

MEETING AGENDA

Valparaiso Board of Zoning Appeals
Wednesday, October 21st, 2020, 5:30 PM
Valparaiso City Hall, 166 Lincolnway

1. Roll Call
2. Adoption of September 16, 2020 & October 5, 2020 Meeting Minutes
5. Old Business

VAR20-019 - A petition filed by Eastgate Investments I, LLC & Eastgate Investments II, LLC c/o Todd A. Leeth, Hoeppner Wagner & Evans LLP. The property is located at 1301 LaPorte Ave and 1308 Lincolnway in the Commercial General (CG) and Urban Residential (UR) Zoning District. The petitioner requests the following variance(s):

- Article 9, Section 9.205 – Vary Parking Requirements to allow for 265 Parking Spaces

6. New Business

VAR20-020 – A petition filed by David L Soto, National Retail Development, LLC, 162 W. Grand Ave, Chicago, IL 60654. The property is located at 604 Silhavy Rd in the Light Industrial (INL) Zoning District. The petitioner requests the following variance(s):

- Article 9, Section 9.403 (B), Table 9.403 (B) – Vary minimum connection spacing (drive entrance location) to allow for a minimum connection spacing of one-hundred sixty-nine (169) feet
- Article 11, Section 11.502 (B)(1) – Vary required projects/recesses to allow for no projections/recesses per plans submitted

7. Adjournment

Michael Micka, President – Board of Zoning Appeals
Beth Shrader, Planning Director
Next Meeting: **November 28th, 2020**

Interested persons can view the public hearing live on Facebook on the Valparaiso Now Facebook Page.

In Support of an application for Special Exception, the Petitioner states that the granting of such request:

- ☐ Will not generate excessive vehicular traffic on minor residential streets;
- ☐ Will not create vehicular parking or traffic problems;
- ☐ Appropriate access roads, drives, utilities, drainage, facilities, and other necessary facilities have been or will be installed;
- ☐ Will make a substantial contribution to the neighborhood environment and will not infringe on the rights of properties in the vicinity of the expected use;
- ☐ Will comply with the requirements of the district in which proposed use is to be located.
- ☐ Petitioner will comply with all ordinance parking requirements.

In support of such application for Special Exception for Home Occupation, Petitioner states:

- ☐ That no person other than members of the family residing on the premises will be engaged in the home occupation.
- ☐ That the use of the dwelling unit for home occupation will be clearly incidental and subordinate to its use for residential purposes and not more than 25% of the floor area of the dwelling will be used in the conduct of the home occupation.
- ☐ That there will be no change in the outside appearance of the building or premises, or other visible evidence of the conduct of such home occupation, other than one sign-such sign not exceeding two square feet in area, non-illuminated and containing only the name and nature of the business.
- ☐ That no home occupation will be conducted in any accessory building.
- ☐ That there will be no sales area unless specifically permitted by the BZA.
- ☐ That no traffic will be generated by such home occupation in greater volume than would normally be expected in a residential neighborhood and any need for parking generated by the conduct of such home occupation will be met by required or permitted parking spaces, and will not be in the front yard.
- ☐ That no equipment or process will be used which creates noise, vibration, glare, fumes, odors, or electrical interference detectable to the normal senses which can be detected off premises.

PETITIONER:

National Retail Development LLC
David L Stolt 162 W. Grand Ave Chicago IL 312.332.0690 x 300
Name (Please Print) Address Phone

OWNER OF SUBJECT PROPERTY:

Site Select LLC PO Box 246 Beverly Hills IN 46301 219-406-0203
Name (Please Print) Address Phone

ADDRESS OF SUBJECT PROPERTY:

601 Silvery Rd
Subject property fronts on the _____ side between (streets) _____
in the 1NL Zoning District.

 9/23/2020

Legal Description of Subject Property: (Exhibit No.____)

SEE ATTACHED

DESCRIPTION OF PROPOSED PROJECT INCLUDING, NEW CONSTRUCTION, ADDITION, ALTERATION, OR CHANGE OF USE: (Exhibit No.____)

SEE ATTACHED

Section (3) of the Zoning Ordinance from which a Variance, Special Exception, or Administrative Relief is sought:

Article: 3 Section: 505 Paragraph: Item:
 9 403 B

Attach a Site Plot Plan drawn to scale showing:

- a. scale
- b. lot: shape, location, dimension, and area
- c. existing improvements on the lot (including, structures, sidewalks, & driveways) and the percent coverage of improvements on the lot
- d. distance for lot lines, right-of-way lines, or easements to any structure for: front, back and side yards

Please fill in:

Front Setback 90ft Rear Setback 30 ft. Side Setbacks 15 ft./ 15 ft. Lot Coverage
Height

The powers and duties of the Board of Zoning Appeals are provided for and limited by Enabling Acts in Indiana Code 36-7-4-900 et. eq.. The public hearing procedures are similar to a courtroom hearing. Although it is not required that the Petitioner represented by legal counsel, information and documentation pertaining to the petitioner should be prepared as if it were to become part of a court hearing. **Although the office of the City Planner is available to assist the Petitioner, it is the Petitioner's responsibility to request and prepare the appropriate variance petition.** The Planning Department can be contacted Monday-Friday between 8:30 – 4:30 at (219) 462-1161.

Petitions will not be scheduled for public hearing unless all legal and procedural requirements have been met.



Parcel Legal Description		Revision Date: 09/16/2020
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Legal Description:

Situated in the County of Porter, State of Indiana, and being more particularly described as follows:

Commencing Two and Sixteen Hundredths (2.16) rods South of the Northwest corner of the Southwest Quarter (SW 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty (20), Township Thirty-Five (35) North, Range Five (5) West, and running thence South Twenty (20) rods; thence East Eighty (80) rods; thence North Twenty (20) rods; thence West Eighty (80) rods to the place of beginning, containing ten (10) acres, more or less.

EXCEPTING THEREFROM that portion of the above described real estate conveyed to the City of Valparaiso, Indiana by Warranty Deed dated April 12, 2018, and recorded as Instrument Number 2018-018371 of the Porter County, Indiana Recorder's Office, being more particularly described as follows:

A part of the Southwest Quarter of the Northwest Quarter of Section 20, Township 35 North, Range 5 West, Washington Township, Porter County, Indiana, and being that part of the grantor(s) land lying within the right-of-way lines depicted on the attached Right-of-Way Parcel Plat, marked EXHIBIT "B" described as follows: BEGINNING 35.79 feet [2.16 rods (35.64 feet) by Instrument Numbers 2015-008329 and 2015-008330] South of the Northwest corner of said Quarter-Quarter Section, which POINT OF BEGINNING is located on the West line of said Quarter Section South 0 degrees 04 minutes 21 seconds East 1,362.83 feet (distance deduced from Instrument Number 2012-004223) from the Northwest corner of said Quarter Section designated as point "254" on said Parcel Plat, and being the Southwest corner of the tract of land described in said Instrument Number 2012-004223; thence South 89 degrees 41 minutes 55 seconds East 40.00 feet along the South line of said tract to the point designated "1038" on said Parcel Plat; thence South 0 degrees 04 minutes 21 seconds East 331.16 feet to the North line of Lot 1 in Willow Heights Subdivision, the plat of which is recorded in Plat Book 3, Page 159 in the Office of the Recorder of said county, designated as point "1037" on said Parcel Plat; thence North 89 degrees 49 minutes 13 seconds West 40.00 feet along the North line of said lot and the Westerly prolongation thereof to the West line of said Quarter-Quarter Section; thence North 0 degrees 04 minutes 21 seconds West 331.25 feet [20 rods (330 feet) by said Instrument Numbers 2015-008330] along said West line to the POINT OF BEGINNING and containing 0.304 acres, more or less, inclusive of the presently existing right-of-way which contains 0.076 acres, more or less.



Project Description		Revision Date: 09/16/2020
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Project Description

Atwater Group (represented by David Soto) is proposing to develop self-storage facilities and a light industrial building on a 9.72-acre parcel located at 604 Silhavy Road, Valparaiso, Indiana. The parcel is currently Zoned INL and will be subdivided into two lots. The front portion will have climate-controlled self-storage building that will be approximately 46,000 sq. ft. Behind this building will be five smaller climate-controlled buildings that collectively add up to approximately 45,000 sq. ft. The back lot will have a single-story light industrial building that is climate-controlled and approximately 24,000 sq. ft. There will be an access drive on the north part of the front building. This drive is not a public road and is connected to Silhavy Road. The site will have detention in the back (East side) of the site. It will be a dry bottom pond with a depth of 7 ft. that will outfall to the east side of the site where another pond is located closely off site.

Bufferyards Provided

This site may reduce bufferyards per section 10.407, since bufferyards would make up 21% of site. In result, this site qualifies as an infill/redevelopment site.

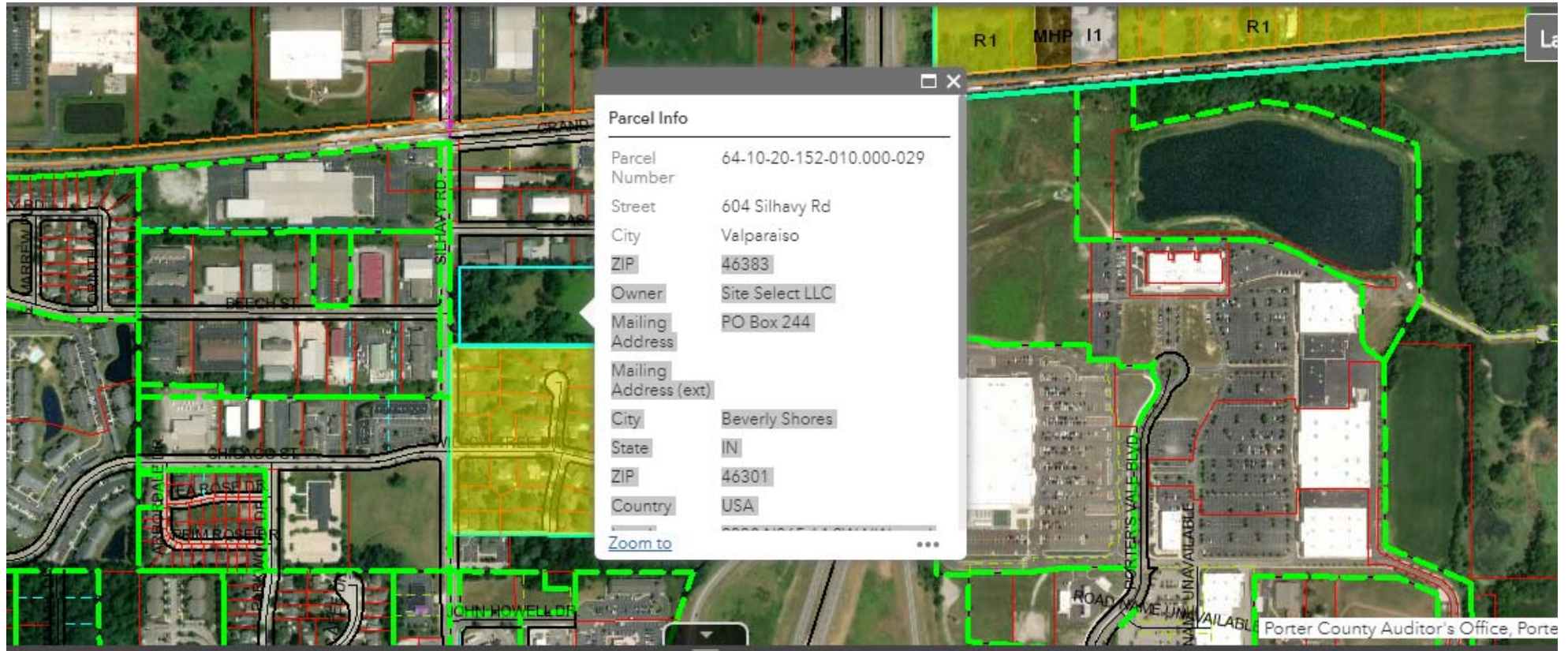
North- A minimum of 18ft. bufferyard with a 6ft. tall solid fence and trees. No berm.

West- 40ft. bufferyard with a 5ft. berm and trees.

South- 40ft. bufferyard with a 6ft. tall solid fence, trees and a minimum 2ft tall berm.

East- Section 10.402 requires a Class A + Class B bufferyard with no berm.

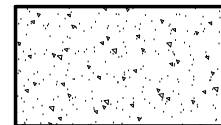
Proposed Location
604 Silhavy Rd



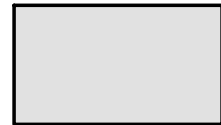
604 Silhavy Rd - Proposed Location – 10 Acres



LEGEND

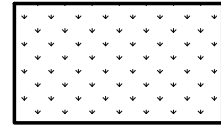


CONCRETE SIDEWALK



ASPHALT PAVEMENT

STRIPING (PAINT, 4" WIDE)



SOD/LANDSCAPING
(SEE LANDSCAPE PLAN)

BARRIER CURB & GUTTER

6-FOOT HIGH SOLID FENCE

LSR (Landscaping Surface Ratio)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
LSR =	0.37

Gross Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Total Floor Area (sq. ft.)	118,000
GROSS FAR =	0.279

Net Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
= BUILDABLE AREA	266,507
Total Floor Area (sq. ft.)	118,000
NET FAR =	0.443

9/23/2020

Unified Development Ordinance - Calculators

VALPARAISO

View UDO Search UDO Archives GIS Maps Quick Tables Quick Links App

Parking and Loading Requirements Site Capacity Non-Residential Site Capacity Bufferyard Standard Inputs Bufferyard Model Inputs

Non-Residential Site Capacity Calculator (See Sec. 4.303 Nonresidential Site Capacity Calculation)

Calculate Clear

Step 1

Zone: INL

Gross Site Area (acres): 9.72

Less Land Within Existing Roads' Ultimate Right-of-way and/or Utility Right-of-Way (acres): 0

Less Land Cut Off From Use by Railroad, Highway, or Water Body (acres): 0

Less All Water Bodies (acres): 0

Less Previously Dedicated Open Space (acres): 0

Equals Base Site Area: 9.72

Area in Acres OSR Protected Land

Step 2

Riparian Buffers: 0.00 0.70 0.00

Floodways: 0.00 1.00 0.00

Floodplain: 0.00 0.20 0.00

Wetlands: 0.00 1.00 0.00

Woodlands: 0.00 0.10 0.00

Slope Slopes more than 25%: 0.00 0.30 0.00

Slope Slopes 15-25%: 2.04 0.10 0.204

Wellhead Protection: 0.00 1.00 0.00

Step 3

Sum Total of Resource Land (acres): 2.04

Step 4

Protected Resource Land (acres) (= sum of protected land): 0.20

Step 5

Base Site Area (acres): 9.72

Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.279

District Yield (acres) (round to 2 decimal places): 2.71

Step 6

Base Site Area (acres): 9.72

Multiply by Landscape Surface Ratio for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.370

District Open Space (acres): 3.60

Step 7

Base Site Area (acres): 9.72

Subtract District Open Space (Step 6) or Protected Resource Land (Step 4), whichever is greater: 3.60

Equals Buildable Land (acres) (round to 2 decimal places): 6.12

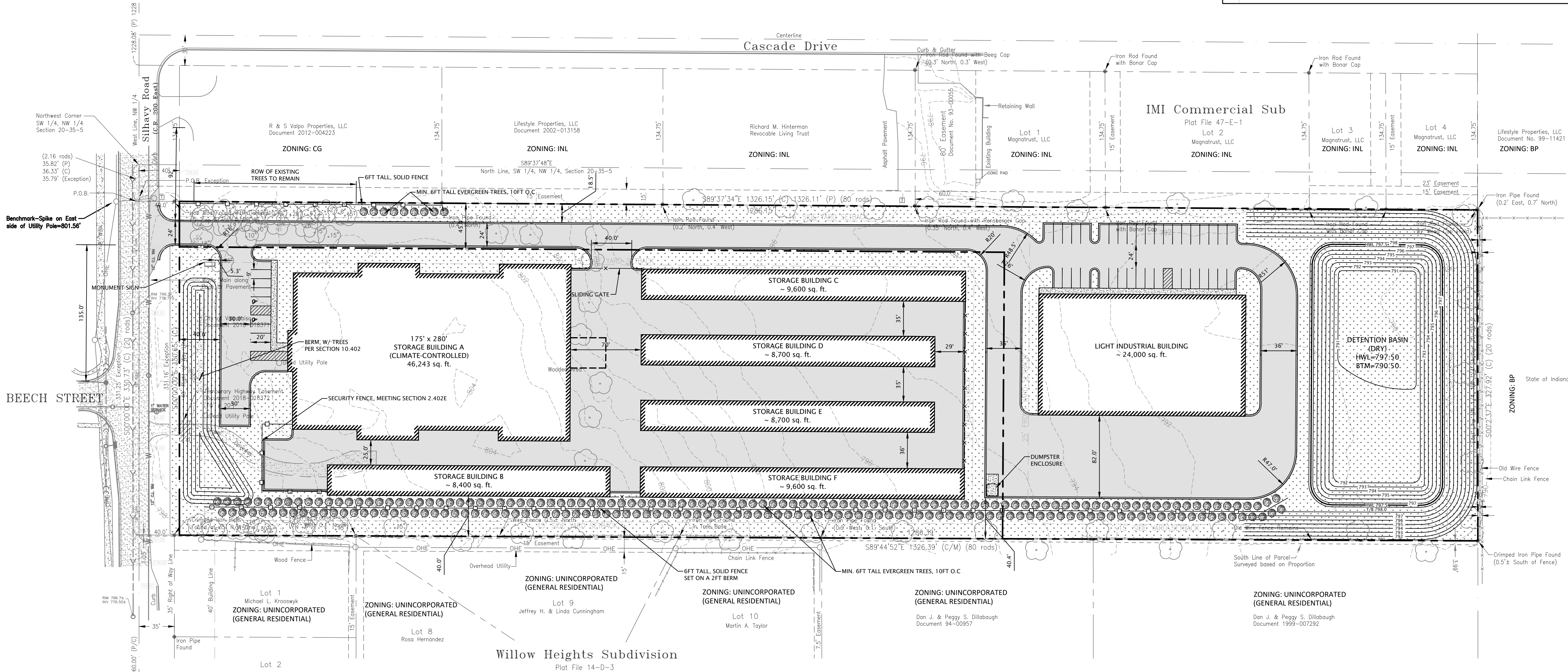
Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.443

Equals Site Specific Yield (acres): 2.71

Minimum Floor Area Yield (square feet) (multiply lesser of District Yield or Site Specific Yield by 43,560): 118,048

Minimum Landscaped Surface (acres) (greater of Protected Resource Land or District Open Space): 3.60

Calculate Clear



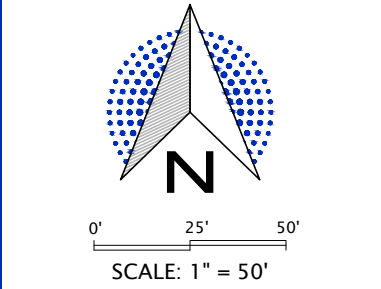
1155 Troutwine Road
Crown Point, IN 46307
P: (219) 662-7710
F: (219) 662-2740
www.dvgteam.com

NOT FOR CONSTRUCTION

Atwater Group
162 W. Grand Avenue, #300
Chicago, Illinois 60654

REVISIONS AND NOTES:	
DATE:	

604 SILHAVY ROAD SITE



© COPYRIGHT 2017 DVG TEAM, INC.	
DESIGN BY RJP	DATE 09/17/20
PROJECT NO. 20-1045	

Exhibit 1



LEGEND			
	CONCRETE SIDEWALK		ASPHALT PAVEMENT
	STRIPING (PAINT, 4\"/>		BARRIER CURB & CUTTER
	SOD/LANDSCAPING (SEE LANDSCAPE PLAN)		6-FOOT HIGH SOLID FENCE

LSR (Landscaping Surface Ratio)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
LSR =	0.37

Gross Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Total Floor Area (sq. ft.)	118,000
GROSS FAR =	0.279

Net Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
= BUILDABLE AREA	266,507
Total Floor Area (sq. ft.)	118,000
NET FAR =	0.443

9/23/2020		Unified Development Ordinance - Calculators	
Parking and Loading Requirements		Site Capacity	Non-Residential Site Capacity
Non-Residential Site Capacity Calculator		Bufferyard Standard Inputs	Bufferyard Model Inputs
Calculate		Clear	
Step 1		INL	
Zone:		9.72	
Gross Site Area (acres):		0	
Less Land Within Existing Roads' Ultimate Right-of-Way and/or Utility Right-of-Way (acres):		0	
Less Land Cut Off From Use by Railroad, Highway, or Water Body (acres):		0	
Less All Water Bodies (acres):		0	
Less Previously Dedicated Open Space (acres):		0	
Equals Base Site Area		Area in Acres	OSR Protected Land
Step 2		0.00 0.70 0.00	
Riparian Buffers		0.00 1.00 0.00	
Floodways		0.00 0.20 0.00	
Floodplain		0.00 1.00 0.00	
Wetlands		0.00 0.10 0.00	
Woodlands		0.00 0.30 0.00	
Slope Slopes more than 25%		2.04 0.10 0.204	
Slope Slopes 15-25%		0.00 1.00 0.00	
Wellhead Protection		2.04	
Sum Total of Resource Land (acres)		2.04	
Step 3		0.20	
Protected Resource Land (acres) (+/- sum of protected land)		9.72	
Step 4		0.279	
Base Site Area (acres)		2.71	
Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards)		9.72	
District Yield (acres) (round to 2 decimal places)		0.370	
Step 5		3.60	
Base Site Area (acres)		9.72	
Multiply by Landscape Surface Ratio for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards)		3.60	
District Open Space (acres)		6.12	
Step 6		0.443	
Base Site Area (acres)		2.71	
Subtract District Open Space (Step 6) or Protected Resource Land (Step 4), whichever is greater		118,048	
Equals Buildable Land (acres) (round to 2 decimal places)		3.60	
Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards)		0.443	
Equals Site Specific Yield (acres)		1.60	
Floor Area Yield (square feet) (multiply lesser of District Yield or Site Specific Yield by 43,560)		118,048	
Minimum Landscaped Surface (acres) (greater of Protected Resource Land or District Open Space)		3.60	
Calculate		Clear	



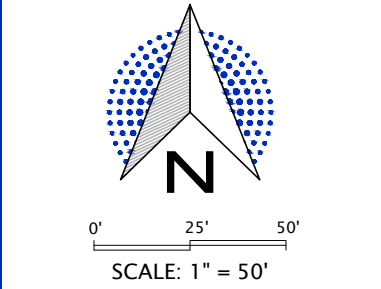
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162 W. Grand Avenue, #300
Chicago, Illinois 60654

DATE:	REVISIONS AND NOTES:

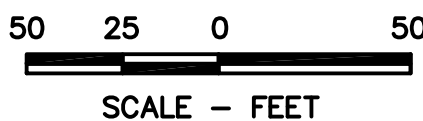
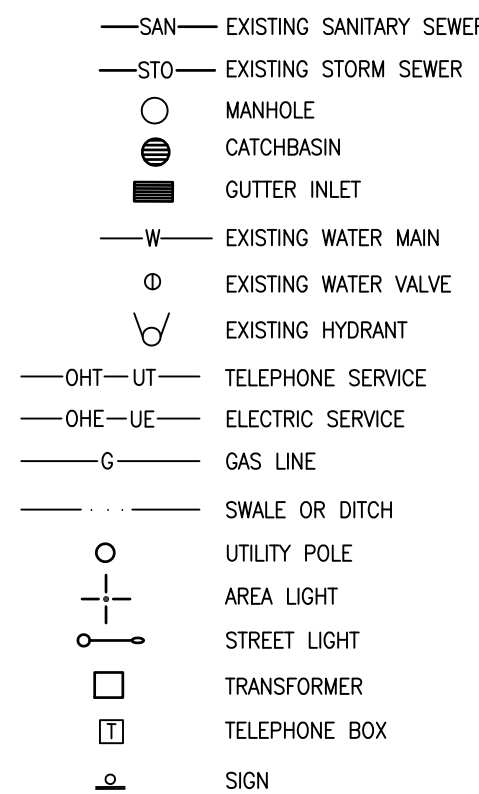
604 SILHAVY ROAD SITE
Site Plan - With Aerial



DESIGN BY		DATE	
RJP		09/17/20	
PROJECT NO.		20-1045	

Exhibit 2

Commencing Two and Sixteen Hundredths (2.16) rods South of the Northwest corner Southwest Quarter (SW 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty (20), Township Thirty-Five (35) North, Range Five (5) West, and running thence South Twenty (20) rods; thence East Eighty (80) rods; thence North Twenty (20) rods; thence West Eighty (80) rods to the Place of Beginning, containing ten (10) acres, more or less.



within the acceptable relative positional accuracies as allowed in this type of survey.

David J. Tiemens, LS 29900020

[illegible]

Board of Zoning Appeals
Valparaiso, Indiana
Variance from Development Standards – Findings of Fact

Petitioner: DVG Team, Inc
Property Address: 604 Silhavy Road
Existing Zoning District: INL – Light Industrial

Variance from Development Standards Request:

1. Variance from Section 9.403.B: Access spacing along Arterials

- Driveway would be less than 200 ft. from Beech Street and Cascade drive on a 30 MPH Arterial (Silhavy Road). Proposed is approximately 92ft.

2. Variance from 11.502. B: Non-Residential Design Standards

- The Light Industrial Building, Buildings B, C, D, E, F, and G will not provide projections or recesses every 80 ft.

Findings of Fact:

1) Variance from Section 9.403.B: Access spacing along Arterials

a) The proposed Variance from Development Standards will not be injurious to the public health, safety, morals and general welfare of the community because:

- This development will be a 2-way, which has 6 points of conflict. The alternative of having the entrance be aligned with Beech Street, causing it to be a 4-way intersection that has 32 points of potential conflict is not ideal. Included in this submittal as part of record is a Traffic Impact Study performed by a Licensed Professional Engineer with significant experience and training in the field of traffic and transportation engineering. This report demonstrates that the even though the proposed entrance is not located per ordinance, it is safer and more desirable to the public. Therefore, the proposed Variance from Development Standards will not be injurious to the public health, safety, morals and general welfare of the Community.

b) The use and value of the area adjacent to the property included in the proposed variance will not be affected in a substantially adverse manner because:

- The proposed project will not have a substantially adverse effect on the use and value of the properties adjacent to the property. This development conforms to character and uses of adjacent properties within this commercial/industrial area. The Traffic Study Report included evaluations of surrounding intersections and determined that no adverse effect will be brought to them.

c) The strict application of the terms of the zoning ordinance will result in particular difficulties in the use of the property included in the proposed variance because:

- That strict application of the terms of the zoning ordinance will result in practical difficulties in the use of the property due to the inability of creating a safe entrance/exit to this site. In addition, the curvature of an entrance drive to align with Beech will restrict the size of proposed building “A” and its use of a parking lot.

2) Variance from 11.502.B: Non-Residential Design Standards

a) The proposed Variance from Development Standards will not be injurious to the public health, safety, morals and general welfare of the community because:

- Approval will not be injurious to public health, safety, morals, comfort, or general welfare of the community. The buildings in which the variances are being requested will not be seen from the surrounding areas. Along Silhavy road, the larger Building A is of a height that completely covers up the rear buildings. Building A's height is approximately 23'-9" at the peak and 12' at the minimum. Buildings B through F are a maximum of 9'-9" tall. In addition, within bufferyards either berms and/or berms & fences will be provided to hide the buildings. Lastly, surrounding this property are a substantial number of trees to block any view of the buildings in question.

b) The use and value of the area adjacent to the property included in the proposed variance will not be affected in a substantially adverse manner because:

- The proposed project will not have a substantially adverse effect on the use and value of the properties adjacent to the property. This development conforms to character and uses of adjacent properties within this commercial area. There is a substantial need in the area for storage facilities.

c) The strict application of the terms of the zoning ordinance will result in particular difficulties in the use of the property included in the proposed variance because:

- That strict application of the terms of the zoning ordinance will result in practical difficulties in the use of the property. The storage buildings are set up to be very narrow. Any recesses/projects will inevitably increase the width of these buildings in order to keep the useable space. The increased width will cause the need for reduction in bufferyards, which are already at their minimums.

1155 Troutwine Road
Crown Point, IN 46307



219.662.7710
fax 219.662.2740

**Silhavy Self-Storage & Industrial Park – A Proposed Development
604 Silhavy Road
Valparaiso, Indiana**

**Traffic Impact Study
September 24, 2020**

Prepared for:

Atwater Group
162 West Grand Avenue, #300
Chicago, IL 60654

Prepared by:

*DVG Team Inc.
1155 Troutwine Road
Crown Point, IN 46307*

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5. Analysis Methodology
6. Level of Service
7. Findings
8. Recommendations
9. Conclusions

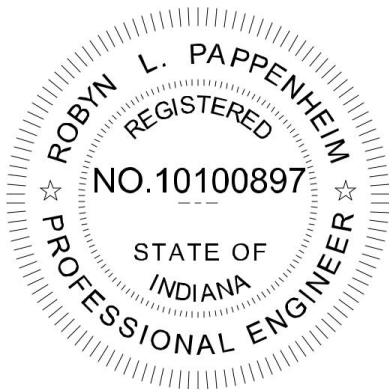
List of Exhibits

EXHIBIT 1	Vicinity Map
EXHIBIT 2	Site Plan
EXHIBIT 3	Traffic Volume Data
EXHIBIT 4A	Proposed Traffic Volumes Exhibit – AM Peak Hour
EXHIBIT 4B	Proposed Traffic Volumes Exhibit – PM Peak Hour
EXHIBIT 5A	Level of Service Existing – Silhavy Rd & Cascade Dr – AM Peak Hour
EXHIBIT 5B	Level of Service Existing – Silhavy Rd & Cascade Dr – PM Peak Hour
EXHIBIT 6A	Level of Service Existing – Silhavy Rd & Beech St – AM Peak Hour
EXHIBIT 6B	Level of Service Existing – Silhavy Rd & Beech St – PM Peak Hour
EXHIBIT 7A	Level of Service Proposed – Silhavy Rd & Cascade Dr – AM Peak Hour
EXHIBIT 7B	Level of Service Proposed – Silhavy Rd & Cascade Dr – PM Peak Hour
EXHIBIT 8A	Level of Service Proposed – Silhavy Rd & Beech St – AM Peak Hour
EXHIBIT 8B	Level of Service Proposed – Silhavy Rd & Beech St – PM Peak Hour
EXHIBIT 9A	Level of Service Proposed – Silhavy Rd & Proposed – AM Peak Hour
EXHIBIT 9B	Level of Service Proposed – Silhavy Rd & Proposed – PM Peak Hour

Preparer Qualifications

"I certify that this TRAFFIC IMPACT STUDY has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."

Robyn L. Pappenheim, P.E.
Indiana Registration 10100897
DVG Team, Inc.



A handwritten signature in black ink, appearing to read "Robyn L. Pappenheim".
09-24-2020

1. Introduction and Summary

The purpose of this study is to assist the potential developers of Silhavy Self Storage and Light Industrial Park in their efforts to evaluate the impacts of the projected traffic volumes of their traffic generator, a proposed commercial development east of the intersection of Silhavy Road between Cascade Drive and Beech Street in the City of Valparaiso, Indiana. See Exhibit 1.

We have analyzed the impacts on the two-way, stop-controlled intersections of Silhavy Road & Beech Street and Silhavy Road & Cascade Drive under existing conditions. At both intersections, only the minor approach(s) is required to stop. Furthermore, we analyzed these intersections as well as the proposed intersection formed by the commercial entrance to the proposed development & Silhavy Road under proposed conditions which include the added traffic due to the development and physical widening of Silhavy Road to three (3) lanes. Analyses of the intersections was performed for the morning and afternoon peak periods of a typical weekday, in keeping with traffic engineering standards to determine existing and projected levels of service.

Silhavy Road has a posted speed limit of 30 MPH in this area. It is generally flat and straight and is two (2) lanes, one in the northbound and one in the southbound direction. It is classified as a major collector roadway on the INDOT website although the City considers it an arterial roadway. A third lane which is to be a two-way left-turn lane (TWLTL) is expected to be added in the near future and was included for the proposed conditions analysis.

Cascade Drive also has a 30 MPH posted speed limit. It is a dead-end, two-lane, east-west local roadway serving mostly light industrial land uses. Beech Street is an east-west, minor collector, two-lane roadway which is also 30 MPH. It is relatively flat with some horizontal curvature.

2. Proposed Development

This development will consist of a 90,000 SFT of self-storage area (half will be climate controlled), and 24,000 SFT of Light Industrial Building area. See Exhibit 2.

3. Area Conditions

The Silhavy Road & Cascade Drive intersection is a four (4) way intersection where Cascade Drive is the east approach and the west approach is a commercial entrance to a business. The Silhavy Road & Beech Street intersection is a three (3) way intersection where Beech Street is the west approach.

The proposed development will have access from the east off Silhavy Road at a point approximately 163' north of Beech Street and 194' south of Cascade Drive measured center to center.

Manual traffic counts at 15-minute intervals were performed on Thursday, September 17, 2020, from 7:00 AM – 9:00 AM and from 4:00 PM to 6:00 PM at the existing intersections for the purpose of identifying a morning peak hour and an afternoon peak hour. All the traffic count data collected is shown in Exhibit 3.

4. Projected Traffic

To assess the potential traffic impact due to the proposed development on the traffic flow of the surrounding streets and intersections, the future travel demand of the site was simulated.

Forecasting the site-generated trips was accomplished through trip generation, trip distribution, and traffic assignment. Trip generation is the process of providing an estimate of the number of trips that will be generated due to the proposed development. Trip distribution is the process of determining the general direction traffic is expected to travel to and from the development utilizing existing traffic patterns as a guide. Traffic assignment is the process of assigning traffic turning movements to the driveways of the development and to the surrounding roadways and intersections. During the traffic assignment process, trip reduced volumes are applied, if applicable.

For this study, the procedure for forecasting site-generated trips was performed for the average AM and PM peak hours of the generator traffic utilizing square footage as the independent variable for both the self-storage and for the light industrial land uses. The Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition was utilized in this analysis as the source for the trip generation rates. The generator trips are higher than the adjacent street trips and therefore a very conservative option for this analysis.

Land Use 151: Mini Warehouse was selected as representative of the intended use of the self-storage facility. It can be noted that the self-storage facility will have peak traffic times on the weekends, as expected.

Land Use 110: General Light Industrial was selected as representative of the intended use of the light industrial building. It can be noted that the light industrial traffic will typically peak during week and close to when the adjacent street has peak times.

See below tables for expected trip generated traffic volumes:

Mini Warehouse
Land Use 151
Average Vehicle Trip Ends vs. GFA (Gross Floor Area)

90,000 SFT GFA		Forecasted Trip Ends		
		Two Way	IN	OUT
Average Weekday		136	68	68
AM Peak Hour	Adjacent Street	9	5	4
PM Peak Hour	Adjacent Street	15	7	8
AM Peak Hour	Generator	18	9	9
PM Peak Hour	Generator	18	9	9
Saturday		176	88	88
Saturday Peak Hour		28	16	16
Sunday		170	85	85
Sunday Peak Hour		14	6	8

General Light Industrial
Land Use 110
Average Vehicle Trip Ends vs. GFA (Gross Floor Area)

24,000 SFT		Forecasted Trip Ends		
		Two Way	IN	OUT
Average Weekday		149	74	75
AM Peak Hour	Adjacent Street	16	14	2
PM Peak Hour	Adjacent Street	14	2	12
AM Peak Hour	Generator	29	25	4
PM Peak Hour	Generator	22	4	18
Saturday		48	24	24
Saturday Peak Hour		10	5	5
Sunday		120	60	60
Sunday Peak Hour		17	8	9

Because these are destination sites and not likely to see sharing of traffic between the two uses, no reduction factors were applied to the above volumes. The highlighted volumes represent the traffic in and out of the development during the peak hours of an average weekday and were therefore used in the levels of service analysis discussed below.

5. Analysis Methodology

By distributing the trip generated traffic over the existing network and including the resulting traffic assignments with the existing traffic volumes, turn movements during both peak periods were determined for the proposed conditions. These expected weekday morning and afternoon peak volumes were then compared to existing conditions and considered to determine what effect the additional traffic due to the addition of these

facilities will have on the nearby existing intersection during peak times. See Exhibit 4A and 4B for the morning and afternoon expected peak traffic volumes, respectively.

6. Level of Service

The Level of Service (LOS) is the classification of the quality of traffic flow at a given location. A breakdown of the various LOS conditions is given below:

LOS 'A' indicates free flow conditions

LOS 'B' indicates stable flow conditions

LOS 'C' indicates slight interruptions in flow

LOS 'D' indicates moderate interruptions in flow

LOS 'E' indicates unstable flow approaching capacity

LOS 'F' indicates a forced flow condition

Traffic engineering standards indicate a LOS of 'D' or better is acceptable. On some occasions, a LOS 'E' is considered acceptable.

The level of service was computed utilizing the recommended methodology of the Highway Capacity Manual (Sixth Edition, TRB 2016). Using the Synchro software, version 10, by Trafficware, the two-way stop-controlled intersection form was filled out for each intersection. Two-way stop-controlled is a general term referring to any condition in which minor approach or approaches are required to stop, but the major approaches are not.

The levels of service were then calculated for each of the appropriate intersection movements to determine the impact of the traffic generated from the proposed development.

Results of these levels of service will be discussed in more detail later in this report.

7. Findings

The peak hours are defined as the heaviest traffic periods of the day. Traffic engineering standards dictate that the heaviest traffic periods of an average weekday shall be studied and the needs resulting from those analyses shall be considered sufficient for the rest of the time periods not analyzed. To ensure even more conservative analyses, peak hour factors (PHF) are applied to the hourly volumes. In such, the PHF effectively causes the analyses to be for the peak 15 minutes of the peak hours.



Silhavy Road has a morning peak hour of 7:45 to 8:45 AM and an afternoon peak hour of 4:15 to 5:15 PM. It can be estimated that the ADT of Silhavy Road in this area is 9,000 vpd based on the afternoon peak period of about 900 vpd which typically represents approximately 10% of the daily traffic.

Level of Service (LOS) Summary Table

<i>Intersection Name</i>	<i>Existing LOS</i>		<i>Proposed LOS</i>	
	<i>Morning</i>	<i>Afternoon</i>	<i>Morning</i>	<i>Afternoon</i>
Silhavy Rd & Cascade Dr	B/B	B/C	B/B	B/C
Silhavy Rd & Beech St	B	C	B	C
Silhavy Rd & Proposed Dr	N/A	N/A	B	B

The Proposed Levels of Service were calculated with the TWLTL. See attached Exhibits for Level of Service result files as Exhibits 5A through 9B.

8. Recommendations

The findings show that the levels of service are acceptable to proceed with the development as planned. By offsetting the entrance from Beech Street, the two (2) resulting ‘T’ intersections will have less combined points of conflict ($6+6=12$) than a single, 4-way intersection which contains 32 points of conflict.

9. Conclusions

Four (4) way intersections should be considered when there is a possibility of needing future all-way stop control or traffic signal control or in cases of public roads intersecting. Because the traffic volumes do not support such a change in intersection control type, the offset ‘T’ intersections are more favorable from an operational as well as a safety perspective. With less overall conflict points, drivers will have less opportunity for incidents. The distances between the driveways and public roadways is sufficient to allow storage, if needed, in the TWLTL for left-turning vehicles.

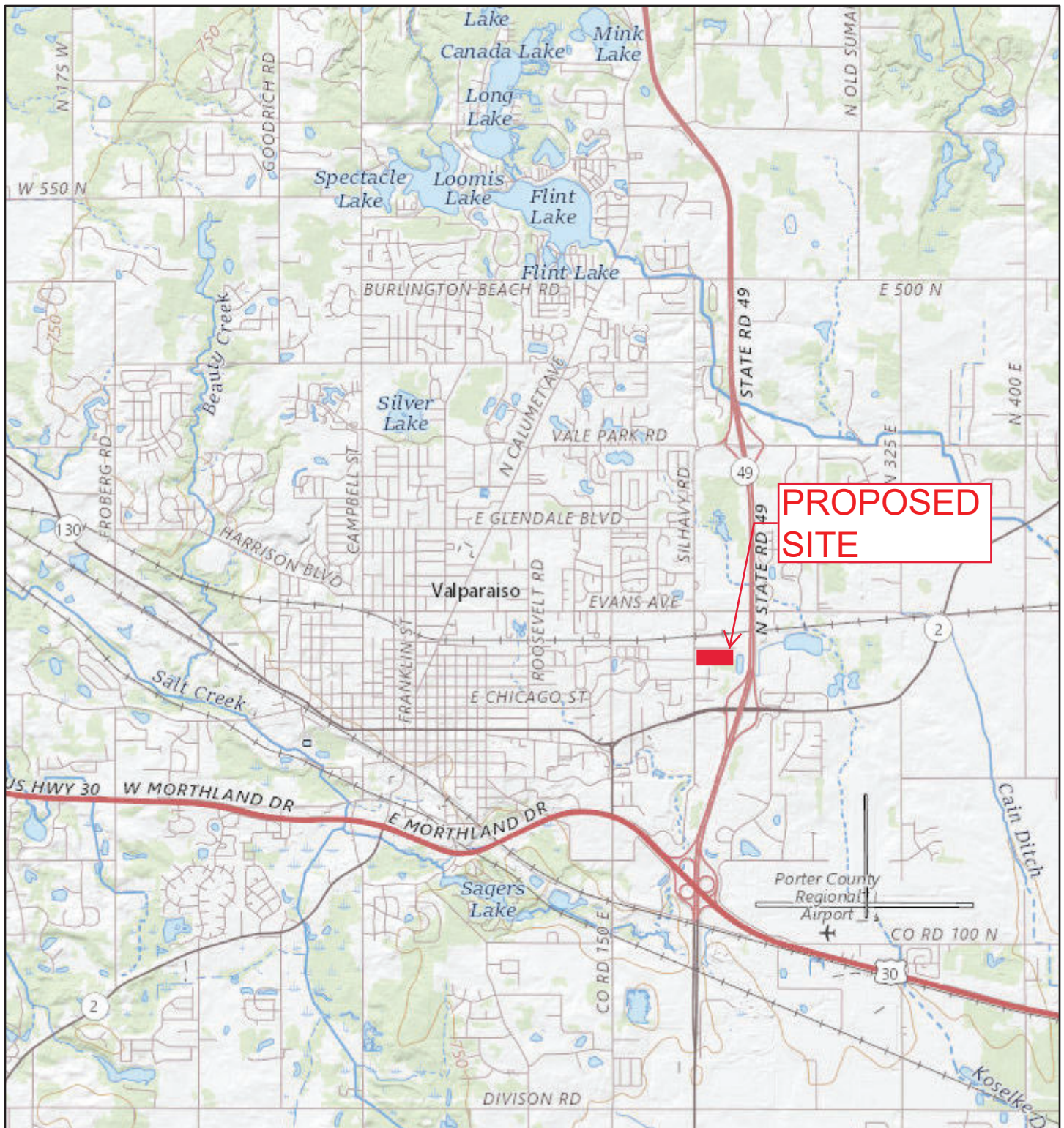
All attempts to remain conservative in this study have been made to provide possible worst-case scenarios. In addition to analyzing the heaviest traffic periods of a typical weekday, conservative trip generated traffic volumes were utilized, and no reduction factors were used. It is, therefore, likely that the impact will be less than projected.



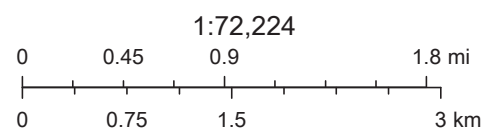
Exhibit 1

Vicinity Map

The National Map Advanced Viewer



9/24/2020, 2:04:07 PM



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census

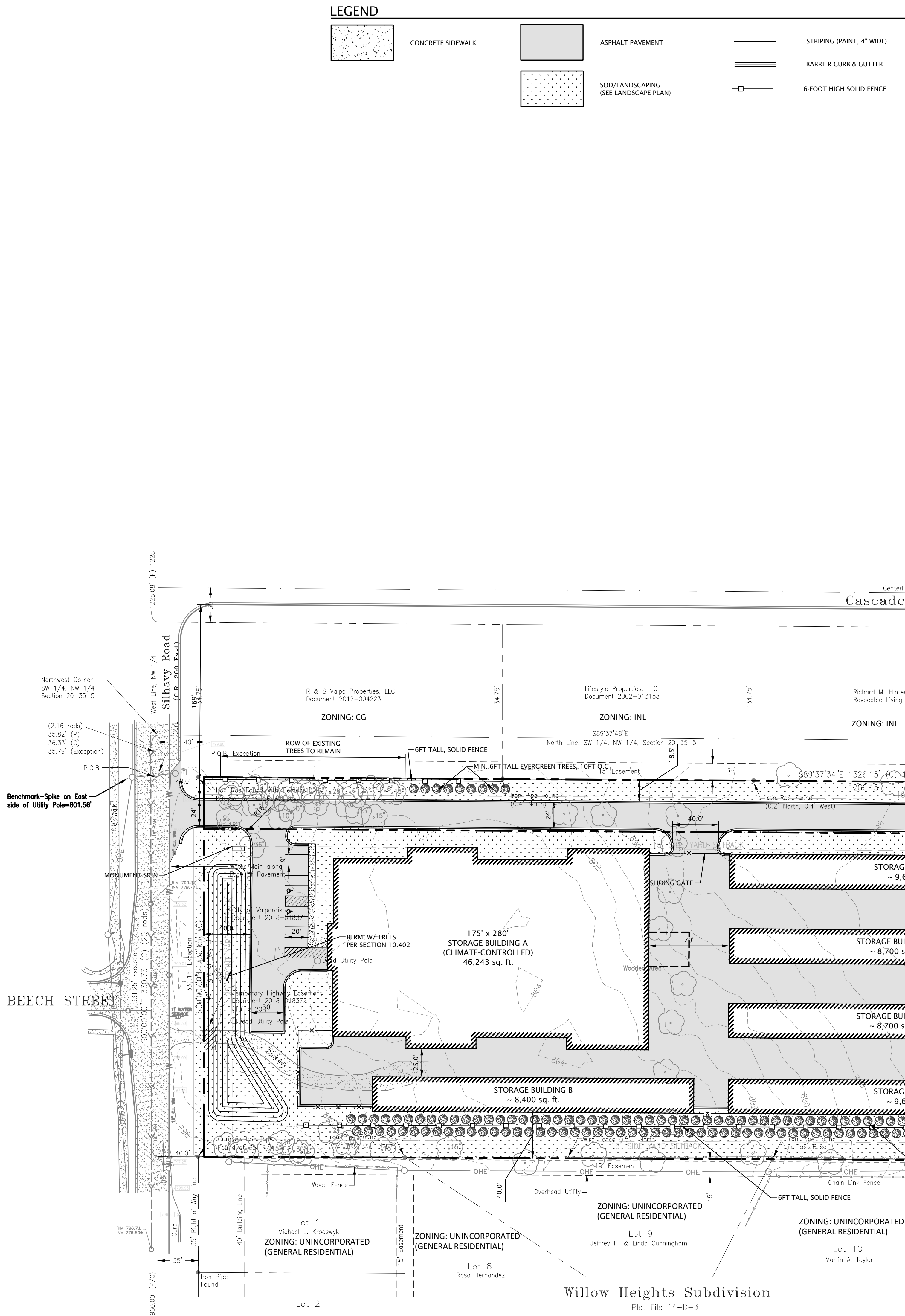
USGS

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National



Exhibit 2

Site Plan



LSR (Landscaping Surface Ratio)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
LSR =	0.37

Gross Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Total Floor Area (sq. ft.)	118,000
GROSS FAR =	0.279

Net Floor-to-Area Ratio (FAR)	
Total Lot Area (sq. ft.)	423,535
Landscaping/Open Space Area (sq. ft.)	157,028
= BUILDABLE AREA	266,507
Total Floor Area (sq. ft.)	118,000
NET FAR =	0.443

9/23/2020 Unified Development Ordinance - Calculators

View UDO Search UDO Archives GIS Maps Quick Tables Quick Links App

Parking and Loading Requirements Site Capacity Non-Residential Site Capacity Bufferyard Standard Inputs Bufferyard Model Inputs

Non-Residential Site Capacity Calculator (See Sec. 4.303 Nonresidential Site Capacity Calculation)

Calculate Clear

Step 1

Zone: INL

Gross Site Area (acres): 9.72

Less Land Within Existing Roads' Ultimate Right-of-way and/or Utility Right-of-Way (acres): 0

Less Land Cut Off From Use by Railroad, Highway, or Water Body (acres): 0

Less All Water Bodies (acres): 0

Less Previously Dedicated Open Space (acres): 0

Equals Base Site Area: 9.72

Area in Acres OSR Protected Land

Step 2

Riparian Buffers: 0.00 0.70 0.00

Floodways: 0.00 1.00 0.00

Floodplain: 0.00 0.20 0.00

Wetlands: 0.00 1.00 0.00

Woodlands: 0.00 0.10 0.00

Slope Slopes more than 25%: 0.00 0.30 0.00

Slope Slopes 15-25%: 2.04 0.10 0.204

Wellhead Protection: 0.00 1.00 0.00

Sum Total of Resource Land (acres): 2.04

Step 3

Protected Resource Land (acres) (= sum of protected land): 0.20

Step 4

Base Site Area (acres): 9.72

Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.279

District Yield (acres) (round to 2 decimal places): 2.71

Step 5

Base Site Area (acres): 9.72

Multiply by Landscape Surface Ratio for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.370

District Open Space (acres): 3.60

Step 6

Base Site Area (acres): 9.72

Subtract District Open Space (Step 6) or Protected Resource Land (Step 4), whichever is greater: 3.60

Equals Buildable Land (acres) (round to 2 decimal places): 6.12

Multiply by Gross FAR for Use and District (from Table 3.301B, Nonresidential and Mixed Use Standards): 0.443

Equals Site Specific Yield (acres): 2.71

Plat File 47-E-1

Lot 2 Magnatrust, LLC ZONING: INL

Lot 3 Magnatrust, LLC ZONING: INL

Lot 4 Magnatrust, LLC ZONING: INL

Lifestyle Properties, LLC Document No. 99-11421 ZONING: BP

State of Indiana

Old Wire Fence

Chain Link Fence

Crimped Iron Pipe Found (0.5'± South of Fence)

South Line of Parcel—Surveyed based on Proportion

MIN. 6FT TALL EVERGREEN TREES, 10FT O.C

6FT TALL, SOLID FENCE

Overhead Utility

Wood Fence

Lot 1 Michael L. Krooswyk ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Lot 8 Rosa Hernandez ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Lot 9 Jeffrey H. & Linda Cunningham ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Lot 10 Martin A. Taylor ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Don J. & Peggy S. Dillabaugh Document 94-00957 ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Don J. & Peggy S. Dillabaugh Document 1999-007292 ZONING: UNINCORPORATED (GENERAL RESIDENTIAL)

Calculate Clear

- NOT FOR CONSTRUCTION

1155 Troutwine Road
Crown Point, IN 46307
P: (219) 662-7710
F: (219) 662-2740
www.dvgteam.com

NOT FOR CONSTRUCTION

Atwater Group
162 W. Grand Avenue, #300
Chicago, Illinois 60654

DATE: REVISIONS AND NOTES:

604 SILHAVY ROAD SITE

Site Plan

0' 25' 50'
SCALE: 1" = 50'

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DESIGN BY RJP DATE 09/17/20

PROJECT NO. 20-1045

EXHIBIT 2



Exhibit 3

Traffic Volume Data



1155 Troutwine Road
Crown Point, IN 46307

Silhavy Road Site
Industrial Park
Valparaiso, IN
AM Peak Period

File Name : 2020 0917 AM Silhavey & Cascade
Site Code : 00000111
Start Date : 9/17/2020
Page No : 1

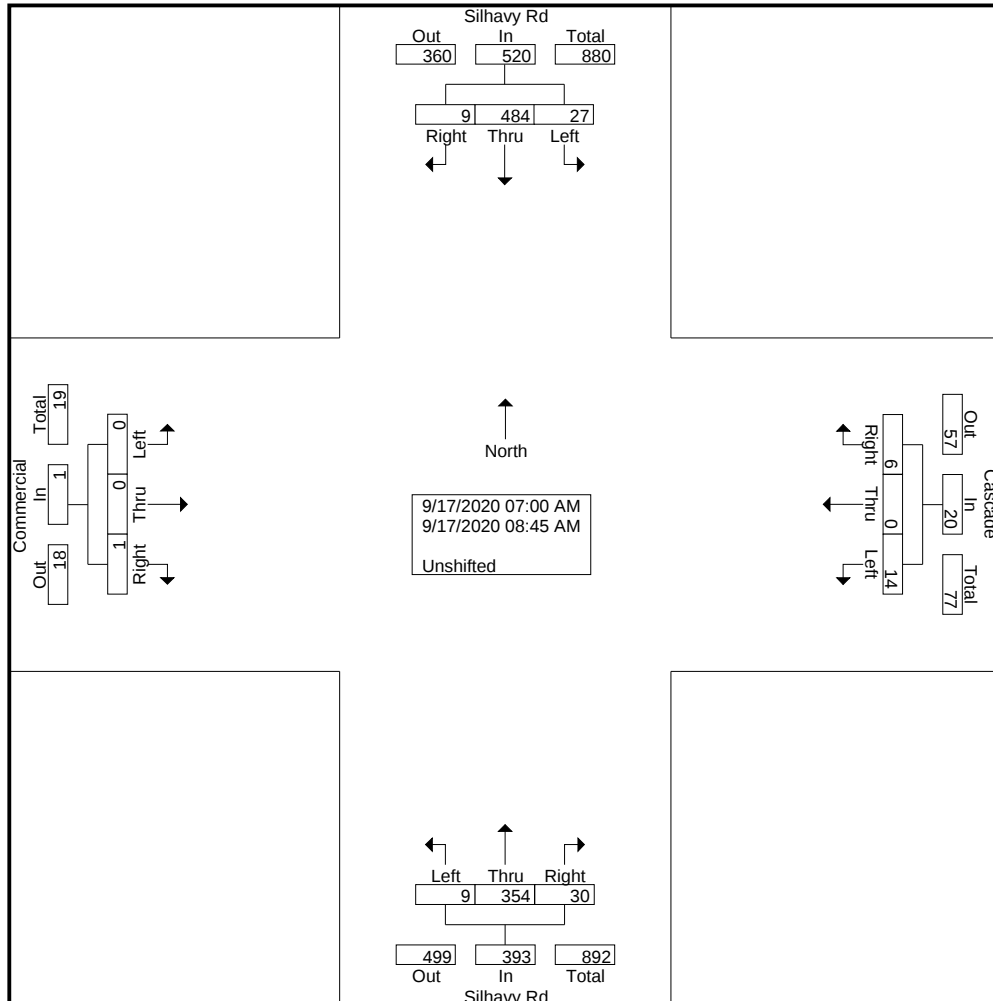
Groups Printed- Unshifted

	Silhavy Rd From North				Cascade From East				Silhavy Rd From South				Commercial From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	1	36	0	37	0	0	0	0	1	40	1	42	0	0	0	0	79
07:15 AM	0	55	1	56	0	0	0	0	4	45	0	49	0	0	0	0	105
07:30 AM	1	56	2	59	1	0	0	1	2	43	1	46	0	0	0	0	106
07:45 AM	0	93	9	102	0	0	0	0	10	44	0	54	0	0	0	0	156
Total	2	240	12	254	1	0	0	1	17	172	2	191	0	0	0	0	446
08:00 AM	1	55	8	64	1	0	2	3	2	56	2	60	0	0	0	0	127
08:15 AM	3	62	5	70	0	0	6	6	3	35	2	40	1	0	0	1	117
08:30 AM	2	58	1	61	4	0	5	9	4	43	1	48	0	0	0	0	118
08:45 AM	1	69	1	71	0	0	1	1	4	48	2	54	0	0	0	0	126
Total	7	244	15	266	5	0	14	19	13	182	7	202	1	0	0	1	488
Grand Total	9	484	27	520	6	0	14	20	30	354	9	393	1	0	0	1	934
Apprch %	1.7	93.1	5.2		30	0	70		7.6	90.1	2.3		100	0	0		
Total %	1	51.8	2.9	55.7	0.6	0	1.5	2.1	3.2	37.9	1	42.1	0.1	0	0	0.1	



1155 Troutwine Road
Crown Point, IN 46307

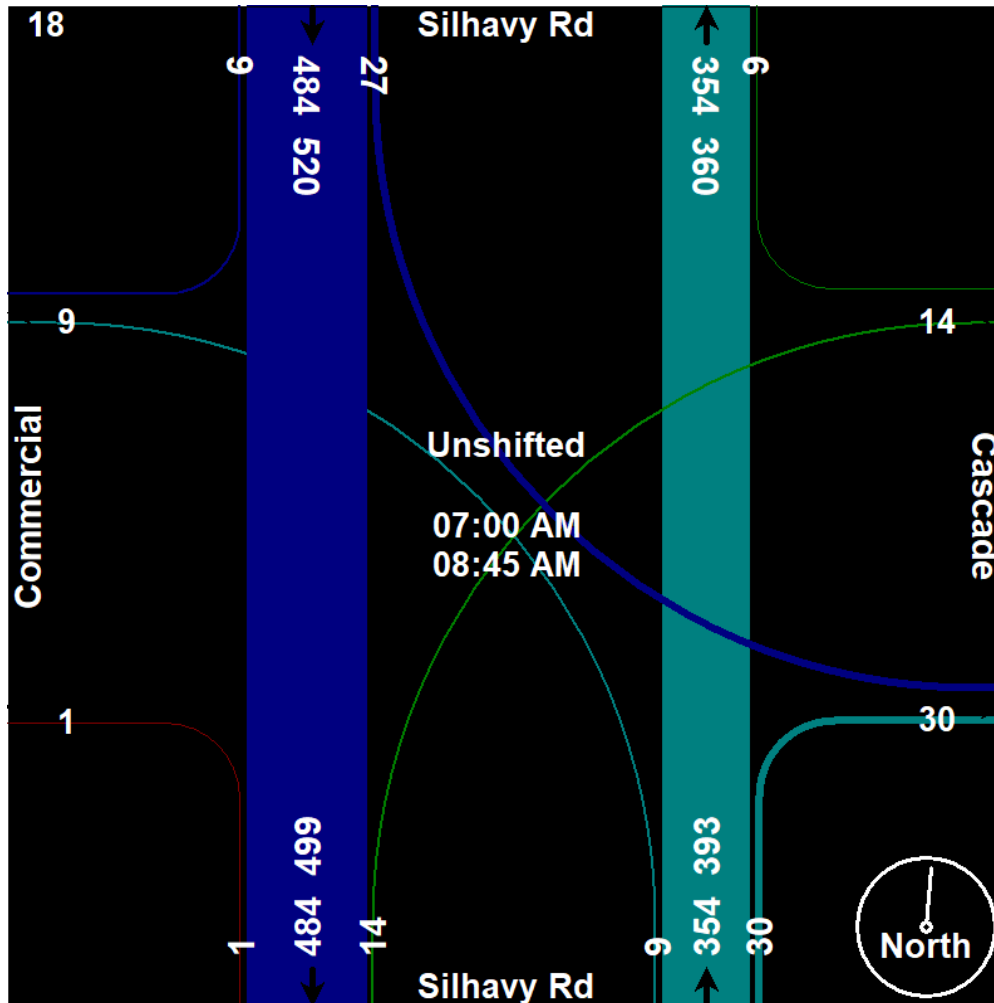
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Site Code : 00000111
Start Date : 9/17/2020
Page No : 2





1155 Troutwine Road
Crown Point, IN 46307

File Name : 2020 0917 AM Silhavey & Cascade
Site Code : 00000111
Start Date : 9/17/2020
Page No : 3





1155 Troutwine Road
Crown Point, IN 46307

Silhavy Road Site
Industrial Park
Valparaiso, IN
PM Peak Period

Groups Printed- Unshifted

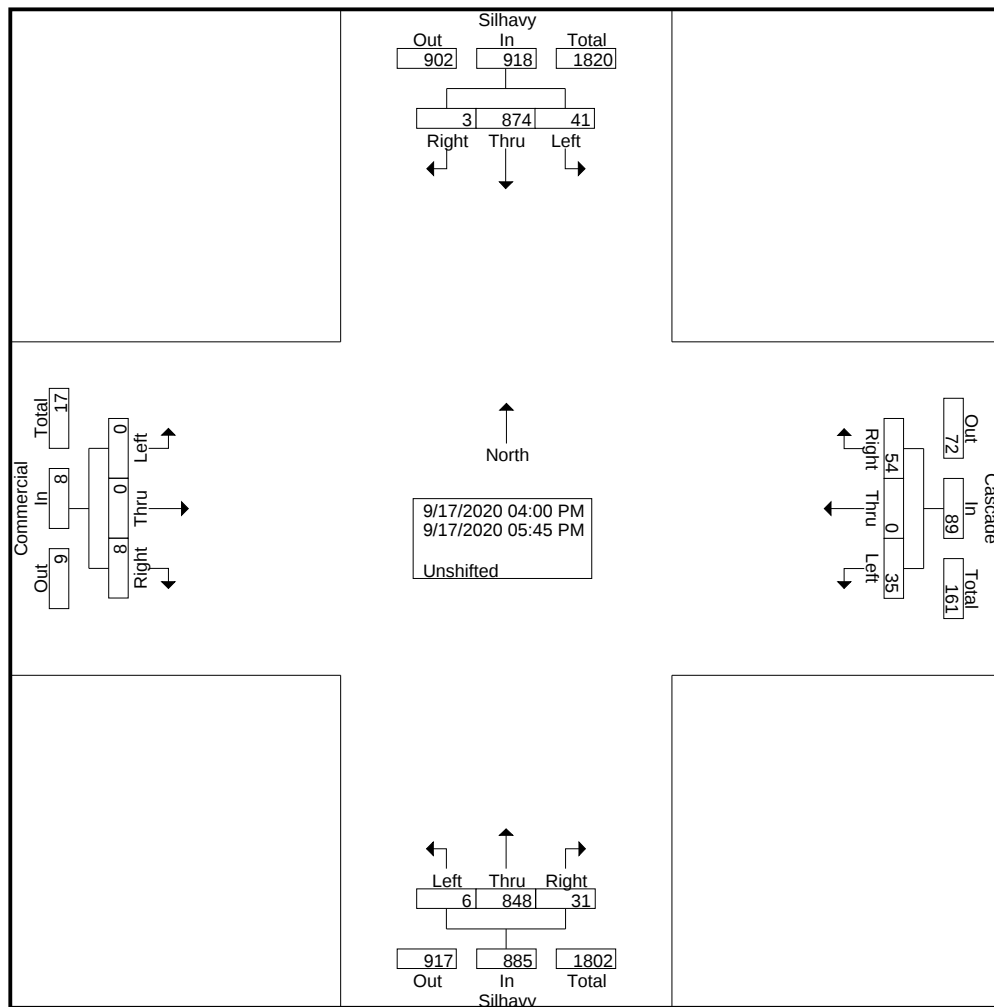
	Silhavy From North				Cascade From East				Silhavy From South				Commercial From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
04:00 PM	1	108	3	112	8	0	6	14	4	104	2	110	4	0	0	4	240
04:15 PM	2	116	4	122	8	0	1	9	5	111	2	118	2	0	0	2	251
04:30 PM	0	96	6	102	2	0	5	7	2	112	1	115	2	0	0	2	226
04:45 PM	0	108	1	109	11	0	5	16	4	110	0	114	0	0	0	0	239
Total	3	428	14	445	29	0	17	46	15	437	5	457	8	0	0	8	956
05:00 PM	0	133	5	138	10	0	6	16	4	121	0	125	0	0	0	0	279
05:15 PM	0	114	4	118	6	0	0	6	3	85	1	89	0	0	0	0	213
05:30 PM	0	100	9	109	2	0	5	7	4	101	0	105	0	0	0	0	221
05:45 PM	0	99	9	108	7	0	7	14	5	104	0	109	0	0	0	0	231
Total	0	446	27	473	25	0	18	43	16	411	1	428	0	0	0	0	944



1155 Troutwine Road
Crown Point, IN 46307

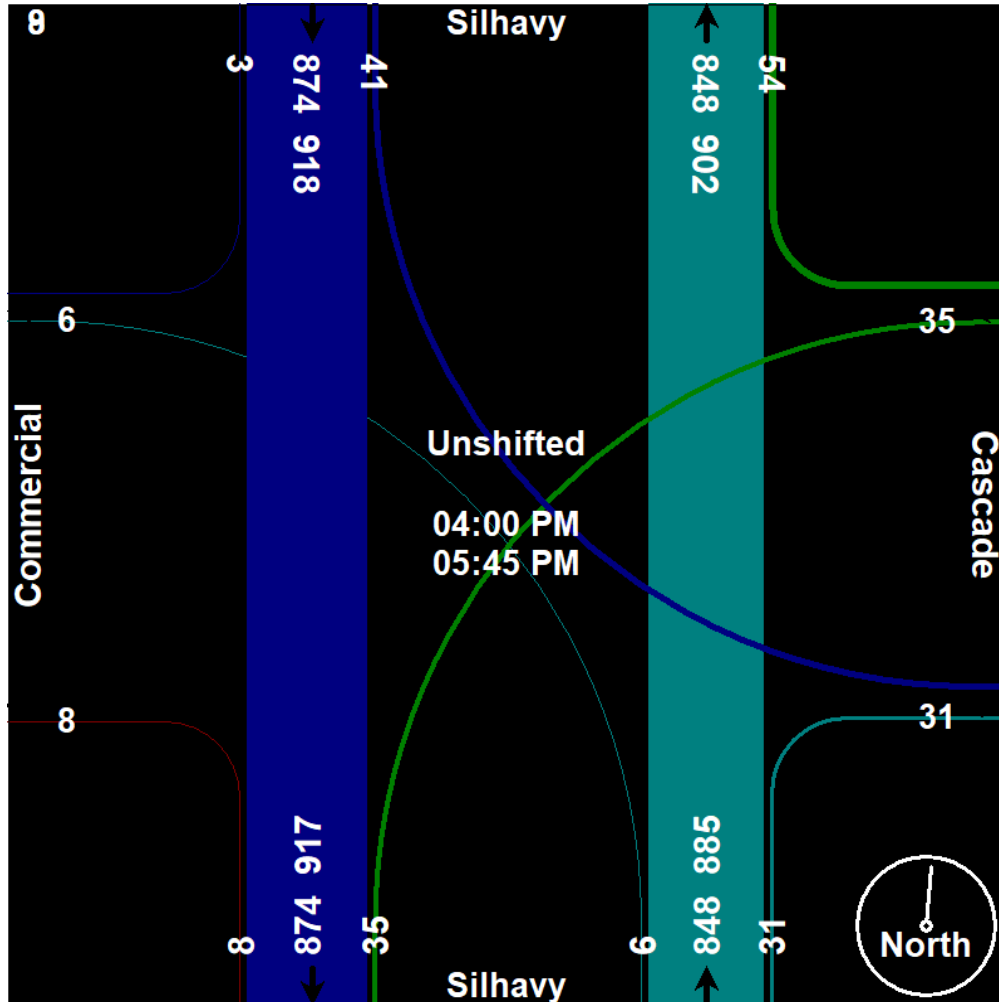
Groups Printed- Unshifted

	Silhavy From North				Cascade From East				Silhavy From South				Commercial From West				
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Grand Total	3	874	41	918	54	0	35	89	31	848	6	885	8	0	0	8	1900
Apprch %	0.3	95.2	4.5		60.7	0	39.3		3.5	95.8	0.7		100	0	0		
Total %	0.2	46	2.2	48.3	2.8	0	1.8	4.7	1.6	44.6	0.3	46.6	0.4	0	0	0.4	





1155 Troutwine Road
Crown Point, IN 46307





1155 Troutwine Road
Crown Point, IN 46307

Silhavy Road Site
Industrial Park
Valparaiso, IN
AM Peak Period

File Name : 2020 0917 AM Silhavey & Beech
Site Code : 00000111
Start Date : 9/17/2020
Page No : 1

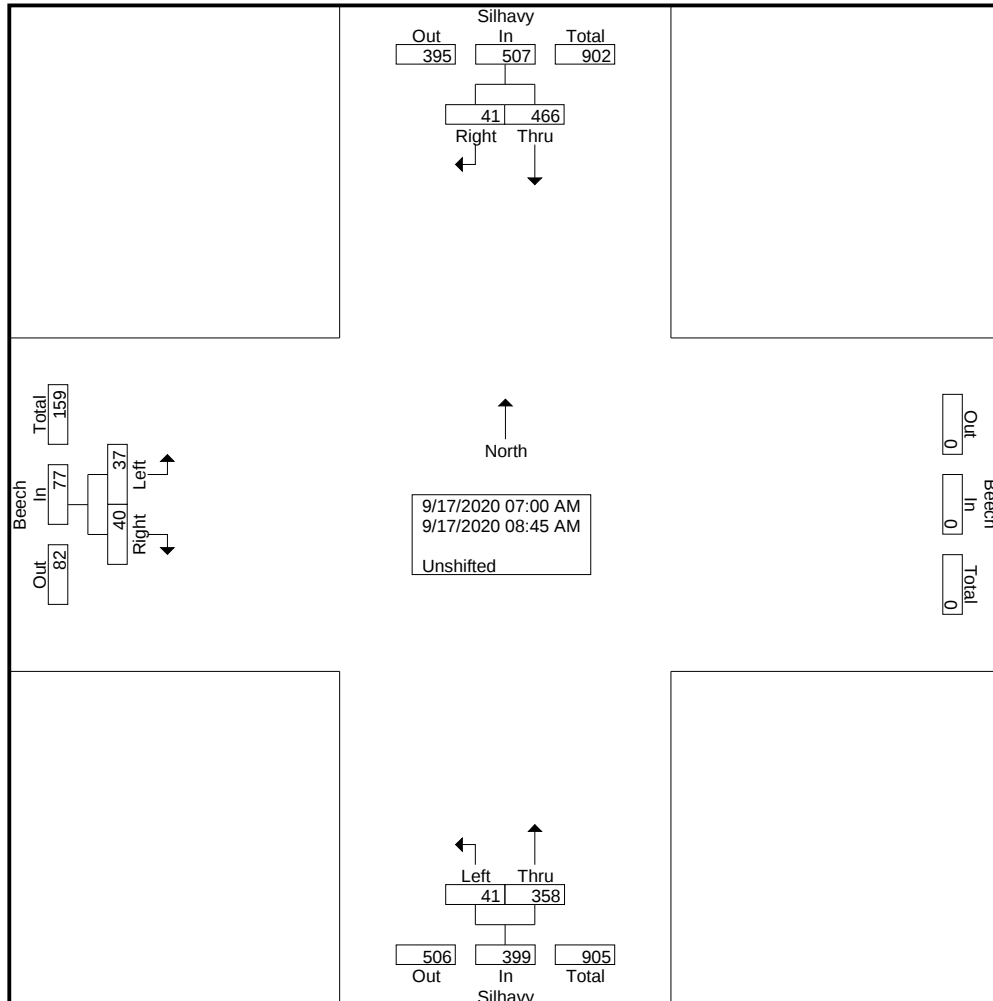
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	Silhavy From North			Silhavy From South			Beech From West			
Start Time	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
07:00 AM	6	27	33	36	8	44	5	5	10	87
07:15 AM	1	53	54	45	3	48	5	6	11	113
07:30 AM	2	59	61	49	4	53	4	1	5	119
07:45 AM	10	72	82	50	6	56	8	4	12	150
Total	19	211	230	180	21	201	22	16	38	469
08:00 AM	4	57	61	48	6	54	3	5	8	123
08:15 AM	9	64	73	41	5	46	4	8	12	131
08:30 AM	4	57	61	44	3	47	7	3	10	118
08:45 AM	5	77	82	45	6	51	4	5	9	142
Total	22	255	277	178	20	198	18	21	39	514
Grand Total	41	466	507	358	41	399	40	37	77	983
Apprch %	8.1	91.9		89.7	10.3		51.9	48.1		
Total %	4.2	47.4	51.6	36.4	4.2	40.6	4.1	3.8	7.8	



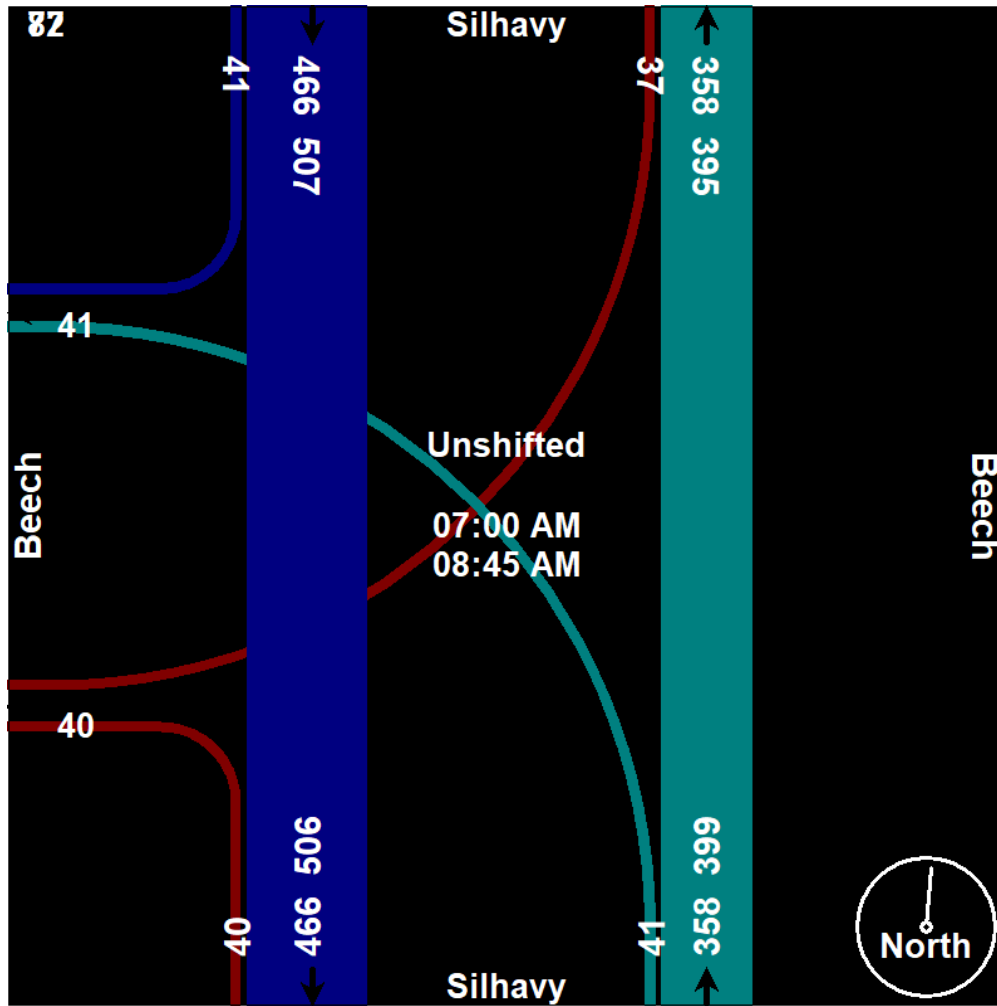
1155 Troutwine Road
Crown Point, IN 46307

File Name : 2020 0917 AM Silhavey & Beech
Site Code : 00000111
Start Date : 9/17/2020
Page No : 2



1155 Troutwine Road
Crown Point, IN 46307

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Page No : 3





1155 Troutwine Road
Crown Point, IN 46307

Silhavy Road Site
Industrial Park
Valparaiso, IN
PM Peak Period

Groups Printed- Unshifted

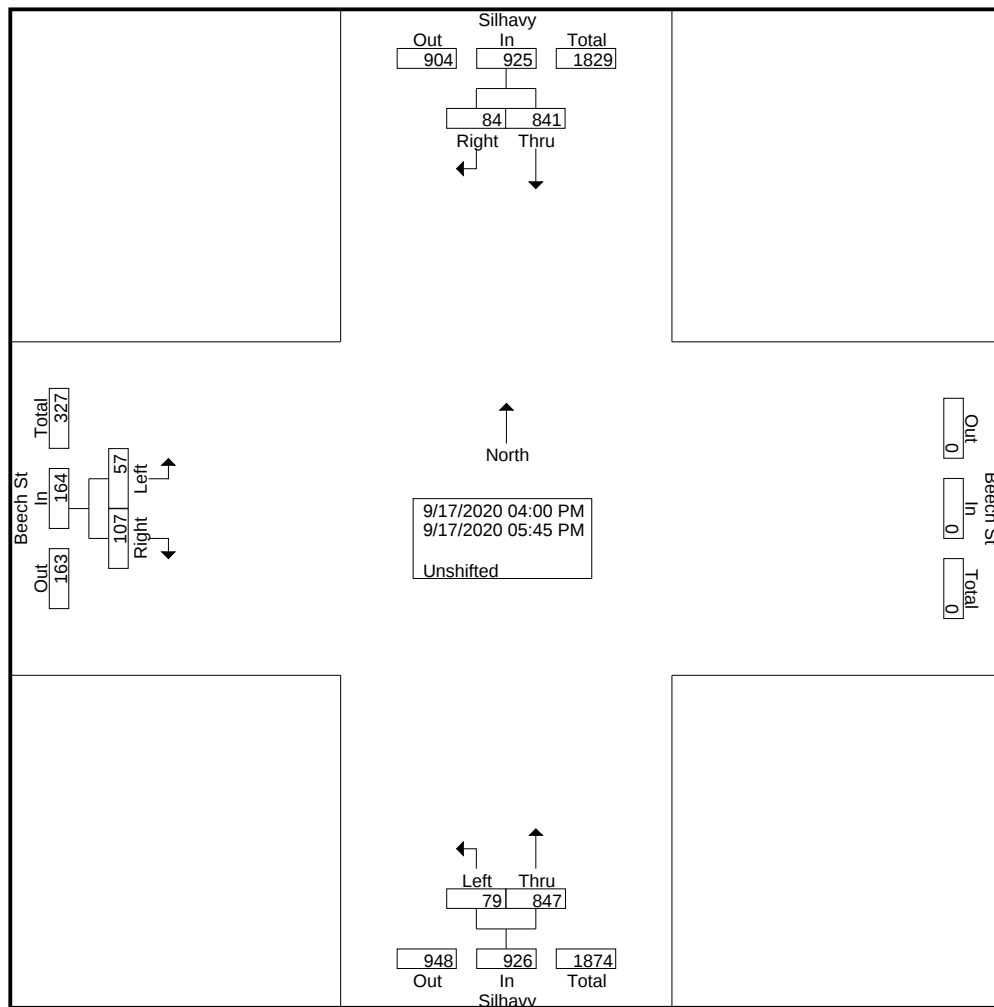
Start Time	Silhavy From North			Silhavy From South			Beech St From West			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
04:00 PM	11	114	125	101	14	115	18	9	27	267
04:15 PM	11	100	111	116	17	133	13	9	22	266
04:30 PM	9	98	107	108	8	116	12	5	17	240
04:45 PM	9	112	121	113	5	118	20	7	27	266
Total	40	424	464	438	44	482	63	30	93	1039
05:00 PM	11	120	131	118	10	128	16	9	25	284
05:15 PM	12	106	118	85	11	96	10	9	19	233
05:30 PM	15	95	110	103	9	112	15	4	19	241
05:45 PM	6	96	102	103	5	108	3	5	8	218
Total	44	417	461	409	35	444	44	27	71	976



1155 Troutwine Road
Crown Point, IN 46307

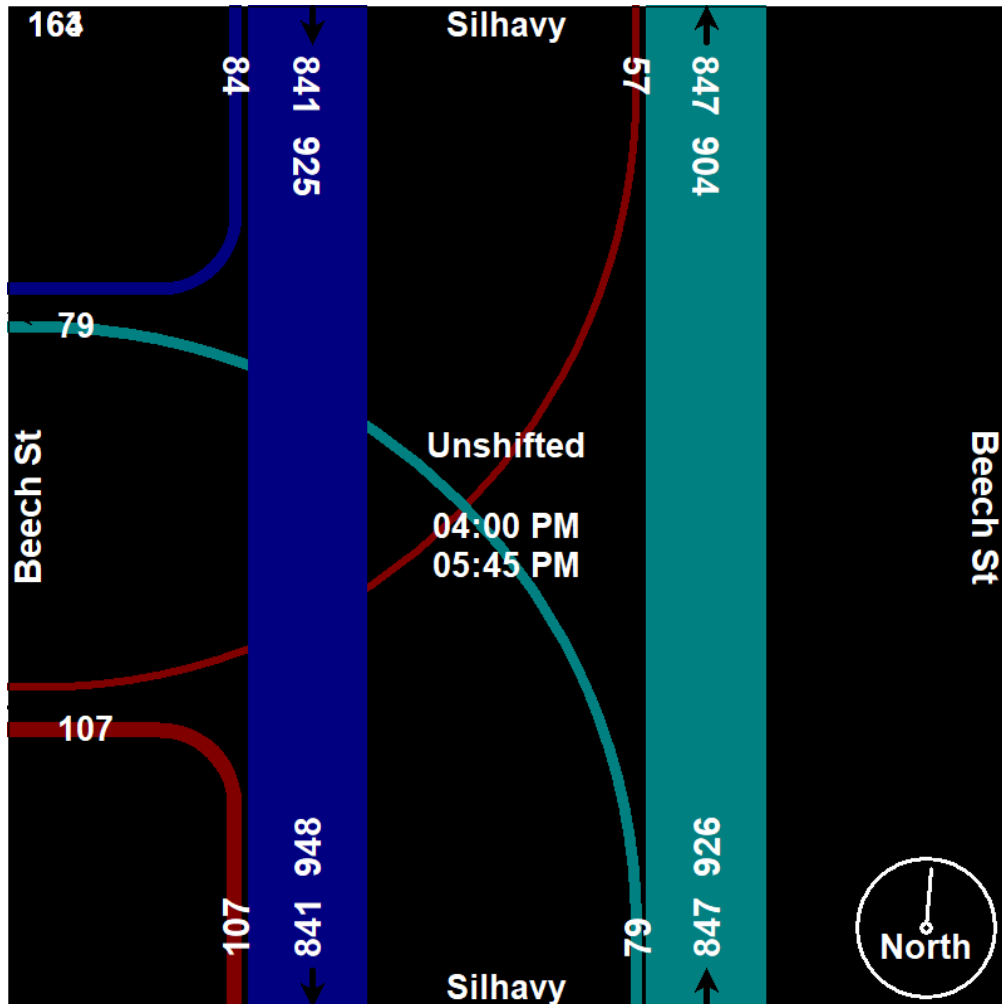
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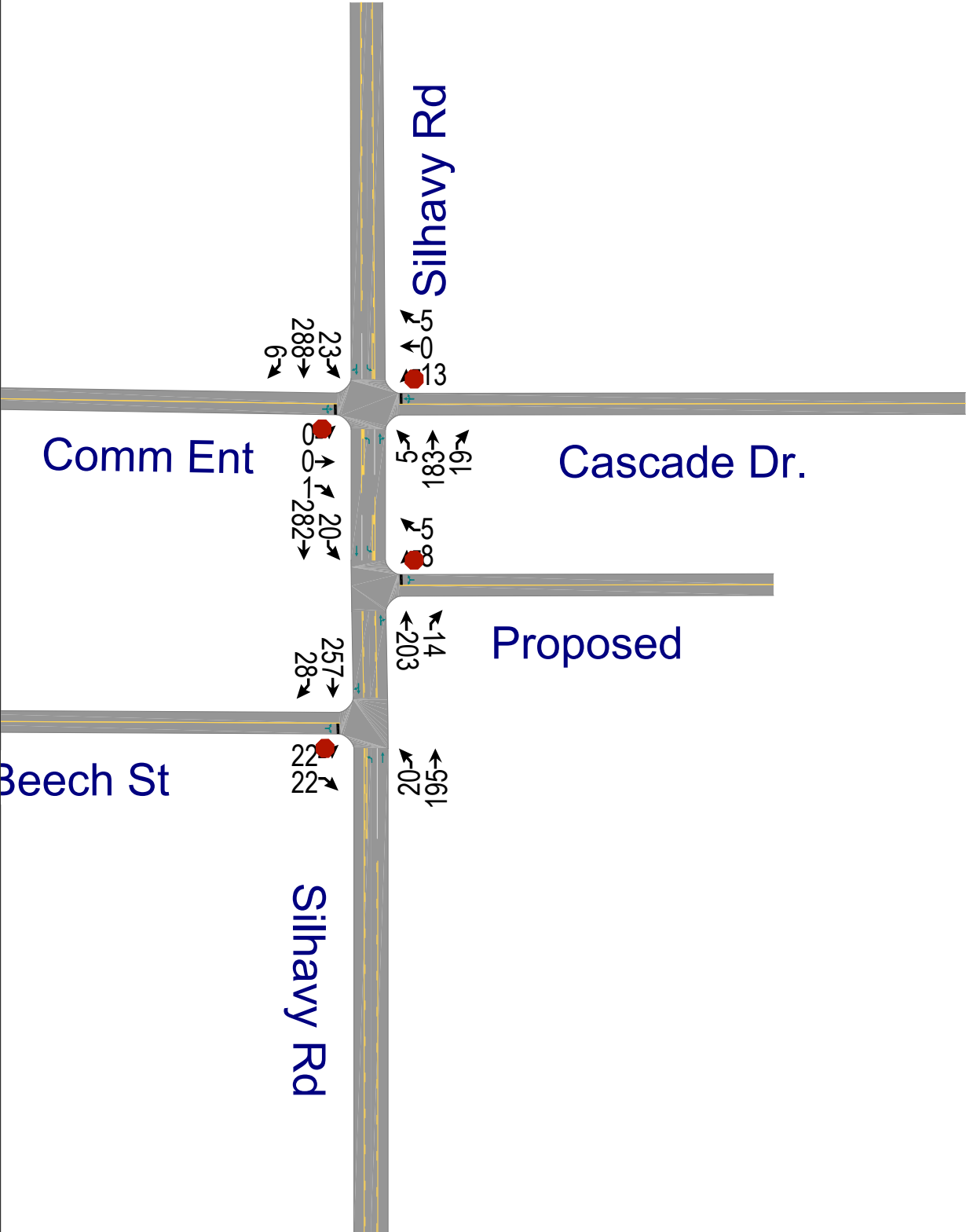
	Silhavy From North			Silhavy From South			Beech St From West			
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Int. Total
Grand Total	84	841	925	847	79	926	107	57	164	2015
Apprch %	9.1	90.9		91.5	8.5		65.2	34.8		
Total %	4.2	41.7	45.9	42	3.9	46	5.3	2.8	8.1	

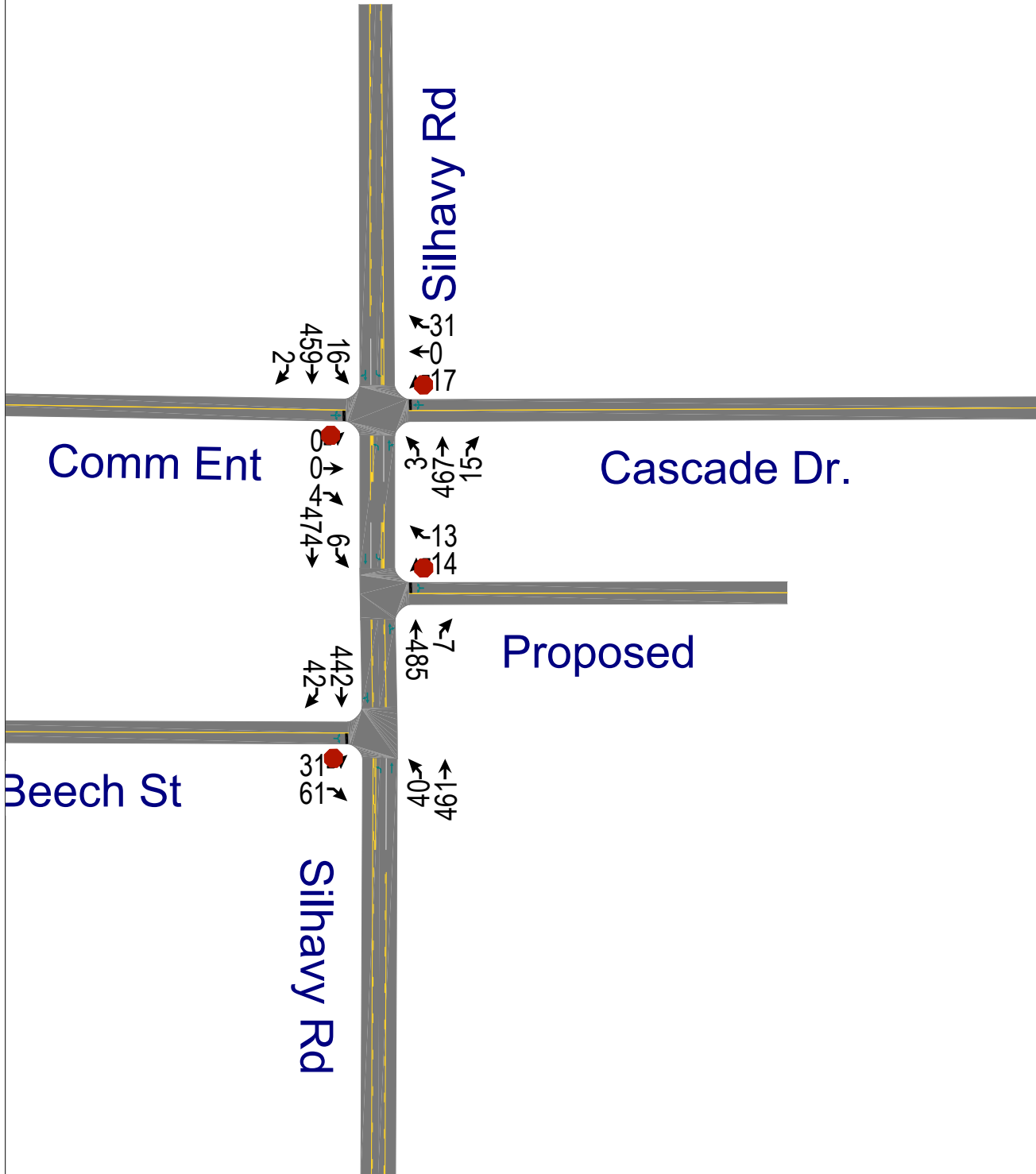




1155 Troutwine Road
Crown Point, IN 46307







HCM 6th TWSC
3: Comm Ent/Cascade Dr. & Silhavy Rd

09/24/2020

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	1	13	0	5	5	178	19	23	268	6
Future Vol, veh/h	0	0	1	13	0	5	5	178	19	23	268	6
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	25	54	92	31	63	80	48	64	66	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	24	0	16	8	223	40	36	406	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	751	763	412	745	749	243	418	0	0	263	0	0
Stage 1	484	484	-	259	259	-	-	-	-	-	-	-
Stage 2	267	279	-	486	490	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	327	334	640	330	341	796	1141	-	-	1301	-	-
Stage 1	564	552	-	746	694	-	-	-	-	-	-	-
Stage 2	738	680	-	563	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	310	319	640	317	326	796	1141	-	-	1301	-	-
Mov Cap-2 Maneuver	310	319	-	317	326	-	-	-	-	-	-	-
Stage 1	559	532	-	740	688	-	-	-	-	-	-	-
Stage 2	717	675	-	539	529	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.7		14.5		0.2		0.6					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1141	-	-	640	418	1301	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.006	0.096	0.028	-	-				
HCM Control Delay (s)	8.2	0	-	10.7	14.5	7.8	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-				

HCM 6th TWSC
3: Comm Ent/Cascade Dr. & Silhavy Rd

09/24/2020

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	4	17	0	31	3	454	15	16	453	2
Future Vol, veh/h	0	0	4	17	0	31	3	454	15	16	453	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	50	71	92	71	38	94	75	67	85	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	24	0	44	8	483	20	24	533	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1116	1104	537	1098	1098	493	541	0	0	503	0	0
Stage 1	585	585	-	509	509	-	-	-	-	-	-	-
Stage 2	531	519	-	589	589	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	185	211	544	190	213	576	1028	-	-	1061	-	-
Stage 1	497	498	-	547	538	-	-	-	-	-	-	-
Stage 2	532	533	-	494	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	165	202	544	181	204	576	1028	-	-	1061	-	-
Mov Cap-2 Maneuver	165	202	-	181	204	-	-	-	-	-	-	-
Stage 1	492	482	-	541	532	-	-	-	-	-	-	-
Stage 2	486	527	-	471	479	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.7		19		0.1		0.4					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1028	-	-	544	325	1061	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.015	0.208	0.023	-	-				
HCM Control Delay (s)	8.5	0	-	11.7	19	8.5	0	-				
HCM Lane LOS	A	A	-	B	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0.1	-	-				

HCM 6th TWSC
7: Silhavy Rd & Beech St

09/24/2020

Intersection

Int Delay, s/veh 1.6

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 20 22 20 183 250 27

Future Vol, veh/h 20 22 20 183 250 27

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 63 69 83 92 87 68

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 32 32 24 199 287 40

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 554 307 327 0 - 0

Stage 1 307 - - - - -

Stage 2 247 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 493 733 1233 - - -

Stage 1 746 - - - - -

Stage 2 794 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 482 733 1233 - - -

Mov Cap-2 Maneuver 482 - - - - -

Stage 1 730 - - - - -

Stage 2 794 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.9 0.9 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1233 - 582 - -

HCM Lane V/C Ratio 0.02 - 0.109 - -

HCM Control Delay (s) 8 0 11.9 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0.1 - 0.4 - -

HCM 6th TWSC
7: Silhavy Rd & Beech St

09/24/2020

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	61	40	455	430	40
Future Vol, veh/h	30	61	40	455	430	40
Conflicting Peds, #/hr	0	0	0	0	0	30
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	76	59	96	90	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	80	68	474	478	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1140	530	552
Stage 1	530	-	-
Stage 2	610	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	222	549	1018
Stage 1	590	-	-
Stage 2	542	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	190	533	989
Mov Cap-2 Maneuver	190	-	-
Stage 1	520	-	-
Stage 2	526	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.9	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	989	-	342	-	-
HCM Lane V/C Ratio	0.069	-	0.34	-	-
HCM Control Delay (s)	8.9	0	20.9	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-	-

HCM 6th TWSC
3: Comm Ent/Cascade Dr. & Silhavy Rd

09/24/2020

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↖		↙	↖	
Traffic Vol, veh/h	0	0	1	13	0	5	5	183	19	23	288	6
Future Vol, veh/h	0	0	1	13	0	5	5	183	19	23	288	6
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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	25	54	92	31	63	80	48	64	66	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	24	0	16	8	229	40	36	436	12
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	787	799	442	781	785	249	448	0	0	269	0	0
Stage 1	514	514	-	265	265	-	-	-	-	-	-	-
Stage 2	273	285	-	516	520	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	309	319	615	312	325	790	1112	-	-	1295	-	-
Stage 1	543	535	-	740	689	-	-	-	-	-	-	-
Stage 2	733	676	-	542	532	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	295	308	615	302	314	790	1112	-	-	1295	-	-
Mov Cap-2 Maneuver	295	308	-	302	314	-	-	-	-	-	-	-
Stage 1	539	520	-	735	684	-	-	-	-	-	-	-
Stage 2	713	671	-	524	517	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.9		14.9		0.2		0.6					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1112	-	-	615	402	1295	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.007	0.1	0.028	-	-				
HCM Control Delay (s)	8.3	-	-	10.9	14.9	7.9	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-				

HCM 6th TWSC
3: Comm Ent/Cascade Dr. & Silhavy Rd

09/24/2020

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	4	17	0	31	3	467	15	16	459	2
Future Vol, veh/h	0	0	4	17	0	31	3	467	15	16	459	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	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	50	71	92	71	38	94	75	67	85	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	24	0	44	8	497	20	24	540	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1137	1125	544	1119	1119	507	548	0	0	517	0	0
Stage 1	592	592	-	523	523	-	-	-	-	-	-	-
Stage 2	545	533	-	596	596	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	179	205	539	184	207	566	1021	-	-	1049	-	-
Stage 1	493	494	-	537	530	-	-	-	-	-	-	-
Stage 2	523	525	-	490	492	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	161	199	539	177	201	566	1021	-	-	1049	-	-
Mov Cap-2 Maneuver	161	199	-	177	201	-	-	-	-	-	-	-
Stage 1	489	483	-	533	526	-	-	-	-	-	-	-
Stage 2	479	521	-	472	481	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.8		19.4		0.1		0.4					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1021	-	-	539	318	1049	-	-				
HCM Lane V/C Ratio	0.008	-	-	0.015	0.213	0.023	-	-				
HCM Control Delay (s)	8.6	-	-	11.8	19.4	8.5	-	-				
HCM Lane LOS	A	-	-	B	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0.1	-	-				

HCM 6th TWSC
7: Silhavy Rd & Beech St

09/24/2020

Intersection

Int Delay, s/veh 1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	22	20	195	257	28
Future Vol, veh/h	22	22	20	195	257	28
Conflicting Peds, #/hr	0	0	0	0	0	30
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	69	83	92	87	68
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	32	24	212	295	41

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	606	346	366
Stage 1	346	-	-
Stage 2	260	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	460	697	1193
Stage 1	716	-	-
Stage 2	783	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	425	677	1159
Mov Cap-2 Maneuver	520	-	-
Stage 1	681	-	-
Stage 2	760	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1159	-	585	-	-
HCM Lane V/C Ratio	0.021	-	0.114	-	-
HCM Control Delay (s)	8.2	-	11.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

HCM 6th TWSC
7: Silhavy Rd & Beech St

09/24/2020

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	61	40	461	442	42
Future Vol, veh/h	31	61	40	461	442	42
Conflicting Peds, #/hr	0	0	0	0	0	30
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	76	59	96	90	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	80	68	480	491	46

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1160	544	567
Stage 1	544	-	-
Stage 2	616	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	216	539	1005
Stage 1	582	-	-
Stage 2	539	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	189	524	976
Mov Cap-2 Maneuver	326	-	-
Stage 1	526	-	-
Stage 2	523	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	976	-	439	-	-
HCM Lane V/C Ratio	0.069	-	0.268	-	-
HCM Control Delay (s)	9	-	16.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	5	203	14	20	282
Future Vol, veh/h	8	5	203	14	20	282
Conflicting Peds, #/hr	0	0	0	0	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
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	9	5	221	15	22	307
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	586	235	0	0	242	0
Stage 1	235	-	-	-	-	-
Stage 2	351	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	473	804	-	-	1324	-
Stage 1	804	-	-	-	-	-
Stage 2	713	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	462	799	-	-	1316	-
Mov Cap-2 Maneuver	549	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.9	0		0.5		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	624	1316	-	
HCM Lane V/C Ratio	-	-	0.023	0.017	-	
HCM Control Delay (s)	-	-	10.9	7.8	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Intersection

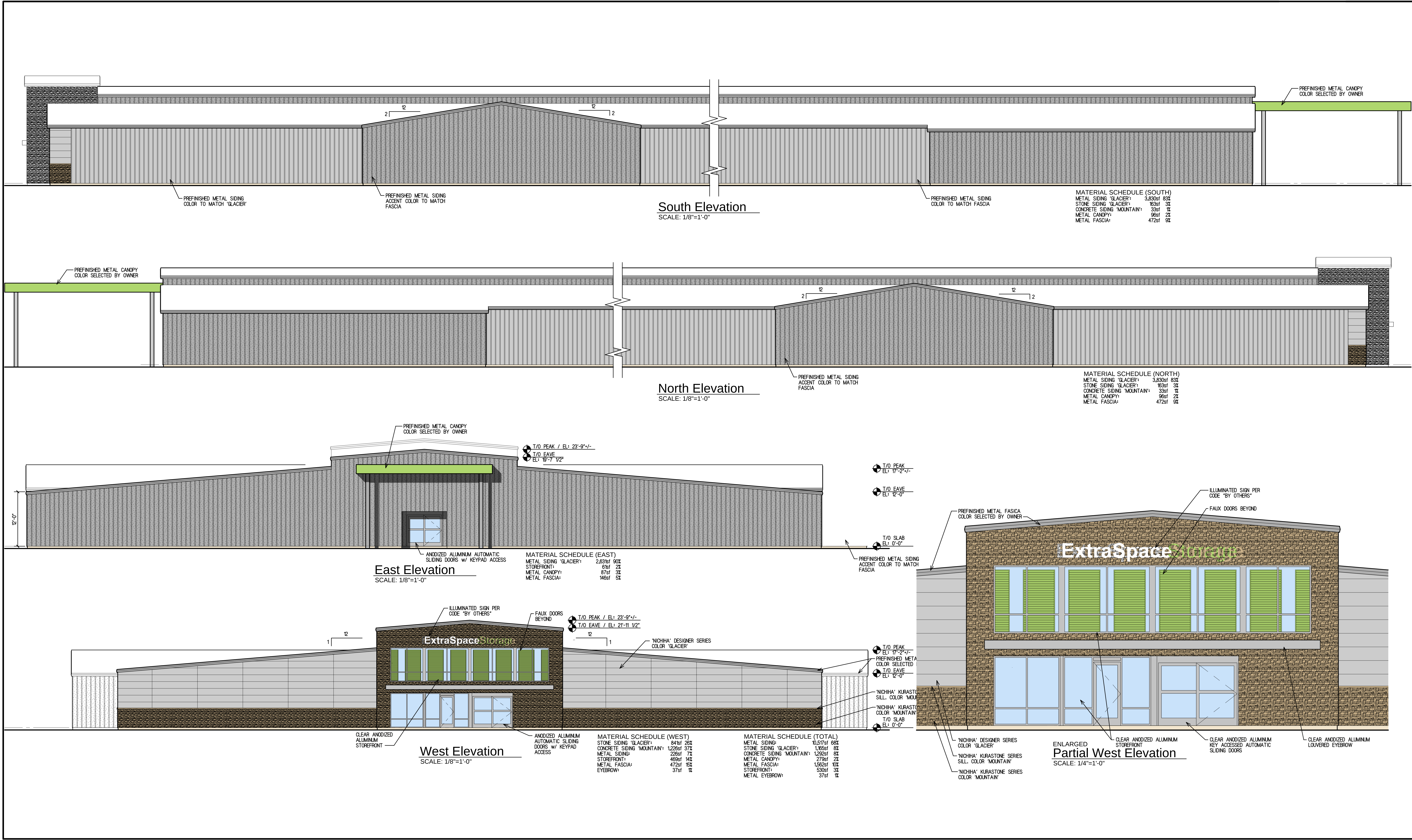
Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	13	485	7	6	474
Future Vol, veh/h	14	13	485	7	6	474
Conflicting Peds, #/hr	0	0	0	0	6	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
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	15	14	527	8	7	515

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1066	537	0
Stage 1	537	-	-
Stage 2	529	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	246	544	-
Stage 1	586	-	-
Stage 2	591	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	243	541	-
Mov Cap-2 Maneuver	378	-	-
Stage 1	582	-	-
Stage 2	587	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	442	1022
HCM Lane V/C Ratio	-	-	0.066	0.006
HCM Control Delay (s)	-	-	13.7	8.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0



DATE
MARCH 13, 2020

REVISIONS 03/13/2020
07/02/20
07/20/20
09/16/20
09/17/20

PROPOSED SITE DEVELOPMENT
Self-Storage & Light Industrial
604 SILHAVY ROAD
VALPARAISO, INDIANA 46383

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THESE PLANS TO BE CERTIFIED THAT THESE PLANS HAVE BEEN PREPARED UNDER THE PERSONAL SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF CONFORM TO LAWS AND ORDINANCES OF THE CITY OF CHICAGO, ILLINOIS.

SHEET NAME
PRELIMINARY BUILDING 'A' EXTERIOR ELEVATIONS

SHEET
SK2
OF 3
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PROJECT NO.
2009