



MEMORANDUM

To: City Council

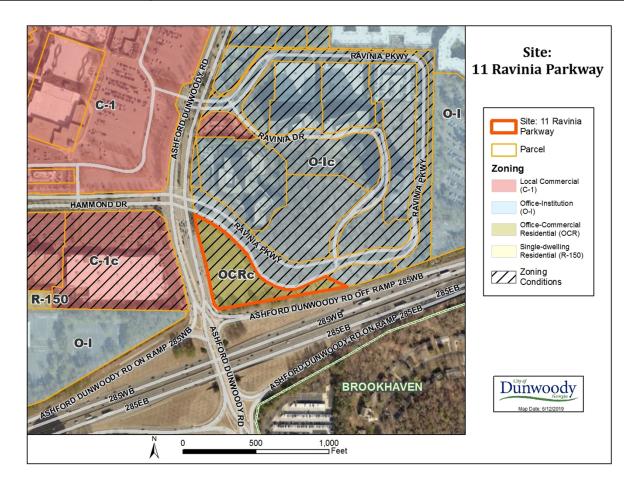
From: John Olson, AICP

Date: November 18, 2019

Subject: Kathy Zickert, attorney for the owner, on behalf of GMC Real Estate

Acquisitions, LLC, Atlanta, GA 30338 seeks to rezone the property, located at 11 Ravinia Parkway, from its current OCR (Office, Commercial, Residential) District conditional zoning classification to a PC-2 (Perimeter Center) District.

The tax parcel number for the site is 18 347 01 049.





4800 Ashford Dunwoody Road Dunwoody, GA 30346 Phone: (678) 382-6800 Dunwoodyga.gov

BACKGROUND

The subject property in question is located along the northeast intersection of Ashford Dunwoody Road and Interstate 285. The property consists of approximately 3.45 acres of undeveloped land, mainly composed of an open grassy knoll along the center of the site, and several trees along the perimeter. The property is bounded by a private road known as Ravinia Parkway to the north and east, Ashford Dunwoody Road to the west, and an off-ramp of westbound Interstate I-285 to the south.

In 2004, the site was altered from Office-Institution Conditional (O-Ic) District to an Office-Commercial-Residential Conditional (OCRc) District. Review of the zoning application indicates the rezoning was not conditioned to site plan specific plan or density. Based on the OCR lot and building standards, (which call for a minimum of zero-foot building setbacks along street frontages, 80 percent lot coverage, and a maximum two-story building height) the site as zoned would appear to allow more than 200,000 square feet of restaurant and retail space. Pursuant to the City of Dunwoody Zoning Ordinance, the subject application seeks a rezoning of the 3.45 acres of land from the existing OCRc District to a Perimeter Center (PC-2) District to allow a 5 to 8 story hotel, 41,400 square feet of retail or restaurant space, and a three level parking deck.

An applicant initiated community meeting was held on Monday, June 3, 2019 in which the applicant presented the application. There were approximately fifteen (15) people in attendance, and the meeting was broadcast to approximately 1,000 people via a Facebook live feed. In response to the meeting, the applicant has provided a communication summary report, which is included within the rezoning application packet attached to this report.

On Sunday, October 6th, 2019 the DHA heard as second presentation of the development. After taking a vote online, a majority of the board voted to support the rezoning as presented.

SITE PLAN ANALYSIS

As previously noted, the project will be developed with a 5 to 8 story hotel, and 41,400 square feet of retail or restaurant space, and a parking deck. More specifically, a 10,500 square foot, one-story restaurant and plaza area is proposed along the northern tip of the site, near the intersection of Ashford Dunwoody Road and Ravinia Parkway. There is valet drop-off along the southwest side of the building and a small, pervious, 16-space surface parking area to the west of the building. Along the southern portion, there are three (3) proposed buildings: a one to two-story retail/restaurant building fronting Ashford Dunwoody, a one to two-story retail/restaurant building fronting I-285, and a 5 to 8-story hotel with a two story restaurant/retail fronting Ravinia Parkway. Much of parking for the development will be built behind the buildings within the existing elevation of land. This design allows for the placement of two 107-space parking levels below grade. Due to the subterranean design, most parking will remain hidden, and therefore be out of view from I-285 and Ashford Dunwoody Road. Access into the development will be achieved via a full access intersection that will be constructed behind the corner restaurant building, along Ravinia Parkway. Additionally, the hotel will have a right-in and right-out (RIRO) hotel drop-off and pick-up, and RIRO truck service driveway, along the south side of Ravinia Parkway. Review of the submitted site plan indicates that an open storm water detention facility is proposed within the eastern panhandle of the site. During the pre-application



Community Development

4800 Ashford Dunwoody Road Dunwoody, GA 30346 Phone: (678) 382-6800 Dunwoodyga.gov

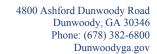
review, city staff discussed the possibility of placing the stormwater treatment under the developed area of the site; however, considering that the topography directs most of the site's water to the east, it appears that some storm water detention may have to remain within the eastern panhandle of the site. It shall be noted that regardless of what happens with the future development of the site, the trees surrounding the proposed detention area will likely be cleared for the state's future express lanes on I-285.

To achieve the desired urban form of shopfront buildings, retail and restaurant fronts are designed in proximity to their adjoining street frontages. The submitted building elevations indicate that the prominent building materials will include brick and stone. In addition, all buildings will have three-dimensional architecture and outdoor dining areas. In regards to streetscapes, the Ashford Dunwoody Road frontage incorporates an 8-foot street buffer, 8-foot sidewalk, and minimum 3-foot buffer; and at Ravinia Parkway, the frontage incorporates a 6-foot street buffer and 6-foot sidewalk terminating at the proposed hotel. As a major parkway frontage, the Perimeter Center Overlay requires 34-feet of parkway frontage along Ashford Dunwoody Road; and as a secondary street, the overlay requires 20 feet of frontage along Ravinia Parkway. However, measurements of the proposed frontages indicate that there is insufficient frontage widths along both streets, as there is approximately 21-feet of streetscape frontage along Ashford Dunwoody Road and 12-feet of streetscape frontage along Ravinia Parkway. Due to inadequate widths, the proposed streetscaping design will require approval of a special administrative permit per procedures listed in Article V, Division 7.

The submitted tree removal plan indicates that 68 trees, including 14 specimen trees will be removed on the site, with the majority of the tree removal occurring in the area of the proposed open storm water detention facility in the eastern panhandle of the site. Five large oak trees will be preserved near the corner of Ashford Dunwoody Road and Ravinia Parkway but 14 mature oaks are proposed to be removed due to their placement 20 feet or more from the back of curb along the Ravinia Parkway frontage. In response to the street tree removal, staff has added condition 8 which states that the owner shall plant a row of single-stemmed hardwood trees a minimum 4 inch caliber at intervals no more than 50 feet. Also, due to intersection improvements, 100 feet of median will be removed within the Ravinia Parkway right-of-way; as a result, five (5) maple trees, ranging in size 11 to 18 inches will be removed.

The southern border of the site is immediately adjacent to the planned "westside connector" road. The current concept plan for the road calls for a grade separated ramp that provides access between I-285 to Perimeter Center Parkway. It shall be emphasized that this project remains an important component in mitigating congestion on Ashford Dunwoody Road at I-285 and at Hammond Drive, as studies have demonstrated that it will remove approximately 700 vehicles from this area during peak traffic hours. At this time, however, a funding source and design has not been determined so a construction timeframe is unknown. According to the conceptual layouts, there appear to be some conflict with the road alignment and the detention area of the project site. In response, Public Works has met with GDOT to explore options to minimize impacts on the site. At this time it appears that the only potential solution is to pursue adding the road onto the proposed bridge structure for GDOT's top end 285 managed lanes project. This particular option would move the alignment off the part of the Ravinia development where buildings are planned, but still impact the detention area, located at the eastern panhandle.

In response to the traffic study, condition 12 states that the Owner shall remove a southbound left turn lane on Ashford Dunwoody Road at Hammond and expand the





Community Development

pedestrian refuge island on the north side of the intersection. Finally, the traffic study recommends that a northbound right turn lane be added independent of development along the portion of Ashford Dunwoody Road that borders the site. While the traffic study states the improvement is necessary mitigate traffic, it notes that adding this lane would increase the distance across the south leg of Ashford Dunwoody Road that would be traversed by pedestrians. Because of the long travel distances for pedestrians, the Community Development Department is not in favor of an additional travel lane. Still, the Public Works Department has stated their desire for this improvement in the future. In response, the applicant has agreed to dedicate additional right-of-way up to the face of the wall as shown on Exhibit A to accommodate this improvement. At such time the city constructs the additional lane, the landscape buffer would be reduced from 8 feet to 6 feet and the sidewalk would be reduced from 8 feet to 7 feet directly adjacent to the wall.

SURROUNDING LAND USE

There is a 42-acre office development known as Ravinia to the northeast of the subject site. Zoned Office-Institutional (O-I), this development incorporates 1.6 million square feet of office space within three office buildings, and a 500-room hotel. Immediately across Ashford Dunwoody Road to the west of the subject property lies Commercial (C-1) zoning districts that include the Perimeter Mall and several strip mall shopping centers.

The table below summarizes all of the nearby zoning districts and land uses:

Direction	Zoning	Future Land Use	Current Land Use
N	O-I	Perimeter Center (PC-2)	Ravinia (Office and Hotel)
S	N/A	N/A	The area south of site consists of I-285
E	O-I	Perimeter Center (PC-2)	Ravinia (Office)
W	C-1	Perimeter Center (PC-1)	Retail

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 future land use map identified in the "2015-2035 Comprehensive Plan" (Plan) envisions the Perimeter Center as a livable regional center with a mix of housing, first-class office, and retail in an environment that includes pedestrian and bicycle-oriented amenities. Equally as important, figure 27-





104-1 explicitly identifies the site as an intended PC-2 District. Based on the aforementioned information, a request to rezone the site to a PC-2 to allow a mix of retail and restaurant uses, and hotel, would appear to be consistent with the 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 proposed hotel and retail uses on the site remain compatible when compared with adjacent higher intensity land uses, including the Perimeter Mall, which has nearly 1.6 million square feet of restaurant/retail floor area; and the Ravinia complex, which contains a 500-room hotel and 1.6 million square feet of office space.

3. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;

The subject lot has a reasonable economic use currently zoned as OCRc, which under a 2004 approval allows up to 37,000 square feet of retail and commercial development, and limits the height to two (2) stories or less. Approving the site for 41,400 square feet of retail/restaurants and a hotel up to 8 stories would effectively upzone the property to align with the Comprehensive Plan and intended PC Districts. Overall, the request will result in a greater economic use for the property.

4. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

The area surrounding the site consists of commercial and office uses with similar and higher intensities of development. From a land use perspective, it appears that the development will not adversely affect the use or usability of adjacent of nearby property.

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 Perimeter Center Overlay and Perimeter Center Districts were approved in May 2017. Since this time the area has seen an increase in new zoning and development approvals that have shifted the focus away from suburban office and commercial development to urban, mixed use development. In addition, the urban design has been focused mainly on placing buildings with active uses near the street and hiding parking in the rear. Street frontages have also been designed with wider sidewalks, bicycle facilities, and street trees. Based on the changing conditions, it appears that the applicant's request to develop a mixed-use, urban development with active streetscapes aligns with these trends, which provides supporting grounds for approval.

6. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources;

The site is currently a vacant, undeveloped parcel, therefore, the zoning proposal should not adversely affect any historic buildings, sites, districts, or archaeological resources.

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 addition of 41,400 square feet of restaurant/retail space and a 5 to 8 story hotel is anticipated to add additional traffic to an already heavily congested intersection. Based on information within the traffic study, the applicant has agreed to dedicate additional right-of-way along Ashford Dunwoody Road. As previously noted, this project does not include a residential component, so it will not have any impact on area schools.

SUMMARY OF JULY 9, 2019 PLANNING COMMISSION

Planning Commission held a public hearing regarding the case on July 11, 2019 and no one from the public spoke in favor or opposition of the development. Following discussions, Commissioner Price motioned to approve the case incorporating staff conditions with the following additional recommendations:

- 1. There shall be no minimum parking requirement for the development;
- 2. The owner shall incorporate a pedestrian crossing facility across Ravinia Parkway near the vehicular access drive into the development; and
- 3. To allow programmable space, the owner shall remove some parking behind the four retail/restaurant buildings.

The motion passed unanimously 6-0. It shall be noted that the City Council approved the removal of minimum parking requirements a few weeks after the Planning Commission hearing; therefore, eliminating minimum parking requirement is not warranted as a final condition. In regards to a pedestrian crossing facility, it is the opinion of staff that placing a crossing at Ravinia Parkway near the vehicular access drive would not be a safe place to cross because of visibility and grade issues. For this reason, staff has not included it as a final condition of zoning.

SUMMARY OF SEPTEMBER 9, 2019 CITY COUNCIL MEETING

Due to differences in what was presented to Planning Commission in July, City Council made a motion to send the application back to the Planning Commission. The motion passed unanimously 7-0.

SUMMARY OF OCTOBER 15, 2019 PLANNING COMMISSION

Planning Commission held a second public hearing regarding the case on October 15, 2019 and no one from the public spoke in opposition of the development. Following discussions, Commissioner Price motioned to approve the case incorporating staff conditions with the following additional recommendations:

- 1. A hotel shall not exceed 8 stories in height or 275 keys/rooms;
- 2. Retail use shall not exceed 2 stories in height;
- 3. Development may include a plaza in front of retail uses instead of parking spaces. A plaza shall serve as a gathering place for civic, social, and commercial purposes. Special features, such as fountains and public art installations, are encouraged; and
- 4. A pedestrian crossing shall be provided for on Ravinia Drive pursuant to approval by the Public Works Director.



4800 Ashford Dunwoody Road Dunwoody, GA 30346 Phone: (678) 382-6800 Dunwoodyga.gov

RECOMMENDATION

The proposed concept is in keeping with the Comprehensive Plan, and PC Districts that intend to transform the Perimeter into a more walkable urban setting. Therefore, the proposal is recommended for approval based on the following exhibits and conditions:

EXHIBIT A: Site plan, completed by Wakefield Beasley and Associates, dated September 25, 2019.

EXHIBIT B: Landscape Plan and Sections, completed by Site Solutions, dated September 30, 2019

EXHIBIT C: Conceptual Sign Designs EXHIBIT D: Architectural renderings

- 1. The owner shall develop the site in general conformity with "Exhibit A" with minor changes allowed as defined by Section 27-337(b) or necessary changes to meet conditions of zoning or land development requirements made necessary by actual field conditions at the time of development;
- 2. Prior to the issuance of a land disturbance permit, the owner shall dedicate right-of-way along Ashford Dunwoody Road up to the face of the proposed retaining wall of the development, as depicted in "Exhibit A". All construction costs associated with this expansion shall be the sole and exclusive responsibility of the City;
- 3. The owner shall construct the streetscaping in general conformity with "Exhibit B". Any minor variations to the streetscapes made necessary by actual field conditions at the time of development shall be subject to approval by the Public Works Director or Community Development Director;
- 4. Major façade materials shall include brick, stone, hard coat stucco and glass, with other high quality materials approved by the Community Development Director during the permit review process;
- 5. During the land development phase, the applicant shall work with the City Arborist and Community Development Director to save trees on the site as depicted on the Tree Removal Plan by Site Solutions, dated May 7th and last revised June 25, 2019. In the event that the site plan or landscape plan needs to be amended to save existing trees or modify plantings, the Community Development Director is authorized to approve of a revised landscape plan;
- 6. All loading facilities and trash/recycling enclosure(s) must be screened from a standing view eight (8) feet above ground from public rights-of-way by landscaping and a solid brick wall at least six feet in height or the height of the dumpster;
- 7. All mechanical equipment (e.g., air conditioning, heating, cooling, ventilation, exhaust and similar equipment) shall be roof mounted and screened in all directions by walls or parapets or will be enclosed in opaque structures to hide the mechanical equipment from a standing view six (6) feet above ground from public right-of-way within 100 feet;
- 8. Within the Ravinia Parkway right-of-way along the northern border of the site, the owner shall plant a row of single-stemmed hardwood trees a minimum 4 inch caliber at intervals on average of no more than 50 feet. In circumstances where the spacing requirement cannot be met due to driveways and other improvements, the city arborist may approve alternate spacing;
- All utilities servicing the site shall be underground with the exception of required aboveground elements, such as transformers and cable boxes. <u>Any required above ground</u> <u>elements shall be screened</u>;
- 10. The ground sign at the corner of I-285 and Ashford Dunwoody Road shall be designed into no more than three (3) feet on top of the retaining wall that will rise above the intersection, but such signage shall not count against each buildings allowable wall



Community Development

4800 Ashford Dunwoody Road Dunwoody, GA 30346 Phone: (678) 382-6800 Dunwoodyga.gov

- signage. Ground signage shall be used, as reflected by Exhibit C, subject to the approval of the Community Development Director;
- 11. Any stormwater detention facility located outside of the eastern panhandle of the site shall be underground;
- 12. As part of the development, Owner shall remove a southbound left turn lane on Ashford Dunwoody Road at Hammond and expand the pedestrian refuge island on the north side of the intersection;
- 13. Separate ownership of parts of the subject property and/or conveyance of part of the subject property to different owners shall not create non-conforming uses or lots and shall not require any variances. The newly created property lines which arise from these conveyances are not required to observe setback, buffer or other zoning requirements, except as may be required by life and safety codes;
- 14. The allowed building signage shall be in general conformance, in size and number, with those shown on Exhibit D;
- 14.-Along Ravinia Parkway, the development shall be limited to one monument sign for the hotel, and one monument sign for the stand alone restaurant; and
- 15. All monument signs shall be located outside of any existing or future right-of-way, as depicted on Exhibit A.

Attachments

- EXHIBIT A: Site plan, completed by Wakefield Beasley and Associates, dated September 25, 2019.
- EXHIBIT B: Landscape plan and Sections, completed by Site Solutions, dated September 30, 2019.
- EXHIBIT C: Conceptual Sign Designs
- EXHIBIT D: Architectural renderings
- RZ19-02 Application Packet
- Tree Removal Plan, dated May 7, 2019 and last revised June 25, 2019.
- Building Elevations
- Location Map
- Dunwoody Comprehensive Plan Excerpt
- Traffic Impact Study
- Westside connector road concept

AN ORDINANCE TO AMEND THE CITY OF DUNWOODY ZONING CLASSIFICATION AND MAP FOR ZONING CONDITIONS OF LAND LOT 347, District 18, IN CONSIDERATION OF ZONING CASE Z-08-14825 (84, 130, AND 140 PERIMETER CENTER EAST) MAJOR MODIFICATION.

WHEREAS: JSJ Perimeter, LLC, seeks permission to modify the conditioned site plan and current conditions of zoning in order to allow a new development configuration for the property by modifying Zoning Case Z-08-14825 as described below; and

WHEREAS:

The property, Tax Parcel 18-347-01-013, 021, and 028, is located on a corner lot (84 Perimeter Center East), which fronts the east side of Ashford-Dunwoody Road and south side of Perimeter Center East, and two vacant wooded lots (140 and 130 Perimeter Center East) to the east, both fronting Perimeter Center East., and consists of 2.86 acres; and

WHEREAS:

The site currently contains a vacant one-story building, formerly occupied as a bank; and

WHEREAS:

The current site plan and conditions of this case allow for the development of a hotel, a 7,050 square foot full service restaurant, a 5,369 square foot meeting space, and a 70,000 square foot fitness club. In addition, the site has a special land use permit to increase the height of the hotel from 2 to 12-stories (SLUP-08-14791), several variances to allow for zero front, side and rear setbacks and an increase in maximum lot coverage from 80 to 86%; and

WHEREAS:

Pursuant to the City of Dunwoody Zoning Ordinance, the application seeks to rezone the 2.86 acres of land to allow 40,000 square feet of retail, restaurant, and commercial uses and a 160 room, 11-story hotel. The commercial component of the development includes two buildings: a retail, restaurant and commercial building up to approximately 12,000 square feet fronting Ashford Dunwoody Road; and a 2-story, retail, restaurant and commercial building fronting Perimeter Center East up to approximately 30,000 square feet. The hotel will be located along the back of the site, fronting Perimeter Center East. The parking, which includes a 4-level, 368 space parking deck, and 14-space surface parking lot, are found within the interior of the site, behind the commercial buildings and hotel. Access into the development is proposed via a full access intersection located behind the hotel at Perimeter Center East. Additionally, there is a right-in and right-out driveway found between the hotel and retail/restaurant/commercial building, along Perimeter Center East. The hotel entrance and drop off area fronts the east side of the driveway entrance, immediately near the access/exit point on to Perimeter Center East. The site's storm water detention facility is proposed underground below the surface parking lot.

The tree removal plan indicates that the entirety of the site's 235 trees, which include approximately 75% pines, will be removed. The plan indicates that 10 specimen trees will be removed. To satisfy the tree

STATE OF GEORGIA **CITY OF DUNWOODY**

ORDINANCE 2019- -

density requirements, several deciduous canopy trees of a minimum 4inch caliper and understory canopy trees will be planted throughout the site. As well, the owner will be required to pay a sum into the tree bank for the replacement density balance of trees removed, as determined by the tree ordinance and City Arborist.

The Ashford Dunwoody Road frontage incorporates an 8-foot street buffer, 8-foot sidewalk, and 16-feet of extra sidewalk or patio dining: and at Perimeter Center East, the frontage incorporates a 6-foot street buffer, 6-foot sidewalk, and 7 to 10-foot of extra sidewalk, landscape buffer or potentially patio seating which terminates at the proposed hotel. In an effort to activate the streetscapes, all building are designed in proximity to their adjoining street frontages. The submitted building elevations indicate that the prominent building materials proposed include masonry tile, glass, stucco, and wood veneer.

The 2007 setback variances align with the intended PC districts by moving the buildings closer to the street. However, review of the site plan indicates the development will have a lot coverage of 83.7%. The submitted open space calculations shown in Exhibit C indicate that the remainder of the site will consist of 16.3% green space and 9.7% hardscape; and

WHEREAS:

The Mayor and City Council find that the proposed use aligns with Dunwoody Comprehensive Plan, which calls for the Perimeter Center District to be a livable regional center with a mix of housing, first-class office, and retail in an environment that includes pedestrian and bicycleoriented amenities; and

WHEREAS:

Notice to the public regarding said rezoning and modification to conditions of zoning has been duly published in The Dunwoody Crier, the Official News Organ of the City of Dunwoody; and

WHEREAS: A public hearing was held by the Mayor and City Council of the City of Dunwoody as required by the Zoning Procedures Act.

NOW THEREFORE, The Mayor and City Council of the City of Dunwoody hereby ORDAIN AND APPROVE the rezoning of said property to modify the conditioned site plan and current conditions of zoning subject to the following Exhibits and conditions:

EXHIBIT A: Site plans, completed by Phillips Architecture, dated October 24, 2019 and October 28, 2019.

EXHIBIT B: Streetscaping Sections, completed by Phillips Architecture, dated October 25, 2019.

EXHIBIT C: Open Space Diagram, completed by Phillips Architecture, dated October 30, 2019.

- 1. The owner shall develop the site in general conformity with "Exhibit A" with minor changes allowed as defined by Section 27-337(b) or necessary changes to meet conditions of zoning or land development requirements made necessary by actual field conditions at the time of development;
- 2. The owner shall construct the streetscaping in general conformity with "Exhibit B". Any minor variations to the streetscapes made necessary by actual field conditions at the time

STATE OF GEORGIA CITY OF DUNWOODY

ORDINANCE 2019- -

- of development shall be subject to approval by the Public Works Director and Community Development Director;
- Major façade materials shall include natural brick, natural stone and natural wood, hard coat stucco and glass, natural brick veneer or stone veneer materials and other high quality materials approved by the Community Development Director during the permit review process;
- 4. Stamped brick and cultured stone, manufactured stone, synthetic EIFS, or other imitation materials shall be prohibited;
- 5. The development shall include a minimum of 25% open space that is made up of no more than 40% hardscape. Such open space areas shall include greenspace, landscaped areas, including perimeter greenspace and hardscape outdoor patio, pedestrian or plaza areas, as shown on "Exhibit C";
- 6. No monument sign shall be constructed along the Ashford Dunwoody Road frontage. As an alternative, the owner is allowed one sign with a sign area up to 120 square feet attached to the building. The design of such signage shall be incorporated into the design of the building as approved by the Community Development Director during the site plan review process. Other building signage will be allowed in accordance with Section 20-57;
- 7. All trash/recycling enclosure(s) must be screened from view of public rights-of-way by landscaping and a solid masonry wall at least eight feet in height;
- 8. Prior to certificate of occupancy, the owner shall pay a sum into the tree bank for the replacement density balance of trees removed, as determined by the tree ordinance and City Arborist;
- 9. All utilities servicing the site shall be underground with the exception of required aboveground elements, such as transformers and cable boxes;
- 10. All mechanical equipment (e.g., air conditioning, heating, cooling, ventilation, exhaust and similar equipment) shall be roof mounted and screened in all directions by walls or parapets or will be enclosed in opaque structures to hide the mechanical equipment from view from public right-of-way;
- 11. Prior to the issuance of certificates of occupancy, the Owner will convey to the City rightof-way to incorporate the sidewalk and landscape buffers along Ashford Dunwoody Road and Perimeter Center East;
- 12. Prior to the issuance of certificates of occupancy, the Owner will convey an easement on the eastern portion of the development sufficient to accommodate two travel lanes and two bicycle lanes as shown on Exhibit A to connect to adjacent property to the south. It will be responsibility of others to connect to this public easement outside of the property lines of the development;
- 13. There shall be no left turn lane into the western most driveway from Perimeter Center East into the development. Access at this driveway shall be restricted to right in and right out turns only;
- 14. The owner will contribute up to \$20,000 to extend the southbound turn lane for left turns from Ashford Dunwoody Road on to Perimeter Center East;
- 15. The uses on the site shall be limited to eating and drinking establishments, brokerage services, office, medical facilities, retail sales, lodging, personal improvement, office, non-traditional bank without a drive-thru such as a banking café, credit union, savings and loans, and laundry drop-off and pick-up service;
- 16. A crosswalk and pedestrian refuge shall be provided across Perimeter Center East on the northeastern corner of the property pursuant to approval of the Public Works Director;
- 17. The hotel shall not exceed 12 stories in height; and
- 18. Parking deck openings that face the apartment building to the east shall be shielded with landscaping and an architectural mesh, grille, screening or other cladding component that enhances the architectural character of the structure. The final design of the parking deck shall be subject to approval of the Community Development Director.

STATE OF GEORGIA **CITY OF DUNWOODY**

ORDINANCE 2019-__--__

Attachments

- EXHIBIT A: Site plans, completed by Phillips Architecture, dated October 24, 2019 and October 28, 2019.
- EXHIBIT B: Streetscaping Sections, completed by Phillips Architecture, dated October 25, 2019.
- EXHIBIT C: Open Space Diagram, completed by Phillips Architecture, dated October 30, 2019.
- MA19-02 Application Packet
- MA19-02 Architectural Renderings
- MA 19-02 Building Sign
- Landscape Plan, dated September 3, 2019.
- Tree Survey, dated September 3, 2019.
- Tree Recompense Plan, dated September 3, 2019.
- Traffic Study
- 2008 Zoning Conditions and Site Plan
- Zoning Map
- Building Elevations
- Dunwoody Comprehensive Plan Excerpt Perimeter Center

SO ORDAINED AND EFFECTIVE, this the day of, 2019.				
Approved by:	Approved as to Form and Content			
Denis L. Shortal, Mayor	City Attorney			
Attest:				
Sharon Lowery, City Clerk	SEAL			

Promenade, Suite 3100 1230 Peachtree Street, N.E. Atlanta, Georgia 30309-3592 Main: 404 815-3500 www.sgrlaw.com

SMITH. GAMBRELL & RUSSELL, LLP

Attorneys at Law

Kathryn M. Zickert

Direct Tel: (404) 815-3500 Direct Fax: (404) 685-6903 kzickert@sgrlaw.com

October 1, 2019

VIA EMAIL AND U.S. MAIL

Richard McLeod, Director of Community Development City of Dunwoody 4800 Ashford Dunwoody Road Dunwoody, GA 30338

Re: 11 Ravinia Parkway Rezoning (Application No. RZ 19-02)

Dear Richard:

Please accept this letter and the attachments as an amendment to the earlier application documents we filed initially. A summary of those changes follows:

- 1. We have reduced the height of the hotel from eight stories to five. We have reduced the number of keys to 156.
- 2. We have eliminated two story retail or restaurant space. We have reduced the amount of that space to 41,400 SF.
- 3. The footprint of the site plan has not changed. But we are filing an amended site plan dated September 25 which reflects these reductions. It is attached as Exhibit A.
- 4. We updated the landscape plan to properly address the tree save area on the corner. The new landscape plan is attached as Exhibit B.
- 5. We have revised the sign package to comply with the dimensional and height requirements of the code. They are attached as Exhibit C.
- 6. We have revised the renderings to reflect these changes. They are attached as Exhibit D.
- 7. We have amended the Statement of Intent to reflect these changes, to expressly include the traffic study, and to update the zoning history so as to clarify what is allowed on site now.

Richard McLeod October 1, 2019 Page 2

8. We have an arborist's evaluation of the tree save potential for the five mature trees at the corner of Ravinia Parkway and Ashford-Dunwoody Road. The letter is attached as Exhibit E.

Although the footprint has not changed, we have made these revisions in an effort to address any issues raised at the first read by the City Council.

Please let me know if you have any questions about the foregoing.

Sincerely,

Kathryn M. Zickert

Bh for Kethyn Zickert

Attorney

KMZ/jab

cc: Tyler Morris, Geyer Morris Company Cameron Grogan, Geyer Morris Company Denis Shortal, City of Dunwoody Michael Starling, City of Dunwoody John Olson, City of Dunwoody

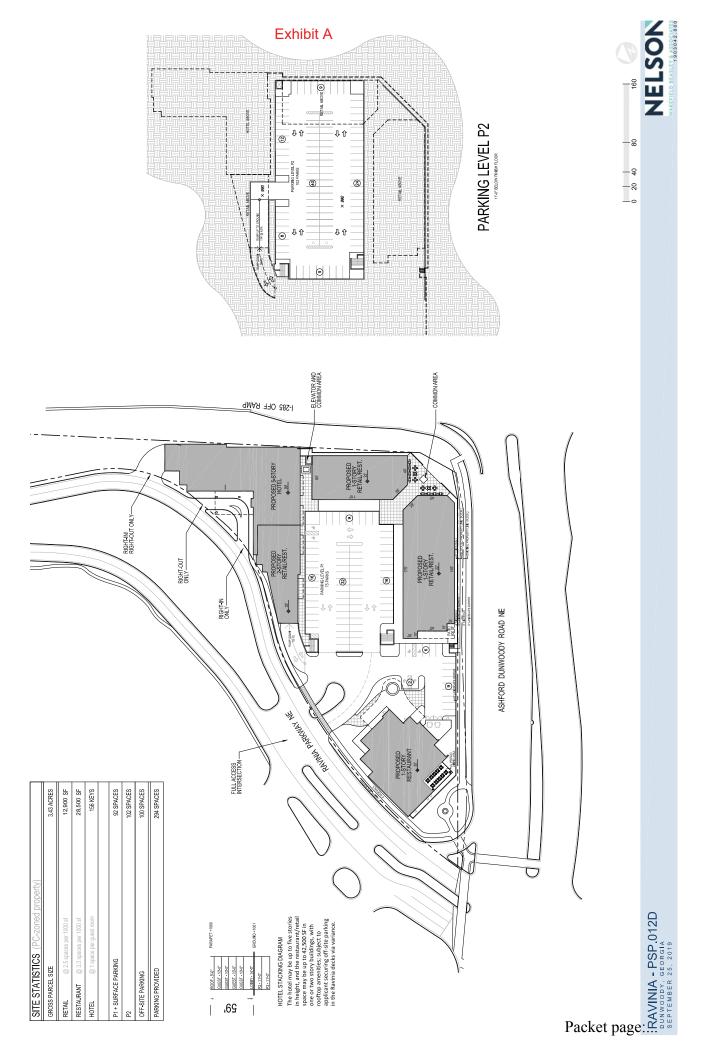
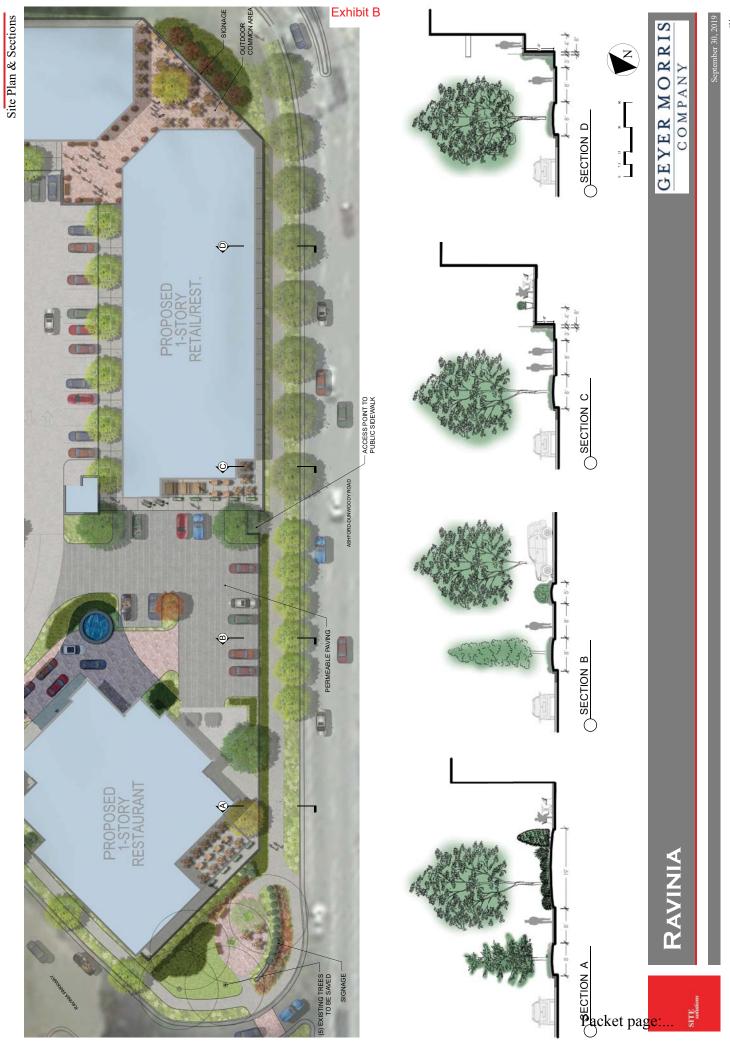


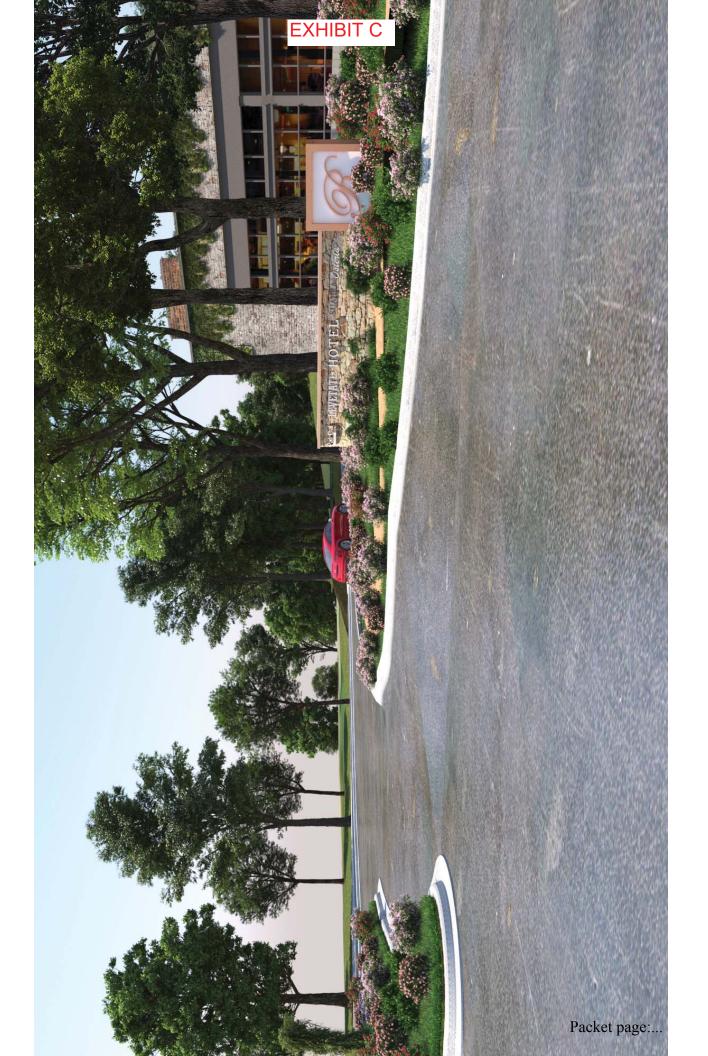






Exhibit B















Packet page:...



TREE SAVE

Date: 10.01.2019

Project: Ravinia Development Client: Geyer Morris Company

Location: South Eastern Corner of Ashford-Dunwoody Road and Ravinia Parkway



<u>Summary</u>: The Developer intends to save approximately five (5) existing trees at the South Eastern corner of Ashford-Dunwoody Road and Ravinia Parkway.

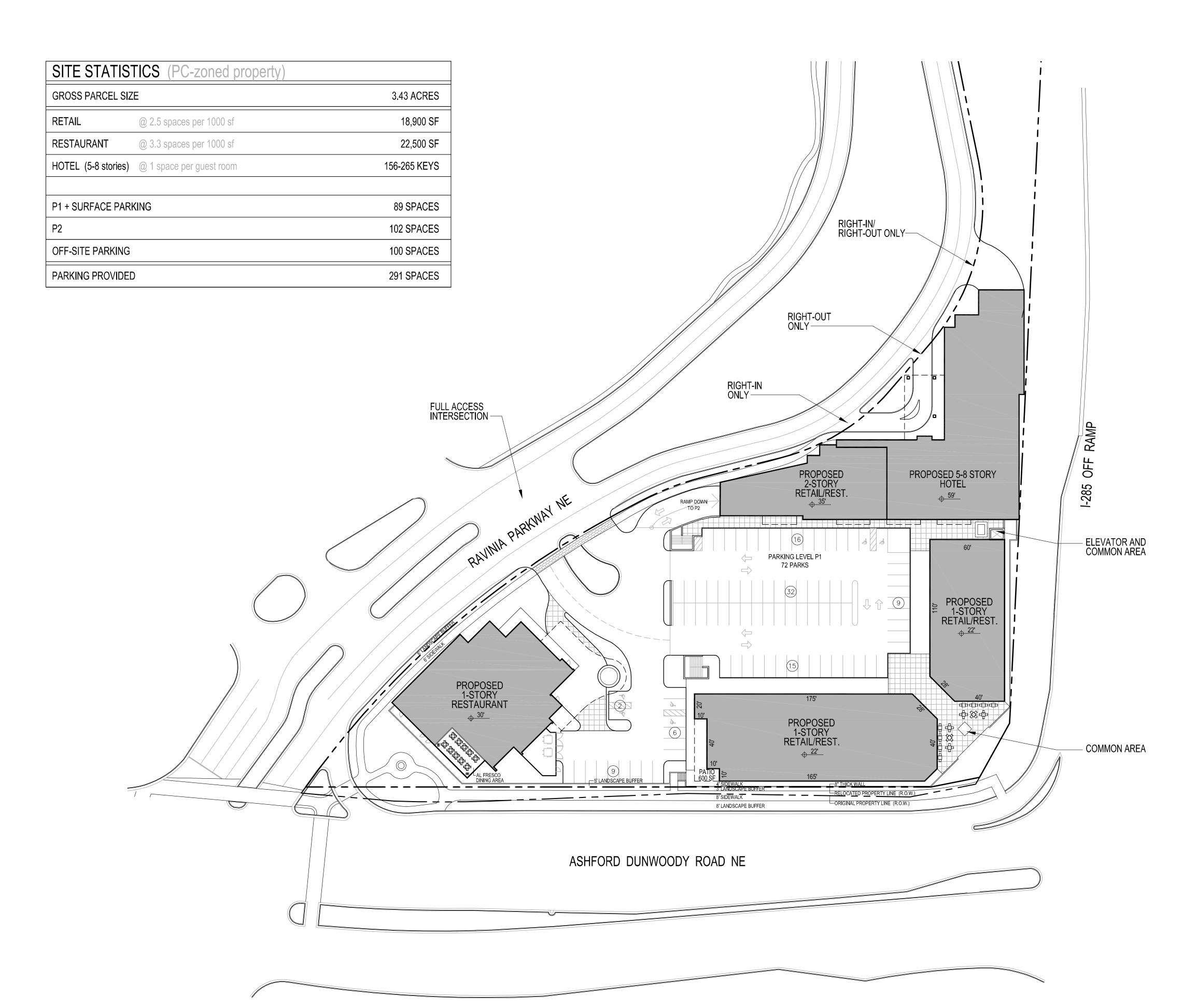
It is our understanding that the current site plan for the development at the South Eastern corner of Ashford-Dunwoody Road and Ravinia Parkway allows for the preservation of approximately five (5) mature trees. The restaurant building closest to the corner is set back far enough to allow for these trees near the intersection to be saved.

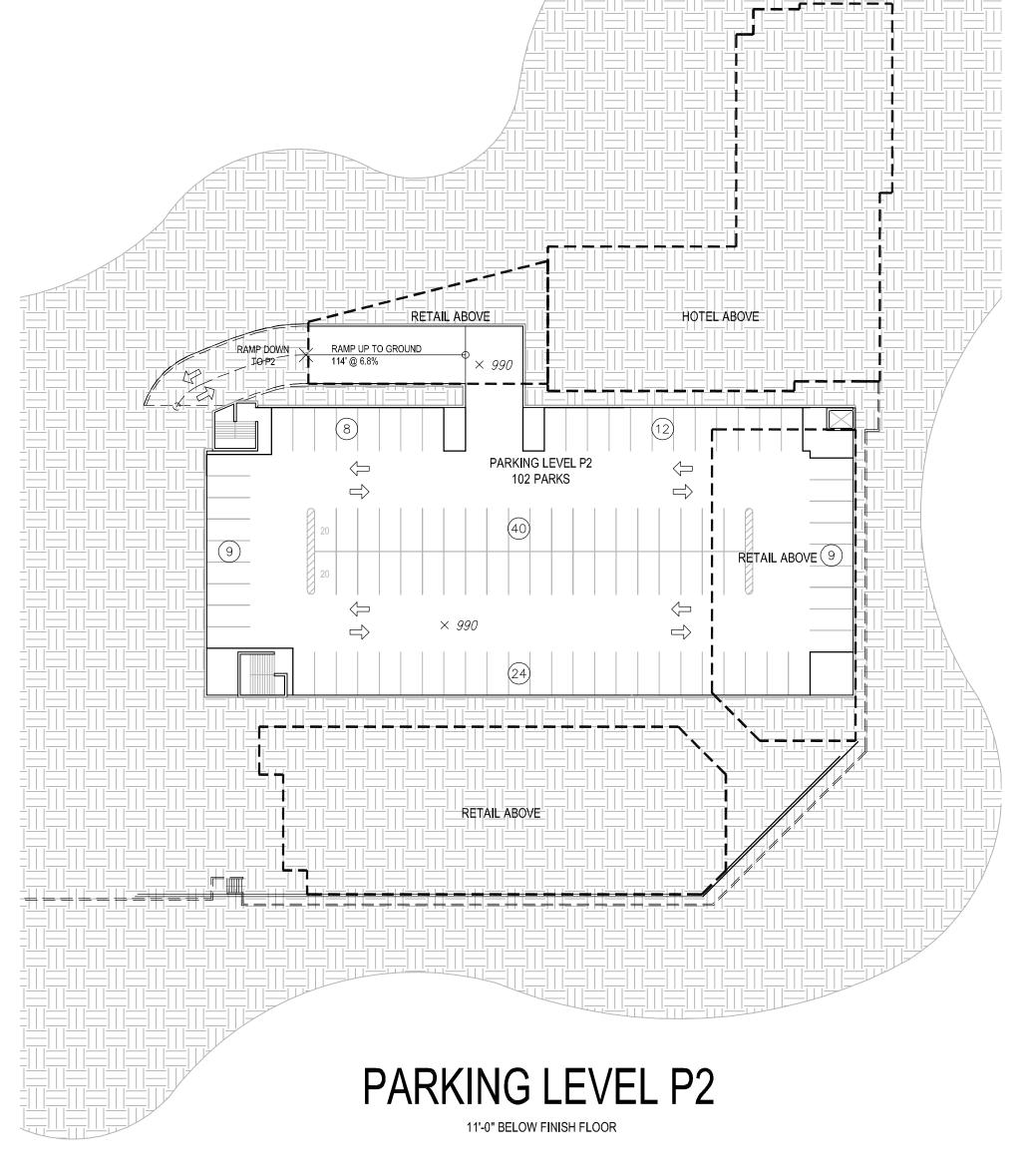
A tree assessment will be required to assess the current state of the tree's health and a tree care plan will be required to indicate the necessary steps to maintain their health while construction is underway nearby. This process will be managed by the developer with Site Solutions assistance to provide the best possible outcome for the tree save area.

Respectfully Submitted,

Joshua Thompson, LEED AP

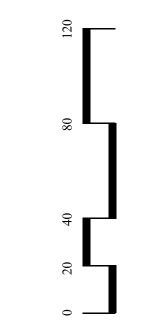
SITE solutions Project Manager



















SECTION D

SECTION

September 30, 2019

SITE













AMENDMENT APPLICATION



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 Phone: (678) 382-6800 | Fax: (770) 396-4828

* Applicant Information:	mation: Phone: (678) 382-6800 Fax: (770) 396-4828				
Company Name: GMC Real Estate Acquisitions, LI	_C, c/o J. Alexander Brock				
Contact Name: Alex Brock					
Address: 1230 Peachtree Street, Suite 3100, Atlanta	a, GA 30309				
Phone: 404-815-3603 Fax: 404-685-6903	Email: jabrock@sgrlaw.com				
Pre-application conference date (required): <u>May 30</u>	, 2019				
X Owner Information: □ Check here if same as ap	plicant				
Owner's Name: <u>Hines Ravinia Four Limited Partnershi</u>	p, a Texas limited partnership				
Owner's Address: <u>5 Ravinia Drive, Suite 1160, Atlanta</u>	a, GA 30346-2109				
Phone: <u>770-206-5303</u> Fax: <u>770-206-5325</u>	Email: vikram.mehra@hines.com				
Property Information:					
Property Address: 11 Ravinia Pkwy, Atlanta, GA 3034	Parcel ID:18 347 01 049				
Current Zoning Classification: Office-Commercial-Re	esidential (OCR)				
Requested Zoning Classification: Perimeter Center-2	(PC-2)				
Applicant Affidavit:					
determined to be necessary, I understand that I am responsible	nt application form is correct and complete. If additional materials are a for filing additional materials as specified by the City of Dunwoody a authorized to act on the owner's behalf, pursuant to this application				
Applicant's Name: J. Alexander Brock	,				
Applicant's Signature: <u>J. M.//</u>	Date: 4/4/19				
Notary:	At a				
Sworn to and subscribed before me this Notary Public: How McDuffle Signature: My Commission Expires:	Day of				
	My Commission Expires				



Additional Applicant Notarized Certification

Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 Phone: (678) 382-6800 | Fax: (770) 396-4828

I hereby certify that to the best of my knowledge, this application form is correct and complete. If additional materials are determined to be necessary, I understand that I am responsible for filing additional materials as specified by the City of Dunwoody Zoning Ordinance. I certify that I, the applicant (if different), am authorized to act on the owner's behalf, pursuant to this application and associated actions.

* Applicant:				
Applicant Name:				
			ate:	
	Fax:			
Sworn to and subse	cribed before me this	Day of	, 20	
Notary Public:				
40				
* Applicant:				
Applicant Name: _				
Signature:			_Date:	
Phone:	Fax:	Email:		
Sworn to and subso	cribed before me this	Day of	, 20	
Notary Public:				
•				
* Applicant:				
Applicant Name:				
Signature:		Da	ate:	
Address:				
Phone:	Fax:	Email:		
Sworn to and subso	cribed before me this	Day of	, 20	
Notary Public:				

Additional Property Owner(s) Notarized Certification



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 Phone: (678) 382-6800 | Fax: (770) 396-4828

I hereby certify that to the best of my knowledge, this amendment form is correct and complete. If additional materials are determined to be necessary, I understand that I am responsible for filing additional materials as specified by the City of Dunwoody Zoning Ordinance. I certify that the applicant(s) (if different) are authorized to act on my behalf, pursuant to this application and associated actions.

Property Owner (If	Applicable):		-	
Owner Name: Hines Ray	vinia Four Limited Partne	ership, a Texas limited	partnership	
Signature: Vilu	milelin		Date:	6/3/2019
Address: 5 Ravinia Drive	91	A 30346-2109		
Phone: 770-206-5303	Fax: 770-206-5325	Email: V	/ikram.mehra@hine	es.com
Sworn to and subscribed	d before me this		JUNE	
Notary Public:	ra Nobach	SHA J LOB		
		EXPIRES GEORGIA JULY 5, 2021	# # # # # # # # # # # # # # # # # # #	, ,
Property Owner (If	Applicable):	TAUBLIC.	100	
Owner Name:	S 8	COU!		
Signature:			Date:	
Address:				
Phone:				
Sworn to and subscribed	before me this	Day of		, 20
Notary Public:				
1				
♣ Property Owner (If	Applicable):		· · · · · · · · · · · · · · · · · · ·	
Owner Name:			is the second se	
Signature:				
Address:				
Phone:				
Sworn to and subscribed	before me this	Day of		, 20
Notary Public:				
.01				

Campaign Disclosure Ordinance



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 Phone: (678) 382-6800 | Fax: (770) 396-4828

Campaign Disclosure Ordinance

Please read the law and complete the Campaign Disclosure Statement on the following page if you are requesting an amendment.

GA Citation/Title
GA Code 36-67A-3, Disclosure of campaign contributions
*38069 Code, 36-67A-3

CODE OF GEORGIA TITLE 36. LOCAL GOVERNMENT PROVISIONS APPLICABLE TO COUNTIES AND MUNICIPAL CORPORATIONS CHAPTER 67A. CONFLICT OF INTEREST IN ZONING ACTIONS (Current through 2000 General Assembly)

36-67A-3 Disclosure of campaign contributions.

- a) When any applicant for rezoning action has made, within two years immediately preceding the filing of that applicant's application for the rezoning action, campaign contributions aggregating \$250.00 or more to a local government official who will consider the application, it shall be the duty of the applicant to file a disclosure report with the governing authority of the respective local government showing:
 - 1) The name and official position of the local government official to whom the campaign contribution was made; and
 - 2) The dollar amount and description of each campaign contribution made by the applicant to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.
- b) The disclosures required by subsection (a) of this Code section shall be filed within ten days after the application for the rezoning action is first filed.
- c) When any opponent of a rezoning action has made, within two years immediately preceding the filing of the rezoning action being opposed, campaign contributions aggregating \$250.00 or more to a local government official of the local government which will consider the application, it shall be the duty of the opponent to file a disclosure with the governing authority respective local government showing:
 - 1) The name and official position of the local government official to whom the campaign contribution was made; and
 - 2) The dollar amount and description of each campaign contribution made by the opponent to the local government official during the two years immediately preceding the filing of the application for the rezoning action and the date of each such contribution.
- d) The disclosure required by subsection (c) of this Code section shall be filed at least five calendar days prior to the

first hearing by the local government of any of its agencies on the rezoning application.

(Code 1981, 36-67A-3, enacted by Ga. L. 1986, p. 1269, 1; Ga. L. 1991, p. 1365, 1; Ga. L. 1993, p. 91, 36.)

Official Code of Georgia Annotated Copyright 1982 – 2000 State of Georgia.



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 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?

Applicant / Owner: Hines Ravinia Four Limited Partnership

Address: 5 Ravinia Drive, Suite 1160, Atlanta, GA 30346-2109

☐ YES NO

Date: _

Date	Government Official	Official Position	Description	Amount
	7			
			100 100	
		0		
			2	
e	2		is the second se	

Address: 1230 Peachtree Street, Suite 3100, Atlanta, GA 30309

Signature:



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 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?

Applicant / Owner: GMC Real Estate Acquisitions, LLC, c/o J. Alexander Brock

☐ YES 💆 NO

If the answer above is yes, please complete the following section:						
Date	Government Official	Official Position	Description	Amount		
	A					
			a a			
F						

Applicant Howner: Kathryn M. Zickert

Address: 5 Ravinia Drive, Synte 1160, Atlanta, GA 30346-21090

Signature: 셬



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 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	☐ YES	NOT IN
or more to a member of the City of Dunwoody City Council or a	U IES	JAL IV
member of the City of Dunwoody Planning Commission?		

VO

	If the answer above is yes, please complete the following section:						
Date	Government Official	Official Position	Description	Amount			

Applicant / Owner: / Dennis J. Webb, Jr.

Address: 5 Ravinia Drive, Suite 1160, Atlanta, GA 30346-2109

Signature:



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 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?

☐ YES ☒ NO

Date: June 4, 2019

Date	Government Official	Official Position	Description	Amount

Applicant / Owner: J. Alexander Brock

Address: 5 Ravinia Drive, Suite 1160, Atlanta, GA 30346-2109

Signature:



Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338 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?

☐ YES X NO

Date: _ June 4, 2019

	If the answer above is yes, please complete the following section:						
Date	Government Official	Official Position	Description	Amount			
	3						
	(5.7)						
	,						

William Christopher Amacher, age 92, passed away on May 12, 2019 at his home in Dunwoody. He was preceded



AMACHER

in death by his cherished wife of 51 years, Vera Joyce Amacher.

Bill was born in Tennessee in 1926, to Annie Sue Drake Amacher and Fritz

Amacher. The family moved to Dunwoody in 1934 to pursue farming. After graduating from Chamblee High School, Bill proudly served our country in WWII, with a Military Police Battalion. After being discharged, he returned to Georgia to continue his education, and played football at Erskine University and West Georgia College, but would ultimately transfer to the University of Georgia. Along with his brother, Fred Amacher, he formed Amacher Bros. Construction Co. in 1953 and was a commercial contractor for over 50 years in Atlanta.

Bill was an active member of Dunwoody United Methodist Church, and particularly enjoyed his Crusaders Sunday School class. He was a member of Dunwoody Preservation Trust, working alongside his beloved wife, Joyce, on a number of community service projects. The City of Dunwoody awarded him Keys to the City in honor of his dedication to historic preservation.

Whether he was playing tennis on his backyard court,

OBITUARIES

vegetable gardening, studying history, playing golf, boating on Lake Lanier, or dancing, Bill was always very active and thoroughly enjoyed all of it. He loved watching the Dawgs between the hedges as well as the Braves and the Falcons. He and his wife Joyce traveled all over the US, China, Europe, Canada and Mexico. Bill loved to entertain in the home he built for his family in Dunwoody. He had a unique voice that is often imitated but never totally mastered.

His family will miss seeing Bill driving around Dunwoody in his pickup truck full of construction equipment, hardhat in tow. He is survived by his son, Zachery Christopher Amacher, and wife Amie. He is also survived by his wife's children who he loved dearly, Zerah Whitfield Wilson and husband Bob and Zelda Whitfield Patrick and husband Dixon, six grandchildren; Lauren and Elliott Wilson, Samantha and Brenda Patrick, Allison and Kimberly Amacher, nephews Eric Amacher and Lance Amacher and their families.

The memorial service will be on Thursday, May 30th, at Dunwoody United Methodist Church at 11:00 a.m. Friends and family are invited to gather at 10:00 a.m. for visitation.

In lieu of flowers, donations can be made to Dunwoody United Methodist Church in memory of Bill Amacher.

Edith Bigby Tribble Chapin, long time Dunwoody resident and Dunwoody Methodist Church member,



CHAPIN

passed away on May 12, 2019 in Highlands, NC. Edith was preceded in death by her husband Judson Chapin, her parents Robert and Edith

Tribble, and her sisters, Robbie Tribble and Sally Herriot. Edith was born on June 27, 1923 in Jonesville, South Carolina and raised there, graduating from Winthrop College in 1944. She married Army Lieutenant Judson Chapin, a

Clemson graduate, that same year. After marriage, she joined Judson, living at a succession of army posts during the war, where she was employed in the base accounting departments. After the war, her husband's insurance career took them from city to city, during which Edith was a devoted home maker and math teacher who received her Master's from the University of Memphis. Over the years, she taught math at Kingsbury High in Memphis, Lindbergh High in St. Louis, and Peachtree High in Dunwoody. Edith and Judson raised three sons, and putand put them successfully through college. They also widened their horizons with visits to 45 states. The couple enjoyed family,

bridge with friends, antiques, and frequent travel to England. After Judson's passing Edith continued to travel the world with friends and her sister Sally. She lost track of how many lands she had been to, but she always said that home with her family was her favorite place to be. Edith sold her Dunwoody, GA home in 2013 and moved to Huntcliff Senior Living where she made new friends and loved her caregivers. In 2019 she moved to Highlands, NC. Edith is survived by her three sons, Walter (Elena) of Poulsbo, WA, Jud (Sarah) of Cashiers, NC, and Stephen of Atlanta, by her two grandchildren Meredith (Chip) Hamner of Raleigh, NC,

OBITUARIES, page 12

Bingo & Dinner!

MAY 23, BINGO starts promptly at 7:30pm Licensed by: The Citizens for Dunwoody

Open to the community. \$15 buys 9 cards for 10 games. 90 chances to win up to \$1,000 and more.

FREE gift card drawings, 50/50 raffle and Nonna's FREE famous Italian food along with soft drinks and desserts—COMPLIMENTARY! (donations appreciated)

All money raised benefits All Saints Knights of Columbus Charities.

All Saints Social Hall, 2443 Mt. Vernon Rd, Dunwoody

Cut out and present this ad for additional bingo cards



Free V Mo

Free Wellness Event Month of May

Celebrating special moments with healthy hearing.
Let us help you stay connected.

93% of Lyric users would recommend Lyric to a friend or loved one.

Call Us Today!!



Dunwoody 770-637-1574 1713 Mt. Vernon Rd., Ste. 4 Dunwoody, GA 30338 Lake Oconee 706-352-9851 Decatur 404-948-5652 1991 N. Williamsburg Dr., Ste A100 Decatur, GA 30033 Lake Sinclair 478-400-1104

Lyric

www.hearatlanta.com | Like us on Facebook

PUBLIC NOTICE

PUBLIC NOTICE is hereby given that there will be a meeting of interested parties at 6:30 p.m., on the 3rd day of June, 2019, in the Overton Room at Two Ravinia Drive, Atlanta, Georgia 30346, for the purpose of discussing a Pre-Application by GMC Real Estate Acquisition, LLC, submitted to the City of Dunwoody to rezone a +3.43 acre parcel from Office-Commercial-Residential (OCR) to Perimeter Center-2 (PC-2) to allow the proposed development of the property located at 11 Ravinia Pkwy, Atlanta, Georgia. The proposed development will consist of a restaurant, retail and hotel. All interested parties are hereby notified and invited to attend.

This 23rd day of May, 2019.

J. Alexander Brock Attorney for GMC Real Estate Acquisition, LLC

THIS NOTICE IS GIVEN PURSUANT TO DUNWOODY CODE OF ORDINANCES SECTION 27-306.

EXHIBIT A

ALL THAT TRACT of land in Land Lot 347 of the 18th District of Delcale County, Georgia, described as follows;

BEGINNING at a Georgia DOT concrete ment found on the north right-of-way line of Interstate
High-way 285 (variable right-of-way) which Georgia DOT concrete is located South 80°-03'-05'
West 20.24 feet from the intersection of the north right-of-way line of Interstate 285 with the east right-of-way line of Ashford-Dunwoody Road (variable right-of-way); running thence along the north right-of-way line of Interstate 285 North 80°-03'-05' East 20.24 feet to the point of intersection of the north right-of-way line of said Ashford-Dunwoody Road; thence, along the east right-of-way line of said Ashford-Dunwoody road, the following courses and dista cer:

- 1) North 48°-10'-13" West 38.00 feet to a point
- 2) North 14"-52'-32" West 25.00 feet to a police
- 3) North 114-44'-52" Wost 201.62 feet to a point,
- 4) North 14°-52'-30° West 158.10 foct to a point
- 5) There e along the are of a curve to the right (which are is subtended by a chord having a bearing and distance of North 12°-39'-39' West 77.41 feet, and a radius of 1,001.75 feet) 77.43 feet to a point and
- 6) North 07°-50'-17" West 74.75 feet to a point on the southerly right-of-way line of Ravinia Parkway (a variable right-of-way);

Thence along the southerty right of way line of the said Ravinia Parkway the following bearings and distances:

- Thence along the are of a 742.10-feet radius curve to the right an are distance of 341.78 feet to a
 point (said are being subtended by a chord bearing South 54°-12'-13" East and having a length of
 338.62 feet);
- 2) Thence South 40°-40'-53" East a distance of 20.72 feet to a point,
- 3) Thence along the arc of a 228.09-foot radius curve to the right an arc distance of 35.90 feet to a point (said are being subtended by a chord bearing South 33°-39'-37" East and having a length of 55.76 feet);
- 4) Thence South 26°-38"-21" East a distance of 62.87 feet
- 5) Thence along the are of a 171.34-foot radius curve to the left an are distance of 106.39 feet to a point (said are being subtended by a chord bearing South 44°-25'-40" East and baving a length of 104.69 feet);
- 6) Thence South 62°-13'-00" East a distance of 51.22 feet to a point
- 7) Thence along the are of a 169.64-foot radius curve to the left an are distance of 153.64 feet to a point (said are being subtended by a chord bearing South 88°-09'-48° East and having a length of 148.44 foot);
- 8) Thence North 65°-53'-25" East a distance of 142.42 feet to a poles;

Thence leaving the said southerly right-of-way line of Ravinis Parkway and running South 66°-15'-42"
East 146.38 feet to a point on the aforementated North right-of-way line of Interstate Highway 285;

Thence along the said North right-of-way line of Interstate Highway 285 South 80°-03'-05" West 745.88 feet to the POINT OF BEGINNING.

PUBLIC NOTICE is hereby given that there will be a meeting of interested parties at 6:30 p.m., on the 3rd day of June, 2019, in the Overton Room at Two Ravinia Drive, Atlanta, Georgia 30346, for the purpose of discussing a Pre-Application by GMC Real Estate Acquisition, LLC, submitted to the City of Dunwoody to rezone a ±3.43 acre parcel from Office-Commercial-Residential (OCR) to Perimeter Center-2 (PC-2) to allow the proposed development of the property located at 11 Ravinia Pkwy, Atlanta, Georgia. The proposed development will consist of a restaurant, retail and hotel. All interested parties are hereby notified and invited to attend.

This	day	of	,	20	19	

J. Alexander Brock Attorney for GMC Real Estate Acquisition, LLC

THIS NOTICE IS GIVEN PURSUANT TO DUNWOODY CODE OF ORDINANCES SECTION 27-306.

Promenade, Suite 3100 1230 Peachtree Street, N.E. Atlanta, Georgia 30309-3592 Main: 404 815-3500 www.sgrlaw.com

SMITH, GAMBRELL & RUSSELL, LLP

Attorneys at Law

J. Alexander Brock

Direct Tel: 404-815-3603 Direct Fax: 404-685-6903 jabrock@sgrlaw.com

May 14, 2019

Re:

11 Ravinia Pkwy, Atlanta, Georgia

Rezoning Application

Dear Neighbors:

You are receiving this notification because you are an owner of property located within 1,000 feet of the above-referenced property. GMC Real Estate Acquisition, LLC, will be submitting an application to the City of Dunwoody to rezone a ±3.43 acre parcel from Office-Commercial-Residential (OCR) to Perimeter Center-2 (PC-2) to allow the proposed development of the property located at 11 Ravinia Pkwy, Atlanta, Georgia. The proposed development will consist of a restaurant, retail and hotel.

I write both to inform you of the pending Application and of the Applicant-Initiated Informational Meeting to be held on June 3, 2019 at 6:30 p.m., in the Overton Room at Two Ravinia Drive, Atlanta, Georgia. A map of the Ravinia Complex is attached for your reference.

Should you have any questions regarding this application, please feel free to contact me.

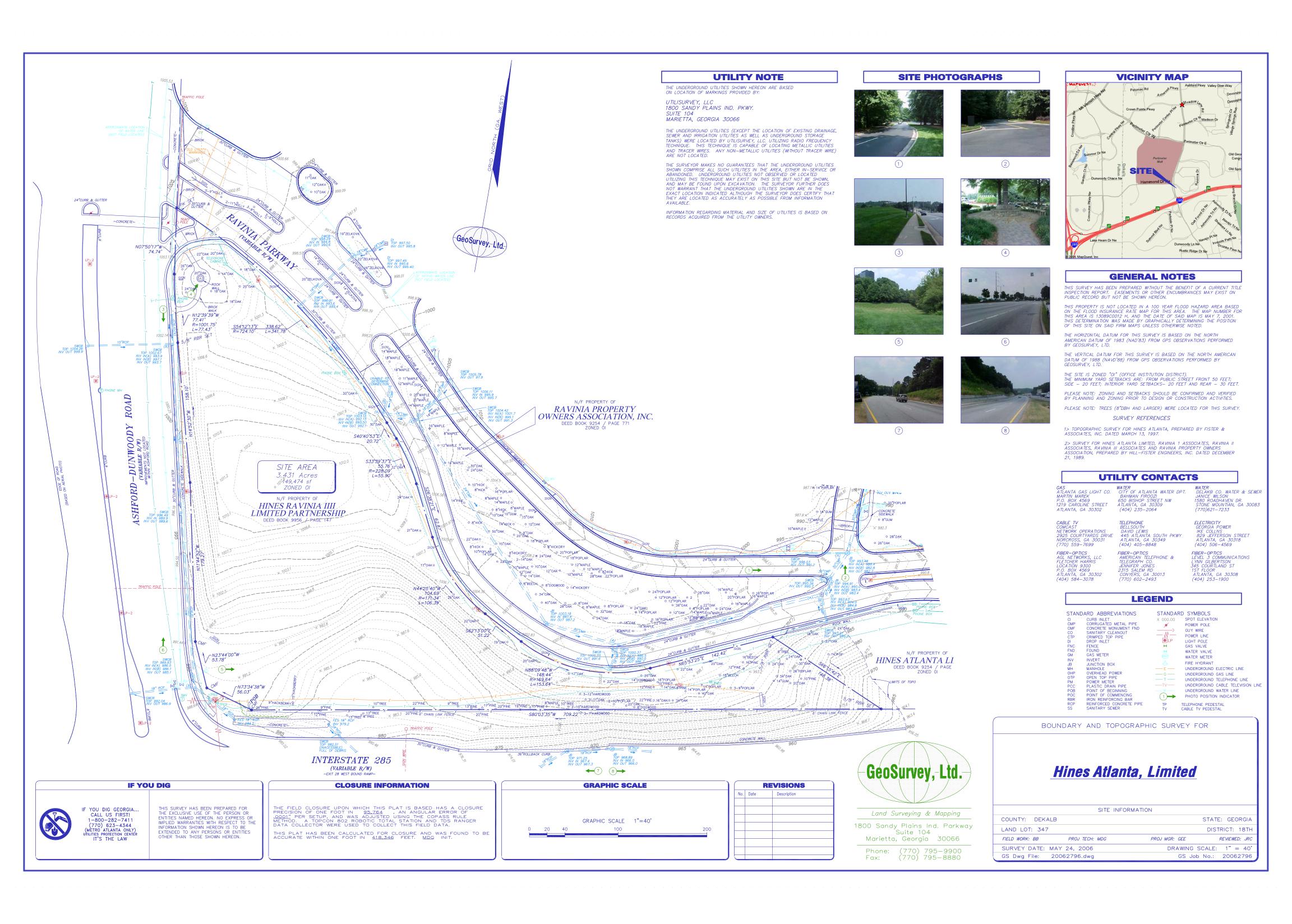
Sincerely,

J. Alexander Brock Attorney at Law

JAB/vmo

Attachment





FIRST AMENDED STATEMENT OF INTENT

and

Other Material Required by
City of Dunwoody Zoning Ordinance
For the
Zoning Map Amendment Application

of

GMC Real Estate Acquisitions, LLC

for

± 3.43 Acres of Land located in Land Lot 347, 18th District, DeKalb County Address: 11 Ravinia Parkway

Submitted for Applicant by:

Kathryn M. Zickert Dennis J. Webb, Jr. J. Alexander Brock Smith, Gambrell & Russell, LLP Promenade, Suite 3100 1230 Peachtree Street, NE Atlanta, Georgia 30309 404-815-3500

I. <u>INTRODUCTION</u>

This application seeks to rezone ±3.43 acres in the City of Dunwoody from the Office-Commercial-Residential (OCR) district to Perimeter Center-2 (PC-2) to allow for a commercial mixed-use development. The property is located in the southeastern quadrant of the intersection of Ravinia Parkway and Ashford-Dunwoody Road (the "Subject Property"). The Subject Property is more particularly located at 11 Ravinia Parkway (Parcel ID No. 18 347 01 049). The Subject Property is in the Perimeter Center Overlay and is currently undeveloped with mostly grassed areas and few trees along its perimeter.

The Applicant is seeking the instant rezoning to allow the development of the Subject Property for ± 41,400 square feet of restaurant/retail space, a five-story hotel (156 keys), parking deck, and appurtenant site improvements (the "Proposed Development"). This type of development is well suited for the area which is largely commercial with some office, hotel and limited residential uses. To the south, the Subject Property is bounded by the right-of-way of U.S. Interstate 285 ("I-285"); to the west, it is bounded by the right-of-way of Ashford Dunwoody Road; to the north and east, it is bounded by the right-of-way of Ravinia Parkway; and it is also bordered on the east by undeveloped Hines Atlanta Limited property, zoned Office-Institutional (O-I).

The area surrounding Perimeter Mall and particularly along Ashford-Dunwoody Road has experienced tremendous growth in the past forty (40) years; however, the Subject Property has remained idle. The site was originally zoned as a part of the overall Ravinia development in 1982 and was then considered for restaurant/retail development later in 2004, yet none of the developments envisioned for the property ever materialized. During this same period, the surrounding area has grown to be one of the premier commercial centers in the Metro-Atlanta

area and the Subject Property is primed for the type of upscale restaurant/retail/hotel development that is now proposed. The City of Dunwoody Zoning Ordinance was updated in 2017 to incorporate the Perimeter Center zoning districts to keep pace with the development in the Perimeter Center area. This Application seeks to bring the Subject Property's zoning in line with the current Perimeter Center zoning and the surrounding development.

In addition, the Proposed Development's layout will incorporate many design features desired for the PC-2 district such as pedestrian connectivity, street interaction, and open space. The Proposed Development's buildings will be located close to the adjacent right-of-ways to provide more pedestrian connectivity and activate the streetscape. Moreover, the proposed retail and restaurant buildings will be one (1) to two (2) stories in height and the proposed hotel will be up to ten (10) stories with the taller hotel building to the rear towards I-285, which reduces the impact of building massing on the adjacent streetscape. The parking for the Proposed Development will be contained in a structured parking deck internal to and surrounded by the retail, restaurant and hotel buildings. The surrounding buildings and the underground parking levels will shield much of the parking from view of the right-of-way. In fact, 214 spaces out of the total 308 spaces onsite, will be underground and completely hidden from the adjacent streets. The effect of these design considerations is to create a development that is both attractive and blends harmoniously with the surrounding development.

The Applicant submits this document as a Statement of Intent with regard to its Zoning Map Amendment Application, a preservation of its constitutional rights, and an analysis of the criteria for the Zoning Map Amendment Application as required by the City of Dunwoody's Zoning Ordinance, § 27-333.

II. ZONING HISTORY

The Subject Property is zoned OCR and is located within the Perimeter Center Overlay. It is designated as being in the "Perimeter Center" (PC) character area on the city's Future Land Use Map. The PC character area fully allows the proposed PC-2 Zoning. The PC character area specifically calls for first-class retail, entertainment, hotels, and high-end restaurants. Subject Property was rezoned from Single Family Residential Large Lot (R-100) to Office-Institutional (O-I) in 1982 pursuant to Zoning Ordinance CZ-82075 for its development with the overall Ravinia complex. This zoning underwent multiple applications for modification, with the latest being in 1997 which modified the zoning to allow 266,000 square feet of office in a 15story building, an 18,000 square foot conference space, 7,000 square feet of retail or restaurant use, and a 1280-space parking deck. In 2004, the Subject Property was rezoned from O-I to OCR to allow restaurant/retail use pursuant to ordinance number CZ-04022. The 2004 zoning was not conditioned on a site plan. The OCR regulations impose a floor area ratio of 1.5 and a two-story building height limit. See DeKalb County OCR regulations in effect in 2004, attached as Exhibit 1. Thus, the property can be developed now for 225,216 square feet of retail and The conditions imposed by the 2004 zoning have left the Subject Property undeveloped for the past fifteen (15) years, despite the area's rapid growth during that same period. The current proposal seeks to rectify this misstep and allow an attractive development in one of Dunwoody's leading areas.

III. IMPACT ANALYSIS

1. WHETHER THE ZONING PROPOSAL IS IN CONFORMITY WITH THE POLICY AND INTENT OF THE COMPREHENSIVE PLAN.

The Subject Property is located within the Perimeter Center Character Area of the City of Dunwoody's 2015-2035 Comprehensive Plan (the "Comprehensive Plan") and within the

Perimeter Center Overlay under the Code. The Proposed Development will be in compliance and advance the goals of the Overlay. Furthermore, the Proposed Development is entirely consistent with these designations, which encompass high quality mixed-use developments that provide services to the residents, workers and visitors of Perimeter Center. In particular, the proposed redevelopment will further the following stated policies of the Comprehensive Plan:

- (a) New development that includes amenities and green space;
- (b) Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route;
- (c) Promoting redevelopments that promote a "pedestrian and bicycle-oriented environment;"
- (d) Promoting redevelopments that "reduce remaining excessive surface parking;" and
- (e) Promoting redevelopment that "continues to emphasize high quality design standards and building materials;"

Additionally, the Subject Property is located in the PC-2 subarea under the Comprehensive Plan and designated for PC-2 under the Perimeter Center Overlay. The Proposed Development is consistent with these designations, which promote the highest intensity of buildings supporting pedestrian and bicycle activity.

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. As stated in previous paragraphs, the surrounding area is largely commercial and the Proposed Development is complementary to the existing development. The proposed retail and restaurant space will offer high-end options that will fill a niche that is lacking in much of the surrounding market. In addition, the boutique hotel will provide options to select travelers

currently underserved by lodging choices in the area, thereby expanding the attractiveness of the area to a larger customer base. It is the Applicant's desire that the Proposed Development will operate in harmony with the nearby and adjacent uses.

3. WHETHER THE PROPERTY TO BE AFFECTED BY THE ZONING PROPOSAL HAS A REASONABLE ECONOMIC USE AS CURRENTLY ZONED.

The Subject Property's current OCR zoning limits the use to restaurant and retail in buildings of less than two stories. In the time since the Subject Property was zoned in 2004, the Perimeter Center area has experienced tremendous commercial growth. This growth coupled with certain market demands for hotel use in the area, has shown that the current zonings restrictions make the Subject Property impractical for development limited exclusively to low-rise commercial. As a result the Subject Property has sat vacant for the past fifteen (15) years with little serious interest in development. The proposed PC-2 zoning will rectify this situation and allow a practical development that follows the positive growth trends of the area.

4. WHETHER THE ZONING PROPOSAL WILL ADVERSELY AFFECT THE EXISTING USE OR USABILITY OF ADJACENT OR NEARBY PROPERTY.

No. The surrounding uses are all commercial or office, which is complementary to the Proposed Development.

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.

As stated in prior paragraphs, the growth trend in the area has been toward taller buildings, such as what is now currently proposed. Evidencing this trend is the City of Dunwoody's adoption of the Perimeter Center zoning districts in 2017, which allows such taller building heights and a variety of commercial uses. The Subject Property is situated in the

intended Perimeter Center, Subarea 2, which is intended for buildings of up to fourteen (14) stories. The proposed PC-2 zoning makes the Subject Property compliant with zoning envisioned for the area.

6. WHETHER THE ZONING PROPOSAL WILL ADVERSELY AFFECT HISTORIC BUILDINGS, SITES, DISTRICTS, OR ARCHAEOLOGICAL RESOURCES.

The Applicant is not aware of any historic buildings, sites, districts, or archaeological resources either on the Subject Property or located in the immediate vicinity that would suffer adverse impacts from the requested rezoning.

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.

Any additional vehicular traffic generated by the Proposed Development can be accommodated. A traffic study which reflects the impact of the development is attached as Exhibit 2. As there is no residential component, the proposed development will have no impact on school enrollment. There is sufficient utility, water and sewer capacity to supply this site.

IV. NOTICE OF CONSTITUTIONAL CHALLENGE TO UNDERLYING ZONING AND PRESERVATION OF CONSTITUTIONAL RIGHTS

The zoning on the Subject Property (and any intervening zoning district other than that requested) is unconstitutional. Further, the Zoning Ordinance of the City of Dunwoody, Georgia lacks adequate standards for the Mayor and City Council to exercise their power to zone and rezone. In essence, the standards are not sufficient to contain the discretion of the Mayor and City Council and to provide the Courts with a reasonable basis for judicial review. Because the stated standards (individually and collectively) are too vague and uncertain to provide reasonable guidance to the Mayor and City Council, the Zoning Ordinance violates the Fifth and Fourteenth

Amendments of the Constitution of the United States in matters of zoning. The Zoning Ordinance also violates Article I, Section III, Paragraph 1; and Article I, Paragraphs 1 and 2 of the Constitution of the State of Georgia, 1983.

The Mayor and City Council are granted the power to zone pursuant to Article IX, Section II, Paragraph 4 of the Constitution of the State of Georgia, 1983. It is a power which must be fairly exercised. Based on this element of fairness, the Zoning Ordinance of the City of Dunwoody, Georgia violates Article IX, Section II, Paragraph 4 of the Constitution of the State of Georgia, 1983.

The Zoning Ordinance presently in effect is contrary to the best interest of the health and welfare of the citizens of the City of Dunwoody, Georgia, and constitutes an arbitrary and capricious act. As a result, the Zoning Ordinance is in violation of Article I, Section I, Paragraphs 1 and 2 of the Constitution of the State of Georgia, 1983; Article I, Section III, Paragraph 1 of the Constitution of the State of Georgia, 1983; and Article I, Section II, Paragraph 3 of the Constitution of the State of Georgia, 1983. Furthermore, the Zoning Ordinance violates the due process clause and equal protection clauses of the Fifth and Fourteenth Amendments to the Constitution of the United States of America.

In addition, the Zoning Ordinance presently in effect is unconstitutional in that it renders this property unusable and destroys its marketability. Therefore, the Zoning Ordinance constitutes a taking of applicant's property without just and adequate compensation and without due process of law in violation of the Fifth and Fourteenth Amendments to the United States Constitution and in violation of Article I, Section I, Paragraph 1 and Article I, Section III, Paragraph 1(a) of the Constitution of Georgia, 1983.

The failure to rezone the Subject Property as requested would constitute the taking of property without due process and without the payment of adequate compensation in violation of Article I, Section I, Paragraph 1 of the Constitution of the State of Georgia, 1983; and the Fifth and Fourteenth Amendments of the Constitution of the United States.

Failure to grant the application for rezoning or to zone the property to any other classification, including other intervening classifications, would be contrary to the best interest of the health and welfare of the citizens of the City of Dunwoody, Georgia, and would further constitute an arbitrary and capricious act. As such, failure to grant the application would constitute a Violation of Article I, Section I, Paragraph 1 of the Constitution of the State of Georgia, 1983; and Article I, Section III, Paragraph 1 of the Constitution of the State of Georgia, 1983; and Article I, Section II, Paragraph 3 of the Constitution of the State of Georgia, 1983, together with the due process clause and equal protection clauses of the Fifth and Fourteenth Amendments to the Constitution of the United States of America.

Any limitation on the time for presentation of the issues before the Mayor and City Council who have the power to zone and rezone is a violation of the guarantees of free speech under Article I, Section I, Paragraph 5 of the Constitution of the State of Georgia, 1983; and the First Amendment of the Constitution of the United States of America. Further, said limitations are in violation of the right to petition and assemble, in violation of Article I, Section I, Paragraph IX of the Constitution of Georgia, 1983; and the First Amendment of the Constitution of the United States of America, as well as the due process clauses of the Constitution of Georgia, 1983 and the Constitution of the United States of America.

The Zoning Ordinance of the City of Dunwoody is unlawful, null and void in that its adoption and map adoption/maintenance did not comply with the requirements of its predecessor ordinance and/or the Zoning Procedures Law, O.C.G.A. § 36-66-1, *et seq*.

Opponents to this rezoning request lack standing, have failed to exhaust administrative remedies, and have waived their rights to appeal.

V. <u>CONCLUSION</u>

For the foregoing reasons, the Applicant respectfully requests that the Zoning Map Amendment at issue be approved. The Applicant also invites and welcomes any comments from Staff or other officials of the City so that such recommendations or input might be incorporated as conditions of approval of this Application.

This day of October, 2019.

Respectfully submitted,

SMITH, GAMBRELL & RUSSELL, L.L.P.

Kathryn M. Zickert Dennis J. Webb, Jr. J. Alexander Brock Attorneys For Applicant

Smith, Gambrell & Russell, LLP Promenade, Suite 3100 1230 Peachtree Street, N.E. Atlanta, Georgia 30309 404-815-3500

EXHIBIT 1

Site: 11 Ravinia Parkway **O-I** RÁVINIÁ PKWÝ NIA DR RAVINIA PAIN HAMMOND DR RAVINIA PKWY OCRC ASHFORD DUNWOODY RD OFF RAMP 285WB R-150 ASHFORD DUMMOODY RD ON RAMP 285EB ASHFORD DUNWOODY RD ORD DUNWOODY RD ON RAMP 285MB **BROOKHAVEN** Site: 11 Ravinia Parkway 285EB Parcel **Zoning** Local Commercial (C-1) Dünwoody Office-Institution (O-I) Office-Commercial Residential (OCR) Map Date: 6/12/2019 Single-dwelling Residential (R-150) 1,000 500

Zoning Conditions

Feet





Material Legend

-Major Façade Materials will make up a minimum of 80% of each façade -Minor materials will make up no more than 20% of each façade -All glass will be highly transparent

-All accent materials will be per the Perimeter Center Overlay requirements



WAKEFIELD BEASLEY & ASSOCIATES A NELSON Brand 1903042.000

Ш





WAKEFIELD BEASLEY & ASSOCIATES A NELSON Brand 1903042.000



WAKEFIELD
BEASLEY &
ASSOCIATES

A NELSON Brand
1903042.000

Packet page:...

JUNE 25, 2019

RAVINIA - CONCEPTUAL RENDERINGS



JUNE 25, 2019

WWW.WBASSOCIATES.COM | A NELSON Company

Packet page:...

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 (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 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







▲ 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.
- 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.

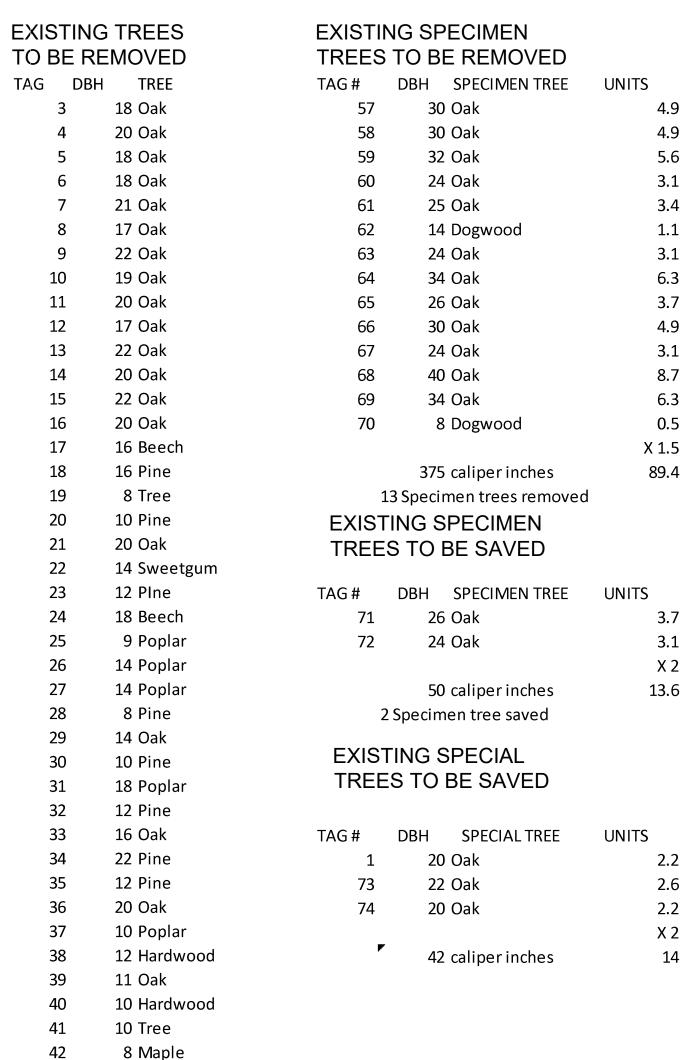
COMMUNITY IMPROVEMENT DISTRICT (CID)

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.







838 caliper inches 55 tree removed

9 Hackberry

20 Pine

44

19 Pine

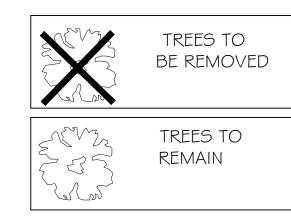
20 Pine 17 Pine

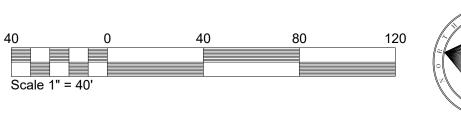
TREE CALCULATIONS
TREE DENSITY FACTOR (TDF)
6.5 ACRES X 20 TREE UNITS = 130.0 TREE UNITS REQUIRED

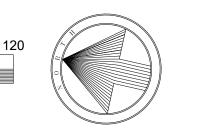
REMAINING TREE FACTOR (RTF)
(SPECIMEN + SPECIAL TREES) X 2 = RTF
(13.6 + 14.0) X 2 = 55.2 UNITS PROVIDED

REQUIRED REPLACEMENT DENSITY (RRD) TDF - RTF = RRD 130.0 - 55.2 = 74.8 UNITS REQUIRED

SPECIMEN RECOMPENSE: 89.4 UNITS REMOVED 89.4 / 0.6 UNITS (3" CAL. TREE) = 149 TREES REQUIRED 149 3" CAL. TREES X \$450.00 PER TREE (ESTIMATED) = \$67,050.00 SPECIMEN TREE RECOMPENSE ESTIMATED AT \$67,050.00.







SITE solutions

LANDSCAPE ARCHITECTURE+ LAND PLANNING

3715 Northside Parkway T: 404.705.9411
300 Northcreek, Bldg. 300 F: 404.705.9491
Atlanta, Georgia 30327 www.sitesolutionsla.com

COPYRIGHT C 2005 BY SITE solutions, LLC. LANDSCAPE ARCHITECTS. ALL RIGHTS RESERVED. THIS DOCUMENT (INCLUDING ELECTRONIC AND REPRODUCTIONS) IS THE PROPERTY OF SITE solutions, LLC. AND ONLY FOR USE ON THE PROJECT SPECIFIED HEREIN. IT IS NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT, IN WHOLE OR IN PART, EXCEPT BY THE EXPRESSED WRITTEN AGREEMENT WITH SITE solutions, LLC. THIS DOCUMENT AND REPRODUCTIONS SHALL

NOT BE CONSIDERED A CERTIFIED DOCUMENT.

PROFESSIONAL STAMP:

MIXED USE

RAVINIA

PREPARED FOR

SHEET STATUS

ATE BY RELEASE

0.2019 JT CITY REVIEW

0.2019 JT ZONING APPLICA

 A
 05.10.2019
 JT
 CITY REVIEW

 B
 05.30.2019
 JT
 ZONING APPLICATION

 C
 06.13.2019
 JT
 ZONING APPLICATION

 D
 06.25.2019
 JT
 ZONING APPLICATION

SHEET TITLE:

TREE REMOVAL PLAN

PROJECT NUMBER: 19015.00

L1.01

DATE: 05.07.2019

NOT FOR CONSTRUCTION

Packet page:...

Traffic Impact Study

Proposed Ravinia Multi-Use Development City of Dunwoody, Georgia

July 19, 2019



Traffic Impact Study

Proposed Ravinia Multi-Use Development City of Dunwoody, Georgia

study prepared for:

Geyer Morris Company
One Buckhead Plaza
3060 Peachtree Road NW, Suite 1050
Atlanta, Georgia 30305

July 19, 2019



MARC R. ACAMPORA, PE, LLC

TRAFFIC ENGINEERING



858 Myrtle Street, NE Atlanta, Georgia 30308 (678) 637-1763



e-mail: acamporatraffic@comcast.net web: www.acamporatraffic.com

Contents

INTRODUCTION	1
EXISTING TRAFFIC CONDITIONS	2
Description of Existing Roadways	2
Pedestrian, Bicycle, and Transit Accessibility	
Existing Traffic Volumes	
Existing Intersection Operations	
NO-BUILD TRAFFIC CONDITIONS	13
No-Build Traffic Volume Projections	13
No-Build Intersection Operations	13
PROJECT TRAFFIC CHARACTERISTICS	15
Project Description	15
Trip Generation	16
Trip Distribution and Assignment	17
FUTURE TRAFFIC CONDITIONS	19
Future Intersection Operations	19
CONCLUSIONS AND RECOMMENDATIONS	21
APPENDIX	
Tables	
Table 1 — Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates	10
Table 2 – Existing Intersection Operations	
Table 3 – No-Build Intersection Operations	
TABLE 4 — RAVINIA MULTI-USE DEVELOPMENT TRIP GENERATION	
Table 5 — Future Intersection Operations	20
Figures	
Figure 1 – Site Location Map	1
Figure 2 – Existing Weekday A.M., Mid-Day, and P.M. Peak Hour Traffic Volumes	9
Figure 3 – Site Plan for Proposed Ravinia Multi-Use Development	
FIGURE 4 – WEEKDAY A.M. AND P.M. PEAK HOUR SITE TRIPS AND DISTRIBUTION PERCENTAGES	
Figure 5 – Future Weekday A.M. and P.M. Peak Hour Volumes	19

Ravinia Multi-Use Development Traffic Impact Study

Photographs

Photograph 1 – Ashford Dunwoody Road Facing South at Ravinia Parkway	3
Photograph 2 – Narrow Sidewalk and Lack of Lane Striping in Northeast Corner of Ashford Dunwoody at Ravinia	
Photograph 3 – Two-Stage Pedestrian Crossing of Ashford Dunwoody on North Side of Ravinia	
PHOTOGRAPH 4 – PEDESTRIANS CROSSING AGAINST THE DON'T WALK SIGNAL AND CONFLICTING WITH LEFT TURNING TRAFFIC	5
Photograph 5 – Location of Site Full-Movement Access on Ravinia Parkway	5
PHOTOGRAPH 6 – VIEW FACING LEFT FROM LOCATION OF PROPOSED SITE MAIN ACCESS	6
Photograph 7 – View Facing Right From Location of Proposed Site Main Access	6
PHOTOGRAPH 8 – VIEW ALONG ONE-WAY SECTION OF RAVINIA PARKWAY IN THE VICINITY OF PROPOSED SITE RIRO ACCESSES	
PHOTOGRAPH 9 — LEFT TURN LANE TO SERVE U-TURN SITE TRIPS EXITING RIRO ACCESSES	

Introduction

This study assesses the traffic impact of a proposed multi-use development in the City of Dunwoody, Georgia. The site is located on the south side of Ravinia Parkway east of Ashford Dunwoody Road and north of the Interstate 285 westbound off-ramp, as shown in the location map in Figure 1. The site will be developed with a 275 key hotel, 12,500 square feet of retail shops, and 30,000 square feet of restaurants. Access will be provided at one full-movement driveway, right-in and right-out (RIRO) driveways for the hotel drop-off/pick-up, and a RIRO truck service driveway, all along the south side of Ravinia Parkway.

The purpose of this traffic impact study is to determine existing traffic operating conditions in the vicinity of the proposed multi-use development, project future traffic volumes, assess the impact of the subject development, then develop conclusions and recommendations to mitigate the project traffic impact and ensure safe and efficient existing and future traffic conditions in the vicinity of the project.

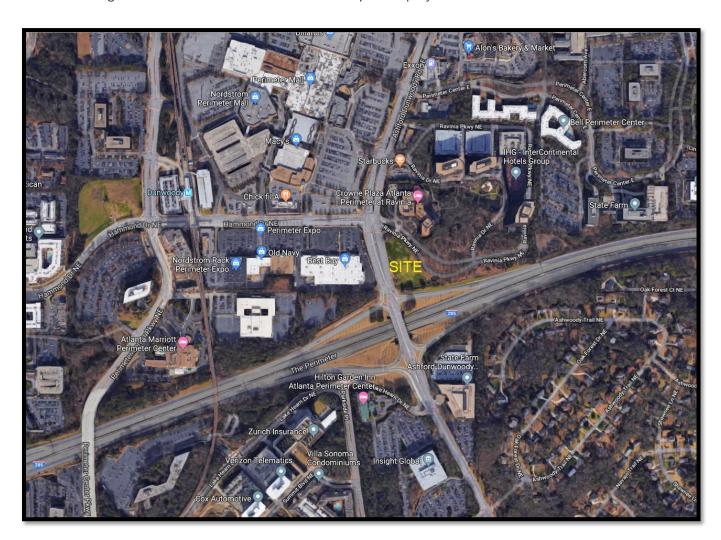


Figure 1 – Site Location Map

Existing Traffic Conditions

Existing traffic operating conditions in the vicinity of the proposed multi-use development were assessed. The following is a description of existing transportation facilities, traffic volumes, and intersection operations.

Description of Existing Roadways

Ashford Dunwoody Road is an urban minor arterial (Georgia DOT designation) with a north/south orientation. The road begins at Mount Vernon Road, passes the subject site, has a diverging diamond interchange (DDI) with Interstate 285, then continues to the south, terminating at Peachtree Road. Adjacent to the site, the road has four through lanes per direction, with exclusive left and right turn lanes at most major intersections. At Hammond Drive / Ravinia Parkway, there are two southbound left turn lanes and one right turn lane and two northbound left turn lanes but just a right turn flare on Ashford Dunwoody Road. Land uses along Ashford Dunwoody Road include a regional shopping mall, other retail centers, office parks, and accesses to multi-family developments. The terrain along the adjacent segment of Ashford Dunwoody Road is level to gently rolling. In 2018 (the latest year for which data was available at the time of this study) the Georgia Department of Transportation (Georgia DOT) recorded an Annual Average Daily Traffic (AADT) volume of 49,300 vehicles per day (vpd) on Ashford Dunwoody Road north of Hammond Drive.

Hammond Drive is an urban minor arterial (Georgia DOT designation) with an east/west orientation. The road begins at Mount Vernon Highway, has a half diamond interchange to/from the north on Georgia 400, then changes name to Ravinia Parkway at Ashford Dunwoody Road and passes the subject site and makes a loop through the Ravinia office park to the north and east of the site. West of Ashford Dunwoody Road, Hammond Drive has two through lanes per direction. Eastbound at Ashford Dunwoody Road, Hammond Drive has a left turn lane and a shared left/through lane, and two right turn lanes. Westbound Ravinia Parkway has two left turn lanes, a through lane, and a right turn lane. However, these lanes are only designated with turn arrows on the brick pavers, with no lane line striping. In the vicinity of the site Hammond Drive serves a regional shopping mall, and other retail uses. Ravinia Parkway serves office buildings, hotels, and small retail uses. The terrain along Hammond Drive is level while Ravinia Parkway is winding with rolling terrain. In 2018 the Georgia DOT recorded an AADT volume of 18,700 vpd on Hammond Drive west of Ashford Dunwoody Road.

Pedestrian, Bicycle, and Transit Accessibility

There is sidewalk along both sides of Ashford Dunwoody Road and Hammond Drive. There is a narrow sidewalk along the north side of Ravinia Parkway for a very short segment to the driveway to the Crowne Plaza hotel. There is no sidewalk along the subject site frontage on Ravinia Parkway. There are crosswalks and pedestrian signals on all approaches at the Ashford Dunwoody / Hammond / Ravinia Parkway intersection. The width of Ashford Dunwoody Road requires pedestrian crossing in two steps, with a stop at the median and a second pedestrian countdown for the second half of the crossing. The pedestrian refuge area in the medians are very

Ravinia Multi-Use Development Traffic Impact Study small. There are no designated bicycle lanes in the vicinity of the site. There is regularly scheduled MARTA bus service adjacent to the site. The MARTA Dunwoody rail station is a modest walk from the site.

Photographs 1 through 9 show the existing conditions at the intersection of Ashford Dunwoody Road at Hammond Drive / Ravinia Parkway and on Ravinia Parkway adjacent to the subject property.



Photograph 1 – Ashford Dunwoody Road Facing South at Ravinia Parkway



Photograph 2 – Narrow Sidewalk and Lack of Lane Striping in Northeast Corner of Ashford Dunwoody at Ravinia



Photograph 3 – Two-Stage Pedestrian Crossing of Ashford Dunwoody on North Side of Ravinia



Photograph 4 – Pedestrians Crossing Against the Don't Walk Signal and Conflicting with Left Turning Traffic



Photograph 5 – Location of Site Full-Movement Access on Ravinia Parkway

Ravinia Multi-Use Development Traffic Impact Study



Photograph 6 – View Facing Left From Location of Proposed Site Main Access



Photograph 7 – View Facing Right From Location of Proposed Site Main Access



Photograph 8 – View Along One-Way Section of Ravinia Parkway in the Vicinity of Proposed Site RIRO Accesses



Photograph 9 – Left Turn Lane to Serve U-Turn Site Trips Exiting RIRO Accesses

Ravinia Multi-Use Development Traffic Impact Study

Existing Traffic Volumes

The City has requested an operational analysis of the intersection of Ashford Dunwoody Road at Hammond Drive / Ravinia Parkway (South). Due to the fact that this intersection is coordinated with the adjacent signals, this traffic study models the subject intersection and the immediately-adjacent intersections along Ashford Dunwoody Road. However, the statistics of intersection operations are only presented for the subject intersection for the existing and no-build conditions. In the future, the site full-movement access is also evaluated. Full turning movement traffic volume count data was provided by the City for the weekday a.m. and p.m. peak hours. Midday counts were collected for this study. The data was provided, or collected, at the following intersections in the vicinity of the proposed development:

- 1. Ashford Dunwoody Road at Ravinia Parkway (North) / Perimeter Mall Access
- 2. Ashford Dunwoody Road at Ravinia Parkway (South) / Hammond Drive
- 3. Ashford Dunwoody Road at Interstate 285 Westbound Ramps
- 4. Ashford Dunwoody Road at Interstate 285 Eastbound Ramps

The counts provided by the City were collected on Tuesday and Wednesday, January 8 and 9, 2019 at the Interstate 285 ramps and on Tuesday and Wednesday, January 15 and 16, 2019 at the first two intersections. The data for the two days was averaged and the peak hour was identified from the averages at each intersection. Mid-day full turning movement counts were collected at each intersection on Thursday, July 10, 2019, from 11:30 a.m. to 1:30 p.m. From all the count data, the highest four consecutive 15-minute interval volumes at each intersection, during each time period, were determined. These volumes make up the typical weekday a.m., mid-day, and p.m. peak hour traffic volumes at that intersection. Area schools were in standard session on the days of the City counts but were not on the day of the mid-day counts. The existing a.m., mid-day, and p.m. peak hour turning movement volumes are shown for the study intersection of Ashford Dunwoody at Hammond Drive / Ravinia Parkway in Figure 2. The raw count data is found in Appendix A. It is again noted that, while the count data and the subsequent analysis is only reported for the one study intersection, the modeling includes the adjacent intersections on Ashford Dunwoody Road.

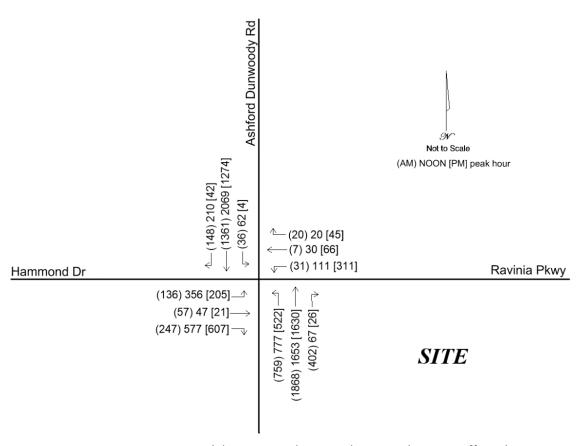


Figure 2 – Existing Weekday A.M., Mid-Day, and P.M. Peak Hour Traffic Volumes

Georgia DOT AADT volume counts were also obtained on nearby roadways for the five years from 2014 to 2018 (the latest year for which volumes are available). Table 1 presents the historic Georgia DOT counts and the annual growth rates between the counts.

Table 1 – Historic Georgia DOT Traffic Volume Counts and Annual Growth Rates

Year	Ash Dunwoody N of Hammond	Annual Growth	Hammond W of Ash Dunwoody	Annual Growth	Perim Ctr W E of Perim Ctr Pky	Annual Growth	I-285 WB Off Ramp	Annual Growth	I-285 EB Off Ramp	Annual Growth
Station ID	089-3586		089-7170		089-4069		089-R701		089-R101	
2014	49,400		17,000		28,500		21,000		21,000	
2015	49,400	0.0%	16,300	-4.1%	28,500	0.0%	21,700	3.3%	21,700	3.3%
2016	49,400	0.0%	16,800	3.1%	28,500	0.0%	22,500	3.7%	22,500	3.7%
2017	49,400	0.0%	17,800	6.0%	28,500	0.0%	23,600	4.9%	23,600	4.9%
2018	49,300	-0.2%	18,700	5.1%	28,500	0.0%	19,800	-16.1%	20,100	-14.8%
avg growth		-0.1%		2.4%		0.0%		-1.5%		-1.1%

Growth in the area has been generally positive and moderate, with Ashford Dunwoody near the site seeing a very slight decrease in the last year. The I-285 ramps have seen stronger decreases in the last year.

Existing Intersection Operations

Existing traffic operations were analyzed at the intersection of Ashford Dunwoody Road at Hammond Drive / Ravinia Parkway using Synchro software, version 10, in accordance with the methodology presented in the Transportation Research Board's 2016 *Highway Capacity Manual (HCM 6)*. This methodology is presented in Appendix B. The results of the analysis are shown in Table 2. Computer printouts containing detailed results of the existing analysis are located in Appendix C. Levels of service and delays are provided for the overall intersection and for each controlled approach or movement. Locations that operate unacceptably (below LOS D) are presented in bold type.

A.M. Peak Hour Mid-Day Peak Hour P.M. Peak Hour Intersection / Approach Delay Delay Delay LOS LOS LOS (s/veh) (s/veh) (s/veh) 1. Ashford Dunwoody Rd at Hammond Drive / D 53.7 F 102.5 D 45.4 Ravinia Parkway northbound approach C 27.6 D 36.3 C 25.7 southbound approach F 94.5 F 193.7 Ε 62.3 Ε Ε D 52.3 eastbound approach 55.2 62.1 westbound approach D 48.4 Ε 70.6 Ε 78.1

Table 2 – Existing Intersection Operations

The existing analysis reveals high delays on certain approaches during all time periods. The overall intersection operates acceptably in the a.m. and p.m. peaks, but fails in the mid-day peak. Observations reveal that some of the delays incurred at this intersection are a result of vehicles spilling back from adjacent intersections.

The intersection design is highly built-out. Additional northbound and southbound through capacity on Ashford Dunwoody Road would help operations, but would require a major road widening through this corridor. This was not evaluated due to lack of feasibility for the near-term. The northbound right turn volume on Ashford Dunwoody turning into Ravinia Parkway is substantial in the morning peak hour (402), which justifies a full right turn lane rather than the short flare currently provided. Conversely, the southbound left turn volume is relatively low and does not necessitate dual left turn lanes. The signal timing at this intersection is nearly three minutes; reducing that timing could potentially reduce delays at this intersection, and in this corridor. Since the signals in this corridor operate interactively, changes in cycle length would impact this entre corridor, and could potentially benefit all intersections. A comprehensive evaluation of corridor signal timing is beyond the scope of this traffic impact study.

Lane lines should be striped exiting Ravinia Parkway (westbound). This would identify the lanes for queued vehicles before they reach the intersection. This is particularly important for the dual left turn lanes. While many of the motorists on this approach are from the offices in Ravinia and are familiar with the lane configuration, motorists from the existing hotel are likely not familiar with the lane usage. The proposed development will introduce a new hotel and customers to the retail and restaurants who will be unfamiliar with these lanes and, therefore, this striping will be beneficial now and even more so in the near future.

Ravinia Multi-Use Development Traffic Impact Study

Elimination of the second southbound left turn lane would create additional room to expand the pedestrian refuge area in the median. As just identified, the southbound left turn volumes do not necessitate two left turn lanes and, therefore the widening of the median island and pedestrian refuge area and the elimination of one left turn lane is recommended. The phasing for the southbound left turn should remain protected-only due to the number of opposing lanes and heavy volumes on northbound Ashford Dunwoody Road. It would also be beneficial to widen the sidewalk at the northeast corner of the intersection and along the north side of Ravinia Parkway. It is recognized that topography may constrain the sidewalk width and this widening may not be feasible.

No-Build Traffic Conditions

A 2024 no-build condition was developed. This represents the traffic conditions that will exist in the future at the anticipated date of the build-out of the proposed multi-use development, but not including the project's trips. The purpose of the analysis of this condition is to isolate the traffic impacts of the proposed development from background growth in volumes that are expected to occur in the area while the development is under construction.

No-Build Traffic Volume Projections

In order to develop no-build volumes, a background growth factor was developed using the historic Georgia DOT 24-hour traffic counts that were presented previously in this report, in Table 1. Based on the growth trends identified in Table 1, a 1.0% annual growth factor was applied to the existing volumes when projecting the future no-build volumes. The growth factor was applied for five years, for a total of 5.1% growth that will occur while the proposed development is under construction. The text after Table 1 noted that growth was low near the site and even decreased in the past year at several locations. This area is seeing a significant level of new development proposed, under construction, or coming online soon. Therefore, it is reasonable to expect growth in traffic volumes to remain positive into the future. However, 1) the volumes at the study intersections are very high, which means small growth rates still equate to solid increases in volumes, 2) as congestion increases in this area it is anticipated that the peaks will get longer, as trips become increasingly scheduled to avoid the highest peaking, and 3) the urbanization of this area may see a shift of some trips to alternative modes including more pedestrian trips between uses and higher transit ridership. This was all considered in choosing a growth factor that reflects recent trends, includes strong future development, and accounts for adaptation of driver behavior and trip type.

The existing traffic volumes were increased by the 5.1% growth factor. The results are the 2024 no-build traffic volumes that will be on the roadway network in the future when the proposed development is completely operational, but excluding the development's trips.

No-Build Intersection Operations

The no-build condition includes the no-build traffic volumes, as described above. These were entered into the Synchro model and the 2024 no-build traffic operations were analyzed at the study intersection using Synchro 10 software in accordance with the HCM 6 methodology. The results of the no-build analysis are shown in Table 3. Computer printouts containing detailed results of the no-build analysis are located in Appendix D. Levels of service and delays are provided for the overall intersection and for each controlled approach or movement. Locations that operate unacceptably are presented in bold type.

Ravinia Multi-Use Development Traffic Impact Study

Table 3 – No-Build Intersection Operations

	A.M. Pe	eak Hour	Mid-Day	Peak Hour	P.M. Pe	ak Hour
Intersection / Approach	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)
Ashford Dunwoody Rd at Hammond Drive / Ravinia Parkway	Ε	59.9	F	113.4	D	46.8
northbound approach	С	28.6	D	38.2	С	27.1
southbound approach	F	110.7	F	219.2	Ε	64.5
eastbound approach	Ε	55.7	E	62.8	D	53.5
westbound approach	D	48.4	E	71.0	Ε	77.9

The no-build analysis reveals increases in delays at the study intersection. The discussion of the existing operations continues to be applicable to the no-build condition. No additional mitigation is identified for the no-build condition.

Project Traffic Characteristics

This section describes the anticipated traffic characteristics of the proposed multi-use development, including a site description, how much traffic the project will generate, and where that traffic will travel.

Project Description

The site will be developed with a 275 key hotel, 12,500 square feet of retail shops, and 30,000 square feet of restaurants. Access will be provided at one full-movement driveway, right-in and right-out (RIRO) driveways for the hotel drop-off/pick-up, and a RIRO truck service driveway, all along the south side of Ravinia Parkway. The site plan is presented in Figure 3.

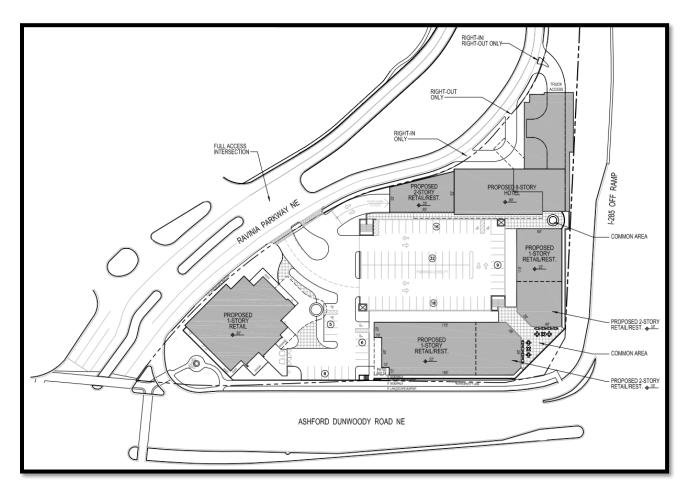


Figure 3 – Site Plan for Proposed Ravinia Multi-Use Development

Trip Generation

Trip generation is an estimate of the number of entering and exiting vehicular trips that will be generated by the proposed development. The volume of traffic that will be generated by each land use was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition. ITE Land Use 310 – Hotel was selected for the hotel. The commercial component will be a mix retail and restaurants. ITE Land Use 820 – Shopping Center was chosen as representative of the commercial space. Trip data for each use is limited for the weekday mid-day peak hour. Therefore, for each use, the weekday a.m. peak hour of the generator was used to represent the mid-day peak.

Multi-use adjustments were made according to the methodology in the ITE *Trip Generation Handbook*, 3rd Edition, which is based on NCHRP Report 684. These adjustments account for trips that will occur between compatible uses within the project. These trips will remain internal to the project and will not travel on adjacent roadways.

There is transit availability in the vicinity of the subject site, though it is expected that transit ridership to the subject site will be somewhat low. However, this area does contain a significant amount of trip attractors that will likely attract some pedestrian activity from the site. These attractors include Perimeter Mall, directly across Ashford Dunwoody Road, as well as other retail shopping, restaurants, hotels, and office buildings in a modest walking distance from the site and the sidewalks and pedestrian crossing signals facilitate walking to and from the subject development. Therefore, a modest 10% pedestrian/transit adjustment was applied to the trip generation.

The retail and restaurant trips were also adjusted to reflect the effect of pass-by trips. These are trips that are already passing the site enroute to their final destination, but will turn into the site for dining or retail purposes, then continue on to their original destination. These trips appear entering and exiting the site main driveway and will turn to and from Ashford Dunwoody Road and Hammond Drive, but they will not be new trips on those roads. Based on the ITE *Trip Generation Handbook*, 3rd Edition, the pass-by percentages selected for the retail/restaurants were 24% in the a.m., 34% in the p.m., and 24% for a 24-hour weekday. The mid-day peak was assumed to be the same at the p.m. peak – 34%. Table 4 summarizes the trip generation calculations for the proposed development.

Table 4 – Ravinia Multi-Use Development Trip Generation

Land Has	ITE	C:	A.N	Л. Peak I	Hour	Mid-	Day Pea	k Hour	P.N	1. Peak l	Hour	24 Hour
Land Use	Code	Size	In	Out	Total	In	Out	Total	In	Out	Total	2-Way
Hotel	310	275 keys	78	54	132	78	66	144	92	88	180	2,678
multi-use adjustment			-0	-5	-5	-0	-5	-5	0	-8	-8	-80*
ped/transit adjustment			<u>-8</u>	<u>-5</u>	<u>-13</u>	<u>-8</u>	<u>-6</u>	<u>-14</u>	<u>-9</u>	<u>-8</u>	<u>-17</u>	<u>-260</u>
Hotel New Trips			70	44	114	70	55	125	83	72	155	2,338
Retail / Restaurants	820	42,500 ft ²	107	66	173	105	90	195	138	150	288	3,360
multi-use adjustment			-5	0	-5	-5	0	-5	-8	0	-8	-80*
ped/transit adjustment			-10	-7	-17	-10	-9	-19	-13	-15	-28	-358
pass-by adjustment			-22	<u>-14</u>	<u>-36</u>	<u>-31</u>	<u>-28</u>	<u>-59</u>	<u>-40</u>	<u>-46</u>	<u>-86</u>	<u>-700</u>
Retail / Restaurant New Trips			70	45	115	59	53	112	77	89	166	2,222
			Р	roject Su	ummary							
Total Gross Trips			185	120	305	183	156	339	230	238	468	6,038
total multi-use			-5	-5	-10	-5	-5	-10	-8	-8	-16	-160
total ped/transit			-18	-12	-30	-18	-15	-33	-22	-23	-45	-618
total pass-by			<u>-22</u>	<u>-14</u>	<u>-36</u>	<u>-31</u>	-28	<u>-59</u>	<u>-40</u>	<u>-46</u>	<u>-86</u>	<u>-700</u>
Total New Trips			140	89	229	129	108	237	160	161	321	4,560

^{*24} hour multi-use adjustment estimated as 10 times p.m. peak adjustment

Trip Distribution and Assignment

The trip distribution percentages indicate what proportion of the project's trips will travel to and from various directions. Separate distributions were developed for the hotel and retail/restaurant uses. The new trips generated by each land use, shown in Table 4, were assigned to the roadway network based on the distribution percentages. The trip distribution percentages and the a.m., mid-day, and p.m. peak hour trips expected to be generated by the development are shown in Figure 4. The traffic volume worksheets in Appendix A show the trips at each intersection (including the adjacent intersections included in the model) by each land use.

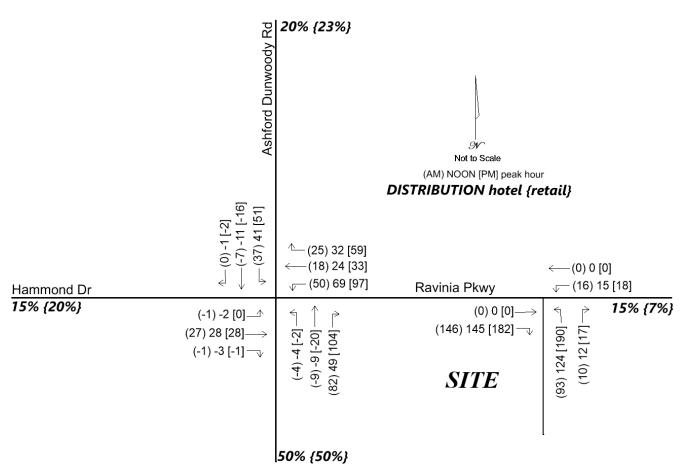


Figure 4 – Weekday A.M. and P.M. Peak Hour Site Trips and Distribution Percentages

Future Traffic Conditions

The future volumes consist of the no-build volumes plus the trips that will be generated by the proposed multiuse development. The future volumes are shown in Figure 5.

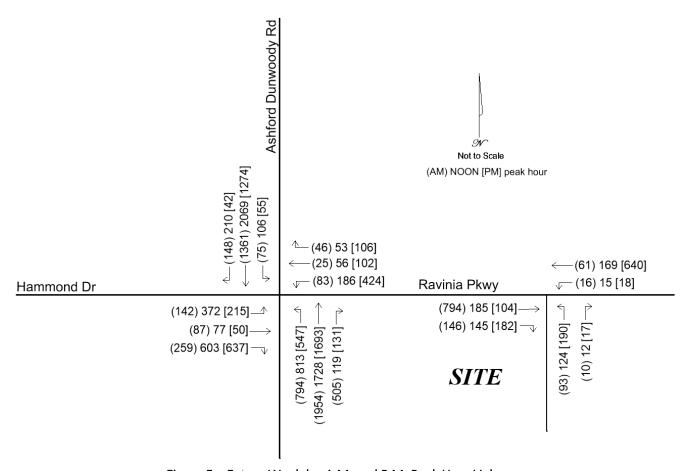


Figure 5 – Future Weekday A.M. and P.M. Peak Hour Volumes

Future Intersection Operations

An operational analysis was performed for the anticipated future project build-out, at the study intersection and the full-movement main site access. Table 5 presents the results of the future analysis. Computer printouts containing detailed results of the future analysis are located in Appendix E. Levels of service and delays are provided for the overall intersection and for each controlled approach or movement. Locations that operate unacceptably are presented in bold type.

Table 5 – Future Intersection Operations

	A.M. Pe	eak Hour	Mid-Day	Peak Hour	P.M. Pe	ak Hour
Intersection / Approach	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)
Ashford Dunwoody Rd at Hammond Drive / Ravinia Parkway	Ε	61.7	F	112.6	D	51.7
northbound approach	С	32.7	D	42.1	D	35.2
southbound approach	F	108.7	F	214.7	E	64.7
eastbound approach	Ε	59.1	Ε	65.7	Ε	57.5
westbound approach	Ε	56.1	Ε	69.3	E	75.2
2. Ravinia Parkway at Site Access	А	3.6	А	3.2	А	4.3
northbound approach (exiting site)	D	34.8	В	14.4	D	25.0
westbound left turn (entering site)	В	10.5	А	8.1	А	8.1

The future analysis reveals intersection operations comparable to the no-build condition, with a modest project traffic impact. The discussion of the existing condition will continue to be applicable into the future, with the addition of the site trips.

The full-movement main site access will operate well, with just some modest delay exiting the site during the morning and evening peak hours. It is noted that the operational analysis of the site access did not include an analysis of activity at the Crowne Plaza hotel driveways. Based on the heavy eastbound right turn volume entering the site, an eastbound right turn lane on Ravinia Parkway merits consideration. However, the eastbound through volumes on Ravinia Parkway are only heavy in the a.m. peak hour. At other times of day, those volumes are moderate and can be accommodated along with the site right turning trips, in the existing two eastbound lanes on Ravinia Parkway. The westbound left turn volume entering the site will be low and, therefore, no westbound left turn lane is necessary at the site main access on Ravinia Parkway. The site main access should include one entering and one exiting lane. The northbound approach exiting the site should be controlled by side street stop sign and accompanying stop bar.

The site plan includes a right-in and a right-out drop-off access for the hotel and a RIRO service access for trucks at the east end of the site, on eastbound Ravinia Parkway. The project civil engineer should comply with all applicable design standards for these RIRO accesses, including sight distance, driveway width, turn radii, and grades. There is an eastbound left turn lane at a median break east of these RIRO accesses, at which most of the trips exiting those RIROs will U-Turn to travel back toward Ashford Dunwoody Road. The design of that intersection at the median break should be checked by the project civil engineer to ensure sufficient turn radius to accommodate U-Turns by the trucks that are expected to use the service RIRO access. The volume expected to make the U-Turn will be low for service vehicles, but will be a bit higher for hotel drop-off / pick-up and valet operations. The U-Turn lane should be striped with a lane line and left turn arrows.

Sidewalk / pedestrian connectivity should be provided from the corner of Ashford Dunwoody Road / Ravinia Parkway into the site.

Ravinia Multi-Use Development Traffic Impact Study

Conclusions and Recommendations

This traffic impact study evaluates the impact of a proposed multi-use development in the City of Dunwoody. The site is located on the south side of Ravinia Parkway east of Ashford Dunwoody Road and north of the Interstate 285 westbound off-ramp. The site will be developed with a 275 key hotel, 12,500 square feet of retail shops, and 30,000 square feet of restaurants. Access will be provided at one full-movement driveway, a right-in and a right-out (RIRO) driveway for the hotel drop-off/pick-up, and a RIRO truck service driveway, all along the south side of Ravinia Parkway. The following are the findings and recommendations of this study:

- 1. The analysis of existing conditions reveals congestion and delays at the Ashford Dunwoody / Hammond / Ravinia intersection during peak times. The following is a summary of conclusions and recommendations based on the existing analysis:
 - a. In order to achieve acceptable operations on all approaches at all time periods, widening of Ashford Dunwoody may become necessary. However, this was not considered feasible within the near-term scope of this traffic impact study and was not evaluated in detail. Other recommendations are made recognizing that this intersection and corridor will continue to incur notable delays, depending on approach, during peak times.
 - b. Some of the delays at the Ashford Dunwoody / Hammond / Ravinia intersection are due to spillback queuing from adjacent intersections which cannot be mitigated at this intersection.
 - c. Shortening the cycle length in the Ashford Dunwoody corridor could produce "snappier" operations which may reduce queuing and delays. It is suggested that shorter timings could be tested, but a comprehensive signal timing analysis for this corridor is beyond the scope of this traffic impact study.
 - d. The northbound right turn volume on Ashford Dunwoody turning into Ravinia is significant enough in the a.m. peak hour to justify an exclusive right turn lane. However, the benefit of this lane to intersection operations are relatively modest and, therefore, it is suggested that the addition of this lane be considered, if feasible.
 - e. The southbound left turn volume on Ashford Dunwoody does not necessitate a second left turn lane. The second lane can be eliminated and the median and pedestrian refuge area can be increased. The southbound left turn phasing should remain protected-only.
 - f. Lane lines should be striped on the westbound approach of Ravinia Parkway.
 - g. If feasible, the sidewalk should be widened in the northeast corner of the intersection and along the north side of Ravinia Parkway.

- 2. The no-build analysis reveals operations comparable to the existing condition. The discussion presented above continues to be applicable for the no-build. No additional mitigation is identified for the no-build.
- 3. The proposed multi-use development will generate 229 new a.m. peak hour trips, 237 new mid-day peak hour trips, 321 new p.m. peak hour trips, and 4,560 new weekday trips. The multi-use design will internally capture a small number of trips, reducing the number of new trips the project will generate. In addition, the availability of transit and the proximity of other development density, coupled with the walkability of the area, will also reduce the number of automobile trips than may have been generated at another location.
- 4. With the addition of the project's trips, future operations will be comparable to the existing and no-build and the recommendations made in the existing analysis are still applicable. The project will add a significant volume of northbound right turns from Ashford Dunwoody, further justifying the northbound right turn lane identified in the existing analysis. The proposed development will add some trips to the southbound left turn from Ashford Dunwoody, but the volume will continue to be low enough to not necessitate a second left turn lane.
- 5. The site main full-movement access will operate well. An eastbound right turn lane on Ravinia Parkway at the site access merits consideration. No westbound left turn lane is necessary. One entering and one exiting lane should be provided at the site access. The exiting approach should be controlled by side street stop sign and accompanying stop bar.
- 6. The design at the median break on Ravinia Parkway east of the site should be checked by the project civil engineer to ensure sufficient turn radius to accommodate U-Turns by the trucks that are expected to use the service RIRO access. The volume expected to make the U-Turn will be low for service vehicles, but will be a bit higher for hotel drop-off / pick-up and valet operations. The U-Turn lane should be striped with a lane line and left turn arrows.
- 7. Sidewalk / pedestrian connectivity should be provided from the corner of Ashford Dunwoody Road / Ravinia Parkway into the site.
- 8. The project civil engineer should comply with all applicable design standards for all site accesses, including sight distance, driveway width, turn radii, and grades.

Appendix A

Traffic Count Data and Volume Worksheets

Ravinia Multi-Use Development Traffic Impact Study City of Dunwoody, Georgia

July 2019

Intersection: 1. Ashford Dunwoody Road at Ravinia Parkway (North) / Perimeter Mall Access

Weekday A.M. Peak Hour	Northbo	und Ashfo	rd Dunwoo	dy Road	Southbo	und Ashfo	rd Dunwoo	dy Road	Eastb	ound Perin	neter Mall A	ccess	Westbo	und Ravin	ia Parkway	(North)
-	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	28	1657	330	2015	296	1463	26	1785	10	17	10	37	54	3	83	140
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	29	1742	347	2118	311	1538	27	1876	11	18	11	39	57	3	87	147
Hotel New Trips	2	7	0	9	0	11	0	11	0	0	3	3	0	0	0	0
Retail/Restaurant New Trips	1	9	0	10	0	14	0	14	0	0	2	2	0	0	0	0
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Site Trips	3	16	0	19	0	25	0	25	0	0	5	5	0	0	0	0
Build Volumes	32	1758	347	2137	311	1563	27	1901	44	10	16	44	57	2	87	147

Weekday Mid-Day Peak Hour	Northbo	und Ashfo	rd Dunwoo	dy Road	Southbo	und Ashfo	rd Dunwoo	dy Road	Eastbo	ound Perin	neter Mall A	ccess	Westbo	und Ravin	ia Parkway	(North)
	L	Т	R	Tot	L	T	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	211	1710	117	2038	211	2100	12	2323	55	41	128	224	118	27	86	231
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	222	1797	123	2142	222	2207	13	2441	58	43	135	235	124	28	90	243
Hotel New Trips	3	8	0	11	0	11	0	11	0	0	4	4	0	0	0	0
Retail/Restaurant New Trips	2	11	0	13	0	12	0	12	0	0	2	2	0	0	0	0
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Site Trips	5	19	0	24	0	23	0	23	0	0	6	6	0	0	0	0
Build Volumes	227	1816	123	2166	222	2230	13	2464	58	43	141	241	124	28	90	243

Weekday P.M. Peak Hour	Northbo	und Ashfo	rd Dunwoo	dy Road	Southbo	und Ashfo	rd Dunwoo	dy Road	Eastb	ound Perin	neter Mall A	ccess	Westbo	und Ravin	ia Parkway	(North)
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 5:05-6:05)	151	1710	48	1909	41	969	11	1021	42	16	89	147	236	67	306	609
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	159	1797	50	2006	43	1018	12	1073	44	17	94	154	248	70	322	640
Hotel New Trips	4	11	0	15	0	12	0	12	0	0	4	4	0	0	0	0
Retail/Restaurant New Trips	3	18	0	21	0	15	0	15	0	0	2	2	0	0	0	0
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Site Trips	7	29	0	36	0	27	0	27	0	0	6	6	0	0	0	0
Build Volumes	166	1826	50	2042	43	1045	12	1100	44	17	100	160	248	70	322	640

Ravinia Multi-Use Development Traffic Impact Study

City of Dunwoody, Georgia

July 2019

Intersection: 2. Ashford Dunwoody Road at Ravinia Parkway (South) / Hammond Drive

Weekday A.M. Peak Hour	Northbo	und Ashfo	rd Dunwoo	dy Road	Southbo	und Ashfo	rd Dunwoo	dy Road	Eas	stbound Ha	mmond Dr	ive	Westbo	und Ravini	ia Parkway	(South)
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	759	1868	402	3029	36	1361	148	1545	136	57	247	440	31	7	20	58
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	798	1963	423	3183	38	1430	156	1624	143	60	260	462	33	7	21	61
Hotel New Trips	0	0	34	34	14	0	0	14	0	11	0	11	21	7	9	37
Retail/Restaurant New Trips	0	0	35	35	16	Õ	Ő	16	0	14	Ö	14	23	9	10	42
Retail/Restaurant Pass-by Trips	-4	-9	13	0	7	-7	0	0	-1	2	-1	0	6	2	6	14
Total Site Trips	-4	-9	82	69	37	-7	0	30	-1	27	-1	25	50	18	25	93
Build Volumes	794	1954	505	3252	75	1423	156	1654	142	87	259	487	83	25	46	154

Weekday Mid-Day Peak Hour	Northbo	und Ashfo	rd Dunwoo	dy Road	Southbo	und Ashfo	rd Dunwoo	dy Road	Eas	stbound Ha	ammond D	rive	Westbo	und Ravini	ia Parkway	(South)
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	777	1653	67	2497	62	2069	210	2341	356	47	577	980	111	30	20	161
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	817	1737	70	2624	65	2175	221	2460	374	49	606	1030	117	32	21	169
Hotel New Trips	0	0	33	33	15	0	0	15	0	11	0	11	28	8	11	47
Retail/Restaurant New Trips	0	0	29	29	14	0	0	14	0	12	0	12	26	11	13	50
Retail/Restaurant Pass-by Trips	-4	-9	-13	-26	12	-11	-1	0	-2	5	-3	0	15	5	8	28
Total Site Trips	-4	-9	49	36	41	-11	-1	29	-2	28	-3	23	69	24	32	125
Build Volumes	813	1728	119	2660	106	2164	220	2489	372	77	603	1053	186	56	53	294

Weekday P.M. Peak Hour	Northbo	und Ashfo	rd Dunwoo	ody Road	Southbo	ound Ashfo	rd Dunwoo	dy Road	Ea	stbound Ha	ammond Di	ive	Westbo	und Ravini	ia Parkway	(South)
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 4:40-5:40)	522	1630	26	2178	4	1274	42	1320	205	21	607	833	311	66	45	422
Total Annual Background Growth	5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%		5.1%	5.1%	5.1%	
No-Build Volumes	549	1713	27	2289	4	1339	44	1387	215	22	638	875	327	69	47	444
Hotel New Trips	0	0	43	43	16	0	0	16	0	12	0	12	35	11	15	61
Retail/Restaurant New Trips	0	0	39	39	17	0	0	17	0	15	0	15	44	18	21	83
Retail/Restaurant Pass-by Trips	-2	-20	22	0	18	-16	-2	0	0	1	-1	0	18	4	23	45
Total Site Trips	-2	-20	104	82	51	-16	-2	33	0	28	-1	27	97	33	59	189
Build Volumes	547	1693	131	2371	55	1323	42	1420	215	50	637	902	424	102	106	633

Ravinia Multi-Use Development Traffic Impact Study City of Dunwoody, Georgia

July 2019

Intersection: 3. Ravinia Parkway (South) / Site Main Access

Weekday A.M. Peak Hour	N	orthbound	Site Acce	ss		Southbo	und Hotel		Eastbo	und Ravini	a Parkway	(South)	Westbo	ound Ravini	a Parkway	(South)
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)										755		755		58		58
Total Annual Background Growth										5.1%				5.1%		
No-Build Volumes										794		794		61		61
Hotel New Trips	37	0	7	44	0	0	0	0	0	0	59	59	11	0	0	11
Retail/Restaurant New Trips	42	0	3	45	0	0	0	0	0	0	65	65	5	0	0	5
Retail/Restaurant Pass-by Trips	14	0	0	14	0	0	0	0	0	0	22	22	0	0	0	0
Total Site Trips	93	0	10	103	0	0	0	0	0	0	146	146	16	0	0	16
Build Volumes	93	0	10	103	0	0	0	0	0	794	146	940	16	61	0	77

Weekday Mid-Day Peak Hour	N	orthbound	Site Acce	ss		Southbo	und Hotel		Eastbo	ound Ravini	a Parkway	(South)	Westbo	und Ravini	a Parkway	(South)
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)										176		176		161		161
Total Annual Background Growth										5.1%				5.1%		
No-Build Volumes										185		185		169		169
Hotel New Trips	47	0	8	55	0	0	0	0	0	0	59	59	11	0	0	11
Retail/Restaurant New Trips	49	0	4	53	0	0	0	0	0	0	55	55	4	0	0	4
Retail/Restaurant Pass-by Trips	28	0	0	28	0	0	0	0	0	0	31	31	0	0	0	0
Total Site Trips	124	0	12	136	0	0	0	0	0	0	145	145	15	0	0	15
Build Volumes	124	0	12	136	0	0	0	0	0	185	145	330	15	169	0	184

Weekday P.M. Peak Hour	N	Northbound Site Access			Southbound Hotel				Eastbound Ravinia Parkway (South)				Westbound Ravinia Parkway (South)			
	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot	L	Т	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 4:40-5:40)										99		99		609		609
Total Annual Background Growth										5.1%				5.1%		
No-Build Volumes										104		104		640		640
Hotel New Trips	61	0	11	72	0	0	0	0	0	0	71	71	12	0	0	12
Retail/Restaurant New Trips	83	0	6	89	0	0	0	0	0	0	71	71	6	0	0	6
Retail/Restaurant Pass-by Trips	46	0	0	46	0	0	0	0	0	0	40	40	0	0	0	0
Total Site Trips	190	0	17	207	0	0	0	0	0	0	182	182	18	0	0	18
Build Volumes	190	0	17	207	0	0	0	0	0	104	182	286	18	640	0	658

Ravinia Multi-Use Development Traffic Impact Study

City of Dunwoody, Georgia

July 2019

Intersection: 4. Ashford Dunwoody Road at Interstate 285 Westbound Ramps

Weekday A.M. Peak Hour	Northbo	und Ashfor	d Dunwoody Road	Southbound Ashfo	ord Dunwo	ody Road	Eastbound Hammond Drive	Westb	ound I 285 Off-Ra	mp
	L	Т	Tot	T	R	Tot		L	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:50-8:50)	511	1626	2137	844	621	1465		400	1399	1799
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%			5.1%	5.1%	
No-Build Volumes	537	1709	2246	887	653	1540		420	1470	1891
Hotel New Trips	0	24	24	10	11	21		0	11	11
Retail/Restaurant New Trips	0	23	23	14	9	23		0	12	12
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0		0	0	0
Total Site Trips	0	47	47	24	20	44		0	23	23
Build Volumes	537	1756	2293	911	673	1584		420	1493	1914

Weekday Mid-Day Peak Hour	Northbo	Northbound Ashford Dunwoody Road Southbound Ashford Dunwoody Road				Eastbound Hammond Drive	ound I 285 Off-Ra	mp		
	L	Т	Tot	Т	R	Tot		L	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	436	1514	1950	1707	1044	2751		242	968	1210
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%			5.1%	5.1%	
No-Build Volumes	458	1591	2049	1794	1097	2891		254	1017	1272
Hotel New Trips	0	24	24	15	13	28		0	11	11
Retail/Restaurant New Trips	0	20	20	16	10	26		0	9	9
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0		0	0	0
Total Site Trips	0	44	44	31	23	54		0	20	20
Build Volumes	458	1635	2093	1825	1120	2945		254	1037	1292

Weekday P.M. Peak Hour	Northbo	und Ashfor	d Dunwoody Road	Southbound Ashfo	rd Dunwo	ody Road	Westbound I 285 Off-Ramp		
	L	Т	Tot	Т	R	Tot	L	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 4:00-5:00)	650	1097	1747	1734	725	2459	156	961	1117
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%		5.1%	5.1%	
No-Build Volumes	683	1153	1836	1822	762	2584	164	1010	1174
Hotel New Trips	0	28	28	18	17	35	0	13	13
Retail/Restaurant New Trips	0	26	26	27	17	44	0	13	13
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0
Total Site Trips	0	54	54	45	34	79	0	26	26
Build Volumes	683	1207	1890	1867	796	2663	164	1036	1200

Ravinia Multi-Use Development Traffic Impact Study City of Dunwoody, Georgia

July 2019

Intersection: 5. Ashford Dunwoody Road at Interstate 285 Eastbound Ramps

Weekday A.M. Peak Hour	Northbound Ashfo	rd Dunwoo	dy Road	Southbo	und Ashford	d Dunwoody Road	Eastbe	ound I 285 Off-Ran	np	
	Т	R	Tot	L	Т	Tot	L	R	Tot	_
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:50-8:50)	887	111	998	515	762	1277	1280	840	2120	
										1
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%		5.1%	5.1%		
No-Build Volumes	932	117	1049	541	801	1342	1345	883	2228	
Hotel New Trips	7	0	7	6	4	10	17	0	17	
Retail/Restaurant New Trips	10	0	10	7	7	14	13	0	13	
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0	
Total Site Trips	17	0	17	13	11	24	30	0	30	1
·										1
Build Volumes	949	117	1066	554	812	1366	1375	883	2258	1

Weekday Mid-Day Peak Hour	Northbound Ashfo	Northbound Ashford Dunwoody Road				Dunwoody Road	Eastbo	ound I 285 Off-Ran	np	
	Т	R	Tot	L	Т	Tot	L	R	Tot	1
Counted Volumes (Tues/Wed, January 15/16, 2019, 7:45-8:45)	894	142	1036	952	1001	1953	1046	336	1382	1
T	5.40/	5 40/		E 40/	E 40/		E 40/	5.40/		ı
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%		5.1%	5.1%		Î
No-Build Volumes	940	149	1089	1001	1052	2053	1099	353	1452	ı
Hotel New Trips	7	0	7	9	6	15	17	0	17	ı
Retail/Restaurant New Trips	9	0	9	8	8	16	11	0	11	1
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0	1
Total Site Trips	16	0	16	17	14	31	28	0	28	I
Build Volumes	956	149	1105	1018	1066	2084	1127	353	1480	I

Weekday P.M. Peak Hour	Northbound Ashfo	rd Dunwo	ody Road	Southbo	und Ashfor	d Dunwoody Road	Eastb	ound I 285 Off-Ran	пр
	Т	R	Tot	L	Т	Tot	L	R	Tot
Counted Volumes (Tues/Wed, January 15/16, 2019, 4:05-5:05)	916	397	1313	1396	543	1939	897	453	1350
Total Annual Background Growth	5.1%	5.1%		5.1%	5.1%		5.1%	5.1%	
No-Build Volumes	963	417	1380	1467	571	2038	943	476	1419
Hotel New Trips	8	0	8	11	7	18	20	0	20
Retail/Restaurant New Trips	12	0	12	14	13	27	14	0	14
Retail/Restaurant Pass-by Trips	0	0	0	0	0	0	0	0	0
Total Site Trips	20	0	20	25	20	45	34	0	34
·									
Build Volumes	983	417	1400	1492	591	2083	977	476	1453

Appendix B

Intersection Analysis Methodology

Intersection Analysis Methodology

The methodology used for evaluating traffic operations at intersections is presented in the Transportation Research Board's *Highway Capacity Manual*, 2016 edition (HCM 6). Synchro 10 software, which emulates the HCM 6 methodology, was used for all analyses. The following is an overview of the methodology employed for the analysis of signalized intersections and roundabouts and stop-sign controlled (unsignalized) intersections. Levels of service (LOS) are assigned letters A through F. LOS A indicates operations with very low control delay while LOS F describes operations with high control delay. LOS F is considered to be unacceptable by most drivers, while LOS E is typically considered to be the limit of acceptable delay.

Signalized Intersections and Roundabouts – Level of service for a signalized intersection and a roundabout is defined in terms of control delay per vehicle. For signalized intersections and roundabouts, a composite intersection level of service is determined. The thresholds for each level of service are higher for signalized intersections and roundabouts than for unsignalized intersections. This is attributable to a variety of factors including expectation and acceptance of higher delays at signals/roundabouts, and the fact that drivers can relax when waiting at a signal as opposed to having to remain attentive as they proceed through the unsignalized intersection. The level of service criteria for signalized intersections and roundabouts are shown in Table A.

Table A – Level of Service Criteria for Signalized Intersections and Roundabouts

Control Delay (s/veh)	LOS
≤ 10	А
> 10 and ≤ 20	В
> 20 and ≤ 35	С
> 35 and ≤ 55	D
> 55 and ≤ 80	Е
> 80	F

Source: Highway Capacity Manual 6

Unsignalized Intersections – Level of service for an unsignalized intersection is defined in terms of control delay per vehicle. Control delay is that portion of delay attributable to the control device and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The delays at unsignalized intersections are based on gap acceptance theory, factoring in availability of gaps, usefulness of the gaps, and the priority of right-of-way given to each traffic stream. The level of service criteria for unsignalized intersections are presented in Table B.

Table B – Level of Service Criteria for Unsignalized Intersections

Control Delay (s/veh)	LOS
0 – 10	А
> 10 and ≤ 15	В
> 15 and ≤ 25	С
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Source: Highway Capacity Manual 6

Ravinia Multi-Use Development Traffic Impact Study

Appendix C

Existing Intersection Operational Analysis

Ravinia Multi-Use Development 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

existing a.m.

	۶	→	•	•	+	•	•	†	~	/	+	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	र्स	77	16	†	7	ሻሻ	4111		1,4	1111	7
Traffic Volume (vph)	136	57	247	31	7	20	759	1868	402	36	1361	148
Future Volume (vph)	136	57	247	31	7	20	759	1868	402	36	1361	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.97	0.99				0.96	1.00					0.99
Frt			0.850			0.850		0.973				0.850
Flt Protected	0.950	0.980		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1708	2745	3382	1835	1560	3399	6172	0	3433	6408	1583
Flt Permitted	0.950	0.980		0.950			0.950			0.950		
Satd. Flow (perm)	1614	1690	2745	3382	1835	1502	3398	6172	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		40				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.85	0.85	0.85	0.79	0.79	0.79	0.96	0.96	0.96	0.77	0.77	0.77
Adj. Flow (vph)	160	67	291	39	9	25	791	1946	419	47	1768	192
Shared Lane Traffic (%)	30%											
Lane Group Flow (vph)	112	115	291	39	9	25	791	2365	0	47	1768	192
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	J		40	J		34	J		34	J
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split		custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4	17	3	3		1	6		5	2	
Permitted Phases						3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase					_							

Lane Group	Ø7	Ø8	
Lanectonfigurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type	7	0	
Protected Phases	7	8	
Permitted Phases			
Detector Phase			
Switch Phase			

Ravinia Multi-Use Development

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

existing	a.m.

	•	-	•	•	•	•	1	†	~	-	Ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	16.7	16.7	90.6	11.6	11.6	11.6	70.7	109.2		9.0	43.8	43.8
Actuated g/C Ratio	0.10	0.10	0.53	0.07	0.07	0.07	0.41	0.64		0.05	0.26	0.26
v/c Ratio	0.69	0.69	0.20	0.17	0.07	0.09	0.56	0.60		0.26	1.07	0.37
Control Delay	94.3	93.3	25.1	73.8	71.1	0.6	42.4	22.3		81.1	103.5	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.0
Total Delay	94.3	93.3	25.1	73.8	71.1	0.6	42.4	22.6		81.1	103.5	15.0
LOS	F	F	С	Е	Е	Α	D	С		F	F	В
Approach Delay		55.2			48.4			27.6			94.5	
Approach LOS		Е			D			С			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

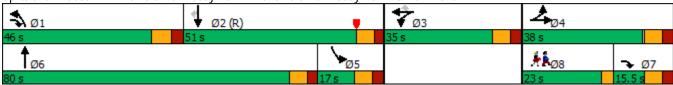
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.07

Intersection Signal Delay: 53.7 Intersection LOS: D
Intersection Capacity Utilization 88.6% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lano Croup	Ø7	Ø8
Lane Group		
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	9	., a. a.
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)	None	4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effet Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		
intersection Summary		

Ravinia Multi-Use Development 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

existing mid-day

	۶	→	•	•	←	•	1	†	~	/	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4	77	1,1	^	7	1,4	4111		1,1	1111	7
Traffic Volume (vph)	356	47	577	111	30	20	777	1653	67	62	2069	210
Future Volume (vph)	356	47	577	111	30	20	777	1653	67	62	2069	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.98				0.96	1.00					0.99
Frt			0.850			0.850		0.994				0.850
Flt Protected	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1679	2745	3382	1835	1560	3399	6306	0	3433	6408	1583
Flt Permitted	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (perm)	1616	1647	2745	3382	1835	1502	3398	6306	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		6				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	396	52	641	132	36	24	854	1816	74	67	2249	228
Shared Lane Traffic (%)	44%											
Lane Group Flow (vph)	222	226	641	132	36	24	854	1890	0	67	2249	228
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	J .		40			34			34	J
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split	NA	custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4	17	3	3	. 3	1	6		5	2	2
Permitted Phases						3	•					2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase							•					_

Lane Group	Ø7	Ø8	
Lane Configurations	<i>D1</i>	20	
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type			
Protected Phases	7	8	
Permitted Phases		0	
Detector Phase			
Switch Phase			
- Indian indian			

Ravinia Multi-Use Development

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

existing mid-day

	ၨ	-	\rightarrow	•	←	•	1	†	/	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	25.6	25.6	86.1	12.9	12.9	12.9	57.5	92.6		9.3	43.8	43.8
Actuated g/C Ratio	0.15	0.15	0.50	0.08	0.08	0.08	0.34	0.54		0.05	0.26	0.26
v/c Ratio	0.90	0.90	0.46	0.52	0.26	0.08	0.75	0.55		0.36	1.37	0.44
Control Delay	105.8	106.1	31.4	81.8	76.2	0.6	55.1	27.5		83.3	214.5	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.0
Total Delay	105.8	106.1	31.4	81.8	76.2	0.6	55.1	27.8		83.3	214.5	20.7
LOS	F	F	С	F	Е	Α	Е	С		F	F	С
Approach Delay		62.1			70.6			36.3			193.7	
Approach LOS		E			Е			D			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

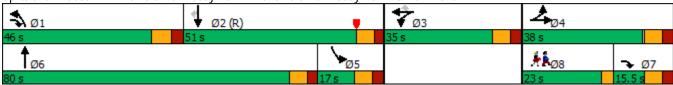
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 102.5 Intersection LOS: F
Intersection Capacity Utilization 94.1% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Synchro 10 Report Marc R Acampora, PE, LLC

Packet page:...

Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
	15.5	22.0
Minimum Split (s)	15.5	23.0
Total Split (s)		
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)		4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
•		
Intersection Summary		

existing p.m.

	۶	→	•	•	←	•	•	†	~	/	+	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ર્ન	77	1,1	†	7	1,4	4111		1,4	1111	7
Traffic Volume (vph)	205	21	607	311	66	45	522	1630	26	4	1274	42
Future Volume (vph)	205	21	607	311	66	45	522	1630	26	4	1274	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.98				0.96	1.00					0.99
Frt			0.850			0.850		0.998				0.850
Flt Protected	0.950	0.961		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1675	2745	3382	1835	1560	3399	6331	0	3433	6408	1583
Flt Permitted	0.950	0.961		0.950			0.950			0.950		
Satd. Flow (perm)	1618	1643	2745	3382	1835	1502	3398	6331	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		2				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	218	22	646	338	72	49	544	1698	27	4	1341	44
Shared Lane Traffic (%)	45%				· -							
Lane Group Flow (vph)	120	120	646	338	72	49	544	1725	0	4	1341	44
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)	20.0	24			40		20.0	34			34	. u.g
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template	•			•		•				•		-
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel	51. Z.	51. Z.	01. 2.1	0112/1	0112/1	01.2%	01.2/	01. Z.n		0112/	011 211	01. Z/
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
Turn Type	Split		custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3	i ciiii	1	6		5	2	1 51111
Permitted Phases	7		1 /		J	3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase	4	4	1 /	J	J	J	-	U		J		
- Switch Friday												

Lane Group 07 Ø8 Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prot) Right Turn on Red Satd. Flow (prot) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Trow way Left Turn Lane Headway Factor Liveries Ceses (meth)						
Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (pern) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor		Ø7	Ø8			
Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Proteted Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prem) Right Turn on Red Satd. Flow (RTOR) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Traffic Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Future Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (yph) Shared Lane Traffic (%) Lane Group Flow (yph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Two way Left Turn Lane Headway Factor						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases 7 8		7	8			
Permitted Phases						
Detector Phase						
Switch Phase	Switch Phase					

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

existing	p.m.

	•	-	•	•	•	•	1	†	/	-	↓	1
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	17.3	17.3	78.5	20.5	20.5	20.5	58.1	106.8		8.3	43.8	43.8
Actuated g/C Ratio	0.10	0.10	0.46	0.12	0.12	0.12	0.34	0.63		0.05	0.26	0.26
v/c Ratio	0.71	0.71	0.51	0.83	0.33	0.14	0.47	0.43		0.02	0.81	0.09
Control Delay	95.5	94.6	36.4	90.7	71.6	0.8	47.7	18.8		77.2	64.3	0.3
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	95.5	94.6	36.4	90.7	71.6	8.0	47.7	18.8		77.2	64.3	0.3
LOS	F	F	D	F	Е	Α	D	В		Е	Е	Α
Approach Delay		52.3			78.1			25.7			62.3	
Approach LOS		D			Е			С			E	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

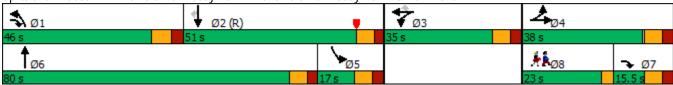
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 45.4 Intersection LOS: D
Intersection Capacity Utilization 89.0% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
	15.5	22.0
Minimum Split (s)	15.5	23.0
Total Split (s)		
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)		4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
•		
Intersection Summary		

Appendix D

No-Build Intersection Operational Analysis

no-build a.m.

	۶	→	•	•	+	4	•	†	<i>></i>	\	+	- ✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	र्स	77	ሻሻ	†	7	ሻሻ	4111		ሻሻ	1111	7
Traffic Volume (vph)	143	60	260	33	7	21	798	1963	423	38	1430	156
Future Volume (vph)	143	60	260	33	7	21	798	1963	423	38	1430	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.97	0.99				0.96	1.00					0.99
Frt			0.850			0.850		0.973				0.850
Flt Protected	0.950	0.980		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1708	2745	3382	1835	1560	3399	6172	0	3433	6408	1583
Flt Permitted	0.950	0.980		0.950			0.950			0.950		
Satd. Flow (perm)	1614	1690	2745	3382	1835	1502	3398	6172	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		40				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.85	0.85	0.85	0.79	0.79	0.79	0.96	0.96	0.96	0.77	0.77	0.77
Adj. Flow (vph)	168	71	306	42	9	27	831	2045	441	49	1857	203
Shared Lane Traffic (%)	30%											
Lane Group Flow (vph)	118	121	306	42	9	27	831	2486	0	49	1857	203
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			40			34			34	9
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1	•	1	1	1
Detector Template	•	•	•	•	•	•	•	•		•	•	•
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel	OI. LX	OI. LX	OI. LX	OI LA	OI LX	OI: EX	OI LX	OI LA		OI LX	OI: EX	OITEX
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
Turn Type	Split	NA	custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	3piit 4	4	17	3 J	3	i Cilli	1	6		5	2	
Permitted Phases	7	4	17	J	J	3	1	U		J		2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase		7	17		J		- 1					

Lane Group 07 Ø8 Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prot) Right Turn on Red Satd. Flow (prot) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Trow way Left Turn Lane Headway Factor Liveries Ceses (meth)						
Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (pern) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor		Ø7	Ø8			
Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Proteted Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prem) Right Turn on Red Satd. Flow (RTOR) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Traffic Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Future Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (yph) Shared Lane Traffic (%) Lane Group Flow (yph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Two way Left Turn Lane Headway Factor						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases 7 8		7	8			
Permitted Phases						
Detector Phase						
Switch Phase	Switch Phase					

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

no-build a.m.

	۶	→	\rightarrow	•	←	•	4	†	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	17.2	17.2	90.6	11.6	11.6	11.6	70.3	108.8		9.0	43.8	43.8
Actuated g/C Ratio	0.10	0.10	0.53	0.07	0.07	0.07	0.41	0.64		0.05	0.26	0.26
v/c Ratio	0.71	0.70	0.21	0.18	0.07	0.09	0.59	0.63		0.27	1.13	0.40
Control Delay	95.2	94.2	25.2	74.2	71.1	0.7	43.2	23.3		81.3	121.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		0.0	0.0	0.0
Total Delay	95.2	94.2	25.2	74.2	71.1	0.7	43.2	23.7		81.3	121.8	16.9
LOS	F	F	С	Е	Е	Α	D	С		F	F	В
Approach Delay		55.7			48.4			28.6			110.7	
Approach LOS		E			D			С			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

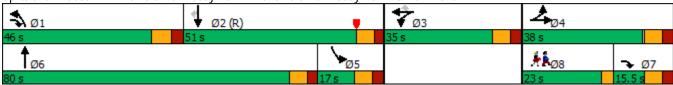
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 59.9 Intersection LOS: E
Intersection Capacity Utilization 89.7% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
	15.5	22.0
Minimum Split (s)	15.5	23.0
Total Split (s)		
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)		4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
•		
Intersection Summary		

no-build mid-day

	۶	→	•	•	←	•	1	†	<i>></i>	/	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	सी	77	1616	↑	7	ሻሻ	4111		1,4	1111	7
Traffic Volume (vph)	374	49	606	117	32	21	817	1737	70	65	2175	221
Future Volume (vph)	374	49	606	117	32	21	817	1737	70	65	2175	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.98				0.96	1.00					0.99
Frt			0.850			0.850		0.994				0.850
Flt Protected	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1679	2745	3382	1835	1560	3399	6306	0	3433	6408	1583
Flt Permitted	0.950	0.963		0.950			0.950			0.950		
Satd. Flow (perm)	1616	1647	2745	3382	1835	1502	3398	6306	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		6				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	416	54	673	139	38	25	898	1909	77	71	2364	240
Shared Lane Traffic (%)	44%											
Lane Group Flow (vph)	233	237	673	139	38	25	898	1986	0	71	2364	240
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	, i		40	- J		34	, i		34	J
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split	NA	custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4	17	3	3		1	6		5	2	
Permitted Phases						3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase												

Lane Group	Ø7	Ø8	
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft) Storage Lanes			
Taper Length (ft) Lane Util. Factor			
Ped Bike Factor			
Frt Cit Drotostod			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type			
Protected Phases	7	8	
Permitted Phases			
Detector Phase			
Switch Phase			

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

no-build mid-day

	•	-	\rightarrow	•	•	•	4	†	/	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	26.4	26.4	85.9	13.1	13.1	13.1	56.4	91.5		9.3	43.8	43.8
Actuated g/C Ratio	0.15	0.15	0.50	0.08	0.08	0.08	0.33	0.54		0.05	0.26	0.26
v/c Ratio	0.91	0.91	0.49	0.54	0.27	0.08	0.80	0.59		0.38	1.44	0.47
Control Delay	106.8	107.0	32.1	82.2	76.3	0.6	58.1	28.8		83.9	243.2	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		0.0	0.0	0.0
Total Delay	106.8	107.0	32.1	82.2	76.3	0.6	58.1	29.2		83.9	243.2	22.4
LOS	F	F	С	F	Е	Α	Е	С		F	F	С
Approach Delay		62.8			71.0			38.2			219.2	
Approach LOS		Е			Е			D			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

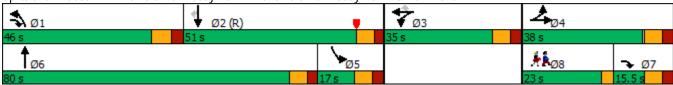
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.44

Intersection Signal Delay: 113.4 Intersection LOS: F
Intersection Capacity Utilization 95.8% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	9	., a. a.
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)	None	4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		
intersection summary		

no-build p.m.

	۶	→	•	•	+	•	•	†	~	/	+	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	ની	77	1,1	†	7	ሻሻ	4111		1,4	1111	7
Traffic Volume (vph)	215	22	638	327	69	47	549	1713	27	4	1339	44
Future Volume (vph)	215	22	638	327	69	47	549	1713	27	4	1339	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.98				0.96	1.00					0.99
Frt			0.850			0.850		0.998				0.850
Flt Protected	0.950	0.961		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1675	2745	3382	1835	1560	3399	6331	0	3433	6408	1583
Flt Permitted	0.950	0.961		0.950			0.950			0.950		
Satd. Flow (perm)	1618	1644	2745	3382	1835	1502	3398	6331	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		2				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	229	23	679	355	75	51	572	1784	28	4	1409	46
Shared Lane Traffic (%)	45%											
Lane Group Flow (vph)	126	126	679	355	75	51	572	1812	0	4	1409	46
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	J		40	J		34	J		34	J
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split		custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases						3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase												

Lane Group 07 Ø8 Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prot) Right Turn on Red Satd. Flow (prot) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Trow way Left Turn Lane Headway Factor Liveries Ceses (meth)						
Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (pern) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor		Ø7	Ø8			
Future Volume (vph) Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Proteted Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ideal Flow (vphpl) Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (prem) Right Turn on Red Satd. Flow (RTOR) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Traffic Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor	Future Volume (vph)					
Grade (%) Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Frt Frt Fortected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Length (ft) Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (yph) Shared Lane Traffic (%) Lane Group Flow (yph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Storage Lanes Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Taper Length (ft) Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Util. Factor Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Ped Bike Factor Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Frt Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Protected Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (prot) Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confi. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Fit Permitted Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (perm) Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Right Turn on Red Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Satd. Flow (RTOR) Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Speed (mph) Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Distance (ft) Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Travel Time (s) Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Confl. Peds. (#/hr) Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Peak Hour Factor Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Adj. Flow (vph) Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Shared Lane Traffic (%) Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Group Flow (vph) Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Enter Blocked Intersection Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Lane Alignment Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Median Width(ft) Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Link Offset(ft) Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Crosswalk Width(ft) Two way Left Turn Lane Headway Factor						
Two way Left Turn Lane Headway Factor						
Headway Factor						
Turning Speed (mph)						
Number of Detectors						
Detector Template						
Leading Detector (ft)						
Trailing Detector (ft)						
Detector 1 Position(ft)						
Detector 1 Size(ft)						
Detector 1 Type						
Detector 1 Channel						
Detector 1 Extend (s)						
Detector 1 Queue (s)						
Detector 1 Delay (s)						
Turn Type						
Protected Phases 7 8		7	8			
Permitted Phases						
Detector Phase						
Switch Phase	Switch Phase					

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

no-build	p.m.

	•	-	•	•	•	•	4	†	~	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	17.8	17.8	77.7	21.3	21.3	21.3	56.8	105.5		8.3	43.8	43.8
Actuated g/C Ratio	0.10	0.10	0.46	0.12	0.12	0.12	0.33	0.62		0.05	0.26	0.26
v/c Ratio	0.73	0.72	0.54	0.84	0.33	0.14	0.51	0.46		0.02	0.86	0.09
Control Delay	96.2	95.3	37.8	90.5	70.8	0.8	49.4	19.8		77.2	66.5	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		0.0	0.0	0.0
Total Delay	96.2	95.3	37.8	90.5	70.8	8.0	49.4	20.1		77.2	66.5	0.3
LOS	F	F	D	F	Е	Α	D	С		Е	Е	Α
Approach Delay		53.5			77.9			27.1			64.5	
Approach LOS		D			Е			С			Ε	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

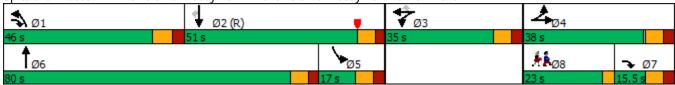
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 46.8 Intersection LOS: D
Intersection Capacity Utilization 90.4% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	9	., a. a.
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)	None	4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		
intersection summary		

Appendix E

Future Intersection Operational Analysis

future a.m.

	۶	→	•	•	←	•	1	†	~	/	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	4	77	1,1	†	7	1,4	4111		1,1	1111	7
Traffic Volume (vph)	142	87	259	83	25	46	794	1954	505	75	1423	156
Future Volume (vph)	142	87	259	83	25	46	794	1954	505	75	1423	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.99				0.96	1.00					0.99
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950	0.987		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1720	2745	3382	1835	1560	3399	6147	0	3433	6408	1583
Flt Permitted	0.950	0.987		0.950			0.950		-	0.950		
Satd. Flow (perm)	1615	1710	2745	3382	1835	1502	3398	6147	0	3433	6408	1562
Right Turn on Red	.0.0	.,	No	0002		Yes	0070	0	Yes	0.00	0.00	Yes
Satd. Flow (RTOR)						196		48	. 00			151
Link Speed (mph)		35			25	.,,		40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13	7.0			1 1,	13	1	7.1			10.2	1
Peak Hour Factor	0.85	0.85	0.85	0.79	0.79	0.79	0.96	0.96	0.96	0.77	0.77	0.77
Adj. Flow (vph)	167	102	305	105	32	58	827	2035	526	97	1848	203
Shared Lane Traffic (%)	21%	102	000	100	02		027	2000	020	,,	1010	200
Lane Group Flow (vph)	132	137	305	105	32	58	827	2561	0	97	1848	203
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)	LOIT	24	rtigrit	LOIT	40	rtigrit	LOIL	34	rtigitt	LOIT	34	rtigrit
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane		10			10			10			10	
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	1.02	1.02	9	1.02	1.02	9	1.01	1.01	9	1.00	1.00	9
Number of Detectors	1	1	1	13	1	1	1	1	7	1	1	1
Detector Template												l.
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel	CI+EX	CI+LX	CI+EX	CI+LX	CI+EX	CI+EX	CI+EX	CI+EX		CI+EX	CI+EX	CI+LX
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
	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)												
Turn Type	Split	NA	custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4	17	3	3	2	1	6		5	2	2
Permitted Phases			17	0	2	3	1	,			0	2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase												

Lane Group	Ø7	Ø8	
Lanectonfigurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type	7	0	
Protected Phases	7	8	
Permitted Phases			
Detector Phase			
Switch Phase			

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

fu	ture a.m.
ļ	4

	•	-	•	•	←	•	1	†	~	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	18.3	18.3	86.9	12.1	12.1	12.1	65.4	100.5		9.3	43.8	43.8
Actuated g/C Ratio	0.11	0.11	0.51	0.07	0.07	0.07	0.38	0.59		0.05	0.26	0.26
v/c Ratio	0.74	0.74	0.22	0.44	0.25	0.20	0.63	0.70		0.52	1.12	0.40
Control Delay	96.6	95.9	26.4	80.0	76.5	1.6	46.5	27.1		88.7	119.8	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1		0.0	0.0	0.0
Total Delay	96.6	95.9	26.4	80.0	76.5	1.6	46.5	28.2		88.7	119.8	16.9
LOS	F	F	С	F	Е	Α	D	С		F	F	В
Approach Delay		59.1			56.1			32.7			108.7	
Approach LOS		E			Е			С			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

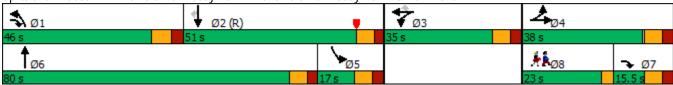
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.12

Intersection Signal Delay: 61.7 Intersection LOS: E
Intersection Capacity Utilization 90.5% ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?		
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)	110110	4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Intersection						
Int Delay, s/veh	3.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	†	LDIX	VVDL	41	₩.	אטוז
Traffic Vol, veh/h	794	146	16	61	93	10
Future Vol, veh/h	794	146	16	61	93	10
·		0	0	0	93	0
Conflicting Peds, #/hr						
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storag		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	79	79	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	863	159	20	77	109	12
Major/Minor	Major1	N	/lajor2	N	/linor1	
Conflicting Flow All	0	0	1022	0	1022	511
Stage 1					943	
	-	-	-	-		-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	675	-	232	508
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	935	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	675	-	225	508
Mov Cap-2 Maneuver		-	-	-	225	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	935	_
2 mgs =						
			10.00			
Approach	EB		WB		NB	
HCM Control Delay, s	0		2.3		34.8	
HCM LOS					D	
Minor Lane/Major Mv	mt	NBLn1	EBT	EBR	WBL	WBT
	IIIL			EDK		
Capacity (veh/h)		238	-	-	675	-
HCM Lane V/C Ratio		0.509	-	-	0.03	-
HCM Control Delay (s	s)	34.8	-	-	10.5	0.1
HCM Lane LOS		D	-	-	В	Α
HCM 95th %tile Q(ve	h)	2.6	-	-	0.1	-

future mid-day

	•	→	•	•	+	4	•	†	<i>></i>	\	+	- ✓
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ሻ	र्स	77	ሻሻ	†	7	ሻሻ	4111		ሻሻ	1111	7
Traffic Volume (vph)	372	77	603	186	56	53	813	1728	119	106	2164	220
Future Volume (vph)	372	77	603	186	56	53	813	1728	119	106	2164	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)	1700	3%	1700	1700	3%	1700	1700	2%	1700	1700	0%	1700
Storage Length (ft)	150	370	0	0	370	140	225	270	0	150	070	220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25		_	150			125		•
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
Ped Bike Factor	0.98	0.98	0.00	0.77	1.00	0.96	1.00	0.00	0.00	0.77	0.00	0.99
Frt	0.70	0.70	0.850			0.850	1100	0.990				0.850
Flt Protected	0.950	0.968	0.000	0.950		0.000	0.950	0.770		0.950		0.000
Satd. Flow (prot)	1656	1687	2745	3382	1835	1560	3399	6280	0	3433	6408	1583
Flt Permitted	0.950	0.968	27.10	0.950			0.950	0200		0.950	0.00	
Satd. Flow (perm)	1617	1661	2745	3382	1835	1502	3398	6280	0	3433	6408	1562
Right Turn on Red			No	5502		Yes	0070	0200	Yes	0.00	0.00	Yes
Satd. Flow (RTOR)						196		11	. 00			151
Link Speed (mph)		35			25	.,,		40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13	7.0				13	1	7				1
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	413	86	670	221	67	63	893	1899	131	115	2352	239
Shared Lane Traffic (%)	40%		0.0		<u> </u>		0.0	.077				207
Lane Group Flow (vph)	248	251	670	221	67	63	893	2030	0	115	2352	239
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			40			34			34	9
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split	NA	custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4	17	3	3		1	6		5	2	
Permitted Phases						3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase												

Lane Group	Ø7	Ø8	
LaneConfigurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type			
Protected Phases	7	8	
Permitted Phases	T	U	
Detector Phase			
Switch Phase			
SWIGHT FIREST			

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

future mid-day

	•	-	\rightarrow	•	•	•	1	†	/	-	↓	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	27.5	27.5	83.0	16.0	16.0	16.0	52.4	87.5		9.3	43.8	43.8
Actuated g/C Ratio	0.16	0.16	0.49	0.09	0.09	0.09	0.31	0.51		0.05	0.26	0.26
v/c Ratio	0.93	0.93	0.50	0.70	0.39	0.20	0.86	0.63		0.61	1.43	0.47
Control Delay	109.1	107.7	33.9	86.1	77.6	1.4	64.4	31.9		93.4	240.2	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4		0.0	0.0	0.0
Total Delay	109.1	107.7	33.9	86.1	77.6	1.4	64.4	32.3		93.4	240.2	22.3
LOS	F	F	С	F	Е	Α	E	С		F	F	С
Approach Delay		65.7			69.3			42.1			214.7	
Approach LOS		Е			Е			D			F	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

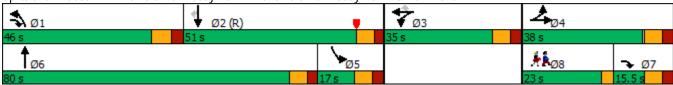
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.43

Intersection Signal Delay: 112.6 Intersection LOS: F
Intersection Capacity Utilization 96.4% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?	9	., a. a.
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)	None	4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		
inicisection summaly		

future p.m.

	۶	→	•	•	+	•	•	†	~	/	+	-√
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	ኻ	र्स	77	1,1	†	7	777	4111		1,4	1111	7
Traffic Volume (vph)	215	50	637	424	102	106	547	1693	131	55	1323	42
Future Volume (vph)	215	50	637	424	102	106	547	1693	131	55	1323	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		3%			3%			2%			0%	
Storage Length (ft)	150		0	0		140	225		0	150		220
Storage Lanes	1		0	2		2	2		0	2		1
Taper Length (ft)	25			25			150			125		
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
Ped Bike Factor	0.98	0.99				0.96	1.00					0.99
Frt			0.850			0.850		0.989				0.850
Flt Protected	0.950	0.970		0.950			0.950			0.950		
Satd. Flow (prot)	1656	1691	2745	3382	1835	1560	3399	6274	0	3433	6408	1583
Flt Permitted	0.950	0.970		0.950			0.950			0.950		
Satd. Flow (perm)	1620	1668	2745	3382	1835	1502	3398	6274	0	3433	6408	1562
Right Turn on Red			No			Yes			Yes			Yes
Satd. Flow (RTOR)						196		12				151
Link Speed (mph)		35			25			40			40	
Link Distance (ft)		479			540			552			596	
Travel Time (s)		9.3			14.7			9.4			10.2	
Confl. Peds. (#/hr)	13					13	1					1
Peak Hour Factor	0.94	0.94	0.94	0.92	0.92	0.92	0.96	0.96	0.96	0.95	0.95	0.95
Adj. Flow (vph)	229	53	678	461	111	115	570	1764	136	58	1393	44
Shared Lane Traffic (%)	39%											
Lane Group Flow (vph)	140	142	678	461	111	115	570	1900	0	58	1393	44
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	J		40	J		34	J		34	J
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1	1	1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50	50	50	50	50	50	50		50	50	50
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)	50	50	50	50	50	50	50	50		50	50	50
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+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
Turn Type	Split		custom	Split	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	4	4		3	3		1	6		5	2	
Permitted Phases						3						2
Detector Phase	4	4	17	3	3	3	1	6		5	2	2
Switch Phase												

Lane Group	Ø7	Ø8	
LaneConfigurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Grade (%)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Turn Type			
Protected Phases	7	8	
Permitted Phases	T	U	
Detector Phase			
Switch Phase			
SWIGHT FIREST			

1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr

future p.m.

	۶	-	\rightarrow	•	←	*	1	†	/	-	ţ	4
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	8.0	8.0		8.0	8.0	8.0	8.0	10.0		8.0	10.0	10.0
Minimum Split (s)	31.5	31.5		33.8	33.8	33.8	16.3	45.2		15.7	49.2	49.2
Total Split (s)	38.0	38.0		35.0	35.0	35.0	46.0	80.0		17.0	51.0	51.0
Total Split (%)	22.3%	22.3%		20.5%	20.5%	20.5%	27.0%	46.9%		10.0%	29.9%	29.9%
Maximum Green (s)	30.5	30.5		27.2	27.2	27.2	37.7	72.8		9.3	43.8	43.8
Yellow Time (s)	4.5	4.5		4.8	4.8	4.8	5.3	4.5		4.7	4.5	4.5
All-Red Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.7		3.0	2.7	2.7
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)	7.5	7.5		7.8	7.8	7.8	8.3	7.2		7.7	7.2	7.2
Lead/Lag							Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	4.0	5.0		2.0	5.0	5.0
Recall Mode	None	None		None	None	None	Max	Max		None	C-Max	C-Max
Walk Time (s)	4.0	4.0		4.0	4.0	4.0		7.0			7.0	7.0
Flash Dont Walk (s)	20.0	20.0		22.0	22.0	22.0		31.0			35.0	35.0
Pedestrian Calls (#/hr)	0	0		7	7	7		0			1	1
Act Effct Green (s)	18.9	18.9	73.6	25.4	25.4	25.4	51.6	90.1		9.0	43.8	43.8
Actuated g/C Ratio	0.11	0.11	0.43	0.15	0.15	0.15	0.30	0.53		0.05	0.26	0.26
v/c Ratio	0.77	0.76	0.57	0.91	0.41	0.29	0.55	0.57		0.32	0.85	0.09
Control Delay	98.3	97.1	40.8	94.7	70.0	1.9	53.8	29.3		82.5	66.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3		0.0	0.0	0.0
Total Delay	98.3	97.1	40.8	94.7	70.0	1.9	53.8	29.6		82.5	66.0	0.3
LOS	F	F	D	F	Е	Α	D	С		F	E	Α
Approach Delay		57.5			75.2			35.2			64.7	
Approach LOS		Е			E			D			E	

Intersection Summary

Area Type: Other

Cycle Length: 170.5

Actuated Cycle Length: 170.5

Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow

Natural Cycle: 150

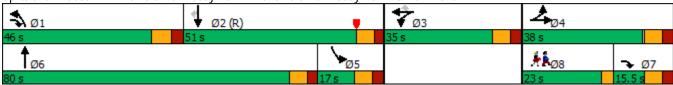
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 51.7 Intersection LOS: D
Intersection Capacity Utilization 92.2% ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 1: Ashford Dunwoody Rd #1 #2/Ashford Dunwoody Rd #1 & Hammond Dr



Lane Group	Ø7	Ø8
Minimum Initial (s)	8.0	1.0
Minimum Split (s)	15.5	22.0
Total Split (s)	15.5	23.0
Total Split (%)	9%	13%
Maximum Green (s)	8.0	20.0
Yellow Time (s)	4.5	3.0
All-Red Time (s)	3.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	Lead
Lead-Lag Optimize?		_344
Vehicle Extension (s)	1.0	2.0
Recall Mode	None	None
Walk Time (s)		4.0
Flash Dont Walk (s)		15.0
Pedestrian Calls (#/hr)		7
Act Effct Green (s)		,
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Intersection Summary		

Intersection						
Int Delay, s/veh	4.3					
		EDD	WDI	WDT	NDI	NDD
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	†	400	40	41	Y	47
Traffic Vol, veh/h	104	182	18	640	190	17
Future Vol, veh/h	104	182	18	640	190	17
Conflicting Peds, #/hr	0	0	0	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	85	85	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	130	228	21	753	207	18
Major/Minor M	ajor1	N	Major2	N	Minor1	
Conflicting Flow All	0	0	358	0	663	179
Stage 1	-	-	-	-	244	-
Stage 2	_		_	_	419	_
Critical Hdwy	_	_	4.14	-	6.84	6.94
	-	-	4.14	-	5.84	0.94
Critical Hdwy Stg 1		-	-			
Critical Hdwy Stg 2	-	-	2 22	-	5.84	2 22
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1197	-	394	833
Stage 1	-	-	-	-	774	-
Stage 2	-	-	-	-	632	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1197	-	382	833
Mov Cap-2 Maneuver	-	-	-	-	382	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	632	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.3		25	
HCM LOS	U		0.3		D	
FICIVI LOS					U	
Minor Lane/Major Mvmt	1	VBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		400	-	-	1197	-
HCM Lane V/C Ratio		0.563	-	-	0.018	-
HCM Control Delay (s)		25	-	-	8.1	0.1
HCM Lane LOS		D	-	-	Α	Α
HCM 95th %tile Q(veh)		3.3	-	-	0.1	-
, ,						

