VILLAGE OF DOWNERS GROVE
Report for the Village

9/19/2017

SUBJECT:	SUBMITTED BY:
42-76 Ogden Avenue - Plat of Subdivision and Special Use with a Variation for a drive-through	Stan Popovich, AICP Director of Community Development

SYNOPSIS

The petitioner is requesting approval of a Final Plat of Subdivision to subdivide the existing Downers Grove Market property into three lots and a Special Use with a variation to permit a drive-through for a multi-tenant commercial outlot building.

STRATEGIC PLAN ALIGNMENT

The goals for 2015-2017 include *Strong and Diverse Local Economy*.

FISCAL IMPACT

N/A.

UPDATE & RECOMMENDATION

This item was discussed at the September 12, 2017 Village Council meeting. At the meeting a question regarding the ability of vehicles to turn eastbound onto Ogden Avenue from Williams Street was asked.

The traffic study notes that the intersection operates at an acceptable Level of Service except for the eastbound turning movement onto Ogden Avenue from Williams Street during the evening peak hour. This is expected and is not uncommon when minor roads such as Williams Street intersects with major arterials such as Ogden Avenue without the presence of a light. The report notes that under future conditions, there will be minimal increases in delay but the levels of service will remain the same. Staff concurs with the findings in the report and notes that based on the high volume of traffic on Ogden Avenue, the only way to provide a higher level of service eastbound from Williams Street would be add signals on Ogden Avenue to create larger gaps.

Staff recommends approval at the September 19, 2017 Village Council meeting.

BACKGROUND

Property Information & Zoning Request

The petitioner is proposing to construct a new 3,800-square-foot two tenant, commercial outlot building on a 0.92 acre site located at the northwest corner of Ogden Avenue and Williams Street. Starbucks will occupy the western 2,100-square-foot space with a drive-through and will relocate from its existing tenant space in the building immediately west of this proposed building, where it currently lacks a drive-through. The eastern 1,700-square-foot space is planned to be a fast casual restaurant.

The drive-through lane will run along the rear (north) and side (west) of the proposed building. Vehicles will enter northeast of the building and exit at the southwest corner. The parking for the entire shopping center is shared amongst all buildings and tenants, with 52 spaces (three of which are handicap accessible) are located on the proposed lot in the immediate vicinity of the building.

A new Williams Street access point that aligns with the existing east-to-west drive-aisle is proposed. The curb-cut and raised median is oriented in a way that allows north- and south-bound traffic on Williams to enter the development, but cars may only exit going southbound onto Williams.

As part of the project, the petitioner will create an outlot for the building. This lot will be created from the existing main Parcel 1/Lot 1 that contains the main building and much of the parking lot.

Compliance with the Comprehensive Plan

The property is designated as Corridor Commercial in the Comprehensive Plan. Corridor commercial uses include a range of retail, service, office and business activities. These uses serve a dual role by providing for the daily needs of the local residents while having a regional draw. To stay competitive, the Plan calls for reinvestment of the regional commercial areas to retain current businesses and attract new restaurants. The proposed development also achieves the following:

- Expands an existing shopping center and redevelops an under-used parking area
- Improves connectivity by installing a sidewalk to Ogden Avenue and Williams Street that leads to the primary entrance of the building
- Provides an attractive image with enhanced landscaping and screens residential areas to the east

The proposed uses and the proposed plan are consistent with the Comprehensive Plan.

Compliance with the Zoning Ordinance

The property is zoned B-3, General Services and Highway Business. The proposed coffee shop restaurant with a drive-through use is an allowable Special Use in the B-3 zoning district per Section 5.010 of the Zoning Ordinance. All bulk requirements are met except the drive-through lane setback. A variation from 25 feet to 3.38 feet is proposed. This setback is taken from the property line that abuts the shopping center's internal drive-aisle and parking area.

In addition to the bulk standards, the proposal complies with the following:

- The petitioner is proposing a total of eight stacking spaces in the drive-through lane.
- The parking lot lighting will meet the Village's lighting requirements.
- New landscaping will be installed around the street perimeter of the parking lot, on the internal landscape islands and around the drive-through lane.
- With the addition of the new building, 439 spaces are required for the entire shopping center and 513 are proposed.

Compliance with the Subdivision Ordinance

The applicant is proposing to subdivide one existing lot into three lots and will meet all requirements of the Subdivision Ordinance. There are no school and park donations required with this application. The proposed development, resulting lots and proposed improvements comply with the Subdivision Ordinance.

Public Improvements

The proposal includes a total of 1,404 square feet of new landscaped green space on the site, thereby reducing the impervious area and not requiring on-site stormwater detention. Pedestrian connections leading from the

building will connect to the existing sidewalks. Additionally, a new water service will be provided for the proposed building to accommodate fire and domestic water service.

Public Comment
There was no public comment.

The Plan Commission found that the proposal is an appropriate use in the B-3 district, is compatible with the Comprehensive Plan, complies with the Subdivision lot dimensions in Section 20.301 and meets all standards for approval of a Special Use per Section 12.050 of the Zoning Ordinance, and a Variation per Section 28.12.090 of the Zoning Ordinance.

ATTACHMENTS

Ordinance
Aerial Map
Staff Report with attachments dated August 7, 2017
Draft Minutes of the Plan Commission Hearing dated August 7, 2017

VILLAGE OF DOWNERS GROVE

COUNCIL ACTION SUMMARY

INITIATED: Applicant (Name) **DATE:** September 19, 2017

RECOMMENDATION FROM: _____ (Board or Department) **FILE REF:** 17-PLC-0022

NATURE OF ACTION:

___ Ordinance

_X_ Resolution

___ Motion

___ Other

STEPS NEEDED TO IMPLEMENT ACTION:

Motion to Adopt "A RESOLUTION APPROVING THE FINAL PLAT OF SUBDIVISION FOR 42-76 OGDEN AVENUE", as presented.

SUMMARY OF ITEM:

Adoption of the attached resolution shall approve the final plat of subdivision for the property located at 42-76 Ogden Avenue.

RECORD OF ACTION TAKEN:

_____

_____

_____

1\wp\cas.17\FP-42-76-Ogden-17-PLC-0022

42-76 Ogden
Final Plat of Subdivision
17-PLC-0022

RESOLUTION _____

A RESOLUTION APPROVING THE FINAL PLAT OF SUBDIVISION FOR 42-76 OGDEN AVENUE

WHEREAS, application has been made pursuant to the provisions of Chapter 20 of the Downers Grove Municipal Code for the approval of a Final Plat of Subdivision to subdivide one lot into three lots for the property located on the northwest corner of Ogden Avenue and Williams Street, commonly known as 42-76 Ogden Avenue, Downers Grove, Illinois, legally described as follows:

PARCEL 1:
LOT 1 IN JAMES A. MC CORMICK SUBDIVISION, BEING A SUBDIV1SION OF ALL THAT PART OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 4, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE SOUTH PROPERTY LINE OF 41ST STREET AND NORTH OF THE NORTH PROPERTY LINE OF OGDEN AVENUE (EXCEPT THE EAST 40 FEET AND THE WEST 33 FEET THEREOF), ACCORDING TO THE PLAT THEREOF RECORDED MAY 9, 1969 AS DOCUMENT R69-20009, IN DUPAGE COUNTY, ILLINOIS.

PARCEL 2:
A NON-EXCLUSIVE EASEMENT FOR THE BENEFIT OF PARCEL 1 AS GRANTED IN DEED IN TR UST DATED MAY 5, 1969 AND RECORDED MAY 13, 1969 AS DOCUMENT R69-20706, FROM JAMES J. NACK TO AMERICAN NATIONAL BANK AND TRUST COMPANY OF CHICAGO, A NATIONAL BANKING ASSOCIATION, AS TRUSTEE UNDER TRUST NUMBER 26980 AND AS RESERVED IN DEED IN TRUST FROM JAMES J. NACK TO LA SALLE NATIONAL BANK, A NATIONAL BANKING ASSOCIATION, AS TRUSTEE UNDER TRUST NUMBER 37612 DATED MAY 5, 1969 AND RECORDED MAY 13, 1969 AS DOCUMENT R69-20702 AND AMENDED AND ABROGATED BY ABROGATION OF CONDITION IN DEED MADE BY JAMES J. NACK TO LA SALLE NATIONAL BANK, A NATIONAL BANKING ASSOCIATION, AS TRUSTEE UNDER TRUST NUMBER 37612 DATED OCTOBER 2, 1973 AND RECORDED DECEMBER 28, 1973 AS DOCUMENT R73-77260, FOR PEDESTRIAN AND VEHICULAR ACCESS AND ROADWAY PURPOSES OVER THE EASTERLY 34 FEET OF LOT 2 (EXCEPT ALONG THE EAST WALL OF THE COMMERCIAL BUILDING CONSTRUCTED ON LOT 2, SAID EAST WALL BEING 33 FEET SOUTH OF THE NORTH LOT LINE OF LOT 2 AND EXTENDING FOR A DISTANCE OF 175 FEET, PLUS A 10 FOOT SIDEWALK, THE EASEMENT SHALL BE THE EASTERLY 30 FEET OF LOT 2) IN JAMES A. MCCORMICK SUBDIVISION, BEING A SUBDIVISION OF ALL THAT PART OF THE EAST 1/2 OF THE NORTHWEST 1/4 OF SECTION 4, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, LYING SOUTH OF THE SOUTH PROPERTY LINE OF 41ST STREET AND NORTH OF THE NORTH PROPERTY LINE OF OGDEN AVENUE (EXCEPT THE EAST 40 FEET AND THE WEST 33 FEET THEREOF), ACCORDING TO THE PLAT THEREOF RECORDED MAY 9, 1969 AS DOCUMENT R69-20009, IN DUPAGE COUNTY, ILLINOIS.

Commonly known as: 42-76 Ogden Avenue, Downers Grove, IL 60515
Pins: 09-04-112-034 and 09-04-112-035

WHEREAS, notice has been given and a public hearing held on August 7, 2017 regarding this final plat application pursuant to the requirements of the Downers Grove Municipal Code; and,

WHEREAS, the Plan Commission has recommended approval of the Final Plat of Subdivision of Downers Grove Marketplace Resubdivision, located at 42-76 Ogden Avenue, Downers Grove, Illinois, as requested, subject to certain conditions.

NOW, THEREFORE, BE IT RESOLVED by the Village Council of the Village of Downers Grove that the Final Plat of Subdivision of Downers Grove Marketplace Resubdivision, located at 42-76 Ogden Avenue, Downers Grove, Illinois, is hereby approved subject to the following conditions:

1. The proposed Final Plat of Subdivision for a coffee shop restaurant with a drive-through use shall substantially conform to the attached proposed Downers Market Multi-tenant building engineering drawings prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, last revised August 1, 2017, the architectural drawings prepared by JTS Architects dated January 24, 2014, last revised August 1, 2017, and the Downers Grove Market Resubdivision, prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, except as such plans may be modified to conform to Village codes, ordinances, and policies.

2. All signs must meet the requirements of the Sign Ordinance.

3. The building shall be equipped with an automatic fire suppression system and an automatic and manual fire alarm system.

4. A curbed "pork-chop" shall be installed at the ¾ access point to Williams Street. Vehicles exiting the site shall be prohibited from turning left (northbound) onto Williams Street.

5. The EFIS on the building shall be maintained in accordance with the Village's currently adopted edition of the International Property Maintenance Code.

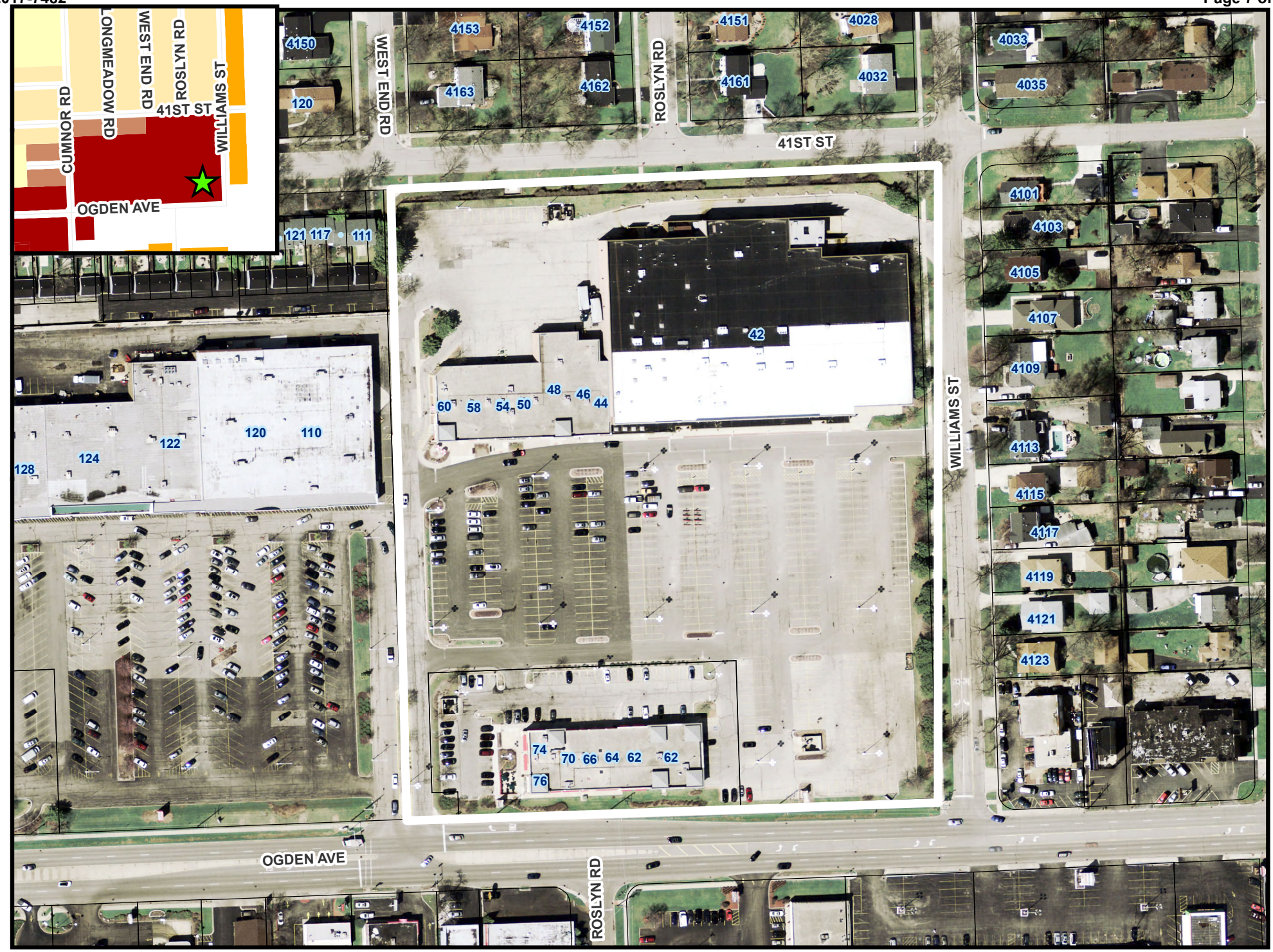
BE IT FURTHER RESOLVED, that the Mayor and Village Clerk are authorized to sign the final plat.

BE IT FURTHER RESOLVED, that this resolution shall be in full force and effect from and after its adoption in the manner provided by law.

_____
Mayor

Passed:
Attest:_____
Village Clerk

1\mw\res.17\FP-42-76-Ogden-Starbucks-17-PLC-0022



0 60 120 Feet

42-76 Ogden Avenue - Location Map

N

VILLAGE OF DOWNERS GROVE
REPORT FOR THE PLAN COMMISSION
AUGUST 7, 2017 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
17-PLC-0022 42-76 Ogden Avenue Downers Grove Market	Final Plat of Subdivision and Special Use in conjunction with a Variation for a drive-through	Scott Williams Planner

REQUEST
The petitioner is requesting approval of a Final Plat of Subdivision to subdivide the existing property into three lots and a Special Use with a variation to permit a drive-through for a multi-tenant commercial outlot building at Downers Grove Market, 42-76 Ogden Avenue.

NOTICE
The application has been filed in conformance with applicable procedural and public notice requirements.

GENERAL INFORMATION

OWNER: IRC Downers Grove Marketplace, LLC
814 Commerce Drive, Suite 800
Oak Brook, IL 60523

APPLICANT: Agent: Pam Sullins
IRC Retail Centers
814 Commerce Drive, Suite 300
Oak Brook, IL 60523

PROPERTY INFORMATION

EXISTING ZONING: B-3, General Services and Highway Business
EXISTING LAND USE: Multi-tenant Shopping Center
PROPERTY SIZE: 459,986 square feet (10.56 acres)
PINS: 09-04-112-034, -035

SURROUNDING ZONING AND LAND USES

	ZONING	FUTURE LAND USE
NORTH:	R-3, Residential Detached House 3	Single Family Detached
SOUTH:	Village of Westmont Commercial Zoning	N/A
EAST:	R-4, Residential Detached House 4	Single Family Detached
	Village of Westmont Commercial Zoning	N/A
WEST:	B-3, General Services and Highway Business	Corridor Commercial
	R-5A, Residential Attached House 5A	Corridor Commercial

ANALYSIS

SUBMITTALS

This report is based on the following documents, which are on file with the Department of Community Development:

1. Application/Petition for Public Hearing
2. Project Summary
3. ALTA/ACSM Land Title Survey
4. Final Plat of Subdivision
5. Reciprocal Easement Agreement
6. Architectural Plans
7. Engineering Plans
8. Traffic Impact Study
9. Letters to neighbors across from the new access point

PROJECT DESCRIPTION

The petitioner is proposing to construct a new 3,800 square foot commercial outlot building on the 10.56 acre shopping center site located at the northwest corner of Ogden Avenue and Williams Street. There would be two tenants: the western 2,100 square foot space would be served by the drive-through and occupied by Starbucks. This Starbucks would be relocating from an existing tenant space in the outlot building immediately west of this proposed building where it currently lacks a drive-through. The eastern 1,700 square foot space would be a fast casual restaurant yet to be determined. The subject property is commonly known as the Downers Grove Market, which is zoned B-3, General Services and Highway Business. The petitioner is requesting approval of the following items:

1. Final Plat of Subdivision to subdivide two assessment lots into three new lots of record
2. Special Use for the proposed Starbucks drive-through, pursuant to Section 28.7.130 of the Zoning Ordinance where a drive-through is listed as a permitted Special Use in the B-3 zoning district and;
3. Setback variation in conjunction with the Special Use for the proposed drive-through, pursuant to Section 28.12.090. The petitioner is requesting a three-foot, four and half inch setback for the drive-through lane adjacent to the north property line where 25 feet is required.

In addition to the principal retail building that sits on the north side of the property, there is an existing multi-tenant outlot building with frontage on Ogden Avenue. The two existing buildings contain approximately 105,346 square feet of retail and restaurant commercial space. Approximately 562 parking spaces are currently available throughout the shopping center.

Site Layout

The petitioner is proposing to construct the multi-tenant commercial building at the southeast corner of the shopping center, to the east of the existing outlot building separated by three parking rows and two drive aisles. Immediately south of the proposed building will be a patio for outdoor seating. The trash enclosure will be located to the northwest of the building and accessed from the main east-west drive aisle for the existing shopping center.

The drive-through lane will run along the rear and side (west) of the proposed building. Vehicles will enter at the northeast corner of the building and exit at the southwest corner. The drive-through lane is designed to accommodate eight vehicles, as required. The parking for the entire development is shared amongst all buildings and tenants, although 52 spaces (three of which are handicap accessible) are located on the proposed lot in the immediate vicinity of the building. New landscaping will be installed around the street perimeter of the parking lot, on the internal landscape islands and around the drive-through lane.

A new Williams Street access point that aligns with the existing east-west drive-aisle is proposed. The curb-cut and raised median is oriented in a way that allows north and south-bound traffic on Williams to enter, but only right turns going southbound exiting the site is permitted.

The building will be a one-story building with brick, stone, and EIFS exteriors. The cornices and parapet will provide 100% mechanical screening. Other features include metal canopies and lighting accents. The building's design and materials are complimentary with the existing shopping center and should enhance the visual appeal of the shopping center.

The proposed Starbucks coffee shop will be open for the same hours it currently has at its location in the adjacent outlot building. Per the traffic impact study, weekday peak hours are from 7:30 am to 8:30 am and from 5:00 pm to 6:00 pm. The Saturday midday peak hour is from 12:00pm to 1:00PM.

As part of the project, the petitioner will create an outlot for the building. This lot will be carved out of the existing main Parcel 1/Lot 1 that contains the main building and much of the parking.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The property is designated as Corridor Commercial in the Comprehensive Plan. Corridor commercial uses include a range of retail, service, office and business activities. These uses serve a dual role of by providing for the daily needs of the local residents while having a regional draw. To stay competitive, the Plan calls for reinvestment of the regional commercial areas to retain current businesses and attract new restaurants. Starbucks already operates out of an existing building in the shopping center, but this new location will provide a drive-through. The other tenant space would attract a new business to the community. The proposed development also achieves the following:

- Expand an existing shopping center and redevelop an under-used parking area
- Improves connectivity by installing a sidewalk to Ogden Avenue and Williams Street that leads to the primary entrance of the building
- Provides an attractive image with enhanced landscaping and screens residential areas to the east

The proposed uses and the proposed plan are consistent with the Comprehensive Plan.

COMPLIANCE WITH THE ZONING ORDINANCE

The property is zoned B-3, General Services and Highway Business District. The proposed coffee shop restaurant with a drive-through use is listed as an allowable Special Use in this district.

The property is zoned B-3, General Services and Highway Business. The bulk requirements of the proposed development in the B-3 zoning district are summarized in the following table:

Proposed Starbucks	Required	Proposed
Building		
Building South Setback (Street Yard)	75' from Ogden Avenue centerline	117.4 ft.
Building East Setback (Street Yard)	25' Non-Ogden Avenue Street Setback	93.6 ft.
Building North Setback (Side Yard)	0 ft.	31 ft.
Building West Setback (Rear Yard)	0 ft.	80.5 ft.
Height	60 ft. maximum	23.33 ft. (top of parapet)
FAR	0.75	0.10

Landscaped Open Space	10% (3,905 sq. ft.)	26% (9,947 sq. ft.)
Street Yard Landscaped Open Space	50% (1,953 sq. ft.)	145% (5,664 sq. ft.)
Parking		
Street Setback (south)	50 ft. from Ogden Avenue Centerline	57 ft.
Street Setback (east)	8 ft. Non-Ogden Avenue Street Setback	25 ft.
Parking		
Stacking Spaces	8	8
Street Setback (south)	25 ft.	49 ft.
Street Setback (east)	50 ft. [1]	67.66 ft.
Rear Setback (west)	25 ft.	85 ft.
Side Setback (north)	**25 ft.**	**3 ft. 4.5 in.***

[1]Required setback from abutting residential zoning districts
*Indicates a variation

Site Lighting
The proposal includes six new light poles, three of which are back-to-back. The single fixture light poles are located on the eastern property line across the street from residential zoning and they will have a negligible impact on adjacent lots. The parking lot lighting will meet the Village's lighting requirements.

Parking
A Reciprocal Easement Agreement for Downers Grove Market grants access to all lots through the use of the parking lot, driveways, drive aisles and lanes on the subject property for all tenants, which will be recorded upon approval of these petitions. As such, the parking requirements apply to the Shopping Center as a whole. The proposed Starbucks will reduce the total number of parking stalls to 513 spaces, where 439 spaces are required.

As the stacking requirement is specific to the drive-through use, the Starbucks proposal needs to comply with Village requirements. The petitioner is proposing a total of eight stacking spaces in the drive-through lane, as required.

Signage
A new monument sign is proposed at the northwest corner of Ogden Avenue and Williams Street. Directional signage to assist with directing vehicles to the drive-through is proposed. All exterior signage will be required to meet the Sign Ordinance requirements.

COMPLIANCE WITH THE SUBDIVISION ORDINANCE
The three commercial lots will meet the minimum lot dimension requirements per Section 20.301 of the Subdivision Ordinance. The lot dimensions are specified in the table below:

Downers Grove Market Resubdivision	**Lot Width (req. 100 ft.)**	**Lot Depth (req. 140 ft.)**	**Lot Area (req. 10, 500 sq. ft.)**
Lot 1 – Principal Retail Buildings	537.62 ft.	624.54 ft.	342,939 sq. ft.
Lot 2 – Existing Outlot	330 ft.	200 ft.	76,846 sq. ft.
Lot 3 –Starbucks Outlot	175.01 ft.	229.61 ft.	40,201 sq. ft.

The petitioner has not requested any exceptions from the Subdivision Ordinance. The petitioner is providing the required five-foot wide public utility and drainage easements along the side lot lines and the ten-foot wide public utility and drainage easements along the rear lot lines, as applicable. There are no school and park donations required with this application.

TRAFFIC AND CIRCULATION

The proposed use is a complementary use that is not anticipated to have any negative impact on the existing traffic patterns in the area and no roadway improvements or traffic control modifications will be necessary for public intersections. Based on the Institute of Transportation Engineers (ITE) Trip Generation Handbook, a coffee shop with a drive-through has a large number of the generated trips diverted from existing traffic on the area roadways (referred to as "pass-by traffic"). Assuming a worst-case scenario, a 70% pass-by reduction in trip generations was applied to the Starbucks which is already established and operating in the same shopping center.

It should be noted that the proposed Starbucks will have different peak hours compared to the existing and proposed restaurant and retail uses in the shopping center. The primary traffic will be arriving on-site during the morning rush hour when the majority of the shopping center will be vacant. Afternoon peak times also vary including from the attached restaurant use.

The traffic study concludes that the development will have a limited impact on the anticipated level of service (LOS) for the intersections associated with Downers Grove Market. In regards to Ogden Avenue and Williams Street intersection which is not signalized, it will continue to operate with the same LOS with minimal increases in delay. Southbound queues for left-turns would continue to have longest delay because east-west traffic on Ogden is free-flow through this intersection; however, this queue will be 50 feet or less and will not block the proposed access drive.

The intersection of the proposed access drive with Williams Street is projected to operate at LOS A (the best LOS) for all approaches. A no left-turn sign out of the development along with stop sign control is recommended by the traffic impact study. The petitioner will also be providing a curbed "pork-chop" to prevent left (northbound) turns out of this access point.

The drive-through stacking meets village code with 8 stack spaces provided and a lane width that exceeds village code. The site layout has been designed to prevent additional vehicles from stacking into Williams Street. The applicant has also provided a supplemental Starbucks drive-through survey which shows the average delay queue is between seven and eight cars. Staffs finds the drive-through will not negatively impact the traffic in the surrounding area, and staff concurs with the findings of the report.

ENGINEERING/PUBLIC IMPROVEMENTS

The existing utilities servicing the development are sufficient for the proposed Starbucks. The sidewalk will continue through the proposed driveway at Williams Street. Pedestrian connections leading from the building will connect to the existing sidewalks. Downers Grove Sanitary District has provided conceptual approval of the proposed building. Additionally, new water service will be provided for the proposed building to accommodate fire and domestic water service.

The proposal includes a total of 1,404 square feet of new landscaped green space on the site, thereby reducing the impervious area. No additional on-site stormwater detention is required, and the site will comply with all provisions of the Stormwater Ordinance.

PUBLIC SAFETY REQUIREMENTS

The Fire Prevention Division of the Fire Department has reviewed the proposed plans and has adequate access to the proposed building. The proposed building will be fully sprinkled and equipped with a manual and automatic fire alarm system.

NEIGHBORHOOD COMMENT

Notice was provided to all property owners 250 feet or less from the property line in addition to posting the public hearing sign and publishing a legal notice in *Downers Grove Suburban Life*. Staff received one informational inquiry regarding the proposal at this time. Attached to this report are two letters sent out by the applicant to the residential neighbors located directly across from the proposed access point.

FINDINGS OF FACT

The petitioner is requesting a Final Plat of Subdivision, and a Special Use in Conjunction with a Variation to permit a drive-through. Staff finds that the proposal meets the standards as outlined below:

Final Plat of Subdivision

The proposed Final Plat of Subdivision to resubdivide the subject property into three lots meets and exceeds the minimum lot dimension standards of Section and 20.301(c) of the Subdivision Ordinance. The proposal is consistent with surrounding uses and lot sizes. The request is consistent with the Comprehensive Plan and meets the requirements of the Subdivision Ordinance of the Village.

Special Use

The applicant is requesting a Special Use approval for a commercial restaurant building with a drive-through. The proposed use meets the standards for granting a Special Use as outlined below:

Section 28.12.050.H Approval Criteria

No special use may be recommended for approval or approved unless the respective review or decision-making body determines that the proposed special use is constituent with and in substantial compliance with all Village Council policies and plans and that the applicant has presented evidence to support each of the following conclusions:

1. *That the proposed use is expressly authorized as a Special Use in the district in which it is to be located;*
   The property is located in the B-3, General Service and Highway Business zoning district. Under Section 5.010 of the Zoning Ordinance, a drive-through facility is listed as an allowable Special Use in the B-3 zoning district. This standard has been met.

2. *That the proposed use at the proposed location is necessary or desirable to provide a service or a facility that is in the interest of public convenience and will contribute to the general welfare of the neighborhood or community.*
   The proposed restaurant building with a drive-through use provides a desirable service that contributes to the general welfare of the community. The proposed use is also consistent with the Comprehensive Plan's recommendation for reinvestment in corridor commercial areas to remain competitive and providing an enhanced gateway.

   The proposal is compatible with surrounding uses and will contribute to the general welfare of the neighborhood and the community. The proposed plan will include a high quality building design with outdoor patio seating. It will also redevelop an under-used parking area with a trash enclosure. This standard is met.

3. *That the proposed use will not, in the particular case, be detrimental to the health, safety or general welfare of persons residing or working in the vicinity or be injurious to property values or improvements in the vicinity.*

The proposed development and drive-through facility will not be detrimental to the health, safety or general welfare of persons residing in or working in the vicinity and will not be injurious to property values or improvements in the vicinity. The on-site circulation has been designed in a manner that will separate stacking lanes from drive-aisles and the parking areas. Moreover, landscaping and screening will be added which will create a buffer for the adjacent properties. The proposed use will not be detrimental to the health safety or the general welfare of persons in the vicinity of the site. The proposed drive-through is similar in nature to other commercial uses along Ogden Avenue. This standard is met.

Section 28.12.090.G Approval Criteria

Variations require evaluation per Section 28.12.090 of the Municipal Code, *Standards and Review Criteria*: "No variation may be approved unless the variation to be approved is consistent with the spirit and intent of this zoning ordinance and that strict compliance with the subject provisions would result in practical difficulties or particular hardships for the subject property owner. The consideration of whether a variation request has met the standards of practical difficulties or particular hardships must include all of the following findings from the evidence presented:"

(1) ***The subject property cannot yield a reasonable return if required to comply with the regulations that apply to it.***

The property is currently yielding a reasonable return. However, if the project has to comply with the 25' drive-through lane setback from the northern property line, then this may reduce the yield of this property as the site would unsuitable for any type of restaurant that has a drive-through component and will persist as an under-used parking lot. This standard has been met.

(2) ***The plight of the owner is due to unique circumstances.***

The proposed property is currently a section of a shopping center's parking lot. Based on the location of the existing access drive, a functional site requires the drive-through facility to be along the northern property line in order to minimize any potential interaction between motorists and pedestrians. This layout allows for optimal circulation patterns for both vehicles and pedestrians and provides the proper number of stacking spaces. This standard has been met.

(3) ***The variation, if granted, will not alter the essential character of the locality.***

The proposed variation will not alter the essential character of the locality. The area contains many coffee shops/restaurants with drive-throughs. Starbucks is already conducting business on the subject property. The proposed project will enhance the character of the locality by redeveloping a section of the parking lot that will match the existing commercial buildings. This standard has been met.

(4) ***That the particular physical surroundings, shape, or topographical conditions of the subject property would result in a particular hardship upon the owner, as distinguished from a mere inconvenience, if the strict letter of the regulations were carried out.***

The property presents a physical hardship to have safe and adequate site circulation while meeting the required setback for a drive-through facility. Physical conditions of the property do not allow for the proposed project to meet the setback requirements and create an optimal circulation pattern to safely accommodate pedestrians and motorists. The proposed site plan allows for both pedestrians and motorists to utilize the site while only having the petitioner request one variation from the Zoning Ordinance. All other bulk regulations have been met and the variation request meets the spirit and intent of the Zoning Ordinance. This standard has been met.

(5) ***That the conditions leading to the need of the requested variation are not applicable, generally, to other properties within the same zoning classification.***
The conditions leading to the requested variation are very specific to this property and are not generally found with other properties within the B-3 district or the Village. The subject property is on a proposed corner lot of a shopping center; this condition is not characteristic to other B-3 zoned properties. The proposed site layout acknowledges both motorists and pedestrians by physically placing the drive-through facility along the northern property line separating it from pedestrians. As such, the variation request is only applicable to this property. The proposed site design will meet all other safety and design regulations. This standard has been met.

(6) ***That the alleged difficulty or hardship was not created by the current property owner****.*
There is no particular difficulty or physical hardship associated with the property that has resulted from the actions of the owner. The drive aisles and the arrangement of the parking lot is existing. The setback of the drive-through is based on the adjacent zoning and is more restrictive with a greater setback for residential zoning. The petitioner is requesting a setback variation for the drive-through facility in order to meet the circulation safety, stacking and setback requirements from the Zoning Ordinance and to meet the goals of the Village's Comprehensive Plan. This standard had been met.

(7) ***That the proposed variation will not impair an adequate supply of air to adjacent property, or substantially increase the danger of fire, or otherwise endanger the public safety, or substantially diminish or impair property values within the neighborhood****.*
The approval of the proposed variation will not diminish or impair the property values of similar properties within the neighborhood. Adequate landscaping, screening and buffering will be provided so as to not endanger the public health, safety or welfare. Moreover, the proposed drive-through facility is set on the north side of the subject property and will be adjacent to but separated from the rest of the shopping center's existing parking lot. The granting of the requested variation will not negatively impact the desirability of adjacent properties. This standard has been met.

(8) ***That the proposed variation will not alter the essential character of the area.***
The granting of a variation will not alter the essential character of the area. The area is a combination of large and small retail establishments. The character will remain the same with the construction of a Starbucks coffee shop and restaurant space in an existing shopping center. This standard has been met.

(9) ***That the granting of the variation will not confer on the subject property owner any special privilege that is not available to other properties or structures in the same district.***
If this request is granted it will not confer a special privilege to the subject property as there are physical hardships and unique circumstances associated with this property that are not common with the properties found in the same zoning district. All properties located in the B-3 zoning district can apply for a special use for a drive-through facility; however, there are setbacks and safety regulations that each site has to comply with as found in the Zoning Ordinance. The proposed design follows all of the safety regulations by optimizing vehicular and pedestrian circulation when placing the drive-through facility along the northern property line. This property could not accommodate the drive-through facility without a setback variation. This standard has been met.

RECOMMENDATIONS

The proposed Final Plat of Subdivision and Special Use with a Variation for the construction of a coffee shop with a drive-through use is compatible with surrounding zoning and land use classifications, meets the standards for Special Use and is consistent with the Comprehensive Plan.

Based on the findings listed above, staff recommends that the Plan Commission make a positive recommendation to the Village Council regarding 17-PLC-0022 subject to the following conditions:

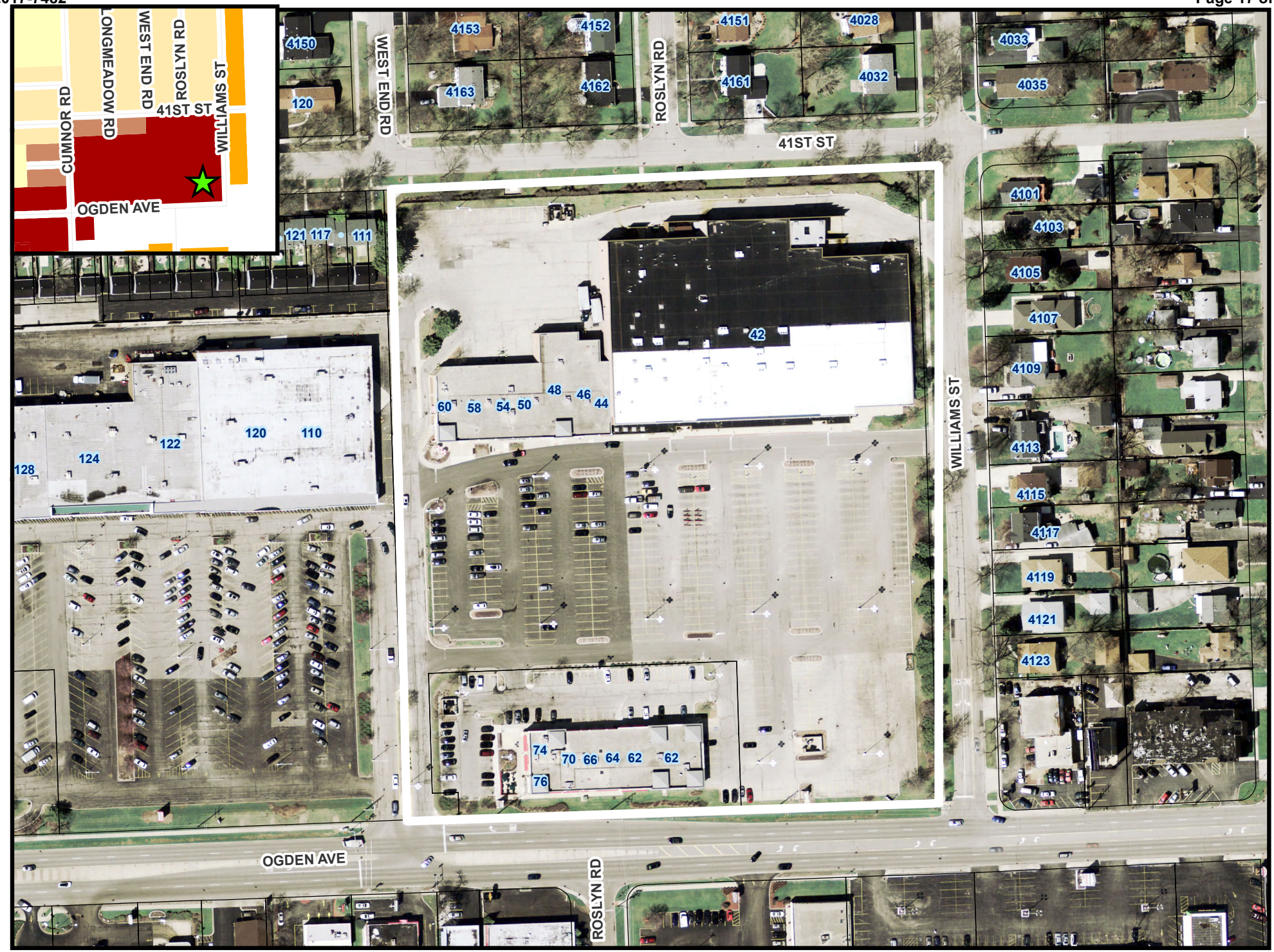
1. The proposed Final Plat of Subdivision and Special Use with a Variation request for a coffee shop restaurant with a drive-through use shall substantially conform to the attached proposed Downer Market Multi-tenant building engineering drawings prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, last revised August 1, 2017, the architectural drawings prepared by JTS Architects dated January 24, 2014, last revised August 1, 2017, and the Downers Grove Market Resubivision, prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, except as such plans may be modified to conform to Village codes, ordinances, and policies.
2. All signs must meet the requirements of the Sign Ordinance.
3. The building shall be equipped with an automatic suppression and an automatic and manual fire alarm system.
4. A curbed "pork-chop" shall be installed at the ¾ access point to Williams Street. Vehicles exiting the site shall be prohibited from turning left (northbound) onto Williams Street.

Staff Report Approved By:

_____
Stanley J. Popovich, AICP
Director of Community Development

SP; sw
-att

P:\P&CD\PROJECTS\PLAN COMMISSION\2017 PC Petition Files\17-PLC-0022 - 42 Ogden - Plat of Subdivision, Special Use, Variation\Staff Report 17-PLC-0022.doc



42-76 Ogden Avenue - Location Map

RetailCenters

TO: Village of Downers Grove

FROM: Pam Sullins, IRC Senior Project Manager

DATE: 7/6/17

RE: **DOWNERS GROVE MARKET SHOPPING CENTER/Project Summary/Petition for creation of an out parcel for development, with a 1) Plat of Subdivision, 2) Special Use Permit (Drive Thru for Starbuck's in the new out parcel building) and 3) Rear Yard Setback Variance along north Property Line of proposed out parcel lot.**

General: IRC Retail Centers is the owner of the above referenced shopping center (the "Shopping Center") in the Village. The Shopping Center is zoned in the Village's B-3 General Services and Highway Business.

Summary of Petition: Applicant seeks approval for:

1) **Plat of Subdivision: Obtain approval for the Plat of Subdivision where we request creating the separate .956 Acre out parcel containing a proposed building with a proposed 3,800 SF building (assumed to have 2 proposed tenants; Starbuck's 2,000 SF WITH a Drive-thru and 1,800 SF "fast casual" restaurant).**

2) **Special Use Permit/Proposed Drive Thru for the Starbuck's and as per Article 5, section 5.100 "other use category" of Chapter 28 Zoning Code the Starbuck's Drive Thru requires the special use permit. The stacking requirements are met with proposed number of stacking. (Starbuck's will move from their existing location in the small strip center adjacent to the new location with a proposed Drive-Thru.) Owner plans to backfill their existing location with another retail use.**

3) **Obtain a Variance for Rear Yard Setback; Chapter 28 Zoning Code, Article 3, section 3.030 Lot and Building Regulations (we meet all the building setbacks, but we need a variance of rear yard setback). We are required to have a 25' buffer from back of curb to lot line and we are only proposing 3'4.5". Therefore, we are requesting a 21'7.5" variance in required buffer.**

Layout configuration of out parcel and modifications to center:

1) The proposed Site Plan meets building setback requirements, inter-connectivity with pedestrian walk-ways planned from out parcel to Williams Street and Ogden Avenue. Each parcel in the Plat of Subdivision is self-parked and meets parking ratio requirements.

2) As part of the proposed-out parcel development for the Starbuck's with a Drive-Thru, application/owner seeks approval for a 3-way cut/enter/exit off Williams (limited to 3-way which would prohibit anyone from existing and going northbound on Williams). To support this request, a Traffic Study Analysis of the volume of traffic (existing AND proposed) was conducted by KLOA Traffic Consultants and a copy of that analysis is part of the project submittal. In summary, the study found no negative impact from the proposed 3-way access point.

3) The out parcel also proposes the addition of a monument sign in the SEC of the out-parcel lot and will be for those two tenants in the proposed-out parcel building. The placement of the monument sign meets the setbacks and the distance between signs as required by code.

Zoning Ordinance Standards:

Applicant believes the proposed requests meets the standards of section 28.1607(a) for a Plan Commission Recommendation:

1) Meets standards of Article XVI: Yes
2) Departures from Ordinances: Variance for rear yard setback (which faces internal part of center, so isn't obstructive and there will be adequate landscaping and pedestrian highlighted walk-ways).
3) Adequacy of Public Services, Traffic Control, Light and Air: non-issue because we will install required fire safety fire hydrants and most of the circulation of traffic is internal off the main Ogden thoroughfare.
4) Conformity with Planning Objectives of Village: We worked with Staff to address and plan for a building that ties into what is already in the center and therefore ties in very nice with overall look of it.

Applicant further states the proposed requests meet the standard of Section 28.1607(b) for Village Council approvals:

1) Necessary or Desirable use: Yes, in compliance
2) Not detrimental to Health, Safety, Property Values: Yes, in compliance
3) Planned Development or Permitted Use: Yes, in compliance
4) Not Detrimental to Orderly Development: No
5) Not Injurious to Enjoyment of other Property: No
6) No Impediment6 to Development of Adjoining Land: No

Village of Downers Grove
Page two
From: Pam Sullins 7/6/17

7) Adequate Roads, Drainage: Yes, in compliance
8) Adequate Parking: Yes, in compliance
9) Conforms to Zoning District: Yes, in compliance

Pam Sullins
Senior Construction Project Manager

IRC Retail Centers
814 Commerce Drive, Suite 300
Oak Brook, Illinois 60523
(d) 630.451.8559
(p) 877.206.5656
(f) 630.812.7999
sullins@ircretailcenters.com
www.ircretailcenters.com

Twitter | Linkedin | Facebook

Focused on Retail. Centered on Value.

SHEET 2 OF 2

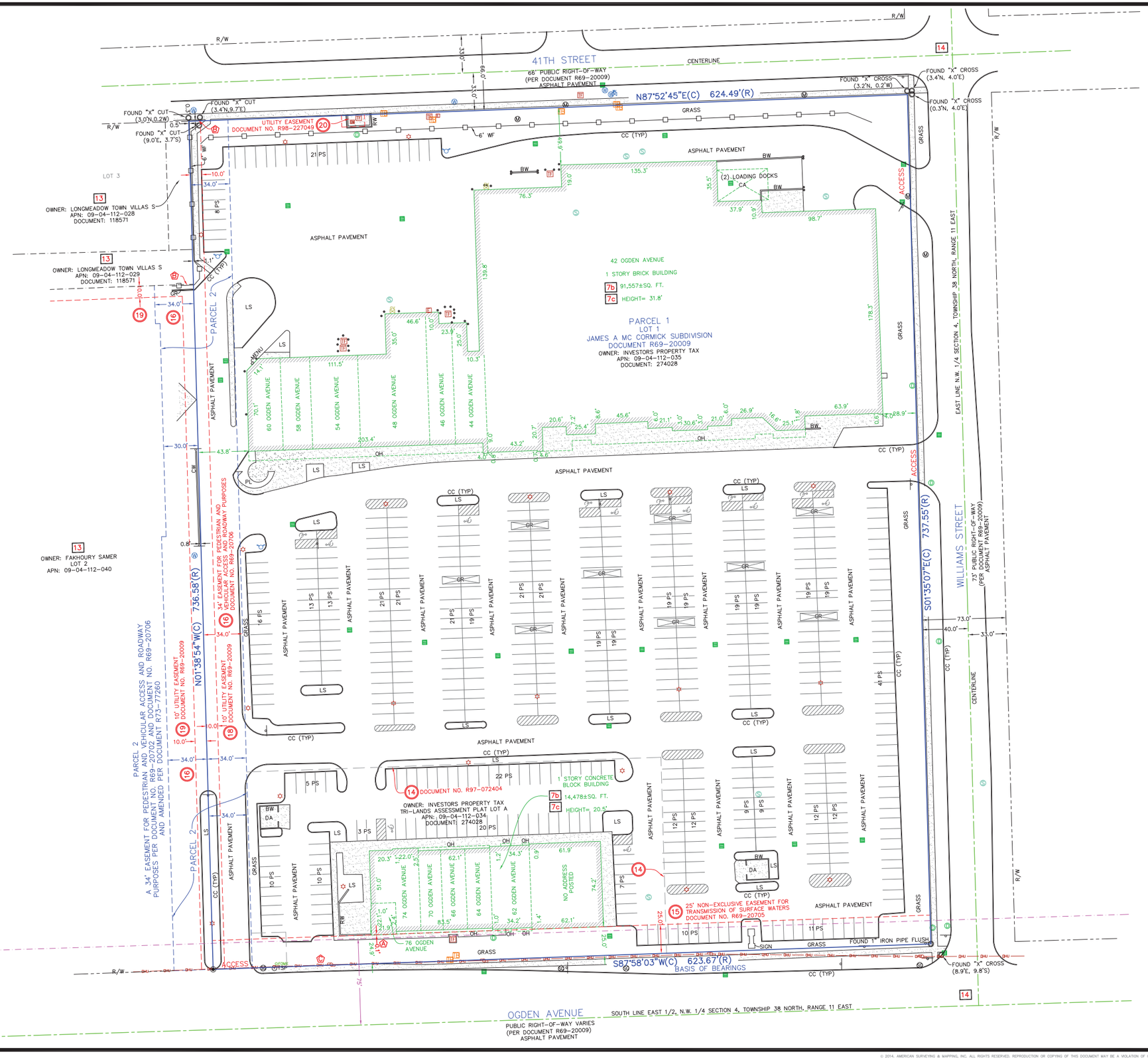
6Dia NORTH ARROW & SCALE

1" = 40'
GRAPHIC SCALE
0 20' 40' 80'

6Dib LEGEND AND ABBREVIATIONS

	CONCRETE SURFACE	BW	BRICK WALL
	NO PARKING AREA	(C)	CALCULATED DIMENSION
	HANDICAP PARKING	CC	CONCRETE CURB
	BOLLARD	CW	CONCRETE WALL
	CATCH BASIN	CA	COVERED AREA
	ELECTRIC BOXES/STRUCTURES	(R)	DOCUMENT R69-20009
	ELECTRIC TRANSFORMER	DA	DUMPSTER AREA
OF/SMC	FIBER OPTIC UTILITY MARKER	GR	GUARD RAIL
	FIRE HYDRANT	LS	LANDSCAPED AREA
	GAS VALVE	OH	OVERHANG
	LIGHT POLE	X PS	PARKING SPACE
	MANHOLE (UNKNOWN)	PL	PLANTER
	RECOVERED MONUMENT AS NOTED	RW	RETAINING WALL
	SANITARY MANHOLE	R/W	RIGHT OF WAY
	SET "X" CUT	SQ.FT.	SQUARE FEET
	SIGN	(TYP)	TYPICAL
	STORM MANHOLE	WF	WOOD FENCE
	TELEPHONE BOXES/STRUCTURES		
	TRAFFIC SIGNAL MANHOLE		
TSP	TRAFFIC SIGNAL POST		
	UTILITY POLE		
	WATER MANHOLE		
	WATER VALVE		
OHU	OVERHEAD UTILITY LINE		
	WOOD FENCE		

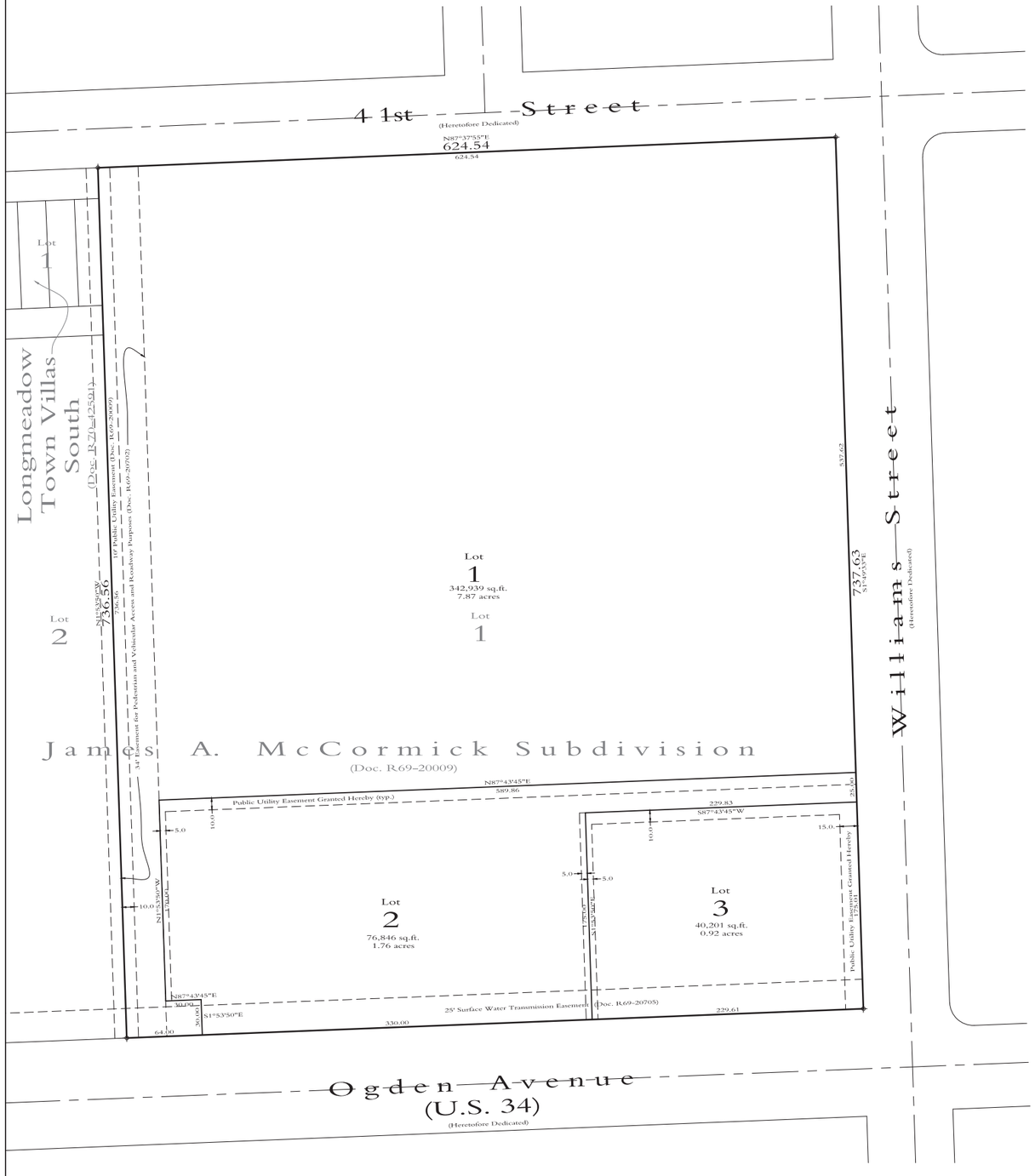
TOTAL LOADING DOCKS = 2

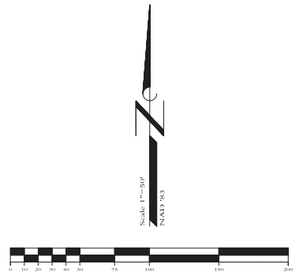


6Dvi 2

ALTA/ACSM LAND TITLE SURVEY
OF
DOWNERS GROVE MARKET
42 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS
DUPAGE COUNTY

AMERICAN SURVEYING & MAPPING INC.
3191 MAGUIRE BLVD., SUITE 200 ORLANDO, FLORIDA 32803
PHONE (407) 426-7979 WWW.ASMCORPORATE.COM





Downer's Grove Marketplace Resubdivision

Being a resubdivision of Lot 1 of James A. McCormick Subdivision, a subdivision of all that part of the east half of the northwest quarter of Section 4, Township 38 north, Range 11 east of the Third Principal Meridian lying south of the south property line of 41st Street anbd north of the north property line of Ogden Avenue (except the east 40 feet and the west 33 feet thereof in DuPage County, Illinois.

459,986 sq.ft., 10.56 acres

P.I.N. 09-04-112-034

09-04-112-035

Sheet 1 of 2

Date: 7-4-17

File: 17-028RP

Job: 17-028

Craig R. Knoche & Associates
Civil Engineers, P.C.
Registered Design Firm 2781
24 North Bennett Street • Geneva, Illinois 60134 • phone (630) 845-2270 • fax (630) 845-2275
• Civil Engineers
• Surveyors
• Land Planners

Prepared for:
IRC Retail Centers

Plat of Resubdivision

Ownwe's Certificate

State of Illinois }S.S.
County of DuPage }

This is to certify that Inland Downer's Grove Marketplace L.L.C. is the owner of the lands shown and described in the annexed Plat and has, as such owner, caused the same to be surveyed, subdivided and platted as shown for the uses and purposes therein set forth and does hereby acknowledge and adopt the same under the style and title thereon shown. It is further certified that the platted lands fall within the boundaries of Downer's Grove Elementary School District 58 and Community High School District 99.

dated at Oak Brook, Illinois this____day of_____, A.D.2017.

by:_____
(manager)

Notary's Certificate

State of Illinois }S.S.
County of DuPage }

I,_____ , a notary public in and for the County and State aforesaid do hereby certify that_____, as Manager of Inland Downer's Grove Marketplace L.L.C., who is personally known to me to be the same person whose name is subscribed to the foregoing certificate, appeared before me this day in person and acknowledged the execution of the annexed plat and accompanying instrument as being pursuant to authority given and as their free and voluntary act and as the free and voluntary act of Inland Downer's Grove L.L.C.

Given under my hand and notarial seal this____day of_____, A.D.2017.

_____
notary public

Director of Community Development's Certificate

State of Illinois }S.S.
County of DuPage }

Approved by the Village of Downers Grove Director of Community Development this____day of_____, A.D.2017.

by:_____
(Director of Community Development)

Downer's Grove Sanitary District Certificate

State of Illinois }S.S.
County of DuPage }

I, _____, Collector of the Downers Grove Sanitary District, do hereby certify that there are no delinquent or unpaid current or forfeited special assessments or any deferred installments thereof that have not been apportioned against the tract of land included in this Plat.

by:_____
(Downer's Grove Sanitary District)

Village Collector's Certificate

State of Illinois }S.S.
County of DuPage }

I, _____, Collector for the Village of Downer's Grove, do hereby certify that there are no delinquent or unpaid current or forfeited special assessments or any deferred installments thereof that have not been apportioned against the tract of land, included in this plat.

by:_____
(Village Collector)

Village Council's Certificate

State of Illinois }S.S.
County of DuPage }

The Mayor and Village Clerk of the Village of Downer's Grove, Illinois hereby certify that said council has duly approved this Plat of Resubdivision attached hereto by ordinance_____, duly authenticated and passed this____day of_____, A.D.2017.

by:_____
(Mayor)

attest:_____
(Village Clerk)

County Clerk's Certificate

State of Illinois }S.S.
County of DuPage }

I, Paul Hinds, County Clerk in and for the County and State aforesaid find no redeemable tax sale, unpaid forfeiture taxes or unpaid current taxes against any of the land included in the annexed plat. I further certify that I have received all statutory fees in connection with said plat.

Given under my hand and the seal of the county this____day of_____, A.D.2017.

_____
County Clerk

Recorder's Certificate

State of Illinois }S.S.
County of DuPage }

This instrument, no._____, was filed for record in the Recorder's Office of Du Page County, Illinois this____day of_____, A.D.2017 at_____o'clock____m., and was recorded as Document_____.

_____
Recorder of Deeds

This plat has been approved by the Illinois Department of Transportation with respect to roadway access pursuant to Illinois Compiled Statutes ch. 765, sec. 205/2; however, a highway permit is required of the owner of the property. A plan that meets requirements contained in the Department's 'Policy on Permits for Access Driveways to State Highways' will be required.

_____
District Engineer

State of Illinois }S.S.
County of DuPage }

This is to certify that I, John Cole Helfrich, an Illinois Professional Land Surveyor, have surveyed, resubdivided and platted for the uses and purposes therein set forth the following described lands:

Lot 1 of James A. McCormick Subdivision, being a subdivision of all that part of the east half of the northwest quarter of Section 4, Township 38 north, Range 11 east of the Third Principal Meridian lying south of the south property line of 41st Street ambd north of the north property line of Ogden Avenue (except the east 40 feet and the west 33 feet thereof in DuPage County, Illinois.

All dimensions are given in feet and decimal parts thereof .

I further certify that the lands described above lie within the corporate limits of the Village of Downer's Grove, Illinois which has authorized a comprehensive plan and is exercising the special powers authorized by Division 12 of Article 11 of the Illinois Municipal Code.

I further certify that the Federal Emergency Management Agency FIRM Community Panel 17043C0902H, with an effective date of December 16, 2004 indicates that the above described property lies within an area designated as Zone X. Zone X is defined as "areas determined to be outside the 0.2% annual chance floodplain."

Given under my Hand and Seal this____day of_____, A.D.2017.

_____
Illinois Professional Land Surveyor 2967
exp. 11-30-16

John Cole Helfrich * State of Illinois *
Professional Land Surveyor 2967

PUBLIC UTILITY EASEMENT DECLARATION

A perpetual easement is hereby reserved for and granted to the Village of Downer's Grove, an Illinois municipal corporation, and those public utility and other companies operating under franchise agreements granting them rights from the Village of Downer's Grove, including but not limited to, Commonwealth Edison Company, AT & T, Nicor Gas Company, and Comcast Cable Communication, Inc., together with their respective successors and assigns (the "Grantees"), for the installation, modification, construction, reconstruction, replacement, alteration, enlargement, operation, inspection, repair, maintenance, relocation, renewal and removal of facilities, improvements and appurtenances to serve these and other lands with various public utilities transmission and distribution systems, including without limitation, from time to time, electricity, sounds and signals, cable television, communication, telephone, gas pipelines, water pipelines, storm and sanitary sewers, storm water detention and retention facilities, and storm water drainage, together with any and all necessary lines, cables, mains, manholes, hydrants, catch basins, connections, pipes, applicances, and other structures and appurtenances as may be deemed necessary, in, across, along, over, under, and upon the areas hereon identified as "Public Utility Easement Granted Hereby," together with the right to install required service connections under the surface of each lot to serve improvements thereon; and together with the right to enter upon the property with such personnel and equipment as may be deemed necessary for all such uses and purposes.

No obstruction or structure shall be erected or located, nor shall any trees be planted, over said easement areas, nor shall any other activities be undertaken that unreasonably interfere with the Grantees' intended use thereof, but the same may be used for landscaping, fencing, parking or other purposes if such use does not then or later interfere with the aforementioned purposes.

The right is also hereby granted to the Village of Downer's Grove to remove any fences, buildings or structures and to cut down, trim or remove any trees, shrubs, bushes, roots or other plantings that interfere with the operation of or access to such facilities in, on, upon, across, under or through said Public Utility Easement. The Village of Downer's Grove shall not be responsible for the replacement or repair of any such fences, buildings, structures, trees, turf, gardens, shrubs, landscaping, or other improvements removed during the exercise of the herein given rights. Replacement and/or repair of said items shall be the responsibility of the then property owner.

Following any work to be performed by the Village of Downer's Grove in the exercise of its easement rights herein granted, said Village shall have no obligation with respect to surface restoration, including by not limited to, the restoration, repair or replacement of pavement, curb, gutters, fences, sheds, trees, lawn or shrubbery, provided, however, that said Villagey shall be obligated, following such maintenance work, to backfill and mound all trench created so as to retain suitable drainage, to cold patch any asphalt or concrete surface, to remove all excess debris and spoil, and to leave the maintenance area in a generally clean and workmanlike condition. The Village has no obligation to repair any improvements that were completed without obtaining the necessary permits prior to installation.

The occupation and use of the perpetual easement herein granted and reserved for the Grantees by each of such entities shall be done in such a manner so as not to interfere with or preclude the occupation and use thereof by other entities for which such easements are granted and reserved. The crossing and re-crossing of said easements by the Grantees shall be done in such a manner so as not to interfere with, damage, or disturb any transmission and/or distribution systems and facilities appurtenant thereto existing within the easements being crossed or re-crossed.

Where the easement areas are also used for electric, telephone, cable TV, gas distribution systems or their appurtenances, such other utility installations shall not interfere with the maintenance of gravity or subsurface flow and stabilization of vegetative ground cover on the above-mentioned drainage facilities, or cause any change in grade, or impair or change the surface drainage patterns of the property.

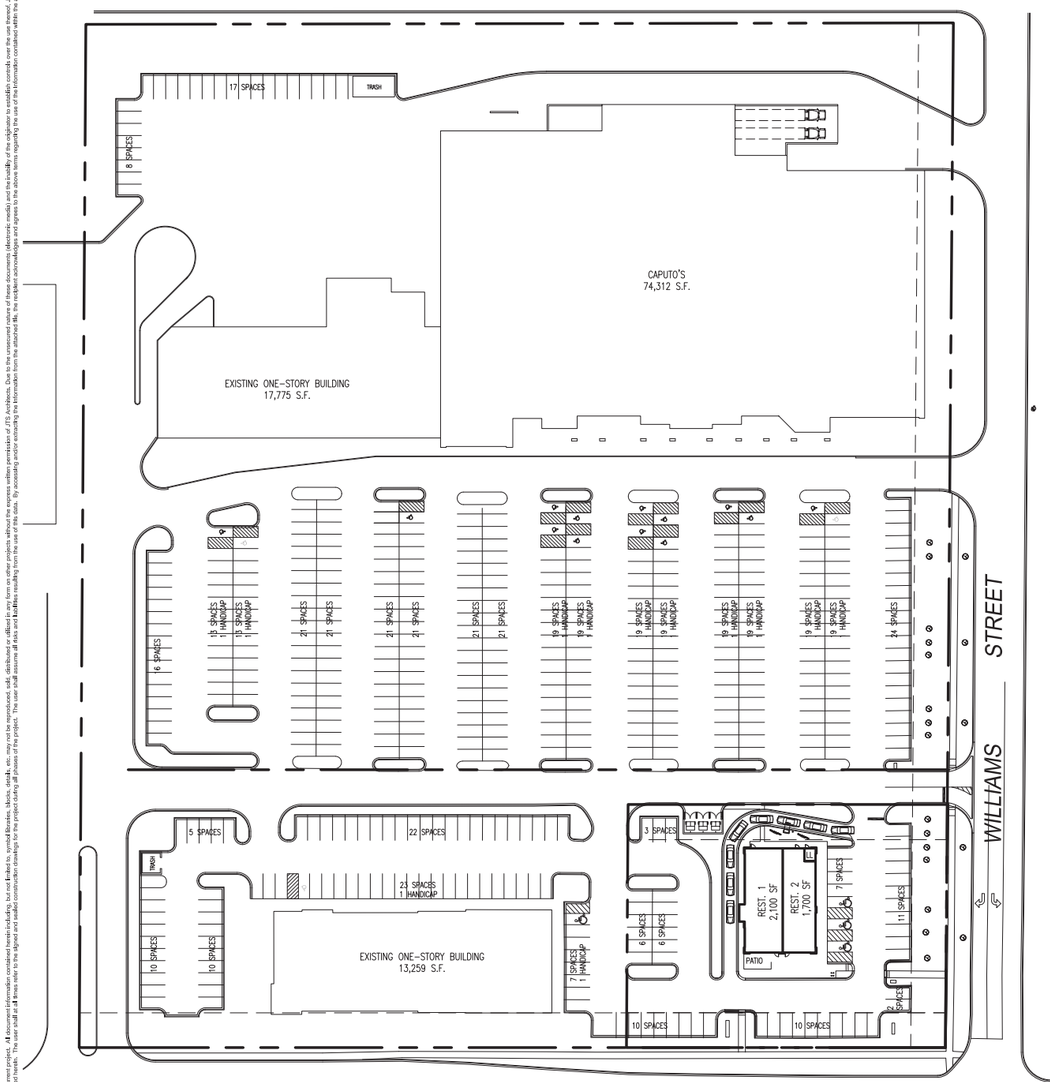
Craig R. Knoche & Associates
Civil Engineers, P.C.
Registered Design Firm #184
24 North Bennett Street • Geneva, Illinois 60134 • phone (630) 845-2870 • fax (630) 845-2875
• Civil Engineers
• Surveyors
• Land Planners

Date: 7-4-17
File: 17-028RP2
Job: 17-028

Sheet 2 of 2

Prepared for:
IRC Retail Centers

Plat of Resubdivision



1 SITE PLAN - PROPOSED
SCALE: 1" = 50'-0"

PARKING TABLE

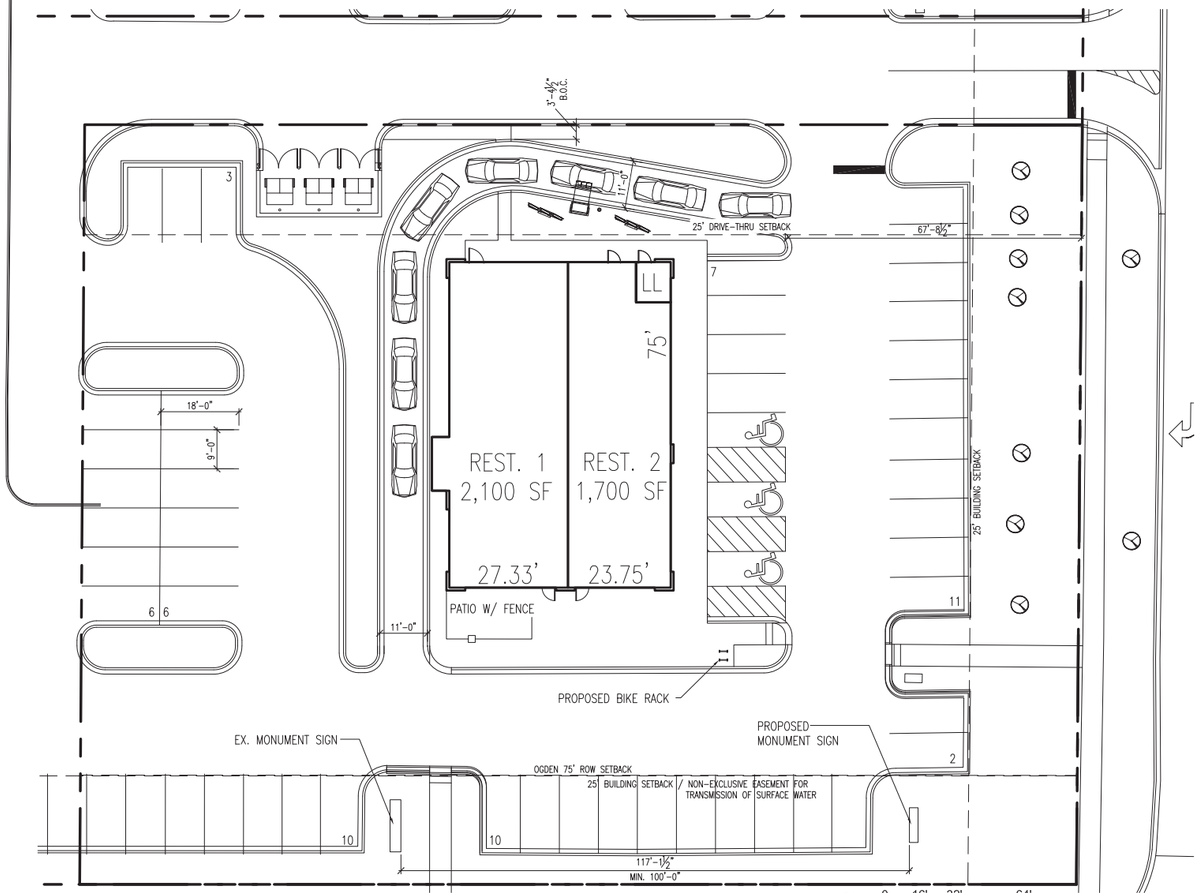
LOCATION	TENANT	SQ. FT.	PARKING REQ'D.
INLINE	OBERWEIS	2,600	11 (4 PER 1,000 S.F.)
	LUXURY NAILS	2,000	8 (4 PER 1,000 S.F.)
	RETAIL (AVAILABLE)	5,200	21 (4 PER 1,000 S.F.)
	HALLMARK	5,175	20 (4 PER 1,000 S.F.)
	SALLY BEAUTY SUPPLY	1,600	6 (4 PER 1,000 S.F.)
	GNC	1,200	5 (4 PER 1,000 S.F.)
	CAPUTO'S	74,312	298 (4 PER 1,000 S.F.)
TOTAL:		90,314	369 SPACES
ACTUAL:			376 SPACES
EXISTING OUTLOT	STARBUCKS	1,458	6 (4 PER 1,000 S.F.)
	PANDA EXPRESS	1,992	8 (4 PER 1,000 S.F.)
	WEIGHT WATCHERS	1,410	6 (4 PER 1,000 S.F.)
	T-MOBILE	1,400	6 (4 PER 1,000 S.F.)
	GREAT CLIPS	1,050	4 (4 PER 1,000 S.F.)
	CHASE BANK	3,500	14 (4 PER 1,000 S.F.)
	ORANGE LEAF	2,449	10 (4 PER 1,000 S.F.)
TOTAL:		13,259	54 SPACES
ACTUAL:			79 SPACES
PROPOSED OUTLOT	MTB (LEASABLE)	3,800	16 (4 PER 1,000 S.F.)
	MTB (LANDLORD)	100	
TOTAL:		3,900	16 SPACES
ACTUAL:			58 SPACES
TOTAL REQ'D:		106,261	430 SPACES (INCL. 14 HANDICAP)
ACTUAL (W/PROPOSED):			513 SPACES (INCL. 14 HANDICAP)

OUTLOT 1

SITE AREA .923 AC

PARKING PER SITE

TENANT	SQ. FT.	PARKING REQ'D.
RESTAURANT 1	2,100	8 (4 PER 1,000 S.F.)
RESTAURANT 2	1,700	7 (4 PER 1,000 S.F.)
LANDLORD ROOM	75	1 (1 PER 1,000 S.F.)
TOTAL	3,875	16 SPACES
TOTAL(ACTUAL)		52 SPACES



2 ENLARGED SITE PLAN - PROPOSED
SCALE: 1/16" = 1'-0"

1/16" = 1'-0"

450 E. Higgins Road . Suite 202
Elk Grove Village . IL 60007
P 847.952.9970
F 847.574.8075
www.jtsarch.com

JTS ARCHITECTS

IRC RETAIL CENTERS

MULTI-TENANT BUILDING
DOWNERS GROVE, IL 60515

DOWNERS GROVE MARKET - MULTI-TENANT BUILDING
42-76 OGDEN AVE. DOWNERS GROVE, IL 60515

RetailCenters

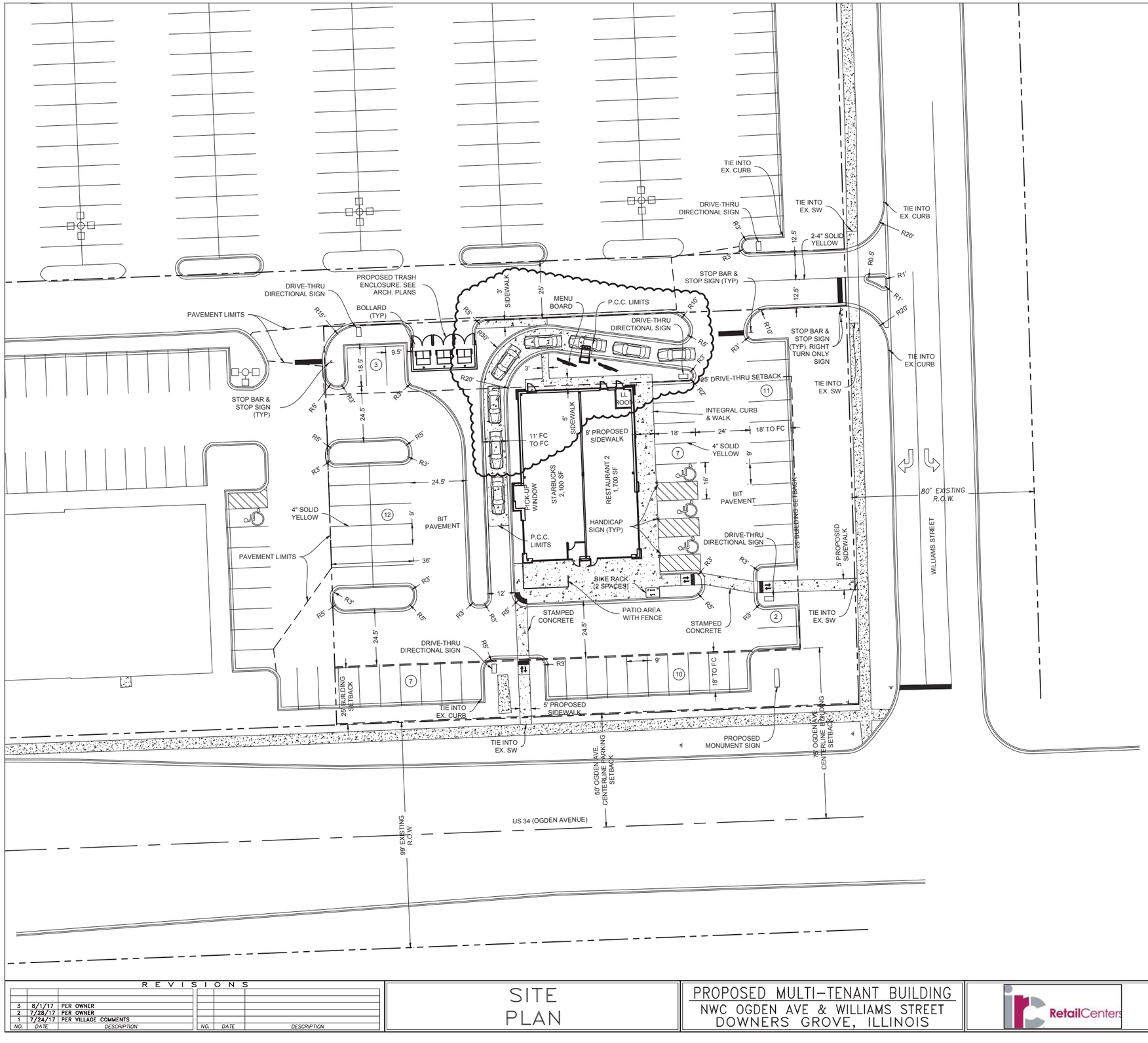
DATE	SUBMITTED FOR
7/25/17	PC VILLAGE REVIEW
8/1/17	PC RESUBMITTAL

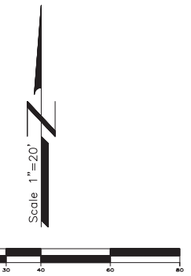
SHEET TITLE
SITE PLAN

DATE
07/06/2017

JOB NO.
2619.A

SHEET
AS1





SITE ANALYSIS

SITE

NW Corner of Ogden Avenue (US Route 34) & Williams Street
Downers Grove, IL

Proposed Use	Multi-Tenant Building with Drive Thru
Existing Zoning	B-3
Required Zoning	B-3
Parcel Area	39,050 sf 0.90 ± Acres
Building Area	2,100 sf Restaurant 1,700 sf Restaurant 75 sf Landlord Room
Max F.A.R.	0.75
Provided	0.10

SETBACKS

	Front Yard (Ogden Ave C.L.)	Rear Yard (B-3)	Interior Side Yard (B-3)	Side Yard (Williams St)
Building Setback	75'	0'	0'	25'
Provided	117.2'	31'	80.5'	93.3'

PARKING

Quantity Reqd	9 = 4 x 2,100/1,000	Restaurant (4 per 1,000 sf floor area)
	7= 4 x 1,700/1,000	Restaurant (4 per 1,000 sf floor area)
	8	Drive Thru (8 total stacking)
	1	Landlord Room (1 per 1,000 sf floor area)
	25 Required	
Provided	60 = 49 Standard + 3 ADA + 8 Stacking	
Stall Size Required	9' x 18' (Standard)	
Provided	9' x 18' (Standard), 16' x 18' (ADA)	
Driveway Width Minimum	24'	
Provided	24'	

LEGEND

PROPOSED CURB & GUTTER

EXISTING CURB & GUTTER

PROPERTY LINE

SETBACK LINE

SITE NOTES

1. ALL DIMENSIONS ARE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURB RADII ARE BACK OF CURB UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO STARTING WORK AND NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND.
4. SIDEWALK AROUND PERIMETER OF BUILDING SHALL BE WALK/PAVEMENT UNLESS OTHERWISE SPECIFIED ON PLANS.
5. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ALL EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION.
6. SEE DETAILS FOR BITUMINOUS AND CONCRETE PAVEMENT SECTIONS.
7. CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES DURING CONSTRUCTION OF ENTRANCE OF R.O.W. IN ACCORDANCE W/ ILLINOIS D.O.T. REQUIREMENTS.
8. ADA HANDICAP RAMPS SHALL BE INSTALLED AT ALL LOCATIONS DELINEATED ON PLANS AS WELL AS AT ALL LOCATIONS WHERE SIDEWALK ABUTS DRIVES OR ROADWAYS.
9. CONTRACTOR SHALL COMPARE ARCHITECTURAL AND ENGINEERING PLANS FOR INTERFACE COMPATIBILITY.
10. ALL CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED ON PLANS.
11. PAVEMENT STRIPING TO BE TRAFFIC YELLOW TWO COATS UNLESS OTHERWISE SPECIFIED ON PLANS.

SITE IMPERVIOUS

EXISTING IMPERVIOUS AREA = 32,151 SF
PROPOSED IMPERVIOUS AREA = 30,747 SF
NET IMPERIOUS = 1,404 SF

REVISIONS

NO.	DATE	DESCRIPTION
3	8/1/17	PER OWNER
2	7/28/17	PER OWNER
1	7/24/17	PER VILLAGE COMMENTS

SITE PLAN

PROPOSED MULTI-TENANT BUILDING
NWC OGDEN AVE & WILLIAMS STREET
DOWNERS GROVE, ILLINOIS

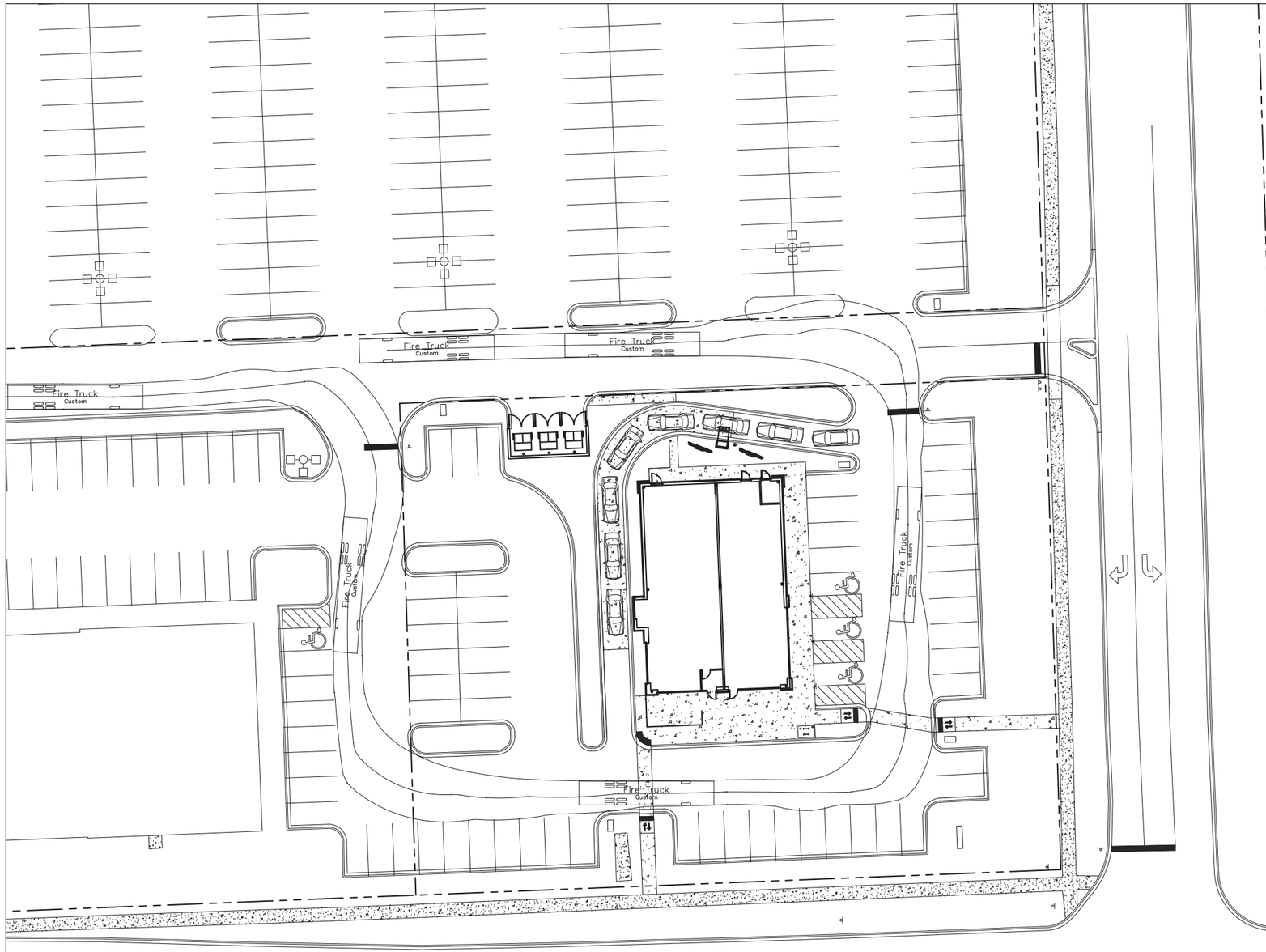
RetailCenters

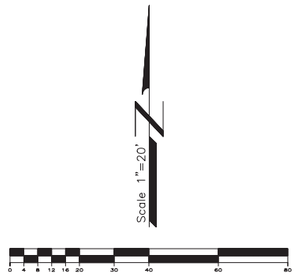
Craig R. Knoche & Associates, Civil Engineers, P.C. • Civil Engineers • Surveyors • Land Planners
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

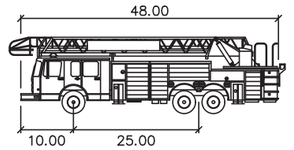
DATE: 7/6/17
FILE: 17-031 C10
JOB NO: 17-031

C1.1
SHEET NO.

PROPOSED MULTI-TENANT BUILDING
DOWNERS GROVE, ILLINOIS







Fire Truck feet

Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 45.0

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

TURNING EXHIBIT

PROPOSED MULTI-TENANT BUILDING
NWC OGDEN AVE & WILLIAMS STREET
DOWNERS GROVE, ILLINOIS

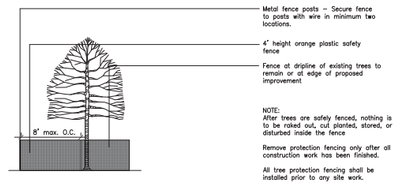
RetailCenters

Craig R. Knoche & Associates, Civil Engineers, P.C.
• Civil Engineers • Surveyors • Land Planners
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

DATE: 7/24/17
FILE: 17-031 C10
JOB NO: 17-031

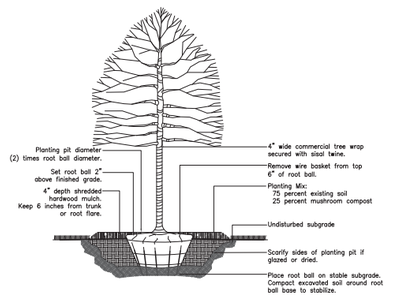
C1.2
SHEET NO.

PROPOSED MULTI-TENANT BUILDING DOWNERS GROVE, ILLINOIS



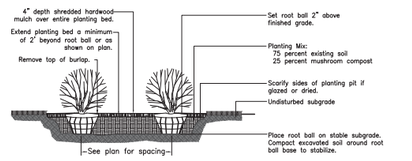
Detail

Tree Protection Fencing



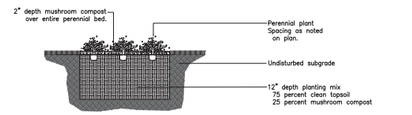
Detail

Deciduous Tree Planting



Detail

Shrub Planting



Detail

Perennial Planting

Plant List

Shade Trees

Key	Qty.	Size	Botanical Name	Common Name	Remarks
CEO	4	2.5"	Celtis occidentalis 'Prairie Pride'	Prairie Pride Common Hackberry	BB
GPS	3	2.5"	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	BB
GTS	3	2.5"	Gleditsia triacanthos var. inermis 'Skyline'	Skyline Thornless Honeylocust	BB

Ornamental Trees

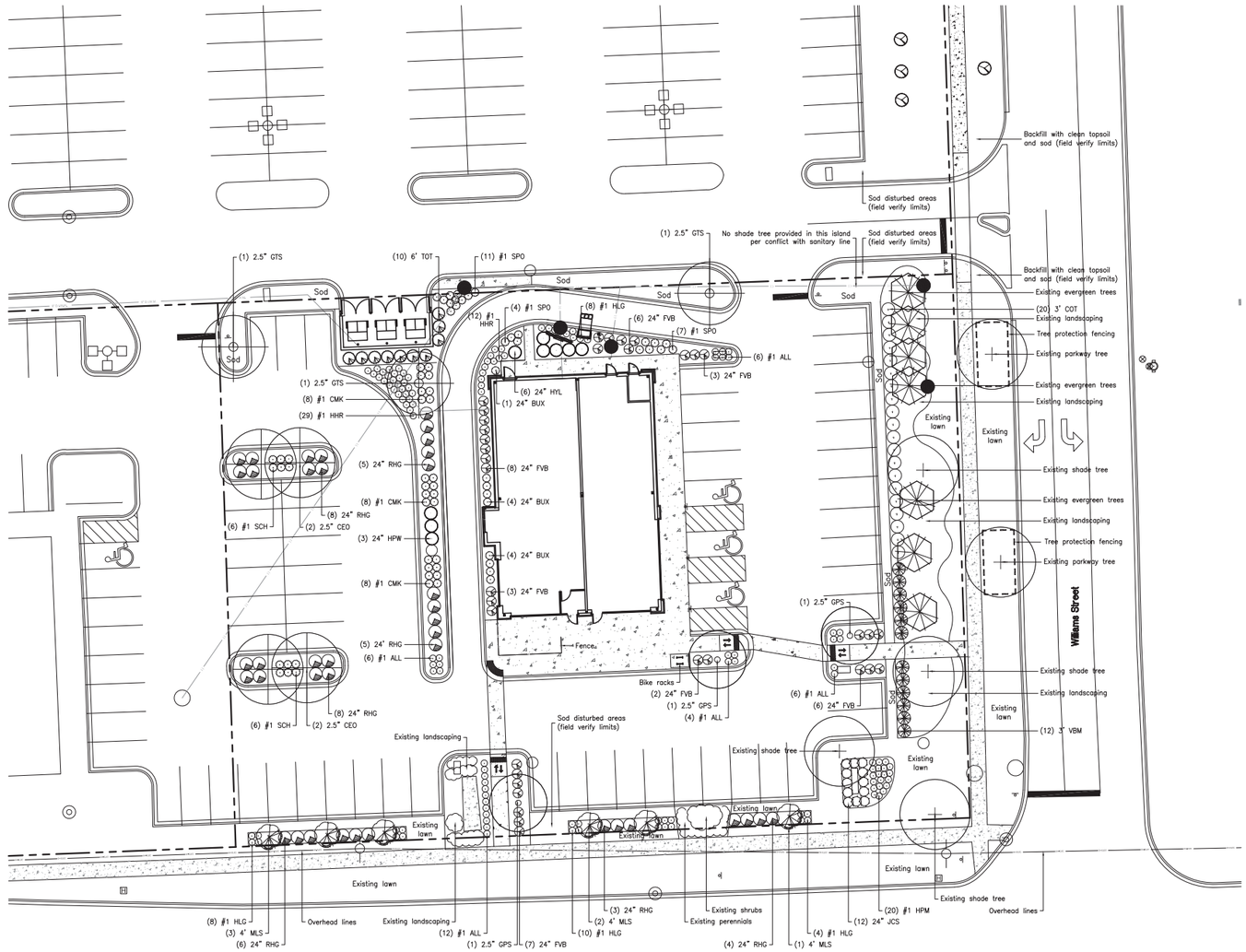
Key	Qty.	Size	Botanical Name	Common Name	Remarks
MLS	6	4'	Malus sargentii	Sargent Crabapple	BB/Clump

Shrubs

Key	Qty.	Size	Botanical Name	Common Name	Remarks
BUX	9	24"	Buxus x microphylla 'Glencoe'	Chicagoland Green Boxwood	BB
COT	20	3'	Cotoneaster acutifolius	Peking Cotoneaster	BB
FVB	35	24"	Forsythia viridissima 'Bronxensis'	Bronx Dwarf Forsythia	BB
HPW	3	24"	Hydrangea paniculata 'Pinky Winky'	Pinky Winky Hydrangea	BB
HYL	6	24"	Hydrangea paniculata 'Limelight'	Limelight Hydrangea	BB
JCS	12	24"	Juniperus chinensis var. sargentii	Sargent Juniper	BB
RHG	39	24"	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	BB
TOT	10	6'	Thuja occidentalis 'Technyi'	Mission Arborvitae	BB
VBM	12	3'	Viburnum dentatum 'Christom'	Blue Muffin Arrowwood Viburnum	BB

Perennials and Ornamental Grasses

Key	Qty.	Size	Botanical Name	Common Name	Remarks
ALL	34	#1	Allium 'Summer Beauty'	Summer Beauty Allium	Container
CMK	24	#1	Calamagrostis acutiflora 'Karl Foerster'	Feather Reed Grass	Container
HHR	41	#1	Hemerocallis 'Happy Returns'	Happy Returns Daylily	Container
HLG	30	#1	Hemerocallis 'Little Grapette'	Little Grapette Daylily	Container
HPM	20	#1	Hemerocallis 'Pardon Me'	Pardon Me Daylily	Container
SCH	12	#1	Schizachyrium scoparium	Little Bluestem	Container
SPO	22	#1	Sporobolus heterolepis	Prairie Dropseed	Container



Landscaped Open Space Calculations

Lot 1

Total lot area:	8.28 acres (360,634 sq. ft.)
Total landscape area:	46,671 sq. ft. or 12.94% of total lot area
Total street yard landscape area:	32,263 sq. ft. or 69.13% of total landscape area

Lot 3

Total lot area:	0.90 acres (39,052 sq. ft.)
Total landscape area:	9947 sq. ft. or 25.5% of total lot area
Total street yard landscape area:	5664 sq. ft. or 56.94% of total landscape area

Downers Grove Market

Downers Grove, Illinois

DAVID R. McCALLUM ASSOCIATES, INC.
LANDSCAPE ARCHITECTS
350 N. Milwaukee Avenue | Libertyville, Illinois 60048
T 8473622029 | F 8473622214

McCALLUM ASSOCIATES

Landscape Plan

Mark	Description	Date
4	Site Plan Revision	08.01.17
3	Site Plan Revision	07.28.17
2	Per Village Comments	07.24.17
1	For Review	07.05.17

Issuance

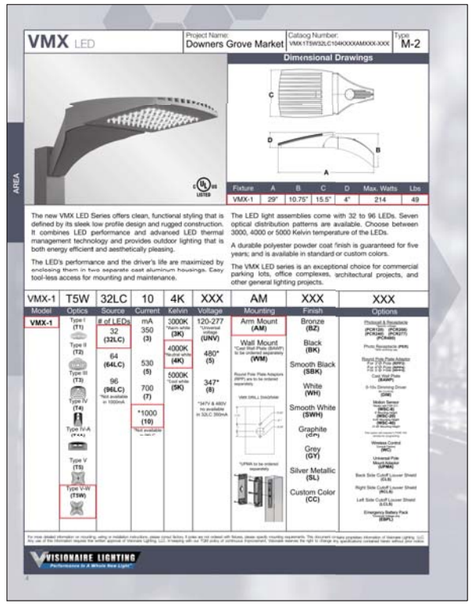
Number
468617

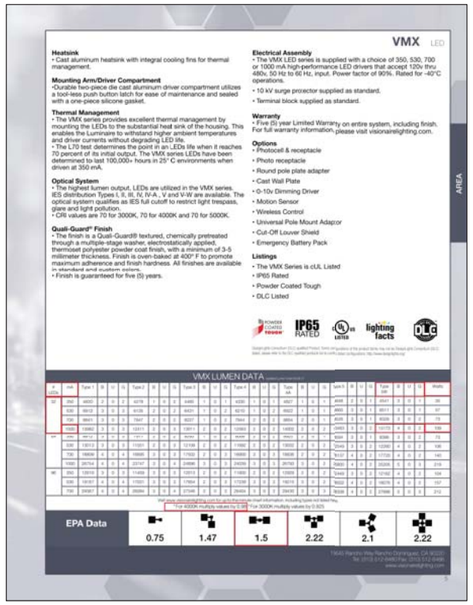
Scale
1" = 20'

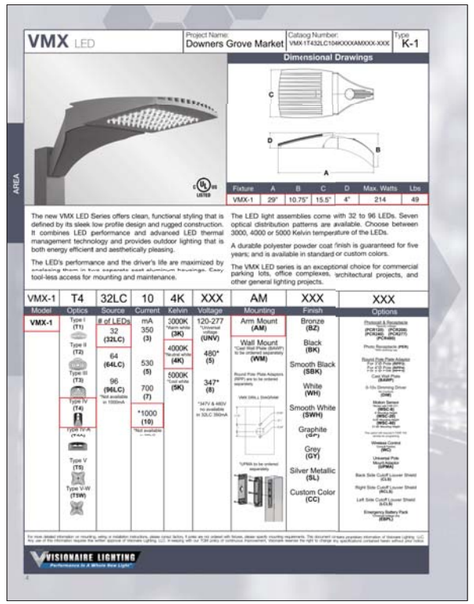
North

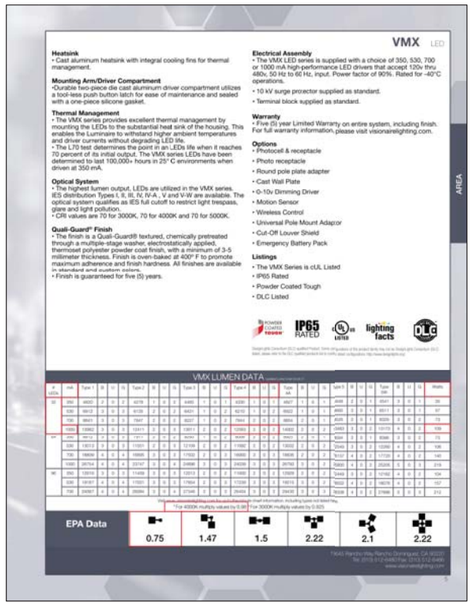
File
4686FP4A

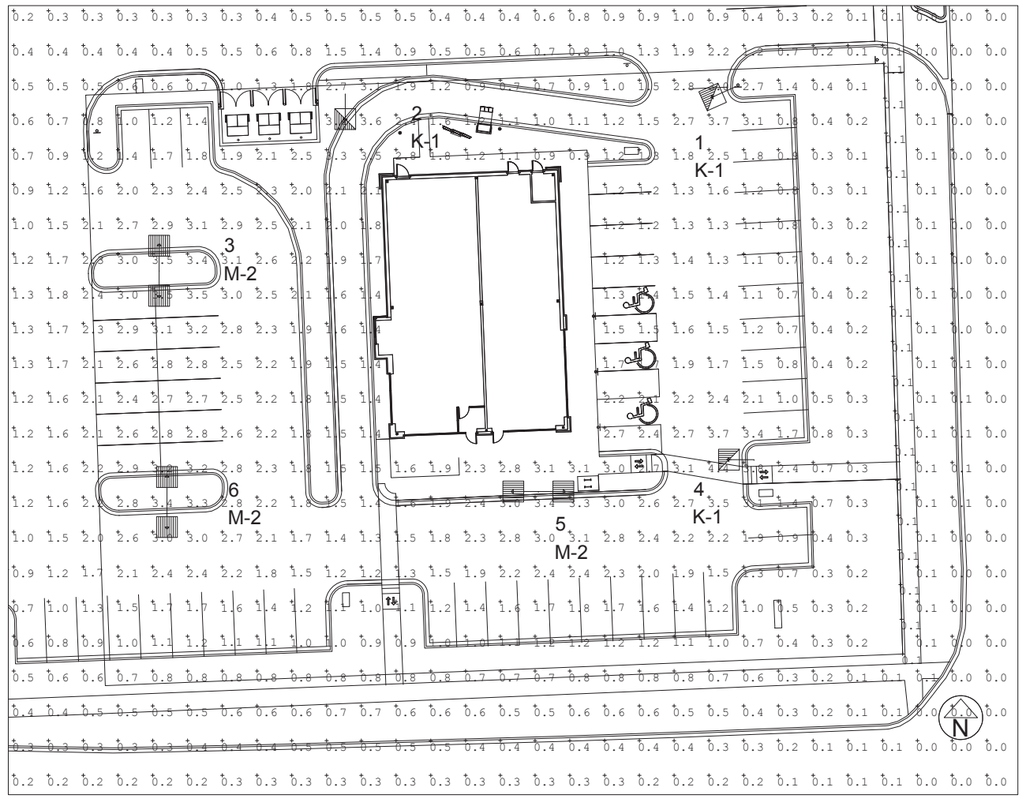
Sheet
L1.0









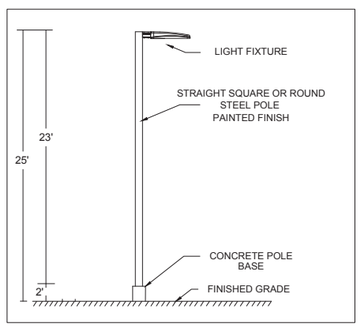


1 LED PHOTOMETRIC PLAN
SCALE: 1" = 20'-0"

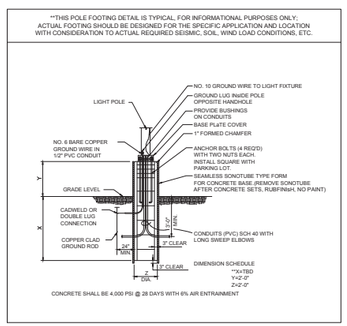
0' 20' 40'

Luminaire Schedule							
Symbol	Qty	Label	Arranged	TLL	LLF	Description	BUG Rating
	3	M-2	BACK-BACK	N.A.	0.80	New Fixt 109W LED T5W 25' Mtg Ht (4000K/32 LED's/12910 Lumens/1000mA) Visionaire VMX-1-T5W-32LC-10-4K-XXX	B4-U0-G2
	3	K-1	SINGLE	N.A.	0.80	New Fixt 109W LED T4 25' Mtg Ht (4000K/32 LED's/12311 Lumens/1000mA) Visionaire VMX-1-T4-32LC-10-4K-XXX	B2-U0-G2

Calculation Summary						
Label	Avg	Max	Min	Avg/Min	Max/Min	# Pts
East Property Line	0.10	0.1	0.1	1.00	1.00	18
Site	0.12	4.4	0.0	N.A.	N.A.	6516
General Parking Area	2.07	4.4	0.7	2.96	6.29	185



2 POLE DETAIL TYP.
SCALE: NTS



3 LIGHT POLE BASE DETAIL TYP.
SCALE: NTS

BASED ON THE INFORMATION PROVIDED. ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT **MUST** DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.

THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER THE CONTROLLED CONDITIONS UTILIZING CURRENT INDUSTRY STANDARD LAMP RATINGS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

FOR ADDITIONAL LIGHTING INFORMATION CONTACT:

On-Site Lighting & Survey, LLC
PH: 763.684.1548

On-Site Lighting & Survey, LLC
1111 HIGHWAY 25 NORTH
SUITE 201
BUFFALO MN 55313
PH:763.684.1548
FAX:763.682.9048

KNOCHE & ASSOCIATES PC

24 NORTH BENNETT STREET
GENEVA. IL. 60134
PH:630.845.1270

PROJECT INFO: DOWNERS GROVE MARKET, MULTI-TENANT BUILDING
NAPERVILLE. ILLINOIS

ENGINEER INFO:

ENGINEER SEAL:

REVISIONS

#	DATE	INIT	DESCRIPTION
1	07.21.2017	NM	FIXTURE RESELECTION
2	07.28.2017	NM	NEW SITE PLAN
3	08.01.2017	NM	NEW SITE PLAN

SHEET DESCRIPTION: LED PHOTOMETRIC PLAN

PROJECT #: KE7170703

ISSUE DATE: 07.03.2017

DESIGN LEVEL: NA

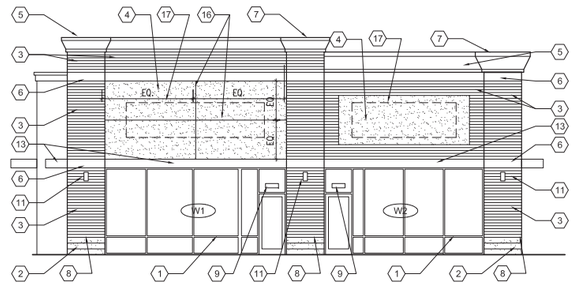
AGI: N.MOLENDA

CAD: J.MACKEY

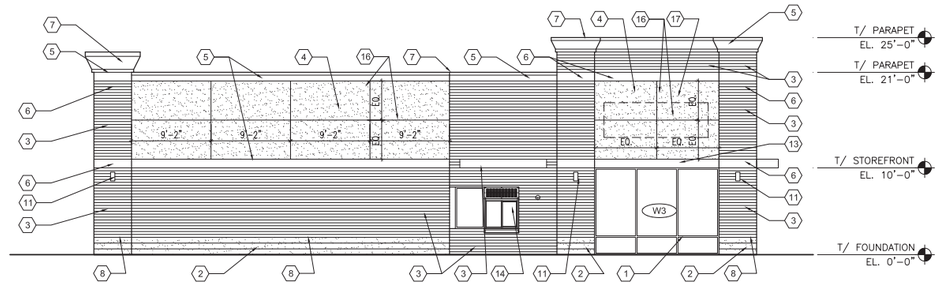
SHEET#: SL3.0 REV#: 3

EXTERIOR ELEVATION KEYNOTES

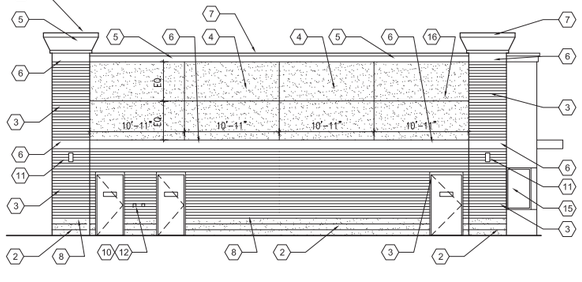
1. 4 ½" ALUMINUM STOREFRONT SYSTEM W/ CLEAR 1" INSULATED GLAZING (NON-TINTED, NON-REFLECTIVE) DARK BRONZE FINISH
2. SPLIT-FACE STONE (TO MATCH NEIGHBORING CENTER)
3. BRICK (TO MATCH NEIGHBORING CENTER)
4. EIFS - SANDPEBBLE FINE - STO OR EQUAL
5. EIFS CORNICE - SANDPEBBLE FINE - STO OR EQUAL
6. EIFS BAND - SANDPEBBLE FINE - STO OR EQUAL
7. PRE-FINISHED ALUMINUM COPING- DARK BRONZE - PAC-CLAD OR EQUAL
8. STONE SILL
9. PROVIDE BUILDING ADDRESS ABOVE FRONT ENTRY DOOR & ON REAR ACCESS DOOR, TYPICAL ALL DOORS. PROVIDE LETTERING FOR SPRINKLER ROOM AND FIRE ALARM PANEL ON DOOR TO LANDLORD ROOM
10. LANDLORD KEY BOX - MASTERLOCK 5423D (MOUNTED @ 42" A.F.F.)
11. EXTERIOR WALL SCONCES MOUNTED AT 9'-0" AFF TO CENTER OF J-BOX
12. KNOX BOX AT LL ROOM - 3200 SERIES - VERIFY WITH FIRE CHIEF (MOUNTED @ 42" A.F.F.)
13. CANTILEVERED METAL CANOPY
14. DRIVE-THRU WINDOW & FLY FAN
15. SIDELIGHT WINDOW AT 3'-0" AFF @ DRIVE-THRU
16. EIFS REVEAL - SEE WALL SECTION FOR DETAIL
17. FRT ⅝" PLYWOOD SHEATHING IN LIEU OF EXT. GYP. BD. AND CENTERED JUNCTION BOX BEHIND ALL SIGN BOARD AREAS.



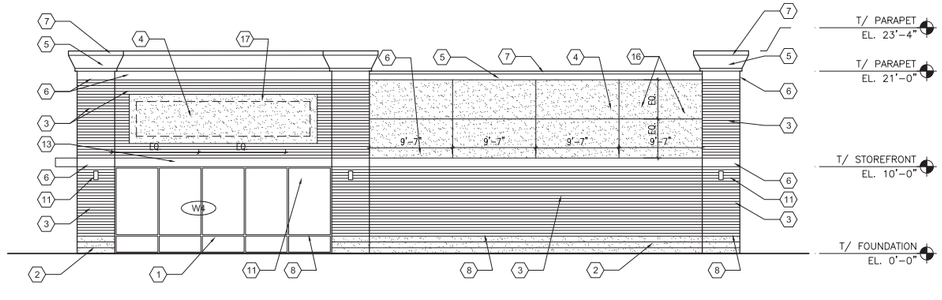
1 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



4 EAST ELEVATION
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

1/8" = 1'-0"

5 STOREFRONT ELEVATIONS
SCALE: 1/4" = 1'-0"

GLAZING

G1 1" LOW E GLASS (CLEAR) FULLY TEMPERED MAX U-VALUE: 0.38

G2 1" LOW E GLASS (CLEAR) MAX U-VALUE: 0.38

450 E. Higgins Road . Suite 202
Elk Grove Village . IL 60007
P 847.952.9970
F 847.574.8075
www.jtsarch.com

JTS ARCHITECTS

IRC RETAIL CENTERS

DOWNERS GROVE MARKET - MULTI-TENANT BUILDING
42-76 OGDEN AVE. DOWNERS GROVE, IL 60515

RetailCenters

DATE	SUBMITTED FOR
7/25/17	PC VILLAGE REVIEW
8/1/17	PC RESUBMITTAL

SHEET TITLE

ELEVATIONS

DATE
07/06/2017

JOB NO.
2619.A

SHEET
A4.0

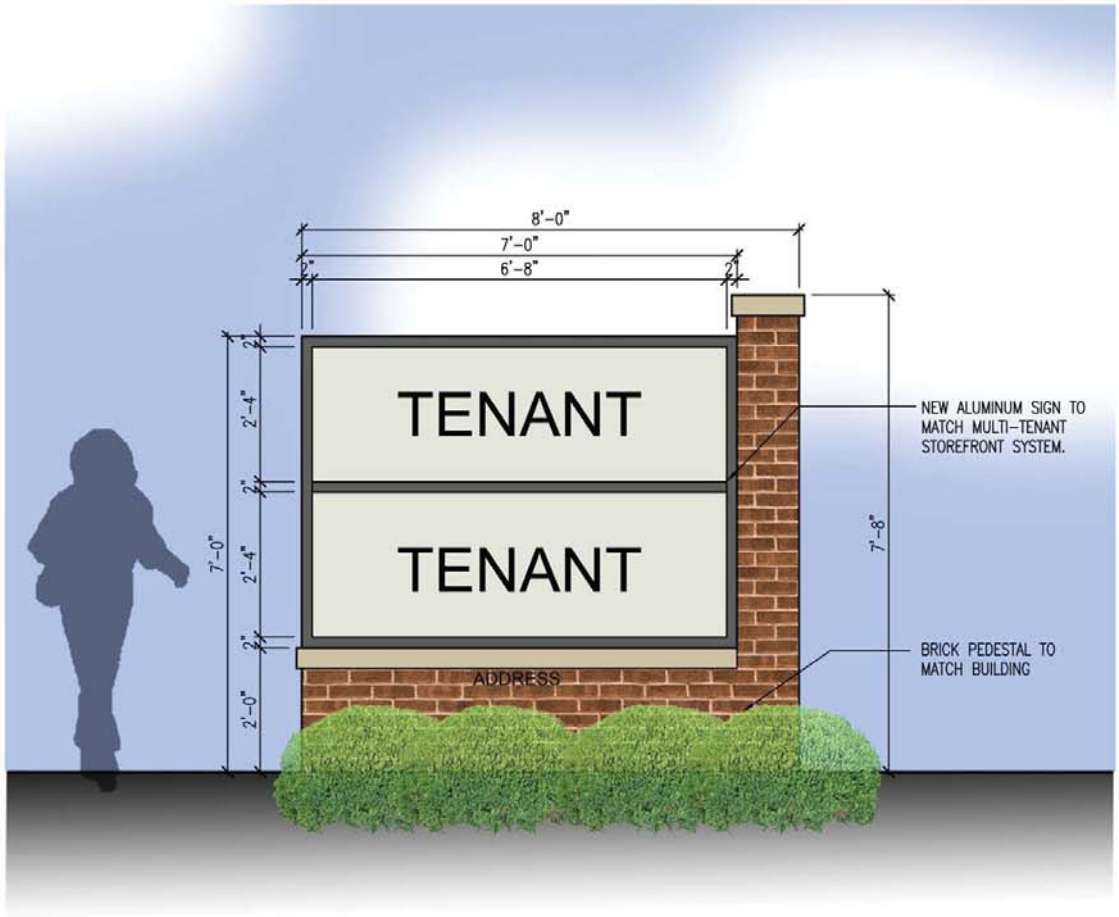
South

West

North

East

JTS ARCHITECTS



JTS ARCHITECTS

RetailCenters

July 17, 2017

Mr. & Mrs. Mack and Evelyn Johnson
4121 N Williams
Downers Grove IL 60515

Re: Development of Starbuck's with a Drive Thru

Dear Mr. & Mrs. Johnson:

I would like to meet with you to discuss the project we have "on the board" being evaluated with respect to development for an out parcel with a small building fronting up towards Ogden (in front of Caputo's) and will have a Drive-thru added for Starbuck's Coffee. They would propose moving from the existing building to the new little building we anticipate creating.

Please contact me at 630-451-8559 and I will arrange meeting you at your house or at the Starbuck's so I can go over the plan with you.

(See enclosed plan and I would like to address adding some landscaping to your front yard to shield any exiting cars coming from Starbuck's onto Williams Street.)

I look forward to hearing from you.

Best,

Pam Sullins

Pam Sullins
Assistant Vice President
Director of Project Development

IRC Retail Centers
814 Commerce Drive, Suite 300
Oak Brook, Illinois 60523
(d) 630.451.8559
(p) 877.206.5656
(f) 630.812.7999
sullins@ircretailcenters.com
www.ircretailcenters.com

Twitter | Linkedin | Facebook

Focused on Retail. Centered on Value.

RetailCenters

July 17, 2017

Mr. Lance Lencioni
4123 N Williams
Downers Grove IL 60515

Re: Development of Starbuck's with a Drive Thru

Dear Mr. Lencioni:

I would like to meet with you to discuss the project we have "on the board" being evaluated with respect to development for an out parcel with a small building fronting up towards Ogden (in front of Caputo's) and will have a Drive-thru added for Starbuck's Coffee. They would propose moving from the existing building to the new little building we anticipate creating.

Please contact me at 630-451-8559 and I will arrange meeting you at your house or at the Starbuck's so I can go over the plan with you.

(See enclosed plan and I would like to address adding some landscaping to your front yard to shield any exiting cars coming from Starbuck's onto Williams Street.)

I look forward to hearing from you.

Best,

Pam Sullins
Assistant Vice President
Director of Project Development

IRC Retail Centers
814 Commerce Drive, Suite 300
Oak Brook, Illinois 60523
(d) 630.451.8559
(p) 877.206.5656
(f) 630.812.7999
sullins@ircretailcenters.com
www.ircretailcenters.com

Twitter | Linkedin | Facebook

Focused on Retail. Centered on Value.

Starbuck's Drive-thru Survey		
338 Randall Rd., South Elgin, IL		
Wednesday, June 20, 2012		
Time	All cars	Max Que
6:30 AM	15	3
6:45	18	6
7:00	15	7
7:15	13	4
7:30	20	7
7:45	19	8
8:00	17	7
8:15	15	5
8:30	18	8
8:45	12	5
9:00	9	4
9:15	11	5

Peak hour - 7:30-8:30AM with 71cars

Car # 1 at window, car # 3 at speaker.

Starbuck's Drive-thru Survey		
2071 Barrington Rd., Hoffman Est., IL		
Thursday, June 21, 2012		
Time	All cars	Max Que
6:30 AM	15	3
6:45	18	3
7:00	23	9
7:15	17	7
7:30	23	8
7:45	19	9
8:00	20	11
8:15	17	6
8:30	20	7
8:45	15	5
9:00	7	3
9:15	13	5

Peak hour - 7:00-8:00AM with 82 cars

Car # 1at window, car # 4 or 5 at speaker.

Starbuck's Drive-thru Survey		
775 S. Rand Rd., Lake Zurich, IL		
Wednesday, June 20, 2012		
Time	All cars	Max Que
6:30 AM	5	3
6:45	14	5
7:00	17	5
7:15	18	6
7:30	11	4
7:45	15	4
8:00	14	4
8:15	12	3
8:30	15	3
8:45	11	3
9:00	14	6
9:15	15	6

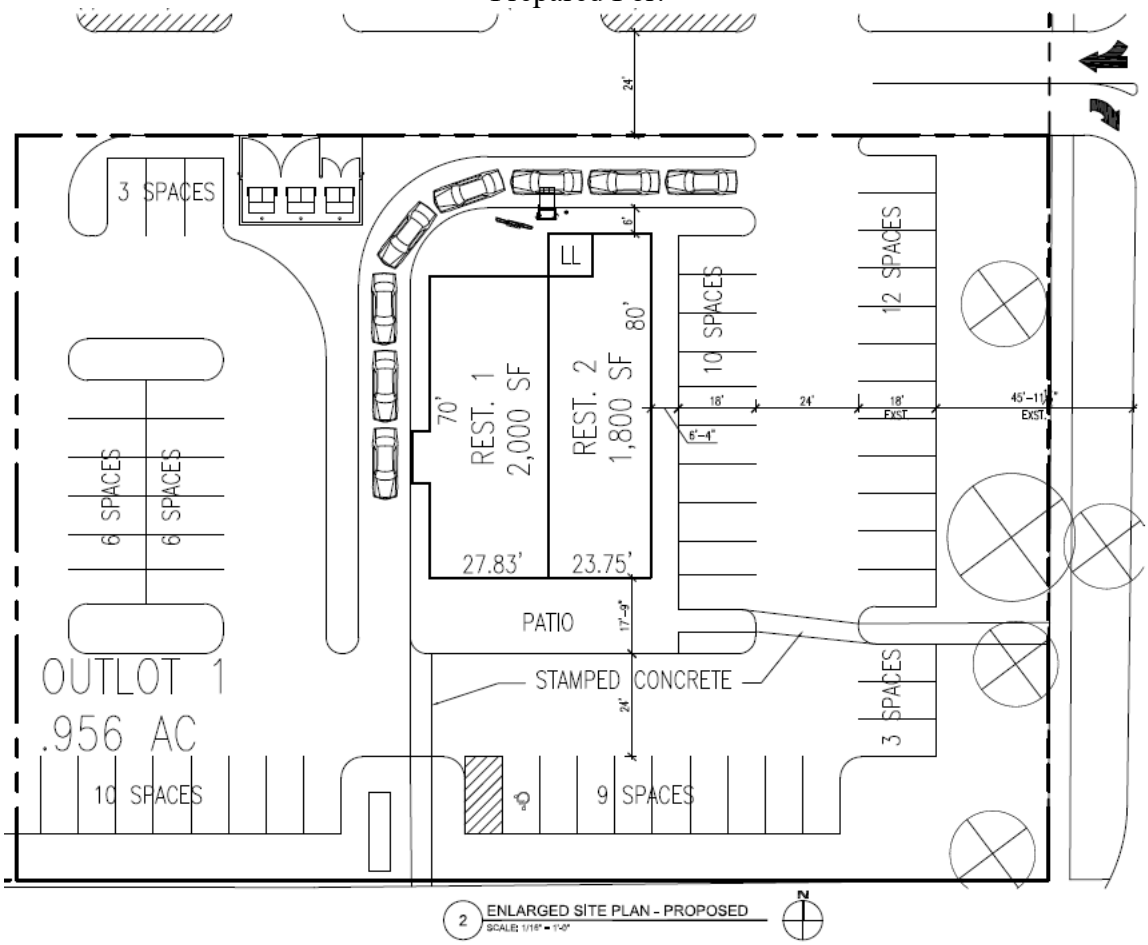
Peak hour - 7:00-8:00AM with 61 cars

Car # 1 at window, car # 5 at speaker.

Average for three sites. (Max Que)
3
5
7
6
6
7
7
5
6
4
4
5

Traffic Impact Study
Proposed Out Lot Development
Downers Grove, Illinois

Prepared For:



Prepared By:

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

July 5, 2017 – Revised July 24, 2017

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 development of an outlot parcel within the Downers Grove Market shopping center. As proposed, the existing southwest corner of the parking lot will be developed with an outlot containing a Starbucks drive-through coffee shop and a fast casual restaurant. Access to the development will continue to be provided via the existing access drives serving the center and via a new right-in/right-out/left-in only access drive on Williams Street.

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 traffic control improvements are necessary to accommodate future traffic conditions.

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 expansion
- Directional distribution of the proposed expansion traffic
- Vehicle trip generation for the proposed expansion
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, evening and Saturday midday 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 weekday evening peak hours for the following conditions:

1. Existing Conditions - Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Future Conditions - The future projected traffic volumes include the existing traffic volumes increased by an ambient area growth factor (growth not attributable to any particular development) and the traffic estimated to be generated by the proposed subject 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 Downers Grove Market shopping center is located in the northwest quadrant of the intersection of Ogden Avenue with Williams Street and the proposed outlot will be located on the southeast corner of the shopping center. Adjacent land uses include single-family homes to the north and east of the shopping center, the Downers Plaza shopping center to the west and general retail uses to the south.

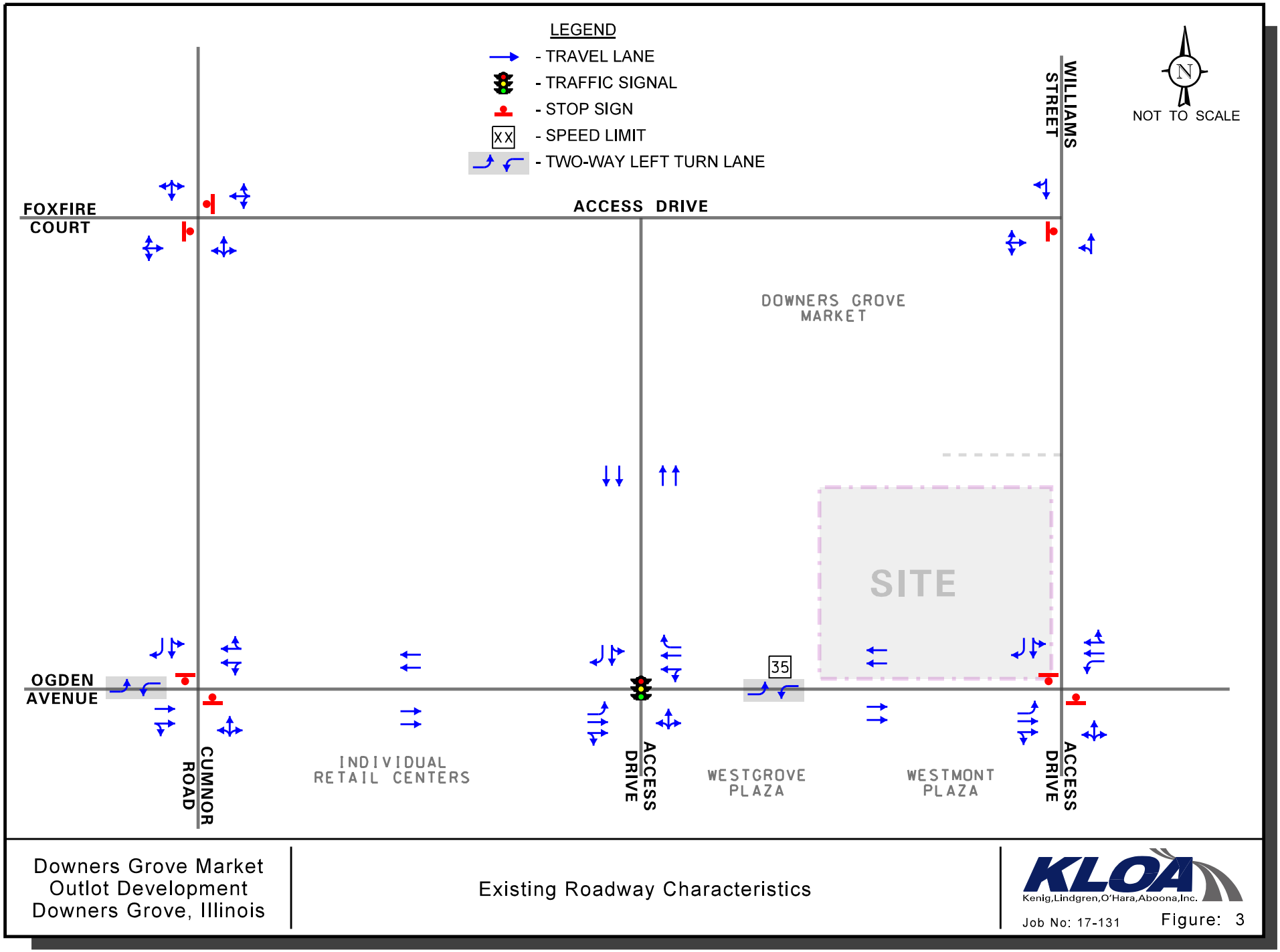
The Downers Grove Market shopping center is comprised of a large building anchored by a Caputo's Fresh Market grocery store and an outlot parcel that contains a Starbucks coffee shop and other retail uses. As part of the proposed development, the existing Starbucks coffee shop will relocate to the proposed outlot parcel.

Existing Roadway System Characteristics

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

Ogden Avenue (U.S. Route 34) is an east-west major arterial roadway that in the vicinity of the site provides two lanes in each direction generally divided by a two-way left-turn lane. At its signalized intersection with Downers Grove Market/Downers Plaza access drive, Ogden Avenue provides an exclusive left-turn lane, a through lane and a combined thorough/right-turn lane in the eastbound approach. The westbound approach provides an exclusive right-turn lane, a through lane and a combined through/left-turn lane. At its unsignalized intersection with Williams Street, Ogden Avenue provides a two-way left-turn lane, a through lane and a combined through/right-turn lane on both approaches. Ogden Avenue is under the jurisdiction of the Illinois Department of Transportation (IDOT), carries an annual average daily traffic (AADT) volume of approximately 32,500 vehicles (IDOT AADT 2016), and has a posted speed limit of 45 miles per hour.

Cumnor Road is a north-south two-lane collector roadway that runs along the west side of the Downers Plaza shopping center. At its unsignalized intersection with the Downers Plaza access drive/Foxfire Court, Cumnor Road provides a combined left/through/right-turn lane on both approaches. Cumnor Road is under the jurisdiction of the Village of Downers Grove, carries an AADT volume of 1,350 vehicles (IDOT AADT 2016), and has a posted speed limit of 25 miles per hour.



Downers Grove Market
Outlot Development
Downers Grove, Illinois

Existing Roadway Characteristics

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

Job No: 17-131 Figure: 3

Williams Street is a north-south two-lane local road that runs along the east side of the Downers Grove Market shopping center. At its unsignalized intersection with Ogden Avenue, Williams Street is widened to provide one inbound lane and two outbound lanes striped for an exclusive left-turn lane and an exclusive right-turn lane. At its unsignalized intersection with the Downers Grove Market access drive, Williams Street provides a combined through/left-turn lane on the northbound approach and a combined through/right-turn lane on the southbound approach. On-street parking is not allowed on either side of the road. Williams Street is under the jurisdiction of the Village of Downers Grove, and has a posted speed limit of 25 miles per hour.

Downers Gove Market/Downers Plaza Access Drive is a north-south drive that provides two inbound lane and two outbound lanes divided by a raised landscaped median. At its signalized intersection with Ogden Avenue, it provides an exclusive right-turn lane and a combined through/left-turn lane on the southbound approach. The northbound approach is the access drive for the Westmont Vision Center and provides a combined left/through/right-turn lane.

Foxfire Court is an east-west local road serving a townhome development west of the Downers Plaza. Foxfire Court is located opposite the Downers Plaza access drive. At its unsignalized intersection with Cumnor Road, Foxfire Court and the Downers Plaza access drive provide a combined left/through/right-turn lane.

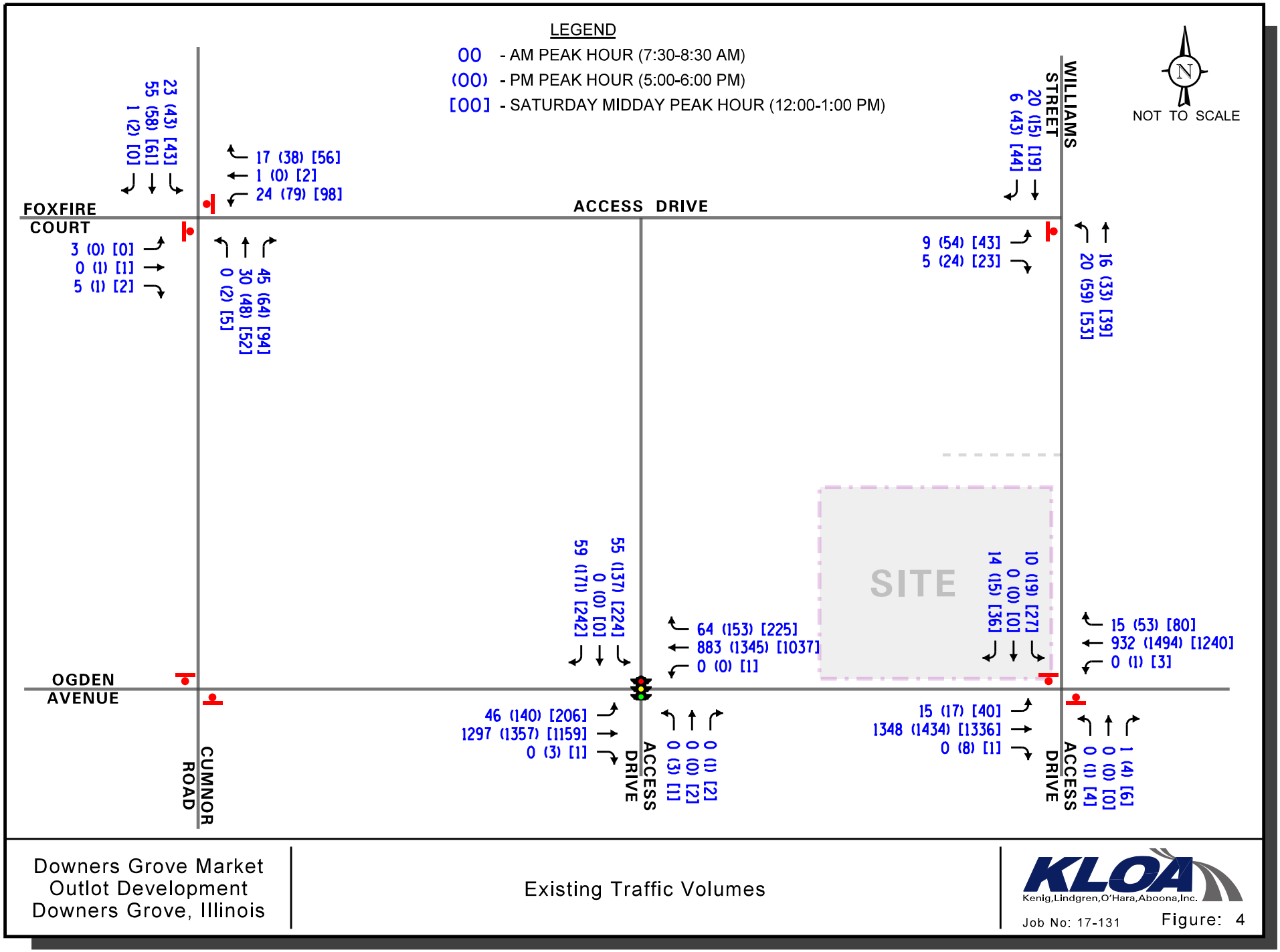
Downers Grove Market Access Drive is an east-west drive that serves the Downers Grove Market shopping center. At its unsignalized intersection with Williams Street, the access drive provides one inbound lane and one outbound lane under stop sign control. The access drive has a posted speed limit of 20 mph.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units on Saturday, June 17, 2017 during the midday (12:00 P.M. to 2:00 P.M.) and on Tuesday, June 20, 2017 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Ogden Avenue with Williams Street
- Ogden Avenue with Downers Grove Market Access Drive
- Cumnor Road with Foxfire Court and Downers Grove Market Access Drive
- Williams Street with Downers Grove Market access drive (Thursday June 22 and Saturday June 24)

The results of the traffic counts showed that the weekday morning peak hour occurs from 7:30 to 8:30 A.M., the weekday evening peak hour from 5:00 to 6:00 P.M. and the Saturday midday peak hour from 12:00 to 1:00 P.M. **Figure 4** illustrates the existing peak hour traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.



Downers Grove Market
Outlot Development
Downers Grove, Illinois

Existing Traffic Volumes

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

Job No: 17-131 Figure: 4

Crash Data

KLOA, Inc. obtained crash data for the most recent five years available (2011 to 2015) for the intersections of Ogden Avenue and Downers Grove Market/Downers Plaza Access Drive, Ogden Avenue and Williams Street, and Cumnor Road with Downers Plaza Access Dive/Foxfire Court. The crash data for the intersections are summarized in **Tables 1** through **3**, respectively. A review of the crash data indicated that no accidents occurred at the intersection of Williams Street and Downers Grove Market Access Drive. Additionally, the review revealed no fatal accidents at any of the intersections included in the study.

Table 1
CRASH DATA SUMMARY – OGDEN AVENUE WITH DOWNERS GROVE MARKET ACCESS DRIVE

	Type of Accident Frequency						
Year	**Angle**	**Object**	**Rear End**	**Sideswipe**	**Turning**	**Other**	**Total**
2011	0	0	1	0	1	0	2
2012	0	0	2	0	3	1	6
2013	1	0	2	1	1	0	6
2014	0	0	1	0	3	0	4
2015	0	0	1	0	2	0	3
Total	**1**	**0**	**7**	**1**	**10**	**1**	**20**
Average/Year	**<1**	**0**	**1.4**	**< <1**	**2**	**<1**	**4**

Table 2
CRASH DATA SUMMARY – OGDEN AVENUE WITH WILLIAMS STREET

Year	Type of Accident Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2011	0	0	1	0	0	0	1
2012	1	0	2	0	0	0	3
2013	1	0	1	0	1	0	3
2014	0	0	4	1	3	0	8
2015	0	0	4	0	0	0	4
Total	**2**	**0**	**12**	**1**	**4**	**0**	**19**
Average/Year	**<1**	**<1**	**2.4**	**<1**	**< 1**	**0**	**3.8**

Table 3
CRASH DATA SUMMARY – CUMNOR ROAD WITH DOWNERS GROVE MARKET ACESS DRIVE

Year	Type of Accident Frequency						
	Angle	Object	Rear End	Sideswipe	Turning	Other	Total
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0
2014	0	0	0	0	1	0	1
2015	0	0	0	0	1	0	1
Total	0	0	0	0	2	0	2
Average/Year	0	0	0	0	<1	0	< 1

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 Development Plan

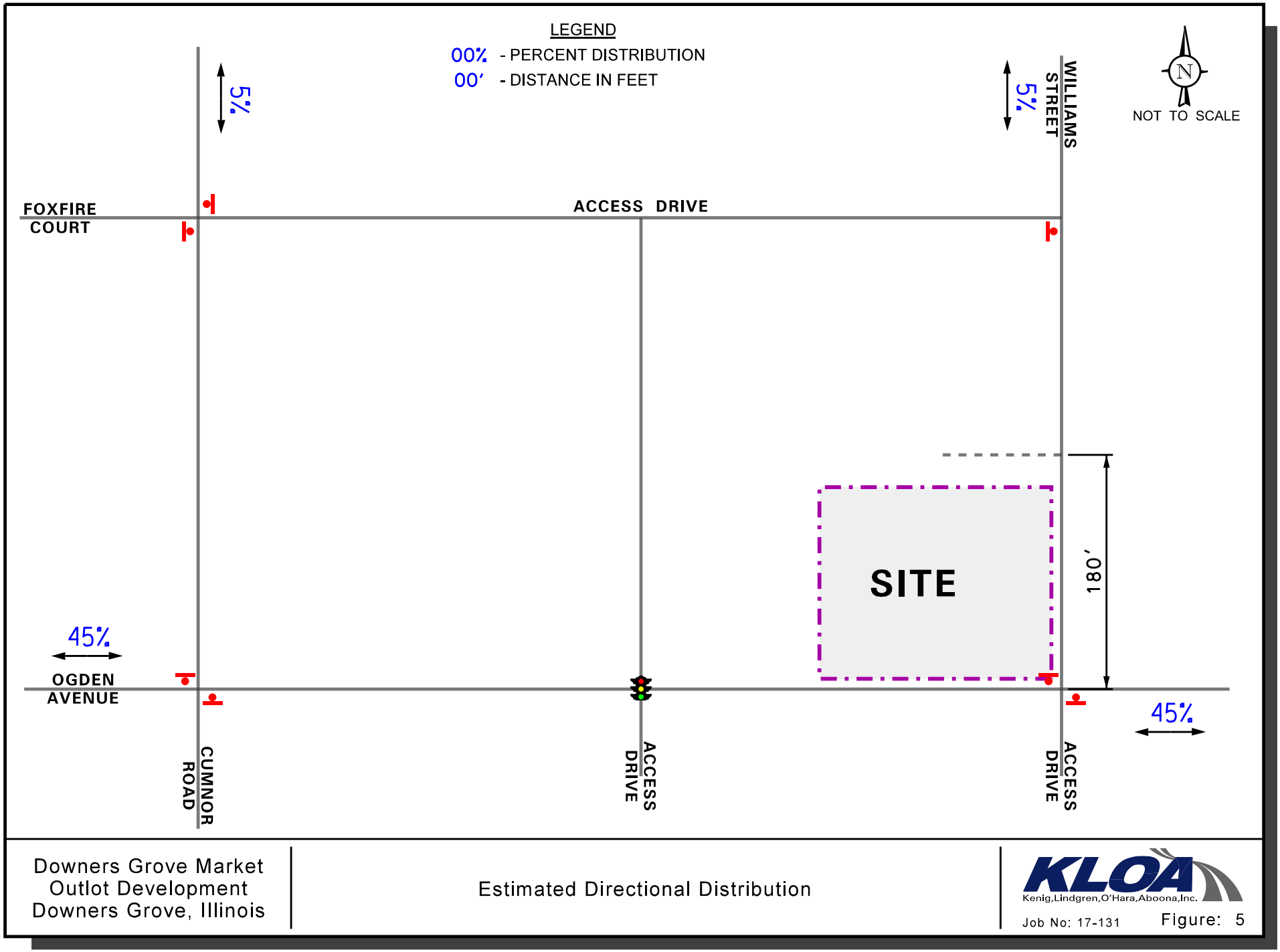
As proposed, the southeast corner of the Downers Grove Market shopping center will be developed to contain a 2,000 square-foot Starbucks coffee shop with drive through, and a 1,800 square foot fast casual restaurant. Access to the development will continue to be provided via the existing access drives serving the shopping center and via a proposed right-in/right-out/left-in access drive on Williams Street. The proposed access drive will be located approximately 180 feet north of the Williams Street stop bar with Ogden Avenue. Outbound movements from the proposed access drive should be under stop sign control.

Directional Distribution

The directions from which patrons and employees 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 directional distribution of the development-generated traffic.

Existing and Projected Site Traffic Generation

The estimated traffic projected to be generated by the proposed development are based upon the proposed land use type and size. The volume of traffic to be generated by the proposed outlot development was estimated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 9th Edition. **Table 4** summarizes the estimated traffic to be generated by the proposed development. It should be noted that surveys conducted by ITE have shown that a considerable number of trips made to coffee shops are diverted from the existing traffic on the area roadways. This is particularly true during the weekday morning and evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. Such diverted trips are referred to as pass-by traffic. These surveys indicate that an average of 89 percent of the peak hour trips generated by a coffee shop are diverted from existing traffic on the adjacent roads. However, in order to provide a conservative (worst-case) analysis, a pass-by reduction of only 70 percent was applied to the coffee shop-generated traffic volumes. No pass-by reduction was applied to the fast casual restaurant.



Downers Grove Market
Outlot Development
Downers Grove, Illinois

Estimated Directional Distribution

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

Job No: 17-131 Figure: 5

Table 4
SITE GENERATED PEAK-HOUR TRAFFIC VOLUMES

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Midday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Fast Causal Restaurant[1] (1,800 s.f.)	--	--	--	20	16	36	24	25	49
Coffee Shop with Drive-Through Window (2,000 s.f.)	103	98	201	43	43	86	84	85	169
Interaction Reduction	--	--	--	*-6*	*-6*	*-12*	*-11*	*-11*	*-22*
Sub Total	**103**	**98**	**201**	**57**	**53**	**110**	**97**	**99**	**196**
Pass-By Reduction	*-72*	*-72*	*-144*	*-30*	*-30*	*-60*	*-58*	*-58*	*-116*
Net New Trips	**31**	**26**	**57**	**27**	**23**	**50**	**39**	**41**	**80**

[1]Based on surveys conducted on local existing locations conducted by KLOA, Inc. See Appendix.

4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The net new trips traffic assignment for the proposed development is illustrated in **Figure 6**. **Figure 7** shows the pass-by trip assignment.

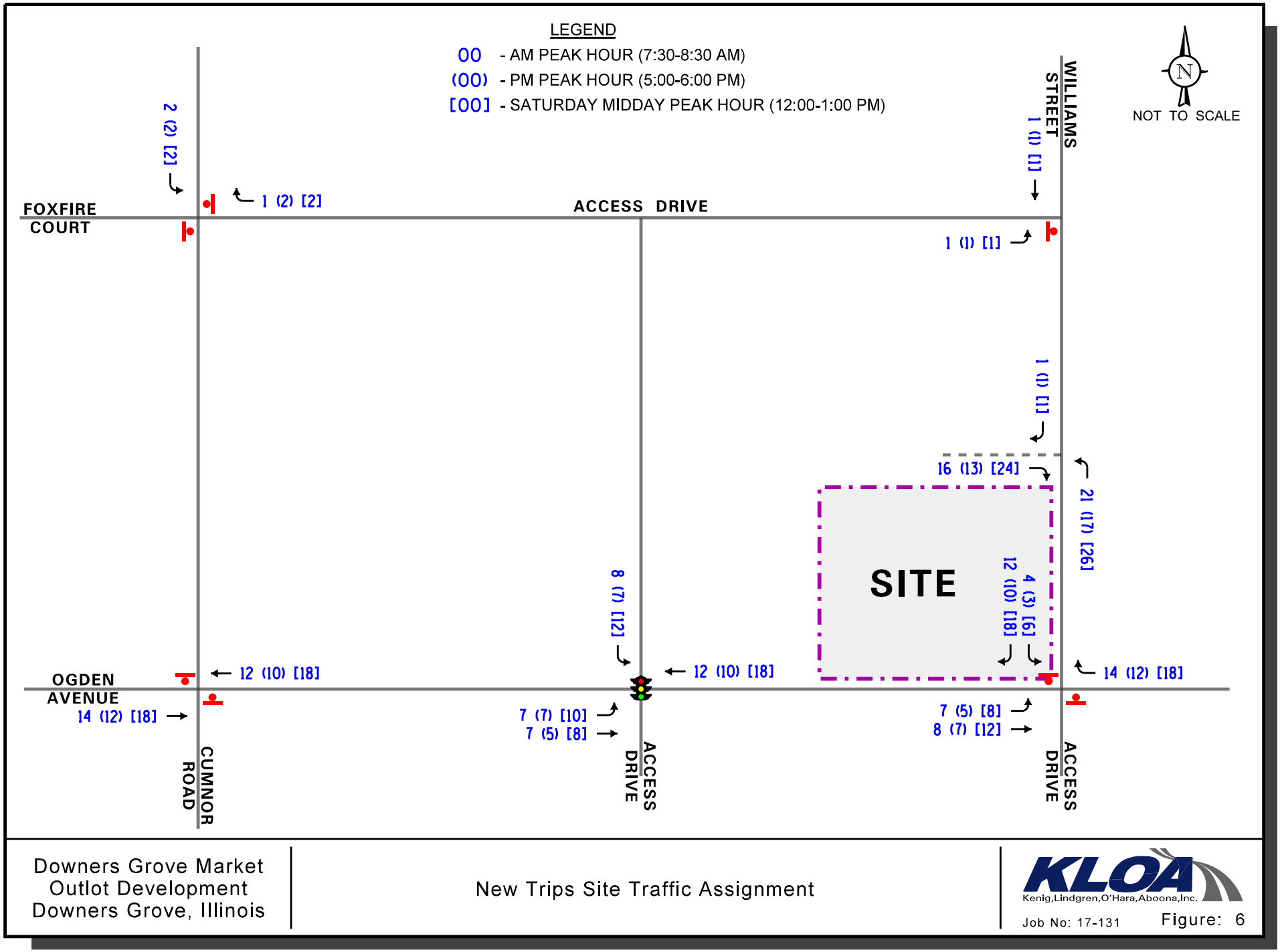
Background Traffic Conditions

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 ADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated June 5th, 2017, the traffic traversing Ogden Avenue is projected to increase by approximately one-fifth of a percent per year between 2017 and 2040. As such, in order to provide a conservative analysis, the existing traffic volumes were increased by one-half percent per year over 6 years (5 years after buildout year) to project Year 2023 conditions. A copy of the CMAP 2040 projections letter is included in the Appendix.

Background growth was only applied to through volumes on Ogden Avenue, as the surrounding area is already mature and established, and not expected to generate additional traffic in the future compared to existing conditions.

Total Projected Traffic Volumes

The development-generated traffic was added to the existing traffic volumes accounting for background growth to determine the Year 2023 total projected traffic volumes, shown in **Figure 8**.

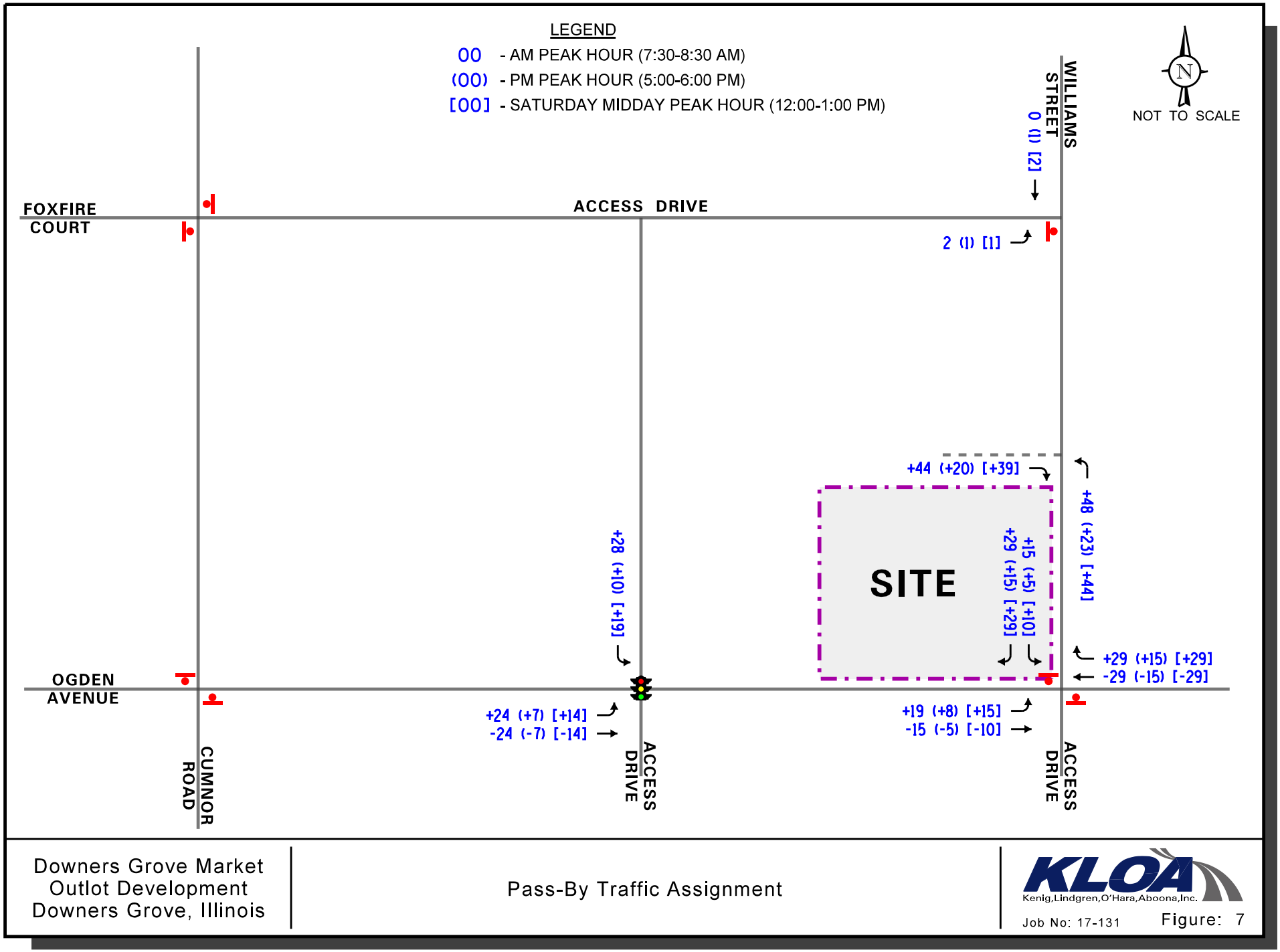


Downers Grove Market
Outlot Development
Downers Grove, Illinois

New Trips Site Traffic Assignment

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

Job No: 17-131 Figure: 6

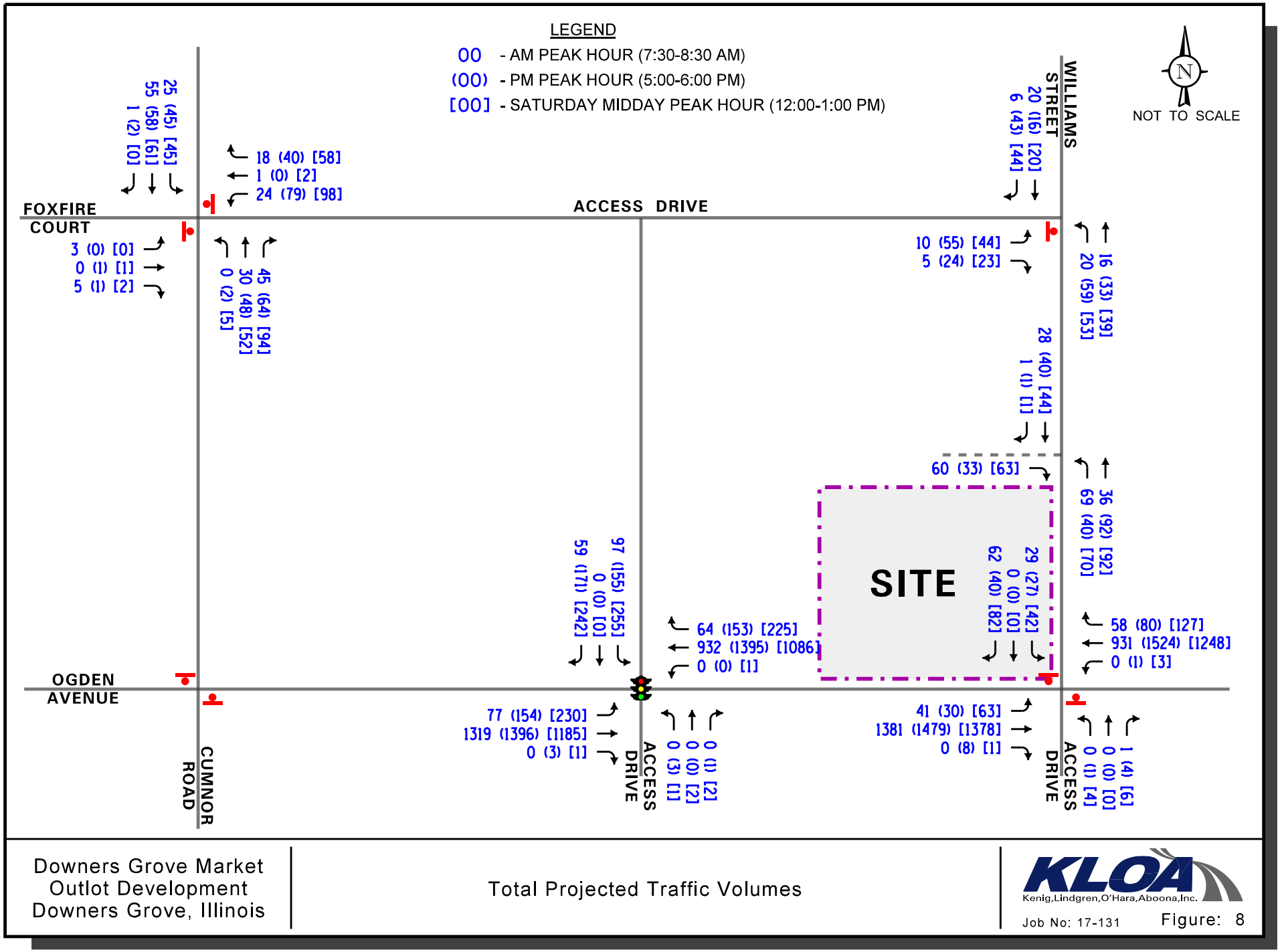


Downers Grove Market
Outlot Development
Downers Grove, Illinois

Pass-By Traffic Assignment

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

Job No: 17-131 Figure: 7



Downers Grove Market
Outlot Development
Downers Grove, Illinois

Total Projected Traffic Volumes

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

Job No: 17-131 Figure: 8

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing (Year 2017) and future projected (Year 2023) traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM), 2010* and analyzed using the HCS 7 computer software. The analyses for the signalized intersection was conducted utilizing the existing cycle lengths and phases.

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 total projected conditions are presented in **Tables 5** through **9**. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS
OGDEN AVENUE WITH DOWNERS GROVE MARKET ACCESS DRIVE – SIGNALIZED

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Year 2017 Existing Conditions	Weekday Morning Peak Hour	A 2.3	A 2.7		A 3.7	A 2.8		--			E 63.1	E 60.9		A – 5.9
		A – 2.7			A – 3.6						E – 62.0			
	Weekday Evening Peak Hour	A 7.9	A 6.0		A 8.9	A 6.0		D 53.8			E 63.1	E 60.2		B – 12.5
		A – 6.2			A – 8.6						E – 61.5			
	Saturday Midday Peak Hour	A 9.4	A 7.8		B 12.7	A 9.8		D 44.3			E 62.1	D 49.9		B - 16.9
		A – 8.0			B – 12.1						E – 55.8			
Year 2023 Projected [illegible]	Weekday Morning Peak Hour	A 3.4	A 3.7		A 5.1	A 3.7		--			E 61.9	E 55.1		A – 7.4
		A – 3.7			A – 5.0						E – 59.2			
	Weekday Evening Peak Hour	A 9.3	A 6.4		A 9.6	A 6.3		D 53.3			E 64.8	E 58.3		B – 13.1
		A – 6.7			A – 9.3						E – 61.3			
	Saturday Midday Peak Hour	B 11.3	A 8.4		B 14.2	B 10.7		D 43.4			E 68.1	D 46.9		B – 18.3
		A – 8.9			B – 13.5						E – 57.8			

Delay is measured in seconds.

Table 6
CAPACITY ANALYSIS RESULTS
CUMNOR ROAD WITH FOXFIRE COURT AND DOWNERS PLAZA ACCESS DRIVE – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Existing Conditions						
• Northbound Left Turns	A	7.3	A	7.3	A	7.7
• Southbound Left Turns	A	7.4	A	7.5	A	7.4
• Eastbound Approach	A	9.0	A	9.8	B	10.2
• Westbound Approach	A	9.5	B	10.8	B	14.2
Projected Conditions						
• Northbound Left Turns	A	7.3	A	7.3	A	7.7
• Southbound Left Turns	A	7.4	A	7.5	A	7.4
• Eastbound Approach	A	9.0	A	9.9	B	10.2
• Westbound Approach	A	9.5	B	10.9	B	14.3

LOS = Level of Service; Delay is measured in seconds

Table 7
CAPACITY ANALYSIS RESULTS
WILLIAMS STREET WITH DOWNERS MARKET ACCESS DRIVE – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Existing Conditions						
• Northbound Left Turns	A	7.3	A	7.5	A	7.5
• Eastbound Approach	A	8.9	B	10.1	A	9.8
Projected Conditions						
• Northbound Left Turns	A	7.3	A	7.5	A	7.5
• Eastbound Approach	A	8.9	B	10.1	A	9.8

LOS = Level of Service; Delay is measured in seconds

Table 8
CAPACITY ANALYSIS RESULTS
OGDEN AVENUE WITH WILLIAMS STREET – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Existing Conditions						
• Eastbound Left Turns	B	10.6	B	14.0	B	13.6
• Westbound Left Turns	B	12.6	B	12.9	B	12.4
• Northbound Approach	B	14.5	C	21.5	D	28.2
• Southbound Approach	C	21.6	E	40.4	D	32.7
Projected Conditions						
• Eastbound Left Turns	B	11.1	B	14.9	B	14.8
• Westbound Left Turns	B	12.9	B	13.2	B	12.7
• Northbound Approach	C	14.7	C	23.3	D	33.4
• Southbound Approach	C	23.5	E	40.7	E	39.3

LOS = Level of Service; Delay is measured in seconds

Table 9
CAPACITY ANALYSIS RESULTS
WILLIAMS STREET WITH PROPOSED ACCESS DRIVE – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Projected Conditions						
• Northbound Left Turns	A	7.4	A	7.4	A	7.4
• Eastbound Approach	A	8.7	A	8.6	A	8.8

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 traffic.

Ogden Avenue with Downers Market/Downers Plaza Access Drive

The results of the capacity analyses indicate that overall this intersection currently operates at Level of Service (LOS) A during the weekday morning peak hours, and at LOS B during weekday evening and Saturday Midday peak hours. It should be noted that the southbound approach LOS ranges from D to E during all three peak hours. However, this is not uncommon as the majority of the green time is allocated to Ogden Avenue.

Under Year 2023 projected conditions, this intersection is projected to continue operating at LOS A during the morning peak hours and LOS B during evening and midday peak hours with increases in delay of less than three seconds. Furthermore, the southbound approach is projected to continue operating at the same LOS with very little changes in the delay experienced. As such, the proposed development will have a limited impact on the operations of this intersection and no roadway improvements or signal modifications will be required.

Cumnor Road with Foxfire Court

The results of the capacity analyses indicate that all approaches currently operate at LOS A or B during peak hours and will continue to do so in the future. As such, the proposed expansion will have a limited impact on the operations of this intersection and no roadway improvements or signal modifications will be required.

Williams Street with Access Drive

The results of the capacity analyses indicate that all approaches operate at LOS A or B during peak hours under existing conditions and will continue to do so in the future. As such, the proposed expansion will have a limited impact on the operations of this intersection and no roadway improvements or signal modifications will be required.

Ogden Avenue and Williams Street

The results of the capacity analyses indicate that all turning movements at this intersection are operating at acceptable LOS with the exception of the southbound left-turn movement during the weekday evening peak hour. This is expected and it is not an uncommon situation when a minor road like Williams Street intersects a major arterial like Ogden Avenue. Under Year 2023 future conditions, all movements will continue operating at the same LOS with minimal increases in delay. Further inspection of the capacity analyses, indicate that the southbound queues will be 50 feet or less and as such will not extend to the proposed access drive. A summary of the existing and future southbound queues is included in the Appendix. Therefore, the proposed development

will have a limited impact on the operations of this intersection and no roadway improvements or traffic control modifications will be necessary in conjunction with this development.

Williams Street with Proposed Access Drive

The results of the capacity analyses indicate that the all approaches operate at LOS A under year 2023 projected conditions. In order to enforce the no outbound left-turn restriction, it is recommended that a "No Left Turn" sign similar to the one provided on the service drive intersection with Williams Street be installed. As previously indicated, outbound movements should be under stop sign control. No other traffic control modifications will be necessary.

6. Conclusion

Based on the proposed development plans and the preceding traffic study, the following conclusions are made:

- The development is well located with respect to the area roadway system.
- The development-generated traffic will not have a significant impact on area roadways.
- The number of trips estimated to be generated by the proposed development is very conservative given that the Starbucks Coffee shop is already in the area with an establish clientele.
- The provision of a right-in/right-out/left-in access drive will enhance the accessibility of the shopping center and reduce the amount of traffic that could travel north on Williams Street.
- The results of the capacity analyses show that all the intersections are generally operating at acceptable levels of service and will continue to do so in the future with minimal increases in delay.
- The future southbound queues on Williams Street will not extend beyond 50 feet and as such will not have a negative impact on the proposed access drive.

Appendix

-Traffic Count Summary Sheets
-CMAP 2040 Projections Letter
-Fast Casual Survey Data
-Level of Service Criteria
-Capacity Analysis Summary Sheets
-Existing and Future Queues

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Access Dri ve
Site Code:
Start Date: 06/17/2017
Page No: 1

Turning Movement Data

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	51	304	0	0	355	0	0	254	58	1	312	0	0	1	1	0	2	0	69	0	56	0	125	794
12:15 PM	0	58	279	0	0	337	0	1	240	59	0	300	0	0	1	0	0	1	0	57	0	72	0	129	767
12:30 PM	0	47	295	0	0	342	0	0	278	55	0	333	0	0	0	0	0	0	0	52	0	57	0	109	784
12:45 PM	0	50	281	1	1	332	0	0	265	53	0	318	0	1	0	1	0	2	0	46	0	57	0	103	755
Hourly Total	0	206	1159	1	1	1366	0	1	1037	225	1	1263	0	1	2	2	0	5	0	224	0	242	0	466	3100
1:00 PM	0	65	268	0	0	333	1	0	254	64	0	319	0	0	0	0	1	0	0	47	0	65	1	112	764
1:15 PM	1	63	285	1	2	350	0	0	239	55	0	294	0	0	0	0	0	0	0	65	0	69	0	134	778
1:30 PM	0	61	293	0	2	354	0	0	227	58	0	285	0	1	0	0	1	1	0	53	0	64	1	117	757
1:45 PM	0	50	267	0	0	317	0	0	257	67	1	324	0	0	0	2	0	2	0	52	0	55	0	107	750
Hourly Total	1	239	1113	1	4	1354	1	0	977	244	1	1222	0	1	0	2	2	3	0	217	0	253	2	470	3049
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	10	267	0	0	277	0	0	174	11	0	185	0	0	0	0	0	0	0	7	0	15	0	22	484
7:15 AM	0	11	289	0	0	300	0	0	206	9	0	215	0	0	0	0	0	0	0	10	0	10	0	20	535
7:30 AM	0	10	337	0	0	347	0	0	218	18	0	236	0	0	0	0	0	0	0	14	0	19	0	33	616
7:45 AM	0	12	337	0	1	349	0	0	222	22	0	244	0	0	0	0	0	0	0	14	0	13	0	27	620
Hourly Total	0	43	1230	0	1	1273	0	0	820	60	0	880	0	0	0	0	0	0	0	45	0	57	0	102	2255
8:00 AM	0	10	310	0	1	320	0	0	230	14	0	244	0	0	0	0	0	0	0	10	0	20	0	30	594
8:15 AM	0	14	313	0	0	327	0	0	213	10	0	223	0	0	0	0	0	0	0	17	0	7	0	24	574
8:30 AM	0	9	297	0	0	306	0	0	227	29	0	256	0	0	0	0	0	0	0	19	0	9	0	28	590
8:45 AM	0	34	330	0	3	364	0	0	184	28	0	212	0	0	0	0	4	0	0	13	0	11	0	24	600
Hourly Total	0	67	1250	0	4	1317	0	0	854	81	0	935	0	0	0	0	4	0	0	59	0	47	0	106	2358
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	22	308	1	1	331	0	1	326	41	0	368	0	0	0	1	1	1	0	53	0	36	0	89	789
4:15 PM	0	33	339	0	0	372	0	0	307	41	0	348	0	0	0	0	0	0	0	33	0	37	0	70	790
4:30 PM	0	29	317	0	0	346	0	0	343	29	0	372	0	1	0	1	0	2	0	40	0	39	0	79	799
4:45 PM	0	56	302	1	0	359	0	1	318	34	0	353	0	0	0	0	0	0	0	37	0	44	0	81	793
Hourly Total	0	140	1266	2	1	1408	0	2	1294	145	0	1441	0	1	0	2	1	3	0	163	0	156	0	319	3171
5:00 PM	0	28	348	0	0	376	0	0	366	33	0	399	0	0	0	0	0	0	0	33	0	43	0	76	851
5:15 PM	0	34	322	0	0	356	0	0	316	45	0	361	0	0	0	0	0	0	0	42	0	55	0	97	814
5:30 PM	0	31	354	1	0	386	0	0	358	36	0	394	0	0	0	0	0	0	0	31	0	38	0	69	849
5:45 PM	0	47	333	2	0	382	0	0	305	39	0	344	0	3	0	1	0	4	0	31	0	35	0	66	796
Hourly Total	0	140	1357	3	0	1500	0	0	1345	153	0	1498	0	3	0	1	0	4	0	137	0	171	0	308	3310
Grand Total	1	835	7375	7	11	8218	1	3	6327	908	2	7239	0	6	2	7	7	15	0	845	0	926	2	1771	17243
Approach %	0.0	10.2	89.7	0.1	-	-	0.0	0.0	87.4	12.5	-	-	0.0	40.0	13.3	46.7	-	-	0.0	47.7	0.0	52.3	-	-	-
Total %	0.0	4.8	42.8	0.0	-	47.7	0.0	0.0	36.7	5.3	-	42.0	0.0	0.0	0.0	0.0	-	0.1	0.0	4.9	0.0	5.4	-	10.3	-
Lights	1	829	7250	7	-	8087	1	3	6202	904	-	7110	0	6	2	7	-	15	0	843	0	921	-	1764	16976
% Lights	100.0	99.3	98.3	100.0	-	98.4	100.0	100.0	98.0	99.6	-	98.2	-	100.0	100.0	100.0	-	100.0	-	99.8	-	99.5	-	99.6	98.5

Buses	0	0	13	0	-	13	0	0	8	0	-	8	0	0	0	0	-	0	0	0	0	0	-	0	21
% Buses	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	4	84	0	-	88	0	0	95	3	-	98	0	0	0	0	-	0	0	1	0	5	-	6	192
% Single-Unit Trucks	0.0	0.5	1.1	0.0	-	1.1	0.0	0.0	1.5	0.3	-	1.4	-	0.0	0.0	0.0	-	0.0	-	0.1	-	0.5	-	0.3	1.1
Articulated Trucks	0	2	28	0	-	30	0	0	20	1	-	21	0	0	0	0	-	0	0	1	0	0	-	1	52
% Articulated Trucks	0.0	0.2	0.4	0.0	-	0.4	0.0	0.0	0.3	0.1	-	0.3	-	0.0	0.0	0.0	-	0.0	-	0.1	-	0.0	-	0.1	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	11	-	-	-	-	-	2	-	-	-	-	-	7	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Access Dri ve
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	51	304	0	0	355	0	0	254	58	1	312	0	0	1	1	0	2	0	69	0	56	0	125	794
12:15 PM	0	58	279	0	0	337	0	1	240	59	0	300	0	0	1	0	0	1	0	57	0	72	0	129	767
12:30 PM	0	47	295	0	0	342	0	0	278	55	0	333	0	0	0	0	0	0	0	52	0	57	0	109	784
12:45 PM	0	50	281	1	1	332	0	0	265	53	0	318	0	1	0	1	0	2	0	46	0	57	0	103	755
Total	0	206	1159	1	1	1366	0	1	1037	225	1	1263	0	1	2	2	0	5	0	224	0	242	0	466	3100
Approach %	0.0	15.1	84.8	0.1	-	-	0.0	0.1	82.1	17.8	-	-	0.0	20.0	40.0	40.0	-	-	0.0	48.1	0.0	51.9	-	-	-
Total %	0.0	6.6	37.4	0.0	-	44.1	0.0	0.0	33.5	7.3	-	40.7	0.0	0.0	0.1	0.1	-	0.2	0.0	7.2	0.0	7.8	-	15.0	-
PHF	0.000	0.888	0.953	0.250	-	0.962	0.000	0.250	0.933	0.953	-	0.948	0.000	0.250	0.500	0.500	-	0.625	0.000	0.812	0.000	0.840	-	0.903	0.976
Lights	0	205	1149	1	-	1355	0	1	1024	225	-	1250	0	1	2	2	-	5	0	223	0	240	-	463	3073
% Lights	-	99.5	99.1	100.0	-	99.2	-	100.0	98.7	100.0	-	99.0	-	100.0	100.0	100.0	-	100.0	-	99.6	-	99.2	-	99.4	99.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	9	0	-	9	0	0	11	0	-	11	0	0	0	0	-	0	0	1	0	2	-	3	23
% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.7	-	0.0	1.1	0.0	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.4	-	0.8	-	0.6	0.7
Articulated Trucks	0	1	1	0	-	2	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	4
% Articulated Trucks	-	0.5	0.1	0.0	-	0.1	-	0.0	0.2	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
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	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Access Dri ve
Site Code:
Start Date: 06/17/2017
Page No: 4

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Access Drive Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	10	337	0	0	347	0	0	218	18	0	236	0	0	0	0	0	0	0	14	0	19	0	33	616
7:45 AM	0	12	337	0	1	349	0	0	222	22	0	244	0	0	0	0	0	0	0	14	0	13	0	27	620
8:00 AM	0	10	310	0	1	320	0	0	230	14	0	244	0	0	0	0	0	0	0	10	0	20	0	30	594
8:15 AM	0	14	313	0	0	327	0	0	213	10	0	223	0	0	0	0	0	0	0	17	0	7	0	24	574
Total	0	46	1297	0	2	1343	0	0	883	64	0	947	0	0	0	0	0	0	0	55	0	59	0	114	2404
Approach %	0.0	3.4	96.6	0.0	-	-	0.0	0.0	93.2	6.8	-	-	NaN	NaN	NaN	NaN	-	-	0.0	48.2	0.0	51.8	-	-	-
Total %	0.0	1.9	54.0	0.0	-	55.9	0.0	0.0	36.7	2.7	-	39.4	0.0	0.0	0.0	0.0	-	0.0	0.0	2.3	0.0	2.5	-	4.7	-
PHF	0.000	0.821	0.962	0.000	-	0.962	0.000	0.000	0.960	0.727	-	0.970	0.000	0.000	0.000	0.000	-	0.000	0.000	0.809	0.000	0.738	-	0.864	0.969
Lights	0	44	1262	0	-	1306	0	0	857	63	-	920	0	0	0	0	-	0	0	54	0	58	-	112	2338
% Lights	-	95.7	97.3	-	-	97.2	-	-	97.1	98.4	-	97.1	-	-	-	-	-	-	-	98.2	-	98.3	-	98.2	97.3
Buses	0	0	6	0	-	6	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	11
% Buses	-	0.0	0.5	-	-	0.4	-	-	0.6	0.0	-	0.5	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.5
Single-Unit Trucks	0	1	20	0	-	21	0	0	20	0	-	20	0	0	0	0	-	0	0	0	0	1	-	1	42
% Single-Unit Trucks	-	2.2	1.5	-	-	1.6	-	-	2.3	0.0	-	2.1	-	-	-	-	-	-	-	0.0	-	1.7	-	0.9	1.7
Articulated Trucks	0	1	9	0	-	10	0	0	1	1	-	2	0	0	0	0	-	0	0	1	0	0	-	1	13
% Articulated Trucks	-	2.2	0.7	-	-	0.7	-	-	0.1	1.6	-	0.2	-	-	-	-	-	-	-	1.8	-	0.0	-	0.9	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
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Access Dri ve
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Access Drive Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
5:00 PM	0	28	348	0	0	376	0	0	366	33	0	399	0	0	0	0	0	0	0	33	0	43	0	76	851
5:15 PM	0	34	322	0	0	356	0	0	316	45	0	361	0	0	0	0	0	0	0	42	0	55	0	97	814
5:30 PM	0	31	354	1	0	386	0	0	358	36	0	394	0	0	0	0	0	0	0	31	0	38	0	69	849
5:45 PM	0	47	333	2	0	382	0	0	305	39	0	344	0	3	0	1	0	4	0	31	0	35	0	66	796
Total	0	140	1357	3	0	1500	0	0	1345	153	0	1498	0	3	0	1	0	4	0	137	0	171	0	308	3310
Approach %	0.0	9.3	90.5	0.2	-	-	0.0	0.0	89.8	10.2	-	-	0.0	75.0	0.0	25.0	-	-	0.0	44.5	0.0	55.5	-	-	-
Total %	0.0	4.2	41.0	0.1	-	45.3	0.0	0.0	40.6	4.6	-	45.3	0.0	0.1	0.0	0.0	-	0.1	0.0	4.1	0.0	5.2	-	9.3	-
PHF	0.000	0.745	0.958	0.375	-	0.972	0.000	0.000	0.919	0.850	-	0.939	0.000	0.250	0.000	0.250	-	0.250	0.000	0.815	0.000	0.777	-	0.794	0.972
Lights	0	139	1338	3	-	1480	0	0	1327	153	-	1480	0	3	0	1	-	4	0	137	0	171	-	308	3272
% Lights	-	99.3	98.6	100.0	-	98.7	-	-	98.7	100.0	-	98.8	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	98.9
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.1	0.0	-	0.1	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	14	0	-	15	0	0	11	0	-	11	0	0	0	0	-	0	0	0	0	0	-	0	26
% Single-Unit Trucks	-	0.7	1.0	0.0	-	1.0	-	-	0.8	0.0	-	0.7	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.8
Articulated Trucks	0	0	4	0	-	4	0	0	7	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	11
% Articulated Trucks	-	0.0	0.3	0.0	-	0.3	-	-	0.5	0.0	-	0.5	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.3
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	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Cumnor Road and Access Drive
Site Code:
Start Date: 06/17/2017
Page No: 1

Turning Movement Data

Start Time	Access Drive Eastbound						Foxfire Court Westbound						Cumnor Road Northbound						Cumnor Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	0	1	0	0	1	0	29	0	15	1	44	0	1	18	22	0	41	0	10	26	0	2	36	122
12:15 PM	0	0	0	0	0	0	0	21	0	11	0	32	0	1	8	29	0	38	0	11	12	0	0	23	93
12:30 PM	0	0	0	2	0	2	0	22	1	16	1	39	0	1	16	20	0	37	0	14	15	0	0	29	107
12:45 PM	0	0	0	0	0	0	0	26	1	14	0	41	0	2	10	23	0	35	0	8	8	0	1	16	92
Hourly Total	0	0	1	2	0	3	0	98	2	56	2	156	0	5	52	94	0	151	0	43	61	0	3	104	414
1:00 PM	0	0	0	0	0	0	0	27	0	9	1	36	0	0	13	33	0	46	0	6	20	0	1	26	108
1:15 PM	0	0	0	0	0	0	0	25	0	19	0	44	0	0	12	21	0	33	0	5	18	0	0	23	100
1:30 PM	0	0	1	0	0	1	0	27	1	11	3	39	0	1	11	30	0	42	0	11	6	0	2	17	99
1:45 PM	0	0	0	1	0	1	0	27	0	13	0	40	0	0	14	16	0	30	0	7	8	1	0	16	87
Hourly Total	0	0	1	1	0	2	0	106	1	52	4	159	0	1	50	100	0	151	0	29	52	1	3	82	394
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	0	0	2	0	2	0	3	0	1	0	4	0	1	4	5	0	10	0	2	10	0	0	12	28
7:15 AM	0	0	0	2	0	2	0	3	0	5	1	8	0	1	11	11	0	23	0	2	16	0	0	18	51
7:30 AM	0	1	0	2	0	3	0	4	1	2	2	7	0	0	6	8	0	14	0	5	14	0	0	19	43
7:45 AM	0	0	0	1	0	1	0	6	0	5	0	11	0	0	8	12	0	20	0	4	14	0	0	18	50
Hourly Total	0	1	0	7	0	8	0	16	1	13	3	30	0	2	29	36	0	67	0	13	54	0	0	67	172
8:00 AM	0	0	0	1	0	1	0	7	0	4	0	11	0	0	9	13	0	22	0	10	15	0	0	25	59
8:15 AM	0	2	0	1	0	3	0	7	0	6	0	13	0	0	7	12	0	19	0	4	14	1	0	19	54
8:30 AM	0	0	0	0	0	0	0	11	1	6	0	18	0	1	11	17	0	29	0	6	5	0	0	11	58
8:45 AM	0	0	0	0	0	0	0	13	0	3	0	16	0	0	9	23	0	32	0	5	14	0	0	19	67
Hourly Total	0	2	0	2	0	4	0	38	1	19	0	58	0	1	36	65	0	102	0	25	48	1	0	74	238
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	1	0	1	0	14	0	9	0	23	0	1	11	16	0	28	0	7	8	0	0	15	67
4:15 PM	0	0	0	1	0	1	0	17	0	13	0	30	0	1	11	11	0	23	0	12	8	1	0	21	75
4:30 PM	0	0	1	0	0	1	0	12	0	3	0	15	0	0	11	13	0	24	0	7	12	1	0	20	60
4:45 PM	0	0	0	1	1	1	0	14	0	9	0	23	0	1	8	17	0	26	0	9	10	0	1	19	69
Hourly Total	0	0	1	3	1	4	0	57	0	34	0	91	0	3	41	57	0	101	0	35	38	2	1	75	271
5:00 PM	0	0	0	0	1	0	0	16	0	8	0	24	0	1	5	18	0	24	0	12	13	0	0	25	73
5:15 PM	0	0	0	0	0	0	0	20	0	12	0	32	0	0	14	21	0	35	0	16	11	2	0	29	96
5:30 PM	0	0	1	1	0	2	0	24	0	13	0	37	0	1	15	12	0	28	0	8	20	0	0	28	95
5:45 PM	0	0	0	0	0	0	0	19	0	5	0	24	0	0	14	13	0	27	0	7	14	0	0	21	72
Hourly Total	0	0	1	1	1	2	0	79	0	38	0	117	0	2	48	64	0	114	0	43	58	2	0	103	336
Grand Total	0	3	4	16	2	23	0	394	5	212	9	611	0	14	256	416	0	686	0	188	311	6	7	505	1825
Approach %	0.0	13.0	17.4	69.6	-	-	0.0	64.5	0.8	34.7	-	-	0.0	2.0	37.3	60.6	-	-	0.0	37.2	61.6	1.2	-	-	-
Total %	0.0	0.2	0.2	0.9	-	1.3	0.0	21.6	0.3	11.6	-	33.5	0.0	0.8	14.0	22.8	-	37.6	0.0	10.3	17.0	0.3	-	27.7	-
Lights	0	3	4	15	-	22	0	391	5	208	-	604	0	13	251	415	-	679	0	188	302	6	-	496	1801
% Lights	-	100.0	100.0	93.8	-	95.7	-	99.2	100.0	98.1	-	98.9	-	92.9	98.0	99.8	-	99.0	-	100.0	97.1	100.0	-	98.2	98.7

Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	0	0	-	0	0	3	0	2	-	5	0	1	2	0	-	3	0	0	6	0	-	6	14
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	0.8	0.0	0.9	-	0.8	-	7.1	0.8	0.0	-	0.4	-	0.0	1.9	0.0	-	1.2	0.8
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.0	6.3	-	4.3	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	2	-	2	0	0	2	1	-	3	0	0	3	0	-	3	8
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.9	-	0.3	-	0.0	0.8	0.2	-	0.4	-	0.0	1.0	0.0	-	0.6	0.4
Pedestrians	-	-	-	-	2	-	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	7	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Cumnor Road and Access Drive
Site Code:
Start Date: 06/17/2017
Page No: 3

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Access Drive Eastbound						Foxfire Court Westbound						Cumnor Road Northbound						Cumnor Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	0	1	0	0	1	0	29	0	15	1	44	0	1	18	22	0	41	0	10	26	0	2	36	122
12:15 PM	0	0	0	0	0	0	0	21	0	11	0	32	0	1	8	29	0	38	0	11	12	0	0	23	93
12:30 PM	0	0	0	2	0	2	0	22	1	16	1	39	0	1	16	20	0	37	0	14	15	0	0	29	107
12:45 PM	0	0	0	0	0	0	0	26	1	14	0	41	0	2	10	23	0	35	0	8	8	0	1	16	92
Total	0	0	1	2	0	3	0	98	2	56	2	156	0	5	52	94	0	151	0	43	61	0	3	104	414
Approach %	0.0	0.0	33.3	66.7	-	-	0.0	62.8	1.3	35.9	-	-	0.0	3.3	34.4	62.3	-	-	0.0	41.3	58.7	0.0	-	-	-
Total %	0.0	0.0	0.2	0.5	-	0.7	0.0	23.7	0.5	13.5	-	37.7	0.0	1.2	12.6	22.7	-	36.5	0.0	10.4	14.7	0.0	-	25.1	-
PHF	0.000	0.000	0.250	0.250	-	0.375	0.000	0.845	0.500	0.875	-	0.886	0.000	0.625	0.722	0.810	-	0.921	0.000	0.768	0.587	0.000	-	0.722	0.848
Lights	0	0	1	1	-	2	0	98	2	55	-	155	0	4	51	94	-	149	0	43	57	0	-	100	406
% Lights	-	-	100.0	50.0	-	66.7	-	100.0	100.0	98.2	-	99.4	-	80.0	98.1	100.0	-	98.7	-	100.0	93.4	-	-	96.2	98.1
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	1	1	0	-	2	0	0	4	0	-	4	6
% Single-Unit Trucks	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	20.0	1.9	0.0	-	1.3	-	0.0	6.6	-	-	3.8	1.4
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	-	-	0.0	50.0	-	33.3	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	-	0.0	0.0	-	0.0	-	0.0	0.0	1.8	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.2
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Cumnor Road and Access Drive
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Access Drive Eastbound						Foxfire Court Westbound						Cumnor Road Northbound						Cumnor Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
8:00 AM	0	0	0	1	0	1	0	7	0	4	0	11	0	0	9	13	0	22	0	10	15	0	0	25	59
8:15 AM	0	2	0	1	0	3	0	7	0	6	0	13	0	0	7	12	0	19	0	4	14	1	0	19	54
8:30 AM	0	0	0	0	0	0	0	11	1	6	0	18	0	1	11	17	0	29	0	6	5	0	0	11	58
8:45 AM	0	0	0	0	0	0	0	13	0	3	0	16	0	0	9	23	0	32	0	5	14	0	0	19	67
Total	0	2	0	2	0	4	0	38	1	19	0	58	0	1	36	65	0	102	0	25	48	1	0	74	238
Approach %	0.0	50.0	0.0	50.0	-	-	0.0	65.5	1.7	32.8	-	-	0.0	1.0	35.3	63.7	-	-	0.0	33.8	64.9	1.4	-	-	-
Total %	0.0	0.8	0.0	0.8	-	1.7	0.0	16.0	0.4	8.0	-	24.4	0.0	0.4	15.1	27.3	-	42.9	0.0	10.5	20.2	0.4	-	31.1	-
PHF	0.000	0.250	0.000	0.500	-	0.333	0.000	0.731	0.250	0.792	-	0.806	0.000	0.250	0.818	0.707	-	0.797	0.000	0.625	0.800	0.250	-	0.740	0.888
Lights	0	2	0	2	-	4	0	38	1	18	-	57	0	1	36	64	-	101	0	25	48	1	-	74	236
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	100.0	94.7	-	98.3	-	100.0	100.0	98.5	-	99.0	-	100.0	100.0	100.0	-	100.0	99.2
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	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	1	-	1	0	0	0	1	-	1	0	0	0	0	-	0	2
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	0.0	5.3	-	1.7	-	0.0	0.0	1.5	-	1.0	-	0.0	0.0	0.0	-	0.0	0.8
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Cumnor Road and Access Drive
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Access Drive Eastbound						Foxfire Court Westbound						Cumnor Road Northbound						Cumnor Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	0	0	0	1	0	0	16	0	8	0	24	0	1	5	18	0	24	0	12	13	0	0	25	73
5:15 PM	0	0	0	0	0	0	0	20	0	12	0	32	0	0	14	21	0	35	0	16	11	2	0	29	96
5:30 PM	0	0	1	1	0	2	0	24	0	13	0	37	0	1	15	12	0	28	0	8	20	0	0	28	95
5:45 PM	0	0	0	0	0	0	0	19	0	5	0	24	0	0	14	13	0	27	0	7	14	0	0	21	72
Total	0	0	1	1	1	2	0	79	0	38	0	117	0	2	48	64	0	114	0	43	58	2	0	103	336
Approach %	0.0	0.0	50.0	50.0	-	-	0.0	67.5	0.0	32.5	-	-	0.0	1.8	42.1	56.1	-	-	0.0	41.7	56.3	1.9	-	-	-
Total %	0.0	0.0	0.3	0.3	-	0.6	0.0	23.5	0.0	11.3	-	34.8	0.0	0.6	14.3	19.0	-	33.9	0.0	12.8	17.3	0.6	-	30.7	-
PHF	0.000	0.000	0.250	0.250	-	0.250	0.000	0.823	0.000	0.731	-	0.791	0.000	0.500	0.800	0.762	-	0.814	0.000	0.672	0.725	0.250	-	0.888	0.875
Lights	0	0	1	1	-	2	0	79	0	38	-	117	0	2	48	64	-	114	0	43	57	2	-	102	335
% Lights	-	-	100.0	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	-	100.0	98.3	100.0	-	99.0	99.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	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	1	0	-	1	1
% Bicycles on Road	-	-	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	1.7	0.0	-	1.0	0.3
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Downers Grove, IL Weather: Hot and Dry 06/23/17
Williams St and Caputo's Fresh Markets Access 10:39:53
Thursday June 22, 2017

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 1 williams/caputosacc

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	2	1	0	0	0	0	0	1	4	1	0	2	11
715	5	6	0	0	0	0	0	4	0	2	0	5	22
730	1	6	0	0	0	0	0	0	2	3	0	2	14
745	2	3	0	0	0	0	0	6	6	0	0	0	17
800	1	7	0	0	0	0	0	6	5	0	0	3	22
815	2	4	0	0	0	0	0	4	7	2	0	4	23
830	1	2	0	0	0	0	0	3	8	1	0	4	19
845	7	4	0	0	0	0	0	5	9	3	0	2	30
1600	5	7	0	0	0	0	0	10	17	2	0	8	49
1615	3	8	0	0	0	0	0	4	10	5	0	8	38
1630	10	4	0	0	0	0	0	9	12	3	0	10	48
1645	7	6	0	0	0	0	0	7	4	4	0	5	33
1700	10	3	0	0	0	0	0	5	17	7	0	16	58
1715	16	4	0	0	0	0	0	10	17	8	0	11	66
1730	9	4	0	0	0	0	0	8	9	5	0	13	48
1745	8	4	0	0	0	0	0	10	16	4	0	14	56
Total	89	73	0	0	0	0	0	92	143	50	0	107	554

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - Totals

Intersection # 1 williams/caputosacc

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	3	0	5	3	3	0	2	6	11
715	11	0	4	7	9	0	8	5	22
730	7	0	2	5	2	0	9	3	14
745	5	0	12	0	6	0	3	8	17
800	8	0	11	3	9	0	7	6	22
815	6	0	11	6	8	0	6	9	23
830	3	0	11	5	7	0	3	9	19
845	11	0	14	5	7	0	7	16	30
1600	12	0	27	10	18	0	9	22	49
1615	11	0	14	13	12	0	13	13	38
1630	14	0	21	13	19	0	7	22	48
1645	13	0	11	9	12	0	10	11	33
1700	13	0	22	23	21	0	10	27	58
1715	20	0	27	19	21	0	12	33	66
1730	13	0	17	18	21	0	9	18	48
1745	12	0	26	18	24	0	8	24	56
Total	162	0	235	157	199	0	123	232	554

Downers Grove, IL Weather: Hot and Dry 06/23/17
Williams St and Caputo's Fresh Markets Access 10:39:53
Thursday June 22, 2017

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: by Movement

Intersection # 1 williams/caputosacc

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	8	4	0	0	0	0	0	4	16	4	0	8	44
715	20	24	0	0	0	0	0	16	0	8	0	20	88
730	4	24	0	0	0	0	0	0	8	12	0	8	56
745	8	12	0	0	0	0	0	24	24	0	0	0	68
800	4	28	0	0	0	0	0	24	20	0	0	12	88
815	8	16	0	0	0	0	0	16	28	8	0	16	92
830	4	8	0	0	0	0	0	12	32	4	0	16	76
845	28	16	0	0	0	0	0	20	36	12	0	8	120
1600	20	28	0	0	0	0	0	40	68	8	0	32	196
1615	12	32	0	0	0	0	0	16	40	20	0	32	152
1630	40	16	0	0	0	0	0	36	48	12	0	40	192
1645	28	24	0	0	0	0	0	28	16	16	0	20	132
1700	40	12	0	0	0	0	0	20	68	28	0	64	232
1715	64	16	0	0	0	0	0	40	68	32	0	44	264
1730	36	16	0	0	0	0	0	32	36	20	0	52	192
1745	32	16	0	0	0	0	0	40	64	16	0	56	224

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: Appr/Exit Totals

Intersection # 1 williams/caputosacc

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	12	0	20	12	12	0	8	24	44
715	44	0	16	28	36	0	32	20	88
730	28	0	8	20	8	0	36	12	56
745	20	0	48	0	24	0	12	32	68
800	32	0	44	12	36	0	28	24	88
815	24	0	44	24	32	0	24	36	92
830	12	0	44	20	28	0	12	36	76
845	44	0	56	20	28	0	28	64	120
1600	48	0	108	40	72	0	36	88	196
1615	44	0	56	52	48	0	52	52	152
1630	56	0	84	52	76	0	28	88	192
1645	52	0	44	36	48	0	40	44	132
1700	52	0	88	92	84	0	40	108	232
1715	80	0	108	76	84	0	48	132	264
1730	52	0	68	72	84	0	36	72	192
1745	48	0	104	72	96	0	32	96	224

Downers Grove, IL Weather: Hot and Dry 06/23/17
Williams St and Caputo's Fresh Markets Access 10:39:53
Thursday June 22, 2017

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 1 williams/caputosacc

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
700	10	16	0	0	0	0	0	11	12	6	0	9	64
715	9	22	0	0	0	0	0	16	13	5	0	10	75
730	6	20	0	0	0	0	0	16	20	5	0	9	76
745	6	16	0	0	0	0	0	19	26	3	0	11	81
800	11	17	0	0	0	0	0	18	29	6	0	13	94
815	10	10	0	0	0	0	0	12	24	6	0	10	72*
830	8	6	0	0	0	0	0	8	17	4	0	6	49*
845	7	4	0	0	0	0	0	5	9	3	0	2	30*
1600	25	25	0	0	0	0	0	30	43	14	0	31	168
1615	30	21	0	0	0	0	0	25	43	19	0	39	177
1630	43	17	0	0	0	0	0	31	50	22	0	42	205
1645	42	17	0	0	0	0	0	30	47	24	0	45	205
1700	43	15	0	0	0	0	0	33	59	24	0	54	228
1715	33	12	0	0	0	0	0	28	42	17	0	38	170*
1730	17	8	0	0	0	0	0	18	25	9	0	27	104*
1745	8	4	0	0	0	0	0	10	16	4	0	14	56*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 1 williams/caputosacc

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
700	26	0	23	15	20	0	22	22	64
715	31	0	29	15	26	0	27	22	75
730	26	0	36	14	25	0	25	26	76
745	22	0	45	14	30	0	19	32	81
800	28	0	47	19	31	0	23	40	94
815	20	0	36	16	22	0	16	34	72*
830	14	0	25	10	14	0	10	25	49*
845	11	0	14	5	7	0	7	16	30*
1600	50	0	73	45	61	0	39	68	168
1615	51	0	68	58	64	0	40	73	177
1630	60	0	81	64	73	0	39	93	205
1645	59	0	77	69	75	0	41	89	205
1700	58	0	92	78	87	0	39	102	228
1715	45	0	70	55	66	0	29	75	170*
1730	25	0	43	36	45	0	17	42	104*
1745	12	0	26	18	24	0	8	24	56*

Downers Grove, IL Weather: Warm and Dry 06/26/17
Williams St and Caputo's Fresh Markets Access 10:02:52
Saturday June 24, 2017

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - by Mvmt

Intersection # 2 williams/caputosaccsat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1200	9	4	0	0	0	0	0	9	11	7	0	8	48
1215	15	2	0	0	0	0	0	10	13	7	0	13	60
1230	8	8	0	0	0	0	0	12	15	6	0	7	56
1245	12	5	0	0	0	0	0	8	14	3	0	15	57
1300	8	8	0	0	0	0	0	8	11	11	0	10	56
1315	6	6	0	0	0	0	0	5	15	6	0	6	44
1330	8	1	0	0	0	0	0	8	17	11	0	13	58
1345	4	4	0	0	0	0	0	5	11	4	0	9	37
Total	70	38	0	0	0	0	0	65	107	55	0	81	416

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Counts: All Vehicles - Totals

Intersection # 2 williams/caputosaccsat

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1200	13	0	20	15	17	0	11	20	48
1215	17	0	23	20	23	0	9	28	60
1230	16	0	27	13	19	0	14	23	56
1245	17	0	22	18	23	0	8	26	57
1300	16	0	19	21	18	0	19	19	56
1315	12	0	20	12	11	0	12	21	44
1330	9	0	25	24	21	0	12	25	58
1345	8	0	16	13	14	0	8	15	37
Total	108	0	172	136	146	0	93	177	416

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: by Movement

Intersection # 2 williams/caputosaccsat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1200	36	16	0	0	0	0	0	36	44	28	0	32	192
1215	60	8	0	0	0	0	0	40	52	28	0	52	240
1230	32	32	0	0	0	0	0	48	60	24	0	28	224
1245	48	20	0	0	0	0	0	32	56	12	0	60	228
1300	32	32	0	0	0	0	0	32	44	44	0	40	224
1315	24	24	0	0	0	0	0	20	60	24	0	24	176
1330	32	4	0	0	0	0	0	32	68	44	0	52	232
1345	16	16	0	0	0	0	0	20	44	16	0	36	148

Downers Grove, IL Weather: Warm and Dry 06/26/17
Williams St and Caputo's Fresh Markets Access 10:02:52
Saturday June 24, 2017

TURNS/TEAPAC[Ver 3.61.12] - 15-Minute Flow Rates: Appr/Exit Totals

Intersection # 2 williams/caputosaccsat

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1200	52	0	80	60	68	0	44	80	192
1215	68	0	92	80	92	0	36	112	240
1230	64	0	108	52	76	0	56	92	224
1245	68	0	88	72	92	0	32	104	228
1300	64	0	76	84	72	0	76	76	224
1315	48	0	80	48	44	0	48	84	176
1330	36	0	100	96	84	0	48	100	232
1345	32	0	64	52	56	0	32	60	148

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: by Movement

Intersection # 2 williams/caputosaccsat

Begin	N-Approach			E-Approach			S-Approach			W-Approach			Int
Time	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
1200	44	19	0	0	0	0	0	39	53	23	0	43	221
1215	43	23	0	0	0	0	0	38	53	27	0	45	229
1230	34	27	0	0	0	0	0	33	55	26	0	38	213
1245	34	20	0	0	0	0	0	29	57	31	0	44	215
1300	26	19	0	0	0	0	0	26	54	32	0	38	195
1315	18	11	0	0	0	0	0	18	43	21	0	28	139*
1330	12	5	0	0	0	0	0	13	28	15	0	22	95*
1345	4	4	0	0	0	0	0	5	11	4	0	9	37*

TURNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 2 williams/caputosaccsat

Begin	Approach Totals				Exit Totals				Int
Time	N	E	S	W	N	E	S	W	Total
1200	63	0	92	66	82	0	42	97	221
1215	66	0	91	72	83	0	50	96	229
1230	61	0	88	64	71	0	53	89	213
1245	54	0	86	75	73	0	51	91	215
1300	45	0	80	70	64	0	51	80	195
1315	29	0	61	49	46	0	32	61	139*
1330	17	0	41	37	35	0	20	40	95*
1345	8	0	16	13	14	0	8	15	37*

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Williams Street
Site Code:
Start Date: 06/17/2017

Turning Movement Data

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Williams Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	11	374	0	0	385	0	1	303	22	0	326	0	0	0	0	0	0	0	6	0	11	0	17	728
12:15 PM	0	9	337	0	0	346	0	1	297	27	0	325	0	1	0	1	0	2	0	9	0	10	0	19	692
12:30 PM	0	11	315	1	0	327	0	1	321	15	0	337	0	3	0	1	0	4	0	6	0	7	0	13	681
12:45 PM	0	9	310	0	0	319	0	0	319	16	0	335	0	0	0	4	0	4	0	6	0	8	0	14	672
Hourly Total	0	40	1336	1	0	1377	0	3	1240	80	0	1323	0	4	0	6	0	10	0	27	0	36	0	63	2773
1:00 PM	1	9	310	1	0	321	0	0	312	18	0	330	0	0	0	3	0	3	0	2	0	7	2	9	663
1:15 PM	0	10	330	3	0	343	0	0	301	10	0	311	0	1	0	1	0	2	0	8	0	6	1	14	670
1:30 PM	0	3	330	0	0	333	0	0	291	14	0	305	0	1	0	0	0	1	0	9	0	6	0	15	654
1:45 PM	0	7	308	1	0	316	0	2	319	11	0	332	0	0	1	3	0	4	0	4	0	12	2	16	668
Hourly Total	1	29	1278	5	0	1313	0	2	1223	53	0	1278	0	2	1	7	0	10	0	23	0	31	5	54	2655
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7:00 AM	0	3	265	0	0	268	0	0	189	5	0	194	0	0	0	0	0	0	0	3	0	2	0	5	467
7:15 AM	0	3	281	0	0	284	1	0	216	5	0	222	0	0	0	0	0	0	0	4	0	4	0	8	514
7:30 AM	0	1	341	0	0	342	0	0	224	2	0	226	0	0	0	1	0	1	0	0	0	5	0	5	574
7:45 AM	0	7	348	0	0	355	0	0	244	6	0	250	0	0	0	0	0	0	0	2	0	7	0	9	614
Hourly Total	0	14	1235	0	0	1249	1	0	873	18	0	892	0	0	0	1	0	1	0	9	0	18	0	27	2169
8:00 AM	0	4	327	0	0	331	0	0	242	3	0	245	0	0	0	0	0	0	0	3	0	2	0	5	581
8:15 AM	0	3	332	0	0	335	0	0	222	3	0	225	0	1	0	0	0	1	0	5	0	0	0	5	566
8:30 AM	0	2	303	0	0	305	1	0	252	10	0	263	0	0	0	0	0	0	0	4	0	6	0	10	578
8:45 AM	0	3	338	1	0	342	0	0	200	5	0	205	0	0	0	2	0	2	0	4	0	2	0	6	555
Hourly Total	0	12	1300	1	0	1313	1	0	916	21	0	938	0	1	0	2	0	3	0	16	0	10	0	26	2280
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	9	351	1	0	361	0	0	366	20	0	386	1	0	0	1	0	2	0	3	0	5	2	8	757
4:15 PM	0	3	353	0	0	356	0	1	343	11	0	355	0	0	0	1	0	1	0	6	0	7	0	13	725
4:30 PM	0	5	365	1	0	371	0	0	359	13	0	372	0	0	0	0	0	0	0	2	0	4	0	6	749
4:45 PM	0	6	319	0	0	325	0	2	355	11	0	368	0	0	0	0	0	0	0	5	0	7	0	12	705
Hourly Total	0	23	1388	2	0	1413	0	3	1423	55	0	1481	1	0	0	2	0	3	0	16	0	23	2	39	2936
5:00 PM	0	4	356	2	0	362	0	0	388	22	0	410	0	1	0	1	0	2	0	5	0	5	0	10	784
5:15 PM	0	3	357	2	0	362	0	0	375	11	0	386	0	0	0	1	0	1	0	7	0	4	1	11	760
5:30 PM	0	5	363	2	0	370	0	0	382	9	0	391	0	0	0	1	0	1	0	3	0	2	0	5	767
5:45 PM	0	5	358	2	0	365	0	1	349	11	0	361	0	0	0	1	0	1	0	4	0	4	0	8	735
Hourly Total	0	17	1434	8	0	1459	0	1	1494	53	0	1548	0	1	0	4	0	5	0	19	0	15	1	34	3046
Grand Total	1	135	7971	17	0	8124	2	9	7169	280	0	7460	1	8	1	22	0	32	0	110	0	133	8	243	15859
Approach %	0.0	1.7	98.1	0.2	-	-	0.0	0.1	96.1	3.8	-	-	3.1	25.0	3.1	68.8	-	-	0.0	45.3	0.0	54.7	-	-	-
Total %	0.0	0.9	50.3	0.1	-	51.2	0.0	0.1	45.2	1.8	-	47.0	0.0	0.1	0.0	0.1	-	0.2	0.0	0.7	0.0	0.8	-	1.5	-
Lights	1	129	7847	17	-	7994	2	9	7053	273	-	7337	1	8	1	22	-	32	0	99	0	131	-	230	15593
% Lights	100.0	95.6	98.4	100.0	-	98.4	100.0	100.0	98.4	97.5	-	98.4	100.0	100.0	100.0	100.0	-	100.0	-	90.0	-	98.5	-	94.7	98.3

Buses	0	0	13	0	-	13	0	0	7	1	-	8	0	0	0	0	-	0	0	1	0	0	-	1	22
% Buses	0.0	0.0	0.2	0.0	-	0.2	0.0	0.0	0.1	0.4	-	0.1	0.0	0.0	0.0	0.0	-	0.0	-	0.9	-	0.0	-	0.4	0.1
Single-Unit Trucks	0	6	83	0	-	89	0	0	87	5	-	92	0	0	0	0	-	0	0	9	0	1	-	10	191
% Single-Unit Trucks	0.0	4.4	1.0	0.0	-	1.1	0.0	0.0	1.2	1.8	-	1.2	0.0	0.0	0.0	0.0	-	0.0	-	8.2	-	0.8	-	4.1	1.2
Articulated Trucks	0	0	28	0	-	28	0	0	19	0	-	19	0	0	0	0	-	0	0	1	0	1	-	2	49
% Articulated Trucks	0.0	0.0	0.4	0.0	-	0.3	0.0	0.0	0.3	0.0	-	0.3	0.0	0.0	0.0	0.0	-	0.0	-	0.9	-	0.8	-	0.8	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	3	1	-	4	0	0	0	0	-	0	0	0	0	0	-	0	4
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.4	-	0.1	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Williams Street
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Williams Street Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
12:00 PM	0	11	374	0	0	385	0	1	303	22	0	326	0	0	0	0	0	0	0	6	0	11	0	17	728
12:15 PM	0	9	337	0	0	346	0	1	297	27	0	325	0	1	0	1	0	2	0	9	0	10	0	19	692
12:30 PM	0	11	315	1	0	327	0	1	321	15	0	337	0	3	0	1	0	4	0	6	0	7	0	13	681
12:45 PM	0	9	310	0	0	319	0	0	319	16	0	335	0	0	0	4	0	4	0	6	0	8	0	14	672
Total	0	40	1336	1	0	1377	0	3	1240	80	0	1323	0	4	0	6	0	10	0	27	0	36	0	63	2773
Approach %	0.0	2.9	97.0	0.1	-	-	0.0	0.2	93.7	6.0	-	-	0.0	40.0	0.0	60.0	-	-	0.0	42.9	0.0	57.1	-	-	-
Total %	0.0	1.4	48.2	0.0	-	49.7	0.0	0.1	44.7	2.9	-	47.7	0.0	0.1	0.0	0.2	-	0.4	0.0	1.0	0.0	1.3	-	2.3	-
PHF	0.000	0.909	0.893	0.250	-	0.894	0.000	0.750	0.966	0.741	-	0.981	0.000	0.333	0.000	0.375	-	0.625	0.000	0.750	0.000	0.818	-	0.829	0.952
Lights	0	37	1329	1	-	1367	0	3	1226	79	-	1308	0	4	0	6	-	10	0	24	0	35	-	59	2744
% Lights	-	92.5	99.5	100.0	-	99.3	-	100.0	98.9	98.8	-	98.9	-	100.0	-	100.0	-	100.0	-	88.9	-	97.2	-	93.7	99.0
Buses	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.3	-	0.1	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	3	6	0	-	9	0	0	12	0	-	12	0	0	0	0	-	0	0	3	0	0	-	3	24
% Single-Unit Trucks	-	7.5	0.4	0.0	-	0.7	-	0.0	1.0	0.0	-	0.9	-	0.0	-	0.0	-	0.0	-	11.1	-	0.0	-	4.8	0.9
Articulated Trucks	0	0	1	0	-	1	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	1	-	1	4
% Articulated Trucks	-	0.0	0.1	0.0	-	0.1	-	0.0	0.2	0.0	-	0.2	-	0.0	-	0.0	-	0.0	-	0.0	-	2.8	-	1.6	0.1
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	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Williams Street
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Williams Street Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:45 AM	0	7	348	0	0	355	0	0	244	6	0	250	0	0	0	0	0	0	0	2	0	7	0	9	614
8:00 AM	0	4	327	0	0	331	0	0	242	3	0	245	0	0	0	0	0	0	0	3	0	2	0	5	581
8:15 AM	0	3	332	0	0	335	0	0	222	3	0	225	0	1	0	0	0	1	0	5	0	0	0	5	566
8:30 AM	0	2	303	0	0	305	1	0	252	10	0	263	0	0	0	0	0	0	0	4	0	6	0	10	578
Total	0	16	1310	0	0	1326	1	0	960	22	0	983	0	1	0	0	0	1	0	14	0	15	0	29	2339
Approach %	0.0	1.2	98.8	0.0	-	-	0.1	0.0	97.7	2.2	-	-	0.0	100.0	0.0	0.0	-	-	0.0	48.3	0.0	51.7	-	-	-
Total %	0.0	0.7	56.0	0.0	-	56.7	0.0	0.0	41.0	0.9	-	42.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.6	0.0	0.6	-	1.2	-
PHF	0.000	0.571	0.941	0.000	-	0.934	0.250	0.000	0.952	0.550	-	0.934	0.000	0.250	0.000	0.000	-	0.250	0.000	0.700	0.000	0.536	-	0.725	0.952
Lights	0	15	1275	0	-	1290	1	0	937	21	-	959	0	1	0	0	-	1	0	11	0	15	-	26	2276
% Lights	-	93.8	97.3	-	-	97.3	100.0	-	97.6	95.5	-	97.6	-	100.0	-	-	-	100.0	-	78.6	-	100.0	-	89.7	97.3
Buses	0	0	2	0	-	2	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	6
% Buses	-	0.0	0.2	-	-	0.2	0.0	-	0.4	0.0	-	0.4	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	0.3
Single-Unit Trucks	0	1	24	0	-	25	0	0	16	1	-	17	0	0	0	0	-	0	0	3	0	0	-	3	45
% Single-Unit Trucks	-	6.3	1.8	-	-	1.9	0.0	-	1.7	4.5	-	1.7	-	0.0	-	-	-	0.0	-	21.4	-	0.0	-	10.3	1.9
Articulated Trucks	0	0	9	0	-	9	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	0	-	0	12
% Articulated Trucks	-	0.0	0.7	-	-	0.7	0.0	-	0.3	0.0	-	0.3	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	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	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Ogden Avenue and Williams Street
Site Code:
Start Date: 06/17/2017

Turning Movement Peak Hour Data (5:00 PM)

Start Time	Ogden Avenue Eastbound						Ogden Avenue Westbound						Access Drive Northbound						Williams Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
5:00 PM	0	4	356	2	0	362	0	0	388	22	0	410	0	1	0	1	0	2	0	5	0	5	0	10	784
5:15 PM	0	3	357	2	0	362	0	0	375	11	0	386	0	0	0	1	0	1	0	7	0	4	1	11	760
5:30 PM	0	5	363	2	0	370	0	0	382	9	0	391	0	0	0	1	0	1	0	3	0	2	0	5	767
5:45 PM	0	5	358	2	0	365	0	1	349	11	0	361	0	0	0	1	0	1	0	4	0	4	0	8	735
Total	0	17	1434	8	0	1459	0	1	1494	53	0	1548	0	1	0	4	0	5	0	19	0	15	1	34	3046
Approach %	0.0	1.2	98.3	0.5	-	-	0.0	0.1	96.5	3.4	-	-	0.0	20.0	0.0	80.0	-	-	0.0	55.9	0.0	44.1	-	-	-
Total %	0.0	0.6	47.1	0.3	-	47.9	0.0	0.0	49.0	1.7	-	50.8	0.0	0.0	0.0	0.1	-	0.2	0.0	0.6	0.0	0.5	-	1.1	-
PHF	0.000	0.850	0.988	1.000	-	0.986	0.000	0.250	0.963	0.602	-	0.944	0.000	0.250	0.000	1.000	-	0.625	0.000	0.679	0.000	0.750	-	0.773	0.971
Lights	0	17	1416	8	-	1441	0	1	1478	52	-	1531	0	1	0	4	-	5	0	19	0	15	-	34	3011
% Lights	-	100.0	98.7	100.0	-	98.8	-	100.0	98.9	98.1	-	98.9	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	-	100.0	98.9
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	12	0	-	12	0	0	10	0	-	10	0	0	0	0	-	0	0	0	0	0	-	0	22
% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.8	-	0.0	0.7	0.0	-	0.6	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.7
Articulated Trucks	0	0	5	0	-	5	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	0	-	0	10
% Articulated Trucks	-	0.0	0.3	0.0	-	0.3	-	0.0	0.3	0.0	-	0.3	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.1	1.9	-	0.1	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

CMAP 2040 Projections Letter

Chicago Metropolitan Agency for Planning

233 South Wacker Drive
Suite 800
Chicago, Illinois 60606

312 454 0400
www.cmap.illinois.gov

June 5, 2017

Andrew Bowen
Consultant
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: ***Ogden Avenue (US 34) @ Cumnor Avenue***
IDOT

Dear Mr. Bowen:

In response to a request made on your behalf and dated June 5, 2017, we have developed year 2040 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2040 ADT
Ogden Ave (US 34), @ Cumnor Ave	32,500	34,000
Cumnor Ave, @ Ogden Ave (US 34)	1,350	2,000

Traffic projections are developed using existing ADT data provided in the request letter and the results from the March 2017 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2040 socioeconomic projections and assumes the implementation of the GO TO 2040 Comprehensive Regional Plan for the Northeastern Illinois area.

If you have any questions, please call me at (312) 386-8806.

Sincerely,

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Fortmann (IDOT)
S:\AdminGroups\ResearchAnalysis\TrafficForecasts_CY2017\DownersGrove\du-26-17\du-26-17.docx

Fast Casual Survey Data

Fast Casual Trip Generation

For previous studies of various fast casual restaurants, KLOA, Inc. surveyed various Panera Bread and Chipotle restaurants throughout the Chicagoland area. Their locations were chosen due to the following reasons:

- They were standalone restaurants with some of them providing a drive-through lane
- They were all located within a retail center and an established community
- They were located within close proximity to various retail and office land uses

The highest trip generation was found to be that of the Panera Bread restaurant in Naperville and is shown on Table A.

Table A
PANERA BREAD TRIP GENERATION SURVEY RESULTS

Land Use	Weekday Midday Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Panera Bread (4,090 s.f.)	74	79	153	45	36	81	56	55	111
Rate per 1,000 s.f.:	18.09	19.31	37.4	11.00	8.80	19.8	13.69	13.44	27.13

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

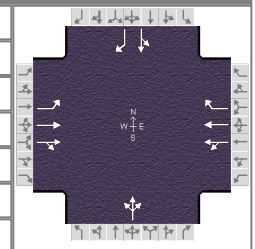
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

HCS7 Signalized Intersection Input Data

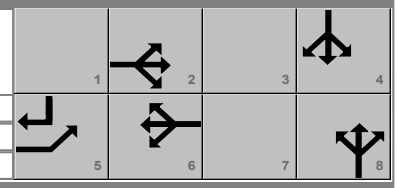
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	1297	0	0	883	64	0	0	0	55	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	104.1	7.4	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



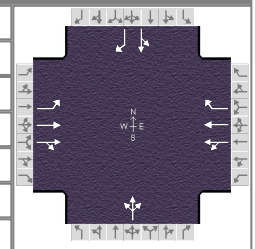
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	1297	0	0	883	64	0	0	0	55	0	59
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	4	3			3	2		0			2	0
Ped / Bike / RTOR, /h	0	0		0	0	0	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	100.0		80.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

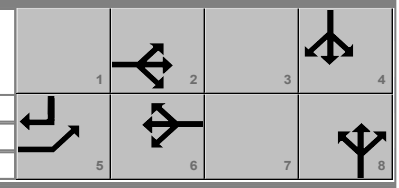
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	1297	0	0	883	64	0	0	0	55	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	104.1	7.4	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



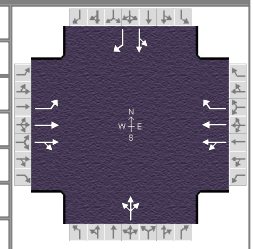
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	6.5	116.6		110.1		13.4		13.4
Change Period, ($Y+R_c$), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		0.0		5.3
Queue Clearance Time (g_s), s	2.6							7.1
Green Extension Time (g_e), s	0.1	0.0		0.0		0.0		0.4
Phase Call Probability	1.00							0.99
Max Out Probability	0.00							0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	47	1337	0	0	910	66		0			57	61
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1856	0	1843	1856	1585		0			1418	1610
Queue Service Time (g_s), s	0.6	10.9	0.0	0.0	8.4	1.1		0.0			5.1	4.7
Cycle Queue Clearance Time (g_c), s	0.6	10.9	0.0	0.0	8.4	1.1		0.0			5.1	4.7
Green Ratio (*g/C*)	0.84	0.85		0.80	0.80	0.80					0.06	0.08
Capacity (*c*), veh/h	540	3157			2971	1269					136	129
Volume-to-Capacity Ratio (*X*)	0.088	0.424	0.000	0.000	0.306	0.052		0.000			0.416	0.472
Back of Queue (*Q*), ft/ln (95 th percentile)	6.5	118.8	0	0	119.3	14.2		0			89.6	92.9
Back of Queue (*Q*), veh/ln (95 th percentile)	0.3	4.6	0.0	0.0	4.7	0.6		0.0			3.5	3.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	2.2	2.3			3.4	2.7					60.2	57.2
Incremental Delay (d_2), s/veh	0.1	0.4	0.0	0.0	0.3	0.1		0.0			2.9	3.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	2.3	2.7			3.7	2.8					63.1	60.9
Level of Service (LOS)	A	A			A	A					E	E
Approach Delay, s/veh / LOS	2.7	A		3.6	A		0.0			62.0	E	
Intersection Delay, s/veh / LOS	5.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.6	B	1.3	A	0.5	A	0.7	A

HCS7 Signalized Intersection Intermediate Values

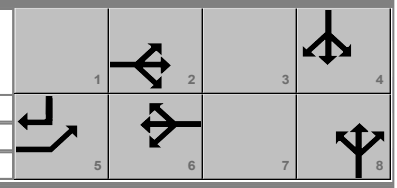
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	1297	0	0	883	64	0	0	0	55	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.0	104.1	7.4	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



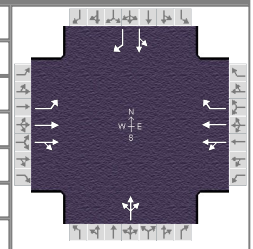
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.969	0.977	1.000	1.000	0.977	0.984	1.000	1.000	1.000	0.984	0.984	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		1.000	1.000		1.000	1.000		0.758	0.758	
Right-Turn Adjustment Factor (f_{RT})		1.000	1.000		0.000	0.847		0.000	1.000		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1753	3711	0	0	3711	1585	0	1900	0	1418	0	1610
Proportion of Vehicles Arriving on Green (P)	0.02	0.85	0.00	0.00	0.80	0.80	0.00	0.00	0.00	0.06	0.00	0.06
Incremental Delay Factor (k)	0.11	0.50			0.50	0.50					0.15	0.15

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.84	0.85		0.80		0.06		0.06
Permitted Saturation Flow Rate (s_p), veh/h/ln	603	0		416		1440		1440
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1900		0
Permitted Effective Green Time (g_p), s	106.1	0.0		0.0		0.0		7.4
Permitted Service Time (g_u), s	95.6	0.0		0.0		0.0		7.4
Permitted Queue Service Time (g_{ps}), s	0.9							5.1
Time to First Blockage (g_f), s	0.0	0.0		104.1		7.4		0.0
Queue Service Time Before Blockage (g_{fs}), s								0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				3.0

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.015	0.000	0.038	0.000	0.163	0.000	0.163
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1701.34	1.45	1601.33	2.58	114.05	57.80	114.05	57.80
Bicycle F_w / F_v	-3.64	1.14	-3.64	0.81	-3.64	0.00	-3.64	0.19

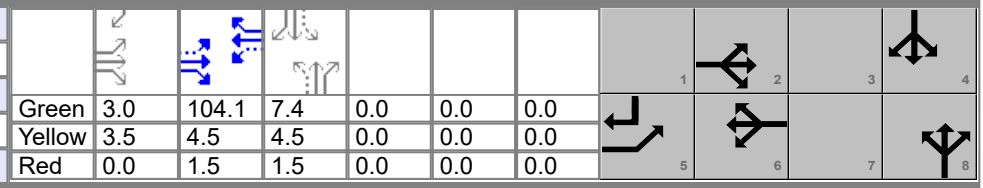
HCS7 Signalized Intersection Results Graphical Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMEX.xus		
Project Description					



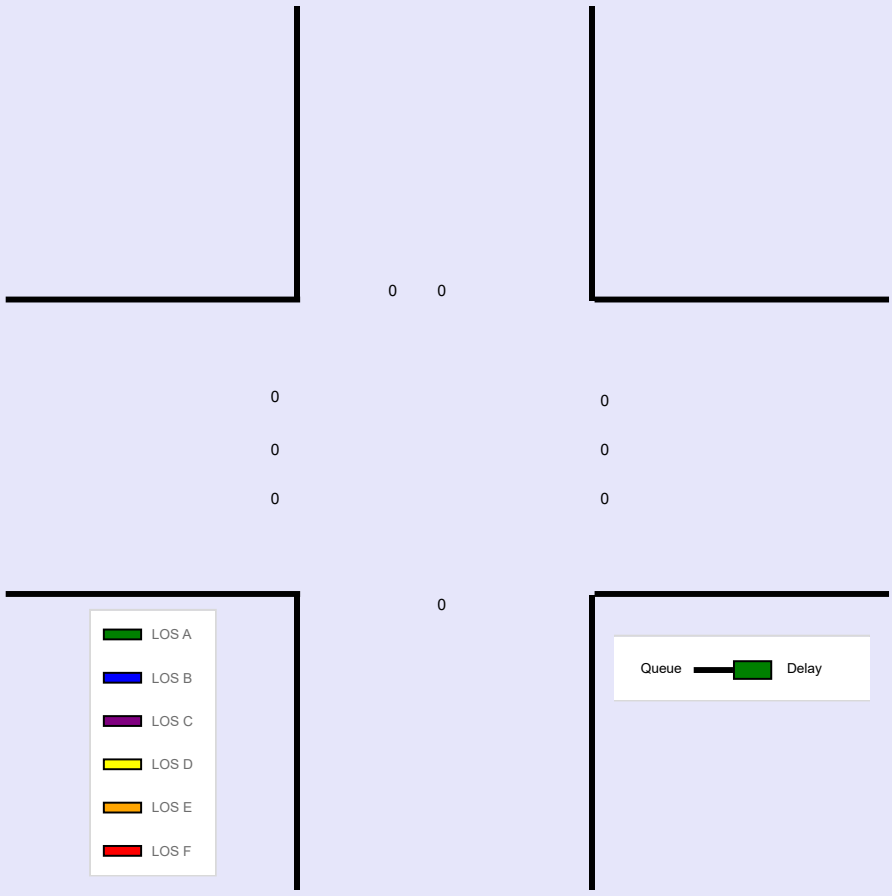
Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	46	1297	0	0	883	64	0	0	0	55	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	3.0	104.1	7.4	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	6.5	118.8	0	0	119.3	14.2		0			89.6	92.9
Back of Queue (*Q*), veh/ln (95 th percentile)	0.3	4.6	0.0	0.0	4.7	0.6		0.0			3.5	3.7
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	2.3	2.7			3.7	2.8					63.1	60.9
Level of Service (LOS)	A	A			A	A					E	E
Approach Delay, s/veh / LOS	2.7	A		3.6	A		0.0			62.0	E	
Intersection Delay, s/veh / LOS	5.9						A					



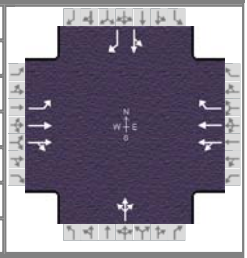
--- Messages ---

No errors or warnings exist.

--- Comments ---

HCS7 Signalized Intersection Input Data

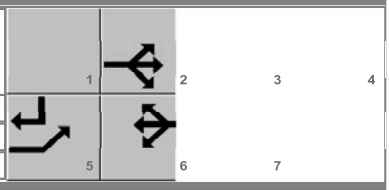
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	1357	3	0	1345	153	3	0	1	137	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.1	101.9	17.5	0.0	0.0	0.0	
Yellow	3.5	4.5	4.5	0.0	0.0	0.0	
Red	0.0	1.5	1.5	0.0	0.0	0.0	



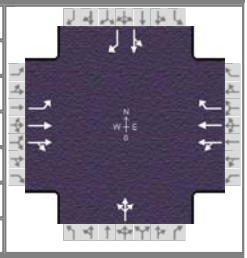
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	1357	3	0	1345	153	3	0	1	137	0	171
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	1	1			1	0		0			0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	110.0		90.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	1357	3	0	1345	153	3	0	1	137	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	5.1	101.9	17.5	0.0	0.0	0.0	5	6	7	
Yellow	3.5	4.5	4.5	0.0	0.0	0.0				
Red	0.0	1.5	1.5	0.0	0.0	0.0				

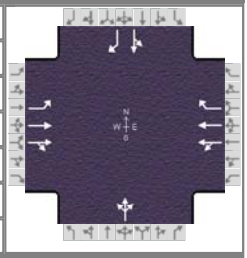
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	8.6	116.5		107.9		23.5		23.5
Change Period, (*Y+R c*), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		5.3		5.3
Queue Clearance Time (*g s*), s	4.7					2.3		16.4
Green Extension Time (*g e*), s	0.4	0.0		0.0		1.8		1.1
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.00					0.00		0.43

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	144	701	701	0	1387	158		4			141	176
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1884	0	1885	1610		1531			1439	1610
Queue Service Time (*g s*), s	2.7	17.5	17.5	0.0	22.2	4.1		0.0			13.1	14.4
Cycle Queue Clearance Time (*g c*), s	2.7	17.5	17.5	0.0	22.2	4.1		0.3			13.3	14.4
Green Ratio (*g/C*)	0.78	0.79	0.79		0.73	0.73		0.12			0.12	0.16
Capacity (*c*), veh/h	341	1488	1487		2745	1172		236			231	260
Volume-to-Capacity Ratio (*X*)	0.424	0.471	0.471	0.000	0.505	0.135		0.017			0.611	0.679
Back of Queue (*Q*), ft/ln (95 th percentile)	42.5	256.2	254.1	0	332.7	62.3		6			221.9	259.7
Back of Queue (*Q*), veh/ln (95 th percentile)	1.7	10.2	10.2	0.0	13.2	2.5		0.2			8.9	10.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (*d 1*), s/veh	7.0	4.9	4.9		8.2	5.7		53.7			59.4	55.3
Incremental Delay (*d 2*), s/veh	0.8	1.1	1.1	0.0	0.7	0.2		0.0			3.7	4.9
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	7.9	6.0	6.0		8.9	6.0		53.8			63.1	60.2
Level of Service (LOS)	A	A	A		A	A		D			E	E
Approach Delay, s/veh / LOS	6.2	A		8.6	A		53.8	D		61.5	E	
Intersection Delay, s/veh / LOS	12.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.8	B	1.8	B	0.5	A	1.0	A

HCS7 Signalized Intersection Intermediate Values

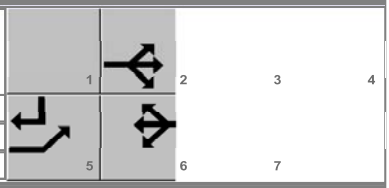
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	1357	3	0	1345	153	3	0	1	137	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.1	101.9	17.5	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



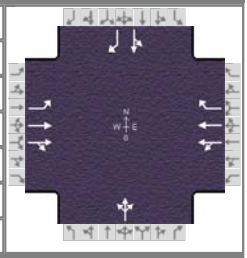
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.992	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		1.000	1.000		0.814	0.806		0.757	0.757	
Right-Turn Adjustment Factor (f_{RT})		0.999	0.999		0.000	0.847		0.000	0.806		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1795	3761	8	0	3770	1610	1148	0	383	1439	0	1610
Proportion of Vehicles Arriving on Green (P)	0.04	0.79	0.79	0.00	0.73	0.73	0.12	0.00	0.12	0.12	0.00	0.12
Incremental Delay Factor (k)	0.11	0.50	0.50		0.50	0.50		0.15			0.15	0.17

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.78	0.79		0.73		0.12		0.12
Permitted Saturation Flow Rate (s_p), veh/h/ln	393	0		391		1440		1439
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1533		1439
Permitted Effective Green Time (g_p), s	103.9	0.0		0.0		17.5		17.5
Permitted Service Time (g_u), s	79.8	0.0		0.0		4.2		17.2
Permitted Queue Service Time (g_{ps}), s	14.0					0.0		13.1
Time to First Blockage (g_f), s	0.0	0.0		101.9		0.7		0.0
Queue Service Time Before Blockage (g_{fs}), s						0.2		0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				5.1

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.045	0.000	0.066	0.000	0.160	0.000	0.160
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1578.69	3.11	1455.92	5.18	249.88	53.60	249.88	53.60
Bicycle F_w / F_v	-3.64	1.28	-3.64	1.27	-3.64	0.01	-3.64	0.52

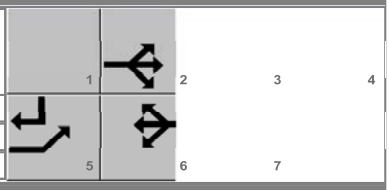
HCS7 Signalized Intersection Results Graphical Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMEX.xus		
Project Description					

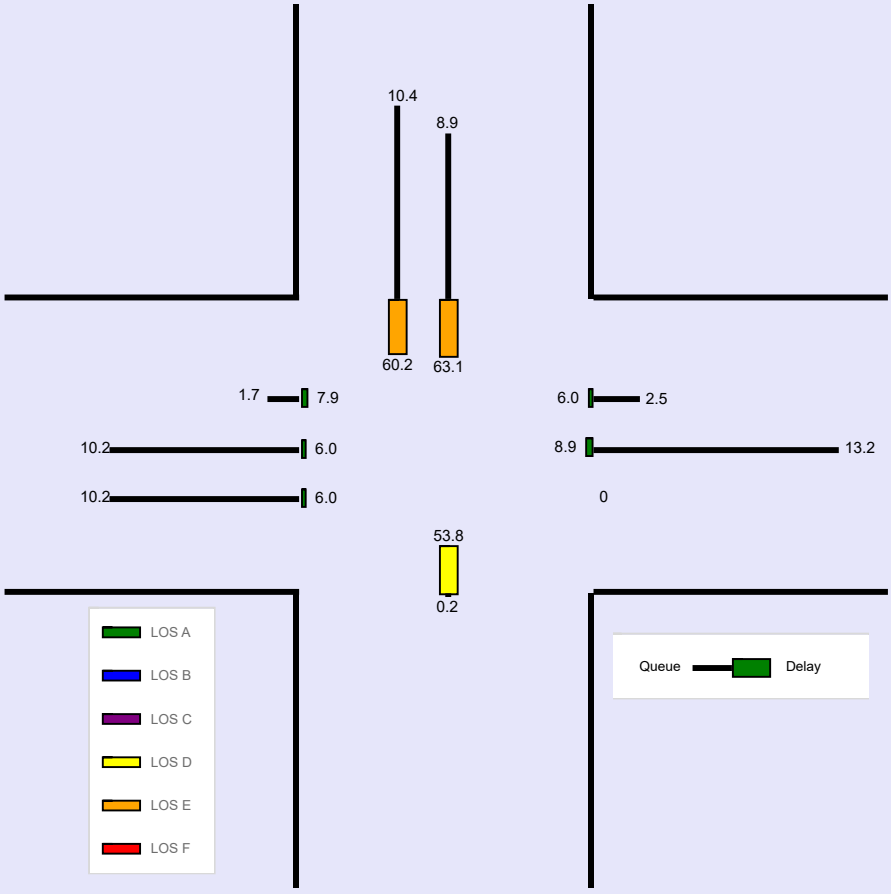


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	140	1357	3	0	1345	153	3	0	1	137	0	171

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	Begin										
Uncoordinated	No	Simult. Gap E/W	On	Green	5.1	101.9	17.5	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	3.5	4.5	4.5	0.0	0.0	0.0			
				Red	0.0	1.5	1.5	0.0	0.0	0.0			



Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	42.5	256.2	254.1	0	332.7	62.3		6			221.9	259.7
Back of Queue (*Q*), veh/ln (95 th percentile)	1.7	10.2	10.2	0.0	13.2	2.5		0.2			8.9	10.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	7.9	6.0	6.0		8.9	6.0		53.8			63.1	60.2
Level of Service (LOS)	A	A	A		A	A		D			E	E
Approach Delay, s/veh / LOS	6.2		A	8.6		A	53.8		D	61.5		E
Intersection Delay, s/veh / LOS	12.5						B					



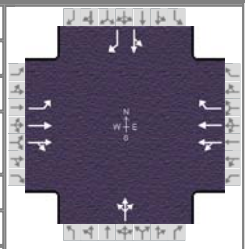
--- Messages ---

No errors or warnings exist.

--- Comments ---

HCS7 Signalized Intersection Input Data

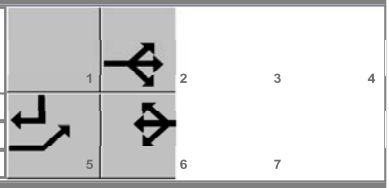
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	206	1159	1	1	1037	225	1	2	2	224	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.3	84.4	22.8	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



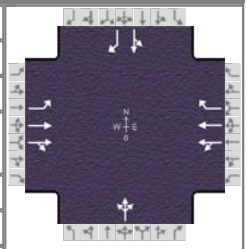
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	206	1159	1	1	1037	225	1	2	2	224	0	242
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	1	1			1	0		0			0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	100.0		80.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

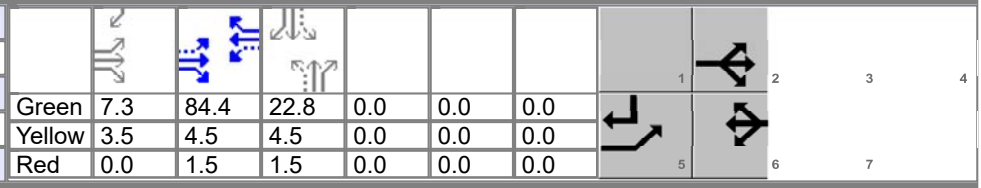
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	206	1159	1	1	1037	225	1	2	2	224	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	7.3	84.4	22.8	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0

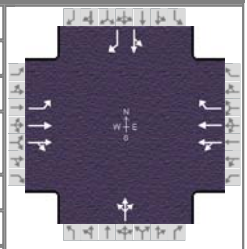
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	10.8	101.2		90.4		28.8		28.8
Change Period, ($Y+R_c$), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		5.3		5.3
Queue Clearance Time (g_s), s	6.8					2.3		22.3
Green Extension Time (g_e), s	0.5	0.0		0.0		2.8		0.5
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.01					0.01		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	210	592	592	554	505	230		5			229	247
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1885	1884	1716	1610		1769			1435	1610
Queue Service Time (g_s), s	4.8	15.9	15.9	0.0	19.0	7.6		0.0			20.0	18.1
Cycle Queue Clearance Time (g_c), s	4.8	15.9	15.9	19.0	19.0	7.6		0.3			20.3	18.1
Green Ratio (*g/C*)	0.72	0.73	0.73	0.65	0.65	0.65		0.18			0.18	0.23
Capacity (*c*), veh/h	426	1380	1380	1251	1114	1045		344			307	373
Volume-to-Capacity Ratio (*X*)	0.493	0.429	0.429	0.443	0.453	0.220		0.015			0.744	0.662
Back of Queue (*Q*), ft/ln (95 th percentile)	80	254	251.9	313.1	294.1	121.7		6.3			321.6	309
Back of Queue (*Q*), veh/ln (95 th percentile)	3.2	10.1	10.1	12.5	11.7	4.9		0.3			12.9	12.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	8.5	6.8	6.8	11.3	11.3	9.3		44.3			52.6	45.3
Incremental Delay (d_2), s/veh	0.9	1.0	1.0	1.1	1.3	0.5		0.0			9.5	4.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	9.4	7.8	7.8	12.5	12.7	9.8		44.3			62.1	49.9
Level of Service (LOS)	A	A	A	B	B	A		D			E	D
Approach Delay, s/veh / LOS	8.0	A		12.1	B		44.3	D		55.8	E	
Intersection Delay, s/veh / LOS	16.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.6	B	1.6	B	0.5	A	1.3	A

HCS7 Signalized Intersection Intermediate Values

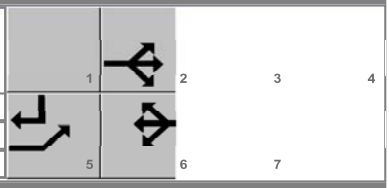
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATEX.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	206	1159	1	1	1037	225	1	2	2	224	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.3	84.4	22.8	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



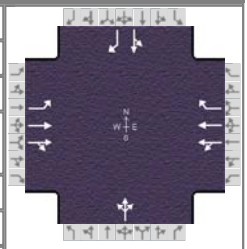
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.992	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.999	0.999		0.959	0.931		0.755	0.755	
Right-Turn Adjustment Factor (f_{RT})		1.000	1.000		0.000	0.847		0.000	0.931		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1795	3767	3	3	3596	1610	354	708	708	1435	0	1610
Proportion of Vehicles Arriving on Green (P)	0.06	0.73	0.73	0.65	0.65	0.65	0.18	0.18	0.18	0.18	0.00	0.18
Incremental Delay Factor (k)	0.11	0.50	0.50	0.50	0.50	0.50		0.15			0.30	0.25

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.72	0.73		0.65		0.18		0.18
Permitted Saturation Flow Rate (s_p), veh/h/ln	537	0		481		1440		1435
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1786		1435
Permitted Effective Green Time (g_p), s	86.4	0.0		84.4		22.8		22.8
Permitted Service Time (g_u), s	65.4	0.0		79.3		2.5		22.5
Permitted Queue Service Time (g_{ps}), s	13.5			0.0		0.0		20.0
Time to First Blockage (g_f), s	0.0	0.0		75.7		7.4		0.0
Queue Service Time Before Blockage (g_{fs}), s				19.0		0.2		0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				7.3

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.062	0.000	0.083	0.000	0.152	0.000	0.152
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1464.46	4.66	1298.32	8.00	350.93	44.19	350.93	44.19
Bicycle F_w / F_v	-3.64	1.15	-3.64	1.06	-3.64	0.01	-3.64	0.78

HCS7 Signalized Intersection Results Graphical Summary

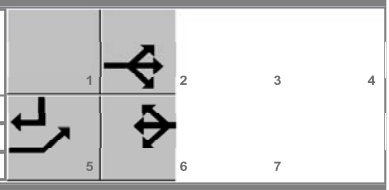
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2017	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATEX.xus		
Project Description					



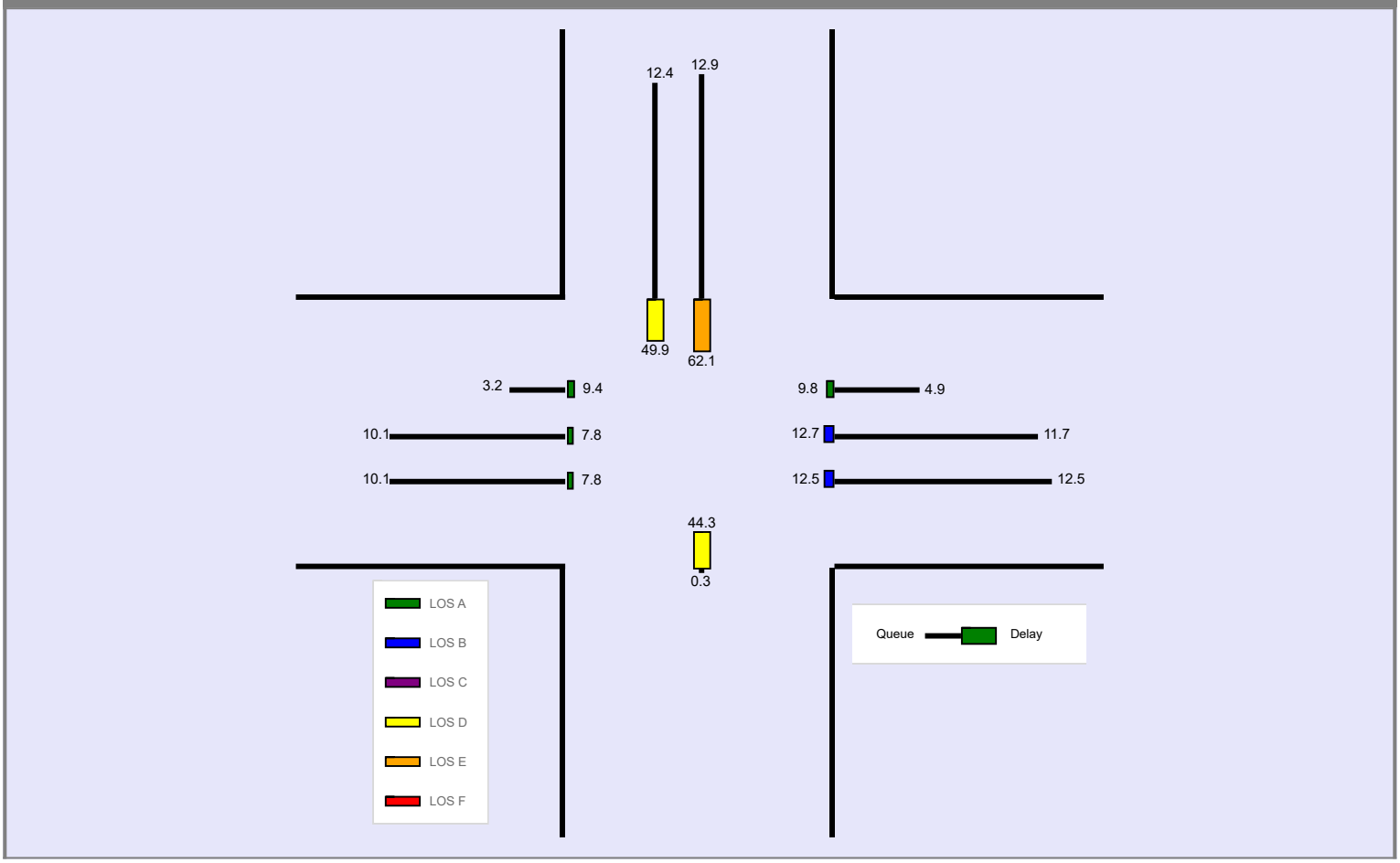
Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	206	1159	1	1	1037	225	1	2	2	224	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	7.3	84.4	22.8	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						



Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	80	254	251.9	313.1	294.1	121.7		6.3			321.6	309
Back of Queue (*Q*), veh/ln (95 th percentile)	3.2	10.1	10.1	12.5	11.7	4.9		0.3			12.9	12.4
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	9.4	7.8	7.8	12.5	12.7	9.8		44.3			62.1	49.9
Level of Service (LOS)	A	A	A	B	B	A		D			E	D
Approach Delay, s/veh / LOS	8.0	A		12.1	B		44.3	D		55.8	E	
Intersection Delay, s/veh / LOS	16.9						B					



--- Messages ---

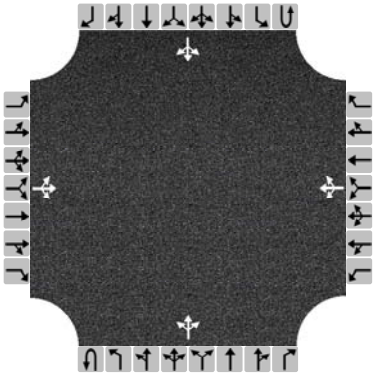
No errors or warnings exist.

--- Comments ---

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ANB	Intersection	Cumnor Rd and Foxfire Ct
Agency/Co.	KLOA, Inc.	Jurisdiction	Downers Grove
Date Performed	6/28/2017	East/West Street	Foxfire Court
Analysis Year	2017	North/South Street	Cumnor Road
Time Analyzed	7:30 A.M. to 8:30 A.M.	Peak Hour Factor	0.87
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Outlot Redevelopment		

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		3	0	5		24	1	17		0	30	45		23	55	1
Percent Heavy Vehicles (%)		0	0	0		0	0	6		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

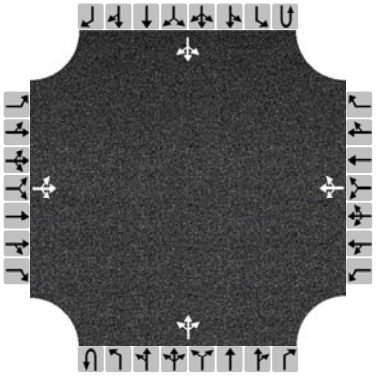
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			9				49			0				26		
Capacity, c (veh/h)			904				845			1551				1518		
v/c Ratio			0.01				0.06			0.00				0.02		
95% Queue Length, Q_{95} (veh)			0.0				0.2			0.0				0.1		
Control Delay (s/veh)			9.0				9.5			7.3				7.4		
Level of Service, LOS			A				A			A				A		
Approach Delay (s/veh)	9.0				9.5				0.0				2.2			
Approach LOS	A				A											

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ANB	Intersection	Cumnor Rd and Foxfire Ct
Agency/Co.	KLOA, Inc.	Jurisdiction	Downers Grove
Date Performed	6/28/2017	East/West Street	Foxfire Court
Analysis Year	2017	North/South Street	Cumnor Road
Time Analyzed	5:00 P.M. to 6:00 P.M.	Peak Hour Factor	0.88
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Outlot Redevelopment		

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		0	1	1		79	0	38		2	48	64		43	58	2
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

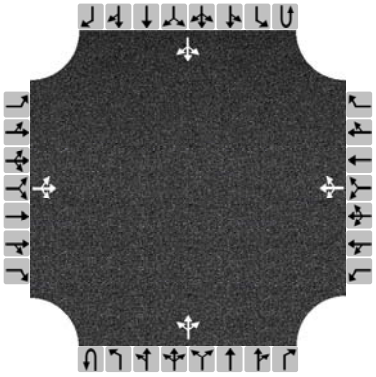
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			2				133			2				49		
Capacity, c (veh/h)			746				748			1544				1471		
v/c Ratio			0.00				0.18			0.00				0.03		
95% Queue Length, Q_{95} (veh)			0.0				0.6			0.0				0.1		
Control Delay (s/veh)			9.8				10.8			7.3				7.5		
Level of Service, LOS			A				B			A				A		
Approach Delay (s/veh)	9.8				10.8				0.1				3.3			
Approach LOS	A				B											

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ANB	Intersection	Cumnor Rd and Foxfire Ct
Agency/Co.	KLOA, Inc.	Jurisdiction	Downers Grove
Date Performed	6/28/2017	East/West Street	Foxfire Court
Analysis Year	2017	North/South Street	Cumnor Road
Time Analyzed	12:00 P.M. to 1:00 P.M.	Peak Hour Factor	0.85
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Outlot Redevelopment		

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		0	1	2		98	2	56		94	52	5		43	61	0
Percent Heavy Vehicles (%)		0	0	3		0	0	3		20				0		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			3				183			111				51		
Capacity, c (veh/h)			698				573			1421				1542		
v/c Ratio			0.00				0.32			0.08				0.03		
95% Queue Length, Q_{95} (veh)			0.0				1.4			0.3				0.1		
Control Delay (s/veh)			10.2				14.2			7.7				7.4		
Level of Service, LOS			B				B			A				A		
Approach Delay (s/veh)	10.2				14.2				5.1				3.2			
Approach LOS	B				B											

HCS7 Two-Way Stop-Control Report

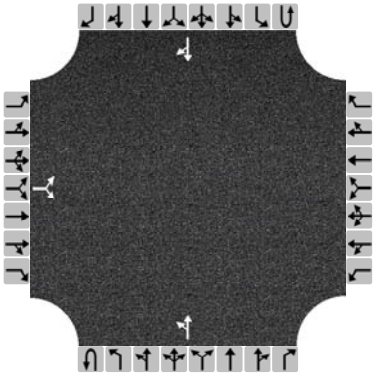
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	7:30 A.M. to 8:30 A.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		9		5						20	16				20	6
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			17							24						
Capacity, c (veh/h)			936							1573						
v/c Ratio			0.02							0.02						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			8.9							7.3						
Level of Service, LOS			A							A						
Approach Delay (s/veh)		8.9								4.1						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

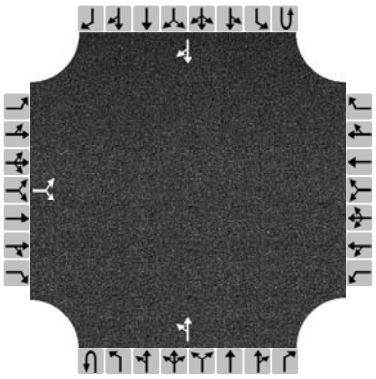
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	5:00 P.M. to 6:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.86
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		54		24						59	33				15	43
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			91							69						
Capacity, c (veh/h)			795							1515						
v/c Ratio			0.11							0.05						
95% Queue Length, Q_{95} (veh)			0.4							0.1						
Control Delay (s/veh)			10.1							7.5						
Level of Service, LOS			B							A						
Approach Delay (s/veh)		10.1								5.0						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

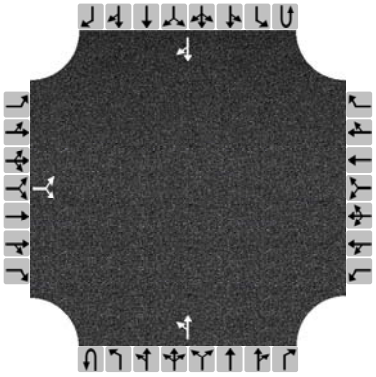
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	12:00 P.M. to 1:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		43		23						53	39				19	44
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			72							58						
Capacity, c (veh/h)			823							1518						
v/c Ratio			0.09							0.04						
95% Queue Length, Q_{95} (veh)			0.3							0.1						
Control Delay (s/veh)			9.8							7.5						
Level of Service, LOS			A							A						
Approach Delay (s/veh)		9.8								4.5						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

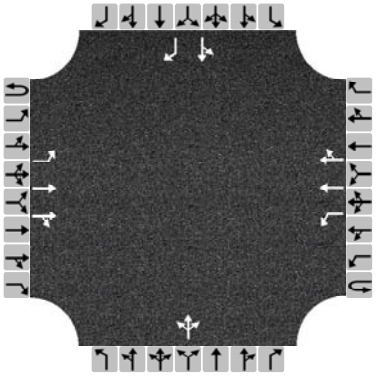
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	7:30 A.M. to 8:30 A.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		15	1348	0		0	932	15		0	0	1		10	0	14
Percent Heavy Vehicles (%)		7				3				0	0	0		30	0	7
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		16				0					1			11		15
Capacity, c (veh/h)		660				471					381			134		505
v/c Ratio		0.02				0.00					0.00			0.08		0.03
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.0			0.3		0.1
Control Delay (s/veh)		10.6				12.6					14.5			34.2		12.3
Level of Service, LOS		B				B					B			D		B
Approach Delay (s/veh)		0.1				0.0				14.5				21.6		
Approach LOS										B				C		

HCS7 Two-Way Stop-Control Report

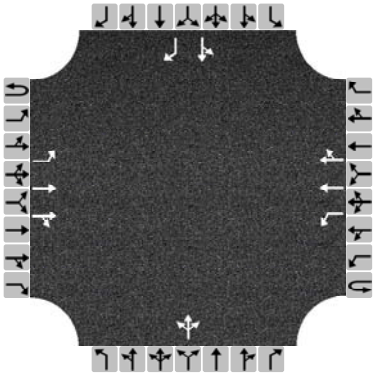
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	5:00 P.M. to 6:00 P.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		17	1434	8		1	1494	53		1	0	4		19	0	15
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		18				1					5			20		15
Capacity, c (veh/h)		416				459					223			86		333
v/c Ratio		0.04				0.00					0.02			0.23		0.05
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.1			0.8		0.1
Control Delay (s/veh)		14.0				12.9					21.5			59.0		16.3
Level of Service, LOS		B				B					C			F		C
Approach Delay (s/veh)		0.2				0.0					21.5			40.7		
Approach LOS											C			E		

HCS7 Two-Way Stop-Control Report

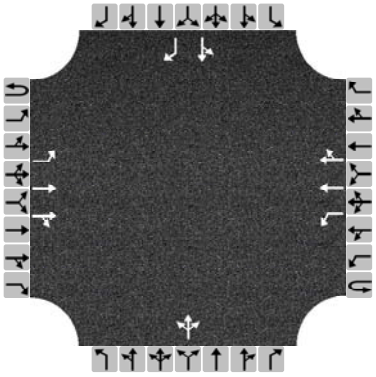
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2017
Time Analyzed	12:00 P.M to 1:00 P.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		40	1336	1		3	1240	80		4	0	6		27	0	36
Percent Heavy Vehicles (%)		8				0				0	0	0		11	0	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

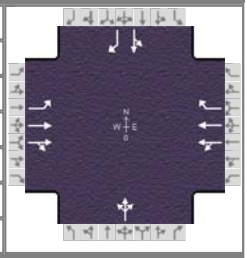
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		42				3					10			28		38
Capacity, c (veh/h)		459				491					165			98		383
v/c Ratio		0.09				0.01					0.06			0.29		0.10
95% Queue Length, Q_{95} (veh)		0.3				0.0					0.2			1.1		0.3
Control Delay (s/veh)		13.6				12.4					28.2			56.1		15.4
Level of Service, LOS		B				B					D			F		C
Approach Delay (s/veh)		0.4				0.0				28.2				32.7		
Approach LOS										D				D		

HCS7 Signalized Intersection Input Data

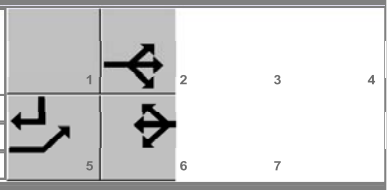
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	1319	0	0	980	64	0	0	0	91	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	100.1	11.0	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



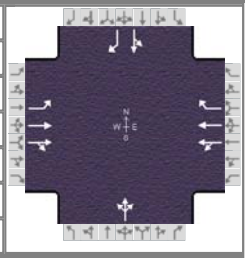
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	1319	0	0	980	64	0	0	0	91	0	59
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	4	3			3	2		0			2	0
Ped / Bike / RTOR, /h	0	0		0	0	0	0	0		0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	100.0		80.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

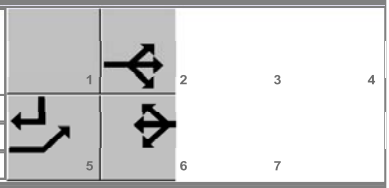
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	1319	0	0	980	64	0	0	0	91	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	100.1	11.0	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0



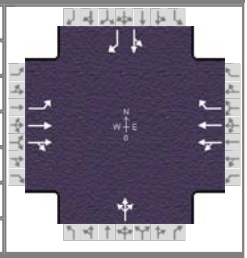
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	6.9	113.0		106.1		17.0		17.0
Change Period, ($Y+R_c$), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		0.0		5.2
Queue Clearance Time (g_s), s	3.2							10.4
Green Extension Time (g_e), s	0.2	0.0		0.0		0.0		0.6
Phase Call Probability	1.00							1.00
Max Out Probability	0.00							0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	79	1360	0	0	1010	66		0			94	61
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1753	1856	0	0	1856	1585		0			1418	1610
Queue Service Time (g_s), s	1.2	13.3	0.0	0.0	11.2	1.3		0.0			8.4	4.5
Cycle Queue Clearance Time (g_c), s	1.2	13.3	0.0	0.0	11.2	1.3		0.0			8.4	4.5
Green Ratio (*g/C*)	0.81	0.82			0.77	0.77					0.08	0.11
Capacity (*c*), veh/h	477	3055			2859	1221					175	178
Volume-to-Capacity Ratio (*X*)	0.167	0.445	0.000	0.000	0.353	0.054		0.000			0.536	0.342
Back of Queue (*Q*), ft/ln (95 th percentile)	15.1	171.1	0	0	171.8	17.6		0			147.5	87.3
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	6.7	0.0	0.0	6.7	0.7		0.0			5.8	3.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	3.2	3.2			4.7	3.6					58.3	53.5
Incremental Delay (d_2), s/veh	0.2	0.5	0.0	0.0	0.3	0.1		0.0			3.6	1.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	3.4	3.7			5.1	3.7					61.9	55.1
Level of Service (LOS)	A	A			A	A					E	E
Approach Delay, s/veh / LOS	3.7	A		5.0	A		0.0			59.2	E	
Intersection Delay, s/veh / LOS	7.4						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.7	B	1.4	A	0.5	A	0.7	A

HCS7 Signalized Intersection Intermediate Values

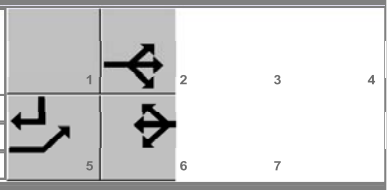
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	1319	0	0	980	64	0	0	0	91	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	100.1	11.0	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						



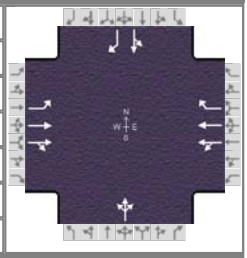
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.969	0.977	1.000	1.000	0.977	0.984	1.000	1.000	1.000	0.984	0.984	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		1.000	1.000		1.000	1.000		0.758	0.758	
Right-Turn Adjustment Factor (f_{RT})		1.000	1.000		0.000	0.847		0.000	1.000		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1753	3711	0	0	3711	1585	0	1900	0	1418	0	1610
Proportion of Vehicles Arriving on Green (P)	0.03	0.82	0.00	0.00	0.77	0.77	0.00	0.00	0.00	0.08	0.00	0.08
Incremental Delay Factor (k)	0.11	0.50			0.50	0.50					0.15	0.15

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.81	0.82		0.77		0.08		0.08
Permitted Saturation Flow Rate (s_p), veh/h/ln	549	0		407		1440		1440
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1900		0
Permitted Effective Green Time (g_p), s	102.1	0.0		0.0		0.0		11.0
Permitted Service Time (g_u), s	89.0	0.0		0.0		0.0		11.0
Permitted Queue Service Time (g_{ps}), s	2.2							8.4
Time to First Blockage (g_f), s	0.0	0.0		100.1		11.0		0.0
Queue Service Time Before Blockage (g_{fs}), s								0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				3.4

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.028	0.000	0.049	0.000	0.160	0.000	0.160
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1646.40	2.03	1540.70	3.43	168.98	54.48	168.98	54.48
Bicycle F_w / F_v	-3.64	1.19	-3.64	0.89	-3.64	0.00	-3.64	0.26

HCS7 Signalized Intersection Results Graphical Summary

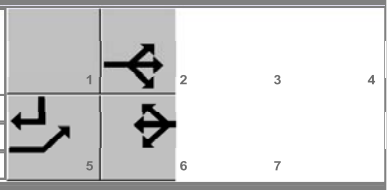
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	A.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access AMFUT.xus		
Project Description					



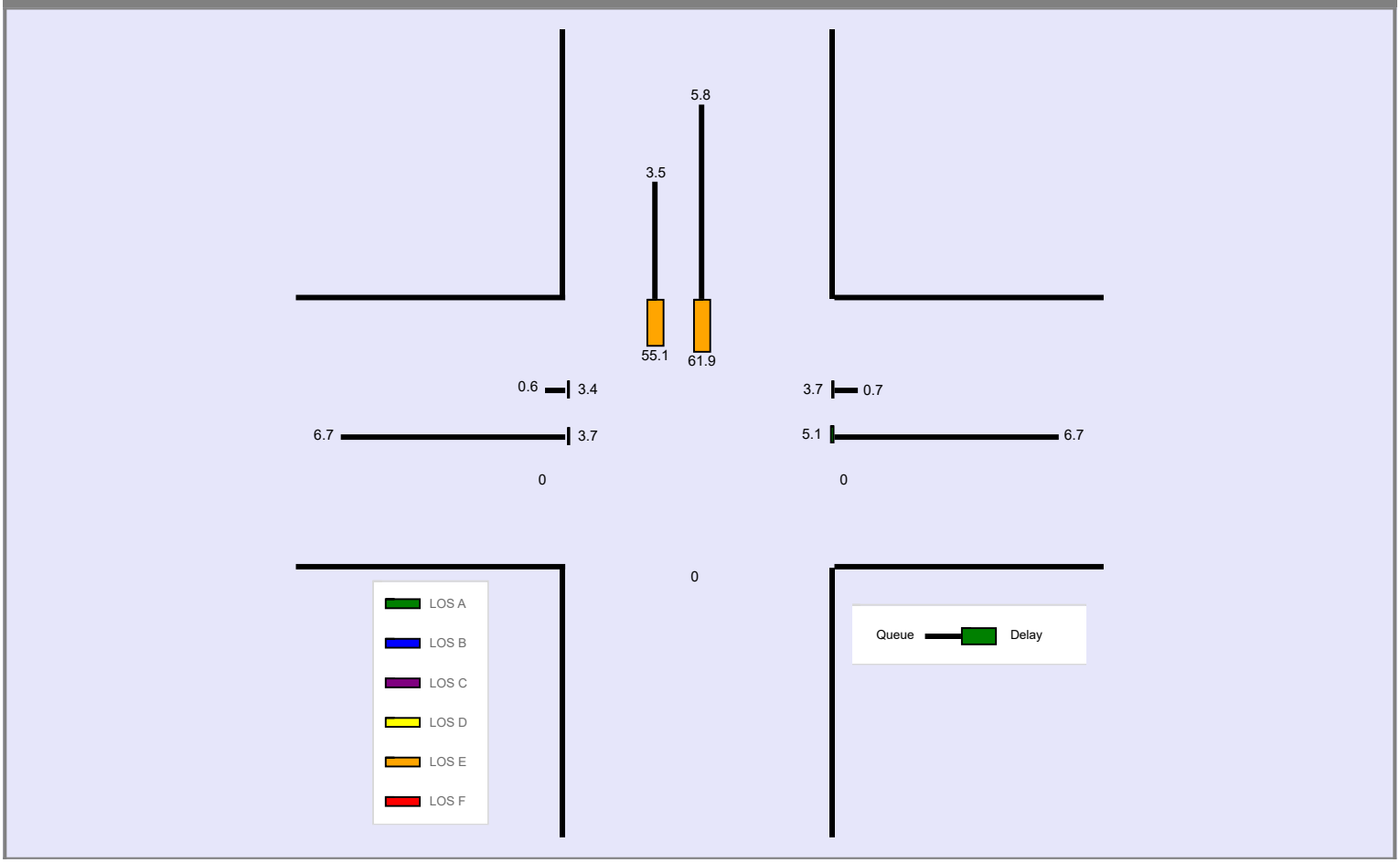
Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	77	1319	0	0	980	64	0	0	0	91	0	59

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	100.1	11.0	0.0	0.0	0.0	
Yellow	3.5	4.5	4.5	0.0	0.0	0.0	
Red	0.0	1.5	1.5	0.0	0.0	0.0	



Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	15.1	171.1	0	0	171.8	17.6		0			147.5	87.3
Back of Queue (*Q*), veh/ln (95 th percentile)	0.6	6.7	0.0	0.0	6.7	0.7		0.0			5.8	3.5
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	3.4	3.7			5.1	3.7					61.9	55.1
Level of Service (LOS)	A	A			A	A					E	E
Approach Delay, s/veh / LOS	3.7	A		5.0	A		0.0			59.2	E	
Intersection Delay, s/veh / LOS	7.4						A					



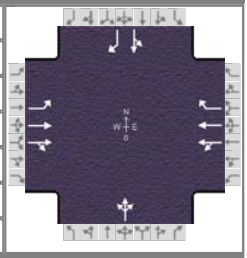
--- Messages ---

No errors or warnings exist.

--- Comments ---

HCS7 Signalized Intersection Input Data

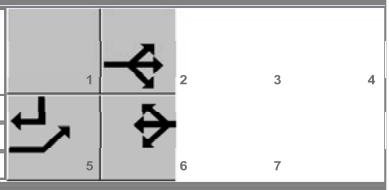
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1396	3	0	1395	153	3	0	1	154	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.5	100.8	18.2	0.0	0.0	0.0	
Yellow	3.5	4.5	4.5	0.0	0.0	0.0	
Red	0.0	1.5	1.5	0.0	0.0	0.0	



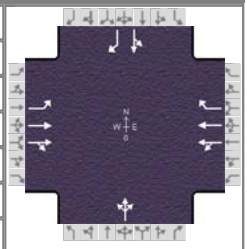
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1396	3	0	1395	153	3	0	1	154	0	171
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	1	1			1	0		0			0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	110.0		90.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (*e*), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1396	3	0	1395	153	3	0	1	154	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

							1	2	3	4
Green	5.5	100.8	18.2	0.0	0.0	0.0	5	6	7	
Yellow	3.5	4.5	4.5	0.0	0.0	0.0				
Red	0.0	1.5	1.5	0.0	0.0	0.0				

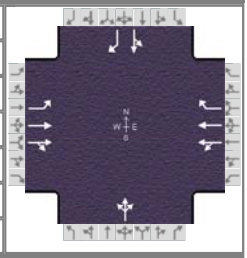
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	9.0	115.8		106.8		24.2		24.2
Change Period, ($Y+R_c$), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		5.3		5.3
Queue Clearance Time (g_s), s	5.1					2.3		17.1
Green Extension Time (g_e), s	0.4	0.0		0.0		1.9		1.1
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.00					0.00		0.56

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	159	721	721	0	1438	158		4			159	176
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1884	0	1885	1610		1534			1439	1610
Queue Service Time (g_s), s	3.1	18.7	18.7	0.0	24.1	4.3		0.0			14.8	14.3
Cycle Queue Clearance Time (g_c), s	3.1	18.7	18.7	0.0	24.1	4.3		0.3			15.1	14.3
Green Ratio (*g/C*)	0.77	0.78	0.78		0.72	0.72		0.13			0.13	0.17
Capacity (*c*), veh/h	327	1479	1478		2716	1160		244			238	272
Volume-to-Capacity Ratio (*X*)	0.486	0.488	0.488	0.000	0.530	0.136		0.017			0.667	0.648
Back of Queue (*Q*), ft/ln (95 th percentile)	56.6	273.3	271	0	360.7	64.7		5.9			247.3	256.1
Back of Queue (*Q*), veh/ln (95 th percentile)	2.2	10.8	10.8	0.0	14.3	2.6		0.2			9.9	10.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	8.2	5.3	5.3		8.9	6.1		53.1			59.6	54.3
Incremental Delay (d_2), s/veh	1.1	1.2	1.2	0.0	0.7	0.2		0.0			5.2	4.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	9.3	6.4	6.4		9.6	6.3		53.2			64.8	58.3
Level of Service (LOS)	A	A	A		A	A		D			E	E
Approach Delay, s/veh / LOS	6.7	A		9.3	A		53.2	D		61.3	E	
Intersection Delay, s/veh / LOS	13.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.0	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.8	B	1.8	B	0.5	A	1.0	A

HCS7 Signalized Intersection Intermediate Values

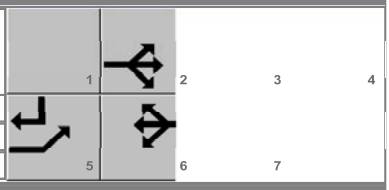
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1396	3	0	1395	153	3	0	1	154	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.5	100.8	18.2	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						



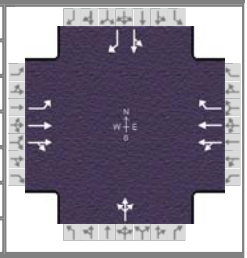
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.992	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		1.000	1.000		0.814	0.807		0.757	0.757	
Right-Turn Adjustment Factor (f_{RT})		0.999	0.999		0.000	0.847		0.000	0.807		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1795	3761	8	0	3770	1610	1151	0	384	1439	0	1610
Proportion of Vehicles Arriving on Green (P)	0.04	0.78	0.78	0.00	0.72	0.72	0.13	0.00	0.13	0.13	0.00	0.13
Incremental Delay Factor (k)	0.11	0.50	0.50		0.50	0.50		0.15			0.18	0.17

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.77	0.78		0.72		0.13		0.13
Permitted Saturation Flow Rate (s_p), veh/h/ln	374	0		376		1440		1439
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1533		1439
Permitted Effective Green Time (g_p), s	102.8	0.0		0.0		18.2		18.2
Permitted Service Time (g_u), s	76.7	0.0		0.0		3.1		17.9
Permitted Queue Service Time (g_{ps}), s	19.3					0.0		14.8
Time to First Blockage (g_f), s	0.0	0.0		100.8		0.7		0.0
Queue Service Time Before Blockage (g_{fs}), s						0.2		0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				5.5

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.047	0.000	0.068	0.000	0.159	0.000	0.159
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1569.07	3.25	1440.56	5.48	259.50	53.01	259.50	53.01
Bicycle F_w / F_v	-3.64	1.32	-3.64	1.32	-3.64	0.01	-3.64	0.55

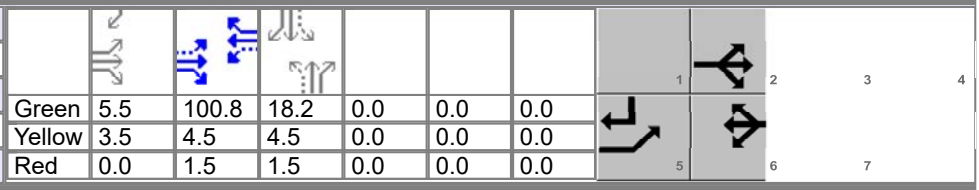
HCS7 Signalized Intersection Results Graphical Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 28, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	P.M. Peak Hour	PHF	0.97
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access PMFUT.xus		
Project Description					



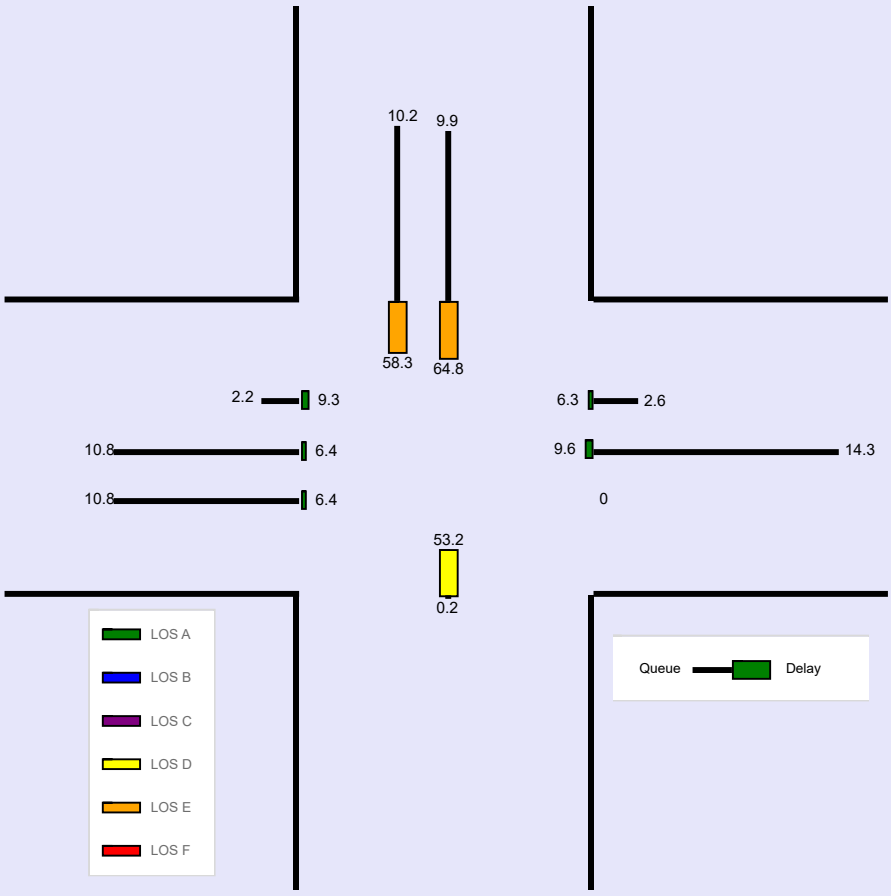
Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1396	3	0	1395	153	3	0	1	154	0	171

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	5.5	100.8	18.2	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	56.6	273.3	271	0	360.7	64.7		5.9			247.3	256.1
Back of Queue (*Q*), veh/ln (95 th percentile)	2.2	10.8	10.8	0.0	14.3	2.6		0.2			9.9	10.2
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	9.3	6.4	6.4		9.6	6.3		53.2			64.8	58.3
Level of Service (LOS)	A	A	A		A	A		D			E	E
Approach Delay, s/veh / LOS	6.7	A		9.3	A		53.2	D		61.3	E	
Intersection Delay, s/veh / LOS	13.1						B					



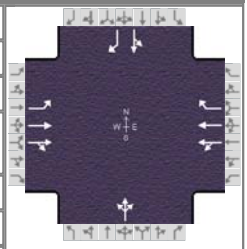
--- Messages ---

No errors or warnings exist.

--- Comments ---

HCS7 Signalized Intersection Input Data

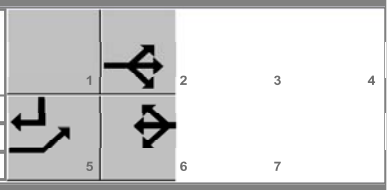
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	230	1185	1	1	1086	225	1	2	2	255	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.1	82.4	24.0	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						



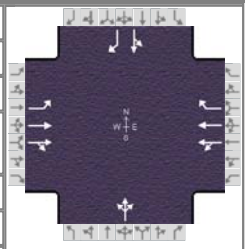
Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	230	1185	1	1	1086	225	1	2	2	255	0	242
Initial Queue (Q_b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N_m), man/h		None			None			None			None	
Heavy Vehicles (P_{HV}), %	1	1			1	0		0			0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (*AT*)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (*I*)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Width (*W*), ft	12.0	12.0			12.0	12.0		12.0			12.0	12.0
Turn Bay Length, ft	0	0			0	0		0			0	0
Grade (*Pg*), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	25	25	25	25	25	25

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	20.0	100.0		80.0		30.0		30.0
Yellow Change Interval (*Y*), s	3.5	4.5		4.5		4.5		4.5
Red Clearance Interval (R_c), s	0.0	1.5		1.5		1.5		1.5
Minimum Green (G_{min}), s	3	15	6	15	6	8	6	6
Start-Up Lost Time (*l*t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Passage (*PT*), s	3.0	7.0	2.0	7.0	2.0	4.0	2.0	4.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	Yes	Yes	No	Yes	No	Yes	No	Yes
Walk (*Walk*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (*PC*), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

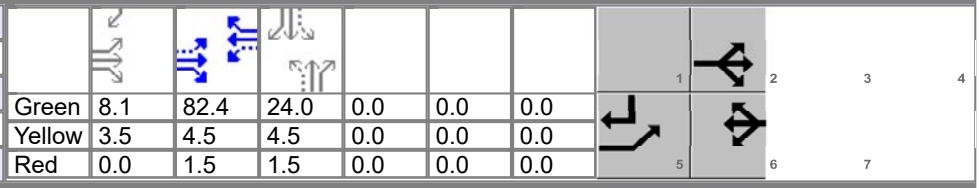
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	230	1185	1	1	1086	225	1	2	2	255	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.1	82.4	24.0	0.0	0.0	0.0
Yellow	3.5	4.5	4.5	0.0	0.0	0.0
Red	0.0	1.5	1.5	0.0	0.0	0.0

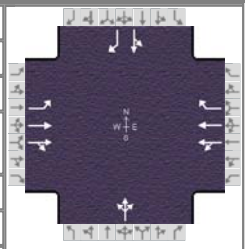
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	4.0		7.3		8.0		7.0
Phase Duration, s	11.6	100.0		88.4		30.0		30.0
Change Period, ($Y+R_c$), s	3.5	6.0		6.0		6.0		6.0
Max Allow Headway (*MAH*), s	4.0	0.0		0.0		5.2		5.2
Queue Clearance Time (g_s), s	7.6					2.3		25.5
Green Extension Time (g_e), s	0.5	0.0		0.0		3.1		0.0
Phase Call Probability	1.00					1.00		1.00
Max Out Probability	0.04					0.02		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	235	605	605	581	529	230		5			260	247
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1795	1885	1885	1884	1716	1610		1779			1435	1610
Queue Service Time (g_s), s	5.6	17.0	17.0	0.0	21.2	7.9		0.0			23.2	17.7
Cycle Queue Clearance Time (g_c), s	5.6	17.0	17.0	21.2	21.2	7.9		0.3			23.5	17.7
Green Ratio (*g/C*)	0.71	0.72	0.72	0.63	0.63	0.63		0.18			0.18	0.25
Capacity (*c*), veh/h	409	1363	1363	1221	1087	1020		362			320	398
Volume-to-Capacity Ratio (*X*)	0.574	0.444	0.444	0.475	0.486	0.225		0.014			0.812	0.620
Back of Queue (*Q*), ft/ln (95 th percentile)	95.6	270.3	268.1	346.4	325.2	128.5		6.3			375.4	300.6
Back of Queue (*Q*), veh/ln (95 th percentile)	3.8	10.7	10.7	13.9	12.9	5.1		0.3			15.0	12.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Uniform Delay (d_1), s/veh	10.0	7.3	7.3	12.6	12.6	10.2		43.3			52.8	43.5
Incremental Delay (d_2), s/veh	1.3	1.0	1.1	1.3	1.6	0.5		0.0			15.3	3.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0
Control Delay (*d*), s/veh	11.3	8.4	8.4	13.9	14.2	10.7		43.4			68.1	46.9
Level of Service (LOS)	B	A	A	B	B	B		D			E	D
Approach Delay, s/veh / LOS	8.9	A		13.5	B		43.4	D		57.8	E	
Intersection Delay, s/veh / LOS	18.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.2	B	2.9	C	2.9	C
Bicycle LOS Score / LOS	1.7	B	1.6	B	0.5	A	1.3	A

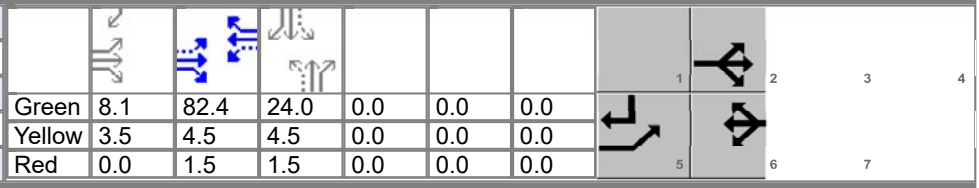
HCS7 Signalized Intersection Intermediate Values

General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATFUT.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	230	1185	1	1	1086	225	1	2	2	255	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	8.1	82.4	24.0	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						

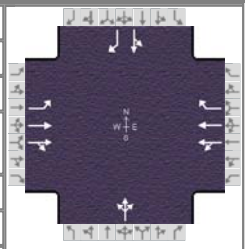
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Heavy Vehicles and Grade Factor (f_{HVg})	0.992	0.992	1.000	1.000	0.992	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Lane Utilization Adjustment Factor (f_{LU})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.999	0.999		0.959	0.936		0.755	0.755	
Right-Turn Adjustment Factor (f_{RT})		1.000	1.000		0.000	0.847		0.000	0.936		0.000	0.847
Left-Turn Pedestrian Adjustment Factor (f_{Lpb})	1.000			1.000			1.000			1.000		
Right-Turn Ped-Bike Adjustment Factor (f_{Rpb})			1.000			1.000			1.000			1.000
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Movement Saturation Flow Rate (s), veh/h	1795	3767	3	3	3596	1610	356	712	712	1435	0	1610
Proportion of Vehicles Arriving on Green (P)	0.06	0.72	0.72	0.63	0.63	0.63	0.18	0.18	0.18	0.18	0.00	0.18
Incremental Delay Factor (k)	0.11	0.50	0.50	0.50	0.50	0.50		0.15			0.37	0.24

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	3.5	6.0		6.0		6.0		6.0
Green Ratio (g/C)	0.71	0.72		0.63		0.18		0.18
Permitted Saturation Flow Rate (s_p), veh/h/ln	513	0		469		1440		1435
Shared Saturation Flow Rate (s_{sh}), veh/h/ln				0		1786		1435
Permitted Effective Green Time (g_p), s	84.4	0.0		82.4		24.0		24.0
Permitted Service Time (g_u), s	61.1	0.0		77.0		0.5		23.7
Permitted Queue Service Time (g_{ps}), s	19.6			0.0		0.0		23.2
Time to First Blockage (g_f), s	0.0	0.0		73.8		7.5		0.0
Queue Service Time Before Blockage (g_{fs}), s				21.2		0.2		0.0
Protected Right Saturation Flow (s_R), veh/h/ln				0				1610
Protected Right Effective Green Time (g_R), s				0.0				8.1

Multimodal	EB		WB		NB		SB	
Pedestrian F_w / F_v	1.389	0.00	1.557	0.00	2.107	0.00	2.107	0.00
Pedestrian F_s / F_{delay}	0.000	0.064	0.000	0.087	0.000	0.151	0.000	0.151
Pedestrian M_{corner} / M_{cw}								
Bicycle c_b / d_b	1446.15	4.98	1267.14	8.73	369.23	43.22	369.23	43.22
Bicycle F_w / F_v	-3.64	1.19	-3.64	1.10	-3.64	0.01	-3.64	0.84

HCS7 Signalized Intersection Results Graphical Summary

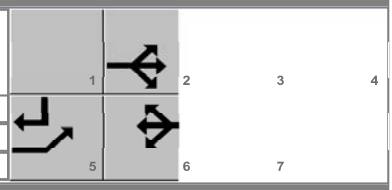
General Information				Intersection Information	
Agency	KLOA, Inc.			Duration, h	0.25
Analyst	ANB	Analysis Date	Jun 29, 2017	Area Type	Other
Jurisdiction	IDOT	Time Period	Sat. Midday Peak Hour	PHF	0.98
Urban Street	Ogden Avenue	Analysis Year	2023	Analysis Period	1> 7:00
Intersection	Ogden Ave/Downers Ma…	File Name	Oden+Access SATFUT.xus		
Project Description					



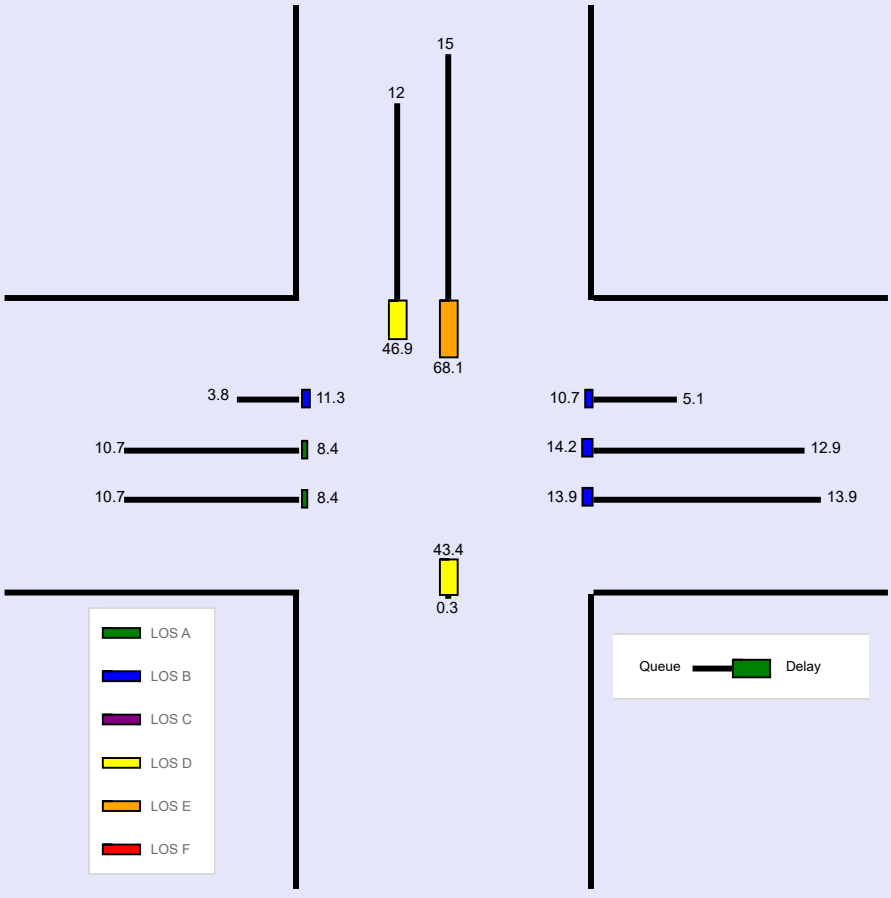
Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	230	1185	1	1	1086	225	1	2	2	255	0	242

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	8.1	82.4	24.0	0.0	0.0	0.0						
Yellow	3.5	4.5	4.5	0.0	0.0	0.0						
Red	0.0	1.5	1.5	0.0	0.0	0.0						



Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (*Q*), ft/ln (95 th percentile)	95.6	270.3	268.1	346.4	325.2	128.5		6.3			375.4	300.6
Back of Queue (*Q*), veh/ln (95 th percentile)	3.8	10.7	10.7	13.9	12.9	5.1		0.3			15.0	12.0
Queue Storage Ratio (*RQ*) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00
Control Delay (*d*), s/veh	11.3	8.4	8.4	13.9	14.2	10.7		43.4			68.1	46.9
Level of Service (LOS)	B	A	A	B	B	B		D			E	D
Approach Delay, s/veh / LOS	8.9	A		13.5	B		43.4	D		57.8	E	
Intersection Delay, s/veh / LOS	18.3						B					



--- Messages ---

No errors or warnings exist.

--- Comments ---

HCS7 Two-Way Stop-Control Report

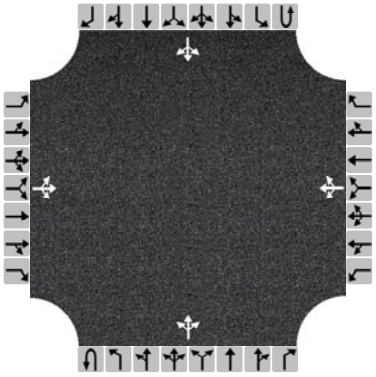
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	7:30 A.M. to 8:30 A.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Cumnor Rd and Foxfire Ct
Jurisdiction	Downers Grove
East/West Street	Foxfire Court
North/South Street	Cumnor Road
Peak Hour Factor	0.87
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		3	0	5		24	1	18		0	30	45		25	55	1
Percent Heavy Vehicles (%)		0	0	0		0	0	6		0				0		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			9				50			0				29		
Capacity, c (veh/h)			900				842			1551				1518		
v/c Ratio			0.01				0.06			0.00				0.02		
95% Queue Length, Q_{95} (veh)			0.0				0.2			0.0				0.1		
Control Delay (s/veh)			9.0				9.5			7.3				7.4		
Level of Service, LOS			A				A			A				A		
Approach Delay (s/veh)		9.0				9.5				0.0				2.4		
Approach LOS		A				A										

HCS7 Two-Way Stop-Control Report

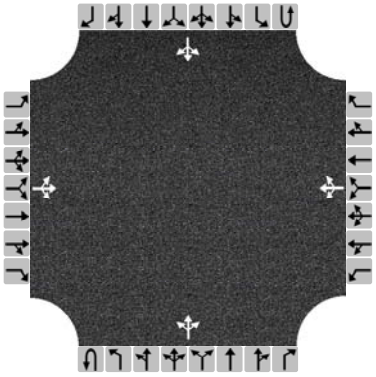
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	5:00 P.M. to 6:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Cumnor Rd and Foxfire Ct
Jurisdiction	Downers Grove
East/West Street	Foxfire Court
North/South Street	Cumnor Road
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		0	1	1		79	0	40		2	48	64		45	58	2
Percent Heavy Vehicles (%)		0	0	0		0	0	0		0				0		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			2				135			2				51		
Capacity, c (veh/h)			743				747			1544				1471		
v/c Ratio			0.00				0.18			0.00				0.03		
95% Queue Length, Q_{95} (veh)			0.0				0.7			0.0				0.1		
Control Delay (s/veh)			9.9				10.9			7.3				7.5		
Level of Service, LOS			A				B			A				A		
Approach Delay (s/veh)		9.9				10.9				0.1				3.4		
Approach LOS		A				B										

HCS7 Two-Way Stop-Control Report

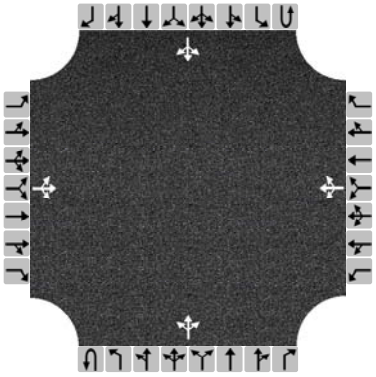
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	12:00 P.M. to 1:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Cumnor Rd and Foxfire Ct
Jurisdiction	Downers Grove
East/West Street	Foxfire Court
North/South Street	Cumnor Road
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	0	1	0	0	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume, V (veh/h)		0	1	2		98	2	58		94	52	5		45	61	0
Percent Heavy Vehicles (%)		0	0	3		0	0	3		20				0		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			3				185			111				53		
Capacity, c (veh/h)			696				572			1421				1542		
v/c Ratio			0.00				0.32			0.08				0.03		
95% Queue Length, Q_{95} (veh)			0.0				1.4			0.3				0.1		
Control Delay (s/veh)			10.2				14.3			7.7				7.4		
Level of Service, LOS			B				B			A				A		
Approach Delay (s/veh)		10.2				14.3				5.1				3.3		
Approach LOS		B				B										

HCS7 Two-Way Stop-Control Report

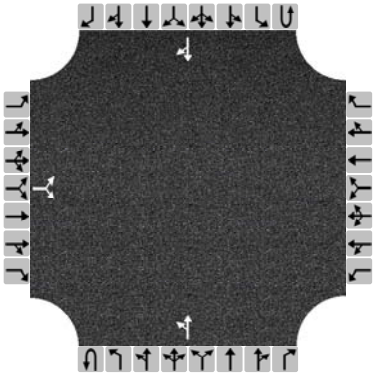
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	7:30 A.M. to 8:30 A.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		10		5						20	16				21	6
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			18							24						
Capacity, c (veh/h)			931							1572						
v/c Ratio			0.02							0.02						
95% Queue Length, Q_{95} (veh)			0.1							0.0						
Control Delay (s/veh)			8.9							7.3						
Level of Service, LOS			A							A						
Approach Delay (s/veh)	8.9								4.1							
Approach LOS	A															

HCS7 Two-Way Stop-Control Report

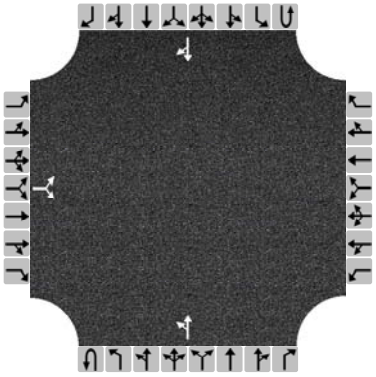
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	5:30 P.M. to 6:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.86
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		55		24						59	33				16	43
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			92							69						
Capacity, c (veh/h)			792							1513						
v/c Ratio			0.12							0.05						
95% Queue Length, Q_{95} (veh)			0.4							0.1						
Control Delay (s/veh)			10.1							7.5						
Level of Service, LOS			B							A						
Approach Delay (s/veh)		10.1								5.0						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

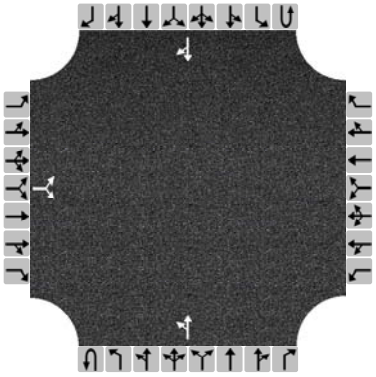
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	12:00 P.M. to 1:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redevelopment

Site Information

Intersection	Williams St and Access Dr
Jurisdiction	Downers Grove
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume, V (veh/h)		44		23						53	39				20	44
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			73							58						
Capacity, c (veh/h)			820							1517						
v/c Ratio			0.09							0.04						
95% Queue Length, Q_{95} (veh)			0.3							0.1						
Control Delay (s/veh)			9.8							7.5						
Level of Service, LOS			A							A						
Approach Delay (s/veh)		9.8								4.5						
Approach LOS		A														

HCS7 Two-Way Stop-Control Report

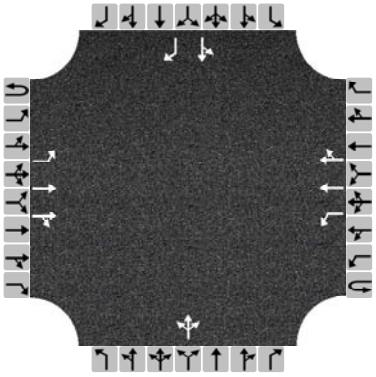
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	7:30 A.M. to 8:30 A.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		41	1381	0		0	931	58		0	0	1		29	0	62
Percent Heavy Vehicles (%)		7				3				0	0	0		30	0	7
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		43				0					1			31		65
Capacity, c (veh/h)		635				456					371			122		488
v/c Ratio		0.07				0.00					0.00			0.25		0.13
95% Queue Length, Q_{95} (veh)		0.2				0.0					0.0			0.9		0.5
Control Delay (s/veh)		11.1				12.9					14.7			44.3		13.5
Level of Service, LOS		B				B					B			E		B
Approach Delay (s/veh)		0.3				0.0				14.7				23.5		
Approach LOS										B				C		

HCS7 Two-Way Stop-Control Report

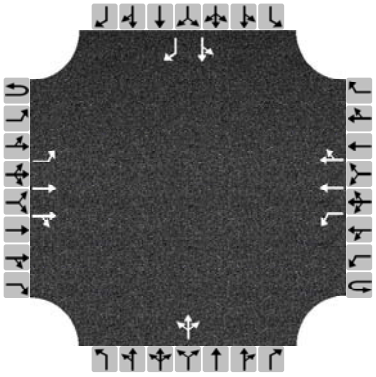
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	5:00 P.M. to 6:00 P.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		30	1479	8		1	1524	80		1	0	4		27	0	40
Percent Heavy Vehicles (%)		0				0				0	0	0		0	0	0
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		31				1					5			28		41
Capacity, c (veh/h)		395				440					202			79		318
v/c Ratio		0.08				0.00					0.02			0.35		0.13
95% Queue Length, Q_{95} (veh)		0.3				0.0					0.1			1.4		0.4
Control Delay (s/veh)		14.9				13.2					23.3			73.3		18.0
Level of Service, LOS		B				B					C			F		C
Approach Delay (s/veh)		0.3				0.0				23.3				40.4		
Approach LOS										C				E		

HCS7 Two-Way Stop-Control Report

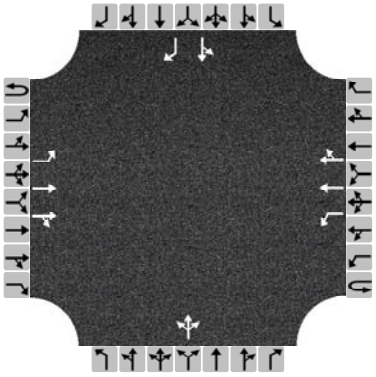
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc.
Date Performed	6/28/2017
Analysis Year	2023
Time Analyzed	12:00 P.M to 1:00 P.M.
Intersection Orientation	East-West
Project Description	Outlot Redevelopment

Site Information

Intersection	Ogden Ave and Williams St
Jurisdiction	IDOT
East/West Street	Ogden Avenue
North/South Street	Williams Street
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	2	0	0	1	2	0		0	1	0		0	1	1
Configuration		L	T	TR		L	T	TR			LTR			LT		R
Volume, V (veh/h)		63	1378	1		3	1248	127		4	0	6		42	0	82
Percent Heavy Vehicles (%)		8				0				0	0	0		11	0	3
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Left + Thru								1						

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		66				3					10			44		86
Capacity, c (veh/h)		435				472					137			88		366
v/c Ratio		0.15				0.01					0.07			0.50		0.24
95% Queue Length, Q_{95} (veh)		0.5				0.0					0.2			2.2		0.9
Control Delay (s/veh)		14.8				12.7					33.4			81.1		17.8
Level of Service, LOS		B				B					D			F		C
Approach Delay (s/veh)		0.6				0.0					33.4			39.3		
Approach LOS											D			E		

HCS7 Two-Way Stop-Control Report

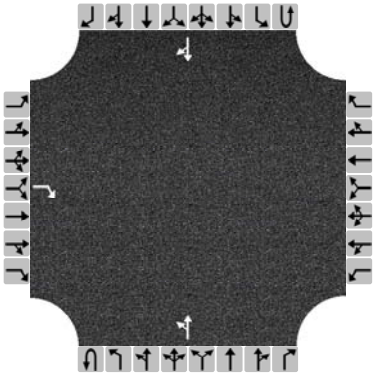
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc,
Date Performed	6/29/2017
Analysis Year	2023
Time Analyzed	7:30 A.M. to 8:30 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redeveolpment

Site Information

Intersection	WIlliams and Access Drive
Jurisdiction	IDOT
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R						LT						TR
Volume, V (veh/h)				60						69	36				28	1
Percent Heavy Vehicles (%)				3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				65						75						
Capacity, c (veh/h)				1041						1573						
v/c Ratio				0.06						0.05						
95% Queue Length, Q_{95} (veh)				0.2						0.2						
Control Delay (s/veh)				8.7						7.4						
Level of Service, LOS				A						A						
Approach Delay (s/veh)	8.7								5.0							
Approach LOS	A															

HCS7 Two-Way Stop-Control Report

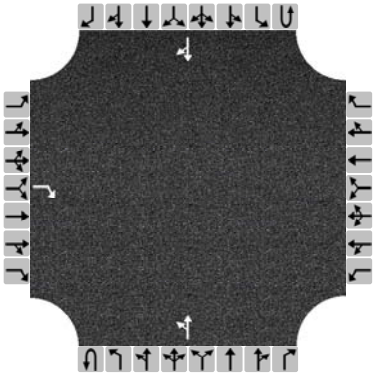
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc,
Date Performed	6/29/2017
Analysis Year	2023
Time Analyzed	5:00 P.M. to 6:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redeveolpment

Site Information

Intersection	WIlliams and Access Drive
Jurisdiction	IDOT
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R						LT						TR
Volume, V (veh/h)				33						40	92				40	1
Percent Heavy Vehicles (%)				3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)				6.2						4.1						
Critical Headway (sec)				6.23						4.13						
Base Follow-Up Headway (sec)				3.3						2.2						
Follow-Up Headway (sec)				3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				36						43						
Capacity, c (veh/h)				1022						1556						
v/c Ratio				0.04						0.03						
95% Queue Length, Q_{95} (veh)				0.1						0.1						
Control Delay (s/veh)				8.6						7.4						
Level of Service, LOS				A						A						
Approach Delay (s/veh)	8.6								2.4							
Approach LOS	A															

HCS7 Two-Way Stop-Control Report

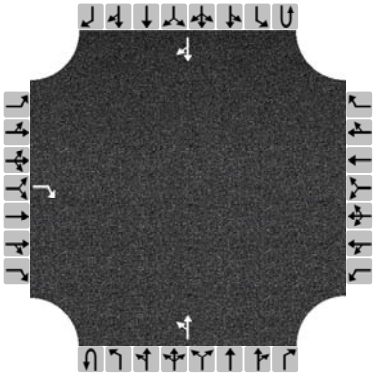
General Information

Analyst	ANB
Agency/Co.	KLOA, Inc,
Date Performed	6/29/2017
Analysis Year	2023
Time Analyzed	12:00 P.M. to 1:00 P.M.
Intersection Orientation	North-South
Project Description	Outlot Redeveolpment

Site Information

Intersection	WIlliams and Access Drive
Jurisdiction	IDOT
East/West Street	Access Drive
North/South Street	Williams Street
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	1	0	0	0	1	0
Configuration				R						LT						TR
Volume, V (veh/h)				63						70	92				44	1
Percent Heavy Vehicles (%)				3						3						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized	No				No				No				No			
Median Type/Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)				68						76						
Capacity, c (veh/h)				1017						1550						
v/c Ratio				0.07						0.05						
95% Queue Length, Q_{95} (veh)				0.2						0.2						
Control Delay (s/veh)				8.8						7.4						
Level of Service, LOS				A						A						
Approach Delay (s/veh)	8.8								3.4							
Approach LOS	A															

Existing and Future Queues

Table B
Williams Street and Ogden Avenue 95th Percentile Queue Lengths

		Existing Conditions				Future Conditions		
Williams Street		A.M.	P.M.	Saturday		A.M.	P.M.	Saturday
SB Left/Through		< 25 feet	25 feet	25 feet		25 feet	35 feet	55 feet
SB Right		< 25 feet	< 25 feet	< 25 feet		< 25 feet	< 25 feet	25 feet

DRAFT

FILE 17-PLC-0022: A petition seeking approval of a Special Use and setback variation to allow a drive-through restaurant facility, and a Final Plat of Subdivision to create a commercial outlot. The property is zoned B-3, General Services and Highway Business. The property is located at the northwest corner of the intersection of Ogden Avenue and Williams Street, commonly known as 42-76 Ogden Avenue, Downers Grove, IL (PINs 09-04-112-034 and 09-04-112-035). Pam Sullins, agent of IRC Retail Centers, Petitioner, and IRC Downers Grove, Marketplace, Owner.

Staff Presentation:

Mr. Scott Williams, Village Planner, said that the subject property is located at the northwest corner of Williams and Ogden; however, this evening they will consider a Final Plat of Subdivision based on the entire size of the Subdivision known as Downers Grove Market. There are currently two large buildings located on the site with a combined area of 105,000 square feet. With regard to zoning, they will be discussing a drive-through that is impacted by the adjacent zoning. He explained that the subject property and the property to the west are zoned B-3. There is R-4 single-family zoning to the east, with the Village of Westmont also to the east and the south. There is additional single-family zoning to the north.

Mr. Williams referred to the Plat of Subdivision that will result in the internal property lines being changed to accommodate the drive-through facility. He said the proposal reduces the overall parking count to 513 parking spaces, which is still well over-parked from the required 439 parking spaces. They are turning unused parking area into commercial space with a drive-through. Furthermore, there will be a new access point off of Williams Street with curb and gutter. Starbuck's is a pre-existing business on the existing property and will move to the new building with the drive-through.

Mr. Williams referred to the engineering of the site, stating that pedestrian connections leading from the proposed building will connect to the existing sidewalks. He explained that the total size of the building is about 3800 square feet, with Starbuck's occupying the western space of the building. The remainder of the building will be occupied by an as yet unknown fast-food type of restaurant facility. With regard to the stacking for the drive-through, it is 11 feet versus the required 10 feet to allow for a wider turning radius going around the building.

Elevation drawings depict the buildings being made of brick, stone and EFIS, with a cornice and parapet. The petitioner has increased the amount of brick on the building from its original plan. It will also feature metal canopies and lighting features. There is a patio proposed to the south of the Starbuck's. Regarding landscaping, the proposal includes a total of 1,404 square feet of new landscaped green space on the site, reducing the impervious area. The petitioner will remove two trees but plant an additional 14 trees on the site. No additional on-site stormwater detention is required, and the site will comply with all provisions of the Stormwater Ordinance.

Mr. Williams then addressed the proposal's compliance with the Comprehensive Plan, noting that the Comprehensive Plan speaks of reinvestment in the regional commercial areas to retain current businesses and attract new restaurants. He noted that the proposed uses and the proposed plan are consistent with the Comprehensive Plan.

DRAFT

With regard to the setbacks, Mr. Williams reviewed the setbacks as noted in his Staff report dated August 7, 2017, with comparisons of the proposed setbacks to the required setbacks for the specific zoning district. The petitioner will include additional lighting in the form of six new light poles, three of which are back-to-back. He also noted that the proposal for the three commercial lots would meet the minimum lot dimension requirements for the Subdivision Ordinance.

The drive-through Special Use is a compatible use for the site, as Starbuck's already exists at that location, and the drive through is a permitted Special Use.

The petitioner is seeking a variation from the 25' drive-through land setback from the northern property line. Staff sees the variation requirements as having been met as stated on pages 7-8 of Staff's report dated August 7, 2017.

Mr. Williams said, based on its findings, Staff recommends that the Plan Commission make a positive recommendation to the Village Council regarding Case #17-PLC-0022 subject to the following four conditions:

1. The proposed Final Plat of Subdivision and Special Use with a Variation request for a coffee shop restaurant with a drive-through use shall substantially conform to the proposed Downers Market Multi-tenant building engineering drawings prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, last revised August 1, 2017, the architectural drawings prepared by JTS Architects dated January 24, 2014, last revised August 1, 2017, and the Downers Grove Market Resubdivision, prepared by Craig R. Knoche & Associate Civil Engineers, PC dated July 4, 2017, except as such plans may be modified to conform to Village codes, ordinances, and policies.
2. All signs must meet the requirements of the Sign Ordinance.
3. The building shall be equipped with an automatic suppression and an automatic and manual fire alarm system.
4. A curbed "pork-chop" shall be installed at the ¾ access point to Williams Street. Vehicles exiting the site shall be prohibited from turning left (northbound) onto Williams Street.

Petitioner's Presentation

Ms. Pam Sullins with IRC Retail Center, Owner of the subject property, stated she is the Project Manager. She said that her entire team is present to respond to any questions the Commission members might have. Ms. Sullins noted that Village Staff made a thorough presentation of their request, and she was available to answer any unaddressed issues.

Ms. Rollins said she has been in Starbuck's drive-through lines before and it looks as though they are trying to wrap the vehicles around the front of the building. It looks like they could end up blocking traffic with only a couple of extra cars.

DRAFT

Mr. Mike Worthman of KLOA traffic engineers said that their surveys show a maximum queue of about 7-8 vehicles, which they are providing in this proposal. Eight vehicles meets the Village Code. If it does back up, the cars can come around and stack up in the parking lot if necessary. They can accommodate a number of cars before they get to Williams Street. There will be way-finding signage installed.

Mr. Steve Cullins of Starbucks Coffee Company, 564 West Randolph, Chicago, said that typically they use directional way-finding to help guide cars through the site. They also have specific striping on the pavement of double green chevrons pointing to the drive-through. Once people get used to the drive-through flow it becomes easier.

Mr. Worthman noted also that the peak period is in the morning when the rest of the shopping center is closed or operating at very little capacity.

A Commissioner asked whether the meeting requested with residential property owners across from the proposed Williams Street access point ever occurred. Ms. Sullins said that one resident did receive their letter, and she has a signed certification of receipt. However, they attempted three different times to deliver to the first house and have never been able to deliver. They used UPS certified.

There being no further questions at this time, Chairman Rickard invited the public to make their comments or ask questions. There were no speakers.

Ms. Sullins said that during or after this building is built, if the two residential owners have complaints, she would be happy to meet them and talk about relocation of some plantings in front of their homes.

Chairman Rickard then closed the Public Hearing.

Deliberation:

Chairman Rickard said he believes the Standards have been met for the Special Use permit and the setback variation. He verified that the property owner for the newly created parcel and the shopping center would be the same owner.

Mr. Kulovany moved that in case 17-PLC-0022, Final Plat of Subdivision and Special Use in conjunction with a variation for a drive-through, that the Plan Commission forwards a positive recommendation to the Village Council. Ms. Hogstrom seconded the Motion. All in favor. The Motion carried.

/s/ Celeste K. Weilandt
(As transcribed by MP-3 audio)