VILLAGE OF DOWNERS GROVE
Report for the Village
2/13/2024

SUBJECT:	SUBMITTED BY:
Planned Unit Development #31 Amendment for the construction of a new multi-family residential development	Stan Popovich, AICP Director of Community Development

SYNOPSIS

The petitioner is proposing to build a new multi-family residential development and is requesting approval of the following:

- Planned Unit Development amendment to Planned Unit Development #31, Esplanade at Locust Point
- Final Plat of Subdivision

STRATEGIC PLAN ALIGNMENT

The goals for 2023-2025 include *Strong and Diverse Local Economy*.

FISCAL IMPACT

N/A

RECOMMENDATION

Approval on the February 20, 2024 Active Agenda per the Plan Commission's unanimous (7-0) recommendation. The Plan Commission found that the proposal is an appropriate use in the Planned Unit Development, is compatible with the Comprehensive Plan, meets the standards for a Planned Unit Development amendment and complies with the Subdivision standards, respectively, in Sections 28.12.040.C.5 and 20.301.

BACKGROUND

Property Information & Zoning Request

The petitioner is proposing to construct a new multi-family residential development at the northwest intersection of Lacey Road and Woodcreek Drive. The multi-family residential development will be located on a new 9.23 acre lot within the Esplanade at Locust Point development. The property is zoned O-R-M/P.U.D., Office-Research-Manufacturing/ Planned Unit Development #31. The petitioner is requesting:

- A Planned Unit Development Amendment to permit the construction of a multi-family residential development.
- A Plat of Subdivision to create two lots of record; and

Development History

PUD #31 was approved in 1990 with a master site development plan and has been amended multiple times to allow for different building layouts, developments and uses. Most recently in 2022 the PUD was amended to

add multi-family residential as an approved allowed use within PUD #31. Currently, the PUD includes approximately 2.1 million square feet of office space, a hotel, a restaurant, a university and a day care center.

The multi-family residential development proposal consists of three, four-story buildings. Each building will be composed of 99 units for a total of 297 apartments. The amenities included with the 8,000 square foot club house are: a swimming pool, sundecks, open spaces, dog walking areas, meeting spaces, a full-service fitness center and work spaces. The three residential buildings will include a total of 195 parking spaces and bike storage within the interior parking levels. Additionally, a total of 295 parking spaces will be provided via the exterior surface parking lots. The petitioner is requesting a deviation from the required 594 parking spaces, considering the development only provides a total 490 parking spaces. New access points will be provided to the new development further described below.

Lastly, the petitioner is requesting to subdivide the subject property into two lots of record. The second lot, north of where the multi-family development will be located, is planned for a future office building and parking deck. The petitioner will be required to finalize the proposed development plans for the future office buildings in detail, including all engineering related items such as stormwater management, and to request approval of a PUD Amendment.

Compliance with the Comprehensive Plan

The Future Land Use Plan designates the site as Office Corporate Campus. Moreover, the Comprehensive Plan identifies the future land use of the Esplanade as a continuing commercial development. However, as previously noted, in 2022 the Plan Commission and Village Council found that multi-family residential is an appropriate use in the Planned Unit Development and deemed it compatible with the Comprehensive Plan.

The Butterfield Focus Area Plan calls for:

- Development and redevelopment should be focused on attracting a regional customer base as well as providing services, retail, and entertainment to the substantial daytime population.

The remaining vacant property within PUD #31 has been identified in The Comprehensive Plan as Catalyst Site # C1. The Plan identifies the following key features of Catalyst Site #C1:

- Previously approved as part of a Planned Unit Development, these sites have not yet developed. With excellent visibility and access, these parcels could accommodate additional office development, restaurants or retail. The northern vacant lot is still planned for an office development.

The Comprehensive Plan further states that new multi-family residential areas should:

- Maintain a setback, height, bulk, and orientation similar to that of neighboring developments.
- Provide for a variety of housing and dwelling unit types and densities, generally organized by dwelling types, lot-sizes, etc.
- Be located near significant activity centers and along major roadways as well as a component of mixed-use development within Downtown Downers Grove. The zoning ordinance should be revised to allow for additional multi-family development as identified in the Land Use Plan and subarea plans.

The Comprehensive Plan also notes the following:

- Reinvestment should occur in the Finley Road/Butterfield Road area to improve the aesthetics and function of regional commercial uses.

Compliance with the Zoning Ordinance

The property is zoned O-R-M/PUD, Office-Research-Manufacturing/ Planned Unit Development #31. The proposal includes a request for a Planned Unit Development Amendment to allow for the construction of a

new multi-family residential development, which is a permitted use in the PUD #31. As noted in Table 1 in the Plan Commission staff report, the proposed development will have 490 parking spaces, where the required is 594. All other Zoning Ordinance requirements are met.

Compliance with the Subdivision Ordinance

The petitioner is proposing to subdivide one existing lot of record into two lots of record. The southern lot is the proposed location for the residential development. The northern lot will remain vacant, but is planned for an office building and parking deck in the future. The final plat of subdivision is in compliance with the minimum lot dimension requirements as outlined in Section 20.301 of the Village's Subdivision Ordinance. 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 and 2.

Engineering and Public Improvements

The proposed multi-family residential development will be located on the proposed subdivided Lot 1. The overall Esplanade campus drains in a westerly direction and the stormwater detention for the entire development was designed in a series of lakes. The proposed development does require additional stormwater detention. The required detention volume will be provided by modifying three existing ponds to gain additional volume. Modifications will include: raising the high water level elevation, minor re-grading, overflow weir adjustments, and adjustments to the outfall restrictor pipe. Based on the existing impervious area on the site and the proposed impervious area, the proposed development requires Post Construction Best Management Practices (PCBMPs). This additional volume will be provided in three basins: two basins will be located within large parking lot islands in the multi-family residential development and a third basin will be located immediately west of Building #3. Lastly, the proposed development will provide access via a right-in/right-out access drive on Lacey Road and via two full-movement access drives on Woodcreek Drive.

Traffic and Parking

A traffic impact study for the proposed development was completed by the petitioner. The study examined the existing and future traffic conditions based on the proposed development. The proposed development is projected to generate primarily outbound traffic during the weekday morning and inbound traffic during the weekday evening. This direction of traffic is the opposite of other area developments, which are primarily office and industrial. The area roadway system was found to have sufficient reserve capacity to accommodate the traffic.

As noted above, the development will provide 490 residential parking spaces where 594 are required. As such, the proposed development will provide parking at a ratio of 1.65 spaces per residential unit; where the required parking ratio per the Zoning Ordinance is 2 spaces per dwelling unit. The petitioner's rationale for the relief request has found that the provided parking will be adequate based on similar rental communities that they have constructed, which is further reinforced by their traffic impact study. Based on the rates published in the *Institute of Transportation Engineers' (ITE) 5th Edition of the Parking Generational Manual*, the proposed development should provide a total of 389 parking spaces (parking ratio of 1.31 spaces per dwelling unit) to accommodate the peak parking demand (Monday-Friday).

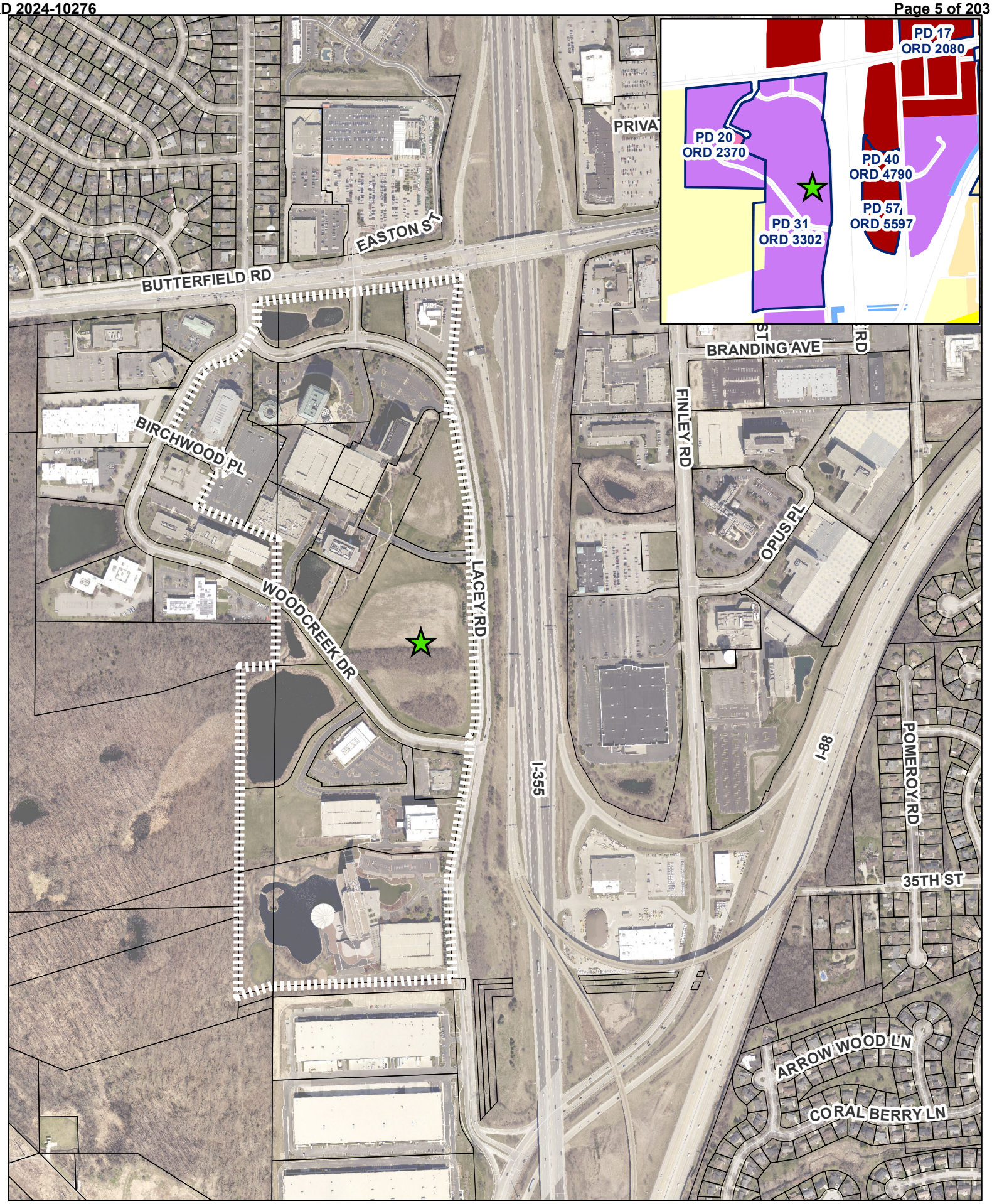
Public Comment

Prior to the Plan Commission meeting staff received the attached correspondence from the DuPage County Forest Preserve. During the Plan Commission meeting, two members of the public provided input. Public comments included concern over the reduced number of parking spaces, the proposed design of the buildings and clarification if additional traffic lights were needed because of the development. The petitioner noted that the traffic and parking study identified that there was sufficient parking provided for the development and that

no additional traffic lights would be required. The petitioner further stated that the architecture design incorporated elements of other Esplanade buildings in the PUD.

ATTACHMENTS

Aerial Map
Ordinance
Staff Report with attachments dated January 22, 2024
Draft Minutes of the Plan Commission Hearing dated January 22, 2024
Public Correspondence



N

0 250 500 1,000 Feet

3201, 3211, 3221, 3231 Woodcreek Drive - Location Map

Subject Property

Project Location

ORDINANCE NO. _____

**AN ORDINANCE APPROVING AN
AMENDMENT TO PLANNED UNIT DEVELOPMENT #31
TO CONSTRUCT A NEW MULTI-FAMILY RESIDENTIAL DEVELOPMENT**

WHEREAS, the Village Council has previously adopted Ordinance No. 3302, on April 30, 1990, designating the property described therein as Planned Unit Development #31 and subsequent amendments thereto; and,

WHEREAS, the Village Council has previously adopted Ordinance No. 4314 on July 17, 2001 and Ordinance No. 5729, on November 20, 2018 approving amendments to Planned Unit Development #31 to allow construction of certain restaurants at 1801 Butterfield Road; and,

WHEREAS, the Village Council has previously adopted Ordinance No. 5943 on October 4, 2022 approving amendments to Planned Unit Development #31 to add multi-family residential as an allowed use; 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 #31 to construct a new multi-family residential development; 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 January 22, 2024, 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 adopted authorizing the construction of a new multi-family residential development.

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 23-PCE-0009 as set forth in the minutes of their January 22, 2024 meeting.

SECTION 4. That the multi-family residential allowed use is consistent with and complementary to the overall planned unit development site plan and with the requirements of the *"O-R-M/PUD #31, Office-Research-Manufacturing/Planned Unit Development #31"* zoning district.

SECTION 5. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION 6. 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

1\mw\ord.24\PUD#31-AMD-3201 Woodcreek-23 PCE-0009

VILLAGE OF DOWNERS GROVE
REPORT FOR THE PLAN COMMISSION
JANUARY 22, 2024 AGENDA

SUBJECT:	TYPE:	SUBMITTED BY:
23-PCE-0009 3201, 3211, 3221 and 3231 Woodcreek Drive	PUD Amendment and Final Plat of Subdivision	Flora P. León, AICP Senior Planner

REQUEST
The petitioner is requesting approval of a Final Plat of Subdivision and a Planned Unit Development amendment to Planned Unit Development #31, Esplanade at Locust Point to build a new multi-family residential development.

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

GENERAL INFORMATION

APPLICANT: M&R Development, L.L.C.
555 W. Pierce Road, Suite 180
Itasca, IL 60143

OWNERS: HP/AG Esplanade at Locust Point Land Limited Partnership
1901 Butterfield Road
Downers Grove, IL 60515

Coopers Hawk
3500 Lacey Suite 1000
Downers Grove, IL 60515

Hamilton Partners
1901 Butterfield Road, Suite 270
Downers Grove, IL 60515

Hamilton Partners, Inc.
PO Box 3664
Oak Brook, IL 60522

Hamilton Partners
300 Park Boulevard, Suite 201
Itasca, IL 60143

DG Hotels, LLC
2111 Butterfield Road
Downers Grove, IL 60515

Esplanade I Spe, LLC
300 Park Boulevard, Suite 201
Itasca, IL 60143-3106

AM Society GI Endoscopy
3300 Woodcreek Drive
Downers Grove, IL 60515

AG Products Company
1901 Butterfield Road, Suite 330
Downers Grove, IL 60515

Midwestern University
444 31st Street
Downers Grove, IL 60515

KORE 3500 Lacey Owner, LLC
6500 Quebec Street, Suite 300
Grennwood Village, CO 80111

PROPERTY INFORMATION

EXISTING ZONING: O-R-M/P.D. #31, Office-Research-Manufacturing/ Planned Development #31
EXISTING LAND USE: Business Park
PROPERTY SIZE: 102 Acres of Land
PINS: 05-25-413-009; 05-25-415-009, -010; 05-36-200-009, -011; 05-36-202-008, -015, -016, -017; 05-36-400-017; 06-30-301-007; 06-30-304-002, -003; 06-30-305-003; 06-31-100-019, -020, -021, -022, -023, -025, -027, -028, -029; 06-31-103-001, -002, -005, -006, -007

SURROUNDING ZONING AND LAND USES

	ZONING	FUTURE LAND USE
East:	Tollway Right-of-Way	N/A
WEST:	O-R-M, Office-Research-Manufacturing/PD #20	Office Corporate Campus
	R-1, Residential Detached House 1	Park and Open Space
NORTH:	B-3, General Services and Highway Business	Regional Commercial
	B-1, Local Business (DuPage County)	DuPage County
SOUTH:	O-R-M, Office-Research-Manufacturing	Office Corporate Campus

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. Sign Package
9. Plat of Subdivision
10. Traffic Impact Study

PROJECT DESCRIPTION

The petitioner is proposing to construct a new multi-family residential development at the northwest intersection of Lacey Road and Woodcreek Drive. The multi-family residential development will be located on a new 9.23 acre lot within the Esplanade at Locust Point. The property is zoned O-R-M/P.U.D. #31, Office-Research-Manufacturing/ Planned Unit Development #31. The petitioner is requesting:

- A Plat of Subdivision to create two lots of record; and
- A Planned Unit Development Amendment to permit the construction of a multi-family residential development.

Currently, the PUD includes approximately 2.1 million square feet of office space including office buildings at 1902 and 2001 Butterfield Road, as well as 3250 and 3450 Lacey Road. The PUD also includes the Double Tree Guest Suites Hotel, Cooper's Hawk Restaurant, Midwestern University and a daycare center.

PUD #31 was approved in 1990 with a master site development plan that identified a variety of office buildings, open space, transportation and roadway improvements. The PUD was amended multiple times since 1990 to allow for different building layouts, developments and uses.

Most recently in 2022 the PUD was amended to add *multi-family residential* as an approved allowed use within PUD #31. While, the approved Master Plan for this Planned Development did not originally anticipate a housing component, longer term market factors led the owner to consider housing on part of the overall site. During this review, preliminary site plans and renderings for a potential multifamily project were provided. However, the PUD approval at that time noted that the petitioner would be required to finalize the proposed development plans in detail, including all engineering related items such as stormwater management, and to request approval of a PUD Amendment and a Plat of Subdivision.

Currently, the multi-family residential development proposal consists of three, four-story buildings. Each building will be composed of 99-units for a total of 297 apartments. The apartments are a mix of studios, one-, and two-bedroom units. The proposed buildings will be primarily clad with masonry, fiber cement panels, architectural metal cladding, and vinyl hung windows. Depending on location, the units will include one of the following options a: patio, balcony, or Juliet balcony. The first three levels include the use of masonry veneers while the fourth level utilizes a fiber cement panel system found throughout the façade. The lobby and office components of all three residential buildings face the interior of the site. Architectural metal awnings and aluminum storefront doors are used to identify each building's main entrance. A fourth building will be programmed as a clubhouse with a main entrance facing Lacey Road. The amenities included with the 8,000 square foot club house are: a swimming pool, sundecks, open spaces, dog walking areas, meeting spaces, a full-service fitness center and work spaces.

Each apartment building includes a parking level that will be partially below grade based on each buildings site topography. Access to the parking level will be via garage door. The three residential buildings will include a total of 195 parking spaces and bike storage within the interior parking levels. Additionally, a total of 295 parking spaces will be provided via the exterior surface parking lots. The petitioner is requesting a deviation from the required 594 parking spaces, considering the development only provides a total 490 parking spaces. New access points will be provided to the new development further described below.

Lastly, the petitioner is requesting to subdivide the subject property into two lots of record. The second lot, north of where the multi-family development will be located, is planned for a future office building and parking deck. The petitioner will be required to finalize the proposed development plans for the future office buildings in detail, including all engineering related items such as stormwater management, and to request approval of a PUD Amendment.

COMPLIANCE WITH THE COMPREHENSIVE PLAN

The Future Land Use Plan designates the site as Office Corporate Campus. Moreover, the Comprehensive Plan identifies the future land use of the Esplanade as a continuing commercial development. However, as previously noted, in 2022 the Plan Commission and Village Council found that multi-family residential is an appropriate use in the Planned Unit Development and deemed it compatible with the Comprehensive Plan.

The Butterfield Focus Area Plan calls for:

- Development and redevelopment should be focused on attracting a regional customer base as well as providing services, retail, and entertainment to the substantial daytime population.

The remaining vacant property within PUD #31 has been identified in The Comprehensive Plan as Catalyst

Site # C1. The Plan identifies the following key features of Catalyst Site #C1:

- Previously approved as part of a Planned Unit Development, these sites have not yet developed. With excellent visibility and access, these parcels could accommodate additional office development, restaurants or retail. The northern vacant lot is still planned for an office development.

The Comprehensive Plan further states that new multi-family residential areas should:

- Maintain a setback, height, bulk, and orientation similar to that of neighboring developments.
- Provide for a variety of housing and dwelling unit types and densities, generally organized by dwelling types, lot-sizes, etc.
- Be located near significant activity centers and along major roadways as well as a component of mixed-use development within Downtown Downers Grove. The zoning ordinance should be revised to allow for additional multi-family development as identified in the Land Use Plan and subarea plans.

The Comprehensive Plan also notes the following:

- Reinvestment should occur in the Finley Road/Butterfield Road area to improve the aesthetics and function of regional commercial uses.

COMPLIANCE WITH ZONING ORDINANCE

The property is zoned O-R-M/PUD, Office-Research-Manufacturing/ Planned Unit Development #31. The proposal includes a request for a Planned Unit Development Amendment to allow for the construction of a new multi-family residential development, which is a permitted use in the PUD #31. The bulk requirements of the proposed building are summarized in the following table:

Table 1 – Zoning Requirements, Proposed Lot 1

Proposed Lot 1	Required	Proposed
Street Setback		
Building 1: 3211 Woodcreek Drive (minimum)	43.13 ft.	46.00 ft.
Building 2: 3221 Woodcreek Drive (minimum)	41.75 ft.	42.49 ft.
Building 3: 3201 Woodcreek Drive (minimum)	43.75 ft.	44.50 ft.
Club Building: 3231 Woodcreek Drive (minimum)	35.00 ft.	35.00 ft.
Parking	35.00 ft.	40.50 ft.
Side Interior Setback		
Buildings	10 ft.	25 ft.
Parking	10 ft.	10 ft.
Rear Setback	N/A	21.13 ft.
Height		
Building 1: 3211 Woodcreek Drive (maximum)	140 ft.	51.25 ft.
Building 2: 3221 Woodcreek Drive (maximum)	140 ft.	48.50 ft.
Building 3: 3201 Woodcreek Drive (maximum)	140 ft.	52.50 ft.
Club Building: 3231 Woodcreek Drive (maximum)	140 ft.	25 ft.
Landscape Open Space (minimum)	15%	50%
Floor Area Ratio (maximum)	1.00	0.83
Parking Spaces (minimum)	594	**490 ***

As highlighted in the table above, the petitioner is requesting relief from the Zoning Ordinance parking requirements. A summary of the requested deviation will be further discussed under "Traffic and Parking."

Table 2: Zoning Requirements, Overall PUD

Overall PUD	Required	Proposed
Parking Spaces (minimum)	9,470	9,521
Open Space (minimum)	15%	50.84% (2,259,100 SF)
Floor Area Ratio (maximum)	1.00	0.84

SIGNAGE

Signage within the Esplanade PUD is governed by a master sign plan. The petitioner is proposing two wall signs, to be mounted on the north and east facades of Building #2. A monument sign is proposed along Woodcreek Drive and along Lacey Road. One directional sign is located at the Lacey Road entrance while three others are placed within the interior of the development. These signs are compliant with the Esplanade PUD master signage plan.

An amendment to the PUD master signage plan is requested to replace an existing monument sign 1807 Butterfield Road with a new monument sign. The new monument sign will be 13.25 feet tall and contain 60 square feet of signage. A summary of the proposed signage is provided below:

Table 3: Sign Package

Sign Type	Area	Height	Location
Wall Sign	48 sq.ft.	N/A	Building #2 (north facade)
Wall Sign	48 sq.ft.	N/A	Building #2 (east facade)
Monument Sign	24 sq.ft.	7 feet	Woodcreek Drive
Monument Sign	24 sq.ft.	7 feet	Lacey Road
Monument Sign	60 sq.ft.	13.25 feet	1807 Butterfield Road
Directional Signs (Qty.4)	5 sq.ft.	4.83 feet	Internal

COMPLIANCE WITH SUBDIVISION ORDINANCE

The petitioner is proposing to subdivide one existing lot of record into two lots of record. The southern lot is the proposed location for the residential development. The northern lot will remain vacant, but is planned for an office building and parking deck in the future. The petitioner will be required to finalize the proposed office building development plans in detail and request approval of a PUD Amendment.

The final plat of subdivision is in compliance with the minimum lot dimension requirements as outlined in Section 20.301 of the Village's Subdivision Ordinance. 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 and 2.

Table 4 – Subdivision Requirements

Esplanade at Locust Point	Lot Width (100 ft. minimum)	Lot Depth (140 ft. minimum)	Lot Area (20,000 square foot minimum)
Lot 1 (Multi-Family)	560.1 ft.	768.57 ft.	401,909 sq. ft.
Lot 2 (Future Office)	403.39 ft.	548.81 ft.	173,004 sq. ft.

The Subdivision Ordinance requires that developments requesting a final development plan of a planned unit development for multi-family developments to provide park and school donations to offset the impact

of new residential units. The proposed development will include 297 units (69 studios, 144 one bedroom units, and 84 two bedroom units). Based upon the number of units and the number of bedrooms, the total donation is $1,671,277.77 ($1,508,385.45 to the Park District, $117,306.24 to Elementary School District 58, and $45,586.08 to High School District 99). Payment of these donations must be made to the Village prior to the issuance of any site development or building permits.

ENGINEERING/PUBLIC IMPROVEMENTS

The proposed residential development will be located on the proposed subdivided Lot 1. The overall Esplanade campus drains in a westerly direction and the stormwater detention for the entire development was designed in a series of lakes. The proposed development does require additional stormwater detention. The required detention volume will be provided by modifying three existing ponds to gain additional volume. Modifications will include: raising the high water level elevation, minor re-grading, overflow weir adjustments, and adjustments to the outfall restrictor pipe.

Based on the existing impervious area on the site and the proposed impervious area, the proposed development requires Post Construction Best Management Practices (PCBMPs). This additional volume will be provided in three basins: two basins will be located within large parking lot islands in the multi-family residential development and a third basin will be located immediately west of Building #3. The petitioner will be required to meet all Village engineering standards and comply with all applicable codes when formally submitting for a permit.

The proposed development will provide access via a right-in/right-out access drive on Lacey Road and via two full-movement access drives on Woodcreek Drive. Additionally, Woodcreek Drive will be restriped to provide:

- A separate left-turn lane serving both access drives to the proposed development and
- A westbound left-turn lane to serve the existing access drive on the south side of Woodcreek Drive between the development site's access drives.

Internal pedestrian connections are provided among all four buildings. Additionally, pedestrian connections lead out toward established sidewalk networks on Woodcreek Drive, Lacey Road, and heading north towards the adjacent pond and office park. New fire, water service, and sanitary sewer service lines will be provided. The Downers Grove Sanitary District conceptually approved the request for sanitary service to this development. The Village will also require the petitioner to abrogate an existing AT&T easement prior to the issuance of a building permit.

TRAFFIC AND PARKING

A traffic impact study for the proposed development was completed by the petitioner. The study examined the existing and future traffic conditions based on the proposed development. The proposed development is projected to generate primarily outbound traffic during the weekday morning and inbound traffic during the weekday evening. This direction of traffic is the opposite of other area developments, which are primarily office and industrial. The area roadway system was found to have sufficient reserve capacity to accommodate the traffic

Access to the development will be provided via a right-in/right-out access drive on Lacey Road and all movements will be under stop sign control. Left-turn movements will be restricted via the median on Lacey Road. Additional access will be provided via two full-movement access drives on Woodcreek Drive. As part of the development, Woodcreek Drive will be restriped to provide a separate left-turn lane serving both access drives. Moreover, the restriping of Woodcreek Drive will also include a westbound left-turn lane to serve the existing access drive on the south side of Woodcreek Drive between the site's access drives. The

traffic impact study found that the proposed access drives would sufficiently accommodate the traffic projected to be generated while ensuring efficient and flexible access is provided.

The development will provide 490 residential parking spaces where 594 are required. As such, the proposed development will provide parking at a ratio of 1.65 spaces per residential unit; where the required parking ratio per the Zoning Ordinance is 2 spaces per dwelling unit.

The petitioner's rationale for the relief request has found that the provided parking will be adequate based on similar rental communities that they have constructed, which is further reinforced by their traffic impact study. Based on the rates published in the *Institute of Transportation Engineers' (ITE) 5th Edition of the Parking Generational Manual*, the proposed development should provide a total of 389 parking spaces (parking ratio of 1.31 spaces per dwelling unit) to accommodate the peak parking demand (Monday-Friday). Under these standards the proposed development supply of 490 parking spaces exceeds the ITE's requirement of 398 parking stalls. The petitioner also states that the reduced parking will translate to more green space within the development.

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 buildings provides sufficient access around the property as needed. The buildings 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 legal notice in the Daily Herald. Staff received one inquiry from the DuPage County Forest Preserve District inquiring about the nature of the proposal.

STANDARDS OF APPROVAL

The petitioner is requesting approval of a final Plat of Subdivision to subdivide the existing single lot of record into two lots of record. The proposed Final Plat of Subdivision meets the standards of Sections 20.301 and 20.305 of the Subdivision Ordinance and Section 28.3.030 of the Zoning Ordinance. Additionally, the petitioner is also requesting a Planned Unit Development Amendment to PUD #31. The review and approval criterion for this request is listed below.

The petitioner has submitted a narrative that attempts to address all 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.

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:

a. *The zoning map amendment review and approval criteria of Sec. 12.030.I.*
b. *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.*
c. *Whether PUD development plan complies with the PUD overlay district provisions of Sec. 4.030.*
d. *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.*

e. 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.

DRAFT MOTION

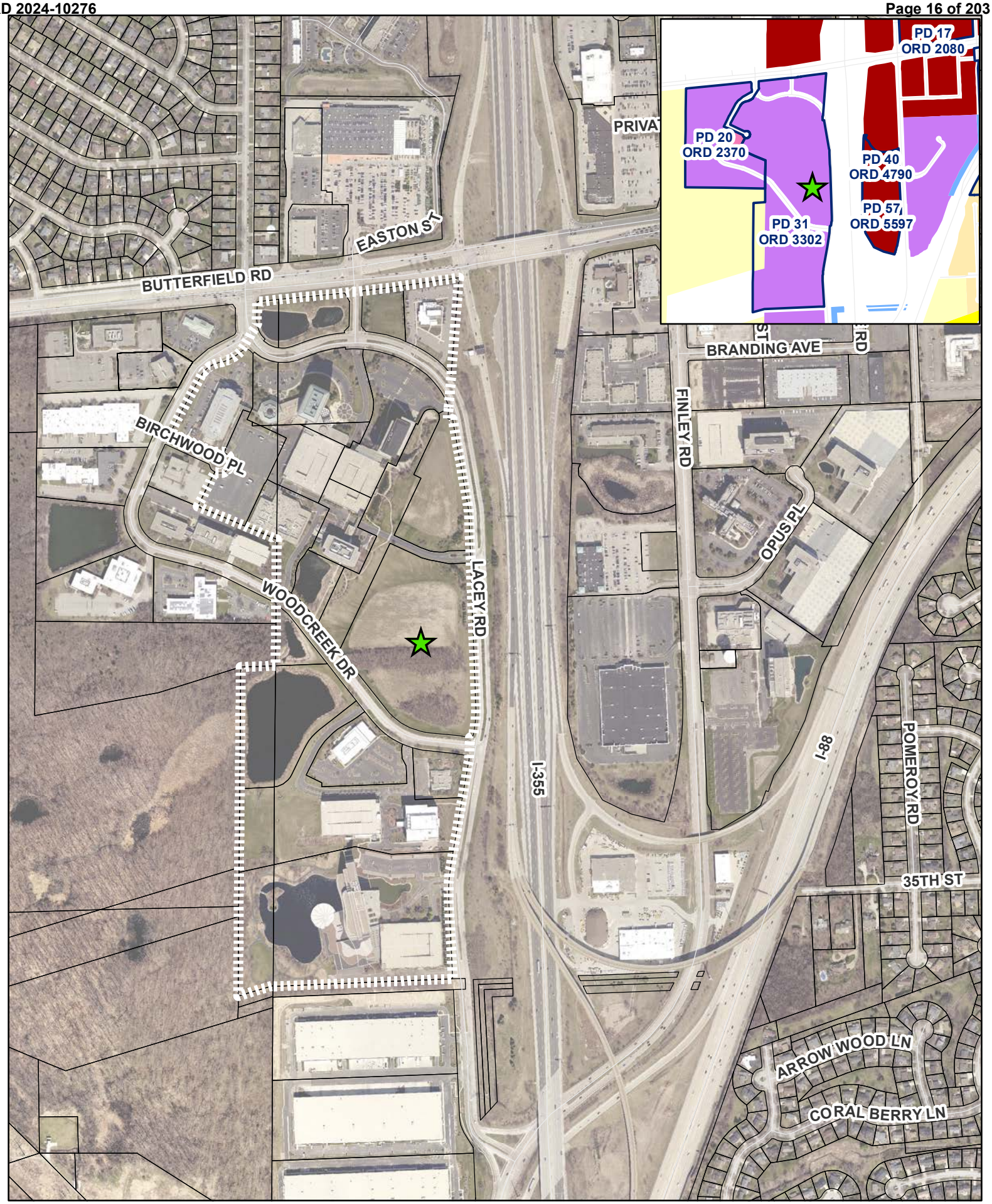
Staff will provide a recommendation at the January 22, 2024 meeting. Should the Plan Commission find that the request meets the standards of approval for a Final Plat of Subdivision and a Planned Unit Development Amendment, staff has prepared a draft motion that the Plan Commission may make for the recommended approval of 23-PCE-0009:

> 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 Final Plat of Subdivision and Planned Unit Development #31 Amendment 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 23-PCE-0009, subject to the following conditions:
>
> 1. The Planned Unit Development Amendment and Final Plat of Subdivision shall substantially conform to the staff report; and drawings prepared by RWG Engineering submitted on 12/08/23, and by BSB Design on 12/08/23, except as such plans may be modified to conform to the Village codes and ordinances.
> 2. A recorded final plat of subdivision will be required prior to permit issuance.
> 3. Prior to issuing any site development or building permits, the petitioner shall make park and school donations in the amount of $1,671,277.77 ($1,508,385.45 to the Park District, $117,306.24 to Elementary School District 58, and $45,586.08 to High School District 99).
> 4. Based on the results of the EcoCAT from IDNR: Tree removal should only occur between November 1st and March 31st when the northern long-eared bat is hibernating off site.
> 5. A recorded plat of abrogation to remove the utility easements will be required prior to permit issuance.

Staff Report Approved By:

Stanley J. Popovich, AICP
Director of Community Development

SP:fl
-att



N

0 250 500 1,000 Feet

3201, 3211, 3221, 3231 Woodcreek Drive - Location Map

Subject Property

Project Location

M & R Development, L.L.C.

Esplanade Place

Project Narrative

The Esplanade at Locust Point, otherwise known as PUD #31, was approved in 1990 with a master site development plan and use list that identified a variety of office buildings, open space, transportation and roadway improvements. The PUD was amended multiple times since 1990 to allow for different building layouts, developments and additional uses.

While the Comprehensive Plan identifies the future land use of The Esplanade at Locust Point as a continuing commercial development without a housing component, the Plan Commission, on September 12, 2022, unanimously recommended that PUD #31 be amended to permit the construction of a multi-family residential development on a parcel situated within the PUD at the intersection of Woodcreek Drive and Lacey Road. The Plan Commission found that the proposal for residential use is an appropriate one in the PUD, is compatible with the Comprehensive Plan, and meets the standards for a PUD amendment found in Section 28.12.040.C.6. Subsequently, the Village Council, on October 4, 2022 approved the PUD amendment by the adoption of Ordinance 2022-9606.

M&R Development is now pleased to present this proposal for Esplanade Place, a new luxury rental community on a nine-acre portion of the Esplanade at Locust Point Planned Unit Development. The proposed residential community will contain state-of-the-art, high-end features and amenities which will appeal to the changing lifestyles of those who are currently renting by choice. In total, the community will consist of three 99-unit four story buildings, or a total of 297 apartment homes, 213 of which will be studio and one-bedroom units, and 84 of which will be two-bedroom units. The rental units will average slightly under 800 square feet in size.

Esplanade Place will offer its residents both garage and surface parking. Proposed for the community will be 65 interior garage spaces, housed in each of the three residential buildings (195 garages spaces, total), and 295 exterior parking spaces. These 490 parking spaces will equate to a parking ratio of 1.65 spaces per unit which we have found to be adequate in similar rental communities we have constructed and currently manage through our affiliate RMK Management Company. Similarly, the project's traffic consultant, KOLA, has studied the parking utilization for several recently built suburban rental communities (similar to Esplanade Place) and, based on their experience and findings and, also believes that the allotted parking spaces will adequately meet the parking needs of the proposed community. This traffic and parking report dated March 9, 2023 is included in the submittal.

The reduced demand for parking will translate to more green space and less asphalt within the development. As part of our application request, we are requesting a variance from the Village's parking requirement of 2 spaces per unit. The proposed parking ratio is 1.65 spaces per unit for a total of 490 surface and garage spaces.

Many people are now spending more time at home and away from their office. They are looking for affordable housing options that provide them both the space they need to live and work at home, and indoor and outdoor amenity spaces which facilitate recreation, relaxation and ongoing social interaction with others. To that end, our community will contain a state-of-the-art 6,000-square foot clubhouse, a swimming pool, expansive sundecks, open spaces, dog walking areas, and other areas and amenities for all community residents to enjoy. The clubhouse will contain meeting spaces with refrigerators, microwaves, warming drawers and ice machines, a full-service fitness center, and work areas where residents will be able to work individually or in concert with others, both in person and virtually. The fitness center will contain a yoga room, personal training options, and multi-purpose exercise rooms.

Our proposed unit mix means that our community will generate few children and little impact for Downers Grove Grade School District 58 and Community High School District 99. At the same time, it will generate significant new tax revenues for those districts and for the Downers Grove Park District that will benefit existing Downers Grove residents.

Stormwater management improvements are an integral part of the Esplanade Place development. During the initial engineering design, a detailed analysis was performed to evaluate drainage conditions within this subwatershed and formulate plans for maintenance improvements and detention storage volume additions within the 3 ponds to which this project is tributary. A total of 2.054 acre-feet of additional storage to address the updated 100-year storm event needs has been designed to be accommodated within these ponds, located immediately west and southwest of the subject site. In addition to detention storage, best management practices have been incorporated into the stormwater collection design to reduce runoff and promote runoff absorption. A total of 3 VCBMP facilities have been included in the infrastructure program, capturing rainfall runoff and providing water cleansing and absorption opportunities both within and immediately adjacent to the residential development. These volume control facilities store a total of 26,668 cubic feet of runoff, thereby reducing discharge flow rates exiting the site.

Years ago, land to the south of the Esplanade, like the land we are now seeking to develop, was slated for large office building development. Nevertheless, changes in the way people have come to live brought about by the pandemic and current economic conditions brought changed thoughts about how that land should be developed and used. Amazon opened a distribution hub, which has helped the local economy, and the way people purchase everyday items. Midwestern University opened a new campus. A successful new day care facility was constructed. New restaurants (such as Cooper's Hawk) have opened. These developments help serve the needs of those working in area office buildings, who want to live outside downtown Downers Grove in an upscale rental community and in close proximity to their offices, and the needs of all Village residents.

It should be noted that the construction of our community, if approved, would not foreclose the opportunity for new office development in this area. Almost 8.5 acres of land will remain for new office development at the Esplanade. This means that another 846,000 square feet of new "Class A" office space could be constructed at the Esplanade if and when the demand for the construction of new "Class A" office space returns to the East-West Corridor office market and such development becomes economically feasible.

We invite those interested in seeing a comparable development constructed under conditions similar to those observed at the Esplanade at Locust Point to visit our recently constructed multi-family development in Itasca known as The Residences at Hamilton Lakes. This project accurately reflects our design intentions with respect to the development we are seeking to construct at the Esplanade. The Residences of Hamilton Lakes is a 297-unit community delivered in 2017. The project contains three residential buildings and a luxurious clubhouse offering residents a variety of lavish amenities. It took a little over a year to achieve a 95% rate of occupancy, which reflects the strong demand in the area for projects such as the one we are proposing to construct at the Esplanade.

We look forward to receiving Plan Commission input, to answering all questions, and to working with the Village staff on this exciting new development proposal for the Village.

About M&R Development

Founded in 1996 by Tom Moran and Anthony Rossi, M&R Development is an environmentally conscious developer of luxury, high-end rental apartment buildings ranging in style from suburban garden and mid-rise to urban high-rise. We are an innovative company focused on sustainable and eco-friendly developments. Several of our more recently construction projects have receiving LEED certifications.

The M&R Development team continues to introduce new ideas into the multi-family industry and deliver apartment homes which meet or exceed resident expectations. Mr. Moran and Mr. Rossi were some of the first developers to introduce luxury living into the Midwest market. Their early ideas included expansive fitness centers, business centers, cyber cafes, cinemas and pet spas. At a time when the cost to rent is lower than the cost to own a home, more and more residents are choosing M&R Development projects because of its attention to detail and its genuine concern for the comfort of its residents.

To date, M&R Development has developed 19 properties containing over 4,700 units, spanning from the Chicago area to Wisconsin. This includes the development of The Residences at The Grove (ReNew) in Downers Grove, a 294-unit luxury apartment community. Our most recently delivered projects include 42 Hundred on the Lake in St Francis, Wisconsin, Elevate Apartments in Madison, Wisconsin, and 2929 North Mayfair in Wauwatosa, Wisconsin.

Review and Approval Criteria

PLANNED UNIT DEVELOPMENT

Plan Commission Number & Title: Esplanade Place

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.***
   See Exhibit A

3. ***Whether PUD development plan complies with the PUD overlay district provisions of Sec. 4.030.***
   See Exhibit A

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.***
   See Exhibit A

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.***
   See Exhibit A

EXHIBIT A

EXHIBIT A

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

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.***
   The proposed PUD amendment would conflict with the Comprehensive Plan's recommendation that the subject property be developed with additional office restaurant or retail uses, but it would further these Plan objectives: (1) provide diversity in the Village's housing stock and unit types; (2) encourage development which allows Village residents to stay in Downers Grove through all stages of their lives; and (3) encourage office campuses to offer office spaces that are adaptable to market trends. It should be noted that the Plan encourages the Village to continually address new challenges and it provides that "it is not a definitive course of action or a legally binding obligation of what must be done" or "...a mandate." In fact, it states that "while it is a detailed document that provides specific guidance on land use decisions, it is also intended to be sufficiently flexible to accommodate unique or compelling circumstances and the consideration of creative approaches to development that are consistent with the overall policies and guidelines" in the Plan.

3. ***Whether PUD development plan complies with the PUD overlay district provisions of Sec. 4.030.***
   The proposed PUD amendment would result in the construction of a development that creates a new housing option which meets the needs of different age groups and household types, and a multi-use development that creates a mix of residential and nonresidential uses. The proposed amendment would also further overlay district objectives of achieving flexibility and creativity in the use of land which responds to changing social, economic and market conditions, and locating mixed-use residential and commercial developments in close proximity to one another.

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.***
   The proposed PUD amendment would result in several public benefits that are equal to those that would have resulted from development of the subject property under the existing PUD ordinance. These include high-quality development that creates limited or no negative impact on area school districts; positive fiscal impact for the Village, those school districts and the Downers Grove Park District; the sustainability of existing office development on the Esplanade corporate campus; and the generation of daytime (and in this case, nighttime) population which will support and patronize Village restaurants and businesses.

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.***

The applicant is prepared to work with the Plan Commission, the Village Council and Village staff on including terms and conditions in a PUD amendment which will protect the interests of existing and future Esplanade office occupants and the general public.

Residential Site Area	9.22 Ac.		Tot. Bedrooms
Studio/ Conv. Units	69	23.24%	69
1 BR Units	144	48.48%	144
2 BR Units	84	28.28%	168
3 BR Units	0	0.0%	0
		100.0%	
Total Rental Units	297	(28.0 Du/Ac.)	381 BR
Setbacks Refer to Sheet LP1.02			
RESIDENTIAL PARKING			
Garages	195		
Surface	295		
Res. Parking Subtotal	490	(Provided-1.65 Spaces/Unit) (Required-2.00 Spaces/Unit) Parking Variance Requested	
Bike Parking			
Garage (30 / Bldg.)	90		
Surface (6 / Pad)	18		

Unit	Description	GSF (sf)	NSF (sf)	Unit Count Level 1	Level 2	Level 3	Level 4	Per Bldg	Total	Percent	Total GSF	Total NSF	Notes:
Studio Units													
S1	Studio	524	481	1	1	1	1	4	12	4.0%	2,096	1,924	Efficiency
S2	Studio	605	560	2	2	2	2	8	24	8.1%	4,840	4,480	Studio Unit
S3	Convertible / 1 Bath	711	661	2	3	3	3	11	33	11.1%	7,821	7,271	Convertible with Sleeping Room
S4													
S5													
Total Studio Units				5	6	6	6	23	69	23.2%	14,757	13,675	
											642	595	
One Bedroom Units													
A1	1 Bed / 1 Bath	749	698	4	4	4	4	16	48	16.2%	11,984	11,168	Standard 1 Bedroom
A2	1 Bed / 1 Bath	819	764	4	4	4	4	16	48	16.2%	13,104	12,224	Standard 1 Bedroom
A3	1 Bed / 1 Bath	871	816	4	4	4	4	16	48	16.2%	13,936	13,056	Standard 1 Bedroom
A4													
A5													
Total 1 Br Units				12	12	12	12	48	144	48.5%	39,024	36,448	
											813	759	
Two Bedroom Units													
B1	2 Bed / 2 Bath	1,122	1,055	2	2	2	2	8	24	8.1%	8,976	8,440	"In-Line" 2 Bedroom
B2	2 Bed / 2 Bath	1,290	1,216	5	5	5	5	20	60	20.2%	25,800	24,320	Corner 2 Bedroom
B3													
B4													
B5													
Total 2 Br Units				7	7	7	7	28	84	28.3%	34,776	32,760	
											1,242	1,170	
Three Bedroom Units													
C1													
Total 3 Br Units				0	0	0	0	0	0	0.0%	0	0	
Totals				24	25	25	25	99	297	100.0%	88,557	82,883	
											895	837	
											Mean Unit Areas		

NSF Measured to interior face of gyp board at perimeter of unit
GSF Measured to exterior face of stud at exterior and corridor walls and to centerline of demising wall

North

0 40 80 160 320

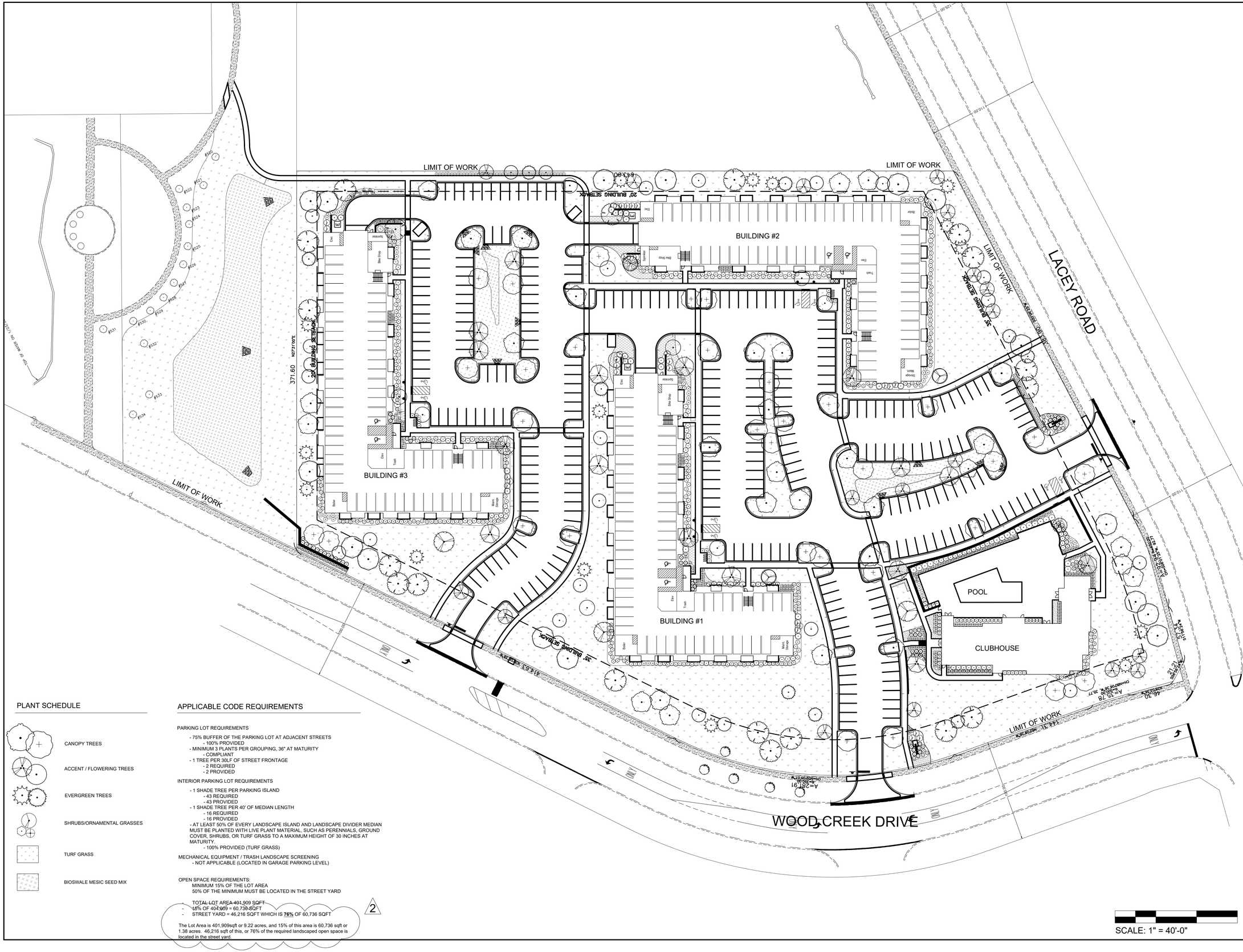
HAMILTON PARTNERS

m&r DEVELOPMENT

LP 1.01
Conceptual Site Plan
ESPLANADE PLACE
Downers Grove, Illinois

BSB DESIGN
BSBDESIGN.COM

Date: December 28, 2023



PLANT SCHEDULE

- CANOPY TREES
- ACCENT / FLOWERING TREES
- EVERGREEN TREES
- SHRUBS/ORNAMENTAL GRASSES
- TURF GRASS
- BIOSWALE MESIC SEED MIX

APPLICABLE CODE REQUIREMENTS

PARKING LOT REQUIREMENTS

- 75% BUFFER OF THE PARKING LOT AT ADJACENT STREETS
  - 100% PROVIDED
- MINIMUM 3 PLANTS PER GROUPING, 36" AT MATURITY
  - COMPLIANT
- 1 TREE PER 30LF OF STREET FRONTAGE
  - 2 REQUIRED
  - 2 PROVIDED

INTERIOR PARKING LOT REQUIREMENTS

- 1 SHADE TREE PER PARKING ISLAND
  - 43 REQUIRED
  - 43 PROVIDED
- 1 SHADE TREE PER 40' OF MEDIAN LENGTH
  - 16 REQUIRED
  - 16 PROVIDED
- AT LEAST 50% OF EVERY LANDSCAPE ISLAND AND LANDSCAPE DIVIDER MEDIAN MUST BE PLANTED WITH LIVE PLANT MATERIAL, SUCH AS PERENNIALS, GROUND COVER, SHRUBS, OR TURF GRASS TO A MAXIMUM HEIGHT OF 30 INCHES AT MATURITY.
  - 100% PROVIDED (TURF GRASS)

MECHANICAL EQUIPMENT / TRASH LANDSCAPE SCREENING

- NOT APPLICABLE (LOCATED IN GARAGE PARKING LEVEL)

OPEN SPACE REQUIREMENTS:

MINIMUM 15% OF THE LOT AREA
50% OF THE MINIMUM MUST BE LOCATED IN THE STREET YARD

- TOTAL LOT AREA 401,909 SQFT
- 15% OF 401,909 = 60,736 SQFT
- STREET YARD = 46,216 SQFT WHICH IS **76%** OF 60,736 SQFT

The Lot Area is 401,909sqft or 9.22 acres, and 15% of this area is 60,736 sqft or 1.38 acres. 46,216 sqft of this, or 76% of the required landscaped open space is located in the street yard.

2

SCALE: 1" = 40'-0"

BrightView Design Group

1645 Grant Street
Denver, Colorado 80203

T/ 303.825.2010

www.brightview.com
www.naturallygreatdesign.com

CONSULTANTS

OWNER

ESPLANADE PLACE

DOWNERS GROVE, ILLINOIS

SIGNATURE & SEAL

REVISIONS

REV 01	REVIEWER COMMENTS	12/07/2023
REV 02	REVIEWER COMMENTS	12/28/2023

NO.	COMMENTS	DATE

SHEET INFORMATION

DATE	03/24/2023
JOB NUMBER	113623
DRAWN BY	AO
CHECKED BY	TM/KB

OVERALL SCHEMATIC DESIGN

L1.100

Building 1 (3211 Wood Creek Drive) Elevations
- Residential - 762.00
- Garage - 751.00
- Roof Elevation= 762.0+48'=810.0
- Average Proposed Grade (Wood Creek Drive) 756.25 + 761.25/2=758.15

Building Height = 810.0-758.75=51.25
Setback Required = 35'+ 16.25/2= 35'+ 8.125'= 43.125'
Setback Proposed= 46.0'(As measured on the site plan)

Building 2 (3221 Wood Creek Drive) Elevations
- Residential - 762.0
- Garage - 751.0
- Roof Elevation- 762.0+48'= 810.0'
- Average Proposed Grade (Lacy Drive) 761.5 + 761.5/2=761.5

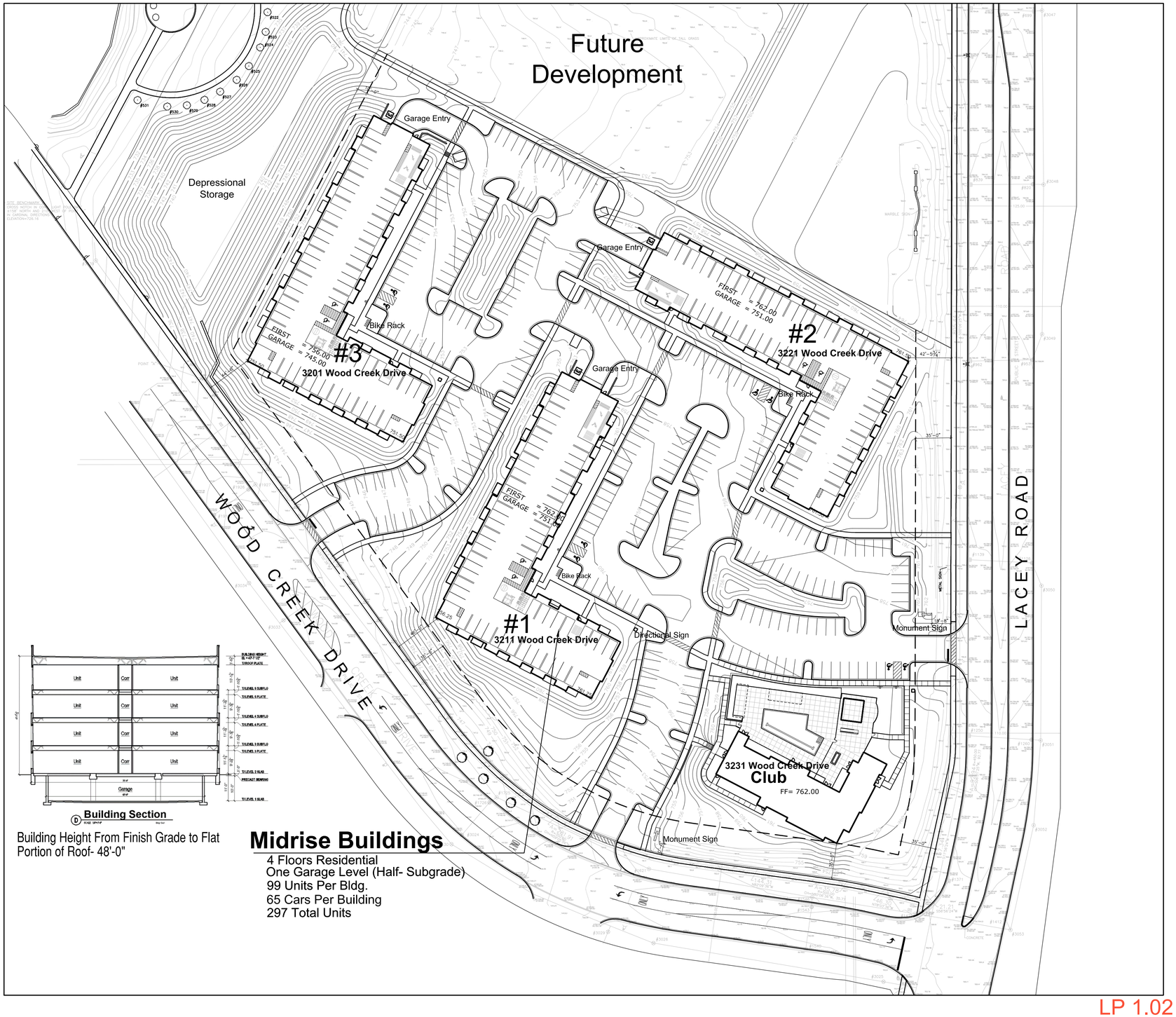
Building Height =810.0-761.5=48.5'
Setback Required = 35'+ 13.5/2= 35'+ 6.75'= 41.75'
Setback Proposed= 42.49' (As measured on the site plan)

Building 3 (3201 Wood Creek Drive) Elevations
- Residential - 756.00
- Garage - 745.00
- Roof Elevation=756.0+48'=804.0
- Average Proposed Grade (Wood Creek Drive) 751.5 + 751.5/2=751.5

Building Height =804.0-751.5=52.5
Setback Required = 35"+ 17.5/2= 35'+8.75'= 43.75'
Setback Proposed= 44.5'(As measured on the site plan)

*Denotes Rounded Up Calculation

Club Building (3231 Wood Creek Drive)
One Story Building (Wood Creek Drive/Lacy Road)
Setback Required- 35' (Estimated Building Height-25')
Setback Provided- 35'



Building Section

Building Height From Finish Grade to Flat Portion of Roof- 48'-0"

Midrise Buildings
4 Floors Residential
One Garage Level (Half- Subgrade)
99 Units Per Bldg.
65 Cars Per Building
297 Total Units

North

0 25 50 100 200

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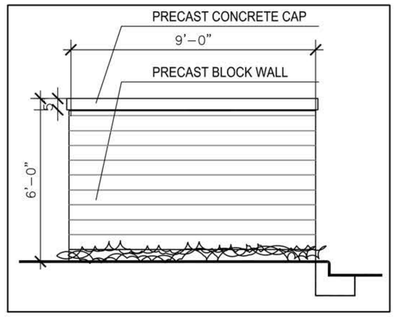
LP 1.02
Building Setbacks
ESPLANADE PLACE
Downers Grove, Illinois

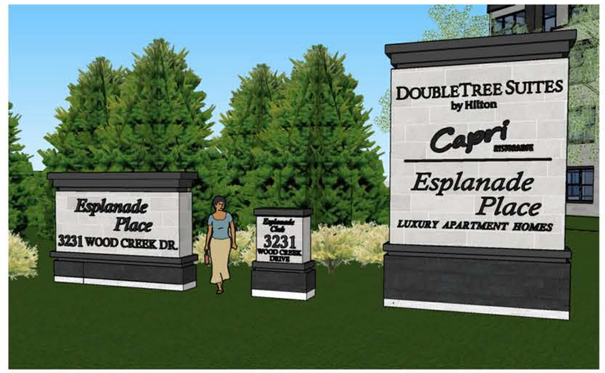
BSB DESIGN
BSBDESIGN.COM

Date: December 28, 2023



Trash Pad Enclosure

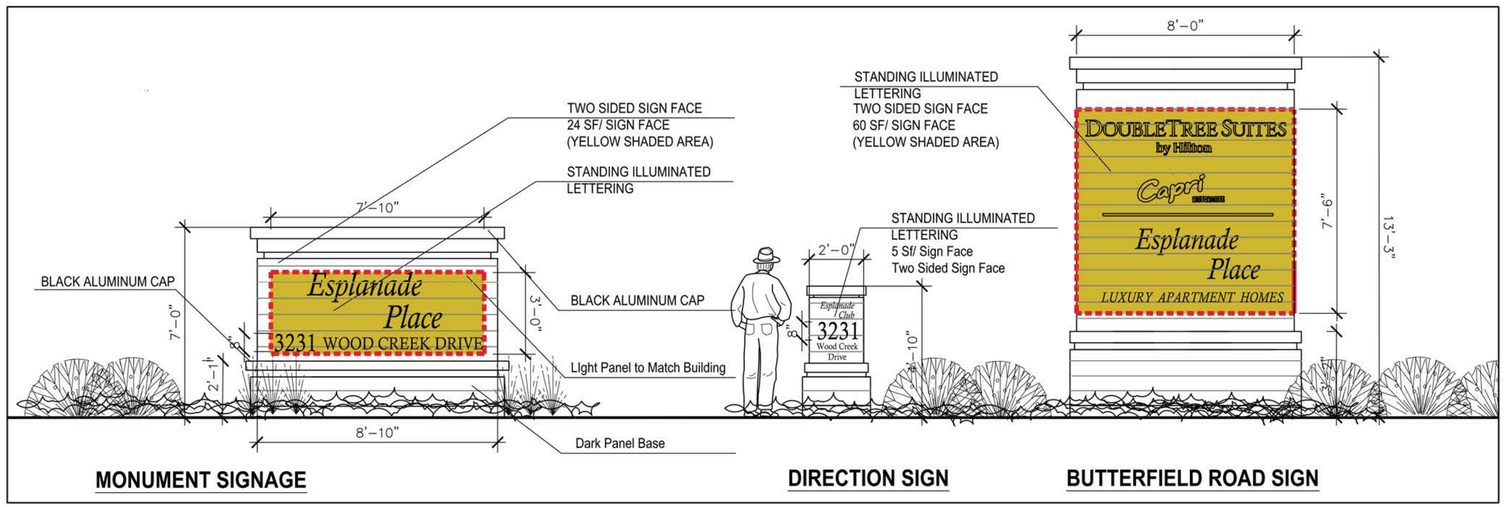
Building Signage Area- 48 SF Each Side



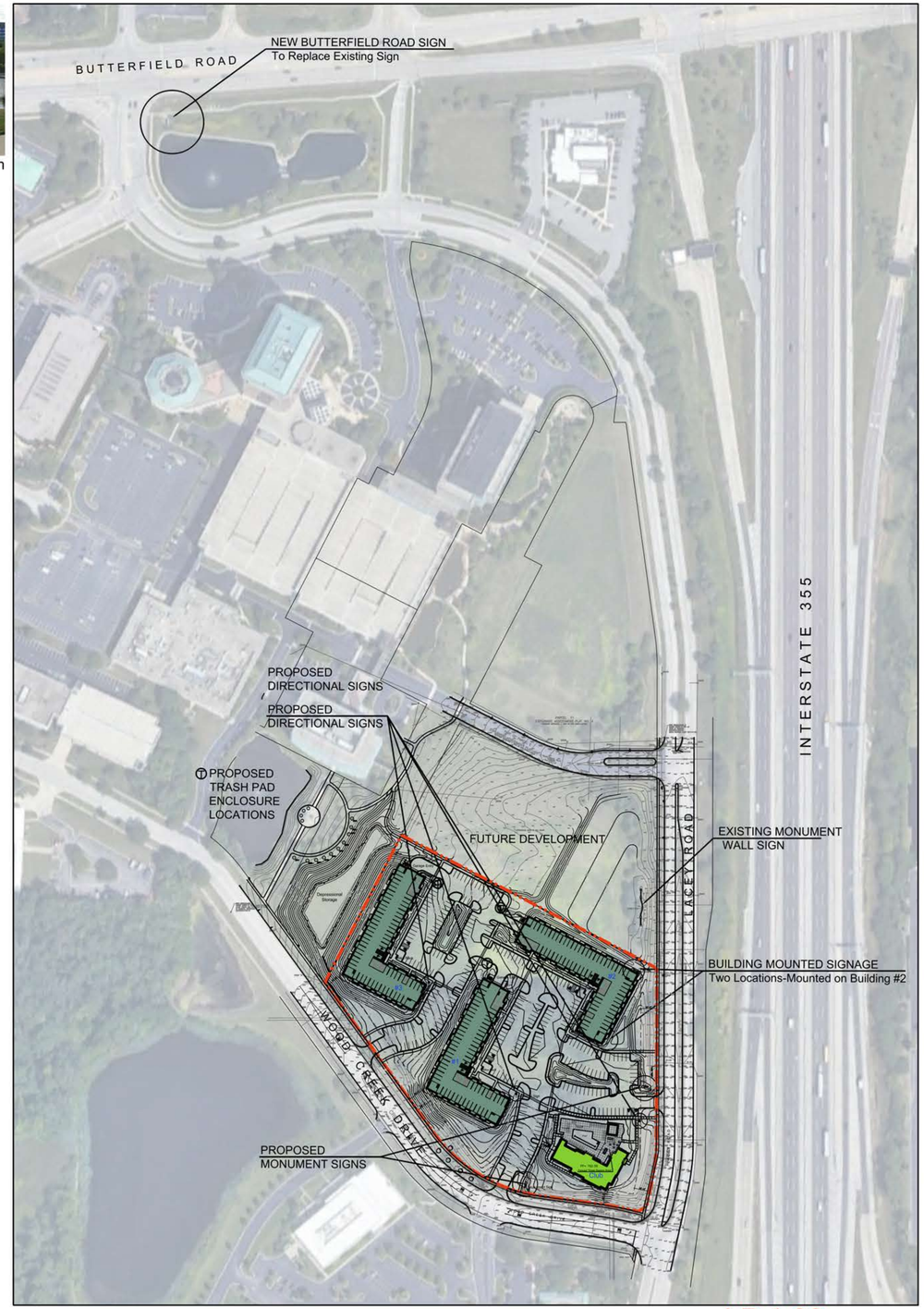
Monument Sign Location Sign Butterfield Road Sign (Proposed)

Current Butterfield Road Sign

Building Mounted Signage
Located on East and North Sides of Building #Two Facing Tollway



Proposed Signage
Scale: 3/8"=1'-0"



HAMILTON PARTNERS

m&r DEVELOPMENT

LP 1.03
Concept Sign Plan
ESPLANADE PLACE
Downers Grove, Illinois

BSB DESIGN
BSBDESIGN.COM

Date: December 26, 2023

ZONING COMPARISON TABLE- ESPLANADE PLACE APARTMENTS

Project Name	ESPLANADE PLACE APARTMENTS
Address:	3201, 3211, 3221, 3231 Woodcreek Drive
PIN(s):	06-31-100-021
Zoning District:	O-R-M
Existing Use:	Office/Mixed Use
Proposed Use:	Multi-Family Development
Petition Type:	Revision to Esplanade PUD
Deviations:	Reduction In the Amount of Required Parking Spaces

Requirement	Required	Proposed/ Existing	Meets	Plus/	Difference
	O-R-M	(SF)	Req'ment?	Minus	
Minimum District Area (acres)	NA[1]	NA	NA	NA	NA
Minimum Lot Area (square feet)	20,000	401,909	YES	+	381,909
Minimum Lot Area Per Dwelling Unit (sf)	NA	NA	NA	NA	NA
Total Buildng Floor Area		335,500			
Maximum Floor Area Ratio (FAR)	1.00	0.83	YES	+	0.17
Maximum Building Coverage (% of lot)	NA	NA	NA	NA	NA
Building Setbacks (feet)					
Street Yard	35[7]				
Front	Feet				
MF Building -3211 Wood Creek Drive	43.125	45.67	YES	+	2.545
MF Building -3221 Wood Creek Drive	41.75	42.42	YES	+	0.67
MF Building -3201 Wood Creek Drive	43.75	44.5	YES	+	0.75
One Story Club -3231 Wood Creek Drive	35	35	YES	No Ch.	0
Side (interior)	10	20'	YES	+	10'
Rear (residential floors)	NA	NA	NA	NA	NA
Rear (nonresidential floors)	NA	NA	NA	NA	NA
Landscaped Open Space		167,087			
Min. Landscaped Open Space (% of lot)[10]	15	0.50	YES	+	35%
Maximum Building Height (feet)	140'	45'	YES	+	95'
Parking	2.0 sp/du	1.65 sp/du			
	594	490	NO	-	-104
Donations	$1,671,277.77	$1,671,277.77	YES	No Ch.	0

Notes to Zoning Comparison Table:
[1] No minimum district area required north of Ronald Reagan Memorial Tollway or to property zoned M-1 or M-2 on 10-25-1982.
[7] Plus one foot (1') of additional setback for each two feet (2') of building height above thirty-five feet (35').
[10] At least fifty percent (50%) of required landscaped open space must be located in the street yard

North

0 16 32 64 128

LP 1.04
Zoning Comparison Table/
Concept Club Amenity Plan
ESPLANADE PLACE
Downers Grove, Illinois

Date: December 28, 2023

HAMILTON PARTNERS

m&r DEVELOPMENT

BSB DESIGN
BSBDESIGN.COM

*ESPLANADE PUD DATA SUMMARY

PARCEL "A-1", "A-2" & "A-3"

SITE AREA	2,217,216 SF
EXISTING BLDG FLOOR AREA	
BUILDING FLOOR AREAS (GROSS F.A.R.)	
2001 BUTTERFIELD	639,906 SF
3131 WOODCREEK DRIVE	80,181
1901 BUTTERFI ELD	296,312
3250 LACEY ROAD	188,802
CARLUCCI RESTAURANT	11,400
SUBTOTAL EXISTING BUILDING FLOOR AREA :	1,216,601

PARCEL "A" (Proposed Esplanade Place Apts. and Future Office Bldg Phase)

FUTURE BLDG FLOOR AREA		
ESPLANADE PLACE APARTMENTS/ CLUB	348,000 SF	
(2) FUTURE OFFICE BUILDINGS	846,000	
(2) FUTURE RESTAURANTS	10,000	
(1) BANK	7,400	
SUBTOTAL FUTURE BUILDING FLOOR AREA	1,204,000 SF	
SUBTOTAL EXISTING AND FUTURE FL. AREA :	2,420,601 SF	109% (1.09 FAR)
EXISTING AND FUTURE FLOOR AREA PER 06/03/2011 MASTER PLAN UPDATE	*2,670,196 SF*	
UNUTILIZED FLOOR AREA (SF)	*249,595*	
BUILT-UP FOOTPRINT	612,303 SF	27.62%
PAVED AREA	591,394	26.67%
OPEN SPACE		
LANDSCAPED "GREEN" OPEN AREA	910,106	41.05%
WATER ELEMENTS	104,201	4.70%
SUBTOTAL OPEN SPACE	1,014,307	45.75%

PARCEL 'B'

SITE AREA	1,918,464 SF	
BUILDING FLOOR AREA		
FUTURE MWU BUILDING	185,000	
3300 WOODCREEK DRIVE (ASGE)	41,822	
3450 LACEY ROAD (MWU)	190,087	
3500 LACEY ROAD	658,370	
3400 LACEY ROAD (DAY CARE CENTER)	10,800	
SUBTOTAL BUILDING FLOOR AREA	1,086,079	56.61% (.57 FAR)
BUILT-UP FOOTPRINT	461,215 SF	24.04%
PAVED AREA	313,856	16.36%
OPEN SPACE		
LANDSCAPED "GREEN" OPEN AREAS	721,935	37.63%
WATER ELEMENTS	421,458	21.97%
SUBTOTALOPEN SPACE-PARCEL'B'	1,143,393	59.60%

HOTEL PARCEL - DOUBLETREE HOTEL

SITE AREA	308,011 SF	
SUBTOTAL BUILDING FLOOR AREA	204,976	66.55% (.67 FAR)
BUILT-UP FOOTPRINT	39,648	12.87%
PAVED AREA	174,383	56.62%
OPEN SPACE		
LANDSCAPED "GREEN" OPEN AREAS"	93,980	30.51%
WATER ELEMENTS	0	0.00%
SUBTOTAL OPEN SPACE	93,980	30.51%

ESPLANADE PUD TOTALS

PUD LAND AREA	5,258,760 SF	
LAND AREA (SITE AREA) EXCLUDING LAND ASSOCIATED WITH BUTTERFIELD, LACEY & WOOD CREEK ROADS	4,443,691 SF	
BUILDING FLOOR AREA (GROSS F.A.R.)	3,734,885 SF	84.05% (.84 FAR)
BUILT-UP FOOTPRINT	1,104,958 SF	24.87%
PAVED AREA	1,079,633 SF	24.30%
OPEN SPACE		
LANDSCAPED "GREEN" OPEN AREAS"	1,733,441 SF	39.01%
WATER ELEMENTS	525,659 SF	11.83%
TOTAL OPEN SPACE	2,259,100 SF	50.84%

PARKING SUMMARY

EXISTING PARCEL "A-1", "A-2" & "A-3"

	REQUIRED	PROVIDED /PROPOSED
2001 BUTTERFIELD ROAD	"1,600 CARS @ 2.5/1,000	1,600 CARS
3131 WOODCREEK DRIVE	160 CARS @ 2/1,000	113 CARS
1901 BUTTERFIELD	741 CARS @ 2.5/1,000	741 CARS
3250 LACEY ROAD	472 CARS @ 2.5/1,000	472 CARS
CARLUCCI RESTAURANT	148 CARS @ 10/1,000	148 CARS
SUBTOTAL A1, A2, A3	3,121 CARS	3,074 CARS

PARCEL "A"

	REQUIRED	PROVIDED /PROPOSED
ESPLANADE PLACE APARTMENTS	594 CARS 2.0 CARS/UNIT	490
OFFICE BUILDING ONE	1,755 CARS @ 2.5/1,000	1795
OFFICE BUILDING TWO	360 CARS @ 2.5/1,000	410
RESTAURANT	100 CARS @ 10/1,000	100
BANK	19 CARS @ 10/1,000	31
SUBTOTAL FUTURE A	2,858 CARS	2,826

PARCEL "B"

	REQUIRED	PROVIDED /PROPOSED
FUTURE MWU BUILDING	388 CARS @ 2.5/1,000	471 CARS
3300 WOODCREEK DRIVE (ASGE)	98 CARS @ 2.5/1,000	142 CARS
3450 LACEY ROAD (MWU)	901 CARS @ 2.671,000	889 CARS
3500 LACEY ROAD	1,646 CARS @ 2.5/1,000	1,646 CARS
3400 LACEY ROAD (DAY CARE C'TER)	36 CARS @ 3.3/1,000	51 CARS
SUBTOTAL 'B'	3,069 CARS	3199 CARS
SUBTOTAL - DOUBLETREE HOTEL	422 CARS @ 1/ROOM	422 CARS
GRAND TOTAL	9,470 CARS	9,521 CARS

HAMILTON PARTNERS

m&r DEVELOPMENT

North

0 60 120 240 480

LP 1.05

Updated Esplanade Master Plan

ESPLANADE PLACE

Downers Grove, Illinois

BSB DESIGN

BSBDESIGN.COM

Date: December 28, 2023

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Rendering

A1.0
ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Rendering

A1.1
ESPLANADE PLACE
Downer's Grove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Rendering

A1.2
ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Rendering

A1.3
ESPLANADE PLACE
Downer's Grove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Rendering

A1.4
ESPLANADE PLACE
Downer's Grove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00

Aerial View from Southwest

HAMILTON PARTNERS

m&r DEVELOPMENT

Contextual Height Exhibit

A1.5

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00

Aerial View from Southeast

HAMILTON PARTNERS

m&r DEVELOPMENT

Contextual Height Exhibit

A1.6

ESPLANADE PLACE

Downer's Grove, IL

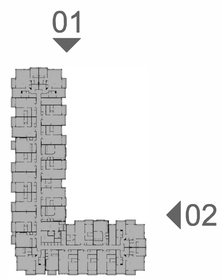
BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00

01: North Elevation - Building 1

3/32" = 1'-0"



02: East Elevation - Building 1

3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.0

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

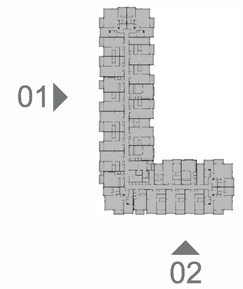
December 8, 2023 | MR230012.00

01: West Elevation - Building 1

3/32" = 1'-0"

02: South Elevation - Building 1

3/32" = 1'-0"



HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.1

ESPLANADE PLACE

Downer's Grove, IL

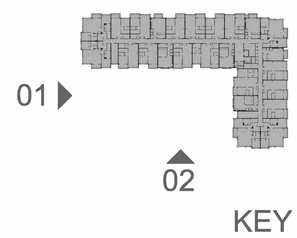
BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00

01: West Elevation - Building 2

3/32" = 1'-0"



02: South Elevation - Building 2

3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.2
ESPLANADE PLACE

Downer's Group, IL

BSB DESIGN

BSBDESIGN.COM

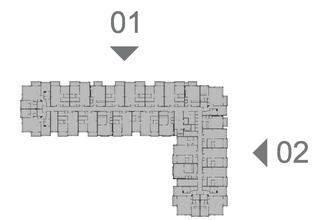
December 8, 2023 | MR230012.00

01: North Elevation - Building 2

3/32" = 1'-0"

02: East Elevation - Building 2

3/32" = 1'-0"



HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.3

ESPLANADE PLACE

Downer's Grove, IL

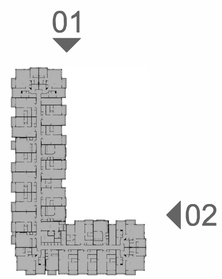
BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00

01: North Elevation - Building 3

3/32" = 1'-0"



02: East Elevation - Building 3

3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.4
ESPLANADE PLACE

Downer's Street, IL

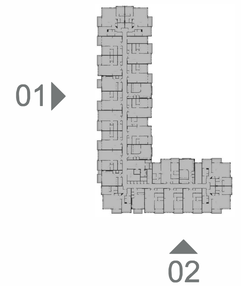
BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00

01: West Elevation - Building 3

3/32" = 1'-0"



02: South Elevation - Building 3

3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Exterior Elevations

A3.5

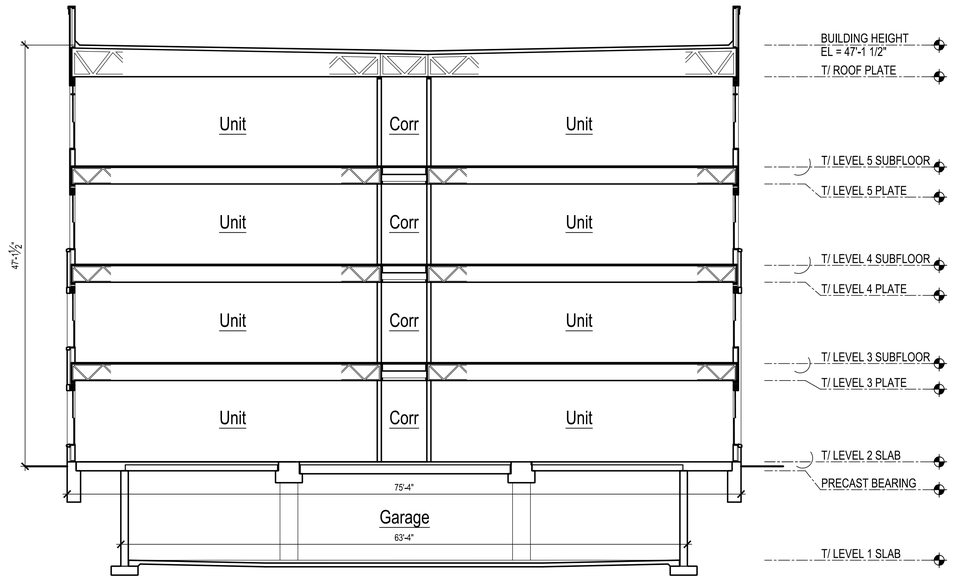
ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

December 8, 2023 | MR230012.00



Building Section

Scale: 1/8" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Building Section

A4.0

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

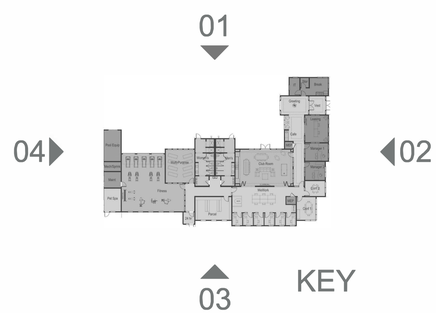
December 8, 2023 | MR230012.00

01: North Elevation - Club Building
1/8" = 1'-0"

02: East Elevation - Club Building
1/8" = 1'-0"

03: South Elevation - Club Building
1/8" = 1'-0"

04: West Elevation - Club Building
1/8" = 1'-0"



HAMILTON PARTNERS

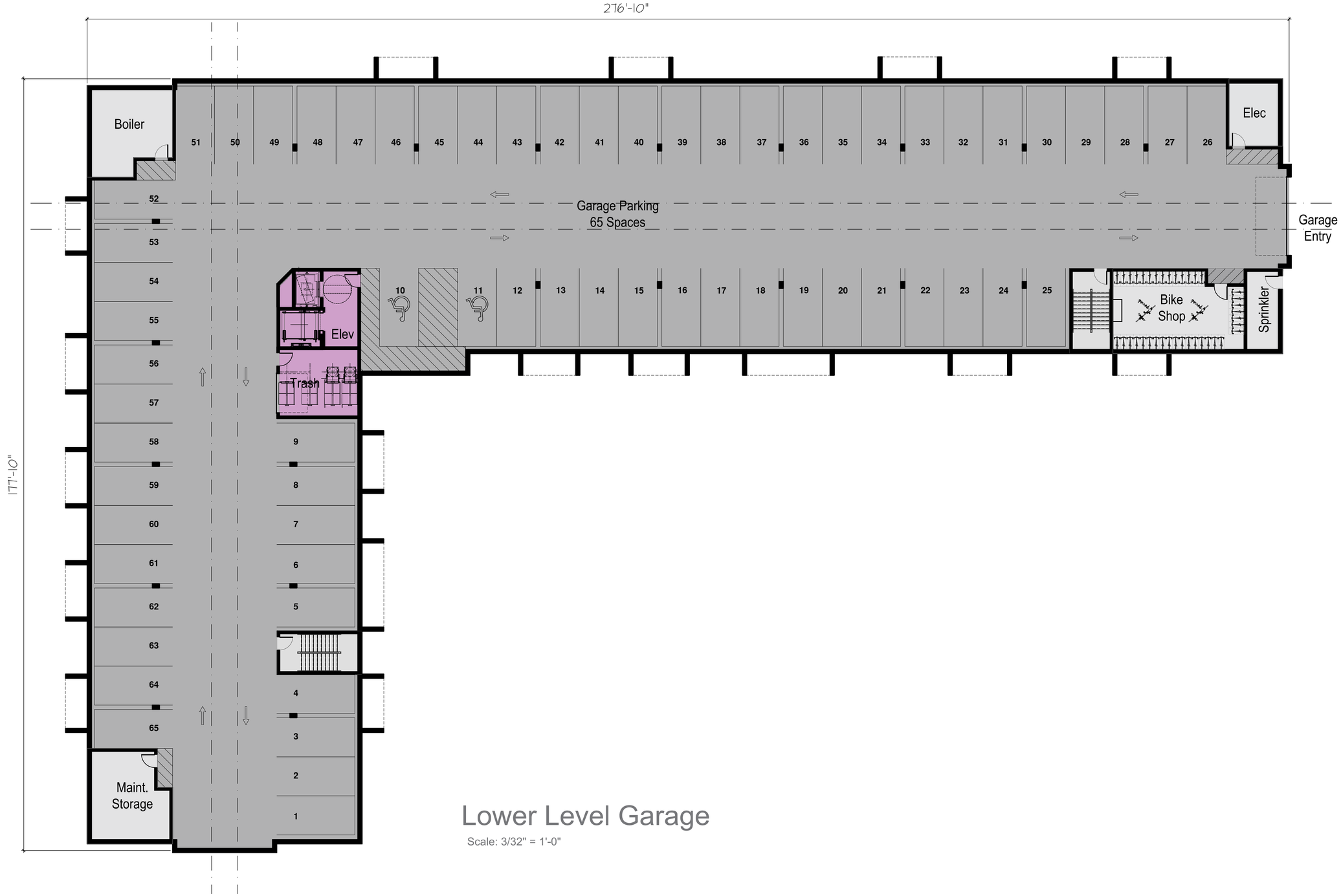
m&r DEVELOPMENT

Exterior Elevations

A6.1
ESPLANADE PLACE
Downer's Groove, IL

BSB DESIGN
BSBDESIGN.COM

December 8, 2023 | MR230012.00



Lower Level Garage

Scale: 3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Building Floorplan Diagrams

A2.0

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

March 24, 2023 | MR230012.00

Entry Level

Scale: 3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Building Floorplan Diagrams

A2.1

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

March 24, 2023 | MR230012.00

Levels 2, 3 & 4

Scale: 3/32" = 1'-0"

HAMILTON PARTNERS

m&r DEVELOPMENT

Building Floorplan Diagrams

A2.2

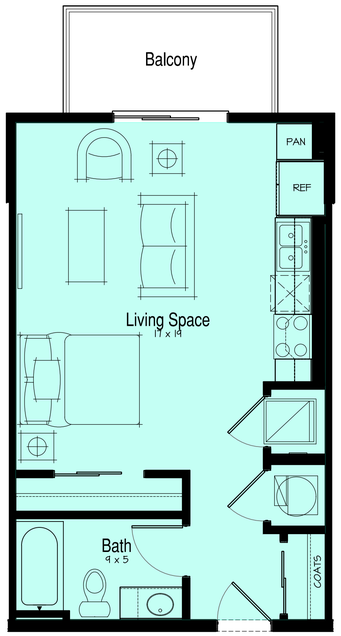
ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

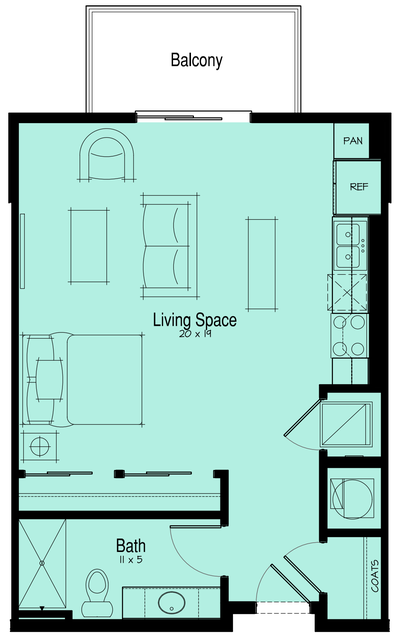
March 24, 2023 | MR230012.00



ANSI TYPE B UNIT
524 GSF / 481 NSF

Unit - S1 Studio

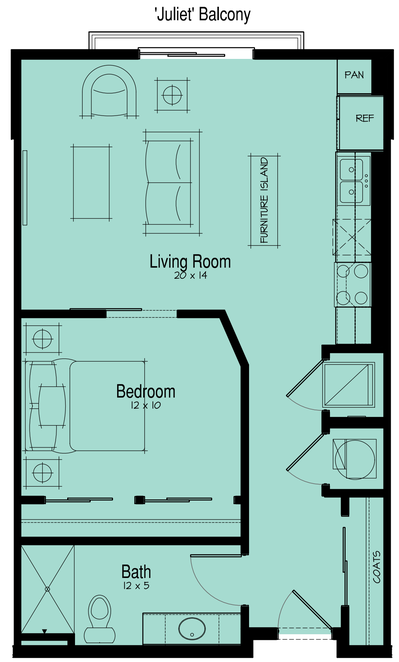
SCALE: 1/4"=1'-0"



ANSI TYPE B UNIT
605 GSF / 560 NSF

Unit - S2 Studio

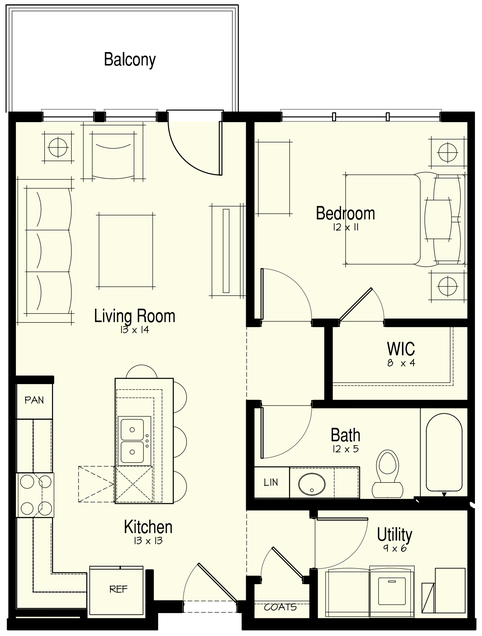
SCALE: 1/4"=1'-0"



ANSI TYPE B UNIT
711 GSF / 661 NSF

Unit - S3 Studio

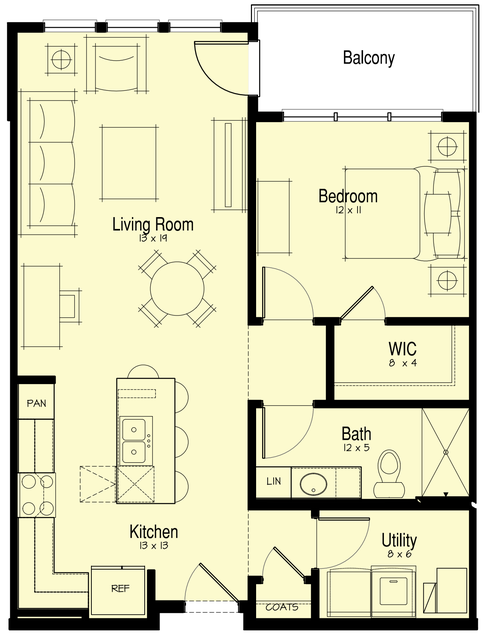
SCALE: 1/4"=1'-0"



ANSI TYPE B UNIT
749 GSF / 698 NSF

Unit - A1 1-Bedroom

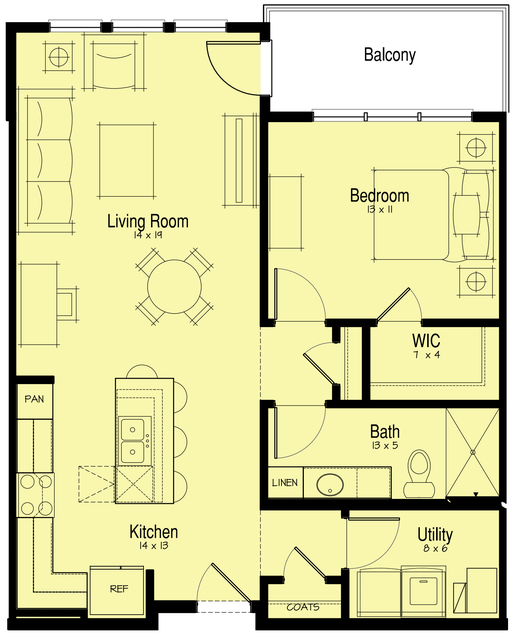
SCALE: 1/4"=1'-0"



ANSI TYPE B UNIT
819 GSF / 763 NSF

Unit - A2 1-Bedroom

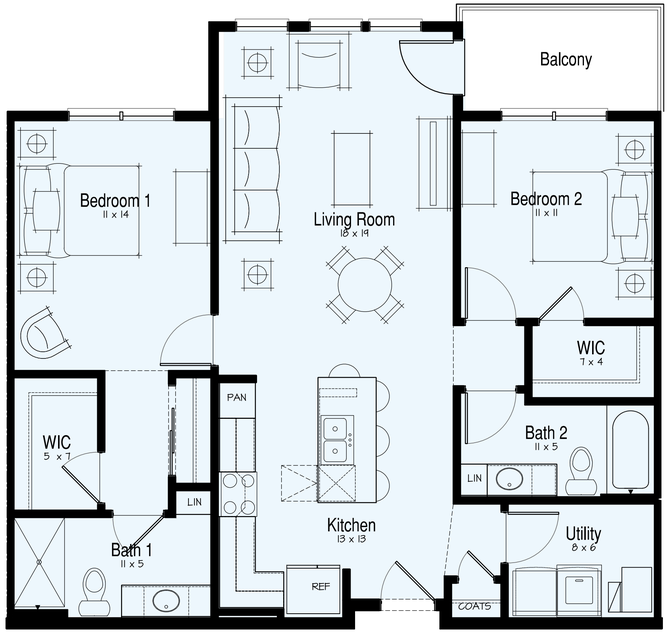
SCALE: 1/4"=1'-0"



ANSI TYPE B UNIT
871 GSF / 815 NSF

Unit - A3 1-Bedroom

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



ANSI TYPE B UNIT
1122 GSF / 1055 NSF

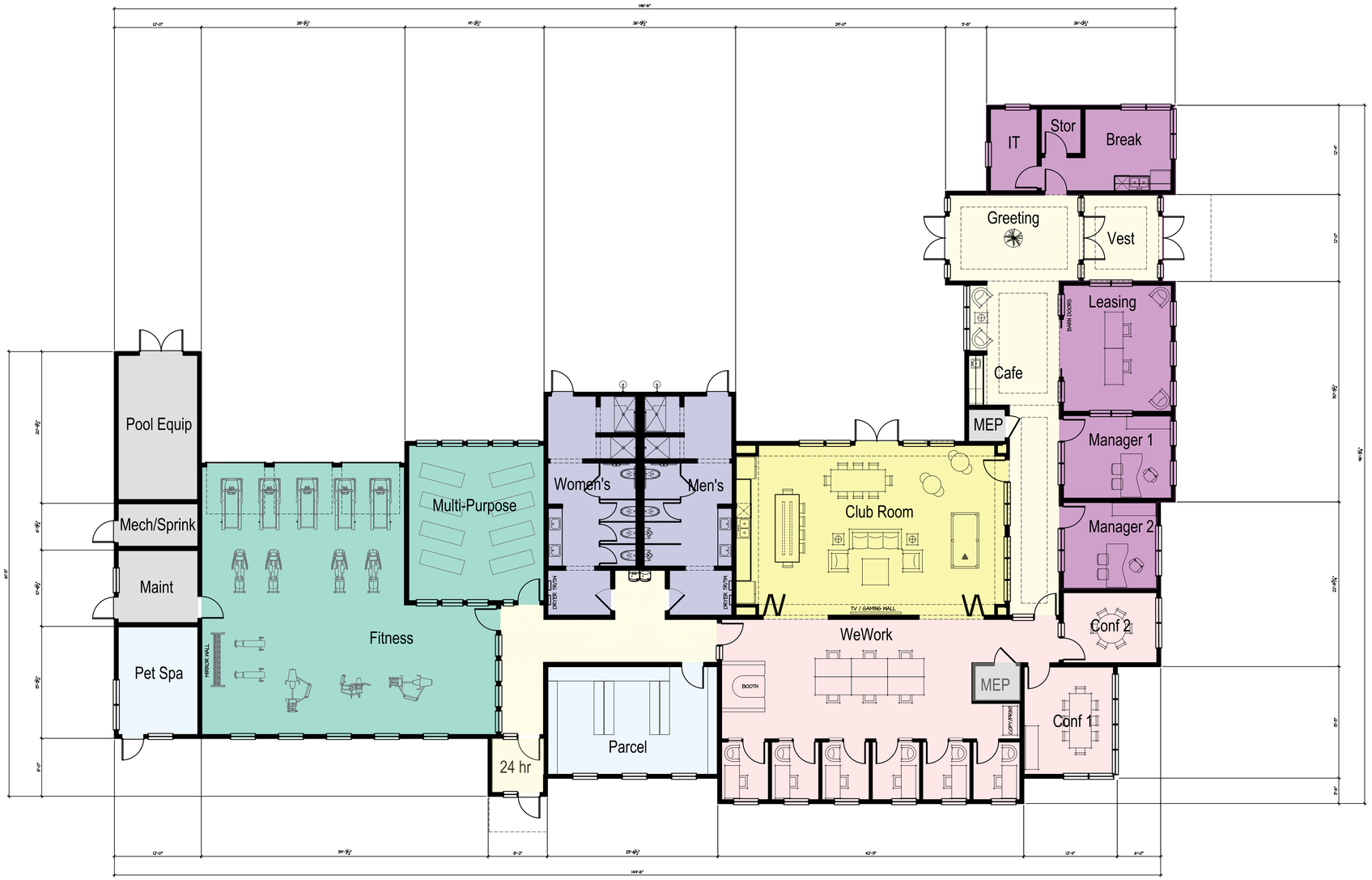
Unit - B1 2-Bedroom

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

ANSI TYPE B UNIT
1290 GSF / 1216 NSF

Unit - B2 2-Bedroom

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



Floor Plan

Scale: 1/8" = 1'-0"

8,097 sf

HAMILTON PARTNERS

m&r DEVELOPMENT

Club Building

A6.0

ESPLANADE PLACE

Downer's Grove, IL

BSB DESIGN

BSBDESIGN.COM

March 24, 2023 | MR230012.00

RWG ENGINEERING, LLC
CIVIL ENGINEERING – REAL ESTATE CONSULTING – PROJECT MANAGEMENT
ILLINOIS PROFESSIONAL DESIGN FIRM #184–006370

LIMITATION OF WARRANTY OF ENGINEER'S INSTRUMENTS OF SERVICE

THE ENGINEER AND HIS CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

LEGEND

	EXISTING	PROPOSED
SANITARY MANHOLE	◎	◉
STORM MANHOLE	◎	◉
CATCH BASIN	○	●
INLET	□	■
PRECAST FLARED END SECTION	▷	▶
CONCRETE HEADWALL	⊃	⊃
VALVE VAULT	⊗	⊗
VALVE BOX	⊞	⊞
FIRE HYDRANT		
BUFFALO BOX	⊕	•
CLEANOUT	⊡	⊡
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
WATER MAIN		
CONSTRUCT WATER MAIN UNDER SEWER		
GRANULAR TRENCH BACKFILL		
STREET LIGHT		
ELECTRICAL CABLE	E	E
2" CONDUIT ENCASEMENT		
ELECTRICAL TRANSFORMER OR PEDESTAL	E	
POWER POLE		
STREET SIGN		
GAS MAIN	G	G
TELEPHONE LINE	T	T
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	×750.00
WETLANDS		
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
OVERFLOW RELIEF ROUTING		
SLOPE BANK		
TREE WITH TRUNK SIZE	6" 6"	
SOIL BORING	B-6	B-6
TOPSOIL PROBE	P-0	P-1
FENCE LINE, WIRE OR SILT		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

ABBREVIATIONS

BL	BASE LINE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT–OF–WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FF	FINISHED FLOOR	ST	STORM SEWER
FG	FINISHED GRADE	T	TANGENCY OF CURVE
FL	FLOW LINE	TB	TOP OF BANK
FP	FLOODPLAIN	TC	TOP OF CURB
FR	FRAME	TF	TOP OF FOUNDATION
FW	FLOODWAY	TP	TOP OF PIPE
HWL	HIGH WATER LEVEL	TS	TOP OF SIDEWALK
INV	INVERT	TW	TOP OF WALK
L	LENGTH OF CURVE	WM	WATER MAIN
MH	MANHOLE	Δ	INTERSECTION ANGLE

811 Know what's below. Call before you dig.

Formerly JULIE 1–800–892–0123

PRELIMINARY ENGINEERING

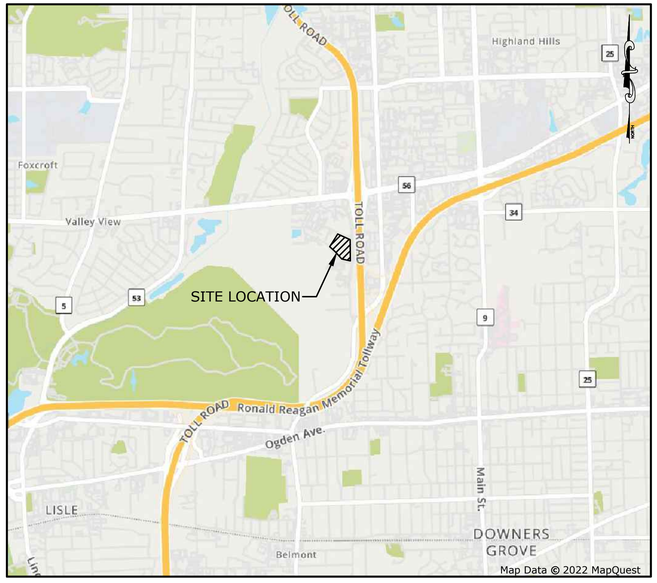
FOR

ESPLANADE PLACE

–

DOWNERS GROVE, ILLINOIS 60515

LOCATION MAP



PLANS PREPARED FOR
CO-DEVELOPERS:

HAMILTON PARTNERS
1901 BUTTERFIELD ROAD
SUITE 270
DOWNERS GROVE, IL 60515
(630) 963-0700

M & R DEVELOPMENT
555 PIERCE ROAD
SUITE 180
ITASCA, IL 60143
(847) 397-7171

INDEX OF SHEETS

DATE	REVISION	DRAWN BY
1 12/08/23	ADDRESSED VODG 04/07/23 COMMENTS	TLM

ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
TITLE SHEET

DOWNERS GROVE SANITARY DISTRICT NOTES

1. The Downers Grove Sanitary District Standards and Ordinances shall govern all sanitary sewer consturction.
2. The Sewer contractor shall schedule with the District inspections of the sanitary sewer construction 48 hours in advance of the start of the construction. (630–969–0664)
3. The constructed sewers shall pass all District requirements for air testing, televising and manhole vacuum tests (contractor to refer to DGSD specifications handout).
4. All sanitary sewers shall be PVC pipe with a SDR of 26, complying with ASTM D2241, 160 psi pressure pipe push–on bell and spigot type with rubber ring seal gasket ASTM D3139.
5. "Flex Seal" non–shear couplings (with stainless steel shear ring) shall be used to connect pipes of dissimilar material or size.
6. Service connections to existing sewers shall be made by:
   A) Machine tap with the connection made with a Geneco Sealtite Sewer Saddle Tee, or Cascade Sewer Saddle Tee, or approved equal.
   B) A new tee fitting shall be cut into the main with connection made to the main with non–shear couplings.

SURFACE WATER DRAINAGE STATEMENT

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, ROBERT W. GUDMUNDSON, A REGISTERED PROFESSIONAL ENGINEER IN ILLINOIS AND HAMILTON PARTNERS, THE OWNER OF THE LAND DEPICTED HEREON OR HIS DULY AUTHORIZED ATTORNEY, DO HEREBY STATE, THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO ADJOINING PROPERTY RESULTING FROM THE CONSTRUCTION OF THIS SUBDIVISION. I HEREBY CERTIFY THAT THE PROPERTY WHICH IS THE SUBJECT OF THIS SUBDIVISION OR ANY PART THEREOF IS NOT LOCATED WITHIN A 100 YEAR SPECIAL FLOOD HAZARD AREA AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FLOODPLAIN MAP PANEL No. 17043C0158J AND No. 17043C0159J, DATED AUGUST 01, 2019.

DATED THIS 15TH DAY OF MARCH, 2023

OWNER OR ATTORNEY

ENGINEER

GENERAL NOTES

1. The contractor shall notify the following governmental agencies at least two working days prior to commencement of construction:
   - Village of Downers Grove Engineering and Public Works Department (630–434–5500)
   - Downers Grove Sanitary District (630–969–0664)
2. The contractor shall notify all utility companies and arrange for their facilities to be located prior to work in any easement, right–of–way, or suspected utility location. Repair of any damage to existing facilities shall be the responsibility of the contractor. Utility locations shown herein are for graphic illustration only and are not to be relied upon.
3. Prior to commencement of any offsite construction, the contractor shall secure written authorization that all offsite easements have been secured, and that permission has been granted to enter onto private property.
4. Elevations shown herein reflect NAVD 1988 datum.
5. The boundary and topographic survey data for this project is based on a field survey prepared by Edward J. Molloy and Associates, Inc. dated December 8, 2022. The contractor shall verify existing conditions prior to commencing construction and shall immediately notify the engineer in writing of any differing conditions.
6. RWG Engineering, LLC, it's employees and agents are not responsible for the safety of any party at or on the construction site. Safety is the sole responsibility of the contractor, and any other entity performing work at the site. Neither the owner nor the engineer assumes any responsibility for job site safety or for the means, methods or sequences of construction.
7. Except where modified by the contract documents, all work proposed hereon shall be in accordance with the following specifications, which are hereby made a part hereof:
   A. "Standard Specifications for Road and Bridge Construction in Illinois," as prepared by I.D.O.T. latest edition.
   B, "Standard Specifications for Water and Sewer Main Construction in Illinois," latest edition.
   C. "Illinois Recommended Standards for Sewage Works," as published by the I.E.P.A., latest edition.
   D. The subdivision and development codes and standards of the Village of Downers Grove, as published by the Municipality.
   E. "Illinois Accessibility Code" as published by the State of Illinois Capital Development Board, effective October 23, 2018.
   F. The National Electric Code.
   G. "Illinois Urban Manual" as prepared by the U.S. Dept. of Agriculture latest edition.
8. The Village of Downers Grove Development Ordinance shall take precedence if a conflict in project specifications occurs.

December 01, 2023 11:38:57 a.m. AcadVer:24.2s (LMS Tech)
Drawing: S:\70600522 – ESPLANADE MULTI–FAMILY\300_ENGINEERING\310_CADD\PRELIM\706_BASE.DWG

NOTE:
THERE SHALL BE NO STAGING OF ANY TYPE ON PUBLIC PROPERTY OF ANY TYPE, THIS INCLUDES TRUCKS WAITING IN FRONT ON THE STREETS OR IN THE PARKING LOTS ACROSS THE STREET. COORDINATION OF DELIVERIES WILL NEED TO BE OUTLINED IN GREAT DETAILS SO THAT THERE WILL NEVER BE A TRAFFIC PROBLEM ON LACEY ROAD OR WOOD CREEK DRIVE.

NOTE:
ONE FULL SIZE HARD COPY OF THE AS–BUILT FINAL GRADING SURVEY (PRINTED TO SCALE) MUST BE SUBMITTED PRIOR TO SCHEDULING THE FINAL STORMWATER/RIGHT–OF–WAY INSPECTION FOR THE PROJECT. AS APPLICABLE, IT SHALL INCLUDE, BUT IS NOT LIMITED TO, THE ITEMS LISTED IN SECTION 26.700.C OF THE DOWNERS GROVE MUNICIPAL CODE. AS APPLICABLE, IT SHALL ALSO INCLUDE THE AS–BUILT STORAGE VOLUME OF ANY RESIDENTIAL STORMWATER STORAGE (RSS) OR POST CONSTRUCTION BEST MANAGEMENT PRACTICES (PCBMPs). BEFORE THE PERMIT CAN BE CLOSED, AN ELECTRONIC COPY OF THE APPROVED AS–BUILT GRADING SURVEY IS REQUIRED.

BENCHMARKS

REFERENCE BENCHMARKS:

DUPAGE COUNTY BENCHMARK 0166:
STATION LOCATED ALONG THE EAST SIDE OF FINLEY ROAD AT THE OVERPASS FOR INTERSTATE 88. STATION IS 110.0 FT. NORTH OF THE CENTERLINE OF A CAR DEALERSHIP ENTRANCE AND 32.0 FT. EAST OF THE CENTERLINE OF FINLEY ROAD NORTHBOUND. MONUMENT IS A 3.5 INCH BRASS DISK ON THE SOUTH END OF THE EAST BRIDGE WALL FOR THE OVERPASS. MONUMENT IS 2.0 FT. ABOVE ROAD GRADE.
ELEVATION = 771.01 FT. (NAVD 88)

DUPAGE COUNTY BENCHMARK LISLE 07:
STATION IS LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF WARRENVILLE ROAD AND HATCH LANE. STATION IS 49.0 FT NORTH OF THE GF NGS HORIZONTAL ACCURACY: PID: DI3578 BENCHMARK CLOSE UP BENCHMARK LOCATOR REFERENCE FIRST CENTERLINE OF WARRENVILLE ROAD, 33.2 FT WEST OF THE WEST END OF A GUARDRAIL ACROSS NORTH HATCH LANE, AND 27.3 FT EAST–SOUTHEAST OF A SANITARY MANHOLE. MONUMENT IS A STEEL ROD IN CONCRETE WITH AN ALUMINUM ACCESS COVER.
ELEVATION = 721.30 FT. (NAVD 88)

SITE BENCHMARKS:

BENCHMARK "A":
CROSS NOTCH IN CONC. LIGHT POLE BASE ±158' NORTH AND 210' WEST OF POINT "A" IN CARDINAL DIRECTIONS
ELEVATION = 726.16
SITE BENCHMARK IS ALONG THE SW'LY SIDE OF WOOD CREEK DRIVE

BENCHMARK "B":
CROSS NOTCH IN TOP OF CURB AT HYDRANT
ELEVATION = 753.44

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PROJECT NO. 70600522
DATE 03/24/23
SCALE NONE
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
1 OF 15

ROBERT W. GUDMUNDSON
38423
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS

EXPIRATION DATE: 11/30/25

EXISTING UTILITY STRUCTURE SCHEDULE

SANITARY SEWER STRUCTURES

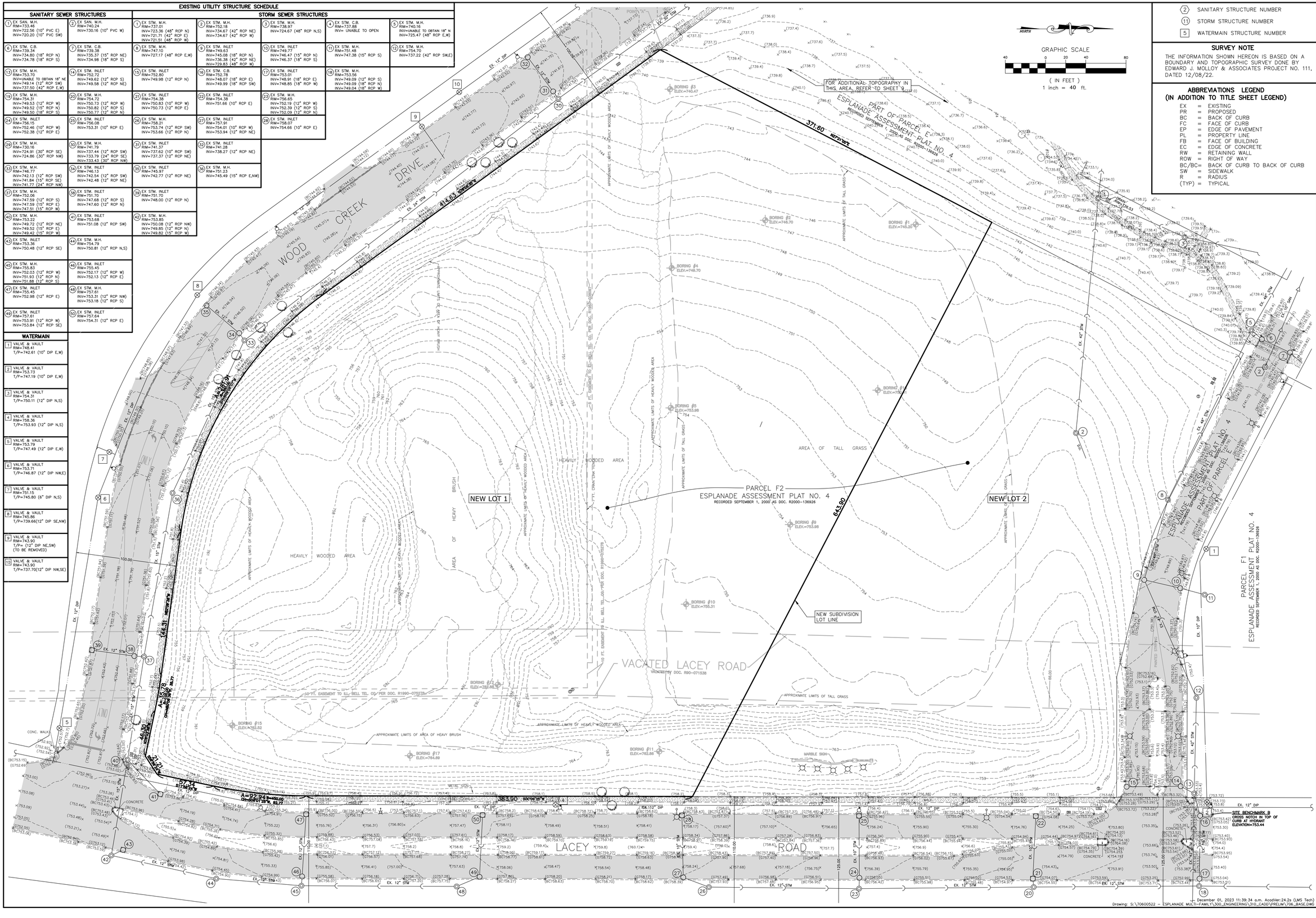
1 EX. SAN. M.H. RIM=753.46 INV=722.56 (10" PVC E) INV=720.20 (10" PVC SW)	2 EX. SAN. M.H. RIM=740.24 INV=730.16 (10" PVC W)	
6 EX. STM. C.B. RIM=739.34 INV=734.80 (18" RCP N) INV=734.78 (18" RCP S)	7 EX. STM. C.B. RIM=735.37 (15" RCP NE) INV=734.98 (18" RCP S)	
13 EX. STM. M.H. RIM=753.70 INV=UNABLE TO OBTAIN 18" NE INV=749.14 (12" RCP SW) INV=737.50 (42" RCP E,W)	14 EX. STM. INLET RIM=752.72 INV=749.62 (12" RCP S) INV=749.58 (12" RCP NE)	
19 EX. STM. M.H. RIM=754.31 INV=749.53 (12" RCP W) INV=749.52 (15" RCP N) INV=749.50 (18" RCP S)	20 EX. STM. M.H. RIM=754.72 INV=750.73 (10" RCP W) INV=750.82 (12" RCP S) INV=750.72 (12" RCP N)	
24 EX. STM. INLET RIM=756.15 INV=752.46 (10" RCP W) INV=752.38 (12" RCP E)	25 EX. STM. INLET RIM=756.08 INV=753.31 (10" RCP E)	
29 EX. STM. M.H. RIM=730.16 INV=724.91 (30" RCP SE) INV=724.86 (30" RCP NW)	30 EX. STM. M.H. RIM=741.79 INV=737.44 (12" RCP SW) INV=733.79 (24" RCP SE) INV=733.43 (30" RCP NW)	
33 EX. STM. M.H. RIM=746.77 INV=742.13 (12" RCP SW) INV=741.84 (15" RCP SE) INV=741.77 (24" RCP NW)	34 EX. STM. INLET RIM=746.13 INV=742.54 (12" RCP SW) INV=742.48 (12" RCP NE)	
37 EX. STM. M.H. RIM=752.06 INV=747.59 (12" RCP S) INV=747.59 (15" RCP E) INV=747.51 (15" RCP W)	38 EX. STM. INLET RIM=751.70 INV=747.68 (12" RCP S) INV=747.60 (12" RCP N)	
40 EX. STM. M.H. RIM=753.22 INV=749.72 (12" RCP NE) INV=749.52 (15" RCP E) INV=749.42 (15" RCP W)	41 EX. STM. INLET RIM=755.68 INV=751.08 (12" RCP SW)	
43 EX. STM. INLET RIM=753.36 INV=750.48 (12" RCP SE)	44 EX. STM. M.H. RIM=754.79 INV=750.81 (12" RCP N,S)	
45 EX. STM. M.H. RIM=755.83 INV=752.03 (12" RCP W) INV=751.93 (12" RCP N) INV=751.88 (12" RCP S)	46 EX. STM. INLET RIM=755.45 INV=752.17 (12" RCP W) INV=752.13 (12" RCP E)	
47 EX. STM. INLET RIM=755.45 INV=752.98 (12" RCP E)	48 EX. STM. M.H. RIM=757.60 INV=753.31 (12" RCP NW) INV=753.18 (12" RCP S)	
49 EX. STM. INLET RIM=757.61 INV=753.91 (12" RCP W) INV=753.84 (12" RCP SE)	50 EX. STM. INLET RIM=757.64 INV=754.31 (12" RCP E)	

STORM SEWER STRUCTURES

1 EX STM. M.H. RIM=737.01 INV=723.36 (48" RCP N) INV=721.71 (42" RCP E) INV=721.51 (48" RCP W)	2 EX STM. M.H. RIM=752.18 INV=734.67 (42" RCP NE) INV=734.67 (42" RCP W)	3 EX STM. M.H. RIM=738.97 INV=724.67 (48" RCP N,S)	4 EX STM. C.B. RIM=737.88 INV= UNABLE TO OPEN	5 EX STM. M.H. RIM=740.16 INV=UNABLE TO OBTAIN 18" N INV=725.47 (48" RCP E,W)
8 EX STM. M.H. RIM=747.10 INV=727.17 (48" RCP E,W)	9 EX STM. INLET RIM=749.63 INV=745.08 (18" RCP N) INV=736.38 (42" RCP NE) INV=729.83 (48" RCP W)	10 EX STM. INLET RIM=749.77 INV=746.47 (15" RCP N) INV=746.37 (18" RCP S)	11 EX STM. M.H. RIM=751.48 INV=747.38 (15" RCP S)	12 EX STM. M.H. RIM=754.70 INV=737.22 (42" RCP SW,E)
15 EX STM. INLET RIM=752.80 INV=749.98 (12" RCP N)	16 EX STM. C.B. RIM=752.78 INV=734.67 (18" RCP E) INV=749.99 (18" RCP SW)	17 EX STM. INLET RIM=753.01 INV=748.91 (18" RCP E) INV=748.85 (18" RCP W)	18 EX STM. M.H. RIM=753.56 INV=749.09 (12" RCP S) INV=749.09 (18" RCP N) INV=749.04 (18" RCP W)	
21 EX STM. INLET RIM=754.38 INV=750.73 (12" RCP E)	22 EX STM. INLET RIM=754.38 INV=751.66 (10" RCP E)	23 EX STM. M.H. RIM=756.65 INV=752.19 (12" RCP W) INV=752.39 (12" RCP S) INV=752.09 (12" RCP N)		
26 EX STM. M.H. RIM=758.21 INV=753.74 (12" RCP SW) INV=753.66 (12" RCP N)	27 EX STM. INLET RIM=757.91 INV=754.01 (10" RCP W) INV=753.94 (12" RCP NE)	28 EX STM. INLET RIM=758.07 INV=754.66 (10" RCP E)		
31 EX STM. INLET RIM=741.37 INV=737.62 (10" RCP SW) INV=737.37 (12" RCP NE)	32 EX STM. INLET RIM=741.28 INV=738.27 (12" RCP NE)			
35 EX STM. INLET RIM=745.97 INV=742.77 (12" RCP NE)	36 EX STM. M.H. RIM=751.23 INV=745.49 (15" RCP E,NW)			
39 EX STM. INLET RIM=751.70 INV=748.00 (12" RCP N)				
42 EX STM. M.H. RIM=753.85 INV=750.08 (12" RCP NW) INV=749.85 (12" RCP N) INV=749.82 (15" RCP W)				

WATERMAIN

1	VALVE & VAULT RIM=745.41 T/P=742.61 (10" DIP E,W)
2	VALVE & VAULT RIM=753.73 T/P=747.19 (10" DIP E,W)
3	VALVE & VAULT RIM=754.31 T/P=750.11 (12" DIP N,S)
4	VALVE & VAULT RIM=758.36 T/P=753.93 (12" DIP N,S)
5	VALVE & VAULT RIM=753.79 T/P=747.49 (12" DIP E,W)
6	VALVE & VAULT RIM=753.71 T/P=746.87 (12" DIP NW,E)
7	VALVE & VAULT RIM=751.15 T/P=745.80 (6" DIP N,S)
8	VALVE & VAULT RIM=745.86 T/P=739.66(12" DIP SE,NW)
9	VALVE & VAULT RIM=743.90 T/P= (12" DIP NE,SW) (TO BE REMOVED)
10	VALVE & VAULT RIM=743.90 T/P=737.70(12" DIP NW,SE)



ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
EXISTING CONDITIONS PLAN

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PROJECT NO. 70600522
DATE 03/24/23
SCALE 1"=40'
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
2 OF 15

Drawing: S:\70600522 – ESPLANADE MULTI-FAMILY\300_ENGINEERING\310_CADD\PRELIM\706_BASE.DWG
December 01, 2023 11:39:34 a.m. AcadVer:24.2s (LMS Tech)

DEMOLITION NOTES:

1. EROSION CONTROL INSTALLATION SHALL BE DONE PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITY.
2. EXISTING ELECTRICAL AND PHONE CABLES MAY BE LOCATED WITHIN THE PROPOSED IMPROVEMENT AREA. APPROXIMATE KNOWN LOCATIONS ARE SHOWN HEREON. THE CONTRACTOR SHALL ARRANGE FOR PRECISE LOCATION OF EXISTING CABLE SERVICES AND EXERCISE EXTREME CARE WHEN WORKING AROUND THE SAME.
3. ALL STRUCTURAL PAVEMENT MATERIALS (ASPHALT, CONCRETE SIDEWALK, CURB/GUTTER) THAT CANNOT BE CRUSHED TO AN APPROVED IDOT SPECIFICATION FOR USE AS STRUCTURAL FILL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN OFFSITE LOCATION. RE-USE OF MILLED ASPHALT AND PROPERLY CRUSHED CONCRETE AS STRUCTURAL FILL IS ACCEPTABLE AND ENCOURAGED.
4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGE TO EXISTING AMENITIES SCHEDULED TO REMAIN. PROPER SAWCUTTING SHALL BE ACCOMPLISHED AT ALL POINTS OF CONNECTION OR INTERFACE BETWEEN EXISTING AND PROPOSED IMPROVEMENTS.
5. CONTRACTOR SHALL BE RESPONSIBLE TO HAVE ALL UNDERGROUND UTILITIES (EVEN IF NOT SHOWN ON THESE PLANS) LOCATED PRIOR TO DEMOLITION WORK. SANITARY SERVICE, WATERMAIN SERVICE, GAS, ELECTRIC, ETC SHALL BE CUT-OFF. CONTRACTOR TO COORDINATE WITH RESPECTIVE MUNICIPAL AGENCY TO ARRANGE FOR DISCONNECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO EXISTING UTILITIES, STREET LIGHTS, SIGNS, ETC. THAT ARE NOT INTENDED TO BE PERMANENTLY REMOVED.
7. CONTRACTOR SHALL NOTIFY THE DOWNERS GROVE PUBLIC WORKS DEPARTMENT, DOWNERS GROVE SANITARY DISTRICT, ALL UTILITY COMPANIES, AND THE FIRE DEPARTMENT PRIOR TO START UP.
8. ONSITE DISTURBED AREAS TO REMAIN AS GREENSPACE SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SOD.
9. ALL EXISTING DRIVEWAY APRONS SHALL BE SAWCUT ALONG WITH REMOVAL OF ANY EXISTING DEPRESSED CURB AND GUTTER, AND NEW BARRIER CURB AND GUTTER (SIZED TO MEET EXISTING ADJACENT CONDITIONS) SHALL BE INSTALLED AND DOWELED INTO THE EXISTING ADJOINING CURB AND GUTTER.
10. PARKWAYS SHALL BE RESTORED WITH MINIMUM 4" TOPSOIL AND SOD
11. UTILITY LINES SCHEDULED FOR REMOVAL SHALL BE PROPERLY DISCONNECTED FROM FACILITIES THAT ARE TO REMAIN, SECURELY PLUGGED AT ALL CONNECTION POINTS, AND EITHER REMOVED OR FILLED WITH FLOWABLE FILL (LEAN CONCRETE MIXTURE) AND ABANDONED IN PLACE (REMOVE IF LOCATED UNDER NEW BUILDING PAD AREAS). IN THE CASE OF STRUCTURE ABANDONMENT, CASTINGS AND TOP SLABS AND CONE SECTIONS SHALL BE REMOVED PRIOR TO FILLING THE STRUCTURE (UNLESS THE STRUCTURE IS EASIER TO COMPLETELY REMOVE).
12. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG CONCRETE/MORTAR PLUGS.
13. EXISTING METER AND MTU TO BE RETURNED TO VILLAGE OF DOWNERS GROVE PUBLIC WORKS DEPARTMENT.

DEMOLITION LEGEND

- REMOVE EXISTING PAVEMENT/SIDEWALK/STRUCTURE/C&G (INCL SAWCUT)
- PAVEMENT PAINT REMOVAL
- TREE/BUSH/STRUCTURE REMOVAL
- TREE PROTECTION FENCE
- REMOVE EXISTING UTILITY LINE
- REMOVE EXISTING CURB AND GUTTER

(2) SANITARY STRUCTURE NUMBER

(11) STORM STRUCTURE NUMBER

[5] WATERMAIN STRUCTURE NUMBER

SURVEY NOTE

THE INFORMATION SHOWN HEREON IS BASED ON A BOUNDARY AND TOPOGRAPHIC SURVEY DONE BY EDWARD J. MOLLOY & ASSOCIATES PROJECT NO. 111, DATED 12/08/22.

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

NOTE: EXISTING IBT EASEMENT TO BE VACATED (TYP.) REFER TO ABROGATION PLAT

REMOVE PAVEMENT PAINT (TYP.)

ALL TREES ON SITE TO BE REMOVED

NEW SUBDIVISION LOT LINE

RELOCATE EXISTING STREET LIGHT TO NORTH SIDE OF NEW ENTRANCE DRIVEWAY.

NEW LOT 1

NEW LOT 2

PARCEL F2
ESPLANADE ASSESSMENT PLAT NO. 4
RECORDED SEPTEMBER 1, 2000 AS DOC. R2000-136926

PART OF PARCEL E
ESPLANADE ASSESSMENT PLAT NO. 4
RECORDED SEPTEMBER 1, 2000 AS DOC. R2000-136926

PARCEL F1
ESPLANADE ASSESSMENT PLAT NO. 4
RECORDED SEPTEMBER 1, 2000 AS DOC. R2000-136926

VACATED LACEY ROAD
VACATED BY DOC. R90-071538

LACEY ROAD

WOOD CREEK DRIVE

371.80 NORTHWEST

414.63 SOUTHEAST

643.90

383.90 S07°09'28"W

50 FT. EASEMENT TO ILL. BELL TEL. CO. PER DOC. R1990-075278

16 FT. EASEMENT TO ILL. BELL TEL. CO. PER DOC. R1990-075278

APPROXIMATE LIMITS OF HEAVILY WOODED AREA

APPROXIMATE LIMITS OF TALL GRASS

APPROXIMATE LIMITS OF AREA OF HEAVY BRUSH

HEAVILY WOODED AREA

AREA OF TALL GRASS

MARBLE SIGN

METAL SIGN

CONC. WALK

SITE BENCHMARK B
CROSS NOTCH IN TOP OF CURB AT HYDRANT
ELEVATION=753.44

NO.	DATE	REVISIONS	DRAWN BY
1	12/08/23	ADDRESSED VODG 04/07/23 COMMENTS	TLM

ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
DEMOLITION PLAN

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PROJECT NO. 70600522
DATE 03/24/23
SCALE 1"=40'
PROJ. MGR. RWG
PROJ. ASSOC: MKR
DRAWN BY TLM

SHEET 3 OF 15

Drawing: S:\70600522 – ESPLANADE MULTI-FAMILY\300_ENGINEERING\310_CADD\PRELIM\706_BASE.DWG
December 01, 2023 11:40:1 a.m. AcadVer:24.2s (LMS Tech)

SITE GEOMETRIC AND PAVING NOTES:

1. SIDEWALK RAMPS WITH DETECTABLE WARNINGS AND DEPRESSED CURBS SHALL BE INSTALLED AT ALL SIDEWALK CROSSINGS. SEE CONSTRUCTION STANDARDS FOR SPECIFIC DETAILS.
2. UNLESS NOTED OTHERWISE ON THE PLAN, ALL DIMENSIONS ARE TO THE BACK OF CURB, FACE OF BUILDING, OR PROPERTY LINES.
3. UNLESS OTHERWISE NOTED, ALL CURB AND GUTTER SHALL BE B6.12 CONCRETE CURB AND GUTTER
4. UNLESS OTHERWISE NOTED, ALL CURB RADII ARE 4' TO BACK OF CURB.
5. ALL BOUNDARY AND LOT DIMENSIONS ARE SHOWN PER THE SUBDIVISION (OR SITE) PLAT PREPARED BY EDWARD J. MOLLOY AND ASSOCIATES, INC. DATED 12/08/22.
6. BUILDING DIMENSIONS HAVE BEEN INDICATED HEREON BASED UPON ARCHITECTURAL INFORMATION CURRENT AS OF THE BASE DATE OF THIS PLAN PREPARATION. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND ADVISE THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
7. IMPROVEMENTS ADJACENT TO BUILDINGS, IF SHOWN (SUCH AS TRUCK DOCKS, RETAINING WALLS, SIDEWALKS, CURBING, FENCING, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, TRANSFORMERS, BOLLARDS, ETC) HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY– REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
8. THE LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAYS. CONTRACTOR TO VERIFY ACTUAL DOORWAY LOCATION WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTING SIDEWALKS.
9. UPON COMPLETION OF PAVING OPERATIONS, THE CONTRACTOR SHALL INSTALL THE PAVEMENT MARKINGS AND STRIPES AND ALL DIRECTIONAL SIGNAGE, ETC AS SHOWN HEREON. PARKING STALL (EXCEPT FOR HC) MARKING COLOR IS WHITE. ALL ONSITE PAVEMENT MARKINGS AND STRIPES SHALL BE PAINTED WITH IDOT SPECIFICATION PAVEMENT PAINT. PARKING STALL STRIPES SHALL BE 4" WIDE. HANDICAP STALLS SHALL BE PAINTED YELLOW AND SIGNED PER FEDERAL, STATE AND LOCAL REQUIREMENTS.
10. PRIOR TO OPENING TO THE PUBLIC, ALL TRAFFIC CONTROL SIGNAGE SHALL BE INSTALLED AS INDICATED, SIGNS SHALL BE INSTALL WITH 3" SQUARE ALUMINUM POSTS WITH A BAKED ON ENAMEL FINISH, SET 1' INTO CONCRETE PIER AND SHALL INCLUDE A POST CAP.
11. IF A MINIMUM OF 9' OF THE ROADWAY (NOT INCLUDING GUTTER PAN) CANNOT BE MAINTAINED FOR VEHICULAR TRAVEL LANE, THEN A FULL CLOSURE AND DETOUR PLAN MUST BE SUBMITTED TO PUBLIC WORKS. PLEASE CONTACT THE VILLAGE'S TRAFFIC MANAGER AT 630-434-5460 FOR FURTHER INFORMATION AND TO COORDINATE DETOUR, PRIOR TO CLOSING THE STREET. A WRITTEN APPROVAL IS REQUIRED.
12. ALL CA-6 TRENCH BACKFILL, AGGREGATE BASE COURSE, AND HOT MIX ASPHALT (HMA) PLACED AS PART OF A STREET PATCH MUST BE TESTED FOR PROPER COMPACTION BY AN IDOT PRE-QUALIFIED TESTING FIRM. TESTING REPORTS MUST BE EMAILED TO THE VILLAGE AT CUT@downers.us PRIOR TO ACCEPTANCE OF THE WORK.
13. ANY CHANGES MADE TO THE SITE PLAN OR IN THE FIELD DURING CONSTRUCTION MUST BE SUBMITTED IN WRITING TO THE VILLAGE OF DOWNERS GROVE.
14. TWO HARD COPIES OF AN AS–BUILT FINAL GRADING SURVEY MUST BE SUBMITTED TO THE VILLAGE PRIOR TO SCHEDULING THE FINAL STORMWATER/RIGHT–OF–WAY INSPECTION FOR THE PROJECT, AS APPLICABLE, IT SHALL INCLUDE, BUT IS NOT LIMITED TO THE ITEMS LISTED IN SECTION 26.700.C. OF THE DOWNERS GROVE MUNICIPAL CODE.

SITE DATA:

TOTAL SITE SIZE (NEW SUBDIVISION LOT 1)	=	401,909 S.F. (9.23 AC)
EXISTING LOT 1 CONDITIONS:		
EXISTING BUILDING FOOTPRINT	=	0 S.F. (0.00%)
EXISTING PAVT./SIDEWALK/CONC.	=	464 S.F. (0.12%)
EXISTING GREENSPACE	=	401,445 S.F. (99.88%)
EXISTING CONDITIONS IMPERVIOUS AREA	=	464 S.F. (0.01 AC)
PROPOSED LOT 1 CONDITIONS:		
PROPOSED BUILDING FOOTPRINT	=	86,158 S.F. (21.44%)
PROPOSED PAVT./SIDEWALK/CONC.	=	152,664 S.F. (37.98%)
PROPOSED GREENSPACE	=	163,087 S.F. (40.58%)
PROPOSED CONDITIONS IMPERVIOUS AREA	=	238,822 S.F. (5.48 AC)
PROPOSED PARKING SUMMARY:		
REGULAR STALLS (OUTSIDE)	=	287
REGULAR STALLS (INSIDE)	=	189
ADA ACCESSIBLE STALLS (OUTSIDE)	=	8
ADA ACCESSIBLE STALLS (INSIDE)	=	6
TOTAL STALLS PROVIDED	=	490

PAVEMENT STRIPING
NEW TURN LANES SHALL BE PAINTED WITH DOUBLE 4" YELLOW OR SINGLE WHITE PAVEMENT PAINT (AS NOTED). ARROWS AND LETTERS SHALL BE WHITE.

NOTE: RESTORE WOOD CREEK DRIVE PER DETAIL PVT-17. SEE SHEET 15.

2' WIDE SAWCUT & PAVT REPLACEMENT (TYP) AND DEPRESSED C&G (77')

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

FOR DETAILS OF THIS AREA SEE SHEETS 7, 8 & 9

4 STORY BUILDING #3
99- RESIDENTIAL UNITS

4 STORY BUILDING #1
99- RESIDENTIAL UNITS

4 STORY BUILDING #2
99- RESIDENTIAL UNITS

CLUBHOUSE

POOL

3201 WOODCREEK DR.

3211 WOODCREEK DR.

3221 WOODCREEK DR.

3231 WOODCREEK DR.

NEW LOT 1

NEW LOT 2

NEW SUBDIVISION LOT LINE

LACEY ROAD

WOOD CREEK DRIVE

WOOD CREEK

STOP SIGN & STOP BAR

STOP SIGN/RIGHT TURN ONLY SIGN & STOP BAR

ONE-WAY SIGN

MONUMENT SIGN

BIKE RACK (6 BIKES)

8'x12' CONC. TRASH PAD (TYP.)

EXISTING ESPLANADE SIGNAGE TO REMAIN

SIDEWALK NOTE:
ADA DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL SIDEWALK CROSSINGS, BOTH PUBLIC AND PRIVATE. REFER TO DETAILS ON SHEET 15.

SURFACE IMPROVEMENT LEGEND:

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING CONCRETE WALK
- PROPOSED ONSITE PARKING LOT ASPHALT PAVEMENT: 1 1/2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 BITUMINOUS TACK COAT (0.05 gal/sy) 2 1/2" HOT MIX ASPHALT BINDER COURSE, IL-19, N50 BITUMINOUS PRIME COAT MC-30 (0.35 gal/sy) 8" AGGREGATE BASE COURSE CA-6, TYPE B
- PROPOSED PUBLIC STREET ACCESS APRON IN R.O.W.: 2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 6" HOT MIX ASPHALT BINDER COURSE, IL-19, N50 BITUMINOUS PRIME COAT MC-30 (0.35 gal/sy) 6" AGGREGATE BASE COURSE CA-6, TYPE B
- PROPOSED CONCRETE PAVEMENT: 6" PORTLAND CEMENT CONCRETE PAVEMENT (4,000 PSI) W/ 6"x6" No. 6 WELDED WIRE MESH 6" AGGREGATE BASE COURSE CA-6, TYPE B
- PROPOSED CONCRETE SIDEWALK: 5" PORTLAND CEMENT CONCRETE (4,000 PSI) (8" AT DRIVEWAY CROSSING) 4" AGGREGATE BASE COURSE CA-6, TYPE B
- EX. CURB AND GUTTER
- CURB AND GUTTER (B6.12) SEE DETAIL SHEETS
- REVERSED PITCH CURB AND GUTTER
- DEPRESSED CURB SECTION (SHADED)
- ADA CURB RAMP WITH DETECTABLE WARNING (REPLACABLE RED POLYMER COMPOSITE PLATES)
- (22) NUMBER OF PARKING STALLS PER AISLE

ABBREVIATIONS LEGEND
(IN ADDITION TO TITLE SHEET LEGEND)

EX	=	EXISTING
PR	=	PROPOSED
BC	=	BACK OF CURB
FC	=	FACE OF CURB
EP	=	EDGE OF PAVEMENT
PL	=	PROPERTY LINE
FB	=	FACE OF BUILDING
FW	=	FACE OF WALK (SIDEWALK)
ROW	=	RIGHT OF WAY
BC/BC	=	BACK OF CURB TO BACK OF CURB
SW	=	SIDEWALK
R	=	RADIUS
RW	=	RETAINING WALL
(TYP)	=	TYPICAL

#	DATE	REVISIONS	DRAWN BY
1	12/08/23	ADDRESSED VODG 04/07/23 COMMENTS	TLM

ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS

SITE GEOMETRIC AND PAVING PLAN

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St. Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

PROJECT NO. 70600522
DATE 03/24/23
SCALE 1"=40'
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET
4 OF 15

December 01, 2023 11:41:01 a.m. AcadVer:24.2s (LMS Tech)
Drawing: S:\70600522 – ESPLANADE MULTI-FAMILY\300_ENGINEERING\310_CADD\PRELIM\706_BASE.DWG

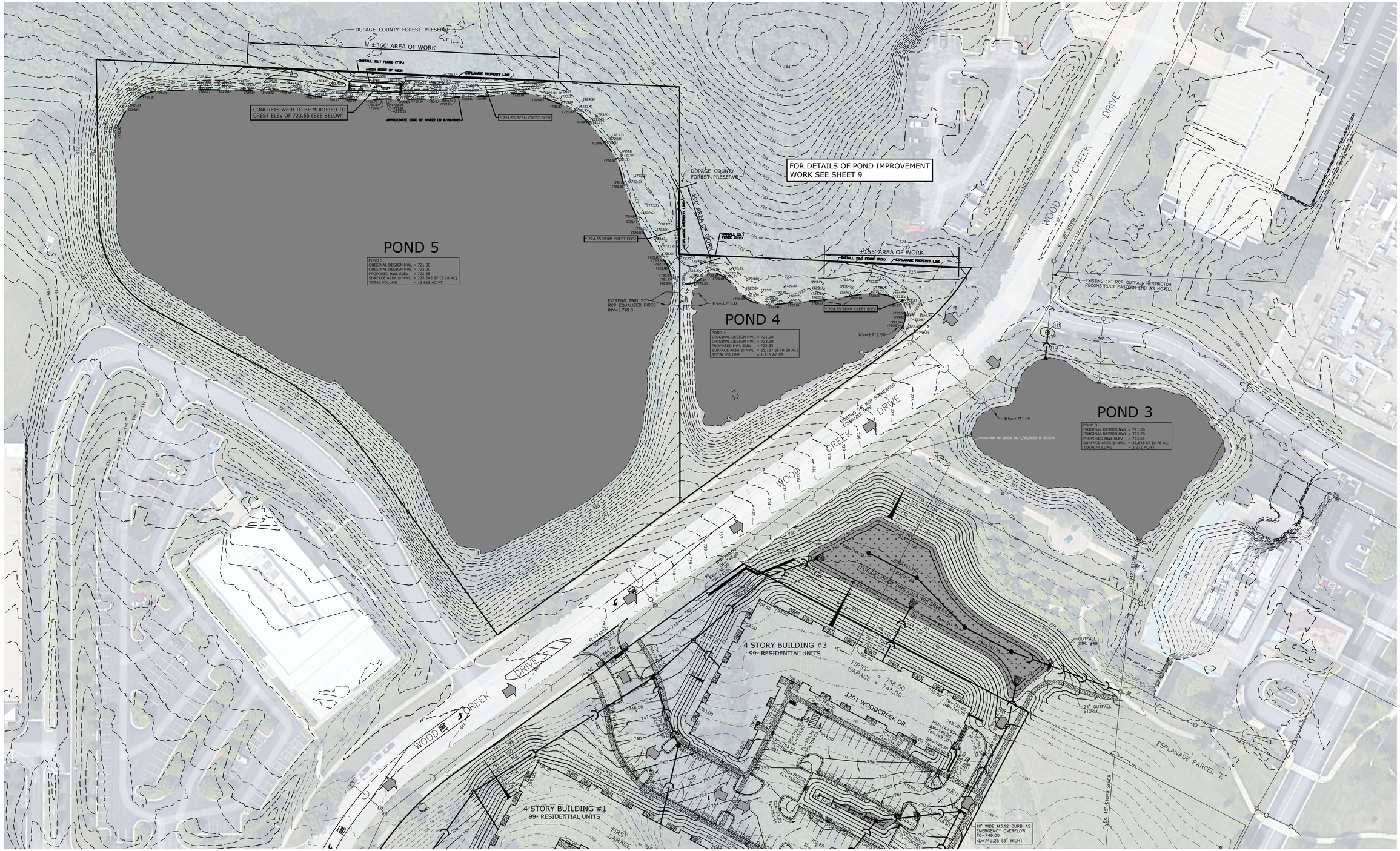
OFFSITE STORM SEWER STRUCTURES	
(110) 30 L.F. - 16" DI @ 0.5% W/ 16' FES INV=721.00	(111) INSTALL 48" DIA. STM MH TYPE C OVER EX. 18" PIPE RIM=725.00 INV=720.85 (16"E,18"W)

NORTH

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.



December 01, 2023 11:50:51 a.m. AcadVer:24.2s (LMS Tech)
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DATE	REVISIONS	DRAWN BY
1 12/08/23	ADDRESSED VOGC 04/07/23 COMMENTS	TLM

ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
OFFSITE PONDS MODIFICATION FOR ADDITIONAL VOLUME

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
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Wheaton, IL 60189
630-460-8899
www.rwg-engineering.com

PROJECT NO. 70600522
DATE 11/14/23
SCALE 1"=50'
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY MKR

SHEET
8 OF 15

UTILITY NOTES:

1. RIM GRADES FOR DRAINAGE STRUCTURES REFLECT THE FLOW LINE ELEVATIONS OF THE PAVEMENT, OR DRAINAGE SWALE (AS APPLICABLE)
2. UNLESS OTHERWISE NOTED, ALL UTILITY DIMENSIONS ARE CENTER TO CENTER OF STRUCTURES (OR TO END OF FLARED END SECTION – IE INCLUDING LENGTH OF FLARED END SECTION)
3. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO THE PROPOSED GRADES AS INDICATED ON THE PLANS.
4. CONNECTIONS TO EXISTING SEWERS OR WATERMAINS (OR EXISTING SERVICE STUBS) AT POINTS OTHER THAN VISIBLE STRUCTURES ARE APPROXIMATE. THE CONTRACTOR SHALL EXCAVATE AND VERIFY EXISTING SEWER OR WATERMAIN LOCATIONS, SIZES, ELEVATIONS, AND PIPE CONDITIONS AT PROPOSED CONNECTION POINTS PRIOR TO CONSTRUCTING UTILITY EXTENSIONS, AND NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICT OR DISCREPANCIES.
5. EXISTING UNDERGROUND PIPE, CONDUIT AND/OR CABLES (LIGHTING, ELECTRIC, GAS, CABLE, ETC) ARE SHOWN FROM RECORD INFORMATION AND ARE APPROXIMATE IN NATURE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION IN THE FIELD AND NOTIFY THE ENGINEER AND OWNER OF ANY CONFLICT.
6. SELECT GRANULAR TRENCH BACKFILL IS REQUIRED FOR ALL UTILITY TRENCHES UNDER EXISTING OR PROPOSED PAVEMENT, DRIVEWAYS, PARKING LOTS, AND SIDEWALKS, AND EXTENDED A MINIMUM OF 2' EACH SIDE OF SAME. GRANULAR TRENCH BACKFILL SHALL BE COMPACTED IN PLACE IN ACCORDANCE WITH THE SPECIFICATIONS.
7. BUILDING DIMENSIONS AND ADJACENT UTILITY SERVICE LOCATIONS HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE TIME OF DRAWING PREPARATION. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THE CONTRACTOR SHALL REFER TO THE CURRENT ARCHITECTURAL PLANS FIRST, FOR PRECISE BUILDING DIMENSIONS AND UTILITY SERVICE CONNECTION LOCATIONS AND NOTIFY THE ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
8. ROUTING OF GAS, ELECTRIC, TELEPHONE AND OTHER CABLE SERVICES (IF SHOWN) ARE APPROXIMATE AND SUBJECT TO MODIFICATION BY THE RESPECTIVE UTILITY COMPANY AND/OR DEVELOPER. THE CONTRACTOR SHALL COORDINATE THE FINAL UTILITY SERVICE LOCATION WITH EACH UTILITY COMPANY PRIOR TO CONSTRUCTION.
9. EXISTING WATER SERVICE DISCONNECTION AND THE PROPOSED WATER SERVICE CONNECTION SHALL BOTH BE MADE AT THE MAIN.
10. THE PROPOSED SERVICE LOCATION MUST BE AT LEAST 18" FROM THE EXISTING SERVICE DISCONNECTION.
11. PROPOSED WATER SERVICE MUST MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 10' FROM SANITARY SERVICE.
12. NEW WATER SERVICE MUST BE A MINIMUM OF 4" FROM A FIRE HYDRANT.

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

1 inch = 40 ft.

NEW UTILITY STRUCTURE LEGEND

- STORM INLET – OPEN GRATE
- STORM CATCH BASIN – OPEN GRATE
- STORM MANHOLE – CLOSED LID
- SANITARY MANHOLE
- VALVE VAULT
- FIRE HYDRANT

CONTRACTOR TO PAY SPECIAL ATTENTION TO DEPRESSED CURB AREAS WHICH DRAIN PORTIONS OF PARKING LOTS AND DRIVEWAYS INTO THE VOLUME CONTROL BASINS. SEE DETAIL FOR CURB DEPRESSION ON SHEET 7. INSTALL 4' WIDE BAND OF RIP-RAP (CA-3 OR LARGER) TO BOTTOM OF OUTFALL SLOPE.

FOR ALL NEW UTILITY PIPE AND STRUCTURE INFORMATION, REFER TO UTILITY SCHEDULE ON SHEET 11. EXISTING UTILITY INFORMATION ALL REFERENCED ON SHEET 2.

4 STORY BUILDING #3
99- RESIDENTIAL UNITS
FIRST FLOOR FF=756.00
GARAGE FLOOR EL=745.00

4 STORY BUILDING #1
99- RESIDENTIAL UNITS
FIRST FLOOR FF=762.00
GARAGE FLOOR EL=751.00

4 STORY BUILDING #2
99- RESIDENTIAL UNITS
FIRST FLOOR FF=762.00
GARAGE FLOOR EL=751.00

CLUBHOUSE

POOL

FDC CONNECTION

3201 WOODCREEK DR.

3211 WOODCREEK DR.

3221 WOODCREEK DR.

3231 WOODCREEK DR.

NEW LOT 1

NEW LOT 2

NEW SUBDIVISION LOT LINE

NOTE: TRENCH DRAIN OUTLET TO BE DESIGNED BY MEP ENGINEER WITH A SEWER PIPE TO INTERIOR STORM SEWER SUMP PUMP AND STORM DRAIN PIPE TO A ROOF DRAIN OUTLET PIPE.

WOODCREEK DRIVE

LACEY ROAD

DATE	REVISIONS	DRAWN BY
1 12/08/23	ADDRESSED VODG 04/07/23 COMMENTS	TLM

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ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
UTILITY PLAN

RWG Engineering, LLC
Civil Engineering ◆ Real Estate Consulting ◆ Project Management
975 E. 22nd St, Suite 400
Wheaton, IL 60189
630.480.7889
www.rwg-engineering.com

PROJECT NO. 70600522
DATE 03/24/23
SCALE 1"=40'
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY TLM

SHEET 10 OF 15

December 01, 2023 11:44:23 a.m. AcadVer:24.2s (LMS Tech)
Drawing: S:\70600522 – ESPLANADE MULTI-FAMILY\300_ENGINEERING\310_CADD\PRELIM\706_BASE.DWG


GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
DownersGrove100'RM
Overall Length 48.250ft
Overall Width 8.333ft
Overall Body Height 11.000ft
Min Body Ground Clearance 1.393ft
Track Width 8.333ft
Lock-to-lock time 6.00s
Max Wheel Angle 45.00°
WOOD CREEK DRIVE
ONLY
4 STORY BUILDING #3
99- RESIDENTIAL UNITS
3201 WOODCREEK DR.
4 STORY BUILDING #1
99- RESIDENTIAL UNITS
3211 WOODCREEK DR.
4 STORY BUILDING #2
99- RESIDENTIAL UNITS
3221 WOODCREEK DR.
CLUBHOUSE
POOL
3231 WOODCREEK DR.
NEW LOT 1
NEW LOT 2
NEW SUBDIVISION LOT LINE
371.60
414.63
643.90
383.90
144.31
LACEY ROAD
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DRAWN BY
REVISIONS
DATE
ESPLANADE PLACE
DOWNERS GROVE, ILLINOIS
FIRE TRUCK EXHIBIT
975 E. 22nd St, Suite 400
Wheaton, IL 60189
630.480.7889
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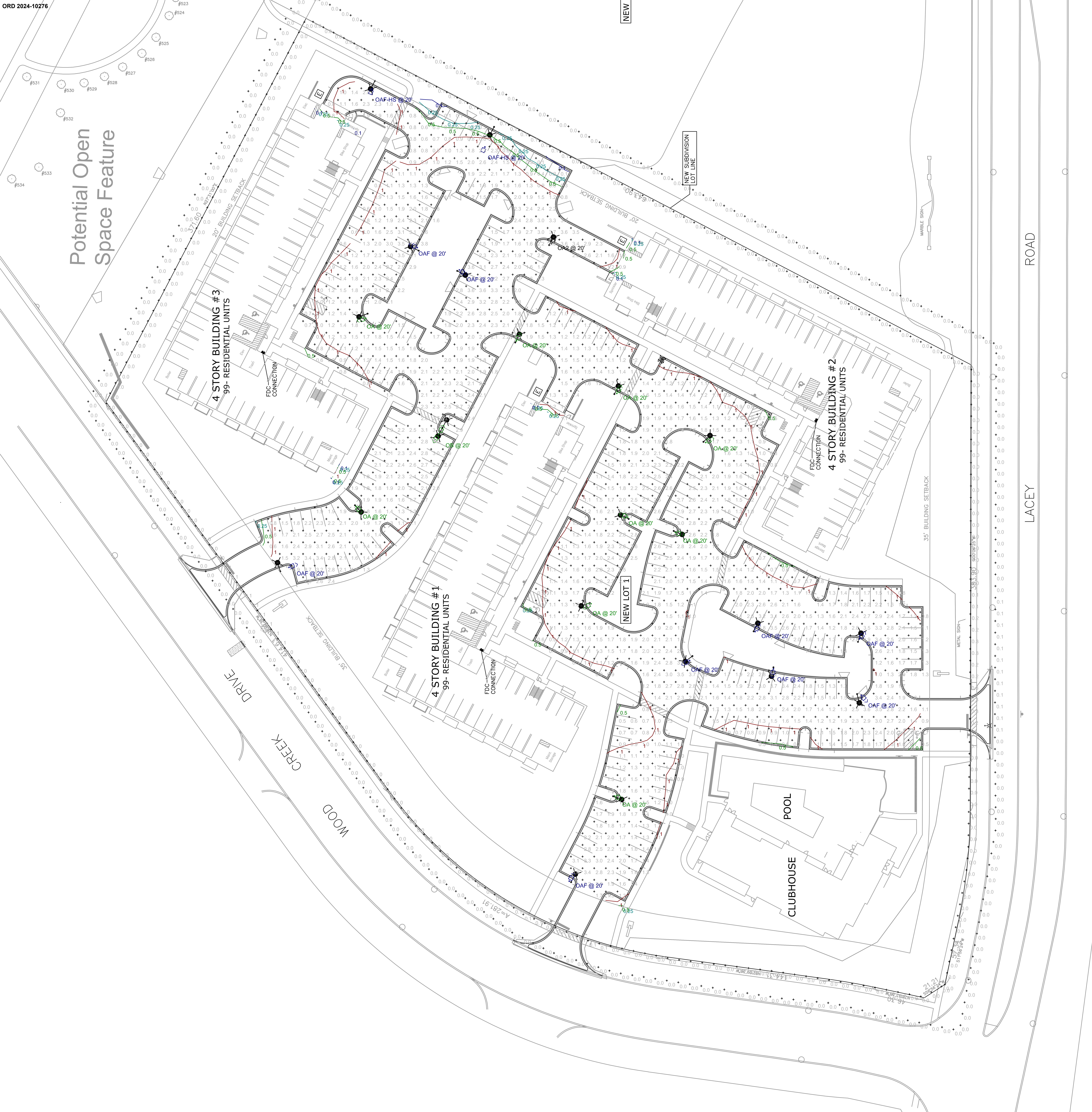
RWG Engineering, LLC
Civil Engineering • Real Estate Consulting • Project Management
PROJECT NO. 70600522
DATE 12/08/23
SCALE 1"=40'
PROJ. MGR. RWG
PROJ. ASSOC. MKR
DRAWN BY TLM
SHEET
1 OF 1
December 01, 2023 11:55:21 a.m.



Site Lighting Fixture Schedules								
Symbol	Label	QTY	Manufacturer	Catalog	Description	Lamp Output	LLF	Input Power
	OA	9	Lithonia Lighting	DSX1 LED P4 40K 70CRI T5W	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 5 Wide	17013	0.9	123.94
	OA2	1	Lithonia Lighting	DSX1 LED P4 40K 70CRI T2M	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 2 Medium	15849	0.9	123.94
	OAF	9	Lithonia Lighting	DSX1 LED P4 40K 70CRI T4M	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 4 Medium	16272	0.9	123.94
	OAF-HS	2	Lithonia Lighting	DSX1 LED P2 40K 70CRI TFTM HS	D-Series Size 1 Area Luminaire P2 Performance Package 4000K CCT 70 CRI Forward Throw Houseside Shield	8367	0.9	67.7927
	OB	1	Lithonia Lighting	DSX1 LED P4 40K 70CRI T5W	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Type 5 Wide	17013	0.9	247.88

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking & Drive	+	1.7 fc	4.2 fc	0.1 fc	42.0:1	17.0:1
Property Line	+	0.0 fc	0.3 fc	0.0 fc	N/A	N/A
20' out from property line	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A

1 ELECTRICAL PHOTOMETRIC SITE PLAN
SCALE: 1" = 40'-0"

LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
02-14-23

SALASO'BRIEN | expect a difference |
10930 W. Sam Houston Parkway N., Suite 900
Houston, Texas 77064
281.664.1900 | Registration No. F-4111

Espanade MEP Parking

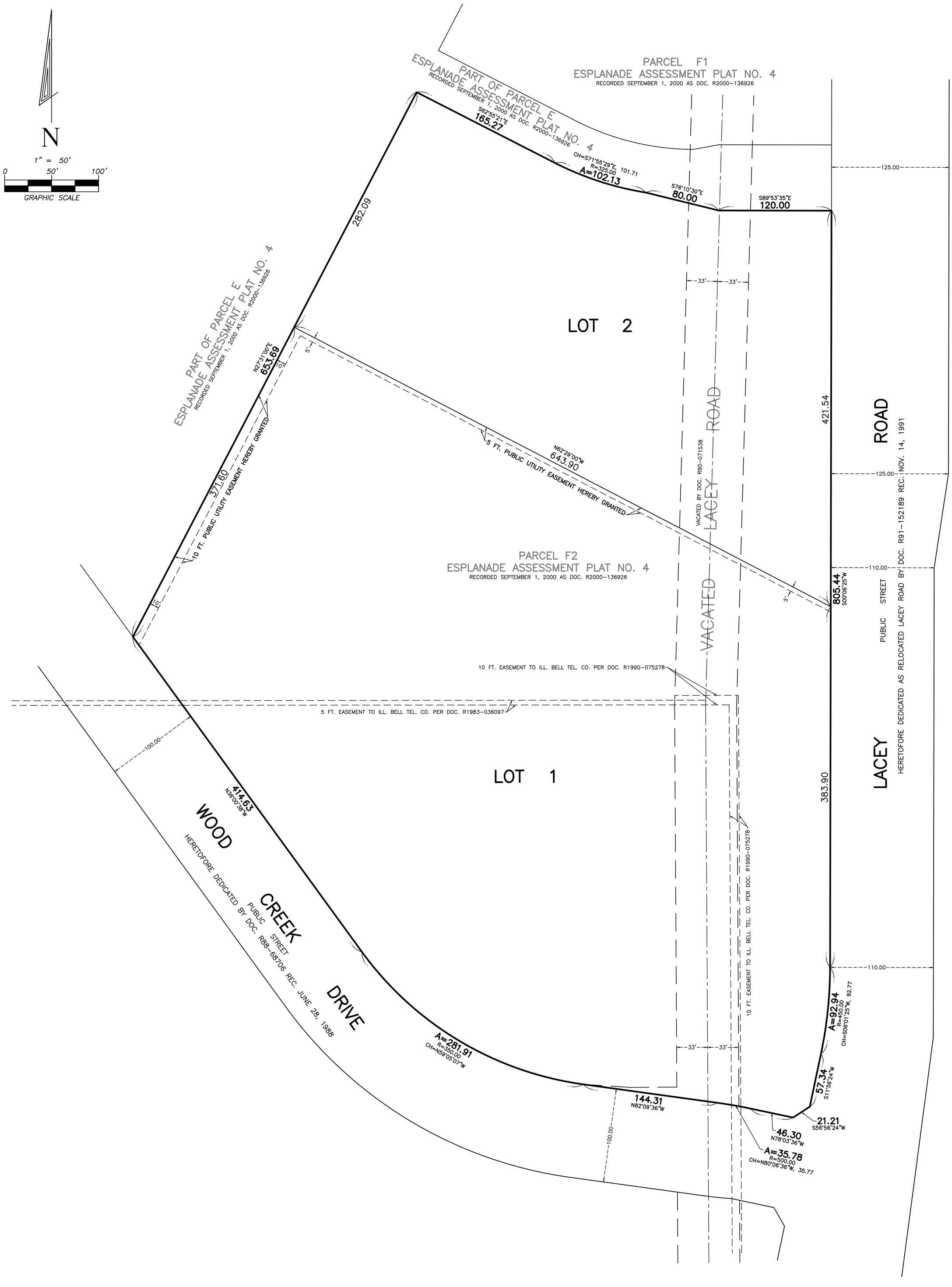
Designer
Date
02/10/2023
Scale
-
Drawing No. E0.1
Electrical Photometric Site Plan

1 of 1

FINAL PLAT OF SUBDIVISION

ESPLANADE PARCEL F2 SUBDIVISION

BEING A RESUBDIVISION IN THE SOUTHWEST 1/4 OF SECTION 30 AND THE NORTHWEST 1/4 OF SECTION 31, TOWNSHIP 39 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DUPAGE COUNTY, ILLINOIS



DRAFTED BY: BJE			
PAGE: 1 OF 2			
ORDER NO.: 230015			
FILE: 30-39-11	NOV. 30, 2023	230015	VILLAGE COMMENT LETTER DATED 4/7/2023
PROJECT NO.: 111	FEB. 16, 2023	230015	PRELIMINARY SUBDIVISION PLAT – INITIAL
	REVISION DATE	ORDER NO.	REVISION
CLIENT: HAMILTON PARTNERS, INC.			

AREA SUMMARY:

LOT 1:	401,909 SQ. FT. OR	9.2266	ACRES
LOT 2:	173,004 SQ. FT. OR	3.9716	ACRES
TOTAL:	574,913 SQ. FT. OR	13.1982	ACRES

FOR REVIEW

PREPARED BY:
EDWARD J. MOLLOY & ASSOCIATES
A DIVISION OF THOMAS A. MOLLOY, LTD. – PROFESSIONAL LAND SURVEYING
1236 MARK STREET, BENSENVILLE, ILLINOIS 60106 (630) 595-2600 FAX:(630) 595-4700
E-MAIL: TMOLLOY@EJMOLLOY.COM

FINAL PLAT OF SUBDIVISION

ESPLANADE PARCEL F2 SUBDIVISION

BEING A RESUBDIVISION IN THE SOUTHWEST 1/4 OF SECTION 30 AND THE NORTHWEST 1/4 OF SECTION 31,
TOWNSHIP 39 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, DUPAGE COUNTY, ILLINOIS

OWNER'S CERTIFICATE AND SCHOOL DISTRICT STATEMENT

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

HP/AG ESPLANADE AT LOCUST POINT–IV LIMITED PARTNERSHIP, DOES HEREBY CERTIFY THAT IT IS THE OWNER OF THE PROPERTY DESCRIBED HEREON AND THAT IT HAS CAUSED SAID PROPERTY TO BE SURVEYED AND PLATTED FOR THE PURPOSE OF RESUBDIVIDING SAME INTO TWO LOTS AS SHOWN HEREON FOR THE USES AND PURPOSES THEREIN SET FORTH AND DOES HEREBY ACKNOWLEDGE AND ADOPT THE SAME UNDER THE STYLE AND TITLE HEREON SHOWN. IT FURTHER CERTIFIES TO THE BEST OF ITS KNOWLEDGE, THAT THE LAND INCLUDED HEREIN FALLS WITHIN THE FOLLOWING SCHOOL DISTRICTS: GRADE SCHOOL DISTRICT #58, HIGH SCHOOL DISTRICT #99 AND COLLEGE OF DUPAGE DISCTRICT NO. 502.

SIGNED AT _____, THIS _____ DAY OF _____, A.D. 202__

HP/AG ESPLANADE AT LOCUST POINT–IV LIMITED PARTNERSHIP

BY: _____ TITLE: _____

NOTARY PUBLIC CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPOAGE)

I, _____, A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ OF HP/AG ESPLANADE AT LOCUST POINT–IV LIMITED PARTNERSHIP, PERSONALLY KNOWN TO ME TO BE THE SAME PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT HE/SHE SIGNED AND DELIVERED THE SAID INSTRUMENT AS HIS/HER OWN FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID LIMITED PARTNERSHIP FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND OFFICIAL SEAL THIS _____ DAY OF _____, A.D. 202__

MY COMMISSION EXPIRES: _____

_____
NOTARY PUBLIC

PLAN COMMISSION OF THE VILLAGE OF DOWNERS GROVE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

APPROVED BY THE PLAN COMMISSION OF THE VILLAGE OF DOWNERS GROVE, THIS ____ DAY OF _____, A.D. 202__.

_____
CHAIRMAN

VILLAGE COUNCIL OF THE VILLAGE OF DOWNERS GROVE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

APPROVED THIS ____ DAY OF _____, A.D. 202__ BY THE COUNCIL OF THE VILLAGE OF DOWNERS GROVE.

_____
MAYOR

_____
VILLAGE CLERK

VILLAGE COLLECTOR CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, _____, COLLECTOR FOR THE VILLAGE OF DOWNERS GROVE, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THIS PLAT.

DATED THIS _____ DAY OF _____, A.D. 202__.

_____
COLLECTOR OF THE VILLAGE OF DOWNERS GROVE

DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF, REASONABLE PROVISIONS HAVE BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS AND PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDOR HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS _____ DAY OF _____, A.D. 202__.

_____ _____
OWNER OR ATTORNEY ILLINOIS LICENSED PROFESSIONAL ENGINEER

_____ _____
PRINTED NAME PRINTED NAME, LICENSE NO. & EXPIRATION DATE

DOWNERS GROVE SANITARY DISTRICT CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, _____, COLLECTOR OF THE DOWNERS GROVE SANITARY DISTRICT, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT OR UNPAID CURRENT OR FORFEITED SPECIAL ASSESSMENTS OR ANY DEFERRED INSTALLMENTS THEREOF THAT HAVE NOT BEEN APPORTIONED AGAINST THE TRACT OF LAND INCLUDED IN THIS PLAT.

DATED THIS _____ DAY OF _____, A.D. 202__.

_____
COLLECTOR OF DOWNERS GROVE SANITARY DISTRICT

DRAINAGE CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, _____, A REGISTERED PROFESSIONAL ENGINEER IN ILLINOIS AND _____, THE OWNER OF THE LAND DEPICTED HEREON OR HIS DULY AUTHORIZED ATTORNEY, DO HEREBY STATE, THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS AND PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION. FURTHER, AS ENGINEER, I HEREBY CERTIFY THAT THE PROPERTY WHICH IS THE SUBJECT OF THIS SUBDIVISION OR ANY PART THEREOF IS (IS NOT) LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

DATED THIS _____ DAY OF _____, A.D. 202__

_____
ENGINEER

_____
OWNER OR THEIR DULY AUTHORIZED ATTORNEY

FOR REVIEW

DUPAGE COUNTY CLERK CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, JEAN KACZMAREK, COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID FORFEITED TAXES AND NO REDEEMABLE TAX SALES AGAINST ANY OF THE LAND INCLUDED IN THIS PLAT. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PLAT DEPICTED HEREON.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY CLERK OF DUPAGE COUNTY, ILLINOIS, THIS _____ DAY OF _____, A.D. 202__.

_____
COUNTY CLERK

DUPAGE COUNTY RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

THIS PLAT WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF DUPAGE COUNTY, ILLINOIS, ON THE _____ DAY OF _____, A.D. 202__ AT _____ O'CLOCK __M AS DOCUMENT NUMBER _____.

_____
RECORDER OF DEEDS

DECLARATION OF RESTRICTIVE COVENANTS

THE UNDERSIGNED OWNER HEREBY DECLARES THAT THE REAL PROPERTY DESCRIBED IN AND DEPICTED ON THIS PLAT OF SUBDIVISION SHALL BE HELD, TRANSFERRED, SOLD, CONVEYED AND OCCUPIED SUBJECT TO THE FOLLOWING COVENANTS AND RESTRICTIONS:

(a) ALL PUBLIC UTILITY STRUCTURES AND FACILITIES, WHETHER LOCATED ON PUBLIC OR PRIVATE PROPERTY, SHALL BE CONSTRUCTED WHOLLY UNDERGROUND, EXCEPT FOR TRANSFORMERS, TRANSFORMER PADS, LIGHT POLES, REGULATORS, VALVES, MARKERS AND SIMILAR STRUCTURES APPROVED BY THE VILLAGE ENGINEER OF THE VILLAGE OF DOWNERS GROVE PRIOR TO RECORDING OF THIS PLAT OF SUBDIVISION.

(b) AN EASEMENT FOR SERVING THE SUBDIVISION, AND OTHER PROPERTY WITH STORM DRAINAGE, SANITARY SEWER, STREET LIGHTING, POTABLE WATER SERVICE, AND OTHER PUBLIC UTILITY SERVICES, IS HEREBY RESERVED FOR AND GRANTED TO THE VILLAGE OF DOWNERS GROVE AND DOWNERS GROVE SANITARY DISTRICT, THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, JOINTLY AND SEPARATELY, TO INSTALL, OPERATE AND MAINTAIN, AND REMOVE, FROM TIME TO TIME, FACILITIES AND EQUIPMENT USED IN CONNECTION WITH THE PUBLIC WATER SUPPLY, TRANSMISSION LINES, SANITARY SEWERS, STORM DRAINAGE SYSTEM, STREET LIGHTING SYSTEM, OR OTHER PUBLIC UTILITY SERVICE, AND THEIR APPURTENANCES, EITHER ON, OVER, ACROSS, BELOW OR THROUGH THE GROUND SHOWN WITHIN THE DOTTED LINES ON THE PLAT MARKED "PUBLIC UTILITY AND/OR DRAINAGE EASEMENT," OR SIMILAR LANGUAGE DESIGNATING A STORMWATER OR SEWER EASEMENT, AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, TOGETHER WITH THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER, THE PROPERTY WITHIN THE STORMWATER OR SEWER EASEMENT WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

WHEREAS, SAID LOTS WILL BE CONVEYED TO PURCHASERS SUBJECT TO THIS DECLARATION TO THE END THAT THE RESTRICTIONS IMPOSED SHALL INURE TO THE BENEFIT OF EACH AND ALL OF THE PURCHASERS OF SUCH LOTS WHETHER THEY SHALL HAVE BECOME SUCH BEFORE OR AFTER THE DATE THEREOF, AND THEIR RESPECTIVE HEIRS AND ASSIGNS, AND

WHEREAS, THE AFORESAID PROPERTY DESCRIBED ON THE ATTACHED PLAT IS LOCATED ENTIRELY WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF DOWNERS GROVE, ILLINOIS, AND

WHEREAS, ALL OF THE PROVISIONS, RESTRICTIONS, CONDITIONS, COVENANTS, AGREEMENTS, AND CHARGES HEREIN CONTAINED SHALL RUN WITH AND BIND ALL OF SAID LOTS AND LAND AND SHALL INURE TO THE BENEFIT OF, AND BE ENFORCEABLE BY THE VILLAGE OF DOWNERS GROVE, ILLINOIS, AND THE OWNERS OR OWNER OF ANY OF THE LOTS OF LAND COMPRISED WITHIN SAID PLAT, AND THEIR RESPECTIVE HEIRS, EXECUTORS, ADMINISTRATORS, SUCCESSORS, GRANTEES AND ASSIGNS.

NOW, THEREFOR, ALL PERSONS, FIRMS OR CORPORATIONS NOW OWNING THE AFORESAID PROPERTY DO COVENANT AND AGREE THAT THEY OR ANY PERSON, FIRM OR CORPORATION HEREAFTER ACQUIRING ANY PROPERTY OR LOTS SHOWN UPON THE ATTACHED PLAT OF SUBDIVISION ARE HEREBY SUBJECTED TO THE FOLLOWING RESTRICTIONS RUNNING WITH SAID PROPERTY TO WHOMSOEVER OWNED, TO WIT:

OWNER HEREBY GRANTS TO THE VILLAGE OF DOWNERS GROVE A STORMWATER MANAGEMENT EASEMENT FOR THE USE AND BENEFIT OF THE VILLAGE, OVER THE STORMWATER FACILITIES WITHIN THE PROPERTY AND A RIGHT OF ACCESS TO PRIVATELY–OWNED LAND FOR THE REASONABLE EXERCISE OF THE RIGHTS GRANTED TO THE VILLAGE.

EACH OWNER OR PURCHASER SHALL BE RESPONSIBLE TO INSPECT AND MAINTAIN THE STORMWATER FACILITIES ON THEIR LOT. NO BUILDINGS OR STRUCTURES OF ANY KIND SHALL BE PLACED ON SAID EASEMENT NOR SHALL ANY OTHER CHANGE BE MADE ON THE PROPERTY THAT MIGHT MATERIALLY AFFECT THE PROPER MANAGEMENT, OPERATION OR CONTINUED MAINTENANCE OF ANY STORMWATER FACILITY; IMPEDE STORMWATER DRAINAGE IN OR ON THE PROPERTY; NEGATIVELY IMPACT THE WATER QUALITY OF THE STORMWATER FACILITIES; OR MATERIALLY REDUCE THE STORMWATER DETENTION OR RETENTION CAPACITY THEREOF AS PROVIDED IN APPROVED PLANS.

IN THE EVENT THE VILLAGE DETERMINES, IN ITS SOLE AND ABSOLUTE DISCRETION, THAT THE PROHIBITIONS OF THE PRECEDING PARAGRAPH HAVE BEEN VIOLATED OR THAT PROPER MAINTENANCE OF THE STORMWATER FACILITIES IS NOT BEING PERFORMED OR THAT PROPER OPERATION OF THE STORMWATER FACILITIES IS NOT OCCURRING, ON THE PROPERTY AT ANY TIME, THE VILLAGE OR ITS CONTRACTORS OR AGENTS, AFTER TEN (10) DAYS PRIOR WRITTEN NOTICE TO THE OWNER, MAY, BUT SHALL NOT BE OBLIGATED TO, ENTER UPON ANY OR ALL OF THE PROPERTY FOR THE PURPOSES OF (A) CORRECTING ANY VIOLATION AND (B) PERFORMING MAINTENANCE WORK ON AND TO THE STORMWATER FACILITIES.

IN THE EVENT THAT THE VILLAGE SHALL PERFORM, OR CAUSE TO BE PERFORMED, ANY WORK PURSUANT TO THE STORMWATER MANAGEMENT EASEMENT, THE VILLAGE SHALL HAVE THE RIGHT TO CHARGE THE OWNER THE AMOUNT SUFFICIENT TO DEFRAY THE ENTIRE COST OF SUCH WORK, INCLUDING ADMINISTRATIVE COSTS, EITHER BEFORE OR AFTER SUCH COST IS INCURRED. IF THE AMOUNT SO CHARGED IS NOT PAID BY THE OWNER WITHIN THIRTY (30) DAYS FOLLOWING A DEMAND IN WRITING BY THE VILLAGE FOR SUCH PAYMENT, SUCH CHARGE, TOGETHER WITH INTEREST AND COSTS OF COLLECTION, SHALL BECOME A LIEN UPON THE PROPERTY AND THE VILLAGE SHALL HAVE THE RIGHT TO COLLECT SUCH CHARGE, WITH INTEREST AND COSTS, AND TO ENFORCE SUCH LIEN AS IN FORECLOSURE PROCEEDINGS AS PERMITTED BY LAW.

IN WITNESS WHEREOF, THE OWNERS HAVE SET THEIR HANDS UPON THE ATTACHED PLAT THE DAY AND DATE FIRST WRITTEN THEREON.

DATED THIS _____ DAY OF _____, A.D. 202__.

_____
OWNER

_____
NOTARY PUBLIC

TAX PARCEL PERMANENT INDEX NUMBERS:
06–31–100–024

PLAT SUBMITTED BY:
HAMILTON PARTNERS, INC.
300 PARK BOULEVARD, SUITE 201
ITASCA, ILLINOIS 60143

AFTER RECORDING RETURN TO:
VILLAGE CLERK'S OFFICE
VILLAGE OF DOWNERS GROVE
50 RAUPP BOULEVARD
BUFFALO GROVE, IL 60089

SEND FUTURE TAX BILLS TO:
HP/AG ESPLANADE AT LOCUST POINT–IV LIMITED PARTNERSHIP
C/O HAMILTON PARTNERS, INC.
300 PARK BOULEVARD, SUITE 201
ITASCA, ILLINOIS 60143

EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATION SERVICE IS HEREBY RESERVED FOR AND GRANTED TO

COMMONWEALTH EDISON COMPANY AND AT&T TELEHOLDINGS INCORPORATED, ILLINOIS a.k.a. ILLINOIS BELL TELEPHONE COMPANY, GRANTEES,

THEIR RESPECTIVE LICENSEES, SUCCESSORS AND ASSIGNS JOINTLY AND SEVERALLY, TO CONSTRUCT, OPERATE, REPAIR, MAINTAIN, MODIFY, RECONSTRUCT, REPLACE, SUPPLEMENT, RELOCATE AND REMOVE, FROM TIME TO TIME, POLES, GUYS, ANCHORS, WIRES, CABLES, CONDUITS, MANHOLES, TRANSFORMERS, PEDESTALS, EQUIPMENT CABINETS OR OTHER FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY, COMMUNICATIONS, SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) ON THE PLAT AND MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION), THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS OR ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHTS TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES, ROOTS AND SAPLINGS AND TO CLEAR OBSTRUCTIONS FROM THE SURFACE AND SUBSURFACE AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DASHED OR DOTTED LINES (OR SIMILAR DESIGNATION) MARKED "EASEMENT", "UTILITY EASEMENT", "PUBLIC UTILITY EASEMENT", "P.U.E." (OR SIMILAR DESIGNATION) WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRAD OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPERTY OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2, AS AMENDED FROM TIME TO TIME.

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE OR AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY TERMS SUCH AS "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREAS", "COMMON GROUND", "PARKING" AND "COMMON AREA". THE TERM "COMMON AREA OR AREAS", AND "COMMON ELEMENTS" INCLUDE REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURE SUCH AS A POOL, RETENTION POND OR MECHANICAL EQUIPMENT.

RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF THE GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

PROFESSIONAL AUTHORIZATION

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, THOMAS A. MOLLOY, A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS, LICENSE NUMBER 35–3409, DO HEREBY AUTHORIZE THE VILLAGE OF DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS, ITS STAFF OR AUTHORIZED AGENT, TO PLACE THIS DOCUMENT OF RECORD IN THE COUNTY RECORDERS OFFICE IN MY NAME AND IN COMPLIANCE WITH ILLINOIS STATUTES CHAPTER 109 PARAGRAPH 2, AS AMENDED.

SIGNED AT BENSENVILLE, ILLINOIS, THIS 30TH DAY OF NOVEMBER , A.D. 2023

EDWARD J. MOLLOY AND ASSOCIATES, LTD.
AN ILLINOIS PROFESSIONAL DESIGN FIRM – LICENSE NO. 184–004840

FOR REVIEW

_____
THOMAS A. MOLLOY
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35–3409
(EXPIRES NOVEMBER 30, 2024 AND IS RENEWABLE)

LAND SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF DUPAGE) SS

I, THOMAS A. MOLLOY , AN ILLINOIS PROFESSIONAL LAND SURVEYOR HEREBY CERTIFY THAT I HAVE SURVEYED AND PLATTED THE FOLLOWING DESCRIBED PROPERTY FOR THE PURPOSE OF SUBDIVIDING SAME INTO A TWO LOT SUBDIVISION:

PARCEL F2 IN ESPLANADE ASSESSMENT PLAT NO. 4 OF PART OF THE SOUTHWEST 1/4 OF SECTION 30 AND THE NORTHWEST 1/4 OF SECTION 31, TOWNSHIP 39 NORTH, RANGE 11, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED SEPTEMBER 1, 2000 AS DOCUMENT R2000–136926, IN DUPAGE COUNTY, ILLINOIS.

AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION. DIMENSIONS ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

I FURTHER CERTIFY THAT AN EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A.) FLOOD INSURANCE RATE MAPS COMMUNITY–PANEL NO'S. 17043C0158J AND 17043C0159J WITH A MAP REVISED DATES OF AUGUST 1, 2019, SHOWS THAT THE PROPERTY LEGALLY DESCRIBED HEREON FALLS WITHIN ZONE "X" DEFINED AS AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

I FURTHER CERTIFY THAT SAID SURVEY IS WITHIN THE CORPORATE LIMITS OF THE VILLAGE OF DOWNERS GROVE, DUPAGE COUNTY, ILLINOIS WHICH HAS ADOPTED AN OFFICIAL COMPREHENSIVE PLAN.

I FURTHER CERTIFY THAT THE IRON PIPE/ROD SURVEY STAKES NOTED ON THE ANNEXED PLAT HAVE BEEN ESTABLISHED ON THE SITE OR, WILL BE SET UPON COMPLETION OF CONSTRUCTION OR WITHIN 12 MONTHS AFTER THE RECORDING DATE OF THIS SUBDIVISION.

SIGNED AT BENSENVILLE, ILLINOIS, THIS 30TH DAY OF NOVEMBER , A.D. 2023

EDWARD J. MOLLOY AND ASSOCIATES, LTD.
AN ILLINOIS PROFESSIONAL DESIGN FIRM – LICENSE NO. 184–004840

FOR REVIEW

_____
THOMAS A. MOLLOY
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35–3409
(EXPIRES NOVEMBER 30, 2024 AND IS RENEWABLE)

THOMAS A. MOLLOY
35–3409
PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS
BENSENVILLE, ILLINOIS

VALID ONLY WITH EMBOSSED SEAL

DRAFTED BY: BJE
PAGE: *2 OF 2*
ORDER NO.: *230015*
FILE: *30–39–11*
PROJECT NO.: 111

CLIENT: HAMILTON PARTNERS, INC.

REVISION DATE	ORDER NO.	REVISION
NOV. 30, 2023	230015	VILLAGE COMMENT LETTER DATED 4/7/2023
FEB. 16, 2023	230015	PRELIMINARY SUBDIVISION PLAT – INITIAL

PREPARED BY:
EDWARD J. MOLLOY & ASSOCIATES
A DIVISION OF THOMAS A. MOLLOY, LTD. – PROFESSIONAL LAND SURVEYING
1236 MARK STREET, BENSENVILLE, ILLINOIS 60106 (630) 595–2600 FAX:(630) 595–4700
E–MAIL: TMOLLOY@EJMOLLOY.COM

Traffic Impact Study
Esplanade Place Residential Development
Downers Grove, Illinois

Prepared For:

m&r DEVELOPMENT

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

January 3, 2024

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed Esplanade Place residential development to be located in Downers Grove, Illinois. The site, which is currently vacant, is located in the northwest corner of the intersection of Lacey Road with Woodcreek Drive with the Esplanade within Locust Creek business park. As proposed, the site will be developed with three, four-story apartment buildings with 99 units each for a total of 297 units. Parking will be accommodated via a 65-space parking garage within each building and 295 exterior parking spaces for a total of 490 parking spaces. Access to the development will be provided via a right-in/right-out access drive on Lacey Road and via two full-movement access drives on Woodcreek Drive.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any additional roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

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

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

1. Existing Traffic Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes conducted in 2023.

2. Year 2029 No-Build Conditions – Analyzes the capacity of the existing roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2029 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 2029 no-build volumes and the traffic estimated to be generated by the proposed development.

Site Location **Figure 1**

Esplanade Place Residential Development
Downers Grove, Illinois

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

-Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

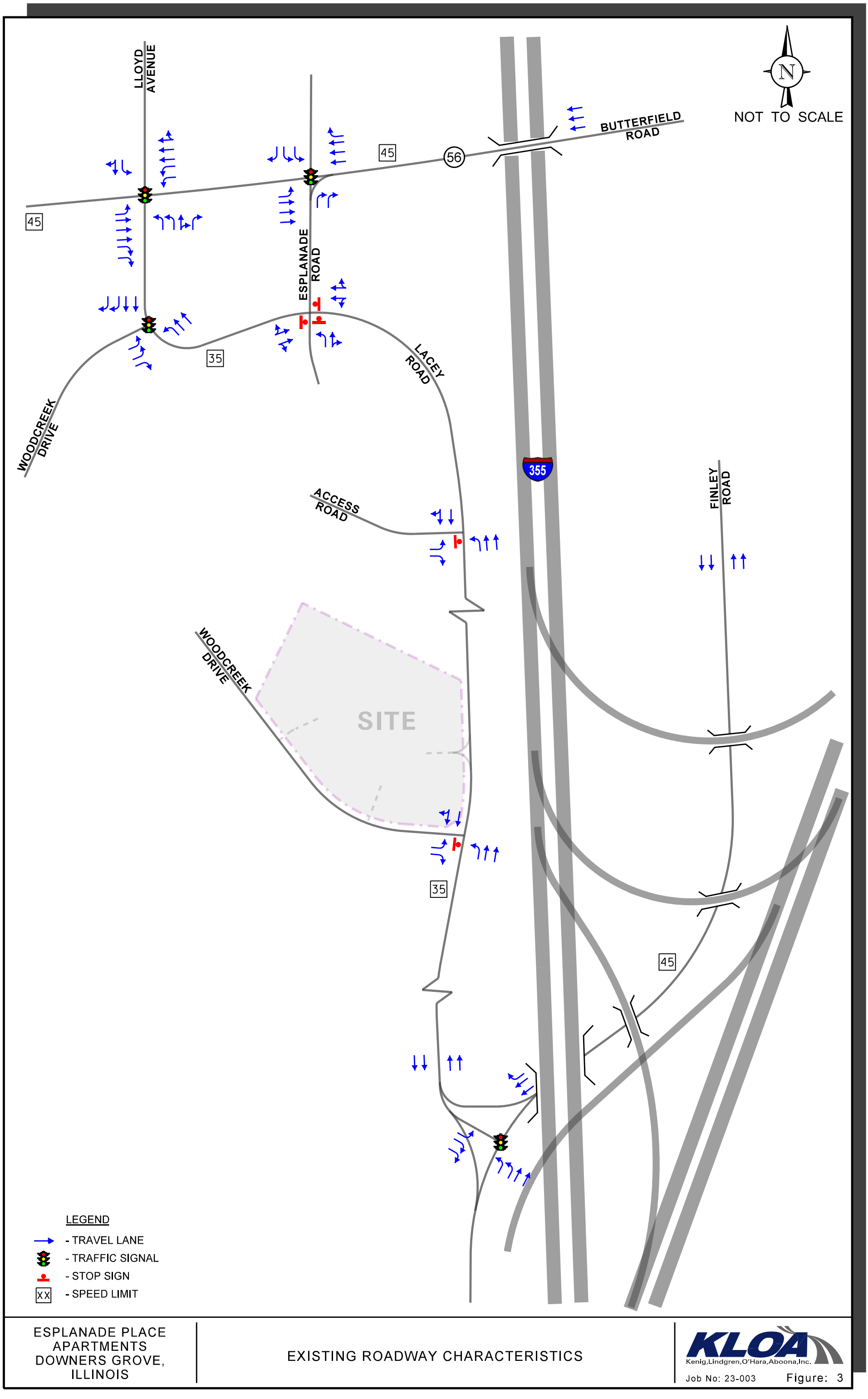
The site, which is currently vacant, is bounded by vacant space to the north, Lacey Road to the east, and Woodcreek Drive to the south and west. The site is located within the Esplanade at Locust Creek business park. Land uses within the vicinity are primarily office to the north and medical or industrial to the south.

Existing Roadway System Characteristics

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

Butterfield Road (Illinois Route 56) is an east-west other principal arterial roadway that provides three lanes in each direction narrowing to two lanes in each direction west of Woodcreek Drive. At its signalized intersection with Woodcreek Drive and Lloyd Avenue, Butterfield Road provides an exclusive left-turn lane, three through lanes, and dual right-turn lanes on the eastbound approach and dual left-turn lanes, two through lanes, and a shared through/right-turn lane on the westbound approach. At its signalized intersection with Esplanade Road, Butterfield Road provides an exclusive left-turn lane and three through lanes on the eastbound approach. This intersection is located within the storage length of the westbound dual left-turn lanes from the intersection of Butterfield Road with Lacey Road and as such the westbound approach provides two lanes that are the remainder of the dual left-turn lanes, three through lanes and an exclusive right-turn lane. A full diamond interchange with I-355 is provided approximately 1,200 feet east of Esplanade Road. Butterfield Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is designated as a Strategic Regional Arterial (SRA), carries an annual average daily traffic (AADT) volume of 30,700 vehicles (IDOT 2021), and has a posted speed limit of 45 miles per hour.

Finley Road is a north-south minor arterial roadway that provides two through lanes in each direction generally separated by a raised landscaped median. At its signalized intersection with Lacey Road, Finley Road provides dual left-turn lanes and two through lanes on the northbound approach and two through lanes and an exclusive right-turn lane on the southbound approach. Finley Road is under the jurisdiction of the DuPage County Division of Transportation (DuDOT) and has a posted speed limit of 45 miles per hour. Finley Road carried an AADT volume of 20,800 vehicles in 2016 and 10,900 vehicles in 2020 (IDOT).



ESPLANADE PLACE APARTMENTS DOWNERS GROVE, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

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

Job No: 23-003 Figure: 3

Woodcreek Drive is a circulatory local roadway that serves the majority of the buildings within the Esplanade at Locust Creek business park. At its signalized intersection with Butterfield Road, Woodcreek Drive provides dual left-turn lanes, a shared through/right-turn lane, and an exclusive right-turn lane on the northbound approach and is aligned opposite Llyod Avenue. At its signalized intersection with Lacey Road, Woodcreek Drive provides two through lanes and dual right-turn lanes on the southbound approach and dual left-turn lanes and an exclusive right-turn lane on the eastbound approach. At its unsignalized intersection with Lacey Road, Woodcreek Drive provides an exclusive left-turn lane and an exclusive right-turn lane on the eastbound approach and is under stop sign control. Woodcreek Drive is under the jurisdiction of the Village of Downers Grove.

Lacey Road is a north-south minor collector road that extends from Woodcreek Drive east and then south to Finley Road serving the Esplanade at Locust Point business park. The road generally provides two lanes in each direction separated by a landscaped median. At its signalized intersection with Woodcreek Drive, Lacey Road provides an exclusive left-turn lane and two through lanes on the northbound approach. At its unsignalized all-way stop controlled intersection with Esplanade Road, Lacey Road provides a combined left/through lane and a combined through/right-turn lane on both approaches. At its unsignalized intersection with the access road north of the site, Lacey Road provides an exclusive left-turn and two through lanes on the northbound approach and a through lane and a shared through/right-turn lane on the southbound approach. The access road provides an exclusive left-turn lane and an exclusive right-turn lane. At its unsignalized intersection with Woodcreek Drive, Lacey Road provides an exclusive left-turn and two through lanes on the northbound approach and a through lane and a shared through/right-turn lane on the southbound approach. At its signalized intersection with Finley Road, Lacey Road provides an exclusive left-turn lane and dual right-turn lanes on the eastbound approach. Lacey Road is under the jurisdiction of the Village of Downers Grove and has a posted speed limit of 35 miles per hour. Lacey Road carried an AADT volume of 3,750 vehicles in 2016 and 1,650 vehicles in 2020 (IDOT).

Esplanade Road is a northbound only local road that extends north from Lacey Road to Butterfield Road. At its signalized intersection with Butterfield Road, Esplanade Road provides dual right turn lanes on the northbound approach and is aligned opposite a Home Depot access drive. The access drive provides dual left-turn lanes and an exclusive right-turn lane on the southbound approach. At its all-way stop sign controlled intersection with Lacey Road, Esplanade Road is aligned opposite an access drive which provides an exclusive left-turn lane and a shared through/right-turn lane on the northbound approach. Esplanade Road is under the jurisdiction of the Village of Downers Grove.

Lloyd Avenue is a north-south local road that extends north from Butterfield Road and provides one lane in each direction. At its signalized intersection with Butterfield Road, Lloyd Avenue is aligned opposite Woodcreek Drive and provides an exclusive left-turn lane and a shared through-right-turn lane on the southbound approach. Llyod Avenue is under the jurisdiction of Milton Township and has a posted speed limit of 25 miles per hour.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts utilizing Miovision Scout Collection Units at the following intersections:

- Butterfield Road with Woodcreek Drive and Lloyd Avenue
- Lacey Road with Woodcreek Drive (North)
- Lacey Road with Esplanade Road
- Lacey Road with the access road north of the site
- Lacey Road with Woodcreek Drive (South)
- Lacey Road with Finley Road

The traffic counts were conducted in February 2023, during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occur between 7:30 A.M. and 8:30 A.M. during the weekday morning peak period and between 4:30 P.M. and 5:30 P.M. during the weekday evening peak period. Copies of the traffic count summary sheets are included in the Appendix. Turning movements to and from the north leg at the intersection of Butterfield Road with Esplanade Road were based on traffic counts conducted in 2017.

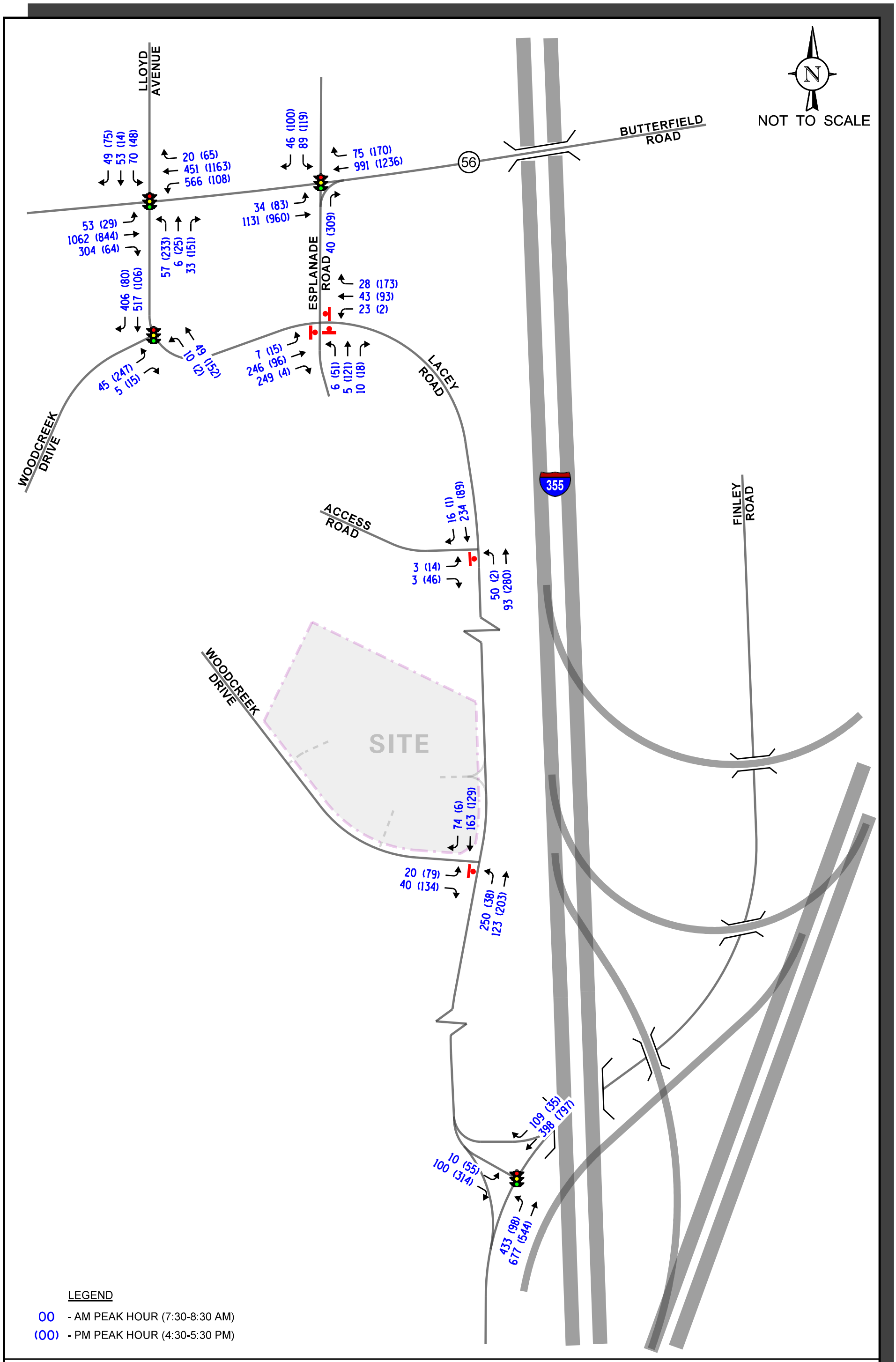
The existing traffic volumes are illustrated in **Figure 4**.

Crash Analysis

KLOA, Inc. obtained accident data for the most recent available past six years (2017 to 2021) for the study area intersections. A review of the data revealed the following:

- Two crashes were reported at the intersection of Lacey Road with Woodcreek Drive (north)
- No crashes were reported at the intersections of Lacey Road with Woodcreek Drive (south) or Lacey Road with the access road north of the site.
- Three crashes were reported at the intersection of Lacey Road with Esplanade Road
- No fatalities were reported at any intersection during the reviewed period.

Summaries of the crash data at the intersections of Butterfield Road with Woodcreek Drive and Llyod Avenue and Lacey Road with Finley Road are shown in **Tables 1 and 2**.



LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

(00) - PM PEAK HOUR (4:30-5:30 PM)

ESPLANADE PLACE APARTMENTS DOWNERS GROVE, ILLINOIS

EXISTING TRAFFIC VOLUMES

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

Job No: 23-003 Figure: 4

Table 1
BUTTERFIELD ROAD WITH WOODCREEK DRIVE AND LLYOD AVENUE
CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2017	0	0	0	1	0	2	0	3
2018	1	0	0	2	0	1	0	4
2019	0	0	2	2	1	2	0	7
2020	0	0	0	1	0	2	0	3
2021	0	0	0	0	0	1	0	1
Total	**1**	**0**	**2**	**6**	**1**	**8**	**0**	**18**
Average	**<1.0**	**--**	**<1.0**	**1.2**	**<1.0**	**1.6**	**--**	**3.6**

Table 2
LACEY ROAD WITH FINLEY ROAD - CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Pedestrian	Object	Rear End	Sideswipe	Turning	Other	Total
2017	0	0	0	0	0	0	0	0
2018	0	0	0	2	0	0	0	2
2019	0	0	0	2	0	0	0	2
2020	0	0	0	0	0	1	0	1
2021	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**5**
Average	**--**	**--**	**--**	**<1.0**	**--**	**<1.0**	**--**	**1.0**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will be developed with three, four-story apartment buildings with 99 units each for a total of 297 units. Parking will be accommodated via a 65-space parking garage within each building and 295 exterior parking spaces for a total of 490 parking spaces. Access to the development will be provided as follows:

- A proposed right-in/right-out access drive on Lacey Road located approximately 300 feet north of Woodcreek Drive. The access drive will provide one inbound lane and one outbound lane with left-turn movements restricted via the median on Lacey Road. Outbound movements will be under stop sign control.

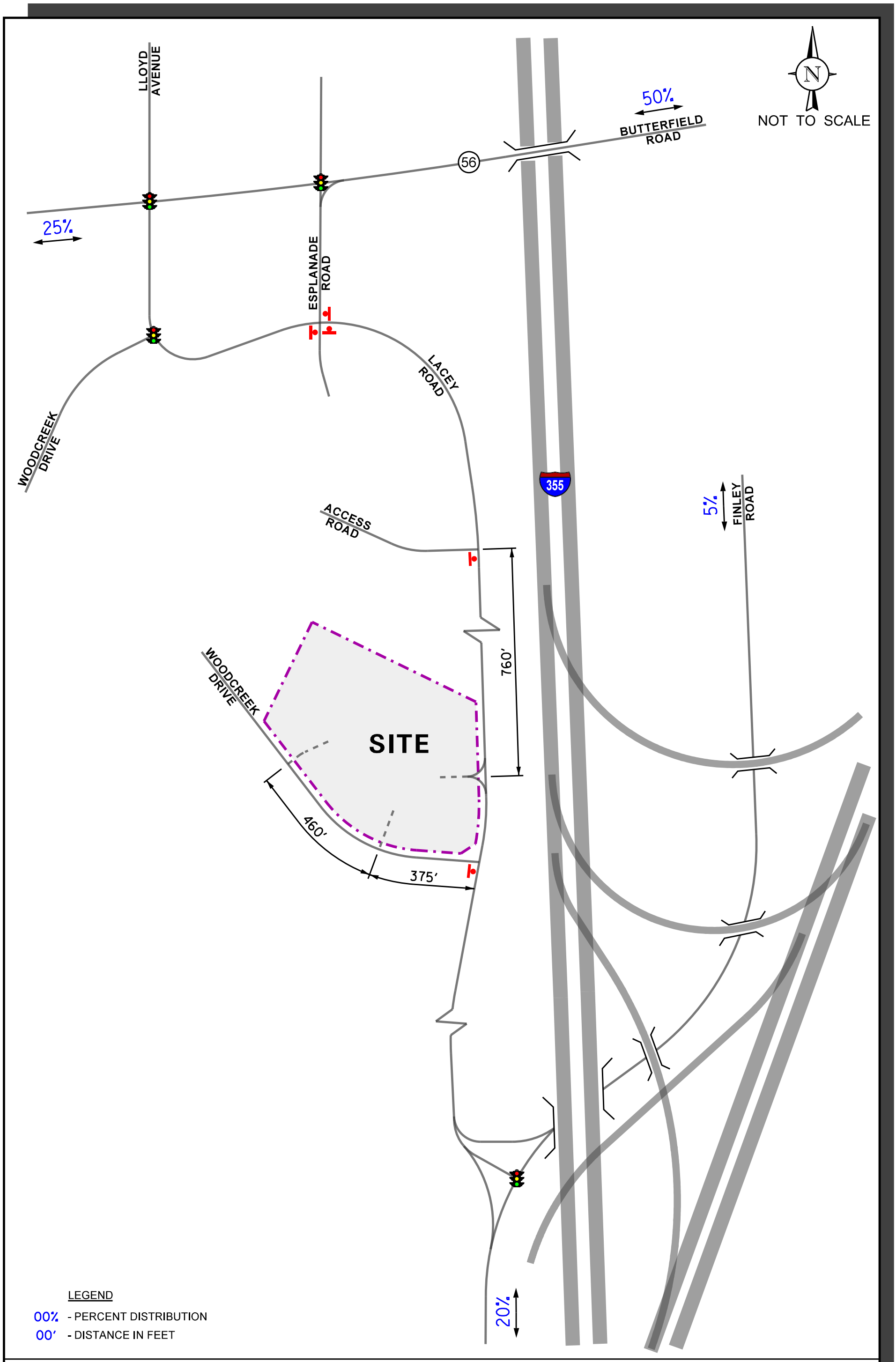
- A proposed full-movement access drive on Woodcreek Drive located approximately 840 feet west of Lacey Road. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. As part of the development, Woodcreek Drive will be restriped to provide a separate left-turn lane serving this access drive.

- A proposed full-movement access drive on Woodcreek Drive located approximately 390 feet west of Lacey Road. The access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. As part of the development, Woodcreek Drive will be restriped to provide a separate left-turn lane serving this access drive.

In addition, as part of the restriping of Woodcreek Drive, a westbound left-turn lane will be provided that will serve the existing access drive on the south side of Woodcreek drive between the site access drives. A copy of the preliminary site plan is included in the Appendix.

Directional Distribution

The directions from which residents will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic. Figure 5 also shows the distance, in feet, between the existing and proposed access intersections.



LEGEND

00% - PERCENT DISTRIBUTION

00' - DISTANCE IN FEET

ESPLANADE PLACE APARTMENTS DOWNERS GROVE, ILLINOIS

DIRECTIONAL DISTRIBUTION

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

Job No: 23-003 Figure: 5

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed senior residential development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Multifamily Housing, Mid-Rise" (Land-Use Code 221) rates were used to determine the traffic to be generated by the development. **Table 3** shows the weekday morning and weekday evening peak hour traffic to be generated by the proposed senior residential development as well as the daily total traffic volumes.

As can be seen in Table 3, the proposed development is projected to generate more outbound trips during the morning peak hour and more inbound trips during the peak hour. This is typical of residential developments with residents leaving in the morning and returning in the evening. As shown in Figure 4, the other developments located withing the vicinity of the site generate primarily inbound trips during the weekday morning peak hour and primarily outbound trips during the weekday evening peak hour. This is typical of industrial and office developments. As such, traffic generated by the proposed development will primarily travel in the opposite direction of a majority of traffic in the area and will therefore have a reduced impact on area intersections.

Table 3
PROJECTED DEVELOPMENT-GENERATED TRAFFIC VOLUMES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Traffic		
		In	Out	Total	In	Out	Total	In	Out	Total
221	Multifamily Housing, Mid-Rise (297 Units)	27	92	119	71	45	116	685	685	1,370

4. Projected Traffic Conditions

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

Development Traffic Assignment

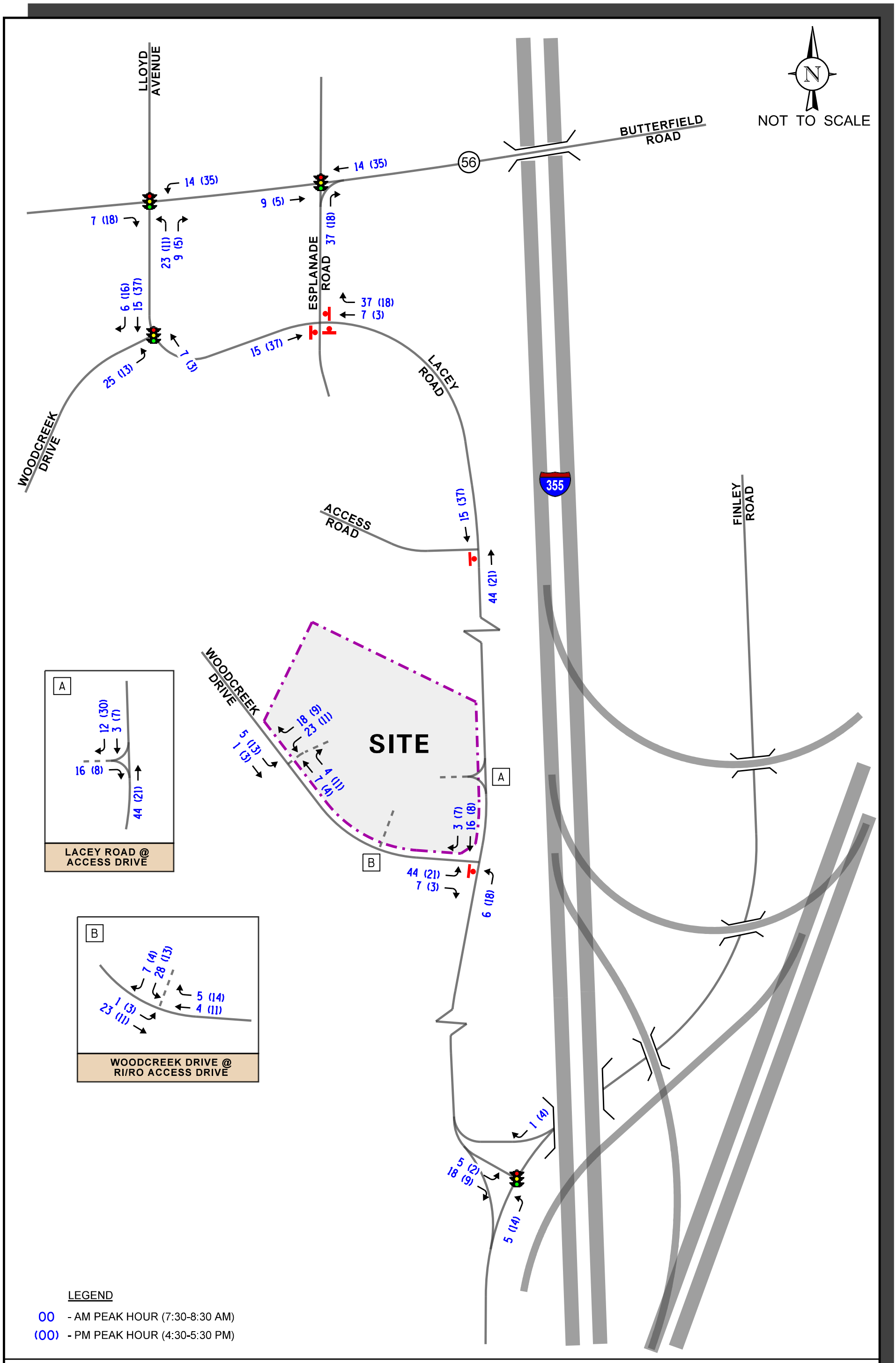
The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). The traffic assignment for the development is illustrated in **Figure 6.**

Background (No-Build) Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of 0.7 percent per year for six years (buildout year plus five years) for a total of approximately 4.3 percent to project Year 2028 background conditions. **Figure 7** illustrates the Year 2029 no-build conditions. A copy of the CMAP 2050 projections letter is included in the Appendix.

Total Projected Traffic Volumes

The development-generated traffic (Figure 6) was added to the Year 2029 no-build traffic volumes (Figure 7) to determine the Year 2029 total projected traffic volumes, shown in **Figure 8.**



LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

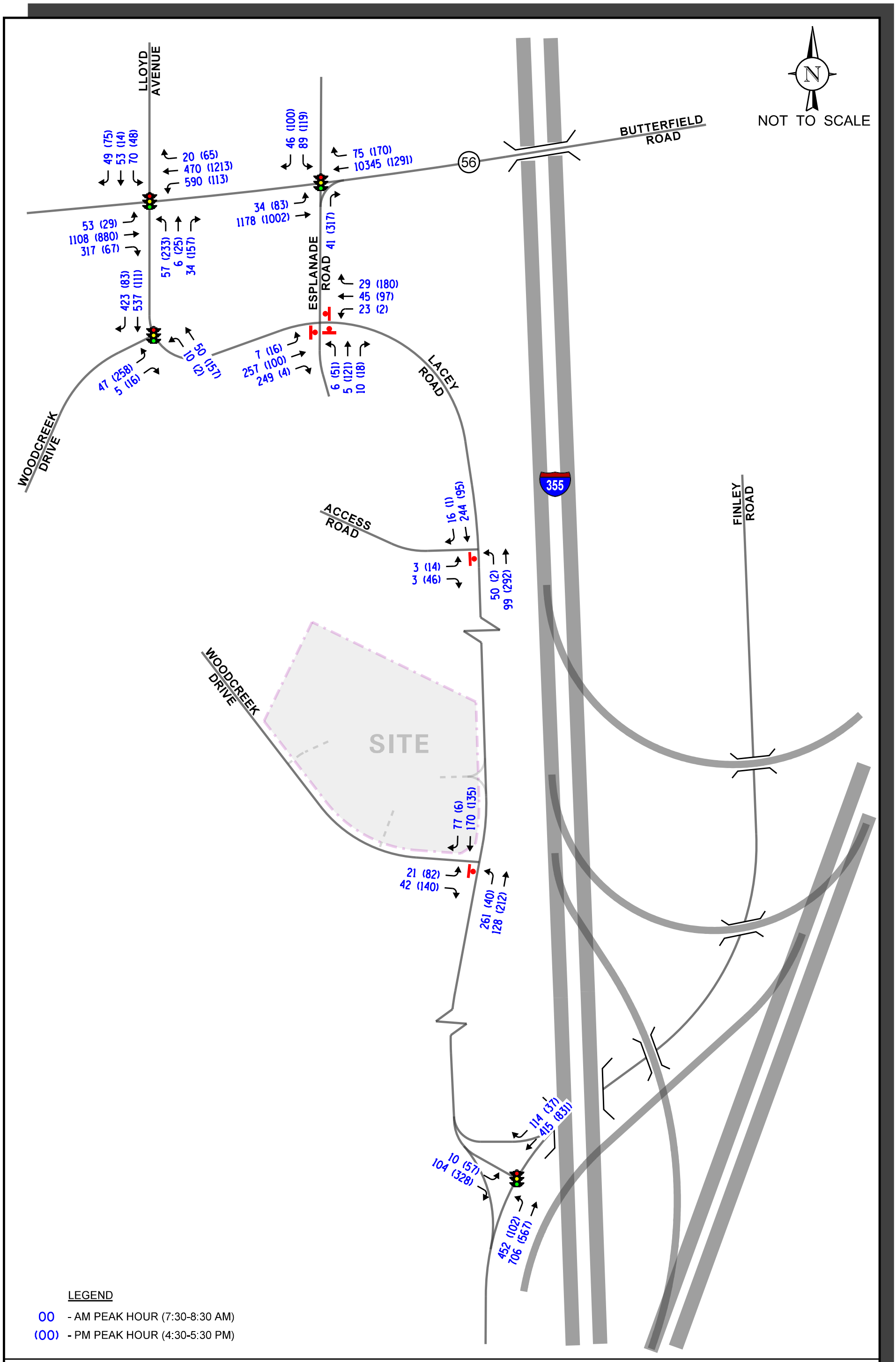
(00) - PM PEAK HOUR (4:30-5:30 PM)

ESPLANADE PLACE APARTMENTS
DOWNERS GROVE, ILLINOIS

SITE-GENERATED TRAFFIC VOLUMES

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

Job No: 23-003 Figure: 6



LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

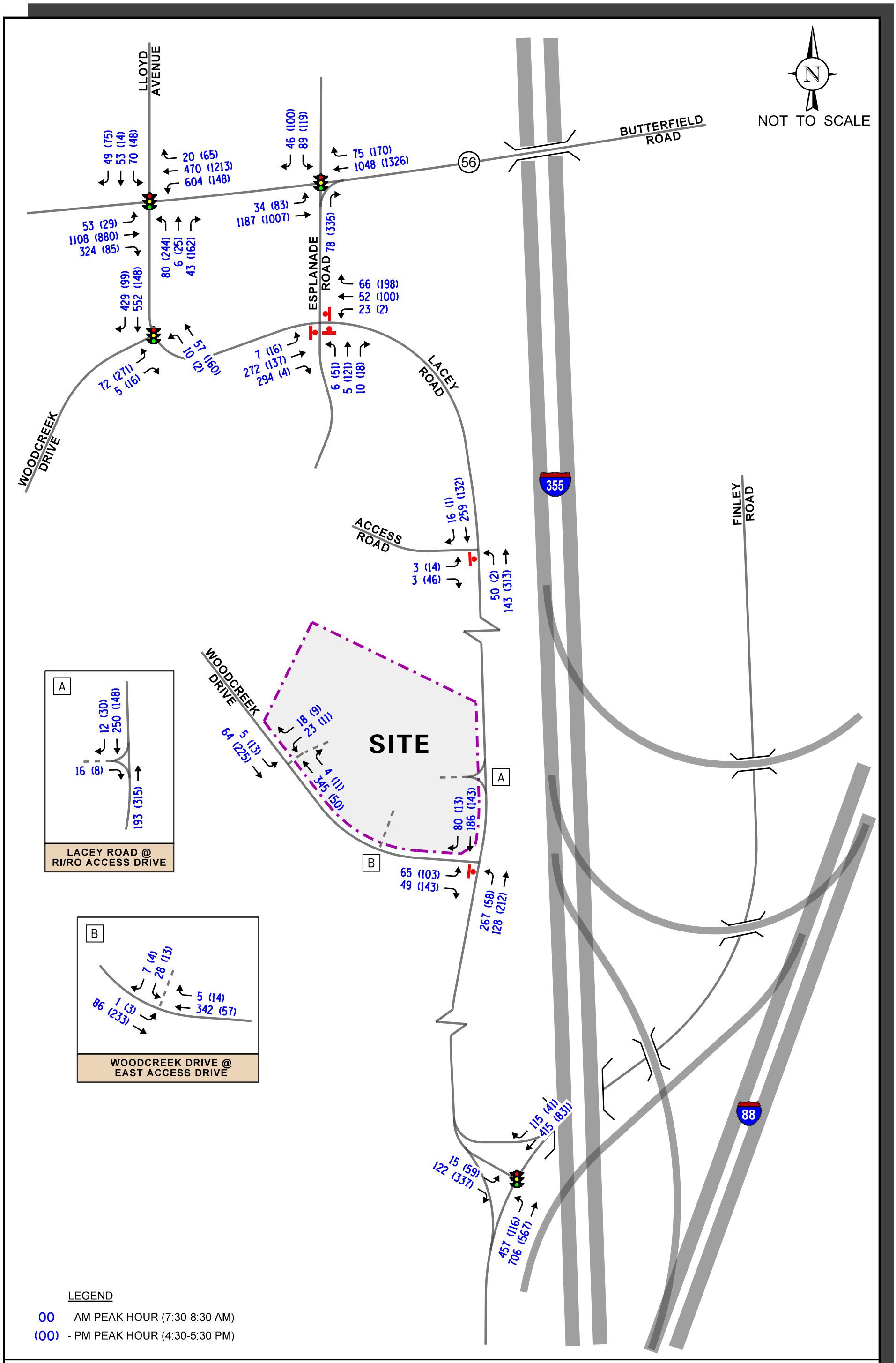
(00) - PM PEAK HOUR (4:30-5:30 PM)

ESPLANADE PLACE APARTMENTS DOWNERS GROVE, ILLINOIS

YEAR 2029 NO-BUILD TRAFFIC VOLUMES

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

Job No: 23-003 Figure: 7



LEGEND

00 - AM PEAK HOUR (7:30-8:30 AM)

(00) - PM PEAK HOUR (4:30-5:30 PM)

ESPLANADE PLACE APARTMENTS
DOWNERS GROVE, ILLINOIS

YEAR 2029 TOTAL TRAFFIC VOLUMES

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

Job No: 23-003 Figure: 8

5. Traffic Analysis and Recommendations

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

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2029 no-build, and Year 2029 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 actual and field-measured cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2029 no-build, and Year 2029 total projected conditions are presented in **Tables 4** through **10**. A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 4
CAPACITY ANALYSIS RESULTS – BUTTERFIELD ROAD WITH WOODCREEK DRIVE AND LLOYD AVENUE– SIGNALIZED

	Peak Hour	Eastbound			Westbound		Northbound			Southbound		Overall
		L	T	R	L	T/R	L	T	R	L	T/R	
Existing Traffic Volumes	Weekday Morning Peak Hour	E 64.3	C 25.3	A 2.7	E 71.8	B 10.2	D 40.2	C 20.7	A 2.8	E 58.2	D 50.5	C 32.5
		C – 22.0			D – 43.8		C – 28.5			D – 53.6		
	Weekday Evening Peak Hour	E 67.5	B 14.1	A 0.0	F 100.3	A 3.4	D 46.3	C 25.6	B 18.7	E 75.1	C 26.3	B 17.5
		B – 14.8			B – 11.2		D – 35.7			D – 43.4		
Year 2029 No-Build Traffic Volumes	Weekday Morning Peak Hour	E 64.3	C 26.6	A 2.7	E 71.3	B 10.4	D 42.2	B 19.1	A 3.0	E 58.2	D 50.5	C 32.9
		C – 22.8			D – 43.6		C – 29.3			D – 53.6		
	Weekday Evening Peak Hour	E 67.5	B 14.5	A 0.0	F 99.8	A 3.6	D 46.6	C 25.5	B 19.2	E 75.1	C 26.3	B 17.6
		B – 15.1			B – 11.4		D – 36.0			D – 43.4		
Year 2029 Total Projected Traffic Volumes	Weekday Morning Peak Hour	E 64.3	C 28.3	A 2.7	E 71.3	B 10.7	E 55.4	B 13.8	A 3.4	E 65.4	D 50.5	C 34.2
		C – 24.0			D – 44.1		D – 37.6			D – 56.5		
	Weekday Evening Peak Hour	E 67.9	B 15.9	A 0.1	F 98.7	A 3.6	D 46.4	C 25.4	B 19.4	E 75.1	C 26.3	B 18.9
		B – 16.1			B – 13.4		D – 36.0			D – 43.4		

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

Table 5
CAPACITY ANALYSIS RESULTS – BUTTERFIELD ROAD WITH ESPLANADE ROAD– SIGNALIZED

	Peak Hour	Eastbound		Westbound		Northbound			Southbound		Overall
		L	R	T	R	L	T	R	L	R	
Existing Traffic Volumes	Weekday Morning Peak Hour	F 98.5	A 1.2	B 10.0	A 0.5	A 0.7			E 58.0	A 7.2	A 8.4
		A – 4.0		A – 9.3					D – 40.6		
	Weekday Evening Peak Hour	F 85.4	A 6.1	B 13.8	A 0.5	B 16.2			E 63.3	A 9.0	B 14.6
		B – 12.4		B – 12.2					D – 38.5		
Year 2029 No-Build Traffic Volumes	Weekday Morning Peak Hour	F 97.6	A 1.1	B 10.1	A 0.5	A 0.8			E 58.0	A 7.2	A 8.2
		A – 3.8		A – 9.4					D – 40.6		
	Weekday Evening Peak Hour	F 85.8	A 6.3	B 14.1	A 0.5	C 20.6			E 63.3	A 8.9	B 15.2
		B – 12.4		B – 12.5					D – 38.5		
Year 2029 Total Projected Traffic Volumes	Weekday Morning Peak Hour	F 96.9	A 1.1	B 10.1	A 0.5	A 1.7			E 58.0	A 7.2	A 8.2
		A – 3.8		A – 9.5					D – 40.6		
	Weekday Evening Peak Hour	F 84.9	A 6.4	B 14.3	A 0.5	C 24.2			E 63.3	A 8.9	B 15.6
		B – 12.4		B – 12.7					D – 38.5		

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

Table 6
CAPACITY ANALYSIS RESULTS – LACEY ROAD WITH WOODCREEK DRIVE (NORTH)– SIGNALIZED

	Peak Hour	Eastbound (Woodcreek Drive)		Northbound (Lacey Road)		Southbound (Woodcreek Drive)		Overall
		L	R	L	T	T	R	
Existing Traffic Volumes	Weekday Morning Peak Hour	E 55.7	C 30.6	A 1.8	A 2.1	A 1.7	A 0.1	A 3.6
		D 53.2		A – 2.1		A 1.0		
	Weekday Evening Peak Hour	E 61.6	B 20.0	A 3.5	A 3.7	A 2.0	A 0.0	C 27.0
		E – 59.2		A – 3.7		A – 1.1		
Year 2029 No-Build Traffic Volumes	Weekday Morning Peak Hour	E 55.7	C 30.6	A 1.8	A 2.1	A 1.7	A 0.1	A 3.6
		D 53.3		A – 2.1		A 1.0		
	Weekday Evening Peak Hour	E 61.4	B 19.8	A 3.5	A 3.8	A 2.0	A 0.0	C 27.2
		E – 59.1		A – 3.8		A – 1.1		
Year 2029 Total Projected Traffic Volumes	Weekday Morning Peak Hour	E 55.6	C 29.4	A 2.1	A 251	A 1.9	A 0.1	A 4.8
		D 53.9		A – 2.4		A 1.2		
	Weekday Evening Peak Hour	E 61.2	B 19.6	A 3.5	A 4.0	A 2.0	A 0.0	C 25.6
		E – 58.8		A – 4.0		A – 1.2		

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

Table 7
CAPACITY ANALYSIS RESULTS – LACEY ROAD WITH FINLEY ROAD– SIGNALIZED

	Peak Hour	Eastbound		Northbound		Southbound		Overall
		L	R	L	T	T	R	
Existing Traffic Volumes	Weekday Morning Peak Hour	E 56.4	B 13.7	E 55.1	A 2.4	B 13.4	A 1.6	B 19.0
		B – 17.4		C – 22.9		B – 10.8		
	Weekday Evening Peak Hour	E 60.1	B 10.4	E 59.9	A 2.7	A 7.6	A 0.7	B 10.8
		B – 17.8		B – 11.5		A – 7.3		
Year 2029 No-Build Traffic Volumes	Weekday Morning Peak Hour	E 56.3	B 13.6	D 54.6	A 2.4	B 14.0	A 1.6	B 19.1
		B – 17.1		C – 22.8		B – 11.3		
	Weekday Evening Peak Hour	E 59.6	B 10.2	E 59.8	A 2.9	A 7.9	A 0.6	B 10.9
		B – 17.5		B – 11.5		A – 7.6		
Year 2029 Total Projected Traffic Volumes	Weekday Morning Peak Hour	E 57.3	B 13.1	D 54.4	A 2.5	B 14.2	A 1.6	B 19.2
		B – 17.9		C – 22.9		B – 11.5		
	Weekday Evening Peak Hour	E 59.8	B 10.2	E 59.9	A 2.9	A 8.2	A 0.7	B 11.5
		B – 17.5		B – 12.6		A – 7.8		

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

Table 8
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Lacey Road with Esplanade Road[1]				
• Overall	B	10.1	A	9.9
• Eastbound Approach	B	10.5	A	9.1
• Westbound Approach	A	8.0	B	10.1
• Northbound Approach	A	8.6	B	10.2
Lacey Road with Access Road[2]				
• Eastbound Left Turn	B	11.4	B	10.1
• Eastbound Right Turn	B	10.2	A	8.7
• Northbound Left Turn	A	8.0	A	7.4
Lacey Road with Woodcreek Drive (South)[2]				
• Eastbound Left Turn	C	16.8	B	11.5
• Eastbound Right Turn	A	9.3	A	9.4
• Northbound Left Turn	A	8.6	A	7.6

LOS = Level of Service
Delay is Measured in Seconds
1 – All-way stop control
2 – Two-way stop control

Table 9
CAPACITY ANALYSIS RESULTS – YEAR 2029 NO-BUILD CONDITIONS
UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Lacey Road with Esplanade Road[1]				
• Overall	B	10.2	B	10.1
• Eastbound Approach	B	10.7	A	9.1
• Westbound Approach	A	8.1	B	10.3
• Northbound Approach	A	8.7	B	10.3
Lacey Road with Access Road[2]				
• Eastbound Left Turn	B	11.5	B	10.2
• Eastbound Right Turn	B	10.3	A	8.8
• Northbound Left Turn	A	8.1	A	7.4
Lacey Road with Woodcreek Drive (South)[2]				
• Eastbound Left Turn	C	17.4	B	11.7
• Eastbound Right Turn	A	9.4	A	9.5
• Northbound Left Turn	A	8.7	A	7.6

LOS = Level of Service
Delay is Measured in Seconds
1 – All-way stop control
2 – Two-way stop control

Table 10
CAPACITY ANALYSIS RESULTS – YEAR 2029 TOTAL PROJECTED CONDITIONS
UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Lacey Road with Esplanade Road[1]				
• Overall	B	10.4	B	10.5
• Eastbound Approach	B	11.0	A	9.5
• Westbound Approach	A	8.2	B	10.9
• Northbound Approach	A	8.8	B	10.7
Lacey Road with Access Road[2]				
• Eastbound Left Turn	B	11.7	B	10.4
• Eastbound Right Turn	B	10.4	A	8.9
• Northbound Left Turn	A	8.1	A	7.5
Lacey Road with the Site Access Drive				
• Eastbound Approach	A	9.1	A	8.8
Lacey Road with Woodcreek Drive (South)[2]				
• Eastbound Left Turn	C	20.8	B	12.6
• Eastbound Right Turn	A	9.5	A	9.6
• Northbound Left Turn	A	8.9	A	7.7
Woodcreek Drive with the West Site Access Drive				
• Eastbound Left Turn	A	8.0	A	7.3
• Southbound Approach	B	11.3	A	9.7
Woodcreek Drive with the East Site Access Drive				
• Eastbound Left Turn	A	8.0	A	7.3
• Southbound Approach	B	11.6	B	10.0

LOS = Level of Service
Delay is Measured in Seconds
1 – All-way stop control
2 – Two-way stop control

Discussion and Recommendations

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

Butterfield Road with Woodcreek Drive and Llyod Avenue

The results of the capacity analyses indicate that the intersection currently operates at an overall Level of Service (LOS) C during the weekday morning peak hour and LOS B during the weekday evening peak hour. It should be noted that multiple left-turn movements operate at LOS E or F during the peak hours. This is the result of the long cycle length (125 to 135 seconds during the peak hours) and the protected only operation of these movements. However, all left-turn movements operate with a volume to capacity (v/c) ratio of less than one and 95th percentile queues that can be accommodated within the existing turn lanes. Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning peak hour and LOS B during the weekday evening peak hour.

Under Year 2029 total projected conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of approximately one second over no-build conditions. Multiple left-turn movements are projected to continue to operate at LOS E or F. However, as is the case under existing conditions, these movements are projected to operate with a v/c ratio of less than one and 95th percentile queues that can be accommodate. Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by approximately two percent or less. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Butterfield Road with Esplanade Road

The results of the capacity analyses indicate that the intersection currently operates at an overall LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. It should be noted that multiple left-turn movements operate at LOS E or F during the peak hours. As with the intersection of Butterfield Road with Woodcreek Drive and Llyod Avenue, this is the result of the long cycle length (125 to 135 seconds during the peak hours) and the protected only operation of these movements. However, all left-turn movements operate with a v/c ratio of less than one and 95th percentile queues that can be accommodated within the existing turn lanes. Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour.

Under Year 2029 total projected conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with increases in delay of less than one second over no-build conditions. Multiple left-turn movements are projected to continue to operate at LOS E or F. However, as is the case under existing conditions, these movements are projected to operate with a v/c ratio of less than one and 95th percentile queues that can be accommodated. Further, the proposed development is not projected to increase the volume of left-turn movements at this intersection. Overall, the proposed

development is projected to increase the volume of traffic traversing this intersection by approximately two percent or less. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lacey Road with Woodcreek Drive (North)

The results of the capacity analyses indicate that the intersection currently operates at an overall LOS A during the weekday morning peak hour and LOS C during the weekday evening peak hour. It should be noted that the eastbound left-turn movement operates at LOS E during the peak hours. As with the intersection of Butterfield Road with Woodcreek Drive and Llyod Avenue, this is the result of the long cycle length (125 to 135 seconds during the peak hours) and the protected only operation of this movement. However, all left-turn movements operate with a volume to capacity (v/c) ratio of less than one and 95th percentile queues that can be accommodated within the existing turn lanes. Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning peak hour and LOS C during the weekday evening peak hour.

Under Year 2029 total projected conditions, this intersection is projected to continue to operate at an overall LOS A during the weekday morning peak hour and LOS C during the weekday evening peak hour with increases in delay of approximately one second or less over no-build conditions. The eastbound left-turn movements is projected to continue to operate at LOS E during both peak hours. However, as is the case under existing conditions, these movements are projected to operate with a v/c ratio of less than one and 95th percentile queues that can be accommodated. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lacey Road with Finley Road

The results of the capacity analyses indicate that the intersection currently operates at an overall LOS B during the weekday morning and weekday evening peak hours. It should be noted that multiple left-turn movements operate at LOS D or E during the peak hours. As with the other area signalized intersections, this is the result of the long cycle length (125 to 135 seconds during the peak hours) and the protected only operation of these movements. However, all left-turn movements operate with a v/c ratio of less than one and 95th percentile queues that can be accommodated within the existing turn lanes. Under Year 2029 no-build conditions, this intersection is projected to continue to operate at an overall LOS B during the weekday morning and weekday evening peak hours.

Under Year 2029 total projected conditions, this intersection is projected to continue to operate at an overall LOS B during the weekday morning and weekday evening peak hours with increases in delay of less than one second over no-build conditions. Multiple left-turn movements are projected to continue to operate at LOS D or E. However, as is the case under existing conditions, these movements are projected to operate with a v/c ratio of less than one and 95th percentile queues that can be accommodated. Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by less than two percent. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lacey Road with Esplanade Road

The results of the capacity analyses indicate that overall, this intersection currently operates at LOS B during the weekday morning peak hour and LOS A during the weekday evening peak hour. Further, all movements operate at LOS A or better. Under Year 2029 no-build conditions, this intersection is projected to operate at LOS B during both peak hours.

Under Year 2029 total projected conditions, this intersection is projected to operate at LOS B during both peak hours. Further, all movements are projected to continue to operate at LOS B or better. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lacey Road with the Access Road

The results of the capacity analyses indicate that all critical movements at this intersection operate at LOS B or better during the weekday morning and weekday evening peak hours. Under Year 2028 no-build and total projected conditions, all critical movements at this intersection are projected to continue to operate at the same levels of service during both peak hours with increases in delay of less than one second. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Lacey Road with the Site Access Drive

As proposed, right-in/right-out access drive will be provided on Lacey Road located approximately 300 feet north of Woodcreek Drive. The access drive will provide one inbound lane and one outbound lane with left-turn movements restricted via the median on Lacey Road. Outbound movements will be under stop sign control.

Under Year 2029 total projected conditions, outbound movements from the access drive are projected to operate at LOS A during the weekday morning and weekday evening peak hours. When the projected traffic volumes at this access drive are compared to the right-turn lane guidelines in Chapter 36 of IDOT's BDE Manual, a southbound right-turn lane is not warranted on Lacey Road serving the access drive. As such, the proposed access drive will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

Lacey Road with Woodcreek Drive (South)

The results of the capacity analyses indicate that all critical movements at this intersection operate at LOS B or better during the weekday morning and weekday evening peak hours. Under Year 2028 no-build conditions, all critical movements at this intersection are projected to continue to operate at the same levels of service.

Under Year 2029 total projected conditions, all critical movements at this intersection are projected to operate at LOS C or better during both peak hours. Further, 95th percentile queues for the eastbound and northbound left-turn movements will continue to be accommodated within the

existing turn lanes. When the projected traffic volumes at this intersection are compared to the right-turn lane guidelines in Chapter 36 of IDOT's BDE Manual, a southbound right-turn lane is not warranted on Lacey Road. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Woodcreek Drive with the Site Access Drives

As proposed, two full-movement access drives will be provided on Woodcreek Drive located approximately 390 and 840 feet west of Lacey Road. The access drives will provide one inbound lane and one outbound lane with outbound movements under stop sign control. As part of the development, Woodcreek Drive will be restriped to provide separate left-turn lanes serving both site access drives and the existing access drive on the south side of Woodcreek Drive between the site access drives.

Under Year 2029 total projected conditions, outbound movements from the access drives are projected to operate at LOS B during the weekday morning and weekday evening peak hours. Further, inbound left-turn movements are projected to operate at LOS A during both peak hours. When the projected traffic volumes at these access drives are compared to the right-turn lane guidelines in Chapter 36 of IDOT's BDE Manual, no right-turn lanes will be warranted on Woodcreek Drive serving the access drives. As such, the proposed access drives will be sufficient to accommodate the traffic projected to be generated by the proposed development and will ensure efficient and flexible access is provided.

Parking Evaluation

As proposed, the development is to contain 297 apartment units in three buildings. Parking will be accommodated via a 65-space parking garage within each building and 295 exterior parking spaces for a total of 490 parking spaces. The peak parking demand of the proposed development was estimated based on the rates published in the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*, 5th Edition and based on surveys conducted by KLOA, Inc. at similar area developments. Further, the parking supply was compared to the Village of Downers Grove Municipal Code.

ITE Parking Generation Manual

In reviewing the survey data published in the Institute of Transportation Engineers' (ITE) 5th Edition of the *Parking Generation Manual*, the following average peak parking demands were determined:

- Multifamily Housing – Mid-Rise (Land-Use Code 221)
  - Monday-Friday: 389 spaces (ratio of 1.31 spaces per unit)
  - Saturday: 362 spaces (ratio of 1.22 spaces per unit)

As such, based on ITE *Parking Generation Manual* rates, the proposed development should provide a total of 389 parking spaces to accommodate the peak parking demand. This results in a surplus of 101 parking spaces.

KLOA, Inc. Surveys

KLOA, Inc conducted parking occupancy surveys at two similar area developments to determine their peak parking demand. The counts were conducted at Apex 41 in Lombard and at Regency Place in Oakbrook Terrace on Friday January 27, 2023 and Saturday 28, 2023. The surveys were conducted between 6:00 A.M. and 10:00 P.M. The following summarizes the results of the surveys.

- Apex 41 (760 S Highland Ave, Lombard, IL)
  - Five-Story apartment building located one mile northeast of the site.
  - 181 total units, 174 occupied at the time of the surveys.
  - Parking Supply of 286 parking spaces (242 garage, 44 exterior)
  - Peak parking occupancy on Friday was 187 spaces.
  - Peak parking occupancy on Saturday was 201 spaces.
  - The peak parking ratio was 1.16 spaces per occupied unit (Saturday).

- Regency Place (2003 S Meyers Rd, Oakbrook Terrace, IL)
  - Four-story apartment building located 2.5 miles northeast of the site.
  - 112 total units, 112 occupied at the time of the surveys.
  - Parking Supply of 248 parking spaces (182 garage, 66 exterior).
  - Peak parking occupancy on Friday was 162 spaces.
  - Peak parking occupancy on Saturday was 167 spaces.
  - The peak parking ratio was 1.49 spaces per occupied unit (Saturday).

As such, based on the parking occupancy surveys rates, the proposed development should provide parking at a rate of 1.49 spaces per unit for a total of 443 parking spaces to accommodate the peak parking demand. This results in a surplus of 47 parking spaces.

Village of Downers Grove Requirements

The Downers Grove Municipal Code requires a parking ratio of two parking spaces per unit. The proposed development should provide a total of 594 parking spaces, which results in a deficit of 104 spaces.

Evaluation

The proposed parking supply is greater than the projected peak parking demand of the development based on ITE and the parking occupancy surveys. As such, the proposed 490-space parking capacity will adequately accommodate the parking demand of the proposed development.

6. Conclusion

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

- As proposed, the site will be developed with three, four-story apartment buildings with 99 units each for a total of 297 units.
- The proposed development is projected to generate primarily outbound traffic during the weekday morning and inbound traffic during the weekday evening. This direction of traffic is the opposite of other area developments area which are primarily office and industrial.
- The area roadway system generally has sufficient reserve capacity to accommodate the traffic to be generated by the proposed development and no additional roadway improvements or traffic control modifications are required.
- Access to the development will be provided via a right-in/right-out access drive on Lacey Road and via two full-movement access drives on Woodcreek Drive.
- Woodcreek Drive will be restriped to provide separate left-turn lanes serving both site access drives and the existing access drive on the south side of Woodcreek Drive between the site access drives.
- The proposed access will adequately accommodate site-generated traffic and ensure that efficient and flexible access to and from the site is provided.
- Parking will be accommodated via a 65-space parking garage within each building and 295 exterior parking spaces for a total of 490 parking spaces. The proposed parking supply will be adequate in accommodating the peak parking demand of the proposed development.

Appendix

Traffic Count Summary Sheets
Preliminary Site Plan
ITE Trip Generation Worksheets
CMAP Projections Letter
Level of Service Criteria
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

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

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Butterfield Rd with Lacey Rd
Site Code:
Start Date: 01/04/2023

Turning Movement Data

Start Time	Butterfield Rd Eastbound						Butterfield Rd Westbound						Lacey Rd Northbound						Lacey Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	7	180	47	0	234	0	47	104	3	0	154	0	6	1	10	0	17	0	13	5	11	0	29	434
7:15 AM	0	11	217	55	0	283	1	110	140	10	0	261	0	4	1	4	0	9	0	14	8	24	0	46	599
7:30 AM	0	11	263	70	0	344	0	156	95	4	0	255	1	13	2	8	0	24	0	19	15	7	0	41	664
7:45 AM	0	18	293	102	0	413	0	170	136	10	0	316	0	14	0	8	0	22	0	16	16	11	0	43	794
Hourly Total	0	47	953	274	0	1274	1	483	475	27	0	986	1	37	4	30	0	72	0	62	44	53	0	159	2491
8:00 AM	0	10	258	70	0	338	0	115	109	2	0	226	0	18	3	7	0	28	0	16	10	15	0	41	633
8:15 AM	0	14	248	62	0	324	0	125	111	4	0	240	0	9	1	10	0	20	0	19	12	16	0	47	631
8:30 AM	0	10	246	49	0	305	0	70	130	6	0	206	0	11	3	11	0	25	0	14	6	20	0	40	576
8:45 AM	0	6	241	49	0	296	0	91	130	0	0	221	0	11	2	4	0	17	0	19	7	13	0	39	573
Hourly Total	0	40	993	230	0	1263	0	401	480	12	0	893	0	49	9	32	0	90	0	68	35	64	0	167	2413
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	8	226	15	0	249	1	19	298	19	0	337	0	49	9	36	0	94	0	11	4	21	0	36	716
4:15 PM	0	4	230	15	0	249	1	30	250	17	0	298	0	53	4	15	0	72	0	14	3	17	0	34	653
4:30 PM	0	7	194	14	0	215	0	27	268	16	0	311	0	62	5	52	0	119	0	8	3	15	0	26	671
4:45 PM	0	10	194	17	0	221	0	25	347	13	0	385	0	36	7	32	0	75	0	15	4	22	0	41	722
Hourly Total	0	29	844	61	0	934	2	101	1163	65	0	1331	0	200	25	135	0	360	0	48	14	75	0	137	2762
5:00 PM	0	0	1	0	0	1	0	0	4	0	0	4	0	0	0	1	0	1	0	0	0	0	0	0	6
Grand Total	0	116	2791	565	0	3472	3	985	2122	104	0	3214	1	286	38	198	0	523	0	178	93	192	0	463	7672
Approach %	0.0	3.3	80.4	16.3	-	-	0.1	30.6	66.0	3.2	-	-	0.2	54.7	7.3	37.9	-	-	0.0	38.4	20.1	41.5	-	-	-
Total %	0.0	1.5	36.4	7.4	-	45.3	0.0	12.8	27.7	1.4	-	41.9	0.0	3.7	0.5	2.6	-	6.8	0.0	2.3	1.2	2.5	-	6.0	-
Lights	0	115	2754	558	-	3427	3	971	2061	102	-	3137	1	284	38	191	-	514	0	176	93	189	-	458	7536
% Lights	-	99.1	98.7	98.8	-	98.7	100.0	98.6	97.1	98.1	-	97.6	100.0	99.3	100.0	96.5	-	98.3	-	98.9	100.0	98.4	-	98.9	98.2
Buses	0	1	2	2	-	5	0	0	3	0	-	3	0	0	0	0	-	0	0	0	0	2	-	2	10
% Buses	-	0.9	0.1	0.4	-	0.1	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.0	-	0.4	0.1
Single-Unit Trucks	0	0	20	5	-	25	0	13	31	1	-	45	0	2	0	7	-	9	0	2	0	0	-	2	81
% Single-Unit Trucks	-	0.0	0.7	0.9	-	0.7	0.0	1.3	1.5	1.0	-	1.4	0.0	0.7	0.0	3.5	-	1.7	-	1.1	0.0	0.0	-	0.4	1.1
Articulated Trucks	0	0	15	0	-	15	0	1	27	1	-	29	0	0	0	0	-	0	0	0	0	1	-	1	45
% Articulated Trucks	-	0.0	0.5	0.0	-	0.4	0.0	0.1	1.3	1.0	-	0.9	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.5	-	0.2	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield Rd with Lacey Rd
Site Code:
Start Date: 01/04/2023

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Butterfield Rd Eastbound						Butterfield Rd Westbound						Lacey Rd Northbound						Lacey Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	11	263	70	0	344	0	156	95	4	0	255	1	13	2	8	0	24	0	19	15	7	0	41	664
7:45 AM	0	18	293	102	0	413	0	170	136	10	0	316	0	14	0	8	0	22	0	16	16	11	0	43	794
8:00 AM	0	10	258	70	0	338	0	115	109	2	0	226	0	18	3	7	0	28	0	16	10	15	0	41	633
8:15 AM	0	14	248	62	0	324	0	125	111	4	0	240	0	9	1	10	0	20	0	19	12	16	0	47	631
Total	0	53	1062	304	0	1419	0	566	451	20	0	1037	1	54	6	33	0	94	0	70	53	49	0	172	2722
Approach %	0.0	3.7	74.8	21.4	-	-	0.0	54.6	43.5	1.9	-	-	1.1	57.4	6.4	35.1	-	-	0.0	40.7	30.8	28.5	-	-	-
Total %	0.0	1.9	39.0	11.2	-	52.1	0.0	20.8	16.6	0.7	-	38.1	0.0	2.0	0.2	1.2	-	3.5	0.0	2.6	1.9	1.8	-	6.3	-
PHF	0.000	0.736	0.906	0.745	-	0.859	0.000	0.832	0.829	0.500	-	0.820	0.250	0.750	0.500	0.825	-	0.839	0.000	0.921	0.828	0.766	-	0.915	0.857
Lights	0	53	1042	301	-	1396	0	559	425	18	-	1002	1	53	6	29	-	89	0	69	53	47	-	169	2656
% Lights	-	100.0	98.1	99.0	-	98.4	-	98.8	94.2	90.0	-	96.6	100.0	98.1	100.0	87.9	-	94.7	-	98.6	100.0	95.9	-	98.3	97.6
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	2
% Buses	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	2.0	-	0.6	0.1
Single-Unit Trucks	0	0	11	3	-	14	0	6	15	1	-	22	0	1	0	4	-	5	0	1	0	0	-	1	42
% Single-Unit Trucks	-	0.0	1.0	1.0	-	1.0	-	1.1	3.3	5.0	-	2.1	0.0	1.9	0.0	12.1	-	5.3	-	1.4	0.0	0.0	-	0.6	1.5
Articulated Trucks	0	0	8	0	-	8	0	1	11	1	-	13	0	0	0	0	-	0	0	0	0	1	-	1	22
% Articulated Trucks	-	0.0	0.8	0.0	-	0.6	-	0.2	2.4	5.0	-	1.3	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	2.0	-	0.6	0.8
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield Rd with Lacey Rd
Site Code:
Start Date: 01/04/2023
Page No: 3

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Butterfield Rd Eastbound						Butterfield Rd Westbound						Lacey Rd Northbound						Lacey Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	8	226	15	0	249	1	19	298	19	0	337	0	49	9	36	0	94	0	11	4	21	0	36	716
4:15 PM	0	4	230	15	0	249	1	30	250	17	0	298	0	53	4	15	0	72	0	14	3	17	0	34	653
4:30 PM	0	7	194	14	0	215	0	27	268	16	0	311	0	62	5	52	0	119	0	8	3	15	0	26	671
4:45 PM	0	10	194	17	0	221	0	25	347	13	0	385	0	36	7	32	0	75	0	15	4	22	0	41	722
Total	0	29	844	61	0	934	2	101	1163	65	0	1331	0	200	25	135	0	360	0	48	14	75	0	137	2762
Approach %	0.0	3.1	90.4	6.5	-	-	0.2	7.6	87.4	4.9	-	-	0.0	55.6	6.9	37.5	-	-	0.0	35.0	10.2	54.7	-	-	-
Total %	0.0	1.0	30.6	2.2	-	33.8	0.1	3.7	42.1	2.4	-	48.2	0.0	7.2	0.9	4.9	-	13.0	0.0	1.7	0.5	2.7	-	5.0	-
PHF	0.000	0.725	0.917	0.897	-	0.938	0.500	0.842	0.838	0.855	-	0.864	0.000	0.806	0.694	0.649	-	0.756	0.000	0.800	0.875	0.852	-	0.835	0.956
Lights	0	29	841	59	-	929	2	100	1159	65	-	1326	0	200	25	134	-	359	0	48	14	74	-	136	2750
% Lights	-	100.0	99.6	96.7	-	99.5	100.0	99.0	99.7	100.0	-	99.6	-	100.0	100.0	99.3	-	99.7	-	100.0	100.0	98.7	-	99.3	99.6
Buses	0	0	1	2	-	3	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	1	-	1	4
% Buses	-	0.0	0.1	3.3	-	0.3	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.3	-	0.7	0.1
Single-Unit Trucks	0	0	2	0	-	2	0	1	2	0	-	3	0	0	0	1	-	1	0	0	0	0	-	0	6
% Single-Unit Trucks	-	0.0	0.2	0.0	-	0.2	0.0	1.0	0.2	0.0	-	0.2	-	0.0	0.0	0.7	-	0.3	-	0.0	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	0	0	0	0	-	0	2
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Access Rd
Site Code:
Start Date: 01/04/2023
Page No: 1

Turning Movement Data

Start Time	Access Rd Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	11	6	0	17	0	26	0	0	26	43
7:15 AM	0	0	2	0	2	0	7	11	0	18	0	34	2	0	36	56
7:30 AM	0	1	0	0	1	0	8	22	0	30	0	46	3	0	49	80
7:45 AM	0	0	0	0	0	1	13	26	0	40	0	78	4	0	82	122
Hourly Total	0	1	2	0	3	1	39	65	0	105	0	184	9	0	193	301
8:00 AM	0	1	0	0	1	0	10	20	0	30	0	61	3	0	64	95
8:15 AM	0	1	3	0	4	1	17	25	0	43	1	48	6	0	55	102
8:30 AM	0	0	2	0	2	0	13	23	0	36	1	33	0	0	34	72
8:45 AM	0	1	2	1	3	1	7	21	0	29	0	51	2	0	53	85
Hourly Total	0	3	7	1	10	2	47	89	0	138	2	193	11	0	206	354
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	7	0	12	0	1	73	0	74	0	14	0	0	14	100
4:15 PM	0	2	14	0	16	0	0	70	0	70	0	22	0	0	22	108
4:30 PM	0	8	13	0	21	0	1	61	0	62	0	14	0	0	14	97
4:45 PM	0	0	8	0	8	0	0	45	0	45	0	17	1	0	18	71
Hourly Total	0	15	42	0	57	0	2	249	0	251	0	67	1	0	68	376
5:00 PM	0	4	18	0	22	0	0	65	0	65	0	21	0	0	21	108
5:15 PM	0	2	7	0	9	0	1	67	0	68	0	25	0	0	25	102
5:30 PM	0	5	7	0	12	0	0	51	0	51	0	18	1	0	19	82
5:45 PM	0	1	4	0	5	0	2	31	0	33	0	12	0	0	12	50
Hourly Total	0	12	36	0	48	0	3	214	0	217	0	76	1	0	77	342
Grand Total	0	31	87	1	118	3	91	617	0	711	2	520	22	0	544	1373
Approach %	0.0	26.3	73.7	-	-	0.4	12.8	86.8	-	-	0.4	95.6	4.0	-	-	-
Total %	0.0	2.3	6.3	-	8.6	0.2	6.6	44.9	-	51.8	0.1	37.9	1.6	-	39.6	-
Lights	0	31	84	-	115	3	90	612	-	705	2	508	21	-	531	1351
% Lights	-	100.0	96.6	-	97.5	100.0	98.9	99.2	-	99.2	100.0	97.7	95.5	-	97.6	98.4
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	3	-	3	0	1	5	-	6	0	12	1	-	13	22
% Single-Unit Trucks	-	0.0	3.4	-	2.5	0.0	1.1	0.8	-	0.8	0.0	2.3	4.5	-	2.4	1.6
Articulated Trucks	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
Bicycles on Road	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
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Access Rd
Site Code:
Start Date: 01/04/2023
Page No: 2

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Access Rd Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	1	0	0	1	0	8	22	0	30	0	46	3	0	49	80
7:45 AM	0	0	0	0	0	1	13	26	0	40	0	78	4	0	82	122
8:00 AM	0	1	0	0	1	0	10	20	0	30	0	61	3	0	64	95
8:15 AM	0	1	3	0	4	1	17	25	0	43	1	48	6	0	55	102
Total	0	3	3	0	6	2	48	93	0	143	1	233	16	0	250	399
Approach %	0.0	50.0	50.0	-	-	1.4	33.6	65.0	-	-	0.4	93.2	6.4	-	-	-
Total %	0.0	0.8	0.8	-	1.5	0.5	12.0	23.3	-	35.8	0.3	58.4	4.0	-	62.7	-
PHF	0.000	0.750	0.250	-	0.375	0.500	0.706	0.894	-	0.831	0.250	0.747	0.667	-	0.762	0.818
Lights	0	3	1	-	4	2	47	90	-	139	1	226	15	-	242	385
% Lights	-	100.0	33.3	-	66.7	100.0	97.9	96.8	-	97.2	100.0	97.0	93.8	-	96.8	96.5
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	2	-	2	0	1	3	-	4	0	7	1	-	8	14
% Single-Unit Trucks	-	0.0	66.7	-	33.3	0.0	2.1	3.2	-	2.8	0.0	3.0	6.3	-	3.2	3.5
Articulated Trucks	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
Bicycles on Road	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
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Access Rd
Site Code:
Start Date: 01/04/2023
Page No: 3

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Access Rd Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	8	13	0	21	0	1	61	0	62	0	14	0	0	14	97
4:45 PM	0	0	8	0	8	0	0	45	0	45	0	17	1	0	18	71
5:00 PM	0	4	18	0	22	0	0	65	0	65	0	21	0	0	21	108
5:15 PM	0	2	7	0	9	0	1	67	0	68	0	25	0	0	25	102
Total	0	14	46	0	60	0	2	238	0	240	0	77	1	0	78	378
Approach %	0.0	23.3	76.7	-	-	0.0	0.8	99.2	-	-	0.0	98.7	1.3	-	-	-
Total %	0.0	3.7	12.2	-	15.9	0.0	0.5	63.0	-	63.5	0.0	20.4	0.3	-	20.6	-
PHF	0.000	0.438	0.639	-	0.682	0.000	0.500	0.888	-	0.882	0.000	0.770	0.250	-	0.780	0.875
Lights	0	14	46	-	60	0	2	238	-	240	0	76	1	-	77	377
% Lights	-	100.0	100.0	-	100.0	-	100.0	100.0	-	100.0	-	98.7	100.0	-	98.7	99.7
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	1.3	0.0	-	1.3	0.3
Articulated Trucks	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
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Finley Rd
Site Code:
Start Date: 01/04/2023
Page No: 1

Turning Movement Data

Start Time	Lacey Rd Eastbound					Finley Rd Northbound					Finley Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	2	12	0	14	0	52	131	0	183	0	68	19	0	87	284
7:15 AM	0	4	18	0	22	0	77	125	0	202	0	98	18	0	116	340
7:30 AM	0	3	23	0	26	0	103	172	0	275	0	104	21	0	125	426
7:45 AM	0	1	28	0	29	0	124	188	0	312	0	119	35	0	154	495
Hourly Total	0	10	81	0	91	0	356	616	0	972	0	389	93	0	482	1545
8:00 AM	0	3	21	0	24	0	102	150	0	252	0	87	23	0	110	386
8:15 AM	0	3	28	1	31	0	104	167	0	271	0	88	30	0	118	420
8:30 AM	0	7	30	0	37	0	76	142	0	218	0	94	21	0	115	370
8:45 AM	0	6	29	0	35	0	66	162	0	228	0	92	24	0	116	379
Hourly Total	0	19	108	1	127	0	348	621	0	969	0	361	98	0	459	1555
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	15	83	0	98	0	15	122	0	137	0	182	1	0	183	418
4:15 PM	0	7	84	0	91	0	23	147	0	170	1	174	7	0	182	443
4:30 PM	0	16	91	0	107	0	22	132	0	154	0	199	12	0	211	472
4:45 PM	0	12	69	0	81	0	21	139	0	160	0	170	10	0	180	421
Hourly Total	0	50	327	0	377	0	81	540	0	621	1	725	30	0	756	1754
5:00 PM	0	18	87	0	105	0	30	127	0	157	0	200	6	0	206	468
5:15 PM	0	9	67	0	76	0	25	146	0	171	0	228	7	0	235	482
5:30 PM	0	15	60	0	75	1	21	126	0	148	0	196	9	0	205	428
5:45 PM	0	6	45	0	51	1	15	110	0	126	0	150	8	0	158	335
Hourly Total	0	48	259	0	307	2	91	509	0	602	0	774	30	0	804	1713
Grand Total	0	127	775	1	902	2	876	2286	0	3164	1	2249	251	0	2501	6567
Approach %	0.0	14.1	85.9	-	-	0.1	27.7	72.3	-	-	0.0	89.9	10.0	-	-	-
Total %	0.0	1.9	11.8	-	13.7	0.0	13.3	34.8	-	48.2	0.0	34.2	3.8	-	38.1	-
Lights	0	122	753	-	875	2	864	2264	-	3130	1	2209	241	-	2451	6456
% Lights	-	96.1	97.2	-	97.0	100.0	98.6	99.0	-	98.9	100.0	98.2	96.0	-	98.0	98.3
Buses	0	1	0	-	1	0	1	6	-	7	0	6	1	-	7	15
% Buses	-	0.8	0.0	-	0.1	0.0	0.1	0.3	-	0.2	0.0	0.3	0.4	-	0.3	0.2
Single-Unit Trucks	0	4	22	-	26	0	11	12	-	23	0	18	8	-	26	75
% Single-Unit Trucks	-	3.1	2.8	-	2.9	0.0	1.3	0.5	-	0.7	0.0	0.8	3.2	-	1.0	1.1
Articulated Trucks	0	0	0	-	0	0	0	4	-	4	0	16	1	-	17	21
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.2	-	0.1	0.0	0.7	0.4	-	0.7	0.3
Bicycles on Road	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
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Finley Rd
Site Code:
Start Date: 01/04/2023
Page No: 2

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Lacey Rd Eastbound					Finley Rd Northbound					Finley Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	3	23	0	26	0	103	172	0	275	0	104	21	0	125	426
7:45 AM	0	1	28	0	29	0	124	188	0	312	0	119	35	0	154	495
8:00 AM	0	3	21	0	24	0	102	150	0	252	0	87	23	0	110	386
8:15 AM	0	3	28	1	31	0	104	167	0	271	0	88	30	0	118	420
Total	0	10	100	1	110	0	433	677	0	1110	0	398	109	0	507	1727
Approach %	0.0	9.1	90.9	-	-	0.0	39.0	61.0	-	-	0.0	78.5	21.5	-	-	-
Total %	0.0	0.6	5.8	-	6.4	0.0	25.1	39.2	-	64.3	0.0	23.0	6.3	-	29.4	-
PHF	0.000	0.833	0.893	-	0.887	0.000	0.873	0.900	-	0.889	0.000	0.836	0.779	-	0.823	0.872
Lights	0	8	93	-	101	0	427	669	-	1096	0	380	109	-	489	1686
% Lights	-	80.0	93.0	-	91.8	-	98.6	98.8	-	98.7	-	95.5	100.0	-	96.4	97.6
Buses	0	0	0	-	0	0	0	2	-	2	0	3	0	-	3	5
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.3	-	0.2	-	0.8	0.0	-	0.6	0.3
Single-Unit Trucks	0	2	7	-	9	0	6	6	-	12	0	9	0	-	9	30
% Single-Unit Trucks	-	20.0	7.0	-	8.2	-	1.4	0.9	-	1.1	-	2.3	0.0	-	1.8	1.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	6	0	-	6	6
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	1.5	0.0	-	1.2	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Finley Rd
Site Code:
Start Date: 01/04/2023
Page No: 3

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Lacey Rd Eastbound					Finley Rd Northbound					Finley Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	16	91	0	107	0	22	132	0	154	0	199	12	0	211	472
4:45 PM	0	12	69	0	81	0	21	139	0	160	0	170	10	0	180	421
5:00 PM	0	18	87	0	105	0	30	127	0	157	0	200	6	0	206	468
5:15 PM	0	9	67	0	76	0	25	146	0	171	0	228	7	0	235	482
Total	0	55	314	0	369	0	98	544	0	642	0	797	35	0	832	1843
Approach %	0.0	14.9	85.1	-	-	0.0	15.3	84.7	-	-	0.0	95.8	4.2	-	-	-
Total %	0.0	3.0	17.0	-	20.0	0.0	5.3	29.5	-	34.8	0.0	43.2	1.9	-	45.1	-
PHF	0.000	0.764	0.863	-	0.862	0.000	0.817	0.932	-	0.939	0.000	0.874	0.729	-	0.885	0.956
Lights	0	54	310	-	364	0	96	542	-	638	0	790	30	-	820	1822
% Lights	-	98.2	98.7	-	98.6	-	98.0	99.6	-	99.4	-	99.1	85.7	-	98.6	98.9
Buses	0	1	0	-	1	0	1	0	-	1	0	2	1	-	3	5
% Buses	-	1.8	0.0	-	0.3	-	1.0	0.0	-	0.2	-	0.3	2.9	-	0.4	0.3
Single-Unit Trucks	0	0	4	-	4	0	1	0	-	1	0	0	4	-	4	9
% Single-Unit Trucks	-	0.0	1.3	-	1.1	-	1.0	0.0	-	0.2	-	0.0	11.4	-	0.5	0.5
Articulated Trucks	0	0	0	-	0	0	0	2	-	2	0	5	0	-	5	7
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.4	-	0.3	-	0.6	0.0	-	0.6	0.4
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Woodcreek Dr
Site Code:
Start Date: 01/04/2023
Page No: 1

Turning Movement Data

Start Time	Woodcreek Dr Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	1	0	1	0	21	16	0	37	0	22	4	0	26	64
7:15 AM	0	0	1	0	1	0	49	18	0	67	0	24	14	0	38	106
7:30 AM	0	4	9	0	13	0	55	27	0	82	0	34	21	0	55	150
7:45 AM	0	6	10	0	16	0	78	30	0	108	0	43	29	0	72	196
Hourly Total	0	10	21	0	31	0	203	91	0	294	0	123	68	0	191	516
8:00 AM	0	7	9	0	16	0	64	27	0	91	0	44	16	0	60	167
8:15 AM	0	3	12	0	15	1	52	33	0	86	0	40	8	0	48	149
8:30 AM	0	4	11	0	15	0	24	32	0	56	0	34	4	0	38	109
8:45 AM	0	7	11	0	18	2	22	20	0	44	0	43	10	0	53	115
Hourly Total	0	21	43	0	64	3	162	112	0	277	0	161	38	0	199	540
Grand Total	0	31	64	0	95	3	365	203	0	571	0	284	106	0	390	1056
Approach %	0.0	32.6	67.4	-	-	0.5	63.9	35.6	-	-	0.0	72.8	27.2	-	-	-
Total %	0.0	2.9	6.1	-	9.0	0.3	34.6	19.2	-	54.1	0.0	26.9	10.0	-	36.9	-
Lights	0	29	59	-	88	3	362	200	-	565	0	276	104	-	380	1033
% Lights	-	93.5	92.2	-	92.6	100.0	99.2	98.5	-	98.9	-	97.2	98.1	-	97.4	97.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	2	5	-	7	0	3	3	-	6	0	8	2	-	10	23
% Single-Unit Trucks	-	6.5	7.8	-	7.4	0.0	0.8	1.5	-	1.1	-	2.8	1.9	-	2.6	2.2
Articulated Trucks	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
Bicycles on Road	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
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Woodcreek Dr
Site Code:
Start Date: 01/04/2023
Page No: 2

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Woodcreek Dr Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	4	9	0	13	0	55	27	0	82	0	34	21	0	55	150
7:45 AM	0	6	10	0	16	0	78	30	0	108	0	43	29	0	72	196
8:00 AM	0	7	9	0	16	0	64	27	0	91	0	44	16	0	60	167
8:15 AM	0	3	12	0	15	1	52	33	0	86	0	40	8	0	48	149
Total	0	20	40	0	60	1	249	117	0	367	0	161	74	0	235	662
Approach %	0.0	33.3	66.7	-	-	0.3	67.8	31.9	-	-	0.0	68.5	31.5	-	-	-
Total %	0.0	3.0	6.0	-	9.1	0.2	37.6	17.7	-	55.4	0.0	24.3	11.2	-	35.5	-
PHF	0.000	0.714	0.833	-	0.938	0.250	0.798	0.886	-	0.850	0.000	0.915	0.638	-	0.816	0.844
Lights	0	19	39	-	58	1	247	115	-	363	0	156	72	-	228	649
% Lights	-	95.0	97.5	-	96.7	100.0	99.2	98.3	-	98.9	-	96.9	97.3	-	97.0	98.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	1	-	2	0	2	2	-	4	0	5	2	-	7	13
% Single-Unit Trucks	-	5.0	2.5	-	3.3	0.0	0.8	1.7	-	1.1	-	3.1	2.7	-	3.0	2.0
Articulated Trucks	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
Bicycles on Road	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
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Woodcreek Dr
Site Code:
Start Date: 01/04/2023
Page No: 1

Turning Movement Data

Start Time	Woodcreek Dr Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	11	1	0	12	0	0	6	0	6	2	50	42	0	94	112
7:15 AM	0	4	2	0	6	0	2	5	0	7	0	74	76	0	150	163
7:30 AM	0	13	1	0	14	0	2	11	0	13	0	106	124	0	230	257
7:45 AM	0	9	2	0	11	0	1	11	0	12	0	154	137	0	291	314
Hourly Total	0	37	6	0	43	0	5	33	0	38	2	384	379	0	765	846
8:00 AM	0	10	1	0	11	0	2	15	0	17	0	128	80	0	208	236
8:15 AM	0	9	1	0	10	0	5	12	0	17	0	127	65	0	192	219
8:30 AM	0	14	3	0	17	0	2	11	0	13	1	91	23	0	115	145
8:45 AM	0	9	3	0	12	0	2	8	0	10	0	100	51	0	151	173
Hourly Total	0	42	8	0	50	0	11	46	0	57	1	446	219	0	666	773
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	66	6	0	72	0	2	31	0	33	0	25	12	0	37	142
4:15 PM	0	29	4	0	33	0	0	44	0	44	0	28	19	0	47	124
4:30 PM	0	70	4	0	74	0	0	45	0	45	0	23	24	0	47	166
4:45 PM	0	53	5	0	58	0	2	30	0	32	0	28	17	0	45	135
Hourly Total	0	218	19	0	237	0	4	150	0	154	0	104	72	0	176	567
5:00 PM	0	76	3	0	79	0	0	40	0	40	0	30	19	0	49	168
5:15 PM	0	48	3	0	51	0	0	37	0	37	0	25	20	0	45	133
5:30 PM	0	33	7	0	40	0	0	37	0	37	0	28	14	0	42	119
5:45 PM	0	23	2	0	25	0	0	26	0	26	0	27	16	0	43	94
Hourly Total	0	180	15	0	195	0	0	140	0	140	0	110	69	0	179	514
Grand Total	0	477	48	0	525	0	20	369	0	389	3	1044	739	0	1786	2700
Approach %	0.0	90.9	9.1	-	-	0.0	5.1	94.9	-	-	0.2	58.5	41.4	-	-	-
Total %	0.0	17.7	1.8	-	19.4	0.0	0.7	13.7	-	14.4	0.1	38.7	27.4	-	66.1	-
Lights	0	466	47	-	513	0	19	367	-	386	3	1029	731	-	1763	2662
% Lights	-	97.7	97.9	-	97.7	-	95.0	99.5	-	99.2	100.0	98.6	98.9	-	98.7	98.6
Buses	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Buses	-	0.2	0.0	-	0.2	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	10	1	-	11	0	1	2	-	3	0	14	8	-	22	36
% Single-Unit Trucks	-	2.1	2.1	-	2.1	-	5.0	0.5	-	0.8	0.0	1.3	1.1	-	1.2	1.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.1	0.0	-	0.1	0.0
Bicycles on Road	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
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Woodcreek Dr
Site Code:
Start Date: 01/04/2023
Page No: 2

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Woodcreek Dr Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:30 AM	0	13	1	0	14	0	2	11	0	13	0	106	124	0	230	257
7:45 AM	0	9	2	0	11	0	1	11	0	12	0	154	137	0	291	314
8:00 AM	0	10	1	0	11	0	2	15	0	17	0	128	80	0	208	236
8:15 AM	0	9	1	0	10	0	5	12	0	17	0	127	65	0	192	219
Total	0	41	5	0	46	0	10	49	0	59	0	515	406	0	921	1026
Approach %	0.0	89.1	10.9	-	-	0.0	16.9	83.1	-	-	0.0	55.9	44.1	-	-	-
Total %	0.0	4.0	0.5	-	4.5	0.0	1.0	4.8	-	5.8	0.0	50.2	39.6	-	89.8	-
PHF	0.000	0.788	0.625	-	0.821	0.000	0.500	0.817	-	0.868	0.000	0.836	0.741	-	0.791	0.817
Lights	0	37	4	-	41	0	10	48	-	58	0	507	404	-	911	1010
% Lights	-	90.2	80.0	-	89.1	-	100.0	98.0	-	98.3	-	98.4	99.5	-	98.9	98.4
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	4	1	-	5	0	0	1	-	1	0	7	2	-	9	15
% Single-Unit Trucks	-	9.8	20.0	-	10.9	-	0.0	2.0	-	1.7	-	1.4	0.5	-	1.0	1.5
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.2	0.0	-	0.1	0.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Lacey Rd with Woodcreek Dr
Site Code:
Start Date: 01/04/2023
Page No: 3

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Woodcreek Dr Eastbound					Lacey Rd Northbound					Lacey Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	70	4	0	74	0	0	45	0	45	0	23	24	0	47	166
4:45 PM	0	53	5	0	58	0	2	30	0	32	0	28	17	0	45	135
5:00 PM	0	76	3	0	79	0	0	40	0	40	0	30	19	0	49	168
5:15 PM	0	48	3	0	51	0	0	37	0	37	0	25	20	0	45	133
Total	0	247	15	0	262	0	2	152	0	154	0	106	80	0	186	602
Approach %	0.0	94.3	5.7	-	-	0.0	1.3	98.7	-	-	0.0	57.0	43.0	-	-	-
Total %	0.0	41.0	2.5	-	43.5	0.0	0.3	25.2	-	25.6	0.0	17.6	13.3	-	30.9	-
PHF	0.000	0.813	0.750	-	0.829	0.000	0.250	0.844	-	0.856	0.000	0.883	0.833	-	0.949	0.896
Lights	0	242	15	-	257	0	2	152	-	154	0	105	78	-	183	594
% Lights	-	98.0	100.0	-	98.1	-	100.0	100.0	-	100.0	-	99.1	97.5	-	98.4	98.7
Buses	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Buses	-	0.4	0.0	-	0.4	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	4	0	-	4	0	0	0	-	0	0	1	2	-	3	7
% Single-Unit Trucks	-	1.6	0.0	-	1.5	-	0.0	0.0	-	0.0	-	0.9	2.5	-	1.6	1.2
Articulated Trucks	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
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield Road with Esplanade Road
Site Code:
Start Date: 10/24/2017
Page No: 1

Turning Movement Data

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Esplanade Road Northbound						Esplanade Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	8	413	0	0	421	1	0	311	17	0	329	0	0	0	5	0	5	0	25	0	4	0	29	784
7:15 AM	0	5	423	0	0	428	1	0	370	7	0	378	0	0	0	8	0	8	0	22	0	12	0	34	848
7:30 AM	0	6	403	0	0	409	0	0	441	17	0	458	0	0	0	6	0	6	0	26	0	9	0	35	908
7:45 AM	0	9	364	0	0	373	1	0	474	14	0	489	0	0	0	18	0	18	0	23	0	11	0	34	914
Hourly Total	0	28	1603	0	0	1631	3	0	1596	55	0	1654	0	0	0	37	0	37	0	96	0	36	0	132	3454
8:00 AM	0	9	295	0	0	304	0	0	367	16	0	383	0	0	0	5	0	5	0	19	0	11	0	30	722
8:15 AM	0	10	311	0	0	321	0	0	385	28	0	413	0	0	0	4	0	4	0	21	0	15	0	36	774
8:30 AM	0	17	349	0	0	366	0	0	408	31	0	439	0	0	0	8	0	8	0	18	0	14	0	32	845
8:45 AM	0	10	312	0	0	322	0	0	448	23	0	471	0	0	0	14	1	14	0	28	0	16	0	44	851
Hourly Total	0	46	1267	0	0	1313	0	0	1608	98	0	1706	0	0	0	31	1	31	0	86	0	56	0	142	3192
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	17	306	0	0	323	0	0	416	33	0	449	0	0	0	116	0	116	0	27	0	29	0	56	944
4:15 PM	0	22	327	0	0	349	0	0	505	46	0	551	0	0	0	108	0	108	0	21	0	19	0	40	1048
4:30 PM	0	17	356	0	0	373	0	0	489	49	0	538	0	0	0	124	0	124	0	36	0	27	0	63	1098
4:45 PM	0	17	304	0	0	321	0	0	481	40	0	521	0	0	0	146	0	146	0	22	0	23	0	45	1033
Hourly Total	0	73	1293	0	0	1366	0	0	1891	168	0	2059	0	0	0	494	0	494	0	106	0	98	0	204	4123
5:00 PM	0	21	412	0	0	433	1	0	452	32	0	485	0	0	0	153	0	153	0	31	0	26	0	57	1128
5:15 PM	0	28	414	0	0	442	0	0	422	49	0	471	0	0	0	147	0	147	0	30	0	24	0	54	1114
5:30 PM	0	14	381	0	0	395	0	0	523	31	0	554	0	0	0	114	0	114	0	27	0	32	0	59	1122
5:45 PM	0	19	350	0	0	369	0	0	441	38	0	479	0	0	0	67	0	67	0	22	0	23	0	45	960
Hourly Total	0	82	1557	0	0	1639	1	0	1838	150	0	1989	0	0	0	481	0	481	0	110	0	105	0	215	4324
Grand Total	0	229	5720	0	0	5949	4	0	6933	471	0	7408	0	0	0	1043	1	1043	0	398	0	295	0	693	15093
Approach %	0.0	3.8	96.2	0.0	-	-	0.1	0.0	93.6	6.4	-	-	0.0	0.0	0.0	100.0	-	-	0.0	57.4	0.0	42.6	-	-	-
Total %	0.0	1.5	37.9	0.0	-	39.4	0.0	0.0	45.9	3.1	-	49.1	0.0	0.0	0.0	6.9	-	6.9	0.0	2.6	0.0	2.0	-	4.6	-
Lights	0	227	5649	0	-	5876	4	0	6854	460	-	7318	0	0	0	1040	-	1040	0	384	0	290	-	674	14908
% Lights	-	99.1	98.8	-	-	98.8	100.0	-	98.9	97.7	-	98.8	-	-	-	99.7	-	99.7	-	96.5	-	98.3	-	97.3	98.8
Buses	0	1	14	0	-	15	0	0	23	1	-	24	0	0	0	0	-	0	0	3	0	1	-	4	43
% Buses	-	0.4	0.2	-	-	0.3	0.0	-	0.3	0.2	-	0.3	-	-	-	0.0	-	0.0	-	0.8	-	0.3	-	0.6	0.3
Single-Unit Trucks	0	1	43	0	-	44	0	0	44	8	-	52	0	0	0	3	-	3	0	7	0	4	-	11	110
% Single-Unit Trucks	-	0.4	0.8	-	-	0.7	0.0	-	0.6	1.7	-	0.7	-	-	-	0.3	-	0.3	-	1.8	-	1.4	-	1.6	0.7
Articulated Trucks	0	0	14	0	-	14	0	0	12	2	-	14	0	0	0	0	-	0	0	4	0	0	-	4	32
% Articulated Trucks	-	0.0	0.2	-	-	0.2	0.0	-	0.2	0.4	-	0.2	-	-	-	0.0	-	0.0	-	1.0	-	0.0	-	0.6	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

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

Rosemont, Illinois, United States 60018
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Count Name: Butterfield Road with Esplanade Road
Site Code:
Start Date: 10/24/2017

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Esplanade Road Northbound						Esplanade Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	6	403	0	0	409	0	0	441	17	0	458	0	0	0	6	0	6	0	26	0	9	0	35	908
7:45 AM	0	9	364	0	0	373	1	0	474	14	0	489	0	0	0	18	0	18	0	23	0	11	0	34	914
8:00 AM	0	9	295	0	0	304	0	0	367	16	0	383	0	0	0	5	0	5	0	19	0	11	0	30	722
8:15 AM	0	10	311	0	0	321	0	0	385	28	0	413	0	0	0	4	0	4	0	21	0	15	0	36	774
Total	0	34	1373	0	0	1407	1	0	1667	75	0	1743	0	0	0	33	0	33	0	89	0	46	0	135	3318
Approach %	0.0	2.4	97.6	0.0	-	-	0.1	0.0	95.6	4.3	-	-	0.0	0.0	0.0	100.0	-	-	0.0	65.9	0.0	34.1	-	-	-
Total %	0.0	1.0	41.4	0.0	-	42.4	0.0	0.0	50.2	2.3	-	52.5	0.0	0.0	0.0	1.0	-	1.0	0.0	2.7	0.0	1.4	-	4.1	-
PHF	0.000	0.850	0.852	0.000	-	0.860	0.250	0.000	0.879	0.670	-	0.891	0.000	0.000	0.000	0.458	-	0.458	0.000	0.856	0.000	0.767	-	0.938	0.908
Lights	0	34	1350	0	-	1384	1	0	1641	69	-	1711	0	0	0	31	-	31	0	87	0	45	-	132	3258
% Lights	-	100.0	98.3	-	-	98.4	100.0	-	98.4	92.0	-	98.2	-	-	-	93.9	-	93.9	-	97.8	-	97.8	-	97.8	98.2
Buses	0	0	3	0	-	3	0	0	6	1	-	7	0	0	0	0	-	0	0	2	0	1	-	3	13
% Buses	-	0.0	0.2	-	-	0.2	0.0	-	0.4	1.3	-	0.4	-	-	-	0.0	-	0.0	-	2.2	-	2.2	-	2.2	0.4
Single-Unit Trucks	0	0	10	0	-	10	0	0	17	4	-	21	0	0	0	2	-	2	0	0	0	0	-	0	33
% Single-Unit Trucks	-	0.0	0.7	-	-	0.7	0.0	-	1.0	5.3	-	1.2	-	-	-	6.1	-	6.1	-	0.0	-	0.0	-	0.0	1.0
Articulated Trucks	0	0	10	0	-	10	0	0	3	1	-	4	0	0	0	0	-	0	0	0	0	0	-	0	14
% Articulated Trucks	-	0.0	0.7	-	-	0.7	0.0	-	0.2	1.3	-	0.2	-	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Butterfield Road with Esplanade Road
Site Code:
Start Date: 10/24/2017
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Butterfield Road Eastbound						Butterfield Road Westbound						Esplanade Road Northbound						Esplanade Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:30 PM	0	17	356	0	0	373	0	0	489	49	0	538	0	0	0	124	0	124	0	36	0	27	0	63	1098
4:45 PM	0	17	304	0	0	321	0	0	481	40	0	521	0	0	0	146	0	146	0	22	0	23	0	45	1033
5:00 PM	0	21	412	0	0	433	1	0	452	32	0	485	0	0	0	153	0	153	0	31	0	26	0	57	1128
5:15 PM	0	28	414	0	0	442	0	0	422	49	0	471	0	0	0	147	0	147	0	30	0	24	0	54	1114
Total	0	83	1486	0	0	1569	1	0	1844	170	0	2015	0	0	0	570	0	570	0	119	0	100	0	219	4373
Approach %	0.0	5.3	94.7	0.0	-	-	0.0	0.0	91.5	8.4	-	-	0.0	0.0	0.0	100.0	-	-	0.0	54.3	0.0	45.7	-	-	-
Total %	0.0	1.9	34.0	0.0	-	35.9	0.0	0.0	42.2	3.9	-	46.1	0.0	0.0	0.0	13.0	-	13.0	0.0	2.7	0.0	2.3	-	5.0	-
PHF	0.000	0.741	0.897	0.000	-	0.887	0.250	0.000	0.943	0.867	-	0.936	0.000	0.000	0.000	0.931	-	0.931	0.000	0.826	0.000	0.926	-	0.869	0.969
Lights	0	83	1479	0	-	1562	1	0	1840	169	-	2010	0	0	0	569	-	569	0	116	0	100	-	216	4357
% Lights	-	100.0	99.5	-	-	99.6	100.0	-	99.8	99.4	-	99.8	-	-	-	99.8	-	99.8	-	97.5	-	100.0	-	98.6	99.6
Buses	0	0	5	0	-	5	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	6
% Buses	-	0.0	0.3	-	-	0.3	0.0	-	0.1	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	2	0	-	2	0	0	2	1	-	3	0	0	0	1	-	1	0	0	0	0	-	0	6
% Single-Unit Trucks	-	0.0	0.1	-	-	0.1	0.0	-	0.1	0.6	-	0.1	-	-	-	0.2	-	0.2	-	0.0	-	0.0	-	0.0	0.1
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	3	0	0	-	3	4
% Articulated Trucks	-	0.0	0.0	-	-	0.0	0.0	-	0.1	0.0	-	0.0	-	-	-	0.0	-	0.0	-	2.5	-	0.0	-	1.4	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	-	0.0	0.0	-	0.0	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Preliminary Site Plan

Residential Site Area	9.22 Ac.		Tot. Bedrooms
Studio/ Conv. Units	69	23.24%	69
1 BR Units	144	48.48%	144
2 BR Units	84	28.28%	168
3 BR Units	0	0.0%	0
		100.0%	
Total Rental Units	297	(28.0 Du/Ac.)	381 BR
Setbacks Refer to Sheet LP1.02			
RESIDENTIAL PARKING			
Garages	195		
Surface	295		
Res. Parking Subtotal	490	(Provided-1.65 Spaces/Unit) (Required-2.00 Spaces/Unit) Parking Variance Requested	
Bike Parking			
Garage (30 / Bldg.)	90		
Surface (6 / Pad)	18		

Unit	Description	GSF (sf)	NSF (sf)	Unit Count Level 1	Level 2	Level 3	Level 4	Per Bldg	Total	Percent	Total GSF	Total NSF	Notes:
Studio Units													
S1	Studio	524	481	1	1	1	1	4	12	4.0%	2,096	1,924	Efficiency
S2	Studio	605	560	2	2	2	2	8	24	8.1%	4,840	4,480	Studio Unit
S3	Convertible / 1 Bath	711	661	2	3	3	3	11	33	11.1%	7,821	7,271	Convertible with Sleeping Room
S4													
S5													
Total Studio Units				5	6	6	6	23	69	23.2%	14,757	13,675	
											642	595	
One Bedroom Units													
A1	1 Bed / 1 Bath	749	698	4	4	4	4	16	48	16.2%	11,984	11,168	Standard 1 Bedroom
A2	1 Bed / 1 Bath	819	764	4	4	4	4	16	48	16.2%	13,104	12,224	Standard 1 Bedroom
A3	1 Bed / 1 Bath	871	816	4	4	4	4	16	48	16.2%	13,936	13,056	Standard 1 Bedroom
A4													
A5													
Total 1 Br Units				12	12	12	12	48	144	48.5%	39,024	36,448	
											813	759	
Two Bedroom Units													
B1	2 Bed / 2 Bath	1,122	1,055	2	2	2	2	8	24	8.1%	8,976	8,440	"In-Line" 2 Bedroom
B2	2 Bed / 2 Bath	1,290	1,216	5	5	5	5	20	60	20.2%	25,800	24,320	Corner 2 Bedroom
B3													
B4													
B5													
Total 2 Br Units				7	7	7	7	28	84	28.3%	34,776	32,760	
											1,242	1,170	
Three Bedroom Units													
C1													
Total 3 Br Units				0	0	0	0	0	0	0.0%	0	0	
Totals				24	25	25	25	99	297	100.0%	88,557	82,883	
											895	837	

NSF Measured to interior face of gyp board at perimeter of unit
GSF Measured to exterior face of stud at exterior and corridor walls and to centerline of demising wall

Mean Unit Areas

North

0 40 80 160 320

HAMILTON PARTNERS

m&r DEVELOPMENT

LP 1.01
Conceptual Site Plan
ESPLANADE PLACE
Downers Grove, Illinois

BSB DESIGN
BSBDESIGN.COM

Date: December 28, 2023

ITE Trip Generation Worksheets

Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

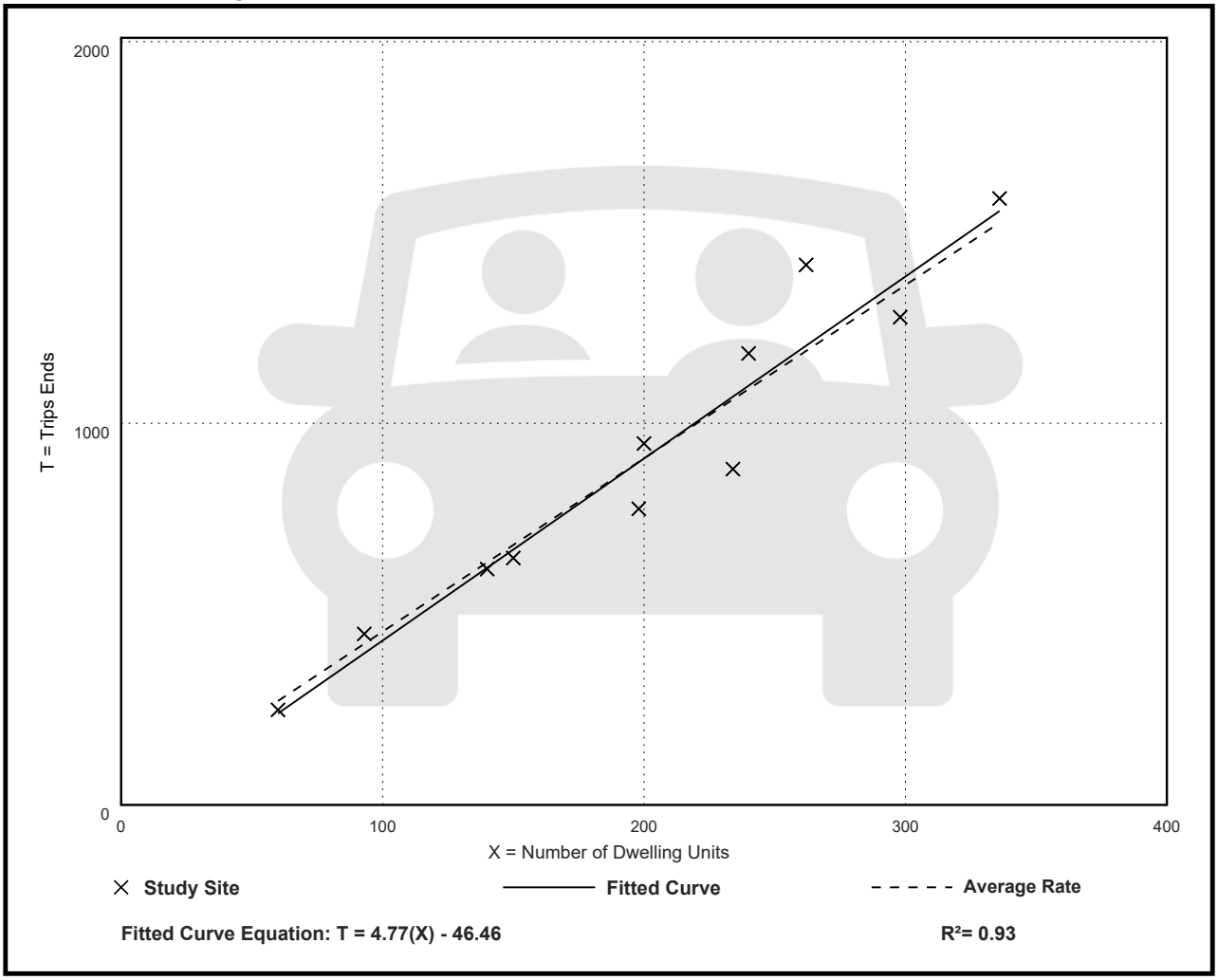
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 11
Avg. Num. of Dwelling Units: 201
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



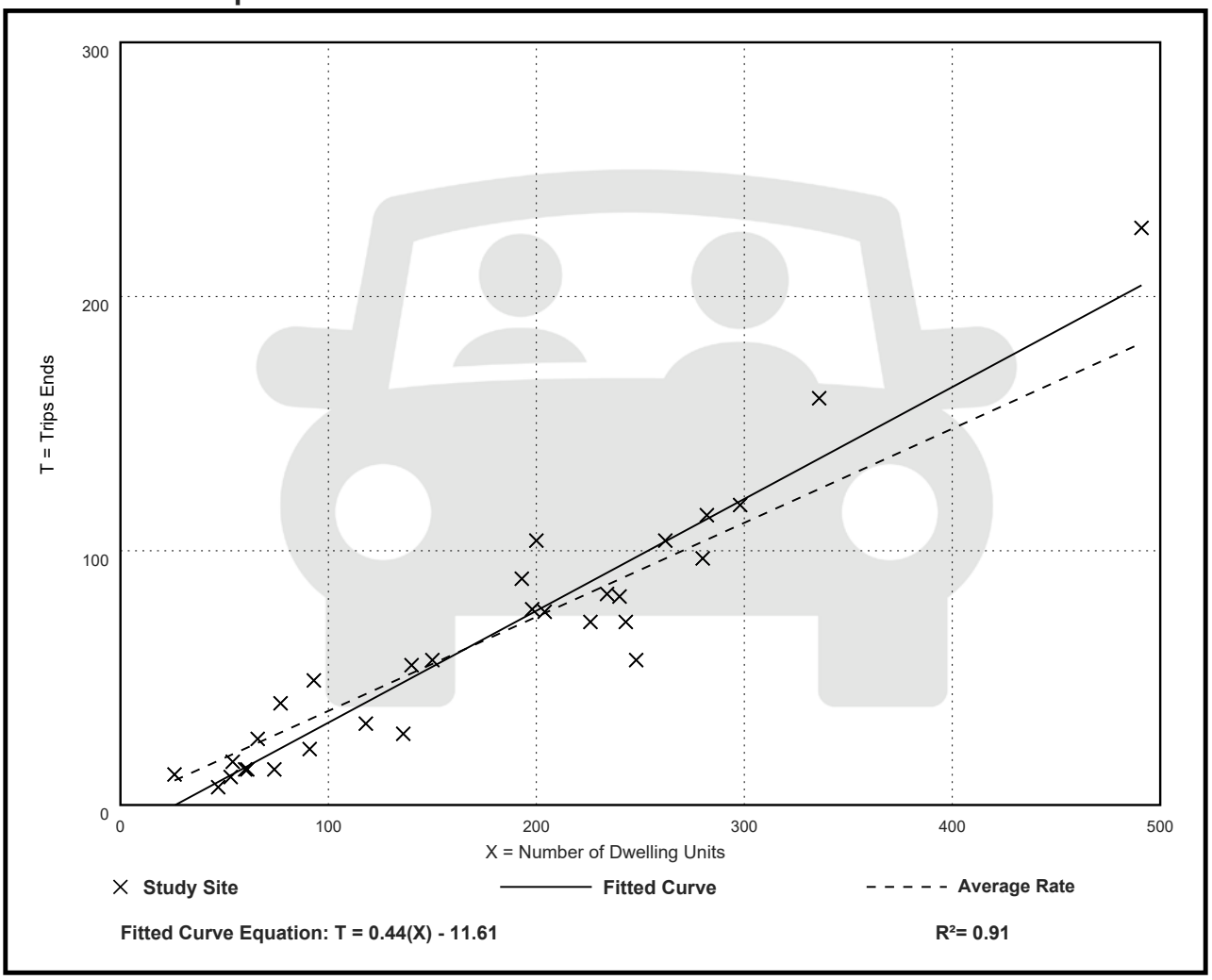
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 30
Avg. Num. of Dwelling Units: 173
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



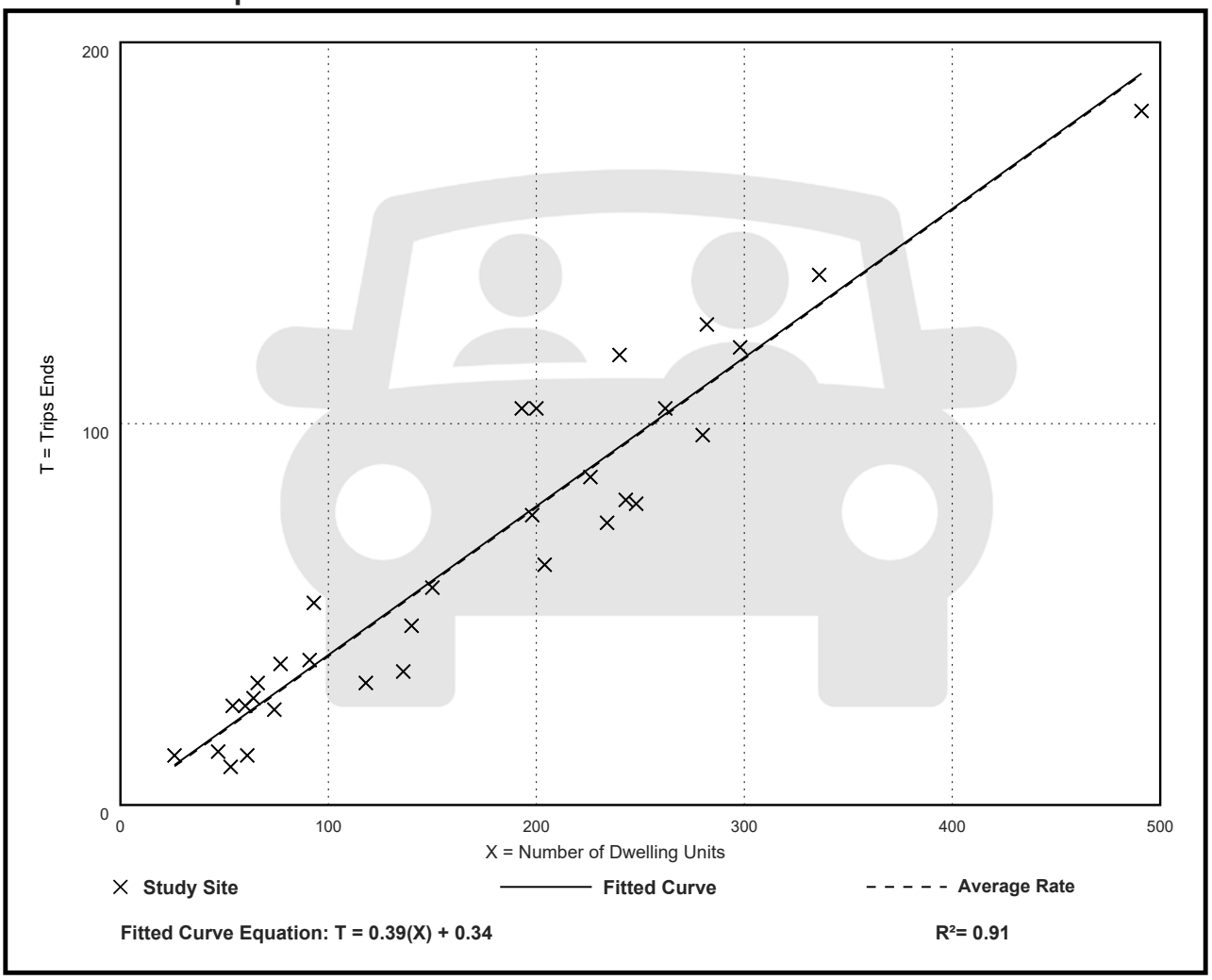
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 31
Avg. Num. of Dwelling Units: 169
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



CMAP Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street
Suite 450
Chicago, IL 60607

312-454-0400
cmap.illinois.gov

February 23, 2023

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

Subject: Lacey Road @ Woodcreek Drive
IDOT

Dear Mr. Bowen:

In response to a request made on your behalf and dated february 22, 2023, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT	Year 2050 ADT
Butterfield Rd, @ Lacey Rd	30,700 (2021)	40,200
Lacey Rd south of Butterfield Rd	3,750 (2016)	4,900
Finley Rd, @ Lacey Rd	20,800 (2016)	22,800

Traffic projections are developed using existing ADT data provided in the request letter and the results from the October 2022 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)
2023_TrafficForecasts\DownersGrove\du-11-23\du-11-23.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

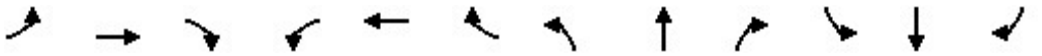
Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1062	304	566	451	20	55	6	33	70	53	49
Future Volume (vph)	53	1062	304	566	451	20	55	6	33	70	53	49
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.994			0.896	0.850		0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	5353	2814	3467	4856	0	3433	1493	1370	1787	1730	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	5353	2814	3467	4856	0	3433	1493	1370	1787	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			353		7			16	183		31	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	6%	10%	2%	0%	12%	1%	0%	4%
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 (%)									42%			
Lane Group Flow (vph)	62	1235	353	658	547	0	64	23	22	81	119	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	22.5	57.5	57.5	30.0	65.0		14.0	17.5	17.5	20.0	23.5	
Total Split (%)	18.0%	46.0%	46.0%	24.0%	52.0%		11.2%	14.0%	14.0%	16.0%	18.8%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	9.7	58.3	58.3	27.4	78.1		7.7	9.6	9.6	13.8	12.7	
Actuated g/C Ratio	0.08	0.47	0.47	0.22	0.62		0.06	0.08	0.08	0.11	0.10	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

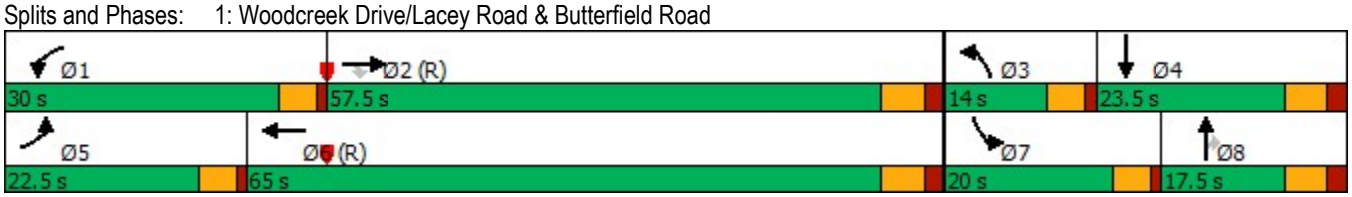
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.49	0.24	0.87	0.18		0.30	0.18	0.08	0.41	0.59	
Control Delay	64.3	25.3	2.7	71.8	10.2		40.2	20.7	2.8	58.2	50.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	25.3	2.7	71.8	10.2		40.2	20.7	2.8	58.2	50.5	
LOS	E	C	A	E	B		D	C	A	E	D	
Approach Delay		22.0			43.8			28.5			53.6	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	49	267	0	291	54		25	0	0	64	69	
Queue Length 95th (ft)	89	303	25	#362	68		28	31	0	108	120	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	259	2496	1500	765	3036		260	152	293	244	268	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.49	0.24	0.86	0.18		0.25	0.15	0.08	0.33	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 32.5 Intersection LOS: C
Intersection Capacity Utilization 59.9% 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.

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1131	0	0	991	75	0	0	40	89	0	46
Future Volume (vph)	34	1131	0	0	991	75	0	0	40	89	0	46
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82			205			65
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	2%	8%	0%	0%	6%	2%	0%	2%
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)	37	1243	0	0	1089	82	0	0	44	98	0	51
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	15.0	92.5			77.5				16.0	16.5		
Total Split (%)	12.0%	74.0%			62.0%				12.8%	13.2%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	8.0	89.0			80.7	113.2			8.2	9.9		24.0
Actuated g/C Ratio	0.06	0.71			0.65	0.91			0.07	0.08		0.19

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

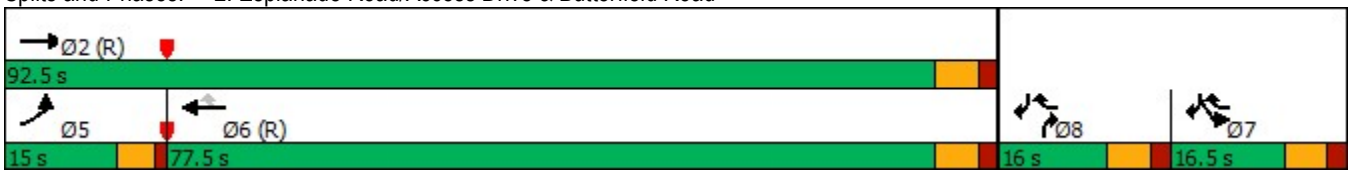
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.33			0.21	0.06			0.12	0.36		0.14
Control Delay	98.5	1.2			10.0	0.5			0.7	58.0		7.2
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	98.5	1.2			10.0	0.5			0.7	58.0		7.2
LOS	F	A			B	A			A	E		A
Approach Delay		4.0			9.3			0.7			40.6	
Approach LOS		A			A			A			D	
Queue Length 50th (ft)	32	3			91	0			0	39		0
Queue Length 95th (ft)	m65	6			120	7			0	67		25
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	151	3809			5129	1298			403	297		317
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	0.25	0.33			0.21	0.06			0.11	0.33		0.16

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 10 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 8.4 Intersection LOS: A
Intersection Capacity Utilization 44.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	45	5	10	49	517	406
Future Volume (vph)	45	5	10	49	517	406
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3183	1346	1805	3725	3725	2814
Flt Permitted	0.950		0.398			
Satd. Flow (perm)	3183	1346	756	3725	3725	2814
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		6				495
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	20%	0%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	55	6	12	60	630	495
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	34.0	34.0	12.0	91.0	79.0	34.0
Total Split (%)	27.2%	27.2%	9.6%	72.8%	63.2%	27.2%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	9.6	9.6	105.9	103.4	99.6	118.9
Actuated g/C Ratio	0.08	0.08	0.85	0.83	0.80	0.95

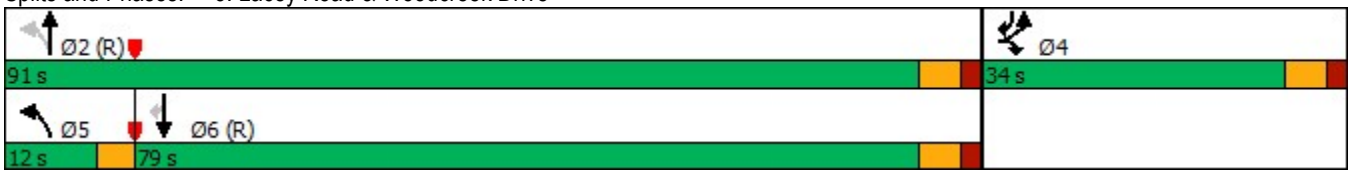
Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.22	0.06	0.02	0.02	0.21	0.18
Control Delay	55.7	30.6	1.8	2.1	1.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	55.7	30.6	1.8	2.1	1.7	0.1
LOS	E	C	A	A	A	A
Approach Delay	53.2			2.1	1.0	
Approach LOS	D			A	A	
Queue Length 50th (ft)	22	0	1	3	14	0
Queue Length 95th (ft)	38	13	4	7	24	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	712	306	711	3080	2969	2814
Starvation Cap Reductn	0	0	0	0	1772	475
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.02	0.02	0.02	0.53	0.21

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.22			
Intersection Signal Delay: 3.6		Intersection LOS: A	
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive



Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	433	677	398	109	10	100
Future Volume (vph)	433	677	398	109	10	100
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	2918	3551	3762	1599	1736	2842
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	2918	3551	3762	1599	1736	2842
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				125		115
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	7%	1%	1%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	498	778	457	125	11	115
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	27.2	104.7	73.0	87.3	8.3	8.3
Actuated g/C Ratio	0.22	0.84	0.58	0.70	0.07	0.07

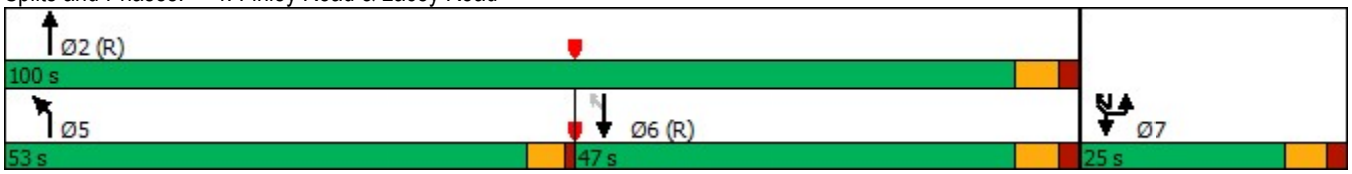
Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.79	0.26	0.21	0.11	0.09	0.39
Control Delay	55.1	2.4	13.4	1.6	56.4	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.1	2.4	13.4	1.6	56.4	13.7
LOS	E	A	B	A	E	B
Approach Delay		22.9	10.8		17.4	
Approach LOS		C	B		B	
Queue Length 50th (ft)	197	51	86	0	9	0
Queue Length 95th (ft)	232	68	131	20	27	30
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1132	2972	2195	1280	263	529
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.26	0.21	0.10	0.04	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.0		Intersection LOS: B	
Intersection Capacity Utilization 45.3%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	7	246	249	0	23	43	28	6	5	10	0	0
Future Vol, veh/h	7	246	249	0	23	43	28	6	5	10	0	0
Peak Hour Factor	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	25	3	0	2	0	2	11	0	0	0	0	0
Mvmt Flow	8	283	286	0	26	49	32	7	6	11	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10.5	8	8.6
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	5%	0%	52%	0%
Vol Thru, %	0%	33%	95%	33%	48%	43%
Vol Right, %	0%	67%	0%	67%	0%	57%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	15	130	372	45	50
LT Vol	6	0	7	0	23	0
Through Vol	0	5	123	123	22	22
RT Vol	0	10	0	249	0	28
Lane Flow Rate	7	17	149	428	51	57
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.012	0.026	0.209	0.496	0.075	0.074
Departure Headway (Hd)	6.442	5.469	5.047	4.176	5.281	4.658
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	558	658	707	855	682	773
Service Time	4.149	3.176	2.813	1.942	2.986	2.363
HCM Lane V/C Ratio	0.013	0.026	0.211	0.501	0.075	0.074
HCM Control Delay	9.2	8.3	9.2	11	8.4	7.7
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0	0.1	0.8	2.8	0.2	0.2

HCM 6th TWSC
6: Lacey Road & Access Road 02/24/2023

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	50	93	234	16
Future Vol, veh/h	3	3	50	93	234	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	67	2	3	3	6
Mvmt Flow	4	4	61	113	285	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	474	153	305	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	179	-	-	-	-	-
Critical Hdwy	6.8	8.24	4.14	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.97	2.22	-	-	-
Pot Cap-1 Maneuver	524	694	1253	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	498	694	1253	-	-	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	700	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.8	2.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1253	-	570	694	-	-
HCM Lane V/C Ratio	0.049	-	0.006	0.005	-	-
HCM Control Delay (s)	8	-	11.4	10.2	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0	0	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 02/24/2023

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	40	250	123	163	74
Future Vol, veh/h	20	40	250	123	163	74
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	5	2	1	2	3	3
Mvmt Flow	24	48	298	146	194	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	907	141	282	0	-	0
Stage 1	238	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Critical Hdwy	6.9	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	270	881	1285	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	463	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	881	1285	-	-	-
Mov Cap-2 Maneuver	329	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	5.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1285	-	329	881	-	-
HCM Lane V/C Ratio	0.232	-	0.072	0.054	-	-
HCM Control Delay (s)	8.6	-	16.8	9.3	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	0.9	-	0.2	0.2	-	-

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	844	64	108	1163	65	223	25	151	48	14	75
Future Volume (vph)	29	844	64	108	1163	65	223	25	151	48	14	75
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.992			0.891	0.850		0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	5406	2814	3467	5097	0	3502	1597	1519	1805	1647	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	5406	2814	3467	5097	0	3502	1597	1519	1805	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170		10			68	133		78	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
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 (%)	0%	1%	1%	1%	1%	0%	0%	0%	1%	0%	0%	1%
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 (%)									43%			
Lane Group Flow (vph)	30	879	67	113	1279	0	232	94	89	50	93	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	13.5	59.0	59.0	32.5	78.0		25.5	30.0	30.0	13.5	18.0	
Total Split (%)	10.0%	43.7%	43.7%	24.1%	57.8%		18.9%	22.2%	22.2%	10.0%	13.3%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	7.7	80.6	80.6	9.8	86.9		14.2	17.6	17.6	8.1	9.4	
Actuated g/C Ratio	0.06	0.60	0.60	0.07	0.64		0.11	0.13	0.13	0.06	0.07	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

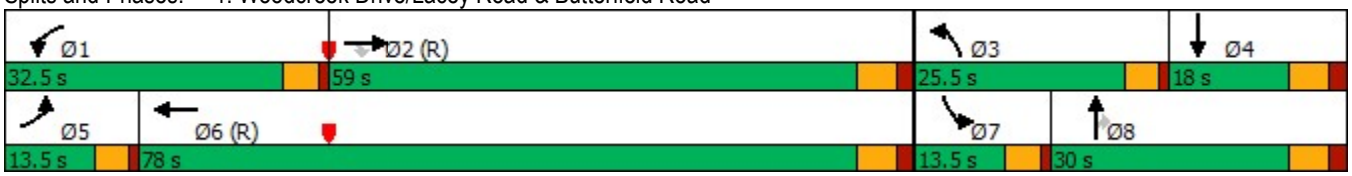
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.27	0.04	0.45	0.39		0.63	0.35	0.28	0.46	0.50	
Control Delay	67.5	14.1	0.0	100.3	3.4		46.3	25.6	18.7	75.1	26.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.5	14.1	0.0	100.3	3.4		46.3	25.6	18.7	75.1	26.3	
LOS	E	B	A	F	A		D	C	B	E	C	
Approach Delay		14.8			11.2			35.7			43.4	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	26	125	0	54	49		108	34	27	43	13	
Queue Length 95th (ft)	59	186	0	88	293		152	85	78	87	68	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	123	3227	1748	719	3283		544	339	379	120	219	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.27	0.04	0.16	0.39		0.43	0.28	0.23	0.42	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 17.5 Intersection LOS: B
Intersection Capacity Utilization 54.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	960	0	0	1236	170	0	0	309	119	0	100
Future Volume (vph)	83	960	0	0	1236	170	0	0	309	119	0	100
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						175			292			103
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
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%	1%	0%	0%	1%	1%	0%	0%	1%	2%	0%	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)	86	990	0	0	1274	175	0	0	319	123	0	103
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	16.0	96.0			80.0				19.0	20.0		
Total Split (%)	11.9%	71.1%			59.3%				14.1%	14.8%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	10.8	95.8			80.5	113.7			10.0	11.2		27.2
Actuated g/C Ratio	0.08	0.71			0.60	0.84			0.07	0.08		0.20

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

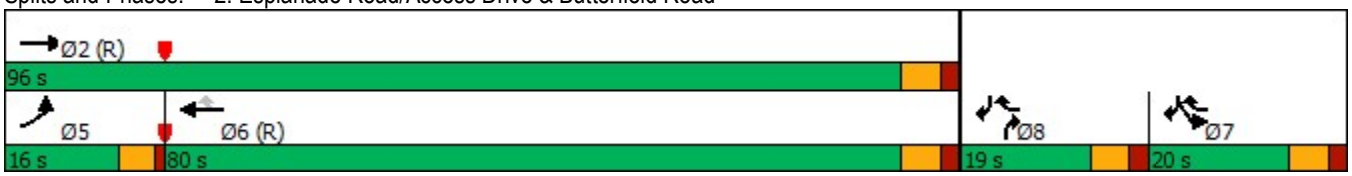
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.60	0.26			0.27	0.13			0.67	0.43		0.25
Control Delay	85.4	6.1			13.8	0.5			16.2	63.3		9.0
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	85.4	6.1			13.8	0.5			16.2	63.3		9.0
LOS	F	A			B	A			B	E		A
Approach Delay		12.4			12.2			16.2			38.5	
Approach LOS		B			B			B			D	
Queue Length 50th (ft)	76	71			125	0			13	53		0
Queue Length 95th (ft)	140	103			162	10			63	85		47
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	159	3836			4782	1384			534	356		418
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	0.54	0.26			0.27	0.13			0.60	0.35		0.25

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 104 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 14.6 Intersection LOS: B
Intersection Capacity Utilization 45.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	247	15	2	152	106	80
Future Volume (vph)	247	15	2	152	106	80
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1615	1805	3800	3762	2787
Flt Permitted	0.950		0.655			
Satd. Flow (perm)	3433	1615	1244	3800	3762	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		17				89
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	274	17	2	169	118	89
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	60.0	60.0	14.0	75.0	61.0	60.0
Total Split (%)	44.4%	44.4%	10.4%	55.6%	45.2%	44.4%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	17.4	17.4	108.1	105.6	103.8	132.0
Actuated g/C Ratio	0.13	0.13	0.80	0.78	0.77	0.98

Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.62	0.08	0.00	0.06	0.04	0.03
Control Delay	61.6	20.0	3.5	3.7	2.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	20.0	3.5	3.7	2.0	0.0
LOS	E	B	A	A	A	A
Approach Delay	59.2			3.7	1.1	
Approach LOS	E			A	A	
Queue Length 50th (ft)	119	0	0	14	4	0
Queue Length 95th (ft)	160	23	2	27	11	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	1373	656	1040	2972	2892	2787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.03	0.00	0.06	0.04	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 29.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive

Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	98	544	797	35	55	314
Future Volume (vph)	98	544	797	35	55	314
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3762	3762	1417	1770	2814
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3762	3762	1417	1770	2814
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				36		327
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	14%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	567	830	36	57	327
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	9.1	102.2	88.6	105.4	10.8	10.8
Actuated g/C Ratio	0.07	0.82	0.71	0.84	0.09	0.09

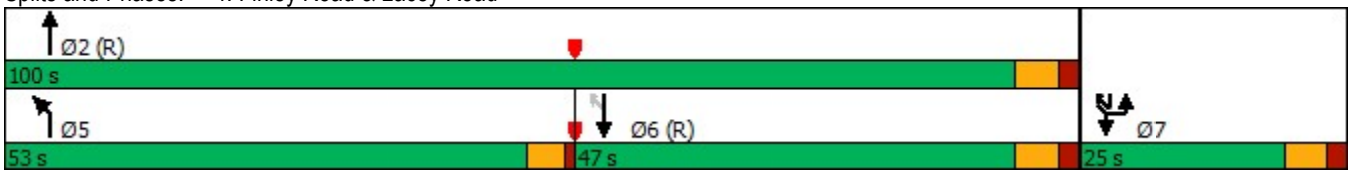
Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.41	0.18	0.31	0.03	0.37	0.60
Control Delay	59.9	2.7	7.6	0.7	60.1	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	2.7	7.6	0.7	60.1	10.4
LOS	E	A	A	A	E	B
Approach Delay		11.5	7.3		17.8	
Approach LOS		B	A		B	
Queue Length 50th (ft)	41	40	116	0	44	0
Queue Length 95th (ft)	69	65	178	5	86	47
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1332	3075	2666	1291	269	705
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.18	0.31	0.03	0.21	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 10.8		Intersection LOS: B	
Intersection Capacity Utilization 44.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	15	96	4	0	2	93	173	51	121	18	0	0
Future Vol, veh/h	15	96	4	0	2	93	173	51	121	18	0	0
Peak Hour Factor	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	0	0	0
Mvmt Flow	19	123	5	0	3	119	222	65	155	23	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	10.1	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	24%	0%	4%	0%
Vol Thru, %	0%	87%	76%	92%	96%	21%
Vol Right, %	0%	13%	0%	8%	0%	79%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	139	63	52	49	220
LT Vol	51	0	15	0	2	0
Through Vol	0	121	48	48	47	47
RT Vol	0	18	0	4	0	173
Lane Flow Rate	65	178	81	67	62	281
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.111	0.274	0.127	0.101	0.093	0.374
Departure Headway (Hd)	6.137	5.543	5.639	5.464	5.366	4.789
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	581	643	632	651	665	749
Service Time	3.913	3.319	3.41	3.235	3.122	2.545
HCM Lane V/C Ratio	0.112	0.277	0.128	0.103	0.093	0.375
HCM Control Delay	9.7	10.4	9.2	8.9	8.7	10.4
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.4	1.1	0.4	0.3	0.3	1.7

HCM 6th TWSC
6: Lacey Road & Access Road 02/24/2023

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	46	2	280	89	1
Future Vol, veh/h	14	46	2	280	89	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	16	52	2	318	101	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	265	51	102	0	-	0
Stage 1	102	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	707	1013	1503	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	1013	1503	-	-	-
Mov Cap-2 Maneuver	724	-	-	-	-	-
Stage 1	916	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1503	-	724	1013	-	-
HCM Lane V/C Ratio	0.002	-	0.022	0.052	-	-
HCM Control Delay (s)	7.4	-	10.1	8.7	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 02/24/2023

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	79	134	38	203	129	6
Future Vol, veh/h	79	134	38	203	129	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	94	160	45	242	154	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	369	81	161	0	-	0
Stage 1	158	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	610	969	1430	-	-	-
Stage 1	860	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	591	969	1430	-	-	-
Mov Cap-2 Maneuver	644	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1430	-	644	969	-	-
HCM Lane V/C Ratio	0.032	-	0.146	0.165	-	-
HCM Control Delay (s)	7.6	-	11.5	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.6	-	-

Capacity Analysis Summary Sheets

Year 2029 No-Build Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1108	317	590	470	20	57	6	34	70	53	49
Future Volume (vph)	53	1108	317	590	470	20	57	6	34	70	53	49
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.994			0.894	0.850		0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	5353	2814	3467	4857	0	3433	1487	1370	1787	1730	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	5353	2814	3467	4857	0	3433	1487	1370	1787	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			369		7			17	183		31	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	6%	10%	2%	0%	12%	1%	0%	4%
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 (%)									43%			
Lane Group Flow (vph)	62	1288	369	686	570	0	66	24	23	81	119	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	22.5	57.5	57.5	30.0	65.0		14.0	17.5	17.5	20.0	23.5	
Total Split (%)	18.0%	46.0%	46.0%	24.0%	52.0%		11.2%	14.0%	14.0%	16.0%	18.8%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	9.7	56.9	56.9	28.7	78.0		7.7	9.6	9.6	13.8	12.7	
Actuated g/C Ratio	0.08	0.46	0.46	0.23	0.62		0.06	0.08	0.08	0.11	0.10	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

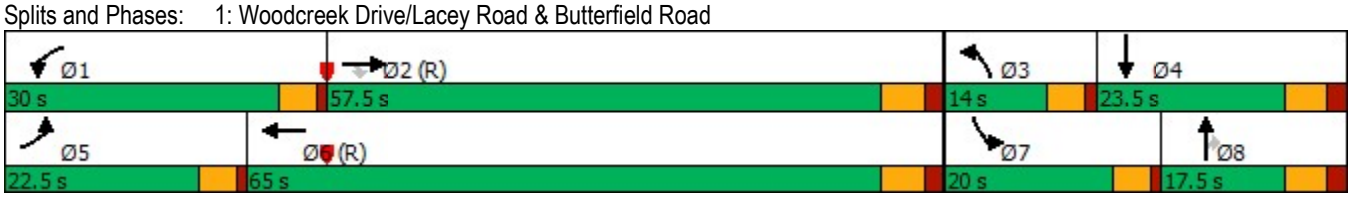
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.53	0.25	0.86	0.19		0.31	0.18	0.08	0.41	0.59	
Control Delay	64.3	26.6	2.7	71.3	10.4		42.2	19.1	3.0	58.2	50.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	26.6	2.7	71.3	10.4		42.2	19.1	3.0	58.2	50.5	
LOS	E	C	A	E	B		D	B	A	E	D	
Approach Delay		22.8			43.6			29.3			53.6	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	49	291	0	304	57		26	0	0	64	69	
Queue Length 95th (ft)	89	319	26	#388	70		28	32	0	108	120	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	259	2437	1482	795	3035		260	153	293	244	268	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.53	0.25	0.86	0.19		0.25	0.16	0.08	0.33	0.44	

Intersection Summary

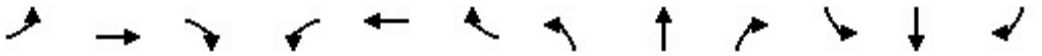
Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 32.9 Intersection LOS: C
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1178	0	0	1034	75	0	0	41	89	0	46
Future Volume (vph)	34	1178	0	0	1034	75	0	0	41	89	0	46
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82			189			65
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	2%	8%	0%	0%	6%	2%	0%	2%
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)	37	1295	0	0	1136	82	0	0	45	98	0	51
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	15.0	92.5			77.5				16.0	16.5		
Total Split (%)	12.0%	74.0%			62.0%				12.8%	13.2%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	8.0	89.0			80.7	113.2			8.2	9.9		24.0
Actuated g/C Ratio	0.06	0.71			0.65	0.91			0.07	0.08		0.19

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023

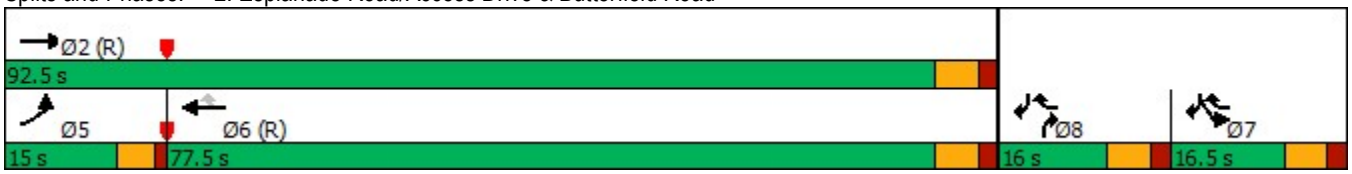
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.34			0.22	0.06			0.13	0.36		0.14
Control Delay	97.6	1.1			10.1	0.5			0.8	58.0		7.2
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	97.6	1.1			10.1	0.5			0.8	58.0		7.2
LOS	F	A			B	A			A	E		A
Approach Delay		3.8			9.4			0.8			40.6	
Approach LOS		A			A			A			D	
Queue Length 50th (ft)	32	4			96	0			0	39		0
Queue Length 95th (ft)	m62	7			125	7			0	67		25
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	151	3809			5129	1298			388	297		317
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	0.25	0.34			0.22	0.06			0.12	0.33		0.16

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 10 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 45.0% ICU Level of Service A
Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	47	5	10	50	537	423
Future Volume (vph)	47	5	10	50	537	423
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3183	1346	1805	3725	3725	2814
Flt Permitted	0.950		0.387			
Satd. Flow (perm)	3183	1346	735	3725	3725	2814
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		6				516
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	20%	0%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	57	6	12	61	655	516
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	34.0	34.0	12.0	91.0	79.0	34.0
Total Split (%)	27.2%	27.2%	9.6%	72.8%	63.2%	27.2%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	9.7	9.7	105.8	103.3	99.6	118.9
Actuated g/C Ratio	0.08	0.08	0.85	0.83	0.80	0.95

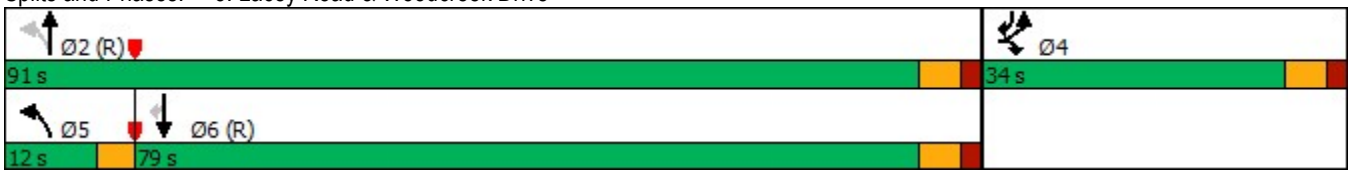
Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.23	0.06	0.02	0.02	0.22	0.19
Control Delay	55.7	30.6	1.8	2.1	1.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.4	0.0
Total Delay	55.7	30.6	1.8	2.1	1.7	0.1
LOS	E	C	A	A	A	A
Approach Delay	53.3			2.1	1.0	
Approach LOS	D			A	A	
Queue Length 50th (ft)	22	0	1	3	15	0
Queue Length 95th (ft)	40	13	4	7	26	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	712	306	694	3078	2967	2814
Starvation Cap Reductn	0	0	0	0	1732	479
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.02	0.02	0.02	0.53	0.22

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.23			
Intersection Signal Delay: 3.6		Intersection LOS: A	
Intersection Capacity Utilization 30.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive



Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	452	706	415	114	10	104
Future Volume (vph)	452	706	415	114	10	104
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	2918	3551	3762	1599	1736	2842
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	2918	3551	3762	1599	1736	2842
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				131		120
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	7%	1%	1%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	520	811	477	131	11	120
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	28.2	104.6	72.0	86.3	8.4	8.4
Actuated g/C Ratio	0.23	0.84	0.58	0.69	0.07	0.07

Lanes, Volumes, Timings
4: Finley Road & Lacey Road

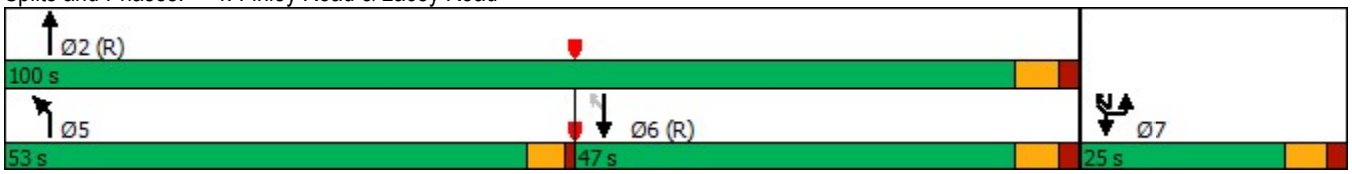
02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.79	0.27	0.22	0.11	0.09	0.40
Control Delay	54.6	2.4	14.0	1.6	56.3	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.6	2.4	14.0	1.6	56.3	13.6
LOS	D	A	B	A	E	B
Approach Delay		22.8	11.3		17.1	
Approach LOS		C	B		B	
Queue Length 50th (ft)	205	53	93	0	9	0
Queue Length 95th (ft)	240	72	139	20	27	30
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1132	2972	2166	1269	263	533
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.27	0.22	0.10	0.04	0.23

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 45.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	7	257	249	0	23	45	29	6	5	10	0	0
Future Vol, veh/h	7	257	249	0	23	45	29	6	5	10	0	0
Peak Hour Factor	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	25	3	0	2	0	2	11	0	0	0	0	0
Mvmt Flow	8	295	286	0	26	52	33	7	6	11	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10.7	8.1	8.7
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	5%	0%	51%	0%
Vol Thru, %	0%	33%	95%	34%	49%	44%
Vol Right, %	0%	67%	0%	66%	0%	56%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	15	136	378	46	52
LT Vol	6	0	7	0	23	0
Through Vol	0	5	129	129	23	23
RT Vol	0	10	0	249	0	29
Lane Flow Rate	7	17	156	434	52	59
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.012	0.026	0.218	0.504	0.077	0.077
Departure Headway (Hd)	6.472	5.499	5.047	4.185	5.291	4.675
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	654	706	855	681	771
Service Time	4.18	3.207	2.815	1.952	2.993	2.378
HCM Lane V/C Ratio	0.013	0.026	0.221	0.508	0.076	0.077
HCM Control Delay	9.3	8.4	9.2	11.2	8.4	7.8
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0	0.1	0.8	2.9	0.2	0.2

HCM 6th TWSC
6: Lacey Road & Access Road 02/24/2023

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	50	99	244	16
Future Vol, veh/h	3	3	50	99	244	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	67	2	3	3	6
Mvmt Flow	4	4	61	121	298	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	491	159	318	0	-	0
Stage 1	308	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.8	8.24	4.14	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.97	2.22	-	-	-
Pot Cap-1 Maneuver	512	687	1239	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	487	687	1239	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	836	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1239	-	561	687	-	-
HCM Lane V/C Ratio	0.049	-	0.007	0.005	-	-
HCM Control Delay (s)	8.1	-	11.5	10.3	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0	0	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 02/24/2023

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	42	261	128	170	77
Future Vol, veh/h	21	42	261	128	170	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	5	2	1	2	3	3
Mvmt Flow	25	50	311	152	202	92

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	946	147	294	0	-	0
Stage 1	248	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Critical Hdwy	6.9	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	254	873	1272	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	873	1272	-	-	-
Mov Cap-2 Maneuver	315	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	447	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	5.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1272	-	315	873	-	-
HCM Lane V/C Ratio	0.244	-	0.079	0.057	-	-
HCM Control Delay (s)	8.7	-	17.4	9.4	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	1	-	0.3	0.2	-	-

Capacity Analysis Summary Sheets

Year 2029 No-Build Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	880	67	113	1213	65	233	25	157	48	14	75
Future Volume (vph)	29	880	67	113	1213	65	233	25	157	48	14	75
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.992			0.890	0.850		0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	5406	2814	3467	5097	0	3502	1595	1519	1805	1647	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	5406	2814	3467	5097	0	3502	1595	1519	1805	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170		9			71	133		78	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
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 (%)	0%	1%	1%	1%	1%	0%	0%	0%	1%	0%	0%	1%
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 (%)									43%			
Lane Group Flow (vph)	30	917	70	118	1332	0	243	97	93	50	93	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	13.5	59.0	59.0	32.5	78.0		25.5	30.0	30.0	13.5	18.0	
Total Split (%)	10.0%	43.7%	43.7%	24.1%	57.8%		18.9%	22.2%	22.2%	10.0%	13.3%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	7.7	80.0	80.0	10.0	86.5		14.6	18.0	18.0	8.1	9.4	
Actuated g/C Ratio	0.06	0.59	0.59	0.07	0.64		0.11	0.13	0.13	0.06	0.07	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

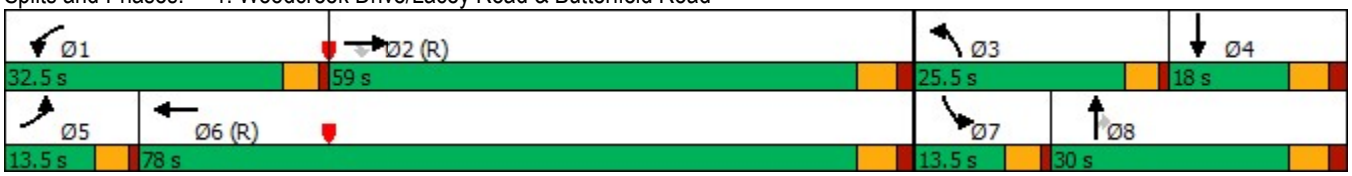
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.29	0.04	0.46	0.41		0.64	0.35	0.29	0.46	0.50	
Control Delay	67.5	14.5	0.0	99.8	3.6		46.6	25.5	19.2	75.1	26.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.5	14.5	0.0	99.8	3.6		46.6	25.5	19.2	75.1	26.3	
LOS	E	B	A	F	A		D	C	B	E	C	
Approach Delay		15.1			11.4			36.0			43.4	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	26	134	0	56	58		113	37	31	43	13	
Queue Length 95th (ft)	59	198	0	89	310		158	88	83	87	68	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	123	3203	1737	719	3267		544	341	379	120	219	
Starvation Cap Reductn	0	0	0	0	249		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.29	0.04	0.16	0.44		0.45	0.28	0.25	0.42	0.42	

Intersection Summary

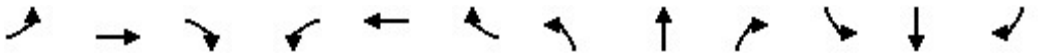
Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 55.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1002	0	0	1291	170	0	0	317	119	0	100
Future Volume (vph)	83	1002	0	0	1291	170	0	0	317	119	0	100
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						175			272			103
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
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%	1%	0%	0%	1%	1%	0%	0%	1%	2%	0%	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)	86	1033	0	0	1331	175	0	0	327	123	0	103
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	16.0	96.0			80.0				19.0	20.0		
Total Split (%)	11.9%	71.1%			59.3%				14.1%	14.8%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	10.7	95.4			80.1	113.8			10.5	11.2		27.6
Actuated g/C Ratio	0.08	0.71			0.59	0.84			0.08	0.08		0.20

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

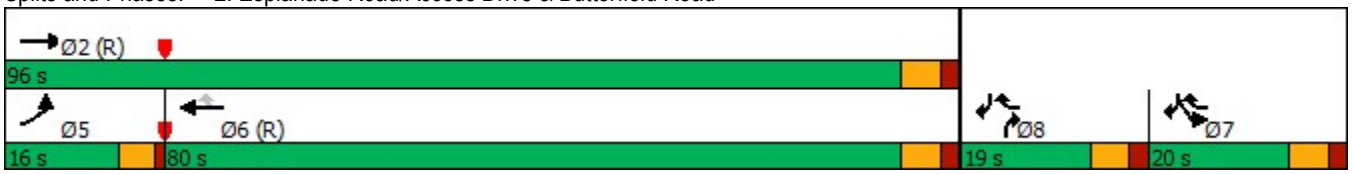
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.60	0.27			0.28	0.13			0.70	0.43		0.25
Control Delay	85.8	6.3			14.1	0.5			20.6	63.3		8.9
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	85.8	6.3			14.1	0.5			20.6	63.3		8.9
LOS	F	A			B	A			C	E		A
Approach Delay		12.4			12.5			20.6			38.5	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	78	76			135	0			26	53		0
Queue Length 95th (ft)	140	107			170	10			79	85		47
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	158	3818			4761	1393			516	356		432
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	0.54	0.27			0.28	0.13			0.63	0.35		0.24

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 104 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 15.2 Intersection LOS: B
Intersection Capacity Utilization 46.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	258	15	2	157	111	83
Future Volume (vph)	258	15	2	157	111	83
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1615	1805	3800	3762	2787
Flt Permitted	0.950		0.651			
Satd. Flow (perm)	3433	1615	1237	3800	3762	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		17				92
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	287	17	2	174	123	92
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	60.0	60.0	14.0	75.0	61.0	60.0
Total Split (%)	44.4%	44.4%	10.4%	55.6%	45.2%	44.4%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	17.9	17.9	107.6	105.1	103.3	132.0
Actuated g/C Ratio	0.13	0.13	0.80	0.78	0.77	0.98

Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.63	0.07	0.00	0.06	0.04	0.03
Control Delay	61.4	19.8	3.5	3.8	2.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.4	19.8	3.5	3.8	2.0	0.0
LOS	E	B	A	A	A	A
Approach Delay	59.1			3.8	1.1	
Approach LOS	E			A	A	
Queue Length 50th (ft)	124	0	0	15	4	0
Queue Length 95th (ft)	165	23	2	29	11	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	1373	656	1029	2957	2877	2787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.03	0.00	0.06	0.04	0.03

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 27.2		Intersection LOS: C	
Intersection Capacity Utilization 29.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive

Lanes, Volumes, Timings
4: Finley Road & Lacey Road 02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	102	567	831	37	57	328
Future Volume (vph)	102	567	831	37	57	328
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3762	3762	1417	1770	2814
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3762	3762	1417	1770	2814
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				39		342
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	14%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	591	866	39	59	342
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	9.3	101.9	88.1	105.2	11.1	11.1
Actuated g/C Ratio	0.07	0.82	0.70	0.84	0.09	0.09

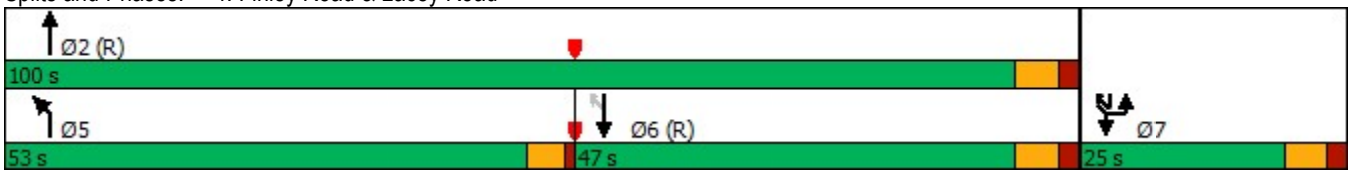
Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.42	0.19	0.33	0.03	0.38	0.61
Control Delay	59.8	2.9	7.9	0.6	59.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	2.9	7.9	0.6	59.6	10.2
LOS	E	A	A	A	E	B
Approach Delay		11.5	7.6		17.5	
Approach LOS		B	A		B	
Queue Length 50th (ft)	42	42	124	0	46	0
Queue Length 95th (ft)	71	69	190	5	88	48
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1332	3066	2651	1285	269	717
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.19	0.33	0.03	0.22	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 45.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	16	100	4	0	2	97	180	51	121	18	0	0
Future Vol, veh/h	16	100	4	0	2	97	180	51	121	18	0	0
Peak Hour Factor	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	0	0	0
Mvmt Flow	21	128	5	0	3	124	231	65	155	23	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.1	10.3	10.3
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	24%	0%	4%	0%
Vol Thru, %	0%	87%	76%	93%	96%	21%
Vol Right, %	0%	13%	0%	7%	0%	79%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	139	66	54	51	229
LT Vol	51	0	16	0	2	0
Through Vol	0	121	50	50	49	49
RT Vol	0	18	0	4	0	180
Lane Flow Rate	65	178	85	69	65	293
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.112	0.277	0.133	0.105	0.097	0.391
Departure Headway (Hd)	6.181	5.587	5.661	5.486	5.379	4.803
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	576	638	629	648	663	744
Service Time	3.962	3.368	3.437	3.262	3.137	2.561
HCM Lane V/C Ratio	0.113	0.279	0.135	0.106	0.098	0.394
HCM Control Delay	9.8	10.5	9.3	8.9	8.7	10.6
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.4	1.1	0.5	0.4	0.3	1.9

HCM 6th TWSC
6: Lacey Road & Access Road 02/24/2023

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	46	2	292	95	1
Future Vol, veh/h	14	46	2	292	95	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	16	52	2	332	108	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	279	55	109	0	-	0
Stage 1	109	-	-	-	-	-
Stage 2	170	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	693	1007	1494	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	692	1007	1494	-	-	-
Mov Cap-2 Maneuver	715	-	-	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1494	-	715	1007	-	-
HCM Lane V/C Ratio	0.002	-	0.022	0.052	-	-
HCM Control Delay (s)	7.4	-	10.2	8.8	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 02/24/2023

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	82	140	40	212	135	6
Future Vol, veh/h	82	140	40	212	135	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	98	167	48	252	161	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	387	84	168	0	-	0
Stage 1	165	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	594	965	1422	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	800	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	574	965	1422	-	-	-
Mov Cap-2 Maneuver	632	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	800	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	1.2	0
HCM LOS	B		

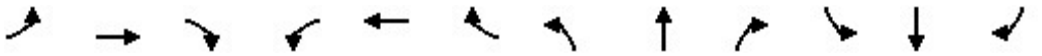
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1422	-	632	965	-	-
HCM Lane V/C Ratio	0.033	-	0.154	0.173	-	-
HCM Control Delay (s)	7.6	-	11.7	9.5	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.6	-	-

Capacity Analysis Summary Sheets

Year 2029 Projected Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	1108	324	604	470	20	80	6	43	70	53	49
Future Volume (vph)	53	1108	324	604	470	20	80	6	43	70	53	49
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.994			0.886	0.850		0.928	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	5353	2814	3467	4857	0	3433	1466	1370	1787	1730	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	5353	2814	3467	4857	0	3433	1466	1370	1787	1730	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			377		7			22	183		31	*1
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	6%	10%	2%	0%	12%	1%	0%	4%
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 (%)									44%			
Lane Group Flow (vph)	62	1288	377	702	570	0	93	29	28	81	119	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	22.5	57.5	57.5	30.0	65.0		14.0	17.5	17.5	20.0	23.5	
Total Split (%)	18.0%	46.0%	46.0%	24.0%	52.0%		11.2%	14.0%	14.0%	16.0%	18.8%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	9.7	53.7	53.7	29.1	75.3		8.4	12.4	12.4	11.0	12.7	
Actuated g/C Ratio	0.08	0.43	0.43	0.23	0.60		0.07	0.10	0.10	0.09	0.10	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

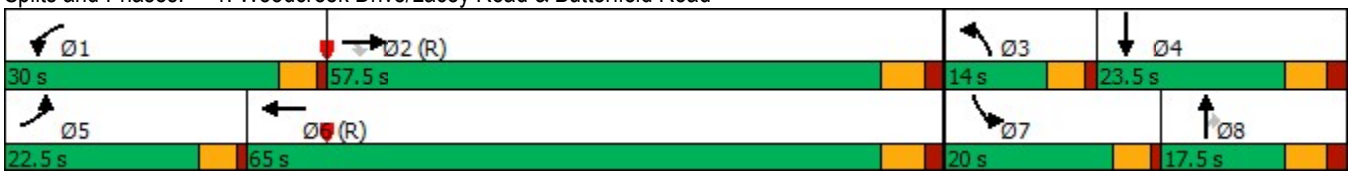
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.56	0.26	0.87	0.19		0.40	0.18	0.09	0.52	0.59	
Control Delay	64.3	28.3	2.7	71.3	10.7		55.4	13.8	3.4	65.4	50.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	28.3	2.7	71.3	10.7		55.4	13.8	3.4	65.4	50.5	
LOS	E	C	A	E	B		E	B	A	E	D	
Approach Delay		24.0			44.1			37.6			56.5	
Approach LOS		C			D			D			E	
Queue Length 50th (ft)	49	291	0	311	57		37	0	0	64	69	
Queue Length 95th (ft)	89	319	26	#403	70		61	34	0	108	120	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	259	2301	1424	808	2929		260	173	307	221	268	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.24	0.56	0.26	0.87	0.19		0.36	0.17	0.09	0.37	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 61.9% ICU Level of Service B
Analysis Period (min) 15
* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	1187	0	0	1048	75	0	0	78	89	0	46
Future Volume (vph)	34	1187	0	0	1048	75	0	0	78	89	0	46
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5353	0	0	7941	1495	0	0	2682	3433	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						82			187			65
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	0%	0%	2%	8%	0%	0%	6%	2%	0%	2%
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)	37	1304	0	0	1152	82	0	0	86	98	0	51
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	15.0	92.5			77.5				16.0	16.5		
Total Split (%)	12.0%	74.0%			62.0%				12.8%	13.2%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	8.0	89.0			80.7	113.2			8.2	9.9		24.0
Actuated g/C Ratio	0.06	0.71			0.65	0.91			0.07	0.08		0.19

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

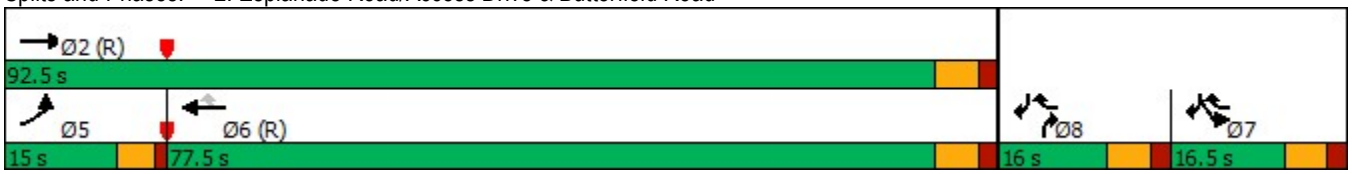
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.34			0.22	0.06			0.25	0.36		0.14
Control Delay	96.9	1.1			10.1	0.5			1.7	58.0		7.2
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	96.9	1.1			10.1	0.5			1.7	58.0		7.2
LOS	F	A			B	A			A	E		A
Approach Delay		3.8			9.5			1.7			40.6	
Approach LOS		A			A			A			D	
Queue Length 50th (ft)	32	4			98	0			0	39		0
Queue Length 95th (ft)	m59	10			127	7			0	67		25
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	151	3809			5129	1298			386	297		317
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	0.25	0.34			0.22	0.06			0.22	0.33		0.16

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 10 (8%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 45.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	72	5	10	57	552	429
Future Volume (vph)	72	5	10	57	552	429
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3183	1346	1805	3725	3725	2814
Flt Permitted	0.950		0.378			
Satd. Flow (perm)	3183	1346	718	3725	3725	2814
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		6				523
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	20%	0%	2%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	6	12	70	673	523
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	34.0	34.0	12.0	91.0	79.0	34.0
Total Split (%)	27.2%	27.2%	9.6%	72.8%	63.2%	27.2%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	11.1	11.1	104.4	101.9	98.2	118.9
Actuated g/C Ratio	0.09	0.09	0.84	0.82	0.79	0.95

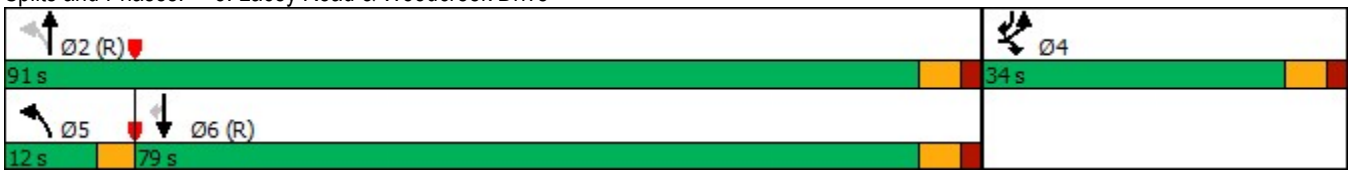
Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.31	0.05	0.02	0.02	0.23	0.19
Control Delay	55.6	29.4	2.1	2.5	1.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	55.6	29.4	2.1	2.5	1.9	0.1
LOS	E	C	A	A	A	A
Approach Delay	53.9			2.4	1.2	
Approach LOS	D			A	A	
Queue Length 50th (ft)	35	0	1	4	16	0
Queue Length 95th (ft)	55	13	4	8	35	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	712	306	673	3036	2925	2808
Starvation Cap Reductn	0	0	0	0	1695	498
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.02	0.02	0.02	0.55	0.23

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.31			
Intersection Signal Delay: 4.8		Intersection LOS: A	
Intersection Capacity Utilization 31.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive



Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	457	706	415	115	15	122
Future Volume (vph)	457	706	415	115	15	122
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	2918	3551	3762	1599	1736	2842
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	2918	3551	3762	1599	1736	2842
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				132		140
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	20%	7%	1%	1%	4%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	525	811	477	132	17	140
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	28.4	104.5	71.6	86.1	8.5	8.5
Actuated g/C Ratio	0.23	0.84	0.57	0.69	0.07	0.07

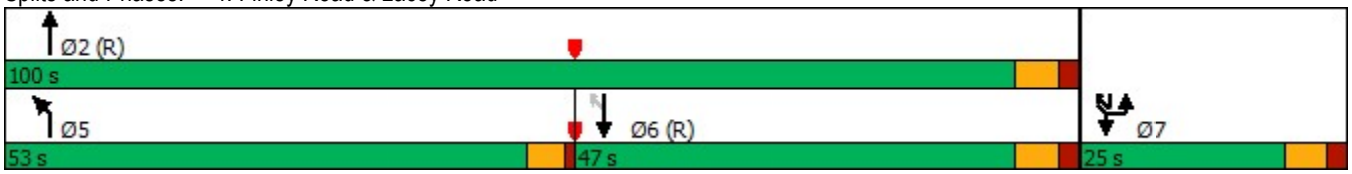
Lanes, Volumes, Timings
4: Finley Road & Lacey Road

02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.79	0.27	0.22	0.12	0.14	0.43
Control Delay	54.4	2.5	14.2	1.6	57.3	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.4	2.5	14.2	1.6	57.3	13.1
LOS	D	A	B	A	E	B
Approach Delay		22.9	11.5		17.9	
Approach LOS		C	B		B	
Queue Length 50th (ft)	207	53	93	0	13	0
Queue Length 95th (ft)	241	73	141	21	36	31
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1132	2967	2154	1265	263	550
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.27	0.22	0.10	0.06	0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 19.2		Intersection LOS: B	
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	7	272	249	0	23	52	66	6	5	10	0	0
Future Vol, veh/h	7	272	249	0	23	52	66	6	5	10	0	0
Peak Hour Factor	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	25	3	0	2	0	2	11	0	0	0	0	0
Mvmt Flow	8	313	286	0	26	60	76	7	6	11	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	11	8.2	8.8
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	5%	0%	47%	0%
Vol Thru, %	0%	33%	95%	35%	53%	28%
Vol Right, %	0%	67%	0%	65%	0%	72%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	15	143	385	49	92
LT Vol	6	0	7	0	23	0
Through Vol	0	5	136	136	26	26
RT Vol	0	10	0	249	0	66
Lane Flow Rate	7	17	164	443	56	106
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.013	0.027	0.232	0.519	0.083	0.135
Departure Headway (Hd)	6.599	5.624	5.072	4.22	5.295	4.589
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	545	639	700	845	680	785
Service Time	4.311	3.337	2.856	2.003	3.002	2.296
HCM Lane V/C Ratio	0.013	0.027	0.234	0.524	0.082	0.135
HCM Control Delay	9.4	8.5	9.4	11.6	8.5	8
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0	0.1	0.9	3.1	0.3	0.5

HCM 6th TWSC
6: Lacey Road & Access Road 01/03/2024

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	3	50	143	259	16
Future Vol, veh/h	3	3	50	143	259	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	0	67	2	3	3	6
Mvmt Flow	4	4	61	174	316	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	535	168	336	0	-	0
Stage 1	326	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.8	8.24	4.14	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.97	2.22	-	-	-
Pot Cap-1 Maneuver	480	676	1220	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	456	676	1220	-	-	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	812	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	2.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1220	-	540	676	-	-
HCM Lane V/C Ratio	0.05	-	0.007	0.005	-	-
HCM Control Delay (s)	8.1	-	11.7	10.4	-	-
HCM Lane LOS	A	-	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0	0	-	-

HCM 6th TWSC
7: Lacey Road & Site Access 01/03/2024

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	0	193	250	12
Future Vol, veh/h	0	16	0	193	250	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	3	3	0
Mvmt Flow	0	17	0	203	263	13

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	138	-	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	891	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	891	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	891	-	-
HCM Lane V/C Ratio	-	0.019	-	-
HCM Control Delay (s)	-	9.1	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 01/03/2024

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	49	267	128	186	80
Future Vol, veh/h	65	49	267	128	186	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	5	2	1	2	3	3
Mvmt Flow	77	58	318	152	221	95

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	981	158	316	0	-	0
Stage 1	269	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Critical Hdwy	6.9	6.94	4.12	-	-	-
Critical Hdwy Stg 1	5.9	-	-	-	-	-
Critical Hdwy Stg 2	5.9	-	-	-	-	-
Follow-up Hdwy	3.55	3.32	2.21	-	-	-
Pot Cap-1 Maneuver	241	859	1248	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	180	859	1248	-	-	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1248	-	304	859	-	-
HCM Lane V/C Ratio	0.255	-	0.255	0.068	-	-
HCM Control Delay (s)	8.9	-	20.8	9.5	-	-
HCM Lane LOS	A	-	C	A	-	-
HCM 95th %tile Q(veh)	1	-	1	0.2	-	-

HCM 6th TWSC
9: Woodcreek Drive & West Site Access 01/03/2024

Intersection	
Int Delay, s/veh	1.1

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	5	64	345	4	23	18
Future Vol, veh/h	5	64	345	4	23	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	3	1	0	0	0
Mvmt Flow	5	67	363	4	24	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	367	0	-	0	442	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	77	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1203	-	-	-	577	685
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	951	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1203	-	-	-	575	685
Mov Cap-2 Maneuver	-	-	-	-	575	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	951	-

Approach	SE	NW	SW
HCM Control Delay, s	0.6	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1203	-	619
HCM Lane V/C Ratio	-	-	0.004	-	0.07
HCM Control Delay (s)	-	-	8	-	11.3
HCM Lane LOS	-	-	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	0.2

HCM 6th TWSC
10: Woodcreek Drive & East Site Access 01/03/2024

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	86	342	5	28	7
Future Vol, veh/h	1	86	342	5	28	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	3	1	0	0	0
Mvmt Flow	1	91	360	5	29	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	365	0	-	0	456	363
Stage 1	-	-	-	-	363	-
Stage 2	-	-	-	-	93	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1205	-	-	-	566	686
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1205	-	-	-	565	686
Mov Cap-2 Maneuver	-	-	-	-	565	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	936	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1205	-	-	-	586
HCM Lane V/C Ratio	0.001	-	-	-	0.063
HCM Control Delay (s)	8	-	-	-	11.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Capacity Analysis Summary Sheets

Year 2029 Projected Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	880	85	148	1213	65	244	25	162	48	14	75
Future Volume (vph)	29	880	85	148	1213	65	244	25	162	48	14	75
Ideal Flow (vphpl)	1900	2000	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)	265		465	0		0	118		0	120		0
Storage Lanes	1		2	2		0	2		1	1		0
Taper Length (ft)	85			25			45			85		
Lane Util. Factor	1.00	0.91	0.88	0.97	0.91	0.91	0.97	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850		0.992			0.889	0.850		0.874	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	4919	2760	3467	5097	0	3502	1593	1519	1805	1647	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1805	4919	2760	3467	5097	0	3502	1593	1519	1805	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170		9			73	133		78	*1
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		2017			601			290			452	
Travel Time (s)		30.6			9.1			6.6			10.3	
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 (%)	0%	11%	3%	1%	1%	0%	0%	0%	1%	0%	0%	1%
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 (%)									43%			
Lane Group Flow (vph)	30	917	89	154	1332	0	254	99	96	50	93	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2						8			
Detector Phase	5	2	2	1	6		3	8	8	7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0		3.0	8.0	8.0	3.0	8.0	
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0		7.5	14.0	14.0	7.5	14.0	
Total Split (s)	13.5	59.0	59.0	32.5	78.0		25.5	30.0	30.0	13.5	18.0	
Total Split (%)	10.0%	43.7%	43.7%	24.1%	57.8%		18.9%	22.2%	22.2%	10.0%	13.3%	
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0		3.5	4.0	4.0	3.5	4.0	
All-Red Time (s)	1.0	2.0	2.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0		4.5	6.0	6.0	4.5	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
Act Effct Green (s)	7.6	78.2	78.2	11.4	86.1		15.1	18.4	18.4	8.1	9.4	
Actuated g/C Ratio	0.06	0.58	0.58	0.08	0.64		0.11	0.14	0.14	0.06	0.07	

Lanes, Volumes, Timings
1: Woodcreek Drive/Lacey Road & Butterfield Road

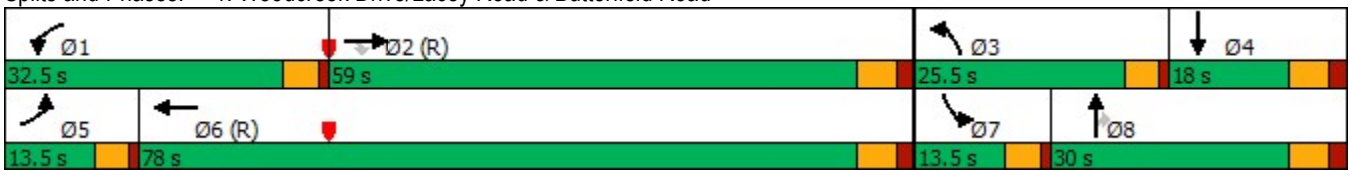
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.32	0.05	0.53	0.41		0.65	0.35	0.30	0.46	0.50	
Control Delay	67.9	15.9	0.1	98.7	3.5		46.4	25.4	19.4	75.1	26.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	67.9	15.9	0.1	98.7	3.6		46.4	25.4	19.4	75.1	26.3	
LOS	E	B	A	F	A		D	C	B	E	C	
Approach Delay		16.1			13.4			36.0			43.4	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	26	142	0	74	56		119	40	33	43	13	
Queue Length 95th (ft)	59	211	0	101	311		163	90	85	87	68	
Internal Link Dist (ft)		1937			521			210			372	
Turn Bay Length (ft)	265		465				118			120		
Base Capacity (vph)	122	2849	1670	719	3254		544	343	379	120	219	
Starvation Cap Reductn	0	0	0	0	234		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.25	0.32	0.05	0.21	0.44		0.47	0.29	0.25	0.42	0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 55.6%		ICU Level of Service B	
Analysis Period (min) 15			

* User Entered Value

Splits and Phases: 1: Woodcreek Drive/Lacey Road & Butterfield Road



Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	1007	0	0	1326	170	0	0	335	119	0	100
Future Volume (vph)	83	1007	0	0	1326	170	0	0	335	119	0	100
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	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)	230		0	60		175	0		0	0		100
Storage Lanes	1		0	2		1	0		2	2		1
Taper Length (ft)	210			300			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.81	1.00	1.00	1.00	0.88	0.97	1.00	1.00
Ped Bike Factor												
Frt						0.850			0.850			0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Flt Permitted	0.950									0.950		
Satd. Flow (perm)	1805	5406	0	0	8020	1599	0	0	2814	3433	0	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						175			270			103
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		601			1566			352			378	
Travel Time (s)		9.1			23.7			8.0			8.6	
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%	1%	0%	0%	1%	1%	0%	0%	1%	2%	0%	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)	86	1038	0	0	1367	175	0	0	345	123	0	103
Turn Type	Prot	NA			NA	custom			Prot	Prot		custom
Protected Phases	5	2			6	7 8			8	7		7 8
Permitted Phases						6			8	7		
Detector Phase	5	2			6	7 8			8	7		7 8
Switch Phase												
Minimum Initial (s)	3.0	15.0			15.0				8.0	8.0		
Minimum Split (s)	7.5	21.0			21.0				14.0	14.0		
Total Split (s)	16.0	96.0			80.0				19.0	20.0		
Total Split (%)	11.9%	71.1%			59.3%				14.1%	14.8%		
Yellow Time (s)	3.5	4.0			4.0				4.0	4.0		
All-Red Time (s)	1.0	2.0			2.0				2.0	2.0		
Lost Time Adjust (s)	0.0	0.0			0.0				0.0	0.0		
Total Lost Time (s)	4.5	6.0			6.0				6.0	6.0		
Lead/Lag	Lead				Lag				Lead	Lag		
Lead-Lag Optimize?	Yes				Yes				Yes	Yes		
Recall Mode	None	C-Min			C-Min				None	None		
Act Effct Green (s)	10.7	95.2			79.9	113.8			10.7	11.2		27.8
Actuated g/C Ratio	0.08	0.71			0.59	0.84			0.08	0.08		0.21

Lanes, Volumes, Timings
2: Esplanade Road/Access Drive & Butterfield Road

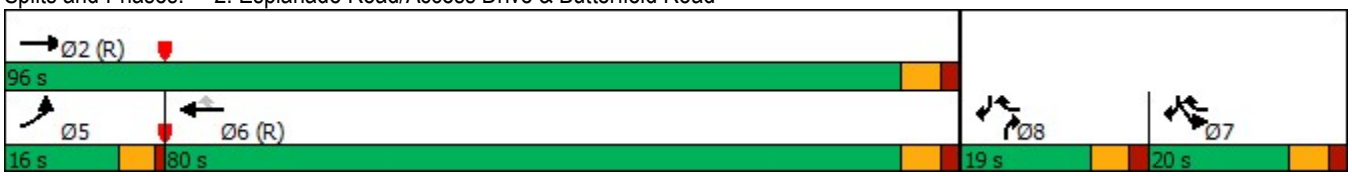
02/24/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.60	0.27			0.29	0.13			0.73	0.43		0.25
Control Delay	84.9	6.4			14.3	0.5			24.2	63.3		8.9
Queue Delay	0.0	0.0			0.0	0.0			0.0	0.0		0.0
Total Delay	84.9	6.4			14.3	0.5			24.2	63.3		8.9
LOS	F	A			B	A			C	E		A
Approach Delay		12.4			12.7			24.2			38.5	
Approach LOS		B			B			C			D	
Queue Length 50th (ft)	79	88			143	0			35	53		0
Queue Length 95th (ft)	140	108			175	10			92	85		47
Internal Link Dist (ft)		521			1486			272			298	
Turn Bay Length (ft)	230					175						100
Base Capacity (vph)	158	3810			4749	1391			514	356		432
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	0.54	0.27			0.29	0.13			0.67	0.35		0.24

Intersection Summary

Area Type: Other
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 104 (77%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 15.6 Intersection LOS: B
Intersection Capacity Utilization 46.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Esplanade Road/Access Drive & Butterfield Road



Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	271	16	2	160	148	99
Future Volume (vph)	271	16	2	160	148	99
Ideal Flow (vphpl)	1900	1900	1900	2000	2000	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	160	0	125			115
Storage Lanes	2	1	1			0
Taper Length (ft)	100		90			
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	0.88
Ped Bike Factor						
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	3433	1615	1805	3800	3762	2787
Flt Permitted	0.950		0.626			
Satd. Flow (perm)	3433	1615	1189	3800	3762	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		18				110
Link Speed (mph)	30			30	30	
Link Distance (ft)	556			645	290	
Travel Time (s)	12.6			14.7	6.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	301	18	2	178	164	110
Turn Type	Prot	Prot	pm+pt	NA	NA	pm+ov
Protected Phases	4	4	5	2	6	4
Permitted Phases			2			6
Detector Phase	4	4	5	2	6	4
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	15.0	15.0	8.0
Minimum Split (s)	14.0	14.0	6.5	21.0	21.0	14.0
Total Split (s)	60.0	60.0	14.0	75.0	61.0	60.0
Total Split (%)	44.4%	44.4%	10.4%	55.6%	45.2%	44.4%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	0.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	3.5	6.0	6.0	6.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	None	C-Min	C-Min	None
Act Effct Green (s)	18.5	18.5	107.0	104.5	102.7	132.0
Actuated g/C Ratio	0.14	0.14	0.79	0.77	0.76	0.98

Lanes, Volumes, Timings
3: Lacey Road & Woodcreek Drive

02/24/2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
v/c Ratio	0.64	0.08	0.00	0.06	0.06	0.04
Control Delay	61.2	19.6	3.5	4.0	2.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	19.6	3.5	4.0	2.0	0.0
LOS	E	B	A	A	A	A
Approach Delay	58.8			4.0	1.2	
Approach LOS	E			A	A	
Queue Length 50th (ft)	130	0	0	16	6	0
Queue Length 95th (ft)	171	23	3	30	14	0
Internal Link Dist (ft)	476			565	210	
Turn Bay Length (ft)	160		125			115
Base Capacity (vph)	1373	656	990	2942	2861	2787
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.03	0.00	0.06	0.06	0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 135			
Actuated Cycle Length: 135			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 25.6		Intersection LOS: C	
Intersection Capacity Utilization 30.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: Lacey Road & Woodcreek Drive

Lanes, Volumes, Timings
4: Finley Road & Lacey Road 02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	116	567	831	41	59	337
Future Volume (vph)	116	567	831	41	59	337
Ideal Flow (vphpl)	1900	2000	2000	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)		0%	0%		0%	
Storage Length (ft)	305			400	0	205
Storage Lanes	2			1	1	1
Taper Length (ft)	230				0	
Lane Util. Factor	0.97	0.95	0.95	1.00	1.00	0.88
Ped Bike Factor						
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3433	3762	3762	1417	1770	2814
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	3433	3762	3762	1417	1770	2814
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				43		351
Link Speed (mph)		45	45		35	
Link Distance (ft)		681	1175		1160	
Travel Time (s)		10.3	17.8		22.6	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	1%	1%	14%	2%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)		0%	0%		0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	121	591	866	43	61	351
Turn Type	Prot	NA	NA	pm+ov	Prot	Prot
Protected Phases	5	2	6	7	7	7
Permitted Phases				6		
Detector Phase	5	2	6	7	7	7
Switch Phase						
Minimum Initial (s)	3.0	15.0	15.0	8.0	8.0	8.0
Minimum Split (s)	7.5	21.0	21.0	14.0	14.0	14.0
Total Split (s)	53.0	100.0	47.0	25.0	25.0	25.0
Total Split (%)	42.4%	80.0%	37.6%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min	None	None	None
Act Effct Green (s)	9.8	101.8	87.5	104.7	11.2	11.2
Actuated g/C Ratio	0.08	0.81	0.70	0.84	0.09	0.09

Lanes, Volumes, Timings
4: Finley Road & Lacey Road

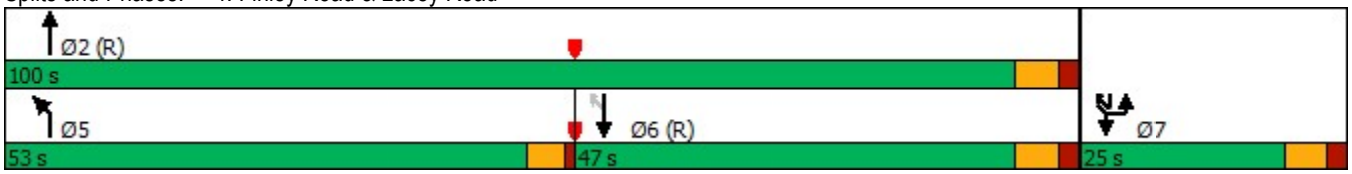
02/24/2023

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
v/c Ratio	0.45	0.19	0.33	0.04	0.39	0.61
Control Delay	59.9	2.9	8.2	0.7	59.8	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	2.9	8.2	0.7	59.8	10.2
LOS	E	A	A	A	E	B
Approach Delay		12.6	7.8		17.5	
Approach LOS		B	A		B	
Queue Length 50th (ft)	48	42	126	0	48	0
Queue Length 95th (ft)	79	70	194	6	90	48
Internal Link Dist (ft)		601	1095		1080	
Turn Bay Length (ft)	305			400		205
Base Capacity (vph)	1332	3063	2632	1279	269	725
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.19	0.33	0.03	0.23	0.48

Intersection Summary

Area Type: Other
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 45.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Finley Road & Lacey Road



HCM 6th AWSC
5: Esplanade Road & Lacey Road 02/24/2023

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Vol, veh/h	16	137	4	0	2	100	198	51	121	18	0	0
Future Vol, veh/h	16	137	4	0	2	100	198	51	121	18	0	0
Peak Hour Factor	0.78	0.78	0.78	0.92	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	2	0	0	0	0	0	0	0	0
Mvmt Flow	21	176	5	0	3	128	254	65	155	23	0	0
Number of Lanes	0	2	0	0	0	2	0	1	1	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.5	10.9	10.7
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	19%	0%	4%	0%
Vol Thru, %	0%	87%	81%	94%	96%	20%
Vol Right, %	0%	13%	0%	6%	0%	80%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	51	139	85	73	52	248
LT Vol	51	0	16	0	2	0
Through Vol	0	121	69	69	50	50
RT Vol	0	18	0	4	0	198
Lane Flow Rate	65	178	108	93	67	318
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.117	0.289	0.174	0.146	0.101	0.429
Departure Headway (Hd)	6.442	5.847	5.778	5.643	5.445	4.862
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	559	618	625	639	651	731
Service Time	4.15	3.555	3.478	3.343	3.234	2.651
HCM Lane V/C Ratio	0.116	0.288	0.173	0.146	0.103	0.435
HCM Control Delay	10	10.9	9.7	9.3	8.9	11.3
HCM Lane LOS	A	B	A	A	A	B
HCM 95th-tile Q	0.4	1.2	0.6	0.5	0.3	2.2

HCM 6th TWSC
6: Lacey Road & Access Road 01/03/2024

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	46	2	313	132	1
Future Vol, veh/h	14	46	2	313	132	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	45	0	80	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	16	52	2	356	150	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	333	76	151	0	-	0
Stage 1	151	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	642	976	1442	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	641	976	1442	-	-	-
Mov Cap-2 Maneuver	681	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1442	-	681	976	-	-
HCM Lane V/C Ratio	0.002	-	0.023	0.054	-	-
HCM Control Delay (s)	7.5	-	10.4	8.9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0.2	-	-

HCM 6th TWSC
7: Lacey Road & Site Access 01/03/2024

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	0	315	148	30
Future Vol, veh/h	0	8	0	315	148	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	0	8	0	332	156	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	94	-	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	951	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	951	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	951	-	-
HCM Lane V/C Ratio	-	0.009	-	-
HCM Control Delay (s)	-	8.8	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

HCM 6th TWSC
8: Lacey Road & Woodcreek Drive 01/03/2024

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	103	143	58	212	143	13
Future Vol, veh/h	103	143	58	212	143	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	115	0	180	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	123	170	69	252	170	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	442	93	185	0	-	0
Stage 1	178	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	549	952	1402	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	522	952	1402	-	-	-
Mov Cap-2 Maneuver	594	-	-	-	-	-
Stage 1	800	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1402	-	594	952	-	-
HCM Lane V/C Ratio	0.049	-	0.206	0.179	-	-
HCM Control Delay (s)	7.7	-	12.6	9.6	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	0.6	-	-

HCM 6th TWSC
9: Woodcreek Drive & West Site Access 01/03/2024

Intersection	
Int Delay, s/veh	0.9

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	13	225	50	11	11	9
Future Vol, veh/h	13	225	50	11	11	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	80	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	237	53	12	12	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	324	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	265	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1550	-	-	-	674	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	784	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1550	-	-	-	668	1012
Mov Cap-2 Maneuver	-	-	-	-	668	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	784	-

Approach	SE	NW	SW
HCM Control Delay, s	0.4	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	1550	-	789
HCM Lane V/C Ratio	-	-	0.009	-	0.027
HCM Control Delay (s)	-	-	7.3	-	9.7
HCM Lane LOS	-	-	A	-	A
HCM 95th %tile Q(veh)	-	-	0	-	0.1

HCM 6th TWSC
10: Woodcreek Drive & East Site Access 01/03/2024

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	233	57	14	13	4
Future Vol, veh/h	3	233	57	14	13	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	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	245	60	15	14	4

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	75	0	-	0	319	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1537	-	-	-	678	1001
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	795	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1537	-	-	-	677	1001
Mov Cap-2 Maneuver	-	-	-	-	677	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	795	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1537	-	-	-	733
HCM Lane V/C Ratio	0.002	-	-	-	0.024
HCM Control Delay (s)	7.3	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

DRAFT

VILLAGE OF DOWNERS GROVE
PLAN COMMISSION MEETING

January 22, 2024, 7:00 P.M.

23-PCE-0009: A petition seeking a Final Plat of Subdivision and an Amendment to Planned Development #31 to construct a new multi-family residential development. The property is currently zoned O-R-M/P.D. #31, Office, Research, and Manufacturing and Planned Development #31. The property is generally located west of Lacey Road starting approximately 1,100 feet north of the intersection of Lacey Road and Finley Road and extending north to Butterfield Road and West of Woodcreek Drive, commonly known as the Esplanade at Locust Point, Downers Grove, IL (PINs: 05-25-413-009, 05-25-415-009, 05-25-415-010, 05-36-200-009, -011, 05-36-202-008, -015, -016, -017, 05-36-400-017, 06-30-301-007, 06-30-304-002, -003, 06-30-305-003, 06-31-100-019, -020, -021, -022, -023, -025, -027, -028, -029, 06-31-103-001, -002, -005, -006, -007). M&R Development, L.L.C., Petitioner and Various Owners

Terry Smith, land planner and landscape architect for the project, introduced the team members and explained the subject property occupied a nine-acre tract on the northwest corner of Lacey Drive and Woodcreek Drive. He gave some of the background and context of the site. He discussed the original approval process and stated they are asking the Plan Commission for approval to an amendment to the PUD to construct the multifamily residential development. Mr. Smith stated they were asking for four major things, such as an amendment to PD #31 to allow for construction of the proposed development, deviation of a parking requirement to allow 1.65 parking spaces per unit, a master signage plan amendment and approval for a plat of subdivision. He then explained the property and what they were proposing, which are three four-story L-shaped multifamily buildings, a club building, 65 space garage level and bicycle parking. He explained there was 195 garage spaces, 295 surface spaces, for a total of 490. The site is 9.2 acres and units comprised of 23% studio, 49% one bedroom, and 28% two bedroom.

Mr. Smith then further discussed the club amenities, which will have traditional features of a club, including pool, grilling area, clubroom, game room, leasing, fitness room at 8,000 square feet. Mr. Smith expressed they wanted to stay in context with the architecture that already exists and wanted to repeat some of the architectural features with the development. He described the buildings as contemporary flat roof facades. He expressed a lot of work went into the stormwater aspect, but they complied with both County and Village regulations. He discussed landscape architecture was an important part of their site. He stated the landscape plan was code compliant and the landscape mostly comprised of a combination of shade trees and foundation plantings to compliment the building architecture. Mr. Smith also discussed the signage package and the various signs included.

Commissioner Boyle asked if the parking coinciding the bedrooms would be in reference to a community a little bit further away. Mr. Smith, said they understood a suburban community would not have the ability of public transportation, but based on the number of bedrooms in the apartments they have sufficient parking, that was also similar to other developments they have recently constructed.

Commissioners Boyle followed up and asked if the spaces were first come first serve. Mr. Smith stated the spots in the garage would be assigned. Commissioner Boyle then asked if there was a plan B if they had residents calling and to say there was not enough parking. Iris Olson, with M&R Development, stated the last few developments they've built were with the 1.65 and they've had zero parking issues.

Commissioner Boyle asked if there would be any concern with people getting in and out in the morning and evening. Mr. Aboona explained they completed a traffic study and it showed the development would not have a negative effect. He also added they had done similar projects over the years with 1.65 and it was a common ratio.

Commissioner Boyle asked how many trees were already there and how many would be going back in there. Mr. Smith said he did not think they did an actual tree survey, but when they realized there was low quality vegetation that they were removing and their plan would be code compliant. Commissioner Boyle asked if there was any protected land. Mr. Smith answered there were no wetlands or restrictions on the property.

Chairman Rickard opened it up to the public for comment.

Scott Richards, resident, said he did not have a problem with the development, but wondered why developers were always wanting to come in and cut down the amount of parking spaces on the projects, and asked if that was really necessary. He said when he first saw the drawings and pictures of the building it looked like a typical family hotel along the expressway and that area had some beautiful buildings, so he would like to see something that looked a little more expensive to blend in.

Diana Olson asked how many traffic lights or traffic stops signs along Lacey they would be installing and said that should be addressed. Chairman Rickard stated they would take questions now and have them address those when they come back up.

Chairman Rickard asked for the staff report.

Flora Leon, Senior Planner, explained the petition was a request for a planned unit development amendment along with a request for a subdivision. She displayed the location map, which show that the location of the project would be at the northwest intersection of Lacey Road and Woodcreek Drive. She said the existing zoning is ORM and all notice requirements were met, along with newspaper notices and mail to all resident within 250 feet. She said staff received correspondence from the DuPage County Forest Preserve, that was provided on the dias and they had no issues with the development. Staff also received one inquiry about the nature of the development.

Ms. Leon then included the history of the development. She explained Lot 2 would remain vacant and there was a plan for an office building and parking, but the proposal would be required to appear in front of the Plan Commission and Village Council for final site plan approval. Ms. Leon noted all the standards of approval had been met and additional utility and drainage easements would be provided for both lots. She then discussed the site plan, including 297 units, clubhouse and amenities, surface parking and interior parking, circulation with two full movement access points and turn lanes, drainage plan, elevations, and signage plan. Lastly, she provided an overview of how the

development met the goals of the Comprehensive Plan and the planned unit development criteria. She stated that staff did find the PUD criteria and subdivision criteria were met.

Chairman Rickard asked to share where the design guidelines were applicable and if they were only applicable in certain plan areas or zoning districts or Village wide. Ms. Leon stated the downtown design guidelines are applicable only to the downtown zoning districts, so it would not apply to this development.

Chairman Rickard asked if it was accurate that staff felt the parking quantity ratio was adequate. Ms. Leon answered yes, they do comply with the findings of the traffic study prepared by the applicant.

Commissioner Dmytryszyn asked if they had any citizen complaints for any projects about the parking spaces. Mr. Zawila said he could not think of any complaints they had received for any development downtown.

Commissioner Frankovic said the only concerns she had was with parking but they answered a lot of the concerns.

Commissioner Boyle asked about the traffic signalization asked by the public. Chairman Rickman asked them to address the question about traffic signalization. Mr. Aboona stated everything there already would remain. Commissioner Boyle asked if that was reviewed and agreed to as a recommendation by the Downers Grove Traffic Department. Mr. Aboona answered that was correct.

Commissioner Toth said he felt the standards were met and there was an opportunity to put BMPs throughout the parking lots and this would be a good opportunity to take advantage of.

Chairman Rickard stated he did not have issues with the parking and seemed like a huge trend to have reduction in parking. He said he also did not see any issues with the project and believed the standards had been met for both requests.

Commissioner Roche added that the bulk of the units would be studio and one bedroom which would likely correlate with a one car need, so it made sense to use beds versus a square footage requirement.

BASED ON THE PETITIONER'S SUBMITTAL, THE STAFF REPORT, AND THE TESTIMONY PRESENTED, COMMISSIONER DMYTRYSZYN MADE A MOTION THAT FOUND THAT THE PETITIONER HAS MET THE STANDARDS OF APPROVAL FOR A FINAL PLAT OF SUBDIVISION IN PLANNED UNIT DEVELOPMENT #31 AMENDMENT AS REQURIED BY THE VILLAGE OF DOWNERS GROVE ZONING ORDINANCE AND IS IN THE PUBLIC INTEREST AND THEREFORE THAT THE PLAN COMMISSION RECOMMEND TO THE VILLAGE COUNCIL APPROVAL OF 23-PCE-0009, SUBJECT TO CONDITIONS 1-5 LISTED ON PAGE 8 OF STAFF REPORT.

SECOND BY COMMISSIONER FRANKOVIC

ROLL CALL:

DRAFT

AYE: DMYTRYSZYN, FRANKOVIC, K. PATEL, TOTH, ROCHE, BOYLE, CHAIRMAN RICKARD

NAY: NONE

MOTION APPROVED. VOTE: 7-0

/s/ Celeste K. Weilandt
Recording Secretary

(As transcribed by Ditto Transcripts)

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January 22, 2024

Don Rickard, Chairman
Plan Commission
Village of Downers Grove
801 Burlington Ave.
Downers Grove, IL 60515-4782

Re: Public Hearing - File Number 23-PCE-0009
Esplanade at Locust Point, Downers Grove

Dear Mr. Rickard,

The Forest Preserve District of DuPage County recently received a Notice of Public Hearing regarding a petition seeking a Final Plat of Subdivision and an Amendment to PUD #31 to construct a new multi-family residential development located south of the intersection of Lacey Road and Butterfield Road. We appreciate receiving timely notification of such requests that may have an impact on Forest Preserve District property and thank you for the opportunity to comment.

Forest Preserve District staff have reviewed the information provided by the Village and we do not have any comments at this time. Please call me at (630) 933-7235 if you have any questions.

Sincerely,

Kevin Stough
Land Preservation Manager

cc: Jessica Ortega, Strategic Plan and Initiatives Manager