

VILLAGE OF DOWNERS GROVE
Report for the Village
10/4/2022

SUBJECT:	SUBMITTED BY:
7251 and 7261 Lemont Road Planned Unit Development Amendment	Stan Popovich, AICP Community Development Director

SYNOPSIS

An ordinance and resolution have been prepared to amend Planned Unit Development #18 with a Special Use to allow the construction of a drive-through restaurant and retail building and a Plat of Subdivision with an exception to create a new lot without street frontage at 7251 and 7261 Lemont Road in the Downers Park Plaza shopping center.

STRATEGIC PLAN ALIGNMENT

The goals for 2021-2023 include *Strong and Diverse Local Economy*.

FISCAL IMPACT

N/A

RECOMMENDATION

Approval on the October 11, 2022 active agenda per the Plan Commission's unanimous 7:0 positive recommendation. The Plan Commission found that the proposal is an appropriate use in the district, is compatible with the Comprehensive Plan, complies with the Subdivision exception standards to lot frontage, and complies with Special Use and Planned Unit Developments approval standards, respectively, in Sections 20.303, 28.12.050.

BACKGROUND

Property Information & Zoning Request

The petitioner is proposing to construct a future drive-through restaurant and retail building at 7251 and 7261 Lemont Road. The building will be located on a new 0.66 acre lot within the 32.94 acre Downers Park Plaza shopping center located at the northeast corner of Lemont Road and 75th Street. The property is zoned B-2/PUD #18, General Retail Business/Planned Unit Development #18. The petitioner is requesting:

- A PUD Amendment with a Special Use to permit the construction of a drive-through restaurant/retail space; and
- A Plat of Subdivision to create an outlot with an exception to create a lot without street frontage.

The petitioner is proposing to build a new 5,230 square foot restaurant/retail with a drive-through lane and 37 parking spaces. The proposed development will involve a decrease of 42 parking spaces for the overall shopping center. Even with the decreased parking, the shopping center will continue to provide more than

the required amount of parking. The drive-through facility will be located on the north and east sides of the building and will provide the required minimum stacking spaces as required by the Municipal Code. The petitioner is proposing landscaping in conformance with the Village requirements. The proposed landscaping includes a mix of canopy trees and landscape materials such as shrubs and ornamental grasses. Parking lot and site lighting is provided within the proposed development and is compliant with the Village requirements.

A Plat of Subdivision is proposed to create a new outlet for the restaurant/retail building. The new lot is located on the west side of the shopping center along Lemont Road, directly east of the existing Burger King Restaurant and the 3 Corners Grill and Tap.

Comprehensive Plan

The Comprehensive Plan's Future Land Use Map designates this property as Corridor Commercial. Corridor Commercial uses include a blend of neighborhood oriented commercial retail that provide services and retail opportunities to the nearby neighborhoods and the surrounding region. The Comprehensive Plan specifically identifies that the 75th Street corridor should continue to contain a range of these types of uses. These commercial areas have a "unique character" and should serve the daily needs of local residents while providing goods and services to the larger region.

The proposed development also meets the Comprehensive Plan's recommendations for a Corridor Commercial area. The proposed development implements the recommendations of the Economic Development Plan to enhance the sales tax, proposes a high level of design, utilizes shared parking, proposes no new curb cuts, provides a dumpster enclosure and screening, and provides a pedestrian connection to existing sidewalk infrastructure.

Compliance with the Zoning Ordinance

The property is zoned B-2/PUD, General Retail Business District/ Planned Unit Development #18. The proposal includes a request for a Special Use to operate a drive-through, which is an available Special Use in the B-2 district. The existing parking lot area that will be converted into the proposed outlet currently contains 79 parking spaces. The proposed development will have 37 parking spaces, which will result in a reduction of 42 spaces. As noted in Table 2 in the Plan Commission staff report, the shopping center will have 1,119 parking spaces, for an excess of 44 parking spaces. All of the Zoning Ordinance requirements are met.

Compliance with the Subdivision Ordinance

The final plat of subdivision is in substantial compliance with the minimum lot dimension requirements as outlined in Section 20.301 of the Village's Subdivision Ordinance. However, Lot 1-B includes an exception to the lot frontage requirement. While Lot 1-B will not front a dedicated street, public access will be granted in perpetuity through a cross access easement and agreement between Lot 1-B (newly created outlet) and Lot 2-A (Main Shopping Center). The petitioner has stated that given the project's location set within an existing shopping center and other surrounding parcels, providing lot frontage along Lemont Road (nearest public right of way) is difficult. As noted, access will be provided through existing cross access easements through the driveways on both Lemont Road and 75th Street.

Engineering/Public Improvements

There is a slight net decrease in the impervious area and therefore new stormwater detention is not required. The drainage for the site will tie into the existing stormwater system for the shopping center. The petitioner will be required to meet all Village engineering standards and comply with all applicable codes when formally submitting for a permit. There will be no changes to the existing access points off of Lemont Road.

Traffic and Parking

A traffic impact study for the proposed development was completed by the petitioner. The study examined the existing 75th Street and Lemont Road traffic conditions and the future conditions based on the proposed development. The study found that proposed parking supply is sufficient and the development will not have a significant impact on the area roadways.

Public Comment

Prior to the Plan Commission meeting, one public comment was received by staff. The inquiry was related to who the future tenants would be. Staff informed the resident that the final tenants had not yet been decided. During the Plan Commission meeting two public comments were received. The first comment was regarding the lack of pedestrian signage and crosswalks at Lemont Road and Dunham Road. Staff noted that Lemont Road was under the jurisdiction of DuPage County Department of Transportation (DuDOT). Staff committed to speaking with the Village Traffic Engineer to express the concerns related to pedestrian signage and lack of crosswalks be communicated to DuDOT. The second public comment included clarification for clustering the restaurants in this area. The petitioner shared that the location of the proposed outlot was chosen because that existing area of parking is rarely used.

ATTACHMENTS

Ordinance

Aerial Map

Staff Report with attachments dated September 12, 2022

Draft Minutes of the Plan Commission Hearing dated September 12, 2022

ORDINANCE NO. _____**AN ORDINANCE APPROVING AN
AMENDMENT TO PLANNED UNIT DEVELOPMENT #18
TO PERMIT CONSTRUCTION OF A RESTAURANT
WITH A DRIVE-THROUGH AND RETAIL BUILDING
AT 7251 & 7261 LEMONT ROAD**

WHEREAS, the Village Council has previously adopted Ordinance No. 2090, on August 1, 1977, designating the property described therein as Planned Unit Development #18 and subsequent amendments thereto; and,

WHEREAS, the Village Council has previously adopted Ordinance No. 5146 on August 10, 2010, approving an amendment to Planned Unit Development #18 to approve the master sign plan; and,

WHEREAS, the Village Council has previously adopted Ordinance No. 5813 on March 10, 2020, approving off-premise electronic message board signs at 7221-7451 Lemont Road; and

WHEREAS, the Village Council has previously adopted Ordinance No. 5892 on December 14, 2021, approving an amendment to Planned Unit Development #18 to permit the construction of a restaurant with a drive-through at 7361 Lemont Road and approving an amendment to the master sign plan; and

WHEREAS, the Owners have filed a written petition with the Village conforming to the requirements of the Zoning Ordinance and requesting an amendment to Planned Unit Development #18 to permit the construction of a restaurant with a drive-through and a retail building at 7251 & 7261 Lemont Road; and,

WHEREAS, such request was referred to the Plan Commission of the Village of Downers Grove, and the Plan Commission has given the required public notice, conducted a public hearing for the petition on September 12, 2022, and has made its findings and recommendations, all in accordance with the statutes of the State of Illinois and the ordinances of the Village of Downers Grove; and,

WHEREAS, the Plan Commission has recommended approval of the requested petition, subject to certain conditions; and,

WHEREAS, the Village Council has considered the record before the Plan Commission, as well as the recommendations of Plan Commission.

NOW, THEREFORE, BE IT ORDAINED by the Council of the Village of Downers Grove, DuPage County, Illinois, as follows:

SECTION 1. That the provisions of the preamble are incorporated into and made a part of this ordinance as if fully set forth herein.

SECTION 2. That a Planned Unit Development Amendment is hereby authorized to permit construction of a restaurant with a drive through and a retail building at 7251 and 7261 Lemont Road.

SECTION 3. That approval set forth in Section 2 of this ordinance is subject to the findings and recommendations of the Downers Grove Plan Commission regarding File 22-PLC-026 as set forth in the minutes of their September 12, 2022 meeting.

SECTION 4. The approval set forth in Section 2 of this ordinance is subject to the following conditions:

1. The Planned Unit Development, Special Use, and a Plat of Subdivision with an exception to create a new outlot without street frontage shall substantially conform to the staff report dated September 12, 2022; and drawings prepared by Woolpert Engineering submitted on 8/24/22, and by Zito Russell Architects updated on 8/3/22, except as such plans may be modified to conform to the Village codes and ordinances.
2. A perpetual cross access and parking easement shall be provided between Lots 2-A and Lot 1-B and shown on the Plat of Subdivision.
3. The pedestrian connection shall be secured with the approval of the property owner at 7231 Lemont Road or 7301 Lemont Road.
4. A pedestrian easement shall be provided on Lot 7 (7231 Lemont Road) or Lot 6N (7301 Lemont Road) for the benefit of public access to Lot 1-B.
5. The pedestrian connection on Lot 1-B must be clearly differentiated through the use of elevation changes, a different paving material or other equally effective methods.
6. The photometric plan shall conform to the Village Zoning Ordinance.
7. All signage shall be permitted separately and conform to the Village's Sign Ordinance.
8. A final plat of subdivision will be required prior to permit issuance.

SECTION 5. The above conditions are hereby made part of the terms under which the Planned Unit Development Amendment is granted. Violation of any or all of such conditions shall be deemed a violation of the Village of Downers Grove Zoning Ordinance, the penalty for which may include, but is not limited to, a fine and/or revocation of the Planned Unit Development Amendment granted herein.

SECTION 6. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

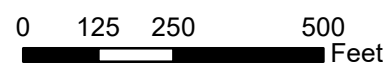
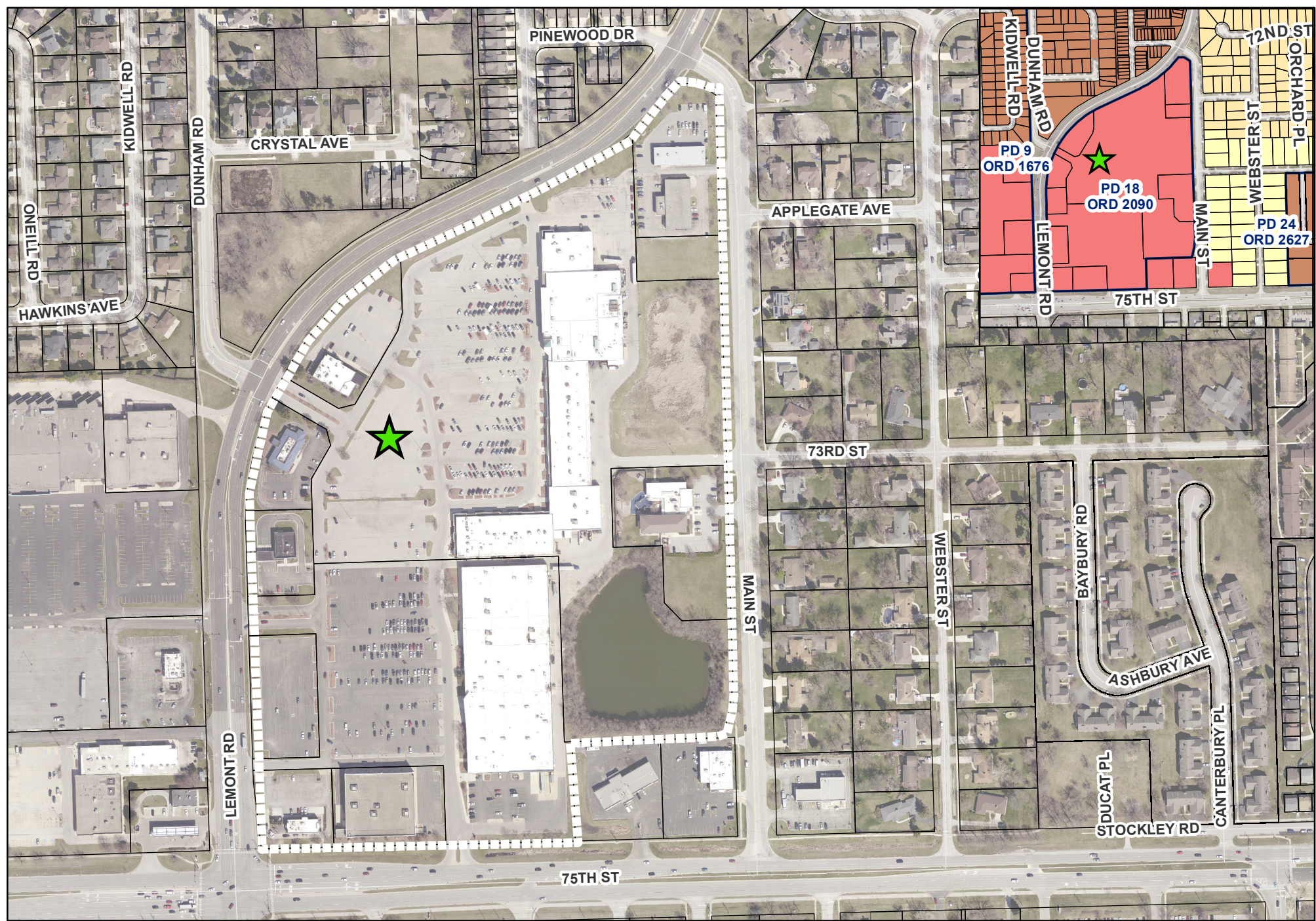
SECTION 7. That this ordinance shall be in full force and effect from and after its passage and publication in pamphlet form as provided by law.

Mayor



Passed:

Published:

Attest: _____
Village Clerk



7221 Lemont Road - Location Map

-  Subject Property
-  Project Location



**VILLAGE OF DOWNERS GROVE
REPORT FOR THE PLAN COMMISSION
SEPTEMBER 12, 2022 AGENDA**

SUBJECT:	TYPE:	SUBMITTED BY:
22-PLC-0026 7251 and 7261 Lemont Road	PUD Amendment, Special Use, and Plat of Subdivision with an Exception	Flora P. Leon, AICP Senior Planner

REQUEST

The petitioner is requesting approval for an amendment to Planned Unit Development #18 to allow the construction of a future restaurant and retail building, a Special Use to allow a drive-through and a Plat of Subdivision with an exception to create a new lot without street frontage at 7251 and 7261 Lemont Road in the Downers Park Plaza shopping center.

NOTICE

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

GENERAL INFORMATION

OWNER/ PETITIONER: PMAT DPP, LLC
109 Northpark Blvd, Suite 300
Covington, LA 70433

PROPERTY INFORMATION

EXISTING ZONING: B-2, General Retail Business/ P.D. #18, Planned Unit Development #18
EXISTING LAND USE: Retail Businesses
PROPERTY SIZE: 1,434,656 square feet (32.94 acres)
PINS: 09-29-110-002 to -008, -013 to -016

SURROUNDING ZONING AND LAND USES

	ZONING	FUTURE LAND USE
NORTH:	R-5A, Residential Attached House 5A	Single Family Attached, Single Family Detached, Park Open Space
SOUTH:	Woodridge, OSB, Office and Service Business District Darien, B-3, General Business District	General Office Commercial
EAST:	R-3, Residential Detached House 3 R-1, Residential Detached House 1	Single Family Detached
WEST:	B-2, General Retail Business	Commercial Corridor

ANALYSIS

SUBMITTALS

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

1. Project Narrative
2. Approval Criteria
3. Plat of Survey
4. Site Plan
5. Engineering Plans
6. Landscape Plans
7. Elevations
8. Plat of Subdivision
9. Traffic Report

PROJECT DESCRIPTION

The petitioner is proposing to construct a future restaurant and retail building at 7251 and 7261 Lemont Road. The restaurant/retail space will be located on a new 0.66 acre lot within the 32.94 acre Downers Park Plaza shopping center located at the northeast corner of Lemont Road and 75th Street. The property is zoned B-2/PUD #18, General Retail Business/Planned Unit Development #18. The petitioner is requesting:

- A PUD Amendment to permit the construction of a restaurant/retail space;
- A Special Use for the construction of a drive-through; and
- A Plat of Subdivision to create an outlot with an exception to create a lot without street frontage.

The petitioner is proposing to build a new 5,230 square foot restaurant/retail building at the northeast corner of the intersection of Dunham Road and Lemont Road, along the east side of Lemont Road. The new building is approximately 28,994 square feet and will include a restaurant with a drive-through lane and 37 parking spaces. The proposed development will involve a decrease of 42 parking spaces for the overall shopping center. Even with the decreased parking, the shopping center will continue to provide more than the required amount of parking.

The drive-through facility will be located on the north and east sides of the building and will provide the required minimum stacking spaces as required by the Village Code. The petitioner is proposing landscaping in conformance with the Village requirements. The proposed landscaping includes a mix of canopy trees and landscape materials such as shrubs and ornamental grasses. Parking lot and site lighting is provided within the proposed development and is compliant with the Village requirements.

The primary building materials used for the exterior are brick and exterior insulation finish system (EIFS). The facades are broken up with decorative columns, windows, and horizontal accent bands. Variation to the roofline is provided by the vertical elements near the entrance of the building. The proposed signage for the future restaurant and retail space will be in compliance with the sign ordinance. Further discussed below, the petitioner is requesting an exception to the lot frontage requirement for new subdivisions.

A Plat of Subdivision is proposed to create a new outlot for the restaurant/retail building. The new lot is located on the west side of the shopping center along Lemont Road, directly east of the existing Burger King Restaurant and the 3 Corners Grill and Tap.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The current Comprehensive Plan’s Future Land Use Map designates this property as Corridor Commercial. Corridor Commercial uses include a blend of neighborhood oriented commercial retail that provide services and retail opportunities to the nearby neighborhoods and the surrounding region. The current Comprehensive Plan specifically identifies that the 75th Street corridor should continue to contain a range of these types of uses. These commercial areas have a “unique character” and should serve the daily needs of local residents while providing goods and services to the larger region.

The proposed development also meets the Comprehensive Plan’s recommendations for a Corridor Commercial area:

- Implements the recommendations of the Economic Development Plan to Enhance the Sales Tax
- Proposes a high level of design
- Utilizes shared parking
- Proposes no new curb cuts
- Provides a dumpster enclosure and screening
- Provides a pedestrian connection to existing sidewalk infrastructure

COMPLIANCE WITH ZONING ORDINANCE

The property is zoned B-2/PUD, General Retail Business District/ Planned Unit Development #18. The proposal includes a request for a Special Use to operate a drive-through, which is an available Special Use in the B-2 district.

The bulk requirements of the proposed building are summarized in the following table:

Table 1 – Zoning Requirements, Proposed Outlot

7251 and 7261 Lemont Road	Required	Proposed
West Setback to building (Street Yard)	25 ft.	64.3 ft.
North Setback to building (Interior Yard)	0 ft.	53 ft.
East Setback (Rear Yard)	0 ft.	23.9 ft.
South Setback (Interior Yard)	0 ft.	28.6 ft.
East Setback to parking (Rear Yard)	0 ft.	30 ft.
South Setback to parking (Interior Yard)	0 ft.	0 ft.
Landscaped Open Space (minimum)	10%	14%
Floor Area Ratio (maximum)	0.75	0.18
Building Height (maximum)	35 ft.	16.75 ft.
Parking Spaces (minimum)	34	37
Stacking Spaces (minimum)	8	8

Table 2 - Zoning Requirements, Shopping Center

7251 and 7261 Lemont Road	Required	Proposed
Parking Spaces (minimum)	1,075	1,119
Open Space (minimum)	10%	26%
Floor Area Ratio (minimum)	0.75	0.18

The existing parking lot area that will be converted into the proposed outlot currently contains 79 parking

spaces. The proposed development will have 37 parking spaces, which will result in a reduction of 42 spaces. As noted in Table 2, the overall shopping center requires 1,075 parking spaces, including the parking required for the proposed use. The shopping center will have 1,119 parking spaces, for an excess of 44 spaces.

COMPLIANCE WITH SUBDIVISION ORDINANCE

The final plat of subdivision is in substantial compliance with the minimum lot dimension requirements as outlined in Section 20.301 of the Village’s Subdivision Ordinance. However, Lot 1-B includes an exception to the lot frontage requirement. While Lot 1-B will not front a dedicated street, public access will be granted in perpetuity through a cross access easement and agreement between Lot 1-B (newly created outlot) and Lot 2-A (Main Shopping Center). The petitioner has stated that given the project’s location set within an existing shopping center and other surrounding parcels, providing lot frontage along Lemont Rd (nearest public right of way) is difficult. As noted, access will be provided through existing cross access easements through the driveways on both Lemont Road and 75th Street.

Table 3 – Subdivision Requirements

Downers Grove Park Plaza	Lot Width (100 ft. minimum)	Lot Depth (140 ft. minimum)	Lot Area (10, 500 square foot minimum)
Lot 2-A	62.15 ft. (existing)	1,130 ft.	886,217 sq. ft.
Lot 1-B	220.5 feet	157 ft.	28,994 sq. ft.

The petitioner is providing the required five-foot wide public utility and drainage easements along the interior yard lot lines and the ten-foot wide public utility and drainage easements along the rear lot lines for Lot 1-B (proposed restaurant/retail site).

ENGINEERING/PUBLIC IMPROVEMENTS

There is a slight net decrease in the impervious area and therefore new stormwater detention is not required. The drainage for the site will tie into the existing stormwater system for the shopping center. The petitioner will be required to meet all Village engineering standards and comply with all applicable codes when formally submitting for a permit.

There will be no changes to the existing access points off of Lemont Road. The middle entrance drive along Lemont Road will include an extended curbed island to help redirect traffic directly west of the proposed lot. The existing drive aisles are directly adjacent to the proposed lot on west, east, and south side. Three drive aisles within the existing parking lot will have access to the site along the north side, the south westernmost entrance will have two-way access and the south easternmost drive aisle will be a drive-through entrance only.

TRAFFIC

A traffic impact study for the proposed development was completed by the petitioner. The study examined the existing 75th Street and Lemont Road traffic conditions and the future conditions based on the proposed development. The study found that based on the projected parking, the proposed parking supply is sufficient to accommodate the parking demand of the proposed drive-through restaurant and retail space. The results of the capacity analysis indicate that the traffic generated by the proposed restaurant/retail space will not have a significant impact on the area roadways and that the volume of traffic estimated to be generated will be reduced due to pass-by trips and internal capture.

The access system serving Downers Park Plaza shopping center will ensure an adequate and flexible access system is provided to accommodate the traffic that will be generated by the proposed restaurant, and the

site plan provides for efficient circulation and adequate stacking. As recommended by the traffic study, the petitioner will provide appropriate wayfinding signs, stripping will be provided to direct customers to and from the entrance of the drive-through lane, existing movements from the drive-through will be under stop sign control and the westbound lanes at the signalized access drives serving Downers Park Plaza shopping center will be restriped.

PUBLIC SAFETY REQUIREMENTS

The Fire Prevention Division reviewed the proposed development and determined that sufficient access to and around the site is provided for emergency vehicles. The loop around the building provides sufficient access around the property as needed. The building will be required to include a fire alarm and sprinkler system that meet the Village's code requirements.

NEIGHBORHOOD COMMENT

Notice was provided to all property owners 250 feet or less from the property in addition to posting public hearing notice signs and publishing the legal notice in *The Bugle*. One public comment was received by staff. The inquiry was general in nature and the resident was satisfied once informed of the proposal.

STANDARDS OF APPROVAL

The petitioner is requesting approval of an amendment to Planned Unit Development #18 to allow the construction of a future restaurant and retail building, a Special Use to allow a drive-through, and a Plat of Subdivision with an exception to create a new outlot without street frontage at 7251 and 7261 Lemont Road in the Downers Park Plaza shopping center. The petitioner has submitted a narrative that attempts to address all of the standards of approval. The Plan Commission should consider the petitioner's documentation, the staff report, and the discussion at the Plan Commission meeting in determining whether the standards for approval have been met.

Planned Unit Development

Section 28.12.040.C.6 Review and Approval Criteria

The decision to amend the zoning map to approve a PUD development plan and to establish a PUD overlay district are matters of legislative discretion that are not controlled by any single standard. In making recommendations and decisions regarding approval of planned unit developments, review and decision-making bodies must consider at least the following factors:

- 1. The zoning map amendment review and approval criteria of Sec. 28.12.030.I.*
- 2. Whether the proposed PUD development plan and map amendment would be consistent with the comprehensive plan and any other adopted plans for the subject area.*
- 3. Whether PUD development plan complies with the PUD overlay district provisions of Sec. 28.4.030.*
- 4. Whether the proposed development will result in public benefits that are greater than or at least equal to those that would have resulted from development under conventional zoning regulations.*
- 5. Whether appropriate terms and conditions have been imposed on the approval to protect the interests of surrounding property owners and residents, existing and future residents of the PUD and the general public.*

Special Use

Section 28.12.050.H Approval Criteria – Special Uses

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 petitioner 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;*
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.*
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.*

Section 20.602(c) Exceptions

An exception shall be recommended by the Plan Commission only if it finds that there are practical difficulties or particular hardships in the way of carrying out the strict letter of the provisions of this subdivision ordinance. In its consideration of the standards of practical difficulties or particular hardships, the Commission may consider, but is not limited to, the following:

1. *The extent to which the proposed exception impacts on the value or reasonable use of surrounding properties.*
2. *Whether the exception is consistent with the trend of development in the area and the surrounding uses.*
3. *The characteristics of the property which support or mitigate against the granting of the exception.*
4. *Whether the exception is in conformance with the general plan and spirit of this Chapter.*
5. *Whether the exception will alter, or be consistent with, the essential character of the locality.*

DRAFT MOTION

Staff will provide a recommendation at the September 12, 2022 meeting. Should the Plan Commission find that the request meets the standards of approval based on the Zoning and Subdivision Ordinances, staff has prepared a draft motion that the Plan Commission may make for the recommended approval of 22-PLC-0026:

Based on the petitioner's submittal, the staff report, and the testimony presented, I find that the petitioner has met the standards of approval for a Planned Unit Development, Special Use, Final Plat of Subdivision, and an Exception to the Subdivision Standards as required by the Village of Downers Grove Zoning and Subdivisions Ordinances and is in the public interest and therefore, I move that the Plan Commission recommend to the Village Council approval of 22-PLC-0026, subject to the following conditions:

1. The Planned Unit Development, Special Use, and a Plat of Subdivision with an exception to create a new outlot without street frontage shall substantially conform to the staff report; and drawings prepared by Woolpert Engineering submitted on 8/24/222, and by Zito Russell Architects updated on 8/3/22, except as such plans may be modified to conform to the Village codes and ordinances.
2. A perpetual cross access and parking easement is provided between Lots 2-A and Lot 1-B and is shown on the Plat of Subdivision.
3. The pedestrian connection shall be secured with the approval of the property owner at 7231 Lemont Road.
4. A pedestrian easement shall be provided on Lot 7 (7321 Lemont Road) for the benefit of public access to Lot 1-B.
5. The pedestrian connection on Lot 1-B must be clearly differentiated through the use of elevation changes, a different paving material or other equally effective methods.

22-PLC-0026; 7251 and 7261 Lemont Road – Downers Grove Plaza
September 12, 2022

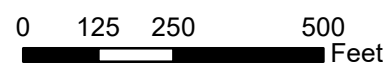
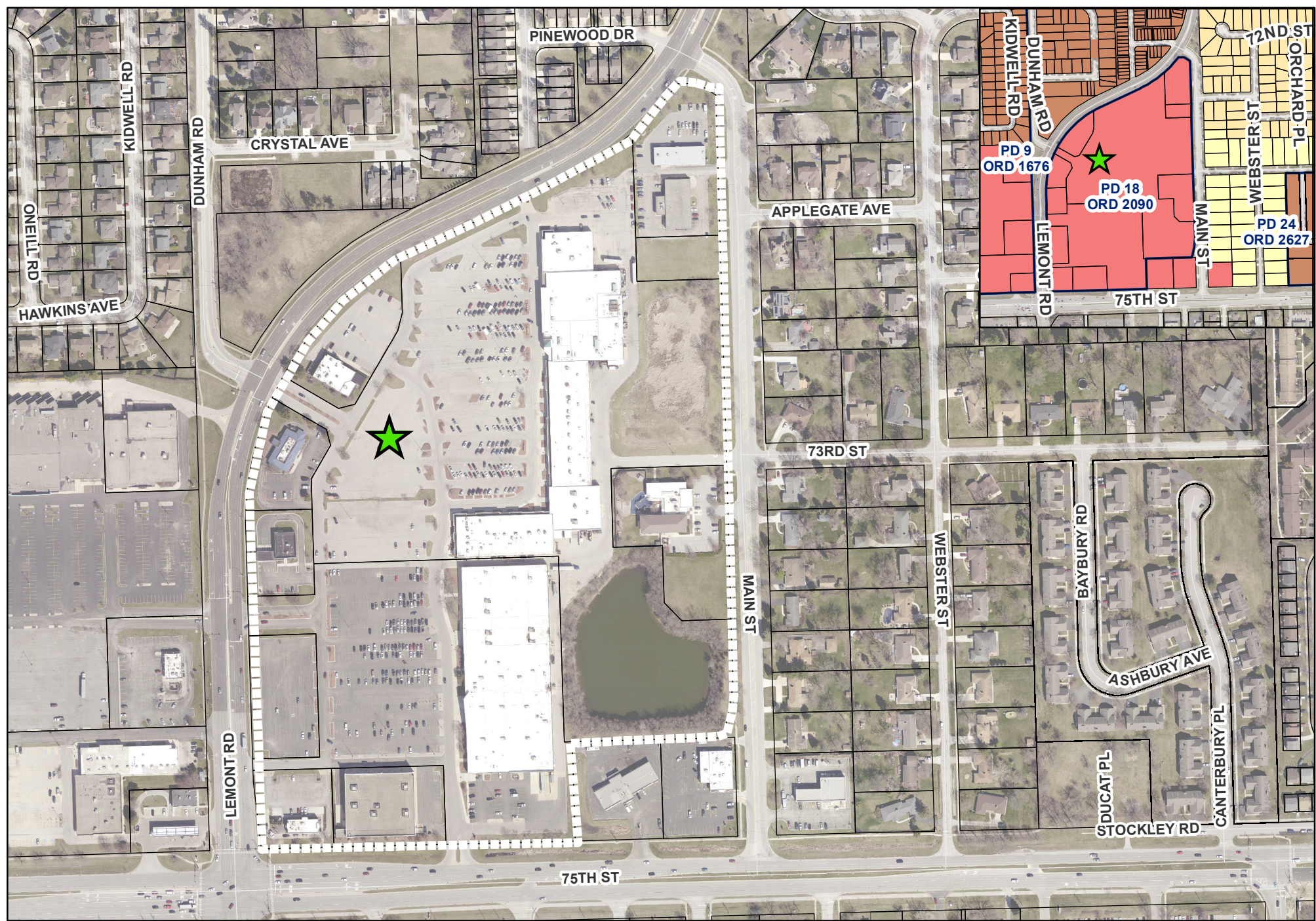
Page 7

6. The photometric plan shall conform to the Village Zoning Ordinance.
7. All signage shall be permitted separately and conform to the Village's Sign Ordinance.
8. A final plat of subdivision will be required prior to permit issuance.



Staff Report Approved By:

A handwritten signature in black ink, appearing to read "Stanley J. Popovich". The signature is written in a cursive style with a large initial "S" and "J".

Stanley J. Popovich, AICP
Director of Community Development



7221 Lemont Road - Location Map

-  Subject Property
-  Project Location



August 2, 2022 (REV
August 22, 2022)

Mr. Stan Popovich
Village of Downers Grove
801 Burlington Avenue
Downers Grove, IL 60515

Re: Project Summary/Narrative
Proposed Restaurant/Retail Project
7251 & 7261 Lemont Rd.
Downers Park Plaza, Proposed Lot 1-B

Dear Stan:

As per our recent meetings and conversations, please see the enclosed Planning Commission application for the above referenced project on behalf of PMAT DPP LLC (Owner) which includes a Special Use approval request (drive through), PUD Amendment, Resubdivision plat, and Waiver Request. A check for the required application fees was delivered to your office on Wednesday, 8/1/22, through UPS Tracking # 1ZF6R2340297361068.

The 5,230 SF restaurant/retail Shell Building is proposed to be located within the existing Downers Park Plaza Shopping Center, an existing PUD with B-2 zoning, located at the corner of Lemont Rd and 75th St. This project will have internal connectivity through the existing shopping center and utilize all existing driveway entrances currently in place. The proposed lot (Lot 1-B) for this project is being carved out of Lot 2 and is currently being used as a parking lot for the development. This portion of the parking lot is very seldomly used given its location to the main shopping center and Lot 2 will still have an excess of 158 parking spaces following the development of the proposed project on Lot 1-B.



The design team has spent a considerable amount of time ensuring the project meets or exceeds PUD or subdivision requirements for this development. The proposed Lot 1-B to be created for this project meets or exceeds Village requirements for minimum lot area, coverage, etc. for the resubdivision. A waiver is

being requested for the frontage requirement due to this lot not having frontage along a public ROW, which is being addressed through the Easement, Covenants, and Restrictions (ECR) document. This ECR, which is currently in place at the shopping center, governs cross access, cross parking, maintenance, monument signage rights, and other development and operating conditions at Downers Park Plaza. A copy of the revised ECR document, which accounts for the creation of the new Lot 1-B for this project, is included with this application for Village review. This document will be recorded concurrently with the resubdivision plat following receiving all necessary Village approvals and will run in perpetuity through title on the property. This ensures access to this parcel (and others) will permanently remain in place through the cross access easements established in the agreement.

The enclosed traffic study, prepared by KLOA, was completed as part of project design. The study noted that the project provides efficient circulation and adequate drive through stacking. Additionally, the study found the volume of traffic estimated to be generated by the proposed project will be reduced due to pass-by trips and internal capture and that the traffic that will be generated by the will not have a significant impact on the area roadways. This demonstrates that the project will not have a negative impact on overall traffic in the area or internal site circulation at Downers Park Plaza.

The project has a drive-thru design included for the proposed restaurant user. This is classified as an allowable Special Use within the B-2 zoning district. As noted above, the design team spent a significant amount of time during site planning to ensure adequate drive through stacking and efficient internal site circulation through the final placement of the building and parking lot geometry. With the change in market trends and overall community safety standards due to Covid-19, the drive through will provide a significant benefit to the community.

The application packet also included black/white and colored exterior elevations for the project. These elevations share some common design elements with the main building with some small modern aesthetic while complying with Village requirements. We believe these elevations provide a clean and



modern store aesthetically and fit in well with nearby projects. The elevations also include a description of each of the proposed finish material. Samples of these materials can be provided upon request.

Given this project is located within an existing, developed shopping center with roadway frontage, utilities are readily available for tie-in with sufficient capacity available to serve the project. Additionally, as the impervious area of the project is unchanged (effectively slightly decreased), the existing detention pond constructed for the shopping center will properly handle the storm water from this project as it does today. This will ensure the proposed project does not adversely impact drainage at the shopping center or in the surrounding areas.

Landscaping and site lighting photometric plans are included for review. The landscaping plans provide plantings like those within the existing shopping center and provide sufficient screening of the drive through when viewed from Lemont Rd. Site lighting plans were developed to ensure quality lighting standards are met as required by the end-users, while also meeting Village requirements to safely illuminate the project at nighttime hours.

We appreciate you and your staff's time to date discussing this project ahead of this submittal and are excited at the opportunity to bring this quality restaurant to the Downers Grove community. We are available to answer any questions or comments regarding this application and look forward to presenting this project to the Planning and Zoning Commission on September 12, 2022. Please advise of any additional information that may be required and once you have confirmation of the application's placement on the meeting agenda.

Sincerely,

A handwritten signature in blue ink that reads "Jason Reibert". The signature is fluid and cursive, with the first name being the most prominent.

Jason Reibert

Vice President

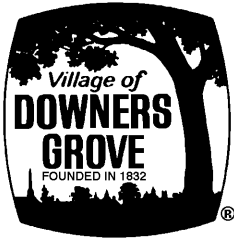


CC: Bob Whelan, PMAT DPP LLC (w/ enclosures)

Kevin Kush, PMAT DPP LLC (w/ enclosures)

Steve Zito, Zito-Russell Architects (w/ enclosures)

Tim Reber, Woolpert (w/ enclosures)



Review and Approval Criteria
PLANNED UNIT DEVELOPMENT

Plan Commission Number & Title: _____

A DETAILED RESPONSE TO ALL OF THE STANDARDS SHALL BE PROVIDED, SPECIFYING HOW EACH STANDARD IS OR IS NOT MET.

Section 28.12.040.C.6 Review and Approval Criteria (Planned Unit Development)

The decision to amend the zoning map to approve a PUD development plan and to establish a PUD overlay district are matters of legislative discretion that are not controlled by any single standard. In making recommendations and decisions regarding approval of planned unit developments, review and decision-making bodies must consider at least the following factors:

- 1. The zoning map amendment review and approval criteria of Sec. 12.030.I.***
See the analysis of zoning map amendment review and approval criteria in separate document.
- 2. Whether the proposed PUD development plan and map amendment would be consistent with the Comprehensive Plan and any other adopted plans for the subject area.***
- 3. Whether PUD development plan complies with the PUD overlay district provisions of Sec. 4.030.***
- 4. Whether the proposed development will result in public benefits that are greater than or at least equal to those that would have resulted from development under conventional zoning regulations.***
- 5. Whether appropriate terms and conditions have been imposed on the approval to protect the interests of surrounding property owners and residents, existing and future residents of the PUD and the general public.***

Applicant: PMAT DPP LLC

Project: Downers Park Plaza – Lot 1-B Resubdivision

1.The extent to which the proposed exception impacts on the value or reasonable use of surrounding properties.

RESPONSE: The exception will not have any impact on value or reasonable use of the surrounding properties. To the general public, access and circulation would remain the same regardless of if this property had the required public frontage as permanent cross access is being provided through the recorded Easements, Covenants, and Restrictions (ECR) document and cross-access servitudes.

2.Whether the exception is consistent with the trend of development in the area and the surrounding uses.

RESPONSE: The exception is consistent with the surrounding uses as permanent, public access will be granted to the proposed parcel as is with all other parcels in the area. Access for this parcel is being provided through the recorded referenced ECR document, while others are through recorded public right of way. Both ensure public access will not be impeded or restricted.

3.The characteristics of the property which support or mitigate against the granting of the exception.

RESPONSE: Given the property's location set within an existing shopping center and other surrounding parcels, providing lot frontage along Lemont Rd (nearest public right of way) is not feasible. As noted, access will be provided through existing cross access easements through the multiple driveways on both Lemont Rd and 75th St.

4.Whether the exception is in conformance with the general plan and spirit of this Chapter.

RESPONSE: The exception is in conformance with the general plan and spirit of the Chapter which is to provide permanent, unrestricted access to all parcels being created. This is being accomplished through the referenced ECR document which has been recorded as part of the original development of Downers Park Plaza and will be revised and recorded as part of this resubdivision and will pass through title in the event of any property sales.

5. Whether the exception will alter, or be consistent with, the essential character of the locality.

RESPONSE: This exception will not alter the essential character of the locality at this project in any manner. As mentioned in an earlier response, the general public will continue to access and

circulate the property as they are now. This will not change or impact the character of the general area.

ZONING ANALYSIS

PROPOSED RETAIL & RESTAURANT, 7251 & 7261 LEMONT ROAD (PART OF EXISTING PUD #18)

PIN: CURRENTLY UNASSIGNED (EXISTING LOT 2 TO BE SUBDIVIDED)		ZONING DISTRICT: PUD/B-2 GENERAL RETAIL BUSINESS		
EXIST. USE: RETAIL (COMMERCIAL)		PROPOSED USE: RETAIL & RESTAURANT (COMMERCIAL)		
REQUIREMENT	REQUIRED	PROPOSED	MEETS REQ.?	DIFFERENCE
LOT FRONTAGE	-	0 (INTERIOR LOT)	N/A	N/A
LOT AREA	-	0.66 ACRES (28,994 S.F.)	N/A	N/A
LOT WIDTH	-	220.5'	N/A	N/A
STREET YARD	25'	64'	YES	+39'
REAR YARD	-	VARIES	N/A	-
SIDE YARD	-	VARIES	N/A	-
HEIGHT	35' MAX.	16'-9"	YES	-20'-3"
OPEN SPACE	10% MIN. (2,899 S.F.)	14% (4,126 S.F.)	YES	+1,227 S.F.
FAR	0.75 MAX. (21,745 S.F.)	0.18 (5,230 S.F.)	YES	-16,515 S.F.
PARKING (RESTAURANT)	21 (+8 STACKING)	23 (+8 STACKING)	YES	+2
PARKING (RETAIL)	13	14	YES	+1

REMARKS:

RESTAURANT REQUIRED PARKING CALCULATED AT 10 SPACES PER 1,000 S.F. BUILDING AREA, PLUS 8 STACKING SPACES W/ MIN. 3 SPACES BETWEEN ORDERING POINT AND PICKUP POINT.

RETAIL REQUIRED PARKING CALCULATED AT 4 SPACES PER 1,000 S.F. BUILDING AREA.

ZONING ANALYSIS

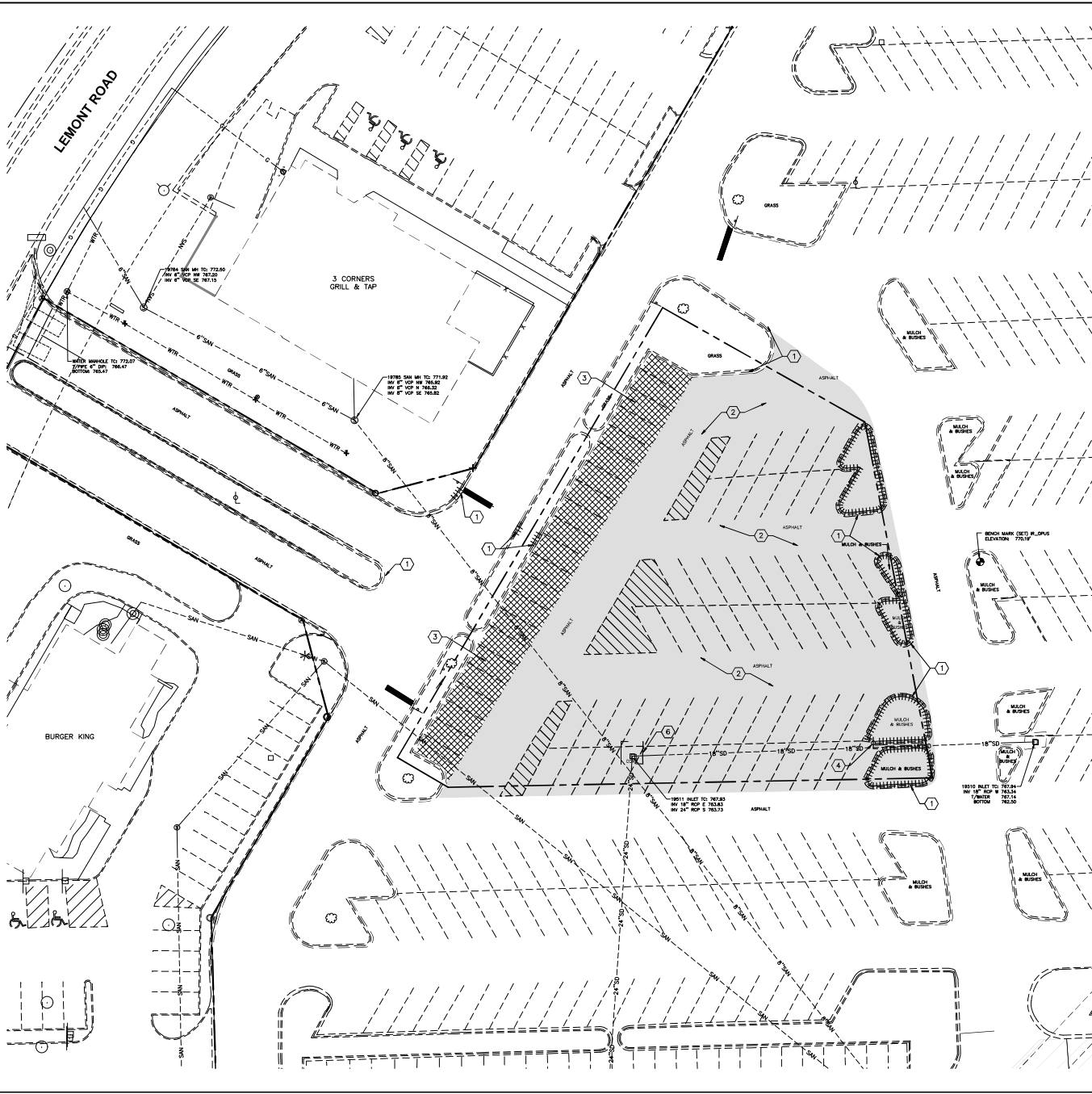
EXISTING (PUD #18) DOWNERS PARK PLAZA SHOPPING CENTER AT
7451 LEMONT ROAD (LOT 2), 7349 LEMONT ROAD (LOT 5) & 1150 75TH STREET (LOT 8)

PINS: 0929110002 (LOT 8), 0929110003 (LOT 5) & 0929110007 (LOT 2)		ZONING DISTRICT: PUD/B-2 GENERAL RETAIL BUSINESS		
EXIST. USE: RETAIL (COMMERCIAL)		PROPOSED USE: RETAIL (COMMERCIAL)		
REQUIREMENT	REQUIRED	EXISTING	MEETS REQ.?	DIFFERENCE
LOT AREA (COMBINED)	-	32.935 ACRES (1,434,656 S.F.)	N/A	N/A
OPEN SPACE (COMBINED)	10% MIN. (143,465 S.F.)	26% (382,327 S.F.)	YES	+238,862 S.F.
FAR (COMBINED)	0.75 MAX. (1,075,992 S.F.)	0.18 (268,821 S.F.)	YES	-807,171 S.F.
PARKING (COMBINED)	4.0/1,000 S.F. (1,075 SPACES)	1,192 SPACES @ 4.43/1,000 S.F.	YES	+117 SPACES

REMARKS:

REQUIRED PARKING CALCULATED AT 4 SPACES PER 1,000 S.F. BUILDING AREA (COMMERCIAL - SHOPPING CENTER, MULTI-TENANT).

Layout File Name: C100 EXISTING CONDITIONS - DEMO PLAN, impsnet Map.dwg; User: william.dougherty; Job: Xrefns; 10015411-TB-K.dwg; 10015411-X-BY OTHERS.dwg; 10015411-P.dwg; 10015411-X.dwg; Last Saved By/Dwgnr: 8/22/2022 10:56:48 AM; Xref: S:\Work\GIS\Chicago\Users\wvsm\10015411\Retail - Downers Grove, IL\A-E\Drawings\Civil\Coord\CA\10015411-C100-EXIST.dwg; Plotted By/Dwgnr: wvsm; PlotDate/Sheet: 22, 2022, 11:28:50 AM



EXISTING LEGEND

- ⊙ STORM MANHOLE
- CURB INLET
- ⊠ CATCH BASIN
- ⚡ FIRE HYD.
- ⊕ WATER VALVE
- ⊙ WATER MANHOLE
- ⚡ SPRINKLER CONTROL VALVE
- ⊕ GAS METER
- ⊕ ELEC. TRANSFORMER
- ⊕ ELECTRIC MANHOLE
- ⊕ TELEPHONE MANHOLE
- ⊕ CLEANOUT
- ⊕ UTILITY POLE
- ⊕ LIGHT POLE
- GUY WIRE
- ⊕ TELEPHONE PEDESTAL
- ⊕ TRAFFIC SIGNAL PULL BOX
- ⊕ SANITARY MANHOLE
- ⊕ SAN
- UE --- UNDERGROUND ELECTRIC
- G --- UNDERGROUND GAS
- SD --- STORM
- SAN --- SANITARY
- WTR --- WATER
- EX --- EXISTING CURB (AND GUTTER)
- TC TOP OF CASTING

DEMOLITION LEGEND

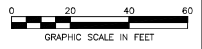
- ① SAWCUT AND REMOVE EXISTING CURB AND GUTTER
- ② SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT FULL DEPTH
- ③ 2" MILL AND OVERLAY
- ④ REMOVE EXISTING LIGHTPOLE
- ⑤ PAVEMENT & CURB RESTORATION AREA FOR PROPOSED SANITARY SEWER CONSTRUCTION
- ⑥ DELETE EXISTING CONCRETE

DEMOLITION NOTES

1. EXISTING UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS ACCORDING TO AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PRESENCE AND LOCATION OF THE EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE TO THE UTILITIES DURING PROBING OR CONSTRUCTION.
2. CALL J.U.L.I.E. (1-800-892-0123) FOR EXACT LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR THE RELOCATION OF UTILITIES ON SITE OR CROSSING THE SITE TO SERVICE ADJACENT PROPERTIES. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY OWNER OR OTHERS, DURING OCCUPIED HOURS, EXCEPT WHEN PERMITTED BY OTHERS.
4. DEMOLISH AND COMPLETELY REMOVE FROM SITE. EXISTING UNDERGROUND UTILITIES INDICATED TO BE REMOVED. COORDINATE WITH UTILITY COMPANIES FOR SHUT-OFF OF SERVICES, IF LINES ARE ACTIVE.
5. EXISTING PAVEMENT AND CONCRETE PAVEMENTS ARE TO BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.
6. MATERIAL CREATED AS A RESULT OF BUILDING DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL MUD, DIRT, GRAVEL, AND ANY OTHER MATERIALS TRACKED ONTO ANY PUBLIC OR PRIVATE STREETS OR SIDEWALKS. THE CONTRACTOR MUST USE WATER OR OTHER METHODS TO KEEP AIRBORNE DUST TO A REQUIRED MINIMUM.
8. PAVEMENT DAMAGED DUE TO THE REMOVAL OF EXISTING CURB SHALL BE SAWCUT, REMOVED AND REPLACED IN KIND.
9. A FULL DEPTH SAWCUT SHALL BE PROVIDED IN ALL AREAS WHERE PROPOSED PAVEMENT OR CURB AND GUTTER MEETS EXISTING PAVEMENT.
10. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF BENCHMARKS PRIOR TO THE START OF CONSTRUCTION.

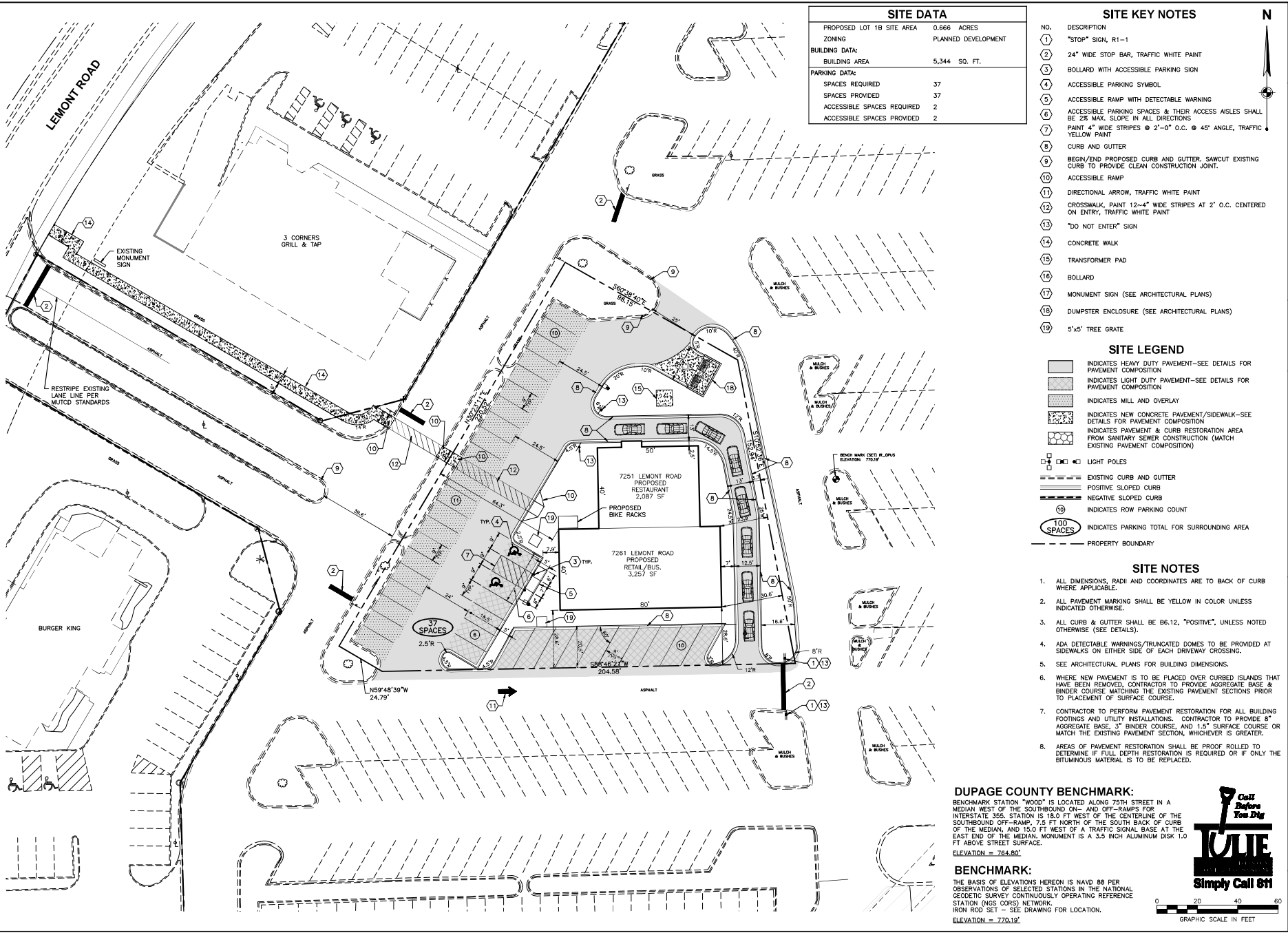
BENCHMARK:

THE BASIS OF ELEVATIONS HEREON IS NAVD 88 PER OBSERVATIONS OF SELECTED STATIONS IN THE NATIONAL GEODETIC SURVEY CONTINUOUSLY OPERATING REFERENCE STATION (NGS CORS) NETWORK. IRON ROD SET - SEE DRAWING FOR LOCATION. ELEVATION = 770.14'



PROJECT No: 10015411	REVISION
	DATE
DATE 08/24/22	No.
DES. BY	DATE
DR. CH	No.
CKD. TR	DATE
1816 South Meyers Road Suite 950 Oakbrook Terrace, IL 60181 630.424.9880 FAX: 630.495.3731	PROJECT No: 10015411
	DATE 08/24/22
	No.
SITE IMPROVEMENT PLANS RETAIL - DOWNERS GROVE	DES. BY
	DR. CH
EXISTING CONDITIONS - DEMO PLAN	CKD. TR
	DATE
7251 & 7261 LEMONT ROAD DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS 60516	SHEET NO.
C100	

Layout, Title Name: C200 SITE PLAN, Images: MapInfo, sullivan, doughearty, jipat, xvelts: 10015411-TBK.dwg, 10015411-K-BY OTHERS.dwg, 10015411-P.dwg, 10015411-X.dwg
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SITE DATA	
PROPOSED LOT 1B SITE AREA	0.866 ACRES
ZONING	PLANNED DEVELOPMENT
BUILDING DATA:	
BUILDING AREA	5,344 SQ. FT.
PARKING DATA:	
SPACES REQUIRED	37
SPACES PROVIDED	37
ACCESSIBLE SPACES REQUIRED	2
ACCESSIBLE SPACES PROVIDED	2

- ### SITE KEY NOTES
1. "STOP" SIGN, R1-1
 2. 24" WIDE STOP BAR, TRAFFIC WHITE PAINT
 3. BOLLARD WITH ACCESSIBLE PARKING SIGN
 4. ACCESSIBLE PARKING SYMBOL
 5. ACCESSIBLE RAMP WITH DETECTABLE WARNING
 6. ACCESSIBLE PARKING SPACES & THEIR ACCESS AISLES SHALL BE 2% MAX. SLOPE IN ALL DIRECTIONS
 7. PAINT 4" WIDE STRIPES @ 2'-0" O.C. @ 45° ANGLE, TRAFFIC YELLOW PAINT
 8. CURB AND GUTTER
 9. BEGN/END PROPOSED CURB AND GUTTER, SAWCUT EXISTING CURB TO PROVIDE CLEAN CONSTRUCTION JOINT.
 10. ACCESSIBLE RAMP
 11. DIRECTIONAL ARROW, TRAFFIC WHITE PAINT
 12. CROSSWALK, PAINT 12-4" WIDE STRIPES AT 2' O.C. CENTERED ON ENTRY, TRAFFIC WHITE PAINT
 13. "DO NOT ENTER" SIGN
 14. CONCRETE WALK
 15. TRANSFORMER PAD
 16. BOLLARD
 17. MONUMENT SIGN (SEE ARCHITECTURAL PLANS)
 18. DUMPSTER ENCLOSURE (SEE ARCHITECTURAL PLANS)
 19. 5'x5' TREE GRATE

- ### SITE LEGEND
- INDICATES HEAVY DUTY PAVEMENT—SEE DETAILS FOR PAVEMENT COMPOSITION
 - INDICATES LIGHT DUTY PAVEMENT—SEE DETAILS FOR PAVEMENT COMPOSITION
 - INDICATES MILL AND OVERLAY
 - INDICATES NEW CONCRETE PAVEMENT/SIDEWALK—SEE DETAILS FOR PAVEMENT COMPOSITION
 - INDICATES PAVEMENT & CURB RESTORATION AREA FROM SANITARY SEWER CONSTRUCTION (MATCH EXISTING PAVEMENT COMPOSITION)
 - LIGHT POLES
 - EXISTING CURB AND GUTTER
 - POSITIVE SLOPED CURB
 - NEGATIVE SLOPED CURB
 - INDICATES ROW PARKING CURB
 - INDICATES PARKING TOTAL FOR SURROUNDING AREA
 - PROPERTY BOUNDARY

- ### SITE NOTES
1. ALL DIMENSIONS, RADI AND COORDINATES ARE TO BACK OF CURB WHERE APPLICABLE.
 2. ALL PAVEMENT MARKING SHALL BE YELLOW IN COLOR UNLESS INDICATED OTHERWISE.
 3. ALL CURB & GUTTER SHALL BE 66.12, "POSITIVE", UNLESS NOTED OTHERWISE (SEE DETAILS).
 4. ADA DETECTABLE WARNING/FRUNGATED DOMES TO BE PROVIDED AT SIDEWALKS ON EITHER SIDE OF EACH DRIVEWAY CROSSING.
 5. SEE ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS.
 6. WHERE NEW PAVEMENT IS TO BE PLACED OVER CURBED ISLANDS THAT HAVE BEEN REMOVED, CONTRACTOR TO PROVIDE AGGREGATE BASE & BINDER COURSE MATCHING THE EXISTING PAVEMENT SECTIONS PRIOR TO PLACEMENT OF SURFACE COURSE.
 7. CONTRACTOR TO PERFORM PAVEMENT RESTORATION FOR ALL BUILDING FOOTINGS AND UTILITY INSTALLATIONS. CONTRACTOR TO PROVIDE 2" AGGREGATE BASE, 3" BINDER COURSE, AND 1.5" SURFACE COURSE OR MATCH THE EXISTING PAVEMENT SECTION, WHICHEVER IS GREATER.
 8. AREAS OF PAVEMENT RESTORATION SHALL BE PROFF ROLLED TO DETERMINE IF FULL DEPTH RESTORATION IS REQUIRED OR IF ONLY THE BITUMINOUS MATERIAL IS TO BE REPLACED.

DUPAGE COUNTY BENCHMARK:
 BENCHMARK STATION "WOOD" IS LOCATED ALONG 75TH STREET IN A MEDIAN WEST OF THE SOUTHBOUND ON- AND OFF-RAMPS FOR INTERSTATE 355. STATION IS 18.0 FT WEST OF THE CENTERLINE OF THE SOUTHBOUND OFF-RAMP, 7.5 FT NORTH OF THE SOUTH BACK OF CURB OF THE MEDIAN, AND 15.0 FT WEST OF A TRAFFIC SIGNAL BASE AT THE EAST END OF THE MEDIAN. MONUMENT IS A 3.5 INCH ALUMINUM DISK 1.0 FT ABOVE STREET SURFACE.
 ELEVATION = 764.80'

BENCHMARK:
 THE BASIS OF ELEVATIONS HEREON IS NAVD 88 PER OBSERVATIONS OF SELECTED STATIONS IN THE NATIONAL GEODETIC SURVEY CONTINUOUSLY OPERATING REFERENCE STATION (NGS CORS) NETWORK.
 IRON ROD SET - SEE DRAWING FOR LOCATION.
 ELEVATION = 770.12'

Call Before You Dig
811
 Simply Call 811

GRAPHIC SCALE IN FEET

REVISION	
No.	DATE

PROJECT No.: 10015411
 DATE: 08/24/22
 DES. BY: [Blank]
 DR. BY: [Blank]
 CKD. BY: [Blank]

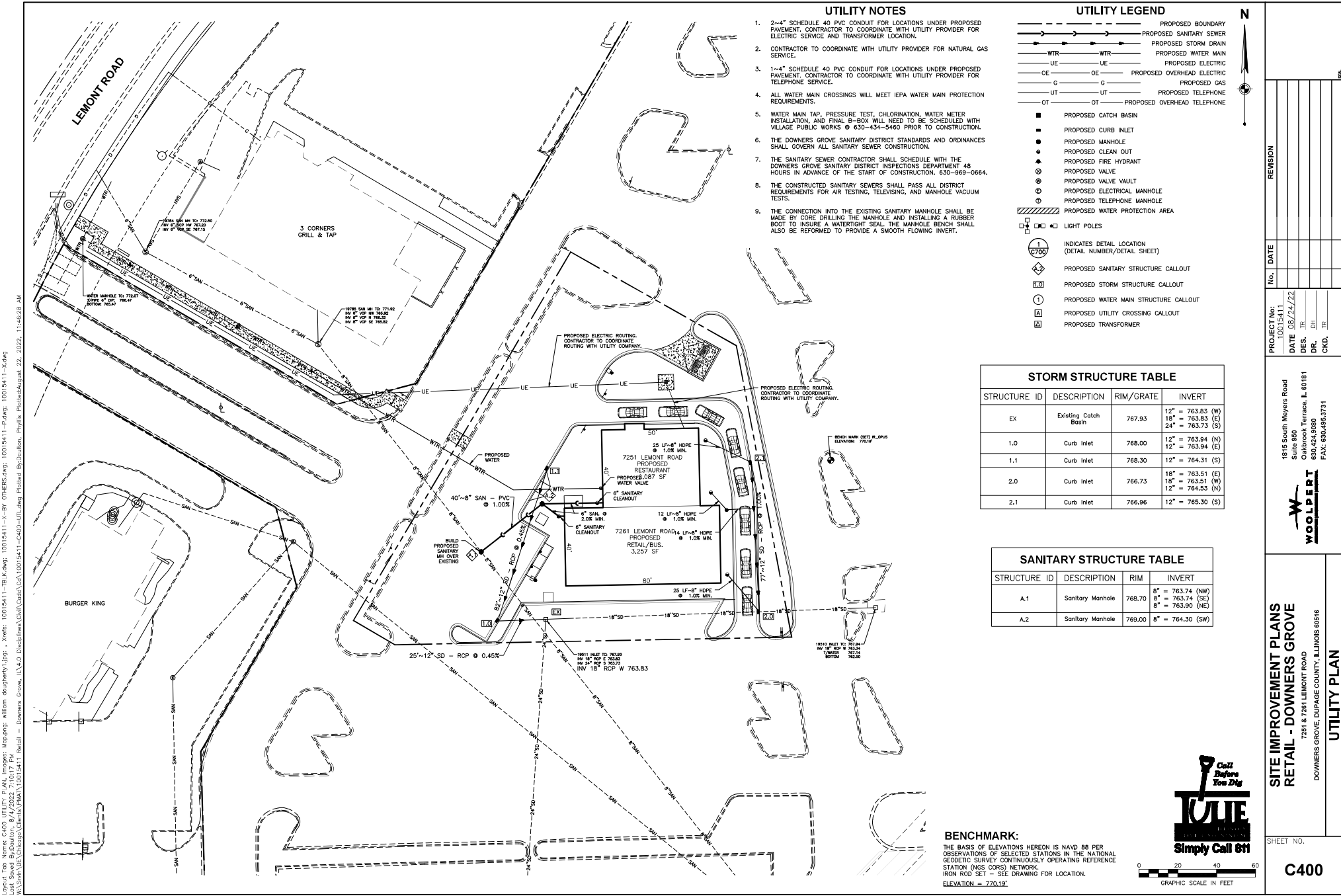
1816 South Meyers Road
 Suite 950
 Oakbrook Terrace, IL 60181
 630.424.9880
 FAX: 630.495.3721

WOOLBERT
 ENGINEERS & ARCHITECTS

SITE IMPROVEMENT PLANS
RETAIL - DOWNERS GROVE
 7251 & 7261 LEMONT ROAD
 DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS 60516

SITE PLAN

SHEET NO. **C200**



UTILITY NOTES

- 2-4" SCHEDULE 40 PVC CONDUIT FOR LOCATIONS UNDER PROPOSED PAVEMENT. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR ELECTRIC SERVICE AND TRANSFORMER LOCATION.
- CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR NATURAL GAS SERVICE.
- 1-4" SCHEDULE 40 PVC CONDUIT FOR LOCATIONS UNDER PROPOSED PAVEMENT. CONTRACTOR TO COORDINATE WITH UTILITY PROVIDER FOR TELEPHONE SERVICE.
- ALL WATER MAIN CROSSINGS WILL MEET IEPA WATER MAIN PROTECTION REQUIREMENTS.
- WATER MAIN TAP, PRESSURE TEST, CHLORINATION, WATER METER INSTALLATION, AND FINAL 8-BOX WILL NEED TO BE SCHEDULED WITH VILLAGE PUBLIC WORKS @ 630-434-5460 PRIOR TO CONSTRUCTION.
- THE DOWNERS GROVE SANITARY DISTRICT STANDARDS AND ORDINANCES SHALL GOVERN ALL SANITARY SEWER CONSTRUCTION.
- THE SANITARY SEWER CONTRACTOR SHALL SCHEDULE WITH THE DOWNERS GROVE SANITARY DISTRICT INSPECTIONS DEPARTMENT 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION. 630-969-0664.
- THE CONSTRUCTED SANITARY SEWERS SHALL PASS ALL DISTRICT REQUIREMENTS FOR AIR TESTING, TELEVISION, AND MANHOLE VACUUM TESTS.
- THE CONNECTION INTO THE EXISTING SANITARY MANHOLE SHALL BE MADE BY CORE DRILLING THE MANHOLE AND INSTALLING A RUBBER BOOT TO INSURE A WATER TIGHT SEAL. THE MANHOLE BENCH SHALL ALSO BE REFORMED TO PROVIDE A SMOOTH FLOWING INVERT.

UTILITY LEGEND

PROPOSED BOUNDARY
 PROPOSED SANITARY SEWER
 PROPOSED STORM DRAIN
 PROPOSED WATER MAIN
 PROPOSED ELECTRIC
 PROPOSED OVERHEAD ELECTRIC
 PROPOSED GAS
 PROPOSED TELEPHONE
 PROPOSED OVERHEAD TELEPHONE

WTR - WTR
 UE - UE
 OE - OE
 G - G
 UT - UT
 OT - OT

PROPOSED CATCH BASIN
 PROPOSED CURB INLET
 PROPOSED MANHOLE
 PROPOSED CLEAN OUT
 PROPOSED FIRE HYDRANT
 PROPOSED VALVE
 PROPOSED VALVE VAULT
 PROPOSED ELECTRICAL MANHOLE
 PROPOSED TELEPHONE MANHOLE
 PROPOSED WATER PROTECTION AREA

LIGHT POLES

INDICATES DETAIL LOCATION (DETAIL NUMBER/DETAIL SHEET)

PROPOSED SANITARY STRUCTURE CALLOUT
 PROPOSED STORM STRUCTURE CALLOUT
 PROPOSED WATER MAIN STRUCTURE CALLOUT
 PROPOSED UTILITY CROSSING CALLOUT
 PROPOSED TRANSFORMER

STORM STRUCTURE TABLE

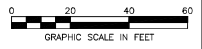
STRUCTURE ID	DESCRIPTION	RIM/GRATE	INVERT
EX	Existing Catch Basin	767.93	12" = 763.83 (W) 18" = 763.83 (E) 24" = 763.73 (S)
1.0	Curb Inlet	768.00	12" = 763.94 (N) 12" = 763.94 (E)
1.1	Curb Inlet	768.30	12" = 764.31 (S)
2.0	Curb Inlet	766.73	18" = 763.51 (E) 18" = 763.51 (W) 12" = 764.53 (N)
2.1	Curb Inlet	766.96	12" = 765.30 (S)

SANITARY STRUCTURE TABLE

STRUCTURE ID	DESCRIPTION	RIM	INVERT
A.1	Sanitary Manhole	768.70	8" = 763.74 (NW) 8" = 763.74 (SE) 8" = 763.90 (NE)
A.2	Sanitary Manhole	769.00	8" = 764.30 (SW)

BENCHMARK:

THE BASIS OF ELEVATIONS HEREON IS NAVD 88 PER OBSERVATIONS OF SELECTED STATIONS IN THE NATIONAL GEODETIC SURVEY CONTINUOUSLY OPERATING REFERENCE STATION (NGS CORS) NETWORK.
 IRON ROD SET - SEE DRAWING FOR LOCATION.
 ELEVATION = 770.19'



Layout: Tab Name: C400 UTILITY PLAN; Image: map.png; William DeGruyter; Lp; Xref: 10015411-TBLK.dwg; 10015411-X-BY OTHERS.dwg; 10015411-P.dwg; 10015411-X.dwg
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REVISION	DATE	No.	DATE	PROJECT No:	DATE	DES.	DR.	CKD.
				10015411	08/24/22			

1816 South Meyers Road
 Suite 950
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WOOLBERT
 ENGINEERS & ARCHITECTS
 DR. DR. DR. DR.
 630.424.9880
 FAX: 630.495.3721

SITE IMPROVEMENT PLANS
RETAIL - DOWNERS GROVE
 7251 & 7261 LEMONT ROAD
 DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS 60516

UTILITY PLAN

SHEET NO. **C400**

TAG	QTY	SCIENTIFIC NAME	COMMON NAME	COND.	SIZE AT INSTALL	MATURE SIZE	REMARKS
SHADE TREE							
AG	2	<i>Aesculus glabra</i>	Ohio Buckeye	B&B	2.5' cal, 14hc, 7wd	40hc x 30wd	Full, well shaped
CK	3	<i>Coprosma tomentos</i>	American Yellowwood	B&B	2.5' cal, 14hc, 7wd	40hc x 30wd	Full, well shaped
HS	1	<i>Hystrix spicata</i> David Odori	Alternaume Blackgum	B&B	2.5' cal, 14hc, 7wd	30hc x 20wd	Full, well shaped
PA	1	<i>Platanus acerifolia</i> 'Bloodgood'	Bloodgood London Plane Tree	B&B	2.5' cal, 14hc, 7wd	50hc x 40wd	Full, well shaped
EVERGREEN SHRUB							
JC	12	<i>Juniperus chinensis</i> 'Sea Green'	Sea Green Juniper	#3 cont.	18hc x 18"wd	27hc x 5'wd	Full, vigorous
TH	6	<i>Taxus canadensis</i> 'Nicksal'	Hicks Yew	#3 cont.	18hc x 18"wd	10hc x 5'wd	Full, vigorous
DECIDUOUS SHRUB							
HP	8	<i>Hydrangea paniculata</i> 'Bobo'	Bobo Hydrangea	#3 cont.	18hc x 18"wd	27hc x 5'wd	Full, vigorous
LS	15	<i>Lindera benzoin</i>	Spicebush	#3 cont.	18hc x 18"wd	8hc x 8'wd	Full, vigorous
ORNAMENTAL GRASS							
CA	12	<i>Calamagrostis canadensis</i> 'Karl Foerster'	Feather Reed Grass	#2 cont.		4hc x 3'wd	Full, vigorous

*QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. CONTRACTOR IS RESPONSIBLE FOR ALL QUANTITIES OF PLANTS ON LANDSCAPE PLAN.

LANDSCAPE NOTES

- LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES, PRIOR TO DIGGING, IS RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- PRIOR TO INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL INSPECT THE SUB GRADE GENERAL SITE CONDITIONS, VERIFY ELEVATIONS, UTILITY LOCATIONS, IRRIGATION, APPROVE TOPSOIL, PROVIDED BY GENERAL CONTRACTOR AND OBSERVE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. NOTIFY GENERAL CONTRACTOR OF ANY UNSATISFACTORY CONDITIONS. WORK SHALL NOT PROCEED UNTIL SUCH CONDITIONS HAVE BEEN CORRECTED AND ARE ACCEPTABLE TO THE LANDSCAPE CONTRACTOR AND/OR CONSTRUCTION MANAGER.
- GENERAL AND LANDSCAPE CONTRACTOR ARE RESPONSIBLE FOR PROTECTING EXISTING TREES FROM DAMAGE DURING CONSTRUCTION. GENERAL CONTRACTOR TO INSTALL TREE PROTECTION FENCING PRIOR TO ANY SITE WORK.
- ALL SHRUB AND GROUNDCOVER BEDS TO BE MULCHED WITH A MINIMUM OF 3 INCHES OF CLEAN SHREDED HARDWOOD MULCH.
- PLANTING HOLES TO BE DIG A MINIMUM OF TWICE THE WIDTH THE SIZE OF THE ROOT BALL OF BOTH SHRUB AND TREE. AMEND BACKFILL WITH TOPSOIL MIX. BACKFILL AND TAMP BOTTOM OF HOLE PRIOR TO PLANTING SO TOP OF ROOT BALL DOES NOT SETTLE BELOW SURROUNDING GRADE.
- TOPSOIL MIX TO BE 4 PARTS SCREENED TOPSOIL AND 1 PART ORGANIC MATERIAL (i.e. NATURE'S HELPER OR PRO MIX).
- EXISTING GRASS IN PROPOSED PLANTING AREAS TO BE REMOVED AND AREA TO BE HAND RAKED TO REMOVE ALL ROCKS AND DEBRIS LARGER THAN 1 INCH IN DIAMETER PRIOR TO PLANTING SHRUBS.
- SOIL TO BE TESTED TO DETERMINE FERTILIZER AND LIME REQUIREMENTS. LIME AND FERTILIZER TO BE DISTRIBUTED PRIOR TO SPREADING SEED. ALL DISTURBED AREAS (INCLUDING RIGHT-OF-WAYS) NOT RECEIVING PLANTINGS TO RECEIVE 4 INCHES OF TOPSOIL AND SEEDED.
- ALL CHANGES TO DESIGN AND/OR PLANT SUBSTITUTIONS TO BE AUTHORIZED BY LANDSCAPE ARCHITECT.
- ALL PARKING ISLANDS TO BE BERMED UP 6"-10" WITH CLEAN FRABLE TOPSOIL PRIOR TO PLANTING.
- ALL LANDSCAPING SHALL BE INSTALLED IN CONFORMANCE WITH ANSI Z60.1 THE AMERICAN STANDARD FOR NURSERY STOCK, AND THE ACCEPTED STANDARDS OF AMERICANHORT.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS INSTALLED FOR ONE FULL YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. ALL PLANTS SHALL BE ALIVE AND AT A VIGOROUS RATE OF GROWTH AT THE END OF THE GUARANTEE PERIOD. THE LANDSCAPE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR ACTS OF GOD OR VANDALISM.
- ANY PLANT THAT IS DETERMINED DEAD, IN AN UNHEALTHY OR UNSIGHTLY CONDITION, LOST ITS SHAPE DUE TO DEAD BRANCHES OR OTHER SYMPTOMS OF POOR, NON-VIGOROUS GROWTH SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR WITH THE COST OF THE REPLACEMENT INCLUDED IN THE BID OR PROPOSAL PRIOR TO THE END OF THE GUARANTEE PERIOD.
- WATER THOROUGHLY TWICE IN THE FIRST 24 HOURS AND APPLY MULCH IMMEDIATELY.

REVISION	DATE	BY	CHKD.
No.			

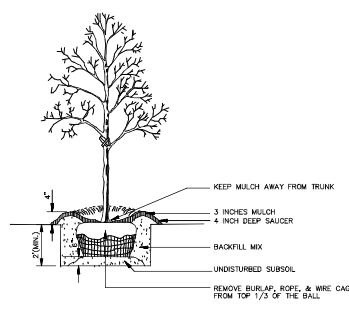
PROJECT NO:	10015411
DATE:	08/24/22
DES. BY:	DR. JHI
CHKD. BY:	DR. JHI

1816 South Meyers Road
 Suite 950
 Oakbrook Terrace, IL 60181
 630.424.9880
 FAX: 630.495.3731



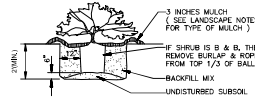
SITE IMPROVEMENT PLANS
RETAIL - DOWNERS GROVE
 7251 & 7261 LEMONT ROAD
 DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS 60516

LANDSCAPE PLAN
 SHEET NO. **C500**



NOTE: SEE LANDSCAPE NOTES FOR THE TYPE OF MULCH MATERIAL TO USE.

TREE PLANTING N.T.S.



SHRUB PLANTING N.T.S.

PERMANENT SEED BLEND

- 6 LBS PER 1000 SF
 - 90% FINE LEAF FESCUE (*FESTUCA ARUNDINACEA*)
 - REBEL, REBEL II, WRANGLER, BONANZA, MOUAVE OR EQUAL
 - 10% KENTUCKY BLUEGRASS (*POA PRATENSIS*)
 - MIDNIGHT, RUGBY II, MIDIRON VARIETIES OR EQUAL
 - 98% PURITY AND 85% GERMINATION
 - 95% SEED FREE
 - 8 LBS 12-12-12 FERTILIZER PER 1000 SF
 - 1 1/2 BALES OF STRAW PER 1000 SF
- *NOTE= AREAS TO BE GRADED AND PREPARED FOR SEEDING AND SOD SHALL BE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL.

LANDSCAPE CODE SUMMARY

VILLAGE OF DOWNERS GROVE
 MUNICIPAL CODE
 ARTICLE 28. VIII LANDSCAPE AND SCREENING

PARKING LOT PERIMETER LANDSCAPE (SEC 28.8.020)

B. PARKING LOT ACROSS STREET FROM NONRESIDENTIAL REQUIRES LANDSCAPE ALONG SEVENTY-FIVE PERCENT (75%) AND ONE TREE PER THIRTY (30) LINEAR FEET OF FRONTAGE

= N/A

C. PARKING LOT ABUTTING ANOTHER NONRESIDENTIAL LOT REQUIRES LANDSCAPE ALONG FIFTY PERCENT (50%) OF PERIMETER

WEST (197 LF)
 = 98.5 LF OF
 = 20 SHRUBS & 12 ORNAMENTAL GRASSES PROVIDED

EAST (153 LF)
 = 76.5 LF OF LANDSCAPE REQUIRED
 = 21 SHRUBS PROVIDED

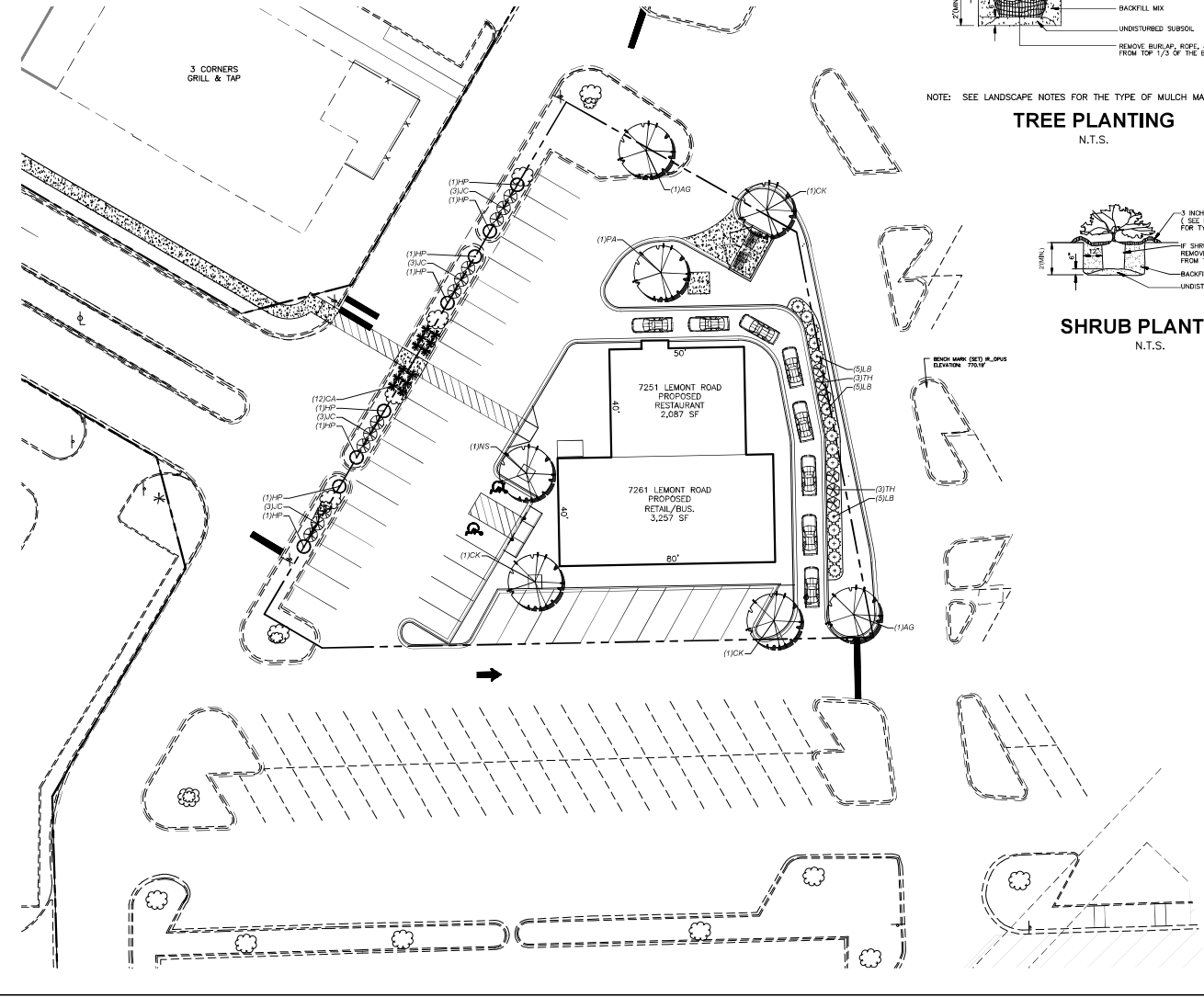
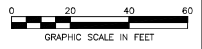
PARKING LOT INTERIOR LANDSCAPE (SEC 28.8.030)

PROVIDE ONE SHADE TREE FOR EACH ONE HUNDRED FIFTY (150) SQUARE FEET OF LANDSCAPE ISLAND

8 ISLANDS (1,200 SF)
 = 8 SHADE TREES REQUIRED
 = 1 EXISTING TREE TO REMAIN & 7 SHADE TREES PROVIDED

BENCHMARK:

THE BASIS OF ELEVATIONS HEREON IS NAVD 88 PER OBSERVATIONS OF SELECTED STATIONS IN THE NATIONAL GEODETIC SURVEY CONTINUOUSLY OPERATING REFERENCE STATION (NGS CORS) NETWORK.
 IRON ROD SET - SEE DRAWING FOR LOCATION.
 ELEVATION = 770.1'



Layout: Tbn Name: C500 LANDSCAPE PLAN; Images: aerial.jpg; Mapinfo: william.dougherty1.jpg; Xrefs: 10015411-TBLK.dwg; 10015411-X-BY OTHERS.dwg; 10015411-P.dwg; 10015411-K.dwg; 10015411-G.dwg
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 Plot Style: C500.ctb
 Sheet: 28 of 201

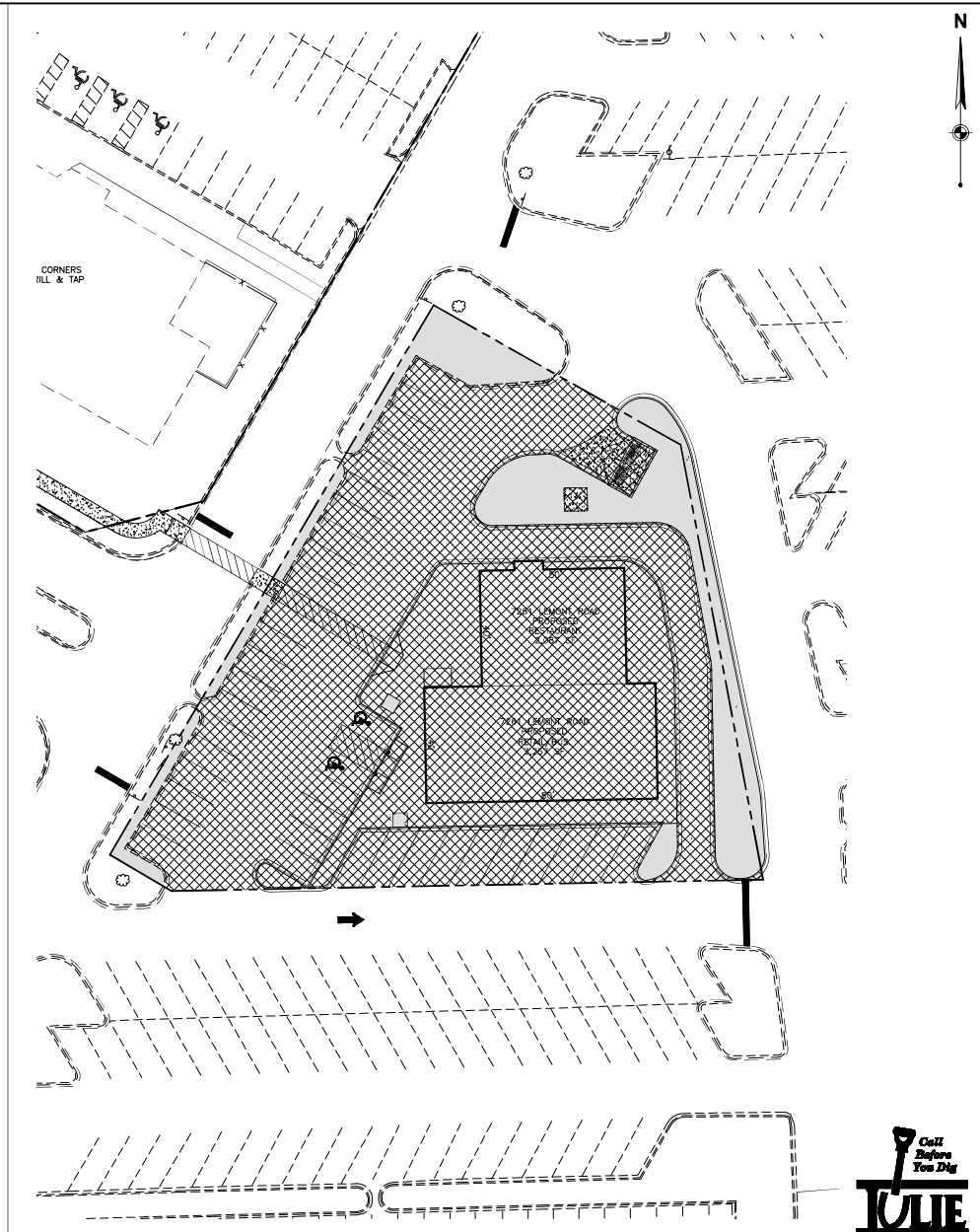
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Last Saved By: Daulton, B. / 2022, 8/4/2022, 6:42:26 PM
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EXISTING CONDITIONS

PERVIOUS AREA 9.0% (0.06 AC)

IMPERVIOUS AREA 91.0% (0.61 AC)

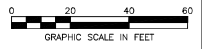


PROPOSED CONDITIONS

PERVIOUS AREA 16.4% (0.11 AC)

IMPERVIOUS AREA 83.6% (0.56 AC)

THE PROPOSED CONDITIONS DECREASE THE TOTAL IMPERVIOUS AREA BY 0.05 ACRES.



No.	DATE	REVISION

PROJECT No: 10015411
 DATE: 08/24/22
 DES. BY: [Redacted]
 DR. BY: [Redacted]
 CKD. BY: [Redacted]

1816 South Meyers Road
 Suite 950
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 FAX: 630.495.3731

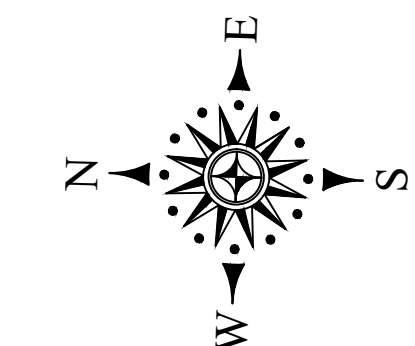
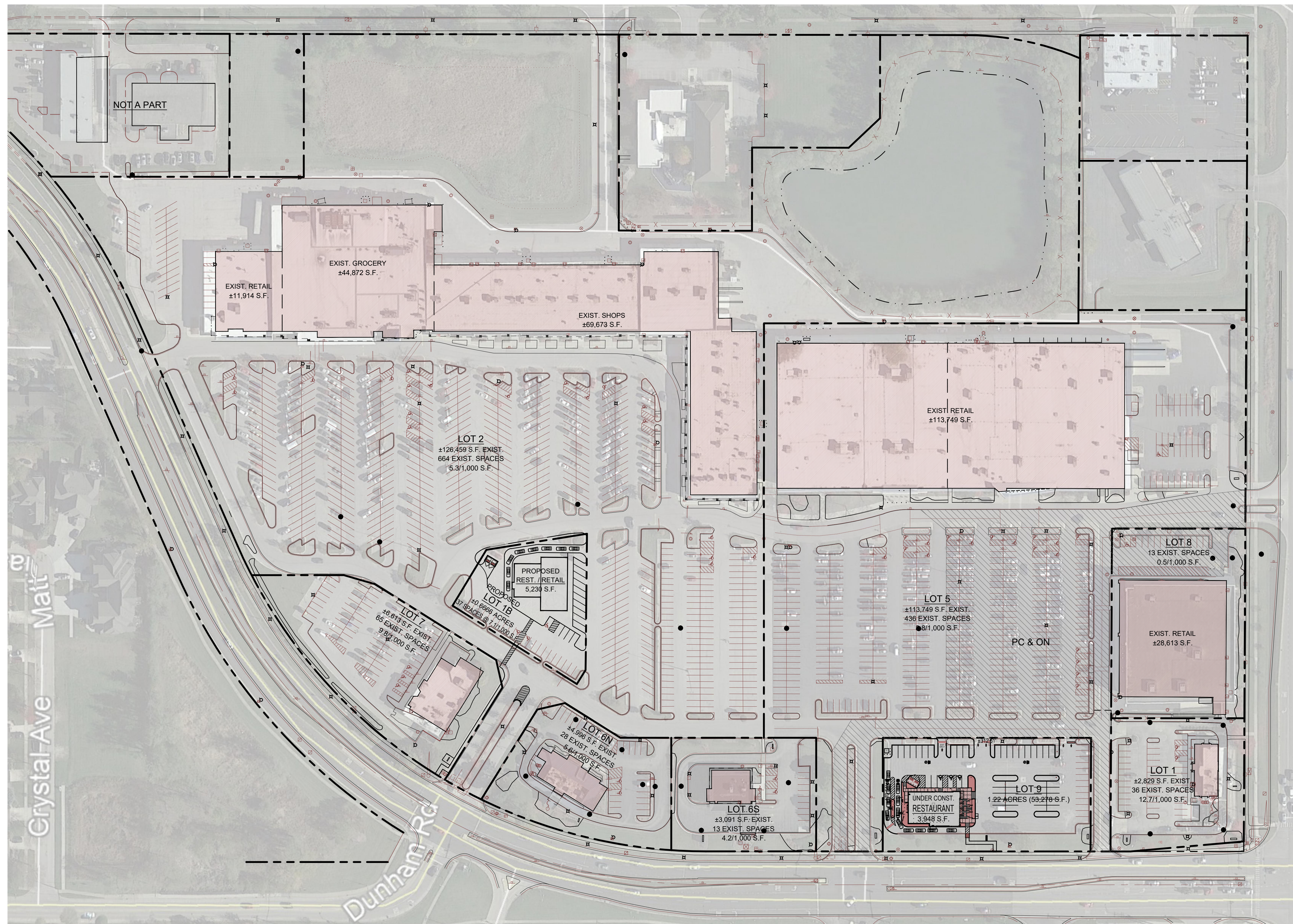


SITE IMPROVEMENT PLANS
RETAIL - DOWNERS GROVE
 7261 & 7261 LEMONT ROAD
 DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS 60516

PERVIOUS-IMPERVIOUS EXHIBIT

SHEET NO.

EXH



SITE DATA - MAIN CENTER

ZONED 'B-2' GENERAL RETAIL BUSINESS, WITHIN THE PLANNED DEVELOPMENT OVERLAY, VILLAGE OF DOWNERS GROVE, ILL.

EXISTING BUILDING AREA - LOT 2	126,459 S.F.
EXISTING BUILDING AREA - LOT 5	113,749 S.F.
EXISTING BUILDING AREA - LOT 8	28,613 S.F.
EXISTING PARKING LOT 2	(W/O LOT 1B) 664 SPACES @ 5.31/1,000 S.F.
EXISTING PARKING LOT 5	436 SPACES @ 3.81/1,000 S.F.
EXISTING PARKING LOT 8	13 SPACES @ 0.51/1,000 S.F.
PROPOSED PARKING LOT 5 - 6 SPACES	TOTAL PARKING LOT 5 & 8 - 465 SPACES @ 4.01/1,000
EXISTING BUILDING AREA - MAIN CENTER	288,821 S.F.
PARKING REQ'D. - EXISTING MAIN CENTER	1,075 SPACES @ 4.01/1,000 S.F.
TOTAL PROPOSED PARKING MAIN CENTER	1,119 SPACES @ 4.31/1,000 S.F.

EXISTING OUTPARCEL SITE DATA

LOT 1 - EXISTING BUILDING AREA	2,829 S.F.	LOT 1 - EXISTING PARKING	36 SPACES @ 12.71/1,000 S.F.
LOT 6S - EXISTING BUILDING AREA	3,091 S.F.	LOT 6S - EXISTING PARKING	13 SPACES @ 4.21/1,000 S.F.
LOT 6N - EXISTING BUILDING AREA	4,996 S.F.	LOT 6N - EXISTING PARKING	28 SPACES @ 5.61/1,000 S.F.
LOT 7 - EXISTING BUILDING AREA	6,613 S.F.	LOT 7 - EXISTING PARKING	65 SPACES @ 9.81/1,000 S.F.
LOT 9 - BUILDING AREA (UNDER CONST.)	3,957 S.F.	(POST CONST.) PARKING	59 SPACES @ 14.91/1,000 S.F.
TOTAL OUTPARCEL BUILDING AREA	21,486 S.F.		
TOTAL OUTPARCEL PARKING	201 SPACES @ 9.41/1,000 S.F.		

PROPOSED OUTPARCEL SITE DATA

PROPOSED BUILDING AREA PROPOSED LOT 1B	5,230 S.F.
PROPOSED PARKING PROPOSED LOT 1B	37 SPACES @ 7.11/1,000 S.F.

OVERALL SITE DATA

TOTAL BUILDING AREA (INCL. UNDER CONST. & PROPOSED)	295,537 S.F.
TOTAL PARKING (INCLUDES PROPOSED)	1,357 SPACES @ 4.59/1,000 S.F.

SITE PLAN

SCALE: 1"=80'

PROPOSED ADDITION TO
DOWNERS PARK PLAZA

EXISTING PUD #18
DOWNERS GROVE, ILLINOIS

STEPHEN L. ZITO, AIA
ARCHITECT

MOBILE, AL. 36609
FAX (251) 343 - 5505

820 S. UNIVERSITY BLVD. SUITE 2G
PHONE (251) 343 - 6161

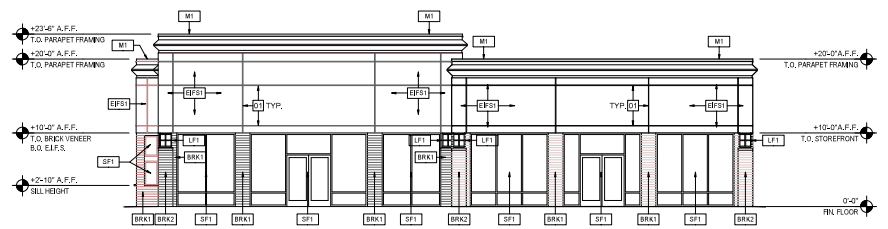
© COPYRIGHT 2022
STEPHEN L. ZITO AIA
ARCHITECT

REVISIONS

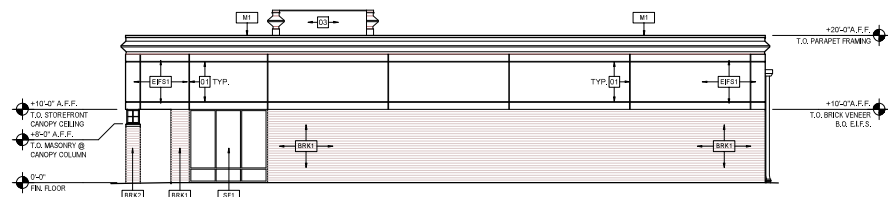
PRELIMINARY
NOT FOR CONSTRUCTION

FILE 3763
DATE AUGUST 3, 2022
SHEET

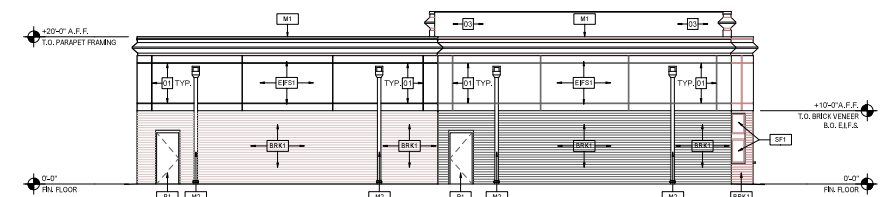
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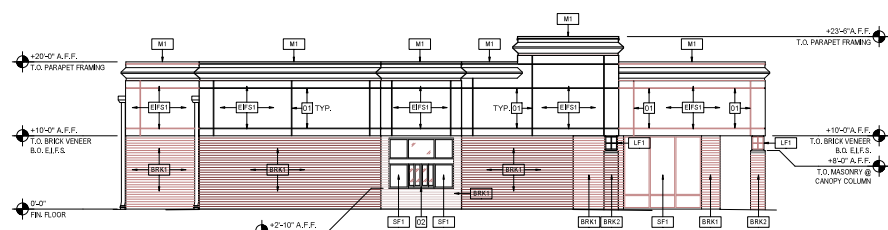
1 FRONT ELEVATION
SCALE: 1/8" = 1'-0"



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



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



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

- EXTERIOR ELEVATIONS KEYED NOTES:**
- 1" WIDE x 1" DEEP E.L.F.S., REVEAL
 - QUINSEY MODEL FM-42E ALUM. & GLASS DRIVE-THRU WINDOW
 - SINGLE PLY ROOFING MEMBRANE ON REAR FACE OF PARAPET WALL

EXTERIOR ELEVATIONS MATERIALS SCHEDULE

BRK1	FIELD BRICK (3 5/8"x11 5/8") TO MATCH COLOR OF BRK2 @ EXIST. CENTER.
BRK2	CANOPY COLUMN COVER BRICK (3 5/8"x11 5/8") TO MATCH COLOR OF CANOPY COLUMN COVER BRICK @ EXIST. CENTER.
EPF1	EXTERIOR INSULATION FINISH SYSTEM, FINISH TO MATCH THAT @ EXIST. CENTER.
SF1	ALUM. & GLASS STOREFRONT SYSTEM W/ 1" INSULATED GLAZING, STYLE & FINISH TO MATCH THAT @ EXIST. CENTER.
M1	PAINT-FINISHED METAL PARAPET CAP FLASHING, FINISH TO MATCH THAT @ EXIST. CENTER.
M2	PAINT-FINISHED METAL COLLECTOR HEAD & DOWNSPOUT, FINISH: DARK BRONZE.
P1	PAINTED, INSULATED HOLLOW METAL DOOR & HOLLOW METAL FRAME, FINISH: DARK BRONZE.
LFT1	DECORATIVE COLUMN CAP LIGHT FIXTURE, STYLE & FINISH TO MATCH THAT @ EXIST. CENTER.

PROPOSED
SHELL BUILDING
A NEW OUTPARCEL FOR
DOWNERS PARK PLAZA
LEMONT ROAD DOWNERS GROVE, ILLINOIS 60516

STEPHEN L. ZITO, AIA
ARCHITECT
MOBILE, AL 36609
PHONE: (251) 343-5505
FAX: (251) 343-5505
820 S. UNIVERSITY BLVD., SUITE 205
PHONE: (251) 343-0161

PT 1110

116
JUNE 23, 2022

PRA2.0
SHELL BLDG. EXTERIOR ELEVATIONS

DATE: 06/23/2022 SHELL BUILDING - DOWNERS PARK PLAZA PLOT SCALE: 1/8"=1'-0" SHEET: 2011



FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



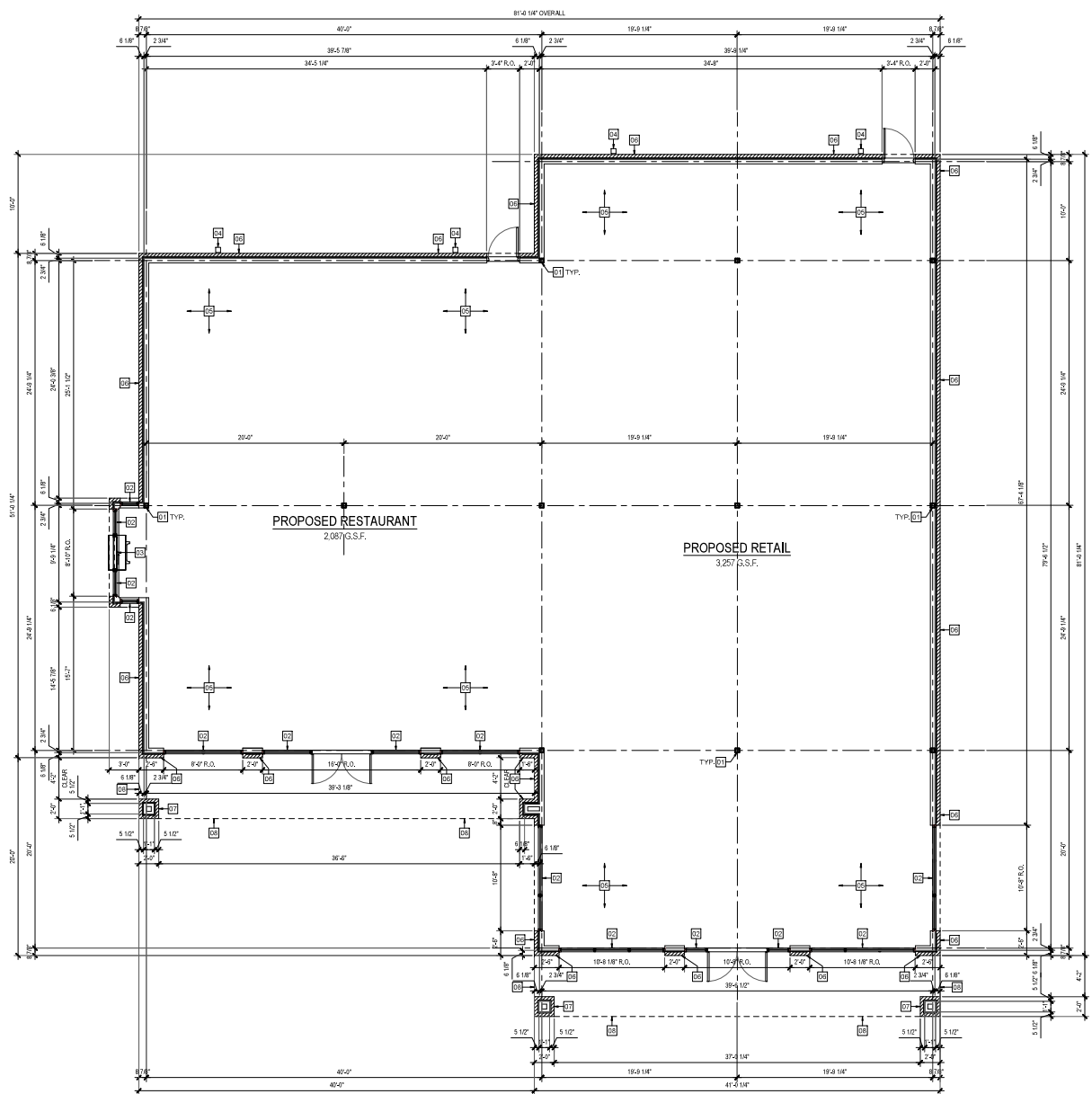
REAR ELEVATION

OUTPARCEL BUILDING, DOWNERS PARK PLAZA
DOWNERS GROVE, ILLINOIS

Stephen L. Zito, AIA
 Architect

4160

6/21/22



1 PRELIMINARY FLOOR PLAN
 SCALE: 3/16" = 1'-0"
 NORTH

- FLOOR PLAN KEYED NOTES:**
- 01 STEEL COLUMN - SEE STRUCT. DWGS.
 - 02 4 1/2" ALUM. & GLASS STOREFRONT W/ 1" INSULATED GLAZING.
 - 03 QUIKSERV MODEL FM-42E ALUM. & GLASS DRIVE-THRU WINDOW.
 - 04 FINISH-FINISHED METAL DOWNSPOUT & COLLECTOR HEAD, CONNECTED TO EXIST. UNDERGROUND STORM SEWER. SEE CIVIL DWGS.
 - 05 FLOOR SLAB TO BE INSTALLED BY TENANT UNDER INTERIOR BUILD-OUT. SEPARATE PROJECT. SEPARATE CONTRACT, SEPARATE COVER.
 - 06 BRICK VENEER OVER AIRSPACE, OVER MOISTURE / VAPOR BARRIER ON 5/8" TYPE X GYP. BD. ON 5/8" FRT PLYWOOD SHEATHING ON 2x8 FRT WOOD STUDS @ 16" O.C. FILL VOIDS BETWEEN STUDS W/ R-19 BATT INSUL. FROM FINISH FLOOR TO MIN. 4" ABOVE ROOF LINE. SEE EXTERIOR ELEVATIONS FOR FINISHES.
 - 07 BRICK VENEER OVER AIRSPACE, OVER MOISTURE / VAPOR BARRIER ON 5/8" FRT PLYWOOD SHEATHING ON 2x8 FRT WOOD STUDS @ 16" O.C. SEE EXTERIOR ELEVATIONS FOR FINISHES.
 - 08 DASHED LINES INDICATE EXTENT OF CANOPY, ABOVE.
- NOTE: ALL EXTERIOR FINISH MATERIALS MUST BE REINSTALLED PER MANUF.'S RECOMMENDATIONS.
- NOTE: UNLESS NOTED AS 'CLEAR', 'OVERALL' OR 'CENTERING' EXTERIOR FINISHES. ALL DIMENSIONS SHOWN ON THIS SHEET ARE FROM FACE OF STUD OR STRUCTURAL GRID LINE TO FACE OF STUD OR STRUCTURAL GRID LINE. DIMENSIONS NOTED AS 'CLEAR' ARE FROM FACE OF FINISH TO FACE OF FINISH. DIMENSIONS NOTED AS 'OVERALL' INCLUDE EXTERIOR FINISHES.

SHE: 2022 SHELL BUILDING - DOWNERS PARK PLAZA
 PLOT SCALE: 1/4" = 100'-0" (THIS SHEET ONLY)

PROPOSED
SHELL BUILDING
 A NEW OUTPARCEL FOR
 DOWNERS PARK PLAZA
 LEMONT ROAD DOWNERS GROVE, ILLINOIS 60516

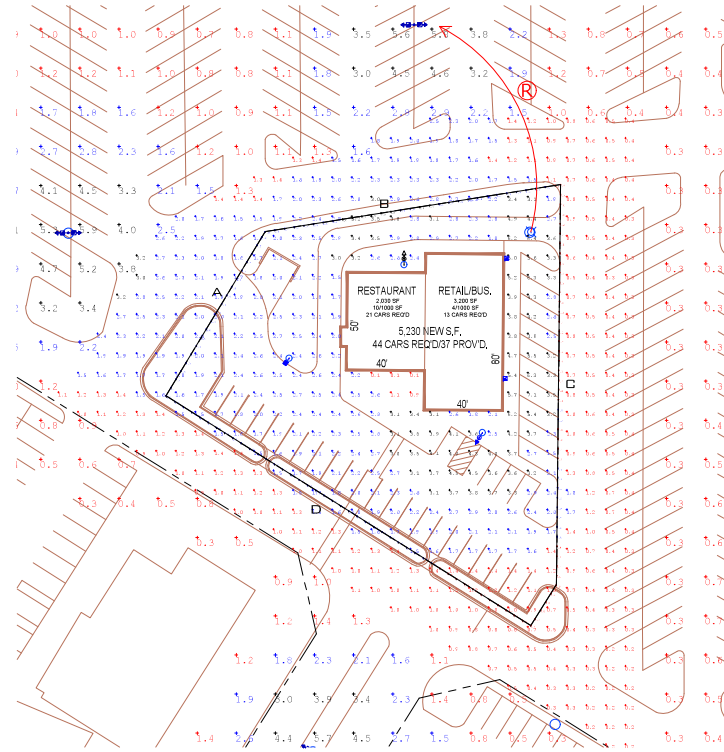
STEPHEN L. ZITO, AIA
 ARCHITECT
 820 S. UNIVERSITY BLVD., SUITE 205
 MOBILE, AL 36609
 PHONE: (251) 343-0161
 FAX: (251) 343-3505

NO.	DATE	DESCRIPTION

ILL 4188
 DATE: JUNE 23, 2022
 SHEET NO. 33
PRA1.0
 SHELL BLDG. FLOOR PLAN

REVISIONS

REV #	DATE	BY:
1	8/3/22	IB



PHASE II - OPTION 2.1 - OVERALL

Footcandle Summary	Area	Min	Max	Avg	Min/Max	Project	Depth
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'

Footcandle Summary	Area	Min	Max	Avg	Min/Max	Project	Depth
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'
AREA	10,000	0.5	5.0	1.5	0.5/5.0	10'	10'

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.

THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER 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.

DOWNERS PARK PLAZA
DOWNERS GROVE, IL
PHASE II - OPTION 2.1 - OVERALL

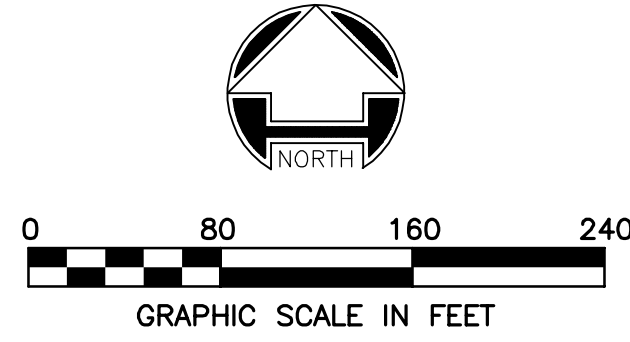
INTEGRATED
LIGHTING SOLUTIONS

8955 GUILFORD ROAD
SUITE 120
COLUMBIA, MD 21046

**FINAL PLAT OF SUBDIVISION
RESUBDIVISION OF LOT 2 IN DOWNERS PARK
BEING A SUBDIVISION OF A PART OF THE SOUTHWEST QUARTER
OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 38 NORTH,
RANGE 11 EAST OF THE 3RD PRINCIPAL MERIDIAN, DUPAGE COUNTY, ILLINOIS**



SITE MAP
NOT TO SCALE



LEGEND:

- SURVEYED BOUNDARY
 - EXISTING LOT/PARCEL LINE
 - PROPOSED LOT LINE
 - RIGHT OF WAY LINE
 - SETBACK LINE
 - EXISTING EASEMENT LINE
 - PROPOSED EASEMENT LINE
 - SECTION LINES
- SET R.R. SPIKE/NAIL IN ASPHALT OR IRON PIN W/CAP IN SOIL OR CUT CROSS IN CONCRETE
 - REBAR FOUND
 - IRON PIPE FOUND
 - MAG NAIL FOUND
 - CHISELED CROSS FOUND

SURVEYOR'S NOTES:

1. "M." DESIGNATES MEASURED DIMENSION/BEARING, "R." DESIGNATES RECORD DIMENSION/BEARING.
2. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
3. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON.
4. THE BASIS OF MEASURED BEARINGS AND HORIZONTAL DATUM SHOWN HEREON IS THE ILLINOIS STATE PLANE COORDINATE SYSTEM EAST ZONE (NAD 83). SAID BEARINGS ORIGINATED FROM SAID COORDINATE SYSTEM BY GPS OBSERVATIONS AND OBSERVATIONS OF SELECTED STATIONS IN THE NATIONAL GEODETIC SURVEY CONTINUOUSLY OPERATING REFERENCE STATION (NGS CORS) NETWORK.
5. IRON PIPES OR SURVEYOR'S NAIL ARE SET AT ALL LOT CORNERS UNLESS OTHERWISE NOTED.
6. ALL EASEMENTS ARE HERETOFORE DEDICATED UNLESS OTHERWISE NOTED.
7. ALL EASEMENTS DEPICTED ON THE PLAT MAP ARE FOR PUBLIC UTILITIES UNLESS OTHERWISE NOTED.
8. THE PROPERTIES DEPICTED ON THIS PLAT IDENTIFIED AS LOT 2-A AND LOT 1-B ARE BENEFITTED AND BURDENED BY BLANKET EASEMENTS MORE PARTICULARLY DESCRIBED IN THAT CERTAIN DECLARATION OF EASEMENTS AND RESTRICTIONS BY PMAT DPP, L.L.C. DATED 02/20/2022, RECORDED AS DOCUMENT NUMBER 2022-018913 IN DUPAGE COUNTY, ILLINOIS.

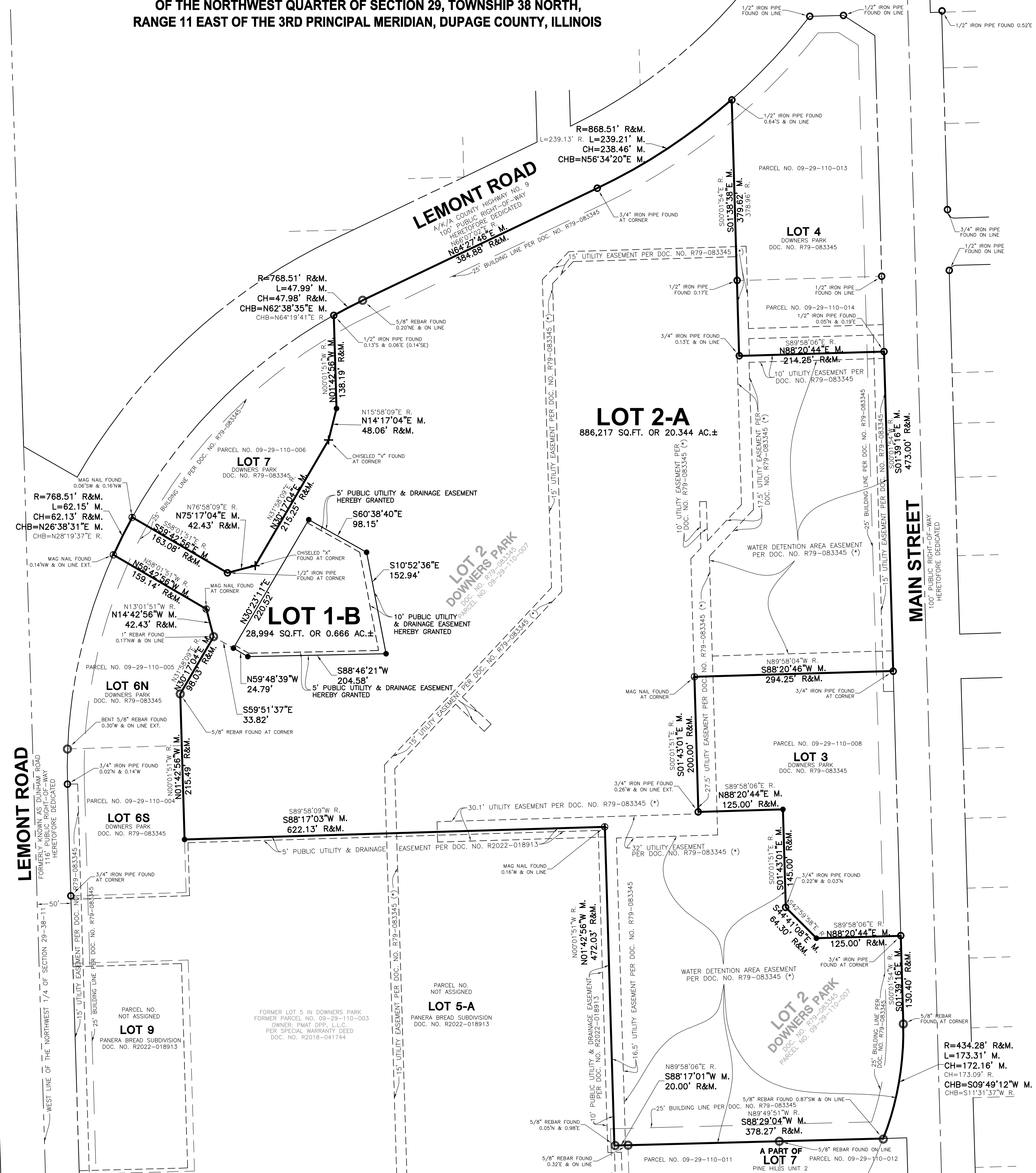
(*) DUE TO A PARTIALLY ILLEGIBLE COPY OF THE RECORDED PLAT PROVIDED TO SURVEYOR, SOME OF THE INFORMATION SHOWN HEREON IS APPROXIMATE. ALSO, SOME OF THE BEARINGS AND DISTANCES DEPICTED ON SAID RECORDED PLAT ARE PARTIALLY ILLEGIBLE.

AREA OF SURVEY:

915,211 S.F. OR 21.010 ACRES (MORE OR LESS)

PROPERTY DESCRIPTION:

LOT 2 IN DOWNERS PARK, BEING A SUBDIVISION IN THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 38 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SUBDIVISION, RECORDED AS DOCUMENT NUMBER R79-083345, IN DUPAGE COUNTY, ILLINOIS.



NO.	DATE	REVISION
1.	08/23/22	PER COMMENTS

PROJECT NO.:	10015411
DATE:	07/12/22
SCALE AS SHOWN:	
DES.:	SRK
DR.:	PTK
CKD.:	SRK

WOOLPERT, INC.
1815 South Meyers Road
Suite 950
Oakbrook Terrace, IL 60181
630-424-9080
FAX: 630-495-3731

WOOLPERT
SOLUTIONS FOR THE CONSTRUCTION INDUSTRY

RESUBDIVISION OF LOT 2 IN DOWNERS PARK
A PART OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 29, TOWNSHIP 38 NORTH, RANGE 11 EAST OF THE 3RD PRINCIPAL MERIDIAN, DUPAGE COUNTY, ILLINOIS

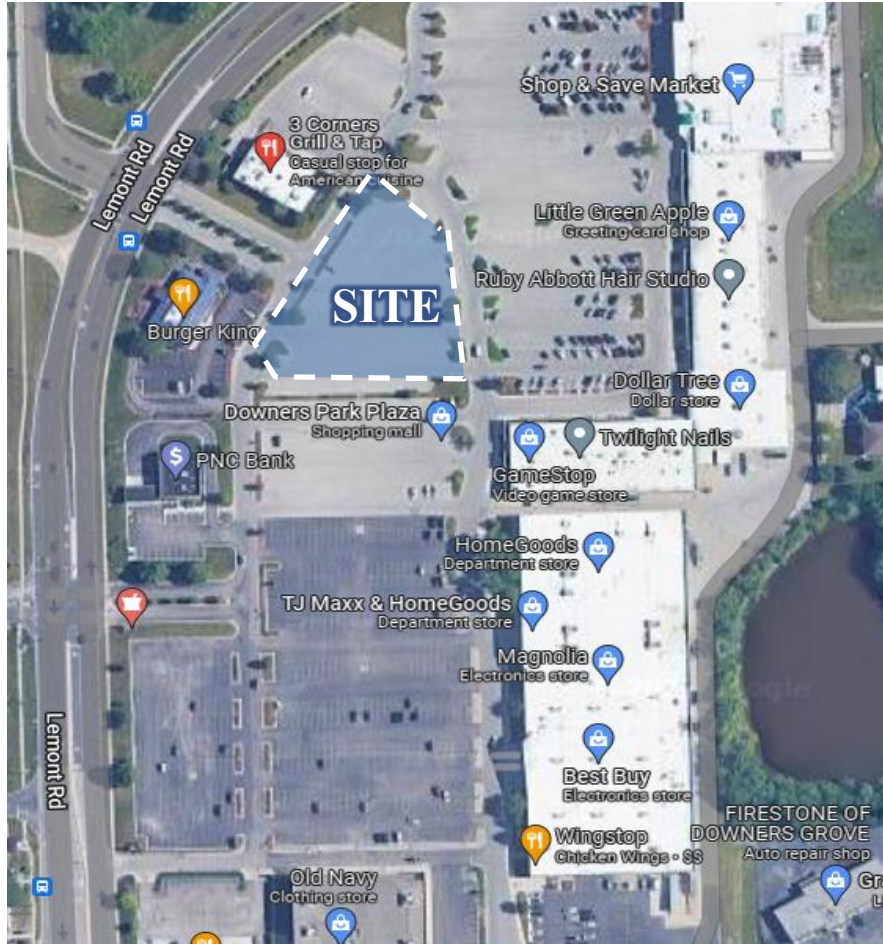
FINAL PLAT OF SUBDIVISION

G:\Projects\Various\81934 - Downers Park Plaza - Outparcel on 75th - Panera\Drawings\10015411 - Plot Lot 2-R1.dwg, Plotted: Aug 23, 2022 - 11:47am

Traffic and Parking Impact Study

Proposed Outlot Parcel

Downers Grove, Illinois



Prepared For:

PMAT DPP LLC



June 23, 2022

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 proposed outlot parcel to be located within Downers Park Plaza shopping center located in the northeast quadrant of the intersection of 75th Street with Lemont Road in Downers Grove, Illinois. The plans call for a 5,230 square-foot multi-tenant building that will include a 2,087 square-foot, drive-through restaurant and a 3,258 square-foot retail area. The site will occupy an outlot parcel within the shopping center in proximity to the access drive off Lemont Road in alignment with Dunham Road. Access will be provided via the existing access system serving the shopping center.

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

Figure 1 shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site. The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed outlot parcel
- Directional distribution of the outlot parcel traffic
- Vehicle trip generation for the outlot parcel
- Future traffic conditions including access to the outlot parcel
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system
- Evaluation of the adequacy parking supply

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

1. Base Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area adjusted to reflect normal conditions.
2. No-Build Conditions – Analyzes the capacity of the existing roadway system using base peak hour traffic volumes including ambient traffic growth and other developments in the area.
3. Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the base traffic volumes, ambient traffic growth, other developments in the area, and the traffic estimated to be generated by the full buildout of the proposed outlot parcel.

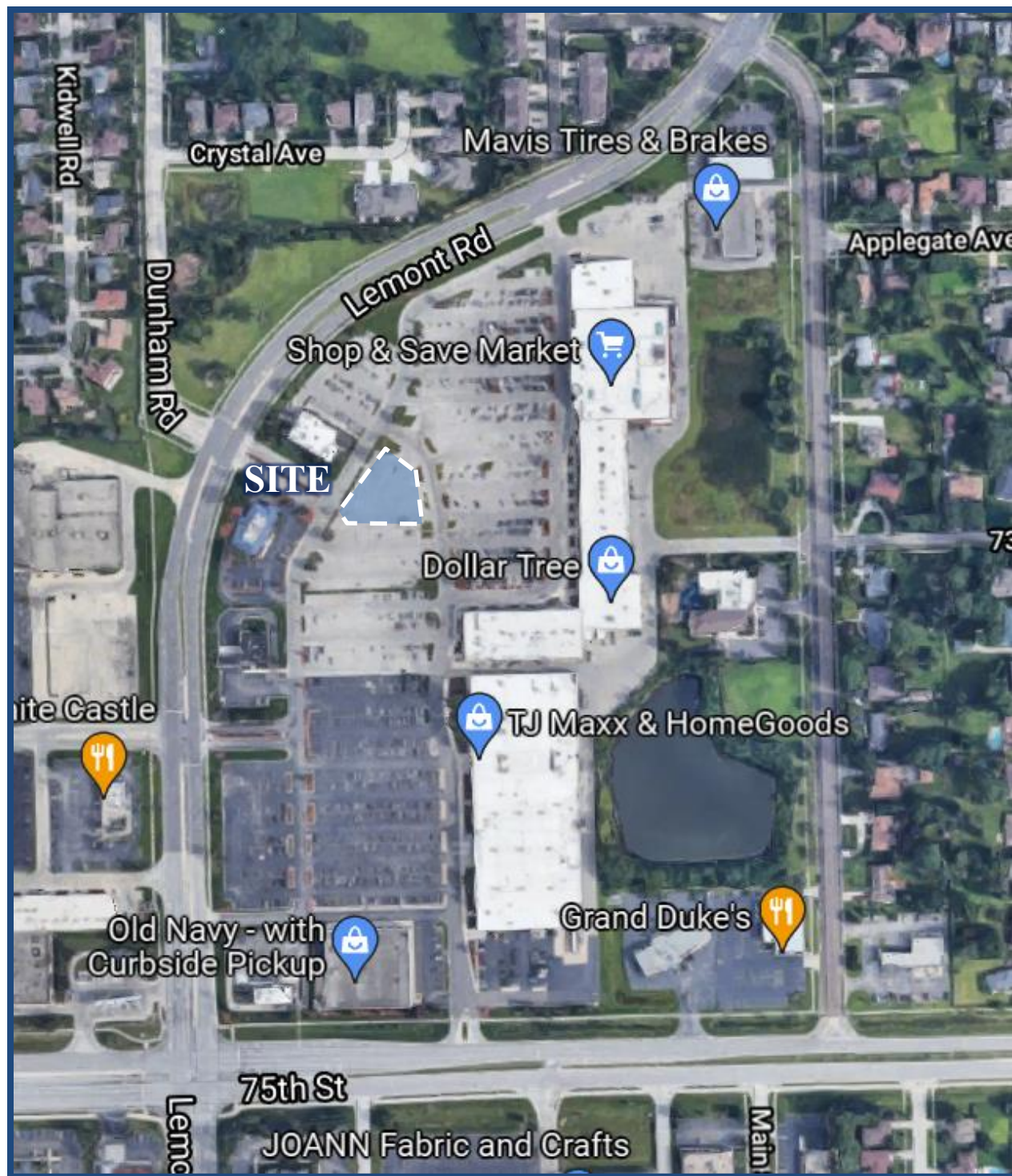


Site Location

Figure 1

*Proposed Outlot Parcel
Downers Grove, Illinois*





Aerial View of Site

Figure 2

2. Existing Conditions

The following provides a detailed description of the physical characteristics of the roadways including geometry and traffic control, adjacent land uses, and peak hour traffic flows along area roadways.

Site Location

The site, which is currently occupied by a surface parking lot, will occupy an outlot parcel located within Downers Park Plaza shopping center located in the northeast quadrant of the intersection of 75th Street with Lemont Road in Downers Grove, Illinois. Land uses in the vicinity of the site are primarily commercial.

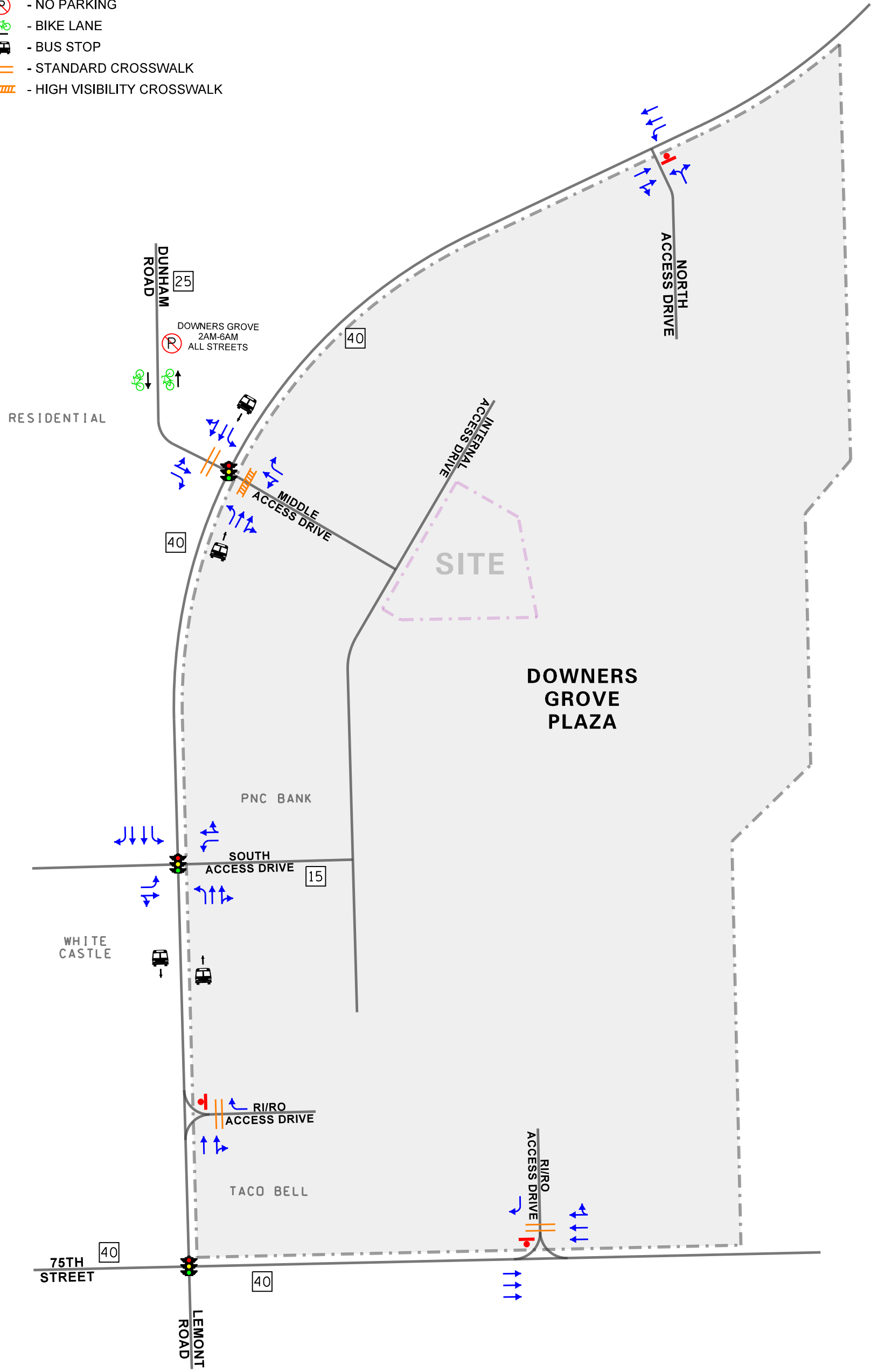
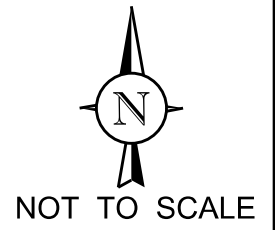
Existing Roadway System Characteristics

The characteristics of the existing roadways that surround the existing Downers Park Plaza are illustrated in **Figure 3** and described below.

Lemont Road is a north-south minor arterial that generally provides two lanes in each direction separated by a raised median in the vicinity of the site. At its signalized intersection with Dunham Road, Lemont Road provides an exclusive left-turn lane, a through lane and a combined through/right-turn lane on the northbound approach. The southbound approach provides an exclusive left-turn lane, a through lane and a combined through/right-turn lane. At its signalized intersection with the main access drive serving Downers Park Plaza, Lemont Road provides an exclusive left-turn lane, a through lane and a combined through/right-turn lane on the northbound approach. The southbound approach provides an exclusive left-turn lane, a through lane and a combined through/right-turn lane. At its unsignalized intersection with the full movement access serving Downers Park Plaza, the northbound approach provides a through lane and a combined through/right-turn lane. The southbound approach provides an exclusive left-turn lane and two through lanes. At its unsignalized intersection with the right-in/right-out access drive serving Downers Park Plaza, Lemont Road provides a through lane and a combined through/right-turn lane on the northbound approach. Lemont Road is under the jurisdiction of DuPage County Division of Transportation (DuDOT) and carries an Annual Average Daily Traffic (AADT) volume of approximately 13,400 vehicles (IDOT 2016). Lemont Road has a posted speed limit of 40 miles per hour.

75th Street is an east-west other principal arterial that generally provides two lanes in each direction separated by a raised median in the vicinity of the site. At its unsignalized intersection with the right-in/right-out access drive serving Downers Park Plaza, 75th Street provides three through lanes on the eastbound approach. The westbound approach provides two through lanes and a combined through/right-turn lane. 75th Street is under the jurisdiction of DuDOT and carries an AADT volume of approximately 32,300 vehicles west of Lemont Road and 31,500 vehicles east of Lemont Road (IDOT 2016). 75th Street has a posted speed limit of 40 miles per hour.

- LEGEND**
- TRAVEL LANE
 - TRAFFIC SIGNAL
 - STOP SIGN
 - SPEED LIMIT
 - NO PARKING
 - BIKE LANE
 - BUS STOP
 - STANDARD CROSSWALK
 - HIGH VISIBILITY CROSSWALK



DOWNERS PARK PLAZA
DOWNERS GROVE,
ILLINOIS

EXISTING TRAFFIC VOLUMES

Job No: 22-194 Figure: 3

Dunham Road is a north-south major collector that generally provides one travel lane and one bike lane in each direction in the vicinity of the site. At its signalized intersection with Lemont Road, Dunham Road provides an exclusive right-turn lane and a combined through/left-turn lane on the southbound approach. The northbound approach provides a combined through/left-turn lane and a combined through/right-turn lane. A standard style crosswalk is provided on the north leg of this intersection and a high-visibility crosswalk is provided on the south leg of this intersection. Dunham Road is under the jurisdiction of the Village of Downers Grove and has a posted speed limit of 25 miles per hour in the northbound approach and 30 miles per hour in the southbound approach.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period vehicle, pedestrian, and bicycle movement traffic counts on Thursday, September 9, 2021, during the weekday morning (7:00 to 9:00 A.M.) and evening (7:00 to 6:00 P.M.) peak periods and on Saturday, September 11, 2021, during the Saturday midday (12:00 to 2:00 P.M.) peak period at the following intersections:

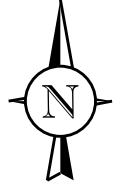
- Lemont Road with the access drives serving Downers Park Plaza
- 75th Street with the right-in/right-out access drive serving Downers Park Plaza
- Two internal intersections off the main access drives off Lemont Road

In order to represent normal conditions, counts were adjusted based on a comparison with the hourly counts previously conducted by KLOA, Inc. in the area and were increased by 10 percent during the weekday morning peak hour and were not increased during the weekday evening and Saturday midday peak hours. The results of the traffic counts showed that the weekday morning peak hour of traffic occurs from 7:15 A.M. to 8:15 A.M., the weekday evening peak hour of traffic occurs from 5:00 P.M. to 6:00 P.M., and the Saturday midday peak hour of traffic occurs from 12:15 P.M. to 1:15 P.M.

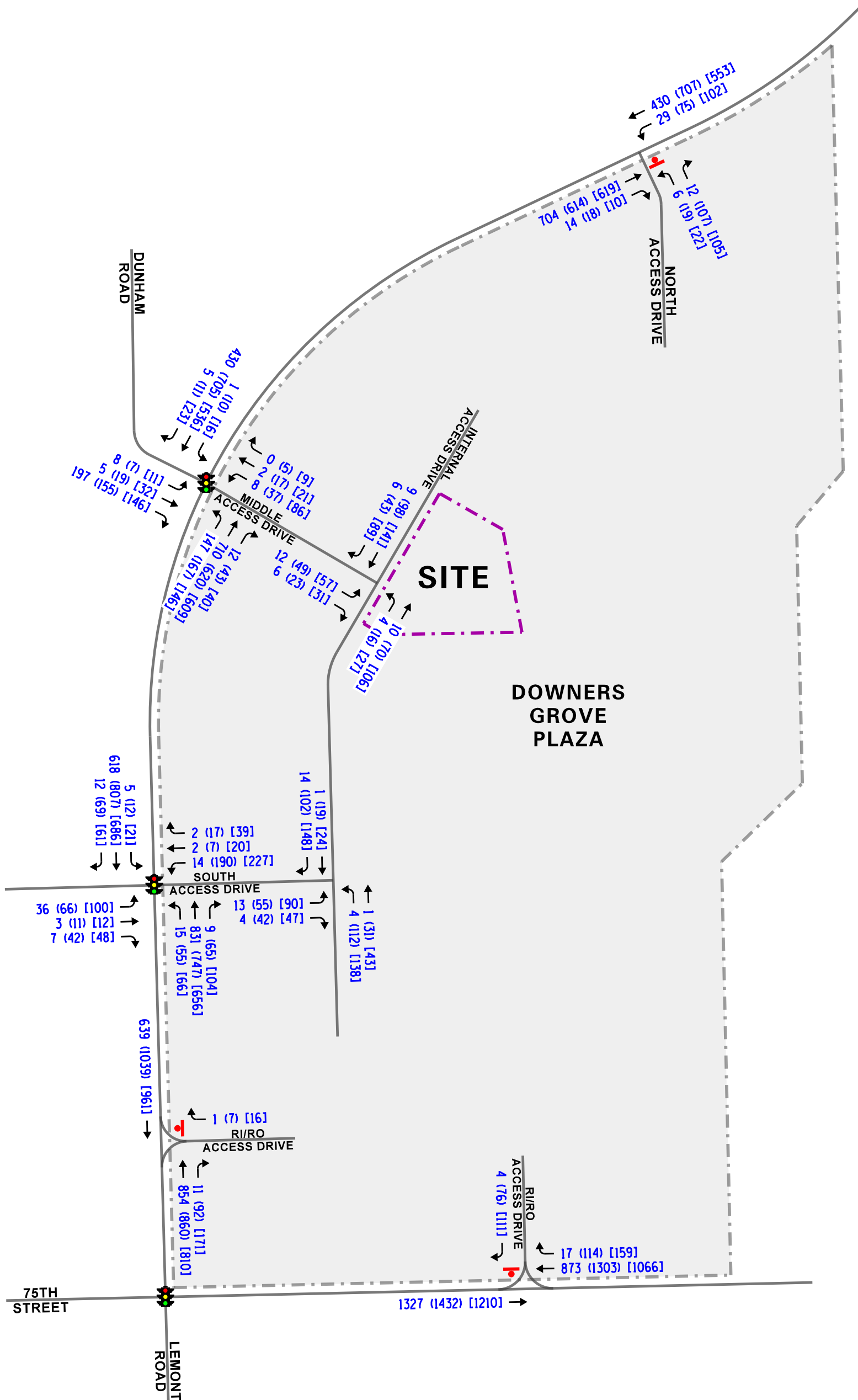
Figure 4 illustrates the Year 2021 traffic volumes. Copies of the traffic count summary sheets are included in the Appendix.

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:15 -1:15 PM)



NOT TO SCALE



Crash Data Analysis

KLOA, Inc. obtained crash data¹ for the past five years (2016 to 2020) for the intersections of Lemont Road with the access drives serving Downers Park Plaza, 75th Street with the right-in/right-out access drive serving Downers Park Plaza and the two internal intersections off the main access drives off Lemont Road. The crash data for the intersections of Lemont Road with Dunham Road and Lemont Road with the right-in/right-out access drive is summarized in **Tables 1** and **2**, respectively. Only eight crashes were reported at the intersection of 75th Street with the right-in/right-out access drive serving Downers Park Plaza, four crashes were reported at the intersection of Lemont Road with the north access drive, four crashes were reported at the intersection of Lemont Road with the south access drive, four crashes were reported at the intersection of the internal access drive with the middle access drive, and four crashes were reported at the intersection of the internal access drive with the south access drive over the five-year period. It should be noted that no fatalities were reported at any studied intersection between 2016 and 2020.

Table 1

LEMONT ROAD WITH DUNHAM ROAD – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2016	0	0	0	0	1	1	0	2
2017	0	0	0	0	0	2	0	2
2018	2	0	1	0	0	1	0	4
2019	0	0	0	1	0	0	0	1
2020	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>4</u>
Total	2	0	1	3	1	6	0	13
Average	<1.0	0	<1.0	<1.0	<1.0	1.2	0	2.6

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

Table 2

LEMONT ROAD WITH RIGHT-IN/RIGHT-OUT ACCESS DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2016	0	0	0	2	0	1	0	3
2017	0	0	0	1	0	1	1	3
2018	0	0	0	2	0	1	0	3
2019	0	0	0	1	0	1	0	2
2020	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>3</u>
Total	0	1	0	7	0	4	2	14
Average	0	<1.0	0	1.4	0	<1.0	<1.0	2.8

3. Traffic Characteristics of the Proposed Outlot

To evaluate the impact of the subject development on the area roadway system, it was necessary to quantify the number of vehicle trips the site will generate during the peak hours and then determine the directions from which the proposed traffic will approach and depart the site.

Proposed Site and Site Plan

As proposed, the site will be developed with an approximate 5,230 square-foot multi-tenant building that will include a drive-through restaurant. The site will occupy an outlot parcel within Lot 2 of the shopping center in proximity to the access drive off Lemont Road in alignment with Dunham Road within Downers Park Plaza shopping center. Access to the Downers Park Plaza shopping center is currently provided via the following:

- A full movement access drive on Lemont Road located approximately 825 feet north of Dunham Road. This access drive provides one inbound lane and one outbound lane with outbound movements under stop sign control. Southbound left-turn movements are accommodated via an exclusive southbound left-turn lane.
- A full movement access drive on Lemont Road opposite Dunham Road. This access drive provides one inbound lane and two outbound lanes (striped as an exclusive right-turn lane and a combined through/left-turn lane) with outbound movements under stop sign control. Northbound and southbound left-turn movements are accommodated via an exclusive northbound left-turn lane and an exclusive southbound left-turn lane, respectively.
- A full movement access drive on Lemont Road located approximately 620 feet south of Dunham Road. This access drive provides one inbound lane and two outbound lanes (striped as an exclusive left-turn lane and a combined through/right-turn lane) with outbound movements under stop sign control. Northbound and southbound left-turn movements are accommodated by an exclusive northbound left-turn lane and an exclusive southbound left-turn lane, respectively.
- A right-out only access drive on Lemont Road located approximately 1,000 feet south of Dunham Road. This access drive provides one outbound lane with outbound movements under stop sign control. Left turning movements are physically restricted due to the existing median along Lemont Road.
- A right-out only access drive on 75th Street located approximately 560 feet east of Lemont Road. This access drive provides one outbound lane with outbound movements under stop sign control. Left-turn movements are physically restricted due to the existing median along Lemont Road.

Based on the proposed outlot parcel plan, the following internal connections will be provided:

- A proposed two-way drive aisle that connects to an existing one-way eastbound parking aisle along the south side of the site and the existing two-way circulation drive that borders the east side of the site.
- A proposed inbound only access to the drive through lane that is located off of the existing one-way eastbound parking aisle along the south side of the site. Out bound movements from the drive through will exit on to the proposed two-way drive aisle as discussed above.

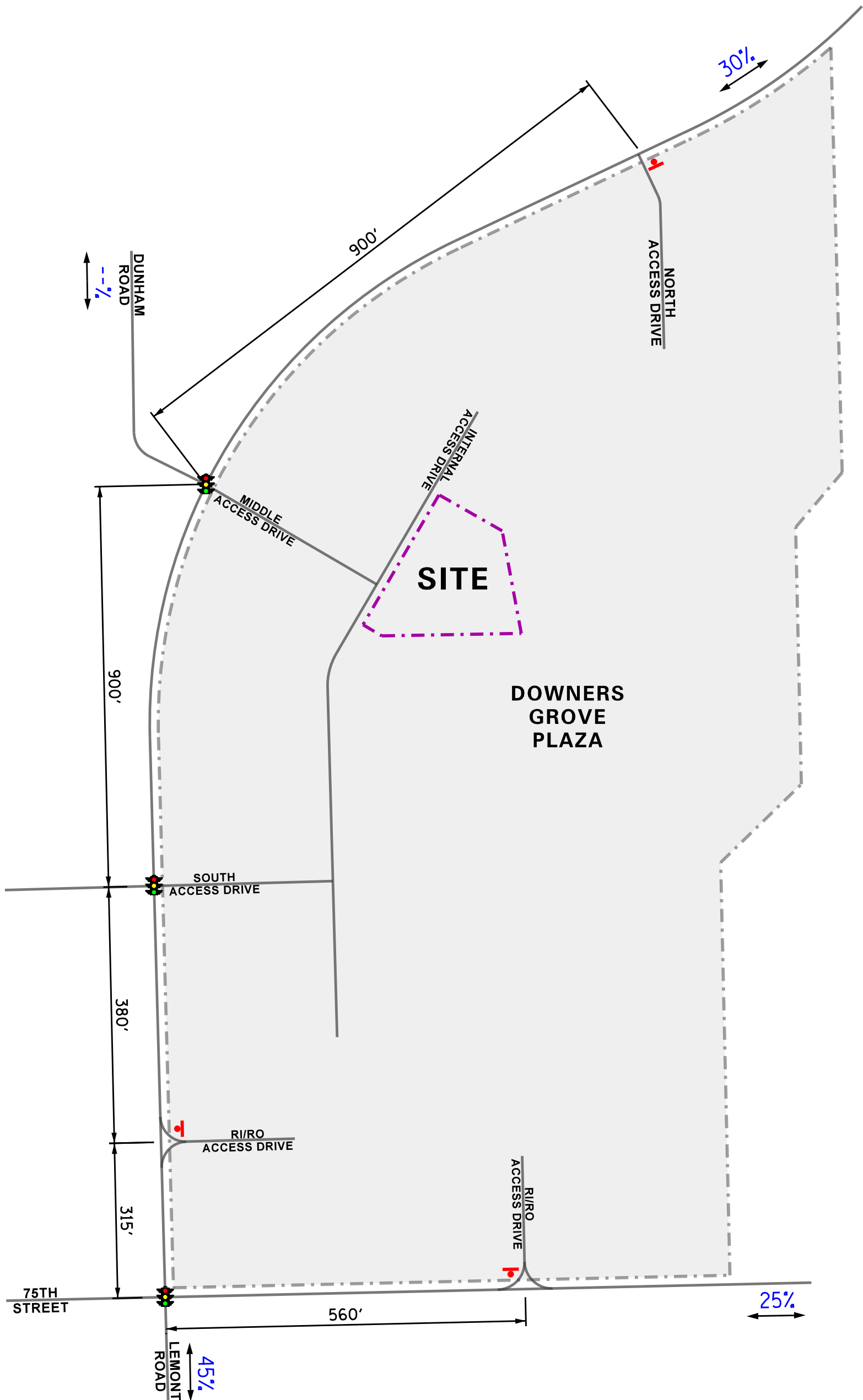
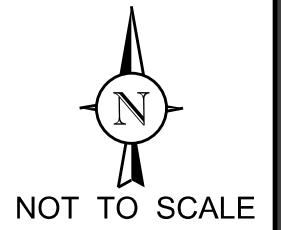
A copy of the site plan is included in the Appendix.

Directional Distribution of Site Traffic

The directional distribution of how traffic will approach and depart the site was estimated based on the general travel patterns through the study area derived from the peak hour traffic volumes. **Figure 5** shows the established directional distribution for the proposed outlot parcel.

LEGEND

- 00% - PERCENT DISTRIBUTION
- 00' - DISTANCE IN FEET



DOWNERS PARK PLAZA
DOWNERS GROVE,
ILLINOIS

DIRECTIONAL DISTRIBUTION



Job No: 22-194

Figure: 5

Development Traffic Generation

The estimate of vehicle traffic to be generated by the proposed outlot parcel is based upon the proposed land use types and sizes. The vehicle trip generation for the proposed outlot parcel was calculated using data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition. Land-Use Code 934 (Fast Food Restaurant with Drive Through Window) and Land-Use Code 822 (Strip Retail) was utilized to estimate the trips to be generated by the proposed outlot parcel.

It is important to note that surveys conducted by ITE have shown that approximately 50 percent of trips made to fast-food restaurant uses and 20 percent of trips made to retail uses are diverted from the existing traffic on the roadway system. 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. As such, a 50 percent pass-by reduction was applied to the trips estimated to be generated by the proposed restaurant and a 20 percent pass-by reduction was applied to the trips estimated to be generated by the retail space within the outlot parcel. It should be noted that internal interaction will occur between the proposed outlot parcel and the existing uses, which will further reduce the estimated trips. As such, a 10 percent interaction reduction was applied to the new trips generated by both uses.

Table 3 shows the estimated vehicle trip generation for the weekday morning, weekday evening, and Saturday midday peak hours and daily trips. The ITE trip generation summary sheets are included in the Appendix.

Table 3

ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour			Daily Traffic
		In	Out	Total	In	Out	Total	In	Out	Total	
934	Fast Food Restaurant with Drive-Through (3,258 s.f.)	48	46	94	36	33	69	59	57	116	982
	<i>10 % Interaction Reduction</i>	-5	-5	-10	-4	-3	-7	-6	-6	-12	-99
	<i>50 % Pass-By Reduction</i>	-21	-21	-42	-16	-16	-32	-26	-26	-52	-442
822	Retail (2,087 s.f.)	5	3	8	17	18	35	11	10	21	178
	<i>10 % Interaction Reduction</i>	0	0	0	-2	-2	-4	-1	-1	-2	-18
	<i>20 % Pass-By Reduction</i>	-1	-1	-2	-3	-3	-6	-2	-2	-4	-32
	Total New Trips	26	22	48	28	27	55	26	32	58	569

4. Projected Traffic Conditions

The total projected traffic volumes take into consideration the base traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed outlot parcel.

Development Traffic Assignment

The estimated weekday morning, weekday evening, and Saturday midday peak hour traffic volumes that will be generated by the proposed outlot parcel were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the new passenger vehicle trips and **Figure 7** illustrates the traffic assignment of the pass-by passenger vehicle trips.

Background Traffic Conditions

The base 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 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP) in a letter dated September 21, 2021, the existing traffic volumes were increased by an annually compounded growth rate for six years (one-year buildout plus five years) totaling 2.1 percent to represent Year 2027 no-build conditions.

In addition, the traffic to be generated by the currently under construction Panera Bread restaurant located in the Downers Park Plaza shopping center and the full occupancy of Downers Park Plaza was added in the background conditions. It should be noted that Downers Park Plaza contained approximately 33,321 square feet of vacant space at the time the traffic counts were conducted.

Figure 8 shows the Year 2027 no-build traffic conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Year 2027 Total Projected Traffic Conditions

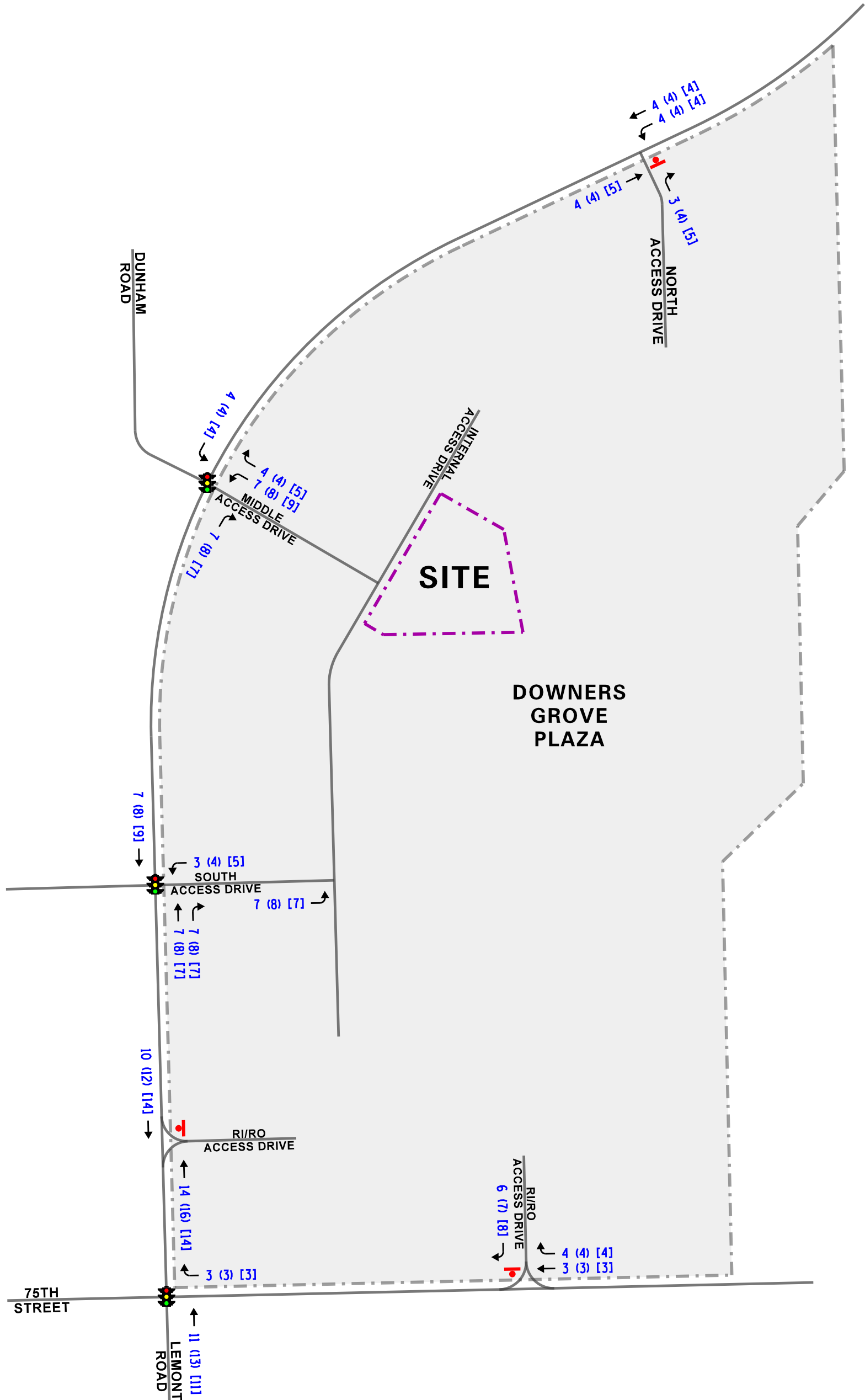
The new and pass-by development-generated traffic (Figures 6 and 7) was added to the no-build traffic volumes (Figure 8) to determine the Year 2027 total projected traffic volumes, which are illustrated in **Figure 9**.

LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:15 -1:15 PM)



NOT TO SCALE

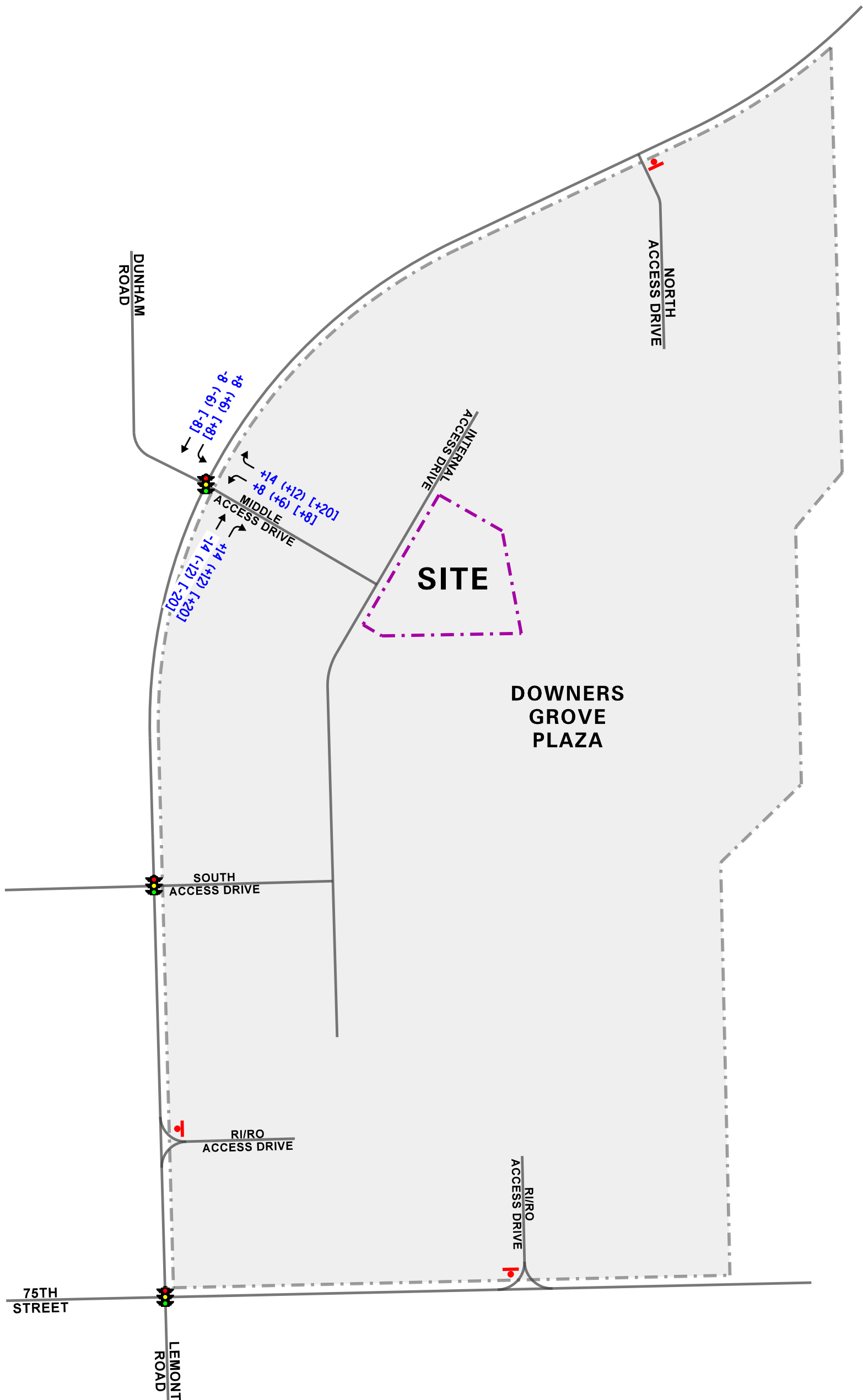


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- (00)** - PM PEAK HOUR (5:00-6:00 PM)
- [00]** - SATURDAY MIDDAY PEAK HOUR (12:15 -1:15 PM)

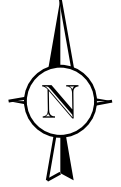


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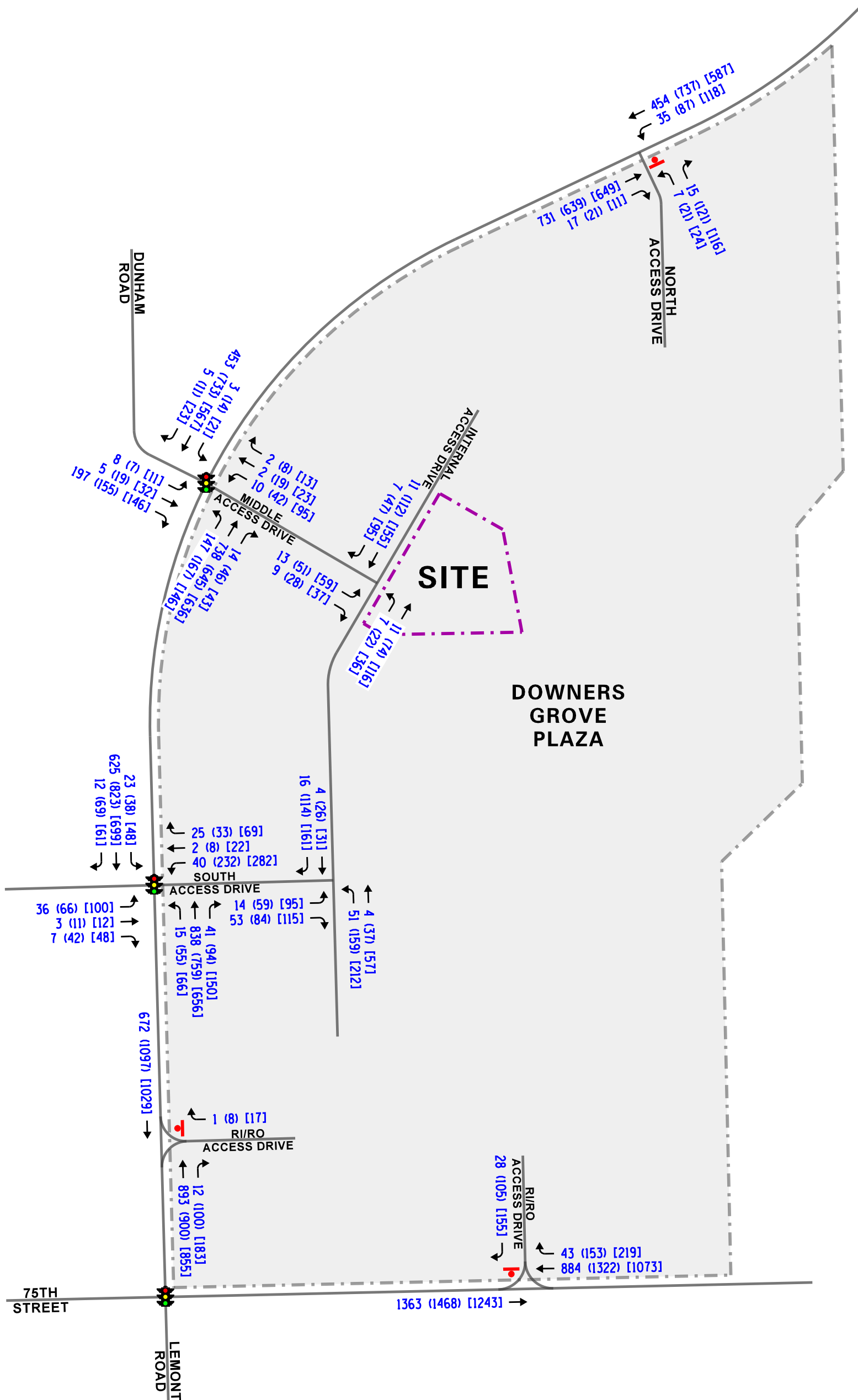


LEGEND

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- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:15 -1:15 PM)

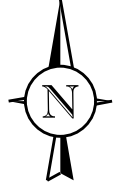


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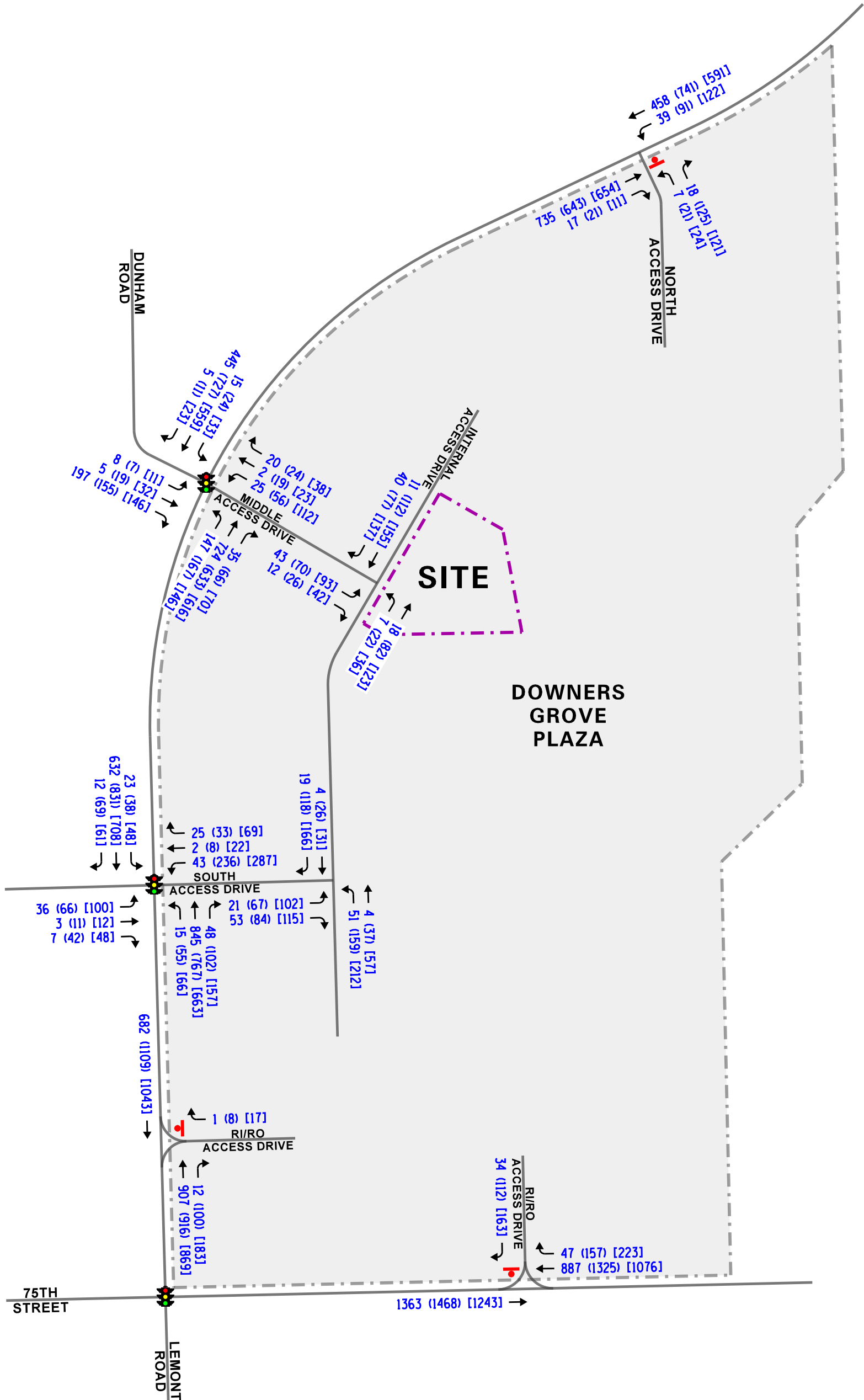


LEGEND

- 00 - AM PEAK HOUR (7:15-8:15 AM)
- (00) - PM PEAK HOUR (5:00-6:00 PM)
- [00] - SATURDAY MIDDAY PEAK HOUR (12:15 -1:15 PM)



NOT TO SCALE



5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening and Saturday midday peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any road improvements or modifications 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 base (Year 2021), Year 2027 no-build, and Year 2027 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic-signal controlled intersections were accomplished using field measures.

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 base, no-build and total projected conditions are presented in **Tables 4 through 8**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
CAPACITY ANALYSIS RESULTS
LEMONT ROAD WITH DUNHAM ROAD / MIDDLE ACCESS DRIVE – SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Southbound		Overall
		L/T	R	L/T	R	L	T/R	L	T/R	
Year 2021 Conditions	Weekday Morning Peak Hour	C 20.8	C 34.3	C 20.7	A 0.0	A 3.8	A 5.7	A 6.0	B 13.4	B 11.6
		C – 33.4		C – 20.7		A – 5.4		B – 13.4		
	Weekday Evening Peak Hour	C 24.2	C 34.4	C 26.4	C 22.8	A 3.8	A 2.5	A 4.9	B 12.3	B 10.4
		C – 33.0		C – 26.1		A – 2.8		B – 12.2		
Saturday Midday Peak Hour	C 25.4	C 34.4	C 32.5	C 23.3	A 3.7	A 3.5	A 4.7	B 11.2	B 11.3	
	C – 32.4		C – 31.8		A – 3.5		B – 11.0			
Year 2027 No-Build Conditions	Weekday Morning Peak Hour	C 20.8	C 34.3	C 20.8	B 20.0	A 3.2	A 5.1	A 6.0	B 13.5	B 11.3
		C – 33.4		C – 20.7		A – 4.8		B – 13.5		
	Weekday Evening Peak Hour	C 24.2	C 34.4	C 27.0	C 23.0	A 3.5	A 2.0	A 4.9	B 12.5	B 10.2
	C – 33.0		C – 26.5		A – 2.3		B – 12.3			
Saturday Midday Peak Hour	C 25.4	C 34.4	C 33.9	C 23.6	A 3.8	A 3.5	A 5.0	B 11.8	B 11.6	
	C – 32.4		C – 32.8		A – 3.5		B – 11.6			
Year 2027 Total Projected Conditions	Weekday Morning Peak Hour	C 20.8	C 34.3	C 22.0	C 21.3	A 3.3	A 5.2	A 6.0	B 13.5	B 11.5
		C – 33.4		C – 21.7		A – 4.9		B – 13.3		
	Weekday Evening Peak Hour	C 24.2	C 34.4	C 28.1	C 24.2	A 3.5	A 2.1	A 4.8	B 12.4	B 10.5
	C – 33.0		C – 27.2		A – 2.3		B – 12.4			
Saturday Midday Peak Hour	C 25.4	C 34.3	D 36.8	C 25.3	A 3.8	A 3.5	A 5.1	B 11.8	B 12.2	
	C – 32.3		C – 34.3		A – 3.5		B – 11.5			

Letter denotes Level of Service; Delay is measured in seconds. L – Left Turns T – Through R – Right Turns

Table 5
CAPACITY ANALYSIS RESULTS
LEMONT ROAD WITH SOUTH ACCESS DRIVE – SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound		Southbound			Overall
		L	T/R	L	T/R	L	T/R	L	T	R	
Year 2021 Conditions	Weekday Morning Peak Hour	C 27.8	C 21.2	C 26.9	C 25.5	A 3.0	A 5.7	A 0.6	A 2.0	A 0.0	A 5.0
		C – 26.4		C – 26.6		A – 5.7		A – 1.9			
	Weekday Evening Peak Hour	C 28.0	B 16.6	D 43.5	B 18.7	B 12.1	B 13.4	A 5.5	A 8.2	A 0.6	B 14.2
	C – 22.9		D – 40.7		B – 13.4		A – 7.6				
Saturday Midday Peak Hour	Weekday Midday Peak Hour	C 23.2	B 16.6	C 32.6	B 18.0	A 7.9	B 11.6	A 3.3	A 7.4	A 0.2	B 12.8
		C – 20.7		C – 29.5		B – 11.3		A – 6.7			
Year 2027 No-Build Conditions	Weekday Morning Peak Hour	C 29.0	C 21.2	C 24.4	B 15.1	A 4.8	A 8.5	A 1.9	A 2.7	A 0.0	A 7.1
		C – 27.3		C – 20.7		A – 8.4		A – 2.6			
	Weekday Evening Peak Hour	C 31.8	B 16.6	D 54.8	B 16.0	B 13.3	B 15.3	A 5.8	A 8.3	A 0.6	B 16.7
	C – 25.0		D – 49.0		B – 15.1		A – 7.6				
Saturday Midday Peak Hour	Weekday Midday Peak Hour	C 22.2	B 16.6	C 29.7	B 15.7	A 9.7	B 15.0	A 4.6	A 8.9	A 0.2	B 14.6
		C – 20.1		C – 26.3		B – 14.6		A – 8.0			
Year 2027 Total Projected Conditions	Weekday Morning Peak Hour	C 29.0	C 21.2	C 24.6	B 15.1	A 4.9	A 8.5	A 2.1	A 2.8	A 0.0	A 7.2
		C – 27.3		C – 20.9		A – 8.5		A – 2.7			
	Weekday Evening Peak Hour	C 31.8	B 16.6	E 56.4	B 16.0	B 13.3	B 15.4	A 6.1	A 8.6	A 0.7	B 17.0
	C – 25.0		D – 50.4		B – 15.2		A – 7.9				
Saturday Midday Peak Hour	Weekday Midday Peak Hour	C 21.9	B 16.6	C 29.7	B 15.7	A 9.8	B 15.3	A 4.8	A 9.1	A 0.2	B 14.7
		C – 19.9		C – 26.3		B – 14.9		A – 8.1			

Letter denotes Level of Service; Delay is measured in seconds. L – Left Turns T – Through R – Right Turns

Table 6
CAPACITY ANALYSIS RESULTS
UNSIGNALIZED INTERSECTIONS – BASE CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Lemont Road with North Access Drive						
• Westbound Approach	B	12.9	B	13.6	B	13.5
• Southbound Left Turns	B	11.2	A	9.2	A	9.3
Lemont Road with Right-In/Right-Out Access Drive						
• Westbound Right Turns	B	11.6	B	12.0	B	12.1
75th Street with Right-In/Right-Out Access Drive						
• Southbound Right Turns	B	13.8	C	20.7	C	19.0
Middle Access Drive with Internal Drive						
• ICU Level of Service ¹	A	14.0%	A	25.7%	A	33.3%
South Access Drive with Internal Drive						
• ICU Level of Service ¹	A	13.5%	A	28.5%	A	35.3%
LOS = Level of Service Delay is measured in seconds. 1 - The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.						

Table 7
CAPACITY ANALYSIS RESULTS
UNSIGNALIZED INTERSECTIONS – YEAR 2027 NO-BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Lemont Road with North Access Drive						
• Westbound Approach	B	13.2	B	14.4	B	14.3
• Southbound Left Turns	B	11.5	A	9.4	A	9.5
Lemont Road with Right-In/Right-Out Access Drive						
• Westbound Right Turns	B	11.8	B	12.2	B	12.9
75th Street with Right-In/Right-Out Access Drive						
• Southbound Right Turns	B	14.7	C	24.3	C	23.3
Middle Access Drive with Internal Drive						
• ICU Level of Service ¹	A	16.8%	A	27.2%	A	35.4%
South Access Drive with Internal Drive						
• ICU Level of Service ¹	A	19.7%	A	32.5%	A	41.6%
LOS = Level of Service Delay is measured in seconds. 1 - The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.						

Table 8
 CAPACITY ANALYSIS RESULTS
 UNSIGNALIZED INTERSECTIONS – YEAR 2027 TOTAL PROJECTED CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Lemont Road with North Access Drive						
• Westbound Approach	B	13.1	B	14.5	B	14.4
• Southbound Left Turns	B	11.6	A	9.4	A	9.6
Lemont Road with Right-In/Right-Out Access Drive						
• Westbound Right Turns	B	11.9	B	12.3	B	13
75th Street with Right-In/Right-Out Access Drive						
• Southbound Right Turns	B	13.7	D	25.2	C	24.3
Middle Access Drive with Internal Drive						
• ICU Level of Service ¹	A	17.1%	A	30.3%	A	40.1%
South Access Drive with Internal Drive						
• ICU Level of Service ¹	A	19.7%	A	33.1%	A	42.3%
LOS = Level of Service Delay is measured in seconds. 1 - The operation of this intersection is based on a critical volume to saturation flow (v/s) evaluation also known as the Intersection Capacity Utilization (ICU) method.						

Discussion and Recommendations

The following is an evaluation of the analyzed intersections based on the projected traffic volumes and the capacity analyses performed.

Lemont Road with Dunham Road and Middle Access Drive

The results of the capacity analysis indicate that overall this intersection currently operates at Level of Service (LOS) B during the weekday morning, weekday evening, and Saturday midday peak hours. All approaches currently operate at LOS C or better during the peak hours.

Under Year 2027 no-build conditions, overall this intersection will continue to operate at the same existing levels of service during the weekday morning, weekday evening, and Saturday midday peak hours with increases in delay of less than one second. All approaches will continue to operate at the same existing levels of service during the peak hours with increases in delay of approximately one second with the exception of the westbound right-turn movement, which will operate at LOS B.

Under Year 2027 total projected conditions, overall this intersection will continue to operate at the same levels of service during the weekday morning, weekday evening, and Saturday midday peak hours with increases in delay of less than one second over no-build conditions. All approaches will continue to operate at the same levels of service during the peak hours with increases in delay of approximately one second with the exception of the westbound right-turn movement, which is projected to operate at LOS C during the weekday morning peak hour with an increase in delay of one second and it will continue to operate at LOS C during the Saturday midday peak hour with an increase in delay of less than two seconds over no-build conditions. The shared left-turn/through lane is projected to operate at LOS D with an increase in delay of approximately three seconds during the Saturday midday peak hour over no-build conditions. Based on field observations, the westbound lanes should be restriped. Therefore, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed outlot parcel and no roadway or traffic control improvements will be required.

Lemont Road with South Access Drive

The results of the capacity analysis indicate that overall this intersection currently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening and Saturday midday peak hours. All approaches currently operate at an acceptable LOS D or better during the peak hours.

Under Year 2027 no-build conditions, overall this intersection will continue to operate at the same existing levels of service during the weekday morning, weekday evening, and Saturday midday peak hours with increases in delay of approximately two seconds. All approaches will continue to operate at the same existing levels of service during the peak hours with increases in delay of approximately three seconds.

Under Year 2027 total projected conditions, overall this intersection will continue to operate at the same levels of service during the weekday morning, weekday evening, and Saturday midday peak hours with increases in delay of less than one second over no-build conditions. All approaches will continue to operate at the same levels of service during the peak hours with increases in delay of less than one second with the exception of the westbound left-turn movement, which is projected to operate on the threshold of LOS D/E during the weekday evening peak hour with an increase in delay of approximately two seconds. Based on a review of the simulation, the westbound queues extend beyond the south leg of the internal intersection during the weekday evening peak hour. However, it is important to note that the queues will clear with every green phase.

Based on field observations, the westbound lanes should be restriped. Therefore, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed outlot parcel and no roadway or traffic control improvements will be required.

Lemont Avenue with North Access Drive

The results of the capacity analysis indicate that the westbound approach currently operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. In addition, the southbound left turning movements currently operates at LOS B or better during the peak hours.

Under Year 2027 no-build conditions, the westbound approach and the southbound left-turn movements will continue to operate at the same existing levels of service with increases in delay of less than one second.

Under Year 2027 total projected conditions, the westbound approach and the southbound left turning movements will continue to operate at the same levels of service during the weekday morning, weekday evening, and Saturday midday peak hours with increases in delay of less than one second over no-build conditions. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed outlot parcel and no roadway or traffic control improvements will be required.

Lemont Avenue with Right-Out Only Access Drive

The results of the capacity analysis indicate that the outbound movements are operating at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours.

Under Year 2027 no-build conditions, all movements will operate at the same existing levels of service during all three peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at the same levels of service during the peak hours with increases in delay of less than one second over no-build conditions. As such, this access drive will be adequate in accommodating the traffic estimated to be generated by the proposed outlot parcel and will ensure efficient and flexible access is provided.

75th Street with Right-Out Only Access Drive

The results of the capacity analysis indicate that the outbound movements are operating at LOS B during the weekday morning peak hour and LOS C during the weekday evening and Saturday midday peak hours.

Under Year 2027 no-build conditions, all movements will operate at the same existing levels of service during the peak hours with increases in delay of less than one second.

Under Year 2027 total projected conditions, all movements will operate at the same levels of service during all three peak hours with increases in delay of approximately one second over no-build conditions. As such, this access drive will be adequate in accommodating the traffic estimated to be generated by the proposed outlot parcel and will ensure efficient and flexible access is provided.

Middle Access Drive with Internal Drive

Because of the traffic control configuration of this intersection where the eastbound traffic is free flow and the other two approaches are under stop sign control, the intersection could not be analyzed using HCM procedures. This intersection's traffic control is designed to allow eastbound movements to operate under free flow conditions in order to keep eastbound queues from extending onto the middle access drive. Given this traffic control configuration and the limitations of the HCM procedures, the intersection was analyzed using the intersection capacity utilization (ICU) level of service. The ICU indicates how much reserve capacity is available or how much an intersection is over capacity.

Based on the ICU analysis, the intersection currently utilizes approximately 14 percent of the capacity of the intersection during the weekday morning peak hour and approximately 25 to 33 percent of its capacity during the weekday evening and Saturday midday peak hours.

Under Year 2027 no-build conditions, it is projected that the intersection will utilize approximately 17 percent of its capacity during the weekday morning peak hour and 27 to 35 percent of its capacity during the weekday evening and Saturday midday peak hours.

Under Year 2027 total projected conditions, it is projected that the intersection will utilize approximately 17 percent of its capacity during the weekday morning peak hour and 30 to 40 percent of its capacity during the weekday evening and Saturday midday peak hours. As a result, the intersection will continue to operate efficiently and with minimal delay. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway or traffic control improvements will be required.

South Access Drive with Internal Drive

Because of the traffic control configuration of this intersection where the eastbound traffic is free flow and the other two approaches are under stop sign control, the intersection could not be analyzed using HCM procedures. This intersection's traffic control is designed to allow eastbound movements to operate under free flow conditions in order to keep eastbound queues from extending onto the middle access drive. Given this traffic control configuration and the limitations of the HCM procedures, the intersection was analyzed using the intersection capacity utilization (ICU) level of service. The ICU indicates how much reserve capacity is available or how much an intersection is over capacity.

Based on the ICU analysis, the intersection currently utilizes approximately 14 percent of the capacity of the intersection during the weekday morning peak hour and approximately 29 to 35 percent of its capacity during the weekday evening and Saturday midday peak hours. Under Year 2027 no-build conditions, it is projected that the intersection will utilize approximately 20 percent of its capacity during the weekday morning peak hour and 32 to 42 percent of its capacity during the weekday evening and Saturday midday peak hours.

Under Year 2027 total projected conditions, it is projected that the intersection will utilize approximately 20 percent of its capacity during the weekday morning peak hour and 33 to 42 percent of its capacity during the weekday evening and Saturday midday peak hours. As a result, the intersection will continue to operate efficiently and with minimal delay. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway or traffic control improvements will be required.

On-Site Circulation and Drive-Through Stacking

The drive-through facility for the proposed outlot parcel will extend along the east and the north sides of the building. As proposed, vehicles will enter the drive-through lane at the southeast corner of the site and exit at the northwest corner of the building. A review of the site plan indicated that approximately eight vehicles will be able to be accommodated within the drive-through lane without blocking the access drives or internal circulation. The stacking of eight vehicles meets the stacking requirement in the Village of Downers Grove municipal code. Additionally, per the municipal code, the proposed location of the ordering board should be at least three vehicles from the pick-up window.

Appropriate wayfinding signs and striping should be provided within the site directing customers to and from the entrance of the drive-through lane. "Do Not Enter" signs should be placed at the exit of the drive-through lane to deter opposing traffic from entering the drive-through lane from the one-way exit direction. Additionally, the exiting movements from the drive-through lane should be under stop sign control.

Parking Evaluation

The following describes the results of a parking evaluation conducted for the Downers Park Plaza taking into consideration the existing parking demand and parking demand generated by existing, proposed, and vacant uses within the shopping center.

Existing Parking Demand

Parking inventory and occupancy surveys were conducted in the parking lots serving Downers Park Plaza. The surveys were performed every hour from 8:00 A.M. to 8:00 P.M. on Wednesday, September 1, 2021 and Saturday, September 11, 2021. The surveys were broken out by rows as shown in **Figure 10**. The results of the parking inventory and occupancy surveys are shown in **Tables 9** and **10**.

Downers Park Plaza has a total of 1,405 parking spaces and had a peak parking demand of 448 vehicles on Thursday at 1:00 P.M. and 481 vehicles on Saturday at 12:00 P.M. With a total of 1,405 parking spaces parking spaces available, approximately 32 percent of the parking spaces were occupied during the plaza's peak parking demand on Thursday and approximately 34 percent of the parking spaces were occupied during the plaza's peak parking demand on Saturday.

Projected Parking Demand

The projected parking demand of Downers Park Plaza was determined as follows:

- The estimated parking demand of the proposed outlot was based on the Village of Downers Grove Municipal Code (ratio of 10 spaces per 1,000 square-foot for the restaurant and 4 spaces per 1000 square-foot for retail) which is higher than the rates provided in the Institute of Transportation Engineers *Parking Generation Manual*, 5th Edition. The hourly distribution for proposed outlot was also based on the Village of Downers Municipal Code **Table 11** summarizes the hourly distribution of parking demand for the proposed outlot.
- The estimated parking demand of the proposed Panera Bread restaurant was based on the Village of Downers Grove Municipal Code (ratio of 10 spaces per 1,000 square-foot) which is higher than the rates provided in the Institute of Transportation Engineers *Parking Generation Manual*, 5th Edition. The hourly distribution for proposed Panera Bread restaurant was also based on the Village of Downers Municipal Code. **Table 12** summarizes the hourly distribution of parking demand for the Panera Bread restaurant with a drive-through window.
- The estimated parking demand of the vacant space was based on the Village of Downers Grove Municipal Code (ratio of four spaces per 1,000 square-foot), which is higher than the rates provided in the Institute of Transportation Engineers *Parking Generation Manual*, 5th Edition. The hourly distribution for vacant space was also based on the Village of Downers Municipal Code. **Table 13** summarizes the hourly distribution of parking demand for the vacant space.



Parking Occupancy Surveys

Figure 10

Table 9
EXISTING PARKING SURVEYS – THURSDAY, SEPTEMBER 9, 2021

Time	Parking Lots																Total	Percent Occupied
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
8:00 AM	1	0	0	6	1	24	42	15	0	11	8	10	0	1	25	3	147	10%
9:00 AM	4	0	1	12	4	51	47	15	1	22	21	10	0	1	22	5	216	15%
10:00 AM	5	0	1	21	4	61	61	21	1	44	63	11	1	1	22	7	324	23%
11:00 AM	12	0	2	26	6	76	78	20	0	55	79	10	2	1	20	5	392	28%
12:00 PM	31	0	2	28	2	82	80	22	2	47	79	12	2	1	14	5	409	29%
1:00 PM	24	0	2	31	3	83	75	22	0	61	108	14	3	0	17	5	448	32%
2:00 PM	22	0	0	24	3	87	61	21	1	50	103	14	4	0	15	4	409	29%
3:00 PM	18	0	0	21	2	78	49	22	2	49	94	14	2	0	15	5	371	26%
4:00 PM	29	0	0	22	3	76	51	20	0	45	90	14	5	0	15	3	373	27%
5:00 PM	44	0	0	20	5	72	53	18	0	32	72	15	4	0	11	3	349	25%
6:00 PM	55	0	1	14	4	62	38	17	1	37	91	13	4	0	12	4	353	25%
7:00 PM	45	0	1	8	3	45	29	7	0	38	76	12	4	0	12	3	283	20%
8:00 PM	52	0	0	7	5	32	27	4	0	33	54	11	2	0	13	3	243	17%
Inventory	65	0	13	187	143	201	222	41	0	95	249	101	33	13	42	0	1405	

Table 10
EXISTING PARKING SURVEYS – SATURDAY, SEPTEMBER 11, 2021

Time	Parking Lots																Total	Percent Occupied
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
8:00 AM	0	0	0	7	1	24	34	13	0	8	9	10	0	0	18	3	127	9%
9:00 AM	0	0	1	7	1	48	47	12	1	10	16	11	0	0	20	3	177	13%
10:00 AM	2	0	0	12	3	67	61	16	2	38	75	13	1	0	15	5	310	22%
11:00 AM	10	0	0	12	4	80	76	17	0	42	95	14	1	0	13	4	368	26%
12:00 PM	29	0	1	23	4	97	103	16	1	51	123	15	1	0	11	6	481	34%
1:00 PM	28	0	0	24	3	82	91	16	2	47	115	15	4	1	15	4	447	32%
2:00 PM	38	0	1	30	2	69	79	15	1	52	142	20	5	1	11	5	471	34%
3:00 PM	37	0	1	26	5	70	68	11	1	52	138	17	4	0	10	5	445	32%
4:00 PM	35	0	0	27	6	67	54	4	2	41	124	13	3	0	11	5	392	28%
5:00 PM	39	0	0	26	5	65	47	3	0	35	102	13	4	0	12	4	355	25%
6:00 PM	42	0	0	15	3	49	40	3	1	31	83	14	4	0	13	3	301	21%
7:00 PM	45	0	0	15	7	41	36	1	0	30	62	12	4	0	11	3	267	19%
8:00 PM	50	0	0	10	6	30	34	2	1	29	36	12	2	0	10	2	224	16%
Inventory	65	0	13	187	143	201	222	41	0	95	249	101	33	13	42	0	1405	

Table 11
PROJECTED OUTLOT HOURLY PARKING DEMAND

Time Period	Weekday	Weekend
8:00 AM	24	28
9:00 AM	24	28
10:00 AM	24	28
11:00 AM	24	28
12:00 AM	24	28
1:00 PM	24	28
2:00 PM	24	28
3:00 PM	24	28
4:00 PM	24	28
5:00 PM	24	28
6:00 PM	33	29
7:00 PM	33	29
8:00 PM	33	29

Table 12
PROJECTED PANERA BREAD HOURLY PARKING DEMAND

Time Period	Weekday	Weekend
8:00 AM	27	27
9:00 AM	27	27
10:00 AM	27	27
11:00 AM	27	27
12:00 AM	27	27
1:00 PM	27	27
2:00 PM	27	27
3:00 PM	27	27
4:00 PM	27	27
5:00 PM	27	27
6:00 PM	39	39
7:00 PM	39	39
8:00 PM	39	39

Table 13
 VACANT RETAIL SPACE HOURLY PARKING DEMAND

Time Period	Weekday	Weekend
8:00 AM	93	133
9:00 AM	93	133
10:00 AM	93	133
11:00 AM	93	133
12:00 AM	93	133
1:00 PM	93	133
2:00 PM	93	133
3:00 PM	93	133
4:00 PM	93	133
5:00 PM	93	133
6:00 PM	120	80
7:00 PM	120	80
8:00 PM	120	80

Projected Parking Demand Results

Tables 14 and **15** show the total projected parking demand of Downers Park Plaza based on the following:

- The existing hourly parking demand.
- The hourly parking demand estimated to be generated by the proposed outlot.
- The hourly parking demand estimated to be generated by the proposed Panera Bread.
- The hourly parking demand estimated to be generated by the full occupancy of Downers Park Plaza.

It should be noted that the number of parking spaces will be reduced by 101 parking spaces with the buildout of the currently under construction Panera Bread restaurant and will be reduced by 35 parking spaces with the buildout of the outlot resulting in a net parking supply of 1269 parking spaces.

The following summarizes the results of the projected parking demand:

- *Weekday Peak Parking Demand.* Downers Park Plaza is estimated to have a peak parking demand of approximately 592 vehicles (47 percent) on a Thursday at 1:00 P.M.
- *Weekend Peak Parking Demand.* Downers Park Plaza is estimated to have a peak parking demand of approximately 669 vehicles (53 percent) on a Saturday at 12:00 P.M.

Based on the projected parking demand it can be seen that the proposed parking supply will be sufficient accommodating the future parking demand, including the proposed outlot parcel.

Table 14
PROJECTED HOURLY PARKING OCCUPANCY - WEEKDAY

Time	Existing Surveys	Under Construction Panera Bread	Vacant Space	Proposed Outlot	Total	Percent Occupied
8:00 AM	147	27	93	24	291	23%
9:00 AM	216	27	93	24	360	28%
10:00 AM	324	27	93	24	468	37%
11:00 AM	392	27	93	24	536	42%
12:00 PM	409	27	93	24	553	44%
1:00 PM	448	27	93	24	592	47%
2:00 PM	409	27	93	24	553	44%
3:00 PM	371	27	93	24	515	41%
4:00 PM	373	27	93	24	517	41%
5:00 PM	349	27	93	24	493	39%
6:00 PM	353	39	120	33	545	43%
7:00 PM	283	39	120	33	475	37%
8:00 PM	243	39	120	33	435	34%
Inventory					1,269	

Table 15
PROJECTED HOURLY PARKING OCCUPANCY - SATURDAY

Time	Existing Surveys	Under Construction Panera Bread	Vacant Space	Proposed Outlot	Total	Percent Occupied
8:00 AM	127	27	133	28	315	25%
9:00 AM	177	27	133	28	365	29%
10:00 AM	310	27	133	28	498	39%
11:00 AM	368	27	133	28	556	44%
12:00 PM	481	27	133	28	669	53%
1:00 PM	447	27	133	28	635	50%
2:00 PM	471	27	133	28	659	52%
3:00 PM	445	27	133	28	633	50%
4:00 PM	392	27	133	28	580	46%
5:00 PM	355	27	133	28	543	43%
6:00 PM	301	39	80	29	449	35%
7:00 PM	267	39	80	29	415	33%
8:00 PM	224	39	80	29	372	29%
Inventory					1,269	

6. Conclusion

Based on existing conditions and the traffic capacity analyses, the findings and recommendations of this study are outlined below:

- The volume of traffic estimated to be generated by the proposed outlot parcel will be reduced due to pass-by trips and internal capture.
- The results of the capacity analysis indicate that the traffic that will be generated by the proposed outlot parcel will not have a significant impact on the area roadways.
- The access system serving Downers Park Plaza will ensure an adequate and flexible access system is provided to accommodate the traffic that will be generated by the proposed outlot parcel.
- The site plan provides for efficient circulation and adequate stacking of 8 vehicles for the proposed drive through restaurant within the outlot parcel.
- Appropriate wayfinding signs and striping should be provided within the site directing customers to and from the entrance of the drive-through lane.
- “Do Not Enter” signs should be placed at the exit of the drive-through lane to deter opposing traffic from entering the drive-through lane from the one-way exit direction.
- Exiting movements from the drive-through lane should be under stop sign control.
- Based on field observations, the westbound lanes should be restriped at the signalized access drives serving Downers Park Plaza.

Appendix

Traffic Count Summary Sheets

Site Plan

CMAP 2050 Projections Letter

Level of Service Criteria

Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



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Count Name: Old Sutton Rd with Penny Rd
Site Code:
Start Date: 10/13/2021
Page No: 4

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Penny Rd Eastbound					Penny Rd Westbound					Old Sutton Rd Northbound					Old Sutton Rd 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
4:00 PM	0	0	13	6	0	19	0	5	17	10	0	32	0	15	2	3	0	20	0	6	6	1	0	13	84
4:15 PM	0	0	11	0	0	11	0	2	30	10	0	42	0	13	13	3	0	29	0	2	5	0	0	7	89
4:30 PM	0	0	13	4	0	17	0	1	16	5	0	22	0	9	6	3	0	18	0	5	5	0	0	10	67
4:45 PM	0	0	13	7	0	20	0	0	22	6	0	28	0	9	12	5	0	26	0	5	4	1	0	10	84
Total	0	0	50	17	0	67	0	8	85	31	0	124	0	46	33	14	0	93	0	18	20	2	0	40	324
Approach %	0.0	0.0	74.6	25.4	-	-	0.0	6.5	68.5	25.0	-	-	0.0	49.5	35.5	15.1	-	-	0.0	45.0	50.0	5.0	-	-	-
Total %	0.0	0.0	15.4	5.2	-	20.7	0.0	2.5	26.2	9.6	-	38.3	0.0	14.2	10.2	4.3	-	28.7	0.0	5.6	6.2	0.6	-	12.3	-
PHF	0.000	0.000	0.962	0.607	-	0.838	0.000	0.400	0.708	0.775	-	0.738	0.000	0.767	0.635	0.700	-	0.802	0.000	0.750	0.833	0.500	-	0.769	0.910
% Lights	0	0	50	17	0	67	0	7	81	30	0	118	0	45	32	14	0	91	0	18	19	2	0	39	315
% Buses	-	-	100.0	100.0	-	100.0	-	87.5	95.3	96.8	-	95.2	-	97.8	97.0	100.0	-	97.8	-	100.0	95.0	100.0	-	97.5	97.2
% 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
% 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	-	-	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

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	5	0	0	0	0	1	5	0	0	0	0	11
615	0	13	0	0	0	0	1	3	0	0	0	0	17
630	0	10	0	0	0	1	0	3	0	0	0	0	14
645	0	14	2	0	0	0	0	4	0	0	0	0	20
700	0	13	2	0	0	0	0	5	0	0	0	0	20
715	0	13	0	0	0	0	0	12	0	0	0	0	25
730	0	13	0	0	0	0	0	13	0	0	0	0	26
745	0	11	0	0	0	0	0	5	0	0	0	0	16
800	0	18	0	0	0	0	0	4	0	0	0	0	22
815	0	12	0	0	0	0	0	11	0	0	0	0	23
830	0	14	0	0	0	0	0	4	0	0	0	0	18
845	0	9	0	0	0	0	0	11	0	0	0	0	20
1500	0	11	1	1	0	0	1	18	0	0	0	0	32
1515	0	12	0	0	0	0	0	16	0	0	0	0	28
1530	0	10	0	1	0	1	0	17	0	0	0	0	29
1545	0	15	0	0	0	0	0	24	0	0	0	0	39
1600	0	24	0	1	0	0	0	30	0	0	0	0	55
1615	0	20	1	1	0	0	0	32	0	0	0	0	54
1630	0	24	0	0	0	0	0	24	0	0	0	0	48
1645	0	14	0	0	0	0	0	28	0	0	0	0	42
1700	0	24	0	0	0	0	0	30	0	0	0	0	54
1715	0	21	0	0	0	0	0	26	0	0	0	0	47
1730	0	10	0	0	0	0	0	31	0	0	0	0	41
1745	0	15	1	0	0	0	0	21	0	0	0	0	37
Total	0	345	7	4	0	2	3	377	0	0	0	0	738

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	5	0	6	0	5	1	5	0	11
615	13	0	4	0	3	1	13	0	17
630	10	1	3	0	3	0	11	0	14
645	16	0	4	0	4	2	14	0	20
700	15	0	5	0	5	2	13	0	20
715	13	0	12	0	12	0	13	0	25
730	13	0	13	0	13	0	13	0	26
745	11	0	5	0	5	0	11	0	16
800	18	0	4	0	4	0	18	0	22
815	12	0	11	0	11	0	12	0	23
830	14	0	4	0	4	0	14	0	18
845	9	0	11	0	11	0	9	0	20

1500	12	1	19	0	19	2	11	0	32
1515	12	0	16	0	16	0	12	0	28
1530	10	2	17	0	18	0	11	0	29
1545	15	0	24	0	24	0	15	0	39
1600	24	1	30	0	31	0	24	0	55
1615	21	1	32	0	33	1	20	0	54
1630	24	0	24	0	24	0	24	0	48
1645	14	0	28	0	28	0	14	0	42
1700	24	0	30	0	30	0	24	0	54
1715	21	0	26	0	26	0	21	0	47
1730	10	0	31	0	31	0	10	0	41
1745	16	0	21	0	21	1	15	0	37
=====									
Total	352	6	380	0	381	10	347	0	738

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	20	0	0	0	0	4	20	0	0	0	0	44
615	0	52	0	0	0	0	4	12	0	0	0	0	68
630	0	40	0	0	0	4	0	12	0	0	0	0	56
645	0	56	8	0	0	0	0	16	0	0	0	0	80
700	0	52	8	0	0	0	0	20	0	0	0	0	80
715	0	52	0	0	0	0	0	48	0	0	0	0	100
730	0	52	0	0	0	0	0	52	0	0	0	0	104
745	0	44	0	0	0	0	0	20	0	0	0	0	64
800	0	72	0	0	0	0	0	16	0	0	0	0	88
815	0	48	0	0	0	0	0	44	0	0	0	0	92
830	0	56	0	0	0	0	0	16	0	0	0	0	72
845	0	36	0	0	0	0	0	44	0	0	0	0	80
1500	0	44	4	4	0	0	4	72	0	0	0	0	128
1515	0	48	0	0	0	0	0	64	0	0	0	0	112
1530	0	40	0	4	0	4	0	68	0	0	0	0	116
1545	0	60	0	0	0	0	0	96	0	0	0	0	156
1600	0	96	0	4	0	0	0	120	0	0	0	0	220
1615	0	80	4	4	0	0	0	128	0	0	0	0	216
1630	0	96	0	0	0	0	0	96	0	0	0	0	192
1645	0	56	0	0	0	0	0	112	0	0	0	0	168
1700	0	96	0	0	0	0	0	120	0	0	0	0	216
1715	0	84	0	0	0	0	0	104	0	0	0	0	188
1730	0	40	0	0	0	0	0	124	0	0	0	0	164
1745	0	60	4	0	0	0	0	84	0	0	0	0	148

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	20	0	24	0	20	4	20	0	44
615	52	0	16	0	12	4	52	0	68
630	40	4	12	0	12	0	44	0	56
645	64	0	16	0	16	8	56	0	80
700	60	0	20	0	20	8	52	0	80
715	52	0	48	0	48	0	52	0	100
730	52	0	52	0	52	0	52	0	104
745	44	0	20	0	20	0	44	0	64
800	72	0	16	0	16	0	72	0	88
815	48	0	44	0	44	0	48	0	92
830	56	0	16	0	16	0	56	0	72
845	36	0	44	0	44	0	36	0	80
1500	48	4	76	0	76	8	44	0	128
1515	48	0	64	0	64	0	48	0	112
1530	40	8	68	0	72	0	44	0	116
1545	60	0	96	0	96	0	60	0	156
1600	96	4	120	0	124	0	96	0	220
1615	84	4	128	0	132	4	80	0	216
1630	96	0	96	0	96	0	96	0	192
1645	56	0	112	0	112	0	56	0	168
1700	96	0	120	0	120	0	96	0	216
1715	84	0	104	0	104	0	84	0	188
1730	40	0	124	0	124	0	40	0	164
1745	64	0	84	0	84	4	60	0	148

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	42	2	0	0	1	2	15	0	0	0	0	62
615	0	50	4	0	0	1	1	15	0	0	0	0	71
630	0	50	4	0	0	1	0	24	0	0	0	0	79
645	0	53	4	0	0	0	0	34	0	0	0	0	91
700	0	50	2	0	0	0	0	35	0	0	0	0	87
715	0	55	0	0	0	0	0	34	0	0	0	0	89
730	0	54	0	0	0	0	0	33	0	0	0	0	87
745	0	55	0	0	0	0	0	24	0	0	0	0	79
800	0	53	0	0	0	0	0	30	0	0	0	0	83
815	0	35	0	0	0	0	0	26	0	0	0	0	61*
830	0	23	0	0	0	0	0	15	0	0	0	0	38*
845	0	9	0	0	0	0	0	11	0	0	0	0	20*

1500	0	48	1	2	0	1	1	75	0	0	0	0	128
1515	0	61	0	2	0	1	0	87	0	0	0	0	151
1530	0	69	1	3	0	1	0	103	0	0	0	0	177
1545	0	83	1	2	0	0	0	110	0	0	0	0	196
1600	0	82	1	2	0	0	0	114	0	0	0	0	199
1615	0	82	1	1	0	0	0	114	0	0	0	0	198
1630	0	83	0	0	0	0	0	108	0	0	0	0	191
1645	0	69	0	0	0	0	0	115	0	0	0	0	184
1700	0	70	1	0	0	0	0	108	0	0	0	0	179
1715	0	46	1	0	0	0	0	78	0	0	0	0	125*
1730	0	25	1	0	0	0	0	52	0	0	0	0	78*
1745	0	15	1	0	0	0	0	21	0	0	0	0	37*

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Passenger Vehicles Only

12/15/21
 13:12:11

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

Intersection # 8 dec/oldsutton/accspenny/cars

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	44	1	17	0	15	4	43	0	62
615	54	1	16	0	15	5	51	0	71
630	54	1	24	0	24	4	51	0	79
645	57	0	34	0	34	4	53	0	91
700	52	0	35	0	35	2	50	0	87
715	55	0	34	0	34	0	55	0	89
730	54	0	33	0	33	0	54	0	87
745	55	0	24	0	24	0	55	0	79
800	53	0	30	0	30	0	53	0	83
815	35	0	26	0	26	0	35	0	61*
830	23	0	15	0	15	0	23	0	38*
845	9	0	11	0	11	0	9	0	20*

1500	49	3	76	0	77	2	49	0	128
1515	61	3	87	0	89	0	62	0	151
1530	70	4	103	0	106	1	70	0	177
1545	84	2	110	0	112	1	83	0	196
1600	83	2	114	0	116	1	82	0	199
1615	83	1	114	0	115	1	82	0	198
1630	83	0	108	0	108	0	83	0	191
1645	69	0	115	0	115	0	69	0	184
1700	71	0	108	0	108	1	70	0	179
1715	47	0	78	0	78	1	46	0	125*
1730	26	0	52	0	52	1	25	0	78*
1745	16	0	21	0	21	1	15	0	37*

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

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

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	0	0	0	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0	0	0	0	0
645	0	1	0	0	0	0	0	0	0	0	0	0	1
700	0	1	0	0	0	0	0	0	0	0	0	0	1
715	0	1	0	2	0	0	0	1	0	0	0	0	4
730	0	0	0	0	0	0	0	2	0	0	0	0	2
745	0	1	0	0	0	0	0	5	0	0	0	0	6
800	0	1	0	0	0	0	0	0	0	0	0	0	1
815	0	3	0	0	0	0	0	0	0	0	0	0	3
830	0	0	0	0	0	0	0	0	0	0	0	0	0
845	0	0	0	0	0	0	0	1	0	0	0	0	1

1500	0	0	0	0	0	0	0	0	0	0	0	0	0
1515	0	2	0	0	0	0	0	0	0	0	0	0	2
1530	0	1	0	0	0	1	0	2	0	0	0	0	4
1545	0	2	0	0	0	0	0	0	0	0	0	0	2
1600	0	0	0	0	0	0	0	2	0	0	0	0	2
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	1	0	0	0	0	1
1645	0	1	0	0	0	0	0	0	0	0	0	0	1
1700	0	0	0	0	0	0	0	3	0	0	0	0	3
1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1730	0	0	0	0	0	0	0	1	0	0	0	0	1
1745	0	1	1	0	0	0	1	0	0	0	0	0	3
=====													
Total	0	15	1	2	0	1	1	18	0	0	0	0	38

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

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

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0
645	1	0	0	0	0	0	1	0	1
700	1	0	0	0	0	0	1	0	1
715	1	2	1	0	3	0	1	0	4
730	0	0	2	0	2	0	0	0	2
745	1	0	5	0	5	0	1	0	6
800	1	0	0	0	0	0	1	0	1
815	3	0	0	0	0	0	3	0	3
830	0	0	0	0	0	0	0	0	0
845	0	0	1	0	1	0	0	0	1

1500	0	0	0	0	0	0	0	0	0
1515	2	0	0	0	0	0	2	0	2
1530	1	1	2	0	2	0	2	0	4
1545	2	0	0	0	0	0	2	0	2
1600	0	0	2	0	2	0	0	0	2
1615	0	0	0	0	0	0	0	0	0
1630	0	0	1	0	1	0	0	0	1
1645	1	0	0	0	0	0	1	0	1
1700	0	0	3	0	3	0	0	0	3
1715	0	0	0	0	0	0	0	0	0
1730	0	0	1	0	1	0	0	0	1
1745	2	0	1	0	0	2	1	0	3
=====									
Total	16	3	19	0	20	2	16	0	38

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

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

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	0	0	0	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0	0	0	0	0
645	0	4	0	0	0	0	0	0	0	0	0	0	4
700	0	4	0	0	0	0	0	0	0	0	0	0	4
715	0	4	0	8	0	0	0	4	0	0	0	0	16
730	0	0	0	0	0	0	0	8	0	0	0	0	8
745	0	4	0	0	0	0	0	20	0	0	0	0	24
800	0	4	0	0	0	0	0	0	0	0	0	0	4
815	0	12	0	0	0	0	0	0	0	0	0	0	12
830	0	0	0	0	0	0	0	0	0	0	0	0	0
845	0	0	0	0	0	0	0	4	0	0	0	0	4
1500	0	0	0	0	0	0	0	0	0	0	0	0	0
1515	0	8	0	0	0	0	0	0	0	0	0	0	8
1530	0	4	0	0	0	4	0	8	0	0	0	0	16
1545	0	8	0	0	0	0	0	0	0	0	0	0	8
1600	0	0	0	0	0	0	0	8	0	0	0	0	8
1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	4	0	0	0	0	4
1645	0	4	0	0	0	0	0	0	0	0	0	0	4
1700	0	0	0	0	0	0	0	12	0	0	0	0	12
1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1730	0	0	0	0	0	0	0	4	0	0	0	0	4
1745	0	4	4	0	0	0	4	0	0	0	0	0	12

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

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

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	0	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0
645	4	0	0	0	0	0	4	0	4
700	4	0	0	0	0	0	4	0	4
715	4	8	4	0	12	0	4	0	16
730	0	0	8	0	8	0	0	0	8
745	4	0	20	0	20	0	4	0	24
800	4	0	0	0	0	0	4	0	4
815	12	0	0	0	0	0	12	0	12
830	0	0	0	0	0	0	0	0	0
845	0	0	4	0	4	0	0	0	4

1500	0	0	0	0	0	0	0	0	0
1515	8	0	0	0	0	0	8	0	8
1530	4	4	8	0	8	0	8	0	16
1545	8	0	0	0	0	0	8	0	8
1600	0	0	8	0	8	0	0	0	8
1615	0	0	0	0	0	0	0	0	0
1630	0	0	4	0	4	0	0	0	4
1645	4	0	0	0	0	0	4	0	4
1700	0	0	12	0	12	0	0	0	12
1715	0	0	0	0	0	0	0	0	0
1730	0	0	4	0	4	0	0	0	4
1745	8	0	4	0	0	8	4	0	12

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

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

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	N-Approach			E-Approach			S-Approach			W-Approach			Int Total
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
600	0	1	0	0	0	0	0	0	0	0	0	0	1
615	0	2	0	0	0	0	0	0	0	0	0	0	2
630	0	3	0	2	0	0	0	1	0	0	0	0	6
645	0	3	0	2	0	0	0	3	0	0	0	0	8
700	0	3	0	2	0	0	0	8	0	0	0	0	13
715	0	3	0	2	0	0	0	8	0	0	0	0	13
730	0	5	0	0	0	0	0	7	0	0	0	0	12
745	0	5	0	0	0	0	0	5	0	0	0	0	10
800	0	4	0	0	0	0	0	1	0	0	0	0	5
815	0	3	0	0	0	0	0	1	0	0	0	0	4*
830	0	0	0	0	0	0	0	1	0	0	0	0	1*
845	0	0	0	0	0	0	0	1	0	0	0	0	1*

1500	0	5	0	0	0	1	0	2	0	0	0	0	8
1515	0	5	0	0	0	1	0	4	0	0	0	0	10
1530	0	3	0	0	0	1	0	4	0	0	0	0	8
1545	0	2	0	0	0	0	0	3	0	0	0	0	5
1600	0	1	0	0	0	0	0	3	0	0	0	0	4
1615	0	1	0	0	0	0	0	4	0	0	0	0	5
1630	0	1	0	0	0	0	0	4	0	0	0	0	5
1645	0	1	0	0	0	0	0	4	0	0	0	0	5
1700	0	1	1	0	0	0	1	4	0	0	0	0	7
1715	0	1	1	0	0	0	1	1	0	0	0	0	4*
1730	0	1	1	0	0	0	1	1	0	0	0	0	4*
1745	0	1	1	0	0	0	1	0	0	0	0	0	3*

Barrington, IL Weather: Cool and Dry
 Old Sutton Rd and Access Dr South of PennyRd
 Tuesday December 14, 2021 Single Unit Trucks Only

12/15/21
 13:15:23

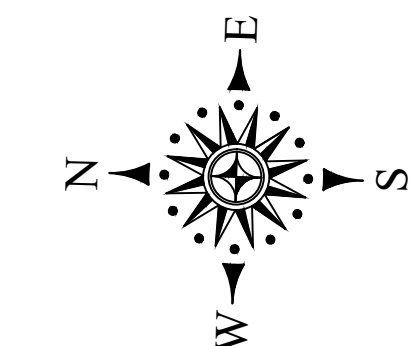
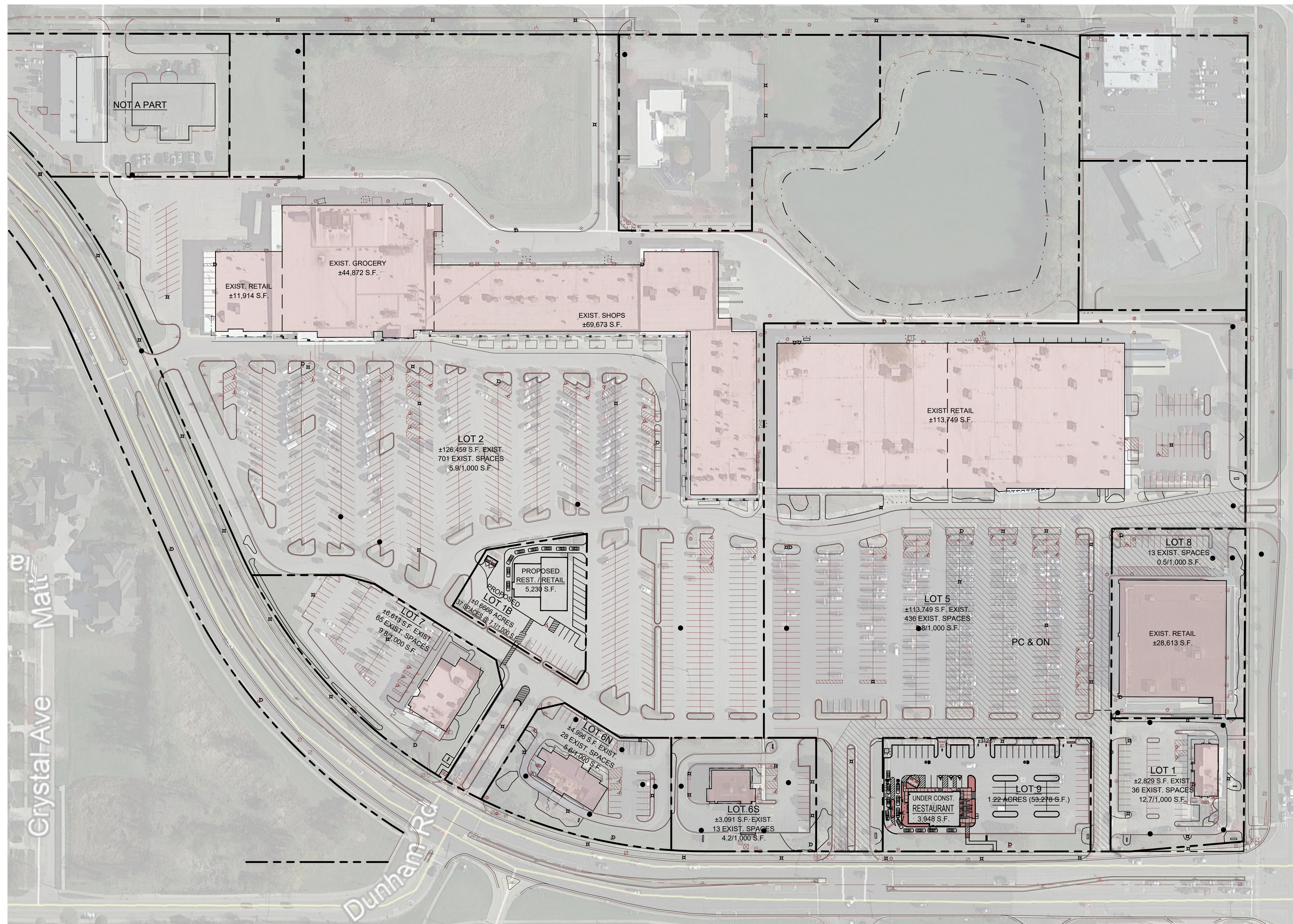
URNS/TEAPAC[Ver 3.61.12] - 60-Minute Volumes: Appr/Exit Totals

Intersection # 9 dec/oldsutton/accspenny/single

Begin Time	Approach Totals				Exit Totals				Int Total
	N	E	S	W	N	E	S	W	
600	1	0	0	0	0	0	1	0	1
615	2	0	0	0	0	0	2	0	2
630	3	2	1	0	3	0	3	0	6
645	3	2	3	0	5	0	3	0	8
700	3	2	8	0	10	0	3	0	13
715	3	2	8	0	10	0	3	0	13
730	5	0	7	0	7	0	5	0	12
745	5	0	5	0	5	0	5	0	10
800	4	0	1	0	1	0	4	0	5
815	3	0	1	0	1	0	3	0	4*
830	0	0	1	0	1	0	0	0	1*
845	0	0	1	0	1	0	0	0	1*

1500	5	1	2	0	2	0	6	0	8
1515	5	1	4	0	4	0	6	0	10
1530	3	1	4	0	4	0	4	0	8
1545	2	0	3	0	3	0	2	0	5
1600	1	0	3	0	3	0	1	0	4
1615	1	0	4	0	4	0	1	0	5
1630	1	0	4	0	4	0	1	0	5
1645	1	0	4	0	4	0	1	0	5
1700	2	0	5	0	4	2	1	0	7
1715	2	0	2	0	1	2	1	0	4*
1730	2	0	2	0	1	2	1	0	4*
1745	2	0	1	0	0	2	1	0	3*

Site Plan



SITE DATA - MAIN CENTER

ZONED 'B-2' GENERAL RETAIL BUSINESS, WITHIN THE PLANNED DEVELOPMENT OVERLAY, VILLAGE OF DOWNERS GROVE, IL.

EXISTING BUILDING AREA - LOT 2	126,459 S.F.
EXISTING BUILDING AREA - LOT 5	113,749 S.F.
EXISTING BUILDING AREA - LOT 8	28,613 S.F.
EXISTING PARKING LOT 2	701 SPACES @ 5.91/1,000 S.F.
EXISTING PARKING LOT 5	436 SPACES @ 3.81/1,000 S.F.
EXISTING PARKING LOT 8	13 SPACES @ 0.51/1,000 S.F.
PROPOSED PARKING LOT 5 - 6 SPACES	TOTAL PARKING LOT 5 & 8 - 455 SPACES @ 4.01/1,000
EXISTING BUILDING AREA - MAIN CENTER	288,821 S.F.
PARKING REQ'D. - EXISTING MAIN CENTER	1,075 SPACES @ 4.01/1,000 S.F.
TOTAL PROPOSED PARKING MAIN CENTER	1,156 SPACES @ 4.31/1,000 S.F.

EXISTING OUTPARCEL SITE DATA

LOT 1 - EXISTING BUILDING AREA	2,829 S.F.	LOT 1 - EXISTING PARKING	36 SPACES @ 12.71/1,000 S.F.
LOT 6S - EXISTING BUILDING AREA	3,091 S.F.	LOT 6S - EXISTING PARKING	13 SPACES @ 4.21/1,000 S.F.
LOT 6N - EXISTING BUILDING AREA	4,996 S.F.	LOT 6N - EXISTING PARKING	28 SPACES @ 5.61/1,000 S.F.
LOT 7 - EXISTING BUILDING AREA	6,613 S.F.	LOT 7 - EXISTING PARKING	65 SPACES @ 9.81/1,000 S.F.
LOT 9 - BUILDING AREA (UNDER CONST.)	3,957 S.F.	(POST CONST.) PARKING	59 SPACES @ 14.91/1,000 S.F.
TOTAL OUTPARCEL BUILDING AREA	21,486 S.F.		
TOTAL OUTPARCEL PARKING	201 SPACES @ 9.41/1,000 S.F.		

PROPOSED OUTPARCEL SITE DATA

PROPOSED BUILDING AREA PROPOSED LOT 1B	5,230 S.F.
PROPOSED PARKING PROPOSED LOT 1B	37 SPACES @ 7.11/1,000 S.F.

OVERALL SITE DATA

TOTAL BUILDING AREA (INCL. UNDER CONST. & PROPOSED)	295,537 S.F.
TOTAL PARKING (INCLUDES PROPOSED)	1,394 SPACES @ 4.71/1,000 S.F.

SITE PLAN

SCALE: 1"=80'

PROPOSED ADDITION TO DOWNERS PARK PLAZA

EXISTING PUD #18
DOWNERS GROVE, ILLINOIS

STEPHEN L. ZITO, AIA
ARCHITECT

MOBILE, AL. 36609
FAX (251) 343 - 5505

820 S. UNIVERSITY BLVD. SUITE 2G
PHONE (251) 343 - 6161

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STEPHEN L. ZITO AIA
ARCHITECT

REVISIONS

PRELIMINARY
NOT FOR CONSTRUCTION

FILE 3763
DATE APRIL 6, 2022
SHEET

PR14

CMAP 2050 Projections Letter



Chicago Metropolitan
Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607

312-454-0400
cmap.illinois.gov

September 21, 2021

Elise Purguette
Traffic Engineer
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: 75th Street @ Lemont Road
IDOT

Dear Ms. Purguette:

In response to a request made on your behalf and dated September 21, 2021, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
75th St west of Lemont Rd	32,300	36,400
75th St east of Lemont Rd	31,500	35,500
Lemont Rd north of 75th St	13,400	15,100

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2021 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

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

Sincerely,

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

cc: Rios (IDOT)
2021_CY_TrafficForecast\DownersGrove\du-44-21\du-44-21.docx

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
Year 2021 Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	5	197	8	2	0	147	710	12	1	430	5
Future Volume (vph)	8	5	197	8	2	0	147	710	12	1	430	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.850					0.998			0.998	
Flt Protected		0.971			0.961		0.950			0.950		
Satd. Flow (prot)	0	1845	1615	0	1674	1900	1752	3461	0	1805	3425	0
Flt Permitted		0.881			0.846		0.463			0.302		
Satd. Flow (perm)	0	1674	1615	0	1473	1900	854	3461	0	574	3425	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	50%	0%	3%	4%	10%	0%	5%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	221	0	11	0	165	811	0	1	489	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	9.5	25.0		9.5	24.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	14.0	37.0		10.0	33.0	
Total Split (%)	37.3%	37.3%	37.3%	37.3%	37.3%	37.3%	18.7%	49.3%		13.3%	44.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		16.3	16.3		16.3		49.2	44.9		44.3	36.3	
Actuated g/C Ratio		0.22	0.22		0.22		0.66	0.60		0.59	0.48	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

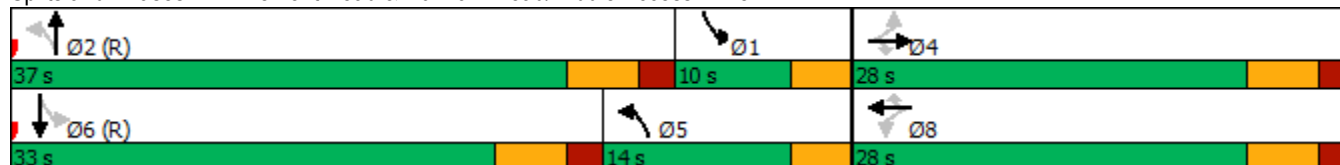


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.04	0.63		0.03		0.26	0.39		0.00	0.29	
Control Delay		20.8	34.3		20.7		3.8	5.7		6.0	13.4	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		20.8	34.3		20.7		3.8	5.7		6.0	13.4	
LOS		C	C		C		A	A		A	B	
Approach Delay		33.4			20.7			5.4			13.4	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		6	94		4		10	33		0	67	
Queue Length 95th (ft)		18	145		15		8	44		2	122	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105				175			135		
Base Capacity (vph)		491	473		432		727	2073		453	1659	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.03	0.47		0.03		0.23	0.39		0.00	0.29	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	46.4%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	7	14	2	2	15	831	9	5	618	12
Future Volume (vph)	36	3	7	14	2	2	15	831	9	5	618	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.891			0.925			0.998				0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1608	0	1805	1758	0	1805	3466	0	1805	3505	1380
Fl _t Permitted	0.833						0.395			0.291		
Satd. Flow (perm)	1452	1608	0	1900	1758	0	750	3466	0	553	3505	1380
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			2			2				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	14%	2%	0%	0%	0%	0%	4%	0%	0%	3%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	11	0	15	4	0	16	904	0	5	665	13
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	23.0		9.5	23.0		9.5	25.0		9.5	24.0	24.0
Total Split (s)	10.0	23.0		10.0	23.0		10.0	32.0		10.0	32.0	32.0
Total Split (%)	13.3%	30.7%		13.3%	30.7%		13.3%	42.7%		13.3%	42.7%	42.7%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	9.8	8.0		8.0	8.0		63.7	59.3		62.8	59.3	59.3
Actuated g/C Ratio	0.13	0.11		0.11	0.11		0.85	0.79		0.84	0.79	0.79

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

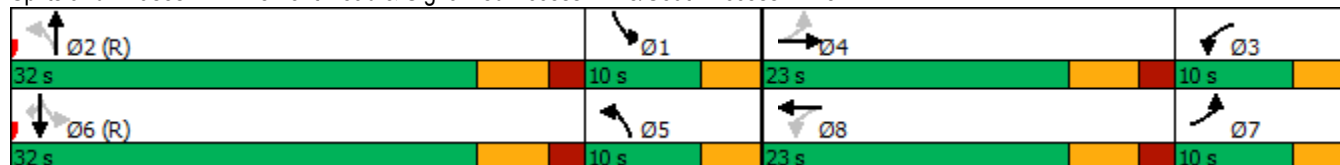
06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.19	0.06		0.08	0.02		0.02	0.33		0.01	0.24	0.01
Control Delay	27.8	21.2		26.9	25.5		3.0	5.7		0.6	2.0	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.8	21.2		26.9	25.5		3.0	5.7		0.6	2.0	0.0
LOS	C	C		C	C		A	A		A	A	A
Approach Delay		26.4			26.6			5.7			1.9	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	16	1		7	1		1	62		0	6	0
Queue Length 95th (ft)	36	16		19	9		8	195		m1	60	m0
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	219	370		210	400		738	2743		575	2773	1122
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.18	0.03		0.07	0.01		0.02	0.33		0.01	0.24	0.01

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 2 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.33
 Intersection Signal Delay: 5.0 Intersection LOS: A
 Intersection Capacity Utilization 41.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC

3: Lemont Road & North Access Drive

06/21/2022

Intersection

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	12	704	14	29	430
Future Vol, veh/h	6	12	704	14	29	430
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	14	7	4	50	0
Mvmt Flow	6	12	726	14	30	443

Major/Minor	Minor1	Major1	Major2	Major2	Major2
Conflicting Flow All	1015	370	0	0	740
Stage 1	733	-	-	-	-
Stage 2	282	-	-	-	-
Critical Hdwy	6.86	7.18	-	-	5.1
Critical Hdwy Stg 1	5.86	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-
Follow-up Hdwy	3.53	3.44	-	-	2.7
Pot Cap-1 Maneuver	233	594	-	-	609
Stage 1	434	-	-	-	-
Stage 2	738	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	222	594	-	-	609
Mov Cap-2 Maneuver	337	-	-	-	-
Stage 1	434	-	-	-	-
Stage 2	702	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	474	609
HCM Lane V/C Ratio	-	-	0.039	0.049
HCM Control Delay (s)	-	-	12.9	11.2
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.1	0.2

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖	
Traffic Vol, veh/h	0	0	0	0	0	1	0	854	11	0	639	0
Future Vol, veh/h	0	0	0	0	0	1	0	854	11	0	639	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	4	9	0	3	0
Mvmt Flow	0	0	0	0	0	1	0	928	12	0	695	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	470
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	545
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	0	545
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	545
HCM Lane V/C Ratio	-	-	0.002
HCM Control Delay (s)	-	-	11.6
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

HCM 6th TWSC

5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1327	873	17	0	4
Future Vol, veh/h	0	1327	873	17	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	2	12	0	25
Mvmt Flow	0	1412	929	18	0	4
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	474
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.15
Pot Cap-1 Maneuver	0	-	-	-	0	414
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	414
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	13.8			
HCM LOS						B
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	414		
HCM Lane V/C Ratio	-	-	-	0.01		
HCM Control Delay (s)	-	-	-	13.8		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection Capacity Utilization

6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	49	23	16	70	98	43
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	49	23	0	86	141	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.95	0.85
Saturated Flow (vph)	1805	1615	0	1882	1813	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		1.7				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	493	1813	
Reference Time A (s)	48.9		0.0	20.9	9.3	
Adj Saturation B (vph)	NA		NA	NA	1813	
Reference Time B (s)	NA		NA	NA	9.3	
Reference Time (s)				20.9	9.3	
Adj Reference Time (s)				24.9	13.3	
Split Option						
Ref Time Combined (s)	3.3		0.0	5.5	9.3	
Ref Time Seperate (s)	3.3		1.1	4.4	6.5	
Reference Time (s)	3.3		5.5	5.5	9.3	
Adj Reference Time (s)	8.0		9.5	9.5	13.3	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		24.9			
Split Option (s)	8.0		22.8			
Minimum (s)	8.0		22.8		30.8	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	13.3					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	21.3					

Intersection Summary

Intersection Capacity Utilization 25.7% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization 7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	42	112	31	19	102
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	55	42	0	143	121	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.87	0.85
Saturated Flow (vph)	1805	1615	0	1826	1660	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.1				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	144	1660	
Reference Time A (s)	54.8		0.0	118.8	8.7	
Adj Saturation B (vph)	NA		NA	NA	1660	
Reference Time B (s)	NA		NA	NA	8.7	
Reference Time (s)				118.8	8.7	
Adj Reference Time (s)				122.8	12.7	
Split Option						
Ref Time Combined (s)	3.7		0.0	9.4	8.7	
Ref Time Seperate (s)	3.7		7.4	2.0	1.4	
Reference Time (s)	3.7		9.4	9.4	8.7	
Adj Reference Time (s)	8.0		13.4	13.4	12.7	
Summary	EB		NB SB	Combined		
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		122.8			
Split Option (s)	8.0		26.1			
Minimum (s)	8.0		26.1	34.1		
Right Turns	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	12.7					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	20.7					

Intersection Summary

Intersection Capacity Utilization 28.5% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Capacity Analysis Summary Sheets
Year 2021 Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	19	155	37	17	5	167	620	43	10	705	11
Future Volume (vph)	7	19	155	37	17	5	167	620	43	10	705	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.990			0.998	
Flt Protected		0.987			0.967		0.950			0.950		
Satd. Flow (prot)	0	1875	1615	0	1837	1615	1805	3536	0	1805	3568	0
Flt Permitted		0.926			0.785		0.336			0.379		
Satd. Flow (perm)	0	1759	1615	0	1492	1615	638	3536	0	720	3568	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	158	0	55	5	170	677	0	10	730	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	14.0	39.0		10.0	35.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	18.7%	52.0%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.5	13.5		13.5	13.5	52.0	47.7		47.4	39.5	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.64		0.63	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

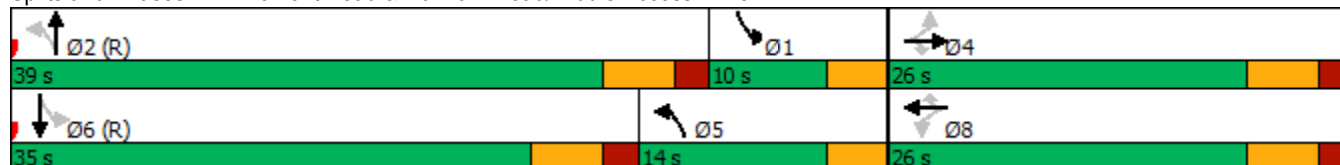


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.08	0.55		0.21	0.02	0.31	0.30		0.02	0.39	
Control Delay		24.2	34.4		26.4	22.8	3.8	2.5		4.9	12.3	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		24.2	34.4		26.4	22.8	3.8	2.5		4.9	12.3	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		33.0			26.1			2.8			12.2	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		10	68		22	2	12	32		1	96	
Queue Length 95th (ft)		28	115		48	10	22	18		6	173	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		469	430		397	430	639	2249		558	1879	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.06	0.37		0.14	0.01	0.27	0.30		0.02	0.39	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	10.4
Intersection LOS:	B
Intersection Capacity Utilization	52.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	11	42	190	7	17	55	747	65	21	807	69
Future Volume (vph)	66	11	42	190	7	17	55	747	65	21	807	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.881			0.892			0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1674	0	1805	1695	0	1805	3534	0	1805	3574	1615
Flt Permitted	0.000			0.000			0.236			0.337		
Satd. Flow (perm)	0	1674	0	0	1695	0	448	3534	0	640	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			18			14				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	54	0	196	25	0	57	837	0	22	832	71
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.0	14.0		16.0	20.0		9.0	35.0		10.0	36.0	36.0
Total Split (%)	13.3%	18.7%		21.3%	26.7%		12.0%	46.7%		13.3%	48.0%	48.0%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	12.7	8.0		11.9	8.3		43.7	41.2		42.3	39.8	39.8
Actuated g/C Ratio	0.17	0.11		0.16	0.11		0.58	0.55		0.56	0.53	0.53

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

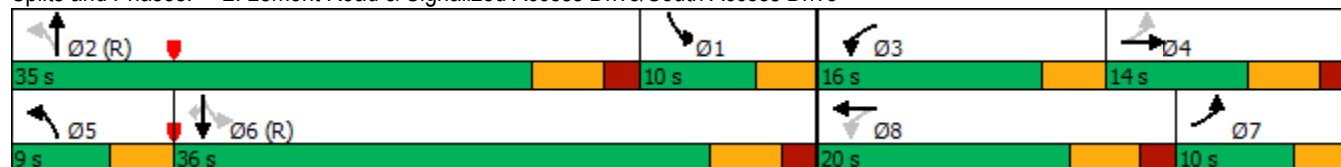


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.25		0.69	0.12		0.16	0.43		0.05	0.44	0.08
Control Delay	28.0	16.6		43.5	18.7		12.1	13.4		5.5	8.2	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	28.0	16.6		43.5	18.7		12.1	13.4		5.5	8.2	0.6
LOS	C	B		D	B		B	B		A	A	A
Approach Delay		22.9			40.7			13.4			7.6	
Approach LOS		C			D			B			A	
Queue Length 50th (ft)	21	5		86	3		11	117		3	173	1
Queue Length 95th (ft)	63	36		#167	24		36	215		m7	74	3
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	309	216		300	331		361	1949		464	1898	926
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.22	0.25		0.65	0.08		0.16	0.43		0.05	0.44	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 6 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 14.2 Intersection LOS: B
 Intersection Capacity Utilization 56.6% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC 3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	19	107	614	18	75	707
Future Vol, veh/h	19	107	614	18	75	707
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	11	0	2	0	0
Mvmt Flow	20	111	640	19	78	736

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1174	330	0	0	659	0
Stage 1	650	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Critical Hdwy	6.82	7.12	-	-	4.1	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.41	-	-	2.2	-
Pot Cap-1 Maneuver	186	640	-	-	939	-
Stage 1	484	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	640	-	-	939	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	484	-	-	-	-	-
Stage 2	514	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	549	939
HCM Lane V/C Ratio	-	-	0.239	0.083
HCM Control Delay (s)	-	-	13.6	9.2
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.3

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	49	23	16	70	98	43
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	49	23	0	86	141	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.95	0.85
Saturated Flow (vph)	1805	1615	0	1882	1813	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		1.7				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	493	1813	
Reference Time A (s)	48.9		0.0	20.9	9.3	
Adj Saturation B (vph)	NA		NA	NA	1813	
Reference Time B (s)	NA		NA	NA	9.3	
Reference Time (s)				20.9	9.3	
Adj Reference Time (s)				24.9	13.3	
Split Option						
Ref Time Combined (s)	3.3		0.0	5.5	9.3	
Ref Time Seperate (s)	3.3		1.1	4.4	6.5	
Reference Time (s)	3.3		5.5	5.5	9.3	
Adj Reference Time (s)	8.0		9.5	9.5	13.3	
Summary	EB		NB SB	Combined		
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		24.9			
Split Option (s)	8.0		22.8			
Minimum (s)	8.0		22.8	30.8		
Right Turns	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	13.3					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	21.3					
Intersection Summary						
Intersection Capacity Utilization	25.7%		ICU Level of Service		A	
Reference Times and Phasing Options do not represent an optimized timing plan.						

Intersection Capacity Utilization 7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	42	112	31	19	102
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	55	42	0	143	121	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.87	0.85
Saturated Flow (vph)	1805	1615	0	1826	1660	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.1				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	144	1660	
Reference Time A (s)	54.8		0.0	118.8	8.7	
Adj Saturation B (vph)	NA		NA	NA	1660	
Reference Time B (s)	NA		NA	NA	8.7	
Reference Time (s)				118.8	8.7	
Adj Reference Time (s)				122.8	12.7	
Split Option						
Ref Time Combined (s)	3.7		0.0	9.4	8.7	
Ref Time Seperate (s)	3.7		7.4	2.0	1.4	
Reference Time (s)	3.7		9.4	9.4	8.7	
Adj Reference Time (s)	8.0		13.4	13.4	12.7	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		122.8			
Split Option (s)	8.0		26.1			
Minimum (s)	8.0		26.1		34.1	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	12.7					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	20.7					

Intersection Summary

Intersection Capacity Utilization 28.5% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖↗	
Traffic Vol, veh/h	0	0	0	0	0	7	0	860	92	0	1039	0
Future Vol, veh/h	0	0	0	0	0	7	0	860	92	0	1039	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	7	0	896	96	0	1082	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	496
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	525
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	0	525
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	12	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	525
HCM Lane V/C Ratio	-	-	0.014
HCM Control Delay (s)	-	-	12
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1432	1303	114	0	76
Future Vol, veh/h	0	1432	1303	114	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	0	1507	1372	120	0	80

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	746
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	309
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	309
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	309
HCM Lane V/C Ratio	-	-	-	0.259
HCM Control Delay (s)	-	-	-	20.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1

Capacity Analysis Summary Sheets
Year 2021 Saturday Midday Peak Hour Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	146	86	21	9	146	609	40	16	536	23
Future Volume (vph)	11	32	146	86	21	9	146	609	40	16	536	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.991			0.994	
Flt Protected		0.988			0.961		0.950			0.950		
Satd. Flow (prot)	0	1836	1599	0	1826	1615	1787	3507	0	1805	3535	0
Flt Permitted		0.911			0.738		0.415			0.380		
Satd. Flow (perm)	0	1693	1599	0	1402	1615	781	3507	0	722	3535	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	1%	0%	0%	0%	1%	2%	2%	0%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	152	0	112	9	152	676	0	17	582	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	13.0	38.0		10.0	35.0	
Total Split (%)	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	17.3%	50.7%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.3	13.3		13.3	13.3	52.1	47.9		48.1	40.1	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.64		0.64	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

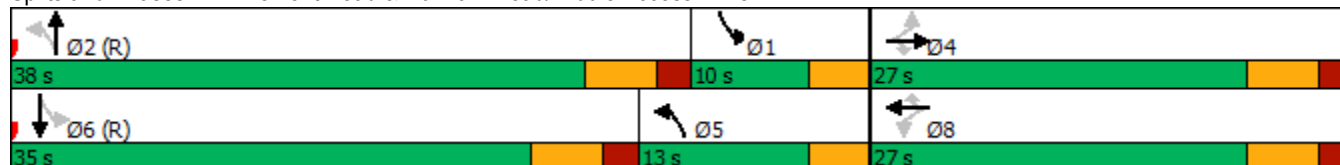


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.15	0.54		0.45	0.03	0.24	0.30		0.03	0.31	
Control Delay		25.4	34.4		32.5	23.3	3.7	3.5		4.7	11.2	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		25.4	34.4		32.5	23.3	3.7	3.5		4.7	11.2	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		32.4			31.8			3.5			11.0	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		17	65		47	4	15	41		2	72	
Queue Length 95th (ft)		41	112		87	14	22	41		9	131	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		474	447		392	452	704	2238		566	1888	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.09	0.34		0.29	0.02	0.22	0.30		0.03	0.31	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	11 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization	49.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	12	48	227	20	39	66	656	104	21	686	61
Future Volume (vph)	100	12	48	227	20	39	66	656	104	21	686	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.881			0.901			0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1648	0	1805	1712	0	1805	3478	0	1805	3574	1615
Flt Permitted	0.833			0.716			0.336			0.303		
Satd. Flow (perm)	1552	1648	0	1360	1712	0	638	3478	0	576	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			41			26				233
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	63	0	236	62	0	69	791	0	22	715	64
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.6	14.0		18.4	21.8		9.0	33.0		9.6	33.6	33.6
Total Split (%)	14.1%	18.7%		24.5%	29.1%		12.0%	44.0%		12.8%	44.8%	44.8%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	15.1	8.0		17.1	8.6		48.8	43.0		47.9	39.7	39.7
Actuated g/C Ratio	0.20	0.11		0.23	0.11		0.65	0.57		0.64	0.53	0.53

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

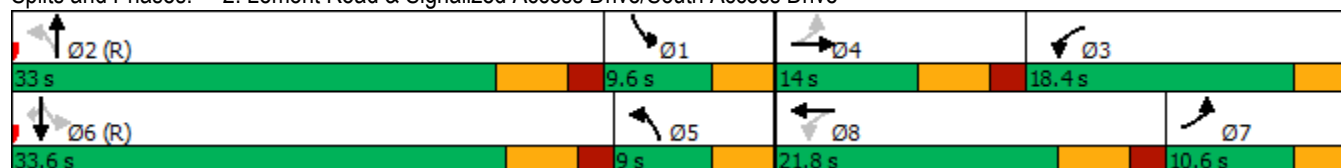


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.31	0.29		0.64	0.27		0.14	0.39		0.05	0.38	0.07
Control Delay	23.2	16.6		32.6	18.0		7.9	11.6		3.3	7.4	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	23.2	16.6		32.6	18.0		7.9	11.6		3.3	7.4	0.2
LOS	C	B		C	B		A	B		A	A	A
Approach Delay		20.7			29.5			11.3			6.7	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	37	6		90	9		11	88		3	83	0
Queue Length 95th (ft)	67	39		141	42		30	192		m4	105	0
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	342	220		483	393		500	2006		470	1889	963
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.29		0.49	0.16		0.14	0.39		0.05	0.38	0.07

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 5 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 12.8
 Intersection LOS: B
 Intersection Capacity Utilization 57.4%
 ICU Level of Service B
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC 3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	22	105	619	10	102	553
Future Vol, veh/h	22	105	619	10	102	553
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	23	109	645	10	106	576

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1150	328	0	0	655	0
Stage 1	650	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Critical Hdwy	6.84	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	192	674	-	-	942	-
Stage 1	481	-	-	-	-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	170	674	-	-	942	-
Mov Cap-2 Maneuver	303	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	510	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.5	0	1.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	556	942
HCM Lane V/C Ratio	-	-	0.238	0.113
HCM Control Delay (s)	-	-	13.5	9.3
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.9	0.4

HCM 6th TWSC

4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖↗	
Traffic Vol, veh/h	0	0	0	0	0	16	0	810	104	0	961	0
Future Vol, veh/h	0	0	0	0	0	16	0	810	104	0	961	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	17	0	880	113	0	1045	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	- 497	- 0 0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	- 6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	- 3.3	-
Pot Cap-1 Maneuver	0	0 524	0 - - 0 - 0
Stage 1	0	0 -	0 - - 0 - 0
Stage 2	0	0 -	0 - - 0 - 0
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	-	0 524	- - - - -
Mov Cap-2 Maneuver	-	0 -	- - - - -
Stage 1	-	0 -	- - - - -
Stage 2	-	0 -	- - - - -

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 524	-
HCM Lane V/C Ratio	-	- 0.033	-
HCM Control Delay (s)	-	- 12.1	-
HCM Lane LOS	-	- B	-
HCM 95th %tile Q(veh)	-	- 0.1	-

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1210	1066	159	0	111
Future Vol, veh/h	0	1210	1066	159	0	111
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	1235	1088	162	0	113

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	625
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	370
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	370
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	370
HCM Lane V/C Ratio	-	-	-	0.306
HCM Control Delay (s)	-	-	-	19
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.3

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	57	31	27	106	141	89
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	57	31	0	133	230	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.94	0.85
Saturated Flow (vph)	1805	1615	0	1881	1790	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		2.3				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	460	1790	
Reference Time A (s)	56.8		0.0	34.7	15.4	
Adj Saturation B (vph)	NA		NA	NA	1790	
Reference Time B (s)	NA		NA	NA	15.4	
Reference Time (s)				34.7	15.4	
Adj Reference Time (s)				38.7	19.4	
Split Option						
Ref Time Combined (s)	3.8		0.0	8.5	15.4	
Ref Time Seperate (s)	3.8		1.8	6.7	9.5	
Reference Time (s)	3.8		8.5	8.5	15.4	
Adj Reference Time (s)	8.0		12.5	12.5	19.4	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		38.7			
Split Option (s)	8.0		31.9			
Minimum (s)	8.0		31.9		39.9	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	19.4					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	27.4					

Intersection Summary

Intersection Capacity Utilization 33.3% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization 7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	47	138	43	24	148
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	90	47	0	181	172	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.87	0.85
Saturated Flow (vph)	1805	1615	0	1828	1655	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.5				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	148	1655	
Reference Time A (s)	89.8		0.0	147.1	12.5	
Adj Saturation B (vph)	NA		NA	NA	1655	
Reference Time B (s)	NA		NA	NA	12.5	
Reference Time (s)				147.1	12.5	
Adj Reference Time (s)				151.1	16.5	
Split Option						
Ref Time Combined (s)	6.0		0.0	11.9	12.5	
Ref Time Seperate (s)	6.0		9.2	2.7	1.7	
Reference Time (s)	6.0		11.9	11.9	12.5	
Adj Reference Time (s)	10.0		15.9	15.9	16.5	
Summary	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		151.1			
Split Option (s)	10.0		32.4			
Minimum (s)	10.0		32.4		42.3	
Right Turns	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	16.5					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	24.5					
Intersection Summary						
Intersection Capacity Utilization			35.3%	ICU Level of Service		A
Reference Times and Phasing Options do not represent an optimized timing plan.						

Capacity Analysis Summary Sheets
Year 2027 No-Build Weekday Morning Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	5	197	10	2	2	147	738	14	3	453	5
Future Volume (vph)	8	5	197	10	2	2	147	738	14	3	453	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.850			0.850		0.997			0.998	
Flt Protected		0.971			0.959		0.950			0.950		
Satd. Flow (prot)	0	1845	1615	0	1692	1615	1752	3457	0	1805	3426	0
Flt Permitted		0.880			0.835		0.446			0.286		
Satd. Flow (perm)	0	1672	1615	0	1473	1615	823	3457	0	543	3426	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	50%	0%	3%	4%	10%	0%	5%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	221	0	13	2	165	845	0	3	515	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	9.5	25.0		9.5	24.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	14.0	37.0		10.0	33.0	
Total Split (%)	37.3%	37.3%	37.3%	37.3%	37.3%	37.3%	18.7%	49.3%		13.3%	44.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		16.3	16.3		16.3	16.3	49.2	44.9		44.3	36.3	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.66	0.60		0.59	0.48	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

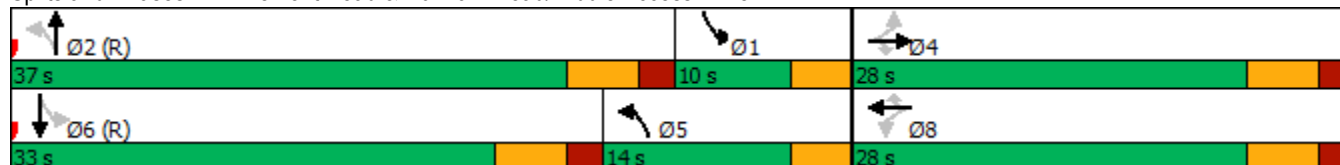


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.04	0.63		0.04	0.01	0.26	0.41		0.01	0.31	
Control Delay		20.8	34.3		20.8	20.0	3.2	5.1		6.0	13.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		20.8	34.3		20.8	20.0	3.2	5.1		6.0	13.5	
LOS		C	C		C	B	A	A		A	B	
Approach Delay		33.4			20.7			4.8			13.5	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		6	94		5	1	10	89		0	69	
Queue Length 95th (ft)		18	145		16	5	11	51		4	129	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		490	473		432	473	709	2071		437	1659	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.03	0.47		0.03	0.00	0.23	0.41		0.01	0.31	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	11.3
Intersection LOS:	B
Intersection Capacity Utilization:	49.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	7	40	2	25	15	838	41	23	625	12
Future Volume (vph)	36	3	7	40	2	25	15	838	41	23	625	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.891			0.860			0.993				0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1608	0	1805	1634	0	1805	3453	0	1805	3505	1380
Fl _t Permitted							0.387			0.265		
Satd. Flow (perm)	1743	1608	0	1900	1634	0	735	3453	0	504	3505	1380
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			27			7				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	14%	2%	0%	0%	0%	0%	4%	0%	0%	3%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	11	0	43	29	0	16	945	0	25	672	13
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	23.0		9.5	23.0		9.5	25.0		9.5	24.0	24.0
Total Split (s)	10.0	23.0		10.0	23.0		10.0	32.0		10.0	32.0	32.0
Total Split (%)	13.3%	30.7%		13.3%	30.7%		13.3%	42.7%		13.3%	42.7%	42.7%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	8.7	8.0		11.8	8.1		59.6	55.7		59.8	57.5	57.5
Actuated g/C Ratio	0.12	0.11		0.16	0.11		0.79	0.74		0.80	0.77	0.77

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

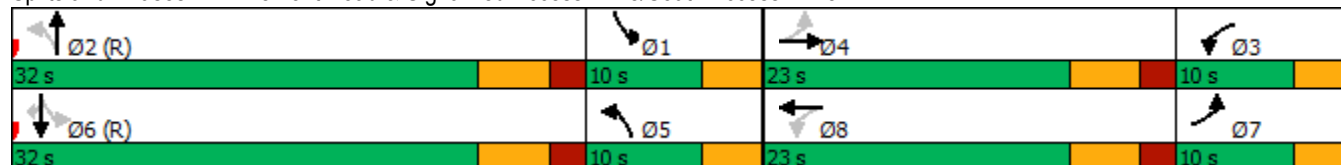


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.06		0.15	0.14		0.02	0.37		0.05	0.25	0.01
Control Delay	29.0	21.2		24.4	15.1		4.8	8.5		1.9	2.7	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	29.0	21.2		24.4	15.1		4.8	8.5		1.9	2.7	0.0
LOS	C	C		C	B		A	A		A	A	A
Approach Delay		27.3			20.7			8.4			2.6	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	17	1		19	1		1	50		0	8	0
Queue Length 95th (ft)	35	16		38	23		9	211		m3	64	m0
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	203	370		295	391		686	2566		518	2687	1092
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.19	0.03		0.15	0.07		0.02	0.37		0.05	0.25	0.01

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 2 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 7.1 Intersection LOS: A
 Intersection Capacity Utilization 43.4% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC

3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	7	15	731	17	35	454
Future Vol, veh/h	7	15	731	17	35	454
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	14	7	4	50	0
Mvmt Flow	7	15	754	18	36	468

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1069	386	0	0	772
Stage 1	763	-	-	-	-
Stage 2	306	-	-	-	-
Critical Hdwy	6.86	7.18	-	-	5.1
Critical Hdwy Stg 1	5.86	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-
Follow-up Hdwy	3.53	3.44	-	-	2.7
Pot Cap-1 Maneuver	215	579	-	-	588
Stage 1	418	-	-	-	-
Stage 2	717	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	202	579	-	-	588
Mov Cap-2 Maneuver	320	-	-	-	-
Stage 1	418	-	-	-	-
Stage 2	673	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	460	588
HCM Lane V/C Ratio	-	-	0.049	0.061
HCM Control Delay (s)	-	-	13.2	11.5
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

HCM 6th TWSC 4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↔			↕↕↕	
Traffic Vol, veh/h	0	0	0	0	0	1	0	893	12	0	672	0
Future Vol, veh/h	0	0	0	0	0	1	0	893	12	0	672	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	4	9	0	3	0
Mvmt Flow	0	0	0	0	0	1	0	971	13	0	730	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	- 492	- 0 0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	- 6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	- 3.3	-
Pot Cap-1 Maneuver	0	0 528	0 - - 0 - 0
Stage 1	0	0 -	0 - - 0 - 0
Stage 2	0	0 -	0 - - 0 - 0
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	-	0 528	- - - - -
Mov Cap-2 Maneuver	-	0 -	- - - - -
Stage 1	-	0 -	- - - - -
Stage 2	-	0 -	- - - - -

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 528	-
HCM Lane V/C Ratio	-	- 0.002	-
HCM Control Delay (s)	-	- 11.8	-
HCM Lane LOS	-	- B	-
HCM 95th %tile Q(veh)	-	- 0	-

HCM 6th TWSC

5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1363	884	43	0	28
Future Vol, veh/h	0	1363	884	43	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	2	12	0	25
Mvmt Flow	0	1450	940	46	0	30
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	493
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.15
Pot Cap-1 Maneuver	0	-	-	-	0	402
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	402
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	14.7			
HCM LOS						B
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	402		
HCM Lane V/C Ratio	-	-	-	0.074		
HCM Control Delay (s)	-	-	-	14.7		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.2		

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	13	9	7	11	11	7
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	13	9	0	18	18	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.98	0.94	0.85
Saturated Flow (vph)	1805	1615	0	1863	1789	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		0.7				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	265	1789	
Reference Time A (s)	13.0		0.0	8.2	1.2	
Adj Saturation B (vph)	NA		0	0	1789	
Reference Time B (s)	NA		8.5	9.2	1.2	
Reference Time (s)				8.2	1.2	
Adj Reference Time (s)				12.2	8.0	
Split Option						
Ref Time Combined (s)	0.9		0.0	1.2	1.2	
Ref Time Seperate (s)	0.9		0.5	0.7	0.7	
Reference Time (s)	0.9		1.2	1.2	1.2	
Adj Reference Time (s)	8.0		8.0	8.0	8.0	
Summary	EB		NB SB	Combined		
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		12.2			
Split Option (s)	8.0		16.0			
Minimum (s)	8.0		12.2	20.2		
Right Turns	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	8.0					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	16.0					

Intersection Summary
 Intersection Capacity Utilization 16.8% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	14	53	51	4	4	16
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	14	53	0	55	20	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.95	0.88	0.85
Saturated Flow (vph)	1805	1615	0	1812	1672	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.9				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	127	1672	
Reference Time A (s)	14.0		0.0	52.0	1.4	
Adj Saturation B (vph)	NA		0	0	1672	
Reference Time B (s)	NA		11.4	11.6	1.4	
Reference Time (s)				11.6	1.4	
Adj Reference Time (s)				15.6	8.0	
Split Option						
Ref Time Combined (s)	0.9		0.0	3.6	1.4	
Ref Time Seperate (s)	0.9		3.4	0.3	0.3	
Reference Time (s)	0.9		3.6	3.6	1.4	
Adj Reference Time (s)	8.0		8.0	8.0	8.0	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		15.6			
Split Option (s)	8.0		16.0			
Minimum (s)	8.0		15.6		23.6	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	8.0					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	16.0					

Intersection Summary

Intersection Capacity Utilization 19.7% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Capacity Analysis Summary Sheets
Year 2027 No-Build Weekday Evening Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	19	155	42	19	8	167	645	46	14	733	11
Future Volume (vph)	7	19	155	42	19	8	167	645	46	14	733	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.990			0.998	
Flt Protected		0.987			0.966		0.950			0.950		
Satd. Flow (prot)	0	1875	1615	0	1835	1615	1805	3536	0	1805	3568	0
Flt Permitted		0.925			0.778		0.322			0.365		
Satd. Flow (perm)	0	1758	1615	0	1478	1615	612	3536	0	694	3568	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	158	0	62	8	170	705	0	14	759	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	14.0	39.0		10.0	35.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	18.7%	52.0%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.5	13.5		13.5	13.5	52.0	47.7		47.4	39.5	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.64		0.63	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

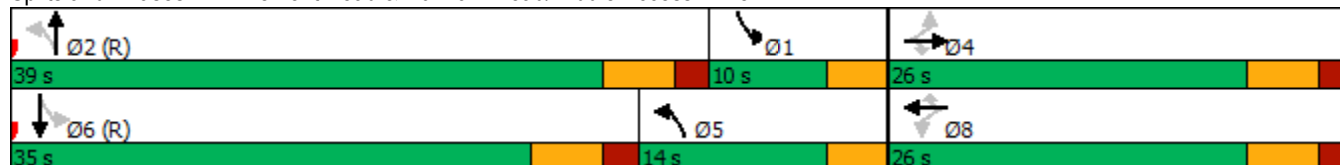


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.08	0.55		0.23	0.03	0.32	0.31		0.03	0.40	
Control Delay		24.2	34.4		27.0	23.0	3.5	2.0		4.9	12.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		24.2	34.4		27.0	23.0	3.5	2.0		4.9	12.5	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		33.0			26.5			2.3			12.3	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		10	68		25	3	2	4		2	101	
Queue Length 95th (ft)		28	115		53	13	21	21		8	182	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		468	430		394	430	624	2248		543	1879	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.06	0.37		0.16	0.02	0.27	0.31		0.03	0.40	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	10.2
Intersection LOS:	B
Intersection Capacity Utilization	53.2%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	11	42	232	8	33	55	759	94	38	823	69
Future Volume (vph)	66	11	42	232	8	33	55	759	94	38	823	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.881			0.879			0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1674	0	1805	1670	0	1805	3517	0	1805	3574	1615
Flt Permitted	0.000			0.000			0.224			0.314		
Satd. Flow (perm)	0	1674	0	0	1670	0	426	3517	0	597	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			34			21				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	54	0	239	42	0	57	879	0	39	848	71
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.0	14.0		16.0	20.0		9.0	35.0		10.0	36.0	36.0
Total Split (%)	13.3%	18.7%		21.3%	26.7%		12.0%	46.7%		13.3%	48.0%	48.0%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	9.7	8.0		12.1	8.7		41.5	39.0		42.3	39.6	39.6
Actuated g/C Ratio	0.13	0.11		0.16	0.12		0.55	0.52		0.56	0.53	0.53

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

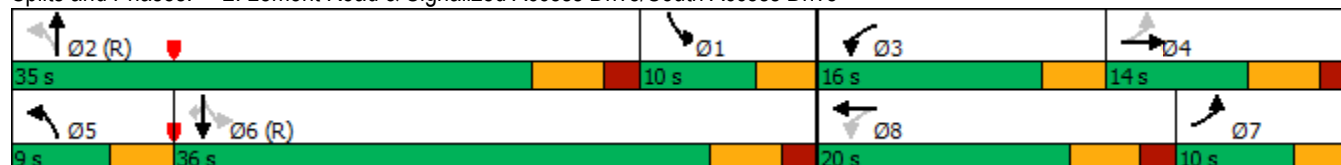


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.25		0.82	0.19		0.17	0.48		0.09	0.45	0.08
Control Delay	31.8	16.6		54.8	16.0		13.3	15.3		5.8	8.3	0.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	31.8	16.6		54.8	16.0		13.3	15.3		5.8	8.3	0.6
LOS	C	B		D	B		B	B		A	A	A
Approach Delay		25.0			49.0			15.1			7.6	
Approach LOS		C			D			B			A	
Queue Length 50th (ft)	28	5		108	3		15	166		5	177	1
Queue Length 95th (ft)	64	36		#221	30		36	227		m11	74	3
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	238	216		300	339		338	1838		443	1886	921
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.29	0.25		0.80	0.12		0.17	0.48		0.09	0.45	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 6 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 16.7 Intersection LOS: B
 Intersection Capacity Utilization 60.2% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC

3: Lemont Road & North Access Drive

06/21/2022

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	21	121	639	21	87	737
Future Vol, veh/h	21	121	639	21	87	737
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	11	0	2	0	0
Mvmt Flow	22	126	666	22	91	768

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1243	344	0	0	688
Stage 1	677	-	-	-	-
Stage 2	566	-	-	-	-
Critical Hdwy	6.82	7.12	-	-	4.1
Critical Hdwy Stg 1	5.82	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-
Follow-up Hdwy	3.51	3.41	-	-	2.2
Pot Cap-1 Maneuver	168	626	-	-	916
Stage 1	469	-	-	-	-
Stage 2	534	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	151	626	-	-	916
Mov Cap-2 Maneuver	286	-	-	-	-
Stage 1	469	-	-	-	-
Stage 2	481	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	532	916
HCM Lane V/C Ratio	-	-	0.278	0.099
HCM Control Delay (s)	-	-	14.4	9.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.1	0.3

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↔			↕↕↕	
Traffic Vol, veh/h	0	0	0	0	0	8	0	900	100	0	1097	0
Future Vol, veh/h	0	0	0	0	0	8	0	900	100	0	1097	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	8	0	938	104	0	1143	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	521
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	505
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	0	505
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	505
HCM Lane V/C Ratio	-	-	0.017
HCM Control Delay (s)	-	-	12.2
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1468	1322	153	0	105
Future Vol, veh/h	0	1468	1322	153	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	0	1545	1392	161	0	111

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	295
HCM Lane V/C Ratio	-	-	-	0.375
HCM Control Delay (s)	-	-	-	24.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	1.7

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	51	28	22	74	112	47
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	51	28	0	96	159	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.96	0.85
Saturated Flow (vph)	1805	1615	0	1878	1816	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		2.1				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	417	1816	
Reference Time A (s)	50.9		0.0	27.6	10.5	
Adj Saturation B (vph)	NA		NA	NA	1816	
Reference Time B (s)	NA		NA	NA	10.5	
Reference Time (s)				27.6	10.5	
Adj Reference Time (s)				31.6	14.5	
Split Option						
Ref Time Combined (s)	3.4		0.0	6.1	10.5	
Ref Time Seperate (s)	3.4		1.5	4.7	7.4	
Reference Time (s)	3.4		6.1	6.1	10.5	
Adj Reference Time (s)	8.0		10.1	10.1	14.5	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		31.6			
Split Option (s)	8.0		24.6			
Minimum (s)	8.0		24.6		32.6	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	14.5					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	22.5					

Intersection Summary
 Intersection Capacity Utilization 27.2% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	59	84	159	37	26	114
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	59	84	0	196	140	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.88	0.85
Saturated Flow (vph)	1805	1615	0	1823	1668	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		6.2				0.0
Adj Reference Time (s)		10.2				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	141	1668	
Reference Time A (s)	58.8		0.0	167.4	10.1	
Adj Saturation B (vph)	NA		NA	NA	1668	
Reference Time B (s)	NA		NA	NA	10.1	
Reference Time (s)				167.4	10.1	
Adj Reference Time (s)				171.4	14.1	
Split Option						
Ref Time Combined (s)	3.9		0.0	12.9	10.1	
Ref Time Seperate (s)	3.9		10.6	2.3	1.9	
Reference Time (s)	3.9		12.9	12.9	10.1	
Adj Reference Time (s)	8.0		16.9	16.9	14.1	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		171.4			
Split Option (s)	8.0		31.0			
Minimum (s)	8.0		31.0		39.0	
Right Turns						
	EBR					
Adj Reference Time (s)	10.2					
Cross Thru Ref Time (s)	14.1					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	24.3					























Intersection Summary
 Intersection Capacity Utilization 32.5% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Capacity Analysis Summary Sheets
Year 2027 No-Build Saturday Midday Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	146	95	23	13	146	636	43	21	567	23
Future Volume (vph)	11	32	146	95	23	13	146	636	43	21	567	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.990			0.994	
Flt Protected		0.988			0.961		0.950			0.950		
Satd. Flow (prot)	0	1836	1599	0	1826	1615	1787	3504	0	1805	3536	0
Flt Permitted		0.908			0.738		0.397			0.361		
Satd. Flow (perm)	0	1687	1599	0	1402	1615	747	3504	0	686	3536	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	1%	0%	0%	0%	1%	2%	2%	0%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	152	0	123	14	152	708	0	22	615	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	13.0	38.0		10.0	35.0	
Total Split (%)	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	17.3%	50.7%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.3	13.3		13.3	13.3	52.0	46.1		47.5	39.5	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.61		0.63	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

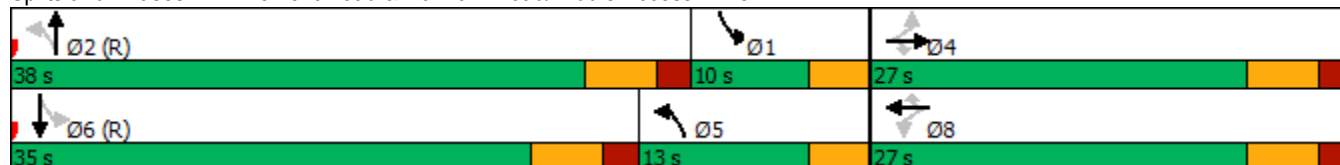


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.15	0.54		0.50	0.05	0.25	0.33		0.04	0.33	
Control Delay		25.4	34.4		33.9	23.6	3.8	3.5		5.0	11.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		25.4	34.4		33.9	23.6	3.8	3.5		5.0	11.8	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		32.4			32.8			3.5			11.6	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		17	65		52	5	11	28		2	77	
Queue Length 95th (ft)		41	112		94	19	25	48		11	139	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		472	447		392	452	677	2151		540	1860	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.09	0.34		0.31	0.03	0.22	0.33		0.04	0.33	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	11 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	11.6
Intersection LOS:	B
Intersection Capacity Utilization	51.0%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	12	48	282	22	69	66	656	150	48	699	61
Future Volume (vph)	100	12	48	282	22	69	66	656	150	48	699	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.881			0.886			0.972				0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1648	0	1805	1683	0	1805	3453	0	1805	3574	1615
Fl _t Permitted	0.833			0.716			0.314			0.260		
Satd. Flow (perm)	1552	1648	0	1360	1683	0	597	3453	0	494	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			72			41				233
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	63	0	294	95	0	69	839	0	50	728	64
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.6	14.0		18.4	21.8		9.0	33.0		9.6	33.6	33.6
Total Split (%)	14.1%	18.7%		24.5%	29.1%		12.0%	44.0%		12.8%	44.8%	44.8%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	15.4	8.0		20.8	8.9		44.6	37.7		44.6	36.3	36.3
Actuated g/C Ratio	0.21	0.11		0.28	0.12		0.59	0.50		0.59	0.48	0.48

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

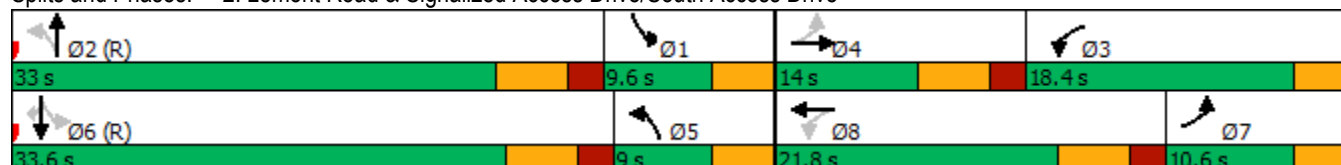


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.29		0.64	0.36		0.16	0.48		0.13	0.42	0.07
Control Delay	22.2	16.6		29.7	15.7		9.7	15.0		4.6	8.9	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	22.2	16.6		29.7	15.7		9.7	15.0		4.6	8.9	0.2
LOS	C	B		C	B		A	B		A	A	A
Approach Delay		20.1			26.3			14.6			8.0	
Approach LOS		C			C			B			A	
Queue Length 50th (ft)	34	6		110	10		13	141		8	87	0
Queue Length 95th (ft)	64	39		168	49		32	213		10	113	1
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	349	220		523	411		443	1756		402	1727	901
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.29		0.56	0.23		0.16	0.48		0.12	0.42	0.07

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	5 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	14.6
Intersection LOS:	B
Intersection Capacity Utilization	61.9%
ICU Level of Service	B
Analysis Period (min)	15

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC

3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	24	116	649	11	118	587
Future Vol, veh/h	24	116	649	11	118	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	25	121	676	11	123	611
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1234	344	0	0	687	0
Stage 1	682	-	-	-	-	-
Stage 2	552	-	-	-	-	-
Critical Hdwy	6.84	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	169	658	-	-	916	-
Stage 1	464	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	146	658	-	-	916	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	464	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.3	0	1.6			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	534	916	-	
HCM Lane V/C Ratio	-	-	0.273	0.134	-	
HCM Control Delay (s)	-	-	14.3	9.5	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	1.1	0.5	-	

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖↗	
Traffic Vol, veh/h	0	0	0	0	0	17	0	855	183	0	1029	0
Future Vol, veh/h	0	0	0	0	0	17	0	855	183	0	1029	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	18	0	929	199	0	1118	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	564
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	474
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	0	474
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	474
HCM Lane V/C Ratio	-	-	0.039
HCM Control Delay (s)	-	-	12.9
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1243	1073	219	0	155
Future Vol, veh/h	0	1243	1073	219	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	1268	1095	223	0	158

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	352
HCM Lane V/C Ratio	-	-	-	0.449
HCM Control Delay (s)	-	-	-	23.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.2

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	59	37	36	116	155	95
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	59	37	0	152	250	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.94	0.85
Saturated Flow (vph)	1805	1615	0	1878	1792	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		2.7				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	406	1792	
Reference Time A (s)	58.8		0.0	45.0	16.7	
Adj Saturation B (vph)	NA		NA	NA	1792	
Reference Time B (s)	NA		NA	NA	16.7	
Reference Time (s)				45.0	16.7	
Adj Reference Time (s)				49.0	20.7	
Split Option						
Ref Time Combined (s)	3.9		0.0	9.7	16.7	
Ref Time Seperate (s)	3.9		2.4	7.3	10.4	
Reference Time (s)	3.9		9.7	9.7	16.7	
Adj Reference Time (s)	8.0		13.7	13.7	20.7	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		49.0			
Split Option (s)	8.0		34.5			
Minimum (s)	8.0		34.5		42.5	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	20.7					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	28.7					

Intersection Summary

Intersection Capacity Utilization 35.4% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	95	115	212	57	31	161
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	95	115	0	269	192	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.87	0.85
Saturated Flow (vph)	1805	1615	0	1825	1661	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		8.5				0.0
Adj Reference Time (s)		12.5				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	144	1661	
Reference Time A (s)	94.7		0.0	224.5	13.9	
Adj Saturation B (vph)	NA		NA	NA	1661	
Reference Time B (s)	NA		NA	NA	13.9	
Reference Time (s)				224.5	13.9	
Adj Reference Time (s)				228.5	17.9	
Split Option						
Ref Time Combined (s)	6.3		0.0	17.7	13.9	
Ref Time Seperate (s)	6.3		14.1	3.6	2.2	
Reference Time (s)	6.3		17.7	17.7	13.9	
Adj Reference Time (s)	10.3		21.7	21.7	17.9	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		228.5			
Split Option (s)	10.3		39.6			
Minimum (s)	10.3		39.6		49.9	
Right Turns						
	EBR					
Adj Reference Time (s)	12.5					
Cross Thru Ref Time (s)	17.9					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	30.4					

Intersection Summary

Intersection Capacity Utilization 41.6% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Capacity Analysis Summary Sheets
Year 2027 Projected Weekday Morning Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	5	197	25	2	20	147	724	35	15	445	5
Future Volume (vph)	8	5	197	25	2	20	147	724	35	15	445	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor			0.850			0.850		0.993			0.998	
Flt Protected		0.971			0.955		0.950			0.950		
Satd. Flow (prot)	0	1845	1615	0	1756	1615	1752	3438	0	1805	3425	0
Flt Permitted		0.874			0.776		0.452			0.283		
Satd. Flow (perm)	0	1661	1615	0	1427	1615	834	3438	0	538	3425	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	50%	0%	3%	4%	10%	0%	5%	20%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	15	221	0	30	22	165	852	0	17	506	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	9.5	25.0		9.5	24.0	
Total Split (s)	28.0	28.0	28.0	28.0	28.0	28.0	14.0	37.0		10.0	33.0	
Total Split (%)	37.3%	37.3%	37.3%	37.3%	37.3%	37.3%	18.7%	49.3%		13.3%	44.0%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		16.3	16.3		16.3	16.3	49.2	44.9		44.3	36.3	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.66	0.60		0.59	0.48	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

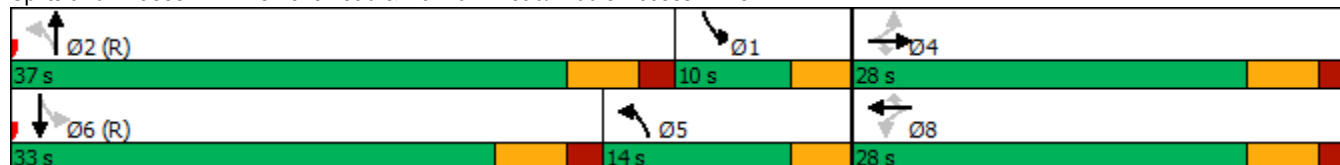


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.04	0.63		0.10	0.06	0.26	0.41		0.04	0.31	
Control Delay		20.8	34.3		22.0	21.3	3.3	5.2		6.0	13.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		20.8	34.3		22.0	21.3	3.3	5.2		6.0	13.5	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		33.4			21.7			4.9			13.3	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		6	94		11	8	10	77		1	67	
Queue Length 95th (ft)		18	145		28	23	11	51		10	127	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		487	473		418	473	715	2058		434	1656	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.03	0.47		0.07	0.05	0.23	0.41		0.04	0.31	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	11.5
Intersection LOS:	B
Intersection Capacity Utilization	49.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	3	7	43	2	25	15	845	48	23	632	12
Future Volume (vph)	36	3	7	43	2	25	15	845	48	23	632	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.891			0.860			0.992				0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1656	1608	0	1805	1634	0	1805	3451	0	1805	3505	1380
Fl _t Permitted							0.383			0.259		
Satd. Flow (perm)	1743	1608	0	1900	1634	0	728	3451	0	492	3505	1380
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			27			8				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	14%	2%	0%	0%	0%	0%	4%	0%	0%	3%	17%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	11	0	46	29	0	16	961	0	25	680	13
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	23.0		9.5	23.0		9.5	25.0		9.5	24.0	24.0
Total Split (s)	10.0	23.0		10.0	23.0		10.0	32.0		10.0	32.0	32.0
Total Split (%)	13.3%	30.7%		13.3%	30.7%		13.3%	42.7%		13.3%	42.7%	42.7%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	8.7	8.0		11.8	8.1		59.6	55.7		59.8	57.5	57.5
Actuated g/C Ratio	0.12	0.11		0.16	0.11		0.79	0.74		0.80	0.77	0.77

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

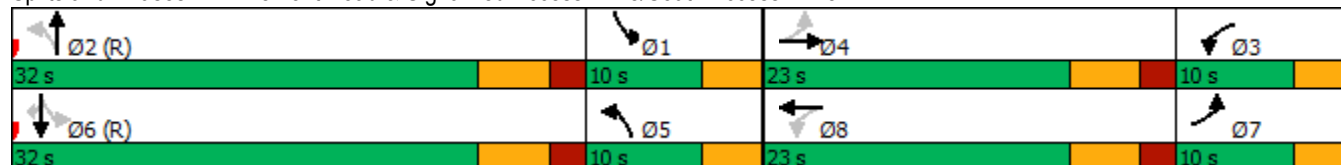
06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.20	0.06		0.16	0.14		0.02	0.37		0.05	0.25	0.01
Control Delay	29.0	21.2		24.6	15.1		4.9	8.5		2.1	2.8	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	29.0	21.2		24.6	15.1		4.9	8.5		2.1	2.8	0.0
LOS	C	C		C	B		A	A		A	A	A
Approach Delay		27.3			20.9			8.5			2.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	17	1		20	1		1	52		0	8	0
Queue Length 95th (ft)	35	16		40	23		9	215		m4	70	m0
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	203	370		295	391		681	2564		509	2686	1091
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.19	0.03		0.16	0.07		0.02	0.37		0.05	0.25	0.01

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 2 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 7.2 Intersection LOS: A
 Intersection Capacity Utilization 43.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC
3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	7	18	735	17	39	458
Future Vol, veh/h	7	18	735	17	39	458
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	3	14	7	4	50	0
Mvmt Flow	7	19	758	18	40	472

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1083	388	0	0	776	0
Stage 1	767	-	-	-	-	-
Stage 2	316	-	-	-	-	-
Critical Hdwy	6.86	7.18	-	-	5.1	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.44	-	-	2.7	-
Pot Cap-1 Maneuver	210	578	-	-	586	-
Stage 1	416	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	196	578	-	-	586	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	416	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	468	586
HCM Lane V/C Ratio	-	-	0.055	0.069
HCM Control Delay (s)	-	-	13.1	11.6
HCM Lane LOS	-	-	B	B
HCM 95th %tile Q(veh)	-	-	0.2	0.2

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖↗	
Traffic Vol, veh/h	0	0	0	0	0	1	0	907	12	0	682	0
Future Vol, veh/h	0	0	0	0	0	1	0	907	12	0	682	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	4	9	0	3	0
Mvmt Flow	0	0	0	0	0	1	0	986	13	0	741	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	- 500	- 0 0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	- 6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	- 3.3	-
Pot Cap-1 Maneuver	0	0 522	0 - - 0 - 0
Stage 1	0	0 -	0 - - 0 - 0
Stage 2	0	0 -	0 - - 0 - 0
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	-	0 522	- - - - -
Mov Cap-2 Maneuver	-	0 -	- - - - -
Stage 1	-	0 -	- - - - -
Stage 2	-	0 -	- - - - -

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 522	-
HCM Lane V/C Ratio	-	- 0.002	-
HCM Control Delay (s)	-	- 11.9	-
HCM Lane LOS	-	- B	-
HCM 95th %tile Q(veh)	-	- 0	-

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1363	887	20	0	34
Future Vol, veh/h	0	1363	887	20	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	3	2	12	0	25
Mvmt Flow	0	1450	944	21	0	36

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	483
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	4.15
Pot Cap-1 Maneuver	0	-	-	-	408
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	408
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	408
HCM Lane V/C Ratio	-	-	-	0.089
HCM Control Delay (s)	-	-	-	14.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.3

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	43	12	7	18	11	40
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	43	12	0	25	51	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.88	0.85
Saturated Flow (vph)	1805	1615	0	1873	1676	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		0.9				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	352	1676	
Reference Time A (s)	42.9		0.0	8.5	3.7	
Adj Saturation B (vph)	NA		0	0	1676	
Reference Time B (s)	NA		8.5	9.6	3.7	
Reference Time (s)				8.5	3.7	
Adj Reference Time (s)				12.5	8.0	
Split Option						
Ref Time Combined (s)	2.9		0.0	1.6	3.7	
Ref Time Seperate (s)	2.9		0.5	1.1	0.8	
Reference Time (s)	2.9		1.6	1.6	3.7	
Adj Reference Time (s)	8.0		8.0	8.0	8.0	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		12.5			
Split Option (s)	8.0		16.0			
Minimum (s)	8.0		12.5		20.5	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	8.0					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	16.0					

Intersection Summary
 Intersection Capacity Utilization 17.1% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization 7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	21	53	51	4	4	19
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	21	53	0	55	23	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.95	0.88	0.85
Saturated Flow (vph)	1805	1615	0	1812	1665	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.9				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	127	1665	
Reference Time A (s)	20.9		0.0	52.0	1.7	
Adj Saturation B (vph)	NA		0	0	1665	
Reference Time B (s)	NA		11.4	11.6	1.7	
Reference Time (s)				11.6	1.7	
Adj Reference Time (s)				15.6	8.0	
Split Option						
Ref Time Combined (s)	1.4		0.0	3.6	1.7	
Ref Time Seperate (s)	1.4		3.4	0.3	0.3	
Reference Time (s)	1.4		3.6	3.6	1.7	
Adj Reference Time (s)	8.0		8.0	8.0	8.0	
Summary	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		15.6			
Split Option (s)	8.0		16.0			
Minimum (s)	8.0		15.6		23.6	
Right Turns	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	8.0					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	16.0					
Intersection Summary						
Intersection Capacity Utilization			19.7%	ICU Level of Service		A
Reference Times and Phasing Options do not represent an optimized timing plan.						

Capacity Analysis Summary Sheets
Year 2027 Projected Weekday Evening Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	19	155	56	19	24	167	633	66	11	727	24
Future Volume (vph)	7	19	155	56	19	24	167	633	66	11	727	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.986				0.995
Flt Protected		0.987			0.964		0.950			0.950		
Satd. Flow (prot)	0	1875	1615	0	1832	1615	1805	3521	0	1805	3557	0
Flt Permitted		0.922			0.763		0.319			0.361		
Satd. Flow (perm)	0	1752	1615	0	1450	1615	606	3521	0	686	3557	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40				40
Link Distance (ft)		667			331			633				695
Travel Time (s)		15.2			7.5			10.8				11.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	2%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	26	158	0	76	24	170	713	0	11	766	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	26.0	26.0	26.0	26.0	26.0	26.0	14.0	39.0		10.0	35.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%	34.7%	34.7%	18.7%	52.0%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.5	13.5		13.5	13.5	52.0	47.7		47.4	39.6	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.64		0.63	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

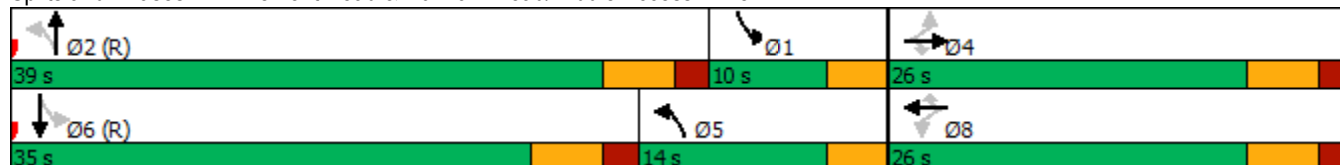


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.08	0.55		0.29	0.08	0.32	0.32		0.02	0.41	
Control Delay		24.2	34.4		28.1	24.2	3.5	2.1		4.8	12.5	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		24.2	34.4		28.1	24.2	3.5	2.1		4.8	12.5	
LOS		C	C		C	C	A	A		A	B	
Approach Delay		33.0			27.2			2.3			12.4	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		10	68		31	9	2	4		1	102	
Queue Length 95th (ft)		28	115		62	27	21	21		7	183	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		467	430		386	430	620	2240		539	1876	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.06	0.37		0.20	0.06	0.27	0.32		0.02	0.41	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.55
Intersection Signal Delay:	10.5
Intersection LOS:	B
Intersection Capacity Utilization	54.2%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	11	42	236	8	33	55	767	102	38	831	69
Future Volume (vph)	66	11	42	236	8	33	55	767	102	38	831	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.881			0.879			0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1674	0	1805	1670	0	1805	3514	0	1805	3574	1615
Flt Permitted	0.000			0.000			0.220			0.305		
Satd. Flow (perm)	0	1674	0	0	1670	0	418	3514	0	580	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			34			22				145
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	68	54	0	243	42	0	57	896	0	39	857	71
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.0	14.0		16.0	20.0		9.0	35.0		10.0	36.0	36.0
Total Split (%)	13.3%	18.7%		21.3%	26.7%		12.0%	46.7%		13.3%	48.0%	48.0%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effct Green (s)	9.7	8.0		12.1	8.7		41.5	39.0		42.3	39.6	39.6
Actuated g/C Ratio	0.13	0.11		0.16	0.12		0.55	0.52		0.56	0.53	0.53

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

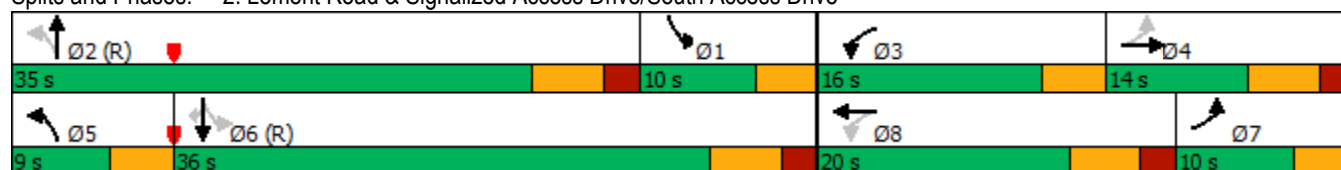


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.25		0.84	0.19		0.17	0.49		0.09	0.45	0.08
Control Delay	31.8	16.6		56.4	16.0		13.3	15.4		6.1	8.6	0.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	31.8	16.6		56.4	16.0		13.3	15.4		6.1	8.6	0.7
LOS	C	B		E	B		B	B		A	A	A
Approach Delay		25.0			50.4			15.2			7.9	
Approach LOS		C			D			B			A	
Queue Length 50th (ft)	28	5		110	3		15	171		6	181	0
Queue Length 95th (ft)	64	36		#226	30		36	233		m12	78	4
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	238	216		300	339		334	1837		435	1886	921
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.29	0.25		0.81	0.12		0.17	0.49		0.09	0.45	0.08

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 6 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 17.0 Intersection LOS: B
 Intersection Capacity Utilization 60.9% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC 3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	1.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		↑	↑↑
Traffic Vol, veh/h	21	125	643	21	91	741
Future Vol, veh/h	21	125	643	21	91	741
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	1	11	0	2	0	0
Mvmt Flow	22	130	670	22	95	772

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1257	346	0	0	692	0
Stage 1	681	-	-	-	-	-
Stage 2	576	-	-	-	-	-
Critical Hdwy	6.82	7.12	-	-	4.1	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.41	-	-	2.2	-
Pot Cap-1 Maneuver	164	625	-	-	912	-
Stage 1	467	-	-	-	-	-
Stage 2	528	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	147	625	-	-	912	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	473	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.5	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	532	912
HCM Lane V/C Ratio	-	-	0.286	0.104
HCM Control Delay (s)	-	-	14.5	9.4
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.2	0.3

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↔			↕↕↕	
Traffic Vol, veh/h	0	0	0	0	0	8	0	916	100	0	1109	0
Future Vol, veh/h	0	0	0	0	0	8	0	916	100	0	1109	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	8	0	954	104	0	1155	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	529
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	499
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	0	499
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	499
HCM Lane V/C Ratio	-	-	0.017
HCM Control Delay (s)	-	-	12.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC
5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1468	1325	157	0	112
Future Vol, veh/h	0	1468	1325	157	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	0	1545	1395	165	0	118

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	-
Pot Cap-1 Maneuver	0	-	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	25.2
HCM LOS			D

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	294
HCM Lane V/C Ratio	-	-	-	0.401
HCM Control Delay (s)	-	-	-	25.2
HCM Lane LOS	-	-	-	D
HCM 95th %tile Q(veh)	-	-	-	1.9

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	70	26	22	82	118	77
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	70	26	0	104	195	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.94	0.85
Saturated Flow (vph)	1805	1615	0	1880	1787	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		1.9				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	445	1787	
Reference Time A (s)	69.8		0.0	28.0	13.1	
Adj Saturation B (vph)	NA		NA	NA	1787	
Reference Time B (s)	NA		NA	NA	13.1	
Reference Time (s)				28.0	13.1	
Adj Reference Time (s)				32.0	17.1	
Split Option						
Ref Time Combined (s)	4.7		0.0	6.6	13.1	
Ref Time Seperate (s)	4.7		1.5	5.2	7.9	
Reference Time (s)	4.7		6.6	6.6	13.1	
Adj Reference Time (s)	8.7		10.6	10.6	17.1	
Summary						
	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		32.0			
Split Option (s)	8.7		27.7			
Minimum (s)	8.7		27.7		36.4	
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	17.1					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	25.1					

Intersection Summary

Intersection Capacity Utilization 30.3% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization 7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	67	84	159	37	26	118
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right	No				No	
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	67	84	0	196	144	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.88	0.85
Saturated Flow (vph)	1805	1615	0	1823	1666	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00	
Protected Option Allowed	No		No		No	
Reference Time (s)	6.2				0.0	
Adj Reference Time (s)	10.2				0.0	
Permitted Option						
Adj Saturation A (vph)	120		0	141	1666	
Reference Time A (s)	66.8		0.0	167.4	10.4	
Adj Saturation B (vph)	NA		NA	NA	1666	
Reference Time B (s)	NA		NA	NA	10.4	
Reference Time (s)			167.4		10.4	
Adj Reference Time (s)			171.4		14.4	
Split Option						
Ref Time Combined (s)	4.5		0.0	12.9	10.4	
Ref Time Seperate (s)	4.5		10.6	2.3	1.9	
Reference Time (s)	4.5		12.9	12.9	10.4	
Adj Reference Time (s)	8.5		16.9	16.9	14.4	
Summary	EB		NB SB	Combined		
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		171.4			
Split Option (s)	8.5		31.3			
Minimum (s)	8.5		31.3	39.7		
Right Turns	EBR					
Adj Reference Time (s)	10.2					
Cross Thru Ref Time (s)	14.4					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	24.6					

Intersection Summary

Intersection Capacity Utilization 33.1% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Capacity Analysis Summary Sheets
Year 2027 Projected Saturday Midday Peak Hour
Conditions

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	32	146	112	23	38	146	616	70	33	559	23
Future Volume (vph)	11	32	146	112	23	38	146	616	70	33	559	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		105	0		85	175		0	135		0
Storage Lanes	0		1	0		1	1		0	1		0
Taper Length (ft)	60			25			165			120		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.985			0.994	
Flt Protected		0.988			0.960		0.950			0.950		
Satd. Flow (prot)	0	1836	1599	0	1824	1615	1787	3486	0	1805	3536	0
Flt Permitted		0.904			0.732		0.402			0.357		
Satd. Flow (perm)	0	1680	1599	0	1391	1615	756	3486	0	678	3536	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			40			40	
Link Distance (ft)		667			331			633			695	
Travel Time (s)		15.2			7.5			10.8			11.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	9%	0%	1%	0%	0%	0%	1%	2%	2%	0%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	152	0	141	40	152	715	0	34	606	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0	3.0	15.0		3.0	15.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	27.0	27.0	27.0	27.0	27.0	27.0	13.0	38.0		10.0	35.0	
Total Split (%)	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%	17.3%	50.7%		13.3%	46.7%	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0		3.5	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0	6.0		6.0	6.0	3.5	6.0		3.5	6.0	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Min		None	C-Min	
Act Effct Green (s)		13.3	13.3		13.3	13.3	52.0	46.0		47.5	39.4	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.69	0.61		0.63	0.53	

Lanes, Volumes, Timings

1: Lemont Road & Dunham Road/Middle Access Drive

06/21/2022

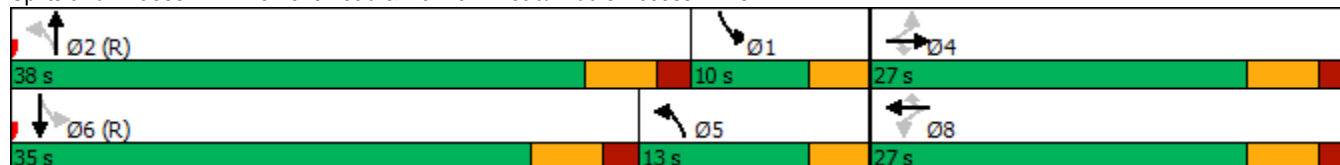


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.15	0.54		0.57	0.14	0.25	0.33		0.07	0.33	
Control Delay		25.4	34.3		36.8	25.3	3.8	3.5		5.1	11.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		25.4	34.3		36.8	25.3	3.8	3.5		5.1	11.8	
LOS		C	C		D	C	A	A		A	B	
Approach Delay		32.3			34.3			3.5			11.5	
Approach LOS		C			C			A			B	
Queue Length 50th (ft)		17	65		61	16	11	28		3	75	
Queue Length 95th (ft)		41	111		106	38	24	48		14	137	
Internal Link Dist (ft)		587			251			553			615	
Turn Bay Length (ft)			105			85	175			135		
Base Capacity (vph)		470	447		389	452	682	2138		535	1857	
Starvation Cap Reductn		0	0		0	0	0	0		0	0	
Spillback Cap Reductn		0	0		0	0	0	0		0	0	
Storage Cap Reductn		0	0		0	0	0	0		0	0	
Reduced v/c Ratio		0.09	0.34		0.36	0.09	0.22	0.33		0.06	0.33	

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	11 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.57
Intersection Signal Delay:	12.2
Intersection LOS:	B
Intersection Capacity Utilization	51.7%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 1: Lemont Road & Dunham Road/Middle Access Drive



Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	12	48	287	22	69	66	663	157	48	708	61
Future Volume (vph)	100	12	48	287	22	69	66	663	157	48	708	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	85		0	85		0	200		0	70		160
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	75			75			130			175		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.881			0.886			0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1648	0	1805	1683	0	1805	3450	0	1805	3574	1615
Flt Permitted	0.833			0.716			0.308			0.251		
Satd. Flow (perm)	1552	1648	0	1360	1683	0	585	3450	0	477	3574	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		50			72			43				233
Link Speed (mph)		30			30			40				40
Link Distance (ft)		302			294			366				633
Travel Time (s)		6.9			6.7			6.2				10.8
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	2%	0%	0%	0%	0%	2%	0%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	104	63	0	299	95	0	69	855	0	50	738	64
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	15.0
Minimum Split (s)	9.5	14.0		9.5	14.0		9.0	24.0		9.5	24.0	24.0
Total Split (s)	10.6	14.0		18.4	21.8		9.0	33.0		9.6	33.6	33.6
Total Split (%)	14.1%	18.7%		24.5%	29.1%		12.0%	44.0%		12.8%	44.8%	44.8%
Yellow Time (s)	3.5	4.0		3.5	4.0		3.5	4.0		3.5	4.0	4.0
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	6.0
Lead/Lag	Lag	Lead		Lag	Lead		Lag	Lead		Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	C-Min
Act Effect Green (s)	15.5	8.0		21.0	8.9		44.4	37.5		44.4	36.1	36.1
Actuated g/C Ratio	0.21	0.11		0.28	0.12		0.59	0.50		0.59	0.48	0.48

Lanes, Volumes, Timings

2: Lemont Road & Signalized Access Drive/South Access Drive

06/21/2022

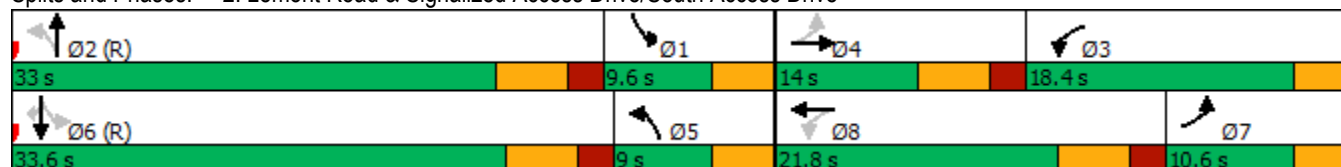


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.29		0.65	0.36		0.16	0.49		0.13	0.43	0.07
Control Delay	21.9	16.6		29.7	15.7		9.8	15.3		4.8	9.1	0.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.9	16.6		29.7	15.7		9.8	15.3		4.8	9.1	0.2
LOS	C	B		C	B		A	B		A	A	A
Approach Delay		19.9			26.3			14.9			8.1	
Approach LOS		B			C			B			A	
Queue Length 50th (ft)	34	6		111	10		13	145		8	92	0
Queue Length 95th (ft)	64	39		170	49		32	220		11	118	1
Internal Link Dist (ft)		222			214			286			553	
Turn Bay Length (ft)	85			85			200			70		160
Base Capacity (vph)	353	220		523	411		435	1747		392	1719	897
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.29	0.29		0.57	0.23		0.16	0.49		0.13	0.43	0.07

Intersection Summary

Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	75
Offset:	5 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.65
Intersection Signal Delay:	14.7
Intersection LOS:	B
Intersection Capacity Utilization:	62.6%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 2: Lemont Road & Signalized Access Drive/South Access Drive



HCM 6th TWSC 3: Lemont Road & North Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	24	121	654	11	122	591
Future Vol, veh/h	24	121	654	11	122	591
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	25	126	681	11	127	616

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1249	346	0	0	692
Stage 1	687	-	-	-	-
Stage 2	562	-	-	-	-
Critical Hdwy	6.84	6.9	-	-	4.1
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.3	-	-	2.2
Pot Cap-1 Maneuver	165	656	-	-	912
Stage 1	461	-	-	-	-
Stage 2	534	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	142	656	-	-	912
Mov Cap-2 Maneuver	275	-	-	-	-
Stage 1	461	-	-	-	-
Stage 2	460	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.4	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	534	912
HCM Lane V/C Ratio	-	-	0.283	0.139
HCM Control Delay (s)	-	-	14.4	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	1.2	0.5

HCM 6th TWSC
4: Lemont Road & Right-In/Right-Out Access Drive

06/21/2022

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations						↗		↕↗			↕↖↗	
Traffic Vol, veh/h	0	0	0	0	0	17	0	869	183	0	1043	0
Future Vol, veh/h	0	0	0	0	0	17	0	869	183	0	1043	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	3	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	1	1	0	1	0
Mvmt Flow	0	0	0	0	0	18	0	945	199	0	1134	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	-	572
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	0	468
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	0	468
Mov Cap-2 Maneuver	-	0	-
Stage 1	-	0	-
Stage 2	-	0	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	468
HCM Lane V/C Ratio	-	-	0.039
HCM Control Delay (s)	-	-	13
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC

5: 75th Street & Right-In/Right-Out Access Drive

06/21/2022

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1243	1076	223	0	163
Future Vol, veh/h	0	1243	1076	223	0	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	1	1	0	0	0
Mvmt Flow	0	1268	1098	228	0	166
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	663
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	-	0	350
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	350
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	0	0	24.3			
HCM LOS						C
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	350		
HCM Lane V/C Ratio	-	-	-	0.475		
HCM Control Delay (s)	-	-	-	24.3		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	2.5		

Intersection Capacity Utilization 6: Internal Drive & Middle Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	93	42	36	123	155	137
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	93	42	0	159	292	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.99	0.93	0.85
Saturated Flow (vph)	1805	1615	0	1878	1766	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		3.1				0.0
Adj Reference Time (s)		8.0				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	421	1766	
Reference Time A (s)	92.7		0.0	45.3	19.8	
Adj Saturation B (vph)	NA		NA	NA	NA	
Reference Time B (s)	NA		NA	NA	NA	
Reference Time (s)				45.3	19.8	
Adj Reference Time (s)				49.3	23.8	
Split Option						
Ref Time Combined (s)	6.2		0.0	10.2	19.8	
Ref Time Seperate (s)	6.2		2.4	7.8	10.5	
Reference Time (s)	6.2		10.2	10.2	19.8	
Adj Reference Time (s)	10.2		14.2	14.2	23.8	
Summary						
	EB		NB SB	Combined		
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		49.3			
Split Option (s)	10.2		38.0			
Minimum (s)	10.2		38.0	48.2		
Right Turns						
	EBR					
Adj Reference Time (s)	8.0					
Cross Thru Ref Time (s)	23.8					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	31.8					

Intersection Summary

Intersection Capacity Utilization 40.1% ICU Level of Service A
 Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization

7: Internal Drive & South Access Drive

06/21/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	102	115	212	57	31	166
Pedestrians						
Ped Button						
Pedestrian Timing (s)						
Free Right		No				No
Ideal Flow	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120
Volume Combined (vph)	102	115	0	269	197	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.85	0.95	0.96	0.87	0.85
Saturated Flow (vph)	1805	1615	0	1825	1660	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00	
Protected Option Allowed	No			No	No	
Reference Time (s)		8.5				0.0
Adj Reference Time (s)		12.5				0.0
Permitted Option						
Adj Saturation A (vph)	120		0	144	1660	
Reference Time A (s)	101.7		0.0	224.5	14.2	
Adj Saturation B (vph)	NA		NA	NA	1660	
Reference Time B (s)	NA		NA	NA	14.2	
Reference Time (s)				224.5	14.2	
Adj Reference Time (s)				228.5	18.2	
Split Option						
Ref Time Combined (s)	6.8		0.0	17.7	14.2	
Ref Time Seperate (s)	6.8		14.1	3.6	2.2	
Reference Time (s)	6.8		17.7	17.7	14.2	
Adj Reference Time (s)	10.8		21.7	21.7	18.2	
Summary	EB		NB SB		Combined	
Protected Option (s)	NA		NA			
Permitted Option (s)	Err		228.5			
Split Option (s)	10.8		39.9			
Minimum (s)	10.8		39.9		50.7	
Right Turns	EBR					
Adj Reference Time (s)	12.5					
Cross Thru Ref Time (s)	18.2					
Oncoming Left Ref Time (s)	0.0					
Combined (s)	30.8					
Intersection Summary						
Intersection Capacity Utilization			42.3%		ICU Level of Service	A
Reference Times and Phasing Options do not represent an optimized timing plan.						

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**VILLAGE OF DOWNERS GROVE
PLAN COMMISSION MEETING**

September 12, 2022, 7:00 P.M.

22-PLC-0026: A PETITION SEEKING AN AMENDMENT TO PLANNED DEVELOPMENT #18, A SPECIAL USE FOR A RESTAURANT WITH A DRIVE-THROUGH, AND A FINAL PLAT OF SUBDIVISION WITH AN EXCEPTION TO LOT FRONTAGE. THE PROPERTY IS CURRENTLY ZONED B-2/P.D. #18, GENERAL RETAIL BUSINESS/PLANNED UNIT DEVELOPMENT #18. THE PROPERTY IS LOCATED AT THE NORTHEAST CORNER OF LEMONT ROAD AND 75TH STREET, COMMONLY KNOWN AS 7221-7451 LEMONT ROAD, DOWNERS GROVE, IL (PIN: 09-29-110-002 TO -008, -013 TO -016), PMAT, DDP, LLC, OWNERS AND PETITIONER.

Mr. Jason Reibert, introduced himself as a part of Gulf State Construction Services. He noted that this project was part of an ongoing redevelopment plan at this shopping center. Mr. Reibert shared that the scope of work included a new 5,000SF restaurant and retail building on a new outlot on the west side of the Downers Park Plaza and to the east of Burger King and 3 Corners Grill & Tap. He also shared that the new outlot to the south was previously approved and under construction. Mr. Reibert noted that the proposed lot was located in an area of parking away from retail parking allowing for a redevelopment opportunity. He then noted that no new access points would be proposed. Additionally, he stated that the parking study found that the internal circulation would not be negatively impacted and that there would be sufficient parking available. Mr. Reibert noted that there were existing utilities and drainage on the site. He then shared the elevations and highlighted that similar architecture would complement the existing buildings in the shopping center. Mr. Reibert explained that the proposal included a restaurant with a drive-through window. He also noted that the proposed outlot would meet the subdivision requirements. Mr. Reibert shared that the one item that would require an exception is the street frontage since access to Lemont Street was not possible. He noted that to address a lack of access a cross access agreement would be granted on lot 7. Mr. Reibert concluded his presentation by stating that the criteria for each entitlement request was met.

Chairman Rickard thanked Mr. Reibert, and asked the Commission to present questions.

Commissioner Dmytryszyn asked for more clarification on the internal traffic patterns with the proposal and upcoming Panera building. Mr. Reibert explained that the outlot location was chosen because this area of parking was rarely used. Additionally, the outlot would be directly located adjacent to the main access point off of Lemont Street. As such, this existing access point would help funnel the traffic toward the new outlot.

Chairman Rickard invited for any additional public comment.

Mr. Haran Rashes shared that he lived directly north of Lemont Road. He stated that he was opposed to the petition because of the additional traffic that would be produced and its impact on

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pedestrians. Mr. Rashes shared that he found the traffic study inaccurate and disagreed with the results. He acknowledged that he understood that Lemont Road was under county jurisdiction but noted that he had concerns over the lack of pedestrian signage and crosswalks. Mr. Rashes stated that crossing Lemont Road was not safe.

Mr. Scott Richards, asked why new development was being clustered in the Downers Park Plaza. Chairman Rickard shared that the petitioner could respond that but it sounded like the location was based on the underutilization of the existing parking lot.

Chairman Rickard then invited staff to make their presentation.

Ms. Flora Leon, Senior Planner, summarized the request stating that the petitioner was requesting approval for a planned unit development amendment, special use for a drive-through, and a final plat of subdivision with an exception to lot frontage. Providing a location map she noted the subject site was located east along Lemont Road. The existing zoning district was B-2/P.D. #18 or General Retail Business with an overlay of Planned Unit Development #18. Ms. Leon noted that the required noticing was provided and staff received one phone call asking for information on the future tenants.

Ms. Leon then provided an overall shopping center site plan for reference. She noted that the proposed outlot was located just east of 3 Corners Grill & Tap and Burger King. The proposed future building would include two tenants. She then provided the proposed outlot site plan. Ms. Leon highlighted that as shown on the site plan the outlot did not have frontage along Lemont Street. She noted that the request for the subdivision included a request to deviate from the street frontage requirement. This said, Ms. Leon stated that no change would be occurring to the access of the shopping center along Lemont Street. She then shared that the new outlot would have three entrances and one would be dedicated for the proposed drive-through. Ms. Leon reminded the Plan Commission that the special use request was for this newly proposed drive-through. She went on to share that the trash enclosure would include the required screening and that a pedestrian connection would lead pedestrians onto the existing sidewalk on Lemont Street with permission of the owners at the 3 Corners Grill & Tap. On this note, Ms. Leon explained that staff would also be open to having the petitioner provide a connection out to the sidewalks on Lemont Street via the Burger King lot. If the Plan Commission agreed with this option when making a motion they would simply need to amend the conditions of approval items 3 and 4.

Ms. Leon then shared the elevations of the proposed building and explained that the materials included EIFS and face brick. She then shared that the proposal met the goals of the Comprehensive Plan and that the criteria for a Planned Unit Development, Special Use, and a Subdivision with an Exception were all met. She noted that if the Plan Commission agreed a draft motion could be found on pages 6 and 7 of the staff report.

Commissioner Rector asked for clarification on modifying the conditions of approval. Specifically she asked if the connection had to be designated now. Ms. Leon explained that the conditions of approval, items 3 and 4, could be reworked to allow flexibility for the connection to be established on Lot 7 or 6N.

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Commissioner Rector asked if the Village had any oversight over the crosswalks on Lemont Street. Ms. Leon offered that staff would work with the Public Work Traffic Manger to see if they could reach out to the County to express those concerns.

Commissioner Rector noted that regardless of whether this project happens that concerns needs to be addressed. Mr. Zawila added that that concern was noted on the record and that staff would follow up with Public Works on this matter.

Chairman Rickard noted that if the drive-through ended up on the southern building the stacking would not work and so this design is locked in for the most part. Ms. Leon agreed and stated that the site plan is really the only configuration that worked for the site.

Mr. Reibert explained that while he understood the concern over the crosswalks on Lemont, their scope of work really ends once they are able to make the connection to the sidewalk on Lemont Street. He then explained that the outlot location was chosen because it is centrally located and it is an area seldomly used in the shopping mall. He also noted that this was the only location where they would not negatively impact the existing parking areas of businesses like Shop & Save.

Commissioner Toth, agreed that this area of parking is rarely used and the proposed use would fit in well with the existing mix of users.

Commissioner Dmytryszyn agreed that the area of parking was rarely used and noted that great projects are happening at this shopping center. He mentioned that he did have concerns over the interior traffic patterns and that the data for volume of traffic in the traffic report seemed light.

Commissioner Rector stated she would rather leave the condition of approval for the connection on Lot 7.

Commissioner Roche asked for clarification on which lot was in questions. Mr. Zawila explained lot 7 was 3 Corner Grill & Tap and lot 6N was the Burger King. Commissioner Rector noted that the connection made more sense on lot 7.

Mr. Zawila added that staff offered this evening that either lot 7 or 6N would work for this proposal just in case the petitioner and owner of lot 7 cannot come to an agreement. He noted that this was another option for the conditions. If the condition remains with only making mention of lot 7; then the petitioner would need to come back to plan commission if this connection needs to occur on lot 6N instead. Commissioner Rector agreed that lot 6N should be added in.

WITH RESPECT TO FILE 22-PLC-0026 AND BASED ON THE PETITIONER'S SUBMITTAL, THE STAFF REPORT, AND THE TESTIMONY PRESENTED, COMMISSIONER RECTOR MADE A MOTION THAT THE PETITIONER HAS MET THE STANDARDS OF APPROVAL FOR AN AMENDMENT TO PLANNED DEVELOPMENT #18, A SPECIAL USE FOR A RESTAURANT WITH A DRIVE-THROUGH, AND A FINAL PLAT OF SUBDIVISION WITH AN EXCEPTION TO LOT

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FRONTAGE AS REQUIRED BY THE VILLAGE OF DOWNERS GROVE ZONING ORDINANCE AND IS IN THE PUBLIC INTEREST AND THEREFORE, I MOVE THAT THE PLAN COMMISSION RECOMMEND TO THE VILLAGE COUNCIL APPROVAL OF 22-PLC-0026, SUBJECT TO THE FOLLOWING CONDITIONS:

- 1. THE PLANNED UNIT DEVELOPMENT, SPECIAL USE, AND A PLAT OF SUBDIVISION WITH AN EXCEPTION TO CREATE A NEW OUTLOT WITHOUT STREET FRONTAGE SHALL SUBSTANTIALLY CONFORM TO THE STAFF REPORT; AND DRAWINGS PREPARED BY WOOLPERT ENGINEERING SUBMITTED ON 8/24/22, AND BY ZITO RUSSELL ARCHITECTS UPDATED ON 8/3/22, EXCEPT AS SUCH PLANS MAY BE MODIFIED TO CONFORM TO THE VILLAGE CODES AND ORDINANCES.**
- 2. A PERPETUAL CROSS ACCESS AND PARKING EASEMENT IS PROVIDED BETWEEN LOTS 2-A AND LOT 1-B AND IS SHOWN ON THE PLAT OF SUBDIVISION.**
- 3. THE PEDESTRIAN CONNECTION SHALL BE SECURED WITH THE APPROVAL OF THE PROPERTY OWNER AT 7231 OR 7301 LEMONT ROAD.**
- 4. A PEDESTRIAN EASEMENT SHALL BE PROVIDED ON LOT 7 (7231 LEMONT ROAD) OR LOT 6N (7301) FOR THE BENEFIT OF PUBLIC ACCESS TO LOT 1-B.**
- 5. THE PEDESTRIAN CONNECTION ON LOT 1-B MUST BE CLEARLY DIFFERENTIATED THROUGH THE USE OF ELEVATION CHANGES, A DIFFERENT PAVING MATERIAL OR OTHER EQUALLY EFFECTIVE METHODS.**
- 6. THE PHOTOMETRIC PLAN SHALL CONFORM TO THE VILLAGE ZONING ORDINANCE.**
- 7. ALL SIGNAGE SHALL BE PERMITTED SEPARATELY AND CONFORM TO THE VILLAGE'S SIGN ORDINANCE.**
- 8. A FINAL PLAT OF SUBDIVISION WILL BE REQUIRED PRIOR TO PERMIT ISSUANCE.**

SECOND BY COMMISSIONER TOTH. ROLL CALL:

AYE: COMMISSIONERS RECTOR, TOTH, DMYTRYSZYN, MAURER, ROCHE, PATEL, AND CHAIRMAN RICKARD

MOTION PASSED. VOTE: 7-0

/s/ Village Staff
 Recording Secretary
 (As transcribed by MP-3 audio)