

## PLANNING COMMISSION

Paul Player, Chair
Kirk Anders
Bob Dallas
Bill Grossman

Heyward Wescott, Vice-Chair
Richard Grove
Renate Herod

| AGENDDA | CITY OF DUNWOODY | April 12, 2016 |
| :--- | :---: | ---: |
|  | 41 PERIMETER CENTER EAST, SUITE 103 | DUNWOODY, GA 30346 |

## A. CALL TO ORDER

B. ROLL CALL
C. MINUTES

1. Approval of Meeting Minutes from March 8, 2016 Planning Commission Meeting

## D. ORGANIZATIONAL AND PROCEDURAL ITEMS

## E. UNFINISHED BUSINESS

1. RZ 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks to rezone property currently zoned Office-Institution (O-I) to Commercial-Residential MixedUse (CR-1). The tax parcel number is 1832904005.
2. SLUP 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks the following the following: (a) For approval of a special land use permit to increase the height of the multi-unit residential building. (b): For approval of a special land use permit to increase the height of the mixed use vertical building. (c): For approval of a special land use permit to allow multi-unit residential use in the CR-1 Zoning District. The tax parcel number is 1832904005.

## F. NEW BUSINESS

1. TA 16-051 - Consideration of re-adoption and/or modification of the LED prohibition of the Sign Ordinance, Chapter 20 of the City of Dunwoody Code of Ordinances.

## G. OTHER BUSINESS

1. Presentation by Michael Starling

## H. PUBLIC COMMENT

## I. COMMISSION COMMENT

## J. ADJOURN

## CITY OF DUNWOODY <br> MARCH 8, 2016 <br> PLANNI NG COMMI SSI ON MI NUTES

The Planning Commission of the City of Dunwoody held a Meeting on March 8, 2016 at 6: 00 PM. The meeting was held in the City of Dunwoody City Hall, 41 Perimeter Center East, Dunwoody, Georgia 30346. Present for the meeting were the following:

Voting Members: Paul Player, Chair Heyward Wescott, Vice-Chair Bill Grossman, Commission Member Richard Grove, Commission Member

Also Present: Steve Foote, Community Development Director Rebecca Keefer, City Planner<br>Andrew Russell, Planning Coordinator

## A. CALL TO ORDER

B. ROLL CALL

Kirk Anders, Bob Dallas, and Renate Herod were absent.
C. MINUTES

1. Approval of Meeting Minutes from January 12, 2016 Planning Commission Meeting

Bill Grossman motioned to approve. Richard Grove seconded.
The motion was voted on and passed (4-0).
D. ORGANIZATIONAL AND PROCEDURAL ITEMS
E. UNFINISHED BUSINESS
F. NEW BUSINESS

1. RZ 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks to rezone property currently zoned Office-Institution (O-I) to Commercial-Residential Mixed-Use (CR-1). The tax parcel number is 1832904005.

Paul Player introduced the item.
Rebecca Keefer presented the item and recommended deferral to the April 12, 2016 Planning Commission meeting.

Doug Dillard, attorney for the applicant, presented on behalf of the application and asked for deferral to the April 12, 2016 Planning Commission meeting.

Heyward Wescott motioned to defer to the April 12, 2016 meeting. Bill Grossman seconded.

The motion was voted on and passed (4-0).
2. SLUP 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks the following the following: (a) For approval of a special land use permit to increase the height of the multi-unit residential building. (b): For approval of a special land use permit to increase the height of the mixed use vertical building. (c): For approval of a special land use permit to allow multi-unit residential use in the CR-1 Zoning District. The tax parcel number is 1832904 005.

Heyward Wescott motioned to defer to the April 12, 2016 meeting. Richard Grove seconded.

The motion was voted on and passed (4-0).
G. OTHER BUSINESS
H. PUBLIC COMMENT
I. COMMISSION COMMENT

Heyward Wescott recognized City Council Member Terry Nall and thanked him for attending the meeting.
J. ADJOURN

Heyward Wescott motioned to adjourn. Bill Grossman seconded.

The motion was voted on and passed (4-0).

# Dunwoody 

## MEMORANDUM

To: Planning Commission
From: $\quad$ Rebecca Keefer, AICP
Date: April 12, 2016
Subject: $\quad$ RZ 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks to rezone property currently zoned Office-Institution (O-I) to Commercial-Residential Mixed-Use (CR-1) to allow for construction of Dunwoody Crown Towers, a mixed use development with residential and nonresidential uses. The tax parcel number is 1832904005.


## ITEM DESCRI PTI ON

The subject property, Site B in the image above, consists of a 4.75 acre portion of the 14.95 acre property located at 244 Perimeter Center Parkway. The 14.95 acre property, commonly referred to as the "Goldkist site," is located just north of I-285, east of Perimeter Center Parkway, west of Ashford Dunwoody Road, and south of a strip shopping center on Hammond Road. The entire 14.95 acre property at 244 Perimeter Center Parkway is currently zoned Office-Institution District (O-I), and has entitlements from a 1999 DeKalb County variance case for a 28 -story hotel, a conference center with a 6 -level parking structure, two 24 -story office buildings, and two 10 -level parking decks. The entitlements are not conditioned to a site plan.

The applicant proposes to subdivide the 14.95 acre lot into two properties, Site A and Site B, and rezone Site B from O-I to Commercial-residential mixed-use (CR-1) to construct a mixed-use development with commercial, retail, lodging, and owner-occupied residential uses. The applicant would retain all existing entitlements (height variances) on Site A, which is not a part of the rezoning and would therefore remain zoned O-I. Because dual-zoned parcels are prohibited, the rezoning of Site B would not take effect until the lot has been legally subdivided and a final plat has been recorded.

The application has been through the DRI process with the Atlanta Regional Commission (ARC) and Georgia Regional Transportation Authority (GRTA). As of this writing, GRTA has issued recommendations that may be modified before GRTA's final decision on April 8, 2016. The final decision will be forwarded to the Commission in advance of the April 12 meeting.

The applicant has met all regulations for applicant initiated neighborhood meetings as required by ordinance, holding a meeting with the public on Monday, February 1, 2016, and providing the applicable reports to the City.

| Direction | Zoning | Use | Current Land Use |
| :---: | :---: | :---: | :---: |
| N | C-1 <br> R-150 | Commercial <br> Residential | Retail <br> Cemetery |
| S | Interstate | Interstate | Interstate |
| E | OCR | Entitlements for <br> retail | Undeveloped |
| W O-I | Office-Institution | Lodging |  |

## ANALYSIS

## Site Plan Analysis

A large surface parking lot exists in the center of the subject property, and mature trees grow around the parking lot on all sides, with tree cover being particularly dense in the east and south areas of the lot. A building that was formerly the Goldkist Company headquarters, a parking structure, and a large surface parking lot exists on the adjacent lot, designated Site A, but no buildings currently exist on Site B. Vehicular access to Site B is currently through a private drive that extends from Gold Kist Road off of Perimeter Center Parkway. The land that site B is composed of does not currently have the required street frontage to be created at this time; therefore, the proposed street off of Perimeter Center Parkway will have to be constructed before the 14.95 acre property can be subdivided, as subdivisions cannot occur except off an existing or proposed street meeting City standards.

According to the site plan dated March 30, 2016, the applicant plans to construct one multiunit owner-occupied condo tower with parking deck; one mixed-use condo tower with a hotel, owner-occupied residential units, accessory uses, and parking; and a retail building. To construct the towers and build residential units, the applicant is seeking SLUPs to increase the height of the Multi-Unit Residential Building ("Crown Tower 1") to 35 stories and the height of the Mixed-Use, Vertical Building ("Crown Tower 2") to 29 stories, and to
allow a Multi-dwelling Residential Use in the CR-1 district for Crown Tower 1, as required by the use table in the Zoning Code. The applicant proposes to provide private drives meeting City standards throughout the subject property. On the east side of the property, the applicant proposes to connect to a driveway that comes off of Ashford Dunwoody Road onto the adjacent property to the north. The proposed lots, Site A and Site B, that would be created once the property is subdivided would have to be compliant with the Zoning Ordinance in terms of setbacks, lot coverage, building height, parking, pedestrian circulation, landscaping, and all other regulations and associated provisions that apply. During staff reviews and meetings with the applicant, it was determined that a variance would be required for the existing building on Site A to remain in compliance with zoning codes when land is dedicated to the City for a public street and right-of-way extending from Perimeter Center Parkway.

The applicant is in the process of drafting a development agreement to address site development work. Staff anticipates receiving the draft on April 6. Staff will perform a review of the agreement and will attempt to transmit the agreement for Planning Commission review prior to the meeting. Staff will incorporate the final approved version of the development agreement as an Exhibit in the conditions of approval.

This application has three companion SLUP applications (SLUP 16-041a,b,c) being heard concurrently with this rezoning request, all of which are for Site B only:
a. Increase the height of the multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings);
b. Increase the height of the mixed used vertical building ("Crown Tower 2" on conceptual drawings); and
c. Allow multi-unit residential use in the CR-1 Zoning District.

This application has one companion variance application (ZBA 16-045), which is for Site A only. The variance request was approved with the following conditions at the March 31, 2016 Zoning Board of Appeals meeting:

Exhibit A: Lot Division Plat, Sheet 5 of 5, submitted by applicant (undated)

1. The variance to reduce the setback from 50 ' to 0 ' shall apply to the existing building, accessory structures, and equipment, only.
2. The variance shall apply to the right-of-way depicted on Exhibit A and to future right-of-way for the Westside Connector, only.
3. If adequate clear zone cannot be met for any future road improvements, the existing building, accessory structures, and equipment shall be adjusted to comply.

## Comprehensive Plan

The Dunwoody Comprehensive Plan is organized primarily by regions, delineated as 'character areas'. The subject parcel is located in the Perimeter Center Character Area, as well as the Transit Village sub-area of the Perimeter CID/LCI study area. Perimeter Center is envisioned as a visitor friendly "livable regional center with first-class office, retail, entertainment, hotels, and high-end restaurants in a pedestrian and bicycle-friendly environment. Future development will emphasize high quality design standards and building materials and incorporate national best practices on efficiency, where possible.

The City is in the code review phase of the Perimeter Center Zoning Project. The subject site is located in the proposed PC-1 District subarea, intended to apply to the central core area
of Perimeter Center, including the area around the Dunwoody MARTA station. The PC-1 District allows "the highest intensity of buildings, a high level of employment uses, and active ground story uses and design that support pedestrian mobility."

## Review and Approval Criteria

In accordance with Georgia and local law, the following review and approval criteria shall be used in reviewing the respective amendment applications:

Section 27-335. Review and approval criteria.
b. Zoning Map Amendments. The following review and approval criteria must be used in reviewing and taking action on all zoning map amendments:

1. Whether the zoning proposal is in conformity with the policy and intent of the comprehensive plan;
The rezoning proposal is in substantial conformity with the policy and intent of the comprehensive plan.
2. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties;
The zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties. Office, lodging, retail, and owner-occupied residential uses are suitable uses in view of the use and development of adjacent and nearby properties.
3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;
The property to be affected does have a reasonable economic use as currently zoned. The current designation is Office-Institution (O-I), with existing entitlements. Existing entitlements allow the applicant to construct a 28-story hotel, a conference center with a 6-level parking structure, two 24-story office buildings, and two 10-level parking decks.
4. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

A portion of the paved internal private drive is shown encroaching on the commercial/ retail property adjacent to the north, on the site plan dated March 30, 2016.

The driveway that the applicant plans to extend to the curb cut off of Ashford Dunwoody Road does not connect directly to the applicant's property without first going through the adjacent property.

The historic Stephen Martin Cemetery borders the property to the north, sandwiched between it and the adjacent shopping center. The dirt and gravel path that leads to the cemetery, and its sign, are located on the subject property. The path and the sign are located in an area to be dedicated on the site plan. The actual cemetery is not located on the subject property. The applicant has spoken with
representatives from the Dunwoody Preservation Trust, the entity that maintains the cemetery, to work on an acceptable strategy for the cemetery's continued maintenance and accessibility.
5. Whether there are other existing or changing conditions affecting the use and development of the property that provide supporting grounds for either approval or disapproval of the zoning proposal;
There are several factors that lend uncertainty to the project. The GDOT I-285/400 Interchange Project impacts this property directly through the acquisition of additional right-of-way needed for the freeway. The amount of right-of-way that will be taken from Site A and $B$ has not been determined, and therefore, the impact on the site cannot be fully determined. Similarly, the ability to complete the Westside Connector from I-285 at Ashford Dunwoody Road to Perimeter Parkway depends on the complete dedication of right-ofway from this site and adequate funding. The development of this site without the Westside Connector would further burden Hammond Drive, Ashford Dunwoody Road, and other local streets.
6. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources; and
The site is currently nearly built-out. A large commercial building and structured and surface parking sits on the west side of the property, and most of the east side of the property is paved parking surface. The adjacent cemetery to the north is the only historic site identified.
7. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.
The traffic study submitted by the applicant does not fully reflect the actual congestion that currently exists at the Ashford Dunwoody Road and Hammond Drive intersection. Staff has requested revisions to the traffic impact study to reduce the percentage of trips assigned to transit, adjust the trip routing to be more consistent with previous studies and update the traffic signal timing model to reflect actual conditions. The site is in close proximity to the Dunwoody MARTA station, making public transit a realistic alternative for those commuting to and from the property. GRTA has conditioned the proposal to provide sidewalks along all property frontage and both side of all internal roadways. That said, the Zoning Code allows for a 25\% reduction in the number of required parking spaces, provided that the property is located $\mathbf{1 , 5 0 0}$ feet from a MARTA station (Sec. 27204). As the development is not located within 1,500 feet of the Dunwoody MARTA station (per sheet CP-004), the proposed parking reduction is not allowable. The applicant will either have to provide the additional parking in accordance with the required ratios or utilize a different reduction method enabled in the Code (e.g.: shared and bicycle parking).

With the requested revisions to the traffic study, staff expects that the study will show that the Ashford Dunwoody Road and Hammond Drive corridors will experience increasing congestion. Substituting residential and other uses for some of the office space would help distribute the trips to and from the site more evenly since residential
trips would be outbound at times when the majority of the area traffic is inbound and vice versa. Additional turn lanes at congested intersections as recommended in this and other traffic impact studies can help reduce delays. However, at intersections like Ashford Dunwoody Road and Hammond Drive where multiple turn lanes already exist on all the approaches, adding additional lanes is not realistic or desirable. Additional connectivity to the interstate and other arterials, such as proposed with the Westside Connector, is needed to address congestion in a significant way.

Regarding the impact on public schools, DeKalb County School District was asked to provide comment on the impact the development will have on schools. That report is attached for review. DeKalb County projects the development will add 37 students to the County system.

## RECOMMENDATION

## Staff Recommendation

Based on the above analysis and findings, staff has determined that the requested amendments to the official zoning map meet the requirements of Chapter 27, §27-335. Therefore, staff recommends the application be approved with the following exhibit(s) and condition(s):

EXHIBIT A: Development agreement, approved May 9, 2016.
EXHIBIT B: GRTA notice of decision, dated April 8, 2016.
EXHIBITC: Site plan, dated March 30, 2016.

1. This Ordinance shall take effect upon the property being subdivided in accordance with all of the ordinances, rules, and regulations of the City of Dunwoody in effect at the time of the subdivision application, but in any case, not later than May 9,
2. If the Subdivision is not accomplished by May 9, 2018, this Ordinance shall be null and void. (this verbiage to be included in the body of the ordinance, rather than a condition).
3. Development of the site shall be in substantial compliance with the above Exhibits.
4. The recordation of the final plat shall take place within 120 days of the completion of site development improvements, unless an extension for unforeseen circumstances is approved by the Community Development Director.
5. Site is limited to a maximum of 380 'for sale' residential units and 150 rooms for a hotel. Other uses and structures permitted as of right in the CR-1 district are also permitted.
6. Any buildings on Site $B$ shall be setback a minimum of 10 feet from any existing or future right-of-way on the north of the site. All other setbacks shall be in accordance with the CR-1, the future PC-1, and/or the Perimeter Center Overlay Districts.
7. Site shall be prohibited from having vehicular access to the existing curb cut at Ashford Dunwoody Road or the attached driveway on the adjacent property. This curb cut and access shall only be for the maintenance of and access to the Spruill cemetery.
8. Entitlements for the site under the February 9, 1999 variance decision shall be maintained on Site A as depicted on the Site Plan.
9. Covenants shall restrict non-owner occupied units to a maximum of 10 percent. A unit shall not be considered "owner occupied" if it includes any partial owner who pays another party (except the mortgagor) for the right to live there.
10. The site is considered one development, and as such, plaza areas and open spaces shown on the plans for Site A will be provided.
11. Show and label extension of proposed right-of-way on Site B as "future right-of-way" across Site B.
12. Provide plan for open space improvements and amenities for residential and commercial areas.
13. Provide documents for easements on this site granting access to the adjacent cemetery.
14. Provide pedestrian access up to the edge of the property to accommodate MARTA connection.
15. Provide improvements recommended in GRTA notice of decision.
16. Construct public streets in accordance with standards in Perimeter Center Overlay.

## Attachments

- Location Map, Zoning Districts Map, Future Land Use Map
- Division 2. - Nonresidential and Mixed-use zoning districts excerpt
- Comprehensive Plan excerpt
- GRTA Revised Letter of Understanding and Staff Recommendations
- Traffic Study
- DeKalb County School District Zoning Review Comments
- Application packet


244 Perimeter Ctr Pkwy Lot Division


Date: 3/1/2016


## CHAPTER 27 -ZONING ORDINANCE ${ }^{[1]}$

## Footnotes:

--- (1) ---

Editor's note—Ord. No. 2013-10-15, § 1, adopted Oct. 14, 2013, repealed former Ch. 27, §§ 27-1—271654 , and enacted a new Ch. 27 as set out herein. Former Ch. 27 pertained to similar subject matter. See the Code Comparative Table for a complete derivation. For stylistic purposes, a uniform system of headings, catchlines, capitalization, citation to state statutes, and expression of numbers in text have been used to conform to the Code of Ordinances. Additions made for clarity are indicated by brackets and obvious misspellings and punctuation errors have been corrected without notation.

## ARTICLE II. - ZONING DISTRICTS

DIVISION 2. - NONRESIDENTIAL AND MIXED-USE ZONING DISTRICTS

Sec. 27-71. - General.
(a) The districts. The city's nonresidential and mixed-use zoning districts are listed below.

| Office | Zoning District | Map Symbol |
| :---: | :---: | :---: |
|  | Office-Institution | O-I |
|  | Office-Institution-Transitional | O-I-T |
|  | Office-Distribution | O-D |
| Commercial | Office-Commercial-Residential | OCR |
|  | Neighborhood Shopping | NS |
|  | C-1 |  |
| Industrial | Commercial-Residential Mixed-Use | CR-1 |

(b) Purposes.
(1) General. The nonresidential and mixed-use districts are generally intended to promote consistency with the comprehensive plan and provide opportunities for shopping, employment, entertainment and living.
(2) Office-institution and office-institution-transitional. The primary purposes of the O-I and O-I-T districts are as follows:
a. To provide convenient locations for office and institutional uses;
b. To provide locations for the development of cultural, recreational, educational and health service facilities; and
c. To limit building heights to two stories in O-I-T zoned areas adjacent to single-dwelling residential districts.
(3) Office-distribution. The primary purpose of the O-D district is to provide convenient locations for office and distribution establishments.
(4) Office-commercial-residential. The primary purposes of the OCR district are as follows:
a. To provide for economic development within the city through redevelopment of parcels of land that have been used in the past for commercial and light industrial uses but that have become obsolete and now offer an opportunity for establishing new moderate-intensity mixed-use developments consisting of a combination of office, commercial and residential uses;
b. To promote redevelopment and new development in an environment that is pedestrianoriented and that provides employment, shopping, entertainment and living opportunities in close proximity thereby reduces auto dependency; and
c. To encourage the conversion of vacant commercial and industrial buildings into mixed-use projects.
(5) Neighborhood shopping. The primary purposes of the NS district are as follows:
a. To provide convenient neighborhood retail shopping and service areas within the city;
b. To provide for the development of new neighborhood shopping districts;
c. To help ensure that the size and scale of neighborhood shopping centers and individual uses within shopping centers are compatible with the scale and character of surrounding neighborhoods; and
d. To accommodate uses designed to serve the convenience shopping and service needs of the immediate neighborhood.
(6) Local commercial. The primary purposes of the C-1 district are as follows:
a. To provide convenient local retail shopping and service areas within the city;
b. To provide for the development of new local commercial districts; and
c. To accommodate uses designed to serve the convenience shopping and service needs of groups of neighborhoods.
(7) Commercial-residential mixed-use. The primary purposes of the CR-1 district are as follows:
a. To provide convenient local retail shopping and service areas within a mixed-use (commercial-residential) setting;
b. To provide for the development of new commercial-residential mixed-use districts; and
c. To promote development patterns that accommodate residential, employment and entertainment within a walkable, mixed-use environment.
(8) General commercial. The primary purposes of the C -2 district are as follows:
a. To provide convenient general business and commercial service areas within the city;
b. To provide for the development of new general commercial districts; and
c. To accommodate uses designed to serve the general business and commercial service needs of the city.
(9) Industrial. The primary purposes of the M district are as follows:
a. To provide areas for the establishment of businesses engaged in the manufacturing, processing, creating, repairing, renovating, painting, cleaning, or assembling of goods, merchandise, or equipment;
b. To help ensure that establishments operate so as to not create adverse noise and other impacts on nearby residential, office, commercial and mixed-use districts; and
c. To help ensure that M districts are located in areas with access to major arterials and freeways.
(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.10), 10-14-2013)

Sec. 27-72. - Uses allowed.
The following table identifies uses allowed in nonresidential and mixed-use zoning districts. See [subsection] 27-111(4) for information about how to interpret the use table.

| USES | DISTRICTS |  |  |  |  |  |  |  |  |  |  | Supplemental <br> Regulations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | O- | O- <br> I-T | O- | OCR | N | C 1 |  | $\begin{gathered} \text { CR- } \\ 1 \end{gathered}$ | C- |  |  |  |
| $\begin{aligned} & P=\text { use permitted as of right } / A=\text { administrative permit req'd } / E=\text { special exception req'd } / S=\text { special } \\ & \text { land use permit req'd } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| RESIDENTIAL |  |  |  |  |  |  |  |  |  |  |  |  |
| Household Living |  |  |  |  |  |  |  |  |  |  |  |  |
| Detached house | - | P | - | - | - | - | - | - | - |  |  | 27-147 |
| Multi-unit building | - | - | - | S | - | - |  | S | - |  |  |  |
| Mixed-use building, vertical | - | - | - | P | - | - | - | P | - |  |  |  |


| Group Living |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Convent and monastery | P | P | - | P | - |  | - | - | - | - | 27-146 |
| Fraternity house, sorority house or residence hall | P | - | - | - | - |  | - | - | - | - |  |
| Nursing home | P | P | - | - | - |  | - | - | - | P |  |
| Personal care home, family (1-4 persons) | - | - | P | - | P |  | P | P | P | - |  |
| Personal care home, group (5-7 persons) | - | - | P | - | P |  | P | P | P | - |  |
| Personal care home, community (8+ persons) | P | P | P | - | P |  | P | P | P | - | 27-145 |
| Child caring institution (1-6 persons) | P | P | P | - | P |  | P | P | P | - |  |
| Child caring institution (7-15 persons) | P | P | P | - | P |  | P | P | P | - |  |
| Child caring institution (16 or more) | P | S | P | - | P |  | P | P | P | - |  |
| Community living arrangement (1-4 persons) |  |  |  | P |  |  | P | P |  |  |  |
| Shelter, homeless | S | S | - | - | - |  | P | P | P | - | 27-140 |
| Transitional housing facility | S | S | - | - | - |  | P | P | P | - | 27-140 |
| QUASI-PUBLIC AND INSTITUTIONAL |  |  |  |  |  |  |  |  |  |  |  |
| Ambulance Service | - | - | - | - | - |  | P | P | P | P |  |
| Club or Lodge, Private | P | P | P | - | - |  | P | P | P | P |  |
| Cultural Exhibit | P | P | P | - | - |  | P | P | P | - |  |
| Day care facility, adult (6 or fewer persons) | - | - | P | - | - |  | - | - | - | - | 27-137 |
| Day care center, adult (7 or more) | P | P | P | P | P |  | P | P | P | - |  |
| Day care facility, child (6 or fewer persons) | - | - | P | - | - |  | - | - | - | - |  |


| Day care center, child (7 or more) | P | P | P | P | P |  | P | P | P |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Educational Services |  |  |  |  |  |  |  |  |  |  |  |
| College or university | P | P | P | - | - | - |  | - | - | - |  |
| Kindergarten | - | - | P | P | P |  | P | P | P | - | 27-141 |
| Research and training facility, college or university affiliated | P | P | P | - | - | - | - | - | - | P |  |
| School, private elementary, middle or senior high | P | P | P | P | - | P | P | P | P | P | 27-148 |
| School, specialized non-degree | P | P | P | P | - |  | P | P | P | P |  |
| School, vocational or trade | P | P | P | - | - | P | P | P | P | P |  |
| Hospital | P | - | - | - | - | - |  | - | - | - |  |
| Place of Worship | P | P | P | P | P |  | P | P | P | P | 27-146 |
| Utility Facility, Essential | E | E | P | E | E |  | P | P | P | P | 27-151 |
| COMMERCIAL |  |  |  |  |  |  |  |  |  |  |  |
| Adult Use |  |  |  |  |  |  |  |  |  |  |  |
| Body art service |  |  |  |  |  |  |  |  | P | P |  |
| Sexually oriented business | P | - | - | P | - |  | - | - | P | P | 27-149 |
| Animal Services |  |  |  |  |  |  |  |  |  |  |  |
| Animal care/boarding | - | - | - | S | S |  | P | P | P | P | 27-131 |
| Animal grooming | - | - | - | P | P |  | P | P | P | P | 27-131 |
| Animal hospital/veterinary clinic | - | - | - | P | P | P | P | P | P | P | 27-131 |


| Communication Services |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Radio and television broadcasting stations | P | P | P | - |  | - | P |  | P | P | P |  |
| Recording studios | P | P | P | - |  | - | P |  | P | P | P |  |
| Telecommunication tower | A | - | A | - |  | S | A |  | A | A | A | 27-150 |
| Telecommunication antenna, co-located | P | P | P | P |  | P | P |  | P | P | P | 27-150 |
| Construction and Building Sales and Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Building or construction contractor | - | - | - | - |  | - | - |  | - | P | P |  |
| Commercial greenhouse or plant nursery | - | - | - | - |  | - | - |  | - | P | P |  |
| Electrical, plumbing and heating supplies and services | - | - | - | - |  | - | P |  | P | - | P |  |
| Lumber, hardware or other building materials establishment | - | - | - | - |  | - | P |  | P | P | P |  |
| Eating and Drinking Establishments |  |  |  |  |  |  |  |  |  |  |  |  |
| Restaurant, accessory to allowed office or lodging use | P | - | - | P |  | - | P |  | P | P | P |  |
| Restaurant, drive-in or drive-through | - | - | - | - |  | - | P |  | S | P | P |  |
| Food truck | P | P | P | P |  | P | P |  | P | P | P | 27-138 |
| Other eating or drinking establishment | - | - | - | P |  | P | P |  | P | P | - |  |
| Entertainment and Spectator Sports |  |  |  |  |  |  |  |  |  |  |  |  |
| Auditorium or stadium | - | - | - | - |  | - | - |  | - | P | P |  |
| Drive-in theater | - | - | - | - |  | - | - |  | - | P |  |  |
| Movie theater | - | - | - | P |  | - | - |  | - | P | - |  |


| Special events facility | - | P | - | - | - | P | P | P | - |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Financial Services |  |  |  |  |  |  |  |  |  |  |
| Banks, credit unions, brokerage and investment services | P | P | P | P | P | P | P | P | P |  |
| Convenient cash business | - | - | - | - | - | - | - | P | - | 27-136 |
| Pawn shop | - | - | - | - | - | - | - | P | - | 27-144 |
| Food and Beverage Retail Sales |  |  |  |  |  |  |  |  |  |  |
| Liquor store (as principal use) | - | - | - | - | - | P | P | P | P |  |
| Liquor store (accessory to lodging or 3+ story office) | - | - | P | P | - | - | - | - | - |  |
| Other food and beverage retail sales | - | - | P | P | P | P | P | P | P |  |
| Funeral and Interment Services |  |  |  |  |  |  |  |  |  |  |
| Cemetery, columbarium, or mausoleum | P | P | P | - | - | - | - | - | - |  |
| Crematory | - | - | - | - | - | - | - | - | S |  |
| Funeral home or mortuary | P | - | - | - | - | P | P | P | P |  |
| Lodging | P | - | P | P | - | P | P | P | P |  |
| Medical Service |  |  |  |  |  |  |  |  |  |  |
| Home health care service | P | P | - | - | - | - | - | - | - |  |
| Hospice | P | P | - | - | - | - | - | - | - |  |
| Kidney dialysis center | P | P | - | - | - | - | - | - | - |  |
| Medical and dental laboratory | P | P | - | P | - | P | P | - | P |  |


| Medical office/clinic | P | P | P | P | P | P | P | P | P |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Office or Consumer Service | P | P | P | P | P | P | P | P | P |  |
| Parking, Non-accessory | S | - | P | - | - | P | P | P | P | 27-143 |
| Personal Improvement Service |  |  |  |  |  |  |  |  |  |  |
| Barber shop, beauty shop, nail salon, massage and/or spa establishments, estheticians, and other "typical" uses per [subsection] 27-114(14) | P | - | - | P | P | P | P | P | P | 27-114(14) |
| Other personal improvement service | - | - | - | - | - | P | P | P | P |  |
| Repair or Laundry Service, Consumer |  |  |  |  |  |  |  |  |  |  |
| Laundromat, self-service | - | - | - | P | P | P | P | P | - |  |
| Laundry or dry cleaning drop-off/pick-up | P | - | - | P | P | P | P | P | P |  |
| Other consumer repair or laundry service | - | - | - | P | P | P | P | P | P |  |
| Research and Testing Services | P | - | P | P | - | - | - | P | P |  |
| Retail Sales |  |  |  |  |  |  |  |  |  |  |
| Retail sales of goods produced on the premises | - | - | - | - | - | - | - | - | P |  |
| Shopping Center | - | - | - | P | P | P | P | P | - |  |
| Other retail sales | - | - | P | P | P | P | P | P | - |  |
| Sports and Recreation, Participant |  |  |  |  |  |  |  |  |  |  |
| Golf course and clubhouse, private | P | P | P | - | - | - | - | P | P |  |
| Health club | - | - | P | P | P | P | P | P | P |  |
| Private park | P | P | P | - | - | - | - | - | - |  |


| Recreation center or swimming pool, neighborhood | P | P | P | - | - | - | - | - | P |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recreation grounds and facilities | - | - | P | - | - | - | - | P | - |  |
| Tennis center, club and facilities | P | P | P | P | - | P | P | P | - |  |
| Other participant sports and recreation (Indoor) | P | - | - | P | - | P | P | P | - |  |
| Other participant sports and recreation (Outdoor) | - | - | - | - | - | - | - | P |  |  |
| Vehicle and Equipment, Sales and Service |  |  |  |  |  |  |  |  |  |  |
| Car wash | - | - | - | - | - | P | - | P | P | 27-134 |
| Gasoline sales | - | - | - | - | - | P | - | P | P | 27-139 |
| Vehicle repair, minor | - | - | - | - | - | P | - | P | P | 27-153 |
| Vehicle repair, major | - | - | - | - | - | - | - | P | P | 27-152 |
| Vehicle sales and rental | - | - | - | - | - | S | S | P | P | 27-154 |
| Vehicle storage and towing | - | - | - | - | - | - | - | P | P | 27-155 |
| INDUSTRIAL |  |  |  |  |  |  |  |  |  |  |
| Manufacturing and Production, Light | - | - | - | - | - | - | - | P | P |  |
| Wholesaling, Warehousing and Freight Movement |  |  |  |  |  |  |  |  |  |  |
| Warehousing and storage | - | - | P | - | - | - | - | - | - |  |
| Self-storage warehouse | - | - | P | - | - | - | - | - | P |  |
| Storage yard and truck terminal | - | - | - | - | - | - | - | - | S |  |
| AGRICULTURE AND TRANSPORTATION |  |  |  |  |  |  |  |  |  |  |


| Agriculture |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Agricultural produce stand | - | - | - | - | - | - | - | - | P |  |
| Community garden | P | P | P | P | P | P | P | P | P | 27-135 |
| Crops, production of | - | - | - | - | - | - | - | - | P |  |
| Transportation |  |  |  |  |  |  |  |  |  |  |
| Heliport | S | - | S | - | - | S | S | - | P |  |
| Stations and terminals for bus and rail passenger service | S | - | - | - | - | - | - | - | - |  |
| Taxi stand and taxi dispatching office | - | - | - | - | - | P | P | - | P |  |

(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.20), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015;
Ord. No. 2015-06-13, § 1, 6-22-2015)
Sec. 27-73. - Lot and building regulations.
(a) This section establishes basic lot and building regulations that apply in nonresidential and mixed-use zoning districts. These regulations offer certainty for property owners, developers and neighbors about the limits of what is allowed; they are not to be construed as a guarantee that stated minimums and maximums can be achieved on every lot. Other factors, such as topography, the presence of protected resources, off-street parking and other factors may work to further limit actual building and development potential.
(b) The lot and building standards of the following table apply to all principal and accessory uses allowed in nonresidential and mixed-use districts, unless otherwise expressly stated in this zoning ordinance. Article VII, division 1, identifies exceptions to these regulations and rules for measuring compliance (see also Figure 5-1).

|  | Regulation | O-I | O-I-T | O-D | OCR | NS | C-1 | CR-1 | C-2 | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L1 | Minimum Lot <br> Area (sq. ft.) | 20,000 | $20,000[1$ <br> ] | 43,560 | 87,120 | 20,000 | 20,000 | 20,000 | 30,000 | 30,000 |
| L2 | Minimum Lot <br> Frontage (ft.) | 100 | 100 | 150 | 100 | 100 | 100 | 100 | 100 | 100 |


|  | Maximum Density (dwelling units per acre) | NA | NA | NA | 30 | NA | NA | 80 | NA | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { Minimum } \\ \text { Building/Structur } \\ \text { e Setbacks (ft.) } \end{gathered}$ |  |  |  |  |  |  |  |  |  |
| $\mathrm{s}$ | Street, front and side | 50 | 40 | 75 | 0 | 50 | 50 | 0 | 50 | 75 |
| S | Side, interior | 20 | 20 | 20 | 20 | 20 | 20 | 20[2] | 20 | 20 |
| S | Rear | 30 | 30 | 30 | 40 | 30 | 30 | 30 | 30 | 30 |
| C | Maximum Lot Coverage (\%) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
|  | Maximum Building Height (stories/ft.) | $\begin{gathered} 5 / 70[3 \\ ] \end{gathered}$ | 2/35 | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | 2/25 | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 3 / 45[4 \\ ] \end{gathered}$ | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 5 / 70[3 \\ ] \end{gathered}$ |
|  | Maximum <br> Building Floor <br> Area (sq. ft.) | NA | NA | NA | NA | $\begin{gathered} 50,000[5 \\ ] \end{gathered}$ | NA | NA | NA | NA |

[1] Attached house developments are subject to a minimum lot area requirement of 4,000 square feet per dwelling unit.
[2] No interior side setback required abutting C-1, CR-1 or C-2-zoned lots.
[3] Buildings may exceed three stories in height only if approved by fire and rescue services. Buildings in excess of five stories or 70 feet in height may be approved only through the special land use permit procedures of article V, division 3. Multi-unit residential and vertical mixed-use buildings that abut any attached single-dwelling residential district may not exceed 40 feet in height. Multi-unit residential buildings and vertical mixed-use buildings that abut any detached single-dwelling residential district may not exceed 35 feet in height.
[4] Buildings in excess stated height limits may be approved through the special land use permit procedures of article V , division 3 . Buildings may exceed three stories in height only if approved by fire and rescue services.
[5] No individual building may exceed 50,000 sq. ft. (GSF). No multi-tenant center may exceed 100,000 sq. ft.

Figure 5-1: Lot and Building Regulations Diagram, Nonresidential and Mixed-use Districts

(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.30), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-74. - Other regulations.
Uses and development in nonresidential and mixed-use zoning districts may be subject to other regulations and standards, including the following.
(1) Nonconformities. See article VI, division 4.
(2) Accessory uses and structures. See article III, division 3.
(3) Parking. See article IV, division 1.
(4) Landscaping and screening. See article IV, division 2.
(5) Signs. See chapter 20 of the Municipal Code.
(6) Outdoor storage. See section 27-286.
(7) Temporary uses. See article III, division 4.
(8) Outdoor lighting. See article IV, division 3.
(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.40), 10-14-2013)
Secs. 27-75-27-85. - Reserved.

## PERIMETER CENTER

## Vision/Intent

Perimeter Center will be a visitor friendly "livable" regional center with first-class office, retail, entertainment, hotels, and high-end restaurants in a pedestrian and bicycle-oriented environment. The area will serve as a regional example of high quality design standards. The City of Dunwoody works in partnership with the Perimeter Community Improvement Districts (PCIDs) and adjacent communities to implement and compliment the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study ( LCl ) and its current and future updates.

In the future, the area should add public gathering space and pocket parks, venues for live music and entertainment and continue to create transportation alternatives, mitigate congestion, and reduce remaining excessive surface parking. The area creates the conditions of possible true "live-work" environment. All future development continues to emphasize high quality design standards and building materials and incorporates the current national best practices on energy efficiency, where possible.

The City of Dunwoody recognizes the value of creating mixed-use, transit-oriented development within walking distance of public transit stations. However, the City has concerns about the impact of such development on the City‘s infrastructure and schools.

## Future Development

The Perimeter Center Character Area will be divided into four subareas (PC-1, PC-2, PC-3, and PC-4) which match the draft proposed overlay district outline that the City is reviewing as part of the Perimeter Center Zoning Code. This area was the subject of a previous LCI Study. The cities of Dunwoody, Sandy Springs, and Brookhaven work in partnership with the Perimeter Community Improvement Districts (PCIDs) to implement and complement the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCI) and its current and future updates.

For specific recommendations on height, density and use refer to the provisions of the Perimeter Center Overlay District and Zoning, available from the Dunwoody Community Development Department.


FIGURE 13: Perimeter Center Character Area Map

PC-1: Intended to apply to the central core area of Perimeter Center, including the area directly surrounding the Dunwoody MARTA train station. This district allows for the highest intensity of buildings, a high level of employment uses, and active ground story uses and design that support pedestrian mobility.

PC-2: Made up primarily of employment uses and limited shop front retail, residential, and services.

PC-3: A smaller scale, less intensive commercial district, permitting both shop front and office buildings.

PC-4: Made up primarily of residential uses at a scale that provides a transition between the intensity of Perimeter Center and the surrounding single-family residential neighborhoods.

## Action Items



- Perimeter Mall

- Housing in Perimeter Center
- New development will include amenities and provide public functional green space.
- New development will be mindful of school capacity issues and applicants will work with Board of Education and City for better resolution of school issues.
- Reduce surface parking and promote livable centers in the immediate areas surrounding MARTA station.
- Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route.
- Achieve a lifelong-community for residents who can age in place with safe access to medical, recreational and other necessary services.
- Create bicycle, pedestrian and non-auto related transportation options to connect with the rest of the City of Dunwoody.


## COMMUNITY IMPROVEMENT DISTRICT (CID)

A Community Improvement District (CID) is an authorized self-taxing district dedicated to Infrastructure improvements within its boundaries. The PCIDs are governed by two boards - one each for Fulton and DeKalb. The PCIDs spent or leveraged public funds to invest $\$ 55$ million in Dunwoody alone; over $\$ 7$ million from ARC's LCI program was directed to the PCIDs. This makes it one of the most, if not the most, successful CIDs in the region. The PCIDs‘ mission focuses exclusively on transportation improvements:

To work continuously to develop efficient transportation services, with an emphasis on access, mobility, diversification and modernization.

■ The 2012 PCID Commuter Trail System Master Plan proposed a network of commuter trails connecting to the MARTA station.

■ The 2012 PCID Perimeter Circulator Implementation report recommended circulator transit to provide first/ last mile connectivity for commuters and reduction in CID area congestion.

- The PCIDs have proposed Perimeter Park at the Dunwoody MARTA Station.
- Work with the Perimeter Transportation Management Association (TMA) to actively reduce automobile dependency and emerge as a leader in alternative transportation for the region.
- Work to strengthen Board of Education relationship for creative solutions to school capacity.
- Work with the PCIDs‘ boards to implement vision.
- Coordinate with the City of Sandy Springs for LCI Updates and implementation.
- Coordinate with the Atlanta Regional Commission (ARC) for implementation of future LCI study updates.
- Coordinate with MARTA regarding Bus Rapid Transit (BRT) (or other regional service) and urban design surrounding all transit stations.

■ Look for ways to encourage live entertainment for the benefit of visitors and residents.

March 14, 2016
Dunwoody Crown Towers, LLC
c/o G. Doug Dillard, Esq.
Pursley, Friese, Torgrimson
1230 Peachtree Street, Suite 1200
Atlanta, Georgia 30309
RE: DRI 2567244 Perimeter Center Parkway
Dear Mr. Brown:
The purpose of this letter is to inform you of the GRTA staff recommendation regarding your request for expedited review of the DRI 2567244 Perimeter Center Parkway Development of Regional Impact (DRI). Based on the information presented during the Pre-Review/Methodology meeting on March 7, 2016, the DRI qualifies for the criteria for expedited review under the DRI Procedures and Principles for GRTA Development of Regional Impact Review Section 3-102.F., Livable Centers Initiative (LCI), which requires the proposed DRI project to be located within an LCI , consistent with the LCl plan, and that the LCl implementation is in good standing with the Atlanta Regional Commission (ARC). A Trip Generation and an Access Analysis are required as part of the review under this criteria. Some of the following items were discussed in the meeting above and should assist you and your consultant team in preparing the DRI Review Package.

## Project Overview

The proposed development is located in the City of Dunwoody on 13.26 acres located in the northwest quadrant of the I-285/Ashford-Dunwoody Road Interchange, south of Hammond Drive and east of Perimeter Center Parkway. The trigger for this development is a rezoning. The project will be a mixed-use development consisting of approximately 1.1 million square feet of new office space, 500 -room and 150 -room hotels, 32,452 restaurant space, 43,700 square feet of retail space, 63,442 conference center and 380 units of high-rise condominiums.

## Methodology for Analysis

- The development site is currently served by one full-movement driveway of Goldkist Road onto Perimeter Center Parkway south of Hammond Drive. When the Westside Connection is completed, the development will have access directly onto that new road. Approximately 65 feet of right-of-way is preserved on the site plan.
- This proposed development is located within Perimeter Livable Centers Initiative (LCl) study area.
- The estimated vehicular trip generation is 18,006 gross new daily trips, based on ITE $9^{\text {th }}$ editions of the ITE Trip Generation Manual.
- A $25 \%$ alternative mode reduction is allowed, in addition to the allowable mixed use and pass-by reductions.
- All intersections identified as within the study network shall be analyzed during the AM and PM peak hours for (1) existing conditions, (2) future "no-build" conditions and (3) future "build" conditions. This DRI shall be reviewed in one phase to be completed by 2026. The LOS standard is "E" due to the DRI location adjacent to a fixed transit guideway facility and located in a major activity center as defined by regional policies per GRTA Technical Guidelines Section 3-102.E. Transportation Analysis.
- The Access Analysis study network is:
- Perimeter Center Parkway at Lake Hearn Drive
- Perimeter Center Parkway at Gold Kist Drive (also site driveway)
- Perimeter Center Parkway at Hammond Drive
- Hammond Drive at Shopping Center Driveway
- Hammond Drive at Ashford-Dunwoody Road
- A $1 \%$ background traffic growth rate* shall be used for all roadways, AM and PM peak hour project trips on the overlapping study network roadway segments, and the addition of the following DRIs project trips:

DRI \#1582 236 Perimeter Mixed Use (aka State Farm Phase I, under construction; approved in 2013) DRI \#2501 Park Center (aka State Farm Phase II, under construction; approved in 2015)
Per the City of Dunwoody, Hines Ravinia IV and 1201 Hammond Drive
*Glenridge, Palisades and High Street are accounted for in the background traffic growth rate.

- Due to the current land uses and proposed demolition, the existing vehicle movements from the current land uses will be counted and reported in the existing conditions and future "no-build" conditions, but are to be deducted from the future "build" conditions prior to adding the DRI project trips.
- Capacity analysis shall be based on turning movement counts collected not more than 12 -months prior to the date of the actual DRI submittal to GRTA. As appropriate, pedestrian counts and heavy vehicle counts shall be collected with vehicle counts and considered within the capacity analysis. Turning movement counts shall be collected while local schools are in session and ordinarily not between the week of Thanksgiving and the second week of January or any week of a major holiday. [NOTE: Adjustments are allowed to previous counts to account for a difference in older counts and those from 12-months ago.]
- Default values should not be assumed in the traffic modeling. Existing conditions shall be taken into account.
- The applicant shall research TIP, STIP, RTP, and GDOT's construction work program, as well as any local government plans (SPLOST, CIP, etc.), to determine the open-to-traffic date, sponsor, cost of the project, funding source(s), for future roadway projects in the project vicinity. This information shall be included within the traffic analysis.


## ADDITIONAL INFORMATION

Every roadway segment and intersection listed above will be analyzed for "required improvements." If the existing LOS for the segment or intersection is below the applicable level of service for a particular time period (e.g., A.M. peak period, P.M. peak period, etc.), then the measured LOS service for that segment and time periods is the standard by which the "base" and "future" traffic conditions will be designed. For example, if the County's LOS standard is LOS D, but an intersection or segment currently operates at LOS E for a certain peak period, then the LOS standard for that intersection or segment for "base" and "future" conditions becomes LOS E (only for that intersection and only for that peak period). The "base" is the phase year traffic without the development traffic (also called future "no-build" conditions) and the "future" is the phase year with the development traffic (also called future "build" conditions). As required in the technical guidelines, specific "required improvements" will be identified to bring the "base" LOS and "future" LOS for every roadway segment and intersection up to the applicable LOS standard. If the existing LOS for the segment or intersection is LOS F, then the future "no-build' and future "build" LOS standard will be LOS E. The improvements required to achieve the desired LOS standard will be provided in a table and graphic within the study. The traffic study should indicate the existing roadway laneage at each studied intersection as well as the laneage required (to meet the LOS standard) for future "nobuild" and future "build" conditions. The improvements may include both programmed improvements and improvements identified in the study.

The planned and programmed improvement should indicate the project sponsor, the anticipated funding by source (federal, state, city/county, developer, CID, etc.), the year open-to-traffic, and estimate of the total project cost. All other required improvements identified in the study should, to the extent known, identify the cost, sponsor, funding, and timing. If any of these elements are not known, please state as "unknown."

The future "no-build" and the future "build" analyses should NOT automatically include/assume the additional lanes/capacity associated with planned and programmed improvement projects unless those roadway projects are currently under construction. Instead, the traffic consultant should recommend the additional laneage required to satisfy the level of service standard.

## DRI REVIEW PACKAGE CHECKLIST

Please use the DRI Review Package Checklist to help you prepare your GRTA DRI Review Package for expedited review of your application. The Checklist reflects the understandings set forth in this letter, and is incorporated into this letter by reference.

The site plan shall be prepared in accordance with Section 4-104 of the DRI Review Package Technical Guidelines and it shall be dated, and shall be at a scale of $1 "=200$ ' or larger (showing more detail). The site plan shall be consistent with GRTA's Site Plan Information Guidelines, which represents the minimum required information on site plans.

The applicant shall indicate on the site plans all adjacent land uses, current zoning, and future land use as indicated on the future land use map. Additionally, all existing and proposed sidewalks, existing and proposed pedestrian trails, and existing and proposed roadway laneage should be indicated on the site plan.

## DRI REVIEW PACKAGE SUBMITTAL

At the time you are ready to submit your DRI Review Package to GRTA, please note the following:

- Provide one (1) paper copy of all materials - of the Transportation analysis and of the Site Plan
- Provide one (1) CD-ROM with electronic versions of all submittal documents:
- Provide a .pdf of each document (Adobe Acrobat)
- Provide the native format for each document
- $\quad . d w g$ is the preferred CAD format (AutoCAD)
- .docx is the preferred word processing format (Word)
- .xlsx is the preferred spreadsheet format (Excel)
- .sy7, .sy8 or .sy9 is the preferred capacity analysis format (Synchro)

As part of the completeness certification process, please have your consultant forward one copy of the completed GRTA DRI Review Package (traffic analysis, site plan, CD) to the GDOT District Office, Regional Commission and local government Planning \& Development and Transportation group (contact information provided below). GRTA shall be copied on each of the transmittal letters.

| GDOT DISTRICT 7 | CITY OF DUNWOODY | ATLANTA REGIONAL |
| :---: | :---: | :---: |
| PUBLIC WORKS | COMMISSION |  |
| Patrick Allen <br> 5025 New Peachtree Rd, NE <br> Chamblee, GA 30341 | Michael Smith <br> Andrew Smith <br> Dunwoorimeter Center East <br> Suite 250 | 40 Courtland Street, NE <br> Atlanta, Georgia 30303 |

Expedited Review Recommendation
Once the DRI Review Package (including the DCA Additional Information Form) has been submitted and determined complete, and ARC with City of Dunwoody have confirmed the LCI consistency qualification, GRTA staff will make a recommendation regarding your request for expedited review under Section 2-202.B of the Procedures and Principles for GRTA Development of Regional Impact Review. If the City of Dunwoody and/or ARC do not confirm consistency with the LCl as required, then the study network and other methodology assumptions may need to be revised for a Non-Expedited Review.

If you have any questions, please feel free to contact me (404) 463-3068 or by email at lbeall@grta.org.
Sincerely,


Laura F. Beall, AICP
Program Manager
cC: Jon West, DCA Steve Foote, City of Dunwoody
Jon Tuley, ARC
Patrick Allen, GDOT District 7
Greg Floyd, MARTA
Catherine Mercier-Baggett, City of Sandy Springs
Patrice Ruffin, City of Brookhaven

Michael Smith, City of Dunwoody
Charles Brown, Crown Holdings Group
Karla Poshedly, Moreland Altobelli
Sal Lalani, TVS Design

# Traffic Impact Study <br> For the Rezoning of the Dunwoody Crown Towers Development 

City of Dunwoody, Georgia

Prepared by<br>Moreland Altobelli Associates, Inc.

February 2016

## INTRODUCTION

A portion of the Dunwoody Crown Towers development, located in the northwest quadrant of the I-285/Ashford-Dunwoody Road Interchange, is proposed to be rezoned. The Dunwoody Crown Towers Development is currently located on Gold Kist Drive. The current O-I zoning on the west end allows for approximately 1,600,000 square feet (SF) of high-rise office space. The master site plan includes two office towers with 24 stories ( 567,000 SF each), a restaurant and conference center of approximately 96,000 SF and a high-rise hotel ( 28 stories with up to 500 rooms or $356,200 \mathrm{SF}$ ). The proposed zoning requested on the east end would include 380 units of high-rise condominiums in mixed-use buildings, a retail center ( 3 stories with a total of 43,700 SF) and a small luxury hotel with approximately 150 rooms or 115,200 SF.

The purpose of this study is to analyze future traffic conditions with and without the proposed zoning and to recommend improvements to maintain acceptable traffic operating conditions, if any, upon the completion of the development. The proposed Dunwoody Crown Towers development is expected to be completed in 2026. The project location map is shown in Figure 1.

Figure 1: Project Location Map


## STUDY AREA ROADWAY NETWORK

The study area roadway network is comprised of five key intersections that are expected to be impacted by the Project:

1. Perimeter Center Parkway at Hammond Drive
2. Perimeter Center Parkway at Gold Kist Drive
3. Perimeter Center Parkway at Lake Hearn Drive
4. Hammond Drive at Ashford-Dunwoody Road
5. Hammond Drive at Shopping Center Driveway

The following is a brief inventory of each major roadway within the study area.

## Perimeter Center Parkway

Perimeter Center Parkway is a four-lane divided north-south oriented roadway that extends from Lake Hearn Drive to Perimeter Center West. Perimeter Center Parkway serves as a collector roadway for office and commercial developments and it parallels Peachtree-Dunwoody Road and Ashford-Dunwoody Road. The roadway has an approximate average daily traffic volume of 8,060 vehicles per day.

## Hammond Drive

Hammond Drive is a four-lane divided east-west oriented roadway that connects from Mount Vernon Highway to Ashford-Dunwoody Road. The northwest quadrant of the intersection of Hammond Drive at Ashford-Dunwoody Road is the site of Perimeter Mall. Hammond Drive crosses over GA 400 freeway and has a north-facing half-diamond interchange with the GA 400 freeway. The roadway has an approximate average daily traffic volume of 22,720 vehicles per day.

## Ashford-Dunwoody Road

Ashford-Dunwoody Road is a six-lane divided north-south oriented roadway. AshfordDunwoody Road has an interchange with I-285. The roadway has an approximate average daily traffic volume of 28,650 vehicles per day.

## Gold Kist Drive

Gold Kist Drive is a two-lane local road that ends at the driveway to the Gold Kist Office building. There is currently two other office driveways on Gold Kist Drive.

## EXISTING CONDITIONS

Peak hour turning movements were obtained from VHB Engineers (formerly GT Hill Planners) for both the morning peak period (7:00 - 9:00 a.m.) and the evening peak hour (4:00-6:00 p.m.) at five major signalized intersections along Perimeter Center Parkway and Hammond Drive. These counts were collected in 2014.

Additionally, 24-hour bi-directional traffic counts were conducted on Peachtree Center Parkway, Hammond Drive and Ashford-Dunwoody Road in 2015. All of the existing daily traffic volumes are contained within the Appendix.

## ANALYSIS OF EXISTING TRAFFIC CONDTIONS

The existing traffic conditions were evaluated at five of the intersections in the study area to determine the operational performance of the area roadway network. Figure 2 shows the existing peak hour traffic volumes that were used in this analysis.

## Intersection Capacity Analysis

The goal of this analysis is to investigate the existing traffic operational performance of the individual intersections of the study area. This analysis was conducted using the methodology outlined in the 2010 Highway Capacity Manual (HCM). This methodology is the industry standard for the evaluation of intersection capacity and delay. In order to facilitate the analysis, a computerized procedure referred to as SYNCHRO was used. This software conforms to the methodology of the HCM. SYNCHRO determines operational characteristics of the intersection. Two of these characteristics that help define the conditions at an intersection are the Level of Service (LOS) and the vehicular delay.

The vehicular delay value that results from the SYNCHRO analysis is used to determine the level of service of an intersection. Level of service (LOS) is a letter designation used to describe traffic operating conditions, on a declining scale from A to F. LOS "A" represents free-flow traffic conditions and LOS "F" represents extreme delays with stopped traffic conditions. Table 1 below indicates the relationship between intersection delay and level of service for signalized intersections.

Figure 2: 2014 Existing Traffic Volumes


Table 1: Level of Service Criteria For Signalized Intersections

| Level of Service | Control Delay (seconds/vehicle) |
| :---: | :---: |
| A | $0-10$ |
| B | $>10-20$ |
| C | $>20-35$ |
| D | $>35-55$ |
| E | $>55-80$ |
| F | $>80$ |

The results of the existing traffic conditions capacity analysis are summarized in Table 2 below:
Table 2: Summary of Intersection Capacity Analysis
Existing Traffic Conditions

| Name of Intersection |  | AM Peak Hour |  | PM Peak Hour |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  |  | Delay | LOS | Delay |  |
| Perimeter Center Parkway at Hammond Drive | B | 13.4 | B | 19.9 |  |
| Perimeter Center Parkway at Gold Kist Drive | A | 4.9 | A | 1.7 |  |
| Perimeter Center Parkway at Lake Hearn Drive | A | 7.3 | B | 11.2 |  |
| Hammond Drive at Ashford-Dunwoody Road | B | 19.2 | C | 29.6 |  |
| Hammond Drive at Shopping Center Driveway | A | 3.3 | A | 8.5 |  |

Under existing conditions, all the intersections shown above are operating at acceptable levels of service during AM and PM peak hours. The intersection capacity analysis worksheets are contained within the Appendix.

## FUTURE TRAFFIC CONDITIONS

Future year 2026 traffic volumes without the Dunwoody Crown Towers development (2026 NoBuild Conditions) were determined from the trip generation of planned development in the area. Table 3 is a list of planned development and the source of information obtained for each development site. Many of the sources were from Developments of Regional Impact (DRI) reports.

Table 3: Development in the Area and Source of Information

| Name of Development/Location | DRI \# | Prepared By |
| :--- | :---: | :--- |
| 236 Perimeter Mixed-Use (a.k.a State Farm, <br> Phase I) | 1582 | Kimley-Horn and Associates, Inc. |
| Park Center (a.k.a. State Farm, Phase II), <br> Included High Street (DRI\#1432), State Farm, <br> Phase I and Palisades Apartments (DRI\#1152, <br> updated in 2015) | 2501 | Kimley-Horn and Associates, Inc. |
| Hines Ravinia IV, Trip Generation |  | Square footage and land use provided <br> by the City of Dunwoody |
| 1201 Hammond Drive, Trip Generation |  | Square footage and land use provided <br> by the City of Dunwoody. |

The percent distribution of development traffic along the roadways of the study was obtained from the respective studies listed above. The trip generated traffic was manually distributed and assigned to the study area roadway network. The resulting future 2026 traffic volumes are shown in Figure 3.

## Project Trip Generation

Vehicle trip generation was estimated for the Dunwoody Crown Towers development using trip generation equations developed by the Institute of Transportation Engineers (ITE) and published in a report titled, Trip Generation, 9th Edition. Full build-out and occupancy of the development were assumed when applying the trip generation equations. The summary of the trips generated by Dunwoody Crown Towers development can be found in Tables 4 and 5.

Figure 3: 2026 Traffic Volumes, No-Build Conditions Without Dunwoody Crown Towers Development


Table 4: Trip Generation
Current Zoning

| Land UseDunwoody Crown Towers Development | $\begin{aligned} & \text { ITE } \\ & \text { Code } \end{aligned}$ | Weekday Daily Trips | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Enter | Exit |
| 1,134,000 SF, Office - Two Towers | 710 | 8,312 | 1,175 | 160 | 230 | 1,120 |
| 500-room Hotel - Tower 356,200 SF | 310 | 4,102 | 155 | 110 | 155 | 145 |
| 32,452 SF Restaurant | 931 | 292 | 15 | 10 | 165 | 80 |
| 63,442 SF Conference Center | 715 | 739 | 100 | 15 | 15 | 100 |
| Gross Trips | - | 13,445 | 1,445 | 295 | 565 | 1,445 |
| 25\% Reduction Transit* | - | -3,361 | -361 | -74 | -141 | -361 |
| Trip Generation of Existing Zoning | - | 10,084 | 1,084 | 221 | 424 | 1,084 |
| Rounded Values Used in Traffic Study | - | 10,100 | 1,085 | 220 | 425 | 1,085 |

*Transit reduction based on Kimley Horn transit reductions from State Farm DRI (Park Center DRI \#2501)

Table 5: Trip Generation
Proposed Zoning

| Land UseDunwoody Crown Towers Development | ITE <br> Code | Weekday Daily Trips | AM Peak Hour |  | PM Peak Hour |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Enter | Exit |
| 1,134,000 SF, Office - Two Towers | 710 | 8,312 | 1,175 | 160 | 230 | 1,120 |
| 500-room Hotel - Tower 356,200 SF | 310 | 4,102 | 155 | 110 | 155 | 145 |
| 32,452 SF Restaurant | 931 | 292 | 15 | 10 | 165 | 80 |
| 63,442 SF Conference Center | 715 | 739 | 100 | 15 | 15 | 100 |
| 380 units High-Rise Condominium | 232 | 1,656 | 25 | 115 | 90 | 55 |
| 150-room Luxury Hotel | 310 | 969 | 45 | 35 | 45 | 45 |
| 43,700 SF Retail Center | 826 | 1,936 | 60 | 35 | 55 | 70 |
| Gross Trips | - | 18,006 | 1,575 | 480 | 755 | 1,615 |
| 25\% Reduction Transit* | - | -4,501 | -394 | -120 | -189 | -404 |
| Mixed-Use Reduction** | - | -828 | -0 | -0 | -35 | -74 |
| Trip Generation of Proposed Zoning | - | 12,677 | 1,181 | 360 | 531 | 1,137 |
| Rounded Values Used in Traffic Study | - | 12,680 | 1,180 | 360 | 530 | 1,140 |

*Transit reduction based on Kimley Horn transit reductions from State Farm DRI (Park Center DRI \#2501)
**Mixed-Use Reduction due to Internal Capture (Source: Chapter 7, ITE Trip Generation Handbook, 9th Edition)

## Traffic Distribution and Assignment

The estimated net new external trips were manually distributed and assigned to the study area road network based on the percent distribution obtained from VHB Engineers.

The resulting future year 2026 traffic volumes (2026 Future Build Conditions) with the current zoning and with the proposed zoning were determined and are shown in Figures 4 and 5, respectively.

Figure 4: 2026 Build Traffic Volumes
With Dunwoody Crown Towers Development's Current Zoning


Figure 5: 2026 Build Traffic Volumes
With Dunwoody Crown Towers Development's Proposed Zoning


## ANALYSIS OF FUTURE TRAFFIC CONDITIONS

The future 2026 traffic conditions were evaluated under three different scenarios:

- Scenario 1: 2026 No-Build Conditions - This scenario includes planned development in the area without the Dunwoody Crown Towers development
- Scenario 2: 2026 Build with Current Zoning Conditions - This scenario includes planned development in the area and the current zoning that allows two office towers with 24 stories ( 567,000 SF each), a restaurant and conference center of approximately $96,000 \mathrm{SF}$ and a high-rise hotel ( 28 stories with up to 500 rooms or 356,200 SF).
- Scenario 3: 2026 Build with Proposed Zoning Conditions - This scenario includes planned development in the area and the proposed zoning that would allow 380 units of high-rise condominiums in mixed-use buildings, a retail center ( 3 stories with a total of $43,700 \mathrm{SF}$ ) and a small luxury hotel with approximately 150 rooms or 115,200 SF in addition to what is currently zoned.

SYNCHRO analysis was used to evaluate the major intersections of each scenario. Lane configuration and roadway assumptions were made for each scenario. Figure 6 illustrates the following assumptions that were made:

- The State Farm Phase I development would construct a right-turn lane on Hammond Drive that would allow motorists to turn into the right-in and right-out site driveway of the development.
- The Park Center development would construct a right-in, right-out driveway on Perimeter Center Parkway across from the planned State Farm Phase I development driveway. The State Farm Phase I development driveway would allow southbound left-turns and northbound right-turns into the driveway and right-out turns out of the driveway. There is also a proposed southbound entrance only tunnel into the State Farm Phase I development.
- The Park Center development would construct a driveway across from Gold Kist Drive.
- A new connector road is planned to be constructed from Perimeter Center Parkway to Peachtree-Dunwoody Road. On the City of Dunwoody side, Park Center development would construct the connector roadway from Perimeter Center Parkway to the Sandy Springs City Limits. It will intersect at the current median opening on Perimeter Center Parkway south of Gold Kist Drive. This connector roadway would be constructed as a three-lane roadway. On the Sandy Springs side, the proposed Palisades apartment development will construct the Connector Road as a matching three-lane roadway from Peachtree-Dunwoody Road to the City of Dunwoody City limits.
- Dunwoody Crown Towers development would construct additional turn-lanes on the Gold Kist Drive approach to Perimeter Center Parkway.
- The Park Center DRI recommended the construction of an additional left-turn lane on the westbound and northbound approaches of the intersection of Hammond Drive and Peachtree Center Parkway. An exclusive right-turn lane on eastbound Hammond Drive at Peachtree Center Parkway was also recommended in the Park Center DRI.

Figure 6: Future Lane Configurations in 2026


Table 6 summarizes the results of the intersection capacity analysis. The intersection capacity analysis worksheets are contained within the Appendix.

Table 6: Summary of Intersection Capacity Analysis
Future 2026 No-Build, Build with Current Zoning and Build with Proposed Zoning Traffic Conditions

| Intersections | Scenario 12026 No-Build |  |  |  | Scenario 22026 Current Zoning |  |  |  | Scenario 3 <br> 2026 Proposed Zoning |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM |  | PM |  | AM |  | PM |  | AM |  | PM |  |
|  | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay | LOS | Delay |
| Perimeter Center Parkway at Hammond Drive | C | 26.6 | B | 10.6 | D | 36.9 | D | 43.6 | D | 42.4 | D | 45.1 |
| Perimeter Center Parkway at Gold Kist Drive | A | 5.9 | A | 7.2 | B | 16.7 | C | 31.0 | B | 18.0 | C | 28.5 |
| Perimeter Center Parkway <br> at Westside Connector | A | 5.6 | A | 7.2 | A | 7.6 | B | 11.5 | A | 7.9 | B | 12.0 |
| Perimeter Center Parkway at Lake Hearn Drive | B | 10.9 | D | 37.3 | B | 12.3 | B | 13.1 | B | 12.2 | B | 13.3 |
| Hammond Drive at Ashford-Dunwoody Road | D | 43.9 | E | 71.3 | D | 54.0 | F | 84.3 | D | 54.6 | F | 84.2 |
| Hammond Drive at Shopping Center Driveway | A | 7.4 | C | 27.1 | B | 10.6 | C | 26.5 | A | 9.8 | C | 26.5 |

The results of the intersection capacity studies indicate that all intersections will operate at acceptable levels of service in the future no-build, build with current zoning of Dunwoody Crown Towers development, and build conditions with the proposed rezoning of Dunwoody Crown Towers development except for the intersection of Hammond Drive at AshfordDunwoody Road. There is an existing traffic problem that is being made worse with every new development in the Perimeter Center area. Traffic congestion at the intersection of AshfordDunwoody Road at Hammond Drive is the result of a traffic pattern caused by the poor interstate access to properties along Perimeter Center Parkway. Traffic from the I-285 westbound Ashford-Dunwoody Road ramp turns right onto Ashford-Dunwoody Road and then turns left onto Hammond Drive to reach destinations along Perimeter Center Parkway. This maneuver is a complex weave across three lanes and has the potential to have frequent crashes.

A project has been proposed and is under study to provide an access ramp from I-285 westbound that would underpass Ashford-Dunwoody Road and tie into Gold Kist Drive to be renamed the Westside Connector. This project would eliminate weaving traffic on Ashford-Dunwoody Road, reduce traffic congestion on Hammond Drive and Ashford-Dunwoody Road and provide improved access to Perimeter Center Parkway.

## CONCLUSIONS

In conclusion, the rezoning of the Dunwoody Crown Towers development to add a residential/mixed-use component that includes 380 units of high-rise condominiums, a small luxury hotel and a small retail center will not impact the operations of the study intersections. There are no new improvements required to facilitate the addition of this residential development. Table 6 results indicate that there is less than one second of delay increase at the major intersections under the proposed zoning scenario.

Additionally, there would be a slight reduction in overall traffic because a small percentage of the residents of the condominiums would typically work at the office towers and office workers and residents would frequent the retail center. Also, the residential traffic peak hour movements are reverse from that of the office towers; therefore the residential traffic would not create the need for additional capacity on the roadway network.

## APPENDIX

# Traffic Data and Analysis Results <br> - 2015 Daily Traffic Volumes <br> - SYNCHRO Analysis results 

## APPENDIX

# Traffic Data and Analysis Results <br> - 2015 Daily Traffic Volumes <br> - SYNCHRO Analysis results 

NB

| Start Time | Bikes |  <br> Trailers | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | $<5 \mathrm{AxI}$ Double | 5 Axle Double | $>6 \mathrm{AxI}$ Double | $<6 \mathrm{AxI}$ Multi | 6 Axle Multi | $\begin{array}{r} >6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/15/15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 00:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
|  | 2 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 02:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 03:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|  | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 | 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 |
| 05:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:15 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:45 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
|  | 0 | 8 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 06:00 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 06:15 | 1 | 9 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 06:30 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 06:45 | 0 | 21 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
|  | 1 | 53 | 8 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 07:00 | 0 | 19 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 07:15 | 0 | 28 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| 07:30 | 0 | 38 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| 07:45 | 0 | 51 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
|  | 0 | 136 | 20 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 158 |
| 08:00 | 0 | 57 | 8 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 68 |
| 08:15 | 0 | 50 | 6 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 59 |
| 08:30 | 0 | 45 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 08:45 | 0 | 57 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
|  | 0 | 209 | 28 | 1 | 2 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 245 |
| 09:00 | 0 | 37 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 09:15 | 0 | 22 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 09:30 | 0 | 36 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 09:45 | 0 | 46 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 |
|  | 0 | 141 | 16 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 159 |
| 10:00 | 0 | 23 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 10:15 | 0 | 35 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 |
| 10:30 | 0 | 30 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 10:45 | 1 | 43 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
|  | 1 | 131 | 14 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 151 |
| 11:00 | 0 | 48 | 7 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 58 |
| 11:15 | 0 | 72 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 84 |
| 11:30 | 0 | 74 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| 11:45 | 0 | 109 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 114 |
|  | 0 | 303 | 27 | 1 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 339 |
| Total | 4 | 990 | 115 | 6 | 14 | 12 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1143 |
| Percent | 0.3\% | 86.6\% | 10.1\% | 0.5\% | 1.2\% | 1.0\% | 0.0\% | 0.2\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |

Site Code: 13
Station ID: 13
PERIMETER CENTER PKWY NORTH OF I-285
Latitude: 0' 0.0000 Undefined
NB

| Start <br> Time | Bikes | Cars \& Trailers | 2 Axle Long | Buses | 2 Axle <br> 6 Tire | 3 Axle Single | 4 Axle Single | $<5 \mathrm{AxI}$ Double | 5 Axle Double | $>6 \mathrm{AxI}$ <br> Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \\ \hline \end{array}$ | 6 Axle Multi | $>6$ AxI Multi | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 PM | 0 | 101 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 113 |
| 12:15 | 0 | 72 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 82 |
| 12:30 | 0 | 67 | 8 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 12:45 | 0 | 62 | 9 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
|  | 0 | 302 | 39 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 345 |
| 13:00 | 0 | 56 | 10 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
| 13:15 | 0 | 42 | 11 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 13:30 | 0 | 54 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 13:45 | 0 | 39 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
|  | 0 | 191 | 38 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 235 |
| 14:00 | 0 | 32 | 5 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 14:15 | 0 | 28 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 14:30 | 0 | 50 | 11 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 |
| 14:45 | 0 | 51 | 9 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
|  | 0 | 161 | 31 | 4 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 205 |
| 15:00 | 0 | 43 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 15:15 | 0 | 52 | 11 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| 15:30 | 0 | 55 | 19 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 80 |
| 15:45 | 0 | 68 | 16 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 |
|  | 0 | 218 | 54 | 6 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 285 |
| 16:00 | 0 | 108 | 25 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 135 |
| 16:15 | 0 | 110 | 15 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 129 |
| 16:30 | 1 | 125 | 20 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 152 |
| 16:45 | 0 | 127 | 10 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 139 |
|  | 1 | 470 | 70 | 2 | 9 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 555 |
| 17:00 | 1 | 135 | 11 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 151 |
| 17:15 | 6 | 80 | 10 | 1 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 106 |
| 17:30 | 4 | 65 | 8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 |
| 17:45 | 1 | 76 | 12 | 1 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 |
|  | 12 | 356 | 41 | 3 | 26 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 440 |
| 18:00 | 2 | 100 | 12 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 129 |
| 18:15 | 0 | 87 | 6 | 1 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 101 |
| 18:30 | 0 | 95 | 9 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| 18:45 | 0 | 61 | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 68 |
|  | 2 | 343 | 33 | 2 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 405 |
| 19:00 | 0 | 57 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| 19:15 | 0 | 57 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 |
| 19:30 | 0 | 39 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
| 19:45 | 0 | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
|  | 0 | 178 | 10 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 193 |
| 20:00 | 0 | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 20:15 | 0 | 18 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 20:30 | 0 | 8 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 20:45 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
|  | 0 | 56 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 63 |
| 21:00 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 21:15 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 21:30 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 21:45 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
|  | 0 | 28 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 22:00 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 22:15 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 22:30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 22:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  | 0 | 16 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 23:00 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 23:15 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 23:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 23:45 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| Total | 15 | 2330 | 322 | 21 | 82 | 11 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 2787 |
| Percent | 0.5\% | 83.6\% | 11.6\% | 0.8\% | 2.9\% | 0.4\% | 0.0\% | 0.2\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |
| Grand Total | 19 | 3320 | 437 | 27 | 96 | 23 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 3930 |
| Percent | 0.5\% | 84.5\% | 11.1\% | 0.7\% | 2.4\% | 0.6\% | 0.0\% | 0.2\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |

SB

| Start <br> Time | Bikes |  <br> Trailers | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | $<5 \mathrm{AxI}$ Double | 5 Axle Double | >6 AxI Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | 6 Axle Multi | $>6 \mathrm{AxI}$ <br> Multi | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/15/15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:45 | 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 |
| 01:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 | 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 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 | 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 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:30 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 04:45 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
|  | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 05:45 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
|  | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 06:00 | 0 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 06:15 | 0 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 06:30 | 0 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 06:45 | 0 | 28 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 32 |
|  | 0 | 67 | 5 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 75 |
| 07:00 | 0 | 36 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 07:15 | 1 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| 07:30 | 0 | 51 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| 07:45 | 0 | 85 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87 |
|  | 1 | 215 | 5 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 225 |
| 08:00 | 0 | 53 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 56 |
| 08:15 | 0 | 54 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 |
| 08:30 | 0 | 63 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 67 |
| 08:45 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
|  | 0 | 219 | 5 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 227 |
| 09:00 | 1 | 69 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 73 |
| 09:15 | 0 | 54 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 57 |
| 09:30 | 0 | 44 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 09:45 | 0 | 46 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
|  | 1 | 213 | 8 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 225 |
| 10:00 | 0 | 31 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 10:15 | 0 | 21 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 10:30 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 10:45 | 0 | 34 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
|  | 0 | 110 | 5 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 119 |
| 11:00 | 0 | 30 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 11:15 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 |
| 11:30 | 0 | 33 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 11:45 | 0 | 42 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 |
|  | 0 | 146 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 154 |
| Total | 2 | 987 | 34 | 1 | 15 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1043 |
| Percent | 0.2\% | 94.6\% | 3.3\% | 0.1\% | 1.4\% | 0.1\% | 0.0\% | 0.3\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |


| Start <br> Time | Bikes |  <br> Trailers | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | $<5$ AxI Double | 5 Axle Double | $>6 \mathrm{AxI}$ Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | 6 Axle Multi | $\begin{array}{r} >6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 PM | 0 | 34 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| 12:15 | 1 | 50 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| 12:30 | 0 | 82 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 84 |
| 12:45 | 0 | 92 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 95 |
|  |  | 258 | 5 | 0 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 269 |
| 13:00 | 1 | 84 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 88 |
| 13:15 | 0 | 91 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 |
| 13:30 | 1 | 73 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 13:45 | 0 | 71 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75 |
|  | 2 | 319 | 9 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 334 |
| 14:00 | 1 | 63 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 66 |
| 14:15 | 0 | 68 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
| 14:30 | 0 | 73 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 76 |
| 14:45 | 1 | 63 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 71 |
|  | 2 | 267 | 8 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 284 |
| 15:00 | 0 | 92 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 96 |
| 15:15 | 0 | 107 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 112 |
| 15:30 | 0 | 152 | 6 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 163 |
| 15:45 | 0 | 134 | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 141 |
|  | 0 | 485 | 15 | 0 | 6 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 512 |
| 16:00 | 0 | 153 | 5 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 |
| 16:15 | 0 | 146 | 5 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 155 |
| 16:30 | 1 | 222 | 7 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 233 |
| 16:45 | 0 | 156 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 162 |
|  | 1 | 677 | 20 | 1 | 5 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 712 |
| 17:00 | 1 | 197 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 203 |
| 17:15 | 1 | 177 | 3 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 185 |
| 17:30 | 0 | 170 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 175 |
| 17:45 | 1 | 161 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 165 |
|  | 3 | 705 | 10 | 0 | 4 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 728 |
| 18:00 | 1 | 178 | 6 | 0 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 192 |
| 18:15 | 1 | 159 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 168 |
| 18:30 | 1 | 158 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 162 |
| 18:45 | 0 | 152 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 |
|  | 3 | 647 | 16 | 0 | 9 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 682 |
| 19:00 | 0 | 108 | 6 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 118 |
| 19:15 | 0 | 46 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 19:30 | 1 | 56 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 59 |
| 19:45 | 0 | 36 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 38 |
|  | 1 | 246 | 11 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 266 |
| 20:00 | 0 | 36 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 20:15 | 0 | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 20:30 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 20:45 | 0 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
|  | 0 | 101 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 106 |
| 21:00 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| 21:15 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 21:30 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 21:45 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
|  | 0 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 22:00 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 22:15 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 22:30 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 22:45 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
|  | 0 | 27 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 23:00 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 23:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 23:30 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 23:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
|  | 0 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total | 13 | 3795 | 101 | 2 | 40 | 18 | 1 | 13 | 2 | 0 | 0 | 0 | 1 | 3986 |
| Percent | 0.3\% | 95.2\% | 2.5\% | 0.1\% | 1.0\% | 0.5\% | 0.0\% | 0.3\% | 0.1\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |
| Grand Total | 15 | 4782 | 135 | 3 | 55 | 19 | 1 | 16 | 2 | 0 | 0 | 0 | 1 | 5029 |
| Percent | 0.3\% | 95.1\% | 2.7\% | 0.1\% | 1.1\% | 0.4\% | 0.0\% | 0.3\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% | 0.0\% |  |

# All Traffic Data Services, Inc 

Page 1
1336 Farmer Road
Conyers, GA 30012
alltrafficdata.net
Site Code: 16
Station ID: 16
HAMMOND DRIVE WEST OF ASHFORD DUNWOODY
Latitude: 0' 0.0000 Undefined

| Start | 15-Dec-15 | EB |  | Hour Totals |  | WB |  | Hour Totals |  | Combined Totals |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Time | Tue | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon | Morning | Afternoon |
| 12:00 |  | 18 | 202 |  |  | 8 | 261 |  |  |  |  |
| 12:15 |  | 16 | 176 |  |  | 3 | 284 |  |  |  |  |
| 12:30 |  | 8 | 198 |  |  | 10 | 264 |  |  |  |  |
| 12:45 |  | 10 | 212 | 52 | 788 | 8 | 276 | 29 | 1085 | 81 | 1873 |
| 01:00 |  | 4 | 224 |  |  | 8 | 264 |  |  |  |  |
| 01:15 |  | 4 | 216 |  |  | 4 | 239 |  |  |  |  |
| 01:30 |  | 2 | 262 |  |  | 2 | 224 |  |  |  |  |
| 01:45 |  | 3 | 242 | 13 | 944 | 7 | 194 | 21 | 921 | 34 | 1865 |
| 02:00 |  | 4 | 274 |  |  | 7 | 207 |  |  |  |  |
| 02:15 |  | 5 | 252 |  |  | 3 | 206 |  |  |  |  |
| 02:30 |  | 1 | 290 |  |  | 2 | 234 |  |  |  |  |
| 02:45 |  | 1 | 252 | 11 | 1068 | 3 | 215 | 15 | 862 | 26 | 1930 |
| 03:00 |  | 0 | 187 |  |  | 3 | 176 |  |  |  |  |
| 03:15 |  | 2 | 122 |  |  | 1 | 188 |  |  |  |  |
| 03:30 |  | 1 | 170 |  |  | 1 | 186 |  |  |  |  |
| 03:45 |  | 4 | 88 | 7 | 567 | 6 | 188 | 11 | 738 | 18 | 1305 |
| 04:00 |  | 4 | 124 |  |  | 5 | 193 |  |  |  |  |
| 04:15 |  | 0 | 130 |  |  | 8 | 184 |  |  |  |  |
| 04:30 |  | 4 | 119 |  |  | 10 | 181 |  |  |  |  |
| 04:45 |  | 2 | 167 | 10 | 540 | 22 | 154 | 45 | 712 | 55 | 1252 |
| 05:00 |  | 10 | 128 |  |  | 26 | 190 |  |  |  |  |
| 05:15 |  | 9 | 104 |  |  | 32 | 175 |  |  |  |  |
| 05:30 |  | 10 | 84 |  |  | 38 | 168 |  |  |  |  |
| 05:45 |  | 15 | 110 | 44 | 426 | 75 | 160 | 171 | 693 | 215 | 1119 |
| 06:00 |  | 16 | 147 |  |  | 96 | 148 |  |  |  |  |
| 06:15 |  | 30 | 169 |  |  | 186 | 135 |  |  |  |  |
| 06:30 |  | 39 | 216 |  |  | 186 | 178 |  |  |  |  |
| 06:45 |  | 46 | 192 | 131 | 724 | 213 | 160 | 681 | 621 | 812 | 1345 |
| 07:00 |  | 63 | 211 |  |  | 185 | 153 |  |  |  |  |
| 07:15 |  | 77 | 206 |  |  | 197 | 138 |  |  |  |  |
| 07:30 |  | 88 | 210 |  |  | 218 | 136 |  |  |  |  |
| 07:45 |  | 82 | 208 | 310 | 835 | 248 | 141 | 848 | 568 | 1158 | 1403 |
| 08:00 |  | 96 | 225 |  |  | 240 | 106 |  |  |  |  |
| 08:15 |  | 108 | 180 |  |  | 245 | 101 |  |  |  |  |
| 08:30 |  | 90 | 192 |  |  | 210 | 88 |  |  |  |  |
| 08:45 |  | 80 | 146 | 374 | 743 | 209 | 88 | 904 | 383 | 1278 | 1126 |
| 09:00 |  | 108 | 175 |  |  | 232 | 72 |  |  |  |  |
| 09:15 |  | 97 | 134 |  |  | 234 | 62 |  |  |  |  |
| 09:30 |  | 92 | 147 |  |  | 214 | 61 |  |  |  |  |
| 09:45 |  | 75 | 121 | 372 | 577 | 248 | 46 | 928 | 241 | 1300 | 818 |
| 10:00 |  | 104 | 110 |  |  | 207 | 54 |  |  |  |  |
| 10:15 |  | 118 | 96 |  |  | 166 | 40 |  |  |  |  |
| 10:30 |  | 112 | 93 |  |  | 227 | 27 |  |  |  |  |
| 10:45 |  | 126 | 46 | 460 | 345 | 246 | 21 | 846 | 142 | 1306 | 487 |
| 11:00 |  | 165 | 77 |  |  | 272 | 39 |  |  |  |  |
| 11:15 |  | 134 | 54 |  |  | 238 | 20 |  |  |  |  |
| 11:30 |  | 136 | 32 |  |  | 237 | 21 |  |  |  |  |
| 11:45 |  | 164 | 16 | 599 | 179 | 292 | 10 | 1039 | 90 | 1638 | 269 |
| Total |  | 2383 | 7736 |  |  | 5538 | 7056 |  |  | 7921 | 14792 |
| Percent |  | 23.5\% | 76.5\% |  |  | 44.0\% | 56.0\% |  |  | 34.9\% | 65.1\% |
| Grand Total |  | 2383 | 7736 |  |  | 5538 | 7056 |  |  | 7921 | 14792 |
| Percent |  | 23.5\% | 76.5\% |  |  | 44.0\% | 56.0\% |  |  | 34.9\% | 65.1\% |

ADT
ADT 22,713
AADT 22,713

Site Code: 1 Station ID: 1

Latitude: 0' 0.0000 Undefined
NB

| Start <br> Time | Bikes |  <br> Trailers | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | $<5$ AxI Double | 5 Axle Double | $>6 \mathrm{AxI}$ Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \\ \hline \end{array}$ | 6 Axle Multi | $>6 \mathrm{AxI}$ <br> Multi | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/15/15 | 0 | 41 | 10 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| 00:15 | 0 | 32 | 6 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 00:30 | 0 | 18 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 27 |
| 00:45 | 0 | 13 | 13 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
|  | 0 | 104 | 37 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 149 |
| 01:00 | 0 | 12 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 01:15 | 0 | 15 | 3 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 21 |
| 01:30 | 0 | 11 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 15 |
| 01:45 | 1 | 15 | 2 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 21 |
|  | 1 | 53 | 9 | 1 | 4 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 72 |
| 02:00 | 0 | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 02:15 | 0 | 12 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 02:30 | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 02:45 | 0 | 11 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
|  | 0 | 37 | 13 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 03:00 | 0 | 9 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 03:15 | 0 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 03:30 | 0 | 9 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 03:45 | 2 | 22 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
|  | 2 | 43 | 10 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 |
| 04:00 | 1 | 7 | 6 | 0 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 20 |
| 04:15 | 0 | 10 | 5 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 18 |
| 04:30 | 0 | 25 | 6 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 33 |
| 04:45 | 0 | 36 | 11 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49 |
|  | 1 | 78 | 28 | 0 | 8 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 120 |
| 05:00 | 1 | 38 | 9 | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 54 |
| 05:15 | 0 | 45 | 21 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 69 |
| 05:30 | 0 | 73 | 27 | 0 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 109 |
| 05:45 | 1 | 121 | 38 | 1 | 9 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 173 |
|  | 2 | 277 | 95 | 2 | 21 | 0 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 405 |
| 06:00 | 2 | 138 | 30 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 178 |
| 06:15 | 10 | 152 | 45 | 3 | 12 | 3 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 232 |
| 06:30 | 9 | 232 | 62 | 4 | 6 | 2 | 0 | 11 | 1 | 1 | 1 | 0 | 1 | 330 |
| 06:45 | 8 | 194 | 54 | 2 | 5 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 271 |
|  | 29 | 716 | 191 | 9 | 29 | 9 | 1 | 22 | 1 | 1 | 1 | 0 | 2 | 1011 |
| 07:00 | 6 | 189 | 45 | 2 | 12 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 262 |
| 07:15 | 5 | 179 | 47 | 2 | 9 | 1 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 249 |
| 07:30 | 7 | 190 | 47 | 1 | 7 | 4 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 265 |
| 07:45 | 4 | 225 | 68 | 1 | 8 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 313 |
|  | 22 | 783 | 207 | 6 | 36 | 10 | 0 | 22 | 0 | 1 | 0 | 1 | 1 | 1089 |
| 08:00 | 11 | 221 | 52 | 4 | 7 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 304 |
| 08:15 | 7 | 151 | 53 | 4 | 6 | 3 | 0 | 5 | 1 | 0 | 2 | 1 | 0 | 233 |
| 08:30 | 7 | 172 | 51 | 1 | 7 | 1 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 247 |
| 08:45 | 10 | 139 | 42 | 1 | 6 | 2 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 209 |
|  | 35 | 683 | 198 | 10 | 26 | 8 | 0 | 26 | 2 | 0 | 2 | 1 | 2 | 993 |
| 09:00 | 9 | 153 | 50 | 4 | 12 | 2 | 0 | 8 | 1 | 1 | 1 | 0 | 1 | 242 |
| 09:15 | 8 | 187 | 57 | 2 | 13 | 3 | 0 | 12 | 1 | 0 | 2 | 0 | 1 | 286 |
| 09:30 | 8 | 177 | 57 | 3 | 15 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 2 | 272 |
| 09:45 | 5 | 159 | 63 | 2 | 8 | 2 | 0 | 7 | 1 | 1 | 1 | 0 | 0 | 249 |
|  | 30 | 676 | 227 | 11 | 48 | 11 | 0 | 33 | 3 | 2 | 4 | 0 | 4 | 1049 |
| 10:00 | 12 | 169 | 69 | 3 | 10 | 3 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 274 |
| 10:15 | 9 | 151 | 79 | 1 | 13 | 5 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 268 |
| 10:30 | 10 | 177 | 91 | 2 | 17 | 1 | 1 | 11 | 1 | 0 | 1 | 0 | 0 | 312 |
| 10:45 | 7 | 164 | 60 | 2 | 13 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 257 |
|  | 38 | 661 | 299 | 8 | 53 | 13 | 1 | 33 | 1 | 1 | 1 | 0 | 2 | 1111 |
| 11:00 | 7 | 192 | 83 | 2 | 11 | 2 | 0 | 5 | 1 | 0 | 1 | 0 | 0 | 304 |
| 11:15 | 10 | 148 | 65 | 2 | 11 | 3 | 1 | 5 | 1 | 2 | 1 | 0 | 0 | 249 |
| 11:30 | 8 | 137 | 63 | 1 | 8 | 3 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 224 |
| 11:45 | 5 | 113 | 46 | 1 | 10 | 2 | 1 | 5 | 1 | 0 | 2 | 0 | 0 | 186 |
|  | 30 | 590 | 257 | 6 | 40 | 10 | 2 | 18 | 3 | 3 | 4 | 0 | 0 | 963 |
| Total | 190 | 4701 | 1571 | 56 | 278 | 65 | 4 | 167 | 12 | 8 | 13 | 2 | 11 | 7078 |
| Percent | 2.7\% | 66.4\% | 22.2\% | 0.8\% | 3.9\% | 0.9\% | 0.1\% | 2.4\% | 0.2\% | 0.1\% | 0.2\% | 0.0\% | 0.2\% |  |

Site Code: 1 Station ID: 1

Latitude: 0' 0.0000 Undefined
NB

| Start <br> Time | Bikes |  <br> Trailers | 2 Axle Long | Buses | 2 Axle <br> 6 Tire | 3 Axle Single | 4 Axle Single | <5 AxI Double | 5 Axle Double | $>6$ AxI Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \\ \hline \end{array}$ | 6 Axle Multi | $\begin{array}{r} >6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 PM | 10 | 98 | 31 | 3 | 9 | 2 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 161 |
| 12:15 | 10 | 92 | 36 | 2 | 5 | 2 | 0 | 7 | 1 | 0 | 0 | 0 | 1 | 156 |
| 12:30 | 5 | 89 | 33 | 4 | 2 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 141 |
| 12:45 | 7 | 84 | 33 | 2 | 4 | 4 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 142 |
|  | 32 | 363 | 133 | 11 | 20 | 10 | 0 | 25 | 2 | 0 | 1 | 1 | 2 | 600 |
| 13:00 | 12 | 89 | 47 | 1 | 6 | 3 | 0 | 7 | 0 | 1 | 0 | 0 | 0 | 166 |
| 13:15 | 4 | 116 | 72 | 1 | 12 | 1 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 214 |
| 13:30 | 10 | 125 | 67 | 3 | 14 | 3 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 228 |
| 13:45 | 8 | 120 | 58 | 2 | 9 | 5 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 207 |
|  | 34 | 450 | 244 | 7 | 41 | 12 | 0 | 23 | 2 | 1 | 0 | 0 | 1 | 815 |
| 14:00 | 8 | 136 | 81 | 3 | 12 | 3 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 248 |
| 14:15 | 3 | 149 | 83 | 3 | 5 | 2 | 0 | 2 | 2 | 0 | 1 | 0 | 1 | 251 |
| 14:30 | 7 | 107 | 64 | 3 | 12 | 3 | 0 | 6 | 0 | 1 | 0 | 0 | 0 | 203 |
| 14:45 | 6 | 87 | 56 | 3 | 9 | 2 | 0 | 6 | 1 | 1 | 1 | 1 | 1 | 174 |
|  | 24 | 479 | 284 | 12 | 38 | 10 | 0 | 18 | 3 | 2 | 3 | 1 | 2 | 876 |
| 15:00 | 8 | 135 | 75 | 2 | 9 | 2 | 0 | 11 | 1 | 0 | 1 | 0 | 1 | 245 |
| 15:15 | 4 | 129 | 121 | 6 | 18 | 2 | 0 | 12 | 0 | 2 | 0 | 0 | 1 | 295 |
| 15:30 | 6 | 160 | 129 | 4 | 11 | 3 | 0 | 12 | 2 | 2 | 0 | 0 | 1 | 330 |
| 15:45 | 5 | 184 | 92 | 1 | 12 | 3 | 0 | 16 | 1 | 1 | 1 | 0 | 0 | 316 |
|  | 23 | 608 | 417 | 13 | 50 | 10 | 0 | 51 | 4 | 5 | 2 | 0 | 3 | 1186 |
| 16:00 | 8 | 152 | 86 | 2 | 16 | 3 | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 278 |
| 16:15 | 5 | 100 | 61 | 1 | 5 | 3 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 180 |
| 16:30 | 10 | 70 | 29 | 1 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 117 |
| 16:45 | 9 | 65 | 30 | 2 | 8 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 118 |
|  | 32 | 387 | 206 | 6 | 32 | 9 | 0 | 18 | 1 | 1 | 1 | 0 | 0 | 693 |
| 17:00 | 9 | 57 | 35 | 2 | 7 | 3 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 118 |
| 17:15 | 3 | 63 | 29 | 1 | 6 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 106 |
| 17:30 | 9 | 83 | 42 | 2 | 9 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 151 |
| 17:45 | 5 | 77 | 22 | 1 | 4 | 2 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 115 |
|  | 26 | 280 | 128 | 6 | 26 | 10 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 490 |
| 18:00 | 10 | 92 | 33 | 1 | 3 | 4 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 146 |
| 18:15 | 6 | 70 | 34 | 2 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 121 |
| 18:30 | 9 | 74 | 24 | 2 | 3 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 118 |
| 18:45 | 6 | 86 | 32 | 2 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 136 |
|  | 31 | 322 | 123 | 7 | 13 | 11 | 0 | 13 | 0 | 0 | 1 | 0 | 0 | 521 |
| 19:00 | 7 | 94 | 43 | 1 | 7 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 162 |
| 19:15 | 5 | 147 | 108 | 2 | 8 | 2 | 0 | 16 | 0 | 0 | 2 | 0 | 0 | 290 |
| 19:30 | 5 | 143 | 108 | 3 | 8 | 2 | 0 | 13 | 2 | 1 | 1 | 0 | 0 | 286 |
| 19:45 | 9 | 130 | 80 | 1 | 10 | 2 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 240 |
|  | 26 | 514 | 339 | 7 | 33 | 8 | 0 | 45 | 2 | 1 | 3 | 0 | 0 | 978 |
| 20:00 | 3 | 102 | 74 | 0 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 189 |
| 20:15 | 1 | 125 | 79 | 3 | 8 | 1 | 0 | 6 | 0 | 0 | 0 | 2 | 0 | 225 |
| 20:30 | 2 | 99 | 68 | 1 | 2 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 183 |
| 20:45 | 4 | 88 | 66 | 0 | 4 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 173 |
|  | 10 | 414 | 287 | 4 | 17 | 3 | 0 | 33 | 0 | 0 | 0 | 2 | 0 | 770 |
| 21:00 | 4 | 86 | 83 | 0 | 4 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 184 |
| 21:15 | 2 | 82 | 71 | 1 | 2 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 163 |
| 21:30 | 1 | 71 | 38 | 0 | 6 | 1 | 1 | 6 | 0 | 0 | 1 | 0 | 0 | 125 |
| 21:45 | 3 | 76 | 58 | 2 | 5 | 0 | 0 | 4 | 0 | 1 | 0 | 1 | 1 | 151 |
|  | 10 | 315 | 250 | 3 | 17 | 3 | 1 | 20 | 0 | 1 | 1 | 1 | 1 | 623 |
| 22:00 | 1 | 82 | 36 | 1 | 5 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 129 |
| 22:15 | 3 | 81 | 35 | 1 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 134 |
| 22:30 | 0 | 60 | 39 | 1 | 6 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 110 |
| 22:45 | 1 | 73 | 31 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 109 |
|  | 5 | 296 | 141 | 4 | 19 | 1 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | 482 |
| 23:00 | 1 | 54 | 22 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 82 |
| 23:15 | 0 | 39 | 26 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 69 |
| 23:30 | 0 | 50 | 21 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 73 |
| 23:45 | 0 | 27 | 20 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 49 |
|  | 1 | 170 | 89 | 1 | 4 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 273 |
| Total | 254 | 4598 | 2641 | 81 | 310 | 87 | 1 | 280 | 16 | 11 | 14 | 5 | 9 | 8307 |
| Percent | 3.1\% | 55.4\% | 31.8\% | 1.0\% | 3.7\% | 1.0\% | 0.0\% | 3.4\% | 0.2\% | 0.1\% | 0.2\% | 0.1\% | 0.1\% |  |
| Grand Total | 444 | 9299 | 4212 | 137 | 588 | 152 | 5 | 447 | 28 | 19 | 27 | 7 | 20 | 15385 |
| Percent | 2.9\% | 60.4\% | 27.4\% | 0.9\% | 3.8\% | 1.0\% | 0.0\% | 2.9\% | 0.2\% | 0.1\% | 0.2\% | 0.0\% | 0.1\% |  |

Site Code: 1.5
Station ID: 1.5
ASHFORD DUNWOODY ROAD NORTH OF HAMMOND DRIVE
Latitude: 0' 0.0000 Undefined
SB

| Start Time | Bikes | Cars \& Trailers | 2 Axle Long | Buses | 2 Axle <br> 6 Tire | 3 Axle Single | 4 Axle Single | $<5 \mathrm{AxI}$ Double | 5 Axle Double | $>6 \mathrm{AxI}$ Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \\ \hline \end{array}$ | 6 Axle Multi | $>6$ AxI Multi | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12/15/15 | 0 | 55 | 13 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 72 |
| 00:15 | 2 | 51 | 10 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 66 |
| 00:30 | 2 | 35 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 45 |
| 00:45 | 1 | 31 | 10 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 44 |
|  | 5 | 172 | 40 | 0 | 2 | 3 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 227 |
| 01:00 | 1 | 29 | 7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 01:15 | 0 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 20 |
| 01:30 | 0 | 17 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 01:45 | 3 | 26 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
|  | 4 | 90 | 19 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 116 |
| 02:00 | 2 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 02:15 | 0 | 14 | 3 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 21 |
| 02:30 | 1 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 02:45 | 2 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
|  | 5 | 46 | 9 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 64 |
| 03:00 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 03:15 | 1 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 03:30 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 03:45 | 0 | 7 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
|  | 1 | 25 | 10 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| 04:00 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| 04:15 | 1 | 3 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 04:30 | 0 | 5 | 6 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 04:45 | 0 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
|  | 1 | 30 | 18 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 53 |
| 05:00 | 1 | 23 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 29 |
| 05:15 | 0 | 28 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 05:30 | 0 | 39 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 48 |
| 05:45 | 1 | 58 | 9 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 71 |
|  | 2 | 148 | 28 | 1 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 1 | 184 |
| 06:00 | 4 | 54 | 8 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 68 |
| 06:15 | 3 | 56 | 14 | 1 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 80 |
| 06:30 | 5 | 121 | 10 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 140 |
| 06:45 | 2 | 137 | 13 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 156 |
|  | 14 | 368 | 45 | 4 | 6 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 444 |
| 07:00 | 9 | 189 | 12 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 213 |
| 07:15 | 3 | 201 | 16 | 1 | 7 | 0 | 0 | 3 | 0 | 1 | 2 | 0 | 1 | 235 |
| 07:30 | 3 | 223 | 28 | 2 | 4 | 4 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 268 |
| 07:45 | 6 | 204 | 17 | 3 | 7 | 6 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 250 |
|  | 21 | 817 | 73 | 6 | 18 | 11 | 0 | 10 | 2 | 1 | 3 | 0 | 4 | 966 |
| 08:00 | 2 | 205 | 21 | 1 | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 238 |
| 08:15 | 3 | 184 | 19 | 1 | 11 | 3 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 225 |
| 08:30 | 4 | 198 | 15 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 223 |
| 08:45 | 8 | 164 | 45 | 2 | 4 | 2 | 1 | 3 | 1 | 1 | 1 | 0 | 0 | 232 |
|  | 17 | 751 | 100 | 5 | 23 | 6 | 1 | 8 | 2 | 1 | 2 | 0 | 2 | 918 |
| 09:00 | 10 | 173 | 22 | 2 | 3 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 214 |
| 09:15 | 5 | 191 | 22 | 0 | 3 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 229 |
| 09:30 | 6 | 142 | 25 | 3 | 1 | 6 | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 188 |
| 09:45 | 6 | 165 | 24 | 4 | 4 | 1 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 212 |
|  | 27 | 671 | 93 | 9 | 11 | 12 | 0 | 13 | 0 | 0 | 3 | 0 | 4 | 843 |
| 10:00 | 6 | 168 | 29 | 2 | 1 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 212 |
| 10:15 | 6 | 161 | 30 | 3 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 206 |
| 10:30 | 3 | 164 | 34 | 2 | 1 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 210 |
| 10:45 | 8 | 154 | 32 | 1 | 3 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 204 |
|  | 23 | 647 | 125 | 8 | 5 | 4 | 0 | 12 | 4 | 0 | 1 | 0 | 3 | 832 |
| 11:00 | 2 | 169 | 33 | 0 | 1 | 4 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 213 |
| 11:15 | 3 | 164 | 33 | 1 | 7 | 1 | 0 | 8 | 0 | 2 | 1 | 0 | 1 | 221 |
| 11:30 | 10 | 184 | 30 | 0 | 4 | 2 | 0 | 7 | 0 | 1 | 0 | 0 | 1 | 239 |
| 11:45 | 4 | 140 | 17 | 0 | 4 | 2 | 0 | 2 | 2 | 1 | 2 | 0 | 0 | 174 |
|  | 19 | 657 | 113 | 1 | 16 | 9 | 0 | 20 | 2 | 4 | 4 | 0 | 2 | 847 |
| Total | 139 | 4422 | 673 | 37 | 85 | 51 | 1 | 74 | 13 | 7 | 14 | 0 | 16 | 5532 |
| Percent | 2.5\% | 79.9\% | 12.2\% | 0.7\% | 1.5\% | 0.9\% | 0.0\% | 1.3\% | 0.2\% | 0.1\% | 0.3\% | 0.0\% | 0.3\% |  |

Site Code: 1.5
Station ID: 1.5
ASHFORD DUNWOODY ROAD NORTH OF HAMMOND DRIVE
Latitude: 0' 0.0000 Undefined
SB

| Start <br> Time | Bikes | Cars \& Trailers | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | <5 AxI Double | 5 Axle Double | $>6 \mathrm{AxI}$ <br> Double | $\begin{array}{r} <6 \mathrm{AxI} \\ \text { Multi } \end{array}$ | 6 Axle Multi | $>6 \mathrm{AxI}$ <br> Multi | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12 PM | 3 | 172 | 24 | 3 | 1 | 2 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 213 |
| 12:15 | 5 | 151 | 20 | 1 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 187 |
| 12:30 | 2 | 192 | 25 | 2 | 2 | 2 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 230 |
| 12:45 | 2 | 108 | 14 | 4 | 2 | 3 | 0 | 2 | 2 | 1 | 1 | 0 | 0 | 139 |
|  | 12 | 623 | 83 | 10 | 8 | 8 | 1 | 13 | 4 | 2 | 5 | 0 | 0 | 769 |
| 13:00 | 3 | 88 | 20 | 2 | 6 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 125 |
| 13:15 | 3 | 91 | 19 | 1 | 8 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 127 |
| 13:30 | 2 | 89 | 15 | 3 | 7 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 121 |
| 13:45 | 2 | 117 | 20 | 2 | 4 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 154 |
|  | 10 | 385 | 74 | 8 | 25 | 10 | 0 | 13 | 0 | 0 | 1 | 0 | 1 | 527 |
| 14:00 | 1 | 100 | 10 | 1 | 11 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 127 |
| 14:15 | 4 | 106 | 17 | 1 | 6 | 4 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 143 |
| 14:30 | 1 | 80 | 11 | 1 | 8 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 106 |
| 14:45 | 1 | 77 | 15 | 3 | 9 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 109 |
|  | 7 | 363 | 53 | 6 | 34 | 12 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 485 |
| 15:00 | 3 | 110 | 12 | 1 | 5 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 139 |
| 15:15 | 3 | 98 | 20 | 2 | 9 | 2 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 138 |
| 15:30 | 4 | 130 | 21 | 3 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 165 |
| 15:45 | 7 | 113 | 32 | 2 | 3 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 161 |
|  | 17 | 451 | 85 | 8 | 19 | 11 | 0 | 10 | 0 | 1 | 0 | 0 | 1 | 603 |
| 16:00 | 3 | 132 | 34 | 2 | 2 | 3 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 181 |
| 16:15 | 4 | 108 | 38 | 1 | 3 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 161 |
| 16:30 | 2 | 111 | 35 | 1 | 3 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 157 |
| 16:45 | 5 | 104 | 24 | 1 | 7 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 147 |
|  | 14 | 455 | 131 | 5 | 15 | 8 | 0 | 14 | 2 | 2 | 0 | 0 | 0 | 646 |
| 17:00 | 5 | 106 | 33 | 1 | 6 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 157 |
| 17:15 | 3 | 126 | 24 | 3 | 4 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 167 |
| 17:30 | 6 | 128 | 46 | 2 | 4 | 3 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 194 |
| 17:45 | 3 | 104 | 42 | 0 | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 158 |
|  | 17 | 464 | 145 | 6 | 21 | 6 | 0 | 13 | 1 | 1 | 2 | 0 | 0 | 676 |
| 18:00 | 4 | 134 | 31 | 1 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 176 |
| 18:15 | 4 | 139 | 31 | 1 | 8 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 1 | 193 |
| 18:30 | 3 | 150 | 33 | 1 | 4 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 196 |
| 18:45 | 2 | 129 | 18 | 2 | 7 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 164 |
|  | 13 | 552 | 113 | 5 | 22 | 7 | 0 | 16 | 0 | 0 | 0 | 0 | 1 | 729 |
| 19:00 | 1 | 106 | 14 | 2 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 129 |
| 19:15 | 1 | 106 | 9 | 2 | 5 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 127 |
| 19:30 | 2 | 116 | 12 | 3 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 141 |
| 19:45 | 5 | 128 | 15 | 4 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 160 |
|  | 9 | 456 | 50 | 11 | 18 | 6 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 557 |
| 20:00 | 5 | 134 | 12 | 4 | 5 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 164 |
| 20:15 | 2 | 122 | 23 | 3 | 8 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 164 |
| 20:30 | 1 | 159 | 12 | 1 | 4 | 2 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 183 |
| 20:45 | 2 | 152 | 20 | 3 | 10 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 193 |
|  | 10 | 567 | 67 | 11 | 27 | 7 | 1 | 10 | 3 | 0 | 1 | 0 | 0 | 704 |
| 21:00 | 3 | 157 | 20 | 2 | 9 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 196 |
| 21:15 | 3 | 142 | 15 | 3 | 6 | 5 | 0 | 3 | 3 | 0 | 2 | 0 | 0 | 182 |
| 21:30 | 1 | 215 | 16 | 1 | 5 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 244 |
| 21:45 | 1 | 209 | 24 | 2 | 3 | 2 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 246 |
|  | 8 | 723 | 75 | 8 | 23 | 11 | 0 | 11 | 3 | 1 | 3 | 0 | 2 | 868 |
| 22:00 | 1 | 165 | 19 | 1 | 5 | 7 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 206 |
| 22:15 | 0 | 165 | 12 | 3 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 187 |
| 22:30 | 5 | 133 | 7 | 0 | 5 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 156 |
| 22:45 | 2 | 128 | 13 | 0 | 2 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 149 |
|  | 8 | 591 | 51 | 4 | 13 | 15 | 1 | 11 | 2 | 0 | 1 | 0 | 1 | 698 |
| 23:00 | 0 | 129 | 15 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 150 |
| 23:15 | 1 | 109 | 9 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 125 |
| 23:30 | 0 | 87 | 7 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 97 |
| 23:45 | 1 | 88 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 95 |
|  | 2 | 413 | 35 | 1 | 3 | 2 | 1 | 5 | 1 | 0 | 2 | 0 | 2 | 467 |
| Total | 127 | 6043 | 962 | 83 | 228 | 103 | 4 | 131 | 18 | 7 | 15 | 0 | 8 | 7729 |
| Percent | 1.6\% | 78.2\% | 12.4\% | 1.1\% | 2.9\% | 1.3\% | 0.1\% | 1.7\% | 0.2\% | 0.1\% | 0.2\% | 0.0\% | 0.1\% |  |
| Grand Total | 266 | 10465 | 1635 | 120 | 313 | 154 | 5 | 205 | 31 | 14 | 29 | 0 | 24 | 13261 |
| Percent | 2.0\% | 78.9\% | 12.3\% | 0.9\% | 2.4\% | 1.2\% | 0.0\% | 1.5\% | 0.2\% | 0.1\% | 0.2\% | 0.0\% | 0.2\% |  |

1：Perimeter Center Pkwy／Perimeter Center Pkwy．\＆Hammond Dr．

|  | 4 |  |  | $\bigcirc$ |  | 4 |  | $\dagger$ |  |  | $\ddagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{717}$ | 㻢 |  | ${ }^{7}$ | 44 | 「＇ | ${ }^{7}$ | 中 ${ }^{\text {P }}$ |  | ${ }^{7} 1$ | 44 | 「 |
| Volume（vph） | 135 | 325 | 160 | 105 | 515 | 230 | 95 | 135 | 55 | 40 | 150 | 110 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 260 |  | 0 | 250 |  | 500 | 160 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 0 | 1 |  | 1 | 1 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  | 0.950 |  |  |  | 0.850 |  | 0.957 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3362 | 0 | 1770 | 3539 | 1583 | 1770 | 3387 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.420 |  |  | 0.513 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3362 | 0 | 782 | 3539 | 1583 | 956 | 3387 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 141 |  |  |  | 250 |  | 60 |  |  |  | 151 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 2029 |  |  | 963 |  |  | 670 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 10.2 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 147 | 353 | 174 | 114 | 560 | 250 | 103 | 147 | 60 | 43 | 163 | 120 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 147 | 527 | 0 | 114 | 560 | 250 | 103 | 207 | 0 | 43 | 163 | 120 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA |  | pm＋pt | NA | Perm | pm＋pt | NA |  | Prot | NA | Perm |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 6 | 8 |  |  |  |  | 4 |
| Detector Phase | 5 | 2 |  | 1 | 6 | 6 | 3 | 8 |  | 7 | 4 | 4 |

Synchro 8 Report
daf

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 10.0 | 26.0 |  | 10.0 | 26.0 | 26.0 | 9.0 | 21.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (\%) | 15.4\% | 40.0\% |  | 15.4\% | 40.0\% | 40.0\% | 13.8\% | 32.3\% |  | 12.3\% | 30.8\% | 30.8\% |
| Maximum Green (s) | 6.0 | 22.0 |  | 6.0 | 22.0 | 22.0 | 5.0 | 17.0 |  | 4.0 | 16.0 | 16.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag |  | Lead | Lag | Lag | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes |  | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min |  | None | C-Min | C-Min | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 |  |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 |  |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 |  |  | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 8.1 | 30.2 |  | 35.9 | 29.6 | 29.6 | 15.9 | 11.5 |  | 5.6 | 8.3 | 8.3 |
| Actuated g/C Ratio | 0.12 | 0.46 |  | 0.55 | 0.46 | 0.46 | 0.24 | 0.18 |  | 0.09 | 0.13 | 0.13 |
| v/c Ratio | 0.34 | 0.32 |  | 0.21 | 0.35 | 0.29 | 0.32 | 0.32 |  | 0.14 | 0.36 | 0.36 |
| Control Delay | 27.8 | 10.5 |  | 6.9 | 12.3 | 1.9 | 19.8 | 17.7 |  | 29.0 | 27.7 | 6.4 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 27.8 | 10.5 |  | 6.9 | 12.3 | 1.9 | 19.8 | 17.7 |  | 29.0 | 27.7 | 6.4 |
| LOS | C | B |  | A | B | A | B | B |  | C | C | A |
| Approach Delay |  | 14.3 |  |  | 8.8 |  |  | 18.4 |  |  | 20.1 |  |
| Approach LOS |  | B |  |  | A |  |  | B |  |  | C |  |
| 90th \%ile Green (s) | 10.2 | 24.2 |  | 9.3 | 23.3 | 23.3 | 5.0 | 11.5 |  | 4.0 | 10.5 | 10.5 |
| 90th \%ile Term Code | Gap | Coord |  | Gap | Coord | Coord | Max | Hold |  | Max | Gap | Gap |
| 70th \%ile Green (s) | 8.9 | 23.0 |  | 8.3 | 22.4 | 22.4 | 8.5 | 11.0 |  | 6.7 | 9.2 | 9.2 |
| 70th \%ile Term Code | Gap | Coord |  | Gap | Coord | Coord | Max | Hold |  | Gap | Gap | Gap |
| 50th \%ile Green (s) | 8.1 | 25.1 |  | 7.4 | 24.4 | 24.4 | 8.2 | 10.3 |  | 6.2 | 8.3 | 8.3 |
| 50th \%ile Term Code | Gap | Coord |  | Gap | Coord | Coord | Gap | Hold |  | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.3 | 27.8 |  | 6.6 | 27.1 | 27.1 | 7.2 | 18.6 |  | 0.0 | 7.4 | 7.4 |
| 30th \%ile Term Code | Gap | Coord |  | Gap | Coord | Coord | Gap | Hold |  | Skip | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 50.8 |  | 0.0 | 50.8 | 50.8 | 0.0 | 6.2 |  | 0.0 | 6.2 | 6.2 |
| 10th \%ile Term Code | Skip | Coord |  | Skip | Coord | Coord | Skip | Hold |  | Skip | Gap | Gap |
| Queue Length 50th (ft) | 27 | 54 |  | 19 | 84 | 0 | 29 | 27 |  | 8 | 31 | 0 |
| Queue Length 95th (ft) | 50 | 91 |  | 23 | 42 | 10 | 63 | 54 |  | 22 | 55 | 28 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 590 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 160 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 427 | 1636 |  | 546 | 1611 | 856 | 319 | 946 |  | 297 | 871 | 503 |
| 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 | 0.34 | 0.32 |  | 0.21 | 0.35 | 0.29 | 0.32 | 0.22 |  | 0.14 | 0.19 | 0.24 |

## Intersection Summary

Area Type: Other
Cycle Length: 65

Actuated Cycle Length: 65
Offset: 50 ( $77 \%$ ), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 13.4 Intersection LOS: B
Intersection Capacity Utilization 42.7\% ICU Level of Service A
Analysis Period (min) 15
Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


|  | 4 | $\rightarrow$ |  | 7 |  | 4 | 4 | 4 | \％ | $1$ | $\frac{1}{1}$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | \％ | 种妥 | 「 | ${ }^{1 /}$ | 中4 | 7 | ${ }^{7}$ | 4 | 「 | ${ }^{1}$ | $\hat{\sigma}$ |  |
| Volume（vph） | 5 | 410 | 5 | 5 | 840 | 25 | 0 | 0 | 5 | 15 | 5 | 10 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.897 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1863 | 1863 | 1583 | 1770 | 1671 | 0 |
| Flt Permitted | 0.292 |  |  | 0.485 |  |  |  |  |  | 0.784 |  |  |
| Satd．Flow（perm） | 544 | 5085 | 1583 | 903 | 3539 | 1583 | 1863 | 1863 | 1583 | 1460 | 1671 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 151 |  |  | 151 |  |  | 437 |  | 11 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time（s） |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 5 | 446 | 5 | 5 | 913 | 27 | 0 | 0 | 5 | 16 | 5 | 11 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 5 | 446 | 5 | 5 | 913 | 27 | 0 | 0 | 5 | 16 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt |  | Perm | pm＋pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 8.0 | 29.0 | 29.0 | 8.0 | 29.0 | 29.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (\%) | 12.3\% | 44.6\% | 44.6\% | 12.3\% | 44.6\% | 44.6\% | 12.3\% | 30.8\% | 30.8\% | 12.3\% | 30.8\% |  |
| Maximum Green (s) | 4.0 | 25.0 | 25.0 | 4.0 | 25.0 | 25.0 | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 56.7 | 58.7 | 58.7 | 56.7 | 58.7 | 58.7 |  |  | 5.5 | 7.4 | 7.3 |  |
| Actuated g/C Ratio | 0.87 | 0.90 | 0.90 | 0.87 | 0.90 | 0.90 |  |  | 0.08 | 0.11 | 0.11 |  |
| v/c Ratio | 0.01 | 0.10 | 0.00 | 0.01 | 0.29 | 0.02 |  |  | 0.01 | 0.08 | 0.08 |  |
| Control Delay | 2.0 | 2.0 | 0.0 | 2.2 | 3.2 | 0.0 |  |  | 0.0 | 24.6 | 16.5 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 2.0 | 2.0 | 0.0 | 2.2 | 3.2 | 0.0 |  |  | 0.0 | 24.6 | 16.5 |  |
| LOS | A | A | A | A | A | A |  |  | A | C | B |  |
| Approach Delay |  | 2.0 |  |  | 3.1 |  |  |  |  |  | 20.6 |  |
| Approach LOS |  | A |  |  | A |  |  |  |  |  | C |  |
| 90th \%ile Green (s) | 5.8 | 33.7 | 33.7 | 5.8 | 33.7 | 33.7 | 0.0 | 5.5 | 5.5 | 4.0 | 13.5 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Skip | Gap | Gap | Max | Hold |  |
| 70th \%ile Green (s) | 0.0 | 61.0 | 61.0 | 0.0 | 61.0 | 61.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| 70th \%ile Term Code | Skip | Coord | Coord | Skip | Coord | Coord | Skip | Skip | Skip | Skip | Skip |  |
| 50th \%ile Green (s) | 0.0 | 61.0 | 61.0 | 0.0 | 61.0 | 61.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| 50th \%ile Term Code | Skip | Coord | Coord | Skip | Coord | Coord | Skip | Skip | Skip | Skip | Skip |  |
| 30th \%ile Green (s) | 0.0 | 61.0 | 61.0 | 0.0 | 61.0 | 61.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| 30th \%ile Term Code | Skip | Coord | Coord | Skip | Coord | Coord | Skip | Skip | Skip | Skip | Skip |  |
| 10th \%ile Green (s) | 0.0 | 61.0 | 61.0 | 0.0 | 61.0 | 61.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Skip | Coord | Coord | Skip | Skip | Skip | Skip | Skip |  |
| Queue Length 50th (ft) | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 6 | 2 |  |
| Queue Length 95th (ft) | m1 | 35 | m0 | 3 | 158 | 0 |  |  | 0 | 19 | 16 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 |  |  |  |  |  |  |
| Base Capacity (vph) | 579 | 4595 | 1445 | 861 | 3198 | 1445 |  |  | 719 | 192 | 419 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.01 | 0.10 | 0.00 | 0.01 | 0.29 | 0.02 |  |  | 0.01 | 0.08 | 0.04 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 65

Actuated Cycle Length: 65
Offset: 47 (72\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 3.1 Intersection LOS: A
Intersection Capacity Utilization $33.2 \%$ ICU Level of Service A
Analysis Period (min) 15
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: $\quad$ 2: Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | $\checkmark$ |  |  | 4 | $\dagger$ | \％ | $v$ | 1 | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ | 「「゙ | \％ 1 | 4 | 「 | 17 | $\dagger \dagger \dagger \%$ |  | \％ 1 | †††t | 「 |
| Volume（vph） | 155 | 65 | 210 | 20 | 10 | 40 | 680 | 2180 | 320 | 20 | 1345 | 180 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.981 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.980 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1681 | 1734 | 2787 | 3433 | 1863 | 1583 | 3433 | 6286 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.980 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1681 | 1734 | 2787 | 3433 | 1863 | 1583 | 3433 | 6286 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 228 |  |  | 158 |  | 51 |  |  |  | 196 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time（s） |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 168 | 71 | 228 | 22 | 11 | 43 | 739 | 2370 | 348 | 22 | 1462 | 196 |
| Shared Lane Traffic（\％） | 30\％ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 118 | 121 | 228 | 22 | 11 | 43 | 739 | 2718 | 0 | 22 | 1462 | 196 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Split | NA | pt＋ov | Split | NA | Perm | Prot | NA |  | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 |  |  |  |  |  | 6 |
| Detector Phase | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 |  | 1 | 6 | 6 |


|  | 4 |  |  | 7 |  |  | $4$ | $\dagger$ |  |  | $\dagger$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 24.0 | 42.0 |  | 8.0 | 26.0 | 26.0 |
| Total Split (\%) | 22.2\% | 22.2\% |  | 22.2\% | 22.2\% | 22.2\% | 26.7\% | 46.7\% |  | 8.9\% | 28.9\% | 28.9\% |
| Maximum Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 20.0 | 38.0 |  | 4.0 | 22.0 | 22.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 10.6 | 10.6 | 32.2 | 6.1 | 6.1 | 6.1 | 19.7 | 43.0 |  | 4.1 | 22.1 | 22.1 |
| Actuated g/C Ratio | 0.15 | 0.15 | 0.46 | 0.09 | 0.09 | 0.09 | 0.28 | 0.61 |  | 0.06 | 0.31 | 0.31 |
| v/c Ratio | 0.46 | 0.46 | 0.16 | 0.07 | 0.07 | 0.15 | 0.77 | 0.70 |  | 0.11 | 0.73 | 0.31 |
| Control Delay | 34.8 | 34.5 | 1.5 | 33.8 | 34.4 | 1.2 | 31.8 | 13.5 |  | 36.8 | 25.5 | 5.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 34.8 | 34.5 | 1.5 | 33.8 | 34.4 | 1.2 | 31.8 | 13.5 |  | 36.8 | 25.5 | 5.3 |
| LOS | C | C | A | C | C | A | C | B |  | D | C | A |
| Approach Delay |  | 18.5 |  |  | 15.4 |  |  | 17.4 |  |  | 23.3 |  |
| Approach LOS |  | B |  |  | B |  |  | B |  |  | C |  |
| 90th \%ile Green (s) | 16.0 | 16.0 |  | 7.0 | 7.0 | 7.0 | 20.0 | 38.0 |  | 4.0 | 22.0 | 22.0 |
| 90th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 13.2 | 13.2 |  | 6.3 | 6.3 | 6.3 | 20.0 | 38.0 |  | 4.0 | 22.0 | 22.0 |
| 70th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 10.5 | 10.5 |  | 5.9 | 5.9 | 5.9 | 20.0 | 46.0 |  | 0.0 | 22.0 | 22.0 |
| 50th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Hold |  | Skip | Max | Max |
| 30th \%ile Green (s) | 8.3 | 8.3 |  | 0.0 | 0.0 | 0.0 | 20.0 | 46.0 |  | 0.0 | 22.0 | 22.0 |
| 30th \%ile Term Code | Gap | Gap |  | Skip | Skip | Skip | Max | Hold |  | Skip | Max | Max |
| 10th \%ile Green (s) | 6.5 | 6.5 |  | 0.0 | 0.0 | 0.0 | 17.1 | 41.9 |  | 0.0 | 20.8 | 20.8 |
| 10th \%ile Term Code | Gap | Gap |  | Skip | Skip | Skip | Gap | Hold |  | Skip | Gap | Gap |
| Queue Length 50th (ft) | 53 | 54 | 0 | 5 | 5 | 0 | 163 | 211 |  | 5 | 177 | 0 |
| Queue Length 95th (ft) | 105 | 107 | 12 | 16 | 20 | 0 | \#280 | 410 |  | 17 | 246 | 47 |
| Internal Link Dist (ft) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 389 | 401 | 1482 | 796 | 432 | 488 | 995 | 3865 |  | 199 | 2043 | 638 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.30 | 0.30 | 0.15 | 0.03 | 0.03 | 0.09 | 0.74 | 0.70 |  | 0.11 | 0.72 | 0.31 |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 70.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 19.2 Intersection LOS: B
Intersection Capacity Utilization 62.9\%
ICU Level of Service B
Analysis Period (min) 15
90th \%ile Actuated Cycle: 81
70th \%ile Actuated Cycle: 77.5
50th \%ile Actuated Cycle: 74.4
30th \%ile Actuated Cycle: 62.3
10th \%ile Actuated Cycle: 56.4
\# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


| daf | Synchro 8 Report |
| :--- | ---: |
| Page 9 |  |


|  | 7 | $4$ |  | $p$ | $\pm$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ${ }^{7}$ | 「 | 性 |  | ${ }^{1}$ | 44 |
| Volume (vph) | 5 | 75 | 210 | 5 | 30 | 385 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 | 0 |  | 0 | 200 |  |
| Storage Lanes | 1 | 1 |  | 0 | 1 |  |
| Taper Length (ft) | 25 |  |  |  | 25 |  |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt |  | 0.850 | 0.997 |  |  |  |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd. Flow (prot) | 1770 | 1583 | 3529 | 0 | 1770 | 3539 |
| Flt Permitted | 0.950 |  |  |  | 0.607 |  |
| Satd. Flow (perm) | 1770 | 1583 | 3529 | 0 | 1131 | 3539 |
| Right Turn on Red |  | Yes |  | Yes |  |  |
| Satd. Flow (RTOR) |  | 82 | 5 |  |  |  |
| Link Speed (mph) | 45 |  | 45 |  |  | 45 |
| Link Distance (ft) | 661 |  | 742 |  |  | 670 |
| Travel Time (s) | 10.0 |  | 11.2 |  |  | 10.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 5 | 82 | 228 | 5 | 33 | 418 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |
| Lane Group Flow (vph) | 5 | 82 | 233 | 0 | 33 | 418 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(ft) | 12 |  | 12 |  |  | 12 |
| Link Offset(ft) | 0 |  | 0 |  |  | 0 |
| Crosswalk Width(ft) | 16 |  | 16 |  |  | 16 |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | 9 |  | 9 | 15 |  |
| Number of Detectors | 1 | 1 | 2 |  | 1 | 2 |
| Detector Template | Left | Right | Thru |  | Left | Thru |
| Leading Detector (ft) | 20 | 20 | 100 |  | 20 | 100 |
| Trailing Detector (ft) | 0 | 0 | 0 |  | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 |  | 0 | 0 |
| Detector 1 Size(ft) | 20 | 20 | 6 |  | 20 | 6 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 2 Position(ft) |  |  | 94 |  |  | 94 |
| Detector 2 Size(ft) |  |  | 6 |  |  | 6 |
| Detector 2 Type |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend (s) |  |  | 0.0 |  |  | 0.0 |
| Turn Type | Prot | Perm | NA |  | Perm | NA |
| Protected Phases | 8 |  | 2 |  |  | 6 |
| Permitted Phases |  | 8 |  |  | 6 |  |
| Detector Phase | 8 | 8 | 2 |  | 6 | 6 |


|  |  |  |  |  | $1$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 |  | 20.0 | 20.0 |
| Total Split (s) | 26.0 | 26.0 | 34.0 |  | 34.0 | 34.0 |
| Total Split (\%) | 43.3\% | 43.3\% | 56.7\% |  | 56.7\% | 56.7\% |
| Maximum Green (s) | 22.0 | 22.0 | 30.0 |  | 30.0 | 30.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  |
| Lead-Lag Optimize? |  |  |  |  |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 |
| Recall Mode | None | None | Max |  | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 |  | 0 | 0 |
| Act Effct Green (s) | 6.3 | 6.3 | 43.3 |  | 43.3 | 43.3 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.83 |  | 0.83 | 0.83 |
| v/c Ratio | 0.02 | 0.31 | 0.08 |  | 0.04 | 0.14 |
| Control Delay | 19.4 | 9.2 | 2.0 |  | 2.4 | 2.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Delay | 19.4 | 9.2 | 2.0 |  | 2.4 | 2.0 |
| LOS | B | A | A |  | A | A |
| Approach Delay | 9.8 |  | 2.0 |  |  | 2.0 |
| Approach LOS | A |  | A |  |  | A |
| 90th \%ile Green (s) | 8.2 | 8.2 | 33.1 |  | 33.1 | 33.1 |
| 90th \%ile Term Code | Gap | Gap | Dwell |  | Dwell | Dwell |
| 70th \%ile Green (s) | 6.7 | 6.7 | 39.3 |  | 39.3 | 39.3 |
| 70th \%ile Term Code | Gap | Gap | Dwell |  | Dwell | Dwell |
| 50th \%ile Green (s) | 5.6 | 5.6 | 45.0 |  | 45.0 | 45.0 |
| 50th \%ile Term Code | Gap | Gap | Dwell |  | Dwell | Dwell |
| 30th \%ile Green (s) | 0.0 | 0.0 | 45.0 |  | 45.0 | 45.0 |
| 30th \%ile Term Code | Skip | Skip | Dwell |  | Dwell | Dwell |
| 10th \%ile Green (s) | 0.0 | 0.0 | 45.0 |  | 45.0 | 45.0 |
| 10th \%ile Term Code | Skip | Skip | Dwell |  | Dwell | Dwell |
| Queue Length 50th (ft) | 2 | 0 | 6 |  | 2 | 13 |
| Queue Length 95th (ft) | 8 | 28 | 16 |  | 8 | 28 |
| Internal Link Dist (ft) | 581 |  | 662 |  |  | 590 |
| Turn Bay Length (ft) |  |  |  |  | 200 |  |
| Base Capacity (vph) | 752 | 720 | 2942 |  | 942 | 2949 |
| Starvation Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 0.11 | 0.08 |  | 0.04 | 0.14 |
| Intersection Summary |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Actuated Cycle Length: 52
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.31
Intersection Signal Delay: 2.9 Intersection LOS: A
Intersection Capacity Utilization 22.6\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 49.3
70th \%ile Actuated Cycle: 54
50th \%ile Actuated Cycle: 58.6
30th \%ile Actuated Cycle: 49
10th \%ile Actuated Cycle: 49
Splits and Phases: 4: Perimeter Center Pkwy \& Goldkist Dr.


|  | 4 |  |  | 4 | ， | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | $\cdots$ | 中4 | 中4 | 「゙「 | 17 | 「゙ |
| Volume（vph） | 55 | 210 | 290 | 120 | 235 | 80 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 130 |  | 87 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1749 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 26.5 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 60 | 228 | 315 | 130 | 255 | 87 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 60 | 228 | 315 | 130 | 255 | 87 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |


|  | 4 |  | 4 | 4 | $t$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Total Split (s) | 10.0 | 36.0 | 26.0 | 26.0 | 24.0 | 24.0 |
| Total Split (\%) | 16.7\% | 60.0\% | 43.3\% | 43.3\% | 40.0\% | 40.0\% |
| Maximum Green (s) | 6.0 | 32.0 | 22.0 | 22.0 | 20.0 | 20.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 6.1 | 15.2 | 11.9 | 11.9 | 8.1 | 8.1 |
| Actuated g/C Ratio | 0.19 | 0.48 | 0.37 | 0.37 | 0.25 | 0.25 |
| v/c Ratio | 0.09 | 0.13 | 0.24 | 0.12 | 0.29 | 0.19 |
| Control Delay | 12.7 | 4.8 | 9.2 | 3.3 | 11.0 | 4.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.7 | 4.8 | 9.2 | 3.3 | 11.0 | 4.9 |
| LOS | B | A | A | A | B | A |
| Approach Delay |  | 6.4 | 7.4 |  | 9.5 |  |
| Approach LOS |  | A | A |  | A |  |
| 90th \%ile Green (s) | 6.0 | 21.6 | 11.6 | 11.6 | 10.0 | 10.0 |
| 90th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 70th \%ile Green (s) | 6.0 | 20.2 | 10.2 | 10.2 | 8.7 | 8.7 |
| 70th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 0.0 | 8.3 | 8.3 | 8.3 | 7.8 | 7.8 |
| 50th \%ile Term Code | Skip | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 0.0 | 8.2 | 8.2 | 8.2 | 6.6 | 6.6 |
| 30th \%ile Term Code | Skip | Dwell | Dwell | Dwell | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 21.2 | 21.2 | 21.2 | 6.4 | 6.4 |
| 10th \%ile Term Code | Skip | Dwell | Dwell | Dwell | Gap | Gap |
| Queue Length 50th (ft) | 2 | 8 | 12 | 0 | 10 | 0 |
| Queue Length 95th (ft) | 17 | 21 | 50 | 13 | 44 | 22 |
| Internal Link Dist (ft) |  | 726 | 1669 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  |
| Base Capacity (vph) | 683 | 3237 | 2581 | 2068 | 2276 | 1079 |
| 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 | 0.07 | 0.12 | 0.06 | 0.11 | 0.08 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |
| Actuated Cycle Length: 31.8 |  |  |  |  |  |  |
| Natural Cycle: 50 |  |  |  |  |  |  |
| Control Type: Semi Act-Uncoord |  |  |  |  |  |  |

## Maximum v/c Ratio: 0.29

Intersection Signal Delay: 7.8 Intersection LOS: A
Intersection Capacity Utilization 28.1\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 39.6
70th \%ile Actuated Cycle: 36.9
50th \%ile Actuated Cycle: 24.1
30th \%ile Actuated Cycle: 22.8
10th \%ile Actuated Cycle: 35.6
Splits and Phases: 5: Lake Hearn Dr. \& Perimeter Center Pkwy


|  | $\rangle$ |  |  | $\checkmark$ |  |  | 4 | $\uparrow$ |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 7\％ | 个t |  | \％ | 个4 | F | \％ | 中 ${ }^{\text {P }}$ |  | \％${ }^{*}$ | 个4 | F |
| Volume（vph） | 225 | 575 | 90 | 70 | 400 | 120 | 275 | 260 | 85 | 230 | 315 | 285 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 260 |  | 0 | 250 |  | 500 | 160 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 0 | 1 |  | 1 | 1 |  | 0 | 2 |  | 1 |
| Taper Length（t） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill．Factor | 0.97 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  | 0.980 |  |  |  | 0.850 |  | 0.963 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3468 | 0 | 1770 | 3539 | 1583 | 1770 | 3408 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.325 |  |  | 0.459 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3468 | 0 | 605 | 3539 | 1583 | 855 | 3408 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 30 |  |  |  | 164 |  | 72 |  |  |  | 296 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 2029 |  |  | 963 |  |  | 670 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 10.2 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 245 | 625 | 98 | 76 | 435 | 130 | 299 | 283 | 92 | 250 | 342 | 310 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 245 | 723 | 0 | 76 | 435 | 130 | 299 | 375 | 0 | 250 | 342 | 310 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（tt） | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（tt） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（tt） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA |  | pm＋pt | NA | Perm | pm＋pt | NA |  | Prot | NA | Perm |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 6 | 8 |  |  |  |  | 4 |
| Detector Phase | 5 | 2 |  | 1 | 6 | 6 | 3 | 8 |  | 7 | 4 | 4 |

Lane Group EBL EBT EBR WBL WBT WBR NBL NBT NBR SBL SBT SBR

| Switch Phase |  |  |  |  |  |  |  | 4.0 | 4.0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 20.0 |
| Total Split (s) | 9.0 | 22.0 | 8.0 | 21.0 | 21.0 | 10.0 | 20.0 | 10.0 | 20.0 |


|  | $15.0 \%$ | $36.7 \%$ | $13.3 \%$ | $35.0 \%$ | $35.0 \%$ | $16.7 \%$ | $33.3 \%$ | $16.7 \%$ | $33.3 \%$ | $33.3 \%$ |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total Split (\%) | 5.0 | 18.0 | 4.0 | 17.0 | 17.0 | 6.0 | 16.0 | 6.0 | 16.0 | 16.0 |


| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |


| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 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) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Lead/Lag | Lead | Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |


| Recall Mode | None | C-Min | None | C-Min | C-Min | None | None | None | None |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | None


| Flash Dont Walk (s) | 11.0 |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| Act Effct Green (s) | 7.6 | 22.6 | 22.4 | 16.7 | 16.7 | 20.4 | 12.7 | 7.0 |
| Actuated g/C Ratio | 0.13 | 0.38 | 0.37 | 0.28 | 0.28 | 0.34 | 0.21 | 11.9 |


| v/c Ratio | 0.56 | 0.55 | 0.23 | 0.44 | 0.23 | 0.73 | 0.48 | 0.63 | 0.49 | 0.56 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Control Delay | 33.3 | 17.4 | 6.1 | 16.5 | 6.4 | 27.9 | 18.4 | 34.8 | 23.1 | 7.6 |


| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Total Delay | 33.3 | 17.4 | 6.1 | 16.5 | 6.4 | 27.9 | 18.4 | 34.8 | 23.1 | 7.6 |
| LOS | C | B | A | B | A | C | B | C | C | A |


| LOS | C | B | A | B | A | C | B | C | C | A |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Approach Delay |  | 21.4 |  | 13.2 |  |  | 22.6 |  | 21.0 |  |
| Approach LOS |  | C |  | B |  |  | C |  | C |  |
| 90th \%ile Green (s) | 5.0 | 18.0 | 4.0 | 17.0 | 17.0 | 6.0 | 16.0 | 6.0 | 16.0 | 16.0 |
| 90th \%ile Term Code | Max | Coord | Max | Coord | Coord | Max | Hold | Max | Max | Max |
| 70th \%ile Green (s) | 7.0 | 18.0 | 6.0 | 17.0 | 17.0 | 6.0 | 14.0 | 6.0 | 14.0 | 14.0 |
| 70th \%ile Term Code | Max | Coord | Max | Coord | Coord | Max | Hold | Max | Gap | Gap |
| 50th \%ile Green (s) | 9.1 | 18.6 | 6.8 | 16.3 | 16.3 | 6.7 | 11.9 | 6.7 | 11.9 | 11.9 |
| 50th \%ile Term Code | Max | Coord | Gap | Coord | Coord | Max | Hold | Max | Gap | Gap |
| 30th \%ile Green (s) | 9.3 | 27.2 | 0.0 | 13.9 | 13.9 | 11.0 | 12.0 | 8.8 | 9.8 | 9.8 |
| 30th \%ile Term Code | Gap | Coord | Skip | Coord | Coord | Max | Hold | Gap | Gap | Gap |
| 10th \%ile Green (s) | 7.8 | 31.2 | 0.0 | 19.4 | 19.4 | 8.8 | 9.5 | 7.3 | 8.0 | 8.0 |
| 10th \%ile Term Code | Gap | Coord | Skip | Coord | Coord | Gap | Hold | Gap | Gap | Gap |
| Queue Length 50th (ft) | 42 | 112 | 2 | 80 | 5 | 79 | 51 | 45 | 58 | 4 |
| Queue Length 95th (ft) | \#103 | 167 | 7 | 116 | 57 | \#153 | 78 | \#93 | 84 | 55 |
| Internal Link Dist (ft) |  | 1949 |  | 883 |  |  | 590 |  | 706 |  |
| Turn Bay Length (ft) | 260 |  | 250 |  | 500 | 160 |  | 250 |  | 300 |
| Base Capacity (vph) | 437 | 1324 | 336 | 1030 | 577 | 407 | 961 | 398 | 943 | 639 |
| 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 | 0.56 | 0.55 | 0.23 | 0.42 | 0.23 | 0.73 | 0.39 | 0.63 | 0.36 | 0.49 |

## Intersection Summary

Area Type: Other
Cycle Length: 60

Actuated Cycle Length: 60
Offset: $0(0 \%)$, Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 19.9 Intersection LOS: B
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: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


2: Hammond Dr. \& Shopping Center Dr

|  | 4 | $\rightarrow$ |  | 7 |  |  | $4$ | $\dagger$ |  |  | $\frac{1}{\dagger}$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | 444 | 7 | ${ }^{7}$ | 44 | 「 | ${ }^{7}$ | 4 | 「 | ${ }^{7}$ | \% |  |
| Volume (vph) | 45 | 800 | 45 | 40 | 495 | 55 | 40 | 20 | 60 | 110 | 20 | 55 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.890 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1658 | 0 |
| Flt Permitted | 0.407 |  |  | 0.303 |  |  | 0.800 |  |  | 0.449 |  |  |
| Satd. Flow (perm) | 758 | 5085 | 1583 | 564 | 3539 | 1583 | 1490 | 1863 | 1583 | 836 | 1658 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 164 |  |  | 164 |  |  | 164 |  | 60 |  |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time (s) |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 49 | 870 | 49 | 43 | 538 | 60 | 43 | 22 | 65 | 120 | 22 | 60 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 49 | 870 | 49 | 43 | 538 | 60 | 43 | 22 | 65 | 120 | 82 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Intersection Summary

Area Type: Other
Cycle Length: 60

Actuated Cycle Length: 60
Offset: 37 ( $62 \%$ ), Referenced to phase 2:EBTL and $6: W B T L$, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 8.5 Intersection LOS: A
Intersection Capacity Utilization 41.6\% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | 7 | $4$ | 4 | 4 | $\dagger$ | $p$ | V |  | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ | 「「で | \％ 1 | 4 | 「 | ＊＊ | $\dagger \dagger \dagger \%$ |  | ${ }^{7} 1$ | †t† | 「 |
| Volume（vph） | 200 | 20 | 750 | 325 | 60 | 30 | 425 | 1735 | 50 | 10 | 1790 | 105 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.961 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1681 | 1701 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.961 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1681 | 1701 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 55 |  |  | 142 |  | 7 |  |  |  | 142 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time（s） |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 217 | 22 | 815 | 353 | 65 | 33 | 462 | 1886 | 54 | 11 | 1946 | 114 |
| Shared Lane Traffic（\％） | 45\％ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 119 | 120 | 815 | 353 | 65 | 33 | 462 | 1940 | 0 | 11 | 1946 | 114 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Split | NA | pt＋ov | Split | NA | Perm | Prot | NA |  | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 |  |  |  |  |  | 6 |
| Detector Phase | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 |  | 1 | 6 | 6 |


|  | 4 |  |  |  |  |  | 4 | $\uparrow$ |  |  | $\downarrow$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 22.0 | 22.0 |  | 20.0 | 20.0 | 20.0 | 20.0 | 50.0 |  | 8.0 | 38.0 | 38.0 |
| Total Split (\%) | 22.0\% | 22.0\% |  | 20.0\% | 20.0\% | 20.0\% | 20.0\% | 50.0\% |  | 8.0\% | 38.0\% | 38.0\% |
| Maximum Green (s) | 18.0 | 18.0 |  | 16.0 | 16.0 | 16.0 | 16.0 | 46.0 |  | 4.0 | 34.0 | 34.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Efftt Green (s) | 17.9 | 17.9 | 33.6 | 14.3 | 14.3 | 14.3 | 15.7 | 52.2 |  | 4.0 | 34.0 | 34.0 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.34 | 0.15 | 0.15 | 0.15 | 0.16 | 0.53 |  | 0.04 | 0.35 | 0.35 |
| v/c Ratio | 0.39 | 0.39 | 0.82 | 0.70 | 0.24 | 0.09 | 0.84 | 0.57 |  | 0.08 | 0.88 | 0.18 |
| Control Delay | 40.1 | 40.0 | 24.1 | 48.0 | 39.3 | 0.5 | 55.1 | 16.7 |  | 47.5 | 35.8 | 3.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 40.1 | 40.0 | 24.1 | 48.0 | 39.3 | 0.5 | 55.1 | 16.7 |  | 47.5 | 35.8 | 3.0 |
| LOS | D | D | C | D | D | A | E | B |  | D | D | A |
| Approach Delay |  | 27.7 |  |  | 43.3 |  |  | 24.1 |  |  | 34.0 |  |
| Approach LOS |  | C |  |  | D |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 18.0 | 18.0 |  | 16.0 | 16.0 | 16.0 | 16.0 | 46.0 |  | 4.0 | 34.0 | 34.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 18.0 | 18.0 |  | 16.0 | 16.0 | 16.0 | 16.0 | 54.0 |  | 0.0 | 34.0 | 34.0 |
| 70th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Skip | Max | Max |
| 50th \%ile Green (s) | 18.0 | 18.0 |  | 15.4 | 15.4 | 15.4 | 16.0 | 54.0 |  | 0.0 | 34.0 | 34.0 |
| 50th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Hold |  | Skip | Max | Max |
| 30th \%ile Green (s) | 18.0 | 18.0 |  | 13.6 | 13.6 | 13.6 | 16.0 | 54.0 |  | 0.0 | 34.0 | 34.0 |
| 30th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Hold |  | Skip | Max | Max |
| 10th \%ile Green (s) | 17.4 | 17.4 |  | 10.9 | 10.9 | 10.9 | 14.7 | 52.7 |  | 0.0 | 34.0 | 34.0 |
| 10th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Gap | Hold |  | Skip | Max | Max |
| Queue Length 50th (tt) | 70 | 71 | 151 | 109 | 37 | 0 | 147 | 220 |  | 3 | 335 | 0 |
| Queue Length 95th (t) | 129 | 129 | \#205 | 157 | 76 | 0 | \#228 | 310 |  | 12 | 390 | 24 |
| Internal Link Dist (tt) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (t) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 309 | 312 | 1003 | 560 | 304 | 377 | 560 | 3402 |  | 140 | 2224 | 641 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.39 | 0.38 | 0.81 | 0.63 | 0.21 | 0.09 | 0.83 | 0.57 |  | 0.08 | 0.88 | 0.18 |

## Intersection Summary

Area Type: Other
Cycle Length: 100

Actuated Cycle Length: 98
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88
Intersection Signal Delay: $29.6 \quad$ Intersection LOS: C
Intersection Capacity Utilization 71.4\%
ICU Level of Service C
Analysis Period (min) 15
90th \%ile Actuated Cycle: 100
70th \%ile Actuated Cycle: 100
50th \%ile Actuated Cycle: 99.4
30th \%ile Actuated Cycle: 97.6
10th \%ile Actuated Cycle: 93
\# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


|  | 7 |  |  |  | － | $\dagger$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ${ }^{7}$ | 「 | 中 ${ }^{\text {a }}$ |  | ${ }^{1}$ | 中4 |
| Volume（vph） | 5 | 25 | 595 | 0 | 45 | 430 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 | 0 |  | 0 | 200 |  |
| Storage Lanes | 1 | 1 |  | 0 | 1 |  |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 |
| Frt |  | 0.850 |  |  |  |  |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 1770 | 1583 | 3539 | 0 | 1770 | 3539 |
| Flt Permitted | 0.950 |  |  |  | 0.406 |  |
| Satd．Flow（perm） | 1770 | 1583 | 3539 | 0 | 756 | 3539 |
| Right Turn on Red |  | Yes |  | Yes |  |  |
| Satd．Flow（RTOR） |  | 27 |  |  |  |  |
| Link Speed（mph） | 45 |  | 45 |  |  | 45 |
| Link Distance（ft） | 661 |  | 742 |  |  | 670 |
| Travel Time（s） | 10.0 |  | 11.2 |  |  | 10.2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 5 | 27 | 647 | 0 | 49 | 467 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 5 | 27 | 647 | 0 | 49 | 467 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width（ft） | 12 |  | 12 |  |  | 12 |
| Link Offset（ft） | 0 |  | 0 |  |  | 0 |
| Crosswalk Width（ft） | 16 |  | 16 |  |  | 16 |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 | 9 |  | 9 | 15 |  |
| Number of Detectors | 1 | 1 | 2 |  | 1 | 2 |
| Detector Template | Left | Right | Thru |  | Left | Thru |
| Leading Detector（ft） | 20 | 20 | 100 |  | 20 | 100 |
| Trailing Detector（ft） | 0 | 0 | 0 |  | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 |  | 0 | 0 |
| Detector 1 Size（ft） | 20 | 20 | 6 |  | 20 | 6 |
| Detector 1 Type | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Detector 2 Position（ft） |  |  | 94 |  |  | 94 |
| Detector 2 Size（ft） |  |  | 6 |  |  | 6 |
| Detector 2 Type |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  |  | 0.0 |  |  | 0.0 |
| Turn Type | Prot | Perm | NA |  | Perm | NA |
| Protected Phases | 8 |  | 2 |  |  | 6 |
| Permitted Phases |  | 8 |  |  | 6 |  |
| Detector Phase | 8 | 8 | 2 |  | 6 | 6 |


|  | $\checkmark$ |  |  |  | $\pm$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 | 20.0 |  | 20.0 | 20.0 |
| Total Split (s) | 22.0 | 22.0 | 38.0 |  | 38.0 | 38.0 |
| Total Split (\%) | 36.7\% | 36.7\% | 63.3\% |  | 63.3\% | 63.3\% |
| Maximum Green (s) | 18.0 | 18.0 | 34.0 |  | 34.0 | 34.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  |
| Lead-Lag Optimize? |  |  |  |  |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 |
| Recall Mode | None | None | Max |  | Max | Max |
| Walk Time (s) | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 |  | 0 | 0 |
| Act Effct Green (s) | 6.1 | 6.1 | 51.8 |  | 51.8 | 51.8 |
| Actuated g/C Ratio | 0.11 | 0.11 | 0.91 |  | 0.91 | 0.91 |
| v/c Ratio | 0.03 | 0.14 | 0.20 |  | 0.07 | 0.15 |
| Control Delay | 25.2 | 13.2 | 1.3 |  | 1.7 | 1.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |
| Total Delay | 25.2 | 13.2 | 1.3 |  | 1.7 | 1.2 |
| LOS | C | B | A |  | A | A |
| Approach Delay | 15.0 |  | 1.3 |  |  | 1.3 |
| Approach LOS | B |  | A |  |  | A |
| 90th \%ile Green (s) | 7.5 | 7.5 | 48.1 |  | 48.1 | 48.1 |
| 90th \%ile Term Code | Gap | Gap | Dwell |  | Dwell | Dwell |
| 70th \%ile Green (s) | 6.3 | 6.3 | 49.0 |  | 49.0 | 49.0 |
| 70th \%ile Term Code | Gap | Gap | Dwell |  | Dwell | Dwell |
| 50th \%ile Green (s) | 0.0 | 0.0 | 49.0 |  | 49.0 | 49.0 |
| 50th \%ile Term Code | Skip | Skip | Dwell |  | Dwell | Dwell |
| 30th \%ile Green (s) | 0.0 | 0.0 | 49.0 |  | 49.0 | 49.0 |
| 30th \%ile Term Code | Skip | Skip | Dwell |  | Dwell | Dwell |
| 10th \%ile Green (s) | 0.0 | 0.0 | 49.0 |  | 49.0 | 49.0 |
| 10th \%ile Term Code | Skip | Skip | Dwell |  | Dwell | Dwell |
| Queue Length 50th (ft) | 2 | 0 | 0 |  | 0 | 0 |
| Queue Length 95th (ft) | 11 | 20 | 40 |  | 10 | 28 |
| Internal Link Dist (ft) | 581 |  | 662 |  |  | 590 |
| Turn Bay Length (ft) |  |  |  |  | 200 |  |
| Base Capacity (vph) | 561 | 520 | 3206 |  | 685 | 3206 |
| Starvation Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 |  | 0 | 0 |
| Reduced v/c Ratio | 0.01 | 0.05 | 0.20 |  | 0.07 | 0.15 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |

Actuated Cycle Length: 57.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.20
Intersection Signal Delay: 1.7 Intersection LOS: A
Intersection Capacity Utilization 33.1\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 63.6
70th \%ile Actuated Cycle: 63.3
50th \%ile Actuated Cycle: 53
30th \%ile Actuated Cycle: 53
10th \%ile Actuated Cycle: 53
Splits and Phases: 4: Perimeter Center Pkwy \& Goldkist Dr.


|  | 4 | $\rightarrow$ |  |  | $\pm$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | 71 | 44 | 44 | 「「で | $1{ }^{1 / 1}$ | 「 |
| Volume（vph） | 210 | 410 | 475 | 265 | 390 | 165 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 288 |  | 179 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1749 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 26.5 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 228 | 446 | 516 | 288 | 424 | 179 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 228 | 446 | 516 | 288 | 424 | 179 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |


|  | 4 |  | 4 | 4 | , | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Total Split (s) | 14.0 | 38.0 | 24.0 | 24.0 | 22.0 | 22.0 |
| Total Split (\%) | 23.3\% | 63.3\% | 40.0\% | 40.0\% | 36.7\% | 36.7\% |
| Maximum Green (s) | 10.0 | 34.0 | 20.0 | 20.0 | 18.0 | 18.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 8.6 | 23.1 | 13.8 | 13.8 | 11.5 | 11.5 |
| Actuated g/C Ratio | 0.20 | 0.53 | 0.32 | 0.32 | 0.26 | 0.26 |
| v/c Ratio | 0.33 | 0.24 | 0.46 | 0.27 | 0.46 | 0.32 |
| Control Delay | 19.4 | 5.5 | 14.5 | 2.9 | 17.0 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.4 | 5.5 | 14.5 | 2.9 | 17.0 | 5.2 |
| LOS | B | A | B | A | B | A |
| Approach Delay |  | 10.2 | 10.4 |  | 13.5 |  |
| Approach LOS |  | B | B |  | B |  |
| 90th \%ile Green (s) | 10.0 | 34.0 | 20.0 | 20.0 | 16.4 | 16.4 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Gap | Gap |
| 70th \%ile Green (s) | 9.6 | 29.9 | 16.3 | 16.3 | 12.7 | 12.7 |
| 70th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 8.4 | 25.9 | 13.5 | 13.5 | 10.9 | 10.9 |
| 50th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.3 | 22.2 | 10.9 | 10.9 | 9.3 | 9.3 |
| 30th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 8.1 | 8.1 | 8.1 | 7.5 | 7.5 |
| 10th \%ile Term Code | Skip | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 26 | 24 | 55 | 0 | 48 | 0 |
| Queue Length 95th (ft) | 64 | 53 | 108 | 22 | 97 | 38 |
| Internal Link Dist (ft) |  | 726 | 1669 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  |
| Base Capacity (vph) | 871 | 2741 | 1796 | 1556 | 1568 | 820 |
| 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 | 0.26 | 0.16 | 0.29 | 0.19 | 0.27 | 0.22 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |
| Actuated Cycle Length: 43.4 |  |  |  |  |  |  |
| Natural Cycle: 50 |  |  |  |  |  |  |
| Control Type: Semi Act-Uncoord |  |  |  |  |  |  |

Synchro 8 Report

Maximum v/c Ratio: 0.46
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 40.2\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 58.4
70th \%ile Actuated Cycle: 50.6
50th \%ile Actuated Cycle: 44.8
30th \%ile Actuated Cycle: 39.5
10th \%ile Actuated Cycle: 23.6
Splits and Phases: 5: Lake Hearn Dr. \& Perimeter Center Pkwy


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％${ }^{1+1}$ | 个个 | F | \％${ }^{*}$ | 个 $\uparrow$ | 「 | \％${ }^{*}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{7} \times$ | 个4 | F |
| Volume（vph） | 240 | 950 | 310 | 450 | 660 | 370 | 200 | 305 | 90 | 370 | 475 | 230 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（tt） | 260 |  | 0 | 250 |  | 500 | 80 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 1 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.966 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3419 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.172 |  |  | 0.410 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3539 | 1583 | 622 | 3539 | 1583 | 1482 | 3419 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 263 |  |  | 126 |  | 51 |  |  |  | 80 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 2029 |  |  | 963 |  |  | 330 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 5.0 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 261 | 1033 | 337 | 489 | 717 | 402 | 217 | 332 | 98 | 402 | 516 | 250 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 261 | 1033 | 337 | 489 | 717 | 402 | 217 | 430 | 0 | 402 | 516 | 250 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA | Perm | pm＋pt | NA | $p m+o v$ | pm＋pt | NA |  | Prot | NA | pm＋ov |
| Protected Phases | 5 | 2 |  | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 | 6 |  | 6 | 8 |  |  |  |  | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 8.0 |
| Total Split (s) | 11.0 | 27.0 | 27.0 | 10.0 | 26.0 | 13.0 | 9.0 | 20.0 |  | 13.0 | 24.0 | 11.0 |
| Total Split (\%) | 15.7\% | 38.6\% | 38.6\% | 14.3\% | 37.1\% | 18.6\% | 12.9\% | 28.6\% |  | 18.6\% | 34.3\% | 15.7\% |
| Maximum Green (s) | 7.0 | 23.0 | 23.0 | 6.0 | 22.0 | 9.0 | 5.0 | 16.0 |  | 9.0 | 20.0 | 7.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 8.6 | 22.9 | 22.9 | 32.2 | 23.3 | 36.5 | 18.1 | 12.9 |  | 9.3 | 16.9 | 29.5 |
| Actuated g/C Ratio | 0.12 | 0.33 | 0.33 | 0.46 | 0.33 | 0.52 | 0.26 | 0.18 |  | 0.13 | 0.24 | 0.42 |
| v/c Ratio | 0.62 | 0.89 | 0.48 | 0.76 | 0.61 | 0.45 | 0.41 | 0.64 |  | 0.89 | 0.61 | 0.35 |
| Control Delay | 37.6 | 34.0 | 7.5 | 26.3 | 22.9 | 10.8 | 17.2 | 27.5 |  | 54.2 | 26.5 | 10.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.6 | 34.0 | 7.5 | 26.3 | 22.9 | 10.8 | 17.2 | 27.5 |  | 54.2 | 26.5 | 10.3 |
| LOS | D | C | A | C | C | B | B | C |  | D | C | B |
| Approach Delay |  | 29.1 |  |  | 20.9 |  |  | 24.1 |  |  | 32.5 |  |
| Approach LOS |  | C |  |  | C |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 7.0 | 23.0 | 23.0 | 6.0 | 22.0 | 9.0 | 5.0 | 16.0 |  | 9.0 | 20.0 | 7.0 |
| 90th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 8.4 | 23.0 | 23.0 | 7.4 | 22.0 | 9.0 | 5.0 | 14.6 |  | 9.0 | 18.6 | 8.4 |
| 70th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Gap |  | Max | Hold | Max |
| 50th \%ile Green (s) | 10.0 | 23.0 | 23.0 | 9.0 | 22.0 | 9.0 | 5.0 | 13.0 |  | 9.0 | 17.0 | 10.0 |
| 50th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Gap |  | Max | Hold | Max |
| 30th \%ile Green (s) | 9.7 | 23.0 | 23.0 | 10.5 | 23.8 | 9.0 | 5.0 | 11.5 |  | 9.0 | 15.5 | 9.7 |
| 30th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Max | Max | Gap |  | Max | Hold | Gap |
| 10th \%ile Green (s) | 8.0 | 22.7 | 22.7 | 11.8 | 26.5 | 10.3 | 6.3 | 9.2 |  | 10.3 | 13.2 | 8.0 |
| 10th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Max | Max | Gap |  | Max | Hold | Gap |
| Queue Length 50th (ft) | 54 | 218 | 22 | 64 | 115 | 47 | 31 | 79 |  | 89 | 103 | 44 |
| Queue Length 95th (ft) | \#111 | \#333 | 82 | m\#156 | 236 | m187 | 48 | 117 |  | \#167 | 141 | 91 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 422 | 1162 | 696 | 645 | 1176 | 886 | 530 | 820 |  | 454 | 1011 | 712 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.62 | 0.89 | 0.48 | 0.76 | 0.61 | 0.45 | 0.41 | 0.52 |  | 0.89 | 0.51 | 0.35 |

## Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Offset: $0(0 \%)$, Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 74.3\% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | 7 |  |  | 4 | $\dagger$ | $p$ |  | $\dagger$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | 444 | T | ${ }^{1}$ | 44 | 「 | ${ }^{1}$ | 4 | 「 | ${ }^{7}$ | $\uparrow$ |  |
| Volume (vph) | 5 | 850 | 365 | 360 | 1350 | 25 | 120 | 5 | 110 | 15 | 5 | 10 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.897 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1671 | 0 |
| Flt Permitted | 0.179 |  |  | 0.224 |  |  | 0.769 |  |  |  |  |  |
| Satd. Flow (perm) | 333 | 5085 | 1583 | 417 | 3539 | 1583 | 1432 | 1863 | 1583 | 1863 | 1671 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 397 |  |  | 140 |  |  | 203 |  | 11 |  |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time (s) |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 5 | 924 | 397 | 391 | 1467 | 27 | 130 | 5 | 120 | 16 | 5 | 11 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 5 | 924 | 397 | 391 | 1467 | 27 | 130 | 5 | 120 | 16 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 8.0 | 23.0 | 23.0 | 19.0 | 34.0 | 34.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (\%) | 11.4\% | 32.9\% | 32.9\% | 27.1\% | 48.6\% | 48.6\% | 11.4\% | 28.6\% | 28.6\% | 11.4\% | 28.6\% |  |
| Maximum Green (s) | 4.0 | 19.0 | 19.0 | 15.0 | 30.0 | 30.0 | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 41.6 | 36.0 | 36.0 | 56.0 | 54.8 | 54.8 | 7.3 | 6.3 | 6.3 | 6.0 | 6.0 |  |
| Actuated g/C Ratio | 0.59 | 0.51 | 0.51 | 0.80 | 0.78 | 0.78 | 0.10 | 0.09 | 0.09 | 0.09 | 0.09 |  |
| v/c Ratio | 0.02 | 0.35 | 0.39 | 0.61 | 0.53 | 0.02 | 0.73 | 0.03 | 0.37 | 0.10 | 0.10 |  |
| Control Delay | 3.2 | 4.2 | 2.1 | 9.0 | 6.2 | 0.0 | 54.2 | 29.2 | 4.0 | 28.0 | 20.6 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 3.2 | 4.2 | 2.1 | 9.0 | 6.2 | 0.0 | 54.2 | 29.2 | 4.0 | 28.0 | 20.6 |  |
| LOS | A | A | A | A | A | A | D | C | A | C | C |  |
| Approach Delay |  | 3.6 |  |  | 6.7 |  |  | 30.1 |  |  | 24.3 |  |
| Approach LOS |  | A |  |  | A |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 5.8 | 21.0 | 21.0 | 21.8 | 37.0 | 37.0 | 4.0 | 7.2 | 7.2 | 4.0 | 7.2 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 70th \%ile Green (s) | 0.0 | 34.1 | 34.1 | 18.0 | 56.1 | 56.1 | 5.9 | 5.9 | 5.9 | 0.0 | 0.0 |  |
| 70th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Hold | Gap | Gap | Skip | Skip |  |
| 50th \%ile Green (s) | 0.0 | 36.8 | 36.8 | 15.6 | 56.4 | 56.4 | 5.6 | 5.6 | 5.6 | 0.0 | 0.0 |  |
| 50th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Hold | Gap | Gap | Skip | Skip |  |
| 30th \%ile Green (s) | 0.0 | 36.9 | 36.9 | 13.7 | 54.6 | 54.6 | 7.4 | 7.4 | 7.4 | 0.0 | 0.0 |  |
| 30th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Skip | Skip |  |
| 10th \%ile Green (s) | 0.0 | 51.3 | 51.3 | 10.7 | 66.0 | 66.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Skip | Skip | Skip | Skip | Skip |  |
| Queue Length 50th (ft) | 0 | 9 | 0 | 26 | 70 | 0 | 57 | 2 | 0 | 7 | 2 |  |
| Queue Length 95th (ft) | m1 | m109 | m54 | 135 | 333 | 0 | 94 | 11 | 8 | 20 | 19 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  |  |  |  |  |
| Base Capacity (vph) | 312 | 2616 | 1007 | 663 | 2771 | 1270 | 177 | 425 | 518 | 154 | 390 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.02 | 0.35 | 0.39 | 0.59 | 0.53 | 0.02 | 0.73 | 0.01 | 0.23 | 0.10 | 0.04 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 70
Offset: 31 (44\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 7.4 Intersection LOS: A
Intersection Capacity Utilization 64.0\% ICU Level of Service B
Analysis Period (min) 15
$m$ Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


|  | $\rangle$ | $\rightarrow$ | 7 | $\dagger$ |  |  | 4 | $\uparrow$ | P |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ | 「" | \% ${ }^{1 / 4}$ | $\uparrow$ | F | \% ${ }^{1 / 4}$ | t†tt |  | ** | tttt | F |
| Volume (vph) | 265 | 120 | 590 | 70 | 95 | 70 | 1340 | 2400 | 395 | 90 | 1395 | 300 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill. Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.979 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (perm) | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 266 |  |  | 101 |  | 52 |  |  |  | 274 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (tt) |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time (s) |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 288 | 130 | 641 | 76 | 103 | 76 | 1457 | 2609 | 429 | 98 | 1516 | 326 |
| Shared Lane Traffic (\%) | 29\% |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 204 | 214 | 641 | 76 | 103 | 76 | 1457 | 3038 | 0 | 98 | 1516 | 326 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset(tt) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector (tt) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(tt) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Split | NA | pt+ov | Split | NA | Perm | Prot | NA |  | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 |  |  |  |  |  | 6 |
| Detector Phase | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 |  | 1 | 6 | 6 |


|  | $\rangle$ |  |  | $\checkmark$ |  |  | 4 | $\uparrow$ |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 21.0 | 21.0 |  | 20.0 | 20.0 | 20.0 | 62.0 | 87.0 |  | 12.0 | 37.0 | 37.0 |
| Total Split (\%) | 15.0\% | 15.0\% |  | 14.3\% | 14.3\% | 14.3\% | 44.3\% | 62.1\% |  | 8.6\% | 26.4\% | 26.4\% |
| Maximum Green (s) | 17.0 | 17.0 |  | 16.0 | 16.0 | 16.0 | 58.0 | 83.0 |  | 8.0 | 33.0 | 33.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 17.0 | 17.0 | 75.0 | 12.5 | 12.5 | 12.5 | 58.0 | 83.3 |  | 7.7 | 33.0 | 33.0 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.55 | 0.09 | 0.09 | 0.09 | 0.42 | 0.61 |  | 0.06 | 0.24 | 0.24 |
| v/c Ratio | 0.98 | 0.99 | 0.39 | 0.24 | 0.61 | 0.32 | 1.00 | 0.79 |  | 0.51 | 0.98 | 0.55 |
| Control Delay | 115.9 | 118.7 | 6.1 | 59.1 | 74.9 | 8.3 | 62.5 | 21.9 |  | 72.5 | 69.6 | 12.7 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 115.9 | 118.7 | 6.1 | 59.1 | 74.9 | 8.3 | 62.5 | 21.9 |  | 72.5 | 69.6 | 12.7 |
| LOS | F | F | A | E | E | A | E | C |  | E | E | B |
| Approach Delay |  | 50.0 |  |  | 50.4 |  |  | 35.1 |  |  | 60.2 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | E |  |
| 90th \%ile Green (s) | 17.0 | 17.0 |  | 16.0 | 16.0 | 16.0 | 58.0 | 83.0 |  | 8.0 | 33.0 | 33.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 17.0 | 17.0 |  | 14.9 | 14.9 | 14.9 | 58.0 | 83.0 |  | 8.0 | 33.0 | 33.0 |
| 70th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 17.0 | 17.0 |  | 12.9 | 12.9 | 12.9 | 58.0 | 83.0 |  | 8.0 | 33.0 | 33.0 |
| 50th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 30th \%ile Green (s) | 17.0 | 17.0 |  | 10.8 | 10.8 | 10.8 | 58.0 | 83.0 |  | 8.0 | 33.0 | 33.0 |
| 30th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 10th \%ile Green (s) | 17.0 | 17.0 |  | 8.0 | 8.0 | 8.0 | 58.0 | 84.3 |  | 6.7 | 33.0 | 33.0 |
| 10th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Hold |  | Gap | Max | Max |
| Queue Length 50th (ft) | 193 | 203 | 59 | 32 | 89 | 0 | $\sim 663$ | 559 |  | 44 | 392 | 37 |
| Queue Length 95th (ft) | \#375 | \#391 | 86 | 58 | 152 | 28 | \#863 | 638 |  | 77 | \#495 | 134 |
| Internal Link Dist (tt) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (tt) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 209 | 216 | 1651 | 402 | 218 | 274 | 1459 | 3848 |  | 201 | 1549 | 590 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.98 | 0.99 | 0.39 | 0.19 | 0.47 | 0.28 | 1.00 | 0.79 |  | 0.49 | 0.98 | 0.55 |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Area Type: <br> Cycle Length: 140 | Other |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

Actuated Cycle Length: 136.5
Natural Cycle: 140
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.00
Intersection Signal Delay: $43.9 \quad$ Intersection LOS: D
Intersection Capacity Utilization 85.6\%
ICU Level of Service E
Analysis Period (min) 15
90th \%ile Actuated Cycle: 140
70th \%ile Actuated Cycle: 138.9
50th \%ile Actuated Cycle: 136.9
30th \%ile Actuated Cycle: 134.8
10th \%ile Actuated Cycle: 132
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


| daf | Synchro 8 Report |
| :--- | ---: |
| Page 9 |  |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \% | $\uparrow$ |  | ${ }^{1}$ | $\uparrow$ |  | ${ }^{*}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{1}$ | 蚛 |  |
| Volume (vph) | 25 | 0 | 20 | 20 | 0 | 40 | 50 | 540 | 20 | 40 | 590 | 100 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 |  | 0 | 0 |  | 0 | 200 |  | 0 | 200 |  | 200 |
| Storage Lanes | 1 |  | 0 | 1 |  | 0 | 1 |  | 0 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  | 0.850 |  |  | 0.995 |  |  | 0.978 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 1770 | 1583 | 0 | 1770 | 3522 | 0 | 1770 | 3461 | 0 |
| Flt Permitted |  |  |  |  |  |  | 0.342 |  |  | 0.416 |  |  |
| Satd. Flow (perm) | 1863 | 1583 | 0 | 1863 | 1583 | 0 | 637 | 3522 | 0 | 775 | 3461 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 513 |  |  | 353 |  |  | 5 |  |  | 26 |  |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 402 |  |  | 1304 |  |  | 742 |  |  | 338 |  |
| Travel Time (s) |  | 6.1 |  |  | 19.8 |  |  | 11.2 |  |  | 5.1 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 27 | 0 | 22 | 22 | 0 | 43 | 54 | 587 | 22 | 43 | 641 | 109 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 27 | 22 | 0 | 22 | 43 | 0 | 54 | 609 | 0 | 43 | 750 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru |  |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm+pt | NA |  | pm+pt | NA |  | pm+pt | NA |  | pm+pt | NA |  |
| Protected Phases | 7 | 4 |  | 3 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |  |
| Detector Phase | 7 | 4 |  | 3 | 8 |  | 5 | 2 |  | 1 | 6 |  |


|  | 4 | $\rightarrow$ | $\cdots$ | 7 |  |  | $4$ | 4 |  | $0$ | $\dagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 |  | 20.0 | 20.0 |  | 8.0 | 20.0 |  | 8.0 | 20.0 |  |
| Total Split (s) | 8.0 | 20.0 |  | 20.0 | 32.0 |  | 8.0 | 22.0 |  | 8.0 | 22.0 |  |
| Total Split (\%) | 11.4\% | 28.6\% |  | 28.6\% | 45.7\% |  | 11.4\% | 31.4\% |  | 11.4\% | 31.4\% |  |
| Maximum Green (s) | 4.0 | 16.0 |  | 16.0 | 28.0 |  | 4.0 | 18.0 |  | 4.0 | 18.0 |  |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag |  | Lead | Lag |  | Lead | Lag |  | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes |  | Yes | Yes |  | Yes | Yes |  | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None |  | None | Min |  | None | Min |  |
| Walk Time (s) |  | 5.0 |  | 5.0 | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 |  | 11.0 | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 |  | 0 | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 5.3 | 6.0 |  | 7.5 | 6.4 |  | 23.3 | 25.3 |  | 23.3 | 25.3 |  |
| Actuated g/C Ratio | 0.16 | 0.18 |  | 0.23 | 0.19 |  | 0.70 | 0.76 |  | 0.70 | 0.76 |  |
| v/c Ratio | 0.09 | 0.03 |  | 0.05 | 0.07 |  | 0.09 | 0.23 |  | 0.06 | 0.28 |  |
| Control Delay | 13.1 | 0.1 |  | 12.1 | 0.2 |  | 4.1 | 5.9 |  | 4.1 | 6.1 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Delay | 13.1 | 0.1 |  | 12.1 | 0.2 |  | 4.1 | 5.9 |  | 4.1 | 6.1 |  |
| LOS | B | A |  | B | A |  | A | A |  | A | A |  |
| Approach Delay |  | 7.3 |  |  | 4.3 |  |  | 5.8 |  |  | 6.0 |  |
| Approach LOS |  | A |  |  | A |  |  | A |  |  | A |  |
| 90th \%ile Green (s) | 4.0 | 5.5 |  | 6.7 | 8.2 |  | 4.0 | 18.0 |  | 4.0 | 18.0 |  |
| 90th \%ile Term Code | Max | Gap |  | Gap | Hold |  | Max | Max |  | Max | Max |  |
| 70th \%ile Green (s) | 0.0 | 5.5 |  | 0.0 | 5.5 |  | 4.0 | 18.0 |  | 4.0 | 18.0 |  |
| 70th \%ile Term Code | Skip | Hold |  | Skip | Gap |  | Max | Hold |  | Max | Max |  |
| 50th \%ile Green (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 18.0 |  | 0.0 | 18.0 |  |
| 50th \%ile Term Code | Skip | Skip |  | Skip | Skip |  | Skip | Dwell |  | Skip | Dwell |  |
| 30th \%ile Green (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 23.7 |  | 0.0 | 23.7 |  |
| 30th \%ile Term Code | Skip | Skip |  | Skip | Skip |  | Skip | Dwell |  | Skip | Dwell |  |
| 10th \%ile Green (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 22.2 |  | 0.0 | 22.2 |  |
| 10th \%ile Term Code | Skip | Skip |  | Skip | Skip |  | Skip | Dwell |  | Skip | Dwell |  |
| Queue Length 50th (ft) | 2 | 0 |  | 2 | 0 |  | 0 | 0 |  | 1 | 0 |  |
| Queue Length 95th (ft) | 18 | 0 |  | 16 | 0 |  | 19 | 107 |  | 16 | 133 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  |  | 200 |  |  |
| Base Capacity (vph) | 290 | 1078 |  | 941 | 1402 |  | 597 | 2688 |  | 676 | 2646 |  |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Reduced v/c Ratio | 0.09 | 0.02 |  | 0.02 | 0.03 |  | 0.09 | 0.23 |  | 0.06 | 0.28 |  |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Area Type: | ther |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Length: 70 |  |  |  |  |  |  |  |  |  |  |  |  |

Actuated Cycle Length: 33.1
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.28
Intersection Signal Delay: 5.9 Intersection LOS: A
Intersection Capacity Utilization 40.9\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 50.2
70th \%ile Actuated Cycle: 39.5
50th \%ile Actuated Cycle: 22
30th \%ile Actuated Cycle: 27.7
10th \%ile Actuated Cycle: 26.2
Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | 4 |  |  |  |  |  |  | $\uparrow$ |  |  | $\downarrow$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{*}$ | $\hat{\square}$ |  |  | \＄ |  | ${ }^{*}$ | 㘖 |  | ${ }_{1}$ | 个4 | 「 |
| Volume（vph） | 100 | 0 | 20 | 15 | 0 | 20 | 90 | 490 | 10 | 10 | 555 | 65 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（t） | 300 |  | 0 | 0 |  | 0 | 300 |  | 0 | 300 |  | 300 |
| Storage Lanes | 1 |  | 0 | 0 |  | 0 | 1 |  | 0 | 1 |  | 1 |
| Taper Length（tt） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.922 |  |  | 0.997 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.979 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 0 | 1681 | 0 | 1770 | 3529 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.732 |  |  |  | 0.879 |  | 0.424 |  |  | 0.449 |  |  |
| Satd．Flow（perm） | 1364 | 1583 | 0 | 0 | 1510 | 0 | 790 | 3529 | 0 | 836 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 266 |  |  | 22 |  |  | 5 |  |  |  | 71 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 654 |  |  | 1393 |  |  | 1830 |  |  | 742 |  |
| Travel Time（s） |  | 9.9 |  |  | 21.1 |  |  | 27.7 |  |  | 11.2 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 109 | 0 | 22 | 16 | 0 | 22 | 98 | 533 | 11 | 11 | 603 | 71 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 109 | 22 | 0 | 0 | 38 | 0 | 98 | 544 | 0 | 11 | 603 | 71 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector（tt） | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（tt） | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex | Cl＋Ex |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（t） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |

Synchro 8 Report

|  | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | SBR

Lead/Lag

| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recall Mode | None | None | None | None | Min | Min | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Efft Green (s) | 8.2 | 8.2 |  | 8.1 | 19.9 | 19.9 | 19.9 | 19.9 | 19.9 |
| Actuated g/C Ratio | 0.25 | 0.25 |  | 0.25 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 |
| v/c Ratio | 0.32 | 0.04 |  | 0.10 | 0.20 | 0.25 | 0.02 | 0.28 | 0.07 |
| Control Delay | 12.7 | 0.1 |  | 6.5 | 6.6 | 5.0 | 5.0 | 5.2 | 2.0 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.7 | 0.1 |  | 6.5 | 6.6 | 5.0 | 5.0 | 5.2 | 2.0 |
| LOS | B | A |  | A | A | A | A | A | A |
| Approach Delay |  | 10.6 |  | 6.5 |  | 5.3 |  | 4.9 |  |
| Approach LOS |  | B |  | A |  | A |  | A |  |
| 90th \%ile Green (s) | 10.8 | 10.8 | 10.8 | 10.8 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| 90th \%ile Term Code | Gap | Gap | Hold | Hold | Gap | Gap | Hold | Hold | Hold |
| 70th \%ile Green (s) | 8.8 | 8.8 | 8.8 | 8.8 | 13.9 | 13.9 | 13.9 | 13.9 | 13.9 |
| 70th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 50th \%ile Green (s) | 8.0 | 8.0 | 8.0 | 8.0 | 16.5 | 16.5 | 16.5 | 16.5 | 16.5 |
| 50th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 30th \%ile Green (s) | 7.4 | 7.4 | 7.4 | 7.4 | 23.6 | 23.6 | 23.6 | 23.6 | 23.6 |
| 30th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 10th \%ile Green (s) | 0.0 | 0.0 | 0.0 | 0.0 | 21.3 | 21.3 | 21.3 | 21.3 | 21.3 |
| 10th \%ile Term Code | Skip | Skip | Skip | Skip | Dwell | Dwell | Dwell | Dwell | Dwell |
| Queue Length 50th (tt) | 15 | 0 |  | 2 | 8 | 23 | 1 | 26 | 0 |
| Queue Length 95th (tt) | 39 | 0 |  | 14 | 28 | 49 | 5 | 55 | 11 |
| Internal Link Dist (tt) |  | 574 |  | 1313 |  | 1750 |  | 662 |  |
| Turn Bay Length (t) | 300 |  |  |  | 300 |  | 300 |  | 300 |
| Base Capacity (vph) | 981 | 1213 |  | 1092 | 790 | 3529 | 836 | 3539 | 1583 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.02 |  | 0.03 | 0.12 | 0.15 | 0.01 | 0.17 | 0.04 |

## Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 32.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.32
Intersection Signal Delay: 5.6 Intersection LOS: A
Intersection Capacity Utilization 41.5\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 35.8
70th \%ile Actuated Cycle: 30.7
50th \%ile Actuated Cycle: 32.5
30th \%ile Actuated Cycle: 39
10th \%ile Actuated Cycle: 25.3
Splits and Phases: 6: Perimeter Center Pkwy \& Connector


|  | 4 |  | 4 | 4 | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | 7\％ | 中4 | 44 | 「゙「 | ＊ | 「゙ |
| Volume（vph） | 310 | 230 | 300 | 280 | 320 | 270 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  |  | 0 | 300 | 0 |
| Storage Lanes | 2 |  |  | 2 | 1 | 1 |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 304 |  | 293 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1941 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 29.4 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 337 | 250 | 326 | 304 | 348 | 293 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 337 | 250 | 326 | 304 | 348 | 293 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |

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|  | 4 | $\rightarrow$ |  |  |  | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 15.0 | 38.0 | 23.0 | 23.0 | 22.0 | 22.0 |
| Total Split (\%) | 25.0\% | 63.3\% | 38.3\% | 38.3\% | 36.7\% | 36.7\% |
| Maximum Green (s) | 11.0 | 34.0 | 19.0 | 19.0 | 18.0 | 18.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 9.2 | 23.6 | 10.2 | 10.2 | 10.0 | 10.0 |
| Actuated g/C Ratio | 0.22 | 0.56 | 0.24 | 0.24 | 0.24 | 0.24 |
| v/c Ratio | 0.45 | 0.13 | 0.38 | 0.33 | 0.42 | 0.49 |
| Control Delay | 17.4 | 4.7 | 15.0 | 3.5 | 16.0 | 5.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 17.4 | 4.7 | 15.0 | 3.5 | 16.0 | 5.6 |
| LOS | B | A | B | A | B | A |
| Approach Delay |  | 12.0 | 9.5 |  | 11.3 |  |
| Approach LOS |  | B | A |  | B |  |
| 90th \%ile Green (s) | 11.0 | 30.1 | 15.1 | 15.1 | 14.0 | 14.0 |
| 90th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 70th \%ile Green (s) | 10.9 | 27.2 | 12.3 | 12.3 | 11.9 | 11.9 |
| 70th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 9.4 | 23.5 | 10.1 | 10.1 | 9.6 | 9.6 |
| 50th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 8.1 | 20.1 | 8.0 | 8.0 | 8.3 | 8.3 |
| 30th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 6.8 | 17.6 | 6.8 | 6.8 | 6.9 | 6.9 |
| 10th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 34 | 11 | 32 | 0 | 35 | 0 |
| Queue Length 95th (ft) | 78 | 27 | 68 | 24 | 74 | 46 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 928 | 2927 | 1654 | 1464 | 1520 | 863 |
| 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 | 0.36 | 0.09 | 0.20 | 0.21 | 0.23 | 0.34 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other | Other |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |

Actuated Cycle Length: 41.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.49
Intersection Signal Delay: $10.9 \quad$ Intersection LOS: B
Intersection Capacity Utilization 36.3\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 52.1
70th \%ile Actuated Cycle: 47.1
50th \%ile Actuated Cycle: 41.1
30th \%ile Actuated Cycle: 36.4
10th \%ile Actuated Cycle: 32.5
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | 71 | 44 | 「 | 71 | 44 | 「 | ${ }^{4} 1$ | 虫 |  | ${ }^{4} 1$ | 中4 | T |
| Volume（vph） | 290 | 705 | 190 | 225 | 810 | 350 | 385 | 550 | 270 | 440 | 425 | 330 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ ft ） | 260 |  | 0 | 250 |  | 500 | 80 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 1 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.951 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3366 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3366 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 75 |  |  | 61 |  | 91 |  |  |  | 61 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 2029 |  |  | 963 |  |  | 330 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 5.0 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 315 | 766 | 207 | 245 | 880 | 380 | 418 | 598 | 293 | 478 | 462 | 359 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 315 | 766 | 207 | 245 | 880 | 380 | 418 | 891 | 0 | 478 | 462 | 359 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA | $p m+o v$ | Prot | NA | pm＋ov | Prot | NA |  | Prot | NA | pm＋ov |
| Protected Phases | 5 | 2 | 3 | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 |  |  | 6 |  |  |  |  |  | 4 |
| Detector Phase | 5 | 2 | 3 | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | 7\% | 个4 | F | \% ${ }^{*}$ |  | F | \% ${ }^{*}$ | 个t |  | \% ${ }^{*}$ |  | F |
| Volume (vph) | 240 | 950 | 585 | 650 | 660 | 370 | 255 | 365 | 125 | 370 | 600 | 230 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 260 |  | 0 | 250 |  | 500 | 80 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 1 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length (tt) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.962 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3405 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.112 |  |  | 0.256 |  |  | 0.950 |  |  |
| Satd. Flow (perm) | 3433 | 3539 | 1583 | 405 | 3539 | 1583 | 925 | 3405 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 202 |  |  | 66 |  | 46 |  |  |  | 86 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (tt) |  | 2029 |  |  | 963 |  |  | 330 |  |  | 786 |  |
| Travel Time (s) |  | 30.7 |  |  | 14.6 |  |  | 5.0 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 261 | 1033 | 636 | 707 | 717 | 402 | 277 | 397 | 136 | 402 | 652 | 250 |
| Shared Lane Traffic (\%) 201 |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 261 | 1033 | 636 | 707 | 717 | 402 | 277 | 533 | 0 | 402 | 652 | 250 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(t) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |


|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 |  |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Left | Thru | Right |  |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 100 | 20 |  |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position(tt) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(t) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 6 | 20 |  |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |  |

Detector 1 Channel

| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |
| Turn Type | Prot | NA | Perm | pm+pt | NA | pm+ov | pm+pt | NA | Prot | NA | $\mathrm{pm}+\mathrm{ov}$ |
| Protected Phases | 5 | 2 |  | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 | 6 |  | 6 | 8 |  |  |  | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 8.0 |
| Total Split (s) | 16.0 | 37.0 | 37.0 | 18.0 | 39.0 | 15.0 | 10.0 | 20.0 |  | 15.0 | 25.0 | 16.0 |
| Total Split (\%) | 17.8\% | 41.1\% | 41.1\% | 20.0\% | 43.3\% | 16.7\% | 11.1\% | 22.2\% |  | 16.7\% | 27.8\% | 17.8\% |
| Maximum Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 11.1 | 32.1 | 32.1 | 49.5 | 35.7 | 51.3 | 22.0 | 15.6 |  | 11.6 | 20.7 | 35.8 |
| Actuated g/C Ratio | 0.12 | 0.36 | 0.36 | 0.55 | 0.40 | 0.57 | 0.24 | 0.17 |  | 0.13 | 0.23 | 0.40 |
| v/c Ratio | 0.62 | 0.82 | 0.92 | 0.99 | 0.51 | 0.43 | 0.68 | 0.85 |  | 0.91 | 0.80 | 0.37 |
| Control Delay | 44.0 | 32.4 | 38.6 | 54.6 | 20.0 | 7.9 | 32.3 | 47.2 |  | 65.9 | 41.3 | 13.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.0 | 32.4 | 38.6 | 54.6 | 20.0 | 7.9 | 32.3 | 47.2 |  | 65.9 | 41.3 | 13.6 |
| LOS | D | C | D | D | B | A | C | D |  | E | D | B |
| Approach Delay |  | 36.0 |  |  | 30.7 |  |  | 42.1 |  |  | 43.6 |  |
| Approach LOS |  | D |  |  | C |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 90th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 70th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 50th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 30th \%ile Green (s) | 10.7 | 33.0 | 33.0 | 14.0 | 36.3 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 10.7 |
| 30th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Hold | Gap |
| 10th \%ile Green (s) | 8.8 | 28.7 | 28.7 | 17.5 | 37.4 | 14.0 | 8.2 | 13.8 |  | 14.0 | 19.6 | 8.8 |
| 10th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Gap | Gap | Gap |  | Gap | Hold | Gap |
| Queue Length 50th (ft) | 72 | 272 | 243 | ~140 | 167 | 115 | 57 | 142 |  | 119 | 184 | 60 |
| Queue Length 95th (ft) | 111 | 351 | \#465 | \#297 | 151 | 67 | \#91 | \#223 |  | \#209 | \#248 | 118 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 457 | 1297 | 708 | 717 | 1405 | 931 | 405 | 643 |  | 442 | 825 | 696 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.57 | 0.80 | 0.90 | 0.99 | 0.51 | 0.43 | 0.68 | 0.83 |  | 0.91 | 0.79 | 0.36 |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: 0 ( $0 \%$ ), Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 36.9 Intersection LOS: D
Intersection Capacity Utilization 82.8\% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | 7 | $4$ |  |  | 4 | $p$ | $\psi$ | $\frac{1}{7}$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | 4种 | 「 | ${ }^{*}$ | 44 | 「 | ${ }^{7}$ | 4 | 「＇ | ${ }^{1 /}$ | $\uparrow$ |  |
| Volume（vph） | 5 | 885 | 365 | 360 | 1550 | 25 | 120 | 5 | 110 | 15 | 5 | 10 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.897 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1671 | 0 |
| Flt Permitted | 0.123 |  |  | 0.218 |  |  | 0.702 |  |  |  |  |  |
| Satd．Flow（perm） | 229 | 5085 | 1583 | 406 | 3539 | 1583 | 1308 | 1863 | 1583 | 1863 | 1671 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 397 |  |  | 109 |  |  | 158 |  | 11 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time（s） |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 5 | 962 | 397 | 391 | 1685 | 27 | 130 | 5 | 120 | 16 | 5 | 11 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 5 | 962 | 397 | 391 | 1685 | 27 | 130 | 5 | 120 | 16 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 8.0 | 34.0 | 34.0 | 28.0 | 54.0 | 54.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (\%) | 8.9\% | 37.8\% | 37.8\% | 31.1\% | 60.0\% | 60.0\% | 8.9\% | 22.2\% | 22.2\% | 8.9\% | 22.2\% |  |
| Maximum Green (s) | 4.0 | 30.0 | 30.0 | 24.0 | 50.0 | 50.0 | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 52.6 | 47.1 | 47.1 | 69.7 | 67.8 | 67.8 | 11.5 | 8.5 | 8.5 | 7.4 | 6.3 |  |
| Actuated g/C Ratio | 0.58 | 0.52 | 0.52 | 0.77 | 0.75 | 0.75 | 0.13 | 0.09 | 0.09 | 0.08 | 0.07 |  |
| v/c Ratio | 0.02 | 0.36 | 0.39 | 0.65 | 0.63 | 0.02 | 0.60 | 0.03 | 0.41 | 0.11 | 0.12 |  |
| Control Delay | 4.6 | 12.5 | 3.2 | 11.7 | 8.0 | 0.0 | 48.5 | 37.8 | 7.5 | 36.5 | 25.9 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 4.6 | 12.5 | 3.2 | 11.7 | 8.0 | 0.0 | 48.5 | 37.8 | 7.5 | 36.5 | 25.9 |  |
| LOS | A | B | A | B | A | A | D | D | A | D | C |  |
| Approach Delay |  | 9.7 |  |  | 8.6 |  |  | 29.0 |  |  | 31.2 |  |
| Approach LOS |  | A |  |  | A |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 5.8 | 36.2 | 36.2 | 25.2 | 55.6 | 55.6 | 4.0 | 8.6 | 8.6 | 4.0 | 8.6 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Gap | Gap | Max | Hold |  |
| 70th \%ile Green (s) | 0.0 | 40.5 | 40.5 | 20.6 | 65.1 | 65.1 | 16.9 | 6.0 | 6.0 | 6.9 | 0.0 |  |
| 70th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Hold | Gap | Gap | Gap | Skip |  |
| 50th \%ile Green (s) | 0.0 | 47.6 | 47.6 | 19.1 | 70.7 | 70.7 | 11.3 | 11.3 | 11.3 | 0.0 | 0.0 |  |
| 50th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| 30th \%ile Green (s) | 0.0 | 52.2 | 52.2 | 16.4 | 72.6 | 72.6 | 9.4 | 9.4 | 9.4 | 0.0 | 0.0 |  |
| 30th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| 10th \%ile Green (s) | 0.0 | 58.8 | 58.8 | 12.0 | 74.8 | 74.8 | 7.2 | 7.2 | 7.2 | 0.0 | 0.0 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| Queue Length 50th (ft) | 1 | 98 | 21 | 46 | 156 | 0 | 71 | 3 | 0 | 9 | 3 |  |
| Queue Length 95th (ft) | m1 | m90 | m35 | 152 | 426 | 0 | \#133 | 13 | 29 | 25 | 22 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  |  |  |  |  |
| Base Capacity (vph) | 229 | 2659 | 1017 | 681 | 2664 | 1218 | 216 | 331 | 411 | 146 | 306 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.02 | 0.36 | 0.39 | 0.57 | 0.63 | 0.02 | 0.60 | 0.02 | 0.29 | 0.11 | 0.05 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: 17 (19\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 69.5\% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | 7 |  | 4 | 4 | 4 | \％ | ， | $\dagger$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | $\uparrow$ | 「「 | \％ | 4 | T | \％ 1 | $\dagger \dagger \dagger \%$ |  | ${ }^{4} 1$ | $\dagger \dagger \dagger$ | 「 |
| Volume（vph） | 265 | 120 | 625 | 70 | 95 | 70 | 1540 | 2400 | 395 | 90 | 1395 | 300 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.979 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 283 |  |  | 101 |  | 53 |  |  |  | 258 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time（s） |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 288 | 130 | 679 | 76 | 103 | 76 | 1674 | 2609 | 429 | 98 | 1516 | 326 |
| Shared Lane Traffic（\％） | 29\％ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 204 | 214 | 679 | 76 | 103 | 76 | 1674 | 3038 | 0 | 98 | 1516 | 326 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Split | NA | pt＋ov | Split | NA | Perm | Prot | NA |  | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 |  |  |  |  |  | 6 |
| Detector Phase | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 |  | 1 | 6 | 6 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 66.0 | 88.0 |  | 12.0 | 34.0 | 34.0 |
| Total Split (\%) | 14.3\% | 14.3\% |  | 14.3\% | 14.3\% | 14.3\% | 47.1\% | 62.9\% |  | 8.6\% | 24.3\% | 24.3\% |
| Maximum Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 16.0 | 16.0 | 78.0 | 12.5 | 12.5 | 12.5 | 62.0 | 84.3 |  | 7.7 | 30.0 | 30.0 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.57 | 0.09 | 0.09 | 0.09 | 0.45 | 0.62 |  | 0.06 | 0.22 | 0.22 |
| v/c Ratio | 1.04 | 1.05 | 0.40 | 0.24 | 0.61 | 0.32 | 1.07 | 0.78 |  | 0.51 | 1.08 | 0.59 |
| Control Delay | 132.0 | 134.9 | 5.6 | 59.1 | 74.9 | 8.3 | 81.5 | 21.1 |  | 72.5 | 97.1 | 16.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 132.0 | 134.9 | 5.6 | 59.1 | 74.9 | 8.3 | 81.5 | 21.1 |  | 72.5 | 97.1 | 16.1 |
| LOS | F | F | A | E | E | A | F | C |  | E | F | B |
| Approach Delay |  | 54.3 |  |  | 50.4 |  |  | 42.5 |  |  | 82.3 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | F |  |
| 90th \%ile Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 16.0 | 16.0 |  | 14.9 | 14.9 | 14.9 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 70th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 16.0 | 16.0 |  | 12.9 | 12.9 | 12.9 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 50th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 30th \%ile Green (s) | 16.0 | 16.0 |  | 10.8 | 10.8 | 10.8 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 30th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 10th \%ile Green (s) | 16.0 | 16.0 |  | 8.0 | 8.0 | 8.0 | 62.0 | 85.3 |  | 6.7 | 30.0 | 30.0 |
| 10th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Hold |  | Gap | Max | Max |
| Queue Length 50th (tt) | ~205 | ~218 | 58 | 32 | 89 | 0 | $\sim 853$ | 547 |  | 44 | $\sim 436$ | 50 |
| Queue Length 95th (ft) | \#387 | \#403 | 83 | 58 | 152 | 28 | \#1026 | 626 |  | 77 | \#533 | 155 |
| Internal Link Dist (tt) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 197 | 203 | 1714 | 402 | 218 | 274 | 1559 | 3894 |  | 201 | 1409 | 549 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.04 | 1.05 | 0.40 | 0.19 | 0.47 | 0.28 | 1.07 | 0.78 |  | 0.49 | 1.08 | 0.59 |

## Intersection Summary

Area Type: Other
Cycle Length: 140

Actuated Cycle Length: 136.5
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.08
Intersection Signal Delay: $54.0 \quad$ Intersection LOS: D
Intersection Capacity Utilization 91.3\%
ICU Level of Service F
Analysis Period (min) 15
90th \%ile Actuated Cycle: 140
70th \%ile Actuated Cycle: 138.9
50th \%ile Actuated Cycle: 136.9
30th \%ile Actuated Cycle: 134.8
10th \%ile Actuated Cycle: 132
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


| daf | Synchro 8 Report |
| :--- | ---: |
| Page 9 |  |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％ | $\hat{F}$ |  | \％ | $\uparrow$ | 「＂ | \％ | $\uparrow \uparrow$ | 「 | ＊＊ | 性 |  |
| Volume（vph） | 25 | 0 | 20 | 90 | 0 | 190 | 50 | 540 | 505 | 640 | 590 | 100 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（t） | 0 |  | 0 | 0 |  | 0 | 200 |  | 200 | 150 |  | 0 |
| Storage Lanes | 1 |  | 0 | 1 |  | 2 | 1 |  | 1 | 2 |  | 0 |
| Taper Length（tt） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.88 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  |  | 0.850 |  |  | 0.850 |  | 0.978 |  |
| Flt Protected | 0.950 |  |  | 0.950 | 0.950 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 1770 | 3539 | 1583 | 3433 | 3461 | 0 |
| Flt Permitted | 0.950 |  |  | 0.950 | 0.950 |  | 0.367 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 684 | 3539 | 1583 | 3433 | 3461 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 323 |  |  |  | 207 |  |  | 549 |  | 26 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 402 |  |  | 1304 |  |  | 742 |  |  | 338 |  |
| Travel Time（s） |  | 6.1 |  |  | 19.8 |  |  | 11.2 |  |  | 5.1 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 27 | 0 | 22 | 98 | 0 | 207 | 54 | 587 | 549 | 696 | 641 | 109 |
| Shared Lane Traffic（\％） |  |  |  | 50\％ |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 27 | 22 | 0 | 49 | 49 | 207 | 54 | 587 | 549 | 696 | 750 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（tt） |  | 12 |  |  | 12 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Two way Left Turn Lane |  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Headway Factor | 1.00 |  |  |  |  |  |  |  |  |  |  |  |


| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru |  | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（t） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| Detector 1 Size（tr） | 20 | 6 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |  |
| Detector 1 Type | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex |  |  |

Detector 1 Channel

| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  | 94 |  |  | 94 |  |  | 94 |
| Detector 2 Size（tt） |  | 6 |  | 6 |  |  | 6 |  |  | 6 |
| Detector 2 Type |  | Cl＋Ex |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |


| Detector 2 Extend（s） |  | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turn Type | Split | NA | Split | NA | Perm | pm＋pt | NA | Perm | Prot | NA |
| Protected Phases | 4 | 4 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |
| Permitted Phases |  |  |  | 8 | 8 | 8 | 5 | 2 | 2 | 1 |
| Detector Phase | 4 | 4 | 8 | 2 | 6 |  |  |  |  |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 43.0 | 43.0 | 37.0 | 72.0 |  |
| Total Split (\%) | 16.7\% | 16.7\% |  | 16.7\% | 16.7\% | 16.7\% | 6.7\% | 35.8\% | 35.8\% | 30.8\% | 60.0\% |  |
| Maximum Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 4.0 | 39.0 | 39.0 | 33.0 | 68.0 |  |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None | None | None | Min | Min | None | Min |  |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 7.3 | 7.3 |  | 8.3 | 8.3 | 8.3 | 26.4 | 21.9 | 21.9 | 21.1 | 43.5 |  |
| Actuated g/C Ratio | 0.10 | 0.10 |  | 0.12 | 0.12 | 0.12 | 0.38 | 0.31 | 0.31 | 0.30 | 0.62 |  |
| v/c Ratio | 0.15 | 0.05 |  | 0.25 | 0.25 | 0.41 | 0.17 | 0.53 | 0.63 | 0.68 | 0.35 |  |
| Control Delay | 39.8 | 0.2 |  | 39.0 | 39.0 | 8.9 | 10.9 | 24.0 | 6.0 | 27.2 | 8.5 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 39.8 | 0.2 |  | 39.0 | 39.0 | 8.9 | 10.9 | 24.0 | 6.0 | 27.2 | 8.5 |  |
| LOS | D | A |  | D | D | A | B | C | A | C | A |  |
| Approach Delay |  | 22.0 |  |  | 18.6 |  |  | 15.1 |  |  | 17.5 |  |
| Approach LOS |  | C |  |  | B |  |  | B |  |  | B |  |
| 90th \%ile Green (s) | 9.1 | 9.1 |  | 11.4 | 11.4 | 11.4 | 4.0 | 32.3 | 32.3 | 32.4 | 60.7 |  |
| 90th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Gap | Hold |  |
| 70th \%ile Green (s) | 7.6 | 7.6 |  | 9.2 | 9.2 | 9.2 | 4.0 | 26.2 | 26.2 | 25.6 | 47.8 |  |
| 70th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Gap | Hold |  |
| 50th \%ile Green (s) | 6.7 | 6.7 |  | 7.8 | 7.8 | 7.8 | 4.0 | 21.9 | 21.9 | 20.8 | 38.7 |  |
| 50th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Gap | Hold |  |
| 30th \%ile Green (s) | 0.0 | 0.0 |  | 6.5 | 6.5 | 6.5 | 0.0 | 16.5 | 16.5 | 15.3 | 35.8 |  |
| 30th \%ile Term Code | Skip | Skip |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| 10th \%ile Green (s) | 0.0 | 0.0 |  | 5.5 | 5.5 | 5.5 | 0.0 | 12.9 | 12.9 | 12.2 | 29.1 |  |
| 10th \%ile Term Code | Skip | Skip |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| Queue Length 50th (ft) | 12 | 0 |  | 22 | 22 | 0 | 8 | 116 | 0 | 145 | 95 |  |
| Queue Length 95th (ft) | 44 | 0 |  | 69 | 69 | 36 | 22 | 216 | 78 | 257 | 152 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  | 200 | 150 |  |  |
| Base Capacity (vph) | 445 | 640 |  | 423 | 423 | 856 | 324 | 2172 | 1183 | 1783 | 3052 |  |
| 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 | 0.06 | 0.03 |  | 0.12 | 0.12 | 0.24 | 0.17 | 0.27 | 0.46 | 0.39 | 0.25 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 120

Actuated Cycle Length: 70.4
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 62.9\%
ICU Level of Service B
Analysis Period (min) 15
90th \%ile Actuated Cycle: 101.2
70th \%ile Actuated Cycle: 84.6
50th \%ile Actuated Cycle: 73.2
30th \%ile Actuated Cycle: 50.3
10th \%ile Actuated Cycle: 42.6
Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | $\rangle$ | $\rightarrow$ |  | 7 |  |  | 4 | $\dagger$ |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | \％ | $\hat{\square}$ |  |  | 4 |  | \％ | 个 ${ }_{\text {d }}$ |  | ${ }^{*}$ | 个个 | 「 |
| Volume（vph） | 180 | 0 | 30 | 15 | 0 | 20 | 160 | 895 | 10 | 10 | 570 | 120 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 300 |  | 0 | 0 |  | 0 | 300 |  | 0 | 300 |  | 300 |
| Storage Lanes | 1 |  | 0 | 0 |  | 0 | 1 |  | 0 | 1 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill．Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.922 |  |  | 0.998 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.979 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 0 | 1681 | 0 | 1770 | 3532 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.732 |  |  |  | 0.896 |  | 0.417 |  |  | 0.256 |  |  |
| Satd．Flow（perm） | 1364 | 1583 | 0 | 0 | 1539 | 0 | 777 | 3532 | 0 | 477 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 263 |  |  | 22 |  |  | 3 |  |  |  | 130 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 654 |  |  | 1393 |  |  | 1830 |  |  | 742 |  |
| Travel Time（s） |  | 9.9 |  |  | 21.1 |  |  | 27.7 |  |  | 11.2 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 196 | 0 | 33 | 16 | 0 | 22 | 174 | 973 | 11 | 11 | 620 | 130 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 196 | 33 | 0 | 0 | 38 | 0 | 174 | 984 | 0 | 11 | 620 | 130 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector（tt） | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（tt） | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{EX}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（tt） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |

Synchro 8 Report

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 22.0 | 22.0 |  | 22.0 | 22.0 |  | 38.0 | 38.0 |  | 38.0 | 38.0 | 38.0 |
| Total Split (\%) | 36.7\% | 36.7\% |  | 36.7\% | 36.7\% |  | 63.3\% | 63.3\% |  | 63.3\% | 63.3\% | 63.3\% |
| Maximum Green (s) | 18.0 | 18.0 |  | 18.0 | 18.0 |  | 34.0 | 34.0 |  | 34.0 | 34.0 | 34.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 |  |  | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |

Lead/Lag

| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recall Mode | None | None | None | None | Min | Min | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Efftt Green (s) | 11.4 | 11.4 |  | 11.1 | 26.3 | 26.3 | 26.3 | 26.3 | 26.3 |
| Actuated g/C Ratio | 0.27 | 0.27 |  | 0.27 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| v/c Ratio | 0.53 | 0.05 |  | 0.09 | 0.36 | 0.44 | 0.04 | 0.28 | 0.12 |
| Control Delay | 20.2 | 0.2 |  | 9.2 | 9.3 | 6.9 | 6.0 | 5.9 | 1.8 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 20.2 | 0.2 |  | 9.2 | 9.3 | 6.9 | 6.0 | 5.9 | 1.8 |
| LOS | C | A |  | A | A | A | A | A | A |
| Approach Delay |  | 17.3 |  | 9.2 |  | 7.3 |  | 5.2 |  |
| Approach LOS |  | B |  | A |  | A |  | A |  |
| 90th \%ile Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 |
| 90th \%ile Term Code | Max | Max | Hold | Hold | Max | Max | Hold | Hold | Hold |
| 70th \%ile Green (s) | 13.4 | 13.4 | 13.4 | 13.4 | 23.4 | 23.4 | 23.4 | 23.4 | 23.4 |
| 70th \%ile Term Code | Gap | Gap | Hold | Hold | Gap | Gap | Hold | Hold | Hold |
| 50th \%ile Green (s) | 10.7 | 10.7 | 10.7 | 10.7 | 19.1 | 19.1 | 19.1 | 19.1 | 19.1 |
| 50th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 30th \%ile Green (s) | 9.4 | 9.4 | 9.4 | 9.4 | 21.9 | 21.9 | 21.9 | 21.9 | 21.9 |
| 30th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 10th \%ile Green (s) | 0.0 | 0.0 | 0.0 | 0.0 | 23.2 | 23.2 | 23.2 | 23.2 | 23.2 |
| 10th \%ile Term Code | Skip | Skip | Skip | Skip | Dwell | Dwell | Dwell | Dwell | Dwell |
| Queue Length 50th (tt) | 34 | 0 |  | 2 | 20 | 63 | 1 | 35 | 0 |
| Queue Length 95th (t) | 112 | 0 |  | 22 | 71 | 140 | 7 | 81 | 18 |
| Internal Link Dist (t) |  | 574 |  | 1313 |  | 1750 |  | 662 |  |
| Turn Bay Length (t) | 300 |  |  |  | 300 |  | 300 |  | 300 |
| Base Capacity (vph) | 626 | 869 |  | 719 | 635 | 2890 | 390 | 2895 | 1318 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.31 | 0.04 |  | 0.05 | 0.27 | 0.34 | 0.03 | 0.21 | 0.10 |

## Intersection Summary

Area Type: Other
Cycle Length: 60

Actuated Cycle Length: 41.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 55.0\% ICU Level of Service B
Analysis Period (min) 15
90th \%ile Actuated Cycle: 60
70th \%ile Actuated Cycle: 44.8
50th \%ile Actuated Cycle: 37.8
30th \%ile Actuated Cycle: 39.3
10th \%ile Actuated Cycle: 27.2
Splits and Phases: 6: Perimeter Center Pkwy \& Connector

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|  | 4 | $\rightarrow$ |  | 4 | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | \％ 1 | 44 | 44 | 「「 | 41 | 「 |
| Volume（vph） | 550 | 230 | 300 | 515 | 335 | 280 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  |  | 0 | 300 | 0 |
| Storage Lanes | 2 |  |  | 2 | 1 | 1 |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 560 |  | 304 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1941 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 29.4 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 598 | 250 | 326 | 560 | 364 | 304 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 598 | 250 | 326 | 560 | 364 | 304 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |

Synchro 8 Report
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|  | 4 | $\rightarrow$ |  |  |  | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (\%) | 33.3\% | 66.7\% | 33.3\% | 33.3\% | 33.3\% | 33.3\% |
| Maximum Green (s) | 16.0 | 36.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 13.1 | 28.6 | 11.3 | 11.3 | 10.8 | 10.8 |
| Actuated g/C Ratio | 0.27 | 0.60 | 0.24 | 0.24 | 0.23 | 0.23 |
| v/c Ratio | 0.64 | 0.12 | 0.39 | 0.51 | 0.47 | 0.51 |
| Control Delay | 19.7 | 4.5 | 17.5 | 3.9 | 19.0 | 6.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.7 | 4.5 | 17.5 | 3.9 | 19.0 | 6.2 |
| LOS | B | A | B | A | B | A |
| Approach Delay |  | 15.2 | 8.9 |  | 13.2 |  |
| Approach LOS |  | B | A |  | B |  |
| 90th \%ile Green (s) | 16.0 | 36.0 | 16.0 | 16.0 | 15.4 | 15.4 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Gap | Gap |
| 70th \%ile Green (s) | 16.0 | 34.0 | 14.0 | 14.0 | 13.1 | 13.1 |
| 70th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 13.4 | 29.0 | 11.6 | 11.6 | 10.4 | 10.4 |
| 50th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 11.3 | 24.6 | 9.3 | 9.3 | 8.9 | 8.9 |
| 30th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 8.9 | 19.8 | 6.9 | 6.9 | 7.2 | 7.2 |
| 10th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 72 | 12 | 38 | 0 | 45 | 0 |
| Queue Length 95th (ft) | 144 | 29 | 80 | 34 | 88 | 50 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 1194 | 2750 | 1231 | 1334 | 1194 | 749 |
| 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 | 0.50 | 0.09 | 0.26 | 0.42 | 0.30 | 0.41 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type:Cycle Length: 60 | Other |  |  |  |  |  |
|  |  |  |  |  |  |  |

Synchro 8 Report

Actuated Cycle Length: 47.7
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.3 Intersection LOS: B
Intersection Capacity Utilization 43.5\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 59.4
70th \%ile Actuated Cycle: 55.1
50th \%ile Actuated Cycle: 47.4
30th \%ile Actuated Cycle: 41.5
10th \%ile Actuated Cycle: 35
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 8.0 |
| Total Split (s) | 14.0 | 31.0 | 20.0 | 13.0 | 30.0 | 18.0 | 20.0 | 28.0 |  | 18.0 | 26.0 | 14.0 |
| Total Split (\%) | 15.6\% | 34.4\% | 22.2\% | 14.4\% | 33.3\% | 20.0\% | 22.2\% | 31.1\% |  | 20.0\% | 28.9\% | 15.6\% |
| Maximum Green (s) | 10.0 | 27.0 | 16.0 | 9.0 | 26.0 | 14.0 | 16.0 | 24.0 |  | 14.0 | 22.0 | 10.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lead | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | None | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 10.1 | 27.2 | 46.1 | 8.9 | 26.1 | 44.1 | 14.9 | 23.8 |  | 14.1 | 23.0 | 37.1 |
| Actuated g/C Ratio | 0.11 | 0.30 | 0.51 | 0.10 | 0.29 | 0.49 | 0.17 | 0.26 |  | 0.16 | 0.26 | 0.41 |
| v/c Ratio | 0.82 | 0.72 | 0.24 | 0.72 | 0.86 | 0.47 | 0.74 | 0.93 |  | 0.89 | 0.51 | 0.52 |
| Control Delay | 57.8 | 32.5 | 8.2 | 51.3 | 34.7 | 10.4 | 44.1 | 46.6 |  | 58.1 | 31.4 | 19.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 57.8 | 32.5 | 8.2 | 51.3 | 34.7 | 10.4 | 44.1 | 46.6 |  | 58.1 | 31.4 | 19.8 |
| LOS | E | C | A | D | C | B | D | D |  | E | C | B |
| Approach Delay |  | 34.8 |  |  | 31.3 |  |  | 45.8 |  |  | 38.0 |  |
| Approach LOS |  | C |  |  | C |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 10.0 | 27.0 | 16.0 | 9.0 | 26.0 | 14.0 | 16.0 | 24.0 |  | 14.0 | 22.0 | 10.0 |
| 90th \%ile Term Code | Max | Coord | Max | Max | Coord | Max | Max | Max |  | Max | Hold | Max |
| 70th \%ile Green (s) | 10.0 | 27.0 | 16.0 | 9.0 | 26.0 | 14.0 | 16.0 | 24.0 |  | 14.0 | 22.0 | 10.0 |
| 70th \%ile Term Code | Max | Coord | Max | Max | Coord | Max | Max | Max |  | Max | Hold | Max |
| 50th \%ile Green (s) | 10.0 | 27.0 | 16.0 | 9.0 | 26.0 | 14.0 | 16.0 | 24.0 |  | 14.0 | 22.0 | 10.0 |
| 50th \%ile Term Code | Max | Coord | Max | Max | Coord | Max | Max | Max |  | Max | Hold | Max |
| 30th \%ile Green (s) | 10.0 | 27.0 | 14.4 | 9.0 | 26.0 | 14.0 | 14.4 | 24.0 |  | 14.0 | 23.6 | 10.0 |
| 30th \%ile Term Code | Max | Coord | Gap | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 10th \%ile Green (s) | 10.4 | 28.2 | 11.9 | 8.6 | 26.4 | 14.3 | 11.9 | 22.9 |  | 14.3 | 25.3 | 10.4 |
| 10th \%ile Term Code | Gap | Coord | Gap | Gap | Coord | Gap | Gap | Gap |  | Gap | Hold | Gap |
| Queue Length 50th (ft) | 91 | 204 | 37 | 76 | 145 | 68 | 115 | 236 |  | 139 | 120 | 125 |
| Queue Length 95th (ft) | \#159 | 270 | 75 | m102 | m240 | m91 | 165 | \#356 |  | \#226 | 169 | 210 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 384 | 1070 | 866 | 343 | 1025 | 807 | 610 | 964 |  | 536 | 903 | 687 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.82 | 0.72 | 0.24 | 0.71 | 0.86 | 0.47 | 0.69 | 0.92 |  | 0.89 | 0.51 | 0.52 |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: $0(0 \%)$, Referenced to phase 2:EBT and 6:WBT, Start of Green, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: $37.3 \quad$ Intersection LOS: D
Intersection Capacity Utilization 80.4\% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | ${ }^{7}$ | 444 | 「 | ${ }^{7}$ | 44 | 「 | ${ }^{1}$ | 4 | 「 | ${ }^{7}$ | $\uparrow$ |  |
| Volume（vph） | 50 | 1230 | 210 | 315 | 965 | 55 | 360 | 20 | 370 | 120 | 20 | 60 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.888 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1654 | 0 |
| Flt Permitted | 0.249 |  |  | 0.101 |  |  | 0.421 |  |  | 0.743 |  |  |
| Satd．Flow（perm） | 464 | 5085 | 1583 | 188 | 3539 | 1583 | 784 | 1863 | 1583 | 1384 | 1654 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 228 |  |  | 158 |  |  | 373 |  | 65 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time（s） |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 54 | 1337 | 228 | 342 | 1049 | 60 | 391 | 22 | 402 | 130 | 22 | 65 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 54 | 1337 | 228 | 342 | 1049 | 60 | 391 | 22 | 402 | 130 | 87 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 9.0 | 31.0 | 31.0 | 21.0 | 43.0 | 43.0 | 18.0 | 28.0 | 28.0 | 10.0 | 20.0 |  |
| Total Split (\%) | 10.0\% | 34.4\% | 34.4\% | 23.3\% | 47.8\% | 47.8\% | 20.0\% | 31.1\% | 31.1\% | 11.1\% | 22.2\% |  |
| Maximum Green (s) | 5.0 | 27.0 | 27.0 | 17.0 | 39.0 | 39.0 | 14.0 | 24.0 | 24.0 | 6.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 43.0 | 36.4 | 36.4 | 57.7 | 49.0 | 49.0 | 24.3 | 14.1 | 14.1 | 12.8 | 7.7 |  |
| Actuated g/C Ratio | 0.48 | 0.40 | 0.40 | 0.64 | 0.54 | 0.54 | 0.27 | 0.16 | 0.16 | 0.14 | 0.09 |  |
| v/c Ratio | 0.17 | 0.65 | 0.29 | 0.81 | 0.54 | 0.06 | 1.05 | 0.08 | 0.72 | 0.58 | 0.44 |  |
| Control Delay | 9.6 | 23.1 | 5.7 | 35.0 | 16.4 | 0.1 | 93.3 | 30.2 | 12.7 | 37.9 | 21.5 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 9.6 | 23.1 | 5.7 | 35.0 | 16.4 | 0.1 | 93.3 | 30.2 | 12.7 | 37.9 | 21.5 |  |
| LOS | A | C | A | D | B | A | F | C | B | D | C |  |
| Approach Delay |  | 20.2 |  |  | 20.1 |  |  | 51.8 |  |  | 31.3 |  |
| Approach LOS |  | C |  |  | C |  |  | D |  |  | C |  |
| 90th \%ile Green (s) | 8.1 | 27.0 | 27.0 | 20.8 | 39.7 | 39.7 | 14.0 | 20.2 | 20.2 | 6.0 | 12.2 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Coord | Max | Gap | Gap | Max | Hold |  |
| 70th \%ile Green (s) | 7.0 | 30.5 | 30.5 | 21.1 | 44.6 | 44.6 | 14.0 | 16.4 | 16.4 | 6.0 | 8.4 |  |
| 70th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 50th \%ile Green (s) | 6.5 | 35.4 | 35.4 | 17.9 | 46.8 | 46.8 | 14.0 | 14.7 | 14.7 | 6.0 | 6.7 |  |
| 50th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 30th \%ile Green (s) | 6.0 | 39.4 | 39.4 | 15.1 | 48.5 | 48.5 | 14.0 | 13.5 | 13.5 | 6.0 | 5.5 |  |
| 30th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 10th \%ile Green (s) | 0.0 | 49.5 | 49.5 | 11.7 | 65.2 | 65.2 | 16.8 | 5.5 | 5.5 | 7.3 | 0.0 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Hold | Gap | Gap | Gap | Skip |  |
| Queue Length 50th (ft) | 12 | 158 | 14 | 131 | 202 | 0 | ~223 | 11 | 14 | 58 | 12 |  |
| Queue Length 95th (ft) | m18 | m258 | m24 | \#241 | 312 | 0 | \#306 | 29 | 97 | 96 | 54 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  |  |  |  |  |
| Base Capacity (vph) | 317 | 2054 | 775 | 450 | 1925 | 933 | 371 | 496 | 695 | 224 | 347 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.17 | 0.65 | 0.29 | 0.76 | 0.54 | 0.06 | 1.05 | 0.04 | 0.58 | 0.58 | 0.25 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: 11 (12\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: $27.1 \quad$ Intersection LOS: C
Intersection Capacity Utilization 77.8\% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％ | $\uparrow$ | 「「 | \％${ }^{*}$ | $\uparrow$ | 「 | \％ 7 | ttto |  | ${ }^{7+1}$ | tttt | F |
| Volume（vph） | 290 | 45 | 1385 | 435 | 140 | 90 | 1065 | 2000 | 55 | 30 | 1700 | 130 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（tt） | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 36 |  |  | 95 |  | 5 |  |  |  | 95 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time（s） |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 315 | 49 | 1505 | 473 | 152 | 98 | 1158 | 2174 | 60 | 33 | 1848 | 141 |
| Shared Lane Traffic（\％） | 43\％ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 180 | 184 | 1505 | 473 | 152 | 98 | 1158 | 2234 | 0 | 33 | 1848 | 141 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  | Detector 1 Chann


| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |
| Turn Type | Split | NA | pt＋ov | Split | NA | Perm | Prot | NA | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 | 1 | 6 |  |


| Permitted Phases | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Detector Phase | 4 |  |  |  |  |  |  |  |  |  |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 34.0 | 34.0 |  | 22.0 | 22.0 | 22.0 | 49.0 | 86.0 |  | 8.0 | 45.0 | 45.0 |
| Total Split (\%) | 22.7\% | 22.7\% |  | 14.7\% | 14.7\% | 14.7\% | 32.7\% | 57.3\% |  | 5.3\% | 30.0\% | 30.0\% |
| Maximum Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 82.0 |  | 4.0 | 41.0 | 41.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 30.0 | 30.0 | 75.0 | 18.0 | 18.0 | 18.0 | 45.0 | 83.6 |  | 4.0 | 41.0 | 41.0 |
| Actuated g/C Ratio | 0.20 | 0.20 | 0.50 | 0.12 | 0.12 | 0.12 | 0.30 | 0.56 |  | 0.03 | 0.27 | 0.27 |
| v/c Ratio | 0.54 | 0.54 | 1.07 | 1.15 | 0.68 | 0.36 | 1.13 | 0.63 |  | 0.36 | 1.06 | 0.28 |
| Control Delay | 60.5 | 60.5 | 70.5 | 148.7 | 79.4 | 15.4 | 116.4 | 23.8 |  | 82.9 | 89.5 | 16.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 60.5 | 60.5 | 70.5 | 148.7 | 79.4 | 15.4 | 116.4 | 23.8 |  | 82.9 | 89.5 | 16.9 |
| LOS | E | E | E | F | E | B | F | C |  | F | F | B |
| Approach Delay |  | 68.5 |  |  | 116.1 |  |  | 55.4 |  |  | 84.3 |  |
| Approach LOS |  | E |  |  | F |  |  | E |  |  | F |  |
| 90th \%ile Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 82.0 |  | 4.0 | 41.0 | 41.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 82.0 |  | 4.0 | 41.0 | 41.0 |
| 70th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Max | Max | Max |
| 50th \%ile Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 82.0 |  | 4.0 | 41.0 | 41.0 |
| 50th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Max | Max | Max |
| 30th \%ile Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 82.0 |  | 4.0 | 41.0 | 41.0 |
| 30th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Max | Max | Max |
| 10th \%ile Green (s) | 30.0 | 30.0 |  | 18.0 | 18.0 | 18.0 | 45.0 | 90.0 |  | 0.0 | 41.0 | 41.0 |
| 10th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Skip | Max | Max |
| Queue Length 50th (ft) | 168 | 171 | $\sim 660$ | ~279 | 145 | 3 | $\sim 672$ | 429 |  | 16 | ~573 | 34 |
| Queue Length 95th (ft) | 254 | 260 | \#977 | \#394 | \#228 | 59 | \#809 | 465 |  | 36 | \#648 | 93 |
| Internal Link Dist (ft) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 336 | 341 | 1411 | 411 | 223 | 273 | 1029 | 3559 |  | 91 | 1751 | 501 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.54 | 0.54 | 1.07 | 1.15 | 0.68 | 0.36 | 1.13 | 0.63 |  | 0.36 | 1.06 | 0.28 |

## Intersection Summary

Area Type: Other
Cycle Length: 150

Actuated Cycle Length: 150
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 71.3 Intersection LOS: E
Intersection Capacity Utilization 95.5\% ICU Level of Service F
Analysis Period (min) 15
90th \%ile Actuated Cycle: 150
70th \%ile Actuated Cycle: 150
50th \%ile Actuated Cycle: 150
30th \%ile Actuated Cycle: 150
10th \%ile Actuated Cycle: 150
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


|  | $\stackrel{*}{ }$ |  |  | 7 |  |  | 4 | $\dagger$ |  |  | $\downarrow$ | $\checkmark$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | F |  |  | F |  | 蚛 |  | ${ }^{7}$ | 中 ${ }^{\text {c }}$ |  |
| Volume (vph) | 0 | 0 | 70 | 0 | 0 | 180 | 0 | 1025 | 25 | 50 | 660 | 80 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 80 |  | 0 |
| Storage Lanes | 0 |  | 1 | 0 |  | 1 | 0 |  | 0 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  |  | 0.865 |  |  | 0.865 |  | 0.996 |  |  | 0.984 |  |
| Flt Protected |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3525 | 0 | 1770 | 3483 | 0 |
| Flt Permitted |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd. Flow (perm) | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3525 | 0 | 1770 | 3483 | 0 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 391 |  |  | 524 |  |  | 338 |  |  | 330 |  |
| Travel Time (s) |  | 5.9 |  |  | 7.9 |  |  | 5.1 |  |  | 5.0 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1114 | 27 | 54 | 717 | 87 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1141 | 0 | 54 | 804 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 0 |  |  | 0 |  |  | 24 |  |  | 24 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Stop |  |  | Stop |  |  | Free |  |  | Free |  |

## Intersection Summary

```
Area Type: Other
```

Control Type: Unsignalized

```
Intersection Capacity Utilization 46.9%
ICU Level of Service A
```

Analysis Period (min) 15

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \% | $\uparrow$ |  | \% | $\hat{6}$ |  | ${ }^{*}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{*}$ | 中 ${ }^{\text {a }}$ |  |
| Volume (vph) | 105 | 0 | 110 | 105 | 0 | 235 | 20 | 710 | 5 | 20 | 665 | 45 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (tt) | 0 |  | 0 | 0 |  | 0 | 200 |  | 0 | 200 |  | 200 |
| Storage Lanes | 1 |  | 0 | 1 |  | 0 | 1 |  | 0 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  | 0.850 |  |  | 0.999 |  |  | 0.990 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 1770 | 1583 | 0 | 1770 | 3536 | 0 | 1770 | 3504 | 0 |
| Flt Permitted | 0.690 |  |  | 0.563 |  |  | 0.266 |  |  | 0.263 |  |  |
| Satd. Flow (perm) | 1285 | 1583 | 0 | 1049 | 1583 | 0 | 495 | 3536 | 0 | 490 | 3504 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 408 |  |  | 298 |  |  | 1 |  |  | 10 |  |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (tt) |  | 402 |  |  | 1304 |  |  | 742 |  |  | 338 |  |
| Travel Time (s) |  | 6.1 |  |  | 19.8 |  |  | 11.2 |  |  | 5.1 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 114 | 0 | 120 | 114 | 0 | 255 | 22 | 772 | 5 | 22 | 723 | 49 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 114 | 120 | 0 | 114 | 255 | 0 | 22 | 777 | 0 | 22 | 772 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru |  |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm+pt | NA |  | pm+pt | NA |  | pm+pt | NA |  | pm+pt | NA |  |
| Protected Phases | 7 | 4 |  | 3 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |  |
| Detector Phase | 7 | 4 |  | 3 | 8 |  | 5 | 2 |  | 1 | 6 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 |  | 20.0 | 20.0 |  | 8.0 | 20.0 |  | 8.0 | 20.0 |  |
| Total Split (s) | 10.0 | 20.0 |  | 20.0 | 30.0 |  | 8.0 | 22.0 |  | 8.0 | 22.0 |  |
| Total Split (\%) | 14.3\% | 28.6\% |  | 28.6\% | 42.9\% |  | 11.4\% | 31.4\% |  | 11.4\% | 31.4\% |  |
| Maximum Green (s) | 6.0 | 16.0 |  | 16.0 | 26.0 |  | 4.0 | 18.0 |  | 4.0 | 18.0 |  |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag |  | Lead | Lag |  | Lead | Lag |  | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes |  | Yes | Yes |  | Yes | Yes |  | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None |  | None | Min |  | None | Min |  |
| Walk Time (s) |  | 5.0 |  | 5.0 | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 |  | 11.0 | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 |  | 0 | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 10.4 | 5.8 |  | 12.9 | 7.1 |  | 16.9 | 16.3 |  | 16.9 | 16.3 |  |
| Actuated g/C Ratio | 0.26 | 0.14 |  | 0.32 | 0.18 |  | 0.42 | 0.40 |  | 0.42 | 0.40 |  |
| v/c Ratio | 0.28 | 0.21 |  | 0.24 | 0.49 |  | 0.07 | 0.55 |  | 0.07 | 0.54 |  |
| Control Delay | 11.9 | 0.8 |  | 10.9 | 5.6 |  | 8.0 | 12.5 |  | 8.0 | 12.4 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  |
| Total Delay | 11.9 | 0.8 |  | 10.9 | 5.6 |  | 8.0 | 12.5 |  | 8.0 | 12.4 |  |
| LOS | B | A |  | B | A |  | A | B |  | A | B |  |
| Approach Delay |  | 6.2 |  |  | 7.3 |  |  | 12.4 |  |  | 12.3 |  |
| Approach LOS |  | A |  |  | A |  |  | B |  |  | B |  |
| 90th \%ile Green (s) | 6.0 | 5.7 |  | 10.1 | 9.8 |  | 4.0 | 18.0 |  | 4.0 | 18.0 |  |
| 90th \%ile Term Code | Max | Hold |  | Gap | Gap |  | Max | Max |  | Max | Max |  |
| 70th \%ile Green (s) | 6.0 | 5.5 |  | 7.9 | 7.4 |  | 0.0 | 18.0 |  | 0.0 | 18.0 |  |
| 70th \%ile Term Code | Max | Gap |  | Gap | Hold |  | Skip | Max |  | Skip | Max |  |
| 50th \%ile Green (s) | 6.0 | 5.5 |  | 7.1 | 6.6 |  | 0.0 | 15.9 |  | 0.0 | 15.9 |  |
| 50th \%ile Term Code | Max | Gap |  | Gap | Hold |  | Skip | Gap |  | Skip | Hold |  |
| 30th \%ile Green (s) | 6.0 | 5.5 |  | 6.4 | 5.9 |  | 0.0 | 13.5 |  | 0.0 | 13.5 |  |
| 30th \%ile Term Code | Max | Gap |  | Gap | Hold |  | Skip | Gap |  | Skip | Hold |  |
| 10th \%ile Green (s) | 0.0 | 5.5 |  | 0.0 | 5.5 |  | 0.0 | 14.1 |  | 0.0 | 14.1 |  |
| 10th \%ile Term Code | Skip | Hold |  | Skip | Gap |  | Skip | Dwell |  | Skip | Dwell |  |
| Queue Length 50th (ft) | 15 | 0 |  | 15 | 0 |  | 3 | 67 |  | 3 | 66 |  |
| Queue Length 95th (ft) | 52 | 0 |  | 52 | 36 |  | 12 | 159 |  | 12 | 157 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  |  | 200 |  |  |
| Base Capacity (vph) | 406 | 894 |  | 757 | 1161 |  | 338 | 1646 |  | 336 | 1636 |  |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  |
| Reduced v/c Ratio | 0.28 | 0.13 |  | 0.15 | 0.22 |  | 0.07 | 0.47 |  | 0.07 | 0.47 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 70

Actuated Cycle Length: 40.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 10.8 Intersection LOS: B
Intersection Capacity Utilization 50.2\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 53.8
70th \%ile Actuated Cycle: 43.4
50th \%ile Actuated Cycle: 40.5
30th \%ile Actuated Cycle: 37.4
10th \%ile Actuated Cycle: 27.6
Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | $\rangle$ |  |  | 7 |  |  | 4 | $\dagger$ |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | \% | $\uparrow$ |  |  | $\dagger$ |  | \% | 性 |  | ${ }^{7}$ |  | F |
| Volume (vph) | 175 | - | 115 | 15 | 0 | 15 | 75 | 545 | 15 | 10 | 655 | 215 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 |  | 0 | 0 |  | 0 | 300 |  | 0 | 300 |  | 300 |
| Storage Lanes | 1 |  | 0 | 0 |  | 0 | 1 |  | 0 | 1 |  | 1 |
| Taper Length (tt) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.932 |  |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.976 |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 0 | 1694 | 0 | 1770 | 3525 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.736 |  |  |  | 0.864 |  | 0.361 |  |  | 0.420 |  |  |
| Satd. Flow (perm) | 1371 | 1583 | 0 | 0 | 1500 | 0 | 672 | 3525 | 0 | 782 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 168 |  |  | 16 |  |  | 5 |  |  |  | 234 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (t) |  | 654 |  |  | 1393 |  |  | 1830 |  |  | 742 |  |
| Travel Time (s) |  | 9.9 |  |  | 21.1 |  |  | 27.7 |  |  | 11.2 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 190 | 0 | 125 | 16 | 0 | 16 | 82 | 592 | 16 | 11 | 712 | 234 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 190 | 125 | 0 | 0 | 32 | 0 | 82 | 608 | 0 | 11 | 712 | 234 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(tt) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector (tt) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex |  | Cl+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(tt) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 31.0 | 31.0 |  | 31.0 | 31.0 |  | 39.0 | 39.0 |  | 39.0 | 39.0 | 39.0 |
| Total Split (\%) | 44.3\% | 44.3\% |  | 44.3\% | 44.3\% |  | 55.7\% | 55.7\% |  | 55.7\% | 55.7\% | 55.7\% |
| Maximum Green (s) | 27.0 | 27.0 |  | 27.0 | 27.0 |  | 35.0 | 35.0 |  | 35.0 | 35.0 | 35.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 |  |  | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |

Lead/Lag

| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recall Mode | None | None | None | None | Min | Min | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Efft Green (s) | 10.8 | 10.8 |  | 10.8 | 18.2 | 18.2 | 18.2 | 18.2 | 18.2 |
| Actuated g/C Ratio | 0.29 | 0.29 |  | 0.29 | 0.49 | 0.49 | 0.49 | 0.49 | 0.49 |
| $\mathrm{v} / \mathrm{C}$ Ratio | 0.48 | 0.22 |  | 0.07 | 0.25 | 0.35 | 0.03 | 0.41 | 0.26 |
| Control Delay | 15.1 | 2.4 |  | 7.3 | 9.0 | 7.0 | 6.3 | 7.5 | 2.2 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 15.1 | 2.4 |  | 7.3 | 9.0 | 7.0 | 6.3 | 7.5 | 2.2 |
| LOS | B | A |  | A | A | A | A | A | A |
| Approach Delay |  | 10.0 |  | 7.3 |  | 7.3 |  | 6.2 |  |
| Approach LOS |  | B |  | A |  | A |  | A |  |
| 90th \%ile Green (s) | 16.2 | 16.2 | 16.2 | 16.2 | 22.4 | 22.4 | 22.4 | 22.4 | 22.4 |
| 90th \%ile Term Code | Gap | Gap | Hold | Hold | Hold | Hold | Gap | Gap | Gap |
| 70th \%ile Green (s) | 12.1 | 12.1 | 12.1 | 12.1 | 17.1 | 17.1 | 17.1 | 17.1 | 17.1 |
| 70th \%ile Term Code | Gap | Gap | Hold | Hold | Hold | Hold | Gap | Gap | Gap |
| 50th \%ile Green (s) | 10.0 | 10.0 | 10.0 | 10.0 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 |
| 50th \%ile Term Code | Gap | Gap | Hold | Hold | Hold | Hold | Gap | Gap | Gap |
| 30th \%ile Green (s) | 8.6 | 8.6 | 8.6 | 8.6 | 13.7 | 13.7 | 13.7 | 13.7 | 13.7 |
| 30th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 10th \%ile Green (s) | 7.3 | 7.3 | 7.3 | 7.3 | 24.2 | 24.2 | 24.2 | 24.2 | 24.2 |
| 10th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| Queue Length 50th (tt) | 25 | 0 |  | 2 | 8 | 32 | 1 | 38 | 0 |
| Queue Length 95th (tt) | 80 | 16 |  | 16 | 34 | 76 | 7 | 91 | 25 |
| Internal Link Dist (tt) |  | 574 |  | 1313 |  | 1750 |  | 662 |  |
| Turn Bay Length (t) | 300 |  |  |  | 300 |  | 300 |  | 300 |
| Base Capacity (vph) | 1019 | 1219 |  | 1118 | 615 | 3227 | 716 | 3240 | 1469 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.19 | 0.10 |  | 0.03 | 0.13 | 0.19 | 0.02 | 0.22 | 0.16 |

## Intersection Summary

Area Type: Other
Cycle Length: 70

Synchro 8 Report
Page 15

Actuated Cycle Length: 37.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 7.2 Intersection LOS: A
Intersection Capacity Utilization 48.6\% ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 46.6
70th \%ile Actuated Cycle: 37.2
50th \%ile Actuated Cycle: 32.3
30th \%ile Actuated Cycle: 30.3
10th \%ile Actuated Cycle: 39.5
Splits and Phases: 6: Perimeter Center Pkwy \& Connector


|  | 4 |  |  | 4 | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | ${ }^{7} 1$ | 44 | 44 | ずず | ${ }^{*}$ | 「゙ |
| Volume（vph） | 210 | 430 | 495 | 425 | 440 | 345 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  |  | 0 | 300 | 0 |
| Storage Lanes | 2 |  |  | 2 | 1 | 1 |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 462 |  | 375 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1941 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 29.4 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 228 | 467 | 538 | 462 | 478 | 375 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 228 | 467 | 538 | 462 | 478 | 375 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 12.0 | 37.0 | 25.0 | 25.0 | 23.0 | 23.0 |
| Total Split (\%) | 20.0\% | 61.7\% | 41.7\% | 41.7\% | 38.3\% | 38.3\% |
| Maximum Green (s) | 8.0 | 33.0 | 21.0 | 21.0 | 19.0 | 19.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 7.9 | 23.7 | 15.1 | 15.1 | 12.8 | 12.8 |
| Actuated g/C Ratio | 0.17 | 0.52 | 0.33 | 0.33 | 0.28 | 0.28 |
| v/c Ratio | 0.38 | 0.25 | 0.46 | 0.37 | 0.49 | 0.52 |
| Control Delay | 21.9 | 6.2 | 14.5 | 2.7 | 16.8 | 5.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.9 | 6.2 | 14.5 | 2.7 | 16.8 | 5.2 |
| LOS | C | A | B | A | B | A |
| Approach Delay |  | 11.3 | 9.0 |  | 11.7 |  |
| Approach LOS |  | B | A |  | B |  |
| 90th \%ile Green (s) | 8.0 | 33.0 | 21.0 | 21.0 | 18.5 | 18.5 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Gap | Gap |
| 70th \%ile Green (s) | 8.0 | 29.6 | 17.6 | 17.6 | 14.6 | 14.6 |
| 70th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 8.0 | 26.9 | 14.9 | 14.9 | 12.7 | 12.7 |
| 50th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.4 | 23.7 | 12.3 | 12.3 | 10.0 | 10.0 |
| 30th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 0.0 | 9.3 | 9.3 | 9.3 | 8.1 | 8.1 |
| 10th \%ile Term Code | Skip | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 29 | 28 | 62 | 0 | 57 | 0 |
| Queue Length 95th (ft) | 69 | 62 | 113 | 27 | 106 | 51 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 660 | 2598 | 1788 | 1636 | 1569 | 927 |
| 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 | 0.35 | 0.18 | 0.30 | 0.28 | 0.30 | 0.40 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |

Actuated Cycle Length: 45.3
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 42.2\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 59.5
70th \%ile Actuated Cycle: 52.2
50th \%ile Actuated Cycle: 47.6
30th \%ile Actuated Cycle: 41.7
10th \%ile Actuated Cycle: 25.4
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


|  | 4 |  | $\square$ | $\bigcirc$ |  |  | $4$ | $\dagger$ | \％ |  | $\ddagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 71 | 44 | 「 | ${ }^{7 \%}$ | 中4 | 「 | ＊＊ | 中 ${ }^{\text {a }}$ |  | ${ }^{7} 1$ | 中4 | F |
| Volume（vph） | 290 | 705 | 315 | 355 | 710 | 350 | 730 | 725 | 380 | 440 | 520 | 330 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 260 |  | 0 | 250 |  | 500 | 80 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 1 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.948 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3355 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.133 |  |  | 0.270 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3539 | 1583 | 481 | 3539 | 1583 | 976 | 3355 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 342 |  |  | 82 |  | 87 |  |  |  | 82 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 2029 |  |  | 963 |  |  | 330 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 5.0 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 315 | 766 | 342 | 386 | 772 | 380 | 793 | 788 | 413 | 478 | 565 | 359 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 315 | 766 | 342 | 386 | 772 | 380 | 793 | 1201 | 0 | 478 | 565 | 359 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Prot | NA | Perm | pm＋pt | NA | pm＋ov | pm＋pt | NA |  | Prot | NA | pm＋ov |
| Protected Phases | 5 | 2 |  | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 | 6 |  | 6 | 8 |  |  |  |  | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 7 | 3 | 8 |  | 7 | 4 | 5 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | 7＊ | 个 $\uparrow$ | 「 | \％${ }^{1 / 1}$ | 性 | F | \％${ }^{1 / 1}$ | 个t |  | \％${ }^{1 / 1}$ | 性 | F |
| Volume（vph） | 240 | 950 | 650 | 660 | 660 | 370 | 300 | 390 | 130 | 370 | 610 | 230 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ t ） | 260 |  | 0 | 250 |  | 500 | 80 |  | 0 | 250 |  | 300 |
| Storage Lanes | 2 |  | 1 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length（tt） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.963 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3408 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.111 |  |  | 0.253 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3539 | 1583 | 401 | 3539 | 1583 | 914 | 3408 | 0 | 3433 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 201 |  |  | 61 |  | 44 |  |  |  | 83 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（tt） |  | 2029 |  |  | 963 |  |  | 330 |  |  | 786 |  |
| Travel Time（s） |  | 30.7 |  |  | 14.6 |  |  | 5.0 |  |  | 11.9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 261 | 1033 | 707 | 717 | 717 | 402 | 326 | 424 | 141 | 402 | 663 | 250 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 261 | 1033 | 707 | 717 | 717 | 402 | 326 | 565 | 0 | 402 | 663 | 250 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（tt） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Detector 1 Type | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋E | Cl＋Ex | Cl＋Ex | Cl＋Ex |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |  | Cl＋Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |
| Turn Type | Prot | NA | Perm | pm＋pt | NA | $\mathrm{pm}+\mathrm{ov}$ | pm＋pt | NA | Prot | NA | pm＋ov |
| Protected Phases | 5 | 2 |  | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 | 6 |  | 6 | 8 |  |  |  | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 8.0 |
| Total Split (s) | 16.0 | 37.0 | 37.0 | 18.0 | 39.0 | 15.0 | 10.0 | 20.0 |  | 15.0 | 25.0 | 16.0 |
| Total Split (\%) | 17.8\% | 41.1\% | 41.1\% | 20.0\% | 43.3\% | 16.7\% | 11.1\% | 22.2\% |  | 16.7\% | 27.8\% | 17.8\% |
| Maximum Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 11.1 | 33.0 | 33.0 | 49.9 | 36.1 | 51.1 | 21.8 | 15.8 |  | 11.0 | 20.8 | 35.9 |
| Actuated g/C Ratio | 0.12 | 0.37 | 0.37 | 0.55 | 0.40 | 0.57 | 0.24 | 0.18 |  | 0.12 | 0.23 | 0.40 |
| v/c Ratio | 0.62 | 0.80 | 1.00 | 1.02 | 0.51 | 0.43 | 0.84 | 0.89 |  | 0.96 | 0.81 | 0.37 |
| Control Delay | 44.0 | 31.1 | 56.2 | 62.2 | 24.9 | 13.8 | 44.4 | 51.4 |  | 75.9 | 41.9 | 13.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 44.0 | 31.1 | 56.2 | 62.2 | 24.9 | 13.8 | 44.4 | 51.4 |  | 75.9 | 41.9 | 13.9 |
| LOS | D | C | E | E | C | B | D | D |  | E | D | B |
| Approach Delay |  | 41.6 |  |  | 37.0 |  |  | 48.8 |  |  | 46.9 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 90th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 70th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 14.0 | 35.0 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 12.0 |
| 50th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Max | Max |
| 30th \%ile Green (s) | 10.7 | 33.0 | 33.0 | 14.0 | 36.3 | 11.0 | 6.0 | 16.0 |  | 11.0 | 21.0 | 10.7 |
| 30th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Hold | Gap |
| 10th \%ile Green (s) | 8.8 | 33.0 | 33.0 | 15.0 | 39.2 | 11.0 | 6.0 | 15.0 |  | 11.0 | 20.0 | 8.8 |
| 10th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Max | Max | Gap |  | Max | Hold | Gap |
| Queue Length 50th (ft) | 72 | 272 | 309 | ~180 | 136 | 83 | 68 | 154 |  | 119 | 187 | 61 |
| Queue Length 95th (ft) | 111 | 351 | \#561 | \#284 | 279 | 268 | \#112 | \#247 |  | \#209 | \#257 | 120 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 457 | 1297 | 707 | 700 | 1419 | 925 | 389 | 642 |  | 419 | 825 | 696 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.57 | 0.80 | 1.00 | 1.02 | 0.51 | 0.43 | 0.84 | 0.88 |  | 0.96 | 0.80 | 0.36 |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: $0(0 \%)$, Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: $42.4 \quad$ Intersection LOS: D
Intersection Capacity Utilization 85.9\% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


|  | 4 | $\rightarrow$ | \％ | 7 |  |  | $4$ | 4 | $p$ |  |  | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | 4納 | T | ${ }^{1}$ | 44 | 「 | ${ }^{1}$ | 4 | 「 | ${ }^{*}$ | F |  |
| Volume（vph） | 5 | 890 | 365 | 360 | 1560 | 25 | 120 | 5 | 110 | 15 | 5 | 10 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.897 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1671 | 0 |
| Flt Permitted | 0.120 |  |  | 0.217 |  |  | 0.702 |  |  |  |  |  |
| Satd．Flow（perm） | 224 | 5085 | 1583 | 404 | 3539 | 1583 | 1308 | 1863 | 1583 | 1863 | 1671 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  |  | 397 |  |  | 109 |  |  | 158 |  | 11 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（ft） |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time（s） |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 5 | 967 | 397 | 391 | 1696 | 27 | 130 | 5 | 120 | 16 | 5 | 11 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 5 | 967 | 397 | 391 | 1696 | 27 | 130 | 5 | 120 | 16 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 8.0 | 34.0 | 34.0 | 28.0 | 54.0 | 54.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (\%) | 8.9\% | 37.8\% | 37.8\% | 31.1\% | 60.0\% | 60.0\% | 8.9\% | 22.2\% | 22.2\% | 8.9\% | 22.2\% |  |
| Maximum Green (s) | 4.0 | 30.0 | 30.0 | 24.0 | 50.0 | 50.0 | 4.0 | 16.0 | 16.0 | 4.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 52.7 | 47.1 | 47.1 | 69.7 | 67.8 | 67.8 | 11.5 | 8.5 | 8.5 | 7.4 | 6.3 |  |
| Actuated g/C Ratio | 0.59 | 0.52 | 0.52 | 0.77 | 0.75 | 0.75 | 0.13 | 0.09 | 0.09 | 0.08 | 0.07 |  |
| v/c Ratio | 0.02 | 0.36 | 0.39 | 0.66 | 0.64 | 0.02 | 0.60 | 0.03 | 0.41 | 0.11 | 0.12 |  |
| Control Delay | 6.2 | 8.4 | 5.0 | 11.8 | 8.1 | 0.0 | 48.5 | 37.8 | 7.5 | 36.5 | 25.9 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 6.2 | 8.4 | 5.0 | 11.8 | 8.1 | 0.0 | 48.5 | 37.8 | 7.5 | 36.5 | 25.9 |  |
| LOS | A | A | A | B | A | A | D | D | A | D | C |  |
| Approach Delay |  | 7.4 |  |  | 8.7 |  |  | 29.0 |  |  | 31.2 |  |
| Approach LOS |  | A |  |  | A |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 5.8 | 36.1 | 36.1 | 25.3 | 55.6 | 55.6 | 4.0 | 8.6 | 8.6 | 4.0 | 8.6 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Gap | Gap | Max | Hold |  |
| 70th \%ile Green (s) | 0.0 | 40.6 | 40.6 | 20.5 | 65.1 | 65.1 | 16.9 | 6.0 | 6.0 | 6.9 | 0.0 |  |
| 70th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Hold | Gap | Gap | Gap | Skip |  |
| 50th \%ile Green (s) | 0.0 | 47.6 | 47.6 | 19.1 | 70.7 | 70.7 | 11.3 | 11.3 | 11.3 | 0.0 | 0.0 |  |
| 50th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| 30th \%ile Green (s) | 0.0 | 52.3 | 52.3 | 16.3 | 72.6 | 72.6 | 9.4 | 9.4 | 9.4 | 0.0 | 0.0 |  |
| 30th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| 10th \%ile Green (s) | 0.0 | 58.8 | 58.8 | 12.0 | 74.8 | 74.8 | 7.2 | 7.2 | 7.2 | 0.0 | 0.0 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Skip | Skip |  |
| Queue Length 50th (ft) | 1 | 53 | 17 | 46 | 158 | 0 | 71 | 3 | 0 | 9 | 3 |  |
| Queue Length 95th (ft) | m1 | m185 | m108 | 153 | 433 | 0 | \#133 | 13 | 29 | 25 | 22 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  |  |  |  |  |
| Base Capacity (vph) | 226 | 2659 | 1017 | 681 | 2664 | 1218 | 216 | 331 | 411 | 146 | 306 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.02 | 0.36 | 0.39 | 0.57 | 0.64 | 0.02 | 0.60 | 0.02 | 0.29 | 0.11 | 0.05 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 90

Actuated Cycle Length: 90
Offset: 52 (58\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: $9.8 \quad$ Intersection LOS: A
Intersection Capacity Utilization 69.8\% ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
$m$ Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \% | $\uparrow$ | 「" | ** | $\uparrow$ | F | ** | †tt $\dagger$ |  | \% ${ }^{*}$ | tttt | F |
| Volume (vph) | 265 | 120 | 630 | 70 | 95 | 70 | 1550 | 2400 | 395 | 90 | 1395 | 300 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length ( t ) | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length (t) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.979 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| FIt Permitted | 0.950 | 0.981 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (perm) | 1681 | 1736 | 2787 | 3433 | 1863 | 1583 | 3433 | 6273 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 283 |  |  | 101 |  | 53 |  |  |  | 258 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (t) |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time (s) |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 288 | 130 | 685 | 76 | 103 | 76 | 1685 | 2609 | 429 | 98 | 1516 | 326 |


|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Shared Lane Traffic (\%) | $29 \%$ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 204 | 214 | 685 | 76 | 103 | 76 | 1685 | 3038 | 0 | 98 | 1516 | 326 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  | 16 |  |  |


| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size(t) |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |

Detector 2 Channel

| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  | 0.0 |  | 0.0 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turn Type | Split | NA | pttov | Split | NA | Perm | Prot | NA | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 | 1 | 6 |  |


| Permitted Phases | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Detector Phase | 4 |  |  |  |  |  |  |  |  |  |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 66.0 | 88.0 |  | 12.0 | 34.0 | 34.0 |
| Total Split (\%) | 14.3\% | 14.3\% |  | 14.3\% | 14.3\% | 14.3\% | 47.1\% | 62.9\% |  | 8.6\% | 24.3\% | 24.3\% |
| Maximum Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 16.0 | 16.0 | 78.0 | 12.5 | 12.5 | 12.5 | 62.0 | 84.3 |  | 7.7 | 30.0 | 30.0 |
| Actuated g/C Ratio | 0.12 | 0.12 | 0.57 | 0.09 | 0.09 | 0.09 | 0.45 | 0.62 |  | 0.06 | 0.22 | 0.22 |
| v/c Ratio | 1.04 | 1.05 | 0.40 | 0.24 | 0.61 | 0.32 | 1.08 | 0.78 |  | 0.51 | 1.08 | 0.59 |
| Control Delay | 132.0 | 134.9 | 5.6 | 59.1 | 74.9 | 8.3 | 84.0 | 21.1 |  | 72.5 | 97.1 | 16.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 132.0 | 134.9 | 5.6 | 59.1 | 74.9 | 8.3 | 84.0 | 21.1 |  | 72.5 | 97.1 | 16.1 |
| LOS | F | F | A | E | E | A | F | C |  | E | F | B |
| Approach Delay |  | 54.1 |  |  | 50.4 |  |  | 43.5 |  |  | 82.3 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | F |  |
| 90th \%ile Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 16.0 | 16.0 |  | 14.9 | 14.9 | 14.9 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 70th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 16.0 | 16.0 |  | 12.9 | 12.9 | 12.9 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 50th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 30th \%ile Green (s) | 16.0 | 16.0 |  | 10.8 | 10.8 | 10.8 | 62.0 | 84.0 |  | 8.0 | 30.0 | 30.0 |
| 30th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Max |  | Max | Max | Max |
| 10th \%ile Green (s) | 16.0 | 16.0 |  | 8.0 | 8.0 | 8.0 | 62.0 | 85.3 |  | 6.7 | 30.0 | 30.0 |
| 10th \%ile Term Code | Max | Max |  | Gap | Gap | Gap | Max | Hold |  | Gap | Max | Max |
| Queue Length 50th (ft) | ~205 | ~218 | 59 | 32 | 89 | 0 | ~863 | 547 |  | 44 | $\sim 436$ | 50 |
| Queue Length 95th (ft) | \#387 | \#403 | 85 | 58 | 152 | 28 | \#1036 | 626 |  | 77 | \#533 | 155 |
| Internal Link Dist (ft) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 197 | 203 | 1714 | 402 | 218 | 274 | 1559 | 3894 |  | 201 | 1409 | 549 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 1.04 | 1.05 | 0.40 | 0.19 | 0.47 | 0.28 | 1.08 | 0.78 |  | 0.49 | 1.08 | 0.59 |

## Intersection Summary

Area Type: Other
Cycle Length: 140

Actuated Cycle Length: 136.5
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.08
Intersection Signal Delay: 54.6 Intersection LOS: D
Intersection Capacity Utilization 91.6\% ICU Level of Service F
Analysis Period (min) 15
90th \%ile Actuated Cycle: 140
70th \%ile Actuated Cycle: 138.9
50th \%ile Actuated Cycle: 136.9
30th \%ile Actuated Cycle: 134.8
10th \%ile Actuated Cycle: 132
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.

daf $\quad$ Synchro 8 Report

|  | $\rangle$ |  | $\geqslant$ | 7 |  | 4 | 4 | $\dagger$ | $p$ | $\checkmark$ | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | 「 |  |  | 「 |  | 性 |  | ${ }^{7}$ | 性 |  |
| Volume（vph） | 0 | 0 | 20 | 0 | 0 | 50 | 0 | 770 | 60 | 140 | 1395 | 165 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（tt） | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 80 |  | 0 |
| Storage Lanes | 0 |  | 1 | 0 |  | 1 | 0 |  | 0 | 1 |  | 0 |
| Taper Length（ft） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  |  | 0.865 |  |  | 0.865 |  | 0.989 |  |  | 0.984 |  |
| Flt Protected |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3500 | 0 | 1770 | 3483 | 0 |
| Flt Permitted |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3500 | 0 | 1770 | 3483 | 0 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（tt） |  | 391 |  |  | 524 |  |  | 338 |  |  | 330 |  |
| Travel Time（s） |  | 5.9 |  |  | 7.9 |  |  | 5.1 |  |  | 5.0 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 0 | 0 | 22 | 0 | 0 | 54 | 0 | 837 | 65 | 152 | 1516 | 179 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 0 | 0 | 22 | 0 | 0 | 54 | 0 | 902 | 0 | 152 | 1695 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 0 |  |  | 0 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（t） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Stop |  |  | Stop |  |  | Free |  |  | Free |  |

## Intersection Summary

```
Area Type: Other
```

Control Type：Unsignalized
Intersection Capacity Utilization 53．8\％ICU Level of Service A
Analysis Period（min） 15

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％ | $\hat{\beta}$ |  | ${ }^{7}$ | $\uparrow$ | 「＂ | ${ }^{7}$ | 个个 | 「 | ${ }^{7} 1$ | 个解 |  |
| Volume（vph） | 25 | 0 | 20 | 115 | 0 | 265 | 50 | 540 | 515 | 725 | 590 | 100 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（t） | 0 |  | 0 | 0 |  | 0 | 200 |  | 200 | 150 |  | 0 |
| Storage Lanes | 1 |  | 0 | 1 |  | 2 | 1 |  | 1 | 2 |  | 0 |
| Taper Length（tt） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.88 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  |  | 0.850 |  |  | 0.850 |  | 0.978 |  |
| Flt Protected | 0.950 |  |  | 0.950 | 0.950 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 1770 | 3539 | 1583 | 3433 | 3461 | 0 |
| Flt Permitted | 0.950 |  |  | 0.950 | 0.950 |  | 0.367 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 684 | 3539 | 1583 | 3433 | 3461 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 304 |  |  |  | 288 |  |  | 555 |  | 26 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 402 |  |  | 1304 |  |  | 742 |  |  | 338 |  |
| Travel Time（s） |  | 6.1 |  |  | 19.8 |  |  | 11.2 |  |  | 5.1 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 27 | 0 | 22 | 125 | 0 | 288 | 54 | 587 | 560 | 788 | 641 | 109 |
| Shared Lane Traffic（\％） |  |  |  | 50\％ |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 27 | 22 | 0 | 62 | 63 | 288 | 54 | 587 | 560 | 788 | 750 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 12 |  |  | 12 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Two way Left Turn Lane |  |  |  | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 |  |  |  |  |  |  |  |  |


| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru |  | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（tt） | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（t） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | l＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  |

Detector 1 Channel

|  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（t） |  | 94 |  | 94 |  |  | 94 |  |  |  |
| Detector 2 Size（tt） |  | 6 |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type | Cl＋Ex |  | Cl＋Ex |  |  | Cl＋Ex |  | Cl＋Ex |  |  |

Detector 2 Channel

| Detector 2 Extend（s） |  | 0.0 |  | 0.0 |  | 0.0 |  | 0.0 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turn Type | Split | NA | Split | NA | Perm | pm＋pt | NA | Perm | Prot | NA |
| Protected Phases | 4 | 4 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |
| Permitted Phases |  |  |  |  |  | 8 | 2 |  | 2 |  |
| Detector Phase | 4 | 4 | 8 | 8 | 5 | 2 | 2 | 1 | 6 |  |

daf
Synchro 8 Report

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 39.0 | 39.0 | 41.0 | 72.0 |  |
| Total Split (\%) | 16.7\% | 16.7\% |  | 16.7\% | 16.7\% | 16.7\% | 6.7\% | 32.5\% | 32.5\% | 34.2\% | 60.0\% |  |
| Maximum Green (s) | 16.0 | 16.0 |  | 16.0 | 16.0 | 16.0 | 4.0 | 35.0 | 35.0 | 37.0 | 68.0 |  |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None | None | None | Min | Min | None | Min |  |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 7.4 | 7.4 |  | 9.2 | 9.2 | 9.2 | 27.3 | 22.9 | 22.9 | 24.3 | 47.7 |  |
| Actuated g/C Ratio | 0.10 | 0.10 |  | 0.12 | 0.12 | 0.12 | 0.36 | 0.30 | 0.30 | 0.32 | 0.63 |  |
| v/c Ratio | 0.16 | 0.05 |  | 0.30 | 0.31 | 0.49 | 0.17 | 0.55 | 0.65 | 0.71 | 0.34 |  |
| Control Delay | 43.4 | 0.2 |  | 41.8 | 41.8 | 8.4 | 12.2 | 26.5 | 6.6 | 28.6 | 8.5 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 43.4 | 0.2 |  | 41.8 | 41.8 | 8.4 | 12.2 | 26.5 | 6.6 | 28.6 | 8.5 |  |
| LOS | D | A |  | D | D | A | B | C | A | C | A |  |
| Approach Delay |  | 24.0 |  |  | 18.5 |  |  | 16.6 |  |  | 18.8 |  |
| Approach LOS |  | C |  |  | B |  |  | B |  |  | B |  |
| 90th \%ile Green (s) | 9.3 | 9.3 |  | 14.1 | 14.1 | 14.1 | 4.0 | 34.1 | 34.1 | 37.0 | 67.1 |  |
| 90th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Max | Hold |  |
| 70th \%ile Green (s) | 7.8 | 7.8 |  | 10.4 | 10.4 | 10.4 | 4.0 | 27.1 | 27.1 | 29.5 | 52.6 |  |
| 70th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Gap | Hold |  |
| 50th \%ile Green (s) | 6.8 | 6.8 |  | 8.7 | 8.7 | 8.7 | 4.0 | 22.8 | 22.8 | 24.9 | 43.7 |  |
| 50th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Max | Gap | Gap | Gap | Hold |  |
| 30th \%ile Green (s) | 0.0 | 0.0 |  | 7.0 | 7.0 | 7.0 | 0.0 | 17.0 | 17.0 | 17.4 | 38.4 |  |
| 30th \%ile Term Code | Skip | Skip |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| 10th \%ile Green (s) | 0.0 | 0.0 |  | 5.7 | 5.7 | 5.7 | 0.0 | 13.3 | 13.3 | 13.7 | 31.0 |  |
| 10th \%ile Term Code | Skip | Skip |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| Queue Length 50th (ft) | 13 | 0 |  | 30 | 30 | 0 | 8 | 129 | 2 | 176 | 98 |  |
| Queue Length 95th (ft) | 47 | 0 |  | 87 | 88 | 42 | 26 | 237 | 90 | 315 | 162 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  | 200 | 150 |  |  |
| Base Capacity (vph) | 417 | 606 |  | 396 | 396 | 877 | 311 | 1827 | 1085 | 1874 | 2927 |  |
| 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 | 0.06 | 0.04 |  | 0.16 | 0.16 | 0.33 | 0.17 | 0.32 | 0.52 | 0.42 | 0.26 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 120

Actuated Cycle Length: 75.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: $18.0 \quad$ Intersection LOS: B
Intersection Capacity Utilization 65.9\%
ICU Level of Service C
Analysis Period (min) 15
90th \%ile Actuated Cycle: 110.5
70th \%ile Actuated Cycle: 90.8
50th \%ile Actuated Cycle: 79.2
30th \%ile Actuated Cycle: 53.4
10th \%ile Actuated Cycle: 44.7
Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | 4 | $\rightarrow$ | 7 | 7 |  |  | 4 | 4 | $p$ | ( | $\frac{1}{1}$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | $\uparrow$ |  |  | 4 |  | ${ }^{7}$ | 中 ${ }^{\text {a }}$ |  | ${ }^{*}$ | 44 | 「 |
| Volume (vph) | 190 | 0 | 30 | 15 | 0 | 20 | 160 | 895 | 10 | 10 | 630 | 125 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 |  | 0 | 0 |  | 0 | 300 |  | 0 | 300 |  | 300 |
| Storage Lanes | 1 |  | 0 | 0 |  | 0 | 1 |  | 0 | 1 |  | 1 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.922 |  |  | 0.998 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.979 |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 0 | 1681 | 0 | 1770 | 3532 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.732 |  |  |  | 0.897 |  | 0.385 |  |  | 0.256 |  |  |
| Satd. Flow (perm) | 1364 | 1583 | 0 | 0 | 1541 | 0 | 717 | 3532 | 0 | 477 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 225 |  |  | 22 |  |  | 3 |  |  |  | 136 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 654 |  |  | 1393 |  |  | 1830 |  |  | 742 |  |
| Travel Time (s) |  | 9.9 |  |  | 21.1 |  |  | 27.7 |  |  | 11.2 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 207 | 0 | 33 | 16 | 0 | 22 | 174 | 973 | 11 | 11 | 685 | 136 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 207 | 33 | 0 | 0 | 38 | 0 | 174 | 984 | 0 | 11 | 685 | 136 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |


|  | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Lane Group |  |  |  |  |  |  |  |  | 4.0 | 4.0 | 4.0 |
| Switch Phase | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 |  |  |
| Minimum Initial (s) | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |  |  |
| Minimum Split (s) | 22.0 | 22.0 |  | 22.0 | 22.0 | 38.0 | 38.0 | 38.0 | 38.0 | 38.0 |  |


| Total Split (\%) | $36.7 \%$ | $36.7 \%$ | $36.7 \%$ | $36.7 \%$ | $63.3 \%$ | $63.3 \%$ | $63.3 \%$ | $63.3 \%$ | $63.3 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Maximum Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |

Lead/Lag

| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recall Mode | None | None | None | None | Min | Min | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Efftt Green (s) | 11.9 | 11.9 |  | 11.3 | 26.9 | 26.9 | 26.9 | 26.9 | 26.9 |
| Actuated g/C Ratio | 0.28 | 0.28 |  | 0.26 | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| v/c Ratio | 0.55 | 0.05 |  | 0.09 | 0.39 | 0.44 | 0.04 | 0.31 | 0.13 |
| Control Delay | 20.8 | 0.2 |  | 9.3 | 10.2 | 7.0 | 6.0 | 6.1 | 1.8 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 20.8 | 0.2 |  | 9.3 | 10.2 | 7.0 | 6.0 | 6.1 | 1.8 |
| LOS | C | A |  | A | B | A | A | A | A |
| Approach Delay |  | 17.9 |  | 9.3 |  | 7.5 |  | 5.4 |  |
| Approach LOS |  | B |  | A |  | A |  | A |  |
| 90th \%ile Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 34.0 | 34.0 | 34.0 | 34.0 | 34.0 |
| 90th \%ile Term Code | Max | Max | Hold | Hold | Max | Max | Hold | Hold | Hold |
| 70th \%ile Green (s) | 14.3 | 14.3 | 14.3 | 14.3 | 25.1 | 25.1 | 25.1 | 25.1 | 25.1 |
| 70th \%ile Term Code | Gap | Gap | Hold | Hold | Gap | Gap | Hold | Hold | Hold |
| 50th \%ile Green (s) | 11.0 | 11.0 | 11.0 | 11.0 | 19.0 | 19.0 | 19.0 | 19.0 | 19.0 |
| 50th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 30th \%ile Green (s) | 9.6 | 9.6 | 9.6 | 9.6 | 21.3 | 21.3 | 21.3 | 21.3 | 21.3 |
| 30th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| 10th \%ile Green (s) | 0.0 | 0.0 | 0.0 | 0.0 | 25.7 | 25.7 | 25.7 | 25.7 | 25.7 |
| 10th \%ile Term Code | Skip | Skip | Skip | Skip | Dwell | Dwell | Dwell | Dwell | Dwell |
| Queue Length 50th (tt) | 36 | 0 |  | 2 | 21 | 64 |  | 40 | 0 |
| Queue Length 95th (t) | 118 | 0 |  | 22 | 75 | 140 | 7 | 90 | 18 |
| Internal Link Dist (tt) |  | 574 |  | 1313 |  | 1750 |  | 662 |  |
| Turn Bay Length (tt) | 300 |  |  |  | 300 |  | 300 |  | 300 |
| Base Capacity (vph) | 606 | 828 |  | 696 | 596 | 2937 | 396 | 2943 | 1339 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.34 | 0.04 |  | 0.05 | 0.29 | 0.34 | 0.03 | 0.23 | 0.10 |

## Intersection Summary

Area Type: Other
Cycle Length: 60

Actuated Cycle Length: 42.8
Natural Cycle: 45
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 7.9 Intersection LOS: A
Intersection Capacity Utilization 55.6\% ICU Level of Service B
Analysis Period (min) 15
90th \%ile Actuated Cycle: 60
70th \%ile Actuated Cycle: 47.4
50th \%ile Actuated Cycle: 38
30th \%ile Actuated Cycle: 38.9
10th \%ile Actuated Cycle: 29.7
Splits and Phases: 6: Perimeter Center Pkwy \& Connector

\＃E． 1.
Lanes，Volumes，Timings
7：Lake Hearn Dr．\＆Perimeter Center Pkwy

|  | 4 |  | 4 | 4 | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | 7\％ | 中4 | 44 | 「゙「 | ＊ | 「゙ |
| Volume（vph） | 550 | 230 | 300 | 515 | 335 | 340 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  |  | 0 | 300 | 0 |
| Storage Lanes | 2 |  |  | 2 | 1 | 1 |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 560 |  | 370 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1941 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 29.4 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 598 | 250 | 326 | 560 | 364 | 370 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 598 | 250 | 326 | 560 | 364 | 370 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |

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|  | 4 | $\rightarrow$ |  | $4$ | ( | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 20.0 | 40.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (\%) | 33.3\% | 66.7\% | 33.3\% | 33.3\% | 33.3\% | 33.3\% |
| Maximum Green (s) | 16.0 | 36.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 13.1 | 28.6 | 11.3 | 11.3 | 10.9 | 10.9 |
| Actuated g/C Ratio | 0.27 | 0.60 | 0.24 | 0.24 | 0.23 | 0.23 |
| v/c Ratio | 0.64 | 0.12 | 0.39 | 0.51 | 0.46 | 0.57 |
| Control Delay | 19.9 | 4.6 | 17.7 | 3.9 | 18.9 | 6.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.9 | 4.6 | 17.7 | 3.9 | 18.9 | 6.5 |
| LOS | B | A | B | A | B | A |
| Approach Delay |  | 15.3 | 8.9 |  | 12.6 |  |
| Approach LOS |  | B | A |  | B |  |
| 90th \%ile Green (s) | 16.0 | 36.0 | 16.0 | 16.0 | 16.0 | 16.0 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Max | Max |
| 70th \%ile Green (s) | 16.0 | 34.0 | 14.0 | 14.0 | 13.1 | 13.1 |
| 70th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 50th \%ile Green (s) | 13.4 | 29.0 | 11.6 | 11.6 | 10.4 | 10.4 |
| 50th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 11.3 | 24.6 | 9.3 | 9.3 | 8.9 | 8.9 |
| 30th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 8.9 | 19.8 | 6.9 | 6.9 | 7.2 | 7.2 |
| 10th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 72 | 12 | 38 | 0 | 45 | 0 |
| Queue Length 95th (ft) | 146 | 30 | 81 | 35 | 88 | 55 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 1192 | 2746 | 1229 | 1333 | 1192 | 791 |
| 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 | 0.50 | 0.09 | 0.27 | 0.42 | 0.31 | 0.47 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |

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Actuated Cycle Length: 47.8
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.2 Intersection LOS: B
Intersection Capacity Utilization 43.5\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 60
70th \%ile Actuated Cycle: 55.1
50th \%ile Actuated Cycle: 47.4
30th \%ile Actuated Cycle: 41.5
10th \%ile Actuated Cycle: 35
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 8.0 |
| Total Split (s) | 16.0 | 38.0 | 38.0 | 14.0 | 36.0 | 22.0 | 32.0 | 46.0 |  | 22.0 | 36.0 | 16.0 |
| Total Split (\%) | 13.3\% | 31.7\% | 31.7\% | 11.7\% | 30.0\% | 18.3\% | 26.7\% | 38.3\% |  | 18.3\% | 30.0\% | 13.3\% |
| Maximum Green (s) | 12.0 | 34.0 | 34.0 | 10.0 | 32.0 | 18.0 | 28.0 | 42.0 |  | 18.0 | 32.0 | 12.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Effct Green (s) | 12.3 | 32.7 | 32.7 | 41.4 | 30.9 | 53.4 | 62.8 | 42.3 |  | 18.6 | 38.0 | 54.3 |
| Actuated g/C Ratio | 0.10 | 0.27 | 0.27 | 0.34 | 0.26 | 0.44 | 0.52 | 0.35 |  | 0.16 | 0.32 | 0.45 |
| v/c Ratio | 0.89 | 0.80 | 0.50 | 0.91 | 0.85 | 0.51 | 0.81 | 0.97 |  | 0.90 | 0.50 | 0.47 |
| Control Delay | 81.3 | 47.5 | 6.3 | 60.8 | 47.4 | 14.5 | 24.3 | 55.3 |  | 71.1 | 36.4 | 20.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 81.3 | 47.5 | 6.3 | 60.8 | 47.4 | 14.5 | 24.3 | 55.3 |  | 71.1 | 36.4 | 20.8 |
| LOS | F | D | A | E | D | B | C | E |  | E | D | C |
| Approach Delay |  | 45.1 |  |  | 42.6 |  |  | 43.0 |  |  | 44.2 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 12.0 | 34.0 | 34.0 | 10.0 | 32.0 | 18.0 | 28.0 | 42.0 |  | 18.0 | 32.0 | 12.0 |
| 90th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Hold | Max |
| 70th \%ile Green (s) | 12.0 | 34.0 | 34.0 | 10.0 | 32.0 | 18.0 | 26.4 | 42.0 |  | 18.0 | 33.6 | 12.0 |
| 70th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 50th \%ile Green (s) | 12.0 | 34.0 | 34.0 | 10.0 | 32.0 | 18.0 | 23.3 | 42.0 |  | 18.0 | 36.7 | 12.0 |
| 50th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 30th \%ile Green (s) | 12.0 | 31.5 | 31.5 | 10.0 | 29.5 | 20.5 | 19.8 | 42.0 |  | 20.5 | 42.7 | 12.0 |
| 30th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 10th \%ile Green (s) | 13.5 | 29.8 | 29.8 | 12.5 | 28.8 | 18.4 | 16.8 | 43.3 |  | 18.4 | 44.9 | 13.5 |
| 10th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Gap | Gap | Gap |  | Gap | Hold | Gap |
| Queue Length 50th (ft) | 126 | 285 | 0 | 123 | 203 | 99 | 184 | 453 |  | 190 | 190 | 148 |
| Queue Length 95th (ft) | \#212 | 360 | 71 | m\#174 | m303 | m134 | 232 | \#610 |  | \#291 | 262 | 254 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (ft) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 352 | 1002 | 693 | 424 | 943 | 750 | 1100 | 1237 |  | 531 | 1120 | 761 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.89 | 0.76 | 0.49 | 0.91 | 0.82 | 0.51 | 0.72 | 0.97 |  | 0.90 | 0.50 | 0.47 |

## Intersection Summary

Area Type: Other
Cycle Length: 120

Actuated Cycle Length: 120
Offset: 0 (0\%), Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: $43.6 \quad$ Intersection LOS: D
Intersection Capacity Utilization 87.7\% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
$m$ Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | $\checkmark$ |  | 4 | 4 | 4 | \% | ( | $\dagger$ | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | 种4 | T | ${ }^{7}$ | 44 | T | ${ }^{7}$ | 4 | 「 | ${ }^{7}$ | F |  |
| Volume (vph) | 50 | 1340 | 210 | 315 | 995 | 55 | 360 | 20 | 370 | 120 | 20 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 1 | 1 |  | 1 | 1 |  | 1 | 1 |  | 0 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.888 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1654 | 0 |
| Flt Permitted | 0.248 |  |  | 0.076 |  |  | 0.365 |  |  | 0.743 |  |  |
| Satd. Flow (perm) | 462 | 5085 | 1583 | 142 | 3539 | 1583 | 680 | 1863 | 1583 | 1384 | 1654 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 211 |  |  | 118 |  |  | 384 |  | 65 |  |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 963 |  |  | 979 |  |  | 533 |  |  | 748 |  |
| Travel Time (s) |  | 14.6 |  |  | 14.8 |  |  | 8.1 |  |  | 11.3 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 54 | 1457 | 228 | 342 | 1082 | 60 | 391 | 22 | 402 | 130 | 22 | 65 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 54 | 1457 | 228 | 342 | 1082 | 60 | 391 | 22 | 402 | 130 | 87 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size(ft) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA | Perm | pm+pt | NA |  |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |  |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |  |


|  | 4 |  | $\geqslant$ | 7 |  | 4 |  | $\dagger$ |  | $\downarrow$ | $\ddagger$ | / |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 9.0 | 44.0 | 44.0 | 29.0 | 64.0 | 64.0 | 27.0 | 34.0 | 34.0 | 13.0 | 20.0 |  |
| Total Split (\%) | 7.5\% | 36.7\% | 36.7\% | 24.2\% | 53.3\% | 53.3\% | 22.5\% | 28.3\% | 28.3\% | 10.8\% | 16.7\% |  |
| Maximum Green (s) | 5.0 | 40.0 | 40.0 | 25.0 | 60.0 | 60.0 | 23.0 | 30.0 | 30.0 | 9.0 | 16.0 |  |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None |  |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 56.8 | 49.9 | 49.9 | 77.0 | 68.1 | 68.1 | 35.0 | 21.9 | 21.9 | 16.9 | 7.8 |  |
| Actuated g/C Ratio | 0.47 | 0.42 | 0.42 | 0.64 | 0.57 | 0.57 | 0.29 | 0.18 | 0.18 | 0.14 | 0.06 |  |
| v/c Ratio | 0.18 | 0.69 | 0.29 | 0.84 | 0.54 | 0.06 | 0.96 | 0.06 | 0.67 | 0.58 | 0.52 |  |
| Control Delay | 8.6 | 21.8 | 1.6 | 50.2 | 18.5 | 0.1 | 74.9 | 39.8 | 11.1 | 45.1 | 29.9 |  |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 8.6 | 21.8 | 1.6 | 50.2 | 18.5 | 0.1 | 74.9 | 39.8 | 11.1 | 45.1 | 29.9 |  |
| LOS | A | C | A | D | B | A | E | D | B | D | C |  |
| Approach Delay |  | 18.8 |  |  | 25.1 |  |  | 42.5 |  |  | 39.0 |  |
| Approach LOS |  | B |  |  | C |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 8.4 | 40.0 | 40.0 | 29.1 | 60.7 | 60.7 | 23.0 | 25.9 | 25.9 | 9.0 | 11.9 |  |
| 90th \%ile Term Code | Gap | Coord | Coord | Max | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 70th \%ile Green (s) | 7.4 | 44.6 | 44.6 | 27.3 | 64.5 | 64.5 | 23.0 | 23.1 | 23.1 | 9.0 | 9.1 |  |
| 70th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 50th \%ile Green (s) | 6.8 | 50.6 | 50.6 | 23.3 | 67.1 | 67.1 | 23.0 | 21.1 | 21.1 | 9.0 | 7.1 |  |
| 50th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Max | Gap |  |
| 30th \%ile Green (s) | 6.3 | 53.0 | 53.0 | 19.9 | 66.6 | 66.6 | 25.6 | 20.7 | 20.7 | 10.4 | 5.5 |  |
| 30th \%ile Term Code | Gap | Coord | Coord | Gap | Coord | Coord | Max | Hold | Hold | Gap | Gap |  |
| 10th \%ile Green (s) | 0.0 | 61.2 | 61.2 | 16.2 | 81.4 | 81.4 | 21.1 | 18.6 | 18.6 | 8.0 | 5.5 |  |
| 10th \%ile Term Code | Skip | Coord | Coord | Gap | Coord | Coord | Gap | Hold | Hold | Gap | Gap |  |
| Queue Length 50th (ft) | 10 | 246 | 0 | 200 | 267 | 0 | 279 | 14 | 12 | 78 | 17 |  |
| Queue Length 95th (ft) | m15 | m383 | m11 | 306 | 372 | 0 | \#405 | 37 | 105 | 124 | 67 |  |
| Internal Link Dist (ft) |  | 883 |  |  | 899 |  |  | 453 |  |  | 668 |  |
| Turn Bay Length (ft) | 250 |  | 250 | 200 |  | 200 | 100 |  |  |  |  |  |
| Base Capacity (vph) | 293 | 2113 | 781 | 447 | 2007 | 949 | 411 | 465 | 683 | 226 | 276 |  |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Reduced v/c Ratio | 0.18 | 0.69 | 0.29 | 0.77 | 0.54 | 0.06 | 0.95 | 0.05 | 0.59 | 0.58 | 0.32 |  |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Area Type: | Other |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Length: 120 |  |  |  |  |  |  |  |  |  |  |  |  |

Actuated Cycle Length: 120
Offset: 24 (20\%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: $26.5 \quad$ Intersection LOS: C
Intersection Capacity Utilization 80.0\% ICU Level of Service D
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
$m$ Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \% | $\uparrow$ | F't | \% ${ }^{*}$ | ¢ | 「 | \% ${ }^{*}$ | t†t |  | \% ${ }^{*}$ | tttt | F |
| Volume (vph) | 290 | 45 | 1495 | 435 | 140 | 90 | 1095 | 2000 | 55 | 30 | 1700 | 130 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (t) | 0 |  | 0 | 0 |  | 0 | 300 |  | 0 | 0 |  | 0 |
| Storage Lanes | 1 |  | 2 | 2 |  | 1 | 2 |  | 0 | 2 |  | 1 |
| Taper Length (t) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (perm) | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  |  | 39 |  |  | 101 |  | 5 |  |  |  | 102 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (tt) |  | 979 |  |  | 481 |  |  | 1611 |  |  | 970 |  |
| Travel Time (s) |  | 14.8 |  |  | 7.3 |  |  | 24.4 |  |  | 14.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 315 | 49 | 1625 | 473 | 152 | 98 | 1190 | 2174 | 60 | 33 | 1848 | 141 |
| Shared Lane Traffic (\%) | 43\% |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 180 | 184 | 1625 | 473 | 152 | 98 | 1190 | 2234 | 0 | 33 | 1848 | 141 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset(tt) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tr) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.0 |


|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Left | Thru | Right |  |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 100 | 20 |  |
| Trailing Detecctor (ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size(tt) | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 6 | 20 |  |
| Detector 1 Type | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex | Cl+Ex |  |


| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |  |  |  |  |  |

Detector 1 Channel

| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size(t) |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |


| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  | 0.0 |  | 0.0 |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turn Type | Split | NA | pttov | Split | NA | Perm | Prot | NA | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 | 1 | 6 |  |


| Permitted Phases | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Detector Phase | 4 |  |  |  |  |  |  |  |  |  |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 |  | 8.0 | 20.0 | 20.0 |
| Total Split (s) | 35.0 | 35.0 |  | 20.0 | 20.0 | 20.0 | 43.0 | 77.0 |  | 8.0 | 42.0 | 42.0 |
| Total Split (\%) | 25.0\% | 25.0\% |  | 14.3\% | 14.3\% | 14.3\% | 30.7\% | 55.0\% |  | 5.7\% | 30.0\% | 30.0\% |
| Maximum Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 73.0 |  | 4.0 | 38.0 | 38.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag |  | Lead | Lag | Lag |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None | None | None | Min |  | None | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 |  |  | 0 | 0 |
| Act Effct Green (s) | 31.0 | 31.0 | 70.0 | 16.0 | 16.0 | 16.0 | 39.0 | 76.2 |  | 4.0 | 38.0 | 38.0 |
| Actuated g/C Ratio | 0.22 | 0.22 | 0.50 | 0.11 | 0.11 | 0.11 | 0.28 | 0.54 |  | 0.03 | 0.27 | 0.27 |
| v/c Ratio | 0.48 | 0.49 | 1.15 | 1.21 | 0.72 | 0.36 | 1.24 | 0.64 |  | 0.34 | 1.06 | 0.28 |
| Control Delay | 52.6 | 52.7 | 100.9 | 165.6 | 79.0 | 13.5 | 161.1 | 23.8 |  | 76.1 | 88.8 | 14.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 52.6 | 52.7 | 100.9 | 165.6 | 79.0 | 13.5 | 161.1 | 23.8 |  | 76.1 | 88.8 | 14.4 |
| LOS | D | D | F | F | E | B | F | C |  | E | F | B |
| Approach Delay |  | 92.0 |  |  | 126.8 |  |  | 71.5 |  |  | 83.4 |  |
| Approach LOS |  | F |  |  | F |  |  | E |  |  | F |  |
| 90th \%ile Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 73.0 |  | 4.0 | 38.0 | 38.0 |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 73.0 |  | 4.0 | 38.0 | 38.0 |
| 70th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max |  | Max | Max | Max |
| 50th \%ile Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 73.0 |  | 4.0 | 38.0 | 38.0 |
| 50th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Max | Max | Max |
| 30th \%ile Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 81.0 |  | 0.0 | 38.0 | 38.0 |
| 30th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Skip | Max | Max |
| 10th \%ile Green (s) | 31.0 | 31.0 |  | 16.0 | 16.0 | 16.0 | 39.0 | 81.0 |  | 0.0 | 38.0 | 38.0 |
| 10th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Hold |  | Skip | Max | Max |
| Queue Length 50th (ft) | 151 | 155 | ~880 | ~269 | 136 | 0 | ~693 | 422 |  | 15 | $\sim 537$ | 27 |
| Queue Length 95th (ft) | 234 | 237 | \#1134 | \#382 | \#233 | 53 | \#829 | 461 |  | 34 | \#613 | 83 |
| Internal Link Dist (ft) |  | 899 |  |  | 401 |  |  | 1531 |  |  | 890 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 300 |  |  |  |  |  |
| Base Capacity (vph) | 372 | 378 | 1413 | 392 | 212 | 270 | 956 | 3476 |  | 98 | 1739 | 503 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.48 | 0.49 | 1.15 | 1.21 | 0.72 | 0.36 | 1.24 | 0.64 |  | 0.34 | 1.06 | 0.28 |

## Intersection Summary

Area Type: Other
Cycle Length: 140

Actuated Cycle Length: 140
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.24
Intersection Signal Delay: $84.3 \quad$ Intersection LOS: F
Intersection Capacity Utilization 99.3\% ICU Level of Service F
Analysis Period (min) 15
90th \%ile Actuated Cycle: 140
70th \%ile Actuated Cycle: 140
50th \%ile Actuated Cycle: 140
30th \%ile Actuated Cycle: 140
10th \%ile Actuated Cycle: 140
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


| dat | Synchro 8 Report |
| :--- | ---: |
| Page 9 |  |


|  | $\Rightarrow$ | $\rightarrow$ |  | $\dagger$ |  | 4 | 4 | $\uparrow$ | $p$ |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | 「 |  |  | 「 |  | 性 |  | ${ }^{4}$ | 蚛 |  |
| Volume（vph） | 0 | 0 | 70 | 0 | 0 | 180 | 0 | 1655 | 25 | 50 | 1010 | 80 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（tt） | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 80 |  | 0 |
| Storage Lanes | 0 |  | 1 | 0 |  | 1 | 0 |  | 0 | 1 |  | 0 |
| Taper Length（t） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Utill．Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  |  | 0.865 |  |  | 0.865 |  | 0.998 |  |  | 0.989 |  |
| FIt Protected |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3532 | 0 | 1770 | 3500 | 0 |
| Flt Permitted |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3532 | 0 | 1770 | 3500 | 0 |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（tt） |  | 391 |  |  | 524 |  |  | 338 |  |  | 330 |  |
| Travel Time（s） |  | 5.9 |  |  | 7.9 |  |  | 5.1 |  |  | 5.0 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1799 | 27 | 54 | 1098 | 87 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1826 | 0 | 54 | 1185 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 0 |  |  | 0 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Stop |  |  | Stop |  |  | Free |  |  | Free |  |

## Intersection Summary

```
Area Type: Other
```

Control Type：Unsignalized
Intersection Capacity Utilization 64．4\％ICU Level of Service C
Analysis Period（min） 15

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | ＊ | $\hat{\square}$ |  | \％ | $\uparrow$ | 「「「 | \％ | 个4 | 「 | ${ }^{1+1}$ | 性 |  |
| Volume（vph） | 105 | 0 | 110 | 560 | 0 | 865 | 20 | 710 | 75 | 375 | 660 | 45 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（t） | 0 |  | 0 | 0 |  | 0 | 200 |  | 200 | 150 |  | 0 |
| Storage Lanes | 1 |  | 0 | 1 |  | 2 | 1 |  | 1 | 2 |  | 0 |
| Taper Length（tt） | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.88 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  |  | 0.850 |  |  | 0.850 |  | 0.990 |  |
| Flt Protected | 0.950 |  |  | 0.950 | 0.950 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 1770 | 3539 | 1583 | 3433 | 3504 | 0 |
| Flt Permitted | 0.950 |  |  | 0.950 | 0.950 |  | 0.361 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 672 | 3539 | 1583 | 3433 | 3504 | 0 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd．Flow（RTOR） |  | 140 |  |  |  | 613 |  |  | 118 |  | 7 |  |
| Link Speed（mph） |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance（t） |  | 402 |  |  | 1304 |  |  | 742 |  |  | 338 |  |
| Travel Time（s） |  | 6.1 |  |  | 19.8 |  |  | 11.2 |  |  | 5.1 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 114 | 0 | 120 | 609 | 0 | 940 | 22 | 772 | 82 | 408 | 717 | 49 |
| Shared Lane Traffic（\％） |  |  |  | 50\％ |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 114 | 120 | 0 | 304 | 305 | 940 | 22 | 772 | 82 | 408 | 766 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 12 |  |  | 12 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |


| Two way Left Turn Lane | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |  |
| Leading Detector（（tt） | 20 | 100 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |  |
| Trailing Detector（（t） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（tt） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| Detector 1 Size（tt） | 20 | 6 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |  |
| Detector 1 Type | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex |  |  |

Detector 1 Channel

| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  | 94 |  |  | 94 |  |  | 94 |
| Detector 2 Size（tt） |  | 6 |  | 6 |  |  | 6 |  |  | 6 |
| Detector 2 Type |  | Cl＋Ex |  | Cl＋Ex |  |  | Cl＋Ex |  |  | Cl＋Ex |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |


| Detector 2 Extend（s） |  | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Turn Type | Split | NA | Split | NA | Perm | pm＋pt | NA | Perm | Prot | NA |
| Protected Phases | 4 | 4 | 8 | 8 |  | 5 | 2 |  | 1 | 6 |
| Permitted Phases |  |  |  | 8 | 8 | 8 | 5 | 2 | 2 | 1 |
| Detector Phase | 4 | 4 | 8 | 5 | 2 | 2 | 1 | 6 |  |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split (s) | 20.0 | 20.0 |  | 37.0 | 37.0 | 37.0 | 8.0 | 40.0 | 40.0 | 23.0 | 55.0 |  |
| Total Split (\%) | 16.7\% | 16.7\% |  | 30.8\% | 30.8\% | 30.8\% | 6.7\% | 33.3\% | 33.3\% | 19.2\% | 45.8\% |  |
| Maximum Green (s) | 16.0 | 16.0 |  | 33.0 | 33.0 | 33.0 | 4.0 | 36.0 | 36.0 | 19.0 | 51.0 |  |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None | None | None | Min | Min | None | Min |  |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 11.9 | 11.9 |  | 27.7 | 27.7 | 27.7 | 32.9 | 28.7 | 28.7 | 16.6 | 46.8 |  |
| Actuated g/C Ratio | 0.12 | 0.12 |  | 0.27 | 0.27 | 0.27 | 0.32 | 0.28 | 0.28 | 0.16 | 0.46 |  |
| v/c Ratio | 0.55 | 0.39 |  | 0.67 | 0.67 | 0.78 | 0.08 | 0.77 | 0.15 | 0.73 | 0.47 |  |
| Control Delay | 56.8 | 9.3 |  | 42.7 | 42.8 | 17.2 | 17.6 | 40.4 | 2.8 | 51.0 | 21.5 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 56.8 | 9.3 |  | 42.7 | 42.8 | 17.2 | 17.6 | 40.4 | 2.8 | 51.0 | 21.5 |  |
| LOS | E | A |  | D | D | B | B | D | A | D | C |  |
| Approach Delay |  | 32.4 |  |  | 27.3 |  |  | 36.3 |  |  | 31.7 |  |
| Approach LOS |  | C |  |  | C |  |  | D |  |  | C |  |
| 90th \%ile Green (s) | 16.0 | 16.0 |  | 33.0 | 33.0 | 33.0 | 4.0 | 36.0 | 36.0 | 19.0 | 51.0 |  |
| 90th \%ile Term Code | Max | Max |  | Max | Max | Max | Max | Max | Max | Max | Hold |  |
| 70th \%ile Green (s) | 14.9 | 14.9 |  | 33.0 | 33.0 | 33.0 | 4.0 | 35.6 | 35.6 | 19.0 | 50.6 |  |
| 70th \%ile Term Code | Gap | Gap |  | Max | Max | Max | Max | Gap | Gap | Max | Hold |  |
| 50th \%ile Green (s) | 12.5 | 12.5 |  | 31.6 | 31.6 | 31.6 | 0.0 | 30.7 | 30.7 | 18.5 | 53.2 |  |
| 50th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| 30th \%ile Green (s) | 9.9 | 9.9 |  | 24.7 | 24.7 | 24.7 | 0.0 | 24.4 | 24.4 | 15.1 | 43.5 |  |
| 30th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| 10th \%ile Green (s) | 7.2 | 7.2 |  | 17.2 | 17.2 | 17.2 | 0.0 | 18.3 | 18.3 | 11.4 | 33.7 |  |
| 10th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| Queue Length 50th (ft) | 77 | 0 |  | 194 | 195 | 117 | 8 | 262 | 0 | 140 | 177 |  |
| Queue Length 95th (ft) | 144 | 40 |  | 326 | 327 | 229 | 23 | 354 | 17 | 213 | 282 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  | 200 | 150 |  |  |
| Base Capacity (vph) | 290 | 376 |  | 569 | 569 | 1348 | 262 | 1306 | 659 | 668 | 1850 |  |
| 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 | 0.39 | 0.32 |  | 0.53 | 0.54 | 0.70 | 0.08 | 0.59 | 0.12 | 0.61 | 0.41 |  |

## Intersection Summary

Area Type: Other
Cycle Length: 120

5: Perimeter Center Pkwy \& Goldkist Dr.
Actuated Cycle Length: 101.6
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 66.7\%
ICU Level of Service C
Analysis Period (min) 15
90th \%ile Actuated Cycle: 120
70th \%ile Actuated Cycle: 118.5
50th \%ile Actuated Cycle: 109.3
30th \%ile Actuated Cycle: 90.1
10th \%ile Actuated Cycle: 70.1
Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | 4 | $\rightarrow$ | 7 | $\bigcirc$ |  |  | $4$ | 4 | \% |  |  | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{1}$ | $\uparrow$ |  |  | $\ddagger$ |  | ${ }^{1}$ | 中 ${ }^{\text {F }}$ |  | ${ }^{7}$ | 44 | 「 |
| Volume (vph) | 290 | 0 | 210 | 15 | 0 | 15 | 140 | 500 | 15 | 10 | 925 | 395 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 300 |  | 0 | 0 |  | 0 | 300 |  | 0 | 300 |  | 300 |
| Storage Lanes | 1 |  | 0 | 0 |  | 0 | 1 |  | 0 | 1 |  | 1 |
| Taper Length (ft) | 25 |  |  | 25 |  |  | 25 |  |  | 25 |  |  |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.932 |  |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.976 |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 0 | 1694 | 0 | 1770 | 3525 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.736 |  |  |  | 0.852 |  | 0.221 |  |  | 0.433 |  |  |
| Satd. Flow (perm) | 1371 | 1583 | 0 | 0 | 1479 | 0 | 412 | 3525 | 0 | 807 | 3539 | 1583 |
| Right Turn on Red |  |  | Yes |  |  | Yes |  |  | Yes |  |  | Yes |
| Satd. Flow (RTOR) |  | 112 |  |  | 18 |  |  | 8 |  |  |  | 429 |
| Link Speed (mph) |  | 45 |  |  | 45 |  |  | 45 |  |  | 45 |  |
| Link Distance (ft) |  | 654 |  |  | 1393 |  |  | 1830 |  |  | 742 |  |
| Travel Time (s) |  | 9.9 |  |  | 21.1 |  |  | 27.7 |  |  | 11.2 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 315 | 0 | 228 | 16 | 0 | 16 | 152 | 543 | 16 | 11 | 1005 | 429 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 315 | 228 | 0 | 0 | 32 | 0 | 152 | 559 | 0 | 11 | 1005 | 429 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(ft) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(ft) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position(ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size(ft) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | Cl+Ex |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(ft) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |

Synchro 8 Report

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 21.0 | 21.0 |  | 21.0 | 21.0 |  | 39.0 | 39.0 |  | 39.0 | 39.0 | 39.0 |
| Total Split (\%) | 35.0\% | 35.0\% |  | 35.0\% | 35.0\% |  | 65.0\% | 65.0\% |  | 65.0\% | 65.0\% | 65.0\% |
| Maximum Green (s) | 17.0 | 17.0 |  | 17.0 | 17.0 |  | 35.0 | 35.0 |  | 35.0 | 35.0 | 35.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 |  |  | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |

Lead/Lag

| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recall Mode | None | None | None | None | Min | Min | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Act Efftt Green (s) | 15.1 | 15.1 |  | 15.1 | 24.8 | 24.8 | 24.8 | 24.8 | 24.8 |
| Actuated g/C Ratio | 0.31 | 0.31 |  | 0.31 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| v/c Ratio | 0.74 | 0.40 |  | 0.07 | 0.72 | 0.31 | 0.03 | 0.55 | 0.42 |
| Control Delay | 30.4 | 10.8 |  | 10.4 | 32.0 | 7.0 | 5.8 | 9.1 | 2.1 |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.4 | 10.8 |  | 10.4 | 32.0 | 7.0 | 5.8 | 9.1 | 2.1 |
| LOS | C | B |  | B | C | A | A | A | A |
| Approach Delay |  | 22.2 |  | 10.4 |  | 12.4 |  | 7.0 |  |
| Approach LOS |  | C |  | B |  | B |  | A |  |
| 90th \%ile Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| 90th \%ile Term Code | Max | Max | Hold | Hold | Max | Max | Max | Max | Max |
| 70th \%ile Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 32.8 | 32.8 | 32.8 | 32.8 | 32.8 |
| 70th \%ile Term Code | Max | Max | Hold | Hold | Gap | Gap | Hold | Hold | Hold |
| 50th \%ile Green (s) | 17.0 | 17.0 | 17.0 | 17.0 | 23.4 | 23.4 | 23.4 | 23.4 | 23.4 |
| 50th \%ile Term Code | Max | Max | Hold | Hold | Hold | Hold | Gap | Gap | Gap |
| 30th \%ile Green (s) | 13.7 | 13.7 | 13.7 | 13.7 | 19.5 | 19.5 | 19.5 | 19.5 | 19.5 |
| 30th \%ile Term Code | Gap | Gap | Hold | Hold | Hold | Hold | Gap | Gap | Gap |
| 10th \%ile Green (s) | 10.2 | 10.2 | 10.2 | 10.2 | 15.6 | 15.6 | 15.6 | 15.6 | 15.6 |
| 10th \%ile Term Code | Gap | Gap | Hold | Hold | Dwell | Dwell | Dwell | Dwell | Dwell |
| Queue Length 50th (tt) | 72 | 22 |  | 3 | 32 | 45 | 2 | 97 | 0 |
| Queue Length 95th (ft) | \#228 | 84 |  | 21 | \#123 | 68 | 7 | 137 | 29 |
| Internal Link Dist (tt) |  | 574 |  | 1313 |  | 1750 |  | 662 |  |
| Turn Bay Length (tt) | 300 |  |  |  | 300 |  | 300 |  | 300 |
| Base Capacity (vph) | 505 | 654 |  | 556 | 310 | 2653 | 607 | 2662 | 1297 |
| Starvation Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.62 | 0.35 |  | 0.06 | 0.49 | 0.21 | 0.02 | 0.38 | 0.33 |

## Intersection Summary

Area Type: Other
Cycle Length: 60

Actuated Cycle Length: 48.2
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: $11.5 \quad$ Intersection LOS: B
Intersection Capacity Utilization 66.1\%
ICU Level of Service C
Analysis Period (min) 15
90th \%ile Actuated Cycle: 60
70th \%ile Actuated Cycle: 57.8
50th \%ile Actuated Cycle: 48.4
30th \%ile Actuated Cycle: 41.2
10th \%ile Actuated Cycle: 33.8
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
Splits and Phases: 6: Perimeter Center Pkwy \& Connector

\＃E． 1.
Lanes，Volumes，Timings
7：Lake Hearn Dr．\＆Perimeter Center Pkwy

|  | 4 |  | 4 | 4 | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | 7\％ | 中4 | 44 | 「゙「 | ＊ | 「゙ |
| Volume（vph） | 210 | 430 | 495 | 445 | 620 | 530 |
| Ideal Flow（vphpl） | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length（ft） | 0 |  |  | 0 | 300 | 0 |
| Storage Lanes | 2 |  |  | 2 | 1 | 1 |
| Taper Length（ft） | 25 |  |  |  | 25 |  |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Right Turn on Red |  |  |  | Yes |  | Yes |
| Satd．Flow（RTOR） |  |  |  | 484 |  | 380 |
| Link Speed（mph） |  | 45 | 45 |  | 45 |  |
| Link Distance（ft） |  | 806 | 1941 |  | 1830 |  |
| Travel Time（s） |  | 12.2 | 29.4 |  | 27.7 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 228 | 467 | 538 | 484 | 674 | 576 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 228 | 467 | 538 | 484 | 674 | 576 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |

Synchro 8 Report
daf
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|  | 4 |  |  |  | $V$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 11.0 | 32.0 | 21.0 | 21.0 | 28.0 | 28.0 |
| Total Split (\%) | 18.3\% | 53.3\% | 35.0\% | 35.0\% | 46.7\% | 46.7\% |
| Maximum Green (s) | 7.0 | 28.0 | 17.0 | 17.0 | 24.0 | 24.0 |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 7.0 | 25.3 | 14.2 | 14.2 | 16.9 | 16.9 |
| Actuated g/C Ratio | 0.14 | 0.50 | 0.28 | 0.28 | 0.34 | 0.34 |
| v/c Ratio | 0.48 | 0.26 | 0.54 | 0.43 | 0.59 | 0.74 |
| Control Delay | 26.0 | 8.4 | 18.3 | 3.3 | 16.2 | 11.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.0 | 8.4 | 18.3 | 3.3 | 16.2 | 11.6 |
| LOS | C | A | B | A | B | B |
| Approach Delay |  | 14.2 | 11.2 |  | 14.1 |  |
| Approach LOS |  | B | B |  | B |  |
| 90th \%ile Green (s) | 7.0 | 28.0 | 17.0 | 17.0 | 24.0 | 24.0 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Max | Max |
| 70th \%ile Green (s) | 7.0 | 28.0 | 17.0 | 17.0 | 20.9 | 20.9 |
| 70th \%ile Term Code | Max | Hold | Max | Max | Gap | Gap |
| 50th \%ile Green (s) | 7.0 | 26.3 | 15.3 | 15.3 | 16.8 | 16.8 |
| 50th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 7.0 | 23.6 | 12.6 | 12.6 | 13.5 | 13.5 |
| 30th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 6.3 | 19.9 | 9.6 | 9.6 | 10.9 | 10.9 |
| 10th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 33 | 36 | 68 | 0 | 85 | 44 |
| Queue Length 95th (ft) | 71 | 78 | 128 | 32 | 131 | 141 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 489 | 2016 | 1224 | 1281 | 1676 | 967 |
| 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 | 0.47 | 0.23 | 0.44 | 0.38 | 0.40 | 0.60 |
| Intersection Summary |  |  |  |  |  |  |
| Area Type: Other |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |

Synchro 8 Report

Actuated Cycle Length: 50.4
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 13.1 Intersection LOS: B
Intersection Capacity Utilization 53.2\%
ICU Level of Service A
Analysis Period (min) 15
90th \%ile Actuated Cycle: 60
70th \%ile Actuated Cycle: 56.9
50th \%ile Actuated Cycle: 51.1
30th \%ile Actuated Cycle: 45.1
10th \%ile Actuated Cycle: 38.8
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％${ }^{1+1}$ | 性 | 「 | \％${ }^{*}$ | 性 | 「 | 7＊1 | 个 ${ }^{\text {a }}$ |  | \％${ }^{1}$ | 个4 | 7 |
| Volume（vph） | 290 | 705 | 340 | 370 | 710 | 350 | 735 | 755 | 390 | 440 | 520 | 330 |
| Lane Util．Factor | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 | 0.97 | 0.95 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.949 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 3433 | 3539 | 1583 | 3433 | 3539 | 1583 | 3433 | 3359 | 0 | 3433 | 3539 | 1583 |
| Flt Permitted | 0.950 |  |  | 0.135 |  |  | 0.277 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 3433 | 3539 | 1583 | 488 | 3539 | 1583 | 1001 | 3359 | 0 | 3433 | 3539 | 1583 |
| Satd．Flow（RTOR） |  |  | 370 |  |  | 82 |  | 86 |  |  |  | 82 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 315 | 766 | 370 | 402 | 772 | 380 | 799 | 821 | 424 | 478 | 565 | 359 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 315 | 766 | 370 | 402 | 772 | 380 | 799 | 1245 | 0 | 478 | 565 | 359 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（tt） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（tt） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex | Cl＋Ex |

Detector 1 Channel

| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | Cl＋Ex |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl＋Ex |  |


| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Turn Type | Prot | NA | Perm | pm＋pt | NA | pm＋ov | pm＋pt | NA | Prot | NA | pm＋ov |
| Protected Phases | 5 | 2 |  | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |
| Permitted Phases |  |  | 2 | 6 |  | 6 | 8 |  |  |  | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 7 | 3 | 8 | 7 | 4 | 5 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 8.0 | 20.0 | 8.0 | 20.0 | 8.0 |
| Total Split（s） | 16.0 | 37.0 | 37.0 | 14.0 | 35.0 | 22.0 | 33.0 | 47.0 | 22.0 | 36.0 | 16.0 |
| Total Split（\％） | 13．3\％ | 30．8\％ | 30．8\％ | 11．7\％ | 29．2\％ | 18．3\％ | 27．5\％ | 39．2\％ | 18．3\％ | 30．0\％ | 13．3\％ |
| Maximum Green（s） | 12.0 | 33.0 | 33.0 | 10.0 | 31.0 | 18.0 | 29.0 | 43.0 | 18.0 | 32.0 | 12.0 |
| Yellow Time（s） | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All－Red Time（s） | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lead | Lead | Lag |  | Lead | Lag | Lead |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Min | C-Min | None | C-Min | None | None | None |  | None | None | None |
| Walk Time (s) |  | 5.0 | 5.0 |  | 5.0 |  |  | 5.0 |  |  | 5.0 |  |
| Flash Dont Walk (s) |  | 11.0 | 11.0 |  | 11.0 |  |  | 11.0 |  |  | 11.0 |  |
| Pedestrian Calls (\#/hr) |  | 0 | 0 |  | 0 |  |  | 0 |  |  | 0 |  |
| Act Efftt Green (s) | 12.2 | 31.7 | 31.7 | 39.9 | 29.7 | 52.1 | 64.1 | 43.8 |  | 18.3 | 39.2 | 55.4 |
| Actuated g/C Ratio | 0.10 | 0.26 | 0.26 | 0.33 | 0.25 | 0.43 | 0.53 | 0.36 |  | 0.15 | 0.33 | 0.46 |
| v/c Ratio | 0.91 | 0.82 | 0.54 | 0.98 | 0.88 | 0.52 | 0.80 | 0.97 |  | 0.91 | 0.49 | 0.46 |
| Control Delay | 83.2 | 49.5 | 6.5 | 74.0 | 51.5 | 15.2 | 23.0 | 55.0 |  | 73.1 | 35.4 | 20.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 83.2 | 49.5 | 6.5 | 74.0 | 51.5 | 15.2 | 23.0 | 55.0 |  | 73.1 | 35.4 | 20.4 |
| LOS | F | D | A | E | D | B | C | E |  | E | D | C |
| Approach Delay |  | 45.8 |  |  | 48.5 |  |  | 42.5 |  |  | 44.4 |  |
| Approach LOS |  | D |  |  | D |  |  | D |  |  | D |  |
| 90th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 10.0 | 31.0 | 18.0 | 29.0 | 43.0 |  | 18.0 | 32.0 | 12.0 |
| 90th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Max | Max |  | Max | Hold | Max |
| 70th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 10.0 | 31.0 | 18.0 | 26.4 | 43.0 |  | 18.0 | 34.6 | 12.0 |
| 70th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 50th \%ile Green (s) | 12.0 | 33.0 | 33.0 | 10.0 | 31.0 | 18.0 | 23.2 | 43.0 |  | 18.0 | 37.8 | 12.0 |
| 50th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 30th \%ile Green (s) | 12.0 | 31.7 | 31.7 | 10.0 | 29.7 | 19.3 | 19.7 | 43.0 |  | 19.3 | 42.6 | 12.0 |
| 30th \%ile Term Code | Max | Coord | Coord | Max | Coord | Max | Gap | Max |  | Max | Hold | Max |
| 10th \%ile Green (s) | 12.8 | 28.0 | 28.0 | 10.8 | 26.0 | 18.4 | 16.1 | 46.8 |  | 18.4 | 49.1 | 12.8 |
| 10th \%ile Term Code | Max | Coord | Coord | Max | Coord | Gap | Gap | Gap |  | Gap | Hold | Max |
| Queue Length 50th ( t ) | 126 | 289 | 0 | 132 | 211 | 100 | 182 | 475 |  | 190 | 187 | 145 |
| Queue Length 95th (t) | \#212 | 364 | 75 | m\#191 | m312 | m137 | 230 | \#637 |  | \#291 | 262 | 254 |
| Internal Link Dist (ft) |  | 1949 |  |  | 883 |  |  | 250 |  |  | 706 |  |
| Turn Bay Length (t) | 260 |  |  | 250 |  | 500 | 80 |  |  | 250 |  | 300 |
| Base Capacity (vph) | 348 | 973 | 703 | 411 | 914 | 733 | 1138 | 1279 |  | 524 | 1156 | 774 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.91 | 0.79 | 0.53 | 0.98 | 0.84 | 0.52 | 0.70 | 0.97 |  | 0.91 | 0.49 | 0.46 |

## Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0\%), Referenced to phase 2:EBT and 6:WBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 45.1
Intersection LOS: D
Intersection Capacity Utilization 89.3\%
ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.
m Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 1: Perimeter Center Pkwy/Perimeter Center Pkwy. \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | ${ }^{7}$ | 个44 | 「 | ＊ | 个4 | 「 | ${ }^{7}$ | $\uparrow$ | 「 | \％ | ¢ |  |
| Volume（vph） | 50 | 1350 | 210 | 315 | 1010 | 55 | 360 | 20 | 370 | 120 | 20 | 60 |
| Lane Util．Factor | 1.00 | 0.91 | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  |  | 0.850 |  | 0.888 |  |
| Flt Protected | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 5085 | 1583 | 1770 | 3539 | 1583 | 1770 | 1863 | 1583 | 1770 | 1654 | 0 |
| FIt Permitted | 0.241 |  |  | 0.075 |  |  | 0.362 |  |  | 0.743 |  |  |
| Satd．Flow（perm） | 449 | 5085 | 1583 | 140 | 3539 | 1583 | 674 | 1863 | 1583 | 1384 | 1654 | 0 |
| Satd．Flow（RTOR） |  |  | 210 |  |  | 118 |  |  | 384 |  | 65 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 54 | 1467 | 228 | 342 | 1098 | 60 | 391 | 22 | 402 | 130 | 22 | 65 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 54 | 1467 | 228 | 342 | 1098 | 60 | 391 | 22 | 402 | 130 | 87 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 12 |  |  | 12 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（tt） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（tt） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex |  |

Detector 1 Channel

| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | Cl＋Ex |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |
| Turn Type | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA | Perm | pm＋pt | NA |
| Protected Phases | 5 | 2 |  | 1 | 6 |  | 3 | 8 |  | 7 | 4 |
| Permitted Phases | 2 |  | 2 | 6 |  | 6 | 8 |  | 8 | 4 |  |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |
| Total Split（s） | 9.0 | 44.0 | 44.0 | 29.0 | 64.0 | 64.0 | 27.0 | 34.0 | 34.0 | 13.0 | 20.0 |
| Total Split（\％） | 7．5\％ | 36．7\％ | 36．7\％ | 24．2\％ | 53．3\％ | 53．3\％ | 22．5\％ | 28．3\％ | 28．3\％ | 10．8\％ | 16．7\％ |
| Maximum Green（s） | 5.0 | 40.0 | 40.0 | 25.0 | 60.0 | 60.0 | 23.0 | 30.0 | 30.0 | 9.0 | 16.0 |
| Yellow Time（s） | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All－Red Time（s） | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

Queue shown is maximum after two cycles.
$m$ Volume for 95 th percentile queue is metered by upstream signal.
Splits and Phases: 2: Shopping Center \& Hammond Dr.


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Configurations | \％ | $\uparrow$ | 「「「 | 7＊ | $\uparrow$ | 「 | \％${ }^{*}$ | tttb |  | \％${ }^{*}$ | tttt | F |
| Volume（vph） | 290 | 45 | 1505 | 435 | 140 | 90 | 1110 | 2000 | 55 | 30 | 1700 | 130 |
| Lane Util．Factor | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 | 1.00 | 0.97 | 0.86 | 0.86 | 0.97 | 0.86 | 1.00 |
| Frt |  |  | 0.850 |  |  | 0.850 |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Flt Permitted | 0.950 | 0.965 |  | 0.950 |  |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1681 | 1708 | 2787 | 3433 | 1863 | 1583 | 3433 | 6382 | 0 | 3433 | 6408 | 1583 |
| Satd．Flow（RTOR） |  |  | 39 |  |  | 101 |  | 6 |  |  |  | 102 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 315 | 49 | 1636 | 473 | 152 | 98 | 1207 | 2174 | 60 | 33 | 1848 | 141 |
| Shared Lane Traffic（\％） | 43\％ |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 180 | 184 | 1636 | 473 | 152 | 98 | 1207 | 2234 | 0 | 33 | 1848 | 141 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（t） |  | 24 |  |  | 24 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（tt） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru |  | Left | Thru | Right |
| Leading Detector（tt） | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector（tt） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl＋Ex | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex | Cl＋Ex |  | Cl＋Ex | Cl＋Ex | Cl＋Ex |

Detector 1 Channel

| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  | 6 |  |
| Detector 2 Type |  | Cl＋Ex |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |


| Detector 2 Extend（s） | 0.0 |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Turn Type | Split | NA | pt＋ov | Split | NA | Perm | Prot | NA | Prot | NA | Perm |
| Protected Phases | 4 | 4 | 45 | 8 | 8 |  | 5 | 2 | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 |  |  |  |  | 6 |
| Detector Phase | 4 | 4 | 45 | 8 | 8 | 8 | 5 | 2 | 1 | 6 | 6 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 | 8.0 | 20.0 | 20.0 |
| Total Split（s） | 34.0 | 34.0 |  | 20.0 | 20.0 | 20.0 | 44.0 | 78.0 | 8.0 | 42.0 | 42.0 |
| Total Split（\％） | 24．3\％ | 24．3\％ |  | 14．3\％ | 14．3\％ | 14．3\％ | 31．4\％ | 55．7\％ | 5．7\％ | 30．0\％ | 30．0\％ |
| Maximum Green（s） | 30.0 | 30.0 |  | 16.0 | 16.0 | 16.0 | 40.0 | 74.0 | 4.0 | 38.0 | 38.0 |
| Yellow Time（s） | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All－Red Time（s） | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |


| Lane Group |  | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | SBR

## Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 140
Natural Cycle: 140
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 84.2
Intersection LOS: F
Intersection Capacity Utilization 99.7\% ICU Level of Service F
Analysis Period (min) 15
90th \%ile Actuated Cycle: 140
70th \%ile Actuated Cycle: 140

50th \%ile Actuated Cycle: 140
30th \%ile Actuated Cycle: 140
10th \%ile Actuated Cycle: 140
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Ashford-Dunwoody Rd. \& Hammond Dr.


|  | 4 | $\rightarrow$ | $\checkmark$ | $\checkmark$ | 4 |  | 4 | $\dagger$ | $p$ | $\pm$ | $\dagger$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | 「 |  |  | 「 |  | 性 |  | ${ }^{7}$ | 中 ${ }^{\text {a }}$ |  |
| Volume（vph） | 0 | 0 | 70 | 0 | 0 | 180 | 0 | 1700 | 25 | 50 | 1050 | 80 |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Frt |  |  | 0.865 |  |  | 0.865 |  | 0.998 |  |  | 0.989 |  |
| Flt Protected |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3532 | 0 | 1770 | 3500 | 0 |
| Flt Permitted |  |  |  |  |  |  |  |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 0 | 0 | 1611 | 0 | 0 | 1611 | 0 | 3532 | 0 | 1770 | 3500 | 0 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1848 | 27 | 54 | 1141 | 87 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 0 | 0 | 76 | 0 | 0 | 196 | 0 | 1875 | 0 | 54 | 1228 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 0 |  |  | 0 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Sign Control |  | Stop |  |  | Stop |  |  | Free |  |  | Free |  |

## Intersection Summary

Control Type：Unsignalized
Intersection Capacity Utilization 65．6\％
ICU Level of Service C
Analysis Period（min） 15

|  | 4 | $\rightarrow$ |  | 7 |  |  | 4 | 4 | \％ | $1$ |  | 4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | \％ | $\uparrow$ |  | ${ }^{7}$ | $\uparrow$ | 「゙「 | ${ }^{7}$ | 44 | 7 | ＊1 | 中 $\hat{\square}$ |  |
| Volume（vph） | 105 | 0 | 110 | 570 | 0 | 910 | 20 | 710 | 140 | 415 | 660 | 45 |
| Lane Util．Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.88 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 0.95 |
| Frt |  | 0.850 |  |  |  | 0.850 |  |  | 0.850 |  | 0.990 |  |
| Flt Protected | 0.950 |  |  | 0.950 | 0.950 |  | 0.950 |  |  | 0.950 |  |  |
| Satd．Flow（prot） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 1770 | 3539 | 1583 | 3433 | 3504 | 0 |
| Flt Permitted | 0.950 |  |  | 0.950 | 0.950 |  | 0.361 |  |  | 0.950 |  |  |
| Satd．Flow（perm） | 1770 | 1583 | 0 | 1681 | 1681 | 2787 | 672 | 3539 | 1583 | 3433 | 3504 | 0 |
| Satd．Flow（RTOR） |  | 158 |  |  |  | 681 |  |  | 158 |  | 9 |  |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 114 | 0 | 120 | 620 | 0 | 989 | 22 | 772 | 152 | 451 | 717 | 49 |
| Shared Lane Traffic（\％） |  |  |  | 50\％ |  |  |  |  |  |  |  |  |
| Lane Group Flow（vph） | 114 | 120 | 0 | 310 | 310 | 989 | 22 | 772 | 152 | 451 | 766 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width（ft） |  | 12 |  |  | 12 |  |  | 24 |  |  | 24 |  |
| Link Offset（ft） |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width（ft） |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 |  |
| Detector Template | Left | Thru |  | Left | Thru | Right | Left | Thru | Right | Left | Thru |  |
| Leading Detector（ft） | 20 | 100 |  | 20 | 100 | 20 | 20 | 100 | 20 | 20 | 100 |  |
| Trailing Detector（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Position（ft） | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Detector 1 Size（ft） | 20 | 6 |  | 20 | 6 | 20 | 20 | 6 | 20 | 20 | 6 |  |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  | $\mathrm{Cl}+\mathrm{Ex}$ | Cl＋Ex | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Queue（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 1 Delay（s） | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Detector 2 Position（ft） |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size（ft） |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |  | $\mathrm{Cl}+\mathrm{Ex}$ |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Split | NA |  | Split | NA | Perm | pm＋pt | NA | Perm | Prot | NA |  |
| Protected Phases | 4 | 4 |  | 8 | 8 |  | 5 | 2 |  | 1 | 6 |  |
| Permitted Phases |  |  |  |  |  | 8 | 2 |  | 2 |  |  |  |
| Detector Phase | 4 | 4 |  | 8 | 8 | 8 | 5 | 2 | 2 | 1 | 6 |  |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Minimum Split（s） | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 | 8.0 | 20.0 | 20.0 | 8.0 | 20.0 |  |
| Total Split（s） | 20.0 | 20.0 |  | 25.0 | 25.0 | 25.0 | 8.0 | 27.0 | 27.0 | 18.0 | 37.0 |  |
| Total Split（\％） | 22．2\％ | 22．2\％ |  | 27．8\％ | 27．8\％ | 27．8\％ | 8．9\％ | 30．0\％ | 30．0\％ | 20．0\％ | 41．1\％ |  |
| Maximum Green（s） | 16.0 | 16.0 |  | 21.0 | 21.0 | 21.0 | 4.0 | 23.0 | 23.0 | 14.0 | 33.0 |  |
| Yellow Time（s） | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |  |
| All－Red Time（s） | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |  |


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 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) | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |  |
| Lead/Lag |  |  |  |  |  |  | Lead | Lag | Lag | Lead | Lag |  |
| Lead-Lag Optimize? |  |  |  |  |  |  | Yes | Yes | Yes | Yes | Yes |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |  |
| Recall Mode | None | None |  | None | None | None | None | Min | Min | None | Min |  |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 |  |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 |  |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 | 0 |  | 0 | 0 |  | 0 |  |
| Act Effct Green (s) | 10.6 | 10.6 |  | 20.2 | 20.2 | 20.2 | 25.9 | 21.9 | 21.9 | 13.6 | 36.5 |  |
| Actuated g/C Ratio | 0.13 | 0.13 |  | 0.25 | 0.25 | 0.25 | 0.31 | 0.27 | 0.27 | 0.17 | 0.44 |  |
| v/c Ratio | 0.50 | 0.35 |  | 0.75 | 0.75 | 0.83 | 0.08 | 0.82 | 0.28 | 0.80 | 0.49 |  |
| Control Delay | 42.0 | 5.6 |  | 43.3 | 43.3 | 16.4 | 14.4 | 37.8 | 5.8 | 46.1 | 18.9 |  |
| Queue Delay | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Total Delay | 42.0 | 5.6 |  | 43.3 | 43.3 | 16.4 | 14.4 | 37.8 | 5.8 | 46.1 | 18.9 |  |
| LOS | D | A |  | D | D | B | B | D | A | D | B |  |
| Approach Delay |  | 23.3 |  |  | 26.8 |  |  | 32.1 |  |  | 29.0 |  |
| Approach LOS |  | C |  |  | C |  |  | C |  |  | C |  |
| 90th \%ile Green (s) | 15.3 | 15.3 |  | 21.0 | 21.0 | 21.0 | 4.0 | 23.0 | 23.0 | 14.0 | 33.0 |  |
| 90th \%ile Term Code | Gap | Gap |  | Max | Max | Max | Max | Max | Max | Max | Hold |  |
| 70th \%ile Green (s) | 12.5 | 12.5 |  | 21.0 | 21.0 | 21.0 | 4.0 | 23.0 | 23.0 | 14.0 | 33.0 |  |
| 70th \%ile Term Code | Gap | Gap |  | Max | Max | Max | Max | Max | Max | Max | Hold |  |
| 50th \%ile Green (s) | 10.7 | 10.7 |  | 21.0 | 21.0 | 21.0 | 0.0 | 23.0 | 23.0 | 14.0 | 41.0 |  |
| 50th \%ile Term Code | Gap | Gap |  | Max | Max | Max | Skip | Max | Max | Max | Hold |  |
| 30th \%ile Green (s) | 9.0 | 9.0 |  | 21.0 | 21.0 | 21.0 | 0.0 | 23.0 | 23.0 | 14.0 | 41.0 |  |
| 30th \%ile Term Code | Gap | Gap |  | Max | Max | Max | Skip | Max | Max | Max | Hold |  |
| 10th \%ile Green (s) | 6.5 | 6.5 |  | 16.8 | 16.8 | 16.8 | 0.0 | 17.5 | 17.5 | 11.8 | 33.3 |  |
| 10th \%ile Term Code | Gap | Gap |  | Gap | Gap | Gap | Skip | Gap | Gap | Gap | Hold |  |
| Queue Length 50th (ft) | 58 | 0 |  | 161 | 161 | 84 | 6 | 201 | 0 | 120 | 133 |  |
| Queue Length 95th (ft) | 108 | 26 |  | \#308 | \#308 | \#193 | 20 | \#312 | 42 | \#205 | 237 |  |
| Internal Link Dist (ft) |  | 322 |  |  | 1224 |  |  | 662 |  |  | 258 |  |
| Turn Bay Length (ft) |  |  |  |  |  |  | 200 |  | 200 | 150 |  |  |
| Base Capacity (vph) | 346 | 437 |  | 432 | 432 | 1222 | 265 | 996 | 558 | 588 | 1556 |  |
| 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 | 0.33 | 0.27 |  | 0.72 | 0.72 | 0.81 | 0.08 | 0.78 | 0.27 | 0.77 | 0.49 |  |

## Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 82.4
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 28.5
Intersection LOS: C
Intersection Capacity Utilization 68.3\% ICU Level of Service C
Analysis Period (min) 15
90th \%ile Actuated Cycle: 89.3
70th \%ile Actuated Cycle: 86.5

50th \%ile Actuated Cycle: 84.7
30th \%ile Actuated Cycle: 83
10th \%ile Actuated Cycle: 68.6
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Perimeter Center Pkwy \& Goldkist Dr.


|  | $\stackrel{ }{*}$ |  |  | $\checkmark$ |  |  | 4 | $\dagger$ |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | \% | $\uparrow$ |  |  | ¢ |  | \% | 中 ${ }^{\text {a }}$ |  | \% | 个4 | F |
| Volume (vph) | 305 | 0 | 210 | 15 | 0 | 15 | 140 | 550 | 15 | 10 | 925 | 405 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 1.00 |
| Frt |  | 0.850 |  |  | 0.932 |  |  | 0.996 |  |  |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.976 |  | 0.950 |  |  | 0.950 |  |  |
| Satd. Flow (prot) | 1770 | 1583 | 0 | 0 | 1694 | 0 | 1770 | 3525 | 0 | 1770 | 3539 | 1583 |
| Flt Permitted | 0.736 |  |  |  | 0.854 |  | 0.219 |  |  | 0.399 |  |  |
| Satd. Flow (perm) | 1371 | 1583 | 0 | 0 | 1483 | 0 | 408 | 3525 | 0 | 743 | 3539 | 1583 |
| Satd. Flow (RTOR) |  | 104 |  |  | 18 |  |  | 7 |  |  |  | 440 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 332 | 0 | 228 | 16 | 0 | 16 | 152 | 598 | 16 | 11 | 1005 | 440 |
| Shared Lane Traffic (\%) |  |  |  |  |  |  |  |  |  |  |  |  |
| Lane Group Flow (vph) | 332 | 228 | 0 | 0 | 32 | 0 | 152 | 614 | 0 | 11 | 1005 | 440 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(t) |  | 12 |  |  | 12 |  |  | 12 |  |  | 12 |  |
| Link Offset(tt) |  | 0 |  |  | 0 |  |  | 0 |  |  | 0 |  |
| Crosswalk Width(tt) |  | 16 |  |  | 16 |  |  | 16 |  |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 | 15 |  | 9 |
| Number of Detectors | 1 | 2 |  | 1 | 2 |  | 1 | 2 |  | 1 | 2 | 1 |
| Detector Template | Left | Thru |  | Left | Thru |  | Left | Thru |  | Left | Thru | Right |
| Leading Detector (tt) | 20 | 100 |  | 20 | 100 |  | 20 | 100 |  | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Position(t) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Detector 1 Size(t) | 20 | 6 |  | 20 | 6 |  | 20 | 6 |  | 20 | 6 | 20 |
| Detector 1 Type | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |  | Cl+Ex | Cl+Ex | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 1 Extend (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(f) |  | 94 |  |  | 94 |  |  | 94 |  |  | 94 |  |
| Detector 2 Size(ft) |  | 6 |  |  | 6 |  |  | 6 |  |  | 6 |  |
| Detector 2 Type |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |  | Cl+Ex |  |
| Detector 2 Channel |  |  |  |  |  |  |  |  |  |  |  |  |
| Detector 2 Extend (s) |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |
| Turn Type | Perm | NA |  | Perm | NA |  | Perm | NA |  | Perm | NA | Perm |
| Protected Phases |  | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  |
| Permitted Phases | 4 |  |  | 8 |  |  | 2 |  |  | 6 |  | 6 |
| Detector Phase | 4 | 4 |  | 8 | 8 |  | 2 | 2 |  | 6 | 6 | 6 |
| Switch Phase |  |  |  |  |  |  |  |  |  |  |  |  |
| Minimum Initial (s) | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 |  | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 22.0 | 22.0 |  | 22.0 | 22.0 |  | 38.0 | 38.0 |  | 38.0 | 38.0 | 38.0 |
| Total Split (\%) | 36.7\% | 36.7\% |  | 36.7\% | 36.7\% |  | 63.3\% | 63.3\% |  | 63.3\% | 63.3\% | 63.3\% |
| Maximum Green (s) | 18.0 | 18.0 |  | 18.0 | 18.0 |  | 34.0 | 34.0 |  | 34.0 | 34.0 | 34.0 |
| Yellow Time (s) | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 |  | 3.5 | 3.5 | 3.5 |
| All-Red Time (s) | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 |  | 0.5 | 0.5 | 0.5 |


|  | * |  |  | $\bigcirc$ |  |  |  | 4 |  |  | $\downarrow$ | $\downarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 |  |  | 4.0 |  | 4.0 | 4.0 |  | 4.0 | 4.0 | 4.0 |
| Lead/Lag |  |  |  |  |  |  |  |  |  |  |  |  |
| Lead-Lag Optimize? |  |  |  |  |  |  |  |  |  |  |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 |  | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None |  | None | None |  | Min | Min |  | Min | Min | Min |
| Walk Time (s) | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 |  | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 |  | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) | 0 | 0 |  | 0 | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Act Effct Green (s) | 15.8 | 15.8 |  |  | 15.8 |  | 25.4 | 25.4 |  | 25.4 | 25.4 | 25.4 |
| Actuated g/C Ratio | 0.32 | 0.32 |  |  | 0.32 |  | 0.51 | 0.51 |  | 0.51 | 0.51 | 0.51 |
| v/c Ratio | 0.76 | 0.40 |  |  | 0.07 |  | 0.73 | 0.34 |  | 0.03 | 0.55 | 0.43 |
| Control Delay | 31.5 | 11.2 |  |  | 10.2 |  | 34.0 | 7.6 |  | 6.2 | 9.5 | 2.2 |
| Queue Delay | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |
| Total Delay | 31.5 | 11.2 |  |  | 10.2 |  | 34.0 | 7.6 |  | 6.2 | 9.5 | 2.2 |
| LOS | C | B |  |  | B |  | C | A |  | A | A | A |
| Approach Delay |  | 23.2 |  |  | 10.2 |  |  | 12.8 |  |  | 7.3 |  |
| Approach LOS |  | C |  |  | B |  |  | B |  |  | A |  |
| 90th \%ile Green (s) | 18.0 | 18.0 |  | 18.0 | 18.0 |  | 34.0 | 34.0 |  | 34.0 | 34.0 | 34.0 |
| 90th \%ile Term Code | Max | Max |  | Hold | Hold |  | Max | Max |  | Max | Max | Max |
| 70th \%ile Green (s) | 18.0 | 18.0 |  | 18.0 | 18.0 |  | 34.0 | 34.0 |  | 34.0 | 34.0 | 34.0 |
| 70th \%ile Term Code | Max | Max |  | Hold | Hold |  | Max | Max |  | Hold | Hold | Hold |
| 50th \%ile Green (s) | 18.0 | 18.0 |  | 18.0 | 18.0 |  | 25.2 | 25.2 |  | 25.2 | 25.2 | 25.2 |
| 50th \%ile Term Code | Max | Max |  | Hold | Hold |  | Gap | Gap |  | Hold | Hold | Hold |
| 30th \%ile Green (s) | 14.2 | 14.2 |  | 14.2 | 14.2 |  | 19.7 | 19.7 |  | 19.7 | 19.7 | 19.7 |
| 30th \%ile Term Code | Gap | Gap |  | Hold | Hold |  | Hold | Hold |  | Gap | Gap | Gap |
| 10th \%ile Green (s) | 10.5 | 10.5 |  | 10.5 | 10.5 |  | 16.1 | 16.1 |  | 16.1 | 16.1 | 16.1 |
| 10th \%ile Term Code | Gap | Gap |  | Hold | Hold |  | Dwell | Dwell |  | Dwell | Dwell | Dwell |
| Queue Length 50th (ft) | 83 | 25 |  |  | 3 |  | 34 | 53 |  | 2 | 103 | 0 |
| Queue Length 95th (ft) | \#235 | 84 |  |  | 20 |  | \#126 | 79 |  | 7 | 144 | 31 |
| Internal Link Dist (ft) |  | 574 |  |  | 1313 |  |  | 1750 |  |  | 662 |  |
| Turn Bay Length (ft) | 300 |  |  |  |  |  | 300 |  |  | 300 |  | 300 |
| Base Capacity (vph) | 521 | 666 |  |  | 575 |  | 293 | 2533 |  | 533 | 2542 | 1261 |
| Starvation Cap Reductn | 0 | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 |  |  | 0 |  | 0 | 0 |  | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.34 |  |  | 0.06 |  | 0.52 | 0.24 |  | 0.02 | 0.40 | 0.35 |
| Intersection Summary |  |  |  |  |  |  |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| Actuated Cycle Length: 49.5 |  |  |  |  |  |  |  |  |  |  |  |  |
| Natural Cycle: 55 |  |  |  |  |  |  |  |  |  |  |  |  |
| Control Type: Semi Act-Uncoord |  |  |  |  |  |  |  |  |  |  |  |  |
| Maximum v/c Ratio: 0.76 |  |  |  |  |  |  |  |  |  |  |  |  |
| Intersection Signal Delay: 12.0 |  |  |  | Intersection LOS: B |  |  |  |  |  |  |  |  |
| Intersection Capacity Utilization 66.9\% |  |  |  | ICU Level of Service C |  |  |  |  |  |  |  |  |
| Analysis Period (min) 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| 90th \%ile Actuated Cycle: 60 |  |  |  |  |  |  |  |  |  |  |  |  |
| 70th \%ile Actuated Cycle: 60 |  |  |  |  |  |  |  |  |  |  |  |  |

50th \%ile Actuated Cycle: 51.2
30th \%ile Actuated Cycle: 41.9
10th \%ile Actuated Cycle: 34.6
\# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

Splits and Phases: 6: Perimeter Center Pkwy \& Connector


|  | 4 |  |  |  | （ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | 7\％ | 中4 | 中4 | 「「゙ | ${ }^{7} 1$ | 「゙ |
| Volume（vph） | 260 | 430 | 495 | 445 | 620 | 530 |
| Lane Util．Factor | 0.97 | 0.95 | 0.95 | 0.88 | 0.97 | 1.00 |
| Frt |  |  |  | 0.850 |  | 0.850 |
| Flt Protected | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（prot） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Flt Permitted | 0.950 |  |  |  | 0.950 |  |
| Satd．Flow（perm） | 3433 | 3539 | 3539 | 2787 | 3433 | 1583 |
| Satd．Flow（RTOR） |  |  |  | 484 |  | 413 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj．Flow（vph） | 283 | 467 | 538 | 484 | 674 | 576 |
| Shared Lane Traffic（\％） |  |  |  |  |  |  |
| Lane Group Flow（vph） | 283 | 467 | 538 | 484 | 674 | 576 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width（ft） |  | 24 | 24 |  | 24 |  |
| Link Offset（ft） |  | 0 | 0 |  | 0 |  |
| Crosswalk Width（ft） |  | 16 | 16 |  | 16 |  |
| Two way Left Turn Lane |  |  |  |  |  |  |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed（mph） | 15 |  |  | 9 | 15 | 9 |
| Number of Detectors | 1 | 2 | 2 | 1 | 1 | 1 |
| Detector Template | Left | Thru | Thru | Right | Left | Right |
| Leading Detector（ft） | 20 | 100 | 100 | 20 | 20 | 20 |
| Trailing Detector（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Position（ft） | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector 1 Size（ft） | 20 | 6 | 6 | 20 | 20 | 20 |
| Detector 1 Type | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |
| Detector 1 Channel |  |  |  |  |  |  |
| Detector 1 Extend（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay（s） | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position（ft） |  | 94 | 94 |  |  |  |
| Detector 2 Size（ft） |  | 6 | 6 |  |  |  |
| Detector 2 Type |  | $\mathrm{Cl}+\mathrm{Ex}$ | $\mathrm{Cl}+\mathrm{Ex}$ |  |  |  |
| Detector 2 Channel |  |  |  |  |  |  |
| Detector 2 Extend（s） |  | 0.0 | 0.0 |  |  |  |
| Turn Type | Prot | NA | NA | Perm | Prot | Perm |
| Protected Phases | 5 | 2 | 6 |  | 4 |  |
| Permitted Phases |  |  |  | 6 |  | 4 |
| Detector Phase | 5 | 2 | 6 | 6 | 4 | 4 |
| Switch Phase |  |  |  |  |  |  |
| Minimum Initial（s） | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Minimum Split（s） | 8.0 | 20.0 | 20.0 | 20.0 | 20.0 | 20.0 |
| Total Split（s） | 12.0 | 32.0 | 20.0 | 20.0 | 28.0 | 28.0 |
| Total Split（\％） | 20．0\％ | 53．3\％ | 33．3\％ | 33．3\％ | 46．7\％ | 46．7\％ |
| Maximum Green（s） | 8.0 | 28.0 | 16.0 | 16.0 | 24.0 | 24.0 |
| Yellow Time（s） | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 |
| All－Red Time（s） | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |

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|  | 4 |  |  |  | $\rangle$ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lead/Lag | Lead |  | Lag | Lag |  |  |
| Lead-Lag Optimize? | Yes |  | Yes | Yes |  |  |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | Min | Min | Min | None | None |
| Walk Time (s) |  | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) |  | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 |
| Pedestrian Calls (\#/hr) |  | 0 | 0 | 0 | 0 | 0 |
| Act Effct Green (s) | 7.9 | 25.9 | 13.9 | 13.9 | 16.8 | 16.8 |
| Actuated g/C Ratio | 0.16 | 0.51 | 0.27 | 0.27 | 0.33 | 0.33 |
| v/c Ratio | 0.53 | 0.26 | 0.56 | 0.43 | 0.59 | 0.72 |
| Control Delay | 25.7 | 8.3 | 19.1 | 3.5 | 16.6 | 10.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.7 | 8.3 | 19.1 | 3.5 | 16.6 | 10.3 |
| LOS | C | A | B | A | B | B |
| Approach Delay |  | 14.9 | 11.7 |  | 13.7 |  |
| Approach LOS |  | B | B |  | B |  |
| 90th \%ile Green (s) | 8.0 | 28.0 | 16.0 | 16.0 | 24.0 | 24.0 |
| 90th \%ile Term Code | Max | Hold | Max | Max | Max | Max |
| 70th \%ile Green (s) | 8.0 | 28.0 | 16.0 | 16.0 | 19.8 | 19.8 |
| 70th \%ile Term Code | Max | Hold | Max | Max | Gap | Gap |
| 50th \%ile Green (s) | 8.0 | 27.5 | 15.5 | 15.5 | 16.9 | 16.9 |
| 50th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 30th \%ile Green (s) | 8.0 | 24.7 | 12.7 | 12.7 | 13.7 | 13.7 |
| 30th \%ile Term Code | Max | Hold | Gap | Gap | Gap | Gap |
| 10th \%ile Green (s) | 6.8 | 20.5 | 9.7 | 9.7 | 11.0 | 11.0 |
| 10th \%ile Term Code | Gap | Hold | Gap | Gap | Gap | Gap |
| Queue Length 50th (ft) | 42 | 37 | 71 | 0 | 88 | 37 |
| Queue Length 95th (ft) | 84 | 78 | 132 | 32 | 131 | 125 |
| Internal Link Dist (ft) |  | 726 | 1861 |  | 1750 |  |
| Turn Bay Length (ft) |  |  |  |  | 300 |  |
| Base Capacity (vph) | 552 | 1992 | 1138 | 1225 | 1656 | 977 |
| 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 | 0.51 | 0.23 | 0.47 | 0.40 | 0.41 | 0.59 |
| Intersection Summary |  |  |  |  |  |  |
| Cycle Length: 60 |  |  |  |  |  |  |
| Actuated Cycle Length: 50.8 |  |  |  |  |  |  |
| Natural Cycle: 55 |  |  |  |  |  |  |
| Control Type: Semi Act-Uncoord |  |  |  |  |  |  |
| Maximum v/c Ratio: 0.72 |  |  |  |  |  |  |
| Intersection Signal Delay: 13.3 |  |  |  |  | rsectio | OS: B |
| Intersection Capacity Utilization 53.2\% |  |  |  |  | Level | Service A |
| Analysis Period (min) 15 |  |  |  |  |  |  |
| 90th \%ile Actuated Cycle: 60 |  |  |  |  |  |  |
| 70th \%ile Actuated Cycle: 55.8 |  |  |  |  |  |  |

Synchro 8 Report

50th \%ile Actuated Cycle: 52.4
30th \%ile Actuated Cycle: 46.4
10th \%ile Actuated Cycle: 39.5
Splits and Phases: 7: Lake Hearn Dr. \& Perimeter Center Pkwy


# DeKalb County School District Zoning Review Comments 

| Submitted to: | City of Dunwoody <br> Name of Development: RZ 16-041 |
| :--- | :--- |
| Description: | Dunwoody Crown Towers $\quad$ Location: 244 Perimeter Center Pkwy <br> Rezoning to allow for building of 380 owner-occupied units in two towers. |
| Impact of Development: | If approved, this rezoning will add approximately 37 students to local schools: 17 to Dunwoody ES, |
| 7 to Peachtree MS, 11 to Dunwoody HS and 2 to another DCSD school. An additional 3 students |  |
| would be expected to attend a private school. Overcrowding ranges from almost $115 \%$ to almost $130 \%$. |  |


| Current Condition of Schools | Dunwoody ES | Peachtree MS | Dunwoody HS | $\begin{gathered} \text { Other } \\ \text { DSCD } \\ \text { Schools } \end{gathered}$ | Private Schools | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Capacity | 973 | 1,212 | 1,403 |  |  |  |
| Portables (Oct. 2016) | 3 | 16 | 5 |  |  |  |
| Enrollment (Oct. 2016) | 1,117 | 1,541 | 1,809 |  |  |  |
| Seats Available | -144 | -329 | -406 |  |  |  |
| Utilization (\%) | 114.8\% | 127.1\% | 128.9\% |  |  |  |
| New students from development | 17 | 7 | 11 | 2 | 3 | 40 |
| New Enrollment | 1,134 | 1,548 | 1,820 |  |  |  |
| New Seats Available | -161 | -336 | -417 |  |  |  |
| New Utilization | 116.5\% | 127.7\% | 129.7\% |  |  |  |


|  | Attend other |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Attend Home | DCSD |  |  |
| Sield Rates | School | School | Srivate | School | Total |  | 0.04329 | 0.00238 | 0.00381 | 0.04948 |
| :---: | :---: | :---: | :---: | :---: |
| Elementary | 0.01903 | 0.00095 | 0.00190 | 0.02188 |
| Middle | 0.02997 | 0.00095 | 0.00285 | 0.03378 |
| High | $\mathbf{0 . 0 9 2 2 9}$ | $\mathbf{0 . 0 0 4 2 8}$ | $\mathbf{0 . 0 0 8 5 6}$ | $\mathbf{0 . 1 0 5 1 4}$ |

Student Calculations
Proposed Units 380

|  | Attend other <br> Attend Home <br> School |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Units x Yield | School | Private |  |  |
| School | Total |  |  |  |
| Elementary | 16.45 | 0.90 | 1.45 | 18.80 |
| Middle | 7.23 | 0.36 | 0.72 | 8.31 |
| High | 11.39 | 0.36 | 1.08 | 12.83 |
| Total | $\mathbf{3 5 . 0 7}$ | $\mathbf{1 . 6 2}$ | 3.25 | 39.94 |
|  |  |  |  |  |
|  | Attend other |  |  |  |
| Anticipated Students | Attend Home | DCSD | Private |  |
| Dunwoody ES | School | School | School | Total |
| Peachtree MS | 17 | 1 | 1 | 19 |
| Dunwoody HS | 7 | 0 | 1 | 8 |
| Total | 11 | 1 | 1 | 13 |
| 25 | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4 0}$ |  |

Page 1 of 2
G. Douglas Dillard

404-665-1244

## March 30, 2016

## Via Hand Delivery and E-mail

Mayor Shortal and Members of the City Counci
c/o Steve Foote, Community Development Director
City of Dunwoody
41 Perimeter Center East
Dunwoody, Georgia 30346
Re: Amended Amendment Application; Dunwoody Crown Towers; 244 Perimeter Center Parkway

Dear Steve
Please find enclosed Applicant's revised Amendment Application for approximately 4.75 acres of the above-referenced property. The following revisions were made to the Amendment Application package submitted on February 2, 2016:

- Revised Site Plan to address Staff's 3-14-16 review comments;
- Revised Tract designations on conceptual plat/subdivision exhibit to be consistent with site plan; and
- Revisions to the Letter of Intent to reflect the above-referenced revisions

Please contact me with any questions.

Sincerely,


Enclosures
104.876.4880 | PROMENADE, SUITE 1200,1230 PEACHTREE ST, N E, ATLANTA, GA 30309 | wwwiftlegal.con

## AMENDMENT APPLICATION

## DunWWOOC

41 Perimeter Center East | Dunwoody, GA 30346 Phone: (678) 382-6800 | Fax: (770) 396-4828

* Applicant Information:
Company Name: $\quad$ Dunwoody Crown Towers, LLC
Contact Name: Charlie R. Brown
Address: $\quad 4828$ Ashford Dunwoody Road, Ste 400, Athanta, GA 30338
Phone: $770-391-1233$ Fax: 7 Email: cbrown@crownharoupecom
Pre-application conference date (required): January 5, 2016
* Owner Information: $\square$ Check here if same as applicant

| Owner's Name: |  |
| :---: | :---: |
| Owner's Address: |  |
| Phone: | Email: |


| * Property Information: |  |
| :---: | :---: |
| Property Address: 244 Perimeter Center Parkway,NE, Dunwoody, GA | Parcel ID: 18-329-04-055 |
| Current Zoning Classification: O-I |  |
| Requested Zoning Classification: CR-1 |  |

## Applicant Affidavit:

$\infty$ :reby certify that to the best of my knowledge, this amendment application form is correct and complete. If additional materials are ermined to be necessary, I understand that I am responsible for filing additional materials as specified by the City of Dunwoody and associated actions.
Applicant's Name: Dunwoody Crown Towers, LLC, By: Enillia Pearson Applicant's Signature:By: Qtuilia Is2 Date:01/27/2016

## * Notary:

| Sworn to and subscribed before me this $27^{\text {th }}$, Day of Janualy |
| :--- |
| Notary Publici, fephdnie orant. 2016 |
| Signature: |
| My Commission Expires: $11-9-19$ |

## Applicant-Initiated Meeting

## Rezoning Application: Dunwoody Crown Towers, LLC

## February 1, 2016

1. Efforts to notify neighbors about the proposal (how and when notification occurred, and who was notified);

The Applicant held an applicant-initiated meeting on Monday, February 1, 2016 at the D.W. Brooks Conference Center, 244 Perimeter Center Parkway, Dunwoody, GA 30346. Notice of the applicant-initiated meeting was published in the Dunwoody Crier on January 20, 2016. A copy of the legal advertisement is attached.

On January 11, 2016, notice of the applicant-initiated meeting was also mailed to the two residentially-zoned properties within 1,000 feet of the subject 4.75 -acre property. According to the City's GIS map, there are two properties within 1,000 feet of the subject property zoned for residential use. The first is the Martin Cemetery parcel located at 1191 Ashford Dunwoody (Tax Parcel ID 1834802 002) which is zoned R-150. The Dunwoody Preservation Trust maintains the Martin Cemetery and notice was mailed to the Executive Director of the Dunwoody Preservation Trust at 5455 Chamblee Dunwoody Rd Dunwoody, GA 30338. The second property is located at 11 Ravinia Parkway (Parcel ID 1834701 049), is owned by Hines Ravinia Four Limited, and is zoned OCR. Notice was mailed to Hines Ravinia Four Limited at 1 Ravinia Drive, Ste. 1160, Atlanta, GA 30346. Attached is the notice letter mailed to the Dunwoody Preservation Trust and Hines Ravinia Four Limited. Finally, notice of the meeting was also sent to the Planning Department.

## 2. Meeting location, date and time;

The Applicant held an applicant-initiated meeting on Monday, February 1, 2016 at the D.W. Brooks Conference Center, 244 Perimeter Center Parkway, Dunwoody, GA 30346. The meeting started at 7:00pm.

## 3. Who was involved in the discussions;

Mr. Charles Brown and Mr. Doug Dillard attended the meeting on behalf of the Applicant, Dunwoody Crown Towers, L.L.C. Please see the attached sign-in sheet for the meeting attendees.
4. Suggestions and concerns raised by neighbors; and

The neighbors raised concerns about the overall density and the residential component of the plan, though the concerns were directed primarily at rental units which are not being proposed by the Applicant.
5. What specific changes to the proposal were considered and/or made as a result of the meeting.

No changes are proposed at this time.

## NOTICE OF <br> NONDISCRIMINATORY <br> POLICY AS TO STUDENTS

North Atlanta Children's Ministries, Inc., 5676 Roberts Dr., Atlanta, GA 30338, admits students of
any race, color national and ethric origin to all the any race, color, national and ethnic origin to all the
rights, privileges, programs, and activities generally Tights, privileges, programs, and activities generally
accorded or made available to students of the organization. It does not discriminate on the basis of race, color, national, and ethnic origin in
administration of its educational policies, and other organization-administered programs.

## NOTICE OF MEETING FOR

THE PUBLIC
Dunwoody Crown Towers, LLC intends to submit a Rezoning Application and three Special Land Use Permit
Applications to the City of Dunwoody for land within 1,0oo feet of your property. The Applicant will be submitting a rezoning application and three Special Land Use Permit ("SLUP") Applications for property at 244
Perimeter Center Parkay woody Crown Towers, a mixed use development with residential and non-residential uses. The Applicant will be holding a neighborhood meeting to discuss the proposed rezoning application and to answer any questions that you may have regarding the applications and pro-
posed development. Specific details regarding the Rezoning Application, Special Land Use Permit Applications, and Applicant-initiated neighborhood meeting are below.
CASE NUMBER: TBD (this will be provided at the time the application is filed with the City)
APPLICANT NAME: Dunwoody Crown Towers, LLC JURISDICTION: City of Dunwoody
ZONING CHANGE: O-I to CR-1 (Commercial-Residential)

SLUP Request: (1) SLUP to increase the height of the multi-unit building; (2) SLUP to increase the height of the mixed use vertical building; and a (3) SLUP to zoning district
STREET LOCATION: 244 Perimeter Center Parkway; +/-4.75 acres

PROPOSED DEVELOPMENT: Multi-Unit Residential Tower; Mixed Use Vertical Tower (Hotel and Residential uses); 3 -story Retail Building

APPLICANT-INITIATED MEETING
D.W. Brooks Conference Center

244 Perimeter Center Parkway (sist floor)
Dunwoody, GA 30346
February 1, 2016
7:00 pm
If you have questions about the Applications or the applicant-initiated meeting, please contact Jill

## Brookhaven, from pas.


 takes place today.
to
"The City honors its obligaUnfortunately some of of the
terms of the [Garrett's conlerms of the [Garrett's] con-
tract negotiated
Idministrataions is previous administrations is ambiguous
and doeen not allow the city to
know what
Mayor wht its duties are," Mayor, Johnt Errst said in in a
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continued health and life in-
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Fridas.

## THE CITY OF DUNWOODY, GEORGIA

## NOTICE OF PUBLIC HEARING

The City of Dunwoody Mayor and City Council will meet on Monday, February 08, 2016 at 6:00 p.m. in the Council Chambers of Dunwoody City Hall, which is located at 41 Perimeter Center East, Dunwoody, Georgia 30346, for the purpose of due process of the
following:

CQ Dunwoody Village Court, LLC, owner of 1530 and 1536 Dunwoody Village Parkway, Dunwoody, GA 30338, by Marian Adeimy, attorney for contract purchaser, seeks the follopment. The property consists of two tax parcels; 18-366-06-061 located at 1530 Dunwoody Village Parkway, Dunwoody, GA 30338, and 18-366-06-065 located at 1536 Dunwoody Village Parkway, Dunwoody, GA 30338.
RZ 16-021: Rezone property currently zoned Office-Institution (O-I) District to MultiRZ 16-021: Rezone property currently yonet.
dwelling Residential-100 (RM-100) District.

SLUP 16-02: Special Land Use Permit to waive the requirement for a development to come into full compliance with the Dunwoody Village Overlay District regulations to allow for reduction in sidewalk width from 12 ft 6 ft

RZ 16-022: Kathryn B. Zickert, applicant, on behalf of Hines Atlanta Associates Limited Partnership, owner of 4453 Ashford Dunwoody Road, Dunwoody, GA 30346, seeks permission to rezone property currently zoned Office-Institution conditional ( $0-\mathrm{Ic}$ ) District to Local Commercial conditional (C-1c) District to allow for development of a restaurant with drive-through. The tax parcel number is 1834701033

Should you have any questions, comments, or would like to view the application and supporting materials, please contact the City of Dunwoody Community Development Department at $678-382-6800$. Members of the public are encouraged to call or schedule a meeting with staff in advance of the Public Hearing if they have questions or are unfa-
miliar with the process. Staff is available to answer questions, discuss the decision-mak ing process, and receive comments and concerns.


Terry Landrum Direct: 404.665.1227 tlandrum@pftlegal.com

January 11, 2016

Rebecca Keefer, AICP
City Planner/Director of Sustainability
City of Dunwoody
41 Perimeter Center East, Suite 250,
Dunwoody, GA 30346
RE: Dunwoody Crown Towers
Applicant-Initiated Neighborhood Meeting
244 Perimeter Center Parkway, DeKalb County, Atlanta, GA
Dear Rebecca:
Enclosed please find the Applicant-Initiated Meeting notice that was mailed on January 11, 2016 to residential owners of property within 1,000 feet of the subject property.

Sincerely,


Enclosure

SIGN IN SHEET for NEIGHBORS
Dunwoody Crown Towers
February 1, 2016


## Letter of Intent and Review Criteria

City of Dunwoody Amendment Application
Applicant: Dunwoody Crown Towers, LLC
Property: 244 Perimeter Center Parkway
+/- 4.75 acres of Land
Located in
Land Lot 329 of the $18^{\text {th }}$ District, DeKalb County
O-I to CR-1
G. Douglas Dillard

Jillian Skinner Arnold
PURSLEY FRIESE TORGRIMSON
1230 Peachtree Street, Suite 1200
Atlanta, Georgia 30309
(404) 665-1243
ddillard@pftlegal.com
jarnold@pftlegal.com

## I. INTRODUCTION

The $+/-4.75$ acre property is located at 244 Perimeter Center Parkway and is currently zoned O-I (the "Property"). It is bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping center development to the north. The Applicant, Dunwoody Crown Towers, LLC, intends to develop Dunwoody Crown Towers, a mixed use development with residential and non-residential uses that will significantly enrich the design and livability of the Perimeter Center area and create a true gateway to the City of Dunwoody.

Concurrent with the Amendment application, the Applicant is also submitting 3 Special Land Use Permit ("SLUP") Applications and a Variance Application for the Property. The SLUP requests are for the following: (1) a SLUP to increase the height of the multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings); (2) a SLUP to increase the height of the mixed use vertical building ("Crown Tower 2" on conceptual drawings); and (3) a SLUP to allow multi-unit residential use in the CR-1 zoning district. The requested 0 ' front yard setback variance is for the existing Goldkist building on the adjacent 9.2 -acre property, which will be set back 0 ' from the proposed new road extending to the Property.

The Property is currently part of a larger 15 acre-parcel, but will be subdivided as a legally separate lot upon approval of the rezoning request by the Dunwoody City Council. Therefore, the current 15 -acre parcel will be split into two tracts-Site A (+/-9.2 acres, after dedication) and Site B ( $+/-4.75$ acres, after dedication) as shown on the enclosed Site Plan. The owner is dedicating approximately 1.03 acres for the extension of a new road from the existing Goldkist Road to the Property at Site B. This subdivision is necessitated by the City's prohibition of dual-zoned parcels. Please note, the rezoning and SLUP applications are for Site B. Site A is NOT included in the rezoning or SLUP applications. Site A is shown on the conceptual plans to illustrate existing entitlements pursuant to the variance granted by DeKalb County on February 9, 1999. Site A will remain zoned O-I with existing entitlements as shown on the enclosed conceptual plans.

## II. REZONING REQUEST

The Applicant, Dunwoody Crown Towers, LLC, is requesting said Property (Site B) be rezoned from O-I to CR-1 in order to develop Dunwoody Crown Towers, which includes (i) one mixed use vertical building with a hotel, residential units, and accessory uses ("Crown Tower 2" on the enclosed conceptual drawings), (ii) one multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings), and (iii) a retail building. A site plan showing the proposed buildings and uses is included in the rezoning application. The Applicant proposes a residential density of 380 units spread between Crown Tower 1 and Crown Tower 2. The residential density calculation is based on the 4.75 -acre Site B, exclusive of the 1.03 acres of property to be dedicated for public right of way to the Site B Property.

The luxury residences will include the following features:

- Hardwood flooring in foyer, kitchens and bathrooms
- Quartz countertops throughout the homes
- 10-foot ceilings
- Stainless steel appliances, with side by side refrigerators and wine coolers
- Front load washers in each home
- Ceiling fans in each bedroom
- Walk-in closets with custom shelving
- Patio/Balcony in all homes
- High-speed fiber internet and cable packages
- Tile surround soaking tubs/showers with frameless shower doors
- LED light fixtures
- Smart home technology with thermostats and keyless locks

A Homeowners Association will be created to manage residential operations.
In addition to the luxury features included in each individual unit, residents will have access to various amenities including a spacious club room with bar, indoor $\&$ outdoor fireplaces, and state of the art outdoor kitchen, a business center, fitness center, pools and cabanas, and a massage/treatment room. Though the room distribution has not been solidified, the Applicant anticipates approximately $50 \%$ of the residential units to be 2-bedroom units, approximately $25 \%$ to be 1-bedroom units, approximately $10 \%$ to be studio units, and approximately $15 \%$ to be 3 bedroom units.

The proposed luxury hotel will have a local, authentic feel and include a destination food and beverage outlet, approximately 4,500 square feet of meeting space, and on-site boutique retail. The hotel will also feature a pool, cabanas, spa, Club room, WIFI in the lobby and Club level, and a fitness center. The hotel's close proximity to the Perimeter Center Mall and MARTA offers guests easy and convenient access to restaurants, shopping, and entertainment.

The proposed CR-1 zoning satisfies the City's criteria for amendment applications as set forth in Section III below. As such, the Applicant respectfully requests the City Council grant the Amendment application, as requested by the Applicant.

## Zoning History

The 15-acre parcel currently has significant non-residential development entitlements. In 1999, DeKalb County approved four variances for the 15 -acre parcel at 244 Perimeter Center Parkway: (1) a 28 -story hotel; (2) a conference center and parking structure (6 levels with 600 parking spaces); (3) two 24-story office buildings; and (4) two 10-level parking decks with 4,304 parking spaces. These entitlements remain on the 15 -acre parcel today. The Applicant intends to concentrate the existing above-referenced entitlements on the adjacent 9.2-acre parcel, and rezone
the subject Property to CR-1 in order to add a residential mix of uses into the overall development to create a true transit-oriented mixed use community. The current development entitlements (i.e 28 -story hotel, conference center with parking structure, two 28 -story office buildings, and a parking deck) fit within the 9.2 -acre parcel while still complying with O-I development regulations, including lot coverage.

## The Proposed Development is Consistent with Dunwoody's Comprehensive Plan

The Applicant's proposed development and rezoning requests are consistent with the City of Dunwoody's Comprehensive Plan. The subject property is located in the Perimeter Center Character Area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels, and high-end restaurants" to create a true "live-work" environment. ${ }^{1}$ The City recognizes the value in mixed-use, transit-oriented development, but has concerns about the impact on schools. ${ }^{2}$ Additional goals of the City's Comprehensive Plan include:

- Achieve a lifelong-community for residents who can age in place with safe access to medical, recreational, and other necessary services. ${ }^{3}$
- Increase connectivity and enhance transportation options for all forms of travel. ${ }^{4}$
- Reduce surface parking and promote livable centers in the immediate areas surrounding the MARTA station.
- Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route. ${ }^{6}$

The Applicant's rezoning request and proposed mixed-use development is consistent with the goals and intent of the Perimeter Center Character Area. The rezoning request seeks to add highquality residential units to the area, thereby creating a true "livable" center where Dunwoody residents are able to live, work, shop, play, and access mass transit within one development. Looking at the broader context, this Property is situated next to the new State Farm site, Perimeter Center Mall, and the yet-to-be-developed GID/High Street site, which likewise includes a mix of land uses. This development complements each of those developments by adding residential opportunities for the employees of State Farm and the adjacent office uses.

[^0]Moreover, the residential component of the mixed use project will be well-suited for those Dunwoody residents looking to "age in place" within the City. These individuals are looking to downsize from larger single-family detached homes to smaller residences with less maintenance, yet still remain in the community and part of their established social networks. The Applicant's proposed residences will provide an "age in place" opportunity for Dunwoody residents looking to downsize yet remain in Dunwoody.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area. Sufficient parking is provided on site, and MARTA is within walking distance of the Property making transit a realistic transportation alternative.

## III. IMPACT ANALYSIS

The Applicant satisfies all of the criteria for rezoning as set forth in the City's Zoning Code, Section 27-335(b).

1. Whether the zoning proposal is consistent with the policies of the comprehensive plan;

Yes, the proposed use is consistent with the policies and intent of the City's Comprehensive Plan. The subject property is located in the Perimeter Center Character Area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels, and highend restaurants" to create a true "live-work" environment. The rezoning request seeks to add high-quality residential units to the area, thereby creating a true "livable" center where Dunwoody residents are able to live, work, shop, play, and access mass transit within one development.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area.
2. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties;

Yes, the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties. The Property is bordered by I-285 to the
south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and two shopping center developments, one of which is Perimeter Center Mall, to the north. The Property is located next to a Marriott hotel, the new State Farm campus, Rooms to Go, Perimeter Center Mall, Best Buy, the mixed-use GID site, and the Dunwoody MARTA station. The proposed residential uses on the Property within the broader mixed-use campus will promote the "live work" goals of the Perimeter Center area and complement nearby employment centers by providing residential opportunities for employees. The proposed CR-1 zoning is also consistent with the zoning on the adjacent parcels, which includes O-I, OCR, PD, and C-1.
3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;

While the Property does have some economic value as currently zoned, the highest and best use of the Property would include a residential component.
4. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

No, the zoning proposal will not adversely affect the existing use or usability of adjacent or nearby property. On the contrary, the zoning proposal will benefit surrounding land uses since the proposed mixed use development will provide residential options for employees working in nearby employment centers and those already living in Dunwoody who want to downsize but remain within the Dunwoody community. The proposed transportation improvements proposed as part of this development will also help mitigate traffic congestion for the broader Perimeter Center area.
5. Whether there are other existing or changing conditions affecting the use and development of the property that provide supporting grounds for either approval or disapproval of the zoning proposal;

The Applicant's proposed development will benefit the public health, safety and welfare by promoting necessary transit-oriented development in the Perimeter Center area. Land uses in the Perimeter Center area are changing in such a way as to necessitate locating residential land uses within walking distance of transit and employment centers. The areas surrounding the subject property have significant density entitlements which make the proposed zoning proposal and construction of luxury residences highly beneficial to those within the Perimeter Center area.
6. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources; and

No, the zoning proposal will not adversely affect historic buildings, sites, districts, or archaeological resources. The proposed development is located next to the Martin family cemetery. The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected. The Applicant has spoken with representatives from the Dunwoody Preservation Trust, the organization tasked with maintaining the cemetery, to work on a mutually beneficial strategy for the cemetery's continued maintenance and accessibility.
7. Whether the zoning proposal will result in a use that will or cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.

No, the zoning proposal will not create an excessive or burdensome use of streets, transportation facilities, utilities or schools. The proposed zoning proposal may generate a nominal number of new students, some of which may choose to attend private schools and therefore have no impact on the DeKalb County public school system. Using statistics provided by DeKalb County regarding owner-occupied condominium developments, the number of school-age children generated from the proposed 380 units will be approximately 23 students ( 9 elementary students, 5 middle school students, and 9 high school students).

Moreover, the proposed development may actually reduce the burden on road infrastructure and existing transportation facilities in the area by providing new transportation infrastructure. Although existing entitlements are being maintained on the 9.2-acre parcel (Site A), the existing entitlements permit the property owner to develop approximately 2.1 Million square feet of non-residential uses because the variance approvals on the property limit only the height of the buildings rather than the density or overall building footprint and bulk.

The proposed development reduces the development potential on Site A to approximately 1.58 Million square feet. When the 1.58 Million square feet on Site A is combined with the $+/-460,100-529,115$ square feet of residential, hotel, retail, and accessory uses on Site B, the overall development is approximately 2.11 Million (1.58 Million square feet + 529,115 square feet $=2,109,115$ ), which is consistent with the current entitlements, in terms of density, on the entire 15-acre parcel.

## Moreover, the location of the project adjacent to the Dunwoody MARTA station

 promotes transit ridership and reduces the number of single-occupancy vehicles commuting to Property
## IV. REQUIRED CONSTITUTIONAL NOTICE

Georgia law and the procedures of the City of Dunwoody require us to raise Federal and State constitutional objections during the Amendment application process. While the Applicant anticipates a smooth application process, failure to raise constitutional objections at this stage may mean that the Applicant will be barred from raising important legal claims later in the process. Accordingly, we are required to raise the following constitutional objections at this time:

The portions of the City of Dunwoody Zoning Ordinance, facially and as applied to the Property, which restrict the Property to any zoning classification, uses, or to any zoning district other than that proposed by the Applicant are unconstitutional in that they would destroy the Applicant's property rights without first paying fair, adequate and just compensation for such rights, in violation of Article I, Section I, Paragraph I and Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

The application of the City of Dunwoody Zoning Ordinance, facially and as applied to the Property, which restricts the Property to any zoning classification, uses, or to any zoning classification other than the classification as proposed by the Applicant is unconstitutional, illegal null and void, constituting a taking of Applicant's Property in violation of the Just Compensation Clause of the Fifth Amendment to the Constitution of the United States; Article I, Section I, Paragraph I, and Section III, Paragraph I of the Constitution of the State of Georgia of 1983; and the Equal Protection and Due Process Clauses of the Fourteenth Amendment to the Constitution of the United States denying the Applicant an economically viable use of its land while not substantially advancing legitimate state interests.

A denial of this Application would constitute an arbitrary and capricious act by the City of Dunwoody City Council without any rational basis therefore constituting an abuse of discretion in violation of Article I, Section I, Paragraph I and Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

A refusal by City of Dunwoody City Council to rezone the subject property in accordance with the zoning criteria requirements as requested by the Applicant would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owners of the similarly situated property in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth

Amendment to the Constitution of the United States. Any rezoning of the Property subject to conditions which are different from the conditions requested by the Applicant, to the extent such different conditions would have the effect of further restricting Applicant's utilization of the Property, would also constitute an arbitrary, capricious and discriminatory act in zoning the Property to a unconstitutional classification and would likewise violate each of the provisions of the State and Federal Constitutions set forth hereinabove.

For all the foregoing reasons, it is submitted on behalf of the Applicant that the Amendment Application meets the requirements of the City of Dunwoody Zoning Code.

If there are any questions about this rezoning request, you may contact me at 404-665-1243 or at jarnold@pftlegal.com.


## Environmental Site Analysis

## Dunwoody Crown Towers, LLC

## Conformance to the Comprehensive Plan

## Describe the proposed project and the existing environmental conditions on the site.

The Applicant, Dunwoody Crown Towers, LLC, is requesting said Property (Site B) be rezoned from O-I to CR-1 in order to develop Dunwoody Crown Towers, which includes (i) one mixed use vertical building with a hotel, residential units, and accessory uses ("Crown Tower 2" on the enclosed conceptual drawings), (ii) one multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings), and (iii) a retail building A site plan showing the proposed buildings and uses is included in the rezoning application. The proposed transit-oriented mixed use development will significantly enrich the design and livability of the Perimeter Center area and create a true gateway to the City of Dunwoody.

The project conforms to the City's Comprehensive Plan
The proposed use is consistent with the policies and intent of the City's Comprehensive Plan. The subject property is located in the Perimeter Center Character Area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels, and highend restaurants" to create a true "live-work" environment. The rezoning request seeks to add high-quality residential units to the area, thereby creating a true "livable" center where Dunwoody residents are able to live, work, shop, play, and access mass transit within one development.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area.

## Describe adjacent properties. Include a site plan that depicts the proposed project.

A site plan of the project is included in the Application. The Property is bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and two shopping center developments, one of which is Perimeter Center Mall, to the north. Surrounding land uses include a Marriott hotel, the new State Farm campus, Rooms to Go, Perimeter Center Mall, Best Buy, the mixed-use GID site, and the Dunwoody MARTA station.

Include the portion of the Comprehensive Plan Land Use Map which supports the project's conformity to the Plan.

Attached

## Environmental Impacts of the Proposed Project

a) Wetlands

There are no wetlands on the subject property.
b) Floodplain

The subject property is not located in a floodplain.
c) Streams/stream buffers

No such conditions are known.
d) Slopes exceeding 25 percent over a 10 -foot rise in elevation

No such conditions exist on the property.
e) Vegetation

No such conditions are known.
f) Wildlife Species (including fish)

No such conditions are located near the property.
g) Archeological/Historical Sites

No such conditions exist on the property. The proposed development is located next to the Martin family cemetery. The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected. The Applicant has spoken with representatives from the Dunwoody Preservation Trust, the organization tasked with maintaining the cemetery, to work on a mutually beneficial strategy for the cemetery's continued maintenance and accessibility.

## Project Implementation Measures

a. Protection of environmentally sensitive areas, i.e., floodplain, slopes exceeding 25
percent, river corridors.
No such conditions are known to exist on the property.
b. Protection of water quality.

The Applicant will include appropriate erosion control procedures in the project and comply with local, state, and federal water quality regulations.
c. Minimization of negative impacts on existing infrastructure

The proposed use will be limited to the boundaries of the property and will therefore, not impact any existing nearby structures. Existing and proposed infrastructure is sufficient to handle the proposed use and development.

## d. Minimization on archeological/historically significant areas

The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected.
e. Minimization of negative impacts on environmentally stressed communities where environmentally stressed communities are defined as communities exposed to a environmentally stressed communities are defined as communities exposed to a
minimum of two environmentally adverse conditions resulting from public and private municipal (e.g., solid waste and wastewater treatment facilities, utilities, airports, and railroads) and industrial (e.g., landfills, quarries and manufacturing facilities) uses.

No such conditions are known to exist.

## f. Creation and preservation of green space and open space

The Applicant will incorporate open space as shown on the site plan, which exceeds the amount of open space required in the CR-1 zoning district.
g. Protection of citizens from the negative impacts of noise and lighting

The Applicant will take reasonable measures to protect citizens from the negative impacts of noise and lighting, if any, resulting from the proposed development.
h. Protection of parks and recreational green space

No parks or recreational green space currently exist on the property.
i. Minimization of impacts to wildlife habitats

No such conditions are known to exist on the property.

## PERIMEIER CENTER

## Vision/Intent

Perimeter Center will be a visitor friendly "livable" regional center with first-class office, retail entertainment, hotels, and high-end restaurants in a pedestrian and bicycle-oriented environment The area will serve as a regional example of high quality design standards. The City of Dunwoody works in partnership with the Perimeter Community Improvement Districts (PCIDs) and adjacent communities to implement and compliment the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCI) and its current and future updates.
In the future, the area should add public gathering space and pocket parks, venues for live music and entertainment and continue to create transportation alternatives, mitigate congestion, and reduce remaining excessive surface parking. The area creates the conditions of possible true "live-work" environment. All future developmen continues to emphasize high quality design standards and building materials and incorporates he cuicency where possible efficiency, where possible.
N The City of Dunwoody recognizes the value of creating mixed-use, transit-oriented developmen within walking distance of public transit stations. However, the City has concerns about the impact of schools.

## Future Development

The Perimeter Center Character Area will be divided into four subareas (PC-1, PC-2, PC-3, and $\mathrm{PC}-4)$ which match the draft proposed overlay districtouther Conter Zoning Code This as part of the subject of a previous LCI Study The citios of Dunwoody, Sandy Springs, and Brookhaven work in partnership with the Perimeter Community Improvement Districts (PCIDs) to implement and complement the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCl) and its current and future updates.
For specific recommendations on height, density and use refer to the provisions of the Perimeter enter Overlay District and Zoning, available the Dunwoody Community Developmen Department.


IGURE13: Perimeter Center Character Area Map
$\mathrm{C}-1$ : Intended to apply to the central core area of Perimeter Center, including the area directly surrounding the Dunwoody MARTA train station. This district allows for the highest intensity of buildings, a igh level of employment uses, and active ground story uses and design that support pedestrian mobility.
. Made up primarily of employment uses and limited shop front retail, residential, and services.
$\mathrm{C}-3$ : A smaller scale less intensive commercial district, permitting oth shop front and office buildings.

PC-4: Made up primarily of residential uses at a scale that provides a transition between the intensity of Perimeter Center and the surrounding single-family residential neighborhoods.

## Action Items


$\Delta$ Perimeter Mal

## Campaign Disclosure Statement

## Dunwoody

41 Perimeter Center East | Dunwoody, GA 30346 Phone: (678) 382-6800 | Fax: (770) 396-4828

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $\$ 250.00$ or more to a member of the City of Dunwoody City Council or a member of the City of Dunwoody Planning Commission?


If the answer above is yes, please complete the following section:

| Date | Government Official | Official Position | Description | Amount |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |
| $N$ |  |  |  |  |
| $J^{\prime}$ |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## CAMPAIGN DISCLOSURE STATEMENT

G. DOUGLAS DILLARD and JILLIAN S. ARNOLD, of the law firm of PURSLEY FRIESE TORGRIMSON, and formerly of WEISSMAN, NOWACK, CURRY \& WILCO, P.C., have been retained to represent DUNWOODY CROWN TOWERS, LLC before the CITY OF DUNWOODY, GEORGIA. Pursuant to the provisions of O.C.G.A. §36-67A-3, please find below a list of the contributions made by the above-named individuals, or the law firms of WEISSMAN, NOWACK, CURRY \& WILCO, P.C. and PURSLEY FRIESE TORGRIMSON, in the past two years, aggregating $\$ 250.00$ or more, to local government officials who may review this Application

NAME OF GOV'T. OFFICIAL $\qquad$ POSITION AMOUNT OF DATE OF

None

PURSLEY FRIESE TORGRIMSON


By: G. Douglas Dillard


Date: $\quad 0 / 1 / 16$

1230 Peachtree Street, NE
Suite 1200
Atlanta, GA 30309
404-665-1243

## LEGAL DESCRIIPTION - TRACT B

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot(s) 329 \& 330 of the $18^{\text {th }}$ District, DeKalb County, Georgia and being more particularly described as follows:

Beginning at a point at the intersection of the Western Right-of-Way line of Ashford Dunwoody Rd (Right-of-Way Varies), and the Northern Right-of-Way line of Interstate 285 (Right-of-Way Varies), said point being the TRUE POINT OF BEGINNING;

Thence leaving the Western Right-of-Way line of Ashford Dunwoody Rd and following along the Northern Right-of-Way line of Interstate 285, South 59 degrees 59 minutes 24 seconds West, a distance of 768.56 feet to a point;

Thence leaving the Northern Right-of-Way line of Interstate 285 (Right-of-Way Varies), North 00 degrees 12 minutes 53 seconds West, a distance of 218.34 feet to a point;

Thence North 89 degrees 47 minutes 07 seconds West, a distance of 207.86 feet to a point;
Thence North 00 degrees 12 minutes 53 seconds East, a distance of 161.70 feet to a point
Thence South 89 degrees 47 minutes 07 seconds East, a distance of 100.09 feet to a point
N Thence North 00 degrees 12 minutes 53 seconds East, a distance of 63.60 feet to a point;
Thence South 89 degrees 33 minutes 22 seconds East, a distance of 787.85 feet to an iron pin with cap found on the Western Right-of-Way line of Ashford Dunwoody Rd (Right-of-Way Varies);

Thence continuing along said Right-of-Way, South 16 degrees 51 minutes 13 seconds West, a distance of 55.90 feet to a point, said point being the TRUE POINT OF BEGINNING.

Said tract containing 4.725 acres.


## DUNWOODY CROWN TOWERS

RE-ZONING APPLICATION FOR SITE "B"
244 PERIMETER
CENTER PARKWAY,
DUNWOODY GA
DRI NUMBER: 2567

## PROJECT TEAM

OWNER
CROWN HOLDINGS GROUP
4828 ASHFORD DUNWOODY RD, ATLANTA GA 30338
Contact: NAME
CHARLIE BROWN
ARCHITECT
THOMPSON, VENTULETT, STAINBACK \&
ASSOCIATES, INC ARCHITECTS
1230 PEACHTREE ST NE, SUITE 2700 ATLANTA GA 30309
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## ATTORNEYS

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MORELAND ALTOBELLI ASSOCIATES, INC
2450 COMMERCE AVENUE, SUITE 100, DULUTH, GA 30096
Contact:
KARLA POSHEDLY
770.263.5945

| Sheet List |  |
| :---: | :---: |
| Sheet | Sheet Name |


| CP-000 | COVERSHEET |
| :--- | :--- |
| CP-001 | CONCEPTUAL PLAN - SITE |
| CP-002 | CONCEPTUAL PLAN - ELEVATIONS |
| CP-003 | CONCEPTUAL PLAN - MASSING |
| CP-004 | STREET SECTION \& TRANSIT PROXIMITY |
| CP-005 | PEDESTRIAN CIRCULATION |
| CP-006 | CONCEPTUAL PLAN - QUALITATIVE ILLUSTRATION |
| CP-007 | CONCEPTUAL PLAN - QUALITATIVE ILLUSTRATION |
| CP-008 | CONCEPTUAL PLAN - QUALITATIVE ILLUSTRATION | CP-008 CONCEPTUAL PLAN - QUALITATIVE ILLUSTRATION

NOTE: PARKING FOR SITE "B" I ACCOMMODATED WITHIN PARKING DECKS; THEREFORE LANDSCAPING PLAN FOR

## LOCATION MAP












# Dunwoody 

## MEMORANDUM

To: Planning Commission
From: Rebecca Keefer, AICP
Date: April 12, 2016

SLUP 16-041: Dunwoody Crown Towers, LLC, owner of 244 Perimeter Center Parkway, Dunwoody, GA 30346, by G. Douglas Dillard, attorney for the property owner, seeks three (3) Special Land Use Permits to: a) Increase the height of the multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings); b) Increase the height of the mixed used vertical building ("Crown Tower 2" on conceptual drawings); and c) Allow multi-unit residential use in the CR-1 Zoning District. The tax parcel number is 18-329-04-055.


## BACKGROUND

The subject property, Site B in the image above, is located on a 14.95 acre site bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping center development to the north. The applicant seeks approval of three (3) Special Land Use Permits to increase the maximum building height to allow for the construction of a proposed mixed-use development.

The entire parcel in full has several non-residential development entitlements that pertain to 'height.' In 1999, DeKalb County approved four variances:

- A maximum of 28 stories for a hotel
- A maximum of six (6) stories for a conference center and parking structure
- A maximum of 24 stories for two office buildings
- A maximum of 10 stories for parking decks

The applicant plans to utilize the above entitlements on the 10.2 acres identified as Site A. Development would also have to comply with the existing zoning requirements of the O-I District.

This application has a companion application, RZ 16-041 which seeks to rezone the subject property, Site B, from Office-Institution (O-I) to Commercial-Residential Mixed-Use (CR-1). The applicant also applied for a variance (ZBA 16-045) from Chapter 27, Section 27-73 to change the front yard building setback from 50 feet to 0 feet for Site A only.

The variance application, ZBA 16-045, was approved with the following conditions at the March 31, 2016 Zoning Board of Appeals meeting:

Exhibit A: Lot Division Plat, Sheet 5 of 5, submitted by applicant (undated)

1. The variance to reduce the setback from 50 ' to 0 ' shall apply to the existing building, accessory structures, and equipment, only.
2. The variance shall apply to the right-of-way depicted on Exhibit A and to future right-of-way for the Westside Connector, only.
3. If adequate clear zone cannot be met for any future road improvements, the existing building, accessory structures, and equipment shall be adjusted to comply.

The application has been through the DRI process with the Atlanta Regional Commission (ARC). As of this writing, GRTA has issued recommendations that may be modified before GRTA's final decision on April 8, 2016. The final notice of decision will be forwarded to the Planning Commission in advance of the April 12 meeting.

## ANALYSIS

## Site Plan Analysis

According to the site plan dated March 30, 2016, the property owner plans to construct two (2) hotel/condo towers and a retail building on the 4.75 acre lot ("Site B").

The applicant proposes to construct two towers. They are seeking to increase the height of the Multi-Unit Residential Building ("Crown Tower 1") to 35 stories and the height of the Mixed-Use, Vertical Building ("Crown Tower 2") to 29 stories. The applicant is further requesting a SLUP, as required by the use table in the Zoning Ordinance, to allow Multidwelling Residential Use in the CR-1 district.

The applicant has met all regulations for applicant initiated neighborhood meetings as required by ordinance, holding a meeting with the public on Monday, February 1, 2016, and providing the applicable reports to the City.

| Direction | Zoning | Zoning Use | Current Land Use |
| :---: | :---: | :---: | :---: |
| N | R-150 (cemetery) | Residential <br> Commercial | Institutional <br> Office/Commercial |
| S | I-285 | I-285 | I-285 |
| E | OCR | Office-Commercial- <br> Residential | Proposed <br> Development |
| O-I | Office-Institution <br> Planned <br> Development | Office/Commercial |  |

The City is currently working on a study of the Perimeter Center area that will produce overlay district regulations and new zoning districts. The proposed development is within a location proposed for PC-1 zoning, which, as currently drafted, would allow a maximum height of 30 stories. Based on this position, a maximum of 30 stories is recommended.

## ANALYSIS

## Review and Approval Criteria

Chapter 27, Section 27-359 identifies the following criteria to be applied by the department of planning, the planning commission, and the city council in evaluating and deciding any application for a special land use permit. No application for a special land use permit shall be granted by the city council unless satisfactory provisions and arrangements have been made concerning each of the following factors, all of which are applicable to each application:

1. Whether the proposed use is consistent with the policies of the comprehensive plan; Yes, the proposed use is consistent with the policies of the Comprehensive Plan. The site is located in the Perimeter Center character area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels, and high-end restaurants" to facilitate the creation of a true "livework environment."

The proposed development is a mixed-use project that aims to incorporate all of the above uses while complementing the surrounding mix of uses that characterizes the Perimeter Area. A rezoning application has been submitted for this property to allow for owner-occupied residential units on the property.
2. Whether the proposed use complies with the requirements of this zoning ordinance;

Yes, the proposed use complies with the requirements of the CR-1 Zoning District. CR-1 allows for residential and commercial uses in a single mixeduse development. Though the CR-1 district only allows for a 3 story building as of right, it does provide for the SLUP process to increase the allowable height.

The proposed use is also compatible with the current draft of the Perimeter Center Zoning District (PC-1). PC-1 envisions mixed use developments and allows for owner-occupied residential buildings up to 30 stories tall. Based on this draft document, the height should not exceed 30 stories.
3. Whether the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking and all other applicable requirements of the subject zoning district;
Yes, the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking and all other applicable requirements of the CR-1 zoning district.

The CR-1 district calls for 20\% open space; the most recent proposal shows 40\% open space. The Dunwoody Municipal Code allows for a 25\% reduction in the number of required parking spaces, provided that the property is located 1,500 feet from a MARTA station (Sec. 27-204). As the development is not located within 1,500 feet of the Dunwoody MARTA station (per sheet CP-004), the proposed parking reduction is not allowable. The applicant will either have to provide the additional parking in accordance with the required ratios or utilize a different reduction method enabled in the Code (e.g.: shared and bicycle parking). Staff has requested that an open space and amenities plan be provided to ensure that what is being counted toward the open space calculation will be adequate for the residential and commercial users.

The calculations of use of space are subject to change with the planned purchase of property by GDOT for transportation improvements.
4. Whether the proposed use is compatible with adjacent properties and land uses, including consideration of:
a. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use;
No, the proposed use will not create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated.
b. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use;
No, the proposed use will not create adverse impact upon any adjoining land use by reason of the hours of operation of the proposed use. The surrounding land uses are all non-residential uses, which shall not be affected negatively by the hours of operation of the proposed development's residential, hotel, retail, and accessory uses.
c. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use;
No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use.
d. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the proposed use;

With the requested revisions to the traffic study, staff expects that the study will show that the Ashford Dunwoody Road and Hammond Drive corridors will experience increasing congestion. Substituting 41 Perimeter Center East, Suite 250 Dunwoody, Georgia 30346
P(678) 382-6700
dunwoodyga.gov
residential and other uses for some of the office space would help distribute the trips to and from the site more evenly since residential trips would be outbound at times when the majority of the area traffic is inbound and vice versa. Additional turn lanes at congested intersections as recommended in this and other traffic impact studies can help reduce delays. However, at intersections like Ashford Dunwoody Road and Hammond Drive where multiple turn lanes already exist on all the approaches, adding additional lanes is not realistic or desirable. Additional connectivity to the interstate and other arterials, such as proposed with the Westside Connector Road from Ashford Dunwoody Road to Perimeter Center Parkway, is needed to address congestion in a significant way.

The Westside Connector would allow cars from I-285 to bypass Ashford Dunwoody Rd and Hammond Drive to access the property. Additionally, GRTA has conditioned the proposal to provide a southbound left turn lane along Perimeter Center Parkway and a westbound left turn lane along Gold Kist Road, as well as internal connectivity between all site access driveways.

The property's proximity to MARTA is expected to have a positive effect on the volume of vehicular traffic.
e. Whether the size, scale and massing of proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings; and
Yes, the size, scale, and massing of the proposed building are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings.

The applicant is asking for a 32-35 story residential tower. The adjacent 9.2 acre parcel of the property is entitled for a 28-story hotel and two 24-story office buildings. The commercial parcel directly north of the property is also entitled for similarly tall buildings. The proposed development will be along the I-285 corridor, adding to a skyline that includes the $\mathbf{3 1}$-story Ravinia and the 28-story King and Queen towers.
f. Whether the proposed plan will adversely affect historic buildings, sites, districts, or archaeological resources.
No, the proposed plan will not adversely affect historic buildings, sites, districts, or archaeological resources. The development abuts the Martin family cemetery to the north. The development will have no impact on the cemetery. Staff has requested easement records from the applicant to determine what rights exist on the subject property (15 acre site) for the purpose of access to the cemetary. These easements will be respected in the redevelopment of the site. The applicant has spoken with representatives from the Dunwoody Preservation Trust, the entity that maintains the cemetery, to work on an acceptable strategy for the cemetery's continued maintenance and accessibility.
5. Whether public services, public facilities and utilities-including motorized and nonmotorized transportation facilities-are adequate to serve the proposed use;
Reference 4.d above for discussion of traffic impacts. The site is in close proximity to the Dunwoody MARTA station, making public transit a realistic alternative for those commuting to and from the property. Additionally, GRTA has conditioned the proposal to provide sidewalks along all property frontage and both side of all internal roadways.
6. Whether adequate means of ingress and egress are proposed, with particular reference to non-motorized and motorized traffic safety and convenience, traffic flow and control and emergency vehicle access;
Yes, with the inclusion of road improvements discussed with GDOT and GRTA, the development of the Westside Connector, and intersection improvements at Perimeter Center Parkway, adequate means of ingress and egress are proposed. A newly-created road off of Perimeter Center Parkway will provide primary access and will be capable of handling any new trips generated by the development. The property is accessible by transit, as MARTA is in close proximity, and pedestrian pathways.
Sidewalks and bicycle facilities should be required along Goldkist Drive to facilitate connectivity to MARTA.
7. Whether adequate provision has been made for refuse and service areas; and Yes, adequate provision has been made for refuse and service areas.
8. Whether the proposed building as a result of its proposed height will create a negative shadow impact on any adjoining lot or building.
No, the proposed building will not create a negative shadow impact on any adjoining lot or building. Buildings with similar heights (28-stories, 24stories, 31-stories) already exist along the property in close proximity to the property. The southern property line is bordered by I-285.

## RECOMMENDATION

Staff recommends approval of Special Land Use Permit application a.) to increase the height of the multi-unit residential building ("Crown Tower 1" on enclosed conceptual drawings), subject to the following conditions:

1. The multi-unit residential building shall be a maximum height of 30 stories.
2. All road improvements required by the companion rezoning request and/or development agreement shall be provided.

Staff recommends approval of the Special Land Use Permit application to the height of the mixed used vertical building ("Crown Tower 2" on conceptual drawings), subject to the following conditions:

1. The mixed use vertical building shall be a maximum height of 29 stories
2. All road improvements required by the companion rezoning request and/or development agreement shall be provided.

Staff recommends approval of the Special Land Use Permit application to allow a multi-unit residential use in the Commercial-Residential Mixed-Use (CR-1) District, subject to the following conditions:

1. All road improvements required by the companion rezoning request and/or development agreement shall be provided.

## Attachments

- Location Map, Zoning Map
- Article II, Division 1 Excerpt
- Comprehensive Plan Excerpt
- Application Packet


244 Perimeter Ctr Pkwy Lot Division


Date: 3/1/2016


## CHAPTER 27 - ZONING ORDINANCE ${ }^{[1]}$

## Footnotes:

--- (1) ---
Editor's note—Ord. No. 2013-10-15, § 1, adopted Oct. 14, 2013, repealed former Ch. 27, §§ 27-1—271654 , and enacted a new Ch. 27 as set out herein. Former Ch. 27 pertained to similar subject matter. See the Code Comparative Table for a complete derivation. For stylistic purposes, a uniform system of headings, catchlines, capitalization, citation to state statutes, and expression of numbers in text have been used to conform to the Code of Ordinances. Additions made for clarity are indicated by brackets and obvious misspellings and punctuation errors have been corrected without notation.

## ARTICLE II. - ZONING DISTRICTS

DIVISION 2. - NONRESIDENTIAL AND MIXED-USE ZONING DISTRICTS

Sec. 27-71. - General.
(a) The districts. The city's nonresidential and mixed-use zoning districts are listed below.

| Office | Zoning District | Map Symbol |
| :---: | :---: | :---: |
|  | Office-Institution | O-I |
|  | Office-Institution-Transitional | O-I-T |
|  | Office-Distribution | O-D |
| Commercial | Office-Commercial-Residential | OCR |
|  | Neighborhood Shopping | NS |
|  | C-1 |  |
| Industrial | Commercial-Residential Mixed-Use | CR-1 |

(b) Purposes.
(1) General. The nonresidential and mixed-use districts are generally intended to promote consistency with the comprehensive plan and provide opportunities for shopping, employment, entertainment and living.
(2) Office-institution and office-institution-transitional. The primary purposes of the $\mathrm{O}-\mathrm{I}$ and $\mathrm{O}-\mathrm{I}-\mathrm{T}$ districts are as follows:
a. To provide convenient locations for office and institutional uses;
b. To provide locations for the development of cultural, recreational, educational and health service facilities; and
c. To limit building heights to two stories in O-I-T zoned areas adjacent to single-dwelling residential districts.
(3) Office-distribution. The primary purpose of the O-D district is to provide convenient locations for office and distribution establishments.
(4) Office-commercial-residential. The primary purposes of the OCR district are as follows:
a. To provide for economic development within the city through redevelopment of parcels of land that have been used in the past for commercial and light industrial uses but that have become obsolete and now offer an opportunity for establishing new moderate-intensity mixed-use developments consisting of a combination of office, commercial and residential uses;
b. To promote redevelopment and new development in an environment that is pedestrianoriented and that provides employment, shopping, entertainment and living opportunities in close proximity thereby reduces auto dependency; and
c. To encourage the conversion of vacant commercial and industrial buildings into mixed-use projects.
(5) Neighborhood shopping. The primary purposes of the NS district are as follows:
a. To provide convenient neighborhood retail shopping and service areas within the city;
b. To provide for the development of new neighborhood shopping districts;
c. To help ensure that the size and scale of neighborhood shopping centers and individual uses within shopping centers are compatible with the scale and character of surrounding neighborhoods; and
d. To accommodate uses designed to serve the convenience shopping and service needs of the immediate neighborhood.
(6) Local commercial. The primary purposes of the $\mathrm{C}-1$ district are as follows:
a. To provide convenient local retail shopping and service areas within the city;
b. To provide for the development of new local commercial districts; and
c. To accommodate uses designed to serve the convenience shopping and service needs of groups of neighborhoods.
(7) Commercial-residential mixed-use. The primary purposes of the CR-1 district are as follows:
a. To provide convenient local retail shopping and service areas within a mixed-use (commercial-residential) setting;
b. To provide for the development of new commercial-residential mixed-use districts; and
c. To promote development patterns that accommodate residential, employment and entertainment within a walkable, mixed-use environment.
(8) General commercial. The primary purposes of the C-2 district are as follows:
a. To provide convenient general business and commercial service areas within the city;
b. To provide for the development of new general commercial districts; and
c. To accommodate uses designed to serve the general business and commercial service needs of the city.
(9) Industrial. The primary purposes of the M district are as follows:
a. To provide areas for the establishment of businesses engaged in the manufacturing, processing, creating, repairing, renovating, painting, cleaning, or assembling of goods, merchandise, or equipment;
b. To help ensure that establishments operate so as to not create adverse noise and other impacts on nearby residential, office, commercial and mixed-use districts; and
c. To help ensure that $M$ districts are located in areas with access to major arterials and freeways.
(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.10), 10-14-2013)

Sec. 27-72. - Uses allowed.

The following table identifies uses allowed in nonresidential and mixed-use zoning districts. See [subsection] 27-111(4) for information about how to interpret the use table.

| USES | DISTRICTS |  |  |  |  |  |  |  |  |  | Supplemental Regulations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | O- I-T | O- D | OCR | NS | C- 1 |  | $\begin{gathered} \text { CR- } \\ 1 \end{gathered}$ | C- 2 |  |  |
| $P=$ use permitted as of right $/ A=$ administrative permit req'd $/ E=$ special exception req'd $/ S=$ special land use permit req'd |  |  |  |  |  |  |  |  |  |  |  |
| RESIDENTIAL |  |  |  |  |  |  |  |  |  |  |  |
| Household Living |  |  |  |  |  |  |  |  |  |  |  |
| Detached house | - | P | - | - | - | - |  | - | - | - | 27-147 |
| Multi-unit building | - | - | - | S | - | - |  | S | - | - |  |
| Mixed-use building, vertical | - | - | - | P | - | - |  | P | - | - |  |


| Group Living |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Convent and monastery | P | P | - | P | - |  | - | - | - | - | 27-146 |
| Fraternity house, sorority house or residence hall | P | - | - | - | - |  | - | - | - | - |  |
| Nursing home | P | P | - | - | - |  | - | - | - | P |  |
| Personal care home, family (1-4 persons) | - | - | P | - | P |  | P | P | P | - |  |
| Personal care home, group (5-7 persons) | - | - | P | - | P |  | P | P | P | - |  |
| Personal care home, community (8+ persons) | P | P | P | - | P |  | P | P | P | - | 27-145 |
| Child caring institution (1-6 persons) | P | P | P | - | P |  | P | P | P | - |  |
| Child caring institution (7-15 persons) | P | P | P | - | P |  | P | P | P | - |  |
| Child caring institution (16 or more) | P | S | P | - | P |  | P | P | P | - |  |
| Community living arrangement (1-4 persons) |  |  |  | P |  |  | P | P |  |  |  |
| Shelter, homeless | S | S | - | - | - |  | P | P | P | - | 27-140 |
| Transitional housing facility | S | S | - | - | - |  | P | P | P | - | 27-140 |
| QUASI-PUBLIC AND INSTITUTIONAL |  |  |  |  |  |  |  |  |  |  |  |
| Ambulance Service | - | - | - | - | - |  | P | P | P | P |  |
| Club or Lodge, Private | P | P | P | - | - |  | P | P | P | P |  |
| Cultural Exhibit | P | P | P | - | - | - | P | P | P | - |  |
| Day care facility, adult (6 or fewer persons) | - | - | P | - | - |  | - | - | - | - | 27-137 |
| Day care center, adult (7 or more) | P | P | P | P | P |  | P | P | P | - |  |
| Day care facility, child (6 or fewer persons) | - | - | P | - | - |  | - | - | - | - |  |


| Day care center, child (7 or more) | P | P | P | P | P |  | P | P | P |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Educational Services |  |  |  |  |  |  |  |  |  |  |  |
| College or university | P | P | P | - | - | - |  | - | - | - |  |
| Kindergarten | - | - | P | P | P |  | P | P | P | - | 27-141 |
| Research and training facility, college or university affiliated | P | P | P | - | - | - | - | - | - | P |  |
| School, private elementary, middle or senior high | P | P | P | P | - | P | P | P | P | P | 27-148 |
| School, specialized non-degree | P | P | P | P | - |  | P | P | P | P |  |
| School, vocational or trade | P | P | P | - | - | P | P | P | P | P |  |
| Hospital | P | - | - | - | - | - |  | - | - | - |  |
| Place of Worship | P | P | P | P | P |  | P | P | P | P | 27-146 |
| Utility Facility, Essential | E | E | P | E | E |  | P | P | P | P | 27-151 |
| COMMERCIAL |  |  |  |  |  |  |  |  |  |  |  |
| Adult Use |  |  |  |  |  |  |  |  |  |  |  |
| Body art service |  |  |  |  |  |  |  |  | P | P |  |
| Sexually oriented business | P | - | - | P | - |  | - | - | P | P | 27-149 |
| Animal Services |  |  |  |  |  |  |  |  |  |  |  |
| Animal care/boarding | - | - | - | S | S |  | P | P | P | P | 27-131 |
| Animal grooming | - | - | - | P | P |  | P | P | P | P | 27-131 |
| Animal hospital/veterinary clinic | - | - | - | P | P | P | P | P | P | P | 27-131 |


| Communication Services |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Radio and television broadcasting stations | P | P | P | - |  | - | P |  | P | P | P |  |
| Recording studios | P | P | P | - |  | - | P |  | P | P | P |  |
| Telecommunication tower | A | - | A | - |  | S | A |  | A | A | A | 27-150 |
| Telecommunication antenna, co-located | P | P | P | P |  | P | P |  | P | P | P | 27-150 |
| Construction and Building Sales and Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Building or construction contractor | - | - | - | - |  | - | - |  | - | P | P |  |
| Commercial greenhouse or plant nursery | - | - | - | - |  | - | - |  | - | P | P |  |
| Electrical, plumbing and heating supplies and services | - | - | - | - |  | - | P |  | P | - | P |  |
| Lumber, hardware or other building materials establishment | - | - | - | - |  | - | P |  | P | P | P |  |
| Eating and Drinking Establishments |  |  |  |  |  |  |  |  |  |  |  |  |
| Restaurant, accessory to allowed office or lodging use | P | - | - | P |  | - | P |  | P | P | P |  |
| Restaurant, drive-in or drive-through | - | - | - | - |  | - | P |  | S | P | P |  |
| Food truck | P | P | P | P |  | P | P |  | P | P | P | 27-138 |
| Other eating or drinking establishment | - | - | - | P |  | P | P |  | P | P | - |  |
| Entertainment and Spectator Sports |  |  |  |  |  |  |  |  |  |  |  |  |
| Auditorium or stadium | - | - | - | - |  | - | - |  | - | P | P |  |
| Drive-in theater | - | - | - | - |  | - | - |  | - | P |  |  |
| Movie theater | - | - | - | P |  | - | - |  | - | P | - |  |


| Special events facility | - | P | - | - | - |  | P | P | P | - |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Financial Services |  |  |  |  |  |  |  |  |  |  |  |
| Banks, credit unions, brokerage and investment services | P | P | P | P | P |  | P | P | P | P |  |
| Convenient cash business | - | - | - | - | - |  | - | - | P | - | 27-136 |
| Pawn shop | - | - | - | - | - |  | - | - | P | - | 27-144 |
| Food and Beverage Retail Sales |  |  |  |  |  |  |  |  |  |  |  |
| Liquor store (as principal use) | - | - | - | - | - |  | P | P | P | P |  |
| Liquor store (accessory to lodging or 3+ story office) | - | - | P | P | - |  | - | - | - | - |  |
| Other food and beverage retail sales | - | - | P | P | P |  | P | P | P | P |  |
| Funeral and Interment Services |  |  |  |  |  |  |  |  |  |  |  |
| Cemetery, columbarium, or mausoleum | P | P | P | - | - |  | - | - | - | - |  |
| Crematory | - | - | - | - | - |  | - | - | - | S |  |
| Funeral home or mortuary | P | - | - | - | - |  | P | P | P | P |  |
| Lodging | P | - | P | P | - |  | P | P | P | P |  |
| Medical Service |  |  |  |  |  |  |  |  |  |  |  |
| Home health care service | P | P | - | - | - |  | - | - | - | - |  |
| Hospice | P | P | - | - | - |  | - | - | - | - |  |
| Kidney dialysis center | P | P | - | - | - |  | - | - | - | - |  |
| Medical and dental laboratory | P | P | - | P | - |  | P | P | - | P |  |


| Medical office/clinic | P | P | P | P | P | P | P | P | P |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Office or Consumer Service | P | P | P | P | P | P | P | P | P |  |
| Parking, Non-accessory | S | - | P | - | - | P | P | P | P | 27-143 |
| Personal Improvement Service |  |  |  |  |  |  |  |  |  |  |
| Barber shop, beauty shop, nail salon, massage and/or spa establishments, estheticians, and other "typical" uses per [subsection] 27-114(14) | P | - | - | P | P | P | P | P | P | 27-114(14) |
| Other personal improvement service | - | - | - | - | - | P | P | P | P |  |
| Repair or Laundry Service, Consumer |  |  |  |  |  |  |  |  |  |  |
| Laundromat, self-service | - | - | - | P | P | P | P | P | - |  |
| Laundry or dry cleaning drop-off/pick-up | P | - | - | P | P | P | P | P | P |  |
| Other consumer repair or laundry service | - | - | - | P | P | P | P | P | P |  |
| Research and Testing Services | P | - | P | P | - | - | - | P | P |  |
| Retail Sales |  |  |  |  |  |  |  |  |  |  |
| Retail sales of goods produced on the premises | - | - | - | - | - | - | - | - | P |  |
| Shopping Center | - | - | - | P | P | P | P | P | - |  |
| Other retail sales | - | - | P | P | P | P | P | P | - |  |
| Sports and Recreation, Participant |  |  |  |  |  |  |  |  |  |  |
| Golf course and clubhouse, private | P | P | P | - | - | - | - | P | P |  |
| Health club | - | - | P | P | P | P | P | P | P |  |
| Private park | P | P | P | - | - | - | - | - | - |  |


| Recreation center or swimming pool, neighborhood | P | P | P | - | - | - | - | - | P |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recreation grounds and facilities | - | - | P | - | - | - | - | P | - |  |
| Tennis center, club and facilities | P | P | P | P | - | P | P | P | - |  |
| Other participant sports and recreation (Indoor) | P | - | - | P | - | P | P | P | - |  |
| Other participant sports and recreation (Outdoor) | - | - | - | - | - | - | - | P |  |  |
| Vehicle and Equipment, Sales and Service |  |  |  |  |  |  |  |  |  |  |
| Car wash | - | - | - | - | - | P | - | P | P | 27-134 |
| Gasoline sales | - | - | - | - | - | P | - | P | P | 27-139 |
| Vehicle repair, minor | - | - | - | - | - | P | - | P | P | 27-153 |
| Vehicle repair, major | - | - | - | - | - | - | - | P | P | 27-152 |
| Vehicle sales and rental | - | - | - | - | - | S | S | P | P | 27-154 |
| Vehicle storage and towing | - | - | - | - | - | - | - | P | P | 27-155 |
| INDUSTRIAL |  |  |  |  |  |  |  |  |  |  |
| Manufacturing and Production, Light | - | - | - | - | - | - | - | P | P |  |
| Wholesaling, Warehousing and Freight Movement |  |  |  |  |  |  |  |  |  |  |
| Warehousing and storage | - | - | P | - | - | - | - | - | - |  |
| Self-storage warehouse | - | - | P | - | - | - | - | - | P |  |
| Storage yard and truck terminal | - | - | - | - | - | - | - | - | S |  |
| AGRICULTURE AND TRANSPORTATION |  |  |  |  |  |  |  |  |  |  |


| Agriculture |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Agricultural produce stand | - | - | - |  |  | - | - | - | - | P |  |
| Community garden | P | P | P |  |  | P | P | P | P | P | 27-135 |
| Crops, production of | - | - | - |  |  | - | - | - | - | P |  |
| Transportation |  |  |  |  |  |  |  |  |  |  |  |
| Heliport | S | - | S |  |  | - | S | S | - | P |  |
| Stations and terminals for bus and rail passenger service | S | - | - |  |  | - | - | - | - | - |  |
| Taxi stand and taxi dispatching office | - | - | - |  |  | - | P | P | - | P |  |

(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.20), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015;
Ord. No. 2015-06-13, § 1, 6-22-2015)
Sec. 27-73. - Lot and building regulations.
(a) This section establishes basic lot and building regulations that apply in nonresidential and mixed-use zoning districts. These regulations offer certainty for property owners, developers and neighbors about the limits of what is allowed; they are not to be construed as a guarantee that stated minimums and maximums can be achieved on every lot. Other factors, such as topography, the presence of protected resources, off-street parking and other factors may work to further limit actual building and development potential.
(b) The lot and building standards of the following table apply to all principal and accessory uses allowed in nonresidential and mixed-use districts, unless otherwise expressly stated in this zoning ordinance. Article VII, division 1, identifies exceptions to these regulations and rules for measuring compliance (see also Figure 5-1).

|  | Regulation | O-I | O-I-T | O-D | OCR | NS | C-1 | CR-1 | C-2 | M |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| L1 | Minimum Lot <br> Area (sq. ft.) | 20,000 | $20,000[1$ <br> ] | 43,560 | 87,120 | 20,000 | 20,000 | 20,000 | 30,000 | 30,000 |
| L2 | Minimum Lot <br> Frontage (ft.) | 100 | 100 | 150 | 100 | 100 | 100 | 100 | 100 | 100 |


|  | Maximum Density (dwelling units per acre) | NA | NA | NA | 30 | NA | NA | 80 | NA | NA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Minimum Building/Structur e Setbacks (ft.) |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \mathrm{S} \\ & 1 \end{aligned}$ | Street, front and side | 50 | 40 | 75 | 0 | 50 | 50 | 0 | 50 | 75 |
| $\begin{aligned} & \mathrm{S} \\ & 2 \end{aligned}$ | Side, interior | 20 | 20 | 20 | 20 | 20 | 20 | 20[2] | 20 | 20 |
| $\begin{aligned} & \mathrm{S} \\ & 3 \end{aligned}$ | Rear | 30 | 30 | 30 | 40 | 30 | 30 | 30 | 30 | 30 |
| C | Maximum Lot Coverage (\%) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
|  | Maximum Building Height (stories/ft.) | $\begin{gathered} 5 / 70[3 \\ ] \end{gathered}$ | 2/35 | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | 2/25 | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 3 / 45[4 \\ ] \end{gathered}$ | $\begin{gathered} 2 / 35[4 \\ ] \end{gathered}$ | $\begin{gathered} 5 / 70[3 \\ ] \end{gathered}$ |
|  | Maximum <br> Building Floor <br> Area (sq. ft.) | NA | NA | NA | NA | $\begin{gathered} 50,000[5 \\ ] \end{gathered}$ | NA | NA | NA | NA |

[1] Attached house developments are subject to a minimum lot area requirement of 4,000 square feet per dwelling unit.
[2] No interior side setback required abutting C-1, CR-1 or C-2-zoned lots.
[3] Buildings may exceed three stories in height only if approved by fire and rescue services. Buildings in excess of five stories or 70 feet in height may be approved only through the special land use permit procedures of article V, division 3. Multi-unit residential and vertical mixed-use buildings that abut any attached single-dwelling residential district may not exceed 40 feet in height. Multi-unit residential buildings and vertical mixed-use buildings that abut any detached single-dwelling residential district may not exceed 35 feet in height.
[4] Buildings in excess stated height limits may be approved through the special land use permit procedures of article V , division 3. Buildings may exceed three stories in height only if approved by fire and rescue services.
[5] No individual building may exceed 50,000 sq. ft. (GSF). No multi-tenant center may exceed 100,000 sq. ft.

Figure 5-1: Lot and Building Regulations Diagram, Nonresidential and Mixed-use Districts

(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.30), 10-14-2013; Ord. No. 2015-01-05, § 1, 1-26-2015)

Sec. 27-74. - Other regulations.
Uses and development in nonresidential and mixed-use zoning districts may be subject to other regulations and standards, including the following.
(1) Nonconformities. See article VI, division 4.
(2) Accessory uses and structures. See article III, division 3.
(3) Parking. See article IV, division 1.
(4) Landscaping and screening. See article IV, division 2.
(5) Signs. See chapter 20 of the Municipal Code.
(6) Outdoor storage. See section 27-286.
(7) Temporary uses. See article III, division 4.
(8) Outdoor lighting. See article IV, division 3.
(Ord. No. 2013-10-15, § 1(Exh. A § 27-5.40), 10-14-2013)
Secs. 27-75-27-85. - Reserved.

## PERIMETER CENTER

## Vision/Intent

Perimeter Center will be a visitor friendly "livable" regional center with first-class office, retail, entertainment, hotels, and high-end restaurants in a pedestrian and bicycle-oriented environment. The area will serve as a regional example of high quality design standards. The City of Dunwoody works in partnership with the Perimeter Community Improvement Districts (PCIDs) and adjacent communities to implement and compliment the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study ( LCl ) and its current and future updates.

In the future, the area should add public gathering space and pocket parks, venues for live music and entertainment and continue to create transportation alternatives, mitigate congestion, and reduce remaining excessive surface parking. The area creates the conditions of possible true "live-work" environment. All future development continues to emphasize high quality design standards and building materials and incorporates the current national best practices on energy efficiency, where possible.

The City of Dunwoody recognizes the value of creating mixed-use, transit-oriented development within walking distance of public transit stations. However, the City has concerns about the impact of such development on the City‘s infrastructure and schools.

## Future Development

The Perimeter Center Character Area will be divided into four subareas (PC-1, PC-2, PC-3, and PC-4) which match the draft proposed overlay district outline that the City is reviewing as part of the Perimeter Center Zoning Code. This area was the subject of a previous LCI Study. The cities of Dunwoody, Sandy Springs, and Brookhaven work in partnership with the Perimeter Community Improvement Districts (PCIDs) to implement and complement the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCI) and its current and future updates.

For specific recommendations on height, density and use refer to the provisions of the Perimeter Center Overlay District and Zoning, available from the Dunwoody Community Development Department.


FIGURE 13: Perimeter Center Character Area Map

PC-1: Intended to apply to the central core area of Perimeter Center, including the area directly surrounding the Dunwoody MARTA train station. This district allows for the highest intensity of buildings, a high level of employment uses, and active ground story uses and design that support pedestrian mobility.

PC-2: Made up primarily of employment uses and limited shop front retail, residential, and services.

PC-3: A smaller scale, less intensive commercial district, permitting both shop front and office buildings.

PC-4: Made up primarily of residential uses at a scale that provides a transition between the intensity of Perimeter Center and the surrounding single-family residential neighborhoods.

## Action Items



- Perimeter Mall

- Housing in Perimeter Center
- New development will include amenities and provide public functional green space.
- New development will be mindful of school capacity issues and applicants will work with Board of Education and City for better resolution of school issues.
- Reduce surface parking and promote livable centers in the immediate areas surrounding MARTA station.
- Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route.
- Achieve a lifelong-community for residents who can age in place with safe access to medical, recreational and other necessary services.
- Create bicycle, pedestrian and non-auto related transportation options to connect with the rest of the City of Dunwoody.


## COMMUNITY IMPROVEMENT DISTRICT (CID)

A Community Improvement District (CID) is an authorized self-taxing district dedicated to Infrastructure improvements within its boundaries. The PCIDs are governed by two boards - one each for Fulton and DeKalb. The PCIDs spent or leveraged public funds to invest $\$ 55$ million in Dunwoody alone; over $\$ 7$ million from ARC's LCI program was directed to the PCIDs. This makes it one of the most, if not the most, successful CIDs in the region. The PCIDs‘ mission focuses exclusively on transportation improvements:

To work continuously to develop efficient transportation services, with an emphasis on access, mobility, diversification and modernization.

■ The 2012 PCID Commuter Trail System Master Plan proposed a network of commuter trails connecting to the MARTA station.

■ The 2012 PCID Perimeter Circulator Implementation report recommended circulator transit to provide first/ last mile connectivity for commuters and reduction in CID area congestion.

- The PCIDs have proposed Perimeter Park at the Dunwoody MARTA Station.
- Work with the Perimeter Transportation Management Association (TMA) to actively reduce automobile dependency and emerge as a leader in alternative transportation for the region.
- Work to strengthen Board of Education relationship for creative solutions to school capacity.
- Work with the PCIDs‘ boards to implement vision.
- Coordinate with the City of Sandy Springs for LCI Updates and implementation.
- Coordinate with the Atlanta Regional Commission (ARC) for implementation of future LCl study updates.
- Coordinate with MARTA regarding Bus Rapid Transit (BRT) (or other regional service) and urban design surrounding all transit stations.

■ Look for ways to encourage live entertainment for the benefit of visitors and residents.

G．Douglas Dillard

## March 30， 2016

## Via Hand Delivery and E－mail

Mayor Shortal and Members of the City Council
c／o Steve Foote，Community Development Director
City of Dunwoody
41 Perimeter Center East
Dunwoody，Georgia 30346
Re：$\quad$ Special Land Use Permit Application；Dunwoody Crown Towers； 244 Perimeter Center Parkway

Dear Steve：
Please find enclosed the Applicant＇s revised SLUP application for approximately 4.75 acres of the above－referenced property．The enclosed application includes 3 SLUP requests： N（1）a SLUP to increase the height of the proposed multi－unit residential building；（2）a SLUP to increase the height of the proposed mixed use
unit residential use in the CR－1 zoning district．

The following revisions were made to the SLUP Application package submitted on February 2，2016：
－Revised Site Plan to address Staff＇s 3－14－16 review comments；
－Revised Tract designations on conceptual plat／subdivision exhibit to be consistent with site plan；and
－Revisions to the Letter of Intent to reflect the above－referenced revisions．
Please contact me with any questions．
Sincerely，


Enclosures


## Neighbor Communications Survey

SLUP Applications: Dunwoody Crown Towers, LLC

$$
\text { February 1, } 2016
$$

1. Efforts to notify neighbors about the proposal (how and when notification occurred, and who was notified);

The Applicant held an applicant-initiated meeting on Monday, February 1, 2016 at the D.W. Brooks Conference Center, 244 Perimeter Center Parkway, Dunwoody, GA 30346. Notice of the applicant-initiated meeting was published in the Dunwoody Crier on January 20, 2016. A copy of the legal advertisement is attached.

On January 11, 2016, notice of the applicant-initiated meeting was also mailed to the two residentially-zoned properties within 1,000 feet of the subject 4.75 -acre property. According to the City's GIS map, there are two properties within 1,000 feet of the subject property zoned for residential use. The first is the Martin Cemetery parcel located at 1191 Ashford Dunwoody (Tax Parcel ID 1834802 002) which is zoned R-150. The Dunwoody Preservation Trust maintains the Martin Cemetery and notice was mailed to the Executive Director of the Dunwoody Preservation Trust at 5455 Chamblee Dunwoody Rd Dunwoody, GA 30338. The second property is located at 11 Ravinia Parkway (Parcel ID 1834701 049), is owned by Hines Ravinia Four Limited, and is zoned OCR. Notice was mailed to Hines Ravinia Four Limited at 1 Ravinia Drive, Ste. 1160, Atlanta, GA 30346. Attached is the notice letter mailed to the Dunwoody Preservation Trust and Hines Ravinia Four Limited Finally, notice of the meeting was also sent to the Planning Department.

## 2. Meeting location, date and time;

The Applicant held an applicant-initiated meeting on Monday, February 1, 2016 at the D.W. Brooks Conference Center, 244 Perimeter Center Parkway, Dunwoody, GA 30346. The meeting started at 7:00pm.
3. Who was involved in the discussions;

Mr. Charles Brown and Mr. Doug Dillard attended the meeting on behalf of the Applicant, Dunwoody Crown Towers, L.L.C. Please see the attached sign-in sheet for the meeting attendees.
4. Suggestions and concerns raised by neighbors; and

The neighbors raised concerns about the overall density and the residential component of the plan, though the concerns were directed primarily at rental units which are not being proposed by the Applicant.
5. What specific changes to the proposal were considered and/or made as a result of the meeting.
No changes are proposed at this time.

NONDISCRIMINATORY POLICY AS TO STUDENTS North Atlanta Children's Ministries, Inc., 5676
Roberts Drr, Atlanta, GA 30338, admits students of any race, color, national and ethnic origin to all the ights, privileges, programs, and activities generally rganization. It does not discriminate on the basis of ace, color, national, and ethnic origin in dministration of its educational policies, and other organization-administered programs.

## NOTICE OF MEETING FOR THE PUBLIC

Dunwoody Crown Towers, LLC intends to submit a Rezoning Application and three Special Land Use Permit Applications to the City of Dunwoody for land within
1,0oo feet of your property. The Applicant will be submitting a rezoning application and three Special Land Use Permit ("SLUP") Applications for property at 244 Perimeter Center Parkway in order to develop Dunwoody Crown Towers, a mixed use development with be holding a neighborhood meeting to discuss the proposed rezoning application and to answer any questions that you may have regarding the applications and proposed devepment. Specion zoning meeting are below.
CASE NUMBER: TBD (this will be provided at the time the application is filed with the City)
applicant name: Dunwoody Crown Towers, LLe JURISDICTION: City of Dunwoody

ZONING CHANGE: O-I to CR-1 (Commercial-Residential)
SLUP Request: (1) SLUP to increase the height of the multi-unit building; (2) SLUP to increase the height of the mixed use vertical building; and a (3) SLUP to allow a multi-unit residential building within the CR-
zoning district

STREET LOCATION: 244 Perimeter Center Parkway +/- 4.75 acres
PROPOSED DEVELOPMENT: Mult-Unit Residential Tower; Mixed Use Vertical Tower (Hotel and Res-

APPLICANT-INITLATED MEETING
D.W. Brooks Conference Center
244 Perimeter Center Parkway (1st floor)

Dunwoody, GA 30346
7:00 pm
If you have questions about the Applications on the applicant-initiated meeting, please contact Arnold at (404) 665-1243 or jarnold@pftlegal.con.

Brookhaven, frompaz


## THE CITY OF DUNWOODY, GEORGIA

 NOTICE OF PUBLIC HEARINGThe City of Dunwoody Mayor and City Council will meet on Monday, February 08, 2016 at 6:00 p.m. in the Council Chambers of Dunwoody City Hall, which is located at 41 Perimeter Center East, Dunwoody, Georgia 30346, for the purpose of due process of the following:

CQ Dunwoody Village Court, LLC, owner of 1530 and 1536 Dunwoody Village Parkway, Dunwoody, GA 30338 , by Marian Adeimy, attorney for contract purchaser, seeks the following for the subject property to allow for construction of a 79 -unit townhome development. The property consists of two tax parcels: 18-366-06-061 located at 1530
Dunwoody Village Parkway, Dunwoody, GA 30338, and 18-366-06-065 located at 1536 Dunwoody Village Parkway, Dunwoody, GA 30338
RZ 16-O21: Rezone property currently zoned Office-Institution (O-I) District to MultiRZ 16-021: Rezone property currently zoned

SLUP 16-021: Special Land Use Permit to waive the requirement for a development to come into full compliance with the Dunwoody Viliage Overlay District regulations to low for reduction in sidewalk width from 12 ft to 6 ff

ZZ 16-022: Kathryn B. Zickert, applicant, on behalf of Hines Atlant A Associates Limited Partnership, owner of 4453 Ashford Dunwoody Road, Dunwoody, GA 30346, seeks permission to rezone property currently zoned Office-Institution conditional (0-Ic) District to Local Commercial conditional ( (C-1c) District to allow for development of a restaurant with drive-through. The tax parcel number is 1834701033 .

Should you have any questions, comments, or would like to view the application and supporting materials, please contact the City of Dunwoody Community Development Department at $678-382-6800$. Members of the public are encouraged to call or schedule a meeting with staff in advance of the Public Hearing if they have questions or are unfaanswer questions, discuss the decision-mak ing process, and receive comments and concerns.
Community News:
community news@
criernewspapers.com
Letlers to the Editor
thecrier@mindspring.com

| Bith and Bridal |
| :---: |
| Announcements: |
| community news@ |
| criemewspopers.com |

TORGRIMSON

Terry Landrum Direct: 404.665.1227 tlandrum@pftlegal.com

## January 11, 2016

Rebecca Keefer, AICP
City Planner/Director of Sustainability
City of Dunwody
41 Perimeter Center East Suite 250
Dunwoody, GA 30346
RE: Dunwoody Crown Towers
Applicant-Initiated Neighborhood Meeting
244 Perimeter Center Parkway, DeKalb County, Atlanta, GA
Dear Rebecca:
Enclosed please find the Applicant-Initiated Meeting notice that was mailed on January 11, 2016 to residential owners of property within 1,000 feet of the subject property

Sincerely,
PUR8LE) FRIESE TORGRIMISON, LLP


Enclosure

This letter is to inform you that Dunwoody Crown Towers, LLC intends to submit a Rezoning Application and three Special Land Use Permit Applications to the City of Dunwoody for land within 1,000 feet of your property. The Applicant will be submitting a rezoning application and three Special Land Use Permit ("SLUP") Applications for property at 244 Perimeter Center Parkway in order to develop Dunwoody Crown Towers, a mixed use development with residentia and non-residential uses. The Applicant will be holding a neighborhood meeting to discuss the proposed rezoning application and to answer any questions that you may have regarding the applications and proposed development. Specific details regarding the Rezoning Application, Special Land Use Permit Applications, and Applicant-initiated neighborhood meeting are below.

CASE NUMBER: TBD (this will be provided at the time the application is filed with the City)
APPLICANT NAME: Dunwoody Crown Towers, LLC
JURISDICTION: City of Dunwoody
ZONING CHANGE: O-I to CR-1 (Commercial-Residential)
SLUP Request: (1) SLUP to increase the height of the multi-unit building; (2) SLUP to increase the height of the mixed use vertical building; and a (3) SLUP to allow a multi-unit residential building within the CR-1 zoning district

STREET LOCATION: 244 Perimeter Center Parkway; +/- 4.75 acres
PROPOSED DEVELOPMENT: Multi-Unit Residential Tower; Mixed Use Vertical Tower (Hotel and Residential uses); 3-story Retail Building

APPLICANT-INITIATED MEETING
D.W. Brooks Conference Center

244 Perimeter Center Parkway ( ${ }^{\text {st }}$ floor)
Dunwoody, GA 30346
February 1, 2016
7:00 pm
If you have questions about the Applications or the applicant-initiated meeting, please contact Jill Arnold at (404) 665-1243 or jarnold@pftlegal.com


SIGN IN SHEET for NEIGHBORS
Dunwoody Crown Towers
February 1, 2016


## Letter of Intent and Review Criteria

City of Dunwoody Special Land Use Permit Application
Applicant: Dunwoody Crown Towers, LLC
Property: 244 Perimeter Center Parkway
+/- 4.75 acres of Land
Located in
Land Lot 329 of the $18^{\text {th }}$ District, DeKalb County
3 SLUP Requests: (1) a SLUP to increase the height of the multi-unit residential building; (2) a SLUP to increase the height of the mixed use vertical building; and (3) a SLUP to allow multi-unit residential use in the CR-1 zoning district.

## Submitted for Applicant by:

G. Douglas Dillard

Jillian Skinner Arnold
PURSLEY FRIESE TORGRIMSON
1230 Peachtree Street, Suite 1200
Atlanta, Georgia 30309
(404) 665-1243
ddillard@pftlegal.com
jarnold@pftlegal.com
I. INTRODUCTION

The $+/-4.75$ acre property is located at 244 Perimeter Center Parkway and is currently zoned O-I (the "Property"). It is bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping center development to the north. The Applicant, Dunwoody Crown Towers, LLC, intends to develop Dunwoody Crown Towers, a mixed use development with luxury residential and non-residential uses that will significantly enrich the design and livability of the Perimeter Center area and create a true gateway to the City of Dunwoody.

The Applicant respectfully requests 3 Special Land Use Permits ("SLUPs") from the City of Dunwoody: (1) a SLUP to increase the height of the multi-unit residential building ("Crown Tower 1 " on enclosed conceptual drawings); (2) a SLUP to increase the height of the mixed use vertical building ("Crown Tower 2" on conceptual drawings); and (3) a SLUP to allow multi-unit residential use in the CR-1 zoning district.

Concurrent with the 3 Special Land Use Permit ("SLUP") Applications, the Applicant is also submitting an Amendment Application for the Property and a Variance Application for the adjacent property. The Amendment Application requests said Property (4.75-acre parcel" "Site B" on the enclosed site plan) be rezoned from O-I to CR-1 in order to develop Dunwoody Crown Towers, which includes (i) one mixed use vertical building with a hotel, residential units, and accessory uses, (ii) one multi-unit residential building, and (iii) a retail building. The requested 0 front yard setback variance is for the existing Goldkist building on the adjacent 10.2 -acre property, which will be set back 0 ' from the proposed new road extending to the Property.

The Property is currently part of a larger 15 acre-parcel, but will be subdivided as a legally separate lot upon approval of the rezoning request by the Dunwoody City Council. Therefore, the current 15 -acre parcel will be split into two tracts-Site A ( +-9.2 acres, after road dedication) and Site B (+/-4.75 acres, after road dedication) as shown on the enclosed Site Plan. The owner is dedicating approximately 1.03 acres for the extension of a new road from the existing Goldkist Road to the Property at Site B. This subdivision is necessitated by the City's prohibition of dualzoned parcels. Please note, the rezoning and SLUP applications are for Site B. Site A is NOT included in the rezoning or SLUP applications. Site A is shown on the conceptual plans to illustrate existing entitlements pursuant to the variance granted by DeKalb County on February 9 , 999. Site A will remain zoned O-I with existing entitlements as shown on the enclosed conceptual plans.

## II. SLUP REQUEST

The Applicant has included its 3 SLUP requests in one SLUP application. Each SLUP request will be explained in detail below and evaluated based on the criteria established by the City of

Dunwoody. The Applicant's 3 SLUP requests satisfy the City's criteria for SLUP applications as set forth in Section III below. As such, the Applicant respectfully requests the City Council grant the SLUP applications, as requested by the Applicant.

## Brief Zoning History

The 15 -acre parcel currently has significant non-residential development entitlements. In 1999, DeKalb County approved four variances for the 15 -acre parcel at 244 Perimeter Center Parkway: (1) a 28 -story hotel; (2) a conference center and parking structure ( 6 levels with 600 parking spaces); (3) two 24 -story office buildings; and (4) two 10 -level parking decks with 4,304 parking spaces. These entitlements remain on the 15 -acre parcel today. The Applicant intends to concentrate the existing above-referenced entitlements on the adjacent 9.2 -acre parcel (acreage calculation after road dedication), and rezone the subject Property to CR-1 in order to add a residential mix of uses into the overall development to create a true transit-oriented mixed use community. The current development entitlements (i.e. a 28 -story hotel, conference center with parking structure, two 28 -story office buildings, and a parking deck) fit within the 9.2 -acre parcel while still complying with O-I development regulations, including lot coverage.

## The Proposed Development is Consistent with Dunwoody's Comprehensive Plan

The Applicant's proposed development and SLUP requests are consistent with the City of Dunwoody's Comprehensive Plan. The subject property is located in the Perimeter Center Character Area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels, and high-end restaurants" to create a true "live-work" environment. ${ }^{1}$ The City recognizes the value in mixed-use, transit-oriented development, but has concerns about the impact on schools. ${ }^{2}$ Additional goals of the City's Comprehensive Plan include:

- Achieve a lifelong-community for residents who can age in place with safe access to medical, recreational, and other necessary services. ${ }^{3}$
- Increase connectivity and enhance transportation options for all forms of travel. ${ }^{4}$
- Reduce surface parking and promote livable centers in the immediate areas surrounding the MARTA station. ${ }^{5}$
- Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route. ${ }^{6}$

[^1]The Applicant's proposed mixed use development and SLUP requests are consistent with the goals and intent of the Perimeter Center Character Area. The rezoning and SLUP requests seek to add luxury residences to the non-residential uses in the area, thereby creating a true "livable" center where Dunwoody residents are able to live, work, shop, play, and access mass transit within one development. Looking at the broader context, this Property is situated next to the new State Farm campus, Perimeter Center Mall, and the yet-to-be-developed GID/High Street site, which likewise includes a mix of land uses. This development complements each of those developments by adding residential opportunities for the employees of State Farm and the adjacent office uses.

Moreover, the residential component of the mixed use project will be well-suited for those Dunwoody residents looking to "age in place" within the City. These individuals are looking to downsize from larger single-family detached homes to smaller residences with less maintenance, yet still remain in the community and part of their established social networks. The Applicant's proposed residences will provide an "age in place" opportunity for Dunwoody residents looking to downsize yet remain in Dunwoody.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and for those who want to move to the area. Sufficient parking is provided on site, and MARTA is within walking distance of the Property making transit a realistic transportation alternative. The heights and uses proposed in the enclosed SLUP applications are also consistent with the City's draft Perimeter Center District. The Perimeter Center District (PC1) envisions a mix of uses in a development, and promotes heights up to 30 stories. Owneroccupied residences, hotels, and retail uses are permitted by right in the PC-1 District.

## III. IMPACT ANALYSIS

This section includes the Applicant's responses for each of the three SLUP requests. As such, the Applicant respectfully requests the City Council grant the SLUP applications.

1. SLUP to Increase the Height of the Multi-Unit Residential Building to 35 Stories (Crown Tower 1)
The Applicant satisfies all of the criteria for the requested SLUP as set forth in the City's Zoning Code, Section 27-359.
a. Whether the proposed use is consistent with the policies of the comprehensive plan

Yes, the proposed use and height is consistent with the policies and intent of the City's Comprehensive Plan. The subject property is located in the Perimeter Center Character Area, which seeks to be a "livable regional center with first-class office, retail, entertainment, hotels,
and high-end restaurants" to create a true "live-work" environment. The rezoning request seeks to add high-quality residential units to the area, thereby creating a true "livable" center where Dunwoody residents are able to live, work, shop, play, and access mass transit within one development. A well-designed, high-rise residential tower is appropriate for the area.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area.
b. Whether the proposed use complies with the requirements of the zoning ordinance.

Yes, the proposed use complies with the requirements of the CR-1 Zoning District. The CR1 Zoning District supports a mix of residential and commercial uses within one development, which is what is proposed by the Applicant here. Moreover, the Code anticipates the need to exceed the 3 -story height limit in the CR-1 zoning district by permitting height increases through the SLUP process. The height is also consistent with the current draft copy of the Perimeter Center Zoning District (PC-1) which envisions a mix of uses in a development, and promotes buildings up to 30 stories. The proposed height of the multi-unit building, at 32-35 stories, is consistent with the future vision for this area. The Perimeter Center area has been designated a "gateway" to Dunwoody and as such must promote projects of the highest and most unique quality, such as the Applicant's proposed Crown Dunwoody Towers development.
c. Whether the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking and all other applicable requirements of the subject zoning district.

Yes, the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking, and all other applicable requirements of the subject zoning district. The proposed development is well within the open space requirements of the CR-1 zoning district. The CR-1 zoning district requires $20 \%$ open space. The proposed development is currently showing approximately $40 \%$ open space on the Property. Moreover, the development is adequately parked. The Dunwoody Zoning Code allows a $25 \%$ reduction in the number of parking spaces if the property is located within 1,500 feet of a MARTA station. See Dunwoody Code, Section 27-204. Here, the Property is located within 1,500 feet of the MARTA station and therefore the reduction in parking provision is applicable upon approval by the Community Development Director. Moreover, the Property's close proximity to MARTA makes transit a realistic transportation
d. Whether the proposed use is compatible with adjacent properties and land uses, including consideration of:

The proposed use is compatible with adjacent properties and land uses which are mostly nonresidential in character. As noted above, the Property is bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping center development to the north. More specifically, the Property is situated next to the new State Farm site, Perimeter Center Mall, and the yet-to-be-developed GID/High Street site, which likewise includes a mix of land uses. The proposed residential uses on the Property within the broader mixed-use campus will promote the "live work" goals of the Perimeter Center area and complement nearby employment centers by providing residential opportunities for those Dunwoody employees.
e. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use.

No, the proposed use will not create any adverse impacts upon adjoining land uses reason of noise, smoke, odor, dust or vibration generated by the proposed use. The proposed residential use is relatively low-impact and will not generate burdensome or obtrusive noise, smoke, odor, dust or vibration in its operations.
f. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use. The surrounding land uses are all nonresidential uses, which will not be negatively impacted by the hours of operation of the proposed residential, hotel, retail, and accessory uses
g. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the manner of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use.
h. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the propose use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the proposed use. The proposed development may actually reduce the burden on road infrastructure and existing transportation facilities in the area by providing new transportation infrastructure. Moreover, the Property's close proximity to the Dunwoody MARTA station makes transit a realistic transportation alternative.
i. Whether the size, scale and massing of proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings.

Yes, the size, scale and massing of the proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings. The proposed multi-unit building height will be between $32-35$ stories in height. This height is appropriate in light of the significant height entitlements on the adjacent 9.2 -acre parcel (Site A), which includes a 28 -story hotel and two 24 -story office buildings, and the heights of surrounding building in the Perimeter area, with the adjacent Ravinia building at 31 stories and the King and Queen towers along the I- 285 Corridor at 28 stories.
j. Whether the proposed plan will adversely affect historic buildings, sites, districts, or archaeological resources.

No, the zoning proposal will not adversely affect historic buildings, sites, districts, or archaeological resources. The proposed development is located next to the Martin family cemetery. The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected. The Applicant has spoken with representatives from the Dunwoody Preservation Trust, the organization tasked with maintaining the cemetery, to work on a mutually beneficial strategy for the cemetery's continued maintenance and accessibility.
k. Whether public services, public facilities and utilities - including motorized and nonmotorized transportation facilities - are adequate to serve the proposed use.

Yes, public services, facilities and utilities are adequate to serve the proposed use. The project is also adjacent to the Dunwoody MARTA station which makes transit a realistic transportation alternative for those commuting to and from the Property

1. Whether adequate means of ingress and egress are proposed, with particular reference to non-motorized and motorized traffic safety and convenience, traffic flow and control and emergency vehicle access.

Yes，adequate means of ingress and egress are proposed for the site．The site may be accessed off of Perimeter Center Parkway from a newly－created road with sufficient capacity to handle any new trips generated by the Applicant＇s proposed development． Future transportation improvements in this area may also add another access point directly off of I－285 to the Property，though this access point（the proposed Westside Connector）has not yet been approved．The Property is also accessible by transit and a pedestrian path from the MARTA station to the Property．
m．Whether adequate provision has been made for refuse and service areas
Yes，adequate provision has been made for refuse and service areas．
n．Whether the proposed building as a result of its proposed height will create a negative shadow impact on any adjoining lot or building．

No，the proposed building will not create a negative shadow impact on any adjoining lot or building．Buildings to the east and west of the Property have similar heights，at 28 －stories，24－ stories，and 31－stories across Ashford－Dunwoody Road．

## 2．SLUP to Increase the Height of the Mixed－Use，Vertical Building to 29 Stories（Crown Tower 2）

The Applicant satisfies all of the criteria for the requested SLUP as set forth in the City＇s Zoning Code，Section 27－359．
a．Whether the proposed use is consistent with the policies of the comprehensive plan．

Yes，the proposed use and height is consistent with the policies and intent of the City＇s Comprehensive Plan．The subject property is located in the Perimeter Center Character Area， which seeks to be a＂livable regional center with first－class office，retail，entertainment，hotels， and high－end restaurants＂to create a true＂live－work＂environment．The rezoning request seeks to add high－quality residential units to the area，thereby creating a true＂livable＂center where Dunwoody residents are able to live，work，shop，play，and access mass transit within one development．A well－designed，high－rise vertical mixed use tower，with residences and hotel uses，is appropriate for the area．

Overall，the proposed mixed use development will complement the surrounding mix of uses in the area，is consistent with the City＇s Comprehensive Plan and its vision for a＂live work＂
mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area.
b. Whether the proposed use complies with the requirements of the zoning ordinance.

Yes, the proposed use complies with the requirements of the CR-1 Zoning District. The CR-1 Zoning District supports a mix of residential and commercial uses within one development, which is what is proposed by the Applicant here. Moreover, the Code anticipates the need to exceed the 3-story height limit in the CR-1 zoning district by permitting height increases through the SLUP process. The height is also consistent with the current draft copy of the Perimeter Center Zoning District (PC-1) envisions a mix of uses in a development, and promotes buildings up to 30 stories. The proposed height of the mixed use vertical building, between 27-29 stories, is consistent with the future vision for this area. The Perimeter Center area has been designated a "gateway" to Dunwoody and as such must promote projects of the highest and most unique quality, such as the Applicant's proposed Crown Dunwoody Towers development.
c. Whether the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking and all other applicable requirements of the subject zoning district.

Yes, the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking, and all other applicable requirements of the subject zoning district. The proposed development is well within the open space requirements of the CR-1 zoning district. The CR-1 zoning district requires $20 \%$ open space. The proposed development is currently showing approximately $40 \%$ open space on the Property. Moreover, the development is adequately parked. The Dunwoody Zoning Code allows a $25 \%$ reduction in the number of parking spaces if the property is located within 1,500 feet of a MARTA station. See Dunwoody Code, Section 27-204. Here, the Property is located within 1,500 feet of the MARTA station and therefore the reduction in parking provision is applicable upon approval by the Community Development Director. Moreover, the Property's close proximity to MARTA makes transit a realistic transportation alternative.
d. Whether the proposed use is compatible with adjacent properties and land uses, including consideration of:

The proposed use is compatible with adjacent properties and land uses which are mostly nonresidential in character. As noted above, the Property is bordered by I-285 to the south,

Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping center development to the north. More specifically, the Property is situated next to the new State Farm site, Perimeter Center Mall, and the yet-to-be-developed GID/High Street site, which likewise includes a mix of land uses. The proposed residential uses on the Property within the broader mixed-use campus will promote the "live work" goals of the Perimete Center area and complement nearby employment centers by providing residential opportunities for those Dunwoody employees.
e. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use.

No, the proposed use will not create any adverse impacts upon adjoining land uses reason of noise, smoke, odor, dust or vibration generated by the proposed use. The proposed hotel, residential and retail uses are relatively low-impact uses that will not generate burdensome or obtrusive noise, smoke, odor, dust or vibration.
f. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use. The surrounding land uses are all nonresidential uses, which will not be negatively impacted by the hours of operation of the proposed residential, hotel, retail, and accessory uses.
g. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the manner of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use.
h. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the propose use

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the proposed use. The proposed development may actually reduce the burden on road infrastructure and existing transportation facilities in the area by providing new transportation infrastructure.
Moreover, the Property's close proximity to the Dunwoody MARTA station makes transit a realistic transportation alternative.
i. Whether the size, scale and massing of proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings.

Yes, the size, scale and massing of the proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings. The proposed mixed use vertical building will be between 27-29 stories in height. This height is appropriate in light of the significant height entitlements on the adjacent 9.2 -acre parcel (Site A), which includes a 28 -story hotel and two 24 -story office buildings, and the heights of surrounding building in the Perimeter area, with the adjacent Ravinia building at 31 stories and the King and Queen towers along the I- 285 Corridor at 28 stories.
j. Whether the proposed plan will adversely affect historic buildings, sites, districts, or archaeological resources.

No, the zoning proposal will not adversely affect historic buildings, sites, districts, or archaeological resources. The proposed development is located next to the Martin family cemetery. The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected. The Applicant has spoken with representatives from the Dunwoody Preservation Trust, the organization tasked with maintaining the cemetery, to work on a mutually beneficial strategy for the cemetery's continued maintenance and accessibility.
k. Whether public services, public facilities and utilities - including motorized and nonmotorized transportation facilities - are adequate to serve the proposed use.

Yes, public services, facilities and utilities are adequate to serve the proposed use. The project is also adjacent to the Dunwoody MARTA station which makes transit a realistic transportation alternative for those commuting to and from the Property.

1. Whether adequate means of ingress and egress are proposed, with particular reference to non-motorized and motorized traffic safety and convenience, traffic flow and control and emergency vehicle access.

Yes, adequate means of ingress and egress are proposed for the site. The site may be accessed off of Perimeter Center Parkway from a newly-created road with sufficient capacity to handle any new trips generated by the Applicant's proposed development. Future transportation improvements in this area may also add another access point directly off of I-285 to the Property, though this access point (the proposed Westside Connector) has
not yet been approved．The Property is also accessible by transit and a pedestrian path from the MARTA station to the Property．
m．Whether adequate provision has been made for refuse and service areas．
Yes，adequate provision has been made for refuse and service areas．
n．Whether the proposed building as a result of its proposed height will create a negative shadow impact on any adjoining lot or building．

No，the proposed building will not create a negative shadow impact on any adjoining lot or building．Buildings to the east and west of the Property have similar heights，at 28 －stories， 24 －stories，and 31－stories across Ashford－Dunwoody Road．

3．SLUP to Allow Multi－Unit Residential Use on the Property（Crown Tower 1）

The Applicant satisfies all of the criteria for the requested SLUP as set forth in the City＇s Zoning Code，Section 27－359．
a．Whether the proposed use is consistent with the policies of the comprehensive plan．

Yes，the proposed use and height is consistent with the policies and intent of the City＇s Comprehensive Plan．The subject property is located in the Perimeter Center Character Area， which seeks to be a＂livable regional center with first－class office，retail，entertainment，hotels， and high－end restaurants＂to create a true＂live－work＂environment．The rezoning request seeks to add high－quality residential units to the area，thereby creating a true＂livable＂center where Dunwoody residents are able to live，work，shop，play，and access mass transit within one development．A well－designed，residential tower is appropriate for the area．

The Comprehensive Plan also promotes＂high quality design standards and building materials．＂The Applicant＇s proposed luxury residential tower will include high quality finishes and amenities，including hardwood flooring in foyer，kitchens and bathrooms，quartz countertops，stainless steel appliances，walk－in closets with custom shelving，and smart home technology with thermostats and keyless locks．A Homeowners Association will be created to manage residential operations．

In addition to the luxury features included in each individual unit，residents will have access to various amenities including a spacious club room with bar，indoor \＆outdoor fireplaces，and
state of the art outdoor kitchen, a business center, fitness center, pools and cabanas, and a massage/treatment room.

Overall, the proposed mixed use development will complement the surrounding mix of uses in the area, is consistent with the City's Comprehensive Plan and its vision for a "live work" mixed use environment in the Perimeter Center area, and provides residential options to those already living in Dunwoody and those who want to move to the area.
b. Whether the proposed use complies with the requirements of the zoning ordinance.

Yes, the proposed use complies with the requirements of the CR-1 Zoning District. The CR1 Zoning District supports a mix of residential and commercial uses within one development, which is what is proposed by the Applicant here. Moreover, the Code anticipates the need to exceed the 3 -story height limit in the CR-1 zoning district by permitting height increases through the SLUP process. The Perimeter Center area has been designated a "gateway" to Dunwoody and as such must promote projects of the highest and most unique quality, such as the Applicant's proposed Crown Dunwoody Towers development.
c. Whether the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking and all other applicable requirements of the subject zoning district.

Yes, the proposed site provides adequate land area for the proposed use, including provision of all required open space, off-street parking, and all other applicable requirements of the subject zoning district. The proposed development is well within the open space requirements of the CR-1 zoning district. The CR-1 zoning district requires $20 \%$ open space. The proposed development is currently showing approximately $40 \%$ open space on the Property. Moreover, the development is adequately parked. The Dunwoody Zoning Code allows a $25 \%$ reduction in the number of parking spaces if the property is located within 1,500 feet of a MARTA station. See Dunwoody Code, Section 27-204. Here, the Property is located within 1,500 feet of the MARTA station and therefore the reduction in parking provision is applicable upon approval by the Community Development Director. Moreover, the Property's close proximity to MARTA makes transit a realistic transportation alternative.
d. Whether the proposed use is compatible with adjacent properties and land uses, including consideration of:

The proposed use is compatible with adjacent properties and land uses which are mostly nonresidential in character. As noted above, the Property is bordered by I-285 to the south, Perimeter Center Parkway to the west, Ashford-Dunwoody Road to the east, and a shopping
center development to the north. More specifically, the Property is situated next to the new State Farm site, Perimeter Center Mall, and the yet-to-be-developed GID/High Street site, which likewise includes a mix of land uses. The proposed residential uses on the Property within the broader mixed-use campus will promote the "live work" goals of the Perimeter Center area and complement nearby employment centers by providing residential opportunities for those Dunwoody employees.
e. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use.

No, the proposed use will not create any adverse impacts upon adjoining land uses reason of noise, smoke, odor, dust or vibration generated by the proposed use. The proposed residential use is relatively low-impact and will not generate burdensome or obtrusive noise, smoke, odor, dust or vibration.
f. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the hours of operation of the proposed use. The surrounding land uses are all nonresidential uses, which will not be negatively impacted by the hours of operation of the proposed residential, hotel, retail, and accessory uses
g. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the manner of operation of the proposed use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use.
h. Whether the proposed use will create adverse impact upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the propose use.

No, the proposed use will not create adverse impacts upon any adjoining land use by reason of the character of vehicles or the volume of traffic generated by the proposed use. The proposed development may actually reduce the burden on road infrastructure and existing transportation facilities in the area by providing new transportation infrastructure.
Moreover, the Property's close proximity to the Dunwoody MARTA station makes transit a realistic transportation alternative.
i. Whether the size, scale and massing of proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings.

Yes, the size, scale and massing of the proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings. The proposed multi-unit building height will be between 32-35 stories in height. This height is appropriate in light of the significant height entitlements on the adjacent 9.2-acre parcel (Site A), which includes a 28 -story hotel and two 24 -story office buildings, and the heights of surrounding building in the Perimeter area, with the adjacent Ravinia building at 31 stories and the King and Queen towers along the I-285 Corridor at 28 stories.
j. Whether the proposed plan will adversely affect historic buildings, sites, districts, or archaeological resources.

No, the zoning proposal will not adversely affect historic buildings, sites, districts, or archaeological resources. The proposed development is located next to the Martin family cemetery. The development will have no impact on the cemetery or the easement providing ingress to and from the cemetery. The cemetery will at all times be protected. The Applicant has spoken with representatives from the Dunwoody Preservation Trust, the organization tasked with maintaining the cemetery, to work on a mutually beneficial strategy for the cemetery's continued maintenance and accessibility.
k. Whether public services, public facilities and utilities - including motorized and nonmotorized transportation facilities - are adequate to serve the proposed use.

Yes, public services, facilities and utilities are adequate to serve the proposed use. The project is also adjacent to the Dunwoody MARTA station which makes transit a realistic transportation alternative for those commuting to and from the Property.
I. Whether adequate means of ingress and egress are proposed, with particular reference to non-motorized and motorized traffic safety and convenience, traffic flow and control and emergency vehicle access.

Yes, adequate means of ingress and egress are proposed for the site. The site may be accessed off of Perimeter Center Parkway from a newly-created road with sufficient capacity to handle any new trips generated by the Applicant's proposed development Future transportation improvements in this area may also add another access point directly off of I-285 to the Property, though this access point (the proposed Westside Connector) has
not yet been approved. The Property is also accessible by transit and a pedestrian path from the MARTA station to the Property.
m. Whether adequate provision has been made for refuse and service areas.

Yes, adequate provision has been made for refuse and service areas.
n. Whether the proposed building as a result of its proposed height will create a negative shadow impact on any adjoining lot or building.

No, the proposed building will not create a negative shadow impact on any adjoining lot or building. Buildings to the east and west of the Property have similar heights, at 28 -stories, 24 -stories, and 31 -stories across Ashford-Dunwoody Road.

## IV. REQUIRED CONSTITUTIONAL NOTICE

Georgia law and the procedures of the City of Dunwoody require us to raise Federal and State constitutional objections during the Amendment application process. While the Applicant anticipates a smooth application process, failure to raise constitutional objections at this stage may mean that the Applicant will be barred from raising important legal claims later in the process. Accordingly, we are required to raise the following constitutional objections at this time:

The portions of the City of Dunwoody Zoning Ordinance, facially and as applied to the Property, which restrict the Property to any zoning classification, uses, or to any zoning district other than that proposed by the Applicant are unconstitutional in that they would destroy the Applicant's property rights without first paying fair, adequate and just compensation for such rights, in violation of Article I, Section I, Paragraph I and Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

The application of the City of Dunwoody Zoning Ordinance, facially and as applied to the Property, which restricts the Property to any zoning classification, uses, or to any zoning classification other than the classification as proposed by the Applicant is unconstitutional, illegal, null and void, constituting a taking of Applicant's Property in violation of the Just Compensation Clause of the Fifth Amendment to the Constitution of the United States; Article I, Section I, Paragraph I, and Section III, Paragraph I of the Constitution of the State of Georgia of 1983; and the Equal Protection and Due Process Clauses of the Fourteenth Amendment to the Constitution of the United States denying the Applicant an economically viable use of its land while not substantially advancing legitimate state interests.

A denial of this Application would constitute an arbitrary and capricious act by the City of Dunwoody City Council without any rational basis therefore constituting an abuse of discretion in violation of Article I, Section I, Paragraph I and Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and the Due Process Clause of the Fourteenth Amendment to the Constitution of the United States.

A refusal by City of Dunwoody City Council to approve the Applicant's 3 requested SLUP applications in accordance with the zoning and SLUP criteria requirements as requested by the Applicant would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owners of the similarly situated property in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States. Any rezoning or SLUP approval of the Property subject to conditions which are different from the conditions requested by the Applicant, to the extent such different conditions would have the effect of further restricting Applicant's utilization of the Property, would also constitute an arbitrary, capricious and discriminatory act in zoning the Property to a unconstitutional classification and would likewise violate each of the provisions of the State and Federal Constitutions set forth hereinabove.

For all the foregoing reasons, it is submitted on behalf of the Applicant that the SLUP Applications meet the requirements of the City of Dunwoody Zoning Code.

If there are any questions about the SLUP requests, you may contact me at 404-665-1243 or at jarnold@pftlegal.com.


## Campaign Disclosure Statement

## Dunwoody

41 Perimeter Center East｜Dunwoody，GA 30346 Phone：（678）382－6800｜Fax：（770）396－4828

Have you，within the two years immediately preceding the filing of this application，made campaign contributions aggregating \＄250．00 or more to a member of the City of Dunwoody City Council or a


If the answer above is yes，please complete the following section

| Date | Government Official | Official Position | Description | Amount |
| :--- | :--- | :--- | :--- | :--- |
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G. DOUGLAS DILLARD and JILLIAN S. ARNOLD, of the law firm of PURSLEY FRIESE TORGRIMSON, and formerly of WEISSMAN, NOWACK, CURRY \& WILCO, P.C., have been retained to represent DUNWOODY CROWN TOWERS, LLC before the CITY OF DUNWOODY, GEORGIA. Pursuant to the provisions of O.C.G.A. $\S 36-67 \mathrm{~A}-3$, please find below a list of the contributions made by the above-named individuals, or the law firms of WEISSMAN, NOWACK, CURRY \& WILCO, P.C. and PURSLEY FRIESE TORGRIMSON, in the past two years, aggregating $\$ 250.00$ or more, to local government officials who may review this Application.

NAME OF GOV'T. OFFICIAL POSITION AMOUNT OF DATE OF None

PURSLEY FRIESE TORGRIMSON


1230 Peachtree Street, NE
Suite 1200
Atlanta, GA 30309
404-665-1243

## LEGAL DESCRIPTION - TRACT B

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot(s) 329 \& 330 of the $18^{\text {th }}$ District, DeKalb County, Georgia and being more particularly described as follows:

Beginning at a point at the intersection of the Western Right-of-Way line of Ashford Dunwoody Rd (Right-of-Way Varies), and the Northern Right-of-Way line of Interstate 285 (Right-of-Way Varies), said point being the TRUE POINT OF BEGINNING;

Thence leaving the Western Right-of-Way line of Ashford Dunwoody Rd and following along the Northern Right-of-Way line of Interstate 285, South 59 degrees 59 minutes 24 seconds West, a distance of 768.56 feet to a point;

Thence leaving the Northern Right-of-Way line of Interstate 285 (Right-of-Way Varies), North 00 degrees 12 minutes 53 seconds West, a distance of 218.34 feet to a point;

Thence North 89 degrees 47 minutes 07 seconds West, a distance of 207.86 feet to a point;
Thence North 00 degrees 12 minutes 53 seconds East, a distance of 161.70 feet to a point;
Thence South 89 degrees 47 minutes 07 seconds East, a distance of 100.09 feet to a point;


Thence South 89 degrees 33 minutes 22 seconds East, a distance of 787.85 feet to an iron pin with cap found on the Western Right-of-Way line of Ashford Dunwoody Rd (Right-of-Way Varies);

Thence continuing along said Right-of-Way, South 16 degrees 51 minutes 13 seconds West, a distance of 55.90 feet to a point, said point being the TRUE POINT OF BEGINNING.

Said tract containing 4.725 acres.




## DUNWOODY CROWN TOWERS

RE－ZONING APPLICATION FOR SITE＂B＂
244 PERIMETER
CENTER PARKWAY
DUNWOODY GA
DRI NUMBER： 2567

## PROJECT TEAM

OWNER
CROWN HOLDINGS GROUP
4828 ASHFORD DUNWOODY RD，ATLANTA GA 30338
Contact：NAME
Charlie brown
ARCHITECT
THOMPSON，VENTULETT，STAINBACK \＆
ASSOCIATES，INC ARCHITECTS
230 PEACHTREE ST NE，SUITE 2700 ATLANTA GA 30309
Contact：$\quad \begin{aligned} & \text { ROB SVEDBERG } \\ & 404.840 .4762\end{aligned}$

## ATTORNEYS

PURSLEY FRIESE TORGRIMSON
PROMENADE SUITE 12001230 PEACHTREE ST NE ATLANTA GA 30309 Contact： 4．665．1244

TRAFFIC CONSULTANT
MORELAND ALTOBELLI ASSOCIATES，INC
2450 COMMERCE AVENUE，SUITE 100，DULUTH，GA 30096
Contact：
KARLA POSHEDLY
770．263．5945

| Sheet List |  |
| :---: | :---: |
| Sheet <br> Number | Sheet Name |


| CP－000 | COVERSHEET |
| :--- | :--- |
| CP－001 | CONCEPTUAL PLAN－SITE |
| CP－002 | CONCEPTUAL PLAN－ELEVATIONS |
| CP－003 | CONCEPTUAL PLAN－MASSING |
| CP－004 | STREET SECTION \＆TRANSIT PROXIMITY |
| CP－005 | PEDESTRIAN CIRCULATION |
| CP－006 | CONCEPTUAL PLAN－QUALITATIVE ILLUSTRATION |
| CP－007 | CONCEPTUAL PLAN－QUALITATIVE ILLUSTRATION |
| CP－008 | CONCEPTUAL PLAN－QUALITATIVE ILLUSTRATION |

 NOTE：PARKING FOR SITE＂BB＂IS ACC
PARKING AREAS IS NOT INCLUDED．

## LOCATION MAP




|  | CROW $\mathbf{N}^{-}$ <br> CROWN HOLDINGS GROUP <br> 4828 ASHFORD DUNWOODY ROAD, ATLANTA GA 30338 |  |  |  |  | Dwg so. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| VS |  |  |  |  |  | CP-001 |
| THOMPSOON VENTUE ET STANBACK \& ASSOCATES, INC. 1233 PEACHIREE STREETNE SUTE 2700 ATANIA, GEORGA 30309 8886600 |  |  | $\begin{array}{\|l} \text { scALE } \\ \text { As indicated } \end{array}$ | $\begin{array}{\|l\|} \hline \text { DATE } \\ 03 / 30 / 2016 \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { PROJECT NO. } \\ 04513.000 \\ \hline \end{array}$ |  |







# LED SIGNAGE RESEARCH AND INFORMATION 

A compilation of various studies and articles addressing LED signage

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## A. Executive Overview

The Georgia Constitution grants to local government the authority over planning and zoning. Ga. Const. 1983, Art. IX, Sect. II, Para. IV. The traditional litmus test for the propriety and enforceability of planning and zoning laws is whether the law is substantially related to the public health, general welfare, safety, and morals. See, e.g., Gradous v. Board of Commissioners, 256 Ga. 469(1986); Barret v. Hamby, 235 Ga. 262 (1975). Within these parameters it is recognized that regulating on the basics of aesthetics is consistent with these basic guidelines. See, e.g., Warren v. City of Marietta, 249 Ga. 205 (1982).

In addition to contending with these parameters, sign regulation is also impacted by the constitutional protections afforded to speech. Under consideration is the City's current prohibition of "LED signs and similar technologies." Code of Ordinances, Sect. 20-51(22). ${ }^{1}$ Such a content-neutral regulation must be "the least restrictive means of furthering the government's significant interests, while still leaving open ample alternatives to communicate." Grady v. Unified Government of Athens-Clarke County, 289 Ga 726, 728 (2011).

Against this backdrop, LED signage presents unique challenges and issues for local governments with a growing body of literature indicating that LED signage has a negative impact on the public health, safety, and general welfare, including the aesthetics of a community. Examples of this literature are provided. Included within the body of literature presented in these materials are various compendiums describing and assessing a much larger volume of study in this area. While you are encouraged to review the materials in their detail in addition to this Executive Overview and Executive Summary of the materials provided, a few points emerge that are pertinent to the City's authority over planning and zoning.

The literature increasingly suggests that LED signage presents more potential for distraction from the driving task. This, in turn, increases the potential for accidents and near-accidents. Threatened thereby is the public's safety, health, and general welfare. As some of the studies captured in these materials show, there appears to be a correlation between such signage and increases in accidents and near-accidents. In addition, the literature gathered and commented upon reflects that such signage is not as environmentally friendly, presenting unique challenges in recycling and requiring/consuming more energy. LED signage can also have an adverse aesthetic impact that can be described (as do some of the studies) as "the Las Vegas effect."

[^2]The research is still ongoing into the effects and impact of LED signage on driver distraction and other areas of potential impact. Contained in the materials are references to two studies underwritten by the outdoor sign industry where researchers concluded that LED signs had no measurable adverse impact on driver distraction in comparison with more traditional signage. As other materials captured here reflect, these studies have been largely panned for deficiencies in the methodology used and conclusions reached on what data has been released by the researchers. The same types of criticisms also have been leveled against a Federal Highway Administration study. Because the research is ongoing and, as some of the materials note, is very complex, a definitive set of guidelines for when, where, and how LED signage may be used, if possible at all, remains to yet be developed even by those who study in this field. Local government, however, is not required to wait for definitive rules or wait for a tragic event before regulating.
C. Executive Summary of Each Publication

1. Compendium of Recent Research Studies on Distraction from Commercial Electronic Variable Message Signs (CEVMS) (February 2016)

Summarizes various studies from around the world that have been conducted since 2008 and highlights the conclusions presented by those researchers and their studies. Then, synthesizing the information, the compendium highlights:
"Broadly summarized, the more recent studies have tended to find that outdoor advertising signs, particularly CEVMS, attract drivers’ attention, and that more dramatic and salient signs attract longer and more frequent glances. This attention is often captured through a "bottom up" physiological process, in which the driver attends to the sign unintentionally and unconsciously, with the eyes captured involuntarily by the sign's changing imagery, brightness, conspicuity, and/or movement.

Several of the reported studies suggested that the distraction caused by outdoor advertising signs could be tolerated by experienced drivers and when attentional or cognitive demands of the driving task were low, but that the risk increased when such signs competed for the driver's visual attention with more demanding road, traffic, and weather conditions, when travel speeds were higher, or when an unanticipated event or action (such as a sudden lane change or hard braking by a lead vehicle) occurred to which the driver had to respond quickly and correctly.

In addition, the more recent research continues to show that the drivers most susceptible to unsafe levels of distraction from roadside billboards are the young (who are more prone to distraction and less adept at emergency vehicle response) and the elderly (who have more difficulty with rapidly shifting attention, poorer night vision and glare susceptibility, and slower mental processing time). As will be seen in this Compendium, these concerns are heightened today, with our elderly driver population growing quickly, traffic increasingly dense, more roads under maintenance or repair (construction and work zones create added risks), and larger, brighter digital and video roadside advertising signs competing for the driver's attention.

Finally, the most recent epidemiological studies (dating from 2014 and 2015) have begun to demonstrate what has long been suspected but not proven - that roadside billboards are associated with increases in crash rates where such billboards are located.

> While employing a broad array of approaches and methodologies, the common theme clearly indicates that the more that commercial digital signs succeed in attracting the attention of motorists that render them a worthwhile investment for owners and advertisers, the more they represent a threat to safety along our busiest streets and highways, where these signs tend to be located." (emphasis in original)

Author highlights some of the deficiencies and shortcomings of two principal studies relied upon by the outdoor sign industry and the fact that both studies received "overall negative reviews from peer-reviewers. Both studies were sponsored by the Outdoor Advertising Association of American and its researcharm, the Foundation for Outdoor Advertising Research and Education. Since these two studies were released, one group of researchers has continued to study the matter under industry auspices, but the industry has declined releasing the research data for peer review of the methodologies and conclusions.

## 2. Digital Billboard Safety Amongst Motorists in Los Angeles (Spring 2009)

The author undertook to study the impact of digital LED billboards on traffic safety. As part of the study the author briefly surveyed other studies, including studies that were critical of the methodologies and conclusions of industrysponsored studies. The study undertaken concluded that digital LED billboards resulted in greater driver distraction than conventional static billboards and presented the following:
"Although evidence of several studies makes claims showing that there is no correlation between traffic collisions in environments with a digital billboard, most notably the two by the OAAA, there are others that prove legitimate increases in accidents, such as the WisDOT study. Therefore, this study cannot say with complete
confidence whether digital billboards contribute to the accident rate in any given area. As it was found in this study as well, what can be inferred is that drivers are more likely to glance at a digital billboards [sic] as opposed to a standard billboard ...; and the odds of a vehicular accident or near accident are twice as likely when a driver turns away from looking forward on the road for more than two seconds .... Although some studies show no correlation or are inconclusive between digital billboards and hazardous driving conditions, it is not sufficient to say that they are not detrimental to drivers because they do distract drivers and it should not rule out that they could cause a traffic accident. Nevertheless, no study has yet to show them to be safe."

## 3. Safety Impacts of the Emerging Digital Display Technology for Outdoor Advertising Signs - Final Report (April 2009)

Undertook a comprehensive study of the then-existing literature associated with the technology, how the technology is used and deployed, and the stimuli impact on drivers and their reactions. The study notes that much more study is necessary to test any hypotheses on the relationship of the technology to driver distraction/inattentiveness and the correlating relationship, if any, on safety. The study also highlights the multitude of variables that are involved in such studies and the possibility that study methods have not yet caught up to the emerging digital technology. Though providing some recommendations for deployment of the technology, the author notes that it may be years before fully informed guidance and regulation can be provided to those whose job it is to adopt and enforce guidance and regulation. The study goes on to note:
"We now know that extended episodes (two seconds or longer) in
which a driver's eyes are not attending to the driving task greatly
increases (by 3.7 times) the likelihood of a crash. ...Other researchers
have suggested that the upper limit for an acceptable distraction
episode may be 0.75 second ... or 1.6 seconds .... And, as shown ...
in an onroad study, and by [another study], there is growing evidence
that billboards can attract and hold a driver’s attention for the
extended periods of time that we now know to be unsafe. As stated
succinctly [in one of the studies] ... 'drivers are comfortable turning
their attention away from the road for a set period of time, regardless
of the demands of the driving task' ... And, ‘[t]hese data ... indicate
that it is likely that our out-of-vehicle tasks (which not only engage attention but also draw the eyes and visual attention away from in front of the vehicle) would have quite significant detrimental effects on processing the roadway in front of the vehicle.'

We also have data to show, despite a lack of analysis by the researchers, that an on-road study ... using an instrumented vehicle found many more such long glances made to DBBs and similar 'comparison sites' consisting of (among other things) on-premise digital signs, than there were to sites containing traditional, static billboards, or sites with no obvious visual elements. Indeed, the mean values for these long glance durations proved to be significantly greater for the sites with digital signs than for the others. From the same study, we have evidence expressed by the researchers that if we were to conduct our research at night we would find that all measures of eye glance behavior would demonstrate significantly greater amounts of distraction to digital advertisements than to fixed billboards or to the natural roadside environment, and that driver vehicle control behaviors such as lane-keeping and speed maintenance would also suffer in the presence of these digital signs. Because the design of this study minimized the differences between the characteristics of DBB sites and the others, and did not report all of the pertinent data collected, it seems reasonable to believe that the differences found might be more pronounced in a more rigorous experiment.

When we add the results of these recent, applied research studies, to ... earlier theoretical work ..., in which was demonstrated that our attention and our eye gaze is reflexively drawn to an object of different luminance in the visual field, that this occurs even when we are engaged in a primary task, and regardless of whether we have any interest in this irrelevant stimulus, and that we may have no recollection of having been attracted to it, we have a growing, and consistent picture of the adverse impact of irrelevant, outside-thevehicle distracters such as DBBs on driver performance."

The study concludes that:
"those who think that their job is to do what they can to enhance safety for the traveling public based upon the best available
information, now have, in our opinion, access to a strong and growing body of evidence, including evidence from industry supported research, that roadside digital advertising, attract drivers’ eyes away from the road for extended, demonstrably unsafe periods of time."

## 4. Electronic Billboards and Highway Safety (May 2003)

This is a report prepared for the Wisconsin Department of Transportation. It surveys and summarizes various studies and research papers concerning driver distraction and electronic signage. The study notes that "[c]ommercial EBBs [electronic billboards] are designed to 'catch the eye of drivers[,]" and notes that " $[t]$ he consequences of distraction from the driving task can be profound." (Page 5) The report went on to highlight several studies including:

- A 1976 study of crashes at a major artery intersection of on-ramps, offramps and other signage where an electronic sign was erected, concluding that the electronic sign was a distraction and a safety risk.
- A 2001 study of crashes finding that driver distraction was a cause of approximately $13 \%$ of the crashes studied with the largest segment of these crashes caused by distractions outside the vehicle.


## 5. Evaluation of the Visual Demands of Digital Billboards Using a Hybrid Driving Simulator (2014)

A study was conducted of driver eye behavior and corresponding impact on driving while driving at 25 mph and 50 mph on a simulated straight roadway and exposed to digital billboards viewed in a drive-like progression with messages of varying lengths/characters. The study participants were college students averaging 22 years of age with visual acuity no worse than 20/28. So, not studied were: older drivers, including the elderly; those with poorer vision; and behavior where the road was not a straight line for the drive. The "[r]esults indicated that drivers gradually drift away from the centerline during the [digital billboard] inspection interval, and then execute large/sudden compensatory steering inputs to reestablish their position in the center of the land after the billboard had been overtaken." The study found that the more characters/words/images presented by the sign, the more pronounced was ineffective lane control.
6. Abstract of Investigation of the Potential Relationship Between Crash Occurrence and the Presence of Digital Advertising Billboards in Alabama and Florida (2015)

Study examined historical crash data in Alabama and Florida adjacent to site locations where digital billboards existed. "The crash data analyses revealed that the presence of digital billboards increased the overall crash rates at digital advertising billboard influence zones by $25 \%$ in Florida and $29 \%$ in Alabama compared to control sites."
7. March 4, 2016 article from insurancenewsnet.com regarding a field study by the Massachusetts Institute of Technology on the effects of digital billboards on glance behavior during highway driving.

The article quotes the report as stating that:
"Decades of laboratory research have shown that rapidly changing or moving stimuli presented in peripheral vision tends to 'capture' covert attention."

According to the article the MIT report concludes:
"Since rapidly changing stimuli are difficult to ignore, the planned increase in episodically changing digital displays near the roadway may be argued to be a potential safety concern."
8. Federal Highway Administration study confirms safety of digital billboards and signs (June 16, 2014; www.digitalsignagetoday.com)

Article published in sign industry publication touting industry-favorable conclusions from a Federal Highway Administration study examining the impact of digital signage on safety.
9. A Critical, Comprehensive Review of Two Studies Recently Released by the Outdoor Advertising Association of America (October 2007)

This report was prepared for the Maryland State Highway Administration in light of the OAAA having declared that the occurrence of traffic accidents was unaffected by the presence of digital/electronic billboards. The study found that the studies touted by the OAAA (and sponsored by it) used flawed methodologies and assumptions and that even the researcher's own information and materials belied the conclusion that the billboards did not pose a traffic threat. The report did so by painstakingly reviewing and evaluating critical aspects of the studies' analyses.

Unlike many other studies referenced in the materials compiled here, neither of the studies touted by the OAAA were peer-reviewed prior to being issued. The report concluded that:
"[h]aving completed this peer review, it is our opinion that acceptance of these reports as valid is inappropriate and unsupported by scientific data, and that ordinance or code changes based on their findings are ill-advised."
10. Highway Agency Takes a Hit Over Safety Report on Electronic Billboards (Feb. 9, 2015; www.fairwarning.org)

Article regarding a critique of the FHWA study touted by the outdoor advertising industry that highlighted some of the major criticisms and perceived deficiencies in the study.
11. Billboards in the Digital Age Unsafe (and Unsightly) at Any Speed (Scenic America Issue Alert 2 (2007): 1-8 (Mar. 30, 2009)

Overview of the problems and concerns posed by digital signage and commenting on how the use of LED signage presents a new source of blight in a community. The article goes on to note that:

- Electronic signage is extremely bright so it can be visible in the daylight and at night, drawing a driver's attention more strongly. This means it also stands out from a greater distance than traditional signage meaning that it can become distracting even before the message is visible. Digital signs are often the brightest object in the landscape, especially at night.
- The changing content of an electronic sign attracts the driver's attention as the driver is trying to determine what the next message is or will be.
- The Florida Department of Transportation states that it takes six seconds to comprehend the message on an electronic billboard which is three-times longer than what studies find to be safe.
- Younger drivers may be more easily distracted and older drivers may require a longer viewing time for comprehension.


## 12. Citizens for a Scenic Florida Report (Obie Media Corporation)

The report summarizes expert witness opinion finding that the amount of time needed by drivers to view a billboard is as long as eight seconds. During that time, drivers' attention is focused away from the roadway. An automobile would travel between 470 feet and 800 feet during the interval it takes to read the sign. Notes that driver attention is particularly important at high speeds, at intersections, and interchanges.
> 13. Milwaukee County Stadium Variable Message Sign Study: Impacts of an Advertising Variable Message Sign on Freeway Traffic (Wisconsin Dept. of Transportation, Dec. 1994)

A six-year analysis was performed starting three years before a variable message sign was erected at Milwaukee County Stadium and continuing over the next three years. The results of the study indicated a substantial increase in both side-swipe and rear-end collisions in the lane from which the sign was most visible. Both types of collisions together resulted in a $43 \%$ increase in accidents the year of installation and a $36 \%$ increase in collisions over the next three years.
14. The Impact of Driver Inattention on Near-Crash/Crash Risk: An Analysis Using the 100 Car Naturalistic Driving Study Data, Executive Summary (U.S. Dept. of Transportation, National Highway Traffic Safety Administration, April, 2006)

This study included a number of driver inattention tasks and conditions. The analysis of eye-glance behavior indicated that total eyes-off-road durations of greater than two seconds significantly increased individual near-crash/crash risk whereas eye-glance durations of less than two seconds did not significantly increase risk relative to normal, baseline driving.
15. Illuminating the Issues - Digital Signage and Philadelphia's Green Future
(www.scenic.org/storage/documents/Digital Signage Final Dec 14 2010/pdf)

Highlights the environmental impact and concerns of the use of digital signage. Generally, such signage consumes more energy to light and maintain than conventional signage because more lamps are used to present the light and digital signage requires auxiliary equipment that consumes energy (e.g., fans to cool the sign and electrical equipment controlling the display. Certain specific findings include:

- LED signs generate heat and do not function well in the heat, thus requiring a cooling system to preserve the unit's useful life.
- An LED billboard measuring 672 square feet uses "about 46 times the power ... of a typical billboard lit by four halide lamps. ... It's almost 30 times the energy used in the average U.S. home."
- Digital signage can result in light trespass and light pollution, noting that to capture the driver's attention digital signs must be set at a very high brightness level because it competes with the sun. Also, the brighter the sign, the more energy that is required and used.
- LED signs have a lifespan of approximately eleven years in contrast to the fifteen years of a traditional sign, meaning that LED signs will be replaced more frequently. This creates a potential waste disposal challenge because the equipment is difficult to recycle.
- Notes that some cities and states have banned electronic signs successfully.

16. Signs, Billboards and Your Community - A citizen's manual for improving the roadside environment by effective control of billboards and outdoor advertising (Pennsylvania Resources Council, Inc. and Society Created to Reduce Urban Blight)

The report highlights that:

- "[t]he visual identity of a community creates a sense of place and civic pride. A community is strengthened when people have positive attitudes toward it, and the visual environment can strongly affect those attitudes. Poorly controlled outdoor advertising can foster a sense of blight and reduce one's sense of community character, to the detriment of civic pride."
- "Experienced drivers learn to ignore features such as signage along roadways that they travel frequently. The outdoor advertising industry refers to the driver's learned behavior ignoring signs as 'site fatigue.' The advertiser is then put in the position of either having its message ignored or having to frequently rotate message and put up more eye-catching advertisement to draw driver's attention back away from the road."
- Public health issues are discussed, including the individual's inability to control his or her visual field, the unintended saturation of messages to children, and the contribution of visual clutter to blight and stress.

AN ORDI NANCE OF THE CITY OF DUNWOODY, GEORGI A ADDRESSI NG AND PROHIBITING LED SIGNAGE; RECOGNIZING THE VARIOUS CONCERNS PRESENTED BY SUCH SI GNAGE AND THE I MPACT OF THOSE CONCERNS ON THE PUBLIC SAFETY, HEALTH, AND GENERAL WELFARE, INCLUDING AESTHETICS; TO REPEAL RESOLUTI ON 2016-__-_ THAT IMPOSED A 90DAY MORATORIUM ON ACCEPTANCE OF NEW SIGN PERMITS AND VARIANCE APPLICATIONS FOR LED SIGNS; TO PROVIDE FOR SEVERABILITY; TO ESTABLISH AN EFFECTIVE DATE; AND FOR OTHER PURPOSES.

WHEREAS, Article IX, Section II, Paragraph IV of the Constitution of the State of Georgia confers on the City the authority to plan and zone; and

WHEREAS, pursuant to that delegation of authority the City of Dunwoody, Georgia ("City") regulates signage within its City limits in Chapter 20 of the City's Code of Ordinances ("Sign Ordinance") for purposes of protecting the public health, safety and general welfare as well as for preserving the unique aesthetics of the City; and

WHEREAS, the Section 20-51(22) of the Sign Ordinance prohibits "LED signs and similar type technologies" and defines "LED signs" in Section 20-3 of the Sign Ordinance; and

WHEREAS, the Mayor and Council have recently been notified of certain concerns that the City's prohibition on LED signs may be invalid; and

WHEREAS, the City was also recently involved in litigation challenging the enforceability of the City's prohibition on LED signage for which a disposition, had it been adverse to the City, may have exposed the City to having to permit signage it may nevertheless lawfully regulate; and

WHEREAS, the City authorized a limited review of the City's Sign Ordinance and preparation of any revisions to be considered addressing certain concerns raised about the Sign Ordinance's prohibition of LED signs; and

WHEREAS, as a part of that process the City adopted Resolution 2016- $\qquad$ -
imposing a 90-day moratorium on accepting new sign permit and variance applications for LED signs while the limited review was conducted because accepting same would have undermined the policy goals of the City and present long-lasting conflicts with those policies; and

WHEREAS, the limited review has been completed and materials generated by that review have been submitted to the City, including the Planning Commission and the Mayor and Council; and

WHEREAS, in accordance with the City's Code of Ordinances a public hearing was held by the Planning Commission on April 12, 2016 to consider

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whether or not the City's prohibition on LED signage should remain in place or be repealed or modified in any way at which time the materials provided and associated issues were presented, discussed, and evaluated; and

WHEREAS, upon considering all that was provided to and considered by the Planning Commission, it recommended that the City's prohibition on LED signage continue; and

WHEREAS, the recommendation of the Planning Commission and the record developed before it was provided to the Mayor and Council in anticipation of a public hearing before the Mayor and Council to consider whether or not the City's prohibition on LED signage should continue or be repealed or modified; and

WHEREAS, in accordance with the City's Code of Ordinances a properly noticed public hearing was held by the Mayor and Council on to consider whether or not the City's prohibition on LED signage should remain or be repealed or modified at which time the materials generated by the limited review as well as the record of proceedings before the Planning Commission were provided and associated issues were presented, discussed, and evaluated; and

WHEREAS, the Mayor and Council, having reviewed the materials provided and having considered the record of this matter as a whole, finds and concludes that demonstrated is a substantial and serious adverse impact by LED signage on driver distraction that, in turn, presents the same for traffic safety and the corresponding safety of the traveling public and property; and

WHEREAS, a prohibition on LED signage will serve as a means of managing traffic control in the City, a goal expressed in the City's current Comprehensive Plan adopted in October 2015; and

WHEREAS, the Mayor and Council, having reviewed the materials provided and having considered the record of this matter as a whole, finds and concludes that demonstrated are substantial and serious concerns about the environmental impact of such signage, including, but not limited to, its energy use and consumption and the recyclability of such signage when use is discontinued and ease of same; and

WHEREAS, a prohibition on LED signage will serve the goals expressed in the City's Comprehensive Plan of preserving the existing character of the City; and

WHEREAS, a prohibition on LED signage is consistent with the City's 2014 Sustainability Plan and its focus on resource conservation and waste reduction; and

WHEREAS, the Mayor and Council, having reviewed the materials provided and having considered the record of this matter as a whole, and in light of the foregoing especially, finds and concludes that the current prohibition on LED signage in the City should be continued, the public safety, health, and general welfare, including aesthetics being served substantially by same; and

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WHEREAS, the Mayor and Council, having reviewed the materials provided and having considered the record of this matter as a whole concludes that based on the materials and record before it, a prohibition on LED signage is the least restrictive manner of preserving the public safety, health, and general welfare, including aesthetics; and

WHEREAS, the Mayor and Council, having reviewed the materials provided and having considered the record of this matter as a whole concludes that a host of other signage avenues yet remain available for the communication of commercial and non-commercial speech.

NOW, THEREFORE, BE IT ORDAI NED by the Mayor and Council of City of Dunwoody, Georgia as follows:

SECTION 1. The current prohibition on LED signage contained in Chapter 20 of the City's Code of Ordinances at Section 20-51(22) shall be preserved and continued.

SECTION 2. Resolution 2016- $\qquad$ is repealed in its entirety.

SECTION 3. All ordinances and resolutions, or parts of same, in conflict with this Ordinance are, to the extent of such conflict, hereby repealed.

SECTION 4. In the event a court of competent jurisdiction declares any word, phrase, clause, sentence or paragraph of this Ordinance unconstitutional or otherwise unenforceable, such ruling shall not affect the remaining words, phrases, clauses, sentences and paragraphs of this Ordinance, but such invalidated provisions shall be severed from the Ordinance and its remaining contents shall stand.

SECTION 5. This Ordinance shall be effective upon its adoption by the Mayor and Council.

SO ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF DUNWOODY, GEORGI A on the $\qquad$ day of $\qquad$ , 2016.

Approved by:

Attest:
Approved as to Form and Content:

STATE OF GEORGIA CITY OF DUNWOODY


[^0]:    City of Dunwoody Comprehensive Plan, p. 25
    ${ }^{2} I d$. at 25.
    ${ }^{3} I d$.
    ${ }_{4}^{4}$ Id.
    ${ }^{5} I$ d. at 26
    ${ }^{6}$ Id. at 26 .

[^1]:    ${ }^{1}$ City of Dunwoody Comprehensive Plan, p. 25.
    ${ }^{2}$ Id. at 25.
    ${ }^{3} I d$.
    ${ }^{4}$ Id.
    ${ }^{6}$ Id. at 26 .

[^2]:    ${ }^{1}$ "LED sign shall mean an electronically controlled sign utilizing light-emitting diodes to form some or all of the sign message." Code of Ordinances, Sect. 20-3.

