B-2 Neighborhood Commercial District

Previous Relevant Zoning Action on Property:

445 Variations for freestanding sign (Ord. 1476, approved 3.21.1977)

DESCRIPTION OF PROPOSAL

The petitioner is requesting appearance approval to modify an existing pole sign. The proposal is to replace the changeable copy area with an electronic messaging sign. The electronic messaging sign will be double-sided, like the manual changeable copy area.

SIGN REVIEW

Sign Location: No changes to the existing location are proposed. The sign has a variation to reduce the required 15 foot setback to only five feet.

Sign Type, Materials and Size: The petitioner is proposing to replace the existing changeable copy area of the sign to a double-sided LED message board. The color LED message board will be double sided, like the other cabinets of the freestanding sign. The LED cabinet will be 3'5.25" x 7'7.75" (26.28 sq. ft.) in size. The new total area of each sign face will be 71 sq. ft. The overall height of the sign, 17 feet, is not changing.

The proposed sign meets the size requirements of the Sign Code.

Landscaping: The applicant is requesting a waiver from the Sign Code to not install landscaping. The cover letter states the justification is that the sign is very close to the side property line and the existing parking lot. The sign received a variation in 1977 to reduce the required side setback from 15 feet to five feet. The existing parking lot is also located less than two feet from the pole of the existing sign. There is limited space for installation of landscaping.

The Plan Commission should discuss if the proposed landscaping waiver is warranted.

STAFF REVIEW

Impact on adjacent uses: Little impact on adjacent uses is expected.

Staff Recommended Action: Staff recommends that the Plan Commission discuss the proposed waiver of landscaping. If the Plan Commission approves of the landscaping waiver, then staff recommends approval of the sign. If the Plan Commission does not agree to waive the landscaping requirement, then the Plan Commission may wish to table the motion until a landscape plan is provided for review.

PROPOSED MOTION

If the Plan Commission approves of the requested freestanding sign, an appropriate motion would be to:

Approve Docket No. SCBA 18-32 to grant appearance approval of the modifications to the existing freestanding sign in accordance with the cover letter and sign plan submitted June 22, 2018 by Amvets, located at 700 McHenry Road, Wheeling, Illinois.



Andrew C. Jennings, AICP
Director of Community Development



Brooke A. Casolari
Senior Planner

Attachments: [Existing conditions photo \(staff\)](#)

 [Cover letter](#)

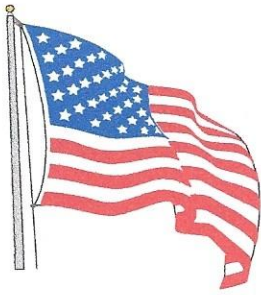
 [Sign plan](#)

Amvets – 700 McHenry Road

Docket No. SCBA 18- 32 (Appearance Approval of a Freestanding Sign)



Existing conditions of sign (looking north)



AMVETS
Phillip Carpenter Post 66
700 McHenry Road
Wheeling, Illinois 60090
(847) 537-0440
Fax (847) 537-0434
E-Mail: post066@yahoo.com



April 24, 2018

Director of Community Development
2 Community Blvd.
Village of Wheeling, IL 60090

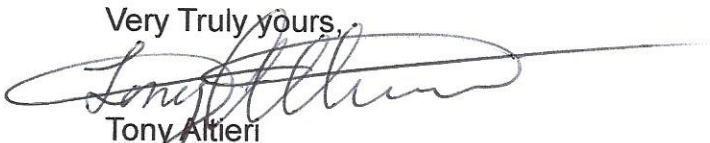
We respectfully request waivers from the Village of Wheeling Free Standing Sign Code.

Specifically:

1. Ordinance #1476. Section A, #1 – We wish to replace the center portion of the existing sign with a new two-sided programmable sign of approximately the same size as the one being replaced.
2. We are requesting a waiver from General Requirement D, Landscape Requirement. Our existing sign is very close to the property line on one side and our existing parking lot on the other side. Therefore no space is available to install landscaping.

Your consideration and approval of our request is appreciated.

Very Truly yours,



Tony Altieri
Commander, AMVETS Post 66

New LED Signage Rendering

Outdoor LED Signage Pole Mount

Model# MP16-37-RFC M/S

Option - Double Sided Signage



3' 5-1/4"(h) x 7' 7-3/4"(w)

16mm Pitch Full Color Outdoor LED

Active Viewing Area (ft): 3' 1-3/4" x 7' 4-1/4"

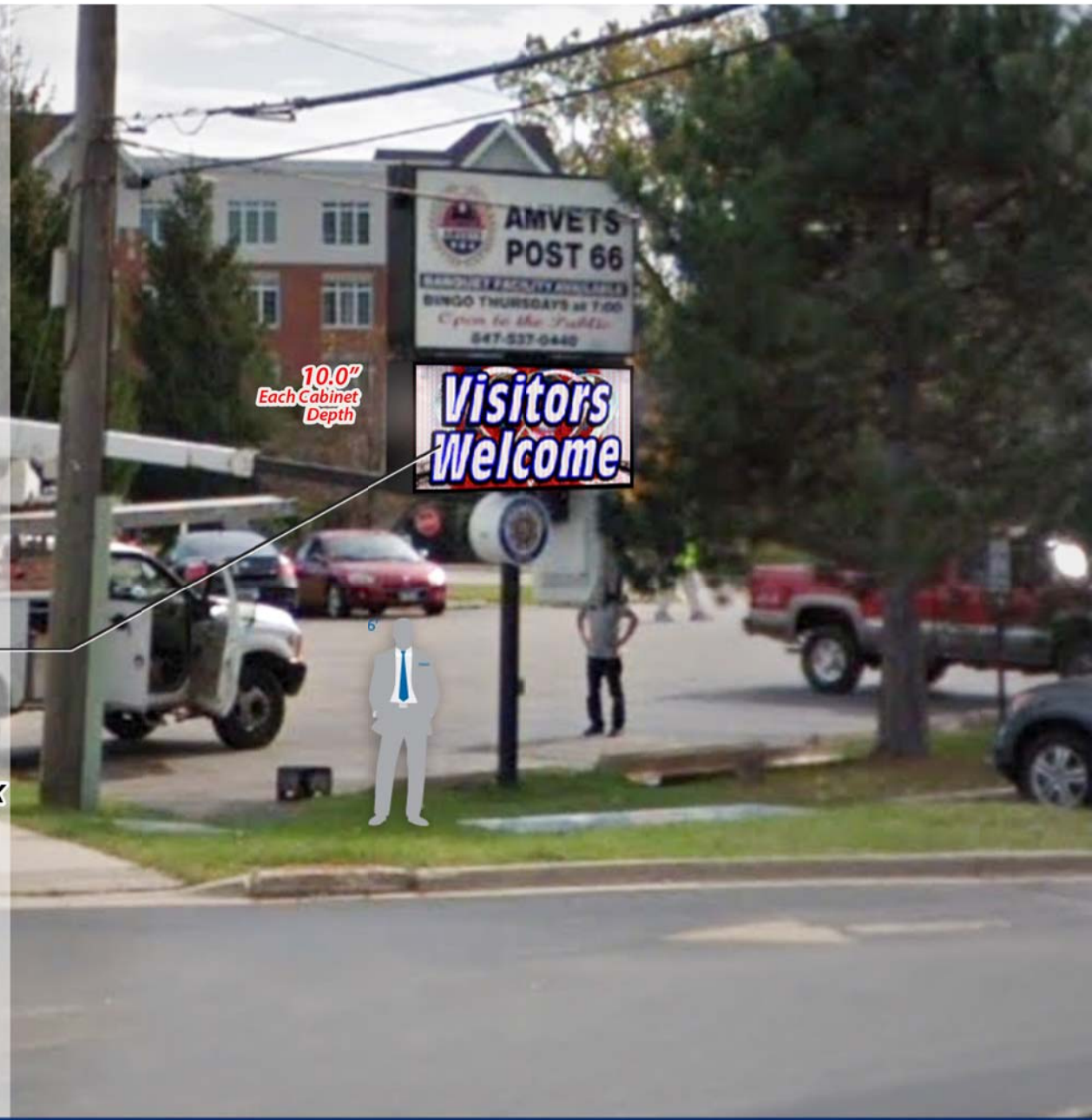
60 x 140 Pixel Dimension, 3x7 Module Matrix

PC / Wifi Wireless Data Input

Text / HD Images / Video Content Available



Weatherproof
Coated Frame



REQUEST FOR PLAN COMMISSION ACTION
STAFF PROJECT REVIEW

TO: Chairperson Ruffatto and Members of the
Wheeling Plan Commission

FROM: Andrew C. Jennings, Director of Community Development
Brooke A. Jones, Senior Planner

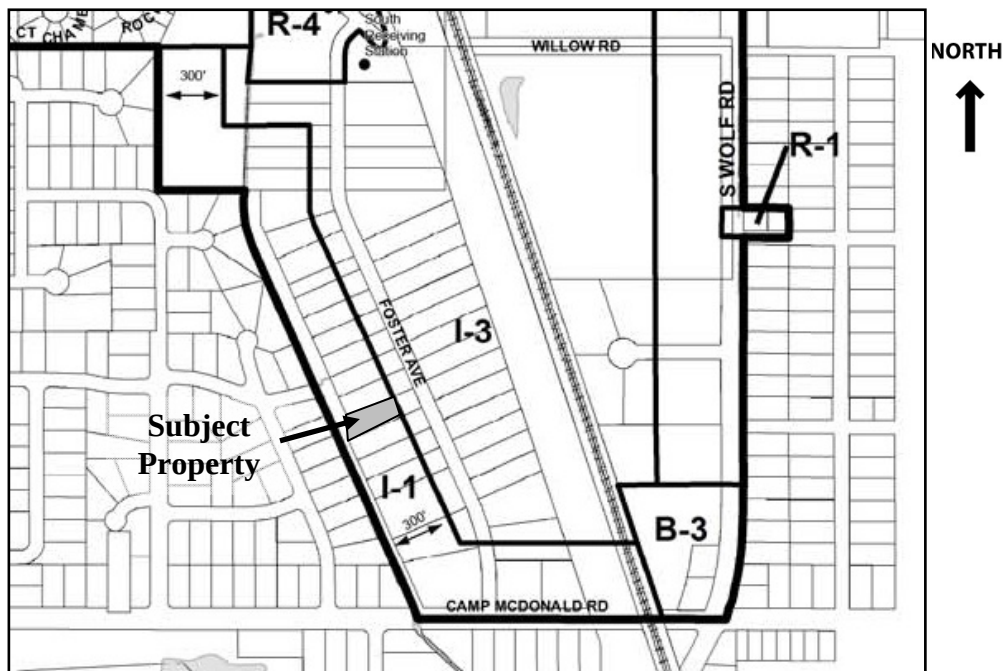
RE: **Docket No. PC 18-13**
Awesome Design
2220 Foster Ave.
Minor Site Plan and Appearance Approval of Building and Site
Modifications

DATE OF REPORT: July 9, 2018

DATE OF MEETING: July 12, 2018

PROJECT OVERVIEW: The petitioner requests minor site plan and appearance approval for building and site modifications and is seeking special consideration to allow an eight foot fence, whereas 6 foot is permitted, to enclose the rear yard.

LOCATION MAP:



GENERAL PROPERTY INFORMATION

<u>Applicant Name:</u>	Jason Roszkowiak, Awesome Design, Police 429, LLC
<u>Property Owner:</u>	Police 429, LLC
<u>Common Location:</u>	Located on the south side of Messner Drive, east of Peterson Drive

<u>Neighboring Property Land Use(s):</u>	North: Industrial West: Single-Family Residential (Prospect Heights) South: Industrial East: Industrial
<u>Comprehensive Plan Designation:</u>	Industrial
<u>Property Size:</u>	35,000 sq. ft. for entire site; 8,001 sq. ft. for the building
<u>Existing Use of Property:</u>	Contractor's shop
<u>Proposed Use of Property:</u>	Contractor's shop
<u>Existing Property Zoning:</u>	I-1 Light Industrial and Office and I-3 General Industrial District
<u>Previous Zoning Action on Property:</u>	None.

DESCRIPTION OF PROPOSAL

The tenant, Awesome Design, which is a general contractor business that operates its contractor's shop from 2220 Foster Avenue, has withdrawn its special use application for outdoor storage. At this time, the applicant is seeking the following two zoning requests:

1. Minor site plan and appearance approval building and site modifications; and
2. An exception from the height limitations of the Zoning Ordinance to allow for an eight-foot fence, whereas six-feet is normally permitted.

The applicant is no longer proposing outdoor storage. However, they are still requesting to fence the rear yard for security. One other site modification is also proposed. The plans include a new overhead garage door on the front (east) façade of the building, which faces Foster Avenue. This modification will also cause the loss of two parking stalls in the front parking lot.

Whenever rear or side lot lines abut major highways or roadways, or other unusual circumstances exist, a special permit allowing fences and landscape screens not conforming to the fencing limitations of the Zoning Ordinance may be issued by the Village Zoning Administrator (Director of Community Development) to a height not exceeding eight (8) feet. The Plan Commission in reviewing the minor site plan and appearance modifications, shall also make a determination regarding the requested fence height.

SITE PLAN & APPEARANCE REVIEW

Site plan: No outdoor storage is proposed for the rear yard. See the discussion on fencing below. Two parking spaces in the front parking lot will need to be removed to accommodate a new overhead garage door on the front façade.

Total Number of Parking Spaces: While the parking lot striping is worn away, the plat of survey indicates 31 existing parking stalls. Two stalls will be displaced by the new overhead garage door on the front façade. 29 spaces is more than adequate for the required parking of the property.

Approximating one-third of the building is used for office, training and retail uses and two-thirds of the building is used for warehousing, then only a total of 16 parking spaces is required by code. The provided parking should also be more than adequate for the future employee growth, which is expected to total no more than 10 employees. A condition of approval has been added to the motion that the parking lots shall be restriped prior to occupancy.

Fencing: An 8-foot tall galvanized chain link fence with barbed wire is proposed for the rear yard. The site plan notes the proposed placement. Three exhibits have been provided to demonstrate the style and materials of the fencing and gates. Title 22 of the Municipal Code, Floodplain Regulations, prohibits fencing in the FEMA Floodway and restricts fencing in the FEMA Flood Zone. While the exact boundaries of the FEMA Flood Zone and Floodplain are unknown at this time, the Village Engineer believes that the petitioner will be able to construct a fence surrounding the rear parking lot. The Plan Commission should make a determination if the 8-foot height is appropriate and if the barbed wire is acceptable.

Building Appearance: An overhead garage door is planned for the front (east) façade of the building. The door is 14 feet wide and 12 feet high. Sheet A-1 provides details. The location of the new door will displace two parking stalls.

STAFF REVIEW

Fire Department Review: The Fire Department has submitted comments dated July 3, 2018. The comments can be addressed at permit.

Engineering Division Review: The Engineering Division has reviewed the plans and has provided a memo dated July 3, 2018. The proposed fence is subject to further review from the Engineering Division. It appears that the rear yard of the subject property is located in the FEMA Floodway and Flood Zone. Fences are prohibited in the floodway. If a fence is placed in the flood zone, it must have at least a 3-inch gap between the bottom of the fence and the existing grade to allow flood waters to pass freely. The Village Engineer believes that the petitioner will be able to construct a fence surrounding the rear parking lot that meets Title 22 of the Municipal Code.

Impact on Adjacent Uses: The Plan Commission should make a determination as to whether the 8-foot chain link fence with barbed wire is appropriate for the location.

Staff Recommended Action: After reviewing the proposal, staff suggests the Plan Commission make a determination regarding the 8-foot high chain link fence with barbed wire prior to making a motion on the minor site plan and appearance modifications.

PROPOSED MOTION

If the Plan Commission approves of the requested minor site plan and appearance modifications, an appropriate motion would be to:

Approved Docket No. PC 18-13 to grant minor site plan and appearance approval for building and site modifications in accordance with the following exhibits submitted July 9, 2018 (except as noted), on behalf of Awesome Design, located at 2220 Foster Avenue, Wheeling, Illinois:

Wheeling Plan Commission

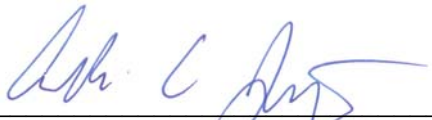
Meeting date: July 12, 2018

RE: Docket No. PC 18-13

- Project description (2 sheets),
- Plat of survey with proposed fencing overlay,
- Site plan noting fencing June 27, 2018
- Fence and gate exhibits (3 sheets), June 27, 2018, and
- Garage door exhibit, A1, June 27, 2018.

And with the following condition of approval:

1. That the parking lots shall be restriped prior to occupancy; and
2. That the fence shall meet the floodplain requirements of Title 22; and



Andrew C. Jennings, AICP
Director of Community Development



Brooke A. Casolari
Senior Planner

Attachments: [Photos of existing conditions \(staff\)](#)

[Fire Department comments, 7.03.2018](#)

[Engineering Division comments, 7.03.2018](#)

[Project description](#)

[Plat of survey with proposed fencing overlay](#)

[Site plan noting fencing](#)

[Fence and gate exhibits](#)

[Garage door exhibit, A-1](#)

Awesome Design – 2220 Foster Avenue

Docket No. PC 18-13 (Minor Site Plan and Appearance Approval of Building and Site Modifications)



Existing conditions – east elevation

Awesome Design – 2220 Foster Avenue

Docket No. PC 18-13 (Minor Site Plan and Appearance Approval of Building and Site Modifications)



Existing conditions of rear of building

Awesome Design – 2220 Foster Avenue

Docket No. PC 18-13 (Minor Site Plan and Appearance Approval of Building and Site Modifications)



Existing conditions of rear parking lot – looking north



MEMO – Fire Prevention Bureau

TO: Brooke Casolari, Village Planner
FROM: Ronald S. Antor, Fire Inspector
CC: Andrew Jennings, Director of Community Development
Keith MacIsaac, Fire Chief
FPB File
DATE: July 3, 2018
SUBJECT: Proposed Building Improvements and Permanent Use of a 20' x 8' (160 square foot) Outdoor Storage Container – 2220-2222 South Foster Avenue – Awesome Design – Plans received for review by the Fire Department, June 25, 2018 and June 27, 2018.

The Wheeling Fire Department has reviewed the submittals received related to the above referenced project and has the following comments:

Site Plan

1. The proposed plans show the addition of a new 20' x 8' storage container to be located in the area of the northwest corner of the rear parking lot.
2. A new fence and gate securing the rear parking lot area is proposed.

2220-2222 South Foster Avenue – Awesome Design – Various Building Improvements and New Street Facing Overhead Door

1. Based on the documents submitted for review, the petitioner's proposal includes building improvements and the addition of a new 14'x12' street facing overhead door. The previous occupant was classified as a Mixed Use Occupancy consisting of (F) Factory and (B) Business Use Group occupancies as defined in the 2012 Editions of the International Building Code (IBC) and Fire Prevention Codes (IFC). The proposed occupancy would be classified as a Mixed Use Occupancy consisting of (S) Storage and (B) Business Use Group occupancies with ancillary areas consisting of (A) Assembly Use Group for an employee training room and (M) Mercantile Use Group for a customer showroom.
2. All construction shall comply with the Village's Building and Fire Prevention Codes (2012 Editions of the International Building Code & International Fire Code – with amendments).

2220-2222 South Foster Avenue – Fire Department Recommended Conditions of Approval

1. The outside storage container shall not be used for the storage of any hazardous materials, including fueled equipment.
2. The storage container shall be limited to a maximum footprint of 20' x 8' (160 square foot).

Ms. Brooke Casolari

SUBJECT: Proposed Building Improvements and Permanent Use of a 20' x 8' (160 square foot) Outdoor Storage Container – 2220-2222 South Foster Avenue – Awesome Design – Plans received for review by the Fire Department, June 25, 2018 and June 27, 2018.

July 3, 2018

Page 2

3. No additional storage containers, sheds or similar structures are allowed for outside storage.
4. A Fire Department approved Knox Box shall be provided at the fence entrance if the gate is locked.

At this time there are no other Fire Department comments related to the project as presented in the documents reviewed.



MEMORANDUM

TO: Brooke Casolari, Senior Planner

FROM: Kyle Goetzelmann, Civil Engineer I

COPY: Jon Tack, Village Engineer

DATE: July 3rd, 2018

SUBJECT: **Awesome Design – Site Plan Review**
2220 Foster Ave. - Review Comments

The Engineering Division received a Project Description and Preliminary Site Plan for the subject project on June 27th, 2018. The Engineering Division has completed a review of the above referenced submittal and offers the following comments at this time:

1. The FEMA Flood Insurance Rate Map indicates that the rear of the property is located in the floodway and 100 year flood zone. A topographic survey will need to be provided by a professional land surveyor to determine the floodway and flood zone boundaries.
2. If floodway/flood zone exists in the rear property, all development/construction will adhere to Title 22 of the Village code and will required a floodplain development permit.
3. Any “drainage system” installation outside of the building boundary is going to require an engineering permit and additional review.
4. Village of Wheeling flood protection elevation is defined as 1 foot above the base flood elevation (100 year flood zone boundary).
5. Outdoor material storage below the flood protection elevation is not an “acceptable use” within the flood zone. If storage below the flood protection elevation is required, all materials must be located in an anchored, flood proofed storage facility.
6. Fence installation is not permitted within the floodway. Fence can be installed within the 100 year flood zone as long as there is a 3” gap between the bottom of the fence and existing grade to allow flood waters to pass freely.



33 NORTH LASALLE STREET, 28TH FLOOR CHICAGO, ILLINOIS 60602
BRIAN P. LISTON (312) 580-1594 PETER TSANTILIS (312) 604-3808 FACSIMILE (312) 580-1592

July 9, 2018

Brooke Casolari
Village of Wheeling
2 Community Boulevard
Wheeling, IL 60090

RE: Site Plan and Appearance Modifications
Police 429 LLC
2220-22 S. Foster Avenue
Wheeling, Illinois 60090
PIN: 03-23-406-011-0000

Dear Brooke:

Police 429, LLC ("Applicant") recently purchased the vacant property located at 2220-22 S. Foster Avenue in Wheeling, IL (the "Property") and respectfully requests the Village of Wheeling approves our Site Plan and Appearance Modifications application to construct an eight-foot fence in the rear yard of the Property and an overhead door to the front of the building. Applicant will lease the Property to two related entities, Awesome Design Contracting and Awesome Design Plumbing (collectively, "Awesome Design"), for warehousing and showroom purposes.

The Property consists of approximately 35,000 square feet of land space and contains an approximately 7,998 square foot building. The previous tenant, Technatool, Inc. began winding down its operations at the Property on October 1, 2017, which it completely vacated on December 4, 2017. The site has been 100% vacant and unused since this date.

To make the Property suitable for Awesome Design's proposed use, Applicant intends to construct an eight-foot fence to entirely enclose the rear parking area along with the following improvements:

- Installation of a new roof
- Installation of new windows
- Installation of new HVAC system
- Tuck pointing
- Installation of new indoor drainage system
- Addition of new drive-in door to the front of the building

Awesome Design, a licensed, bonded, and insured contractor, will perform the substantial rehabilitation work itself. It estimates the costs associated with its proposed development at

Exhibit received July, 9 2018

LISTON & TSANTILIS

\$335,000, while a second estimate Applicant obtained from an independent contractor to verify its own estimate, SkyLand Builders Inc., projects that the proposed rehabilitation work will cost approximately \$385,000.

Established in 2004, Awesome Design specializes in everything from plumbing, HVAC, remodeling, excavating, cabinetry, countertops, fireplace work, additions, flooring, generators, windows, doors and more. Awesome Design currently leases 4,500 square feet of building space in Villa Park. It needs additional space to accommodate its growing business and seeks to operate from a property that it owns, rather than rents, to reduce overhead costs. This site presents an ideal location for the warehousing and distribution of Awesome Design's inventory. In compliance with the Village's Zoning Ordinance, Applicant will only use 800 sq. ft. of the building as a showroom for its products and services, which is 10% of the building's square footage.

Awesome Design currently operates Monday through Friday, 8:00 am to 4:30 pm and has 3 full-time employees and 2 part-time employees, all of whom will be invited to relocate to Wheeling with the company. Within the next year, Awesome Design intends to hire approximately 2-3 more full-time employees and 2 more part-time employees to work at the Property. Moreover, Awesome Design attends career nights at local high schools and hires local high school students as interns during the summer months to help them understand the value and benefit of knowing the construction and plumbing trades. Awesome Design will look to hire qualified Village of Wheeling residents for these and other available positions and requests additional information regarding the Village's job fairs and boards.

Awesome Design Contracting and Awesome Plumbing will park company vehicles in its rear yard. Jason Roszkowiak, an owner of Applicant and Awesome Design Contracting and Awesome Plumbing, has learned from conversations with numerous neighbors that they have dealt with trespassing issues especially with the presence of the creek running directly behind the Property. As a former Des Plaines police officer, Mr. Roszkowiak has firsthand knowledge that an eight-foot fence provides much more protection and better deters property theft than six-foot fences. Further, the proposed fence will have no negative impact on Wheeling residents, the neighborhood or the community-at-the fence. It will not be located within the floodway that runs behind the Property, there will be a 3-inch gap off the ground, and it will be chain-link, allowing for any major flood waters to pass straight through it. The tall trees that run alongside the creek provide a full screen of the fence from the residential neighborhood that is located behind the Property. The addition of the drive-in door to the front of the building will allow for easier access to the building for delivery drivers and will be similar to the other properties along Foster Avenue with front drive-in doors. As such, we respectfully request Wheeling's approval of our petition to construct the eight-foot fence and the drive-in door.

If you have questions or concerns, or require additional information, please contact me at 312-604-3818.

Regards,



Thomas Goodwyn

Exhibit received July, 9 2018

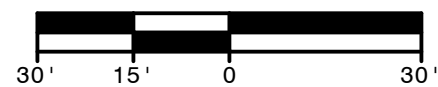
ALTA/NSPS LAND TITLE SURVEY

OF

LOT 28 IN PALWAUKEE INDUSTRIAL PARK A SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 23,
TOWNSHIP 42 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

LEGEND

EXISTING BOUNDARY	EXIST. MANHOLE
EXISTING EASEMENT	EXIST. CATCH BASIN
EXISTING SETBACK	EXIST. CURB INLET
EXISTING FENCE	STORM SEWER
EXISTING BUILDING	SANITARY SEWER
CENTER LINE	WATER VALVE
B.E. BUILDING LINE	BUFFALO BOX (B-BOX)
F.I.P. FOUND IRON PIPE	WATER VALVE & VAULT
T/F TOP OF FOUNDATION	FIRE HYDRANT
G/F GARAGE FLOOR ELEVATION	GAS METER
ASPHALT SURFACE	ELECTRIC METER
BUILDING/STRUCTURE	ELECTRIC PEDESTAL
CONCRETE SURFACE	UTILITY POLE
	PHONE PEDESTAL
	CABLE TV PEDESTAL
	LIGHT POST
	FENCE LINE
	STREET SIGN
	DOWNSPOUT
	TREE



BASIS OF BEARING:
WESTERLY LINE OF FOSTER AVENUE AS
FOUND MONUMENTED AND OCCUPIED PER
RECORD SUBDIVISION PLAT.
S 15°21'54" E (A)

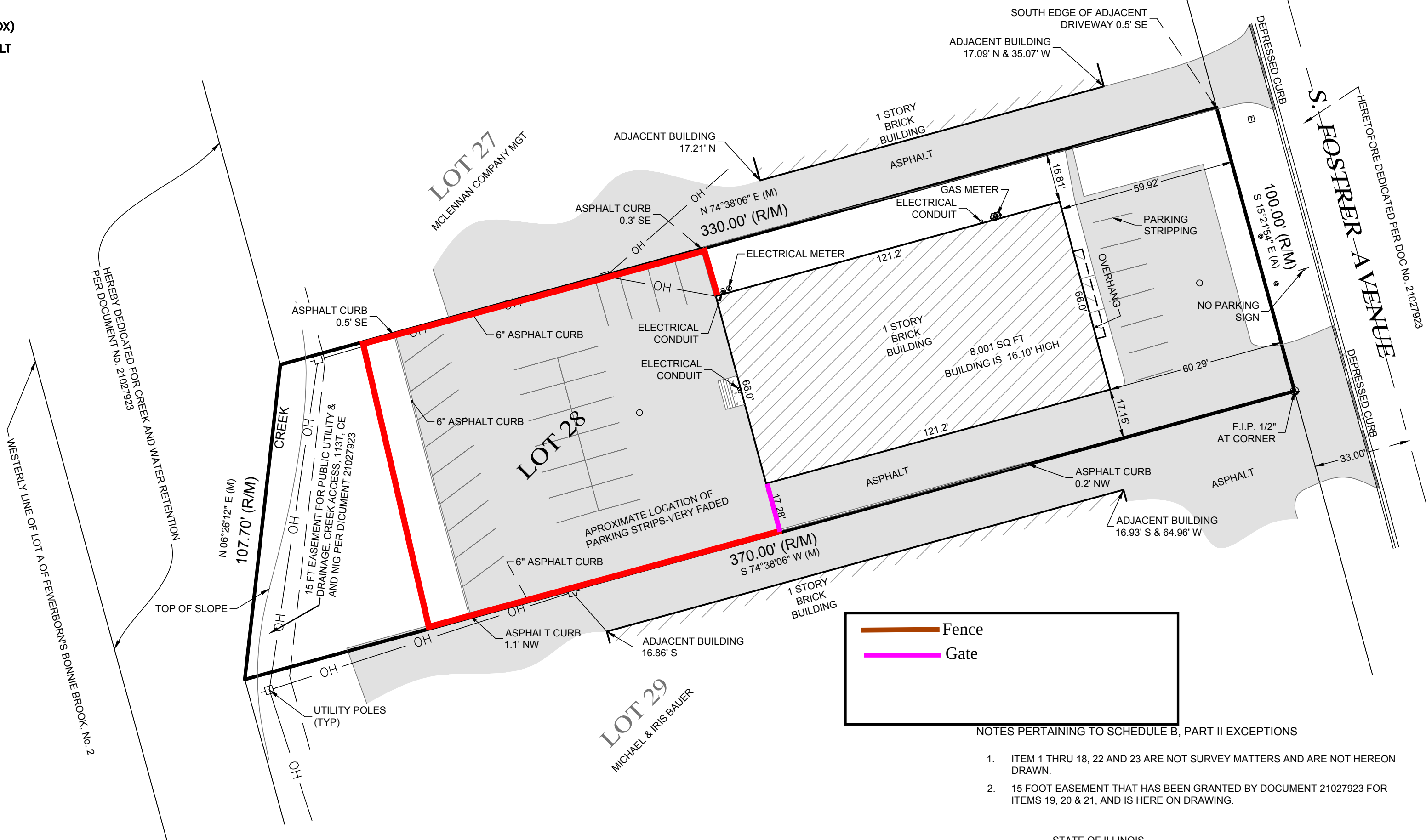
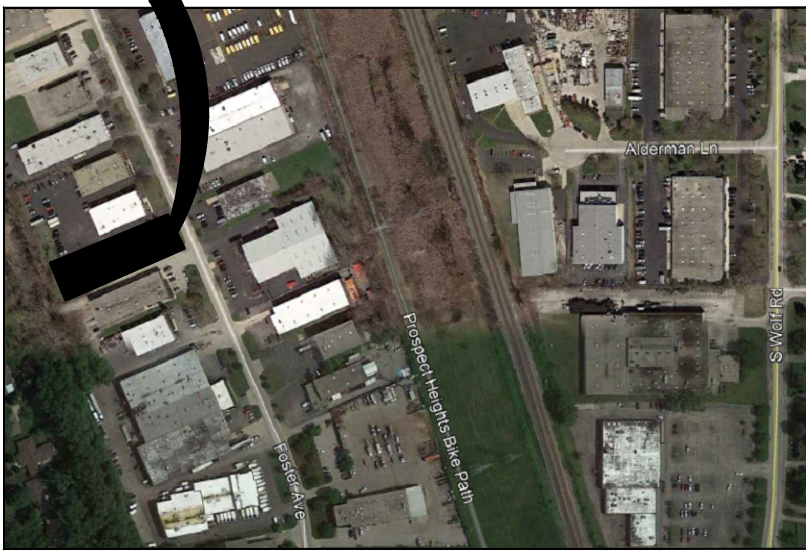


Exhibit received July, 9 2018

SITE



LOCATION MAP

GENERAL NOTES:

- UTILITIES ARE LOCATED USING VISIBLE SURFACE FEATURES PURSUANT TO SECTION 5.E.IV OF STANDARDS. FOR ACTUAL LOCATION OF UTILITIES SHOWN OR NOT SHOWN, PLEASE CONTACT J.U.L.I.E. AT 1-800-892-0123.
- PROPERTY INDEX NUMBER FOR THE LAND DESCRIBED IN THE LEGAL DESCRIPTION HEREON IS 03-23-406-011-0000
- COMMON ADDRESS OF PROPERTY IS: 2220-22 S. FOSTER AVENUE, WHEELING, ILLINOIS.
- PROPERTY IS SHOWN IN A ZONE "AE" FLOOD HAZARD AREA PER FLOOD INSURANCE RATE MAP PANEL NUMBER 17031C 0206J, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITH AN EFFECTIVE DATE OF AUGUST 19, 2008.
- SUB-SURFACE (UNDERGROUND) UTILITY INFORMATION WAS NEITHER TRACED NOR LOCATED AS A PART OF THIS SURVEY.
- TOTAL AREA AS DESCRIBED IN THE BOUNDARY DESCRIPTION OF THIS SURVEY IS 35,000 SQUARE FEET OR 0.803 ACRES.
- PROPERTY HAS DIRECT ACCESS TO S. FOSTER AVENUE, PUBLICLY DEDICATED, USED AND MAINTAINED RIGHT OF WAY.

- UTILIZING FOUND BOUNDARY MONUMENTS IN, ON AND AROUND SITE RESULTED IN A RELATIVE POSITIONAL PRECISION THAT EXCEEDS THE MAXIMUM ALLOWED PURSUANT TO SECTION 3.E.V
- THERE ARE NO DELINEATED WETLANDS ON THE SITE LEGALLY DESCRIBED HEREON, PER TABLE A ITEM 18.
- SURVEYOR HAS NO KNOWLEDGE OF ANY CHANGES IN STREET RIGHT OF WAY LINES CONTEMPLATED OR PROPOSED PER TABLE A, ITEM 17.
- SURVEYOR FOUND NO EVIDENCE OF ANY RECENT MAJOR EARTH WORK, OR RECENT MAJOR CONSTRUCTION PER TABLE A, ITEM 16.
- THERE IS NO VISIBLE INDICATION SITE WAS USED AS A SANITARY WASTE DUMP OR LANDFILL.
- SITE HAS NO SPECIFIED OBSERVED HANDICAP PARKING SPACES.
- THIS SURVEY WAS PREPARED IN PART WITH INFORMATION FROM A COMMITMENT FOR TITLE INSURANCE FROM CHICAGO TITLE INSURANCE CO. KNOWN AS ORDER NUMBER 18PST057240SK WITH AN EFFECTIVE DATE OF JANUARY 23RD, 2018.
- SURVEYOR HAS NOT BEEN PROVIDED WITH ANY ZONING INFORMATION.

NOTES PERTAINING TO SCHEDULE B, PART II EXCEPTIONS

- ITEM 1 THRU 18, 22 AND 23 ARE NOT SURVEY MATTERS AND ARE NOT HEREON DRAWN.
- 15 FOOT EASEMENT THAT HAS BEEN GRANTED BY DOCUMENT 21027923 FOR ITEMS 19, 20 & 21, AND IS HERE ON DRAWING.

STATE OF ILLINOIS
COUNTY OF DUPAGE

TO:
FOSTER PROPERTIES, LLC
POLICE 429, LLC
FIST BANK & TRUST

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY A.L.T.A. AND N.S.P.S. AND INCLUDES ITEMS 1, 2, 3, 4, 6A, 7, 8, 9, 13, 14, 16, 17 AND 18 OF THE 2016 TABLE A THEREOF.

THE FIELD WORK WAS COMPLETED ON FEBRUARY 28TH, 2018.

DATED, THIS 12TH DAY OF MARCH A.D., 2018,
AT LISLE, ILLINOIS.

Thomas J. Casal

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-2205
MY LICENSE EXPIRES NOVEMBER 30, 2018.
ILLINOIS PROFESSIONAL DESIGN FIRM PROFESSIONAL
ENGINEERING CORPORATION NO. 184-001245



Morris Engineering, Inc.
Civil Engineering • Consulting
Land Surveying
515 Warrenville Road, Lisle, IL 60532
Phone: (630) 271-0770
Survey: (630) 271-0599
FAX: (630) 271-0774
Website: www.ecivil.com

ALTA/NSPS LAND TITLE SURVEY
2220-22 S FOSTER AVENUE
WHEELING, ILLINOIS

MORRIS ENGINEERING INC.
Civil Engineering Consulting & Land Surveying
515 Warrenville Road, Lisle, IL 60532 • Phone: (630) 271-0770
Website: www.ecivil.com • Fax: (630) 271-0774

FIELD CREW:	GB
DRAWN BY:	NG
CHECKED BY:	JM
APPROVED BY:	JM
DATE:	03/12/2018
SCALE:	HORIZ 1"=30' VERT NONE
SHEET	1
OF 1 SHEETS	
PROJ #	18-02-6001

Awesome Design & Contracting
2220 Foster
Wheeling, IL

- Property Line
- Fence Line
- Telephone Pole
- Parking Lot
- Grass

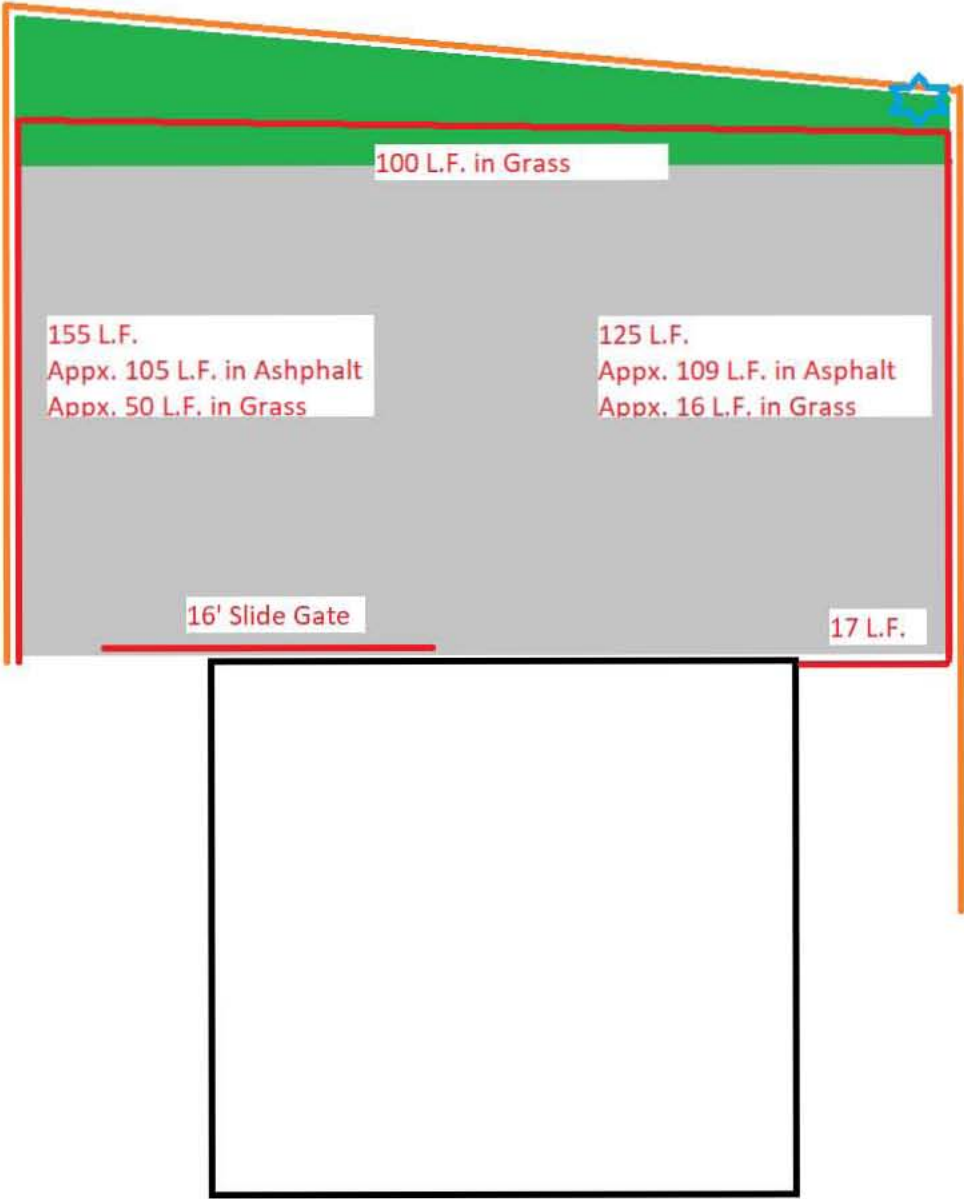


Exhibit received June 27, 2018

DURA BILT FENCE II, INC.

433 Denniston Ct.
Wheeling, IL 60090
847-520-5880 Fax: 847-520-4885

Exhibit received June 27, 2018

PROPOSAL SUBMITTED TO: Awesome Design & Contracting		PHONE: 847-276-0131	DATE: 5-23-18
STREET: 711 North Princeton		FAX:	JOB PHONE:
CITY, STATE AND ZIP CODE: Villa Park, IL		JOB NAME: New Location	
ATTENTION: Jason	DATE OF PLANS:	JOB LOCATION: 2220 Foster - Wheeling, IL	

We hereby submit specifications and estimates for the following:

2nd **REVISION 5-23-18**

Labor & Material for the following:

Furnish & Install 413 L.F. of 8' Plus Barb Chian Link w/ (1) 16' Commercial Slide Gate

Fence Line Details:

- Southeast Line: 16 L.F. Commercial Slide gate w/ Operator
- South Line: 155 L.F.
- North Line: 125 L.F.
- West Line: 100 L.F.
- Northeast Line: 17 L.F.

Material Details: All Galvanized Chain Link

- Gate Posts: 4" SS40
- Latch Post: 4" SS40
- Terminal Posts: 3" SS40
- Line Posts: 2 1/2" SS40
- Top Rail: 1-5/8" SS40
- Brace Rail: 1-5/8" SS40
- Bottom Tension Wire: 7ga
- Wire: 8' 2" x 9ga KB
- Barb Wire: 3 Strand 4pt

- * **Quality Materials & Professional Workmanship Provided!**
- * **All Posts to be Set 42" Deep in Concrete (Wheeling Spec)**
- * **Dirt Removal Included! (If Required)**

Total: \$13,549.00

Optional Upgrades / Selections: Please clearly mark the appropriate box:

- ☐ Change Bottom Tension Wire to Bottom Rail **Add: \$1,125.00**
- ☐ Insert PDS Slats to all Lines (SS40 Posts Highly Recommended) **Add: \$4,450.00**

*Exclusions: bonds, permits, fees, licenses and removals

We Propose hereby to furnish material and labor - complete in accordance with the above specifications, for the **sum of:**

Thirteen Thousand Five Hundred Forty Nine Dollars (\$13,549.00)

Payment to be made as follows: **35% Down (\$4,742.15) & Balance Due Upon Completion (\$8,806.85) NOTE: 3.5% Charge for Credit Cards**

ALL PERMITS MUST BE OBTAINED BY OWNER

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner, on a regular time basis according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by workman's compensation insurance.

Customer hereby assumes full responsibility for the location of the line upon which said materials are to be installed and locate any and all private cables to include sprinkler systems, electric, septic fields, gas lines, grills, lighting, etc. Durabilt Fence to call J.U.L.I.E.

Authorized Signature: Tom Filip Note: This Proposal may be withdrawn by us if not accepted within 15 days.

I, THE UNDERSIGNED, HEREBY AGREE THAT IN THE EVENT OF DEFAULT IN THE PAYMENT OF ANY AMOUNT DUE, AND IF THIS ACCOUNT IS PLACED IN THE HANDS OF AN AGENCY OR ATTORNEY FOR COLLECTION OR LEGAL ACTION, TO PAY AN ADDITIONAL CHARGE EQUAL TO THE COST OF COLLECTIONS INCLUDING AGENCY AND ATTORNEY FEES AND COURT COSTS INCURRED AND PERMITTED BY LAWS GOVERNING THESE TRANSACTIONS. ALL PAST DUE ACCOUNTS WILL BE CHARGED AT THE RATE OF 1.5% ON UNPAID MONTHLY BALANCE

Acceptance of Proposal: the above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of acceptance: _____

Signature: _____



Exhibit received June 27, 2018



Exhibit received June 27, 2018

PROJECT DATA

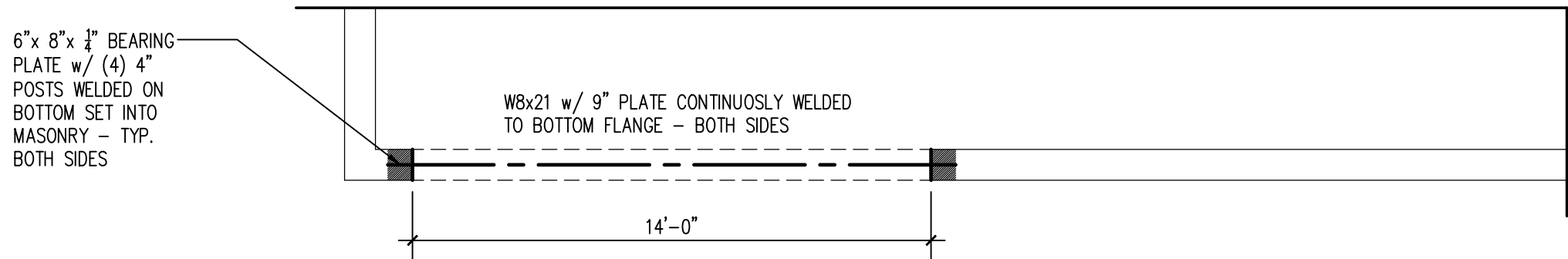
APPLICABLE CODES:

THESE DRAWINGS AND ALL CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES:

2015 INTERNATIONAL BUILDING CODE	2015 INTERNATIONAL ENERGY CONSERVATION CODE
2015 INTERNATIONAL RESIDENTIAL CODE	2015 INTERNATIONAL PROPERTY MAINTENANCE CODE
2014 NATIONAL ELECTRIC CODE	2015 INTERNATIONAL FUEL GAS CODE
2015 INTERNATIONAL MECHANICAL CODE	1997 ILLINOIS ACCESSIBILITY CODE & ADA
2015 INTERNATIONAL FIRE CODE	2000 ILLINOIS LIFE SAFETY CODE
2004 ILLINOIS PLUMBING CODE	ABOVE CODES INCLUDE ALL APPLICABLE AMENDMENTS

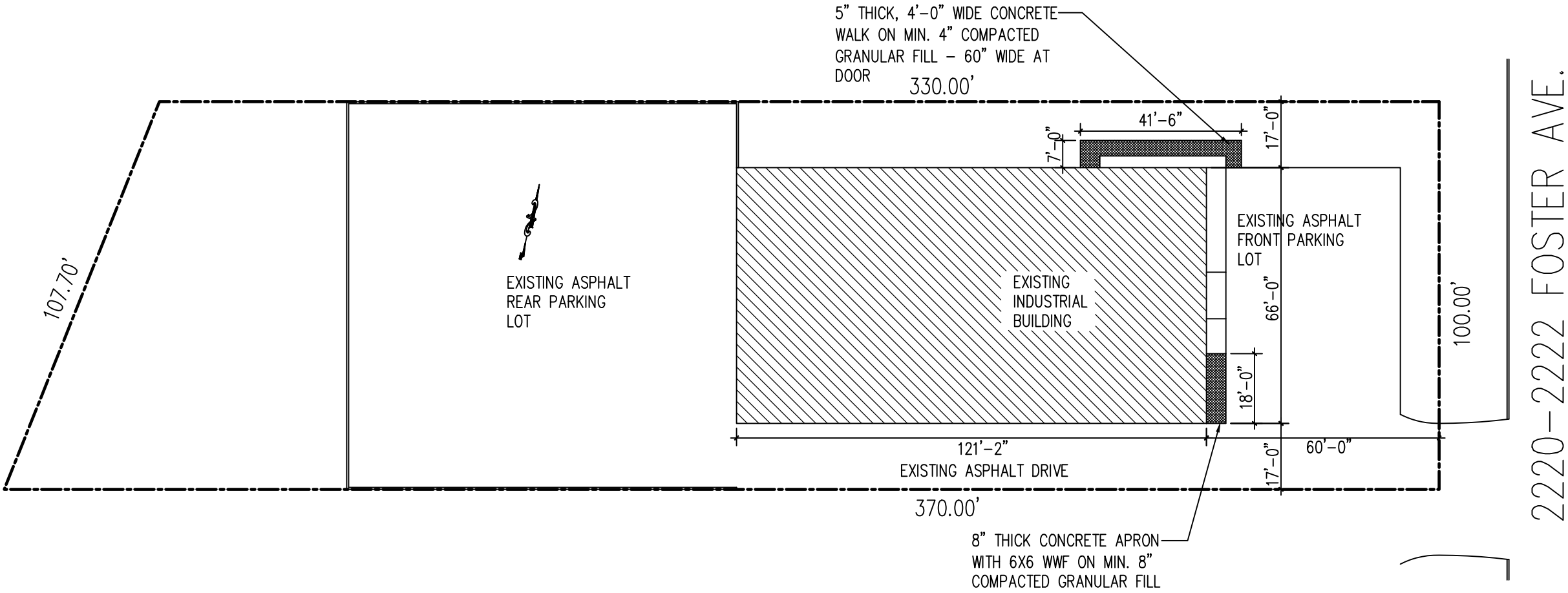
ELECTRICAL NOTES

1). 75% OF ALL LAMPS TO BE HIGH EFFICACY



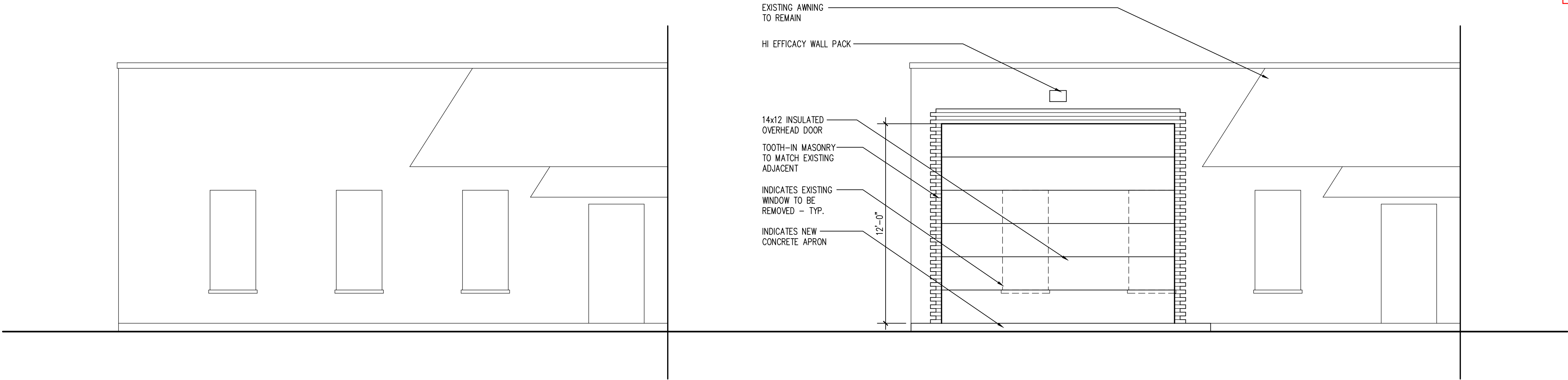
PARTIAL FLOOR PLAN

SCALE: 1/4"=1'-0"



SITE PLAN

SCALE: 1/32"=1'-0"



EXISTING PARTIAL ELEVATION

SCALE: 1/4"=1'-0"

PROPOSED PARTIAL ELEVATION

SCALE: 1/4"=1'-0"

AWESOME DESIGN CONTRACTING

2220-2222 FOSTER AVE
WHEELING, IL

FIRST FLOOR DEMOLITION, ELECTRICAL & FLOOR PLANS

SCOTT KOERNER & ASSOCIATES, LLC
ARCHITECTS AND PLANNERS
1425 CYNTHIA AVENUE
PARK RIDGE, IL 60068
(O) 847.892.1111
(F) 847.201.2033
Copyright 2018 SCOTT KOERNER & ASSOCIATES, LLC

Exhibit received June 27, 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14
.	.	.	.	.	.	.	.	.	.	.	.	.	.

Drawn By:	SAK
Issued For Permit:	06.29.18

Date:	06.29.18
Issued for Const.:	

Sheet No. A-1

A-1

REQUEST FOR PLAN COMMISSION ACTION
STAFF PROJECT REVIEW

TO: Chairperson Ruffatto and Members of the
Wheeling Plan Commission

FROM: Andrew C. Jennings, Director of Community Development
Brooke A. Casolari, Senior Planner

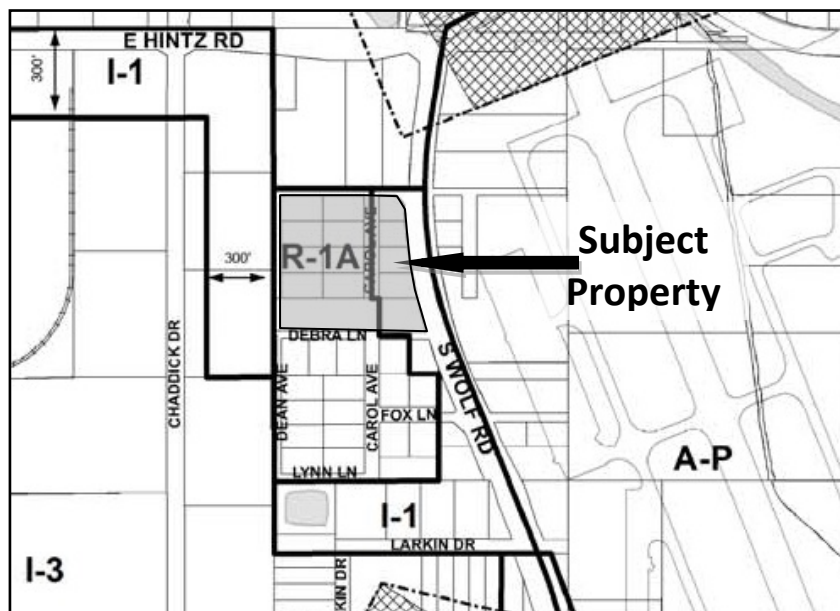
RE: **Docket No. 2018-13A,B&C**
JV Global Services
Southwest corner of Wolf Road and Kerry Lane: (Lots 1 through 8 of the Wolf Road Estates, the adjacent vacant lots north of Debra Lane and east of Wolf Road, and the existing Carol Avenue right-of-way)
(2018-13A) Text Amendment to Add 'Transportation Center' as a Special Use in the I-3 General Industrial District
(2018-13B) Rezoning from I-1 Light Industrial District and R-1A Single-Family Residential to I-3
(2018-13C) Special Use-Site Plan Approval of a Transportation Center

DATE OF REPORT: July 3, 2018

DATE OF MEETING: July 12, 2018

PROJECT OVERVIEW: The petitioner is seeking multiple zoning actions for the property which includes Lots 1 through 8 of the Wolf Road Estates, the adjacent vacant lots north of Debra Lane and east of Wolf Road, and the existing Carol Avenue right-of-way. First, the petitioner is seeking a text amendment to define a new use, Transportation Center, and to add it as a special use in the I-3 District. Second, the petitioner seeks to rezone the property, which is currently R-1A Single-Family Residential and I-1 Light Industrial and Office entirely to I-3 General Industrial District. Lastly, the petitioner is requesting special use-site plan approval of a transportation center.

LOCATION MAP:



GENERAL PROPERTY INFORMATION

<u>Applicant Name:</u>	Jerome Starr, JV Global Services, LLC
<u>Property Owners:</u>	Curtis Latzke (1030 Carol Ave.) Henry Joern (7 lots on Carol Ave.) Chicago Executive Airport (5 lots west of Wolf Rd. and and north of Debra Ln.)
<u>Common Location:</u>	The lots generally west of Wolf Rd., north of Debra Ln., east of Dean Ave., and south of Kerry Ln.
<u>Neighboring Property Land Use(s):</u>	North: Industrial South: Single-Family Residential West: Industrial East: Airport
<u>Comprehensive Plan Designation:</u>	Industrial
<u>Property size:</u>	8.45 acres (total assemblage of properties) 13,450 sq. ft. (building area)
<u>Existing Use of Property:</u>	Industrial / Single-Family Residential / Open space
<u>Proposed Use of Property:</u>	Transportation Center
<u>Existing Property Zoning:</u>	R-1A Single-Family Residential District & I-1 Light Industrial and Office District
<u>Proposed Property Zoning:</u>	I-3 General Industrial District
<u>Previous Zoning Action on Property:</u>	None.

DESCRIPTION OF PROPOSAL

The applicant is requesting the following three zoning actions:

1. Text amendment to create a new use called 'Transportation Center' and add it as a special use in the I-3 General Industrial District;
2. Rezoning of the subject property from R-1A Single-Family Residential and I-1 Light Industrial and Office District entirely to I-3 General Industrial District; and
3. Special use-site plan approval of a Transportation Center.

A detailed two-page [project description](#) is provided by the applicant.

SITE PLAN REVIEW

Scale of Site Plan: 1" = 20'

Proposed General Site Layout: Sole access to the site is via Kerry Lane, which is located at the northeast corner of the site. There are two double-loaded drive aisles for truck parking. A single-

story building with a depressed loading dock is located near the southeast corner of the site. A stormwater detention basin is located along the Wolf Road frontage.

Proposed Floor Plan: The proposed 13,450 sq. ft. building will include 8,000 sq. ft. of warehouse space, 4,000 sq. ft. of heavy motor vehicle repair space, and 1,540 sq. ft. of office space.

Total Number of Parking Spaces: The proposed use, Transportation Center, does not have a defined parking requirement. Therefore, the requirement should be determined by the Plan Commission. The plan calls for a total of 17 light motor vehicle stalls and 118 heavy motor vehicle parking stalls. The Plan Commission may wish to ask the petitioner how this parking is sufficient for the proposed uses.

Ownership: JV Global Services, LLC is under contract to purchase all the private properties in the project area. The Village will be required to vacate the Carol Avenue right-of-way prior to permit issuance. A condition of approval has been added to the motion for special use approval to address the vacation of Carol Avenue.

Site Lighting: A photometrics plan has been provided. 12 pole-mounted lights are proposed throughout the site. It appears that the mounting height of the poles is 40 feet. The petitioner may need FAA approval for such height, due to their proximity to the airport. The Plan Commission may wish to ask the applicant if they submitted for FAA approval.

Sidewalks: There is an existing public walk along Wolf Road.

Bicycle Parking: No bicycle parking has been provided. The Plan Commission may wish to ask the petitioner if bicycle parking for employees will be allowed indoors.

Minimum Green Space: The minimum required green space is 25%. The proposed amount of green space is 27%.

Landscape Irrigation: Irrigation is not discussed in the submittal. The Plan Commission may wish to discuss how this should be addressed. A landscape irrigation plan may be requested.

APPEARANCE REVIEW

Elevation Plan Review: A one-story building, with a very low-pitched roof, is proposed. The warehouse portion of the building will be 23-feet high. The east elevation includes 14-foot high offices. The loading dock is found on the west side of the building and includes nine overhead garage doors.

Exterior Building Materials: The warehouse portion of the building will be comprised of a Thermalclad Tuff-Wall textured insulated wall panel system. Product details for the wall system has been provided. It does not appear that this material is listed as an acceptable wall material in the Design Guidelines. The Plan Commission may wish to discuss the use of this material. The office portion of the building is clad in a brick veneer. Windows are located on the east, north, and south

facades of the office portion of the building, which include clear glazing and stone sills. The building has a low pitched roof made of a metal roof panel system.

Material Samples Provided: Material and color samples will be provided at the meeting. The Plan Commission should review the samples at the hearing.

Landscaping Plan Review: Heavy landscape screening is proposed for the east and south property lines. Screening will be accomplished by a mix of deciduous (Sour Gum, Swamp White Oak) and coniferous trees (Eastern Red Cedar, Colorado Spruce). Ornamental trees, such as Speckled Alder, Autumn Brilliance Serviceberry and River birch, are also proposed. A prairie mix of ground cover is proposed for the detention basin. No flowering perennials are proposed in the landscape plan. Foundation plantings are not proposed for the building. The Plan Commission may wish to discuss other opportunities to add colors and flowers to the site.

Trash enclosure: A gated trash enclosure is noted on the site plan. No details regarding the appearance are provided. The Plan Commission may wish to request details.

Fencing: An 8-foot board fence is proposed for the south property line, which abuts the R-1A Single-Family Residential District. No further details are provided about the material or style of the fence. The Plan Commission may wish to request details.

PROPOSED ZONING CODE TEXT AMENDMENT

The following is the petitioner's proposal for an amendment to the Zoning Code to establish a new use classification for "Transportation Center":

1. Proposed text amendment to Section 19.01.010 – Definitions. Add a definition for "Transportation Center":

"Transportation center" means a facility primarily used for providing outdoor storage of delivery vehicles related to long haul and local deliveries. Such facilities will include accessory services related to delivery vehicles including vehicle maintenance, dispatch operations, and limited freight transfer between vehicles. This term does not include a long term truck storage facility, truck freight terminal, or truck stop.

2. Proposed text amendment to the Appendix A – Use Table:

Add "Transportation Center" as a Special Use in the I-3 Zoning District.

STANDARDS FOR TEXT AMENDMENT

The standards for amendments to the Zoning Code (a text amendment) are the same as the standards for amendments to the Zoning Map (rezoning). In the section below, Staff has replaced the word "rezoning" with the phrases such as "text amendment" to avoid confusion. Following are standards for a text amendment along with the petitioner's responses. **(Staff comments are in bold.)**

1. Will the proposed text amendment comply with the intent and purpose of Title 19, Zoning? (Explain how the proposed uses allowed by the text amendment will conform to the zoning code.)

“The proposed text amendment is consistent with the intent of the Zoning Ordinance as it defines Transportation Center as a new type of business for companies' logistical needs, and can be considered as a Special Use. This is fitting as the ordinance defines Special Uses as activities meriting consideration "because of their unique characteristics.”

The intentions of the Zoning Code regarding businesses with heavy motor vehicles and parking lots are clearly expressed in the definition of “Motor Vehicle (Heavy) Parking Lot, Accessory Use” and “Parking Lot, Principal Use”. Commercial parking lots for heavy motor vehicles are clearly and intentionally excluded from these definitions and are a prohibited use. The intentions are further emphasized in the Use Table, as Heavy Motor Vehicle Parking Lots are expressly allowed only as accessory to businesses located on the same property.

The following are the staff responses to specific statements made in the application:

- **“A Transportation Center is a business location for companies to temporarily park delivery vehicles between distribution trips.” Staff note: This statement identifies the intended use as a commercial parking lot for heavy motor vehicles. The vehicles are owned and/or utilized by companies that operate their primary business functions at a separate location.**
- **“Most companies must park vehicles at one site and operate at a different location.” Staff note: In this statement, the petitioner is explaining the demand for a Transportation Center. Staff’s concern with the proposed use is that it does not appear to address the issue. The space dedicated to dispatch/management functions is limited to three small offices.**
- **“Moving product between trucks is not its principal function.” Staff note: With this statement, the petitioner is distinguishing the proposed use from the definition of truck freight terminal.**
- **“While it includes some services for companies, it is not intended to fully fill those roles.” Staff note: The primary functions of the tenants, in terms of fleet management (dispatch, maintenance), are located elsewhere. The stated purpose of the proposed use classification is not distinguishable from the prohibited use of a commercial parking lot for heavy motor vehicles.**

It is staff’s position that the current zoning code’s intent is to prohibit this type of use. Therefore, the petitioner needs to explain how the intent of the zoning code has been made obsolete, which is addressed in the response to Standard 3.

2. Will the proposed text amendment comply with the Comprehensive Plan, Official Map and all other plans and policies adopted by the Village? If not, explain why the proposed use is in the best interest of the Village. (Explain in detail how the uses allowed by the text

amendment follow the Comprehensive Plan or how a text amendment contrary to the Comprehensive Plan is appropriate.)

“The proposed text amendments comply with the Comprehensive Plan by defining the proposed use, establishing it as a Special Use, and facilitating case by case review of this business type.”

To meet this standard, as it applies to the text amendment, the petitioner must demonstrate that the new use classification complies with the comprehensive plan and all other plans and policies adopted by the Village. The Comprehensive Plan includes general goals for Wheeling’s Industrial areas:

- **Maintain the role of Wheeling’s industrial areas as regional employment centers.**
- **Recruit and retain industrial uses that contribute to the economic strength of the community.**
- **Maintain attractive industrial areas.**

The 2014 Redevelopment Plan document for the establishment of the Southeast II TIF District further defines the Village intention for the area. The introduction states “the Village intends that the Redevelopment Project Area will redevelop with airport, industrial, commercial, office, residential, and recreational uses, including mixed uses.” The plan goes on to list anticipated benefits, including the following:

- **Strengthened property tax base for all affected taxing districts.**
- **Increased sales tax.**
- **Increased job opportunities.**
- **Increased commercial and business opportunities, including those for airport, industrial, retail, office, and mixed-uses.**

It is Staff’s position that the text amendment facilitates the creation of a new land use that is inherently in conflict with several of the intentions and goals identified in the Village’s planning documents. Staff bases this position on the following:

- A. Creating a use which will be added to the code as a Special Use carries with it the implication that the use is deemed to be appropriate in the given district, subject to a review of the configuration in a specific location per the special use standards. The use is essentially a large-scale remote parking/staging lot for manufacturers and freight companies located elsewhere. The text amendment does not include reasonable restrictions on the use (overall size, ratio of parking area to office/management area or warehouse area, etc.) that could be used to distinguish it from a commercial parking lot.**
- B. The general goals for the Village’s industrial areas are stated in the Comprehensive Plan. The goals are arguably undermined by the proposed new use classification. The proposed new land use would, by its nature, occupy an extremely large site with little positive impact on employment or production. Taking the related special use petition, for example, the impact would be a that 8.3 acres of land in a TIF district would be redeveloped to produce a total of**

1,500 square feet of office space, a small number of jobs (most are existing jobs), and no demonstrated impact on production or sales tax.

- C. As the intention of the Southeast II TIF District is stated in the Redevelopment Plan, the petitioner also needs to establish that adding the proposed land use to the code would facilitate the proposed development at a location in the Southeast II TIF District. The proposed use does not appear to strengthen the property tax base, increase sales tax, increase job opportunities, or increase commercial/business opportunities.

3. How have the physical or economic conditions pertaining to the subject area changed, making the existing zoning inappropriate and the proposed text amendment appropriate? (Explain why the current zoning code is inappropriate. What specific physical or economic conditions indicate that a change in the zoning code is required?)

“The proposed text amendments reflect a transition to industrial use in the area, and by designating the proposed business as a Special Use, provides for Village review and approval of such uses to address potential impacts.”

The application materials do not adequately explain the physical or economic conditions that justify the need to establish the Transportation Center land use. The extent of the explanation in the application is as follows: “Increased corporate focus on supply chain efficiencies has companies working to more effectively handle product deliveries, and having separate locations to store their vehicles is part of that approach.” The support for the concept seems to relate more to the convenience of individual drivers than the companies. If that is the case, then an argument could be made that they would be best served if existing warehousing facilities could rent surplus truck parking to local drivers.

In order to for the application materials to fully support the request for the new use, the petitioner would need to address questions such as the following:

1. What are the economic forces causing companies to require satellite parking/staging?
2. Is the creation of the new use classification necessary to address the industry-wide change in operations?
3. What are the size and location parameters associated with this new type of land use? In other words, should it be 10 acres or 5 acres? Should it be within X feet of a major interstate highway? Should it have a minimum building size to accommodate office space and occasional freight transfer?
4. Is there any location in the Village of Wheeling that meets the location requirements of this type of facility?

Staff researched the topic briefly to try to find answers to these questions and found two studies on the topic of “logistics sprawl” and the impacts of decentralization of freight transfer. The studies discuss new types of facilities, such as shared use hubs in the urban core so that small vehicles can make the final mile deliveries. However,

neither study specifically addresses the need for satellite parking and staging locations that are not otherwise associated with warehousing or transfer of goods.

4. How is the proposed text amendment desirable and needed in the Village? (Why is the new use classification district needed? What does the text amendment accomplish? How will it benefit the Village?)

“The proposed text amendments are needed to address this new type of business function and formalize regulation of the business to limit otherwise ad hoc vehicle storage that occurs in industrial areas. Creation of the "Transportation Center" definition also reflects the growth in this business as a support service to companies with logistics needs.

Staff agrees that, in general, resolving an apparent use conflict within the code is best addressed by defining the use as a distinct classification. However, the proposed use as described appears to be most similar to a commercial parking facility for heavy motor vehicles, which the Zoning Code identifies as prohibited. Thus, to justify the amendment, the petitioner would need to make a clear argument for essentially removing the current restriction. The current proposal and response does not provide strong or clear rationale why this use is now necessary. As noted above, if a parking/staging area for multiple third-party logistics companies is emerging as a new trend, there should be some research or analysis to demonstrate the appropriate size, and ideal locations (i.e., distance from facility to work force, highways, or manufacturing area).

5. How will the proposed text amendment be compatible with and not unduly depreciate the use and value of the surrounding property? (Consider the types of uses that could be permitted by the text amendment. Are these uses compatible with existing neighboring land uses? Will the potential uses have a negative impact on surrounding property values?)

“The proposed text amendment designates Transportation Centers as Special Use and specifically defines their operation. In this way, approval of the proposed operation and any like it in other I-3 Districts can be evaluated on a case by case basis to address possible impacts on adjacent properties.”

The use as described is not distinguishable from a commercial heavy motor vehicle parking lot (a prohibited use). The parking of heavy motor vehicles is consistent with uses in the I-3 district, but as accessory to another principal use. The definition notes that the principal use is outdoor storage of delivery vehicles but not long term truck storage.

6. How will the proposed text amendment contribute to a rational pattern of land uses which is beneficial to the Village? (Is the proposed amendment sensible? Are intense uses that create traffic, noise, odor, light, or smoke going to be permitted along a narrow residential street?)

“The proposed text amendment designates Transportation Centers as Special Use and specifically defines their operation. In this way, approval of the proposed operation and any like it in other I-3 Districts can be evaluated on a case by case basis to address possible impacts on adjacent properties.”

The use of Transportation Center as defined and described in the petition is not distinguishable from a commercial parking lot for heavy motor vehicles. In terms of the Zoning Code standard for creating the new use classification, Staff does not believe that the use as defined contributes to a rational pattern of land use which is beneficial to the Village. While the demand for storage yards for various commercial vehicles has been observed, the proposed definition is too vague and does not propose reasonable limitations on use that is prohibited by the current code (i.e., total acreage or a proportion of the zoning lot as compared to another permitted land use).

STANDARDS FOR REZONING

Following are standards for rezoning with the petitioner's responses. **(Staff comments are in bold.)**

1. Will the proposed rezoning comply with the intent and purpose of Title 19, Zoning? (Explain how the proposed uses allowed by the rezoning will conform to the zoning code.)

“Rezoning to the I-3 District is in keeping with the Zoning Ordinance intent of implementing the Village's Comprehensive Plan, which shows this site as industrial. It also reflects the Statement of Intent of the I-3 District as being appropriate for uses generating auto and truck traffic.”

Rezoning to I-3 is consistent with the Comprehensive Plan (future land use plan).

2. Will the proposed rezoning comply with the Comprehensive Plan, Official Map and all other plans and policies adopted by the Village? If not, explain why the proposed use is in the best interest of the Village. (Explain in detail how the uses allowed by the rezoning follow the Comprehensive Plan or how a rezoning contrary to the Comprehensive Plan is appropriate.)

“The proposed rezoning to an industrial district conforms with Comprehensive Plan, which designates this property for industrial. The Comprehensive Plan also show the site's eastern frontage as a buffer along Wolf Road. The landscape plan prepared for the development incorporates such a buffer. The proposed development is incorporated into the existing Village roadway network.”

The subject site is shown as “Industrial” on the Comprehensive Plan. The proposed rezoning to the I-3 General Industrial District is consistent with the Comprehensive Plan.

3. How have the physical or economic conditions pertaining to the subject area changed, making the existing zoning inappropriate and the proposed rezoning appropriate? (Explain why the current zoning designation is inappropriate. What specific physical or economic conditions indicate that a change in zoning is required?)

“The current residential zoning and use of the properties is long standing but inconsistent with the surrounding land use pattern, which but for a small residential area is highly industrial. The area also includes landscaping and contractor businesses at the north end, which indicates a trend away from residential use of the area. These factors, along with the industrial designation in the Comprehensive Plan, make rezoning to reflect the surrounding industrial character a logical evolution for the area.”

No additional comments.

4. How is the proposed rezoning desirable and needed in the Village? (Why is the new zoning district needed? What does the rezoning accomplish? How will it benefit the Village?)

“The proposed rezoning reflects Village desires and needs by being consistent with the Comprehensive Plan regarding industrial use of the property and a buffer along Wolf Road. The proposed rezoning to industrial will create a more consistent pattern of development and a site reflective of the overwhelmingly industrial surrounding area.”

No additional comments.

5. How will the proposed rezoning be compatible with and not unduly depreciate the use and value of the surrounding property? (Consider the types of uses that could be permitted by the rezoning. Are these uses compatible with existing neighboring land uses? Will the potential uses have a negative impact on surrounding property values?)

“The proposed rezoning is consistent with the generally industrial character and zoning of the surrounding properties. The site (once zoned as I-3) will be part of a large, primarily industrial zoned area, with a large I-3 District located to the west. The zoning pattern resulting from the proposed change is reflective of the variety of Industrial Districts in the area.”

No additional comments.

6. How will the proposed rezoning contribute to a rational pattern of land uses which is beneficial to the Village? (Is the proposed rezoning sensible? Are intense uses that create traffic, noise, odor, light, or smoke going to be permitted along a narrow residential street?)

“The proposed rezoning is a rational continuation of the industrial zoning pattern in the area and provides for increased business development in the Village. The appropriateness of the rezoning is indicated by its consistency with the Village's Comprehensive Plan.”

Staff concurs that the rezoning is consistent with the Comprehensive Plan.

STANDARDS FOR SPECIAL USE

Following are standards for special use with the petitioner's responses. **(Staff comments are in bold.)**

1. State why the Special Use is necessary for the public convenience at the proposed location. (Explain how the proposed use will benefit residents, the neighborhood or the community-at-large.)

“The proposed Transportation Center will provide support services for logistical needs of other nearby businesses. Two Wheeling businesses are anticipated to use facility to meet fleet management needs for their growing businesses. The facility has capacity for a third company to lease space. The proposed Transportation Center is located in the Village's industrial area and supports the growth needs of local industrial businesses, in this way it benefits the community at large.”

Staff's concern with the proposed Transportation Center is that it concentrates the truck parking and staging activities of freight transporters and manufacturing companies. The oversight of the activity is not required to be physically on the property, and the facility could be utilized by an unknown quantity / type of other businesses that operate from unknown locations. While production facilities and warehousing/distribution facilities have large trucks utilizing the road network, the roadway use is more clearly related to delivery/shipment of goods. The facilities have a clearer positive impact on employment and production in the local economy, and these positive impacts offset the negative impact of truck traffic and road deterioration.

It is not clear from the information provided that the proposed Transportation Center would be ideally located at the subject property (3.0 miles to the nearest major highway). The Plan Commission may wish to ask the petitioner to provide additional information regarding the ideal location for this type of use.

2. State how the special use will not alter the essential character of the area in which it is to be located. (Explain how the proposed special use is appropriate for the neighborhood or shopping center and how the overall character will not be affected by the special use.)

"The area around the proposed Special Use is primarily industrial in character and zoning. The logistical and transportation support aspect of the Transportation Center is in keeping with the nearby uses. Many of those businesses include distribution functions and trucks are a common part of area businesses (located in the adjacent industrial park)."

The subject property is surrounded by industrial, airport, and existing single-family residential uses. An eight-foot solid fence and heavy landscape screening are proposed for the south property line to provide a buffer from the existing single-family residences south of Debra Lane.

3. State how the location and size of the Special Use, the nature and intensity of the operation involved in or conducted in connection with it, the size of the site in relation to it, and the location of the site with respect to streets giving access to it, will be in harmony with and will not impede the normal, appropriate, and orderly development of the district in which it is to be located and the development of surrounding properties. (Explain how the proposed use will allow the surrounding area to develop appropriately. Is the use too large for the site? Will it be in a location on the lot that will cause conflicts with adjacent properties? Does the use create noise, odor, smoke, or light that will affect other properties?)

"Development of the site as a Transportation Center will not impede normal and orderly development of surrounding properties as it is similar in character to other industrial uses. The use is similar in nature to surrounding, planned industrial activity in that many of the businesses involve truck deliveries. Ready access to Wolf Road indicates that traffic to and from the site need not pass through the internal portions of the industrial district and add to any traffic concerns that may exist there. For these reasons, the proposed use would not likely discourage and / or adversely impact further industrial uses for which the surrounding area is planned and zoned."

The parking of heavy motor vehicles is consistent with the uses in the I-3 District, but only as accessory to another principal use. This use is not distinguishable from a

commercial heavy motor vehicle parking lot, which is a prohibited use in the I-3 District. The size and intensity of the proposed special use is not consistent with uses in the I-3 General Industrial District. The proposed use is essentially a large-scale remote parking/staging lot for manufacturers and freight companies located elsewhere.

4. State how the location, nature and height of buildings, walls and fences, and the nature and extent of the landscaping on the site shall be such that the use will not hinder or discourage the appropriate development and use of adjacent land and buildings, or will not impair the value thereof. (Explain how the proposed use will not prevent development on adjacent properties. Will the proposed use have a negative impact on existing adjacent land uses?)

“The site as proposed has relatively small scale structures that would not be expected to hinder or discourage other development in the area or be of an imposing nature to adjacent residential uses, the sites of which are designated as industrial by the Village’s Comprehensive Plan. The character of the proposed Transportation Center is in keeping with the industrial nature of the area as planned and zoned by the Village. Trucks on site do not idle and the limited maintenance is conducted indoors. Further, the Transportation Center is not a first destination for delivery of products; the primary function is drivers transferring between already loaded vehicles. The occasional transfer of goods is only to maximize delivery loads and will be conducted indoors. In this way, the proposed use also has limited impact on nearby uses. Fences and landscaping on site also will support other development as they are proposed with the intent of screening the property from an adjacent residential area (8’ fence and dense landscaping) and Wolf Road (dense landscaping located at the same elevation as Wolf Road to maximize screening effect).”

The building is small as the petitioner has stated.

5. State how the parking areas will be of adequate size for the particular use, properly located, and suitably screened from adjoining residential uses, entrance and exit drives shall be laid out so as to prevent traffic hazards and nuisances, and the development will not cause traffic congestion. (Is adequate parking provided? Is parking area visible from adjacent homes? Are the entrance and exit drives designed for safe access to the site? Will the special use generate so much traffic as to cause congestion? Will visitors to the special use access the site through residential streets?)

“Parking on site is to serve semi trucks between delivery trips. The spaces for trucks will be leased to companies based on the total number of available spaces and so cannot exceed need. Part of this parking on the site will be for personal cars of truckers while they are on deliveries and, therefore, that number of cars will fit within the total number of spaces. Additional standards parking spaces will be provided on site for regular employees. Not every truck parked on site comes and goes from the property on a daily basis, so the impact of traffic is less than the full number of vehicles that will be on site. The parking area will be screen from homes to the south by a fence. Access to and from the site will be to Wolf Road and not need to travel through the industrial park or the residential area to the south.”

The site is primarily utilized as a parking area for heavy motor vehicles.

The petitioner has submitted a traffic study to address the question of the impact that the proposed Transportation Center operation would have at the subject location. The

Plan Commission may wish to request a more detailed explanation as to why an extension of the northbound left turn queue into the site is not needed.

Dense screening is planned for Wolf Road and along the south property line, which is adjacent to existing single-family residences. A section plan demonstrates the visibility of the truck parking from Wolf Road, which is very limited.

The Fire Department memo describes turning radius conflicts at the ends of the drive aisles. A condition of approval has been added to the motion that the turning radius layout for the entire site must be verified by AutoTurn that the configuration meets the Fire Department's requirements. If modifications are necessary, it may result in a loss of several truck parking stalls. In addition, there is no parking requirement for the proposed use. Per the zoning code, the requirement would be as determined by the Plan Commission. The Plan Commission may wish to discuss whether the proposed 17 employee/visitor spaces will be adequate.

6. State how the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulation in that zone. (Other than the special use listed in this application, the proposal must meet all other requirements of the Zoning Code. Note any other exceptions.)

"The Special Use application for this site is part of a rezoning application from residential to industrial use (as designated by the Village's Comprehensive Plan). As a residential use, the site is not consistent with long term development plans for the area and would not yield an optimal residential redevelopment. For consolidation and development, the property has extraordinary development costs due to multiple properties assembled and installation of infrastructure necessary to successfully redevelop this and surrounding property for industrial uses. However, the proposed use is one that presents a viable use of the properties.

As proposed, the development will require limited zoning variations that will be addressed through a separate application to the Village."

The proposed special use requires a text amendment for the creation of the Transportation Center use and a rezoning to the I-3 General Industrial District. The petitioner believed that a variation would be needed for minimum green space when the application was submitted.

STAFF REVIEW

Fire Department Review: The Fire Department has submitted comments dated June 25, 2018. Most comments can be addressed at permit. Specifically, the memo notes turning radius conflicts, which may result in the loss of parking stalls. The following condition of approval has been added to the special use motion, "the turning radius layout for the entire site must be verified by AutoTurn so that the configuration meets the Fire Department's requirements."

Engineering Division Review: The Engineering Division has provided a comment memo dated July 2, 2018. The comments can be addressed at permit.

Impact on Adjacent Uses: It does not appear that that the proposal will negatively impact the adjacent industrial properties. The assembly of the residential property and a rezoning to facilitate an industrial land use are both consistent with the Comprehensive Plan for the Village. The impact on the remaining residential uses to the south is addressed through dense landscaping and fencing, as well as locating the main access drive at the north end of the property. The impact on development of the area in general should also be considered, as the proposed use would occupy a very large tract of land for surface parking in support of businesses that are not necessarily in Wheeling or surrounding communities.

Staff Recommended Action: Please see the Staff comments regarding the responses to the standards for a text amendment and special use. The use as described in the application for a text amendment is not distinguishable from a commercial parking lot for heavy motor vehicles. The burden to allow a prohibited use to be inserted as a special use is high, and Staff does not believe that the petitioner has provided adequate support to demonstrate that the text amendment meets the standards established in the Zoning Code. Prior to making motions, Staff suggests the Plan Commission discuss the following issues with the petitioner:

Text Amendment

1. Is there additional information to explain the location requirements of this new type of facility in terms of proximity to a major highway?
2. Is there an ideal size in terms of the acreage, the number of trucks, or number of companies?
3. What is causing the need for this new type of facility?
4. Is this type of facility the most appropriate way to address the demand that has been identified, or would the rental of scattered surplus stalls at existing warehouse/distribution facilities be more appropriate?
5. In what way is the use distinguishable from a commercial parking lot for trucks?

Special Use, Site Plan and Appearance:

1. Discuss the traffic study (specifically, whether the left turn lane is long enough, and whether the assumptions regarding peak hours
2. Discuss whether the building is an adequate size to support growth
3. Determine if the proposed parking count is sufficient for the proposed uses;
4. Determine if FAA approval is being sought for the light poles;
5. Discuss if bicycle parking is required;
6. Discuss how landscape irrigation should be addressed;
7. Discuss the use of the Thermalclad Tuff-Wall textured insulated wall panel system;
8. Review all building material samples;
9. Determine if additional flowering landscape material should be added to the site and if building foundation plantings are required;
10. Determine if additional trash enclosure details are required;
11. Determine if additional fencing details are required.

PROPOSED MOTIONS

If the Plan Commission finds that the petitioner has satisfied the requirements for the granting of the requested text amendment, rezoning, and special use, appropriate motions would be to:

Recommend approval of Docket No. 2018-13A, approving a text amendment to Title 19, Zoning of the Wheeling Municipal Code, to add 'Transportation Center' as a Special Use in the I-3 General Industrial District.

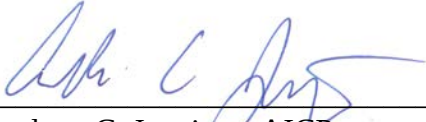
And recommend approval of Docket No. 2018-13B, granting a Rezoning from R-1A Single-Family Residential District and I-1 Light Industrial and Office District to I-3 General Industrial District, as illustrated on the staff exhibit "Existing vs. Proposed Zoning" dated July 12, 2018, southwest corner of Wolf Road and Kerry Lane, Wheeling, Illinois.

And Recommend approval of Docket No. 2018-13C to grant Special Use-Site Plan Approval as required under Title 19, Zoning, of the Wheeling Municipal Code, Chapter 19-07 Industrial Districts, Chapter 19-10 Use Regulations, Chapter 19-12 Site Plan Approval Requirements, in order to establish a Transportation Center, in accordance with the following exhibits submitted June 22, 2018 (except as noted) for JV Global Services at the southwest corner of Wolf Road and Kerry Lane, Wheeling, Illinois:

- Business description (2 sheets), 6.25.2018
- Land use map exhibit,
- Zoning map exhibit,
- Site plan,
- Building elevations,
- Thermalclad material specs (2 sheets),
- Floor plan,
- Landscape plan,
- Site section plan, 6.27.2018
- Lighting plan,
- Hydrant locations plan,
- Topographical survey, and
- Traffic impact study (85 sheets), 6.27.2018

And with the following conditions:

1. Prior to permit issuance, a plat of vacation for Carol Avenue shall be executed by the Village.
2. The turning radius layout for the entire site must be verified by AutoTurn so that the configuration meets the Fire Department's requirements;
3. *And others to be determined at the hearing.*



Andrew C. Jennings, AICP
Director of Community Development



Brooke A. Casolari
Senior Planner

Wheeling Plan Commission
Meeting date: July 12, 2018
RE: Docket Nos. 2018-13ABC

Attachments: [Fire Department comments, dated 7.03.2018](#)

[Engineering Division comments, dated 7.02.2018](#)

[Staff Rezoning Exhibit](#)

[Business description \(2 sheets\)](#)

[Land use map exhibit](#)

[Zoning map exhibit](#)

[Site plan](#)

[Building elevations](#)

[Thermalclad material specs \(2 sheets\)](#)

[Floor plan](#)

[Landscape plan](#)

[Site section plan](#)

[Lighting plan](#)

[Hydrant locations plan](#)

[Topographical survey](#)

[Traffic impact study \(85 sheets\)](#)



Memo

To: Andrew Jennings, Community Development Director
Brooke Casolari, Senior Planner

From: Keith S. MacIsaac KSM

CC: Fire Prevention Bureau

Date: 6/25/2018

Re: Preliminary Site Plan Review – JV Global Transportation Center (Wolf Road & Kerry Lane) –
(Revised Drawings 06/20/2018)

As requested, the following are Fire Department comments regarding the preliminary site plan associated with the above referenced project dated June 20, 2018:

- The site has only one (1) access point on the North end of the property. All vehicles entering and exiting the site will be restricted to using this access point. As currently laid out:
 - o At the South discharge point of the access drive 2 gate posts are shown directly in various points within the paved surface. There is no detail given but as shown, could indicate the installation of “drop-down” posts for security purposes. Additional information is required.
 - o Where the access drive discharges onto the site at the South end of the drive, the layout appears to create a probable collision point between vehicles exiting the site and a potential vehicle parked in the first space. This may result in a modified landscape island and the potential loss of the first space at the Northeast corner.
- The layout of the drive aisles at both ends of the site appears to create turning radius conflicts. The turning radius layout for the entire site must be verified by AutoTurn® that the configuration meets the Fire Department's requirements (i.e. use of the ladder truck/straight truck configuration). The program must be run indicating complete 360 degree access throughout the site, as well as travel in both directions. If necessary, modifications may be needed and could result in the loss of several spaces.
- A one (1) story building is shown on the site and appears intended to be used for storage and off-loading/on-loading of commodities. In accordance with the Village's codes, this building is required to be a minimum of Type II construction and equipped with both fire sprinklers and visual notification devices. The owner/occupant has stated that the building will not be used for the storage of hazardous materials or conducting major vehicle repairs. If this changes, additional fire safety features may be required as part of the building permit phase.
- The depressed dock on the Southwest corner of the site building is shown in the current lowest natural site elevation area. Assuming over land storm water drainage to the storm water management area along Wolf Road, there is a risk of this depressed dock area being submerged during heavy rain events. Water, ice, and snow management will need to be addressed during engineering design of the sump pit, etc. associated with this depressed dock.
- Based upon parking and the depressed loading dock, no indication is given as to where the fire department (FDC) for the building will be installed. The location must be on the leading face of the

building and completely unobstructed. The Fire Department's recommendation would be close to or at the Northwest corner of the building.

- A looped water main with fire hydrants within the site is required in accordance with Village standards. The minimum water main diameter required is 8 inches. Depending upon how the site will be operated and if there is hazardous materials storage; fire flow requirements may require upsizing to a minimum diameter of 10 inches. In addition, depending upon the layout of the water main system, various isolation valves will be required to restrict water main isolations for repairs to no more than 2 fire hydrants at time.
- Fire hydrants are indicated on the drawings and their general locations are acceptable to the Fire Department. However, in accordance with both State law and Village ordinance, a minimum clear space of 48 inches must be maintained completely around each fire hydrant. This is particularly an issue with fire hydrants on the West and South ends of the site. Compliance with this requirement will likely result in a reduction in the number of spaces on the site.
- Site fencing is only shown on the South end of the property. Due to the general security needs typical associated with these types of facilities, installation of additional fencing may adversely impact the proposed storm water management areas, as well as the proposed landscape plan. This should be addressed prior to final engineering.
- No site lighting is indicated. Due to the tight design layout of the site, placement of light poles must be coordinated to not conflict with the required site fire hydrants and not situated where they are likely to be damaged by vehicle movement on the site (ex. backing into spaces).

All of the items listed above will need to be addressed during final engineering and prior to any permits being issued.



MEMORANDUM

TO: Brooke Casolari, Senior Planner

FROM: Kyle Goetzelmann, Civil Engineer I

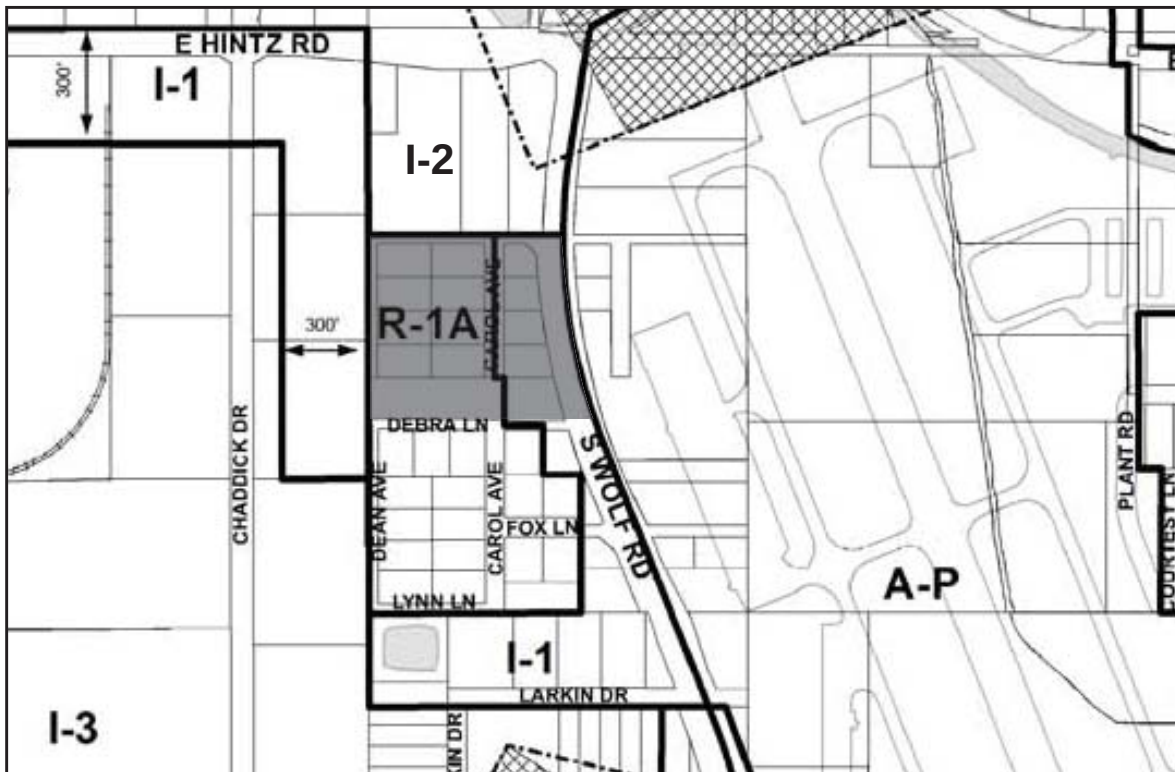
COPY: Jon Tack, Village Engineer

DATE: July 2nd, 2018

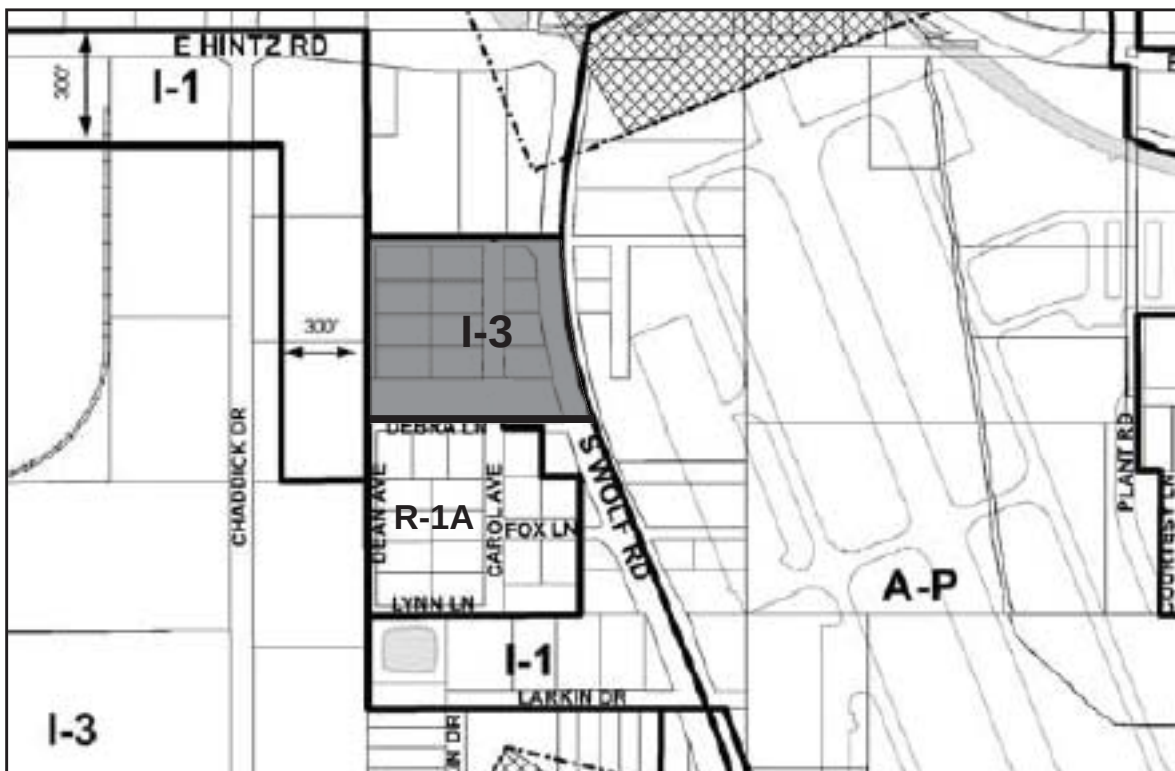
SUBJECT: JV Global – Site Plan Review
S. Wolf Road - Review Comments

The Engineering Division received a Project Description and Preliminary Site Plan for the subject project on June 22nd, 2018. The Engineering Division has completed a review of the above referenced submittal and offers the following comments at this time:

1. Permits from all necessary agencies will be required prior to Village of Wheeling Engineering permit issuance. These agencies include, but aren't limited to: IEPA, IDNR, and MWRD.
2. A letter of credit or performance bond in the amount of 110% of the public and private improvement cost must be provided before permit issuance.
3. Engineer's opinion of probable cost must be provided to support the LOC/Performance bond amount.
4. If looping water main is proposed, a plat of easement must be provided prior to permit issuance. The Village can provide the easement language.
5. SWPPP to be included in Engineering Submittal and IEPA NOI will be required prior to any excavation work.
6. Engineering drawings will need to be provided for site improvements. Included in these drawings are all relevant Village of Wheeling standard details and construction notes.
7. No current sanitary sewer exists in the Wolf Rd. right-of-way. Sanitary sewer connection to Village main must be designed and approved.
8. Address assignment must be handled through the Engineering Division.
9. Storm water report will be required to verify storm water detention basin size.



EXISTING ZONING (I-1 AND R-1A)



PROPOSED ZONING
(REZONE TO I-3)

JV Global Wheeling, IL

To: Village of Wheeling Plan Commission
From: Vladimir Vareldzhyan, Owner
Date: June 25, 2018
RE: **Description of Proposed JV Global Services Transportation Center**

Background

A Transportation Center is a business location for companies to temporarily park delivery vehicles between distribution trips. In addition, the center includes facilities for minor truck maintenance, limited transfer of goods, and office space for companies to manage delivery logistics. This allows companies to consolidate fleet operations and staff at a single location. Most companies must park vehicles at one site and operate at a different location. They may even have limited central parking and / or dispersed truck parking over a number of sites. This limits company efficiency and potential for growth.

Increased corporate focus on supply chain efficiencies, has companies working to more effectively handle product deliveries, and having separate locations to store their vehicles is part of that approach. The proposed Transportation Center to serve this need is not a freight terminal or truck stop. While it includes some services for companies, it is not intended to fully fill those roles.

The Transportation Center is not a first destination point for products to be delivered; that is, moving product between trucks is not its principal function. Trucks and trailers are delivered to the Transportation Center with product having been loaded at the producer's place of business. Drivers then take the loaded trucks for delivery runs. Goods are only transferred between vehicles at the Transportation Center to maximizing loads. That is, a truck that is not fully loaded may have goods added from another vehicle that was going in the same direction. In this way the Transportation Center helps users be more efficient with their deliveries.

Other facilities to store trucks are located throughout the Chicago region, but few if any of those facilities are designed to the same standard or provide comparable services to our center proposed in Wheeling. Nearby examples include those Deerfield, Buffalo Grove, Prospect Heights and Schaumburg. These businesses are located in industrial / business areas of those communities and provide space for approximately 90, 123, 140 and 280 trucks respectively. These number of these operations nearby is an indication in the growing demand for this service.

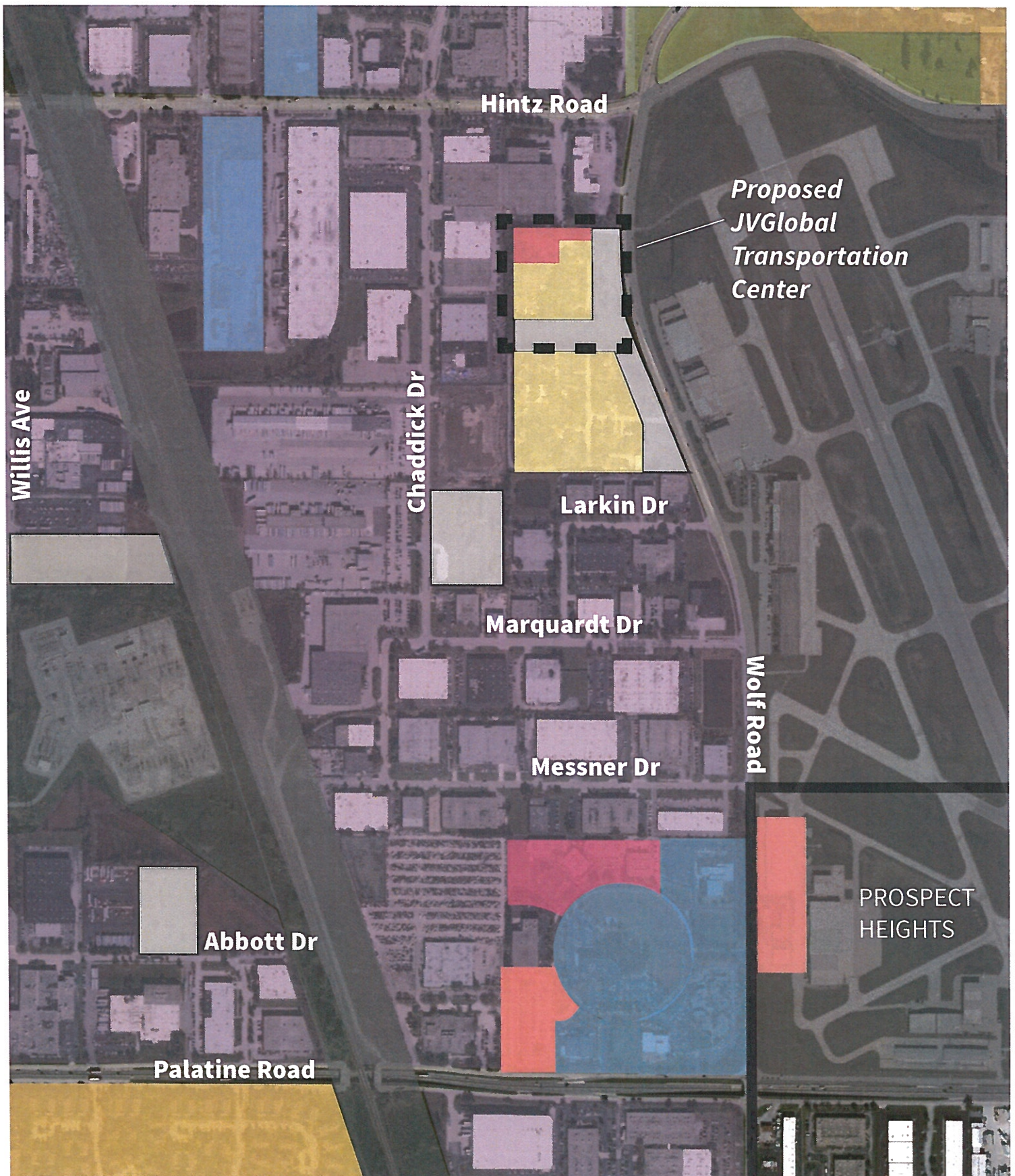
In Wheeling, JV Global Services operates a vehicle storage facility (without support services) and sees increased need. Alex Logistics (a Wheeling business), which has increased their capacity by over 200 percent in the last year, now requires additional transportation space for parking more than 40 trucks. Also, a local food service distributor seeing increased demand from their customers is seeking additional truck parking, and is anticipated to be a client of the proposed Transportation Center.

Business Operations

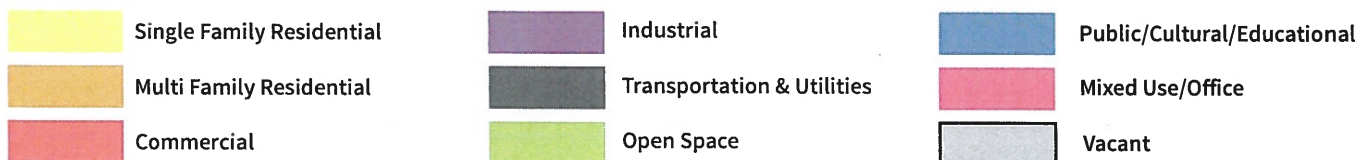
Our proposed facility on Wolf Road will provide parking for 118 trucks and 17 employee / visitor vehicles. Trucks are typically comprised of a 53' trailer and a 15' semi-tractor truck. Coming and going of each truck does not occur daily, most are parked on site for about a week. Traffic matters related to the proposed business has been evaluated through a traffic study and provided separately. The study finds that the proposed use will generate less truck traffic on a daily basis than a typical industrial operation.

Our business plan is to work with and serve three companies who will manage their logistical operations at this location. Working with individual drivers is inefficient and not to be part of the business. The companies will rent parking and office spaces, and JV Global will provide services related to truck maintenance and a limited amount of goods transfer. As provider of these services and owner of the facility, JV Global maintains a close working relationship with the client companies and understands well the companies' operational needs and the work of their drivers. A summary of the proposed business is below:

- Vehicles generally are on site for seven days at time. Typically, drivers leave their personal vehicle at the Transportation Center while making long haul deliveries, and it is available to them when they return. This is an important convenience for the drivers.
- Hours of operation for the office, maintenance and material transfer will be Monday through Friday from 7:00 AM to 6:00 PM, Saturday from 7:00 AM to 12 Noon. Vehicles can access the site at any time for drivers switching between their personal and delivery vehicles. Most common hours for this transfer are expected to be from 4:00 AM to 7:00 AM and 9:00 PM to 11:00 PM.
- Three office spaces (500 square feet each) will be rented to tenant companies for coordinating their fleet operations. These spaces will be leased to companies on a yearly basis.
- The vehicle maintenance / mechanical shop area is approximately 4,000 square feet with three work bays. All maintenance will take place within the maintenance shop and is not allowed in the vehicular parking area. Changed oil and other materials will be disposed of properly. Basic maintenance supplies such as tires, brakes and oil change needs will be stored completely indoors at the site.
- Warehouse space for the material transfer area is 8,000 square feet and has six docks. This space is used for limited transfer of goods (again, the Transportation Center is not a freight transfer terminal) and most loads delivered by trucks from the Transportation Center is loaded or unloaded there. The docks are used for occasional transfer when necessary to accommodate logistical needs for delivery of goods.
- The building is proposed to be constructed with a Thermalclad Tuff-Wall Insulated Panel (additional information provided). The system simulates stucco and presents the appearance of a rough precast panel finish. An interpretation is requested that this material is consistent with the Village Design Guidelines.
- Approximately fourteen employees are expected to work at the site daily. On site employee parking will be provided.
- Drivers are not permitted to sleep in their vehicle on site.
- The site will have 24 / 7 security through 22 video cameras.
- Trucks are not allowed to use their horns or idle on the site.
- No tanker trucks or storage / transfer of hazardous material will be allowed on the site.



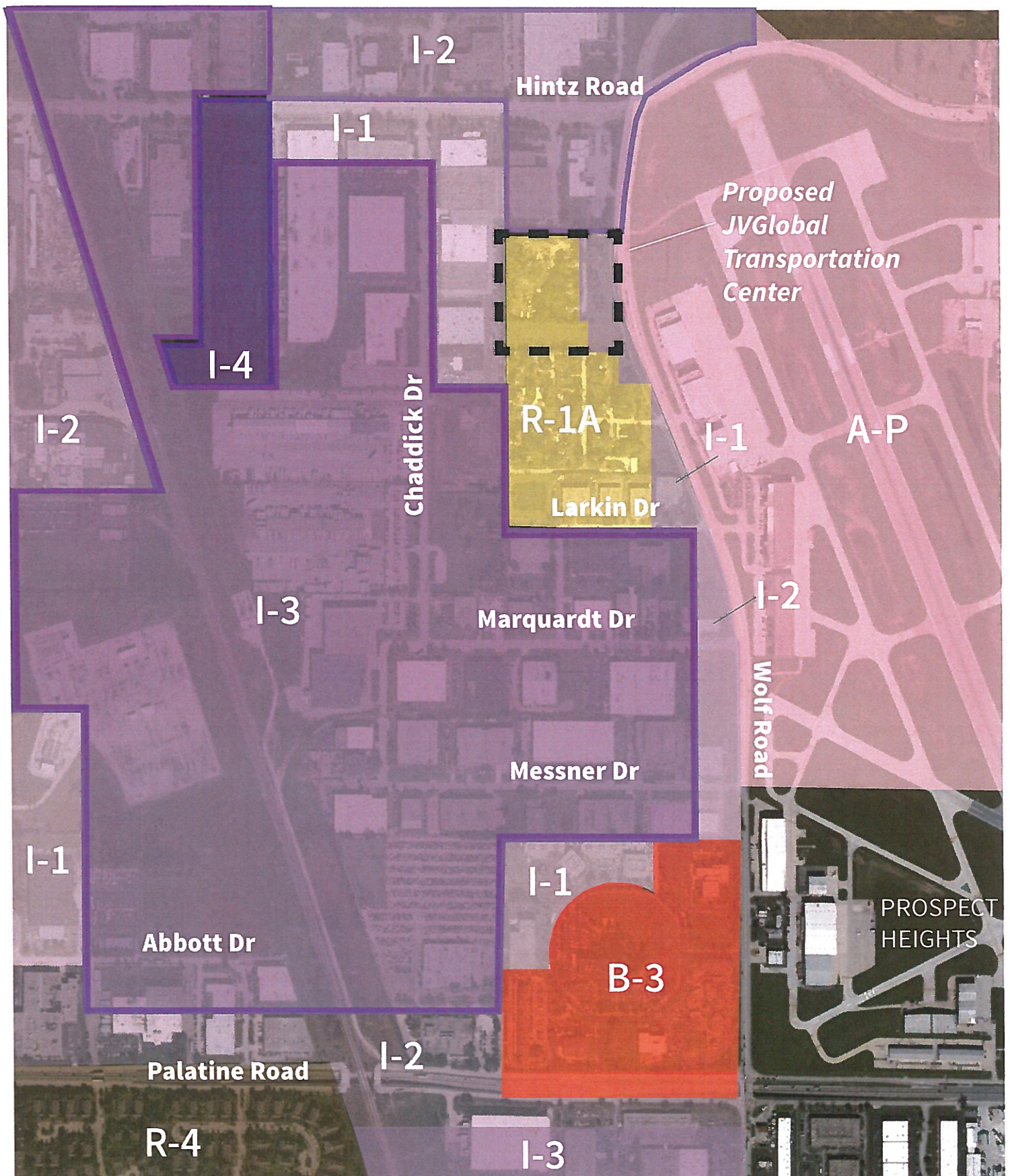
Village of Wheeling Existing Land Use Map



Graphic representation based on Village Land Use Plan & Field Verification Map



Exhibit received June 22, 2018



Village of Wheeling Existing Zoning Map



Graphic representation based on Village Zoning Map

Exhibit received June 22, 2018



SITE DATA

SITE AREA	8.45 AC.
BUILDING AREA	13,450 SQ.FT.
TRUCK/TRAILER PARKING STALLS	118
EMPLOYEE PARKING STALLS	17
GREEN SPACE	27%



GREEN SPACE : 27%

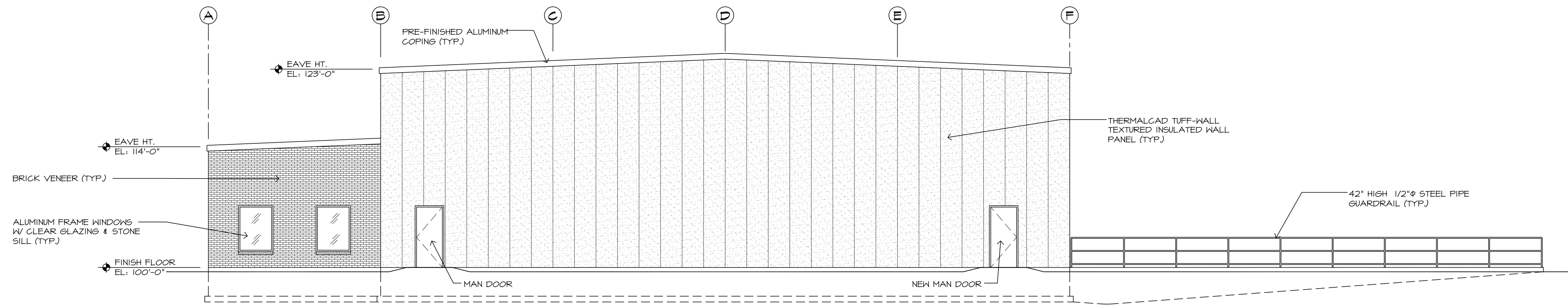
J.V. GLOBAL SERVICES
WOLF ROAD AT KERRY LANE
WHEELING, ILLINOIS

Exhibit received June 22, 2018

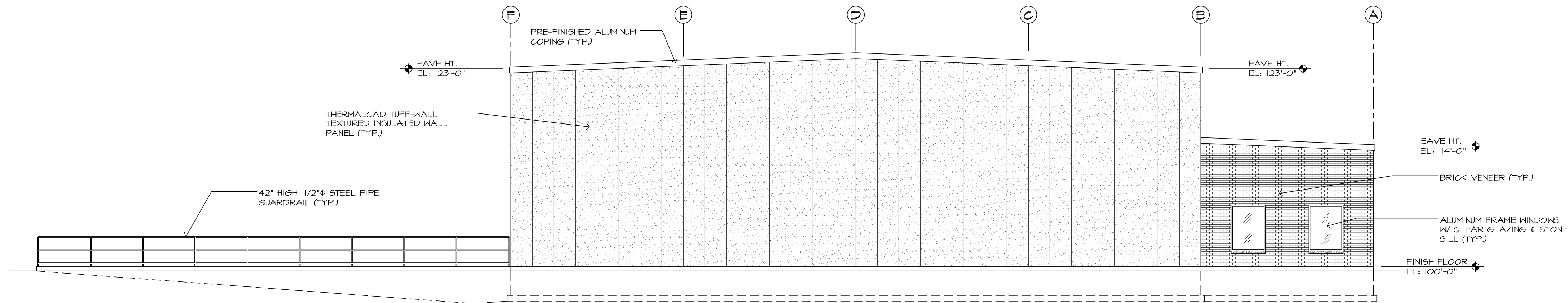
CONCEPT
SITE PLAN

MAY 23, 2018
JUNE 20, 2018

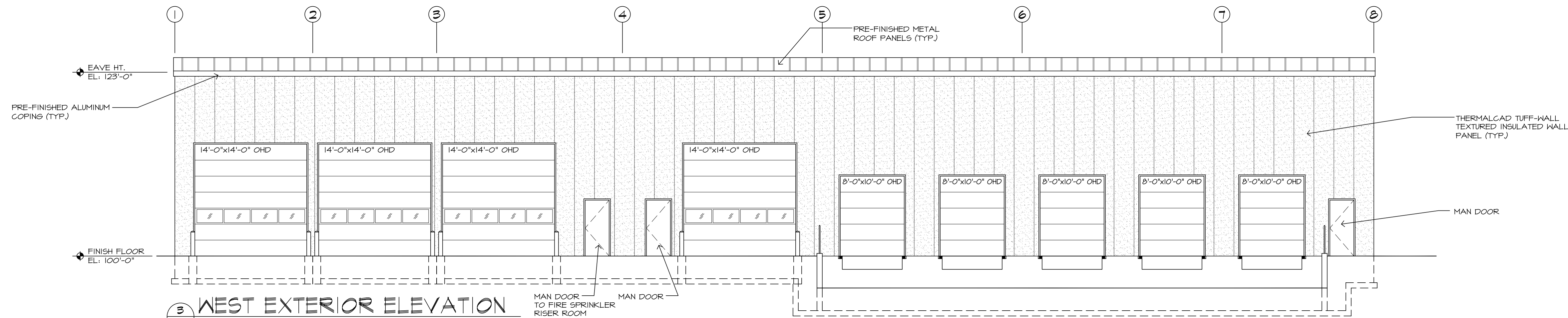




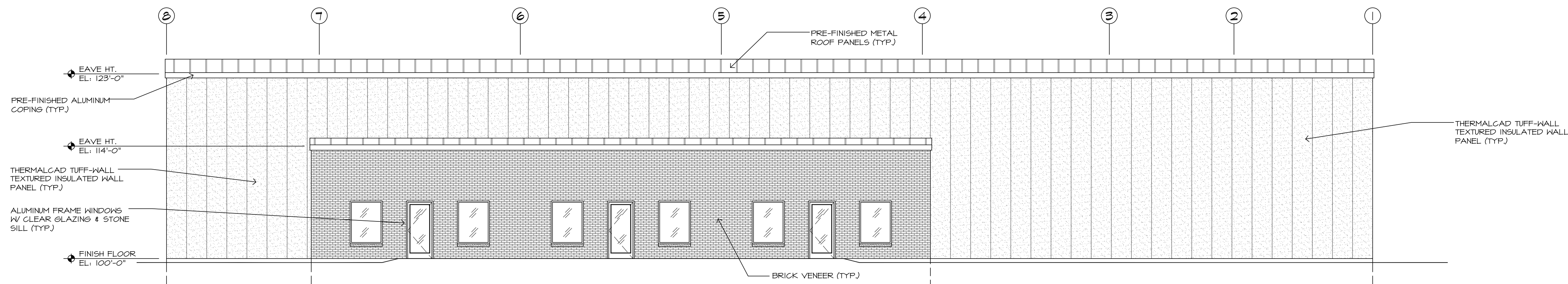
1 NORTH EXTERIOR ELEVATION
1/8" = 1'-0"



2 SOUTH EXTERIOR ELEVATION
1/8" = 1'-0"



3 WEST EXTERIOR ELEVATION
1/8" = 1'-0"



4 EAST EXTERIOR ELEVATION
1/8" = 1'-0"

REVISIONS	BY

CONCEPTUAL EXTERIOR ELEVATIONS

Exhibit received June 22, 2018

NEW TRUCK REPAIR CENTER FOR:
J.V. GLOBAL SERVICES
2008 W. JOHNSBURG ROAD
JOHNSBURG, ILLINOIS 60090

R.B. CUSTOM DESIGNS INC.
2008 W. JOHNSBURG ROAD
JOHNSBURG, ILLINOIS 60090
Phone: 815-754-9459 Fax: 815-307-8200

Date	6/21/18
Scale	AS NOTED
Drawn	RJB
Job	1807
Sheet	CE-1
Of	1

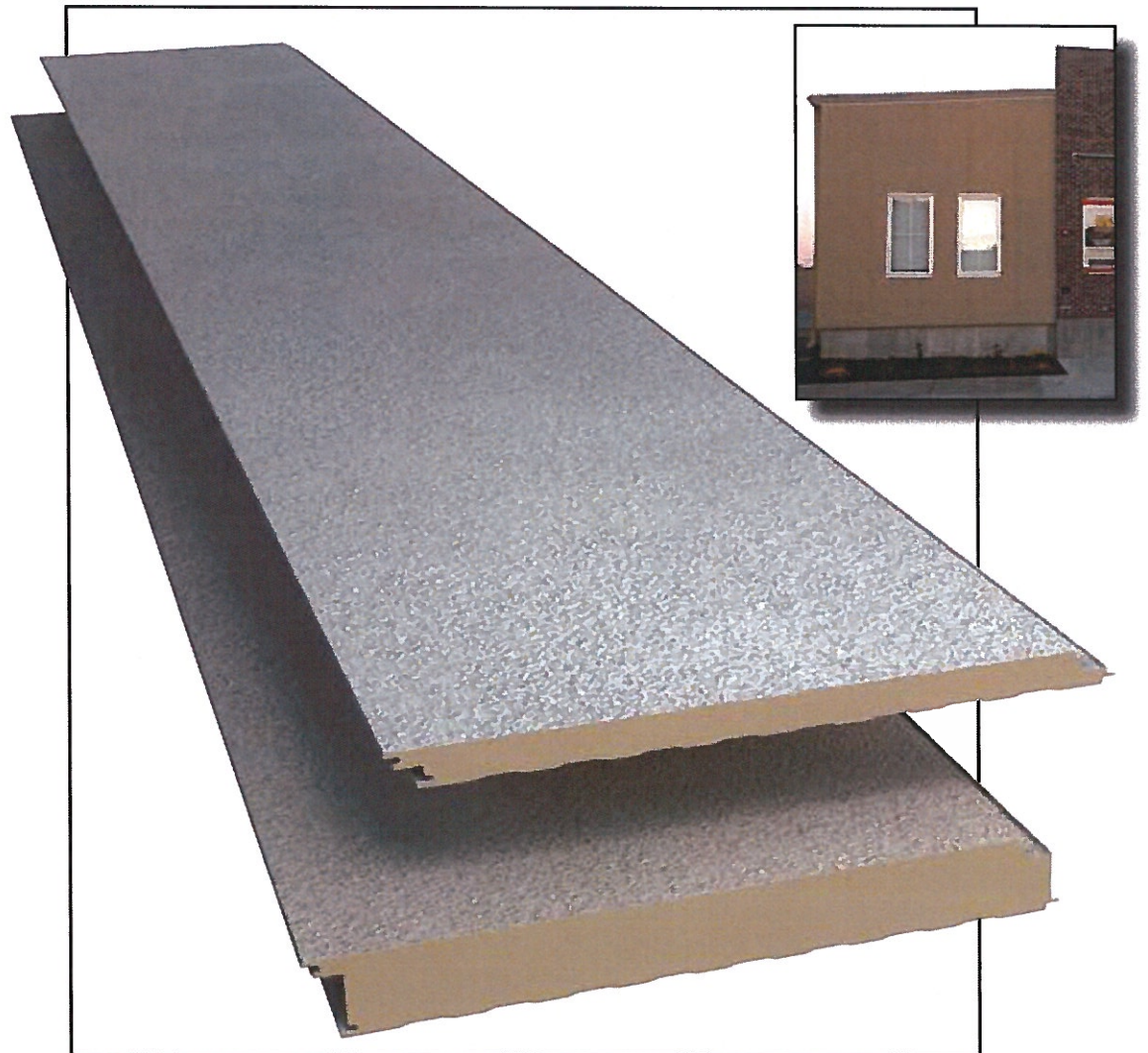
© COPYRIGHT 2018



VARCO PRUDEN BUILDINGS

THERMALCLAD TUFF-WALL™ PANEL

WALL SYSTEMS



FEATURES

- 24 gauge exterior and 26 gauge interior
- 42" wide panel with a durable stucco-like finish
- Available in four thicknesses: 2", 2½", 3" & 4"
- Lengths from 8' to 40'
- Choose from four exterior colors
- Offset tongue-and-groove sidelap joints
- Non-CFC and zero ODP Polyurethane Core

BENEFITS

- Double-walled foam insulated panel for high R performance and exceptional energy efficiency
- Durable textured surface highly resistant to impact and abrasion
- Concealed fastener system provides secure, attractive installation
- Provides the highest available insulating value per inch of any insulating material
- Great alternative when covenants restrict use of metal panel appearance



Exhibit received June 22, 2018

THERMALCLAD TUFF-WALL™ INSULATED PANEL

An attractive and durable sandwich panel ideal for exterior walls or interior partition applications

VP's Tuff-Wall™ is an exceptionally attractive stucco-like insulated wall panel that provides a highly-desired look. The panel's textured surface has a hard aggregated fiber reinforced polymer coating created with the factory applied Tuff-Cote™ finish system. Tuff-Cote finish offers an extremely durable, impact and abrasion resistant coating that withstands severe weather conditions.

Made from G-90 galvanized or AZ-50 aluminum zinc coated 24 gauge steel exterior facing featuring a stucco appearance. Interior facing is a light mesa profile 26 gauge steel (non-embossed), factory coated with a white polyester finish. USDA approved finishes available. For complete color selections, refer to our color card #6024. The panel core is a foamed-in-place non-CFC polyurethane that offers zero ozone depletion potential (ODP), no global warming potential (GWP) and no EPA limits to its usage. With thermal efficiency, recycled steel content and low-VOC material, ThermalClad makes an ideal choice for LEED and sustainable construction.

Panel Width: 42" coverage
Panel Length: Min. 8' Max. 40'
Gauges: 24 ga. exterior, 26 ga. interior
Substrate: G90 or AZ50
Exterior Coating: Tuff-Cote Stucco
Interior Coating: White Polyester
Ext. Coat Warranty: 10 yrs. conditional*
Finish: Hard aggregated fiber reinforced polymer
Profile: Flat exterior; light mesa interior.

All insulated sandwich panels are designed and manufactured to provide long-term, low-maintenance performance. For specific warranty information, refer to VP's Warranty Guide. For information about this or any other VP product or service, contact your local authorized VP Builder.

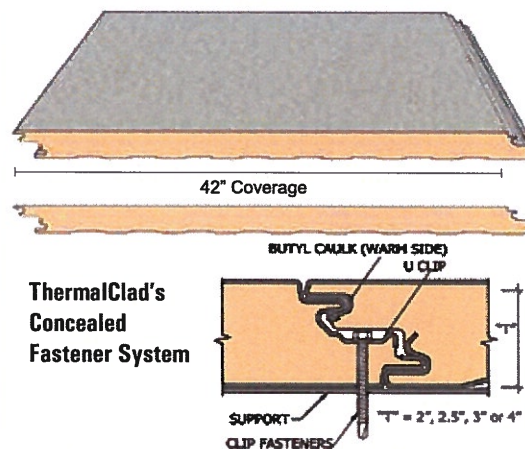
Note: All panels formed from light gauge metal may exhibit waviness, also known as "Oil Canning," commonly occurring in, but not restricted to, flat portions of a panel. This inherent characteristic is not a defect of material or manufacturing and is not cause for rejection.

Note: Tests and approvals include FM 4880 and FM 4881, Dade County Air and Water infiltration tests AAMA 501, ASTM E 283 and E 331.

**Some colors are not recommended for exterior color on cooler and freezer buildings.*



THERMALCLAD TUFF-WALL PROFILE



R-Values with Air Films	
Panel Thickness	75° Mean Temperature
2"	14.95
2.5"	20.00
3"	25.00
4"	32.97

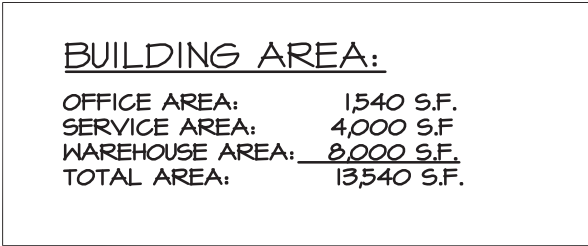
R-Values include the air films on each side of the panel. 75° Mean based on ASTM C-518 Thermal testing (Values for C-1363 based on 4" panel testing. All Values for other thicknesses extrapolated). The R-value of the polyurethane core used in these panels provides the highest insulating value per inch thickness of any building material available today.



Varco Pruden Buildings, 3200 Players Club Circle, Memphis, TN 38125

©All rights reserved. Varco Pruden Buildings® is a division of BlueScope Buildings North America, Inc. Varco Pruden meets or exceeds the most comprehensive testing and compliance standards in the building system industry. To learn more about our products, services and qualifications, visit our website, www.vp.com. **Building Solutions... one relationship at a time.**

2046 TC Tuff-Wall
Issue Date: 2003
Revised: 9/16



REVISIONS	BY

CONCEPTUAL FLOOR PLAN

Exhibit received June 22, 2018

NEW TRUCK REPAIR CENTER FOR:
J.V. GLOBAL SERVICES
120 CAROL STREET
WHEELING, ILLINOIS 60090

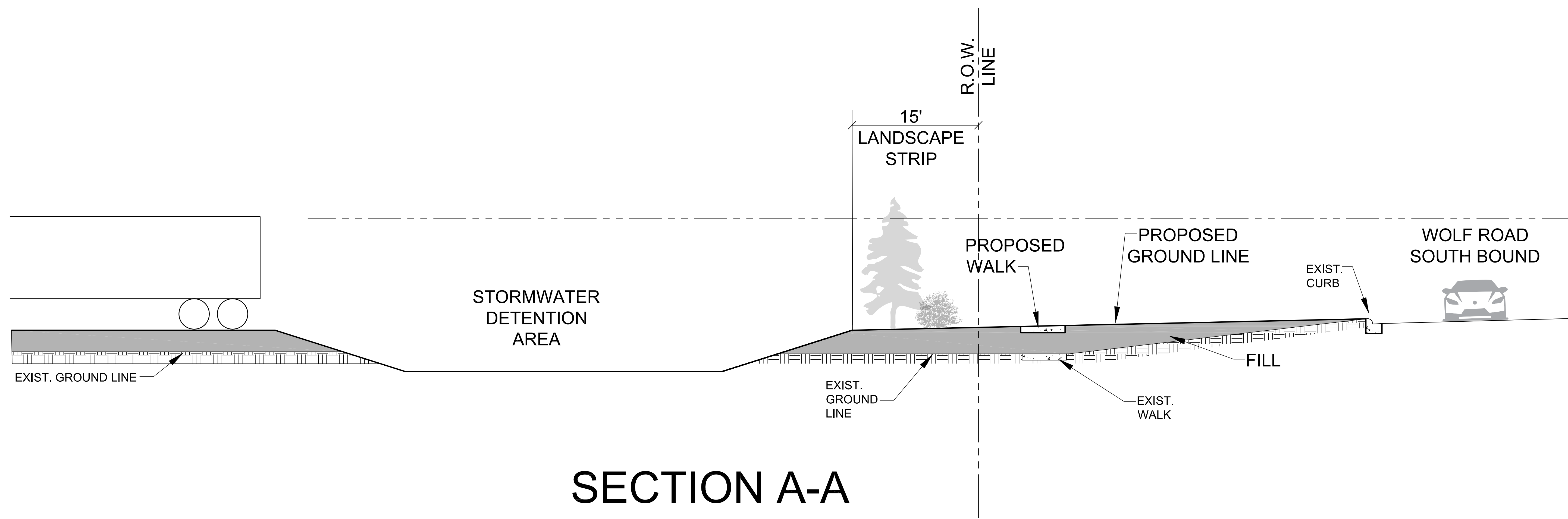
R.B. CUSTOM DESIGNS INC.
2102 W. Johnsbury Road
Johnsbury, Illinois 60051
Phone: 815-T54-4484 Fax: 815-307-8200

Date	6/21/18
Scale	AS NOTED
Drawn	RJB
Job	1807
Sheet	
	
Of	Sheets



PLANTING SCHEDULE

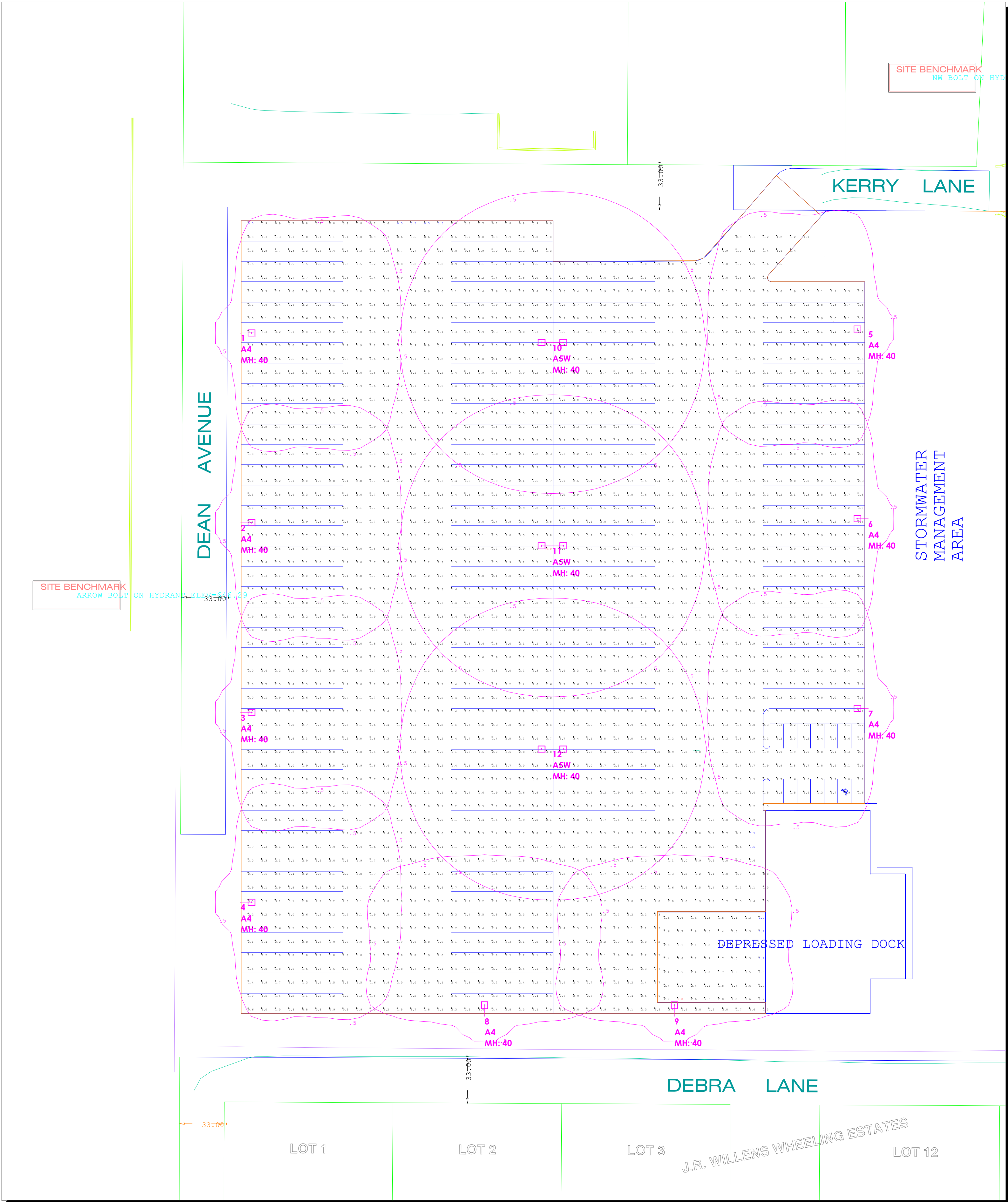
TREES	CODE	BOTANICAL NAME / COMMON NAME	QTY	CALL	SIZE	QTY
NY5 BYL	NY5 BYL	Nyssa sylvatica / Sour Gum	13	B # B	2.5' Cal	13
QUE BIG	QUE BIG	Quercus bicolor / Swamp White Oak	7	B # B	2.5' Cal	7
EVERGREEN TREES	CODE	BOTANICAL NAME / COMMON NAME	QTY	CALL	SIZE	QTY
JAN EAS	JAN EAS	Juniperus virginiana / Eastern Red Cedar	15	B # B	6' - 8'	15
PLC CO2	PLC CO2	Picea pungens / Colorado Spruce	24	B # B	5'-10'	24
FLOWERING TREES	CODE	BOTANICAL NAME / COMMON NAME	QTY	CALL	SIZE	QTY
ALN ALD	ALN ALD	Alnus rugosa / Speckled Alder	16	B # B	6'-8'	16
AME GRA	AME GRA	Amelanchier grandiflora 'Autumn Brilliance' / 'Autumn Brilliance' Serviceberry	24	B # B	6'-8'	24
BET NIG	BET NIG	Betula nigra / River Birch	15	B # B	6'-8'	15
SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	QTY	CALL	SIZE	QTY
COR RES	COR RES	Cornus sericea / Red Twig Dogwood	84	B # B	4'-6'	84
GROUND COVERS	CODE	BOTANICAL NAME / COMMON NAME	QTY	CALL	SIZE	QTY
MIX DET	MIX DET	Mix Detention Basin Mix / Detention Basin Seed Mix	seed	4'1/8"	6'	4'1/8"
MIX SHO	MIX SHO	Mix Short Prairie Mix / Short Prairie	seed	1'1/8"	6'	1'1/8"



SECTION A-A

MAY 23, 2018 JUNE 20, 2018		ROONEY CONSULTANTS, INC. LAKEMOORE, IL (815) 341-0910		4
SECTION A-A				
J.V. GLOBAL SERVICES WOLF ROAD AT KERRY LANE WHEELING, ILLINOIS				

Exhibit received June 27, 2018



Scale: 1 inch= 45 Ft.

Luminaire Schedule										
Symbol	Qty	Label	Arrangement	Lum. Lumens	Arr. Lum. Lumens	Lum. Watts	Arr. Watts	LLF	Description	[MANUFAC]
	9	A4	SINGLE	39921	39921	394.016	394.016	0.900	VPL-96L-395-4K7-4	Beacon Products
	3	A5W	BACK-BACK	39048	78096	390.5	781	0.900	VPL-96L-395-4K7-5W	Beacon Products

Calculation Summary								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Description
LOADING DOCK_Planar	Illuminance	Fc	1.81	2.8	1.2	1.51	2.33	READINGS TAKEN @ 5FT BELOW GRADE LEVEL
PARKING LOT_Planar	Illuminance	Fc	1.89	4.0	0.5	3.78	8.00	READINGS TAKEN @ GRADE LEVEL

LPD Area Summary			
Label	Area	Total Watts	LPD
LPDArea_1	247369	4707.096	0.019

Luminaire Location Summary						
LumNo	Label	X	Y	Z	Orient	Tilt
1	A4	9161	10995	40	0	0
2	A4	9161	10855	40	0	0
3	A4	9161	10715	40	0	0
4	A4	9161	10575	40	0	0
5	A4	9624	10998	40	180	0
6	A4	9624	10858	40	180	0
7	A4	9624	10718	40	180	0
8	A4	9341	10491	40	90	0
9	A4	9481	10491	40	90	0
10	A5W	9391	10988	40	0	0
11	A5W	9391	10838	40	0	0
12	A5W	9391	10688	40	0	0

Parking Lot Design Guide	Basic (for typical conditions) lux/ftc	Basic Enhanced Security (in consideration of personal security or vandalism) lux/ftc	Security lighting for public spaces lux/ftc	High Security (security lighting for public spaces) lux/ftc
Minimum Horizontal Illuminance (Measured on parking surface without any shadowing from any object)	2.0/0.2	5.0/0.5	10.0/1.0	30.0-60.0/3.0-6.0
Uniformity Ratio Maximum - to - Minimum	20:1	15:1	15:1	*4:1 *Avg-Min
Minimum Vertical Illuminance (for facial recognition measured at 5' above the parking surface at the point of lowest horizontal illuminance)	1.0/0.1	2.5/0.25	5.0-8.0/0.5-0.8	12-60/1.2-6.0
Recommendations based on RP-33-99, RP-20-98, 9th Edition IESNA Lighting Handbook				

L.J. KAHER ASSOCIATES, INC.
CONSULTING ENGINEERS
La Grange, Illinois 60525
708-246-1772

ROONEY
CONSULTANTS, INC.
LAKEMOOR, IL (815) 341-0910

Project Name:
WHEELING J.V. GLOBAL TRANS FAC

Drawn By: Jose Saucedo

Drawn By: jose.saucedo@pg-enlighten.com

Date: 5/23/2018

Scale: 1" = 45'

Comments

Date

#

Revisions

Exhibit received June 22, 2018

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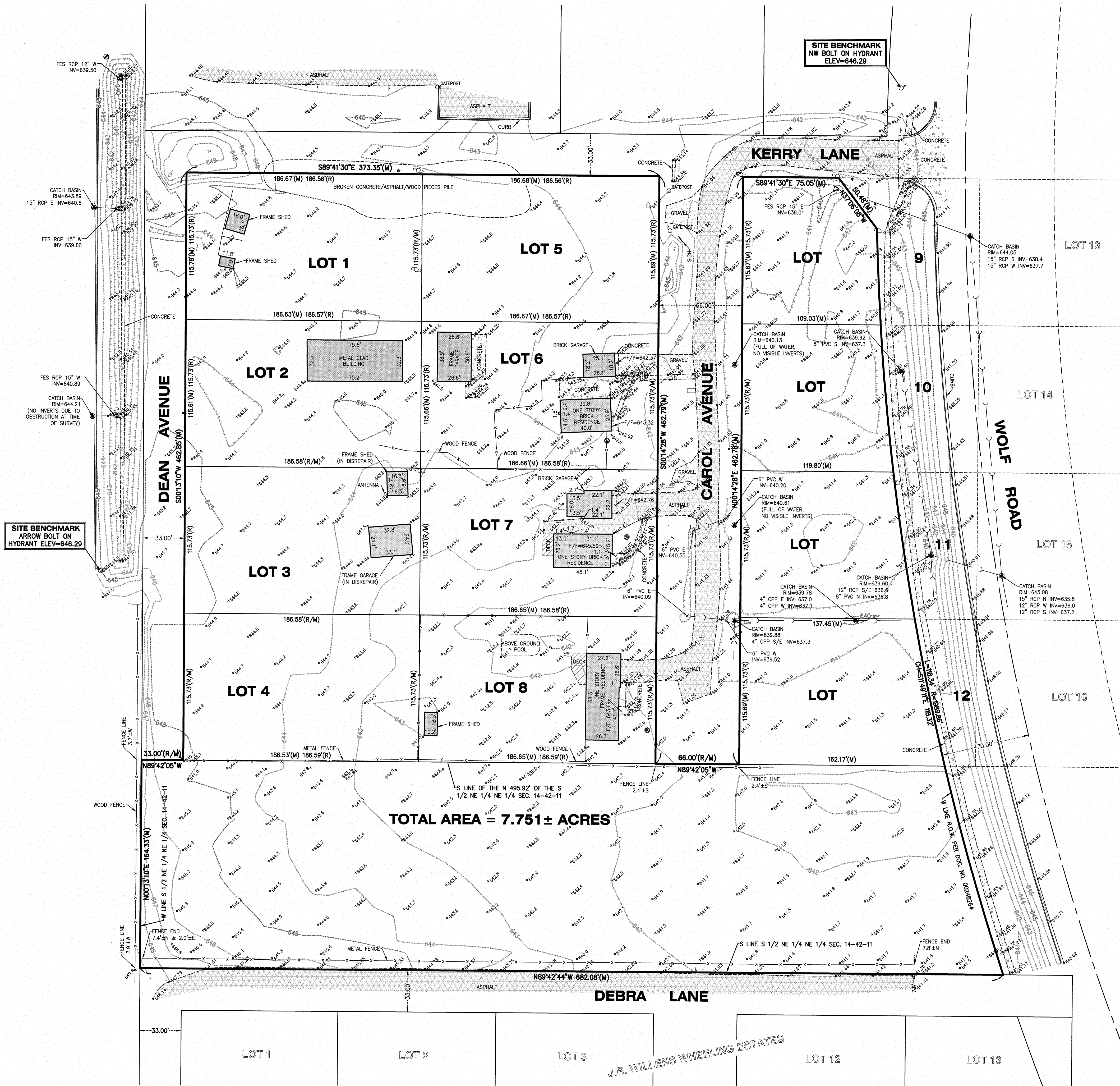
Date

TOPOGRAPHIC SURVEY

Lots 1 through 8 in Wolf Road Estates, being a Subdivision of the North 495.92 feet of the South Half of the Northeast Quarter of the Northeast Quarter of Section 14, Township 42 North, Range 11 East of the Third Principal Meridian, in Cook County, Illinois.

Also,

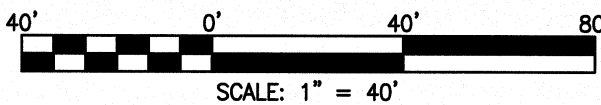
Part of the South Half of the Northeast Quarter of the Northeast Quarter of Section 14, Township 42 North, Range 11 East of the Third Principal Meridian and Part of Lots 9 through 12 in Wolf Road Estates, being a Subdivision of the North 495.92 feet of the South Half of the Northeast Quarter of the Northeast Quarter of Section 14, Township 42 North, Range 11 East of the Third Principal Meridian, in Cook County, Illinois.



P.I.N.'s
03-14-201-018
03-14-201-019
03-14-201-020
03-14-201-021
03-14-201-022
03-14-201-023
03-14-201-024
03-14-201-025
03-14-201-026
03-14-201-027
03-14-201-028
03-14-201-029
03-14-201-037

CLIENT: ROONEY CONSULTING, INC.
DRAWN BY: DAM CHECKED BY: APG
SCALE: 1"=40' SEC. 14 T. 42 R. 11 E.
BASIS OF BEARING: ASSUMED
P.I.N.: SEE ABOVE
JOB NO.: 180052 I.D. IPO
FIELDWORK COMP.: 2/23/18 BK. PG.
PARTS THEREOF CORRECTED TO 86 F.

LEGEND	
●	CATCH BASIN
○	DOWN GUY
⊕	FIRE HYDRANT
⊥	FLARED END SECTION
✱	FOUND CROSS
●	FOUND IRON BAR
○	FOUND IRON PIPE
□	MAIL BOX
⊙	MANHOLE
⊥	SIGN
⊙	UTILITY POLE
●	WELL
(D)	DEED
(M)	MEASURED
(R)	RECORD



PROJECT BENCHMARK
NGS BM "LAK COO 1B"
ELEV=664.66 (NAVD88)

STATE OF ILLINOIS)
COUNTY OF McHENRY) S.S.

We, Vanderstappen Land Surveying, Inc. do hereby state that we have caused the above described property to be topographically surveyed and that the plat hereon drawn is a correct representation of said topography.

This professional service conforms to the current Illinois minimum standards for topographic surveys. This is not a Boundary Survey.

Dated at Woodstock, McHenry County, Illinois 2/27 A.D., 2018.

Vanderstappen Land Surveying, Inc.
Design Firm No. 184-002792

By: *Arthur J. Vanderstappen*
Illinois Professional Land Surveyor No. 3857

Traffic Impact Study Proposed JV Global Transportation Center

Wheeling, Illinois



Prepared For:

JV Global.

Prepared By:



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Exhibit received June 27, 2018

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 the proposed JV Global transportation center to be located on Wolf Road at Kerry Lane in Wheeling, Illinois. As proposed, the approximate eight-acre site will be developed with a parking lot for approximately 119 trucks/trailers and an approximately 13,000 square-foot office building with a single loading dock. The site, which is currently occupied by four single-family homes and the Joern Concrete business, is located on the west side of Wolf Road approximately 715 feet south of Hintz Road. Access to the development will be provided off Wolf Road via Kerry Lane.

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

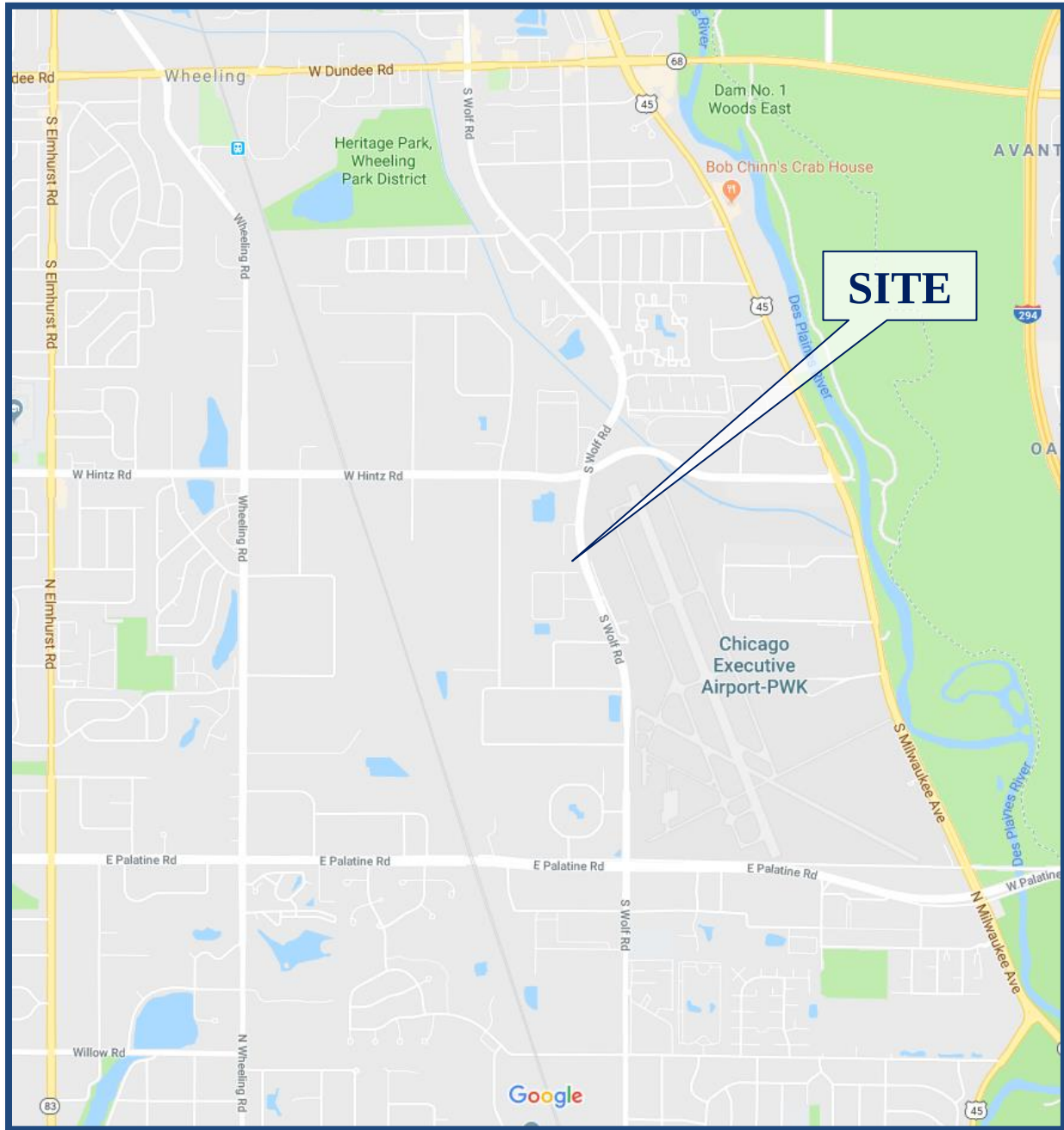
Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site area.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and evening peak hours for the following conditions:

1. Existing Conditions – Analyze the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.
2. Projected Conditions – Analyze the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location

Figure 1



Aerial View of Site Location

Figure 2

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order 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 roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which is currently occupied by four single-family homes and the Joern Concrete business vacant, is located on the west side of Wolf Road approximately 715 feet south of Hintz Road. Land uses in the vicinity of the site are primarily industrial to the north and west with single-family residential to the south. The Chicago Executive Airport is located to the east.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

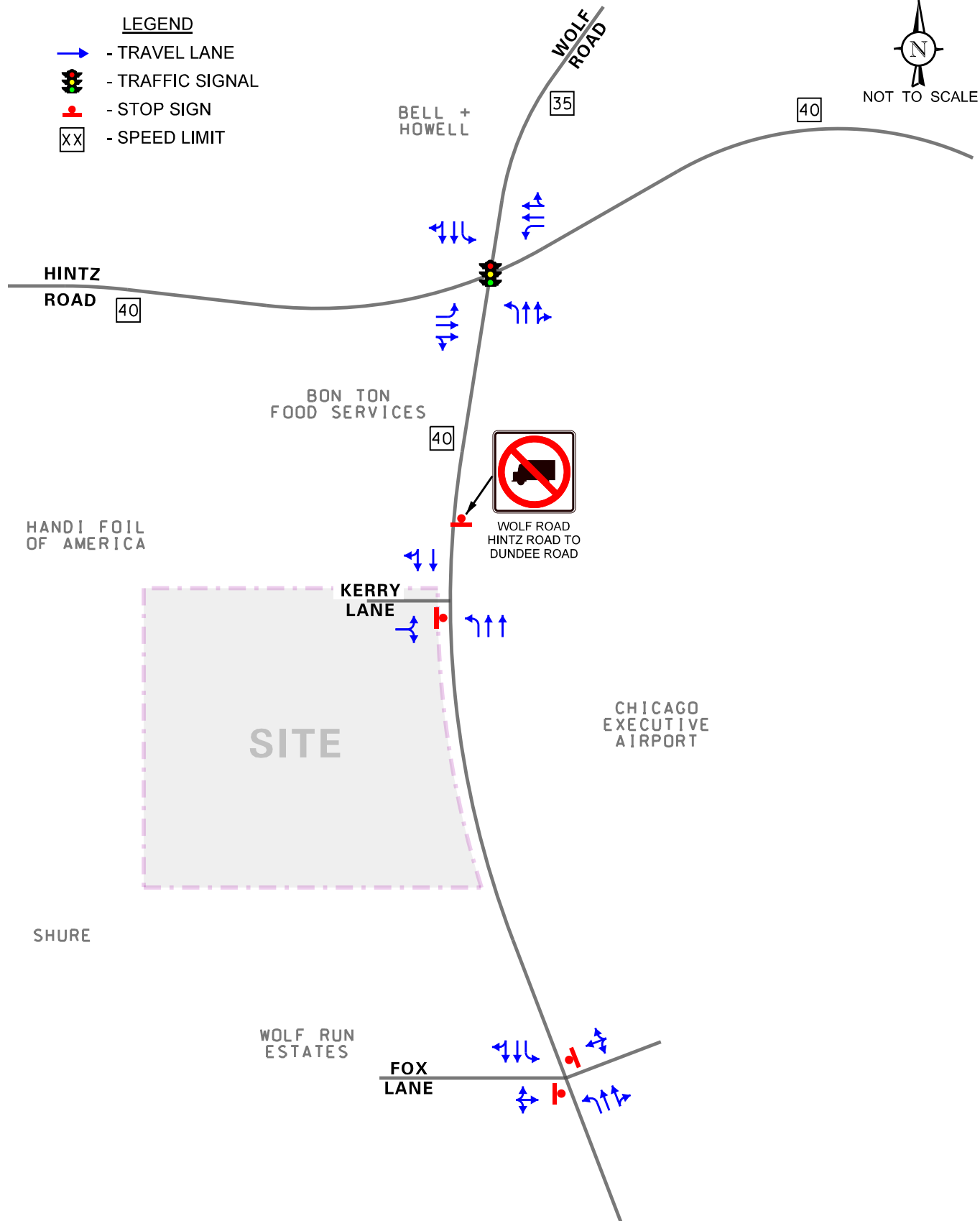
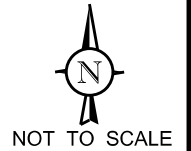
Wolf Road is a north/south minor arterial that provides two lanes in each direction divided by a mountable median in the vicinity of the site. At its unsignalized “T” intersection with Kerry Lane, Wolf Road provides an exclusive left-turn lane with 125 feet of storage and two through lanes in the northbound approach. The southbound approach provides an exclusive through lane and a combined through/right-turn lane. At its signalized intersection with Hintz Road, Wolf Road provides an exclusive left-turn lane, a through lane and a shared through/right-turn lane on both approaches. Wolf Road is also under traffic signal control at its intersection with the Palatine Road ramps approximately 0.9 miles to the south. Wolf Road narrows down to one lane in each direction approximately one-half mile south of Kerry Lane for approximately one-quarter of a mile where it widens up to provide two lanes in each direction. Wolf Road has a posted speed limit of 40 mph, carries an Average Annual Daily Traffic (AADT) of 14,900 vehicles (Year 2014 – IDOT Map) and is under the jurisdiction of the Village of Wheeling in the vicinity of the site. It should be noted that trucks are restricted via signage from traveling on Wolf Road between Hintz Road and Dundee Road.

Hintz Road is an east-west minor arterial that provides two lanes in each direction separated by a raised median in the vicinity of the site. At its signalized intersection with Wolf Road, Hintz Road provides an exclusive left-turn lane, a through lane and a combined through/right-turn lane on both approaches. Hintz Road has a posted speed limit of 35 mph east of Wolf Road increasing to 40 mph west of Wolf Road. Hintz Road carries an AADT of approximately 9,500 vehicles (Year 2014 – IDOT Map) east of Wolf Road increasing to 19,000 vehicles (Year 2014 – IDOT Map) west of Wolf Road. Hintz Road is under the jurisdiction of the Cook County Department of Transportation and Highways (CCDOH).

Kerry Lane is an east-west road that serves the existing land uses within the site. The road provides one inbound lane and one outbound lane with outbound movements under stop sign control.

Fox Lane is an east-west residential road that provides one lane in each direction. The road serves the Wolf Run Estates subdivision located south of the site. On-street parking is not allowed on the north side of the road. At its unsignalized intersection with Wolf Road, Fox Lane is aligned with the Chicago Executive Airport north access drive and provides a shared left/through/right-turn lane under stop sign control. Fox Lane has a posted speed limit of 25 mph.

- LEGEND**
-  - TRAVEL LANE
 -  - TRAFFIC SIGNAL
 -  - STOP SIGN
 -  - SPEED LIMIT



Proposed
Transportation Center
Wheeling, Illinois

Existing Roadway Characteristics

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period classification traffic counts on Thursday, May 22, 2018 during the weekday morning (6:00 to 9:00 A.M.) and evening (4:00 to 7:00 P.M.) peak periods at the intersections of Wolf Road with Hintz Road, Kerry Lane and Fox Lane. The results of the traffic counts indicated that the weekday morning peak hour of traffic occurs from 7:30 to 8:30 A.M. and the weekday evening peak hour of traffic occurs from 4:45 to 5:45 P.M. **Figure 4A** illustrates the existing vehicle peak hour traffic volumes at the study area intersections. **Figure 4B** illustrates the existing truck peak hour traffic volumes at the study area intersections. Copies of the traffic count summary sheets are included in the Appendix.

Gap Study Results

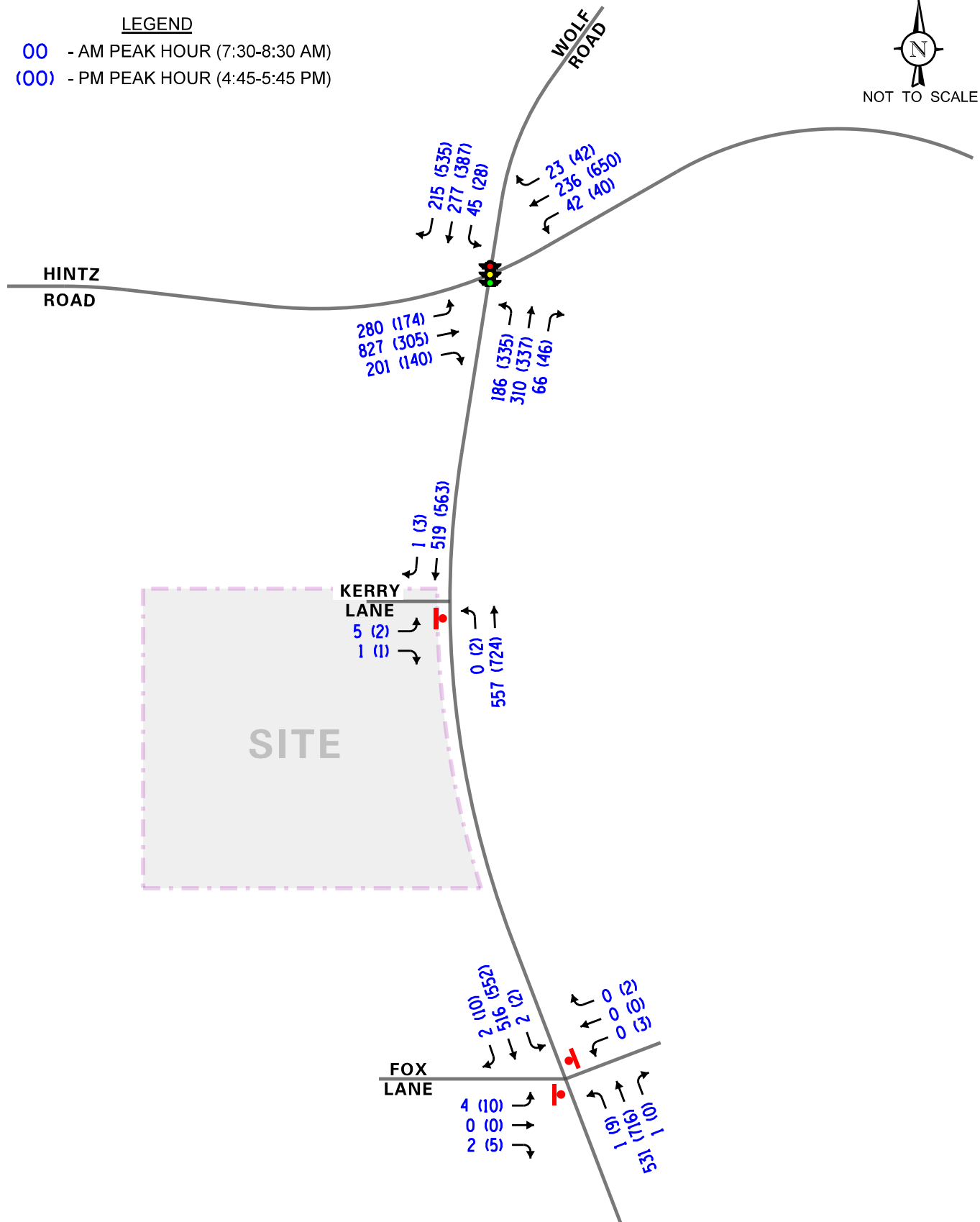
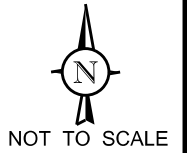
A gap study was performed on Wolf Road at its intersection with Kerry Lane on Thursday, May 22, 2018 during the weekday morning and evening peak hours in order to determine the availability of gaps or interruptions in the Wolf Road traffic stream. The study examined gaps in the southbound direction along Wolf Road, which would allow vehicles to turn left from Wolf Road into the site and to turn right from the site onto Wolf Road, as well as the concurrent gaps in both directions that would allow vehicles to turn left from the site onto Wolf Road. The results of the gap study showing the total number of potential movements based on gaps available for the peak hours are summarized in **Table 1**. It is important to note that the gaps presented on Table 1 are the gaps that can accommodate passenger vehicle maneuvers. The adjusted gaps to accommodate truck traffic are presented later on in the report.

Table 1
SUMMARY OF WOLF ROAD PEAK HOUR GAP STUDY

Movement	Weekday Morning Available Gaps (per 60 minutes)	Weekday Evening Available Gaps (per 60 minutes)
Left Turn from Wolf Road	1,011	925
Left Turn from Kerry Lane	245	201
Right Turn from Kerry Lane	520	500

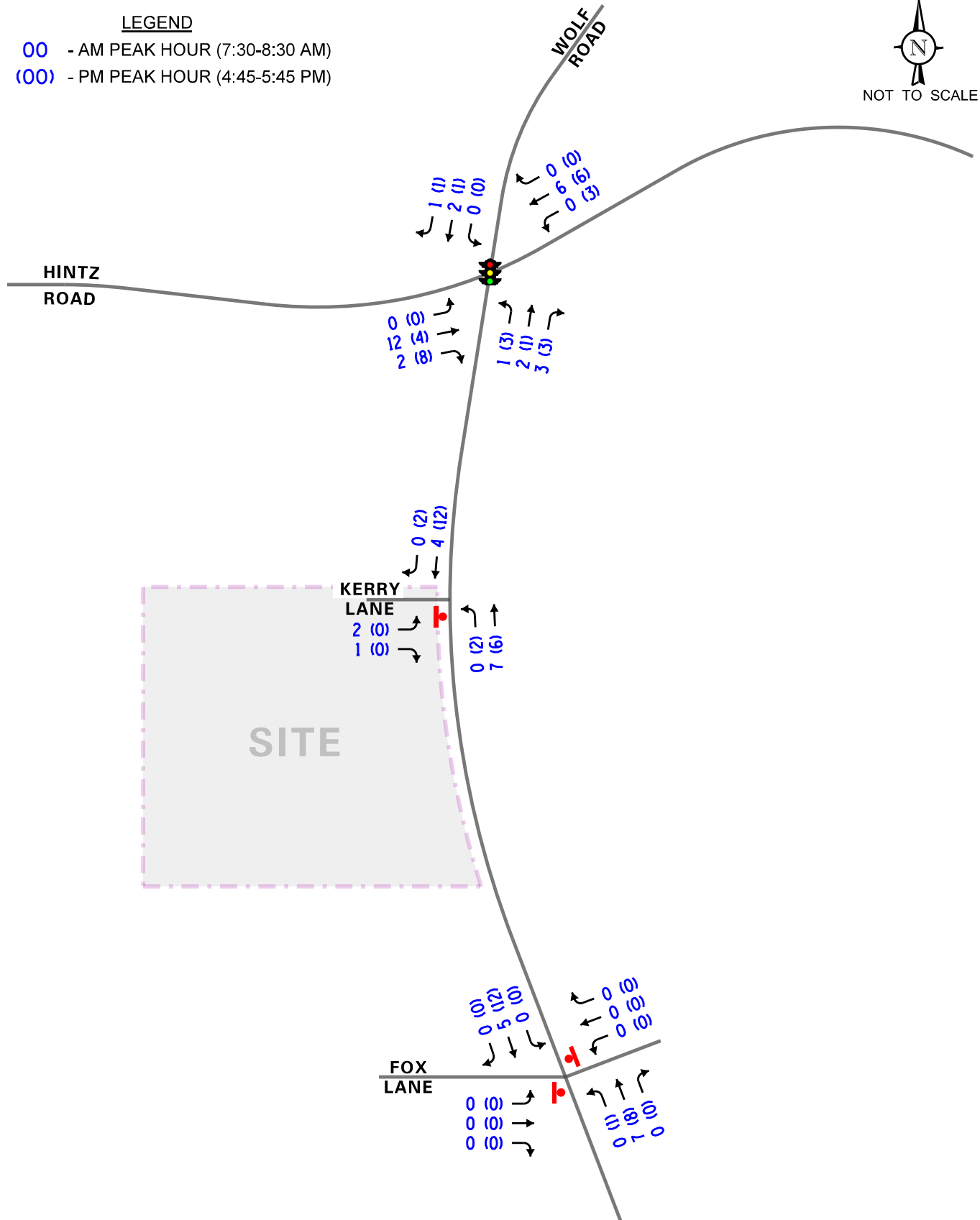
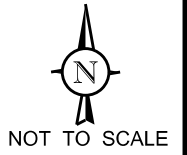
LEGEND

- 00 - AM PEAK HOUR (7:30-8:30 AM)
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3. 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 Site and Development Plan

As proposed, the site will be redeveloped with a transportation center with approximately 119 parking spaces and a one-story building. The center will be gated at its access at Wolf Road and will operate 24-hours a day. It is important to note that the center is not a truck terminal but rather a facility offering parking for heavy vehicle owners who will arrive in their passenger vehicles and leave in their trucks for delivery and transport services. Based on information provided to KLOA, Inc., many of the drivers are gone for several days or weeks before they return to the transportation center, thus generating low volumes of traffic.

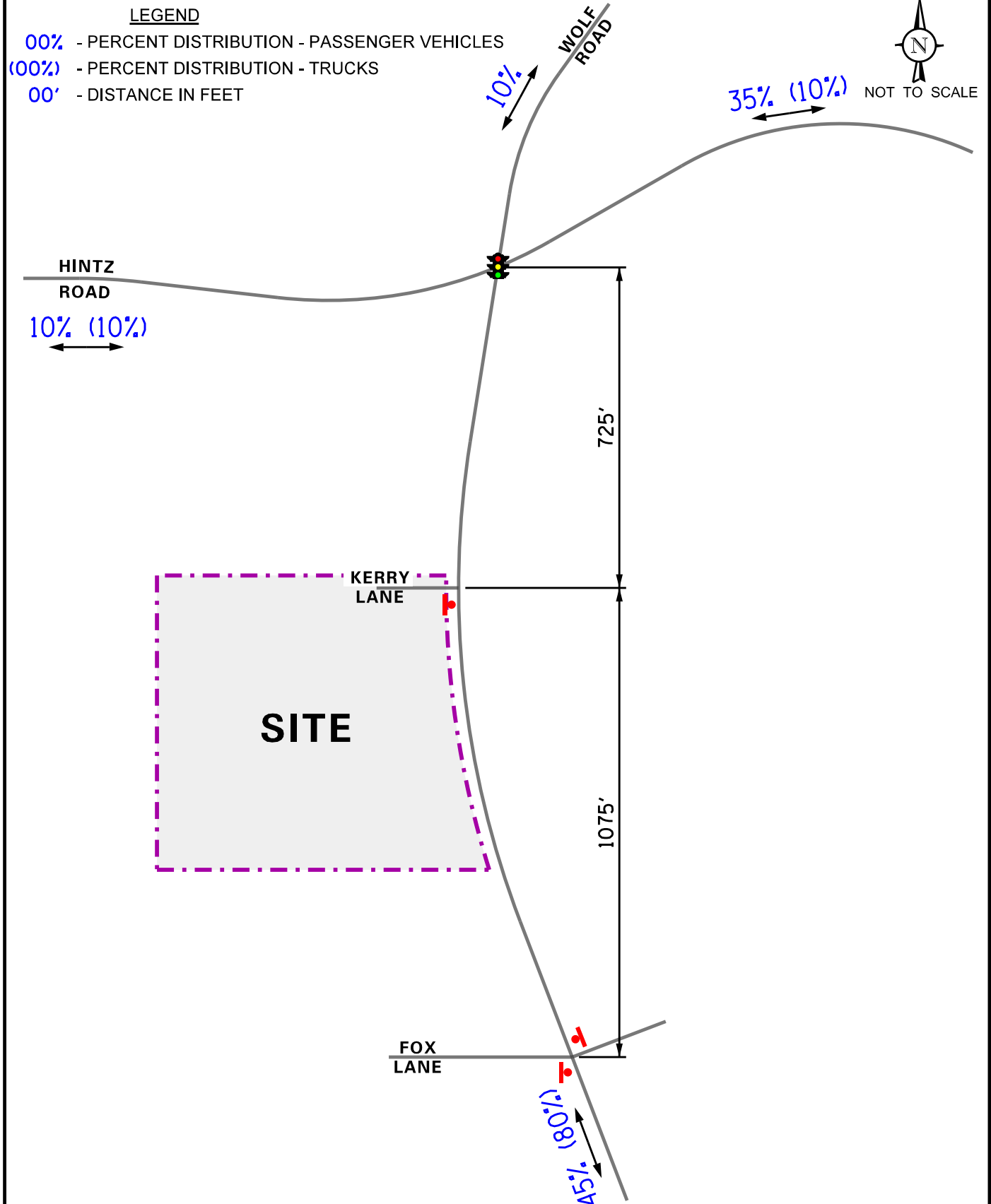
Development Vehicular Access

Access to the transportation center will be provided off Wolf Road via Kerry Lane. The access road, which will be modified to accommodate truck movements in and out, will provide one inbound lane and one outbound lane with outbound movements under stop sign control. No other access point will be provided. Auto Turn runs depicting the truck movements in and out of the site are included in the Appendix. Given the existing truck restriction on Wolf Road north of the site between Hintz Road and Dundee Road and given the location of the interchanges in relation to the Interstate system, it is anticipated that the majority of the truck traffic will travel to/from the south on Wolf Road to connect with Palatine Road.

A site plan depicting the proposed development layout and access and exhibits showing the truck maneuvers to and from the access drive are included in the Appendix.

Directional Distribution

The directions from which employees and users of the proposed development will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the passenger and heavy vehicle directional distribution of the development-generated traffic.



Development Traffic Generation

The volume of traffic generated by the proposed center was based on vehicle trip generation surveys conducted by KLOA, Inc. at the existing facility located at 150 Abbott Drive in Wheeling. This facility has two access drives off Abbott Drive and provides 75 parking spaces. The trip generation surveys were conducted on Monday, May 21, Tuesday May 22 and Thursday May 23, 2018 (a total of 72 hours) and differentiated between passenger vehicle, single-unit trucks and multi-unit trucks. Based on the trip generation surveys, the following was found:

- The existing facility generated between 137 to 179 daily trips. This translates to a trip generation rate between 1.83 and 2.38 daily trips per parking bay
- Approximately 30 percent of the daily traffic was composed of multi-unit trucks and 20 percent of single unit trucks
- The peak generation of the facility typically occurred outside of the peak hours of traffic anywhere between 9:00 A.M. and 2:00 P.M.
- During the peak hours of adjacent street traffic, the trip generation ranged from a low of 0.013 to a high of 0.22 trips per parking bay.

Trips generated during the morning and evening peak hours on the three surveyed days are shown in **Table 2**. The full results of the trip generation survey are included in the Appendix.

Table 2
TRIP GENERATION SURVEY

Date	Type of Vehicle	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		In	Out	Total	In	Out	Total
Monday May 21, 2018	Passenger Vehicles	1	1	2	3	4	7
	Single-Unit Truck	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>
	Multi-Unit Truck	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>
	Total¹	1	1	2	4	5	9
Tuesday May 22, 2018	Passenger Vehicles	1	1	2	2	4	6
	Single-Unit Truck	1	0	1	2	2	4
	Multi-Unit Truck	<u>0</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>4</u>	<u>7</u>
	Total²	2	2	4	7	10	17
Thursday May 24, 2018	Passenger Vehicles	0	0	0	1	2	3
	Single-Unit Truck	1	0	1	1	2	3
	Multi-Unit Truck	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Total	1	0	1	2	4	6

Inspection of Table 1 indicates that the peak trip generation occurred on Tuesday May 22, 2018. This peak translates into a trip generation rate of 0.053 trips per parking space during the morning peak hour and 0.22 trips per parking bay during the evening peak hour. In order to provide for a conservative analysis, the peak trip generation rates were applied to the proposed 119 parking spaces to estimate the number of trips the proposed transportation center will generate. The projected trips to be generated by the site during the peak hours of adjacent street traffic are shown in **Table 3A**. **Table 3B** shows the projected trips to be generated during the peak hour of the generator.

Table 3A
ESTIMATED PEAK HOUR OF ADJACENT STREET TRIP GENERATION
(119 SPACE TRAILER PARKING FACILITY)

	Type of Vehicle	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips
		In	Out	Total	In	Out	Total	
JV Global Transportation Center (119 Spaces)	Passenger Vehicles	1	1	2	3	6	9	141
	Single-Unit Truck	1	1	2	3	3	6	57
	Multi-Unit Truck	<u>1</u>	<u>1</u>	<u>2</u>	<u>5</u>	<u>6</u>	<u>11</u>	<u>85</u>
	Total	3	3	6	11	15	26	283

Table 3B
ESTIMATED PEAK HOUR OF THE GENERATOR TRIP GENERATION
(119 SPACE TRAILER PARKING FACILITY)

	Type of Vehicle	Weekday Morning Peak Hour of Generator			Weekday Evening Peak Hour of Generator			Daily Trips
		In	Out	Total	In	Out	Total	
JV Global Transportation Center (119 Spaces)	Passenger Vehicles	19	8	27	11	13	24	141
	Single-Unit Truck	1	5	6	0	3	3	57
	Multi-Unit Truck	<u>2</u>	<u>3</u>	<u>5</u>	<u>1</u>	<u>5</u>	<u>6</u>	<u>85</u>
	Total	22	16	38	12	21	33	283

Trip Generation Comparison

For comparison purposes, KLOA, Inc. estimated the number of trips that could be generated by the site should it be developed with 100,000 square feet of manufacturing. The number of trips to generated by a manufacturing facility were calculated using the trip rates for Land-Use Code 140 found in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 10th Edition. **Table 4** shows the estimated morning and evening peak hour trips for a manufacturing facility.

Table 4

ESTIMATED TRIP GENERATION – MANUFACTURING LAND USE

Land Use	Type of Vehicle	Weekday Morning Peak Hour			Weekday Evening Peak Hour		
		In	Out	Total	In	Out	Total
Manufacturing (100,000 s.f.)	Passenger Vehicles	34	15	49	17	37	54
	Heavy Vehicles	<u>9</u>	<u>4</u>	<u>13</u>	<u>4</u>	<u>9</u>	<u>13</u>
	Total	43	19	62	21	46	67

As can be seen, a manufacturing land use will generate more traffic than the proposed transportation center.

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed transportation center were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6A** illustrates the passenger vehicle traffic assignment of the trips generated by the proposed development while **Figure 6B** illustrates the heavy vehicle traffic assignment.

Background (No-Build) Traffic Conditions

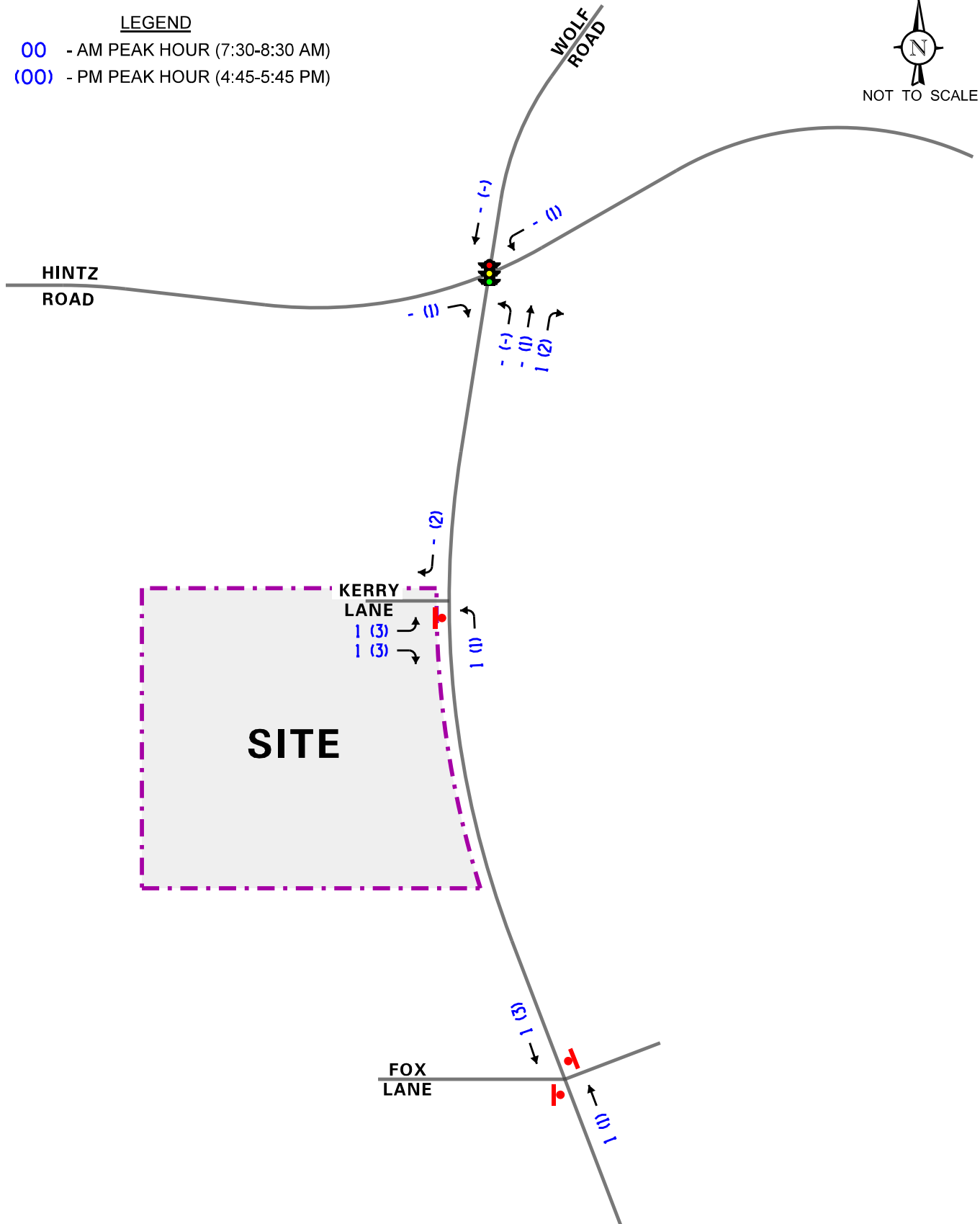
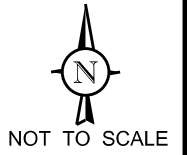
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the traffic volumes traversing Wolf Road and Hintz Road are projected to increase by approximately 0.25 percent per year. As such, the existing traffic volumes were increased by 1.25 percent to reflect Year 2023 background traffic conditions. **Figure 7** illustrates the Year 2023 background traffic volumes.

Total Projected Traffic Volumes

The development-generated traffic volumes (Figure 6) were added to the Year 2023 background traffic volumes to determine the Year 2023 total projected traffic volumes. **Figure 8** illustrates the Year 2023 total projected volumes.

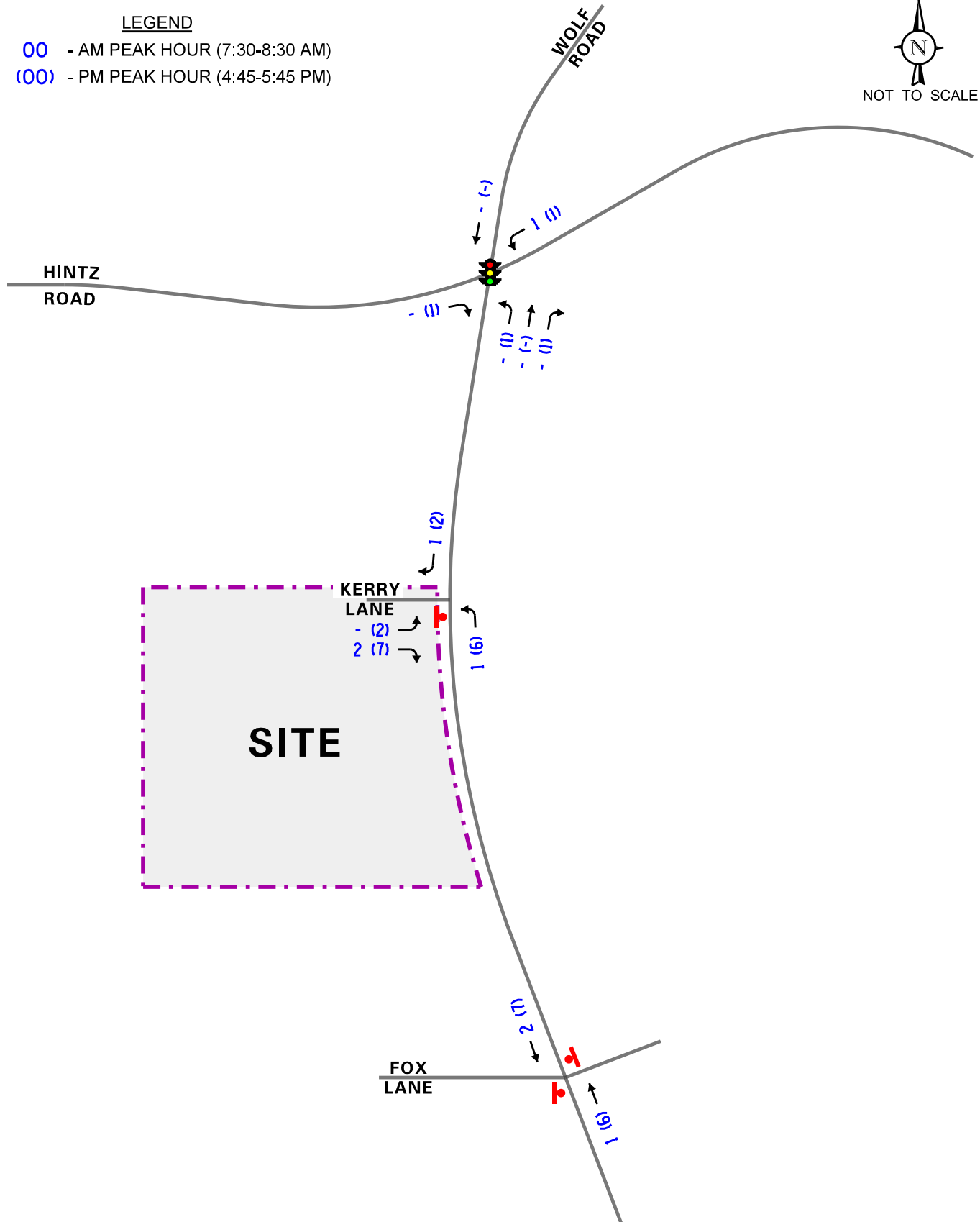
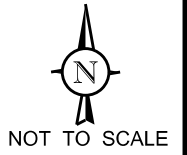
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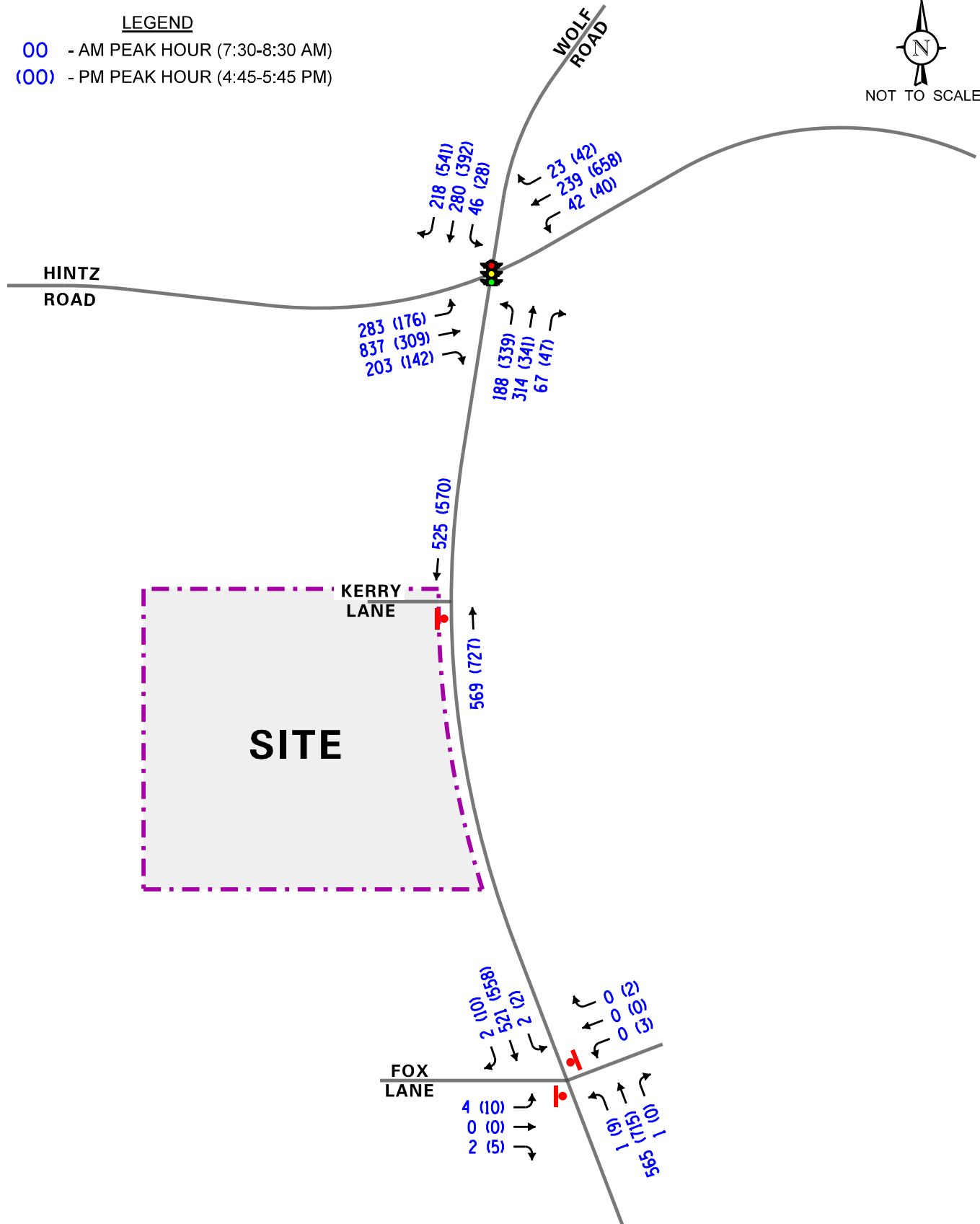
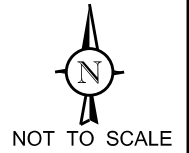


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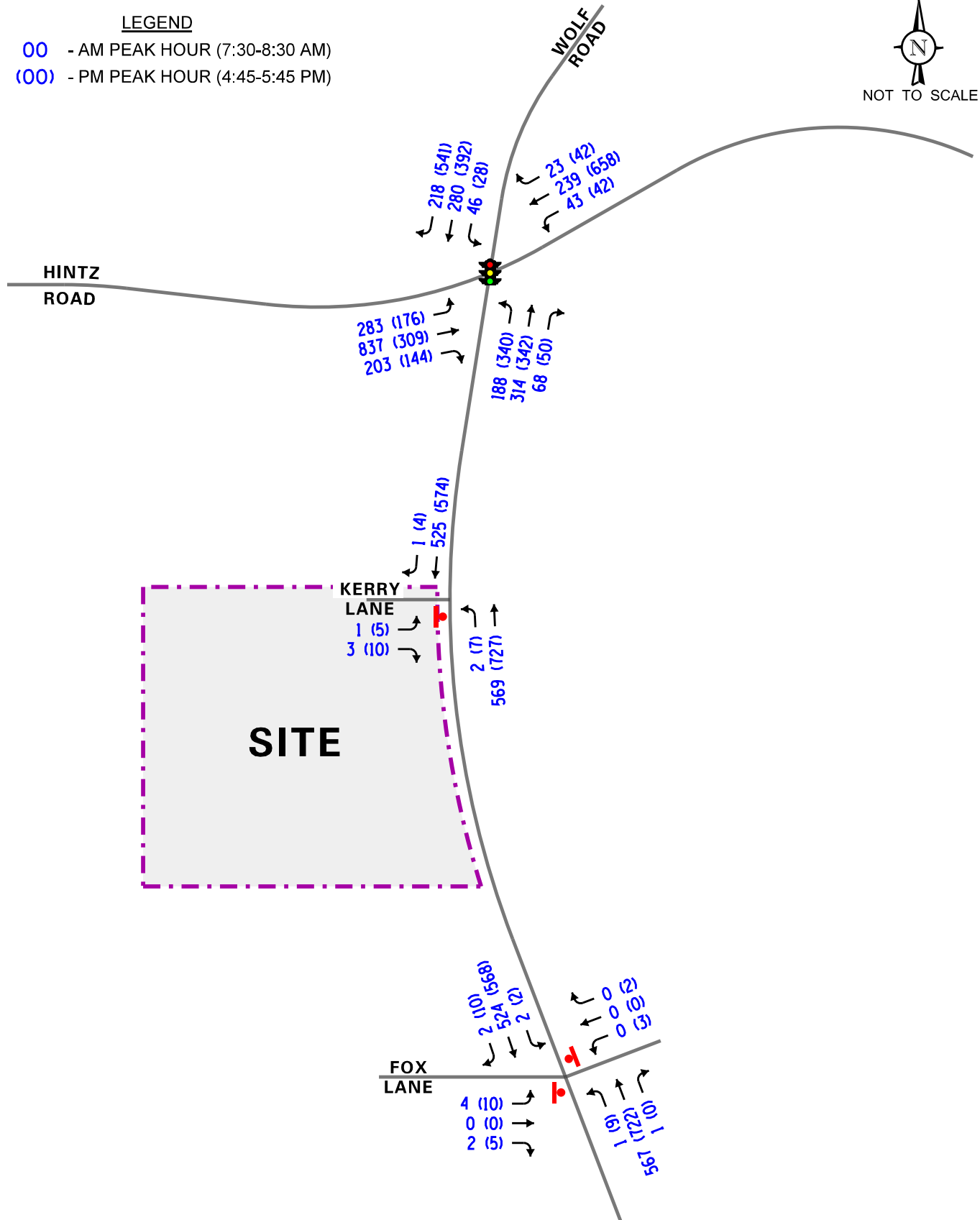
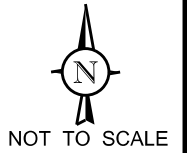


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5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and evening peak hours for the existing (Year 2018) and Year 2023 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using the Synchro/SimTraffic 10 computer 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 from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and Year 2023 conditions are presented in **Tables 5, 6** and **7**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5

CAPACITY ANALYSIS RESULTS – WOLF ROAD WITH HINTZ ROAD – SIGNALIZED

Year 2018 Existing Conditions	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall	
		L	T	R	L	T	R	L	T	R	L	T	R		
	Weekday Morning Peak Hour	B 13.6	C 21.5		B 12.9	C 21.3		C 29.9	C 28.4		C 20.5	C 31.5		C – 23.9	
		B – 19.8			C – 20.1			C – 28.9			C – 30.6				
	Weekday Evening Peak Hour	D 36.7	C 25.9		C 22.0	D 46.2		D 39.7	B 18.9		B 14.5	D 42.8		D – 36.8	
		C – 29.0			D – 44.8			C – 28.6			D – 42.0				
	Year 2023 Projected Conditions	Weekday Morning Peak Hour	B 13.7	C 21.7		B 13.0	C 21.4		C 30.0	C 28.6		C 20.5	C 31.5		C – 24.0
			C – 20.0			C – 20.2			C – 29.0			C – 30.6			
		Weekday Evening Peak Hour	D 37.9	C 26.1		C 22.1	D 47.3		D 40.9	B 18.9		B 14.6	D 44.1		D – 37.7
			C – 29.4			D – 45.9			C – 29.1			D – 43.3			
Delay is measured in seconds.															

Table 6

CAPACITY ANALYSIS RESULTS – YEAR 2018 EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Kerry Lane				
• Northbound Left Turn	A	0.0	A	8.8
• Eastbound Approach	B	13.3	B	13.4
Wolf Road with Fox Lane				
• Northbound Left Turn	A	8.6	A	8.8
• Southbound Left Turn	A	8.6	A	9.3
• Eastbound Approach	C	16.5	C	20.5
• Westbound Approach	A	0.0	C	21.0
LOS = Level of Service Delay is measured in seconds.				

Table 7

CAPACITY ANALYSIS RESULTS – YEAR 2023 PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Wolf Road with Kerry Lane (Access Drive)				
• Northbound Left Turn	A	8.6	A	8.8
• Eastbound Approach	B	11.1	B	12.1
Wolf Road with Fox Lane				
• Northbound Left Turn	A	8.6	A	8.8
• Southbound Left Turn	A	8.8	A	9.4
• Eastbound Approach	C	17.0	C	20.9
• Westbound Approach	A	0.0	C	21.3
LOS = Level of Service Delay is measured in seconds.				

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Wolf Road with Hintz Road.

The results of the capacity analyses indicate that this intersection is operating at an overall level of service (LOS) C and D during the morning and evening peak hours, respectively. Under future conditions, the intersection will continue to operate at the same overall LOS with increases on delay of one second or less. As such, no geometric or traffic control improvements are necessary in conjunction with the proposed development.

Wolf Road with Kerry Lane (Access Drive)

The results of the capacity analysis indicate that under Year 2018 existing traffic volumes, the outbound movements are operating at a LOS B and the northbound left-turn movement operates at a LOS A during both peak hours. Under future conditions, the intersection will continue operating at the same LOS with very similar delays. This is due to the fact that the proposed facility will generate very similar amount of traffic to what it is currently experienced on Kerry Lane. Inspection of the capacity analyses indicates that the northbound left-turn queue will be less than 50 feet and as such can be accommodated by the existing exclusive left-turn lane. Conversely, the outbound queues from the access drive will also be less than 50 feet and will not have a negative impact on the internal circulation of the site. Furthermore, based on a review of the projected traffic volumes, the results of the capacity analyses and the Illinois Department of Transportation (IDOT) guidelines for the provision of auxiliary turn lanes, an exclusive right-turn lane into the site will not be necessary. Therefore, no additional roadway or traffic control improvements are needed or recommended at this intersection in conjunction with the proposed development.

Wolf Road with Fox Lane/Chicago Executive Airport North Access Drive

The results of the capacity analysis indicate that all of the turning movements at this intersection are operating at a LOS C or better during the weekday morning and evening peak hours. Under future conditions, the intersection will continue to operate at the same overall LOS with increases on delay of less than one second. As such, no geometric or traffic control improvements are necessary in conjunction with the proposed development.

Gap Study Evaluation

As indicated earlier, a gap study was conducted of the traffic flow on 100th Street during the weekday morning and weekday evening peak hours. **Table 8** shows the total number of potential movements (adjusted to reflect the longer gap heavy vehicles require to conduct the left and right-turn outbound maneuvers as well as the inbound left-turn maneuver) compared to the number of required gaps that are needed to accommodate the projected traffic turning to and from the access drive. As shown in Table 8, there are sufficient gaps in the Wolf Road traffic stream to accommodate the northbound left turns into the proposed development, eastbound right turns onto Wolf Road, and eastbound left turns onto Wolf Road for the weekday morning and weekday evening peak hours of adjacent roadway traffic. These results further confirm the adequacy of the access drive.

Table 8
REQUIRED GAPS – WOLF ROAD

Time Periods	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
Movement	Potential Movements	Required Gaps	Potential Movements	Required Gaps
Left Turn from Wolf Road	691	2	662	7
Left Turn from Access Drive	121	1	80	5
Right Turn from Access Drive	361	3	345	10

6. Conclusion

A traffic impact study was conducted for the proposed transportation center to be located on the west side of the Wolf Road south of Hintz Road in Wheeling, Illinois.

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

- The proposed center is not a truck terminal but rather a facility offering parking for heavy vehicle owners who will arrive in their passenger vehicles and leave in their trucks for delivery and transport services.
- Many of the drivers arriving at the center are gone for several days or weeks before they return therefore generating very little traffic
- The trip generation survey of the existing facility located at 150 Abbott Drive in Wheeling indicated the following:
 - The existing facility generated between 137 to 179 daily trips which translates to a trip generation rate between 1.83 and 2.38 daily trips per parking bay
 - Approximately 30 percent of the daily traffic was composed of multi-unit trucks and 20 percent of single unit trucks
 - The peak generation of the facility typically occurred outside of the peak hours of traffic anywhere between 9:00 A.M. and 2:00 P.M.
 - During the peak hours of adjacent street traffic, the trip generation ranged from a low of 0.013 to a high of 0.22 trips per parking bay.
- All of the studied intersections are operating at acceptable levels of service and will continue to do so under future conditions with minimal increases in delay. No geometric or traffic control improvements are necessary at any of the studied intersections.
- The proposed access drive will be adequate in accommodating the projected traffic volumes which will be very similar to those experienced under existing conditions.
- The existing northbound exclusive left-turn lane on Wolf Road at its intersection with the access drive will be adequate to accommodate the projected traffic volumes
- The results of the gap study indicate that there are more than adequate number of gaps in the through traffic stream to accommodate the projected turning movements in and out of the access drive.

Appendix

Traffic Count Summary Sheets

Traffic Survey Summary

Site Plan

Auto Turn Runs

Level of Service Criteria

Capacity Analysis Summary Sheets

Right-Turn Lane Warrant

Traffic Count Summary Sheets

Wolf Road and Hintz Road - TMC

Tue May 22, 2018

Full Length (6AM-9AM, 4PM-7PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Hintz Road Eastbound				Hintz Road Westbound				Wolf Road Northbound				Wolf Road Southbound						
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2018-05-22 6:00AM	20	58	12	0	90	0	4	40	1	0	45	0	31	32	2	0	65	0	303
6:15AM	27	58	23	0	108	0	5	49	3	0	57	0	35	42	6	0	83	0	336
6:30AM	34	122	42	0	198	0	7	57	6	0	70	1	44	48	5	0	97	0	479
6:45AM	37	111	37	0	185	0	9	78	3	0	90	0	48	52	7	0	107	1	519
Hourly Total	118	349	114	0	581	0	25	224	13	0	262	1	158	174	20	0	352	1	1637
7:00AM	69	185	37	0	291	0	15	46	2	0	63	0	31	64	5	0	100	2	544
7:15AM	45	196	38	0	279	0	9	64	4	0	77	0	45	58	13	0	116	0	589
7:30AM	69	235	37	0	341	0	9	52	2	0	63	0	67	85	20	0	172	0	728
7:45AM	65	220	60	0	345	0	14	90	3	0	107	0	56	78	9	0	143	0	746
Hourly Total	248	836	172	0	1256	0	47	252	11	0	310	0	199	285	47	0	531	2	2607
8:00AM	87	188	56	0	331	0	15	49	7	0	71	0	33	66	15	0	114	0	626
8:15AM	59	184	48	0	291	0	4	45	11	0	60	0	30	81	22	0	133	0	608
8:30AM	65	140	41	0	246	0	22	46	7	0	75	0	38	84	21	0	143	0	583
8:45AM	71	145	50	0	266	0	12	61	4	0	77	0	29	57	15	0	101	0	552
Hourly Total	282	657	195	0	1134	0	53	201	29	0	283	0	130	288	73	0	491	0	2369
4:00PM	53	112	32	0	197	0	7	94	14	0	115	0	57	67	9	0	133	0	620
4:15PM	53	64	37	0	154	0	9	131	4	0	144	1	70	78	10	0	158	1	643
4:30PM	61	110	40	0	211	0	10	154	12	0	176	0	63	68	8	0	139	0	701
4:45PM	49	68	37	0	154	0	13	133	9	0	155	0	78	98	9	0	185	0	732
Hourly Total	216	354	146	0	716	0	39	512	39	0	590	1	268	311	36	0	615	1	2696
5:00PM	49	103	39	0	191	0	8	155	14	0	177	0	81	83	16	0	180	0	778
5:15PM	41	71	29	0	141	0	5	190	6	0	201	0	87	73	13	0	173	0	756
5:30PM	35	63	35	0	133	1	14	172	13	0	199	0	89	83	8	0	180	0	753
5:45PM	31	67	41	0	139	0	11	180	18	0	209	0	81	61	11	0	153	0	722
Hourly Total	156	304	144	0	604	1	38	697	51	0	786	0	338	300	48	0	686	0	3009
6:00PM	49	62	40	0	151	0	7	127	15	0	149	0	79	63	11	0	153	0	631
6:15PM	38	39	35	0	112	0	8	109	8	0	125	0	63	75	5	0	143	0	561
6:30PM	29	46	26	0	101	0	12	104	12	0	128	0	31	68	3	0	102	0	446
6:45PM	30	38	16	0	84	0	4	69	10	0	83	0	37	68	5	0	110	0	409
Hourly Total	146	185	117	0	448	0	31	409	45	0	485	0	210	274	24	0	508	0	2047
Total	1166	2685	888	0	4739	1	233	2295	188	0	2716	2	1303	1632	248	0	3183	4	14365
% Approach	24.6%	56.7%	18.7%	0%	-	-	8.6%	84.5%	6.9%	0%	-	-	40.9%	51.3%	7.8%	0%	-	-	-
% Total	8.1%	18.7%	6.2%	0%	33.0%	-	1.6%	16.0%	1.3%	0%	18.9%	-	9.1%	11.4%	1.7%	0%	22.2%	-	-
Lights	1130	2569	814	0	4513	-	214	2183	183	0	2580	-	1236	1591	231	0	3058	-	-
% Lights	96.9%	95.7%	91.7%	0%	95.2%	-	91.8%	95.1%	97.3%	0%	95.0%	-	94.9%	97.5%	93.1%	0%	96.1%	-	-
Single-Unit Trucks	10	36	21	0	67	-	4	29	1	0	34	-	20	11	8	0	39	-	-
% Single-Unit Trucks	0.9%	1.3%	2.4%	0%	1.4%	-	1.7%	1.3%	0.5%	0%	1.3%	-	1.5%	0.7%	3.2%	0%	1.2%	-	-
Articulated Trucks	5	40	28	0	73	-	13	43	0	0	56	-	18	7	8	0	33	-	-

Leg Direction	Hintz Road Eastbound					Hintz Road Westbound					Wolf Road Northbound					Wolf Road Southbound					Int				
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*							
Time																									
% Articulated Trucks	0.4%	1.5%	3.2%	0%	1.5%	-	5.6%	1.9%	0%	0%	2.1%	-	1.4%	0.4%	3.2%	0%	1.0%	-	0%	0.2%	0.4%	0%	0.3%	-	1.2%
Buses	20	40	25	0	85	-	2	39	4	0	45	-	29	23	1	0	53	-	1	18	40	0	59	-	242
% Buses	1.7%	1.5%	2.8%	0%	1.8%	-	0.9%	1.7%	2.1%	0%	1.7%	-	2.2%	1.4%	0.4%	0%	1.7%	-	0.4%	1.1%	2.2%	0%	1.6%	-	1.7%
Bicycles on Road	1	0	0	0	1	-	0	1	0	0	1	-	0	0	0	0	0	-	0	0	1	0	1	-	3
% Bicycles on Road	0.1%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0.1%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	4	-	-	-	-	-	-	8
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	100%

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Hintz Road - TMC

Tue May 22, 2018

Full Length (6AM-9AM, 4PM-7PM)

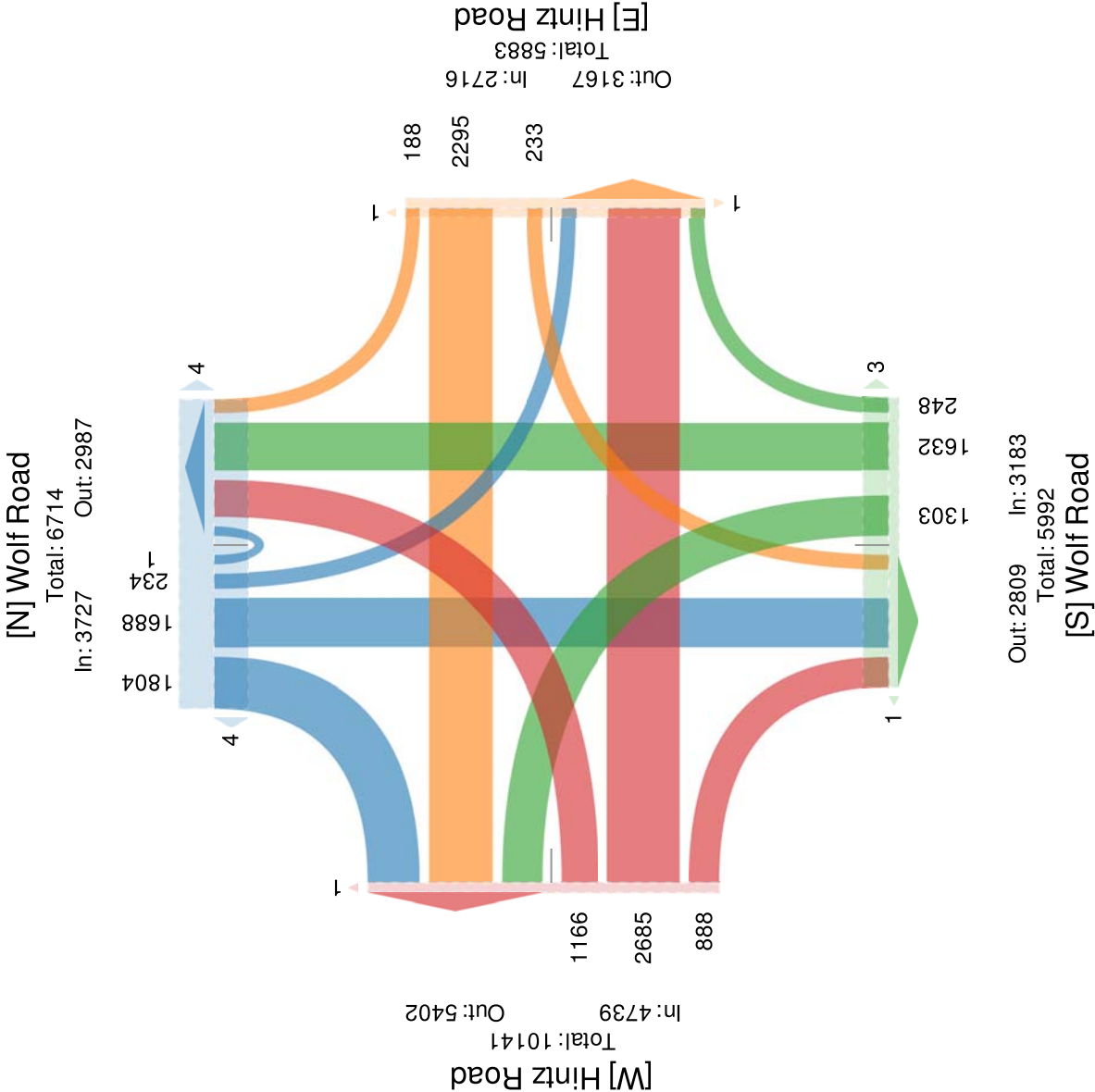
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Wolf Road and Hintz Road - TMC

Tue May 22, 2018

AM Peak (7:30AM - 8:30AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Hintz Road Eastbound						Hintz Road Westbound						Wolf Road Northbound						Wolf Road Southbound						
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2018-05-22 7:30AM	69	235	37	0	341	0	9	52	2	0	63	0	67	85	20	0	172	0	10	66	76	0	152	0	728
7:45AM	65	220	60	0	345	0	14	90	3	0	107	0	56	78	9	0	143	0	9	70	72	0	151	0	746
8:00AM	87	188	56	0	331	0	15	49	7	0	71	0	33	66	15	0	114	0	11	61	38	0	110	0	626
8:15AM	59	184	48	0	291	0	4	45	11	0	60	0	30	81	22	0	133	0	15	80	29	0	124	1	608
Total	280	827	201	0	1308	0	42	236	23	0	301	0	186	310	66	0	562	0	45	277	215	0	537	1	2708
% Approach	21.4%	63.2%	15.4%	0%	-	-	14.0%	78.4%	7.6%	0%	-	-	33.1%	55.2%	11.7%	0%	-	-	8.4%	51.6%	40.0%	0%	-	-	-
% Total	10.3%	30.5%	7.4%	0%	48.3%	-	1.6%	8.7%	0.8%	0%	11.1%	-	6.9%	11.4%	2.4%	0%	20.8%	-	1.7%	10.2%	7.9%	0%	19.8%	-	-
PHF	0.805	0.880	0.838	-	0.948	-	0.700	0.656	0.523	-	0.703	-	0.694	0.912	0.750	-	0.817	-	0.750	0.866	0.707	-	0.883	-	0.908
Lights	271	783	179	0	1233	-	42	221	20	0	283	-	178	297	60	0	535	-	44	266	205	0	515	-	2566
% Lights	96.8%	94.7%	89.1%	0%	94.3%	-	100%	93.6%	87.0%	0%	94.0%	-	95.7%	95.8%	90.9%	0%	95.2%	-	97.8%	96.0%	95.3%	0%	95.9%	-	94.8%
Single-Unit Trucks	3	12	6	0	21	-	0	6	0	0	6	-	5	4	3	0	12	-	1	2	2	0	5	-	44
% Single-Unit Trucks	1.1%	1.5%	3.0%	0%	1.6%	-	0%	2.5%	0%	0%	2.0%	-	2.7%	1.3%	4.5%	0%	2.1%	-	2.2%	0.7%	0.9%	0%	0.9%	-	1.6%
Articulated Trucks	0	12	2	0	14	-	0	6	0	0	6	-	1	2	3	0	6	-	0	2	1	0	3	-	29
% Articulated Trucks	0%	1.5%	1.0%	0%	1.1%	-	0%	2.5%	0%	0%	2.0%	-	0.5%	0.6%	4.5%	0%	1.1%	-	0%	0.7%	0.5%	0%	0.6%	-	1.1%
Buses	6	20	14	0	40	-	0	2	3	0	5	-	2	7	0	0	9	-	0	7	7	0	14	-	68
% Buses	2.1%	2.4%	7.0%	0%	3.1%	-	0%	0.8%	13.0%	0%	1.7%	-	1.1%	2.3%	0%	0%	1.6%	-	0%	2.5%	3.3%	0%	2.6%	-	2.5%
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0.4%	0%	0%	0.3%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Hintz Road - TMC

Tue May 22, 2018

AM Peak (7:30AM - 8:30AM)

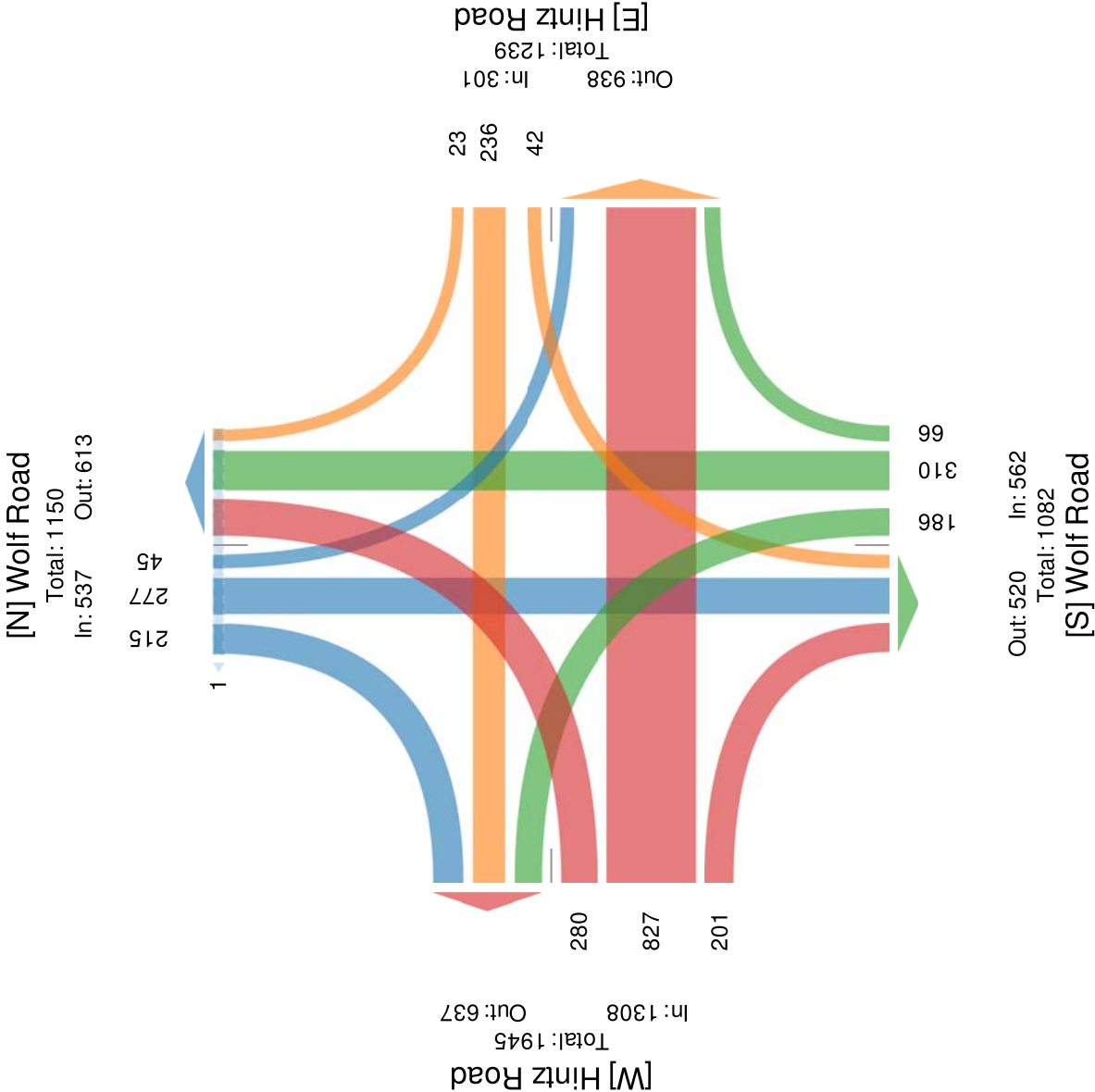
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Wolf Road and Hintz Road - TMC

Tue May 22, 2018

PM Peak (4:45PM - 5:45PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Hintz Road Eastbound						Hintz Road Westbound						Wolf Road Northbound						Wolf Road Southbound						
	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2018-05-22 4:45PM	49	68	37	0	154	0	13	133	9	0	155	0	78	98	9	0	185	0	7	92	139	0	238	1	732
	5:00PM	49	103	39	0	191	0	8	155	14	0	177	0	81	83	16	0	180	0	5	112	113	0	230	0
5:15PM	41	71	29	0	141	0	5	190	6	0	201	0	87	73	13	0	173	0	8	95	138	0	241	0	756
5:30PM	35	63	35	0	133	1	14	172	13	0	199	0	89	83	8	0	180	0	8	88	145	0	241	0	753
Total	174	305	140	0	619	1	40	650	42	0	732	0	335	337	46	0	718	0	28	387	535	0	950	1	3019
% Approach	28.1%	49.3%	22.6%	0%	-	-	5.5%	88.8%	5.7%	0%	-	-	46.7%	46.9%	6.4%	0%	-	-	2.9%	40.7%	56.3%	0%	-	-	-
% Total	5.8%	10.1%	4.6%	0%	20.5%	-	1.3%	21.5%	1.4%	0%	24.2%	-	11.1%	11.2%	1.5%	0%	23.8%	-	0.9%	12.8%	17.7%	0%	31.5%	-	-
PHF	0.888	0.740	0.897	-	0.810	-	0.714	0.855	0.750	-	0.910	-	0.941	0.860	0.719	-	0.970	-	0.875	0.864	0.922	-	0.985	-	0.970
Lights	168	298	131	0	597	-	36	637	42	0	715	-	327	333	43	0	703	-	28	383	525	0	936	-	2951
% Lights	96.6%	97.7%	93.6%	0%	96.4%	-	90.0%	98.0%	100%	0%	97.7%	-	97.6%	98.8%	93.5%	0%	97.9%	-	100%	99.0%	98.1%	0%	98.5%	-	97.7%
Single-Unit Trucks	3	2	1	0	6	-	0	4	0	0	4	-	3	2	0	0	5	-	0	3	2	0	5	-	20
% Single-Unit Trucks	1.7%	0.7%	0.7%	0%	1.0%	-	0%	0.6%	0%	0%	0.5%	-	0.9%	0.6%	0%	0%	0.7%	-	0%	0.8%	0.4%	0%	0.5%	-	0.7%
Articulated Trucks	0	4	8	0	12	-	3	6	0	0	9	-	3	1	3	0	7	-	0	1	1	0	2	-	30
% Articulated Trucks	0%	1.3%	5.7%	0%	1.9%	-	7.5%	0.9%	0%	0%	1.2%	-	0.9%	0.3%	6.5%	0%	1.0%	-	0%	0.3%	0.2%	0%	0.2%	-	1.0%
Buses	2	1	0	0	3	-	1	3	0	0	4	-	2	1	0	0	3	-	0	0	7	0	7	-	17
% Buses	1.1%	0.3%	0%	0%	0.5%	-	2.5%	0.5%	0%	0%	0.5%	-	0.6%	0.3%	0%	0%	0.4%	-	0%	0%	1.3%	0%	0.7%	-	0.6%
Bicycles on Road	1	0	0	0	1	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	1
% Bicycles on Road	0.6%	0%	0%	0%	0.2%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Hintz Road - TMC

Tue May 22, 2018

PM Peak (4:45PM - 5:45PM) - Overall Peak Hour

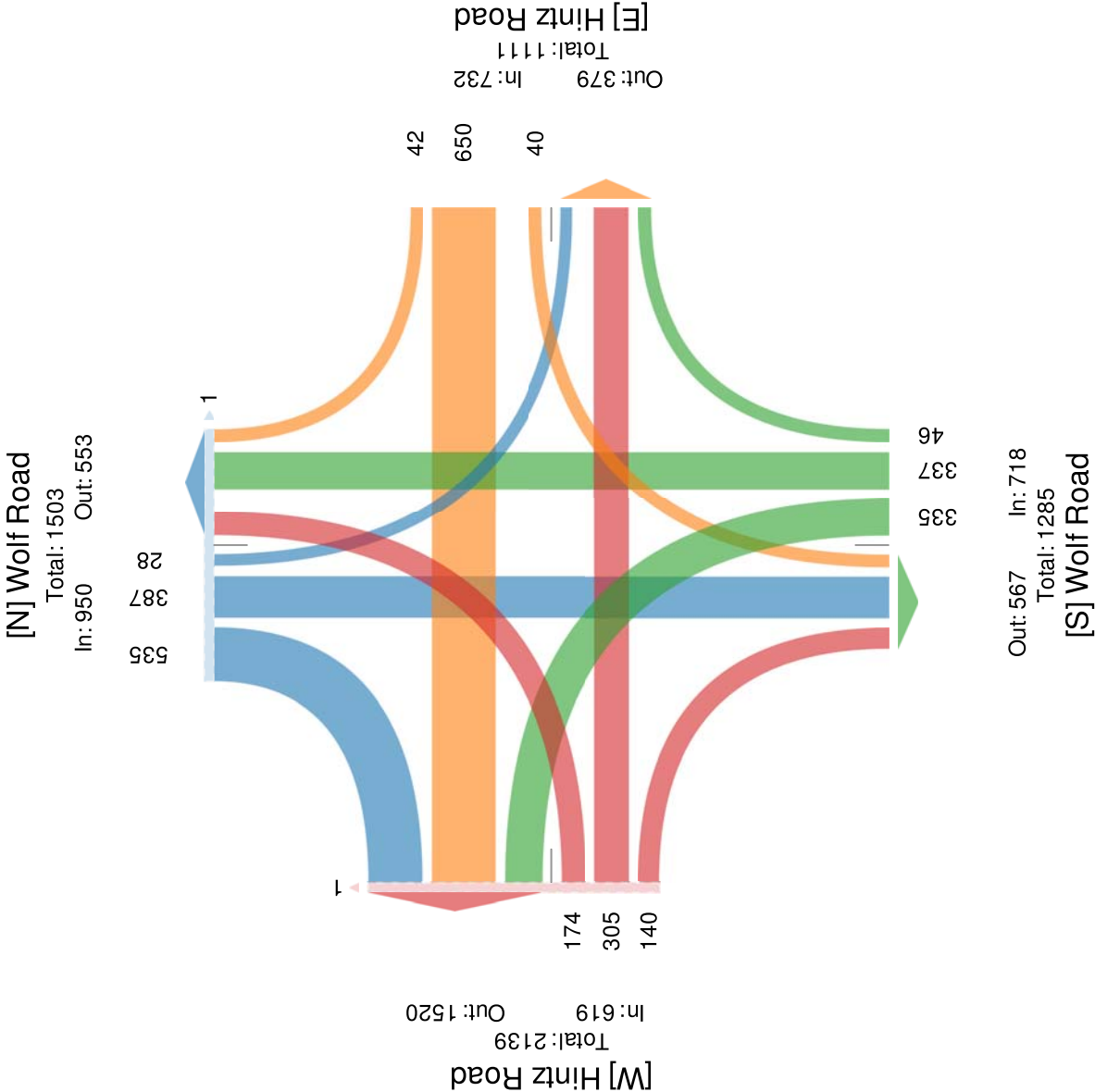
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529143, Location: 42.124292, -87.909684



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Wolf Road and Fox Lane - TMC

Tue May 22, 2018

Full Length (6AM-9AM, 4PM-7PM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction Time	Fox Lane Eastbound				East Westbound				Wolf Road Northbound				Wolf Road Southbound											
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int					
2018-05-22 6:00AM	2	0	1	0	3	0	0	0	1	0	1	0	0	67	0	0	77	0	0	148				
	0	0	0	0	0	0	0	0	0	0	86	0	0	86	0	0	61	1	0	148				
	1	0	2	0	3	1	0	0	0	0	0	104	0	0	104	0	2	91	3	203				
	3	0	0	0	3	0	0	0	1	0	1	0	0	95	3	0	98	0	1	199				
Hourly Total	6	0	3	0	9	1	0	0	2	0	2	0	0	352	3	0	332	4	0	698				
7:00AM	2	0	2	0	4	0	0	0	0	0	0	0	0	100	3	0	103	0	1	215				
7:15AM	1	0	2	0	3	0	0	0	0	0	0	0	1	107	2	0	110	0	1	221				
7:30AM	1	0	2	0	3	0	0	0	0	0	0	0	0	153	0	0	153	0	0	271				
7:45AM	0	0	1	0	1	0	0	0	0	0	0	0	1	119	0	0	120	0	0	262				
Hourly Total	4	0	7	0	11	0	0	0	0	0	0	0	2	479	5	0	486	0	2	969				
8:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	114	1	0	115	0	1	244				
8:15AM	1	0	1	0	2	1	0	0	0	0	0	0	0	145	0	0	145	0	1	282				
8:30AM	1	0	2	0	3	0	1	0	0	0	1	0	0	126	0	0	126	0	1	260				
8:45AM	1	0	0	0	1	0	1	0	0	0	1	0	0	103	0	0	103	0	2	226				
Hourly Total	3	0	3	0	6	1	2	0	0	0	2	0	0	488	1	0	489	0	5	1012				
4:00PM	3	0	2	0	5	0	0	0	1	0	1	0	1	131	4	1	137	0	2	256				
4:15PM	3	0	4	0	7	0	2	0	1	0	3	0	0	159	1	0	160	0	4	292				
4:30PM	3	0	0	0	3	1	0	0	0	0	0	0	2	170	3	0	175	0	2	306				
4:45PM	2	0	1	0	3	0	0	0	3	0	3	0	0	166	1	0	167	0	2	324				
Hourly Total	11	0	7	0	18	1	2	0	5	0	7	0	3	626	9	1	639	0	10	1178				
5:00PM	2	0	1	0	3	0	1	0	0	0	1	0	0	202	3	0	205	0	3	366				
5:15PM	0	0	2	0	2	0	1	0	0	0	1	0	0	149	3	0	152	0	2	276				
5:30PM	1	0	6	0	7	0	0	0	0	0	0	0	0	199	2	0	201	0	3	343				
5:45PM	2	0	3	0	5	0	1	0	2	0	3	0	0	129	0	0	129	0	3	284				
Hourly Total	5	0	12	0	17	0	3	0	2	0	5	0	0	679	8	0	687	0	11	1269				
6:00PM	1	0	0	0	1	0	0	0	0	0	0	0	0	137	1	0	138	0	3	267				
6:15PM	1	0	2	0	3	0	0	0	1	0	1	0	0	141	0	0	141	0	2	264				
6:30PM	0	0	3	0	3	0	0	0	2	0	2	3	2	100	1	0	103	0	4	199				
6:45PM	0	0	2	0	2	1	1	0	1	0	2	0	0	98	1	0	99	0	0	197				
Hourly Total	2	0	7	0	9	1	1	0	4	0	5	3	2	476	3	0	481	0	9	927				
Total	31	0	39	0	70	4	8	0	13	0	21	3	7	3100	29	1	3137	0	40	6053				
% Approach	44.3%	0%	55.7%	0%	-	-	38.1%	0%	61.9%	0%	-	-	0.2%	98.8%	0.9%	0%	-	-	1.4%	98.2%	0.4%	0.1%	-	
% Total	0.5%	0%	0.6%	0%	1.2%	-	0.1%	0%	0.2%	0%	0.3%	-	0.1%	51.2%	0.5%	0%	51.8%	-	0.7%	45.8%	0.2%	0%	46.7%	-
Lights	28	0	37	0	65	-	7	0	13	0	20	-	7	2979	28	1	3015	-	36	2637	10	2	2685	-
% Lights	90.3%	0%	94.9%	0%	92.9%	-	87.5%	0%	100%	0%	95.2%	-	100%	96.1%	96.6%	100%	96.1%	-	90.0%	95.1%	100%	100%	95.0%	-
Single-Unit Trucks	0	0	2	0	2	-	1	0	0	0	1	-	0	36	0	0	36	-	2	46	0	0	48	-
% Single-Unit Trucks	0%	0%	5.1%	0%	2.9%	-	12.5%	0%	0%	0%	4.8%	-	0%	1.2%	0%	0%	1.1%	-	5.0%	1.7%	0%	0%	1.7%	-
Articulated Trucks	1	0	0	0	1	-	0	0	0	0	0	-	0	32	1	0	33	-	0	48	0	0	48	-

Leg Direction	Fox Lane Eastbound				East Westbound				Wolf Road Northbound				Wolf Road Southbound						
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
Time																			
% Articulated Trucks	3.2%	0%	0%	0%	1.4%	-	0%	0%	0%	0%	0%	1.1%	-	0%	1.7%	0%	1.7%	-	1.4%
Buses	2	0	0	0	2	-	0	0	0	0	53	-	0	53	0	0	44	-	99
% Buses	6.5%	0%	0%	0%	2.9%	-	0%	0%	0%	0%	1.7%	-	0%	1.7%	0%	0%	1.6%	-	1.6%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Fox Lane - TMC

Tue May 22, 2018

Full Length (6AM-9AM, 4PM-7PM)

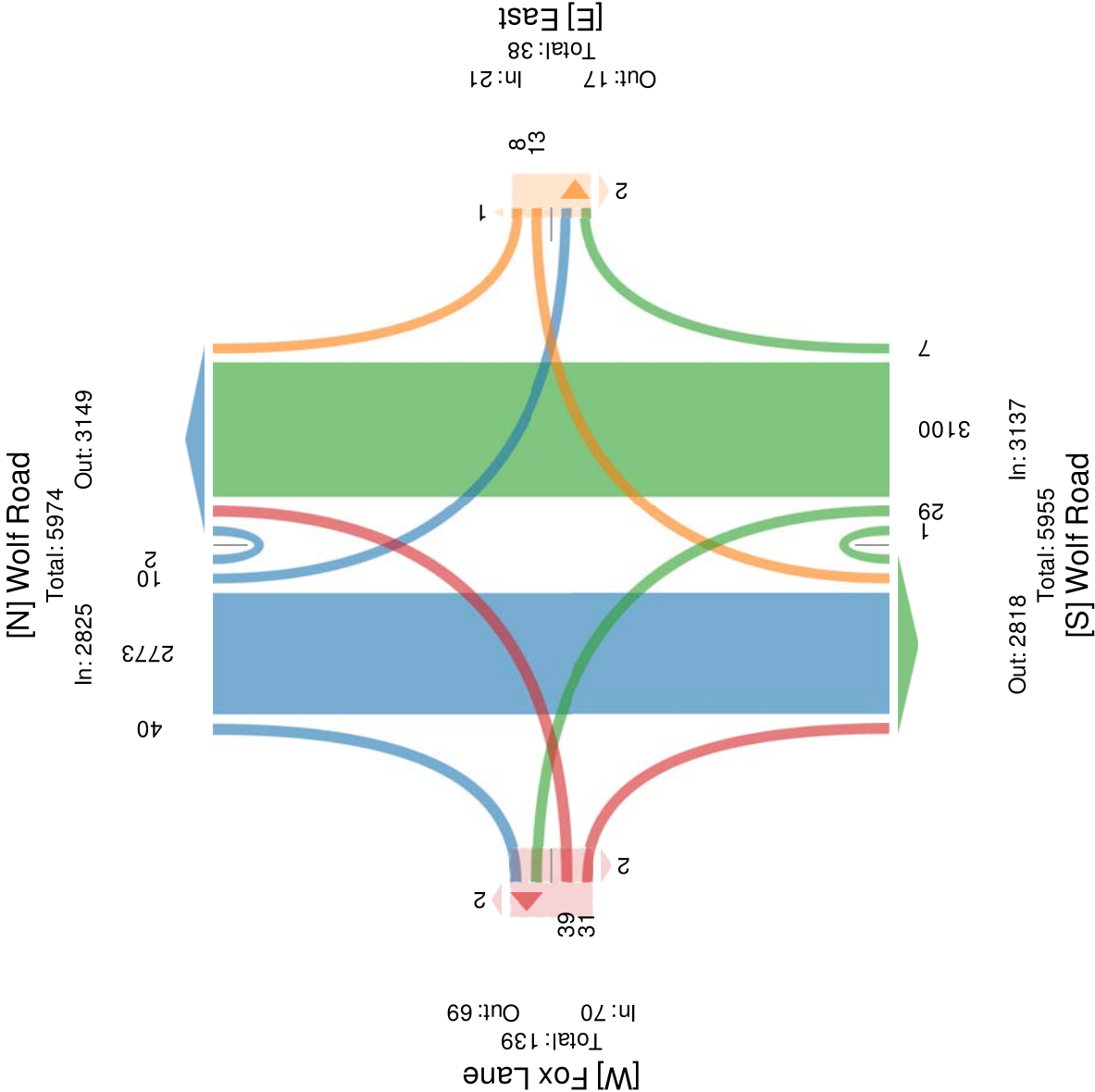
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Wolf Road and Fox Lane - TMC

Tue May 22, 2018

AM Peak (7:30AM - 8:30AM)

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Fox Lane Eastbound						East Westbound						Wolf Road Northbound						Wolf Road Southbound							
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int	
2018-05-22 7:30AM	1	0	2	0	3	0	0	0	0	0	0	0	0	153	0	0	153	0	0	115	0	0	115	0	271	
7:45AM	0	0	1	0	1	0	0	0	0	0	0	0	0	1	119	0	0	120	0	0	140	1	0	141	0	262
8:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	1	0	115	0	1	127	1	0	129	0	244
8:15AM	1	0	1	0	2	1	0	0	0	0	0	0	0	0	145	0	0	145	0	1	134	0	0	135	0	282
Total	2	0	4	0	6	1	0	0	0	0	0	0	0	1	531	1	0	533	0	2	516	2	0	520	0	1059
% Approach	33.3%	0%	66.7%	0%	-	-	0%	0%	0%	0%	-	-	-	0.2%	99.6%	0.2%	0%	-	-	0.4%	99.2%	0.4%	0%	-	-	-
% Total	0.2%	0%	0.4%	0%	0.6%	-	0%	0%	0%	0%	0%	-	-	0.1%	50.1%	0.1%	0%	50.3%	-	0.2%	48.7%	0.2%	0%	49.1%	-	-
PHF	0.500	-	0.500	-	0.500	-	-	-	-	-	-	-	-	0.250	0.868	0.250	-	0.871	-	0.500	0.921	0.500	-	0.922	-	0.939
Lights	1	0	4	0	5	-	0	0	0	0	0	-	-	1	505	1	0	507	-	1	483	2	0	486	-	998
% Lights	50.0%	0%	100%	0%	83.3%	-	0%	0%	0%	0%	-	-	-	100%	95.1%	100%	0%	95.1%	-	50.0%	93.6%	100%	0%	93.5%	-	94.2%
Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	-	0	11	0	0	11	-	0	7	0	0	7	-	18
% Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	-	0%	2.1%	0%	0%	2.1%	-	0%	1.4%	0%	0%	1.3%	-	1.7%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	-	0	7	0	0	7	-	0	5	0	0	5	-	12
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	-	0%	1.3%	0%	0%	1.3%	-	0%	1.0%	0%	0%	1.0%	-	1.1%
Buses	1	0	0	0	1	-	0	0	0	0	0	-	-	0	8	0	0	8	-	1	21	0	0	22	-	31
% Buses	50.0%	0%	0%	0%	16.7%	-	0%	0%	0%	0%	-	-	-	0%	1.5%	0%	0%	1.5%	-	50.0%	4.1%	0%	0%	4.2%	-	2.9%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	-	-	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Fox Lane - TMC

Tue May 22, 2018

AM Peak (7:30AM - 8:30AM)

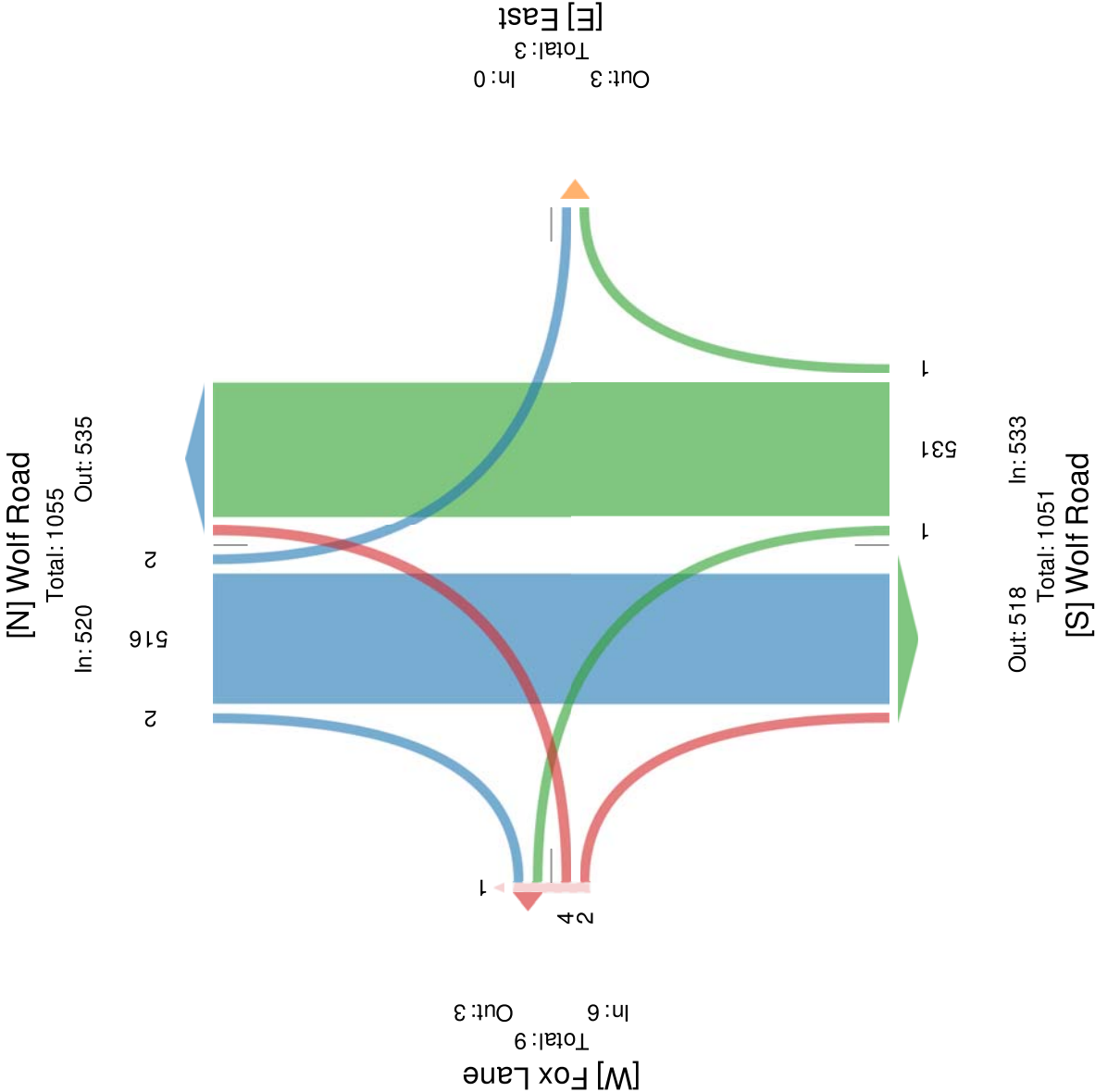
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Wolf Road and Fox Lane - TMC

Tue May 22, 2018

PM Peak (4:45PM - 5:45PM) - Overall Peak Hour

All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US

Leg Direction	Fox Lane Eastbound						East Westbound						Wolf Road Northbound						Wolf Road Southbound						
	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
Time																									
2018-05-22 4:45PM	2	0	1	0	3	0	0	0	3	0	3	0	0	166	1	0	167	0	2	147	2	0	151	0	324
5:00PM	2	0	1	0	3	0	1	0	0	0	1	0	0	202	3	0	205	0	3	154	0	0	157	0	366
5:15PM	0	0	2	0	2	0	1	0	0	0	1	0	0	149	3	0	152	0	2	119	0	0	121	0	276
5:30PM	1	0	6	0	7	0	0	0	0	0	0	0	0	199	2	0	201	0	3	132	0	0	135	0	343
Total	5	0	10	0	15	0	2	0	3	0	5	0	0	716	9	0	725	0	10	552	2	0	564	0	1309
% Approach	33.3%	0%	66.7%	0%	-	-	40.0%	0%	60.0%	0%	-	-	0%	98.8%	1.2%	0%	-	-	1.8%	97.9%	0.4%	0%	-	-	-
% Total	0.4%	0%	0.8%	0%	1.1%	-	0.2%	0%	0.2%	0%	0.4%	-	0%	54.7%	0.7%	0%	55.4%	-	0.8%	42.2%	0.2%	0%	43.1%	-	-
PHF	0.625	-	0.417	-	0.536	-	0.500	-	0.250	-	0.417	-	-	0.886	0.750	-	0.884	-	0.833	0.896	0.250	-	0.898	-	0.894
Lights	5	0	10	0	15	-	2	0	3	0	5	-	0	697	8	0	705	-	10	535	2	0	547	-	1272
% Lights	100%	0%	100%	0%	100%	-	100%	0%	100%	0%	100%	-	0%	97.3%	88.9%	0%	97.2%	-	100%	96.9%	100%	0%	97.0%	-	97.2%
Single-Unit Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	6	0	0	6	-	0	4	0	0	4	-	10
% Single-Unit Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.8%	0%	0%	0.8%	-	0%	0.7%	0%	0%	0.7%	-	0.8%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	8	1	0	9	-	0	12	0	0	12	-	21
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	1.1%	11.1%	0%	1.2%	-	0%	2.2%	0%	0%	2.1%	-	1.6%
Buses	0	0	0	0	0	-	0	0	0	0	0	-	0	5	0	0	5	-	0	1	0	0	1	-	6
% Buses	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.7%	0%	0%	0.7%	-	0%	0.2%	0%	0%	0.2%	-	0.5%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wolf Road and Fox Lane - TMC

Tue May 22, 2018

PM Peak (4:45PM - 5:45PM) - Overall Peak Hour

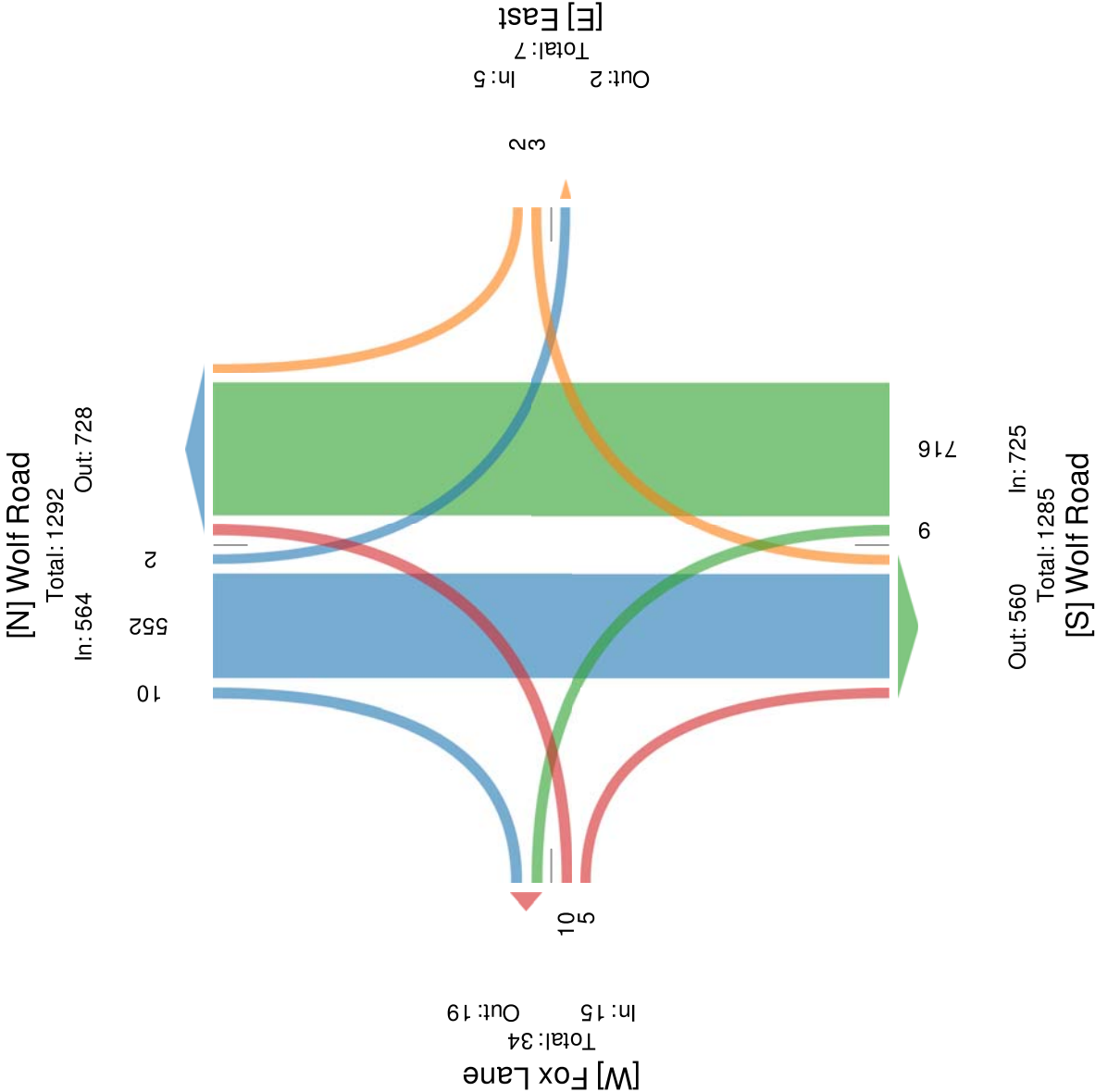
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians, Bicycles on Road)

All Movements

ID: 529139, Location: 42.119555, -87.909112



Provided by: Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400, Rosemont, IL, 60018, US



Traffic Survey Summary

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
Monday, May 21, 2018																
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hourly Total	1	0	0	1	0	0	0	0	1	0	0	1	0	0	1	1
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 AM	0	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0
Hourly Total	0	0	1	1	0	1	0	1	2	0	0	2	1	0	1	2
6:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
6:30 AM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
6:45 AM	0	0	0	0	0	1	1	2	1	0	0	1	0	0	0	0
Hourly Total	0	0	0	0	0	1	2	3	2	3	0	5	0	0	2	2
7:00 AM	0	0	0	0	1	0	0	1	2	0	0	2	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	0	1	2	2	0	0	2	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	1	1	2	0	0	2	1	0	0	1
9:00 AM	1	0	0	1	1	1	0	2	1	1	0	2	1	1	0	2
9:15 AM	1	0	0	1	0	0	0	0	4	0	0	4	0	0	0	0
9:30 AM	2	0	0	2	0	0	0	0	1	0	1	2	1	1	1	3
9:45 AM	1	0	0	1	2	0	0	2	1	0	0	1	0	0	1	1
Hourly Total	5	0	0	5	3	1	0	4	7	1	1	9	2	2	2	6
10:00 AM	0	0	0	0	0	0	1	1	2	1	0	3	2	0	0	2
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:30 AM	0	0	0	0	1	1	0	2	1	0	0	1	0	0	0	0
10:45 AM	0	1	0	1	0	1	1	2	2	1	0	3	1	0	1	2
Hourly Total	0	1	0	1	1	2	2	5	5	2	0	7	4	0	1	5
11:00 AM	0	0	0	0	0	0	0	0	3	0	0	3	2	0	1	3
11:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	2
11:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	5	0	0	5	6	0	1	7
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	2	0	1	3	0	0	0	0
12:30 PM	0	0	1	1	0	0	0	0	2	0	0	2	1	0	1	2
12:45 PM	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	1
Hourly Total	0	0	1	1	0	0	0	0	7	0	1	8	2	0	1	3
1:00 PM	0	0	1	1	1	0	0	1	2	0	0	2	1	1	0	2
1:15 PM	0	0	0	0	1	0	2	3	1	0	0	1	1	0	0	1

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
1:30 PM	0	0	0	0	0	0	1	1	3	0	0	3	2	0	0	2
1:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2	0	0	2
Hourly Total	0	0	1	1	2	1	3	6	7	0	0	7	6	1	0	7
2:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	2	0	0	2
2:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
2:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2
2:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
Hourly Total	0	0	2	2	0	0	0	0	2	1	0	3	5	0	1	6
3:00 PM	0	1	0	1	0	0	0	0	2	0	0	2	0	1	0	1
3:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	1	1	0	2	3	0	0	3	1	1	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	1	1	0	2
Hourly Total	0	0	0	0	1	0	0	1	3	0	0	3	2	1	1	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1
5:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	1	0	0	1	0	0	0	0	1	0	1	2	2	0	0	2
6:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	1	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	1	0	0	1	1	0	1	2	1	0	1	2
7:00 PM	0	1	1	2	0	0	0	0	0	1	0	1	1	1	0	2
7:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1
7:30 PM	1	0	1	2	1	0	1	2	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	3	0	0	3
Hourly Total	1	1	2	4	2	0	1	3	1	1	0	2	5	1	0	6
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

[illegible]

[illegible]

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
9:45 AM	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	1	0	0	1	1	0	2	3	1	1	0	2	0	2	0	2
10:00 AM	1	0	0	1	0	0	0	0	2	0	0	2	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10:30 AM	1	0	0	1	0	0	0	0	1	1	0	2	0	0	1	1
10:45 AM	0	0	1	1	0	1	1	2	0	0	0	0	1	0	0	1
Hourly Total	2	0	1	3	0	1	1	2	3	1	0	4	1	0	2	3
11:00 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	5	0	1	6	2	0	1	3
12:00 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0
12:15 PM	0	0	1	1	0	0	1	1	4	0	0	4	2	0	3	5
12:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	1	2
12:45 PM	0	0	0	0	0	0	1	1	2	0	0	2	1	0	0	1
Hourly Total	0	1	1	2	0	0	2	2	9	0	0	9	4	0	4	8
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	1	1	3	1	1	5
2:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
2:15 PM	0	0	0	0	0	0	1	1	2	0	0	2	0	0	0	0
2:30 PM	0	0	1	1	2	0	0	2	1	1	0	2	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hourly Total	0	0	1	1	2	0	1	3	4	1	0	5	1	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Hourly Total	0	0	1	1	0	0	0	0	1	0	1	2	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	2

[illegible]

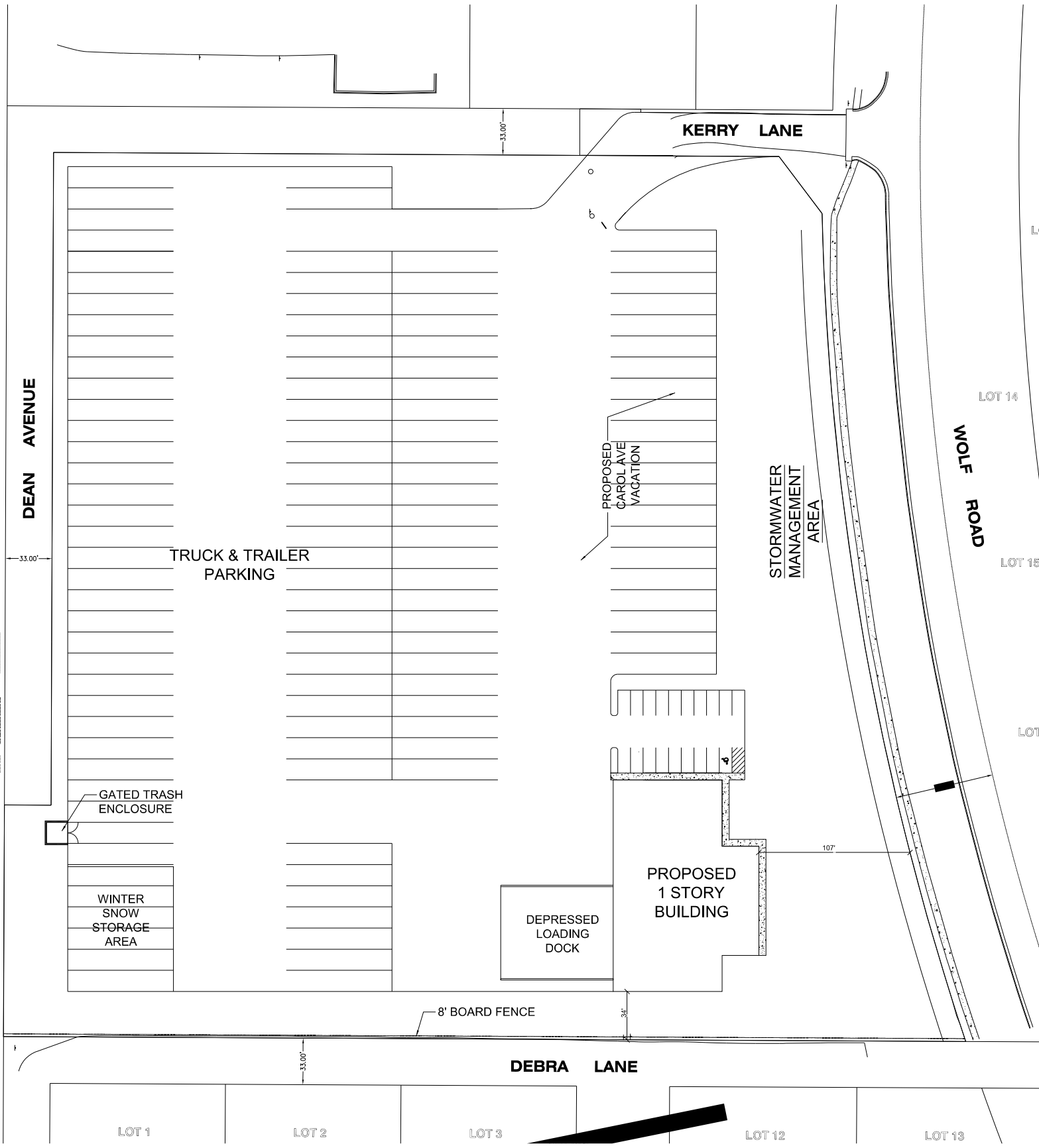
Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
11:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	1	0	1
11:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	1	2
Hourly Total	0	0	2	2	0	0	0	0	2	0	0	2	1	1	1	3
Thursday, May 24, 2018																
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	1	2	0	1	3
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
5:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
5:45 AM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	1	1

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
Hourly Total	0	0	0	0	0	0	1	1	2	1	0	3	0	0	1	1
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	3	0	0	3	2	0	1	3
7:00 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	1	2	3
7:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	1	0	0	1	1	0	0	1	0	1	2	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
Hourly Total	0	0	0	0	0	0	0	0	1	0	1	2	0	1	0	1
10:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	1	0	0	1	0	0	0	0	0	1	0	1	0	2	0	2
10:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
Hourly Total	1	1	0	2	0	0	0	0	0	1	2	3	0	3	1	4
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hourly Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2
12:00 PM	0	0	1	1	0	0	1	1	0	1	0	1	1	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
12:30 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
12:45 PM	0	0	1	1	0	0	0	0	2	0	1	3	1	0	0	1
Hourly Total	0	0	3	3	0	0	1	1	4	1	1	6	3	0	0	3
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	2	0	1	3	1	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	1	1	0	2	2	0	0	2
Hourly Total	0	0	0	0	0	0	0	0	3	1	1	5	5	0	0	5
2:00 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	1	1	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1
Hourly Total	0	0	0	0	1	0	0	1	2	0	1	3	2	1	1	4
3:00 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	1	0	1	2
3:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1
3:45 PM	0	0	0	0	0	0	1	1	1	0	1	2	1	1	0	2
Hourly Total	0	0	1	1	0	0	1	1	5	0	1	6	2	2	1	5
4:00 PM	0	0	0	0	0	0	0	0	1	0	1	2	3	0	1	4
4:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
4:30 PM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
Hourly Total	0	0	0	0	2	0	0	2	3	0	2	5	4	0	1	5
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	2	1	0	3	1	2	0	3
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	2	2	1	1	0	2
Hourly Total	0	0	1	1	0	0	0	0	0	0	3	3	1	1	0	2
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

Time	East Access Drive								West Access Drive							
	Inbound				Outbound				Inbound				Outbound			
	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total	PV	SU	MU	Total
7:30 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0
7:45 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	0	1	1
Hourly Total	0	0	1	1	1	0	0	1	2	0	0	2	2	0	1	3
8:00 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	1	1	2
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0
8:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	1	3	0	0	3	1	0	0	1	0	1	1	2
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
10:30 PM	0	0	0	0	1	0	0	1	1	2	0	3	1	0	0	1
10:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Hourly Total	1	0	1	2	1	0	1	2	1	2	0	3	1	0	0	1
11:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 PM	0	0	0	0	1	0	0	1	1	0	1	2	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	1	2	0	2	4	1	0	0	1

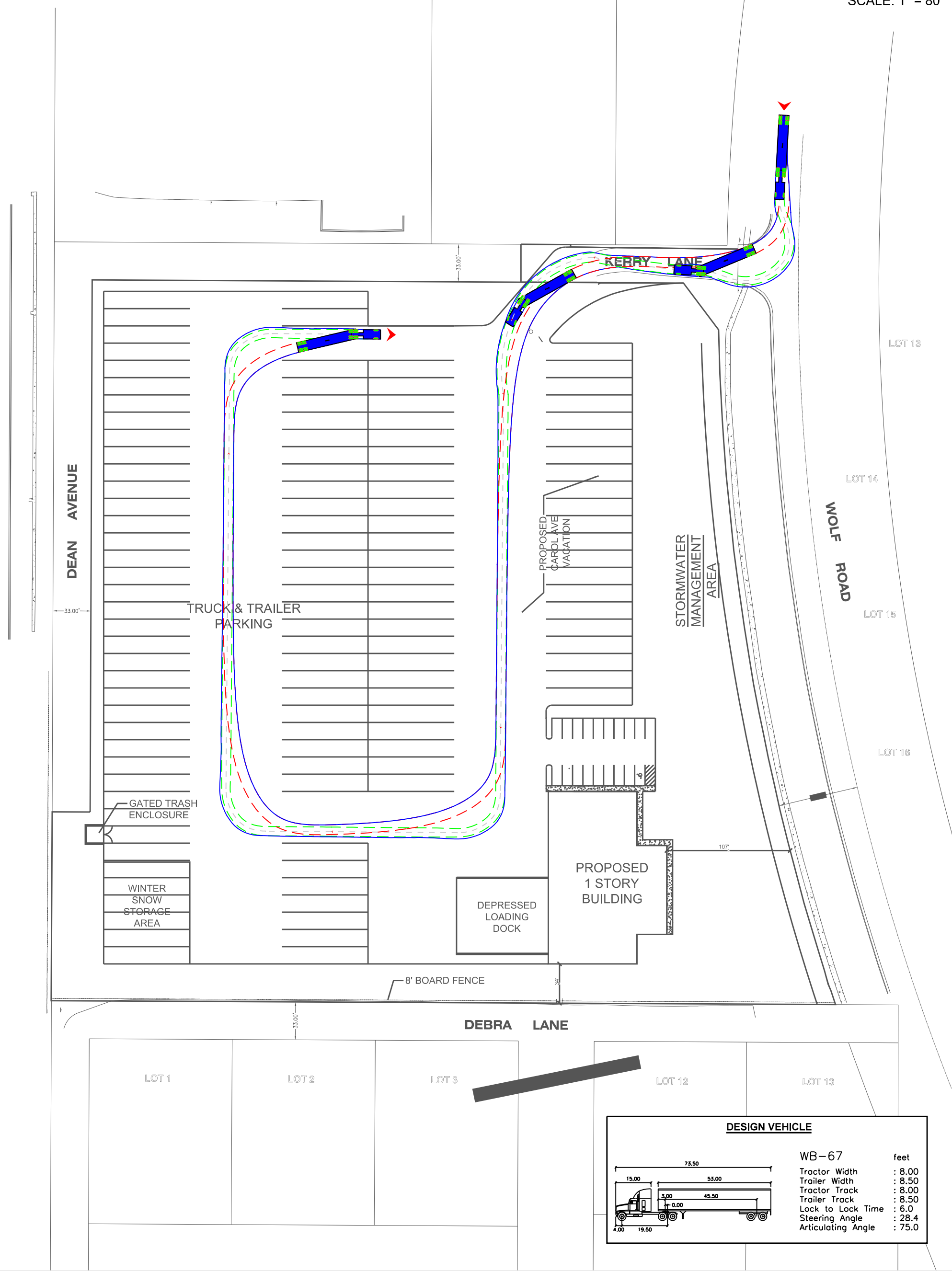
Site Plan



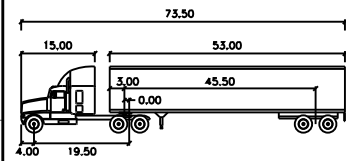
Auto Turn Runs



SCALE: 1" = 80'



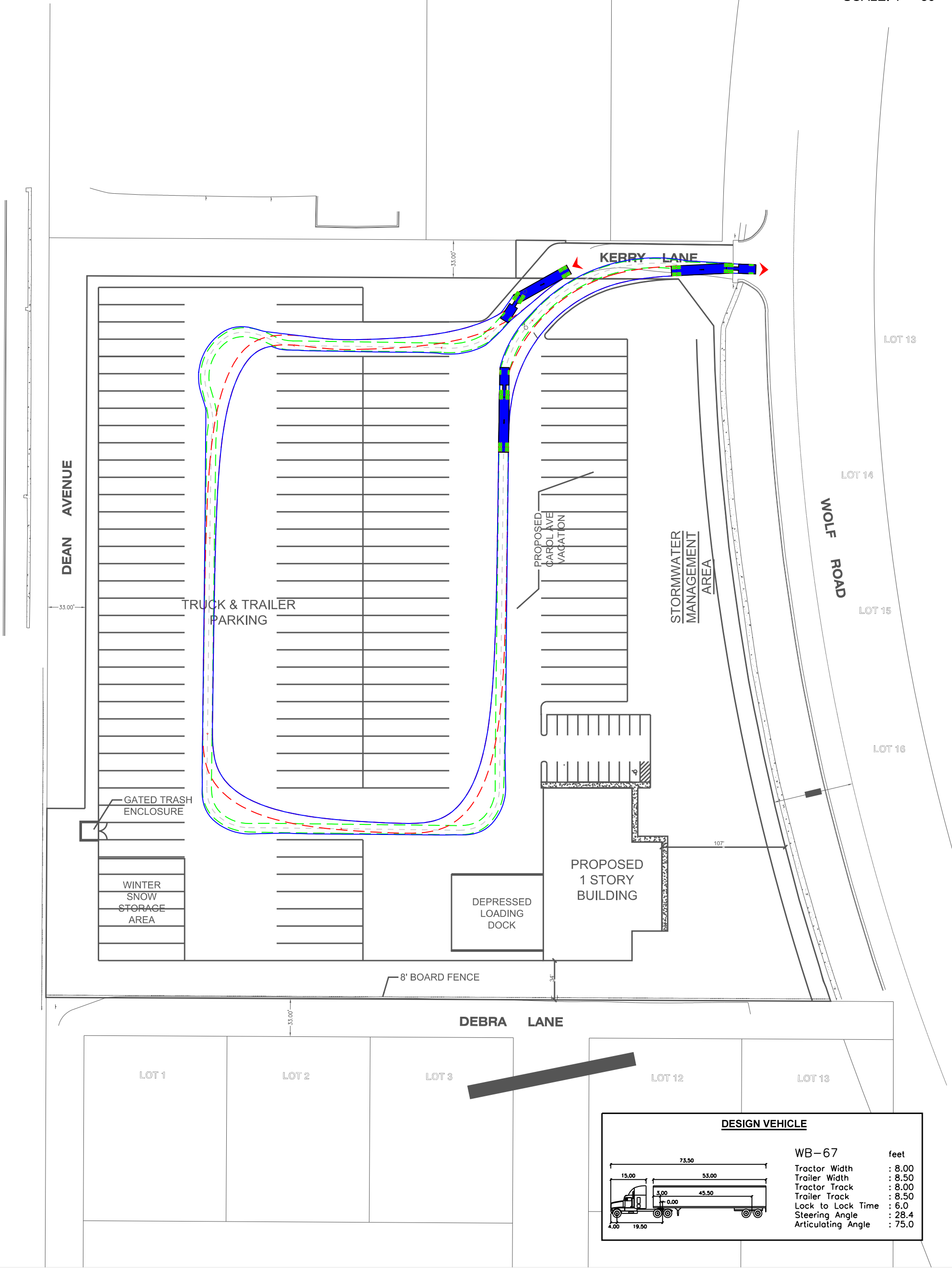
DESIGN VEHICLE



WB-67	feet
Tractor Width	: 8.00
Trailer Width	: 8.50
Tractor Track	: 8.00
Trailer Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 28.4
Articulating Angle	: 75.0



SCALE: 1" = 80'



DESIGN VEHICLE

WB-67		feet
Tractor Width	:	8.00
Trailer Width	:	8.50
Tractor Track	:	8.00
Trailer Track	:	8.50
Lock to Lock Time	:	6.0
Steering Angle	:	28.4
Articulating Angle	:	75.0



SCALE: 1" = 80'



DESIGN VEHICLE

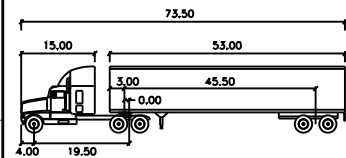
WB-67		feet
Tractor Width	:	8.00
Trailer Width	:	8.50
Tractor Track	:	8.00
Trailer Track	:	8.50
Lock to Lock Time	:	6.0
Steering Angle	:	28.4
Articulating Angle	:	75.0



SCALE: 1" = 80'



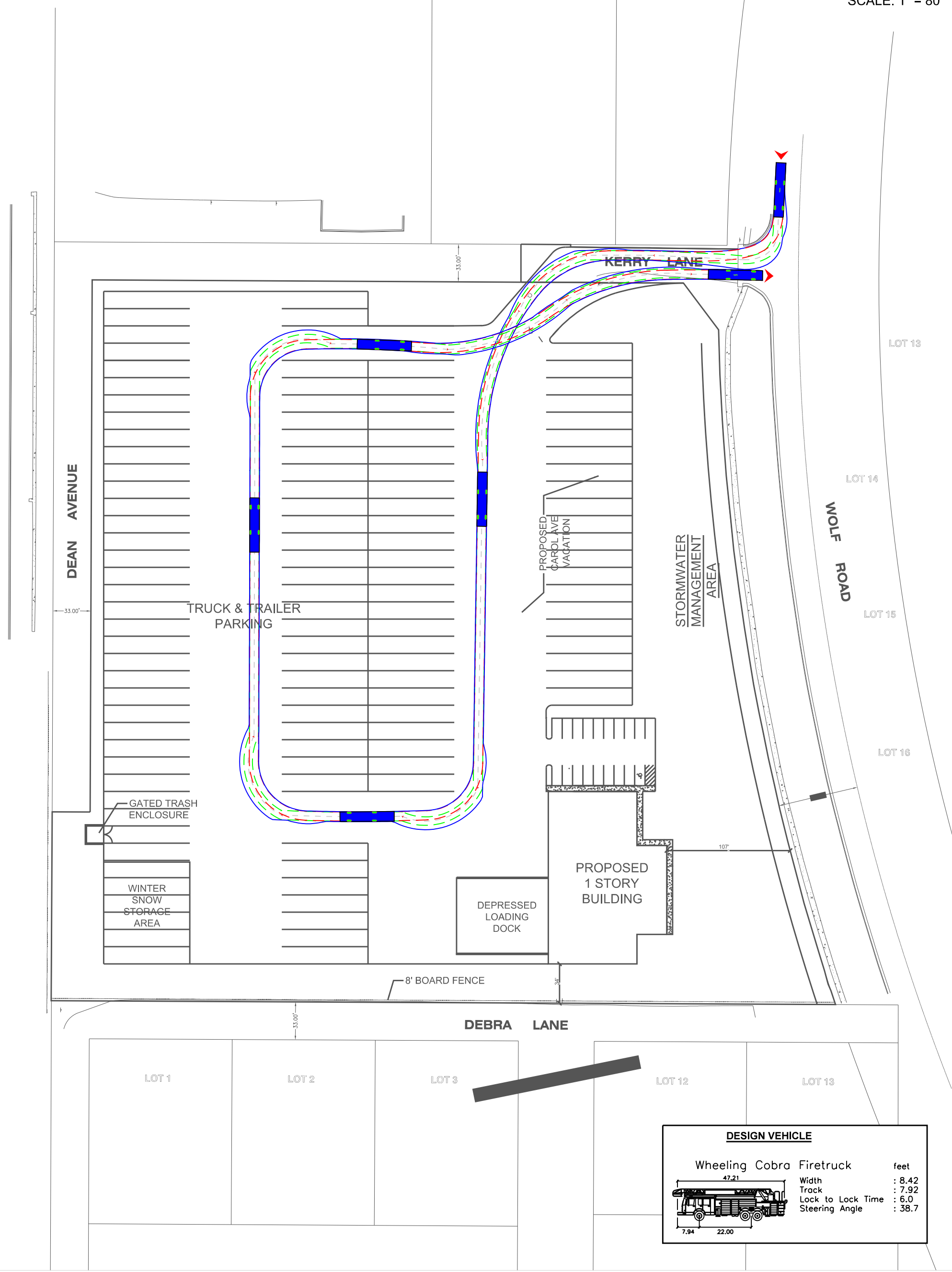
DESIGN VEHICLE



WB-67	feet
Tractor Width	: 8.00
Trailer Width	: 8.50
Tractor Track	: 8.00
Trailer Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 28.4
Articulating Angle	: 75.0



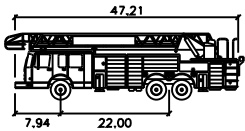
SCALE: 1" = 80'



DESIGN VEHICLE

Wheeling Cobra Firetruck

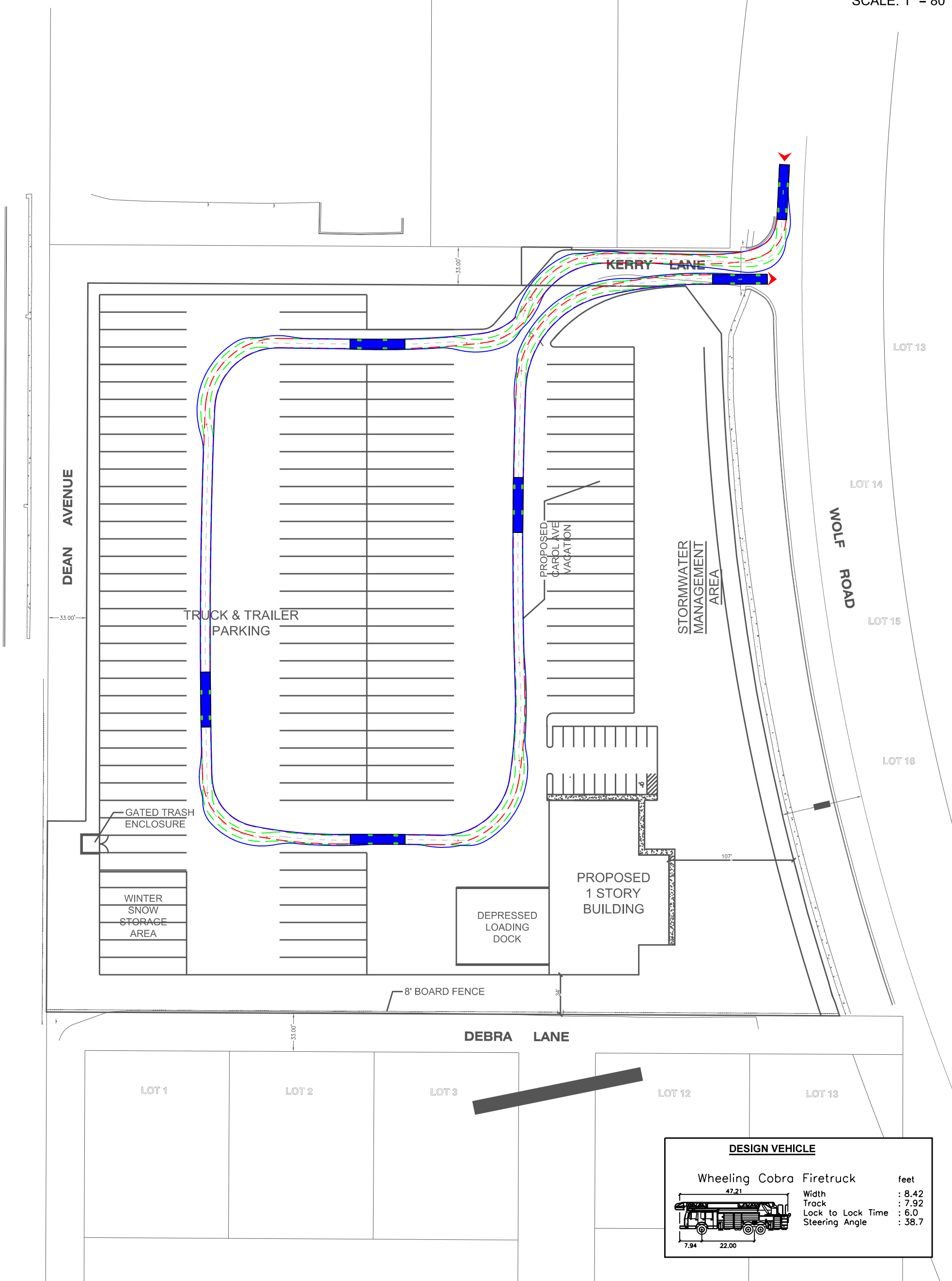
feet



Width : 8.42
Track : 7.92
Lock to Lock Time : 6.0
Steering Angle : 38.7



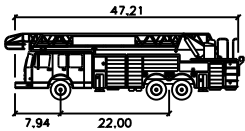
SCALE: 1" = 80'



DESIGN VEHICLE

Wheeling Cobra Firetruck

feet



Width : 8.42
Track : 7.92
Lock to Lock Time : 6.0
Steering Angle : 38.7

Level of Service Criteria

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.	≤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.

Capacity Analysis Summary Sheets

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	827	201	42	236	23	186	310	68	45	277	215
Future Volume (vph)	280	827	201	42	236	23	186	310	68	45	277	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		0	295		0	250		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	185			165			155			155		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.987			0.973			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3410	0	1641	3499	0	1770	3447	0	1805	3324	0
Flt Permitted	0.533			0.205			0.202			0.521		
Satd. Flow (perm)	983	3410	0	354	3499	0	376	3447	0	990	3324	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38			11			27			182	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			910			737			369	
Travel Time (s)		19.3			20.7			16.8			8.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	6%	10%	2%	0%	2%	1%	6%	0%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	1060	0	43	267	0	192	390	0	46	508	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5	24.0		9.5	24.0	
Total Split (s)	18.2	44.4		9.6	35.8		17.0	31.4		9.6	24.0	
Total Split (%)	19.2%	46.7%		10.1%	37.7%		17.9%	33.1%		10.1%	25.3%	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	54.5	46.1		44.4	35.8		33.5	25.1		23.6	14.9	
Actuated g/C Ratio	0.57	0.49		0.47	0.38		0.35	0.26		0.25	0.16	
v/c Ratio	0.43	0.63		0.17	0.20		0.61	0.42		0.15	0.75	
Control Delay	13.6	21.5		12.9	21.3		29.9	28.4		20.5	31.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.6	21.5		12.9	21.3		29.9	28.4		20.5	31.5	
LOS	B	C		B	C		C	C		C	C	
Approach Delay		19.8			20.1			28.9			30.6	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	88	265		11	56		80	98		18	97	
Queue Length 95th (ft)	145	352		28	92		129	137		39	150	

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)	768			830			657			289		
Turn Bay Length (ft)	325			295			250			160		
Base Capacity (vph)	682	1675		249	1327		331	968		301	777	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.42	0.63		0.17	0.20		0.58	0.40		0.15	0.65	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 23.9

Intersection LOS: C

Intersection Capacity Utilization 75.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Wolf Road & Hintz Road

 Ø1	 Ø2	 Ø3	 Ø4 (R)
9.6 s	31.4 s	9.6 s	44.4 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
17 s	24 s	18.2 s	35.8 s

HCM 6th TWSC
6: Wolf Road & Kerry Lane

06/26/2018

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1	0	557	519	1
Future Vol, veh/h	5	1	0	557	519	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	130	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	1	0	605	564	1

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	868	283	565
Stage 1	565	-	-
Stage 2	303	-	-
Critical Hdwy	6.84	6.94	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.22
Pot Cap-1 Maneuver	292	714	1003
Stage 1	532	-	-
Stage 2	723	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	292	714	1003
Mov Cap-2 Maneuver	407	-	-
Stage 1	532	-	-
Stage 2	723	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1003	-	438	-	-
HCM Lane V/C Ratio	-	-	0.015	-	-
HCM Control Delay (s)	0	-	13.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
8: Wolf Road & Fox Lane

06/26/2018

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↱	↕↱		↱	↕↱	
Traffic Vol, veh/h	4	0	2	0	0	0	1	531	1	2	516	2
Future Vol, veh/h	4	0	2	0	0	0	1	531	1	2	516	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	2	0	0	0	1	577	1	2	561	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	857	1146	282	865	1147	289	563	0	0	578	0	0
Stage 1	566	566	-	580	580	-	-	-	-	-	-	-
Stage 2	291	580	-	285	567	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	251	198	715	248	198	708	1005	-	-	992	-	-
Stage 1	476	506	-	467	498	-	-	-	-	-	-	-
Stage 2	693	498	-	698	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	250	197	715	247	197	708	1005	-	-	992	-	-
Mov Cap-2 Maneuver	250	197	-	247	197	-	-	-	-	-	-	-
Stage 1	476	505	-	467	498	-	-	-	-	-	-	-
Stage 2	692	498	-	694	504	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.5		0		0		0					
HCM LOS	C		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1005	-	-	319	-	992	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.02	-	0.002	-	-				
HCM Control Delay (s)	8.6	-	-	16.5	0	8.6	-	-				
HCM Lane LOS	A	-	-	C	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.1	-	0	-	-				

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	305	140	40	650	42	335	337	46	28	387	535
Future Volume (vph)	174	305	140	40	650	42	335	337	46	28	387	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		0	295		0	250		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	185			165			155			155		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.953			0.991			0.982			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3332	0	1641	3512	0	1770	3489	0	1805	3245	0
Flt Permitted	0.137			0.488			0.119			0.519		
Satd. Flow (perm)	253	3332	0	843	3512	0	222	3489	0	986	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		68			6			17			258	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			910			729			369	
Travel Time (s)		19.3			20.7			16.6			8.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	6%	10%	2%	0%	2%	1%	6%	0%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	179	458	0	41	713	0	345	394	0	29	951	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5	24.0		9.5	24.0	
Total Split (s)	16.0	37.7		9.6	31.3		27.1	53.1		9.6	35.6	
Total Split (%)	14.5%	34.3%		8.7%	28.5%		24.6%	48.3%		8.7%	32.4%	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	45.6	37.4		36.7	28.2		57.4	49.1		37.2	28.7	
Actuated g/C Ratio	0.41	0.34		0.33	0.26		0.52	0.45		0.34	0.26	
v/c Ratio	0.69	0.39		0.13	0.79		0.79	0.25		0.08	0.92	
Control Delay	36.7	25.9		22.0	46.2		39.7	18.9		14.5	42.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	36.7	25.9		22.0	46.2		39.7	18.9		14.5	42.8	
LOS	D	C		C	D		D	B		B	D	
Approach Delay		29.0			44.8			28.6			42.0	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	83	117		18	254		171	87		9	258	
Queue Length 95th (ft)	#146	166		40	#356		#302	123		23	#379	

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)	768			830			649			289		
Turn Bay Length (ft)	325			295			250			160		
Base Capacity (vph)	275	1176		326	904		447	1567		379	1061	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.65	0.39		0.13	0.79		0.77	0.25		0.08	0.90	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 36.8

Intersection LOS: D

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Wolf Road & Hintz Road

 Ø1	 Ø2	 Ø3	 Ø4 (R)
9.6 s	53.1 s	9.6 s	37.7 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
27.1 s	35.6 s	16 s	31.3 s

HCM 6th TWSC
6: Wolf Road & Kerry Lane

06/26/2018

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	2	724	563	3
Future Vol, veh/h	2	1	2	724	563	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	130	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1	2	787	612	3

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1012	308	615
Stage 1	614	-	-
Stage 2	398	-	-
Critical Hdwy	6.84	6.94	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.22
Pot Cap-1 Maneuver	236	688	961
Stage 1	502	-	-
Stage 2	647	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	236	688	961
Mov Cap-2 Maneuver	362	-	-
Stage 1	501	-	-
Stage 2	647	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	961	-	430	-	-
HCM Lane V/C Ratio	0.002	-	0.008	-	-
HCM Control Delay (s)	8.8	-	13.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

HCM 6th TWSC
8: Wolf Road & Fox Lane

06/26/2018

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	0	5	3	0	2	9	716	0	2	552	10
Future Vol, veh/h	10	0	5	3	0	2	9	716	0	2	552	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	5	3	0	2	10	778	0	2	600	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1019	1408	306	1102	1413	389	611	0	0	778	0	0
Stage 1	610	610	-	798	798	-	-	-	-	-	-	-
Stage 2	409	798	-	304	615	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	191	138	690	166	137	610	964	-	-	834	-	-
Stage 1	448	483	-	346	396	-	-	-	-	-	-	-
Stage 2	590	396	-	681	480	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	189	136	690	163	135	610	964	-	-	834	-	-
Mov Cap-2 Maneuver	189	136	-	163	135	-	-	-	-	-	-	-
Stage 1	444	482	-	343	392	-	-	-	-	-	-	-
Stage 2	582	392	-	674	479	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.5		21		0.1		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	964	-	-	249	231	834	-	-				
HCM Lane V/C Ratio	0.01	-	-	0.065	0.024	0.003	-	-				
HCM Control Delay (s)	8.8	-	-	20.5	21	9.3	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-				

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	283	837	203	43	239	23	188	314	68	46	280	218
Future Volume (vph)	283	837	203	43	239	23	188	314	68	46	280	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		0	295		0	250		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	185			165			155			155		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.971			0.987			0.973			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3411	0	1641	3499	0	1770	3447	0	1805	3324	0
Flt Permitted	0.531			0.199			0.202			0.519		
Satd. Flow (perm)	980	3411	0	344	3499	0	376	3447	0	986	3324	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37			11			26			185	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			910			737			369	
Travel Time (s)		19.3			20.7			16.8			8.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	6%	10%	2%	0%	2%	1%	6%	0%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	292	1072	0	44	270	0	194	394	0	47	514	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5	24.0		9.5	24.0	
Total Split (s)	18.2	44.4		9.6	35.8		17.0	31.4		9.6	24.0	
Total Split (%)	19.2%	46.7%		10.1%	37.7%		17.9%	33.1%		10.1%	25.3%	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	54.4	46.1		44.3	35.7		33.6	25.1		23.7	15.0	
Actuated g/C Ratio	0.57	0.49		0.47	0.38		0.35	0.26		0.25	0.16	
v/c Ratio	0.44	0.64		0.18	0.20		0.61	0.42		0.16	0.76	
Control Delay	13.7	21.7		13.0	21.4		30.0	28.6		20.5	31.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.7	21.7		13.0	21.4		30.0	28.6		20.5	31.5	
LOS	B	C		B	C		C	C		C	C	
Approach Delay		20.0			20.2			29.0			30.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	89	271		12	57		81	100		18	98	
Queue Length 95th (ft)	147	359		28	92		130	139		39	152	

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)	768			830			657			289		
Turn Bay Length (ft)	325			295			250			160		
Base Capacity (vph)	680	1672		245	1322		331	968		301	779	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.43	0.64		0.18	0.20		0.59	0.41		0.16	0.66	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 24.0

Intersection LOS: C

Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 3: Wolf Road & Hintz Road

 Ø1	 Ø2	 Ø3	 Ø4 (R)
9.6 s	31.4 s	9.6 s	44.4 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
17 s	24 s	18.2 s	35.8 s

HCM 6th TWSC
6: Wolf Road & Access Drive

06/26/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	3	2	569	525	1
Future Vol, veh/h	1	3	2	569	525	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	130	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	3	2	618	571	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	885	286	572	0	-	0
Stage 1	572	-	-	-	-	-
Stage 2	313	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	284	711	997	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	283	711	997	-	-	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	997	-	595	-	-	
HCM Lane V/C Ratio	0.002	-	0.007	-	-	
HCM Control Delay (s)	8.6	-	11.1	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

HCM 6th TWSC
8: Wolf Road & Fox Lane

06/26/2018

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↱	↕↱		↱	↕↱	
Traffic Vol, veh/h	4	0	2	0	0	0	1	567	1	2	524	2
Future Vol, veh/h	4	0	2	0	0	0	1	567	1	2	524	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	2	0	0	0	1	616	1	2	570	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	885	1194	286	908	1195	309	572	0	0	617	0	0
Stage 1	575	575	-	619	619	-	-	-	-	-	-	-
Stage 2	310	619	-	289	576	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	239	185	711	230	185	687	997	-	-	959	-	-
Stage 1	470	501	-	443	478	-	-	-	-	-	-	-
Stage 2	675	478	-	694	500	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	239	184	711	229	184	687	997	-	-	959	-	-
Mov Cap-2 Maneuver	239	184	-	229	184	-	-	-	-	-	-	-
Stage 1	470	500	-	443	478	-	-	-	-	-	-	-
Stage 2	674	478	-	690	499	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17		0		0		0					
HCM LOS	C		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	997	-	-	307	-	959	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.021	-	0.002	-	-				
HCM Control Delay (s)	8.6	-	-	17	0	8.8	-	-				
HCM Lane LOS	A	-	-	C	A	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.1	-	0	-	-				

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	309	144	42	658	42	340	342	50	28	392	541
Future Volume (vph)	176	309	144	42	658	42	340	342	50	28	392	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	325		0	295		0	250		0	160		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	185			165			155			155		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.952			0.991			0.981			0.913	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3328	0	1641	3511	0	1770	3484	0	1805	3245	0
Flt Permitted	0.134			0.484			0.118			0.514		
Satd. Flow (perm)	247	3328	0	836	3511	0	220	3484	0	977	3245	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			5			18			255	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		848			910			729			369	
Travel Time (s)		19.3			20.7			16.6			8.4	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	6%	10%	2%	0%	2%	1%	6%	0%	1%	2%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	181	467	0	43	721	0	351	405	0	29	962	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	24.0		9.5	24.0		9.5	24.0		9.5	24.0	
Total Split (s)	16.0	37.7		9.6	31.3		27.1	53.1		9.6	35.6	
Total Split (%)	14.5%	34.3%		8.7%	28.5%		24.6%	48.3%		8.7%	32.4%	
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	45.4	37.1		36.4	27.9		57.6	49.4		37.3	28.9	
Actuated g/C Ratio	0.41	0.34		0.33	0.25		0.52	0.45		0.34	0.26	
v/c Ratio	0.70	0.40		0.13	0.81		0.81	0.26		0.08	0.93	
Control Delay	37.9	26.1		22.1	47.3		40.9	18.9		14.6	44.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	37.9	26.1		22.1	47.3		40.9	18.9		14.6	44.1	
LOS	D	C		C	D		D	B		B	D	
Approach Delay		29.4			45.9			29.1			43.3	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	84	120		18	259		177	90		9	265	
Queue Length 95th (ft)	#156	170		42	#364		#312	126		23	#390	

Lanes, Volumes, Timings

3: Wolf Road & Hintz Road

06/26/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)	768			830			649			289		
Turn Bay Length (ft)	325			295			250			160		
Base Capacity (vph)	273	1168		322	894		447	1573		378	1059	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.66	0.40		0.13	0.81		0.79	0.26		0.08	0.91	

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 37.7

Intersection LOS: D

Intersection Capacity Utilization 93.0%

ICU Level of Service F

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 3: Wolf Road & Hintz Road

 Ø1	 Ø2	 Ø3	 Ø4 (R)
9.6 s	53.1 s	9.6 s	37.7 s
 Ø5	 Ø6	 Ø7	 Ø8 (R)
27.1 s	35.6 s	16 s	31.3 s

HCM 6th TWSC
6: Wolf Road & Access Drive

06/26/2018

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	10	7	727	574	4
Future Vol, veh/h	5	10	7	727	574	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	130	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	11	8	790	624	4

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1037	314	628
Stage 1	626	-	-
Stage 2	411	-	-
Critical Hdwy	6.84	6.94	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.22
Pot Cap-1 Maneuver	227	682	950
Stage 1	495	-	-
Stage 2	638	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	225	682	950
Mov Cap-2 Maneuver	352	-	-
Stage 1	491	-	-
Stage 2	638	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	950	-	520	-	-
HCM Lane V/C Ratio	0.008	-	0.031	-	-
HCM Control Delay (s)	8.8	-	12.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC
8: Wolf Road & Fox Lane

06/26/2018

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↕		↵	↕↕	
Traffic Vol, veh/h	10	0	5	3	0	2	9	722	0	2	568	10
Future Vol, veh/h	10	0	5	3	0	2	9	722	0	2	568	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	-	140	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	0	5	3	0	2	10	785	0	2	617	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1040	1432	314	1118	1437	393	628	0	0	785	0	0
Stage 1	627	627	-	805	805	-	-	-	-	-	-	-
Stage 2	413	805	-	313	632	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	185	133	682	162	132	606	950	-	-	829	-	-
Stage 1	438	474	-	342	393	-	-	-	-	-	-	-
Stage 2	587	393	-	672	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	183	131	682	159	130	606	950	-	-	829	-	-
Mov Cap-2 Maneuver	183	131	-	159	130	-	-	-	-	-	-	-
Stage 1	433	473	-	338	389	-	-	-	-	-	-	-
Stage 2	579	389	-	665	471	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.9		21.3		0.1		0					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	950	-	-	242	226	829	-	-				
HCM Lane V/C Ratio	0.01	-	-	0.067	0.024	0.003	-	-				
HCM Control Delay (s)	8.8	-	-	20.9	21.3	9.4	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile O(veh)	0	-	-	0.2	0.1	0	-	-				

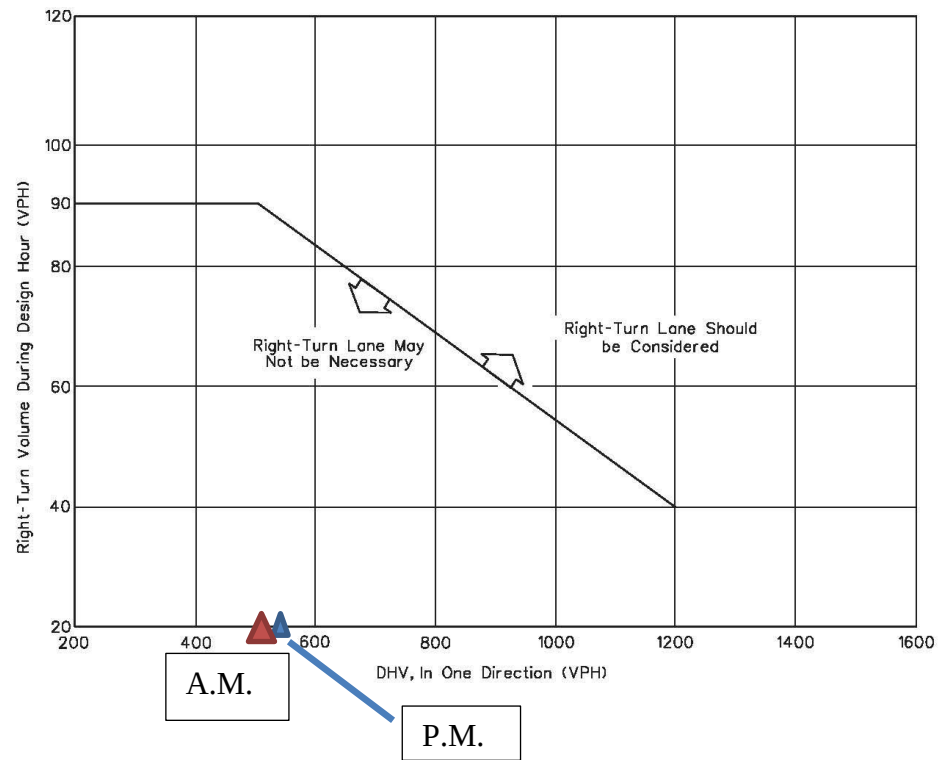
Right-Turn Lane Warrant

Right-Turn Treatment Warrant for Wolf Road at Access Drive

Illinois

INTERSECTIONS

December 2002



Note: For speeds less than 50 mph (80 km/h), see Section 36-3.01(a).

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTION
ON FOUR-LANE HIGHWAYS
(Design Speed of 50 mph (80 km/h) or Greater)**

Figure 36-3B